



End to End Test Specification, RCS Universal Profile

Version 3.0

10 April 2020

This is a Non-binding Permanent Reference Document of the GSMA

Security Classification: Non-confidential

Access to and distribution of this document is restricted to the persons permitted by the security classification. This document is confidential to the Association and is subject to copyright protection. This document is to be used only for the purposes for which it has been supplied and information contained in it must not be disclosed or in any other way made available, in whole or in part, to persons other than those permitted under the security classification without the prior written approval of the Association.

Copyright Notice

Copyright © 2020 GSM Association

Disclaimer

The GSM Association ("Association") makes no representation, warranty or undertaking (express or implied) with respect to and does not accept any responsibility for, and hereby disclaims liability for the accuracy or completeness or timeliness of the information contained in this document. The information contained in this document may be subject to change without prior notice.

Antitrust Notice

The information contain herein is in full compliance with the GSM Association's antitrust compliance policy.

Table of Contents

1	Introduction	3
1.1	General	3
1.2	Functional Assumptions	4
1.3	Testing Environment Assumptions	4
1.4	Assumed architecture	5
1.5	References	5
1.6	Definitions	6
1.7	Acronyms	6
2	Framework	8
2.1	Device Provisioning	8
2.1.1	Functional test cases	8
2.1.2	Technical test cases	12
2.2	Capability Discovery and Service Availability	38
2.2.1	Functional test cases	38
2.2.2	Technical test cases	39
2.3	Security Against Malware	64
2.3.1	Technical test cases	64
3	Messaging	70
3.1	1-to-1 Messaging	70
3.1.1	Functional test cases	70
3.1.2	Technical test cases	85
3.2	Group Chat	133
3.2.1	Functional test cases	133
3.2.2	Technical test cases	153
3.3	File Transfer	175
3.3.1	Functional test cases	175
3.3.2	Technical test cases	184
3.4	Audio Messaging	208
3.4.1	Functional test cases	208
3.4.2	Technical test cases	212
3.5	Settings	213
3.5.1	Functional test cases	213
3.6	Chatbots	224
3.6.1	Universal Profile 2.0: A2P Basic	224
4	Enriched Calling	261
4.1	Enriched Voice Calling	261
4.1.1	Pre-Call Experience	261
4.1.2	In-Call Experience	274
4.1.3	Post-Call Experience	319
4.2	Enriched Call Logs	328
4.2.1	Functional test cases	328
5	Multi-Device Messaging	331

6	Data off	331
7	Backup and Restore	331
8	APIs	331
9	Green Button Promise for Voice	331
10	Green Button Promise for IP Video Call Services	332
11	Multi-Device for Voice & Video	332
Annex A	Test Cases guidelines for Phase 1 of OMA SIMPLE IM-CPM transition	333
	A.1 Framework	333
	A.1.1 Device Provisioning	333
	A.1.2 Capability Discovery	333
	A.1.3 Security Against Malware	333
	A.2 Messaging	333
	A.2.1 1-to-1 Messaging	333
	A.2.2 Group Chat	338
	A.2.3 File Transfer	341
	A.2.4 Audio Messaging	366
Annex B	Test Cases guidelines for Phase 2 of OMA SIMPLE IM-CPM transition	366
Annex C	Document Management	366
	C.1 Document History	366
	C.2 Other Information	366

1 Introduction

1.1 General

This document is intended for use as a test specification for the functionality defined in

- RCC.71 RCS Universal Profile Service Definition Document v1.0 [GSMA RCC.71 UP-SDD] and
- the first implementation release for Universal Profile 2.0: A2P Basic (see section 3.6) as defined in Annex D of [GSMA RCC.71 UP2.1].

This test specification can be used for end-to-end testing over both User-to-Network Interface (UNI) and Network-to-Network Interface (NNI).

Parties wishing to verify compliance of their RCS implementations (e.g. devices, networks, APIs, test tools) to RCS Universal Profile [GSMA RCC.71 UP-SDD] and [GSMA RCC.71 UP2.1] using this test specification and be listed on the GSMA website as accredited are advised to contact [GSMA](#) for guidelines.

The content of this document is based on test cases from [GSMA RCC.58 NARCS TS] with additional contribution from joyn Crane Priority Release Test Matrices and new test cases for specific aspects of RCS Universal Profile [GSMA RCC.71 UP-SDD] and [GSMA RCC.71 UP2.1].

The test cases in this document are partitioned to correspond to RCS Service Clusters:

- Framework
- Messaging, including Chatbots
- Enriched Calling
- Multi-Device Messaging
- Data off
- Backup and Restore
- APIs
- Green Button Promise for Voice
- Green Button Promise for IP Video Call Services
- Multi-Device for Voice & Video

Annexes A and B provide guidelines for test cases usage for Phase 1 and Phase 2 of transition from OMA SIMPLE IM to OMA CPM technologies as per [RCC.64] for the functionality defined in [GSMA RCC.71 UP-SDD]. Overall stages of transition are illustrated on the diagram below (Figure 1).

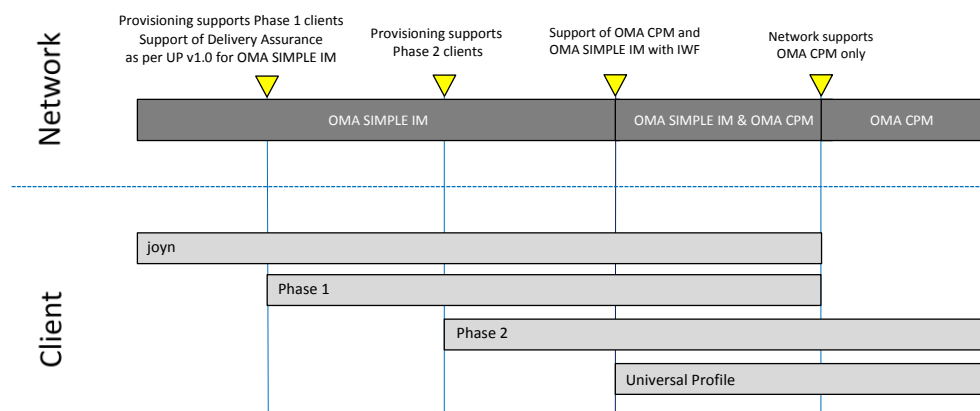


Figure 1: OMA SIMPLE IM to OMA CPM transition stages.

1.2 Functional Assumptions

Device Under Test (DUT), Reference 1, Reference 2, Reference 3 (previously referred to as User A, B, C, D) belong to the same or different operators/service providers depending on the purpose of testing.

1. All users have been provisioned in the respective networks.
2. All users' devices have been configured unless otherwise specified.
3. All users are registered in their RCS networks (online) unless otherwise specified. The registration timer for each user is far from expiration.
4. All users are in 3G/LTE mobile coverage unless otherwise specified. Type of Wi-Fi coverage is specified explicitly, e.g. EPC or non EPC integrated.
5. Operators/service providers that are performing NNI testing have signed the appropriate interworking agreements and have IMS level of interconnections.

1.3 Testing Environment Assumptions

All test cases to be performed in the Original Equipment Manufacturers (OEM) setup or Operator environment with the exception of the test cases which contain a special note allowing simulation of the test scenario. Means of simulation are outside the scope of this Test Specification.

Tests are performed as applicable, by user and terminal capabilities and supporting network / backend functionalities.

It is assumed that the following procedures have been concluded prior to execution of RCS North America End-to-End Test Cases between Operators:

- All users' operators have successfully verified RCS implementations, including UNI, in their respective networks.
- ENUMs and DNSs have been established and provisioned, if applicable.
- All users use UEs of their Operator's choice.
- IP connectivity verified.
- SIP connectivity verified.

- RCS media connectivity verified.
- Addressing and routing, including ENUM and DNS functionality verified.

When testing over NNI, repeat the agreed test set swapping the role of the devices.

Test traces can be captured using either TCPDUMP or WIRESHARK or own SDK toolkit (built-in tracer).

1.4 Assumed architecture

IMS architecture used for RCS services should be based on [3GPP TS 23.221] and [GSMA RCC.07 RCS6.0 UNI].

Refer to [GSMA PRD-IR.90] for RCS Interconnect architecture.

1.5 References

Document Number	Title
[GSMA RCC.71 UP-SDD]	GSMA RCC.71 "RCS Universal Profile Service Definition Document" version 1.0 http://www.gsma.com
[GSMA RCC.71 UP2.1]	GSMA RCC.71 "RCS Universal Profile Service Definition Document" version 2.1 http://www.gsma.com
[GSMA RCC.72]	GSMA RCC.72 "RCS Universal Profile Corrections and Clarifications" http://www.gsma.com NOTE: always refer to the corrections and clarifications for the applicable documents in the latest version published
[GSMA RCC.58 NARCS TS]	GSMA RCC.58 "End-to-End Test Specification. North America RCS Profile" v1.0 http://www.gsma.com
[3GPP TS 24.229]	3GPP TS 24.229 Release 12, "3rd Generation Partnership Project; IP multimedia call control protocol based on Session Initiation Protocol (SIP) and Session Description Protocol (SDP)" http://www.3gpp.org
[GSMA PRD-IR.90]	GSMA PRD IR.90 - "RCS Interworking Guidelines" v9.0 http://www.gsma.com
[GSMA RCC.07 RCS6.0 UNI]	GSMA RCC.07 "Rich Communication Suite 6.0 Advanced Communications Services and Client Specification" v7.0
[GSMA RCC.07 RCS7.0 UNI]	GSMA RCC.07 "Rich Communication Suite 7.0 Advanced Communications Services and Client Specification" v8.0
[GSMA RCC.11]	GSMA RCC.11 "RCS 6.0 Endorsement of OMA CPM 2.1 Conversation Functions", Version 5.0
[IETF RFC 3326]	IETF RFC "The Reason Header Field for the Session Initiation Protocol (SIP)", H. Schulzrinne, D. Oran, G. Camarillo, December 2002. Available at http://www.ietf.org/rfc/rfc3326.txt
[3GPP TS 23.221]	3GPP TS 23.221 Release 10, "3rd Generation Partnership Project; Architectural requirements" http://www.3gpp.org
[IETF RFC 5626]	"Managing Client-Initiated Connections in the Session Initiation Protocol (SIP)", IETF RFC

Document Number	Title
	https://tools.ietf.org/html/rfc5626

1.6 Definitions

Definition	Description
File Transfer Status Notification or File Transfer States Notifications	A visible information for the sender of a File Transfer in 1-to-1 Messaging or Group Chat about the progress of the delivery.
Functional test case	Test cases designed to confirm compliance of main RCS services from the user perspective to the requirements of RCC.71. Functional test cases shall cover the services as a user experiences them, in realistic set up of real networks, and do not require deep inspection of traces.
Technical test case	A test case designed to verify technical implementation of devices/clients and networks and their compliance to technical requirements provided in RCC.71. Technical test case require deep inspection of traces to confirm correct message syntax, formatting and sequencing.
Is Typing Notification	Information for participants in a 1-to-1 Messaging or Group Chat conversation that another participant in the conversation is in the process of creating a message. This message may or may not be sent by that user.
Message Status Notification or Message States Notifications	A visible information for the sender of a message in 1-to-1 Messaging or Group Chat about the progress of the delivery.
Online	A user who is known to be RCS enabled and is currently IMS registered to the RCS service
Offline	A user who is known to be RCS enabled and is currently not IMS registered to the RCS service
RCS 1-to-1 Messaging	Can either be standalone messaging or 1-to-1 chat as defined in RCC.07

1.7 Acronyms

Acronym / Abbreviation	Description
3GPP	3rd Generation Partnership Project
Address Book	Enhanced Address Book
AMR	Adaptive Multi-Rate
AVP	Audio Video Profile
BPEF	Blacklist Policy Enforcement Function
CBP	Constrained Baseline Profile
CFS	Client Fallback to SMS
CPIM	Common Profile for Instant Messaging
CPM	Converged IP Messaging

Acronym / Abbreviation	Description
CS	Circuit Switched
DNS	Domain Name System
DUT	Device Under Test
ENUM	E.164 Number Mapping
FT	File Transfer
FTF	File Transfer Function
GC	Group Chat
GRUU	Globally Routable User agent URI
GSMA	GSM Association
HOS	Home Operator Services
HSPA	High Speed Packet Access
HTTP	Hyper-Text Transfer Protocol
HTTPS	Hyper-Text Transfer Protocol Secure
IM	Instant Messaging
IMS	IP Multimedia Subsystem
IP	Internet Protocol
IPX	Internet Protocol Packet Exchange
LTE	Long Term Evolution
MIME	Multipurpose Internet Mail Extensions
MCC	Mobile Country Code
MNC	Mobile Network Code
MNO	Mobile Network Operator
MSRP	Message Session Relay Protocol
NAT	Network Address Translation
NB AMR	Narrowband AMR
NFS	Network Fallback to SMS
NNI	Network-to-Network Interface
OMA	Open Mobile Alliance
PDD	Product Definition Document
PNB	Personal Network Blacklist
RCS	Rich Communication Suite
RCS-AA	RCS Access Agnostic mode
RCS-CS	RCS CS mode
RR	Receiver Report
RTCP	RTP Control Protocol
RTP	Real Time Protocol
S&F	Store and Forward

Acronym / Abbreviation	Description
SDP	Session Description Protocol
SIMPLE	Session Initiation Protocol for Instant Messaging and Presence Leveraging Extensions
SIP	Session Initiation Protocol
SPI	Social Presence Information
UE	User Equipment
UI	User Interface
UNI	User-to-Network Interface
UP	Universal Profile
URI	Uniform Resource Identifier
URL	Uniform Resource Locator
UX	User Experience
VIP	Very Important Person
VoHSPA	Voice over HSPA
VoLTE	Voice over LTE
WB AMR	Wideband AMR
XDMS	XML Document Management Server
XML	eXtensible Markup Language

2 Framework

2.1 Device Provisioning

2.1.1 Functional test cases

Test case ID	ID_RCS_F_2_1_1
Related test cases	
Feature	Device Provisioning
Reason for test	Validate UP 1.0 Reference section US 2-1 and US2-2 and subsequent requirements.
Pre-conditions Scenario	<ol style="list-style-type: none"> 1. Handset factory settings(device not started-up for the first time yet). 2. The RCS Client on the device is set as default SMS application. 3. Access to cellular network and cellular data is allowed on the device.

Test procedure	1. Insert SIM and switch on the device.
Expected results Post-conditions	1. RCS service provisioning is performed automatically without any user interaction. This can be verified by the tester in the following ways: 2. RCS Master Switch is set to “RCS on” in Settings. (If the network supports “RCS Welcome Message”, then the welcome message or a notification for this welcome message is displayed.) 3. RCS services are available to the user.
Deep inspection	–

Test case ID	ID_RCS_F_2_1_2
Related test cases	
Feature	Device Provisioning
Reason for test	Validate UP 1.0 Reference section R2-2-3
Pre-conditions Scenario	1. Messaging client under testing is already provisioned and registered for RCS
Test procedure	1. Set a different (not the RCS application under test) messaging application as default SMS client. 2. Select the RCS application under test as “SMS default application” (again).
Expected results Post-conditions	1. The RCS application under test is de-provisioned from RCS: The RCS Master Switch for the application under test is set to “RCS off” in Settings. 2. Provisioning of the service is done automatically without any user interaction: RCS Master Switch for the application under test is set to “RCS on” in Settings. RCS services are available to the user.
Deep inspection	–

Test case ID	ID_RCS_F_2_1_3
Related test cases	
Feature	Device Provisioning

Reason for test	Validate UP 1.0 Reference section US2-3 and subsequent requirements.
Pre-conditions Scenario	<ol style="list-style-type: none"> 1. Handset factory settings (device not started-up for the first time yet) 2. An active SIM is inserted in the device. 3. Device connected through wifi 4. Cellular Data is disabled in device settings 5. RCS application under test is selected as default SMS application. 6. IMSI provisioning is available in the network.
Test procedure	<ol style="list-style-type: none"> 1. First start-up is done over non-cellular networks (e.g. Wi-Fi).
Expected results Post-conditions	<ol style="list-style-type: none"> 1. The user should be identified automatically and the device is provisioned for RCS without user interaction: 2. RCS Master Switch is set to “RCS on” in Settings. 3. If the network supports “RCS Welcome Message”, then the welcome message or a notification for this welcome message is displayed.
Deep inspection	–

Test case ID	ID_RCS_F_2_1_4
Related test cases	
Feature	Device Provisioning
Reason for test	Validate UP 1.0 Reference section US2-3 and subsequent requirements.
Pre-conditions Scenario	<ol style="list-style-type: none"> 1. Handset factory settings (device not started-up for the first time yet) 2. An active SIM is inserted in the device. 3. Device connected through wifi. 4. Cellular Data is disabled in device settings. 5. RCS application under test is selected as default SMS application. 6. IMSI provisioning on WiFi is not available on the network. 7. The client is not able to retrieve the IMSI of the SIM
Test procedure	<ol style="list-style-type: none"> 1. First start-up is done. 2. One week later: reboot (test can be simulated by device date change) and select the “Messaging” application under test on the device. 3. Any request by the messaging application under test for manual MSISDN identification is skipped or abandoned. 4. Reboots the device and skip / abandon manual MSISDN introduction another two times (several reboots might be needed). 5. Reboot again the device and enter messaging native app. 6. Check that RCS services are not available

	<ol style="list-style-type: none"> 7. Switch Cellular Data to 'on' in device settings. 8. Check that RCS services are available now.
Expected results Post-conditions	<ol style="list-style-type: none"> 1. RCS is not activated . 2. User should be prompted to provide his identity when in the context of messaging (i.e: after a tutorial, when entering messaging...) for the first time. 3. The RCS application under test requests manual MSISDN identification. An option to 'skip' or 'enter later' or similar is offered to the user. 4. The RCS application under test requests manual MSISDN identification. An option to 'skip' or 'enter later' or similar is offered to the user. This shall happen for both attempts 5. Check, user is not longer offered to enter MSISDN again. 6. RCS services are not available 7. The application under test is provisioned and registered to RCS. 8. RCS services are available to the user. This can be verified by the tester in the following ways: <ol style="list-style-type: none"> a. If the network supports "RCS Welcome Message", then the welcome message or a notification for this welcome message is displayed. b. RCS services are available to the user.
Deep inspection	–

Test case ID	ID_RCS_F_2_1_5
Related test cases	
Feature	Device Provisioning
Reason for test	Validate UP 1.0 Reference section US2-2 and subsequent requirements.
Pre-conditions Scenario	<ol style="list-style-type: none"> 1. Handset factory settings (device not started-up for the first time yet) 2. An active SIM is inserted in the device. 3. Device connected through wifi. IMSI identification in WiFi is not available on the network. 4. Cellular Data is disabled in device settings. 5. SIM card not identified by the device is inside. 6. RCS Master Switch is turned 'off'.
Test procedure	<ol style="list-style-type: none"> 1. Turn RCS master switch to 'on'.

Expected results	1. RCS application prompts the user to manually enter MSISDN for identification of the device on the network.
Post-conditions	
Deep inspection	–

Test case ID	ID_RCS_F_2_1_6
Related test cases	
Feature	Device Provisioning
Reason for test	Validate UP 1.0 Reference section “SIM Swap” R2-5-1
Pre-conditions Scenario	<ol style="list-style-type: none"> 1. SIM Card A is plugged into the device. 2. The device under test is online (registered to RCS). 3. Cellular Data is turned off. 4. User is connected through Wifi. 5. Network does not support IMSI identification in WiFi. 6. SIM Card B was online shortly before (i.e. within the last 24 hrs.) in the device under test. SIM card B is not inserted in any device at the start of this test case.
Test procedure	<ol style="list-style-type: none"> 1. Switch off the device under test. 2. Change SIM card in device under test from SIM Card A to SIM Card B. 3. Switch on device under test (and enter PIN if required to unlock the device).
Expected results Post-conditions	<ol style="list-style-type: none"> 1. New SIM card is properly identified without the need to ask the user for manual identification. The device goes online using the existing and valid RCS configuration for SIM Card B stored on the device. 2. The RCS Master Switch is set to “RCS on” in Settings. 3. RCS services are available to the user.
Deep inspection	–

2.1.2 Technical test cases

Test case ID	ID_RCS_T_2_1_1
Related test cases	

Feature	Device Provisioning
Reason for test	First-time registration over 3GPP. First-time successful configuration; R2-16-2
Pre-conditions Scenario	<ol style="list-style-type: none"> 1. Autoconfiguration Server (ACS) ready to fulfil the requirements described in RCC.14 v3.0 (equals provisioning_version 2.0) 2. SIM card is enabled to use RCS UP 3. RCS services have not been previously configured on the phone/SIM pair 4. DUT is in cellular coverage 5. DUT is powered off
Test procedure	<ol style="list-style-type: none"> 1. DUT is powered up and contacts ACS 2. ACS validates the SIM/phone and the client type, provisions the user and sends a valid configuration to the phone 3. If Terms and Conditions or a Welcome message is provided in the configuration they are accepted 4. The configuration is successfully received by DUT
Expected results Post-conditions	<ol style="list-style-type: none"> 1. ACS is contacted by DUT 2. Configuration takes place seamlessly to the user 3. If applicable, the welcome message is displayed and the user accepts it 4. RCS can be used
Deep inspection	<ol style="list-style-type: none"> 1. Inspect HTTP request includes new or updated GET parameters (rcs_version=6.0, rcs_profile=UP_1.0, vers, provisioning_version=2.0) 2. DUT resolves the IP address and port to access SIP 3. Verify successful registration

Test case ID	ID_RCS_T_2_1_2
Related test cases	
Feature	Device Provisioning
Reason for test	First-time registration over 3GPP. First-time successful configuration in network without Header Enrichment; R2-16-6
Pre-conditions Scenario	<ol style="list-style-type: none"> 1. ACS ready to fulfil the requirements described in RCC.14 2. ACS is unable to successfully identify/verify the identity of the requester (e.g. Header enrichment is not implemented by the Service Provider) 3. SIM card is enabled to use RCS UP 4. RCS services have not been previously configured on the phone/SIM pair 5. DUT is in cellular or WiFi coverage 6. DUT is powered off
Test procedure	<ol style="list-style-type: none"> 1. DUT is powered and contacts ACS 2. ACS validates the SIM/phone based on IMSI or MSISDN provided by the user and OTP (One-Time-Password) 3. The ACS validates the SIM/phone and the client type, provisions the user and sends a valid configuration to the phone

	<ol style="list-style-type: none"> 4. If Terms and Conditions or a Welcome message is provided in the configuration they are accepted 5. Configuration is successfully received by DUT
Expected results Post-conditions	<ol style="list-style-type: none"> 1. ACS is contacted by DUT 2. Configuration takes place seamlessly to the user except that the user is prompted to provide a MSISDN for the current device 3. If applicable, user receives an OTP that he is prompted to provide 4. If applicable, the welcome message is displayed and the user accepts 5. RCS is enabled
Deep inspection	<ol style="list-style-type: none"> 1. Verify initial HTTP request 2. Verify HTTP 511 Network authentication required error response 3. Verify new cookie to be used in subsequent HTTP requests 4. DUT resolves the IP address and port to access SIP 5. Verify successful registration

Test case ID	ID_RCS_T_2_1_3
Related test cases	
Feature	Device Provisioning
Reason for test	First-time unsuccessful configuration over 3GPP: incorrect configuration data
Pre-conditions Scenario	<ol style="list-style-type: none"> 1. ACS ready to fulfil the requirements described in RCC.14 2. ACS is able to send invalid configuration 3. RCS services have not been previously configured on the phone/SIM pair 4. SIM card is enabled to use RCS UP 5. DUT is in cellular coverage 6. DUT is powered off
Test procedure	<p>NOTE: To facilitate self-accreditation this test can be simulated</p> <ol style="list-style-type: none"> 1. DUT is powered on 2. Reboot DUT.
Expected results Post-conditions	<ol style="list-style-type: none"> 1. The ACS validates the SIM/phone, provisions the Reference 1ut sends an invalid configuration to the phone 2. The XML is not complete/truncated 3. XML is malformed 4. XML contains values not accepted as valid in some areas (e.g. text where a number is expected) 5. RCS not enabled as the configuration is not successful 6. DUT retries the configuration and receives valid config file. Configuration takes places seamlessly to the user

Deep inspection	<ol style="list-style-type: none"> 1. Inspect HTTP negotiation 2. Verify registration does not take place following invalid configuration 3. Verify successful registration after reboot and re-configuration
------------------------	--

Test case ID	ID_RCS_T_2_1_4
Related test cases	
Feature	Device Provisioning
Reason for test	First-time registration over 3GPP. First-time unsuccessful configuration: internal server error
Pre-conditions Scenario	<ol style="list-style-type: none"> 1. ACS ready to fulfil the requirements described in RCC.14 2. ACS configured according to test purpose: generating HTTP 500 error. 3. SIM card is enabled to use RCS UP 4. RCS services have not been previously configured on the phone/SIM pair 5. DUT in cellular coverage 6. DUT is powered off
Test procedure	<p>NOTE: To facilitate self-accreditation this test can be simulated</p> <ol style="list-style-type: none"> 1. DUT is powered on. 2. DUT is rebooted.
Expected results Post-conditions	<ol style="list-style-type: none"> 1. The ACS detects an internal error and generates a 500 response (internal server error). Configuration does not take place and RCS not enabled as the configuration is not successful 2. DUT retries the configuration. Configuration takes place seamlessly to the user
Deep inspection	<ol style="list-style-type: none"> 1. Inspect HTTP negotiation 2. Verify 500 Internal error response

Test case ID	ID_RCS_T_2_1_5
Related test cases	
Feature	Device Provisioning
Reason for test	First-time unsuccessful configuration over 3GPP: server not responding
Pre-conditions Scenario	<ol style="list-style-type: none"> 1. ACS ready to fulfil the requirements described in RCC.14 2. ACS configured according to test purpose: Not responding to first config request. 3. SIM card is enabled to use RCS UP 4. RCS services have not been previously configured on the phone/SIM pair 5. DUT in cellular coverage 6. DUT is powered off

Test procedure	NOTE: To facilitate self-accreditation this test can be simulated 1. DUT is powered on and contacts ACS 2. Reboot DUT
Expected results Post-conditions	1. The ACS does not respond (request timeout). Configuration does not take place and RCS not enabled as the configuration is not successful 2. Following a reboot DUT retries the configuration. Configuration successfully takes place
Deep inspection	1. Verify HTTP request timeout 2. Verify DUT tears the HTTP connection following timeout 3. Verify successful configuration and registration after reboot

Test case ID	ID_RCS_T_2_1_6
Related test cases	
Feature	Device Provisioning
Reason for test	First-time registration over 3GPP. First-time unsuccessful configuration: subscriber unauthorized (via HTTP 40
Pre-conditions Scenario	1. ACS ready to fulfil the requirements described in RCC.14 2. ACS/Backend configured according to test purpose 3. SIM card is enabled to use RCS UP 4. RCS services have not been previously configured on the phone/SIM pair 5. DUT in cellular coverage 6. DUT is powered off
Test procedure	NOTE: To facilitate self-accreditation this test can be simulated 1. DUT is powered on and contacts ACS 2. Following a reboot DUT retries the configuration
Expected results Post-conditions	1. The ACS or an intermediate server generates a 403 response (to the HTTP transaction). RCS on DUT not enabled as the configuration is not successful 2. Configuration takes places seamlessly to the user.
Deep inspection	1. Inspect HTTP request 2. Verify HTTP 403 response

Test case ID	ID_RCS_T_2_1_7
Related test cases	
Feature	Device Provisioning

Reason for test	First-time registration over 3GPP. Autoconfiguration once the validity has expired
Pre-conditions Scenario	NOTE: To facilitate self-accreditation this test can be simulated <ol style="list-style-type: none"> 1. ACS ready to fulfil the requirements described in RCC.14 2. SIM card is enabled to use RCS UP 3. Validity of the configuration is known 4. RCS services have not been previously configured on the phone/SIM pair 5. DUT in cellular coverage 6. DUT is powered off
Test procedure	<ol style="list-style-type: none"> 1. DUT is powered on and contacts ACS 2. No action from the user – wait until validity of the config files expires
Expected results Post-conditions	<ol style="list-style-type: none"> 1. ACS is contacted and sends xml configuration to DUT. DUT registers successfully and RCS services are enabled on the device. 2. After expiry of configuration Re-Configuration takes place seamlessly to the user
Deep inspection	<ol style="list-style-type: none"> 1. Inspect HTTP request includes GET parameters and the version of its current configuration

Test case ID	ID_RCS_T_2_1_8
Related test cases	
Feature	Device Provisioning
Reason for test	First-time registration over 3GPP. Configuration is no longer valid in the network
Pre-conditions Scenario	NOTE: To facilitate self-accreditation this test can be simulated <ol style="list-style-type: none"> 1. ACS ready to fulfil the requirements described in RCC.14 2. SIM card is enabled to use RCS UP 3. Validity of the configuration is known 4. RCS services have been previously configured on the phone/SIM pair 5. DUT is in cellular coverage 6. The configuration is no longer valid in the network (e.g. user swaps the SIM between devices) 7. DUT is powered off
Test procedure	<ol style="list-style-type: none"> 1. DUT is powered on and contacts ACS 2. DUT is powered off 3. No action from the user – wait until validity of the config files expires while DUT is still powered off. 4. DUT is powered on
Expected results Post-conditions	<ol style="list-style-type: none"> 1. ACS is contacted and sends xml configuration to DUT. DUT registers successfully and RCS services are enabled on the device. 2. DUT successfully deregisters. 3. DUT remains powered off. 4. Re-Configuration takes place seamlessly to the user, though fails in the

	end.
Deep inspection	<ol style="list-style-type: none"> 1. Verify autoconfiguration request is sent by the client following rebooting 2. Verify unsuccessful configuration with 4xx/5xx error responses

Test case ID	ID_RCS_T_2_1_9
Related test cases	
Feature	Device Provisioning
Reason for test	First-time successful configuration over non 3GPP: token value empty
Pre-conditions Scenario	<ol style="list-style-type: none"> 1. ACS ready to fulfil the requirements described in RCC.14 2. SIM card is enabled to use RCS UP 3. RCS services have not been previously configured on the phone/SIM 4. DUT is under WiFi
Test procedure	<ol style="list-style-type: none"> 1. DUT is powered on and contacts ACS 2. If applicable, user receives an OTP that he is prompted to provide 3. The ACS validates the client type, provisions the user and sends a valid configuration to the DUT 4. If Terms and Conditions or a Welcome message is provided in the configuration they are displayed on DUT 5. Once the configuration is successfully sent, it is possible to access RCS services
Expected results Post-conditions	<ol style="list-style-type: none"> 1. ACS is contacted by DUT 2. The ACS validates the SIM/phone based on IMSI or MSISDN provided by the client and OTP 3. Configuration takes place seamlessly to the user except that the user is prompted to provide a MSISDN for the current device 4. If applicable, the welcome message is displayed and the user accepts 5. RCS is enabled
Deep inspection	<ol style="list-style-type: none"> 1. Verify IMSI is sent without MSISDN when OS platform allows it without MSISDN 2. Verify when IMSI is sent and user inserts the msisdn that 403 response is sent 3. Verify MSISDN is sent when OS does not allow to send IMSI 4. Verify that DUT correctly resolves the IP address and port to access SIP

Test case ID	ID_RCS_T_2_1_10
---------------------	-----------------

Related test cases	
Feature	Device Provisioning
Reason for test	First-time registration over non 3GPP. First-time successful configuration: IMSI validation not supported by the network
Pre-conditions Scenario	<ol style="list-style-type: none"> 1. ACS ready to fulfil the requirements described in RCC.14 2. ACS setup according to test procedure 3. SIM card is enabled to use RCS UP 4. IMSI validation is not supported by the network 5. RCS services have not been previously configured on the phone/SIM 6. DUT is in WiFi
Test procedure	<ol style="list-style-type: none"> 1. DUT is powered on 2. User enters the MSISDN assigned to the SIM card 3. Verify that RCS is enabled (e.g. chat is available)
Expected results Post-conditions	<ol style="list-style-type: none"> 1. The DUT prompts the user to enter MSISDN 2. DUT accepts input, no error response 3. RCS services are enabled
Deep inspection	<ol style="list-style-type: none"> 1. Verify 403 response 2. Verify new cookie to be used in subsequent HTTP requests 3. DUT resolves the IP address and port to access SIP using NAPTR/SRV/A queries 4. Verify successful registration

Test case ID	ID_RCS_T_2_1_11
Related test cases	
Feature	Device Provisioning
Reason for test	First-time registration over non 3GPP. First-time unsuccessful configuration: invalid MSISDN
Pre-conditions Scenario	<ol style="list-style-type: none"> 1. ACS ready to fulfil the requirements described in RCC.14 2. ACS setup according to Test procedure 3. SIM card is enabled to use RCS UP 4. IMSI validation is not supported by the network 5. RCS services have not been previously configured on the phone/SIM 6. DUT is under WiFi 7. DUT is powered off
Test procedure	<ol style="list-style-type: none"> 1. DUT is powered on and DUT contacts ACS 2. An invalid MSISDN (too many or too few digits) is entered
Expected results	<ol style="list-style-type: none"> 1. ACS is contacted by DUT. ACS cannot validate the SIM/phone based on IMS and the user is prompted to provide MSISDN for DUT/SIM pair 2. The client should inform the user of the problem and may offer to retry

Post-conditions	with a different MSISDN and if not following a reboot DUT retries the configuration. RCS is not enabled as the configuration is not successful
Deep inspection	<ol style="list-style-type: none"> 1. Inspect request 2. Verify 403 response

Test case ID	ID_RCS_T_2_1_12
Related test cases	
Feature	Device Provisioning
Reason for test	First-time registration over non 3GPP. First-time unsuccessful configuration: subscriber unauthorized
Pre-conditions Scenario	<ol style="list-style-type: none"> 1. ACS ready to fulfil the requirements described in RCC.14 2. SIM card is enabled to use RCS UP 3. RCS services have not been previously configured on the phone/SIM 4. DUT is under WiFi
Test procedure	<ol style="list-style-type: none"> 1. DUT is powered on and contacts ACS 2. When prompted an MSISDN belonging to different MNO is entered 3. The client informs the user of the problem and may offer to retry
Expected results Post-conditions	<ol style="list-style-type: none"> 1. ACS is contacted by DUT. Configuration takes place seamlessly to the user or the user is prompted to provide a MSISDN for the current device 2. ACS validates the SIM/phone based on MSISDN provided and generates a 403 response. 3. RCS is not enabled
Deep inspection	<ol style="list-style-type: none"> 1. Inspect request 2. Verify 403 response

Test case ID	ID_RCS_T_2_1_13
Related test cases	
Feature	Device Provisioning
Reason for test	First-time registration over non 3GPP. First-time unsuccessful configuration: OTP invalid
Pre-conditions Scenario	<ol style="list-style-type: none"> 1. ACS ready to fulfil the requirements described in RCC.14 2. SIM card is enabled to use RCS UP 3. RCS services have not been previously configured on the phone/SIM 4. DUT is under WiFi 5. DUT cannot handle the SMS with the OTP silently in the background

Test procedure	<ol style="list-style-type: none"> 1. DUT is powered on and contacts ACS 2. DUT's user enters correct MSISDN 3. DUT's user enters an incorrect OTP 4. RCS not enabled as the configuration is not successful. Autoconfiguration might start from the beginning and if not following a reboot DUT retries the configuration
Expected results Post-conditions	<ol style="list-style-type: none"> 1. Configuration takes place seamlessly to the user or the user is prompted to provide a MSISDN for the current device. 2. DUT's User is prompted to provide the OTP received through SMS 3. ACS cannot validate the SIM/phone based on OTP provided by the user and generates error response. 4. DUT may provide user retry mechanism and configuration starts from the beginning
Deep inspection	<ol style="list-style-type: none"> 1. Inspect request 2. Verify error response

Test case ID	ID_RCS_T_2_1_14
Related test cases	
Feature	Device Provisioning
Reason for test	First-time registration over non 3GPP. Other than 403 response - retry procedure
Pre-conditions Scenario	<p>NOTE: To facilitate self-accreditation this test can be simulated</p> <ol style="list-style-type: none"> 1. SIM card is enabled to use RCS UP 2. ACS ready to fulfil the requirements described in RCC.14 3. RCS services have not been previously configured on the phone/SIM 4. DUT is under WiFi 5. DUT is powered off
Test procedure	<ol style="list-style-type: none"> 1. DUT is powered on and contacts ACS 2. DUT is rebooted.
Expected results Post-conditions	<ol style="list-style-type: none"> 1. The ACS detects an internal error and generates a 500 response (internal server error). DUT's user is presented with a screen informing him that the process is taking longer than expected. RCS is not enabled as the configuration is not successful 2. Following a reboot DUT retries the configuration. Depending on ACS behaviour subsequent configuration requests can be handled.
Deep inspection	<ol style="list-style-type: none"> 1. Inspect HTTP negotiation 2. Verify 500 internal error response 3. This procedure can be attempted a maximum of five times after which autoconfiguration is aborted.

Test case ID	ID_RCS_T_2_1_15
Related test cases	
Feature	Device Provisioning
Reason for test	Configuration triggered by a reboot over 3GPP: autoconfiguration disabled and configuration query permanently stopped; rcs_state set to -1
Pre-conditions Scenario	<p>NOTE: To facilitate self-accreditation this test can be simulated</p> <ol style="list-style-type: none"> 1. SIM card is enabled to use RCS UP 2. ACS ready to fulfil the requirements described in RCC.14 3. ACS setup according to test procedure 4. RCS services have been successfully configured on the phone/SIM pair 5. DUT is using cellular coverage 6. DUT is powered off
Test procedure	<ol style="list-style-type: none"> 1. Client is started and contacts ACS 2. DUT is rebooted 3. The user takes some action
Expected results Post-conditions	<ol style="list-style-type: none"> 1. ACS is contacted by client. The ACS validates the SIM/phone and provides a response with DISABLED STATE configuration parameter set to -1. RCS services are not registered. 2. Following a reboot the client does not try an autoconfiguration. Configuration disabled 3. Configuration remains disabled.
Deep inspection	<ol style="list-style-type: none"> 1. Inspect HTTP negotiation 2. Verify response containing the XML 3. Verify DUT does not try to register

Test case ID	ID_RCS_T_2_1_16
Related test cases	
Feature	Device Provisioning
Reason for test	Configuration triggered by a reboot over 3GPP: autoconfiguration disabled and configuration query stopped. rcs_state set to -2
Pre-conditions Scenario	<p>NOTE: To facilitate self-accreditation this test can be simulated</p> <ol style="list-style-type: none"> 1. SIM card is enabled to use RCS UP 2. ACS ready to fulfil the requirements described in RCC.14 3. ACS setup according to test procedure 4. RCS services have been successfully configured on the phone/SIM pair 5. DUT is using cellular coverage 6. DUT is powered off

Test procedure	<ol style="list-style-type: none"> 1. Client is started and contacts ACS 2. DUT is rebooted 3. The user takes some action (e.g. user attempts to send an IM) and the client tries an autoconfiguration
Expected results Post-conditions	<ol style="list-style-type: none"> 1. ACS is contacted by client. The ACS validates the SIM/phone and provides a response with DISABLED STATE configuration parameter set to -2. RCS services are not registered. 2. Following a reboot the client does not try an autoconfiguration. Configuration disabled until user action triggers configuration 3. Configuration takes place
Deep inspection	<ol style="list-style-type: none"> 1. Inspect HTTP negotiation 2. Verify response containing the XML 3. Verify DUT does not try to register 4. Verify autoconfiguration starts once the user takes some action

Test case ID	ID_RCS_T_2_1_17
Related test cases	
Feature	Device Provisioning
Reason for test	Configuration triggered by a reboot over 3GPP: set client in dormant state. rcs_state set to-3
Pre-conditions Scenario	<ol style="list-style-type: none"> 1. SIM card is enabled to use RCS UP 2. ACS ready to fulfil the requirements described in RCC.14 3. ACS setup according to test procedure 4. RCS services have been successfully configured on the phone/SIM pair 5. DUT is using cellular coverage 6. The validity of the client's current configuration has expired
Test procedure	<p>NOTE: To facilitate self-accreditation this test can be simulated</p> <ol style="list-style-type: none"> 1. DUT is powered on and contacts ACS 2. DUT is rebooted 3. The user takes some action and after reboot DUT tries an autoconfiguration
Expected results Post-conditions	<ol style="list-style-type: none"> 1. The ACS validates the SIM/phone and provides a response without configuration data except from the RCS DISBALED STATE set to -3. Client does not register to RCS. 2. Following a reboot DUT remains in dormant state. DUT unregistered until user action triggers configuration 3. Autoconfiguration queries are performed.

Deep inspection	<ol style="list-style-type: none"> 1. Inspect HTTP negotiation 2. Verify response containing the XML 3. Verify DUT does not try to register
------------------------	--

Test case ID	ID_RCS_T_2_1_18
Related test cases	
Feature	Device Provisioning
Reason for test	User explicitly disabled the RCS service; rcs_state set to -4;R2-16-4
Pre-conditions Scenario	<ol style="list-style-type: none"> 1. SIM card is enabled to use RCS UP 2. ACS ready to fulfil the requirements described in RCC.14 3. ACS setup according to test procedure 4. RCS services have been successfully configured on the phone/SIM pair 5. DUT is using cellular coverage 6. The validity of the client's current configuration has not expired
Test procedure	<ol style="list-style-type: none"> 1. User disables RCS on DUT, e.g. master switch to off
Expected results	<ol style="list-style-type: none"> 1. RCS services are disabled
Post-conditions	
Deep inspection	<ol style="list-style-type: none"> 1. Verify HTTPS request with version set to current version and rcs_state set to -4 2. Verify ACS response to contain valid configuration response

Test case ID	ID_RCS_T_2_1_19
Related test cases	
Feature	Device Provisioning
Reason for test	User explicitly re-enables the RCS service; rcs_state set to -4
Pre-conditions Scenario	<ol style="list-style-type: none"> 1. SIM card is enabled to use RCS UP 2. ACS ready to fulfil the requirements described in RCC.14 3. ACS setup according to test procedure 4. user has previously disabled RCS 5. DUT is using cellular coverage 6. The validity of the client's most recent configuration has not expired

Test procedure	1. User enables RCS services on DUT, e.g. master switch to on
Expected results Post-conditions	1. RCS services are enabled
Deep inspection	1. Verify HTTPS request with version set to current version and rcs_state set to same value as version 2. Verify ACS response to contain valid configuration response

Test case ID	ID_RCS_T_2_1_20
Related test cases	
Feature	Device Provisioning
Reason for test	Configuration triggered by a reboot over 3GPP: internal server error
Pre-conditions Scenario	NOTE: To facilitate self-accreditation this test can be simulated 1. SIM card is enabled to use RCS UP 2. ACS ready to fulfil the requirements described in RCC.14 3. ACS setup according to test procedure 4. RCS services have been successfully configured on the phone/SIM pair 5. DUT in cellular coverage
Test procedure	1. DUT is powered on and contacts ACS 2. Reboot DUT.
Expected results Post-conditions	1. The ACS detects an internal error and generates a 500 response (internal server error). DUT keeps using the previous configuration settings and completes a successful registration. RCS and services remain in the same condition as prior to the configuration 2. Following a reboot DUT retries the configuration. Dependent on ACS response (500 error still present or not) subsequent configuration requests are properly handled.
Deep inspection	1. Inspect HTTP/HTTPS negotiation 2. Verify 500 Internal error 3. Verify successful registration following reboot

Test case ID	ID_RCS_T_2_1_21
Related test cases	

Feature	Device Provisioning
Reason for test	Configuration triggered by a reboot over 3GPP: server not responding
Pre-conditions Scenario	<p>NOTE: To facilitate self-accreditation this test can be simulated</p> <ol style="list-style-type: none"> 1. SIM card is enabled to use RCS UP 2. ACS ready to fulfil the requirements described in RCC.14 3. ACS setup according to test procedure 4. RCS services have been successfully configured on the phone/SIM pair 5. DUT in cellular coverage 6. DUT is powered off
Test procedure	<ol style="list-style-type: none"> 1. DUT is powered on. 2. DUT is rebooted.
Expected results Post-conditions	<ol style="list-style-type: none"> 1. ACS does not respond (request timeout). DUT keeps using the previous configuration settings and completes a successful registration. RCS remains in the same condition as prior to the configuration 2. DUT retries the configuration. Dependent on ACS response subsequent configuration requests are properly handled.
Deep inspection	<ol style="list-style-type: none"> 1. Inspect HTTP negotiation 2. Verify successful registration following reboot

Test case ID	ID_RCS_T_2_1_22
Related test cases	
Feature	Device Provisioning
Reason for test	Configuration triggered by a reboot over 3GPP: no version checking
Pre-conditions Scenario	<ol style="list-style-type: none"> 1. SIM card is enabled to use RCS UP 2. ACS ready to fulfil the requirements described in RCC.14 3. RCS services have been successfully configured on the phone/SIM pair 4. DUT is using cellular coverage 5. The validity of the client's current configuration has NOT expired 6. DUT is powered off
Test procedure	<ol style="list-style-type: none"> 1. DUT is powered on 2. DUT registers.
Expected results Post-conditions	<ol style="list-style-type: none"> 1. ACS is contacted by DUT. Due to valid configuration <u>no</u> auto-configuration takes place. 2. Registration takes place successfully.

Deep inspection	<ol style="list-style-type: none"> 1. Verify client does not start autoconfiguration after reboot 2. Verify client tries to register 3. Verify client is successfully registered
------------------------	---

Test case ID	ID_RCS_T_2_1_23
Related test cases	
Feature	Device Provisioning
Reason for test	Configuration triggered by a reboot over non 3GPP: subscriber unauthorized
Pre-conditions Scenario	<p>NOTE: To facilitate self-accreditation this test can be simulated</p> <ol style="list-style-type: none"> 1. SIM card is enabled to use RCS UP 2. ACS ready to fulfil the requirements described in RCC.14 3. ACS setup according to test procedure 4. RCS services have been successfully configured on the phone/SIM pair 5. DUT is under WiFi 6. The validity of the client's current configuration has expired 7. DUT is powered off
Test procedure	<ol style="list-style-type: none"> 1. DUT is powered on and contacts ACS 2. The ACS validates the SIM/phone and ACS generates a 403 response (subscriber unauthorized)
Expected results	<ol style="list-style-type: none"> 1. ACS is contacted by DUT 2. RCS not enabled as the configuration is not successful
Post-conditions	
Deep inspection	<ol style="list-style-type: none"> 1. Inspect HTTPS negotiation 2. Verify 403 Unauthorized response 3. Verify registration does not take place

Test case ID	ID_RCS_T_2_1_24
Related test cases	
Feature	Device Provisioning
Reason for test	Configuration triggered by a reboot over non 3GPP: token invalid
Pre-conditions Scenario	<p>NOTE: To facilitate self-accreditation this test can be simulated</p> <ol style="list-style-type: none"> 1. SIM card is enabled to use RCS UP 2. ACS ready to fulfil the requirements described in RCC.14 3. ACS setup according to test procedure

	<ol style="list-style-type: none"> 4. RCS services have been successfully configured on the phone/SIM pair 5. DUT is under WiFi 6. The validity of the client's current configuration has expired 7. DUT is powered off
Test procedure	<ol style="list-style-type: none"> 1. DUT is powered on and contacts ACS 2. The ACS generates a 511 response (network authentication required) 3. DUT provides user retry mechanism
Expected results Post-conditions	<ol style="list-style-type: none"> 1. ACS is contacted by DUT 2. Configuration takes place seamlessly to the user.RCS services remain in the same condition as prior to the configuration. Token value is removed from DUT. 3. Configuration starts from the beginning
Deep inspection	<ol style="list-style-type: none"> 1. Inspect HTTPS negotiation 2. Verify 511 (Network authentication)n required response 3. Verify autoconfiguration re-start

Test case ID	ID_RCS_T_2_1_25
Related test cases	
Feature	Device Provisioning
Reason for test	Provisioning PUSH: First time configuration initiated by SMS
Pre-conditions Scenario	<p>NOTE: To facilitate self-accreditation this test can be simulated</p> <ol style="list-style-type: none"> 1. SIM card is enabled to use RCS UP 2. ACS ready to fulfil the requirements described in RCC.14 3. ACS setup according to test procedure 4. RCS is inactive on the device 5. DUT is using cellular coverage or WiFi 6. DUT is powered off
Test procedure	<ol style="list-style-type: none"> 1. DUT is powered on and contacts ACS 2. DUT receives configuration request and validates whether IMSI included in the SMS content matches the one on the SIM 3. Client de-registers from the IMS network if registered. And DUT should start configuration procedure.
Expected results Post-conditions	<ol style="list-style-type: none"> 1. ACS is contacted by DUT. A network initiated SMS is sent to the device that includes the IMSI associated to the SIM.. 2. DUT should start cofiguration procedure. If applicable, the welcome message is displayed and the user accepts 3. Registration starts and enables RCS.
Deep inspection	<ol style="list-style-type: none"> 1. Inspect de-registration if client is already registered

	2. Inspect HTTP/HTTPS negotiation
--	-----------------------------------

Test case ID	ID_RCS_T_2_1_26
Related test cases	
Feature	Device Provisioning
Reason for test	Provisioning PUSH: Reconfiguration initiated by SMS
Pre-conditions Scenario	<p>NOTE: To facilitate self-accreditation this test can be simulated</p> <ol style="list-style-type: none"> 1. SIM card is enabled to use RCS UP 2. ACS ready to fulfil the requirements described in RCC.14 3. ACS setup according to test procedure 4. RCS services have been previously configured on the DUT/SIM pair 5. DUT is using cellular coverage or WiFi 6. DUT is powered off
Test procedure	<ol style="list-style-type: none"> 1. DUT is powered on and contacts the ACS. 2. A network initiated SMS is sent to the device that includes the Private User Identity 3. Client de-registers if registered. Current configuration is deleted. Configuration starts.
Expected results Post-conditions	<ol style="list-style-type: none"> 1. ACS is contacted by DUT. 2. DUT receives configuration request and validates whether the IMPI included in the SMS content matches the one in the existing configuration 3. Configuration takes places seamlessly to the user and registration takes place.
Deep inspection	<ol style="list-style-type: none"> 1. Validate SMS format and content 2. Inspect de-registration if client is already registered 3. Verify configuration deletion 4. Inspect HTTP negotiation 5. Verify registration takes place

Test case ID	ID_RCS_T_2_1_27
Related test cases	
Feature	Device Provisioning
Reason for test	Provisioning PUSH: Reconfiguration initiated via EUCR request; R2-16-28

Pre-conditions Scenario	<p>NOTE: To facilitate self-accreditation this test can be simulated</p> <ol style="list-style-type: none"> 1. SIM card is enabled to use RCS UP 2. ACS ready to fulfil the requirements described in RCC.14 3. ACS setup according to test procedure 4. RCS services have been previously configured on the device/SIM pair 5. DUT is using cellular coverage or WiFi 6. DUT is powered off
Test procedure	<ol style="list-style-type: none"> 1. DUT is powered on and contacts ACS 2. A EUCR request is sent by the network 3. Configuration starts.
Expected results Post-conditions	<ol style="list-style-type: none"> 1. ACS is contacted by DUT. 2. Client de-registers and current configuration is deleted. 3. Configuration takes places seamlessly to the user. After registration DUT is RCS enabled.
Deep inspection	<ol style="list-style-type: none"> 1. Inspect de-registration if client is already registered 2. Verify configuration deletion 3. Inspect HTTP negotiation 4. Verify registration takes place

Test case ID	ID_RCS_T_2_1_28
Related test cases	
Feature	Device Provisioning
Reason for test	First-time registration over 3GPP. First-time successful configuration. Default sms app
Pre-conditions Scenario	<ol style="list-style-type: none"> 1. ACS ready to fulfil the requirements described in RCC.14 2. ACS setup according to test procedure 3. RCS services have not been previously configured on the phone/SIM pair 4. Handset is using cellular coverage 5. default_sms_app=1
Test procedure	<ol style="list-style-type: none"> 1. Handset is powered on 2. Once the configuration is successfully sent, it is possible to access RCS services 3. User changes default SMS application, RCS is not selected as default. 4. User A sends messages to Reference 1 5. User changes default SMS application, RCS is selected as default. 6. User A sends messages to Reference 1

<p>Expected results</p> <p>Post-conditions</p>	<ol style="list-style-type: none"> 1. Configuration takes place seamlessly to the user 2. Reference 1 receives a SMS, from user A 3. Reference 1 receives a RCS messaged from user A, when he changed default SMS app
<p>Deep inspection</p>	<ol style="list-style-type: none"> 1. Inspect HTTP/HTTPS request includes new GET parameters (rcs_version, rcs_profile, default_sms_app= 1) 2. Verify successful registration following configuration 3. When the user changed parameter, inspect HTTP/HTTPS request includes new GET parameters (rcs_version, rcs_profile, default_sms_app= 4. Verify there is no RCS chat session established between user A and B 5. When the user changed parameter, inspect HTTP/HTTPS request includes new GET parameters (rcs_version, rcs_profile, default_sms_app= 1) 6. Verify there is RCS chat session established between user A and B

<p>Test case ID</p>	<p>ID_RCS_T_2_1_29</p>
<p>Related test cases</p>	
<p>Feature</p>	<p>Device Provisioning</p>
<p>Reason for test</p>	<p>Conflicts of clients (Android only). Clients switch</p>
<p>Pre-conditions Scenario</p>	<ol style="list-style-type: none"> 1. ACS ready to fulfil the requirements described in RCC.14 2. 2 downloadable clients are installed on Android device 3. RCS clients listening for the broadcast of the Android™ Intents: <ul style="list-style-type: none"> ▪ “ACTION_DEFAULT_SMS_PACKAGE_CHANGED”. ▪ “ACTION_DEFAULT_DIALER_CHANGED” 4. RCS Client #1 is currently running on a device
<p>Test procedure</p>	<ol style="list-style-type: none"> 1. Handset is powered on 2. Run the RCS client #2 on a device 3. Change RCS client preferences to disable currently running client 4. Run again the RCS client #2 on the device 5. Once the configuration is successfully sent, it is possible to access RCS services 6. Test a successful chat to verify behaviour 7. Run RCS client #1 on the device 8. Change RCS client preferences to disable currently running RCS client #1 9. After registration test a successful chat to verify behaviour

Expected results Post-conditions	<ol style="list-style-type: none"> 1. Embedded client performs de-registration 2. Configuration of not embedded client takes places seamlessly to the user 3. If applicable, the welcome message is displayed and the user accepts 4. RCS UX elements are enabled and the user can perform a successful chat after the successful configuration and first-time registration 5. Not embedded client performs de-registration 6. Configuration of embedded client takes places seamlessly to the user 7. RCS UX elements are enabled and the user can perform a successful chat after the successful configuration and first-time registration
Deep inspection	<ol style="list-style-type: none"> 1. Inspect HTTP/HTTPS negotiation 2. Verify response containing the XML 3. The handset resolves the IP address and port to access SIP using FQDN and DNS/SRV queries 4. Verify successful registration following configuration 5. Verify successful IM flow 6. Verify there are no other configuration requests and error messages

Test case ID	ID_RCS_T_2_1_30
Related test cases	
Feature	Device Provisioning
Reason for test	Successful Single Registration over LTE
Pre-conditions Scenario	<ol style="list-style-type: none"> 1. User's device is configured for VoLTE and RCS in the respective network 2. RCS VOLTE SINGLE REGISTRATION parameter value is set to 1 3. Handset is using LTE 4. RCS client mode: RCS-VoLTE
Test procedure	<ol style="list-style-type: none"> 1. Handset is powered on 2. User tries to make a VoLTE call 3. User tries to use RCS messaging services (e.g. 1-to-1 Chat, standalone message)
Expected results Post-conditions	<ol style="list-style-type: none"> 1. Registration takes place seamlessly to the user 2. User can make VoLTE call 3. User can communicate with RCS messaging (e.g. 1-to-1 Chat, standalone message)
Deep inspection	<ol style="list-style-type: none"> 1. Verify single RCS&VoLTE registration flow covering joint capabilities in SIP REGISTER (one IMPI, one sip.instance) 2. Verify session establishment for the VoLTE call 3. Verify session establishment for RCS chat or verify that the message is

	delivered successfully to a recipient.
--	--

Test case ID	ID_RCS_T_2_1_31
Related test cases	
Feature	Device Provisioning
Reason for test	Successful Dual Registration over LTE
Pre-conditions Scenario	<ol style="list-style-type: none"> 1. User's device is configured for VoLTE and RCS in the respective network with different IMPIs 2. RCS VOLTE SINGLE REGISTRATION parameter value is set to 0 3. Handset is using LTE 4. RCS client mode: RCS-CS 5. IMS APN and HOS APN are configured on the device
Test procedure	<ol style="list-style-type: none"> 1. Handset is powered on 2. User tries to make a VoLTE call 3. User tries to use RCS messaging services (e.g. 1-to-1 Chat, standalone message)
Expected results Post-conditions	<ol style="list-style-type: none"> 1. Registration takes place seamlessly to the user 2. User can make VoLTE call 3. User can communicate with RCS messaging (e.g. 1-to-1 Chat, standalone message)
Deep inspection	<ol style="list-style-type: none"> 1. Verify registration flow covering VoLTE capabilities with one IMPI 2. Verify registration flow covering RCS capabilities with a different IMPI than the VoLTE registration 3. Verify session establishment for the VoLTE call 4. Verify session establishment for RCS chat or verify that the message is delivered successfully to a recipient.

Test case ID	ID_RCS_T_2_1_32
Related test cases	
Feature	Device Provisioning

Reason for test	Successful Dual Registration over EPC-integrated WiFi
Pre-conditions Scenario	<ol style="list-style-type: none"> 1. User's device is configured for VoLTE and RCS in the respective network with different IMPIs 2. RCS VOLTE SINGLE REGISTRATION parameter value is set to 0 3. Handset is using LTE and connected to the EPC-integrated WiFi 4. RCS client mode: RCS-CS
Test procedure	<ol style="list-style-type: none"> 1. Handset is powered on 2. User tries to make a VoLTE call 3. User tries to use RCS messaging services (e.g. 1-to-1 Chat, standalone message)
Expected results Post-conditions	<ol style="list-style-type: none"> 1. Registration takes place seamlessly to the user 2. User can make VoLTE call 3. User can communicate with RCS messaging (e.g. 1-to-1 Chat, standalone message)
Deep inspection	<ol style="list-style-type: none"> 1. Verify registration flow covering VoLTE capabilities with one IMPI 2. Verify registration flow covering RCS capabilities with a different IMPI than the VoLTE registration 3. Verify session establishment for the VoLTE call 4. Verify session establishment for RCS chat or verify that the message is delivered successfully to a recipient.

Test case ID	ID_RCS_T_2_1_33
Related test cases	
Feature	Device Provisioning
Reason for test	Successful Dual Registration over non EPC-integrated WiFi
Pre-conditions Scenario	<ol style="list-style-type: none"> 1. User's device is configured for VoLTE and RCS in the respective network with different IMPIs 2. RCS VOLTE SINGLE REGISTRATION parameter value is set to 0 3. Handset is using LTE and connected to the non EPC-integrated WiFi 4. RCS client mode: RCS-CS
Test procedure	<ol style="list-style-type: none"> 1. Handset is powered on 2. User tries to make a VoLTE call 3. User tries to use RCS messaging services (e.g. 1-to-1 Chat, standalone message)

Expected results Post-conditions	<ol style="list-style-type: none"> 1. Registration takes place seamlessly to the user 2. User can make VoLTE call 3. User can communicate with RCS messaging (e.g. 1-to-1 Chat, standalone message)
Deep inspection	<ol style="list-style-type: none"> 1. Verify registration flow covering VoLTE capabilities with one IMPI 2. Verify registration flow covering RCS capabilities with a different IMPI than the VoLTE registration 3. Verify session establishment for the VoLTE call 4. Verify session establishment for RCS chat or verify that the message is delivered successfully to a recipient.

Test case ID	ID_RCS_T_2_1_34
Related test cases	
Feature	Device Provisioning
Reason for test	Non EPC integrated Wifi and Cellular endurance. A long Idle period
Pre-conditions Scenario	<ol style="list-style-type: none"> 1. Pre-conditions as per section 1.2 of the current document apply. 2. User in Wi-Fi and Cellular coverage. 3. Test must be performed on UDP and TCP TLS network protocol
Test procedure	<ol style="list-style-type: none"> 1. Test duration at least 3 hours 2. User is in a chat session and receives a chat message every 30 minutes
Expected results Post-conditions	<ol style="list-style-type: none"> 1. Chat sessions work correctly on UDP, TCP and TLS protocols 2. After screen 'timeout' has expired, device automatically turns in idle state (black screen is shown). 3. User leaves idle state and a chat window is open
Deep inspection	<ol style="list-style-type: none"> 1. Inspect Expires header value 2. Verify that all re-register have been done correctly during idle period (in accordance with network parameters) 3. Verify that client uses the "NEXT NONCE" value provided by the network 4. Verify "NONCE COUNT" value has been incremented

Test case ID	ID_RCS_T_2_1_35
---------------------	-----------------

Related test cases	
Feature	Device Provisioning
Reason for test	Unexpected 403 response
Pre-conditions Scenario	<ol style="list-style-type: none"> 1. Pre-conditions as per section 1.2 of the current document apply. 2. The phone/client is registered and the registration timer is far from expiration
Test procedure	<ol style="list-style-type: none"> 1. IP connectivity is lost 2. IP connectivity is recovered 3. Client gets the 403 Forbidden (no Warning header included) response to any non-REGISTER request due to change of IP address <p>NOTE: This test can be simulated</p>
Expected results	<ol style="list-style-type: none"> 1. No further attempts shall be made and an error message shall be shown to the user
Post-conditions	
Deep inspection	<ol style="list-style-type: none"> 1. Verify the 403 Forbidden SIP response was received 2. Verify no more than 5 attempts of sending same non-REGISTER request take place

Test case ID	ID_RCS_T_2_1_36
Related test cases	
Feature	Device Provisioning
Reason for test	Wifi - Internet Network failure
Pre-conditions Scenario	<ol style="list-style-type: none"> 1. Pre-conditions as per section 1.2 of the current document apply. 2. Dual registration is implemented in the network and on the device 3. Device is connected to both non EPC integrated Wi-Fi and Cellular coverage.

Test procedure	<ol style="list-style-type: none"> 1. Simulate a network failure: No answer to SIP requests over TCP or TLS (e.g. disconnect Wi-Fi access point from WAN) 2. Start chat , FT and in-call sharing services (such as Video Share, Image Share)
Expected results Post-conditions	<ol style="list-style-type: none"> 1. Chat, FT, in-call sharing services failed on the client
Deep inspection	<ol style="list-style-type: none"> 1. Verify client sends REGISTER request over TCP or TLS to the P-CSCF and waits for a response from the network 2. Whenever SIP 200 OK response or an error response (e.g. 403, 408, 500 etc.) does not arrive , the application client shall execute the mechanism defined in 3GPP TS 24.229 and sub-clause 4.5 of RFC5626

Test case ID	ID_RCS_T_2_1_37
Related test cases	
Feature	Device Provisioning
Reason for test	Wi-Fi access point temporarily without internet connection
Pre-conditions Scenario	<ol style="list-style-type: none"> 1. Pre-conditions as per section 1.2 of the current document apply. 2. Dual registration is implemented in the network and on the device 3. Device is connected to both non EPC integrated Wi-Fi and Cellular coverage.
Test procedure	<ol style="list-style-type: none"> 1. After successful registration process, unplug internet connection from the Wi-Fi Access Point for 1 hour 2. Re-Plug of the internet connection on the Wi-Fi Access Point, while mobile device still in the range of the Wi-Fi Access Point
Expected results Post-conditions	<ol style="list-style-type: none"> 1. No freeze / no black screen on the device

Deep inspection	<ol style="list-style-type: none"> 1. After internet connection lost verify if REGISTERS are regularly sent to the IMS according to RFC5626 2. Verify successful re-registration after Internet connection is back. 3. Verify that re-registration was performed within the re-register timer on a regular basis
------------------------	---

2.2 Capability Discovery and Service Availability

2.2.1 Functional test cases

Test case ID	ID_RCS_F_2_2_1
Related test cases	
Feature	Capability Discovery and Service Availability
Reason for test	Validate R3-3-3-1 the device updates the capability of a contact when the user enters a new contact into their address book on their device.
Pre-conditions Scenario	<ol style="list-style-type: none"> 1. The device is able to indicate messaging service (e.g. RCS Message versus. xMS) when the message is sent. 2. User A is an RCS User 3. User A is online (connected via HSPA, LTE, or WiFi) 4. Reference 1 is not stored in User A address book 5. Reference 1 is an RCS User 6. Reference 1 is online (connected via HSPA, LTE, or WiFi)
Test procedure	<ol style="list-style-type: none"> 1. User A adds Reference 1 MSISDN into the address book. 2. User A opens the messaging composer and sends a message to Reference 1.
Expected results	<ol style="list-style-type: none"> 1. User A's device sends an RCS Message to Reference 1.
Post-conditions	
Deep inspection	–

Test case ID	ID_RCS_F_2_2_2
Related test cases	
Feature	Capability Discovery and Service Availability

Reason for test	Validate R3-3-3-1 the device updates the capability of a contact when the user enters a new contact into their address book on their device.
Pre-conditions Scenario	<ol style="list-style-type: none"> 1. Network A allows capability discovery. 2. For Seamless Messaging, network A does not support NFS. 3. The device is able to indicate the messaging service (e.g. RCS Message versus. xMS) when the message is sent. 4. User A is an RCS User 5. User A is online (connected via HSPA, LTE, or WiFi) 6. Reference 1 is not stored in User A address book 7. Reference 1 is not an RCS User
Test procedure	<ol style="list-style-type: none"> 1. User A adds Reference 1 MSISDN to their address book. 2. User A opens the messaging composer and sends a message to Reference 1
Expected results	<ol style="list-style-type: none"> 1. User A's device sends a SMS Message to Reference 1.
Post-conditions	
Deep inspection	–

2.2.2 Technical test cases

2.2.2.1 SIP OPTIONS Exchange

Test case ID	ID_RCS_T_2_2_1_1
Related test cases	
Feature	Capability Discovery and Service Availability - OPTIONS
Reason for test	Capability query in address book
Pre-conditions Scenario	<ol style="list-style-type: none"> 1. Both handsets are RCS registered 2. DUT and Reference 1 are online
Test procedure	<ol style="list-style-type: none"> 1. DUT selects Reference 1 in the address book who is also an RCS user 2. As a result a capability exchange takes place and the right capabilities/services available are displayed

Expected results	1. The phone/client shows the Universal Profile Release RCS services available
Post-conditions	
Deep inspection	<ol style="list-style-type: none"> 1. Verify OPTIONS exchange with right tags 2. Verify responses 3. If testing two different devices, repeat the test swapping the role of the devices

Test case ID	ID_RCS_T_2_2_1_2
Related test cases	
Feature	Capability Discovery and Service Availability - OPTIONS
Reason for test	Capability query in address book (RCS contact currently not registered)
Pre-conditions Scenario	<ol style="list-style-type: none"> 1. DUT handset is RCS registered 2. Reference 1 is an offline RCS user
Test procedure	<ol style="list-style-type: none"> 1. DUT selects Reference 1 who is an RCS user 2. As a result a capability exchange takes place but the network reports that Reference 1 is offline
Expected results	1. The phone/client shows from the RCS services for that contact only IM/Chat and File Transfer as currently available
Post-conditions	
Deep inspection	<ol style="list-style-type: none"> 1. Verify OPTIONS exchange with right tags 2. Verify OPTIONS response includes automata tag or is a 480/408 response 3. If testing two different devices, repeat the test swapping the role of the devices

Test case ID	ID_RCS_T_2_2_1_3
Related test cases	

Feature	Capability Discovery and Service Availability - OPTIONS
Reason for test	Compatibility: Capability query in address book with pre-UP1.0 user
Pre-conditions Scenario	<ol style="list-style-type: none"> 1. Both handsets are RCS registered 2. DUT and Reference 1 are online 3. Reference 1 is pre-UP1.0 user (RCS)
Test procedure	<ol style="list-style-type: none"> 1. DUT selects Reference 1 in the address book who is also an RCS user 2. As a result a capability exchange takes place and the right capabilities/services available are displayed
Expected results Post-conditions	<ol style="list-style-type: none"> 1. The phone/client shows only the pre-UP1.0 RCS services as available
Deep inspection	<ol style="list-style-type: none"> 1. Verify OPTIONS exchange with right tags 2. Verify responses

Test case ID	ID_RCS_T_2_2_1_4
Related test cases	
Feature	Capability Discovery and Service Availability - OPTIONS
Reason for test	To verify that there shall not be any RCS service entry points when the recipient is known to be a non- RCS user.
Pre-conditions Scenario	<ol style="list-style-type: none"> 1. DUT registers and is online. 2. Reference 1 is a non-RCS user.
Test procedure	<ol style="list-style-type: none"> 1. DUT opens the conversation with Reference 1 or opens the contact of Reference 1.
Expected results Post-conditions	<ol style="list-style-type: none"> 1. There are not any RCS service entry points.

Deep inspection	<ol style="list-style-type: none"> 1. Verify OPTIONS exchange with right tags. 2. Verify response from the core is 404 Not Found or 604 Does Not Exist Anywhere or 200 OK not including any of the tags used by RCS services.
------------------------	---

Test case ID	ID_RCS_T_2_2_1_5
Related test cases	
Feature	Capability Discovery and Service Availability - OPTIONS
Reason for test	Capability query in address book (polling set to 0)
Pre-conditions Scenario	<ol style="list-style-type: none"> 1. DUT handset is RCS registered 2. The polling period is set to 0
Test procedure	<ol style="list-style-type: none"> 1. Leave the phone running for a significant period of time (2 days)
Expected results	<ol style="list-style-type: none"> 1. No polling is performed
Post-conditions	
Deep inspection	

Test case ID	ID_RCS_T_2_2_1_6
Related test cases	
Feature	Capability Discovery and Service Availability - OPTIONS
Reason for test	To verify that the conditions the device scan the full contact list to find out which of the contacts are enabled for which RCS services.

Pre-conditions Scenario	<ol style="list-style-type: none"> 1. SIM 1 with RCS account 1 is inserted in DUT. SIM 2 with RCS account 2 is not inserted on DUT. 2. There are 5 contacts on DUT.
Test procedure	<ol style="list-style-type: none"> 1. Power off DUT and switch SIM card to SIM 2. Then power on and DUT with account 2 registers.
Expected results Post-conditions	<ol style="list-style-type: none"> 1. For RCS contacts on DUT, there are available RCS services entry points. For Non-RCS contacts on DUT, there are not any RCS services entry points.
Deep inspection	<ol style="list-style-type: none"> 1. DUT shall perform an initial scan of the full contact list. Verify OPTIONS exchange with right tags to each contact in contact list and responses.

Test case ID	ID_RCS_T_2_2_1_7
Related test cases	
Feature	Capability Discovery and Service Availability - OPTIONS
Reason for test	To verify the conditions that the device requests a RCS capability discovery and/or service availability update of an individual contact.
Pre-conditions Scenario	<ol style="list-style-type: none"> 1. DUT registers RCS services and is online. 2. Reference 1 and Reference 5 are RCS users but are not saved as contact on DUT. 3. Reference 2, Reference 3 and Reference 4 are RCS users and are contacts of DUT with CAPABILITY INFO EXPIRY time expires. 4. Reference 6 and Reference 7 are RCS users.
Test procedure	<ol style="list-style-type: none"> 1. When Reference 1 is added to the address book. 2. When opening Reference 2 from the contact list. 3. When starting a conversation with Reference 3 (e.g. when adding a contact to the "To:" field of a new message.) 4. When opening a conversation or thread with Reference 4. 5. When entering the number of Reference 5 into the dialler. 6. A chat message or File Transfer event from Reference 6 is received.

Expected results Post-conditions	<ol style="list-style-type: none"> Reference 1 is created as a new contact; the right capabilities available for Reference 1 are displayed on DUT. The capabilities available for Reference 2 are updated and displayed on DUT. The capabilities available for Reference 3 are updated and displayed on DUT. The capabilities available for Reference 4 are updated and displayed on DUT. The right capabilities available for Reference 5 are displayed on DUT.
Deep inspection	<ol style="list-style-type: none"> For each time, DUT requests an RCS capability discovery. Verify OPTIONS exchange with right tags and responses.

Test case ID	ID_RCS_T_2_2_1_8
Related test cases	
Feature	Capability Discovery and Service Availability - OPTIONS
Reason for test	Messaging Capabilities Validity (optimization)
Pre-conditions Scenario	<ol style="list-style-type: none"> DUT and Reference 1 handsets are registered Both users are online DUT and Reference 1 have integrated messaging clients DUT and Reference 1 exchange chat messages
Test procedure	<ol style="list-style-type: none"> The coverage varies for handset Reference 1 between EDGE/3G/HSPA/LTE or vice versa IP reconfiguration does not take place
Expected results Post-conditions	<ol style="list-style-type: none"> The UX is not impacted Capability exchange does NOT happen
Deep inspection	<ol style="list-style-type: none"> Verify OPTIONS exchange does not take place unless CAPABILITY INFO EXPIRY time expires for DUT or Reference 1 If testing two different devices, repeat the test swapping the role of the devices

Test case ID	ID_RCS_T_2_2_1_9
Related test cases	
Feature	Capability Discovery and Service Availability - OPTIONS
Reason for test	To verify that MNO shall have the ability to limit the impact of capability and availability checks.
Pre-conditions Scenario	<ol style="list-style-type: none"> 1. DUT registers RCS services and is online. 2. NUT defines minimum interval duration by set CAPABILITY INFO EXPIRY for RCS contact and NON RCS CAPABILITY INFO EXPIRY for Non-RCS contact. 3. There are some contacts on DUT, including RCS contact and non-RCS contact.
Test procedure	<ol style="list-style-type: none"> 1. DUT opens an RCS contact in minimum interval duration. 2. DUT opens a non-RCS contact in minimum interval duration. 3. DUT makes an RCS Call with an RCS contact.
Expected results Post-conditions	<ol style="list-style-type: none"> 1. RCS contact is open with capabilities available unchanged. 2. Non-RCS contact is open with capabilities unavailable unchanged. 3. Call can be made successfully with capabilities available of the contact is updated.
Deep inspection	<ol style="list-style-type: none"> 1. Verify DUT does not use capability discovery mechanism to the same RCS contact in CAPABILITY INFO EXPIRY value. 2. Verify DUT does not use capability discovery mechanism to the same non-RCS contact in NON CAPABILITY INFO EXPIRY value. 3. Verify OPTIONS exchange happens with right tags and responses when the call has been set up.

Test case ID	ID_RCS_T_2_2_1_10
Related test cases	
Feature	Capability Discovery and Service Availability - OPTIONS
Reason for test	To verify that individual MNO can disable RCS capability discovery and service availability in their network and on their devices.

Pre-conditions Scenario	<ol style="list-style-type: none"> 1. DUT and Reference 1 register RCS services and are online. 2. Network Reference 1 and Network Reference 2 disable RCS capability discovery and service availability by set CAPABILITY DISCOVERY MECHANISM to 2. 3. Reference 2 is Non-RCS user. 4. Reference 1 and Reference 2 are contacts of DUT.
Test procedure	<ol style="list-style-type: none"> 1. DUT selects Reference 1 in the address book. 2. DUT selects Reference 2 in the address book.
Expected results Post-conditions	<ol style="list-style-type: none"> 1. Reference 1 shows the RCS services available and selectable. 2. Reference 2 shows the RCS services available and selectable.
Deep inspection	<ol style="list-style-type: none"> 1. Verify there is no OPTIONS exchange happening. 2. The same as 1.

Test case ID	ID_RCS_T_2_2_1_11
Related test cases	
Feature	Capability Discovery and Service Availability - OPTIONS
Reason for test	Reference section R3-4-6: To verify address book scan when SIM is changed
Pre-conditions Scenario	<ol style="list-style-type: none"> 1. DUT is RCS registered 2. The new SIM is RCS capable 3. For the new SIM, CAPABILITY DISCOVERY MECHANISM configuration value is set to (0) OPTIONS by MNO of the new SIM 4. For the new SIM, DISABLE INITIAL ADDRESS BOOK SCAN config is set to (0) FALSE by MNO of the new SIM 5. Reference1 is RCS capable and RCS registered 6. Reference2 is RCS capable and RCS not registered (offline) 7. Reference3 is non RCS capable 8. Reference1, Reference2 and Reference3 are in the DUT's address book 9. DUT is under 3GPP coverage or Wi-Fi
Test procedure	<ol style="list-style-type: none"> 1. Insert the new RCS SIM in DUT and reboot the DUT. 2. Check the address book

Expected results Post-conditions	<ol style="list-style-type: none"> 1. DUT is registered to RCS 2. All the contacts in the address book are updated with their supported capabilities as received from the network.
Deep inspection	<ol style="list-style-type: none"> 1. Verify DUT sends out autoconfiguration request and it is successful 2. Verify DUT sends REGISTER request. Post success of REGISTER the 200OK response is received from the network. 3. Verify DUT sends SIP OPTIONS to Reference1 and receives 200OK indicating it is RCS capable and with supported RCS capabilities for Reference 1. 4. Verify DUT sends SIP OPTIONS to Reference2 and receives "480 TEMPORARILY UNAVAILABLE" indicating it is RCS capable but offline. 5. Verify DUT sends SIP OPTIONS to Reference3 and receives "404 NOT FOUND" indicating it is non-RCS capable

Test case ID	ID_RCS_T_2_2_1_12
Related test cases	
Feature	Capability Discovery and Service Availability - OPTIONS
Reason for test	Reference section R3-4-9-1 (US R3-3-5-1): To verify the Capability availability checks optimization for RCS contact
Pre-conditions Scenario	<ol style="list-style-type: none"> 1. In DUT, CAPABILITY DISCOVERY MECHANISM config value is set to (0) OPTIONS 2. DUT is RCS registered 3. SERVICE AVAILABILITY INFO EXPIRY value is greater than 0 4. CAPABILITY INFO EXPIRY value is greater than 0 5. Service and capability was obtained more recently than the above configured value 6. Reference1 is RCS capable and RCS registered 7. Reference1 exist in the address book in DUT. 8. DUT is under 3GPP coverage or Wi-Fi
Test procedure	<ol style="list-style-type: none"> 1. Open address book in DUT and select Reference1
Expected results Post-conditions	<ol style="list-style-type: none"> 1. Reference1's supported RCS capabilities are displayed to the user.

Deep inspection	1. Verify DUT will not send any capability fetch request as the service and capability was obtained more recently.
------------------------	--

Test case ID	ID_RCS_T_2_2_1_13
Related test cases	
Feature	Capability Discovery and Service Availability - OPTIONS
Reason for test	Reference section R3-4-9-3 (US R3-3-5-: To verify that Capability availability check will not be sent for the RCS contact whose prefix will not match with MNO configured prefix list
Pre-conditions Scenario	<ol style="list-style-type: none"> 1. In DUT, CAPABILITY DISCOVERY MECHANISM config value is set to (0) OPTIONS 2. DUT is RCS registered 3. CAPABILITY DISCOVERY ALLOWED PREFIXES config value is not 0 4. Reference1 is RCS capable and RCS registered 5. Reference1 doesn't exist in the address book in DUT. 6. Prefix of Reference1 doesn't matches with any value in the list of prefixes provided in CAPABILITY DISCOVERY ALLOWED PREFIXES config value 7. DUT is under 3GPP coverage or Wi-Fi
Test procedure	1. DUT adds Reference1 to the address book
Expected results	1. Reference1 will be added to the address book but without indication of RCS capabilities
Post-conditions	
Deep inspection	1. Verify DUT will not send any capability fetch request

Test case ID	ID_RCS_T_2_2_1_14
Related test cases	
Feature	Capability Discovery and Service Availability - OPTIONS

Reason for test	Reference section R3-4-9-3 (US R3-3-5: To verify the Capability availability check will be sent for only those RCS contacts whose prefix will match with MNO configured prefix list
Pre-conditions Scenario	<ol style="list-style-type: none"> 1. In DUT, CAPABILITY DISCOVERY MECHANISM config value is set to (0) OPTIONS 2. DUT is RCS registered 3. CAPABILITY DISCOVERY ALLOWED PREFIXES config value is not 0 4. Reference1 is RCS capable and RCS registered 5. Reference1 doesn't exist in the address book in DUT. 6. Prefix of Reference1 matches with a value in the list of prefixes provided in CAPABILITY DISCOVERY ALLOWED PREFIXES config value 7. DUT is under 3GPP coverage or Wi-Fi
Test procedure	<ol style="list-style-type: none"> 1. DUT adds Reference1 to the address book
Expected results	<ol style="list-style-type: none"> 1. Reference1 is added to the address book and all its supported RCS capabilities are displayed to the user.
Post-conditions	
Deep inspection	<ol style="list-style-type: none"> 1. Verify DUT sends SIP OPTIONS to Reference1 and receives 200OK indicating it is RCS capable with the list of supported RCS capabilities

Test case ID	ID_RCS_T_2_2_1_15
Related test cases	
Feature	Capability exchange
Reason for test	Enriched calling. Trigger after minimum N digits (prefix whitelisted)
Pre-conditions Scenario	<ol style="list-style-type: none"> 1. Both handsets are RCS registered 2. DUT and Reference 1 are online and they are not in an active call 3. DUT has Reference 1's prefix listed under the CAPABILITY DISCOVERY ALLOWED PREFIXES parameter 4. In DUT, CAPABILITY DISCOVERY MECHANISM config value is set to (0) SIP OPTIONS
Test procedure	<ol style="list-style-type: none"> 1. DUT inserts in the dialler first N digits of Reference 1 MSISDN

Expected results Post-conditions	1. DUT phone/client shows the call composer capability for Reference 1 after the full MSISDN is entered
Deep inspection	1. Verify OPTIONS exchange with call composer ICSI 2. Verify responses

Test case ID	ID_RCS_T_2_2_1_16
Related test cases	
Feature	Capability exchange
Reason for test	Enriched calling. Trigger after minimum N digits (prefix is not whitelisted)
Pre-conditions Scenario	1. Both handsets are RCS registered 2. DUT and Reference 1 are online and they are not in an active call 3. DUT does not have Reference 1's prefix listed under the CAPABILITY DISCOVERY ALLOWED PREFIXES parameter and he has other prefixes listed 4. In DUT, CAPABILITY DISCOVERY MECHANISM config value is set to (0) SIP OPTIONS
Test procedure	1. DUT inserts in the dialler first N digits of Reference 1's MSISDN
Expected results Post-conditions	1. DUT phone/client does not show the call composer capability for Reference 1
Deep inspection	1. Verify OPTIONS exchange is not initiated towards Reference 1

2.2.2.2 Presence Based Exchange

Test case ID	ID_RCS_T_2_2_2_1
Related test cases	
Feature	Capability Discovery and Service Availability - Presence
Reason for test	Reference section R3-4-1: Configuring Capability Discovery
Pre-conditions Scenario	<ol style="list-style-type: none"> 1. DUT is not RCS registered 2. DUT is under 3GPP coverage or Wi-Fi
Test procedure	<ol style="list-style-type: none"> 1. DUT is powered on
Expected results	<ol style="list-style-type: none"> 1. DUT is registered to RCS services
Post-conditions	
Deep inspection	<ol style="list-style-type: none"> 1. Verify HTTP GET request (autoconfig request) is sent from DUT 2. Verify DUT receives HTTP 200OK with RCS configuration 3. Verify CAPABILITY DISCOVERY MECHANISM config value is set to (1) PRESENCE. 4. Verify DUT sends out REGISTER request, post success of REGISTER, PUBLISH request containing RCS service capabilities is sent out and 200OK is received from the network.

Test case ID	ID_RCS_T_2_2_2_2
Related test cases	
Feature	Capability Discovery and Service Availability - Presence
Reason for test	Reference section R3-4-3: To verify network responds 200OK response for capability discovery request.
Pre-conditions Scenario	<ol style="list-style-type: none"> 1. In DUT, CAPABILITY DISCOVERY MECHANISM config value is set to (1) PRESENCE 2. DUT is RCS registered 3. Reference1 is RCS capable and RCS registered 4. Reference1 doesn't exist in the DUT's address book 5. DUT and Reference1 are under 3GPP coverage or Wi-Fi

Test procedure	1. Add Reference1 to address book in DUT
Expected results Post-conditions	1. Reference1 is shown as RCS capable in the address book with its supported RCS capabilities.
Deep inspection	<ol style="list-style-type: none"> 1. Verify DUT sends ANONYMOUS SUBSCRIBE to the Reference1 and 200OK response is received from the network 2. Verify DUT receives NOTIFY from the network with the Reference1's supported RCS service capability information, DUT responds with 200OK to this NOTIFY request.

Test case ID	ID_RCS_T_2_2_2_3
Related test cases	
Feature	Capability Discovery and Service Availability - Presence
Reason for test	Reference section R3-4-3: To verify network responds 480 response or with empty presence document for capability discovery request.
Pre-conditions Scenario	<ol style="list-style-type: none"> 1. In DUT, CAPABILITY DISCOVERY MECHANISM config value is set to (1) PRESENCE 2. DUT is RCS registered 3. Reference1 is RCS capable and not RCS registered 4. Reference1 not exist in the DUT's address book 5. DUT is under 3GPP coverage or Wi-Fi
Test procedure	1. Add Reference1 to address book in DUT
Expected results Post-conditions	1. Reference1 is shown as RCS capable in the address book and is offline.
Deep inspection	1. Verify DUT sends SIP ANONYMOUS SUBSCRIBE to the Reference1 and Network responds with "480 TEMPORARILY UNAVAILABLE" response or with empty presence document

Test case ID	ID_RCS_T_2_2_2_4
---------------------	------------------

Related test cases	
Feature	Capability Discovery and Service Availability - Presence
Reason for test	Reference section R3-4-3: To verify network responds 404 response for capability discovery request.
Pre-conditions Scenario	<ol style="list-style-type: none"> 1. In DUT, CAPABILITY DISCOVERY MECHANISM config value is set to (1) PRESENCE 2. DUT is RCS registered 3. Reference1 is non RCS capable 4. Reference1 not exist in the DUT's address book 5. DUT is under 3GPP coverage or Wi-Fi
Test procedure	<ol style="list-style-type: none"> 1. DUT adds Reference 1 to his address book
Expected results	<ol style="list-style-type: none"> 1. Reference1 is shown as not RCS capable in the address book.
Post-conditions	
Deep inspection	<ol style="list-style-type: none"> 1. Verify DUT sends SIP ANONYMOUS SUBSCRIBE to the Reference1 and Network responds with "404 NOT FOUND" response

Test case ID	ID_RCS_T_2_2_2_5
Related test cases	
Feature	Capability Discovery and Service Availability - Presence
Reason for test	Reference section R3-4-4 (US3-2 R3-2-1 & US3-2 R3-2-: To verify capability fetch of individual contacts
Pre-conditions Scenario	<ol style="list-style-type: none"> 1. In DUT, CAPABILITY DISCOVERY MECHANISM config value is set to (1) PRESENCE 2. DUT is RCS registered 3. Reference1 is RCS capable and RCS registered 4. Reference2 is RCS capable and RCS registered 5. Reference1 and Reference2 are part of DUT's address book 6. Capabilities of Reference1 and Reference2 are not available or are expired 7. DUT is under 3GPP coverage or Wi-Fi

Test procedure	<ol style="list-style-type: none"> 1. In DUT's address book select Reference1 2. In DUT's address book select Reference2
Expected results Post-conditions	<ol style="list-style-type: none"> 1. Reference1 is shown as RCS capable and its supported RCS capabilities are displayed to the user. 2. Reference2 is shown as RCS capable and its supported RCS capabilities are displayed to the user.
Deep inspection	<ol style="list-style-type: none"> 1. Verify DUT sends SIP ANONYMOUS SUBSCRIBE to the Reference1 and Reference2 and 200OK response is received from the network for each SUBSCRIBE request sent. 2. Verify DUT receives NOTIFY from the network with the Reference1's supported service capability information, DUT responds with 200OK to this NOTIFY request. 3. Verify DUT receives NOTIFY from the network with the Reference2's supported service capability information, DUT responds with 200OK to this NOTIFY request.

Test case ID	ID_RCS_T_2_2_2_6
Related test cases	
Feature	Capability Discovery and Service Availability - Presence
Reason for test	Reference section R3-4-6: To verify address book scan when SIM is changed
Pre-conditions Scenario	<ol style="list-style-type: none"> 1. DUT is RCS registered 2. The new SIM is RCS capable 3. For the new SIM, CAPABILITY DISCOVERY MECHANISM config value is set to (1) PRESENCE by MNO of the new SIM 4. For the new SIM, DISABLE INITIAL ADDRESS BOOK SCAN config is set to (0) FALSE by MNO of the new SIM 5. For the new SIM, MAX-NUMBER-OF-SUBSCRIPTIONS-IN-PRESENCE-LIST config is set to (0) by MNO of the new SIM 6. Reference1 is RCS capable and RCS registered 7. Reference2 is RCS capable and RCS not registered (offline) 8. Reference3 is non RCS capable 9. Reference1, Reference2 and Reference3 are in the DUT's address book 10. DUT is under 3GPP coverage or Wi-Fi
Test procedure	<ol style="list-style-type: none"> 1. Insert the new RCS SIM in DUT and reboot the DUT. 2. Check the address book

Expected results Post-conditions	<ol style="list-style-type: none"> 1. DUT is registered to RCS 2. All the contacts in the address book are updated with their supported capabilities as received from the network.
Deep inspection	<ol style="list-style-type: none"> 1. Verify DUT sends out autoconfiguration request and it is successful 2. Verify DUT sends REGISTER request. Post success of REGISTER, PUBLISH request is sent out and 200OK response is received from the network. 3. Verify DUT sends SIP ANONYMOUS SUBSCRIBE to Reference1 and receives 200OK indicating it is RCS capable 4. Verify DUT sends SIP ANONYMOUS SUBSCRIBE to Reference2 and receives "480 TEMPORARILY UNAVAILABLE" or with empty presence document indicating it is RCS capable but offline. 5. Verify DUT sends SIP ANONYMOUS SUBSCRIBE to Reference3 and receives "404 NOT FOUND" indicating it is non-RCS capable 6. Verify NOTIFY is received for Reference1 with its supported RCS capabilities, DUT responds with 200OK to this NOTIFY request.

Test case ID	ID_RCS_T_2_2_2_7
Related test cases	
Feature	Capability Discovery and Service Availability - Presence
Reason for test	Reference section R3-4-7 (US R3-3-3-: To verify capability update fetch when a contact is selected in the address book
Pre-conditions Scenario	<ol style="list-style-type: none"> 1. In DUT, CAPABILITY DISCOVERY MECHANISM config value is set to (1) PRESENCE 2. DUT is RCS registered 3. Reference1 is RCS capable and RCS registered 4. Reference1 exist in the address book of DUT 5. Capabilities of Reference1 are not available or are expired 6. DUT is under 3GPP coverage or Wi-Fi
Test procedure	<ol style="list-style-type: none"> 1. Open address book in DUT 2. Select reference1 in the address book
Expected results Post-conditions	<ol style="list-style-type: none"> 1. Reference1 is shown in the address book 2. User should be able see the updated supported RCS capabilities of Reference1

Deep inspection	<ol style="list-style-type: none"> 1. Verify DUT sends SIP ANONYMOUS SUBSCRIBE to Reference1 and receives 200OK indicating it is RCS capable 2. Verify NOTIFY is received for Reference1 with its supported RCS capabilities, DUT responds with 200OK to this NOTIFY request.
------------------------	---

Test case ID	ID_RCS_T_2_2_2_8
Related test cases	
Feature	Capability Discovery and Service Availability - Presence
Reason for test	Reference section R3-4-7 (US R3-3-3-:To verify capability update fetch when starting a conversation with the contact
Pre-conditions Scenario	<ol style="list-style-type: none"> 1. In DUT, CAPABILITY DISCOVERY MECHANISM config value is set to (1) PRESENCE 2. DUT is RCS registered and supports RCS Messaging service (one to one IM) 3. Reference 1 is RCS capable and RCS registered 4. Reference 1 doesn't exist in the DUT address book 5. Reference 1 supports RCS Messaging service (one to one IM) 6. DUT is under 3GPP coverage or Wi-Fi
Test procedure	<ol style="list-style-type: none"> 1. Open the native messaging application on DUT 2. Create a new message and send to Reference1
Expected results Post-conditions	<ol style="list-style-type: none"> 1. Native messaging application shall be opened successfully 2. New message is created succssfully. Reference1 shall be entered in the "To" field of the new message and message is sent to Reference1
Deep inspection	<ol style="list-style-type: none"> 1. Verify DUT sends SIP ANONYMOUS SUBSCRIBE to Reference1 and receives 200OK indicating it is RCS capable 2. Verify NOTIFY is received for Reference1 with its supported RCS capabilities and indicates IM service is supported, DUT responds with 200OK to this NOTIFY request. 3. IM Chat is successfully established with SIP INVITE session.

Test case ID	ID_RCS_T_2_2_2_9
Related test cases	
Feature	Capability Discovery and Service Availability - Presence
Reason for	Reference section R3-4-7 (US R3-3-3-: To verify capability update fetch

test	when opening a conversation or thread with that contact.
Pre-conditions Scenario	<ol style="list-style-type: none"> 1. In DUT, CAPABILITY DISCOVERY MECHANISM config value is set to (1) PRESENCE 2. DUT is RCS registered and supports messaging service (one to one IM chat) 3. Reference 1 is RCS capable and RCS registered 4. DUT and Reference1 supports RCS messaging service (one to one IM chat) 5. There are existing messaging threads on the DUT with Reference1 6. Capabilities of Reference1 are not available or are expired 7. DUT and Reference1 are under 3GPP coverage or Wi-Fi
Test procedure	<ol style="list-style-type: none"> 1. Open messaging thread on DUT with Reference1
Expected results	<ol style="list-style-type: none"> 1. Messaging thread with Referene1 is loaded and Reference1 is shown as RCS Messaging service (one to one IM chat) capable.
Post-conditions	
Deep inspection	<ol style="list-style-type: none"> 1. Verify DUT sends SIP ANONYMOUS SUBSCRIBE to Reference1 and receives 200OK indicating it is RCS capable 2. Verify NOTIFY is received for Reference1 with its supported RCS capabilities and indicates IM service is supported, DUT responds with 200OK to this NOTIFY request.

Test case ID	ID_RCS_T_2_2_2_10
Related test cases	
Feature	Capability Discovery and Service Availability - Presence
Reason for test	Reference section R3-4-7 (US R3-3-3-: To verify capability update fetch when entering a potentially valid number into the dialler
Pre-conditions Scenario	<ol style="list-style-type: none"> 1. In DUT, CAPABILITY DISCOVERY MECHANISM config value is set to (1) PRESENCE 2. DUT is RCS registered 3. Reference 1 is RCS capable and RCS registered 4. Reference 1 doesn't exist in the address book on DUT 5. DUT is under 3GPP coverage or Wi-Fi
Test procedure	<ol style="list-style-type: none"> 1. Open native dialler on DUT and enter Reference1's phone number

Expected results	1. Capability fetch request is sent for Reference1
Post-conditions	
Deep inspection	<ol style="list-style-type: none"> 1. Verify DUT sends SIP ANONYMOUS SUBSCRIBE to Reference1 and receives 200OK indicating it is RCS capable 2. Verify NOTIFY is received for Reference1 with its supported RCS capabilities, DUT responds with 200OK to this NOTIFY request.

Test case ID	ID_RCS_T_2_2_2_11
Related test cases	
Feature	Capability Discovery and Service Availability - Presence
Reason for test	Reference section R3-4-9-1 (US R3-3-5-1): To verify the Capability availability checks optimization for RCS contact
Pre-conditions Scenario	<ol style="list-style-type: none"> 1. In DUT, CAPABILITY DISCOVERY MECHANISM config value is set to (1) PRESENCE 2. DUT is RCS registered 3. SERVICE AVAILABILITY INFO EXPIRY value is greater than 0 4. CAPABILITY INFO EXPIRY value is greater than 0 5. Service and capability was obtained more recently than the above configured value 6. Reference1 is RCS capable and RCS registered 7. Reference1 exist in the address book in DUT. 8. DUT is under 3GPP coverage or Wi-Fi
Test procedure	<ol style="list-style-type: none"> 1. Open address book in DUT and select Reference1
Expected results	<ol style="list-style-type: none"> 1. Reference1's supported RCS capabilities are displayed to the user.
Post-conditions	
Deep inspection	<ol style="list-style-type: none"> 1. Verify DUT will not send any capability fetch request as the service and capability was obtained more recently.

Test case ID	ID_RCS_T_2_2_2_12
---------------------	-------------------

Related test cases	
Feature	Capability Discovery and Service Availability - Presence
Reason for test	Reference section R3-4-9-2 (US R3-3-5-: To verify the Capability availability checks optimization for non-RCS contact
Pre-conditions Scenario	<ol style="list-style-type: none"> 1. In DUT, CAPABILITY DISCOVERY MECHANISM config value is set to (1) PRESENCE 2. DUT is RCS registered 3. NON RCS CAPABILITY INFO EXPIRY value is greater than 0 4. Reference 1 is non-RCS capable 5. Reference 1 exist in the address book in DUT. 6. The time since the last capability query for Reference1 is not older than NON RCS CAPABILITY INFO EXPIRY value 7. DUT is under 3GPP coverage or Wi-Fi
Test procedure	<ol style="list-style-type: none"> 1. Open address book in DUT and select Reference1
Expected results	<ol style="list-style-type: none"> 1. Reference1 is displayed as non-RCS capable
Post-conditions	
Deep inspection	<ol style="list-style-type: none"> 1. Verify DUT will not send any capability fetch request

Test case ID	ID_RCS_T_2_2_2_13
Related test cases	
Feature	Capability Discovery and Service Availability - Presence
Reason for test	Reference section R3-4-9-3 (US R3-3-5-: To verify that Capability availability check will not be sent for the RCS contact whose prefix will not match with MNO configured prefix list
Pre-conditions Scenario	<ol style="list-style-type: none"> 1. In DUT, CAPABILITY DISCOVERY MECHANISM config value is set to (1) PRESENCE 2. DUT is RCS registered 3. CAPABILITY DISCOVERY ALLOWED PREFIXES config value is not 0 4. Reference1 is RCS capable and RCS registered 5. Reference1 doesn't exist in the address book in DUT. 6. Prefix of Reference1 doesn't matches with any value in the list of prefixes provided in CAPABILITY DISCOVERY ALLOWED PREFIXES

	config value 7. DUT is under 3GPP coverage or Wi-Fi
Test procedure	1. DUT adds Reference1 to the address book
Expected results Post-conditions	1. Reference1 is added to the address book
Deep inspection	1. Verify DUT will not send any capability fetch request

Test case ID	ID_RCS_T_2_2_2_14
Related test cases	
Feature	Capability Discovery and Service Availability - Presence
Reason for test	Reference section R3-4-9-3 (US R3-3-5-: To verify the Capability availability check will be sent for only those RCS contacts whose prefix will match with MNO configured prefix list
Pre-conditions Scenario	1. In DUT, CAPABILITY DISCOVERY MECHANISM config value is set to (1) PRESENCE 2. DUT is RCS registered 3. CAPABILITY DISCOVERY ALLOWED PREFIXES config value is not 0 4. Reference1 is RCS capable and RCS registered 5. Reference1 doesn't exist in the address book in DUT. 6. Prefix of Reference1 matches with a value in the list of prefixes provided in CAPABILITY DISCOVERY ALLOWED PREFIXES config value 7. DUT is under 3GPP coverage or Wi-Fi
Test procedure	1. DUT adds Reference1 to the address book
Expected results Post-conditions	1. Reference1 is added to the address book and all its supported RCS capabilities are displayed to the user.

Deep inspection	<ol style="list-style-type: none"> 1. Verify DUT sends SIP ANONYMOUS SUBSCRIBE to Reference1 and receives 200OK indicating it is RCS capable 2. Verify NOTIFY is received for Reference1 with its supported RCS capabilities and DUT responds with 200OK to this NOTIFY request.
------------------------	--

Test case ID	ID_RCS_T_2_2_2_15
Related test cases	
Feature	Capability Discovery and Service Availability - Presence
Reason for test	Reference section R3-4-9-4 (US R3-3-5-: To verify that DUT displays to user only the Capabilities which are understood and supported by DUT (unrecognized and not supported feature tags would be ignored by DUT)
Pre-conditions Scenario	<ol style="list-style-type: none"> 1. In DUT, CAPABILITY DISCOVERY MECHANISM config value is set to (1) PRESENCE 2. DUT is RCS registered and doesn't support IP Video call 3. Reference1 is RCS capable and supports IP Video call 4. Reference1 exist in the DUT's address book. 5. DUT is under 3GPP coverage or Wi-Fi
Test procedure	<ol style="list-style-type: none"> 1. DUT opens address book and selects Reference1
Expected results	<ol style="list-style-type: none"> 1. Reference1's supported RCS capabilities are displayed to the user (IP Video call service will not be displayed).
Post-conditions	
Deep inspection	<ol style="list-style-type: none"> 1. Verify DUT sends SIP ANONYMOUS SUBSCRIBE to Reference1 and receives 200OK indicating it is RCS capable 2. Verify NOTIFY is received for Reference1 with its supported RCS capabilities (IP Video call service-id: <ul style="list-style-type: none"> - Service-id: org.3gpp.urn:urn-7:3gpp-service.ims.icsi.mmtel - Version: 1.0 - Media capabilities: audio, video, duplex - Contact address type: tel/ SIP URI) 3. DUT responds with 200OK to this NOTIFY request.

Test case ID	ID_RCS_T_2_2_2_16
---------------------	-------------------

Related test cases	
Feature	Capability exchange
Reason for test	Enriched calling. Trigger after minimum N digits (prefix whitelisted)
Pre-conditions Scenario	<ol style="list-style-type: none"> 1. Both handsets are RCS registered 2. DUT and Reference 1 are online and they are not in an active call 3. DUT has Reference 1's prefix listed under the CAPABILITY DISCOVERY ALLOWED PREFIXES parameter 4. In DUT, CAPABILITY DISCOVERY MECHANISM config value is set to (1) PRESENCE
Test procedure	<ol style="list-style-type: none"> 1. DUT inserts in the dialler first N digits of Reference 1 MSISDN
Expected results	<ol style="list-style-type: none"> 1. DUT phone/client shows the call composer capability for Reference 1 after the full MSISDN is entered
Post-conditions	
Deep inspection	<ol style="list-style-type: none"> 1. Verify SIP NOTIFY request with available Service IDs

Test case ID	ID_RCS_T_2_2_2_17
Related test cases	
Feature	Capability exchange
Reason for test	Enriched calling. Trigger after minimum N digits (prefix is not whitelisted)
Pre-conditions Scenario	<ol style="list-style-type: none"> 1. Both handsets are RCS registered 2. DUT and Reference 1 are online and they are not in an active call 3. DUT does not have Reference 1's prefix listed under the CAPABILITY DISCOVERY ALLOWED PREFIXES parameter and he has other prefixes listed 4. In DUT, CAPABILITY DISCOVERY MECHANISM config value is set to (1) PRESENCE

Test procedure	1. DUT inserts in the dialler first N digits of Reference 1's MSISDN
Expected results Post-conditions	1. DUT phone/client does not show the call composer capability for Reference 1
Deep inspection	1. Verify SIP SUBSCRIBE dialog is not initiated towards Reference 1

Test case ID	ID_RCS_T_2_2_2_18
Related test cases	
Feature	Capability Discovery and Service Availability - Presence
Reason for test	To verify DUT sends a list subscription request when the MAX-NUMBER-OF SUBSCRIPTIONS IN-PRESENCE-LIST config value is set to a positive number.
Pre-conditions Scenario	<ol style="list-style-type: none"> 1. DUT is RCS registered 2. CAPABILITY DISCOVERY MECHANISM config value is set to (1) PRESENCE by MNO. 3. DISABLE INITIAL ADDRESS BOOK SCAN config is set to (0) FALSE by MNO 4. MAX-NUMBER-OF SUBSCRIPTIONS IN-PRESENCE-LIST config is set to (10) by MNO 5. Reference1, 2, 3 is RCS capable and RCS registered 6. Reference1, Reference2 and Reference3 are not in the DUT's address book 7. Prepare a .vcf file containing Reference 1, 2 and 3 8. DUT is under 3GPP coverage or Wi-Fi
Test procedure	<ol style="list-style-type: none"> 1. Import the .vcf file into DUT's address book 2. Check the address book

Expected results Post-conditions	<ol style="list-style-type: none"> 1. DUT is registered to RCS 2. All the contacts in the address book are updated with their supported capabilities as received from the network.
Deep inspection	<ol style="list-style-type: none"> 1. Verify DUT sends out auto configuration request and it is successful 2. Verify DUT sends REGSITER request. Post success of REGISTER, PUBLISH request is sent out and 200OK response is received from the network. 3. Verify DUT sends SIP LIST ANONYMOUS SUBSCRIBE request included the recipient list for Reference1, 2 and 3 and receives 200OK indicating it is RCS capable 4. Verify NOTIFY is received for Reference1, 2, and 3 with its supported RCS capabilities, DUT responds with 200OK to this NOTIFY request.

2.3 Security Against Malware

2.3.1 Technical test cases

Test case ID	ID_RCS_T_2_3_1
Related test cases	
Feature	Security Against Malware
Reason for test	UP 1.0. Reference section R16-4-1. GBA Configuration request
Pre-conditions Scenario	<ol style="list-style-type: none"> 1. The network supports GBA as defined in [RCC.14] 2. The client supports GBA as defined in [RCC.14] 3. The client hasn't been configured yet as defined in [RCC.14] 4. The client is switch on as defined in [RCC.14]
Test procedure	<ol style="list-style-type: none"> 1. DUT is powered on. 2. Automatically in the background DUT sends a valid GBA configuration request
Expected results Post-conditions	<ol style="list-style-type: none"> 1. DUT is configured (e.g. sending GBA HTTP digest configuration request) and registered properly. 2. Capabilities are properly shown and RCS messages can be sent

Deep inspection	<ol style="list-style-type: none"> 1. Inspect a static string "3gpp-gba" in User-Agent Header in GBA HTTP digest configuration request, if the HTTP DUT application resides in the ME, or "3gpp-gba-uicc" if the HTTP DUT application resides in the UICC 2. Check that DUT receives the 401 "Unauthorized" HTTP response to the HTTP request that was protected. 3. If DUT has no bootstrapped security association then verify that client generates one using bootstrapping procedure defined in section 2.4.2.2 of RCC14 and shall run bootstrapping procedure over Ub interface 4. If DUT has a bootstrapped security association check during HTTP request that use the stored key material and the B-TID to generate keys 5. Verify 200 OK response containing an Authentication-Info header and the configuration XML document.
------------------------	--

Test case ID	ID_RCS_T_2_3_2
Related test cases	
Feature	Security Against Malware
Reason for test	Successful configuration trigger request, SMS_port zero policy in cellular access R16-4-5-2
Pre-conditions Scenario	<ol style="list-style-type: none"> 1. Autoconfiguration server ready to fulfil the requirements described in [RCC.14] 2. RCS services have not been previously configured on the phone/SIM pair or it has been previously configured with a valid configuration or it has previously received a configuration XML document with zero or negative integer VERSION value. 3. Autoconfiguration server applies security enhanced configuration (two factor authentication via OTP) 4. Handset is using cellular coverage 5. Autoconfiguration server is set to force a user visible SMS 6. Autoconfiguration server supports Header Enrichment
Test procedure	<ol style="list-style-type: none"> 1. DUT is powered on. 2. The user enters the OTP to confirm DUT provisioning. 3. DUT is registered properly.
Expected results Post-conditions	<ol style="list-style-type: none"> 1. The user is prompted to confirm DUT provisioning via OTP 2. The user receives an OTP 3. RCS UX elements are enabled

Deep inspection	<ol style="list-style-type: none"> 1. Verify HTTP GET request w/o parameters 2. Verify that HTTP 511 response is received with Set-Cookie header (Cookie A) 3. Inspect HTTPS GET request includes parameters (vers,IMSI, terminal_vendor, terminal_model,terminal_version, IMEI, SMS_port,token,friendly_device_name,...) and Cookie header (Cookie A) 4. Verify that HTTPS 200 OK response from autoconfiguration server is received containing a Set-Cookie (Cookie B) and a configuration XML document with only POLICY characteristic containing SMS_port parameter with value "0" 5. Verify that new HTTPS request is sent containing OTP and Cookie B. 6. Verify HTTPS 200 OK response contains configuration XML document 7. Verify successful registration following configuration
------------------------	---

Test case ID	ID_RCS_T_2_3_3
Related test cases	
Feature	Security Against Malware
Reason for test	Successful configuration trigger request, SMS_port zero policy in non-cellular access R16-4-5-5
Pre-conditions Scenario	<ol style="list-style-type: none"> 1. Autoconfiguration server ready to fulfil the requirements described in [RCC.14] 2. RCS services have not been previously configured on the DUT/SIM pair or it has been previously configured with a valid configuration or it has previously received a configuration XML document with zero or negative integer VERSION value. 3. Autoconfiguration server applies security enhanced configuration (two factor authentication via OTP) 4. DUT is using Wi-Fi coverage 5. Autoconfiguration server is set to force a user visible SMS 6. IMSI provisioning is supported
Test procedure	<ol style="list-style-type: none"> 1. DUT is powered on. 2. The user enters the OTP to confirm DUT provisioning 3. Once the configuration is successfully sent, it is possible to access RCS services
Expected results	<ol style="list-style-type: none"> 1. The user receives a prompt to provide the OTP 2. RCS UX elements are enabled
Post-conditions	

Deep inspection	<ol style="list-style-type: none"> 1. Inspect HTTPS GET request includes parameters (vers,IMSI, terminal_vendor,terminal_model,terminal_version,IMEI,SMS_port,token,friendly_device_name,...) 2. Verify that HTTPS 200 OK response from autoconfiguration server is received containing a Set-Cookie (CookieA) and a configuration XML document with only POLICY characteristic containing SMS_port parameter with value "0" 3. Verify that HTTPS GET with OTP parameter and value and a Cookie header (Cookie A) is sent 4. Verify HTTPS 200 OK response contains a configuration XML document 5. Verify successful registration following configuration
------------------------	--

Test case ID	ID_RCS_T_2_3_4
Related test cases	
Feature	Security Against Malware
Reason for test	Successful configuration trigger request, in cellular access, header enrichment is supported R16-4-5
Pre-conditions Scenario	<ol style="list-style-type: none"> 1. Autoconfiguration server ready to fulfil the requirements described in [RCC.14] 2. RCS services have not been previously configured on the phone/SIM pair or it has been previously configured with a valid configuration or it has previously received a configuration XML document with zero or negative integer VERSION value. 3. Autoconfiguration server applies security enhanced configuration (two factor authentication via OTP) 4. Handset is using cellular coverage 5. Header enrichment is supported 6. Autoconfiguration server does not apply any SMS policy mechanism'
Test procedure	<ol style="list-style-type: none"> 1. DUT is powered on. 2. DUT is registered properly.
Expected results	<ol style="list-style-type: none"> 1. RCS UX elements are enabled
Post-conditions	

Deep inspection	<ol style="list-style-type: none"> 1. Verify HTTP GET request w/o parameters is sent 2. Verify that HTTP 511 response is received with Set-Cookie header (Cookie A) 3. Inspect HTTPS GET request includes parameters (vers,IMSI, terminal_vendor,terminal_model,terminal_version,IMEI,SMS_port,token,friendly_device_name,...) and Cookie header (Cookie A). HTTPS request does not include the MSISDN 4. Verify that HTTPS 200 OK response from autoconfiguration server is received containing a Set-Cookie (Cookie B) 5. Verify that new HTTPS request is sent containing OTP and Cookie B. 6. Verify HTTPS 200 OK response contains configuration XML document 7. Verify successful registration following configuration
------------------------	---

Test case ID	ID_RCS_T_2_3_5
Related test cases	
Feature	Security Against Malware
Reason for test	Successful configuration trigger request, in cellular access, header enrichment is not supported R16-4-5
Pre-conditions Scenario	<ol style="list-style-type: none"> 1. Autoconfiguration server ready to fulfil the requirements described in [RCC.14] 2. RCS services have not been previously configured on the phone/SIM pair or it has been previously configured with a valid configuration or it has previously received a configuration XML document with zero or negative integer VERSION value. 3. Autoconfiguration server applies security enhanced configuration (two factor authentication via OTP) 4. Handset is using cellular coverage 5. Header enrichment is not supported 6. IMSI provisioning is supported 7. Autoconfiguration server does not apply any SMS policy mechanism'
Test procedure	<ol style="list-style-type: none"> 1. DUT is powered on. 2. DUT is registered properly.
Expected results	<ol style="list-style-type: none"> 1. RCS UX elements are enabled
Post-conditions	

Deep inspection	<ol style="list-style-type: none"> 1. Verify HTTP GET request w/o parameters is sent 2. Verify that HTTP 511 response is received 3. Inspect HTTPS GET request includes parameters (vers,IMSI, terminal_vendor,terminal_model,terminal_version,IMEI,SMS_port,token,friendly_device_name,...) 4. Verify that HTTPS 200 OK response from autoconfiguration server is received containing a Set-Cookie (Cookie) 5. Verify that new HTTPS request is sent containing OTP and Cookie . 6. Verify HTTPS 200 OK response contains configuration XML document 7. Verify successful registration following configuration
------------------------	---

Test case ID	ID_RCS_T_2_3_6
Related test cases	
Feature	Security Against Malware
Reason for test	Successful configuration trigger request, in cellular access, header enrichment and IMSI provisioning are not supported R16-4-5
Pre-conditions Scenario	<ol style="list-style-type: none"> 1. Autoconfiguration server ready to fulfil the requirements described in [RCC.14] 2. RCS services have not been previously configured on the phone/SIM pair or it has been previously configured with a valid configuration or it has previously received a configuration XML document with zero or negative integer VERSION value. 3. (two factor authentication via OTP) 4. Handset is using cellular coverage 5. Header enrichment and IMSI provisioning are not supported 6. Autoconfiguration server does not apply any SMS policy mechanism'
Test procedure	<ol style="list-style-type: none"> 1. DUT is powered on. 2. If required the user have to enter their MSISDN 3. DUT is registered properly.
Expected results	<ol style="list-style-type: none"> 1. RCS UX elements are enabled
Post-conditions	
Deep inspection	<ol style="list-style-type: none"> 1. Verify HTTP GET request w/o parameters is sent 2. Verify that HTTP 511 response is received 3. Inspect HTTPS GET request includes parameters (vers,IMSI, terminal_vendor,terminal_model,terminal_version,IMEI,SMS_port,token,friendly_device_name,...)

	<ol style="list-style-type: none"> 4. Verify HTTPS 403 response from autoconfiguration server 5. Verify new HTTPS request is sent including this time the MSISDN 6. Verify that HTTPS 200 OK response from autoconfiguration server is received containing a Set-Cookie (Cookie) 7. Verify that new HTTPS request is sent containing OTP and Cookie . 8. Verify HTTPS 200 OK response contains configuration XML document 9. Verify successful registration following configuration
--	--

3 Messaging

3.1 1-to-1 Messaging

3.1.1 Functional test cases

Test case ID	ID_RCS_F_3_1_1
Related test cases	
Feature	1-to-1 Messaging
Reason for test	UP 1.0. Reference section US5.1 and subsequent requirements
Pre-conditions Scenario	<ol style="list-style-type: none"> 1. A-Party's device is online. 2. B-Party's device is online and known to be RCS capable (to A). 3. There are existing messaging threads on the A-Party's device with B-Party. 4. Existing messaging threads may contain Group Chat and 1-to-1 Messaging.
Test procedure	<ol style="list-style-type: none"> 1. Open the native messaging application on the A-Party's device. 2. A-party opens the conversation thread with B-Party. 3. Create and send messages (e.g. RCS 1-to-1 Message or SMS) from A-Party's device to B-Party. 4. Send 2 files of different file type from A-Party's device to B-Party (e.g. File Transfer or MMS (the latter only if offered by the network operator)). 5. Check on A-Party's device that any service entry point that suggests to send Messages or Files leads to the native messaging application.
Expected results Post-conditions	<ol style="list-style-type: none"> 1. The user can see messages and shared files. 2. The user is able to create a message and send. 3. The user is able to select a file and send. 4. Selecting the various operator messaging access points on the device directs the user to the messaging application.

Deep inspection	–
------------------------	---

Test case ID	ID_RCS_F_3_1_2
Related test cases	
Feature	1-to-1 Messaging
Reason for test	UP 1.0. Reference section US5.2 - Integrated Messaging (and subsequent requirements)
Pre-conditions Scenario	<ol style="list-style-type: none"> 1. A- and B-Party are RCS capable. 2. C-Party is not RCS capable. 3. The A- and B-Party's RCS Service Provider supports Integrated Messaging. 4. On A-Party's device, the user setting for the proposed messaging service (R18-12-1) is set to default "Propose Messaging Service" 5. The proposed messaging service is not latched to SMS (see R5-2-4-).
Test procedure	<ol style="list-style-type: none"> 1. On A-Party's device, select the conversation history with B. 2. On A-Party's device, open the input field for creating a new message. 3. Send a message. 4. Change the proposed messaging service from Chat RCS 1-to-1 Messaging to SMS and back to RCS 1-to-1 Messaging. 5. On A-Party's device, select the conversation history with C-Party. Open the input field for creating a new message. 6. A message shall be sent. 7. Try and change the messaging service to chat.
Expected results Post-conditions	<ol style="list-style-type: none"> 1. The suggested messaging service is RCS 1-to-1 Messaging. 2. The message is sent as an RCS 1-to-1 Message. A- and B-Party are aware that the message sent was an RCS 1-to-1 Message. 3. The proposed messaging service can be changed manually to SMS and back to RCS 1-to-1 Messaging. 4. The suggested messaging service is SMS. 5. The message is sent as SMS. A- and C-Party are aware that the message sent was SMS. 6. It shall not be possible to change the proposed messaging service to RCS 1-to-1 Messaging.
Deep inspection	–

Test case ID	ID_RCS_F_3_1_3
Related test cases	
Feature	1-to-1 Messaging
Reason for test	UP 1.0. Reference section R5-2-2-1-2. CFS
Pre-conditions Scenario	<ol style="list-style-type: none"> 1. A- and B-Party's operator(s) support Integrated Messaging. 2. A-Party's device is online. 3. An RCS 1-to-1 Message has been sent to B-Party device previous to the test. 4. B-Party is a known RCS contact to A-Party's device. 5. B-Party's device is offline but available for CS (e.g. cellular data is switched off and WiFi is switched off). 6. B-Party's Service Provider does not support RCS 1-to-1 Messaging in Data Off (as defined in section 17 of UP 1.0). 7. B-Party's Service Provider supports CFS. 8. The CFS Timer is set to 5 minutes (no user setting). 9. The user setting (as described in US18-13 / R5-2-4- "re-send as SMS" is set to "always ask".
Test procedure	<ol style="list-style-type: none"> 1. On A-Party device, enter the conversation with B. Create and send a message on the A-Party device as RCS 1-to-1 Message. 2. Wait for more than 5 minutes. 3. The A-Party user is offered to re-send the message as SMS. 4. The A-party user shall select to re-send as SMS. 5. Create another few messages on the A-Party device in the messaging screen. 6. Go online on B-Party's device (e.g. by enabling cellular data or WiFi). 7. The A-Party user leaves the conversation with the B-Party. 8. The A-Party user enters the conversation with B again, and starts creating a new message. The message shall be sent.
Expected results Post-conditions	<ol style="list-style-type: none"> 1. The status of the message is 'sent' and remains 'sent' (and does not change to 'delivered'). 2. After 5 Minutes, the A-Party device informs the user that the message could not be delivered. 3. Appropriate display of user information. 4. The message is re-sent as SMS. On the A-Party device, there is no indication that the original RCS 1-to-1 Message has been sent to B. The original RCS 1-to-1 Message is removed from the conversation history. In the conversation history an SMS message is indicated to be sent. The B-Party device receives SMS message. 5. The messaging service is latched to SMS. The A-party user is not asked again to re-send as SMS for future messages. The A-Party device stays in 'SMS mode' as long as the B-Party availability for RCS 1-to-1

	<p>Messaging has not been re-confirmed.</p> <p>6. B-Party is online.</p> <p>7. The proposed messaging service changes to RCS 1-to-1 Messaging. The message is sent as RCS 1-to-1 Message. B-party receives an RCS 1-to-1 Message from A-Party.</p>
Deep inspection	–

Test case ID	ID_RCS_F_3_1_4
Related test cases	
Feature	1-to-1 Messaging
Reason for test	UP 1.0. Reference section R5-2-2-1-2-3. CFS
Pre-conditions Scenario	<ol style="list-style-type: none"> 1. A- and B-Party's RCS Service Provider supports Integrated Messaging. 2. A-Party's device is offline and no CS (e.g. in Flight mode). 3. B-Party is known to be RCS capable to A-Party's device. 4. A-Party's device is not latched to SMS in communication with B-Party.
Test procedure	<ol style="list-style-type: none"> 1. The A-Party creates a message and selects 'send'. 2. A-Party device goes online.
Expected results	<ol style="list-style-type: none"> 1. Messages shall be created as RCS 1-to-1 Message. When attempting to send, the A-Party user is made aware that messages are locally queued and sent once re-connected.
Post-conditions	<ol style="list-style-type: none"> 2. Message is sent as RCS 1-to-1 Messaging when A-Party's device is online again.
Deep inspection	–

Test case ID	ID_RCS_F_3_1_5
Related test cases	
Feature	1-to-1 Messaging
Reason for test	UP 1.0. Reference section R5-2-2-2-4. CFS
Pre-conditions Scenario	<ol style="list-style-type: none"> 1. A-and B-Party's operator(s) support Integrated Messaging. 2. A-Party's device is offline / no data but connected to cellular. 3. B-Party is known to be RCS capable to A-Party's device.

Test procedure	<ol style="list-style-type: none"> 1. A-Party enters 1-to-1 Messaging thread with B-Party and creates a new message. 2. A-Party sends the message.
Expected results Post-conditions	<ol style="list-style-type: none"> 1. The proposed messaging service is SMS before and during the process of creating a new message. 2. The message is sent as SMS from A-Party's device. A- Party is made aware that the messaging service is SMS.
Deep inspection	–

Test case ID	ID_RCS_F_3_1_6
Related test cases	
Feature	1-to-1 Messaging
Reason for test	UP 1.0. Reference section R5-2-3. NFS
Pre-conditions Scenario	<ol style="list-style-type: none"> 1. A- and B-Party's RCS Service Provider(s) support Integrated Messaging. 2. A-Party's device is online. 3. A-Party has sent an RCS 1-to-1 Message to B-Party prior to the test procedure starts. 4. B-Party's device is offline / no data but connected to cellular. 5. A-party's device is aware that B-Party's Service Provider supports NFS. 6. A-Party's device is enabled for SMS Delivery notification in user settings.
Test procedure	<ol style="list-style-type: none"> 1. A-Party enters the 1-to-1 Messaging thread with B-Party. 2. A-Party sends an RCS 1-to-1 Message.
Expected results Post-conditions	<ol style="list-style-type: none"> 1. The proposed messaging service is RCS 1-to-1 Messaging. 2. Message is sent and indicated as RCS 1-to-1 Message. The A-Party receives a 'delivered' Message Status Notification. The A-Party is made aware not to expect a 'display' notification. The B-Party receives the message as SMS.
Deep inspection	–

Test case ID	ID_RCS_F_3_1_7
Related test cases	
Feature	1-to-1 Messaging

Reason for test	UP 1.0. Reference section R5-3-1, R5-3-2, R5-3-3, R5-3-7, Seamless Messaging
Pre-conditions Scenario	<ol style="list-style-type: none"> 1. The A-, B-, C-, D- and E-Party network(s) support Seamless Messaging. 2. The A-, B-, C-, D- and E-Party devices support RCS. 3. A- and B-Party's devices are online. 4. C-Party's device is not online but connected to cellular (CS and data). 5. D-Party's device is offline but connected to CS (no cellular data connection). 6. E-Party's device is offline and not connected to cellular. 7. All parties are stored in each other's contact lists.
Test procedure	<ol style="list-style-type: none"> 1. A-Party sends a short text (less than 1300 characters) to B-Party. 2. A-Party sends a long text (more than 1300 characters) to B-Party. 3. B-Party sends a short text (less than 1300 characters) to A-Party. 4. B-Party sends a long text (more than 1300 characters) to A-Party. 5. A-Party sends a short text (less than 1300 characters) to C-Party. 6. A-Party sends a long text (more than 1300 characters) to C-Party. 7. A-Party sends a short text (less than 1300 characters) to D-Party. 8. A-Party sends a long text (more than 1300 characters) to D-Party. 9. A-Party sends a short text (less than 1300 characters) to E-Party. 10. A-Party sends a long text (more than 1300 characters) to E-Party.
Expected results Post-conditions	<ol style="list-style-type: none"> 1. For test cases 1-7, the receiving device receives the message successfully and on the sending device, the message is presented with a "delivered" Message Status. 2. For test cases 1-10, the message is sent from A-party's device.
Deep inspection	–

Test case ID	ID_RCS_F_3_1_8
Related test cases	
Feature	1-to-1 Messaging
Reason for test	UP 1.0. Reference section R5-3-4, Seamless Messaging
Pre-conditions Scenario	<ol style="list-style-type: none"> 1. The A- and B-Party network(s) support Seamless Messaging. 2. A- Party's device is offline and not connected to cellular. 3. B-Party's device is online. 4. All parties are stored in each other's contact lists.

Test procedure	<ol style="list-style-type: none"> 1. A-Party sends a short text (less than 1300 characters) to B-Party. 2. A-Party sends a long text (more than 1300 characters) to B-Party.
Expected results Post-conditions	<ol style="list-style-type: none"> 1. For both test cases, the message shall be queued for delivery on A-Party's device, and the user is informed about the queuing of messages.
Deep inspection	–

Test case ID	ID_RCS_F_3_1_9
Related test cases	
Feature	1-to-1 Messaging
Reason for test	UP 1.0. Reference section R5-3-5, Seamless Messaging
Pre-conditions Scenario	<ol style="list-style-type: none"> 1. The A- and B-Party network(s) support Seamless Messaging. 2. A- Party's device is offline but connected to cellular CS service (no cellular data). 3. B-Party's device is online. 4. All parties are stored in each other's contact lists. 5. B-party should support SMS delivery report. Note: This can be simulated in case SMS delivery report is not supported
Test procedure	<ol style="list-style-type: none"> 1. A-Party sends a short text (less than 1300 characters) to B-Party. 2. A-Party sends a file to B-Party.
Expected results Post-conditions	<ol style="list-style-type: none"> 1. The message is successfully received on B-Party's device. A-Party's device presents a 'delivered' Message Status Notification to the user. 2. The File shall be queued for delivery on A-Party's device, and the A-Party user is informed about the queuing of files.
Deep inspection	–

Test case ID	ID_RCS_F_3_1_10
Related test cases	
Feature	1-to-1 Messaging
Reason for test	UP 1.0. Reference section R5-3-6, Seamless Messaging
Pre-conditions Scenario	<ol style="list-style-type: none"> 1. The A- and B-Party network(s) support Seamless Messaging. 2. A-and B-Party networks support MMS. 3. A- Party's device is offline but connected to cellular data. 4. B-Party's device is online. 5. All parties are stored in each other's contact lists.
Test procedure	<ol style="list-style-type: none"> 1. A-Party sends a short text (less than 1300 characters) to B-Party. 2. A-Party sends a long text (more than 1300 characters) to B-Party. 3. A-Party sends a file to B-Party.
Expected results Post-conditions	<ol style="list-style-type: none"> 1. The message is successfully received on B-Party's device. A-Party's device presents a 'delivered' Message Status Notification to the user. 2. The message is successfully received on B-Party's device. A-Party's device presents a 'delivered' Message Status Notification to the user. 3. The File shall be successfully received on B-Party's device. A-Party's device presents a 'delivered' File Transfer Status Notification to the user.
Deep inspection	—

Test case ID	ID_RCS_F_3_1_11
Related test cases	
Feature	1-to-1 Messaging
Reason for test	UP 1.0. Reference sections US5-4 (sending messages); US5-5 (Sent Message States) ; US5-6 (Smileys); US5-7 (Is Typing Notification) and subsequent requirements.
Pre-conditions Scenario	<ol style="list-style-type: none"> 1. A-Party's device is online. 2. B-Party is stored as a contact in A-Party's contact list, online and known to be RCS capable. 3. C-Party is not stored as a contact in A-party's contact list, online and RCS capable.

Test procedure	<ol style="list-style-type: none"> 1. Select the B-Party contact from the contact list on A-Party device, create a new message (including a random selection of smileys) and send. 2. Select “create a message”, enter C-Party’s MSISDN and then create a message (including a random selection of smileys) and send message. 3. Open the messages on B-Party’s and C-Party’s device. 4. Send another message from A-Partys device while conversation history is open on B-Party’s device.
Expected results Post-conditions	<ol style="list-style-type: none"> 1. Message is sent as an RCS 1-to-1 Message. On A-Party device, the sent message states are presented: 'pending', 'sent', 'delivered'. (Remark: 'Pending' and 'sent' may be displayed very shortly or not displayed because of rapid message delivery.) Smileys are represented appropriately. 2. While entering C-Party’s MSISDN, the RCS capability is detected in the background without any user information or interaction. The proposed messaging service is RCS 1-to-1 Messaging. The Sent Message States are presented: 'pending', 'sent', 'delivered'. (Remark: 'Pending' and 'sent' may be displayed very shortly or not displayed because of rapid message delivery.) Smileys are represented appropriately. 3. The sent message state on A-Party’s device changes to 'displayed' in the conversations with B-Party and C-Party (if supported by the network). 4. An Is-Typing Notification is shown on B-Party’s device (if supported by the network).
Deep inspection	–

Test case ID	ID_RCS_F_3_1_12
Related test cases	
Feature	1-to-1 Messaging
Reason for test	UP 1.0. Reference sections US5-9, US5-10, US5-11, US5-12, US5-13 (and subsequent requirements): Receiving messages.
Pre-conditions Scenario	<ol style="list-style-type: none"> 1. A-Party’s device is online 2. B-Party’s device is online and known to be RCS capable 3. B-Party’s device has closed the messaging application and screen is in stand-by mode. 4. Integrated Messaging mode is enabled on both devices

Test procedure	<ol style="list-style-type: none"> 1. Send an RCS 1-to-1 Message from A-Party's device to B-Party. 2. Send SMS message from A-Party's device to B-Party. 3. B-Party selects the notification to open the messages.
Expected results Post-conditions	<ol style="list-style-type: none"> 1. B-Party is notified appropriately when a new message arrives. Audible notifications are subject to "silent" and "vibration" mode of the B-Party device. 2. The message is received on the B-Party device in the conversation history with A-party. 3. Visual notifications are removed whenever the B-party has accessed these in the Conversation History. (NOTE it is not sufficient to remove the visible notification when the message has been partly or entirely displayed in a notification widget etc.). All the different operator messages are lined up in the same conversation history with A-Party on the B-party's device. Messages are displayed in the order they were received, with correct time stamp.
Deep inspection	–

Test case ID	ID_RCS_F_3_1_13
Related test cases	
Feature	1-to-1 Messaging
Reason for test	UP 1.0. Reference section US5-14, US5-15, US5-16 (and subsequent requirements) Receiving messages.
Pre-conditions Scenario	<ol style="list-style-type: none"> 1. A-Party's device is online. Messaging Service is not latched to SMS in the conversation with B-Party (if applicable). 2. Messaging service on A-Party's device for communication with B-Party is neither manually nor automatically set to "SMS".- B-Party's device is online and known to be RCS capable to A-party's device. 3. B-Party's device has closed the messaging application and screen is in stand-by mode. 4. A-Party is not in B-Party's contact list. 5. A-Party has set the RCS Alias (R18-2-1)

Test procedure	<ol style="list-style-type: none"> 1. Send a Message from A to B. Message length should be >4000 characters. 2. Open the Messaging application on B-Party's device and display the list of conversations. 3. Select the conversation with the new message from A-Party to display the message.
Expected results Post-conditions	<ol style="list-style-type: none"> 1. B-Party's device displays a new incoming event notification on reception of a new message. The sender of the message is indicated with Alias and MSISDN. The user interface has taken appropriate means to differentiate unverified Alias sender identity from identified contacts from the contact list in the new incoming event notification. 2. In the list of messaging conversation, the conversation that contains the message from A-Party is visually differentiated and easy to find and access. The sender of the message is indicated with Alias and MSISDN. The user interface has taken appropriate means to differentiate unverified Alias sender identity from identified contacts from the contact list in the list of existing messaging conversations. 3. All characters of the sent message are displayed. The sender of the message is indicated with Alias and MSISDN. The user interface has taken appropriate means to differentiate unverified Alias sender identity from identified contacts from the contact list in the conversation with A-Party.
Deep inspection	-

Test case ID	ID_RCS_F_3_1_14
Related test cases	
Feature	1-to-1 Messaging
Reason for test	UP 1.0. Reference section US5-17 (Messaging conversation as Service Access Point for sharing) and US5-18 (Maintain multiple conversations in parallel) and subsequent requirements.
Pre-conditions Scenario	<ol style="list-style-type: none"> 1. A-Party's device is online 2. B-Party's device is online and known to be RCS capable to A-Party's device. 3. C-Party's device is online and known to be RCS capable to A-party's device. 4. A-party's device has existing 1-to-1 Messaging conversations with B-Party and C-Party.

Test procedure	<ol style="list-style-type: none"> 1. Access Conversation with B-Party on A-Party's device. 2. Send a message on the A-Party device as RCS 1-to-1 Messaging to B-Party. 3. Switch to the conversation with C-Party and send a message on the A-Party device as RCS 1-to-1 Messaging to C-Party. 4. Switch back to the conversation with B-Party conversation and send a message to B-Party.
Expected results Post-conditions	<ol style="list-style-type: none"> 1. Service entry points to add a photo, video, audio message, any selected file or geolocation shall be available. 2. A-Party is able to switch between conversations and maintain conversations successively.
Deep inspection	—

Test case ID	ID_RCS_F_3_1_15
Related test cases	
Feature	1-to-1 Messaging
Reason for test	UP 1.0. Reference section US5-19, US5-20, US5-21, US5-22 (Backup & Restore) and subsequent requirements
Pre-conditions Scenario	<ol style="list-style-type: none"> 1. A-Party's device is online 2. A-Party's device has a number of existing messaging conversations. 3. A-Party's RCS Service Provider supports backup & restore
Test procedure	<ol style="list-style-type: none"> 1. Delete 3 messages or files from the A-Party device (in different conversations). 2. Reset A-Party device to factory settings. 3. Re-Boot A-Party device. 4. Open A-Party's messaging application. 5. Select "restore conversations from RCS service provider storage" on A-Party's device. 6. Check whether the 3 deleted messages /files are available.
Expected results Post-conditions	<ol style="list-style-type: none"> 1. Messages are deleted on A-Party's device. 2. A-Party's device is reset to factory settings. 3. A-Party's device is rebooted and online. 4. The messaging application is wiped, no existing conversations shall exist. The A-Party user shall have the option to restore messaging

	<p>conversations.</p> <ol style="list-style-type: none"> 5. After the A-party user has selected "restore", all messaging conversations and all content from each conversation shall be restored (except those messages and files which have been deleted by the service provider in the cloud storage because of capacity limits, see R5-19-1 and R5-19-). 6. The 3 previously deleted messages / files shall not be restored from the cloud storage and are not available in the restored conversations.
Deep inspection	–

Test case ID	ID_RCS_F_3_1_16
Related test cases	
Feature	1-to-1 Messaging
Reason for test	UP 1.0. Reference section US5-23 (Voice & Messaging in parallel) and subsequent requirements
Pre-conditions Scenario	<ol style="list-style-type: none"> 1. A- and B-Party's devices are online. 2. C-Party's device is able to call A-Party.
Test procedure	<ol style="list-style-type: none"> 1. A-Party and B-Party are engaged in a messaging conversation. 2. C-Party calls A-Party. A-Party accepts the call. 3. C-Party hangs up.
Expected results Post-conditions	<ol style="list-style-type: none"> 1. A-Party is able to return to the messaging conversation with B-Party any time during the call. 2. If A-Party did not switch back to messaging conversation with B-Party, A-Party's device automatically returns to the messaging conversation with B-Party after C-Party terminated the call.
Deep inspection	–

Test case ID	ID_RCS_F_3_1_17
Related test cases	
Feature	1-to-1 Messaging
Reason for test	UP 1.0 Reference section US5-24, US5-26 (and subsequent requirements). Geolocation push.

Pre-conditions Scenario	<ol style="list-style-type: none"> 1. A-Party's device is online. 2. B-Party's device is online. 3. A-Party's and B-Party's RCS Service Provider supports Geolocation Push.
Test procedure	<ol style="list-style-type: none"> 1. A-Party opens a messaging conversation with B-Party 2. A-Party shares a location from the messaging thread with B-Party and tags the location.
Expected results Post-conditions	<ol style="list-style-type: none"> 1. A-Party has a thumbnail of the map with the shared location in the conversation history with B-Party. B-Party receives the Geolocation push as an icon (thumbnail) that is typical for a location. A map can be opened on both A-Party's and B-Party's device and the location is visible in a map application including the tag.
Deep inspection	–

Test case ID	ID_RCS_F_3_1_18
Related test cases	
Feature	1-to-1 Messaging
Reason for test	UP 1.0. Reference section US5-25, US5-27 (and subsequent requirements) Geolocation push.
Pre-conditions Scenario	<ol style="list-style-type: none"> 1. A-Party's device is online. 2. B-Party's device is a legacy device (non-RCS device or an RCS version that does not support Geolocation Push) 3. A-Party's and B-Party's RCS Service Provider support Geolocation Push.
Test procedure	<ol style="list-style-type: none"> 1. A-Party opens 'location share' from the messaging thread with B-Party. 2. A-Party selects a location different than the current position and selects "Send".
Expected results Post-conditions	<ol style="list-style-type: none"> 1. A-Party sees a map application and the current position selected. 2. A-Party is able to change the proposed position and select a location. The selected location is sent. On A-Party's device, the Geolocation Push activity creates a thumbnail in the conversation history with B that can be extended in a map application at any time. B-Party receives the selected location either as SMS link to a map application, or a picture of the selected location.
Deep inspection	–

Test case ID	ID_RCS_F_3_1_19
Related test cases	
Feature	1-to-1 Messaging
Reason for test	UP 1.0. Reference section US5-28 (and subsequent requirements). Multiple 1-to-1 messages.
Pre-conditions Scenario	<ol style="list-style-type: none"> 1. A-Party's device is UP1.0 and online. 2. B-Party's and C-Party's devices are known to be RCS UP 1.0 to A-Party's device and online. 3. D-Party's device is RCS enabled but on a previous version and online. 4. E-Party's device is not RCS enabled. 5. F-Party's device is known to be RCS UP 1.0 enabled to A-Party's device.
Test procedure	<ol style="list-style-type: none"> 1. Start creating a 'multiple 1-to-1 distribution list on A-Party's device with the 4 recipients B, C, D and E. 2. Select the distribution list as recipient of a message on A-party's device. The message contains smileys. 3. Send a message to the 4 recipients. 4. Add a 5th participant F to the distribution list.
Expected results Post-conditions	<ol style="list-style-type: none"> 1. The A-Party user is made aware that this is about a multiple 1-to-1 conversation and not a Group Chat. A distribution list with 4 recipients is created. 2. The A-Party's device creates 4 1-to-1 messages in 1-to-1 messaging conversations with B, C, D, and E. 3. Devices B, C and D receive an RCS 1-to-1 Messaging message from A-Party. Device E receives an SMS. Smileys are correctly represented on the RCS capable devices (B,C, and D). On E-Party's device, only a subset of smileys may be represented correctly. 4. The distribution list can be edited / extended.
Deep inspection	–

Test case ID	ID_RCS_F_3_1_20
Related test cases	
Feature	1-to-1 Messaging
Reason for test	To validate UP 1.0. Reference section US5-29 (and subsequent requirements). Multiple 1-to-1 messages.

Pre-conditions Scenario	<ol style="list-style-type: none"> 1. A-Party's device is UP1.0 and online. Network limit for maximum number of participants for multiple 1-to-1 messaging is set. 2. The contact list on A-Party's device is filled with many contacts. 3. B-Party's and C-Party's devices are known to be RCS UP 1.0 to A-Party's device and online. 4. D-Party's device is RCS enabled but on a previous version and online. 5. E-Party's device is not RCS enabled.
Test procedure	<ol style="list-style-type: none"> 1. Start creating a 'multiple 1-to-1 distribution list' on A-Party's device with the 4 recipients B, C, D and E. 2. Extend the distribution list with an attempt to enter more contacts than allowed by the RCS Service Provider.
Expected results Post-conditions	<ol style="list-style-type: none"> 1. A distribution list is created. 2. Once the maximum number of participants have been selected, it shall not be possible to add more participants to the distribution list. The execution of the limit shall be user friendly, i.e. recipients already added in that attempt are not lost so the A-party user has to start from scratch again.
Deep inspection	–

3.1.2 Technical test cases

Test Case ID	ID_RCS_T_3_1_1
Related Test Cases	
Feature	1-to-1 Messaging
Reason for test	Send Pager Mode message 1-to-1. R5-30-1
Pre-conditions Scenario	<ol style="list-style-type: none"> 1. DUT and Reference 1 are online. 2. STANDALONE MSG AUTH configuration parameter set to 1. 3. CHAT AUTH configuration parameter set to 0.
Test procedure	<ol style="list-style-type: none"> 1. DUT sends a small message (less than 1300 bytes and MAX SIZE STANDALONE) (Pager Mode Standalone Message) to Reference 1 with delivery notification requested.

Expected results	1. Reference 1 receives the message. 2. The message is shown as delivered in DUT.
Post-conditions	
Deep inspection	1. Verify that the message is delivered immediately. The feature tag is '3gpp-service.ims.icsi.oma.cpm.msg' 2. Verify that the delivery notification is received (SIP MESSAGE).

Test Case ID	ID_RCS_T_3_1_2
Related Test Cases	
Feature	1-to-1 Messaging
Reason for test	Send Large Message Mode message one-to-one. R5-30-1
Pre-conditions Scenario	1. DUT and Reference 1 are online. 2. STANDALONE MSG AUTH configuration parameter set to 1. 3. CHAT AUTH configuration parameter set to 0.
Test procedure	1. DUT sends a large message (more than 1300 bytes but less than MAX SIZE STANDALONE) to Reference 1 with delivery notification requested. 2. Reference 1 accepts the invitation (either auto or manual).
Expected results	1. Reference 1 receives the message. 2. DUT receives a delivery notification.
Post-conditions	
Deep inspection	1. Verify that the invitation is received and accepted. 2. Verify that the message is delivered immediately. The feature tag is '3gpp-service.ims.icsi.oma.cpm.largemsg' in SIP INVITE 3. Verify that the delivery notification is received.

Test Case ID	ID_RCS_T_3_1_3
---------------------	----------------

Related Test Cases	
Feature	1-to-1 Messaging
Reason for test	Send chat message 1-to-1. R5-30-1
Pre-conditions Scenario	<ol style="list-style-type: none"> 1. DUT and Reference 1 are online. 2. STANDALONE MSG AUTH configuration parameter set to 0. 3. CHAT AUTH configuration parameter set to 1.
Test procedure	<ol style="list-style-type: none"> 1. DUT sends new message (chat invitation) to Reference 1.
Expected results	<ol style="list-style-type: none"> 1. Reference 1 receives the message.
Post-conditions	
Deep inspection	<ol style="list-style-type: none"> 1. Verify DUT sends SIP invitation process with feature tag is '3gpp-service.ims.icsi.oma.cpm.session'. 2. Verify Reference 1 accepts the invitation and receives the message. 3. Verify DUT receives delivery notification.

Test case ID	ID_RCS_T_3_1_4
Related test cases	
Feature	1-to-1 Messaging
Reason for test	Deferred messaging. R5-30-1
Pre-conditions Scenario	<ol style="list-style-type: none"> 1. DUT is online. 2. Reference 1 is offline. 3. STANDALONE MSG AUTH configuration parameter set to 1. 4. CHAT AUTH configuration parameter set to 0 5. Reference 1 is offline.

Test procedure	<ol style="list-style-type: none"> 1. DUT sends 3 messages (less than MAX SIZE STANDALONE) to Reference 1 while Reference 1 is offline. 2. Reference 1 registers for service.
Expected results Post-conditions	<ol style="list-style-type: none"> 1. Reference 1 receives the 3 messages after registering for RCS service
Deep inspection	<ol style="list-style-type: none"> 1. The 3 messages are stored locally in Reference 1 PF 2. When Reference 1 registers for service the messages are delivered to Reference 1 3. An extended test case for DUT to set the delivery and displayed notification request and Reference 1 should send the delivery notification back to DUT when it receives the messages.

Test case ID	ID_RCS_T_3_1_5
Related test cases	
Feature	1-to-1 Messaging
Reason for test	To verify that messaging technology is not latched to SMS
Pre-conditions Scenario	<ol style="list-style-type: none"> 1. Reference 1 is registered RCS users 2. Both DUT and Reference 1 are under 3GPP coverage or Wi-Fi 3. DUT sets the default messaging service to chat in settings
Test procedure	<ol style="list-style-type: none"> 1. DUT register to RCS service 2. DUT sends a chat message to Reference 1. 3. Reference 1 selects the chat message from the notification bar.
Expected results Post-conditions	<ol style="list-style-type: none"> 1. DUT is registered to RCS services. 2. Reference 1 receives the chat message 3. The chat session is established on DUT, and chat composer remains on DUT
Deep inspection	<ol style="list-style-type: none"> 1. Verify SIP Register process on DUT. 2. Verify capability exchange process” 3. Verify DUT sends SIP OPTIONS to Reference 1. Verify DUT receives 200 OK (OPTIONS) with the capability supported by Reference 1. 4. Note: SIP options shall contain at least : +g.3gpp.iari-ref="urn%3Aurn-

	<p>7%3A3gpp-application.ims.iari.rcse.im</p> <ol style="list-style-type: none"> 1. Or 5. Verify DUT sends ANONYMOUS SUBSCRIBE to the Reference1 and 200OK response is received from the network 6. Verify DUT receives NOTIFY from the network with the Reference1's supported RCS service capability information, DUT responds with 200OK to this NOTIFY request. 7. Verify SIP invitation and establishment process on DUT.
--	---

Test case ID	ID_RCS_T_3_1_6
Related test cases	
Feature	1-to-1 Messaging
Reason for test	To verify that chat composer is still available even if DUT is switched to flight mode
Pre-conditions Scenario	<ol style="list-style-type: none"> 1. Both DUT and Reference 1 are registered RCS users 2. Both DUT and Reference 1 are under 3GPP coverage or Wi-Fi 3. DUT and Reference 1 are in an active chat session and are actively exchanging messages.
Test procedure	<ol style="list-style-type: none"> 1. DUT and Reference 1 exchange chat messages. 2. DUT switches to flight mode.
Expected results Post-conditions	<ol style="list-style-type: none"> 1. DUT and Reference 1 receives chat messages. Both composer are in chat. 2. DUT's chat composer still remains
Deep inspection	<ol style="list-style-type: none"> 1. Verify DUT sends no SIP request.

Test case ID	ID_RCS_T_3_1_7
Related test cases	
Feature	1-to-1 Messaging

Reason for test	To verify that chat composer is still available even if DUT switches to Wi-Fi
Pre-conditions Scenario	<ol style="list-style-type: none"> Both DUT and Reference 1 are registered RCS users Both DUT and Reference 1 are under cellular coverage.
Test procedure	<ol style="list-style-type: none"> DUT switches the coverage to Wi-Fi DUT sends a chat message to Reference 1. Reference 1 selects the chat message from the notification bar.
Expected results Post-conditions	<ol style="list-style-type: none"> DUT is registered to RCS services. Reference 1 receives the chat message The chat session is established on DUT, and chat composer remains on DUT.
Deep inspection	<ol style="list-style-type: none"> Verify SIP Register process on DUT. Verify DUT sends SIP OPTIONS to Reference 1. Verify DUT receives 200 OK (OPTIONS) with the capability supported by Reference 1. Note: SIP options shall contain : +g.3gpp.iari-ref="urn%3Aurn-7%3A3gpp-application.ims.iari.rcse.im". 2. Or Verify DUT sends ANONYMOUS SUBSCRIBE to the Reference1 and 200OK response is recieved from the network Verify DUT recieves NOTIFY from the network with the Reference1's supported RCS service capability information, DUT responds with 200OK to this NOTIFY request. Verify SIP invitation and establishment process on DUT.

Test case ID	ID_RCS_T_3_1_8
Related test cases	
Feature	1-to-1 Messaging
Reason for test	To verify that composer is latched to SMS
Pre-conditions Scenario	<ol style="list-style-type: none"> DUT is registered RCS user Reference 1 <u>is not a RCS registered user</u> Both DUT and Reference 1 are under 3GPP coverage or Wi-Fi
Test procedure	<ol style="list-style-type: none"> DUT selects Reference 1 from address book.

Expected results Post-conditions	1. A conversation thread is opened on DUT and SMS composer remains on DUT.
Deep inspection	1. Verify DUT sends SIP OPTIONS when selecting Reference 1. 2. Verify DUT receives 404 response for the SIP OPTIONS request. Or 3. Verify DUT sends ANONYMOUS SUBSCRIBE to the Reference1 and 404 response is received from the network

Test Case ID	ID_RCS_T_3_1_9
Related Test Cases	
Feature	1-to-1 Messaging
Reason for test	Client fallback mechanism applies.
Pre-conditions Scenario	1. DUT is registered and able to access IMS/RCS core network and relevant servers 2. Reference 1 is offline 3. DUT has cached chat capabilities from Reference 1 4. Supported by network: 2G, 3G, HSPA, Wi-Fi 5. Reference 1 network supports revocation as fallback mechanism 6. ChatRevokeTimer is set to a positive integer 7. CFS trigger is equal to 0 8. Assumption: SMS fallback is enabled in the client as 'Never ask and always send SMS'
Test procedure	1. DUT opens a chat conversation from the address book with Reference 1 2. DUT composes and sends a message to Reference 1 (Invitation)
Expected results Post-conditions	1. DUT starts an IM session with Reference 1 and sends a message. Message is not delivered to Reference 1 as it is offline 2. Once ChatRevokeTimer expires, DUT send this message as SMS and revokes it from the server. 3. DUT shows the message is sent as SMS. Message is received by Reference 1 as SMS
Deep inspection	1. Verify invitation process to a 1-to-1 Chat 2. Verify 200OK response includes tag support for revocation as '+g.gsm.rcs.msgrevoke' 3. Verify SIP MESSAGE RevokeRequest is sent following 5.3.5 of RCC71v1 once ChatRevokeTimer expires 4. Verify message is sent as SMS 5. Verify SIP MESSAGE RevokeResponse is received with 'success' status as defined in 5.3.5 of RCC71v1

Test Case ID	ID_RCS_T_3_1_10
Related Test Cases	
Feature	1-to-1 Messaging
Reason for test	Active 1-to-1 Chat session initiated by DUT. Client fallback mechanism applies.
Pre-conditions Scenario	<ol style="list-style-type: none"> 1. DUT and Reference 1 are registered and able to access IMS/RCS core network and relevant servers. 2. Supported by network: 2G, 3G, HSPA, Wi-Fi 3. Reference 1 network supports revocation as fallback mechanism 4. ChatRevokeTimer is set to a positive integer 5. CFS trigger is equal to 0 6. Assumption: SMS fallback is enabled in the client as 'Never ask and always send SMS'
Test procedure	<ol style="list-style-type: none"> 1. DUT and Reference 1 are in an active 1-to-1 Chat session 2. Reference 1 goes offline 3. DUT sends one message more
Expected results Post-conditions	<ol style="list-style-type: none"> 1. DUT and Reference 1 are in an active 1-to-1 Chat session. Delivery and display notifications has been received for the messages sent so far 2. Once Reference 1 goes offline, DUT sends one more message. This chat message does not reach Reference 1, therefore, DUT does not receive delivery notification 3. Once ChatRevokeTimer expires, DUT sends this message as SMS and revokes it from the server. Message is only delivered to Reference 1 as SMS. SMS is the service offered to DUT for Reference 1.
Deep inspection	<ol style="list-style-type: none"> 1. Verify invitation process and successful establishment of the chat 2. Verify 200OK response includes tag support for revocation as '+g.gsma.rcs.msgrevoke' 3. Verify SIP MESSAGE RevokeRequest is sent following 5.3.5 of RCC71v1 once ChatRevokeTimer expires 4. Verify message is sent as SMS 5. Verify SIP MESSAGE RevokeResponse is received with 'success' status as defined in 2.5.3.5 of RCC71v1

Test Case ID	ID_RCS_T_3_1_11
Related Test Cases	
Feature	1-to-1 Messaging
Reason for test	Active 1-to-1 Chat session initiated by Reference 1. Message sent by DUT is not delivered. Client fallback mechanism applies.

Pre-conditions Scenario	<ol style="list-style-type: none"> 1. DUT and Reference 1 are registered and able to access IMS/RCS core network and relevant servers. 2. Supported by network: 2G, 3G, HSPA, Wi-Fi 3. Reference 1 network supports revocation as fallback mechanism 4. ChatRevokeTimer is set to a positive integer 5. CFS trigger is equal to 0 6. Assumption: SMS fallback is enabled in the client as 'Never ask and always send SMS'
Test procedure	<ol style="list-style-type: none"> 1. Reference 1 starts a chat conversation from the address book with DUT 2. Reference 1 composes a couple of messages and sends them to DUT 3. Reference 1 goes offline 4. DUT sends one message more
Expected results Post-conditions	<ol style="list-style-type: none"> 1. Reference 1 and DUT are in an active 1-to-1 Chat session. Delivery and display notifications has been received for the messages sent so far 2. Once Reference 1 goes offline, DUT sends one more message. This chat message does not reach Reference 1, therefore, DUT does not receive delivery notification 3. Once ChatRevokeTimer expires, DUT sends this message as SMS and revokes this message from the server. Message is only delivered to Reference 1 as SMS. SMS is the service offered to DUT for Reference 1.
Deep inspection	<ol style="list-style-type: none"> 1. Verify invitation process and successful establishment of the chat 2. Verify INVITE request includes tag support for revocation as '+g.gsma.rcs.msgrevoke' 3. Verify SIP MESSAGE RevokeRequest is sent following 5.3.5 of RCC71v1 once ChatRevokeTimer expires 4. Verify message is sent as SMS 5. Verify SIP MESSAGE RevokeResponse is received with 'success' status as defined in 5.3.5 of RCC71v1

Test Case ID	ID_RCS_T_3_1_12
Related Test Cases	
Feature	1-to-1 Messaging
Reason for test	Active 1-to-1 Chat session when several messages are not sent. Messages are delivered as SMS and revoked in the correct order.
Pre-conditions Scenario	<ol style="list-style-type: none"> 1. DUT and Reference 1 are registered and able to access IMS/RCS core network and relevant servers. 2. Supported by network: 2G, 3G, HSPA, Wi-Fi 3. Reference 1 network supports revocation as fallback mechanism 4. ChatRevokeTimer is set to a value higher than zero 5. CFS trigger is equal to 0 6. Assumption: SMS fallback is enabled in the client as 'Never ask and always send SMS'

Test procedure	<ol style="list-style-type: none"> 1. DUT and Reference 1 are in an active 1-to-1 Chat session 2. Reference 1 goes offline 3. DUT sends four messages in the chat session, from '1' to '4'. 4. Once chat revoke expires, DUT sends these four messages as SMS to Reference 1 5. SMS is the service offered to DUT for Reference 1, as it is latched to SMS. DUT types and sends a couple of messages more as SMS
Expected results Post-conditions	<ol style="list-style-type: none"> 1. DUT and Reference 1 are in an active 1-to-1 Chat session. Delivery and display notifications has been received for the messages sent so far 2. Once Reference 1 goes offline, DUT sends four messages, there are not delivery notifications for these four messages. 3. Once ChatRevokeTimer expires, DUT sends these messages as SMS and revokes them, starting from the older message not delivered 4. Once the older 'not delivered' message is revoked, all the 'not delivered' messages will be revoked, there is no need to wait until ChatMessageRevoke expires for them 5. DUT sends a couple of messages more in the conversation thread as SMS as per the SMS Latching behaviour (there is no indication that Reference 1 is back online)
Deep inspection	<ol style="list-style-type: none"> 1. Verify invitation process and successful establishment of the chat 2. Verify 200OK response includes tag support for revocation as '+g.gsma.rcs.msgrevoke' 3. Verify SIP MESSAGE RevokeRequest is sent following 5.3.5 of RCC71v1 once ChatRevokeTimer expires for the older message 4. Verify message is sent as SMS for the older message not delivered as chat 5. Verify SIP MESSAGE RevokeResponse is received with 'success' status as defined in 5.3.5 of RCC71v1 6. Verify steps 4-5-6 are repeated in the in the expected order for the rest of messages 7. Verify there is no chat Invitation sent once client is SMS latched

Test Case ID	ID_RCS_T_3_1_13
Related Test Cases	
Feature	1-to-1 Messaging
Reason for test	Make sure DUT waits the configured reconnect guard time when coming back online before DUT revokes the messages, letting the server to deliver any possible delivery notifications
Pre-conditions Scenario	<ol style="list-style-type: none"> 1. DUT is registered and able to access IMS/RCS core network and relevant servers 2. Reference 1 is offline 3. Supported by network: 2G, 3G, HSPA, Wi-Fi 4. Reference 1 network supports revocation as fallback mechanism 5. ChatRevokeTimer is set to a value higher than zero 6. CFS trigger is equal to 0 7. Reconnect Guard Timer is not set to 0 8. Assumption: SMS fallback is enabled in the client as 'Never ask and always send SMS'

Test procedure	<ol style="list-style-type: none"> 1. DUT starts a chat from the address book with Reference 1 2. DUT composes a couple of messages and sends them to Reference 1 3. DUT goes offline 4. Once the ChatRevokeTimer expires, DUT comes back online
Expected results Post-conditions	<ol style="list-style-type: none"> 1. DUT starts a IM session with Reference 1 and sends a couple of messages to Reference 1 2. Messages are not delivered to Reference 1 3. DUT goes offline and comes back successfully online once the ChatRevokeTimer expires. Reference 1 keeps offline, no delivery notifications are received by DUT. 4. Once the RECONNECT GUARD TIMER expires, DUT sends the messages as SMS and revokes the chat messages not delivered from the server, starting for the older message not delivered 5. Messages are delivered to Reference 1 as SMS in the correct order.
Deep inspection	<ol style="list-style-type: none"> 1. Verify invitation process to a 1-to-1 Chat 2. Verify 200OK response includes tag support for revocation as '+g.gsma.rcs.msgrevoke' 3. Verify successful registration 4. Verify SIP MESSAGE RevokeRequest are sent only when RECONNECT GUARD TIMER expires. 5. Verify SIP MESSAGE RevokeRequest are sent following 5.3.5 of RCC71v1 6. Verify message is sent as SMS 7. Verify SIP MESSAGE RevokeResponse are received with 'success' status as defined in 5.3.5 of RCC71v1

Test Case ID	ID_RCS_T_3_1_14
Related Test Cases	
Feature	1-to-1 Messaging
Reason for test	Make sure DUT waits the configured reconnect guard time when coming back online before DUT revokes the messages, letting the server to deliver any possible delivery notifications
Pre-conditions Scenario	<ol style="list-style-type: none"> 1. DUT is registered and able to access IMS/RCS core network and relevant servers 2. Reference 1 is offline 3. Supported by network: 2G, 3G, HSPA, Wi-Fi 4. Reference 1 network supports revocation as fallback mechanism 5. ChatRevokeTimer is set to a value higher than zero 6. CFS trigger is equal to 0 7. Reconnect Guard Timer is not set to 0 8. Assumption: SMS fallback is enabled in the client as 'Never ask and always send SMS'

Test procedure	<ol style="list-style-type: none"> 1. DUT starts a chat from the address book with Reference 1 2. DUT composes a couple of messages and sends them to Reference 1 3. DUT goes offline and Reference 1 comes back online 4. Once the ChatRevokeTimer expires, DUT comes back online
Expected results Post-conditions	<ol style="list-style-type: none"> 1. DUT starts an IM session with Reference 1 and sends two messages to Reference 1. Messages are stored in the Server and not delivered to Reference 1 2. DUT goes offline. Reference 1 comes back online and receives the stored messages from the server 3. DUT comes back successfully online once the ChatRevokeTimer expires. 4. While RECONNECT GUARD TIMER is running, DUT receives the delivery/display notifications that the messages are being sent by IM Chat to Reference 1
Deep inspection	<ol style="list-style-type: none"> 1. Verify invitation process to a 1-to-1 Chat 2. Verify 200OK response includes tag support for revocation as '+g.gsma.rcs.msgrevoke' 3. Verify successful registration 4. Verify delivery/display notifications are received by DUT for the messages sent to Reference 1 5. Verify there is no SIP MESSAGEs RevokeRequest sent to the Server 6. Verify messages are not sent as SMS to Reference 1

Test Case ID	ID_RCS_T_3_1_15
Related Test Cases	
Feature	1-to-1 Messaging
Reason for test	As per CFS configuration required, make sure DUT acts accordingly with the status received in the RevokeRequest response.
Pre-conditions Scenario	<ol style="list-style-type: none"> 1. DUT is registered and able to access IMS/RCS core network and relevant servers 2. Reference 1 is offline 3. Supported by network: 2G, 3G, HSPA, Wi-Fi 4. Reference 1 network supports revocation as fallback mechanism 5. ChatRevokeTimer is set to a value higher than zero 6. CFS trigger is equal to 1 7. Assumption: SMS fallback is enabled in the client as 'Never ask and always send SMS'
Test procedure	<ol style="list-style-type: none"> 1. DUT starts a chat from the address book with Reference 1 2. DUT composes a couple of messages and sends them to Reference 1 3. Reference 1 comes back online right when the Chat Revoke Timer expires <p>NOTE: This test can be simulated</p>

Expected results Post-conditions	<ol style="list-style-type: none"> 1. DUT starts an IM session with Reference 1 and sends a couple of messages to Reference 1. Messages are stored in the Server and not delivered to Reference 1 2. Once ChatRevokeTimer expires and as CFS is equal to 1, DUT revokes these chat message at the same time that Reference 1 comes back online. 3. The response received for the MessageRevoke request is a 'non-successful' response, as the server is trying to deliver the messages to Reference 1 as chat messages 4. As CFS trigger is equal to 1, Chat Messages are not sent by SMS. Reference 1 receives the messages as chat messages
Deep inspection	<ol style="list-style-type: none"> 1. Verify invitation process to a 1-to-1 Chat 2. Verify 200OK response includes tag support for revocation as '+g.gsma.rcs.msgrevoke' 3. Verify SIP MESSAGE RevokeRequest is sent following 5.3.5 of RCC71v1 once ChatRevokeTimer expires 4. Verify SIP MESSAGE RevokeResponse is received with 'failure' status as defined in 5.3.5 of RCC71v1

Test Case ID	ID_RCS_T_3_1_16
Related Test Cases	
Feature	1-to-1 Messaging
Reason for test	As per CFS configuration required, make sure DUT acts accordingly with the status received in the RevokeResponse
Pre-conditions Scenario	<ol style="list-style-type: none"> 1. DUT is registered and able to access IMS/RCS core network and relevant servers 2. Reference 1 is offline 3. Supported by network: 2G, 3G, HSPA, Wi-Fi 4. Reference 1 network supports revocation as fallback mechanism 5. ChatRevokeTimer is set to a value higher than zero 6. CFS trigger is equal to 1 7. Assumption: SMS fallback is enabled in the client as 'Never ask and always send SMS'
Test procedure	<ol style="list-style-type: none"> 1. DUT starts a chat from the address book with Reference 1 2. DUT composes a couple of messages and sends them to Reference 1 3. Reference 1 keeps offline
Expected results Post-conditions	<ol style="list-style-type: none"> 1. DUT starts an IM session with Reference 1 and sends a couple of messages to Reference 1. Messages are stored in the Server and not delivered to Reference 1 2. Once ChatRevokeTimer expires and as CFS is equal to 1, DUT revokes these chat messages 3. The response received for these MessageRevoke requests are a 'successful' response 4. Only then, messages are sent as SMS to Reference 1

Deep inspection	<ol style="list-style-type: none"> 1. Verify invitation process to a 1-to-1 Chat 2. Verify 200OK response includes tag support for revocation as '+g.gsma.rcs.msgrevoke' 3. Verify SIP MESSAGE RevokeRequest is sent following 5.3.5 of RCC71v1 once ChatRevokeTimer expires 4. Verify SIP MESSAGE RevokeResponse is received with 'success' status as defined in 5.3.5 of RCC71v1
------------------------	--

Test Case ID	ID_RCS_T_3_1_17
Related Test Cases	
Feature	1-to-1 Messaging
Reason for test	As per CFS configuration required, make sure DUT acts accordingly with the status received in the RevokeResponse
Pre-conditions Scenario	<ol style="list-style-type: none"> 1. DUT is registered and able to access IMS/RCS core network and relevant servers 2. Reference 1 is offline 3. Supported by network: 2G, 3G, HSPA, Wi-Fi 4. Reference 1 network supports revocation as fallback mechanism 5. ChatRevokeTimer is set to a value higher than zero 6. CFS trigger is equal to 0 7. Assumption: SMS fallback is enabled in the client as 'Never ask and always send SMS'
Test procedure	<ol style="list-style-type: none"> 1. DUT starts a chat from the address book with Reference 1 2. DUT composes a couple of messages and sends them to Reference 1 3. Reference 1 comes back online right when the Chat Revoke Timer expires <p>NOTE: This test can be simulated</p>
Expected results Post-conditions	<ol style="list-style-type: none"> 1. DUT starts an IM session with Reference 1 and sends a couple of messages to Reference 1. Messages are stored in the Server and not delivered to Reference 1 2. Once ChatRevokeTimer expires as CFS trigger is equal to 0, DUT sends the non-delivered messages as SMS and then DUT revokes these chat messages at the same time that Reference 1 comes back online. 3. The response received for the MessageRevoke request is a 'non-successful' response, as the server is trying to deliver the messages to Reference 1 as chat messages 4. Reference 1 receives the messages as chat messages by the server. Reference 1 also receives the messages as SMS sent by DUT
Deep inspection	<ol style="list-style-type: none"> 1. Verify invitation process to a 1-to-1 Chat 2. Verify 200OK response includes tag support for revocation as '+g.gsma.rcs.msgrevoke' 3. Verify SIP MESSAGE RevokeRequest is sent following 5.3.5 of RCC71v1 once ChatRevokeTimer expires 4. Verify SIP MESSAGE RevokeResponse is received with 'failure' status as defined in 5.3.5 of RCC71v1

Test Case ID	ID_RCS_T_3_1_18
Related Test Cases	
Feature	1-to-1 Messaging
Reason for test	As per ChatRevokeTimer configuration required. Message is not revoked.
Pre-conditions Scenario	<ol style="list-style-type: none"> 1. DUT is registered and able to access IMS/RCS core network and relevant servers 2. Reference 1 is offline 3. DUT has cached chat capabilities from Reference 1 4. Supported by network: 2G, 3G, HSPA, Wi-Fi 5. Reference 1 network supports revocation as fallback mechanism 6. ChatRevokeTimer is set to 0 7. CFS trigger is equal to 0
Test procedure	<ol style="list-style-type: none"> 1. DUT opens a chat conversation from the address book with Reference 1 2. DUT composes and sends a message to Reference 1 (Invitation)
Expected results Post-conditions	<ol style="list-style-type: none"> 1. DUT starts an IM session with Reference 1 and sends a message. Message is not delivered to Reference 1 as it is offline 2. As ChatRevokeTimer is set to 0, the client shall not monitor the delivery of the messages and assume the delivery of any messages according to the terminating network delivery policies
Deep inspection	<ol style="list-style-type: none"> 1. Verify invitation process to a 1-to-1 Chat 2. Verify 200OK response includes tag support for revocation as '+g.gsma.rcs.msgrevoke' 3. Verify there is no SIP MESSAGEs RevokeRequest sent to the Server 4. Verify messages are not sent as SMS to Reference 1

Test case ID	ID_RCS_T_3_1_19
Related test cases	
Feature	1-to-1 Messaging
Reason for test	UP 1.0. Reference section 5.3.2 - Delivery Assurance, Network Interworking, session initiation
Pre-conditions Scenario	<ol style="list-style-type: none"> 1. DUT is registered and able to access IMS/RCS core network and relevant servers. 2. Supported by network: 2G, 3G, HSPA, LTE, Wi-Fi 3. DUT is configured with: CHAT REVOKE TIMER=X 4. Reference 1 network supports delivery assurance via network interworking 5. Reference 1 is registered and able to access IMS/RCS core network and

	relevant servers.
Test procedure	<ol style="list-style-type: none"> 1. DUT opens a chat conversation with Reference 1. 2. Reference 1 goes offline (e.g. airplane mode on). 3. DUT composes message and sends it to Reference 1 and wait at least X seconds. 4. Reference 1 comes online (e.g. airplane mode off), device attaches to cellular network, client does not register in IMS/RCS core. 5. DUT continues conversation by sending a message to Reference 1.
Expected results Post-conditions	<ol style="list-style-type: none"> 1. After sending: the message status of sent message changes to "pending" and then "sent" on DUT. 2. After X seconds: DUT does neither resend message as SMS nor offers to DUT to resend as SMS 3. After network attach: Reference 1 device receives DUT message as SMS message 4. After SMS message delivery to Reference 1: On DUT the message status of sent message changes to "delivered via interworking" 5. When sending a subsequent message to Reference 1: As Reference 1's network supports NFS, DUT sends the subsequent message via chat regardless of Reference 1's RCS availability and it does not monitor the delivery of the messages.
Deep inspection	<ol style="list-style-type: none"> 1. Verify SIP 200 OK to DUT for presence of "Network Interworking supported" media feature tag (section 5.3.2 of [GSMA RCC.71 UP-SDD]). 2. DUT initiates IM session and sends message to Reference 1 and learns that network interworking is supported. 3. Verify that CPIM body in SIP INVITE or MSRP SEND of DUT client contains requests for "Interworking" Disposition Notification (as defined in Appendix O of [GSMA RCC.11]) in addition to "Delivered" and "Displayed". 4. Verify that CPIM body in MESSAGE or MSRP SEND contains "interworking" IMDN.

Test case ID	ID_RCS_T_3_1_20
Related test cases	
Feature	1-to-1 Messaging
Reason for test	UP 1.0. Reference section 5.3.2 - Delivery Assurance, Network interworking, during a chat session

Pre-conditions Scenario	<ol style="list-style-type: none"> 1. DUT is registered and able to access IMS/RCS core network and relevant servers. 2. Supported by network: 2G, 3G, HSPA, LTE, Wi-Fi 3. DUT is configured with: CHAT REVOKE TIMER=X 4. Reference 1 network supports delivery assurance via network interworking 5. Reference 1 is registered and able to access IMS/RCS core network and relevant servers.
Test procedure	<ol style="list-style-type: none"> 1. Reference 1 starts a chat conversation by sending 3 messages to DUT. 2. Reference 1 goes offline (e.g. airplane mode). 3. DUT enters conversation, sends a message and wait at least X seconds. 4. Reference 1 comes online (e.g. airplane mode off), device attaches to cellular network, client does not register in IMS/RCS core. 5. DUT continues conversation by sending a message to Reference 1.
Expected results Post-conditions	<ol style="list-style-type: none"> 1. The following applies to messages sent by DUT after Reference 1 became offline: 2. After sending: the message status of sent message changes to "pending" and then "sent" on DUT. 3. After X seconds: DUT does neither resend message as SMS nor offer to DUT to resend as SMS 4. After network attach: Reference 1 receives DUT message as SMS message 5. After SMS message delivery to Reference 1: On DUT the message status of sent message changes to "delivered via interworking" 6. When sending a subsequent message to Reference 1: As Reference 1's network supports NFS, DUT sends the subsequent message via chat regardless of Reference 1's RCS availability and it does not monitor the delivery of the messages.
Deep inspection	<ol style="list-style-type: none"> 1. DUT learns at the time of IMS session invitation that Reference 1 network supports network interworking. 2. Verify INVITE to DUT for presence of "Network Interworking supported" media feature tag (section 5.3.2 of [GSMA RCC.71 UP-SDD]) 3. Verify that CPIM body in SIP INVITE or MSRP SEND of DUT client contains requests for "Interworking" Disposition Notification (as defined in Appendix O of [GSMA RCC.11]) in addition to "Delivered" and "Displayed". 4. Verify that CPIM body in MESSAGE or MSRP SEND contains "interworking" IMDN.

Test case ID	ID_RCS_T_3_1_21
Related test cases	
Feature	1-to-1 Messaging
Reason for test	R5-2-3 R5-30-5 R5-2-3-1(5.3.2 Network Fallback Support Capability 5.3.3.4 Disposition Notifications)

	<p>Network Fallback to SMS:</p> <p>To verify the various types, order of messages and lengthy messages are not affected during NFS</p>
<p>Pre-conditions Scenario</p>	<ol style="list-style-type: none"> 1. DUT and Reference 1 are registered and able to access IMS/RCS core network and relevant servers. 2. DUT and Reference 1 are configured with CHAT AUTH = 1 3. Reference 1 network supports delivery assurance via network interworking 4. DUT and Reference 1 are configured with CHAT AUTH = 1, MESSAGING UX = 1
<p>Test procedure</p>	<ol style="list-style-type: none"> 1. Reference 1 starts a chat conversation by sending 2 messages to DUT. 2. DUT enters conversation, sends a message. 3. Reference 1 goes offline (e.g. airplane mode). 4. DUT sends combination of emoticons to Reference 1 5. DUT sends two text message to Reference 1 6. DUT sends message(1000 < size > 819 to Reference 1 7. Reference 1 comes online (e.g. airplane mode off), device attaches to cellular network; client does not register in IMS/RCS core.
<p>Expected results Post-conditions</p>	<ol style="list-style-type: none"> 1. Messages sent by DUT delivered. There is no SMS initiated for those messages. 2. Messages sent by Reference 1 are marked as delivered and displayed. 3. Reference 1 goes offline , RCS gets disabled 4. The following applies to messages sent by DUT after Reference 1 became offline: 5. After sending: the message status of sent message changes to "pending" and then "sent" on DUT. 6. DUT does neither resend message as SMS nor offer to DUT to resend as SMS 7. The following applies to messages sent by DUT after Reference 1 became offline: 8. After sending: the message status of sent message changes to "pending" and then "sent" on DUT. 9. DUT does neither resend message as SMS nor offer to DUT to resend as SMS. 10. The following applies to messages sent by DUT after Reference 1 became offline: 11. After sending: the message status of sent message changes to "pending" and then "sent" on DUT. 12. DUT does neither resend message as SMS nor offer to DUT to resend as SMS. 13. After network attach: Reference 1 receives DUT message as SMS message. 14. Emoticons are received properly. 15. Messages are delivered in order. Message sent at step 4 received before messages sent at step5. Messges sent at step5 are received inorder. Same behavior for messages sent step 5 and 6. 16. Order of messages are maintained.

	17. After SMS message delivery to Reference 1: On DUT the message status of sent message changes to 'delivered'.
Deep inspection	<ol style="list-style-type: none"> 1. Verify INVITE to DUT and 200OK to Reference1 for presence of "+g.gsma.rcs.msgfallback" media feature tag (Table 9: Feature tags used to indicate network support for chat fallback mechanisms section 5.3.2 of [GSMA RCC.71 UP-SDD]) 2. Verify that CPIM body in MSRP SEND of DUT client contains requests for "Interworking" Disposition Notification (as defined in Appendix O of [GSMA RCC.11]) in addition to "Delivered" and "Displayed". 3. Verify that CPIM body in SIP MESSAGE contains "interworking" IMDN.

Test case ID	ID_RCS_T_3_1_22
Related test cases	
Feature	1-to-1 Messaging
Reason for test	<p>R5-2-3 R5-30-5 R5-2-3-1</p> <p>(5.3.2 Network Fallback Support Capability,5.3.3.4 Disposition Notifications,5.3.3.1 Technology selection rules Table 10: Messaging technology selection for 1-to-1 conversation initiation when A party is online)</p> <p>NFS: For Non RCS Recipients</p> <p>Verify Network interworking of a Standalone message to SMS</p>
Pre-conditions Scenario	<ol style="list-style-type: none"> 1. DUT is registered and able to access IMS/RCS core network and relevant servers. 2. DUT supports Standalone Messaging only. DUT is configured with CHAT AUTH = 0, MESSAGING UX = 1 and STANDALONE MSG AUTH =1 3. Reference 1 is a Non RCS recipient
Test procedure	<ol style="list-style-type: none"> 1. DUT starts conversation with Reference 1 by sending 1 message to DUT. 2. DUT sends emoticons to Reference 1
Expected results Post-conditions	<ol style="list-style-type: none"> 1. After sending: the message status of sent message changes to "pending" and then "sent" on DUT. 2. Reference 1 receives message as SMS. 3. After Message is delivered to Reference 1 as SMS, message is marked as delivered at DUT. 4. After sending: the message status of sent message changes to "pending" and then "sent" on DUT. 5. Reference 1 receives message as SMS. 6. After Message is delivered to Reference 1 as SMS, message is marked

	<p>as delivered at DUT.</p> <p>7. Emoticons are received properly.</p>
Deep inspection	<p>1. DUT initiates standalone messaging as per 3.2.4.1 Standalone messaging of [GSMA RCC.07 RCS6.0 UNI] and sends messages to Reference Verify that there are two SIP messages sent by DUT carrying messages sent at step1 and step2.</p> <p>2. Verify that DUT received SIP message carrying IMDN delivery for all the messages after it was delivered to reference 1as SMS.</p>

Test case ID	ID_RCS_T_3_1_23
Related test cases	
Feature	1-to-1 Messaging
Reason for test	<p>R5-24-4(5.3.6 Geolocation Push fall-back, 5.3.2 Network Fallback Support Capability)</p> <p>To Verify the network supporting NFS handles no fallback scenario properly when remote device does not support Geolocation Push via SMS.</p>
Pre-conditions Scenario	<p>1. DUT and Reference 1 are registered and able to access IMS/RCS core network and relevant servers.</p> <p>2. Reference 1 does not support Geolocation Push via SMS.</p> <p>3. Reference 1 network supports delivery assurance via network interworking</p> <p>4. DUT and Reference1 are configured with CHAT AUTH = 1 and MESSAGING UX = 1.</p>
Test procedure	<p>1. DUT selects 'send my location' option to share location information and adds a label to identify the location</p> <p>2. Reference 1 goes out of coverage and becomes offline.</p> <p>3. DUT sends location informaton prepared at step 1</p> <p>4. Reference 1 gets network coverage back but yet to become IMS registered.</p> <p>5. Reference 1 becomes Online</p> <p>6. Reference 1 receives Geo Location Information as RCS message</p> <p>7. Reference 1 opens Geo Location Information and marks it as read</p>
Expected results Post-conditions	<p>1. User should be able to select the location</p> <p>2. Reference 1 goes offline , RCS gets disabled</p> <p>3. After sending: the message status of sent message changes to "pending" and then "sent" on DUT.</p> <p>4. DUT does neither resend message as SMS nor offers to DUT to resend as SMS any time after location was sent</p> <p>5. After network attach: Reference 1 device does not receive DUT message as SMS message</p> <p>6. After step 5, Geo Location is delivered to Reference 1 as ST&FW</p>

	<p>message.</p> <ol style="list-style-type: none"> 7. Geo Location message is marked as delivered at DUT 8. Geo Location message is marked as displayed at DUT
Deep inspection	<ol style="list-style-type: none"> 1. Verify contact header of REGISTER sent by Reference 1 2. does not include IARI (Table 11: SIP OPTIONS tag for Geolocation Push via SMS of [GSMA RCC.71 UP-SDD]) or via presence document - org.3gpp.urn:urn-7:3gpp-application.ims.iari.rcs.geosms 3. DUT sends out INVITE as per procedures defined in 3.10.4 Technical Realisation of [GSMA RCC.07 RCS6.0 UNI]. 4. Verify SIP 200 OK to DUT for presence of "Network Interworking supported" media feature tag (section 5.3.2 of [GSMA RCC.71 UP-SDD]). 5. Verify that CPIM body in MSRP SEND or SIP INVITE of DUT client contains requests for "Interworking" Disposition Notification (as defined in Appendix O of [GSMA RCC.11]) in addition to "Delivered" and "Displayed". 6. Reference 1 does not receive Geo Location Link in SMS 7. Verify that DUT receives SIP message carrying IMDN delivery and display report from Reference 1.

Test case ID	ID_RCS_T_3_1_24
Related test cases	
Feature	1-to-1 Messaging
Reason for test	<p>R5-24-4(5.3.6 Geolocation Push fall-back, 5.3.2 Network Fallback Support Capability)</p> <p>To Verify the network fallback of standalone message carrying geo location functions properly.</p>
Pre-conditions Scenario	<ol style="list-style-type: none"> 1. DUT and Reference 1 are registered and able to access IMS/RCS core network and relevant servers. 2. Reference 1 supports Geolocation Push via SMS. 3. Reference 1 network supports delivery assurance via network interworking 4. DUT supports Standalone Messaging only. DUT is configured with MESSAGING UX = 1,CHAT AUTH = 0 and STANDALONE MSG AUTH = 1 5. Reference1 is configured with MESSAGING UX = 1, CHAT AUTH = 1 and STANDALONE MSG AUTH = 1
Test procedure	<ol style="list-style-type: none"> 1. DUT selects 'send my location' option to share location information and adds a label to identify the location 2. Reference 1 becomes offline. 3. DUT sends location informaton prepared at step 1 4. Reference 1 gets network coverage back but yet to become IMS registered. 5. Reference 1 receives Geo Location Link as SMS message

Expected results Post-conditions	<ol style="list-style-type: none"> 1. User should be able to select the location 2. Reference 1 goes offline , RCS gets disabled 3. After sending: the message status of sent message changes to "pending" and then "sent" on DUT. 4. Reference one latches to network and registration is not complete 5. DUT does neither resend message as SMS nor offers to DUT to resend as SMS any time after location was sent 6. After network attach: Reference 1 device receives DUT message as SMS message
Deep inspection	<ol style="list-style-type: none"> 1. Verify contact header of REGISTER sent by Reference 1 includes IARI (Table 11: SIP OPTIONS tag for Geolocation Push via SMS of [GSMA RCC.71 UP-SDD]) or via presence document - org.3gpp.urn:urn-7:3gpp-application.ims.iari.rcs.geosms 2. Verify Reference 1 includes IARI (Table 11: SIP OPTIONS tag for Geolocation Push via SMS of [GSMA RCC.71 UP-SDD] or via presence document) in all OPTIONS request& responses 3. Verify that DUT sends out SIP message carrying Geo Info Uri as per as per 3.2.4.1 Standalone messaging of [GSMA RCC.07 RCS6.0 UNI] 4. Verify that Geo Uri included by DUT in Standalone message is as per RFC5870 5. Referece 1 receives Geo Location Link in SMS

Test case ID	ID_RCS_T_3_1_25
Related test cases	
Feature	1-to-1 Messaging
Reason for test	To verify that the user can switch messaging services (from chat to SMS)
Pre-conditions Scenario	<ol style="list-style-type: none"> 1. Both DUT and Reference 1 are registered RCS users 2. Both DUT and Reference 1 are under 3GPP coverage or Wi-Fi
Test procedure	<ol style="list-style-type: none"> 1. DUT selects Reference 1 in address book then selects the option to create a chat conversation. 2. DUT switches the composer to SMS/MMS
Expected results Post-conditions	<ol style="list-style-type: none"> 1. DUT displays a chat conversation and chat composer remains on DUT 2. DUT's composer changes to SMS.

Deep inspection	<ol style="list-style-type: none"> 1. Verify DUT checks capabilities for Reference 1. Verify DUT receives 200 capabilities supported by Reference 1. 2. Verify DUT doesn't check capabilities for reference 1.
------------------------	--

Test case ID	ID_RCS_T_3_1_26
Related test cases	
Feature	1-to-1 Messaging
Reason for test	If both RCS 1-to-1 chat and RCS Standalone messaging are enabled, the message can be delivered seamlessly to recipient according to their capability
Pre-conditions Scenario	<ol style="list-style-type: none"> 1. DUT support seamless messaging and is online 2. MESSAGING UX configuration parameter set to 0 3. CHAT AUTH configuration parameter set to 1 4. STANDALONE MSG AUTH configuration parameter set to 1 5. Reference 1 is online but only support RCS Chat service 6. CHAT AUTH configuration parameter set to 1 7. Reference 2 is online but only support RCS Standalone messaging 8. STANDALONE MSG AUTH configuration parameter set to 1
Test procedure	<ol style="list-style-type: none"> 1. DUT send message to Reference 1 2. DUT send message to Reference 2
Expected results Post-conditions	<ol style="list-style-type: none"> 1. Reference 1 successfully receive message from DUT 2. verify that DUT does not show or visually indicate about technology/service used to convey message to reference device 3. Reference 2 successfully receive message from DUT 4. verify that DUT does not show or visually indicate about technology/service used to convey message to reference device
Deep inspection	<ol style="list-style-type: none"> 1. Verify that selected technology selected by DUT is 1-to1 Chat 2. Verify that selected technology selected by DUT is RCS Standalone messaging

Test case ID	ID_RCS_T_3_1_27
Related test cases	

Feature	1-to-1 Messaging
Reason for test	MSRP 403 error-- This test is to verify if 1-to-1 chat message fails to deliver due to MSRP error code then message successfully send as an RCS standalone message
Pre-conditions Scenario	<ol style="list-style-type: none"> 1. DUT support seamless messaging and is online 2. MESSAGING UX configuration parameter set to 0 3. CHAT AUTH configuration parameter set to 1 4. STANDALONE MSG AUTH configuration parameter set to 1 5. Reference 1 is online
Test procedure	<ol style="list-style-type: none"> 1. DUT send message to reference 1(1-to1 Chat technology selected) 2. Reference 1 fails to receive message from DUT(simulate 403 response from reference 1 to DUT) 3. DUT retry and send same message again to reference 1 <p>NOTE: This test can be simulated</p>
Expected results	<ol style="list-style-type: none"> 1. Reference1 successfully receive message from DUT 2. verify that DUT does not show or visually indicate about technology/service used to convey message to reference device
Post-conditions	
Deep inspection	<ol style="list-style-type: none"> 1. Verify DUT selected 1-to-1 chat for delivering message to reference 1 2. Verify DUT receives MSRP error response 403 3. Verify DUT delivered/send an message an RCS Standalone message

Test case ID	ID_RCS_T_3_1_28
Related test cases	
Feature	1-to-1 Messaging
Reason for test	MSRP 400 error-- This test is to verify if 1-to-1 chat message fails to deliver due to MSRP error code then message successfully send as an RCS standalone message
Pre-conditions Scenario	<ol style="list-style-type: none"> 1. DUT support seamless messaging and is online 2. MESSAGING UX configuration parameter set to 0 3. CHAT AUTH configuration parameter set to 1 4. STANDALONE MSG AUTH configuration parameter set to 1 5. Reference 1 is online
Test procedure	<ol style="list-style-type: none"> 1. DUT send message to reference 1(1-to1 Chat technology selected) 2. Reference 1 fails to receive message from DUT(simulate 400 response from reference 1 to DUT)

	3. DUT retry and send same message again to reference 1 NOTE: This test can be simulated
Expected results Post-conditions	1. Reference1 successfully receive message from DUT 2. verify that DUT does not show or visually indicate about technology/service used to convey message to reference device
Deep inspection	1. Verify DUT selected 1-to-1 chat for delivering message to reference 1 2. Verify DUT receives MSRP error response 400 3. Verify DUT delivered/send an message an RCS Standalone message

Test case ID	ID_RCS_T_3_1_29
Related test cases	
Feature	1-to-1 Messaging
Reason for test	MSRP 501 error-- This test is to verify if 1-to-1 chat message fails to deliver due to MSRP error code then message successfully send as an RCS standalone message
Pre-conditions Scenario	1. DUT support seamless messaging and is online 2. MESSAGING UX configuration parameter set to 0 3. CHAT AUTH configuration parameter set to 1 4. STANDALONE MSG AUTH configuration parameter set to 1 5. Reference 1 is online
Test procedure	1. DUT send message to reference 1(1-to1 Chat technology selected) 2. Reference 1 fails to receive message from DUT(simulate 501 response from reference 1 to DUT) 3. DUT retry and send same message again to reference 1 NOTE: This test can be simulated
Expected results Post-conditions	1. Reference1 successfully receive message from DUT 2. verify that DUT does not show or visually indicate about technology/service used to convey message to reference device
Deep inspection	1. Verify DUT selected 1-to-1 chat for delivering message to reference 1 2. Verify DUT receives MSRP error response 501 3. Verify DUT delivered/send an message an RCS Standalone message

Test case ID	ID_RCS_T_3_1_30
---------------------	-----------------

Related test cases	
Feature	1-to-1 Messaging
Reason for test	MSRP 400, 403 and 501 errors-- This test is to verify if 1-to-1 chat message fails to deliver due to MSRP errors code then message successfully send as an SMS
Pre-conditions Scenario	<ol style="list-style-type: none"> 1. DUT support seamless messaging and is online 2. MESSAGING UX configuration parameter set to 0 3. CHAT AUTH configuration parameter set to 1 4. STANDALONE MSG AUTH configuration parameter set to 0 5. Reference 1 is online
Test procedure	<ol style="list-style-type: none"> 1. DUT send message to reference 1(1-to1 Chat technology selected) 2. Reference 1 fails to receive message from DUT(simulate 400 or 403 or 501 responses from reference 1 to DUT) 3. DUT retry and send same message again to reference 1 <p>NOTE: This test can be simulated</p>
Expected results	<ol style="list-style-type: none"> 1. Reference1 successfully receive message from DUT 2. verify that DUT does not show or visually indicate about technology/service used to convey message to reference device
Post-conditions	
Deep inspection	<ol style="list-style-type: none"> 1. Verify DUT selected 1-to-1 chat for delivering message to reference 1 2. Verify DUT receives MSRP error response 400 or 403 or 501 3. Verify DUT delivered/send an message as SMS

Test case ID	ID_RCS_T_3_1_31
Related test cases	
Feature	1-to-1 Messaging
Reason for test	<p>R5-30-17(5.3.3.1 Technology selection rules)</p> <p>Messaging Technology selection at Sender supporting Standalone messaging only ;for a RCS Recipient supporting 1-1Chat</p> <p>Fall-back to SMS due to Standalone Messaging Failure</p>
Pre-conditions Scenario	<ol style="list-style-type: none"> 1. DUT and Reference 1 are registered and able to access IMS/RCS core network and relevant servers. 2. Supported by network: 2G, 3G, HSPA, LTE, Wi-Fi 3. DUT supports Standalone Messaging only. DUT is configured with CHAT AUTH = 0 and STANDALONE MSG AUTH =1 4. Reference1 is configured with CHAT AUTH = 1 and 5. STANDALONE MSG AUTH = 1 6. Reference 1 network does not indicates fall back/delivery assurance

	(network support required)
Test procedure	1. DUT starts conversation by sending 2 message to Reference 1.
Expected results	1. After sending: the message status of sent message changes to "pending" and then "sent as SMS" on DUT.
Post-conditions	
Deep inspection	<ol style="list-style-type: none"> 1. Verify that SIP message is sent out by DUT 2. DUT receives any of below error responses <ul style="list-style-type: none"> → 380 Alternative Service → 408 Request Timeout → 486 Busy Here → 487 Request Terminated 3. DUT chooses to Fall-back to SMS and resends messages in SMS 4. Reference 1 receives these messages as SMS

Test case ID	ID_RCS_T_3_1_32
Related test cases	
Feature	1-to-1 Messaging
Reason for test	To verify that user can still send new chat message after expiration of chat session by inactivity (R5-30-1)
Pre-conditions Scenario	<ol style="list-style-type: none"> 1. Both DUT and Reference 1 are registered RCS users 2. Both DUT and Reference 1 are under 3GPP coverage or Wi-Fi 3. DUT and Reference 1 are in an active chat session and are actively exchanging messages. 4. Chat inactivity timer is known from IMS network
Test procedure	<ol style="list-style-type: none"> 1. DUT and Reference 1 exchange chat messages. 2. Wait for the chat inactivity timer to expire 3. DUT sends a new chat message to Reference 1
Expected results	<ol style="list-style-type: none"> 1. DUT and Reference 1 receive chat messages 2. The chat session expires (DUT will not notice a closing SIP session) 3. Reference 1 receives the messages from DUT seamlessly
Post-conditions	

Deep inspection	<ol style="list-style-type: none"> 1. Verify chat messages are exchanged with MSRP messages. 2. At DUT, confirm the SIP BYE message was sent after the expected time out. 3. Verify DUT sends the chat message. Also DUT receives the delivered notification in a new session.
------------------------	---

Test case ID	ID_RCS_T_3_1_33
Related test cases	
Feature	1-to-1 Messaging
Reason for test	To verify that a user can start chat by entering a MSISDN (R5-30-1
Pre-conditions Scenario	<ol style="list-style-type: none"> 1. Both DUT Reference 1 are registered RCS users 2. Both DUT and Reference 1 are under 3GPP coverage or Wi-Fi
Test procedure	<ol style="list-style-type: none"> 1. DUT starts a chat from the address book with Reference 1. 2. DUT deletes the chat conversation with Reference 1. 3. DUT starts a new chat by entering Reference 1's MSISDN
Expected results Post-conditions	<ol style="list-style-type: none"> 1. Reference 1 receives the chat message from DUT 2. On DUT, the chat conversation with Reference 1 is deleted 3. Reference 1 receives the chat message from DUT.
Deep inspection	<ol style="list-style-type: none"> 1. Verify DUT sends the chat message. Verify in the header To the format of the phone number. 2. Verify DUT sends the chat message. Verify in the header To the format of the phone number.

Test case ID	ID_RCS_T_3_1_34
Related test cases	
Feature	1-to-1 Messaging
Reason for test	To verify that a user can manually set the default messaging to chat or SMS (R5-30-21)

Pre-conditions Scenario	<ol style="list-style-type: none"> Both DUT and Reference 1 are registered RCS users Both DUT and Reference 1 are under 3GPP coverage or Wi-Fi On DUT, default messaging service is set to automatic
Test procedure	<ol style="list-style-type: none"> DUT starts a chat conversation with Reference 1 and users exchange message. DUT sets default message type to SMS/MMS and sends one SMS to Reference 1 DUT sets default message type to Chat and sends one chat message to Reference 1
Expected results Post-conditions	<ol style="list-style-type: none"> Chat composer remains on DUT SMS composer remains on DUT Chat composer remains on DUT
Deep inspection	<ol style="list-style-type: none"> Verify invitation and establishment process on DUT. Verify DUT receives the notification as SIP MESSAGE or MSRP messages Verify DUT does not checks capabilities nor sends MSRP messages Verify DUT checks capabilities and sends MSRP messages

Test Case ID	ID_RCS_T_3_1_35
Related Test Cases	
Feature	1-to-1 Messaging
Reason for test	To verify that the sent message status. R5-30-22
Pre-conditions Scenario	<ol style="list-style-type: none"> DUT is online. Display Notification switch configuration parameter set to 0. STANDALONE MSG AUTH configuration parameter set to 1. CHAT AUTH configuration parameter set to 0. The Message Size is less than MAX SIZE IM.
Test procedure	<ol style="list-style-type: none"> DUT sends message to Reference 1, transfer of the Message in progress (e.g. queuing on device). DUT sends message and confirmation that the message has been correctly accepted by the DUT network. DUT sends message and confirmation that the message has been delivered to Reference 1. DUT sends message and the message has been displayed in chat view on the receiving Reference 1. DUT sends message and the expected outcome of the operation could not be confirmed by the network; and the device does not attempt to send the message anymore.

Expected results Post-conditions	<ol style="list-style-type: none"> 1. Message status is Pending. 2. Message status is Sent. 3. Message status is Delivered. 4. Message status is Displayed. 5. Message status is Failed.
Deep inspection	<ol style="list-style-type: none"> 1. Verify DUT message has been transferred, but DUT has not received the 200OK response message in timeout time. 2. Verify DUT message has been transferred and DUT received the 200OK response message. 3. Verify DUT received the "Delivered" message notification. 4. Verify DUT received "Displayed" message notification. 5. Verify DUT message has been transferred, but DUT has not received the 200OK response message over timeout time.

Test case ID	ID_RCS_T_3_1_36
Related test cases	
Feature	1-to-1 Messaging
Reason for test	To verify different notifications for chat messages (pending, sending, delivery and display, error) (R5-30-22, R5-30-2)
Pre-conditions Scenario	<ol style="list-style-type: none"> 1. Both DUT and Reference 1 are registered RCS users 2. Both DUT and Reference 1 are under 3GPP coverage or Wi-Fi 3. DUT and Reference 1 are in an active chat session and are actively exchanging messages. 4. Reference 1 is on the home page.
Test procedure	<ol style="list-style-type: none"> 1. DUT sends a new chat message to Reference 1, transfer of the Message in progress (e.g. queuing on device). 2. DUT's network confirms that the message has been correctly accepted. 3. Reference 1 receives the chat message. 4. Reference 1 opens the chat message. 5. DUT sends a new chat message to Reference 1 and an error appears on the Reference 1 side 6. <i>NOTE: To facilitate self-accreditation this test can be simulated</i>
Expected results Post-conditions	<ol style="list-style-type: none"> 1. DUT displays a delivered notification to indicate the chat message has been delivered successfully to Reference 1. 2. DUT displays a notification to indicate the chat message has been read on Reference 1. 3. DUT displays an error notification

Deep inspection	<ol style="list-style-type: none"> 1. Verify DUT message has been transferred, but DUT has not received the MSRP 200OK response message in timeout time. 2. Verify DUT message has been transferred and DUT received the MSRP 200OK response message. 3. Verify DUT received the "Delivered" message notification via MSRP. 4. Verify DUT received the "Displayed" message notification via MSRP. 5. Verify DUT received error message
------------------------	---

Test case ID	ID_RCS_T_3_1_38
Related test cases	
Feature	1-to-1 Messaging
Reason for test	To verify that emoticon pictures (figurines) are supported and properly displayed (R5-30-2)
Pre-conditions Scenario	<ol style="list-style-type: none"> 1. Both DUT and Reference 1 are registered RCS users 2. Both DUT and Reference 1 are under 3GPP coverage or Wi-Fi. 3. DUT and Reference 1 are in an active chat session and are actively exchanging messages. 4. STANDALONE MSG AUTH configuration parameter set to 0. 5. CHAT AUTH configuration parameter set to 1. 6. The Message Size is less than MAX SIZE IM.
Test procedure	<ol style="list-style-type: none"> 1. DUT sends a chat message to Reference 1 with emoticon, for example : “:-)”. 2. Reference 1 sends a chat message with emoticon to DUT, for example : “:-(“
Expected results Post-conditions	<ol style="list-style-type: none"> 1. Reference 1 receives the chat message with the emoticon. Emoticon is displayed to DUT in chat conversation. 2. DUT receives the chat message with the emoticon. Emoticon is displayed to DUT in chat conversation.
Deep inspection	<ol style="list-style-type: none"> 1. Verify Emoticons is sent in the MSRP message as text and delivered and displayed notifications for the emoticons message in MSRP. 2. Verify Emoticons is received in the MSRP message as text bu DUT. Verify DUT sends delivered and displayed notifications as MSRP.

Test case ID	ID_RCS_T_3_1_39
Related test cases	

Feature	1-to-1 Messaging
Reason for test	To verify that the “is typing” notification is well supported and displayed (R5-30-2)
Pre-conditions Scenario	<ol style="list-style-type: none"> 1. Both DUT and Reference 1 are registered RCS users 2. Both DUT and Reference 1 are under 3GPP coverage or Wi-Fi 3. DUT and Reference 1 are in an active chat session and are actively exchanging messages.
Test procedure	<ol style="list-style-type: none"> 1. DUT starts typing a message to Reference 1. 2. DUT stops typing message. 3. DUT starts typing again. 4. DUT sends the message to Reference 1 5. DUT starts typing another message to Reference 1 6. DUT removes all the text in the second message (empty the message box) without sending it
Expected results Post-conditions	<ol style="list-style-type: none"> 1. "DUT is composing" notification is displayed on Reference 1. 2. After a short time, notification “DUT is composing” disappears on Reference 1. 3. "DUT is composing" notification is displayed on Reference 1. 4. "DUT is composing" disappears and the chat message is received on Reference 1. 5. "DUT is composing" notification is displayed on Reference 1. 6. After a short time, notification “DUT is composing” disappears on Reference 1.
Deep inspection	<ol style="list-style-type: none"> 1. Verify isComposing notification is send by MSRP message by DUT. The paramter <state> must be set to active. 2. Verify isComposing notification is send by MSRP message by DUT. The paramter <state> must be set to idle. 3. Verify isComposing notification is send by MSRP message by DUT. The paramter <state> must be set to active. 4. Verify isComposing notification is send by MSRP message by DUT. The paramter <state> must be set to active. 5. Verify isComposing notification is send by MSRP message by DUT. The paramter <state> must be set to idle.

Test Case ID	ID_RCS_T_3_1_40
Related Test Cases	
Feature	1-to-1 Messaging

Reason for test	To verify that user can see when the other party is currently writing a message. R5-30-27
Pre-conditions Scenario	<ol style="list-style-type: none"> 1. DUT and Reference 1 are online. 2. STANDALONE MSG AUTH configuration parameter set to 0. 3. CHAT AUTH configuration parameter set to 1.
Test procedure	<ol style="list-style-type: none"> 1. DUT is composing message with typing text string.
Expected results Post-conditions	<ol style="list-style-type: none"> 1. Reference 1 shall be able to see an “is typing” notification whenever the creator of a message is typing.
Deep inspection	<ol style="list-style-type: none"> 1. Verify ‘IsComposing’ notification is sent when DUT is tying. Content-type is application/im-iscomposing+xml.

Test case ID	ID_RCS_T_3_1_41
Related test cases	
Feature	1-to-1 Messaging
Reason for test	Testing that sent messages are stored when the other party is offline and then forwarded when the party comes online R5-30-29
Pre-conditions Scenario	<ol style="list-style-type: none"> 1. DUT is registered RCS user 2. Reference 1 is an RCS user and offline 3. Both DUT and Reference 1 are under 3GPP coverage or Wi-Fi 4. Chat inactivity timer value is known for the server under test 5. Reference 1 network supports revocation as fallback mechanism 6. ChatRevokeTimer is set to 0
Test procedure	<ol style="list-style-type: none"> 1. DUT sends 3 chat messages to Reference 1. 2. Wait for chat inactivity timer to expire. 3. Reference 1 enables RCS, so it will register for RCS services.
Expected results Post-conditions	<ol style="list-style-type: none"> 1. DUT successfully sends the 3 chat messages. 2. At DUT, there is no delivered or read icon for the message just sent. 3. Reference 1 successfully registers for RCS and the 3 chat message received in the order they were sent. 4. On DUT, the delivered and read icons are displayed for all 3 messages.

Deep inspection	<ol style="list-style-type: none"> 1. Verify DUT doesn't receive notifications for the chat messages. 2. At DUT, confirm in SIP protocol for BYE (Cseq : Bye). Confirm the SIP BYE message was sent after the expected time out. 3. Verify DUT receives "Delivered" and "Displayed" notifications for the chat messages via MSRP or SIP Message.
------------------------	---

Test case ID	ID_RCS_T_3_1_42
Related test cases	
Feature	1-to-1 Messaging
Reason for test	Testing that store and forward function works properly when DUT is in a concurrent chat session with another party R5-30-29
Pre-conditions Scenario	<ol style="list-style-type: none"> 1. DUT and Reference 2 are registered RCS users 2. Reference 1 is an RCS Reference 1ut currently de-registered (RCS disabled) 3. Both DUT, Reference 2 and Reference 1 are under 3GPP coverage or Wi-Fi 4. Chat inactivity timer value is known for the server under test
Test procedure	<ol style="list-style-type: none"> 1. DUT sends chat message to Reference 2. 2. DUT sends 3 chat messages to Reference 1. 3. Wait for chat inactivity timer to expire. 4. Reference 1 enables RCS, so it will register for RCS services.
Expected results Post-conditions	<ol style="list-style-type: none"> 1. Reference 2 receives the chat message successfully 2. DUT successfully sends the 3 chat messages. 3. At DUT, there is no delivered or read icon for the message just sent. 4. Reference 1 successfully registers for RCS and the 3 chat message received in the order they were sent. 5. At DUT, the delivered and read icons are displayed for all 3 messages.
Deep inspection	<ol style="list-style-type: none"> 1. Verify DUT receives notifications for the chat messages 2. Verify DUT doesn't receive notifications for the chat messages. 3. At DUT, confirm in SIP protocol for BYE (Cseq : Bye). Confirm the SIP BYE message was sent after the expected time out. 4. Verify DUT receives "Delivered" and "Displayed" notifications for the chat messages via MSRP or SIP Message.

Test case ID	ID_RCS_T_3_1_43
Related test cases	

Feature	1-to-1 Messaging
Reason for test	Testing that both deferred and new messages are delivered when the user comes online R5-30-29
Pre-conditions Scenario	<ol style="list-style-type: none"> 1. DUT and Reference 1 are RCS users 2. Reference 1 is online 3. DUT is offline 4. Both DUT and Reference 1 are under 3GPP coverage or Wi-Fi 5. Reference 1 network supports revocation as fallback mechanism 6. ChatRevokeTimer is set to 0
Test procedure	<ol style="list-style-type: none"> 1. Reference 1 sends 4 chat message to DUT. 2. DUT is back online. 3. DUT sends a chat message to Reference 1. 4. While the deferred messages are being delivered, Reference 1 sends an additional fifth message to DUT
Expected results Post-conditions	<ol style="list-style-type: none"> 1. DUT receives the fourth chat messages. 2. Reference 1 receives the chat message. 3. DUT receives the fifth message from Reference 1 with current time
Deep inspection	<ol style="list-style-type: none"> 1. Verify DUT doesn't receive notifications or messages 2. Verify SIP Register process on DUT. 3. Verify that when DUT is back online it starts to receive S&F messages 4. Verify that when DUT sends a new chat message to Reference1 it generates a new INVITE and does not use the S&F session. 5. Verify DUT receives notifications for the chat messages. 6. Verify DUT sends notifications for the chat messages

Test case ID	ID_RCS_T_3_1_44
Related test cases	
Feature	1-to-1 Messaging
Reason for test	Testing that message notifications are displayed correctly when both sender and receiver goes offline and online R5-30-29
Pre-conditions Scenario	<ol style="list-style-type: none"> 1. DUT is registered RCS user 2. Reference 1 is an RCS user and offline 3. Both DUT and Reference 1 are under 3GPP coverage or Wi-Fi 4. Reference 1 network supports revocation as fallback mechanism 5. ChatRevokeTimer is set to 0

Test procedure	<ol style="list-style-type: none"> 1. DUT sends 3 chat messages to Reference 1. 2. DUT goes offline. 3. Reference 1 goes online 4. DUT goes back online
Expected results Post-conditions	<ol style="list-style-type: none"> 1. On DUT, there is no delivered or read icon for the message just sent 2. Reference 1 receives the 3 chat messages.
Deep inspection	<ol style="list-style-type: none"> 1. Verify DUT doesn't receive notifications. 2. Verify SIP Register process on DUT. Verify DUT receives notifications for the chat messages

Test case ID	ID_RCS_T_3_1_45
Related test cases	
Feature	1-to-1 Messaging
Reason for test	Testing that message notifications are received correctly if the chat is unanswered R5-30-29
Pre-conditions Scenario	<ol style="list-style-type: none"> 1. DUT and Reference 1 are registered RCS users 2. Both DUT and Reference 1 are under 3GPP coverage or Wi-Fi 3. Chat inactivity timer value is known for the server under test 4. Reference 1 is on the home page
Test procedure	<ol style="list-style-type: none"> 1. DUT sends chat messages to Reference 1. 2. DUT stops sending chat messages. 3. Reference 1 wait until the new invites are expired and opens the chat window
Expected results Post-conditions	<ol style="list-style-type: none"> 1. Reference 1 receives the chat messages but does not open the chat window and DUT see the delivered notifications in the chat thread. 2. DUT see the displayed notifications in the chat thread
Deep inspection	<ol style="list-style-type: none"> 1. Verify DUT receives delivered notifications. 2. Verify DUT receives displayed notifications.

Test case ID	ID_RCS_T_3_1_46
Related test cases	
Feature	1-to-1 Messaging
Reason for test	Testing that message notifications are received correctly when the sender goes offline after sending the messages R5-30-29
Pre-conditions Scenario	<ol style="list-style-type: none"> 1. DUT and Reference 1 are registered RCS users 2. Both DUT and Reference 1 are under 3GPP coverage or Wi-Fi
Test procedure	<ol style="list-style-type: none"> 1. DUT sends chat invitation to Reference 1, then DUT sends a second chat message to Reference 1. 2. DUT disables mobile data. 3. Reference 1 selects the chat message from the notification bar 4. DUT enables mobile data.
Expected results	<ol style="list-style-type: none"> 1. Reference 1 sees the chat messages in the notification bar 2. DUT sees the displayed notification in the chat thread.
Post-conditions	
Deep inspection	<ol style="list-style-type: none"> 1. Verify SIP invitation and establishment process on DUT. 2. Verify DUT doesn't receive notification. 3. Verify SIP Register process on DUT. Verify DUT receives the notification as MSRP or SIP Message.

Test case ID	ID_RCS_T_3_1_47
Related test cases	
Feature	1-to-1 Messaging
Reason for test	To verify that the user sees any events (xMS, Chat, file transfer) within a single conversation thread. (R5-30-3)
Pre-conditions Scenario	<ol style="list-style-type: none"> 1. Both DUT and Reference 1 are registered RCS users 2. Both DUT and Reference 1 are under 3GPP coverage or Wi-Fi 3. DUT and Reference 1 are in an active chat session and are actively exchanging messages.

Test procedure	<ol style="list-style-type: none"> Reference 1 selects a file from local storage and sends to DUT. DUT accepts the notification for downloading the file DUT opens the file.
Expected results Post-conditions	<ol style="list-style-type: none"> Reference 1 sees that FT option is available for DUT. File downloading is started on DUT File transfer and chat messages are grouped into one chat conversation on DUT
Deep inspection	<ol style="list-style-type: none"> Verify no SIP INVITE is receive for the FT, only MSRP Message used. Verify DUT sends delivery notification via MSRP Message Verify DUT sends displayed notifications via MSRP session or SIP MESSAGE if chat session closed.

Test case ID	ID_RCS_T_3_1_48
Related test cases	
Feature	1-to-1 Messaging
Reason for test	To verify that messages received that exceed the Max Size IM value will be truncated (R5-30-3)
Pre-conditions Scenario	<ol style="list-style-type: none"> Both DUT and Reference 1 are registered RCS users Both DUT and Reference 1 are under 3GPP coverage or Wi-Fi DUT and Reference 1 are in an active chat session and are actively exchanging messages.
Test procedure	<ol style="list-style-type: none"> Reference 1 sends a chat message with a number of characters that exceeds the number of characters that the DUT's application is able to display properly. <p>NOTE: To facilitate self-accreditation this test can be simulated</p>
Expected results Post-conditions	<ol style="list-style-type: none"> DUT receives the chat message but the message is truncated and a notification that only a part of the chat message can be displayed
Deep inspection	<ol style="list-style-type: none"> Verify in MSRP message that the message is not cut off by the Network 1, same size as the MSRP message sends by Reference 1.

Test case ID	ID_RCS_T_3_1_49
---------------------	-----------------

Related test cases	
Feature	1-to-1 Messaging
Reason for test	To verify that all messages with the same contact are in the same thread and in a timely order (R5-30-3 To verify that incoming and outgoing messages are - displayed interlaced - and in the order messages have been sent and received
Pre-conditions Scenario	1. Both DUT and Reference 1 are registered RCS users 2. Both DUT and Reference 1 are under 3GPP coverage or Wi-Fi
Test procedure	1. DUT sends chat invitation to Reference 1 2. Reference 1 sends chat message to DUT. 3. DUT sends a chat message to Reference 1 4. DUT goes to home page and Reference 1 sends chat message. 5. DUT opens the address book and Reference 1 sends a chat message. 6. DUT opens the messaging application and selects the chat conversation with Reference 1. 7. DUT and Reference 1 keep exchange chat messages
Expected results Post-conditions	1. Reference 1 selects the chat message from the notification bar. This establishes the chat session. 2. DUT receives the chat message. 3. Reference 1 receives the chat message. 4. DUT received the chat message in the notification bar 5. DUT received the chat message in the notification bar 6. DUT sees all the exchange messages with Reference 1 in the same chat thread. 7. The order of the messages shall be the same between sending and receiving and chat message should be interlaced
Deep inspection	1. Verify DUT received chat message in MSRP message. Verify DUT sends delivered notification in MSRP message. 2. Verify DUT received chat message in MSRP message. Verify DUT sends delivered notification in MSRP message. 3. Verify DUT sends displayed notification in MSRP message. 4. Verify sent and received chat message in MSRP message are displayed into the chat conversation as they have been sent or received.
Test case ID	ID_RCS_T_3_1_50

Related test cases	
Feature	1-to-1 Messaging
Reason for test	To verify that the parameter USER ALIAS AUTH is correctly configured (R5-30-3)
Pre-conditions Scenario	<ol style="list-style-type: none"> Both DUT and Reference 1 are registered RCS users Both DUT and Reference 1 are under 3GPP coverage or Wi-Fi DUT defines an alias name in chat settings and is not in Reference 1 address book. Reference 1 defines an alias name in chat settings and is not in DUT address book.
Test procedure	<ol style="list-style-type: none"> Reference 1 sends chat invitation to DUT DUT opens and reads the message from the notification bar. Reference 1 starts typing a message to DUT DUT starts typing a message to Reference 1. DUT sends a chat message to DUT.
Expected results Post-conditions	<ol style="list-style-type: none"> DUT received the chat message in the notification bar with the alias of Reference 1 Chat thread with Reference 1 is displayed and the alias of Reference 1 is displayed to DUT. DUT should see the notification is Composing with the alias and/or the phone number of Reference 1. Reference 1 receives the chat message from DUT.
Deep inspection	<ol style="list-style-type: none"> Verify in the SIP INVITE, that the header From contains the alias of Reference 1. Verify isComposing notification is receive by MSRP message by DUT. The parameter <state> must be set to active. Verify isComposing notification is send by MSRP message by DUT. The parameter <state> must be set to active.

Test Case ID	ID_RCS_T_3_1_51
Related Test Cases	
Feature	1-to-1 Messaging
Reason for test	No restrictions by the message size. R5-30-40

Pre-conditions Scenario	<ol style="list-style-type: none"> 1. DUT and Reference 1 are registered and able to access IMS/RCS core network and relevant servers. 2. Supported by network: 2G, 3G, HSPA, Wi-Fi 3. CHAT AUTH configuration parameter set to 1. 4. STANDALONE AUTH configuration parameter set to 0. 5. Maximum message size is set to 8192bytes
Test procedure	<ol style="list-style-type: none"> 1. DUT starts a chat conversation with Reference 1 by sending a message 3000 English characters long (invitation) 2. DUT types a second message with 8192 English characters 3. DUT types a third message with 8193 English characters in the IM/chat application client with Reference 1 <p>Note: It is assumed that 8192 bytes is equal 8192 English characters</p>
Expected results Post-conditions	<ol style="list-style-type: none"> 1. DUT starts an IM session with Reference 1. Reference 1 receives a first message 3000 characters long 2. Reference 1 receives a second message 8192 characters long. 3. Messages are displayed correctly in Reference 1 screen 4. DUT gets an error notification on maximum message size reached when trying to types a 8193 message long (UI dependent)
Deep inspection	<ol style="list-style-type: none"> 1. Verify invitation process and successful establishment of the chat 2. Verify Content-Length for the 'message/cpim' is equal to 8192 3. Verify delivery/display notifications (both over SIP and MSRP) 4. Verify chat session is working (8192 message exchanged and 'is typing' notifications)

Test Case ID	ID_RCS_T_3_1_52
Related Test Cases	
Feature	1-to-1 Messaging
Reason for test	To verify the max message size in standalone. R5-30-40
Pre-conditions Scenario	<ol style="list-style-type: none"> 1. DUT and Reference 1 are online. 2. CHAT AUTH configuration parameter set to 0 3. STANDALONE AUTH configuration parameter set to 1 4. DUT is configured MAX SIZE STANDALONE.
Test procedure	<ol style="list-style-type: none"> 1. DUT sends message with size over MAX SIZE STANDALONE.
Expected results Post-conditions	<ol style="list-style-type: none"> 1. Message cannot be sent out.

Deep inspection	1. Verify MSRP message is not sent out.
------------------------	---

Test Case ID	ID_RCS_T_3_1_53
Related Test Cases	
Feature	1-to-1 Messaging
Reason for test	Maximum large message size exceeded (NNI only). R5-30-40
Pre-conditions Scenario	<ol style="list-style-type: none"> 1. DUT and Reference 1 are online. 2. STANDALONE MSG AUTH configuration parameter set to 1. 3. CHAT AUTH configuration parameter set to 0 4. DUT NNI parameters: 5. Max size of large message = xxx MB. 6. Reference 1 NNI parameters: 7. Max size of large message = yyy MB. <p>NOTE: This test case can be simulated</p>
Test procedure	1. DUT sends a multimedia message (Large Message Mode Standalone Message) to Reference 1 with the message size larger than Reference 1 network can support.
Expected results	1. Reference 1 network rejects the message from DUT
Post-conditions	
Deep inspection	<ol style="list-style-type: none"> 1. Verify the a=file-selector attribute in the incoming SIP request. 2. Verify the Max size of large message parameter defined in Reference 1 Network. 3. Reference 1 Messaging Server detects that the multimedia message to be sent is too big (i.e., a=file-selector value is too big) and responds the INVITE with a 403 "Forbidden" and warning header set to "133 Size exceeded".

Test case ID	ID_RCS_T_3_1_54
Related test cases	
Feature	1-to-1 Messaging

Reason for test	To verify that the client supports multiple parallel conversations and group conversations (R5-30-4)
Pre-conditions Scenario	<ol style="list-style-type: none"> Both DUT, Reference 1 and Reference 2 are registered RCS users Both DUT and Reference 1 are under 3GPP coverage or Wi-Fi DUT and Reference 1 are in an active chat session and are actively exchanging messages. DUT and Reference 2 are in an active chat session and are actively exchanging messages DUT, Reference 1 and Reference 2 are in an active Group Chat session and are actively exchanging messages
Test procedure	<ol style="list-style-type: none"> DUT sends a chat message to the Group Chat Reference 1 sends a chat message to chat conversation with DUT. DUT sends a chat message to chat conversation with Reference 2. Reference 1 sends a chat message to the Group Chat
Expected results Post-conditions	<ol style="list-style-type: none"> Reference 1 and Reference 2 receive the Group Chat message. DUT received chat message from Reference 1. Reference 2 received the chat message. DUT and Reference 2 receive the Group Chat message.
Deep inspection	<ol style="list-style-type: none"> Verify DUT sends chat message via MSRP message. Verify DUT receives the chat message via MSRP message. Verify DUT sends chat message via MSRP message Verify DUT receives the chat message via MSRP message.

Test case ID	ID_RCS_T_3_1_55
Related test cases	
Feature	1-to-1 Messaging
Reason for test	To verify the deletion function in a chat message thread (R5-30-4)
Pre-conditions Scenario	<ol style="list-style-type: none"> Both DUT and Reference 1 are registered RCS users Both DUT and Reference 1 are under 3GPP coverage or Wi-Fi DUT and Reference 1 are in an active chat session and are actively exchanging messages
Test procedure	<ol style="list-style-type: none"> DUT selects one chat message and deletes it. DUT selects multiple chat messages and deletes them. DUT selects all the chat messages and deletes them

Expected results Post-conditions	<ol style="list-style-type: none"> 1. The chat message is deleted on DUT 2. The chat messages are deleted on DUT 3. All the chat messages are deleted and the chat conversation is also deleted on DUT
Deep inspection	<ol style="list-style-type: none"> 1. Verify DUT doesn't send any SIP or MSRP request when delete chat message 2. Verify DUT doesn't send any SIP or MSRP request when delete chat messages 3. Verify DUT doesn't send any SIP or MSRP request when delete all chat messages

Test Case ID	ID_RCS_T_3_1_56
Related Test Cases	
Feature	1-to-1 Messaging
Reason for test	To verify that Geolocation Push Service should offer a 'legacy mode'. R5-30-50
Pre-conditions Scenario	<ol style="list-style-type: none"> 1. DUT is online. 2. Reference 1 is a non-RCS recipient. 3. DUT supports CFS.
Test procedure	<ol style="list-style-type: none"> 1. DUT sends positions or locations to Reference 1. 2. Reference 1 selects the positions or locations icon.
Expected results Post-conditions	<ol style="list-style-type: none"> 1. The positions or locations are received as SMS. Reference 1 shall be able to detect that it is a Geolocation Push and display that event as an icon. 2. Reference 1 can see the position / location on a map.
Deep inspection	<ol style="list-style-type: none"> 1. Verify Reference 1 received a link to online map display or 'screenshot' with map picture

Test Case ID	ID_RCS_T_3_1_57
Related Test Cases	
Feature	1-to-1 Messaging

Reason for test	To verify that user can send/receive positions or locations via Chat message. R5-30-50
Pre-conditions Scenario	<ol style="list-style-type: none"> 1. DUT and Reference 1 are online. 2. CHAT AUTH configuration parameter set to 1 3. STANDALONE AUTH configuration parameter set to 0 4. PROVIDE GEOLOC PUSH configuration parameter set to 1 5. Users are not in an active chat session
Test procedure	<ol style="list-style-type: none"> 1. DUT sends detected or selected location to Reference 1. 2. DUT sends detected or selected location with tag to Reference 1.
Expected results Post-conditions	<ol style="list-style-type: none"> 1. Reference 1 receives a position or location, the RCS Geolocation Push user shall have the ability to see the position / location on a map. 2. Reference 1 receives a position or location, the RCS Geolocation Push user shall be able to see any tags that were added by the sender.
Deep inspection	<ol style="list-style-type: none"> 1. Verify the DUT sent geolocation information message via INVITE(with separate Accept-Contact header) or MSRP, and the message has "Content-Type: application/vnd.gsma.rcspushlocation+xml". 2. Verify the DUT sent geolocation information message via MSRP, and the message has "Content-Type: application/vnd.gsma.rcspushlocation+xml" and has "Label" attribute in rcslocation xml.

Test Case ID	ID_RCS_T_3_1_58
Related Test Cases	
Feature	1-to-1 Messaging
Reason for test	To verify that user can send/receive positions or locations via Standalone message. R5-30-50
Pre-conditions Scenario	<ol style="list-style-type: none"> 1. DUT and Reference 1 are online. 2. CHAT AUTH configuration parameter set to 0 3. STANDALONE AUTH configuration parameter set to 1 4. PROVIDE GEOLOC PUSH configuration parameter set to 1
Test procedure	<ol style="list-style-type: none"> 1. DUT sends detected or selected location to Reference 1. 2. DUT sends detected or selected location with tag to Reference 1.

Expected results Post-conditions	<ol style="list-style-type: none"> Reference 1 receives a position or location, the RCS Geolocation Push user shall have the ability to see the position / location on a map. Reference 1 receives a position or location, the RCS Geolocation Push user shall be able to see any tags that were added by the sender.
Deep inspection	<ol style="list-style-type: none"> Verify DUT send SIP Message with "geo" URI as content. Verify DUT send SIP Message as "geo" URI with "labeltext" as content.

Test Case ID	ID_RCS_T_3_1_59
Related Test Cases	
Feature	1-to-1 Messaging
Reason for test	Send Pager Mode message 1-to-many. R5-30-51
Pre-conditions Scenario	<ol style="list-style-type: none"> DUT and Reference 1 are online and Reference 2 is offline. STANDALONE MSG AUTH configuration parameter set to 1 CHAT AUTH configuration parameter set to 0. MAX 1 TO MANY RECIPIENTS configuration parameter is "1".
Test procedure	<ol style="list-style-type: none"> DUT sends a small message (less than 1300 bytes and MAX SIZE STANDALONE) (Pager Mode Standalone Message) to Reference 1 and Reference 2 with delivery notification requested.
Expected results Post-conditions	<ol style="list-style-type: none"> Reference 1 receives the message immediately. Reference 2 receives the message after registering for RCS service. The message is shown as delivered in DUT
Deep inspection	<ol style="list-style-type: none"> Verify that the message is delivered successfully to each recipient. Verify that the delivery notification is received (SIP MESSAGE) from each recipient.

Test Case ID	ID_RCS_T_3_1_60
Related Test Cases	
Feature	1-to-1 Messaging

Reason for test	Send Large Message Mode message 1-to-many. R5-30-51
Pre-conditions Scenario	<ol style="list-style-type: none"> 1. DUT and Reference 1 are online and Reference 2 is offline. 2. STANDALONE MSG AUTH configuration parameter set to 1. 3. CHAT AUTH configuration parameter set to 0. 4. MAX 1 TO MANY RECIPIENTS configuration parameter is "1".
Test procedure	<ol style="list-style-type: none"> 1. DUT sends a large message (more than 1300 bytes but less than MAX SIZE STANDALONE) to Reference 1 and Reference 2 with delivery notification requested. 2. Reference 1 accepts the invitation immediately. 3. Reference 2 accepts the invitation after registering for RCS service.
Expected results Post-conditions	<ol style="list-style-type: none"> 1. Reference 1 and Reference 2 receive the message. 2. DUT receives delivery notification.
Deep inspection	<ol style="list-style-type: none"> 1. Verify that the invitation is received and accepted by each recipient. 2. Verify that the message is delivered successfully. 3. Verify that the delivery notification is received from each recipient.

Test Case ID	ID_RCS_T_3_1_61
Related Test Cases	
Feature	1-to-1 Messaging
Reason for test	Send Pager Mode message 1-to-many. R5-30-51
Pre-conditions Scenario	<ol style="list-style-type: none"> 1. DUT, Reference 1, Reference 2 and Reference 3 are online. 2. STANDALONE MSG AUTH configuration parameter set to 1. 3. CHAT AUTH configuration parameter set to 0. 4. MAX 1 TO MANY RECIPIENTS configuration parameter is present with a value 2.
Test procedure	<ol style="list-style-type: none"> 1. DUT sends a small message (less than 1300 bytes and MAX SIZE STANDALONE) (Pager Mode Standalone Message) to Reference 1, Reference 2 and Reference 3 with delivery notification requested.

Expected results Post-conditions	1. Message cannot be sent out.
Deep inspection	1. Verify DUT did not send the SIP Message out.

Test Case ID	ID_RCS_T_3_1_62
Related Test Cases	
Feature	1-to-1 Messaging
Reason for test	Send Large Message Mode message 1-to-many. R5-30-51
Pre-conditions Scenario	<ol style="list-style-type: none"> 1. DUT, Reference 1, Reference 2 and Reference 3 are online. 2. STANDALONE MSG AUTH configuration parameter set to 1. 3. CHAT AUTH configuration parameter set to 0. 4. MAX 1 TO MANY RECIPIENTS configuration parameter is present with a value 2.
Test procedure	1. DUT sends a large message (more than 1300 bytes and MAX SIZE STANDALONE) (Large Mode Standalone Message) to Reference 1, Reference 2 and Reference 3 with delivery notification requested.
Expected results Post-conditions	1. Message cannot be sent out.
Deep inspection	1. Verify DUT did not send the SIP Message out.

Test Case ID	ID_RCS_T_3_1_63
---------------------	-----------------

Related Test Cases	
Feature	1-to-1 Messaging
Reason for test	Verify 1 TO MANY SELECTED TECHNOLOGY configuration parameter. R5-30-53, R5-30-52
Pre-conditions Scenario	<ol style="list-style-type: none"> 1. DUT, Reference 1, Reference 2 and Reference 3 are RCS capable and online. 2. STANDALONE MSG AUTH configuration parameter set to 0. 3. CHAT AUTH configuration parameter set to 1. 4. MAX 1 TO MANY RECIPIENTS configuration parameter is present with a value 3. 5. 1 TO MANY SELECTED TECHNOLOGY configuration parameter is present with a value 1 (RCS 1-to-1 Chat)
Test procedure	<ol style="list-style-type: none"> 1. DUT sends a message to a distribution list of Reference 1, Reference 2 and Reference 3 with delivery notification requested.
Expected results	<ol style="list-style-type: none"> 1. Message sent out in individual RCS chat sessions to Reference 1, Reference 2 and Reference 3.
Post-conditions	
Deep inspection	<ol style="list-style-type: none"> 1. Verify DUT initiates individual RCS Chat sessions with Reference 1, Reference 2 and Reference 3

3.2 Group Chat

3.2.1 Functional test cases

For the sake of clarity, the initial precondition of known users in each device's contact list is summarised:

- A-Party's device has users B-, C-, D- and E-Party in its contact list.
- B-Party's device has users A-, C- and E-Party in its contact list.
- C-Party's device has A-Party in its contact list.
- E-Party's device has users A- and C-Party in its contact list.

Test case ID	ID_RCS_F_3_2_1
---------------------	----------------

Related test cases	ID_RCS_T_3_1_1
Feature	Group Chat
Reason for test	UP 1.0. Reference section US6.1: Create a Group Chat Conversation with a selection of contacts – Contact offline, non-RCS contact.
Pre-conditions Scenario	<ol style="list-style-type: none"> 1. A-, B- and C-Party's devices are online. 2. B-, C- and D-Party are existing Group chat enabled contacts on the device's contact list. 3. B- and C-Party are actually Group chat enabled contacts, but D-Party is no longer an RCS contact (D's SIM has been moved from RCS device to non-RCS device). 4. B-Party belongs to an RCS provider different from A-Party's RCS provider, and its device is switched-off.
Test procedure	<ol style="list-style-type: none"> 1. Select any 'Create Group chat' entry point (Messaging application or Contact List) provided on A-Party's device. 2. Select B-, C- and D-Party in the contact list to create a Group chat. 3. Type some short text in the 'Subject' field, select any image from device's gallery as 'Icon' of the Group chat, and create the Group. 4. B-Party switches on his device.
Expected results Post-condition	<ol style="list-style-type: none"> 1. While only one contact is selected, 'create Group Chat' option is disabled (i.e. greyed out), until 2 or more contacts are selected. 2. A Group chat conversation appears in A- and C-Party's devices, with 'Subject' as defined by A. A- Party sees B- and C-Party as participants; C-Party sees A- and B-Party as participants. 3. A-Party receives a notification that D-Party cannot take part in the Group chat. D-Party is no longer displayed as an RCS enabled contact in A-Party's contact list. 4. Group chat conversation appears in B-Party's device, with 'Subject' as defined by A-Party. B-Party sees A- and C-Party as participants.
Deep inspection	–

Test case ID	ID_RCS_F_3_2_2
Related test cases	ID_RCS_F_3_2_1
Feature	Group Chat
Reason for test	UP 1.0. Reference section US6.1: Create a Group Chat Conversation with a selection of contacts – From 1-to-1 Chat

Pre-conditions Scenario	<ol style="list-style-type: none"> 1. A-Party's device is online. 2. B- and E-Party are existing Group chat enabled contacts on the A-Party's contact list. 3. There is an existing 1-to-1 Chat Messaging conversation between A- and E-Party on their respective devices. 4. Test case ID_RCS_F_3_2_1 has been executed and the Group Chat conversation is still available on A- and B-Party's devices.
Test procedure	<ol style="list-style-type: none"> 1. Open the messaging application in A-Party's device. 2. Select 1-to-1 Chat Messaging Conversation between A- and E-Party. 3. Select 'Add participant' option and select B-Party from A-Party's contact list. 4. Type same short text in the 'Subject' field, and select same image from A-Party's device gallery as 'Icon' of the Group chat, as in 3_2_1 and create the Group.
Expected results Post-condition	<ol style="list-style-type: none"> 1. A Group Chat conversation appears on A-, B- and E-Party's devices, with 'Subject' as defined by A-Party. Each party can see the other parties as participants. The existing 1-to-1 Messaging conversation remains as independent conversation in A- and E-Party's devices. 2. A- and B-Party now have two different Group chat conversations, with same Subject but different participants.
Deep inspection	–

Test case ID	ID_RCS_F_3_2_3
Related test cases	ID_RCS_F_3_2_2
Feature	Group Chat
Reason for test	UP 1.0. Reference section US6.1: Create a Group Chat Conversation with a selection of contacts – Same 'Subject' and participants as other Group chat.
Pre-conditions Scenario	<ol style="list-style-type: none"> 1. B-Party's device is offline. 2. A- and E-Parties are existing Group chat enabled contacts on B-Party's contact list. 3. Test case 3_2_2 has been executed and its resultant Group Chat conversation remains on A-, B- and E-Party's devices.
Test procedure	<ol style="list-style-type: none"> 1. Select any 'Create Group chat' entry point (Messaging application or Contact List) provided on the B-party device. 2. Select A- and E-Party in the contact list to create a Group chat. 3. Type same short text in the 'Subject' field of the Group chat, as in ID_RCS_F_3_2_1 and ID_RCS_F_3_2_2 and create the Group.

Expected results Post-conditions	<ol style="list-style-type: none"> 1. While only one contact is selected, 'create Group Chat' option is disabled (i.e. greyed out), until the second contacts is selected. 2. Existing Group chat conversation between A-, B- and E-Party (as per 3_2_) is opened in B-Party's device.
Deep inspection	–

Test case ID	ID_RCS_F_3_2_4
Related test cases	
Feature	Group Chat
Reason for test	UP 1.0. Reference section US6.2: Add a subject title and Group Chat Picture to any Group Chat Conversation – No initial 'Subject'.
Pre-conditions Scenario	<ol style="list-style-type: none"> 1. B-Party's device is online. 2. C- and E-Parties are existing Group chat enabled contacts on B-Party's contact list.
Test procedure	<ol style="list-style-type: none"> 1. Select any 'Create Group chat' entry point (Messaging application or Contact List) provided on B-Party's device. 2. Select C- and E-Party in the contact list to create a Group chat. 3. Create the Group without typing any text in the 'Subject' field, nor choosing any image for the 'Icon' field. 4. B-Party sends text messages, emoticons and files to the Group. 5. B-, C- and E-Party change the 'Subject' of the Group chat, and select an image from device gallery for the Group Chat 'Icon' (each one, different subject and image).
Expected results Post-conditions	<ol style="list-style-type: none"> 1. While only one contact is selected, 'create Group Chat' option is disabled (i.e. greyed out), until the second contacts is selected. 2. A Group chat conversation appears on B-, C- and E-Party's device, with a generic 'Subject' and a generic Group Chat 'Icon'. 3. C- and E-Party receive text, emoticons and files as sent by B-Party. 4. Each Group Chat participant sees their own Subject and Icon to identify the Group Chat.
Deep inspection	–

Test case ID	ID_RCS_F_3_2_5
---------------------	----------------

Related test cases	ID_RCS_F_3_2_4
Feature	Group Chat
Reason for test	UP 1.0. Reference section US6.3: Add a contact from contact list to an existing Group Chat Conversation – Added contact is offline; attempt to add a non-RCS contact.
Pre-conditions Scenario	<ol style="list-style-type: none"> 1. B-Party's device is online. 2. A-, C-, D- and E-Party are existing Group chat enabled contacts Known to B-Party's contact list. 3. A-Party's device is switched-off. 4. A-Party is an existing Group chat enabled contact known to B-Party's contact list. 5. Test case 3_2_4 has been executed and its resultant Group Chat conversation remains on B-, C- and E-Party's device. 6. All participant's networks are configured for automatic participation in Group Chat (without manual confirmation by the user).
Test procedure	<ol style="list-style-type: none"> 1. Open existing Group chat conversation between B-, C- and E-Party (as created in Test case 3_2_ on B-Party's device. 2. Select 'Add participant' on B-Party's device and add A-Party from contacts. 3. Switch on A-Party's device. 4. Send text messages, emoticons and files to the Group Chat from A-Party's device. 5. Unplug D-Party's SIM from the RCS capable device and plug it into a new device which is not RCS capable. 6. A-Party shall try and add D-Party to the Group Chat.
Expected results Post-conditions	<ol style="list-style-type: none"> 1. A party appears as new participant on B-, C- and E-Party's devices. 2. A-Party is new participant in the Group Chat. 3. B-, C- and E-Party receive text, emoticons and files in the Group Chat as sent by A-Party. 4. D-Party is not added to the Group chat.
Deep inspection	–

Test case ID	ID_RCS_F_3_2_6
Related test cases	ID_RCS_F_3_2_5
Feature	Group Chat
Reason for test	UP 1.0. Reference section US6.4: Know who is participating in a Group Chat Conversation at any point in time – Unknown participant; Alias handling; participant leaves.

Pre-conditions Scenario	<ol style="list-style-type: none"> 1. A- and E-Party are NOT contacts on C-Party's contact list. 2. B-Party is an existing contact in C-Party's contact list. 3. A- and B-Party have set RCS Alias names; E-Party has not set a RCS Alias name. 4. Test case 3_2_5 has been executed and the Group Chat conversation remains on A-, B-, C- and E-Party's device.
Test procedure	<ol style="list-style-type: none"> 1. Open existing Group chat conversation between A-, B-, C- and E-Party (as created in Test case 3_2_ on C-Party's device. 2. Select the available Group chat information option. 3. Leave Group Chat on B-Party's device.
Expected results Post-conditions	<ol style="list-style-type: none"> 1. C-Party can see A-, B- and E-Party as participants in the Group, identified as: A-Party RCS Alias plus MSISDN, B-Party contact name as in C-Party's contact list, E-Party's MSISDN. 2. A-, C- and E-Party are notified that B-Party has left the Group Chat.
Deep inspection	–

Test case ID	ID_RCS_F_3_2_7
Related test cases	ID_RCS_F_3_2_1
Feature	Group Chat
Reason for test	UP 1.0. Reference section US6.5: not need to deal with Group Chat invites and acceptances.
Pre-conditions Scenario	<ol style="list-style-type: none"> 1. A-Party's device is online. 2. B- and C-Party are existing Group Chat enabled contacts known to A-Party's device. 3. B-Party belongs to a RCS provider different from A-Party's RCS provider. B-Party's RCS provider has disabled Group Chat auto-accept. 4. Group Chat created in Test case 3_2_1 is deleted on A-, B- and C-Party's devices.
Test procedure	<ol style="list-style-type: none"> 1. Select any 'Create Group chat' (from messaging application or Contact List) on A-Party's device. 2. Select B- and C-Party from the contact list to create a Group Chat. 3. Type some short text in the 'Subject' field and create the Group Chat. 4. B-Party accepts the invitation to be part of the Group Chat
Expected results Post-conditions	<p>While only one contact is selected, 'create Group Chat' option is disabled (i.e. greyed out), until a second contact is selected.</p> <p>A Group Chat conversation appears on A- and C-Party's devices, with 'Subject' as defined by A-Party, A- and C-Party as participants.</p> <p>An invitation for that Group Chat appears on B-Party's device.</p>

	The Group Chat conversation appears on B-Party's device, with 'Subject' as defined by A-Party, and A-, B- and C-Party as participants. A- and C-Party are notified that B-Party has accepted the Group Chat invite.
Deep inspection	–

Test case ID	ID_RCS_F_3_2_8
Related test cases	ID_RCS_F_3_2_1 or ID_RCS_F_3_2_7
Feature	Group Chat
Reason for test	UP 1.0. Reference section US6.6: send text Group Chat Messages to an existing Group Chat Conversation – Sender is offline
Pre-conditions Scenario	<ol style="list-style-type: none"> 1. A-Party's device is online. 2. B- and C-Party are known Group Chat enabled contacts to A-Party. 3. Test case 3_2_1 or 3_2_7 has been executed and its resultant Group Chat conversation is available on A-, B- and C-Party's devices.
Test procedure	<ol style="list-style-type: none"> 1. Open existing Group chat conversation between A-, B- and C-Party (as created in Test case 3_2_1 or 3_2_7 on the A-Party's device. 2. Send a few text messages from A-Party's device in that Group Chat. 3. Set A-Party's device to 'Flight mode' (any kind of communication is barred) 4. Create a few Group Chat messages on A-Party's device and select "send". 5. Disable 'Flight Mode' to regain connectivity on A-Party's device.
Expected results Post-conditions	<ol style="list-style-type: none"> 1. B- and C-Party receive the Group Chat messages as sent by A-Party. 2. Messages created by A-Party are locally queued in its device. A-Party user is informed accordingly. 3. Queued messages are sent from A-party's device to the Group Chat and received by B and C parties.
Deep inspection	–

Test case ID	ID_RCS_F_3_2_9
Related test cases	ID_RCS_F_3_2_8
Feature	Group Chat
Reason for test	UP 1.0. Reference section US6.7: send a Group Chat Message to an existing Group Chat Conversation like a text and it is just delivered. Recipients do not need to explicitly accept any single message.

Pre-conditions Scenario	<ol style="list-style-type: none"> 1. A-Party's device is online. 2. B- and C-Party are known to be Group Chat enabled on A-Party's device. 3. Test case F_3_2_8 has been executed.
Test procedure	<ol style="list-style-type: none"> 1. Open Group Chat conversation on B- and C-Party's device.
Expected results Post-conditions	<ol style="list-style-type: none"> 1. When B- and C-Party open the Group Chat conversation with A-party, all messages sent by A are available, without any need to accept those messages.
Deep inspection	–

Test case ID	ID_RCS_F_3_2_10
Related test cases	ID_RCS_F_3_2_1 or ID_RCS_F_3_2_7
Feature	Group Chat
Reason for test	UP 1.0. Reference section US6.8: send Group Chat Messages to Group Chat participants even when they are temporarily offline (e.g. device switched off). - receive these Group Chat Messages when they come online again.
Pre-conditions Scenario	<ol style="list-style-type: none"> 1. A-Party's device is online. 2. B- and C-Party are known to be Group Chat enabled to A-Party's device. 3. Test case 3_2_1 or 3_2_7 has been executed and the Group Chat conversation is still available on A-, B- and C-Party's devices.
Test procedure	<ol style="list-style-type: none"> 1. Set B-Party's device to 'Flight mode' (any kind of communication is barred). 2. Open existing Group chat conversation between A-, B- and C-Party (as created in Test case 3_2_1 or 3_2_7 on A-Party's device). 3. Send a Group Chat message from A-Party's device to the Group. 4. Disable 'Flight Mode' on B-Party's device (communications allowed)
Expected results Post-conditions	<ol style="list-style-type: none"> 1. C-Party receives messages as sent by A-Party in the Group Chat. 2. B-Party receives messages as sent by A-Party in the Group Chat.
Deep inspection	–

Test case ID	ID_RCS_F_3_2_11
---------------------	-----------------

Related test cases	ID_RCS_F_3_2_1 or ID_RCS_F_3_2_7
Feature	Group Chat
Reason for test	UP 1.0. Reference section US6.9: include small graphics into Group Chat Messages
Pre-conditions Scenario	<ol style="list-style-type: none"> 1. A-Party's device is online. 2. B- and C-Party are known to be Group Chat enabled to A-Party's device. 3. Test case 3_2_1 or 3_2_7 has been executed and the Group Chat conversation is still available on A-, B- and C-Party's devices.
Test procedure	<ol style="list-style-type: none"> 1. Open existing Group chat conversation between A-, B- and C-Party (as created in Test case 3_2_1 or 3_2_ on A-Party's device). 2. Send selected character sequences (as defined in in Annex 2: "Emoticon Conversion table" in [GSMA RCC.71 UP-SDD] Rev 1001) from A-Party's device to the Group Chat (one sequence at a time).
Expected results	<ol style="list-style-type: none"> 1. B- and C-Party receive correct emoticons in the Group Chat conversation.
Post-conditions	
Deep inspection	–

Test case ID	ID_RCS_F_3_2_12
Related test cases	ID_RCS_F_3_2_1 or ID_RCS_F_3_2_7
Feature	Group Chat
Reason for test	UP 1.0. Reference section US6.10: Group Chat Message size limits.
Pre-conditions Scenario	<ol style="list-style-type: none"> 1. A-Party's device is online. 2. B- and C-Party are known to be Group Chat enabled to A-Party's device. 3. Test case 3_2_1 or 3_2_7 has been executed and the Group Chat conversation is still available on A-, B- and C-Party's devices. 4. A- and B-Party's devices are configured to handle chat messages up to 8192 bytes long. 5. C-Party's device is configured to handle chat messages up to 4096 bytes long.
Test procedure	<ol style="list-style-type: none"> 1. Open existing Group chat conversation between A-, B- and C-Party (as created in Test case 3_2_1 or 3_2_ on A-Party's device). 2. Type (or copy and paste) and send a text message of length near 8192 characters (at least 1100 words). 3. Type (or copy and paste) and try to send a text message longer than

	8192 characters (for example, more than 1700 words).
Expected results Post-conditions	<ol style="list-style-type: none"> 1. B-Party's device receives and displays the message in the Group Chat as sent by A-Party. 2. C-Party's device displays only the first 4096 characters of the message from A-Party in the Group Chat conversation. C-Party shall be informed that the original message has been cut. 3. A-Party is informed that the whole message cannot be sent. Only the first 8192 characters are displayed in A party's conversation and sent. 4. B-Party's device receives and displays in the Group Chat conversation only the 8192 characters long message as sent by A-Party. 5. C-Party's device displays in the Group Chat conversation the first 4096 characters of the message that was sent by A-Party. C-Party shall be informed that the original message has been cut.
Deep inspection	–

Test case ID	ID_RCS_F_3_2_13
Related test cases	ID_RCS_F_3_2_10
Feature	Group Chat
Reason for test	UP 1.0. Reference section US6.11: Status of sent Group Chat Messages
Pre-conditions Scenario	<ol style="list-style-type: none"> 1. C-Party's device is online. 2. B- and C-Party are known to be Group Chat enabled to A-Party's device. 3. Test case 3_2_1 or 3_2_7 has been executed and the Group Chat conversation is still available on A-, B- and C-Party's devices.
Test procedure	<ol style="list-style-type: none"> 1. Set A- and B-Party's devices to 'Flight mode' (any kind of communication is barred). 2. Open existing Group chat conversation on A-Party's device between A-, B- and C-Party (as created in Test case 3_2_1 or 3_2_7). 3. Create a Group Chat message on A-Party's device and send. 4. Disable 'Flight Mode' on A-Party's device. 5. Open the Group Chat conversation on C-Party's device when the message from A-Party comes in. 6. Set A-Party's device back to 'Flight Mode'. 7. Disable 'Flight Mode' on B-Party's device. 8. Open the Group Chat conversation on B-Party's device when the message from A-Party comes in. 9. Disable 'Flight Mode' on A-Party's device.

Expected results Post-conditions	<ol style="list-style-type: none"> 1. A-Party is informed that the message cannot be sent until connectivity is restored. Message is in 'Pending' state on A-Party's device. 2. A-Party's device sends the message. Message is in 'sent' state. 3. C-Party receives Group Chat messages sent by A-Party. On A-Party's device, the message state changes to 'delivered' for C-Party. 4. A-Party's device indicates 'displayed' to C-Party for the message. 5. B-Party's device receives messages sent by A-Party to the Group. 6. A-Party's device indicates 'displayed' for all Group Chat participants. <p>NOTE: aggregation of sent message status notification is up to the implementation; representation of steps 4b, 5 and 9 may vary depending on the implementation.</p>
Deep inspection	–

Test case ID	ID_RCS_F_3_2_14
Related test cases	ID_RCS_F_3_2_8
Feature	Group Chat
Reason for test	UP 1.0. Reference section US6.12: See when the other party is currently writing a Group Chat Message
Pre-conditions Scenario	<ol style="list-style-type: none"> 1. A-, B- and C-Party's devices are online. 2. The MNO of A-, B- and C-Party support 'is typing'. 3. B- and C-Party are known to be Group Chat enabled to A-Party's device. 4. Test case 3_2_1 or 3_2_7 has been executed and the Group Chat conversation is still available on A-, B- and C-Party's devices.
Test procedure	<ol style="list-style-type: none"> 1. Open existing Group chat conversation between A-, B- and C-Party (as created in Test case 3_2_1 or 3_2_7 on A-, B- and C-Party's devices). 2. Start typing a new message to the Group on A-Party's device. A types text messages to the Group.
Expected results Post-conditions	<ol style="list-style-type: none"> 1. B- and C-Party's devices indicate 'is typing' while A-Party is typing (support of 'is typing' is subject to network configuration).
Deep inspection	–

Test case ID	ID_RCS_F_3_2_15
Related test cases	ID_RCS_F_3_2_8
Feature	Group Chat

Reason for test	UP 1.0. Reference section US6.13: Notification at any time a device receives a new Group Chat Message.
Pre-conditions Scenario	<ol style="list-style-type: none"> 1. A-, B- and C-Party's devices are online. 2. B- and C-Party are known to be Group Chat enabled to A-Party's device. 3. Test case 3_2_1 or 3_2_7 has been executed and the Group Chat conversation is still available on A-, B- and C-Party's devices. 4. B-Party's device is muted 5. C-Party's device has enabled device audio notifications for incoming messages.
Test procedure	<ol style="list-style-type: none"> 1. Open existing Group chat conversation between A-, B- and C-Party (as created in Test case 3_2_1 or 3_2_ on A-, B- and C-Party's devices. 2. Sends Group Chat message from A-Party to the Group.
Expected results	<ol style="list-style-type: none"> 1. B-Party's device shows some kind of visual indication that a message has arrived but remains silent. C-Party's device notifies incoming messages with visual and audible notifications.
Post-conditions	
Deep inspection	—

Test case ID	ID_RCS_F_3_2_16
Related test cases	ID_RCS_F_3_2_6, ID_RCS_F_3_2_7, ID_RCS_F_3_2_15
Feature	Group Chat
Reason for test	UP 1.0. Reference section US6.14: notifications of rapidly sequenced incoming Group Chat Messages intelligibly aggregated and counted.
Pre-conditions Scenario	<ol style="list-style-type: none"> 1. A-, B-, C- and E-Party's devices are online. 2. B-Party is known to be Group Chat enabled to C- and E-Party's devices. 3. Test case 3_2_6 and 3_2_7 have been executed and the Group Chat conversation is still available on A-, B-, C- and E-Party's devices. 4. B-Party has enabled audio notifications for incoming new messages.
Test procedure	<ol style="list-style-type: none"> 1. Open existing Group Chat conversation between A-, B- and C-Party (as created in Test case 3_2_1 or 3_2_ on C-Party's device. 2. Open existing Group Chat conversation between A-, C- and E-Party (as created in Test case 3_2_ on E-Party's device. 3. Send a burst of 6 short Group Chat messages from C-Party's device (one single character each) to the Group chat conversation of A-, B- and C-Party. Simultaneously, send a burst of 9 short Group Chat messages from E-Party's device (one single character each) to the Group Chat conversation of A-, C- and E-Party.

Expected results Post-conditions	1. A-Party's device generates only two audible notifications, and displays two visual indications, one telling that 6 messages have arrived to a Group Chat conversation, the other telling that 9 messages have arrived to a Group Chat conversation. <i>NOTE: as part of the visual notification, details of the Group Chat that received the Group Chat messages may be provided to A-Party.</i>
Deep inspection	–

Test case ID	ID_RCS_F_3_2_17
Related test cases	ID_RCS_F_3_2_4
Feature	Group Chat
Reason for test	UP 1.0. Reference section US6.15: Subject title and Group Picture are displayed as the identifier of a Group Chat Conversation in the list of Chat and Group Chat Conversations.
Pre-conditions Scenario	<ol style="list-style-type: none"> 1. B-Party's device is online. 2. C- and E-Party are known to be Group Chat capable to B-Party's device. 3. Test case F_3_2_4 has been executed, and B-, C- and E-Party have changed the local Group Chat 'Subject' and 'Icon' on their devices.
Test procedure	1. B-, C- and E-Party open the messaging application on their devices and display the list of conversations.
Expected results Post-conditions	1. Each device displays a list of existing 1-to-1 and Group Chat conversations. The Group Chat conversation created in step 3 from Test case 3_2_4 is identifiable through the local 'Subject' and 'Icon' as set on each device in step 5 of test case 3_2_4.
Deep inspection	–

Test case ID	ID_RCS_F_3_2_18
Related test cases	ID_RCS_F_3_2_6, ID_RCS_F_3_2_7, ID_RCS_F_3_2_16
Feature	Group Chat
Reason for test	UP 1.0. Reference section US6.16: Conversations which contain unread messages to be differentiated from conversations that contain messages which have been seen.

Pre-conditions Scenario	<ol style="list-style-type: none"> 1. A-, B-, C- and E-Party's devices are online. 2. B-Party is known to be Group Chat capable to C- and E-Party's devices. 3. Test case F_3_2_16 has been executed, and A-Party has unread messages in two different Group Chat conversations (conversation A/B/C and conversation A/C/E).
Test procedure	<ol style="list-style-type: none"> 1. A-Party opens the messaging application to see the list of conversations. 2. A-Party opens the Group Chat conversation with B- and C-Party. 3. A-Party closes the Group Chat conversation window (NOTE: do not leave the Group Chat with B- and C-Party) and goes back to the overview of conversations in the messaging application.
Expected results Post-conditions	<ol style="list-style-type: none"> 1. Both Group Chat conversations (with B- and C-Party and with C- and E-Party) are highlighted to inform the user of new, unread messages. 2. A-Party's device displays the conversation with B- and C-Party. 3. The Group Chat conversation with B- and C-Party is no longer highlighted (no unread messages anymore), while the Group Chat conversation with C- and E-Party is still highlighted (still unread messages).
Deep inspection	–

Test case ID	ID_RCS_F_3_2_19
Related test cases	ID_RCS_F_3_2_6
Feature	Group Chat
Reason for test	UP 1.0. Reference section US6.17: Receive Group Chat Messages from any of the contacts participating in a Group Chat Conversation – no handshake required; only those messages interchanged while taking part in the Group chat.
Pre-conditions Scenario	<ol style="list-style-type: none"> 1. Test case 3_2_6 has been executed and the Group Chat conversation is still available on A-, C- and E-Party's devices. 2. B-party is a known Group Chat capable contact to A-Party.
Test procedure	<ol style="list-style-type: none"> 1. A-Party opens the Group Chat conversation with C- and E-Party and sends a message. 2. C-Party opens the Group Chat conversation with A- and E-Party and sends a message. 3. A-Party adds B-Party to the Group Chat with C- and E-Party. 4. E-Party opens the Group Chat conversation with A-, B- and C-Party and sends a message. 5. B-Party leaves the Group Chat conversation with A-, C- and E-Party. 6. A-Party opens the Group Chat conversation with C- and E-Party and sends a message.

Expected results	<ol style="list-style-type: none"> 1. C- and E-Party receive the message as sent by A-Party (no acceptance or confirmation required). 2. A- and E-Party receive the message as sent by C-Party (no acceptance or confirmation required). 3. A-, C- and E-Party are notified that B-Party joined the Group Chat. 4. A-, B- and C-Party receive the message sent by E-Party. 5. A-, C- and E-Party are notified that B-Party has left the Group Chat. 6. C- and E-Party receive the message as sent by A-Party. B-Party shall not receive that message.
Post-conditions	
Deep inspection	–

Test case ID	ID_RCS_F_3_2_20
Related test cases	ID_RCS_F_3_2_6, ID_RCS_F_3_2_7
Feature	Group Chat
Reason for test	UP 1.0. Reference section US6.18: Exchange multi-media content (e.g., but not limited to: take an instant picture from camera and send from within the chat) in Group Chat Conversations
Pre-conditions Scenario	<ol style="list-style-type: none"> 1. A-, B-, C- and E-Party's devices are online. 2. B-Party is known to be Group Chat capable to C- and E-Party. 3. Test case 3_2_6 and 3_2_7 have been executed and the Group Chat conversation is still available on A-, B-, C- and E-Party's devices.
Test procedure	<ol style="list-style-type: none"> 1. B-Party takes a picture with the device camera and sends it to the Group Chat with A- and C-Party. 2. A-Party opens the Group Chat with B- and C-Party, selects the picture that was received from B-Party, and sends it to another Group Chat conversation with C- and E-Party.
Expected results	<ol style="list-style-type: none"> 1. A- and C-Party receive the image as sent by B-Party. 2. C- and E-Party receive the image as sent by A-Party.
Post-conditions	
Deep inspection	–

Test case ID	ID_RCS_F_3_2_21
Related test cases	ID_RCS_F_3_2_1, ID_RCS_F_3_2_7
Feature	Group Chat

Reason for test	UP 1.0. Reference section US6.19: view sent and received Group Chat Messages in a time-based order.
Pre-conditions Scenario	<ol style="list-style-type: none"> 1. A- and B-Party's devices are online. 2. Test case 3_2_1 or 3_2_7 has been executed and the Group Chat conversation is still available on A-, B- and C-Party's devices.
Test procedure	<ol style="list-style-type: none"> 1. Open existing Group Chat conversation with A-, B- and C-Party (as created in Test case 3_2_1 or 3_2_ on A-Party's device. 2. Send a Group Chat message from A-Party to the Group. 3. As soon as the message from step 2 was received on B-Party's device, send a new message from B-Party's device to the Group. 4. As soon as the message from step 3 was received on C-Party's device, send a new message from C-Party's device to the Group.
Expected results Post-conditions	<ol style="list-style-type: none"> 1. The same sequence of messages (from steps 2, 3 and is displayed in the Group Chat conversations on A-, B- and C-Party's devices.
Deep inspection	–

Test case ID	ID_RCS_F_3_2_22
Related test cases	ID_RCS_F_3_2_21
Feature	Group Chat
Reason for test	UP 1.0. Reference section US6.20: see the timestamp associated with each of the sent and received messages.
Pre-conditions Scenario	<ol style="list-style-type: none"> 1. A- and B-Party's devices are online. 2. Test case 3_2_1 or 3_2_7 has been executed and the Group Chat conversation is still available on A-, B- and C-Party's devices. 3. A and C devices are synchronised to the UTC aligned with the selected device time zone. 4. Set local time on B-Party's device to 00h00m
Test procedure	<ol style="list-style-type: none"> 1. Open existing Group Chat conversation with A-, B- and C-Party (as created in Test case 3_2_1 or 3_2_ on A-Party's device. 2. Send a Group Chat message from A-Party to the Group. 3. As soon as the message from step 2 was received on B-Party's device, send a new message from B-Party's device to the Group. 4. As soon as the message from step 3 was received on C-Party's device, send a new message from C-Party's device to the Group.

Expected results Post-conditions	<ol style="list-style-type: none"> 1. The same sequence of messages (from steps 2, 3 and is displayed in the Group Chat conversations on A-, B- and C-Party's devices. 2. Timestamp on A-Party's device will look as: WWhXXm – message from A; WWhYYm – message from B; WWhZZm – message from C; 3. Timestamps in B-Party's device will look as: WWhXXm – message from A; 00h00m – message from B; WWhZZm – message from C. 4. Timestamps in C-Party's device will look as: WWhXXm – message from A; WWhYYm – message from B; WWhZZm – message from C;
Deep inspection	–

Test case ID	ID_RCS_F_3_2_23
Related test cases	ID_RCS_F_3_2_6
Feature	Group Chat
Reason for test	UP 1.0. Reference section US6.23: User is able to leave a Group Chat Conversation at any point in time – Without deleting the conversation.
Pre-conditions Scenario	<ol style="list-style-type: none"> 1. Test case 3_2_6 have been executed and the Group Chat conversation is still available on A-, C- and E-Party's devices.
Test procedure	<ol style="list-style-type: none"> 1. A-Party opens the Chat Group conversation with C- and E-Party and leaves the Group Chat conversation (without deleting the conversation). 2. C-Party sends a message to the Group Chat with E-Party. 3. A-Party opens the Group chat conversation and tries to send a message. 4. E-Party adds A-Party to the Group Chat conversation. 5. E-Party sends a message to the Group chat.
Expected results Post-conditions	<ol style="list-style-type: none"> 1. C- and E-Party receive a notification that A-Party is no longer a member of the Group Chat. A-Party is no longer visible in the participant list on C- and E-Party's devices. 2. E-Party receives the Group Chat message as sent by C-Party. 3. A-Party's device displays the Group Chat conversation. The Group Chat is marked as 'closed'. The message sent by C-Party (step is not displayed. C- and E-Party are visible in the participant list as last known members of the Group Chat. A-Party is not allowed to send any messages to the Group. 4. A- and C-Party are notified that A-Party is now member of Group Chat. 5. A- and C-Party receive the Group Chat message as sent by E-Party. The message sent by C-Party (step still does not appear in A-Party's Group Chat conversation.

Deep inspection	–
------------------------	---

Test case ID	ID_RCS_F_3_2_24
Related test cases	
Feature	Group Chat
Reason for test	UP 1.0. Reference section US6.23: User is able to leave a Group Chat Conversation at any point in time – Deleting messages
Pre-conditions Scenario	1. Test case 3_2_6 have been executed and the Group Chat conversation is still available on A-, C- and E-Party's devices.
Test procedure	<ol style="list-style-type: none"> 1. Open the Group Chat conversation with C- and E-Party on A-Party's device. 2. Delete a few randomly selected Group Chat messages from the Group Chat on A-Party's device. 3. Send a message from C-Party's device to the Group Chat. 4. Send a message from A-Party's device to the Group Chat.
Expected results Post-conditions	<ol style="list-style-type: none"> 1. Selected messages are removed from the Group Chat on A-Party's device. C- and E-Party are not aware of this. On C- and E-Party's devices, these messages remain part of the Group Chat conversation. 2. A- and E-Party receive the Group Chat message as sent by C-Party. 3. C- and E-Party receive the Group Chat message as sent by A-Party.
Deep inspection	–

Test case ID	ID_RCS_F_3_2_25
Related test cases	ID_RCS_F_3_2_6
Feature	Group Chat
Reason for test	UP 1.0. Reference section US6.23: User is able to leave a Group Chat Conversation at any point in time – Deleting the conversation.
Pre-conditions Scenario	1. Test case 3_2_6 have been executed and the Group Chat conversation is still available on A-, C- and E-Party's devices.
Test procedure	<ol style="list-style-type: none"> 1. Find the Group Chat conversation with C- and E-Party on A-Party's device. 2. Delete the entire Group Chat conversation with C- and E-party from A-

	<p>Party's device. If the device should ask to 'delete conversation only' or 'delete conversation and leave the Group Chat', then select 'delete conversation and leave the Group Chat'.</p> <ol style="list-style-type: none"> Send a message from C-Party's device to the Group Chat. Add A-Party to the Group Chat from E-Party's device. Send another message from E-Party's device to the Group Chat.
<p>Expected results</p> <p>Post-conditions</p>	<ol style="list-style-type: none"> On A-Party's device, the Group Chat conversation is listed in the list of conversations. The entire conversation is deleted on A-Party's device and A-Party left the Group Chat with C- and E-Party. C- and E-Party receive a notification that A-Party is no longer a member of the Group Chat conversation. A-Party is no longer visible in the participant list. E-Party receives the Group Chat message from C-Party. A- and C-Parties receive a notification that A party is now a member of the Group chat conversation. A-Party is on the list of Group Chat participants on A-, C- and E-Party's devices. A- and C-Party receive the Group Chat message from E-Party.
<p>Deep inspection</p>	<p>–</p>

<p>Test case ID</p>	<p>ID_RCS_F_3_2_26</p>
<p>Related test cases</p>	<p>ID_RCS_F_6_21_2</p>
<p>Feature</p>	<p>Group Chat</p>
<p>Reason for test</p>	<p>UP 1.0. Reference section US6.24: be able to answer any incoming voice or video call during a Group Chat Conversation - and resume the Group Chat when the call is finished.</p>
<p>Pre-conditions Scenario</p>	<ol style="list-style-type: none"> A-, B- and C-Party are online. B- and C-Party are known to be Group Chat capable to A-Party's device. Test case 3_2_1 or 3_2_7 has been executed and the Group Chat conversation is still available on A-, B- and C-Party's devices. Operator Video Calling is available on A-, B- and C-party's networks and devices. <i>(NOTE: If Video Call is not available, this test case shall be ignored.)</i>
<p>Test procedure</p>	<ol style="list-style-type: none"> Open existing Group Chat conversation between A-, B- and C-Party on A-Party's device. Video-Call A-Party from C-Party's device. Answers the video call on A-Party's device. Send a message to the Group Chat conversation from B-Party's device. Open the participant list of the Group Chat on B-Party's device.

	5. Hangs up the Video Call with E-Party on A-Party's device.
Expected results Post-conditions	<ol style="list-style-type: none"> 1. A-Party is notified of the incoming video call and has a one-click option to accept the incoming video call. 2. A- and C-Party's device notify the user of an incoming new Group Chat message. 3. A- and C-Party are displayed as participants in the Group chat conversation. 4. A-Party's device displays the screen that was displayed before A-Party accepted the incoming Video Call in step 2 including the new incoming Group Chat message from step 3.
Deep inspection	—

Test case ID	ID_RCS_F_3_2_27
Related test cases	ID_RCS_F_3_2_6, ID_RCS_F_2_1_1 (Auto-provisioning)
Feature	Group Chat
Reason for test	UP 1.0. Reference section US6.26 and US6.27: Group Chat messages backed up on the Common Message Store - Restore Group Chat Conversations from the Common Message Store (e.g. but not limited to, after wiping device or purchasing a new device).
Pre-conditions Scenario	<ol style="list-style-type: none"> 1. Test case 3_2_6 has been executed and the Group Chat conversation is still available on A-, C- and E-Party's devices. 2. Backup & Restore service is available to A-Party. 3. <i>(NOTE: If Backup & Restore is not available, this test case shall be ignored.)</i>
Test procedure	<ol style="list-style-type: none"> 1. Unplug A-Party's SIM. Plug A-Party's SIM into a different RCS-enabled mobile device which was reset to factory settings before. 2. Open the Messaging application on the A-Party's 'new device'. On request, confirm sync of A-Party's new device with the Backup & Restore service. 3. Open the Group Chat conversation with C- and E-Party on A-Party's 'new device'.
Expected results Post-conditions	<ol style="list-style-type: none"> 1. A-Party's 'new device' is provisioned for RCS services without any interaction from A-Party (as per Test case 2_1_1). 2. A-Party shall be made aware that there are messages on the Backup & Restore service waiting to be synced with A-Party's 'new device'. On confirmation, messaging conversations are restored on A-Party's new device beginning with the latest conversations. 3. The full Group Chat conversation shall be displayed on A-Party's 'new

	device'.
Deep inspection	–

Test case ID	ID_RCS_F_3_2_28
Related test cases	ID_RCS_F_3_2_6
Feature	Group Chat
Reason for test	UP 1.0. Reference section US6.28: ability to share current position or a selected location with any of my Groups from the Messaging Application.
Pre-conditions Scenario	<ol style="list-style-type: none"> 1. Test case 3_2_6 has been executed and the Group Chat conversation is still available on A-, C- and E-Party's devices. 2. Geo-location Push feature is available to A-Party.
Test procedure	<ol style="list-style-type: none"> 1. Open the Group chat conversation on A-Party's device with C- and E-Party 2. Select Geolocation Push feature on A-party's device and send to the Group Chat with C- and E-Party.
Expected results	<ol style="list-style-type: none"> 1. C- and E-Party receive the Location information sent by A-Party.
Post-conditions	
Deep inspection	–

3.2.2 Technical test cases

Test case ID	ID_RCS_T_3_2_1
Related test cases	
Feature	Group Chat
Reason for test	Change Chat 1-to-1 -> Group Chat; R6-29-1

Pre-conditions Scenario	<ol style="list-style-type: none"> 1. DUT and Reference 1,2 are registered and able to access IMS/RCS core network and relevant servers. 2. Contacts addresses of Reference 1,2 are entries in DUT's address book and RCS capabilities are known and not expired. 3. GROUP CHAT AUTH configuration parameter set to 1. 4. IM SESSION AUTO ACCEPT GROUP CHAT set to 1. 5. Supported by network: Cellular, Wi-Fi
Test procedure	<ol style="list-style-type: none"> 1. DUT starts a chat conversation by sending a message to Reference 1. 2. DUT selects contact of Reference 2, adds it to the chat and sends a message into the new Group Chat.
Expected results	<ol style="list-style-type: none"> 1. Message from DUT is received and displayed by Reference 1 2. Group Chat Message from DUT is received and displayed by Reference 1+2
Post-conditions	
Deep inspection	<ol style="list-style-type: none"> 1. Verify SIP INVITE containing resource-list with Reference 1,2 2. New Contribution and Conversation ID 3. Verify ICSI media feature tag value urn:urn-7:3gpp-service.ims.icsi.oma.cpm.session 4. The P-Preferred-Service header field feature tag is '3gpp-service.ims.icsi.oma.cpm.session.group'. 5. Verify Subscription to conference event package

Test case ID	ID_RCS_T_3_2_2
Related test cases	
Feature	Group Chat
Reason for test	Initiate a new Group Chat conversation by selecting contacts. R6-29-1
Pre-conditions Scenario	<ol style="list-style-type: none"> 1. DUT, Reference 1, Reference 2 and Reference 3 are online. 2. GROUP CHAT AUTH configuration parameter set to 1. 3. IM SESSION AUTO ACCEPT GROUP CHAT set to 0.
Test procedure	<ol style="list-style-type: none"> 1. DUT selects 2 contacts (Reference1, and creates a new Group Chat conversation. 2. Reference 1 and Reference 2 accept the invitation. 3. Reference 3 rejects the invitation.
Expected results	<ol style="list-style-type: none"> 1. DUT sends Group Chat initiation request 2. References 1, 2, 3 receive the INVITE request, and show a invitation message. 3. DUT, Reference 1 and Reference 2 join the Group Chat manually, and display the Group Chat conversation. 4. Reference 3 will not display the Group Chat conversation.
Post-conditions	

Deep inspection	<ol style="list-style-type: none"> 1. Verify that the INVITE messages delivered successfully to each recipient. 2. The P-Preferred-Service header field feature tag is '3gpp-service.ims.icsi.oma.cpm.session.group'. 3. Verify that Reference 1 and Reference 2 sending 200 OK. 4. Verify that Reference 3 sending 603 Decline.
------------------------	--

Test case ID	ID_RCS_T_3_2_3
Related test cases	
Feature	Group Chat
Reason for test	Initiating a chat / add a new participant; R6-29-2; R6-29-7; R6-29-8; R6-29-10; 6-29-13, R6-29-20;R6-29-22
Pre-conditions Scenario	<ol style="list-style-type: none"> 1. Minimum setup: 2. DUT + Reference 1,2,3 are registered and able to access IMS/RCS core network and relevant servers. 3. Contacts addresses of Reference 1,2,3 are entries in DUT's address book and RCS capabilities are known and not expired. 4. GROUP CHAT AUTH configuration parameter set to 1 5. IM SESSION AUTO ACCEPT GROUP CHAT set to 1 6. Supported by network: Cellular, Wi-Fi 7. Important information: Correct Implementation of the "icon in a Group Chat" feature is currently under GSG review. Related CR: GSG_RCS_CR076R01
Test procedure	<ol style="list-style-type: none"> 1. DUT selects Reference 1,2 from IM/chat application to start a Group Chat, selects a Subject and an icon for the GC and sends 3 messages into the created Group Chat 2. DUT adds Reference 3 into the Group Chat and sends 3 message into the new, extended Group Chat 3. DUT sends 5 different small graphics into the Group Chat
Expected results Post-conditions	<ol style="list-style-type: none"> 1. GC Subject is visible to all participants.3 Group Chat Messages from DUT received and displayed on Reference 1+2. All GC participants are visible for all participants 2. GC Subject is visible to all participants.3 Group Chat Message from DUT received and displayed on Reference 1-3. All GC participants are visible for all participants 3. All 5 small graphics are correctly displayed on Reference 1-3
Deep inspection	<ol style="list-style-type: none"> 1. Verify NO options exchange when selecting new user to join due to non expired capability (see pre-condition) 2. Verify INVITE containing subject header 3. Verify INVITE containing resource-list with Reference 1,2 4. The P-Preferred-Service header field feature tag is '3gpp-service.ims.icsi.oma.cpm.session.group'. 5. Verify Conversation-ID 6. Verify subscription to conference event package

	<ol style="list-style-type: none"> 7. Verify REFER containing subject header 8. Verify NOTIFY processing with added Reference 3
--	---

Test case ID	ID_RCS_T_3_2_4
Related test cases	
Feature	Group Chat
Reason for test	Typing text /notifications; Participant leaves Group R6-29-16;R6-29-17; R6-29-18; R6-29-19
Pre-conditions Scenario	<ol style="list-style-type: none"> 1. Minimal setup: 2. DUT + Reference 1-3 are registered and able to access IMS/RCS core network and relevant servers. 3. Reference 1-3 are entries in DUT's address book and their RCS capabilities are known and not expired. 4. Supported by network: Cellular, Wi-Fi
Test procedure	<ol style="list-style-type: none"> 1. DUT selects Reference 1-3 from IM/chat application to start a Group Chat and sends a message into the created Group Chat 2. DUT types text in the IM/chat application client. 3. DUT stops typing text in the message. 4. DUT sends a message into the Group Chat 5. Reference 1 leaves the Group Chat
Expected results Post-conditions	<ol style="list-style-type: none"> 1. Group Chat Message from DUT received on Reference 1-3 2. Reference 1-3 receive 'is typing' notification from DUT 3. 'is typing' notifications disappear from Reference 1-3 screens 4. Reference 1-3 receive message from DUT 5. DUT and Reference 2+3 get notification "Reference 1 has left"
Deep inspection	<ol style="list-style-type: none"> 1. Verify INVITE containing resource-list with Reference 1,2,3 2. Verify Conversation-ID 3. Verify subscription to conference event package 4. Verify MSRP Send request with CPIM body and and 'iscomposing' xml body 5. Verify NOTIFY with Reference 1 disconnected departed indication

Test case ID	ID_RCS_T_3_2_5
Related test cases	
Feature	Group Chat
Reason for test	Closing a Group Chat (other than initiator)

Pre-conditions Scenario	<ol style="list-style-type: none"> 1. Minimal setup: 2. DUT + Reference 1,2 are registered and able to access IMS/RCS core network and relevant servers. 3. Reference 1,2 are entries in DUT's address book and their RCS capabilities are known and not expired. 4. Supported by network: Cellular, Wi-Fi
Test procedure	<ol style="list-style-type: none"> 1. Reference 1 selects Reference 2 and DUT to start a Group Chat and sends a message into the created Group Chat 2. DUT leaves the Group Chat 3. Reference 2 sends a Chat Message
Expected results Post-conditions	<ol style="list-style-type: none"> 1. DUT is invited to a Group Chat and the chat message is received 2. Conversation is closed, user is not able to compose a chat message or to add files 3. Message is not received on DUT
Deep inspection	<ol style="list-style-type: none"> 1. Verify INVITE for Group Chat Session 2. Verify subscription to conference event package 3. Verify SIP BYE with reason header set to SIP;cause=200 4. Verify session termination 5. Verify Subscription termination

Test case ID	ID_RCS_T_3_2_6
Related test cases	
Feature	Group Chat
Reason for test	Re-invited after departure R6-29-28
Pre-conditions Scenario	<ol style="list-style-type: none"> 1. Minimal setup: 2. DUT + Reference 1,2 are registered and able to access IMS/RCS core network and relevant servers. 3. Reference 1,2 are entries in DUT's address book and their RCS capabilities are known and not expired. 4. Supported by network: Cellular, Wi-Fi
Test procedure	<ol style="list-style-type: none"> 1. DUT selects Reference 1,2 from IM/chat application to start a Group Chat and sends a message into the created Group Chat 2. Reference 1 leaves the chat voluntarily. 3. Reference 2 send message 4. DUT adds Reference 1 to the Group Chat 5. Reference 1 sends a message into the Group Chat.

Expected results	1. Group Chat Message from DUT received and displayed for Reference 1,2
Post-conditions	2. DUT received notification that Reference 1 has left the Group Chat. Group with DUT & Reference 2 is available 3. DUT receives message, Reference 1 does not receive message 4. DUT invites Reference 1 to the Group Chat 5. Message is received by DUT and Reference 2
Deep inspection	1. Verify BYE from DUT with reason header SIP;cause=200. 2. Verify NOTIFY with Reference 1 set to disconnected, departed. 3. Verify REFER with the Refer-To header containing Reference 1 4. Verify NOTIFY with Reference 1 set to connected

Test case ID	ID_RCS_T_3_2_7
Related test cases	
Feature	Group Chat
Reason for test	Inviting an unregistered user
Pre-conditions Scenario	1. Minimal setup: 2. DUT + Reference 1,2 are registered and able to access IMS/RCS core network and relevant servers. <u>Reference 3 is unregistered.</u> 3. Reference 1,2,3 are entries in DUT's address book and their RCS capabilities are known and not expired. 4. Supported by network: Cellular, Wi-Fi
Test procedure	1. DUT selects Reference 1,2,3 from IM/chat application to start a Group Chat and sends 3 messages into the created Group Chat 2. Reference 3 registers. 3. Reference 3 sends 3 Messages into the Group Chat.
Expected results	1. Messages are received by Reference 1,2
Post-conditions	2. Reference 3 receives messages sent by DUT and DUT receives delivery notification. 3. 3 Messages are received by DUT, Reference 1,2
Deep inspection	1. Verify INVITE with resource-list containing Reference 1,2,3 2. Verify Subscription 3. Verify NOTIFY with Reference 1,2,3 set to "connected" 4. Verify that there is no further participant information update

Test case ID	ID_RCS_T_3_2_8
---------------------	----------------

Related test cases	
Feature	Group Chat
Reason for test	Re-Start a Group Chat
Pre-conditions Scenario	<ol style="list-style-type: none"> 1. Minimal setup: 2. DUT + Reference 1,2 are registered and able to access IMS/RCS core network and relevant servers. 3. Reference 1,2 are entries in DUT's address book and their RCS capabilities are known and not expired. 4. Group Chat session timer – TimerIdle – is known and e.g. set to 300 seconds 5. Supported by network: Cellular, Wi-Fi
Test procedure	<ol style="list-style-type: none"> 1. DUT selects References 1,2 from IM/chat application to start a Group Chat and sends a message into the created Group Chat. Reference 1,2 also send a message into the Group Chat 2. Message exchange is stopped. Wait until session idle timer expires 3. After the timeout DUT, Reference 1,2 send a new message.
Expected results Post-conditions	<ol style="list-style-type: none"> 1. Group Chat Messages are received on target devices 2. No more messages are exchanged. No "is typing" message is visible, Group Chat continues to exist. 3. All messages are delivered correctly and can be read on target devices.
Deep inspection	<ol style="list-style-type: none"> 1. Verify group session ID, Conversation-ID and Contribution-ID in INVITE 2. Verify BYE with reason code other than 200 (e.g. 50) 3. Verify INVITE with group Session Identity, Contribution-ID and Conversation-ID 4. Verify INVITE with resource-list absent

Test case ID	ID_RCS_T_3_2_9
Related test cases	
Feature	Group Chat
Reason for test	Simultaneous Re-start Group Chat
Pre-conditions Scenario	<ol style="list-style-type: none"> 1. Minimal setup: 2. DUT + Reference 1,2 are registered and able to access IMS/RCS core network and relevant servers. 3. Reference 1,2 are entries in DUT's address book and their RCS capabilities are known and not expired. 4. Group Chat session timer – TimerIdle – is known and e.g. set to 300 seconds 5. Supported by network: Cellular, Wi-Fi

Test procedure	<ol style="list-style-type: none"> 1. DUT selects References 1,2 from IM/chat application to start a Group Chat and sends a message into the created Group Chat. 2. Reference 1,2 send a message into the Group Chat 3. Message exchange is stopped. Wait until session idle timer expires. 4. After the timeout Reference 1,2 send a message at the same time.
Expected results Post-conditions	<ol style="list-style-type: none"> 1. Group Chat messages are received on target devices 2. Group Chat messages are received on target devices 3. No more messages are exchanged. No “is typing” message is visible, Group Chat continues to exist. 4. All messages are delivered correctly and can be read on target devices.
Deep inspection	<ol style="list-style-type: none"> 1. Verify Group Chat set-up and subscriptions 2. Verify session involuntary departure 3. DUT sends or receive only one INVITE to/from group session identity with Contribution-ID and Conversation-ID

Test case ID	ID_RCS_T_3_2_10
Related test cases	
Feature	Group Chat
Reason for test	Re-start a Group Chat with some users offline
Pre-conditions Scenario	<ol style="list-style-type: none"> 1. Minimal setup: 2. DUT + Reference 1,2,3 are registered and able to access IMS/RCS core network and relevant servers. 3. Reference 1,2,3 are entries in DUT’s address book and their RCS capabilities are known and not expired. 4. Chat inactivity Timeout of the messaging server is known and e.g. set to 300 seconds 5. Supported by network: Cellular, Wi-Fi
Test procedure	<ol style="list-style-type: none"> 1. DUT selects References 1,2,3 from IM/chat application to start a Group Chat and sends a message into the created Group Chat. 2. Reference 1,2,3 also send one message into the Group Chat 3. Message exchange is stopped, wait until session idle timer expires. 4. After the timeout Reference 3 unregisters (data loss, turn off, closes RCS services). 5. DUT sends new messages . 6. Reference 3 registers back and sends a new message.
Expected results Post-conditions	<ol style="list-style-type: none"> 1. Group Chat Messages are received on target devices 2. Group Chat Messages are received on target devices 3. No more messages are exchanged. No “is typing” message is visible, Group Chat continues to exist. 4. Reference 3 stays to be participant in the Group Chat

	<ol style="list-style-type: none"> 5. Messages are received by Reference 1,2. Message to Reference 3 is not delivered. 6. Message is received from Reference 3, delivery notifications are received for sent messages for Reference 3.
Deep inspection	<ol style="list-style-type: none"> 1. Verify Group Chat set-up and subscription 2. Verify message sending and receiving on DUT 3. Verify INVITE from group session identity, Contribution-ID and Conversation-ID 4. Verify NOTIFY with Reference 1,2,3, set to connected 5. Verify message and IMDN receiving

Test case ID	ID_RCS_T_3_2_11
Related test cases	
Feature	Group Chat
Reason for test	Re-join a Group Chat with some users offline and adding more users. No new session is created.
Pre-conditions Scenario	<ol style="list-style-type: none"> 1. Minimal setup: 2. DUT + Reference 1,2,3,4 are registered and able to access IMS/RCS core network and relevant servers. 3. Reference 1,2,3,4 are entries in DUT's address book and their RCS capabilities are known and not expired. 4. Chat inactivity Timeout of the messaging server is known and e.g. set to 300 seconds 5. Supported by network: Cellular, Wi-Fi
Test procedure	<ol style="list-style-type: none"> 1. Reference 3 selects References 1,2,DUT from IM/chat application to start a Group Chat and sends a message into the created Group Chat. Reference 1,2, DUT also send a message into the Group Chat 2. DUT loses coverage (data loss, turn off, taken battery). 3. Message exchange is stopped. Wait for session idle time to expire. 4. Reference 3 sends a new message. 5. Reference 3 invites Reference 4 to the Group Chat. 6. Reference 4 sends 3 messages 7. DUT registers back (without sending a message) 8. Reference 3 sends a new messages
Expected results Post-conditions	<ol style="list-style-type: none"> 1. Group Chat Messages are received on target devices 2. DUT stays to be a participant of the Group Chat. No more messages or notifications are received on DUT side. 3. No more messages are exchanged. No "is typing" message is visible on any device. 4. Messages are received by all clients except DUT. 5. Reference 4 successfully joins the existing Group Chat 6. Messages from Reference 4 are received from all other devices (except

	DUT) 7. DUT receives messages 8. Messages are received by all participants 9. New messages shall be received by DUT.
Deep inspection	1. Verify no NOTIFY is received on Reference if DUT leaves the Group Chat 2. Verify no NOTIFY is received if DUT re-joins 3. Verify NOTIFY with Reference 4 status set to connected

Test case ID	ID_RCS_T_3_2_12
Related test cases	
Feature	Group Chat
Reason for test	Too many participants
Pre-conditions Scenario	1. Minimal setup: 2. Configuration Parameter MAX_AD-HOC_GROUP_SIZE is set to 5, and maximum-user-count in network is set to 5 3. DUT + Reference 1,2,3,4,5 are registered and able to access IMS/RCS core network and relevant servers. 4. Reference 1,2,3,4,5 are entries in DUT's address book and their RCS capabilities are known and not expired. 5. Supported by network: Cellular, Wi-Fi
Test procedure	1. DUT selects Reference 1,2,3,4 from IM/chat application to start a Group Chat and sends a message into the created Group Chat 2. DUT tries to add Reference 5 into the existing Group Chat
Expected results	1. Message from DUT is received on target devices. 2. DUT receives a warning message, e.g. 'too many participants' or the menu "Add participant" is greyed out.
Post-conditions	
Deep inspection	1. Verify NOTIFY to contain maximum-user-count parameter set to "5" 2. Verify no REFER message sent from DUT to invite Reference 5

Test case ID	ID_RCS_T_3_2_13
Related test cases	
Feature	Group Chat
Reason for test	Chat invitation auto-accept R6-29-9

Pre-conditions Scenario	<ol style="list-style-type: none"> 1. Minimal setup: 2. Configuration parameter AutAcceptGroupChat is set to 1 3. DUT + Reference 1,2,3 are registered and able to access IMS/RCS core network and relevant servers. 4. Supported by network: Cellular, Wi-Fi <p>NOTE: This test case depends on network configuration settings</p>
Test procedure	<ol style="list-style-type: none"> 1. Check that DUT is provisioned for auto-accept of Group Chat invitations 2. Reference 1 creates a Group Chat with Reference 2,3 and each of the participants sends a Message 3. Reference 3 adds DUT into the existing Group Chat 4. DUT sends a Message into the Group Chat
Expected results Post-conditions	<ol style="list-style-type: none"> 1. DUT is provisioned for auto-accept of Group Chat invitations 2. Group Chat is created and Messages are display on target devices. 3. DUT is automatically added to the Group Chat. (No User Interaction required) 4. Message is received on target devices.
Deep inspection	<ol style="list-style-type: none"> 1. Verify 200 OK sent if INVITE is received by DUT.

Test case ID	ID_RCS_T_3_2_14
Related test cases	
Feature	Group Chat
Reason for test	Notifications / Message Status
Pre-conditions Scenario	<ol style="list-style-type: none"> 1. DUT + Reference 1,2 are registered and able to access IMS/RCS core network and relevant servers. Reference 3 is not registered in IMS/RCS core network. 2. Reference 1,2,3 are entries in DUT's address book and their RCS capabilities are known and not expired. 3. Supported by network: Cellular, Wi-Fi
Test procedure	<ol style="list-style-type: none"> 1. DUT selects References 1,2,3 from IM/chat application to start a Group Chat and sends a message into the created Group Chat. 2. Reference 1 does not read the message (e.g. user does not enter the group conversation) 3. Reference 2 reads the message (e.g. user enters the group conversattion) 4. Reference 3 stays unregistered
Expected results Post-conditions	<ol style="list-style-type: none"> 1. GC sucessfully established and messages are received on target devices 2. Message status for reference 1 is delivered on DUT. 3. Message status for Reference 2 is displayed on DUT 4. Message status for Reference 3 is marked sent on DUT

Deep inspection	<ol style="list-style-type: none"> 1. Verify CPIM contains request for IMDN positive-delivery and display notifications 2. Verify that CPIM contains FROM header with public user identity of the user and does not contain sip.instance parameter. 3. Verify received MSRP SEND body, request with CPIM containing IMDN body with appropriate notifications. 4. Verify CPIM TO of the notification is equal to the URI received in CPIM FROM and does not contain device identifier
------------------------	--

Test case ID	ID_RCS_T_3_2_15
Related test cases	
Feature	Group Chat
Reason for test	Reason headers: Explicit Departure
Pre-conditions Scenario	<ol style="list-style-type: none"> 1. DUT + Reference 1,2 are registered and able to access IMS/RCS core network and relevant servers. 2. Reference 1,2 are entries in DUT's address book and their RCS capabilities are known and not expired. 3. Supported by network: Cellular, Wi-Fi
Test procedure	<ol style="list-style-type: none"> 1. DUT, References 1,2 create a Group Chat and each of the participants sends a Message 2. DUT leaves the Group Chat voluntarily
Expected results	<ol style="list-style-type: none"> 1. GC successfully established and Messages are received and displayed on target devices. 2. GC is terminated on DUT, Reference 1,2 show the notification "DUT has left the conversation"
Post-conditions	
Deep inspection	<ol style="list-style-type: none"> 1. Check that the DUT sent the SIP BYE request 2. Check that the SIP BYE request includes a Reason Header field (as defined in [RFC3326]) with the protocol set to SIP and the protocol-cause set to 200 (e.g. SIP;cause=200;text="Call completed").

Test case ID	ID_RCS_T_3_2_16
Related test cases	
Feature	Group Chat
Reason for test	Messaging Server closes Group Chat

Pre-conditions Scenario	<ol style="list-style-type: none"> 1. DUT + Reference 1,2 are registered and able to access IMS/RCS core network and relevant servers. 2. Reference 1,2 are entries in DUT's address book and their RCS capabilities are known and not expired. 3. Supported by network: Cellular, Wi-Fi
Test procedure	<ol style="list-style-type: none"> 1. DUT, reference 1,2 have established a Group Chat session and exchange messages 2. The Group Chat is closed by the Messaging Server due to one of the following reasons (as defined in 3.4.4.1.3.3 of [GSMA RCC.07 RCS6.0 UNI]) 3. Less than the minimum number of active participants as defined in the Messaging Server, for a Group Chat remain in the Group Chat, or 4. When a chat inactivity timeout expires, or 5. Based on local policy in the Messaging Server, e.g. if the originator leaves the Group Chat.
Expected results Post-conditions	<ol style="list-style-type: none"> 1. Group Chat between DUT, Reference 1,2 successfully established and Messages received on target devices. 2. Group Chat is closed on DUT
Deep inspection	<ol style="list-style-type: none"> 1. Verify the protocol-cause set to 410 (e.g. SIP;cause=410;text="Gone") in the SIP BYE request received by DUT. 2. In case of the chat inactivity timeout expires verify the protocol-cause set to 480 (e.g. SIP;cause=480;text="Bearer unavailable") in the SIP BYE request received by DUT

Test case ID	ID_RCS_T_3_2_17
Related test cases	
Feature	Group Chat
Reason for test	User abandons Group Chat (session idle) and attempts to re-join
Pre-conditions Scenario	<ol style="list-style-type: none"> 1. DUT + Reference 1,2 are registered and able to access IMS/RCS core network and relevant servers. 2. Reference 1,2 are entries in DUT's address book and their RCS capabilities are known and not expired. 3. Chat inactivity Timeout of the messaging server is known and e.g. set to 300 seconds 4. Supported by network: Cellular, Wi-Fi
Test procedure	<ol style="list-style-type: none"> 1. DUT, References 1,2 create a Group Chat and each of the participants sends a Message 2. Group Chat session is terminated due to session inactivity, DUT leaves the Group Chat voluntarily

Expected results	1. Group Chat between DUT, Reference 1,2 successfully established and Messages received on target devices.
Post-conditions	2. The Group Chat is closed in the DUT.
Deep inspection	1. Verify INVITE with no resource-list to restart Group Chat Session at the time of request to leave the Group Chat 2. Verify BYE request with Reason header set to SIP;cause=200

Test case ID	ID_RCS_T_3_2_18
Related test cases	
Feature	Group Chat
Reason for test	User coming online in active session (store and forward) R6-29-12
Pre-conditions Scenario	1. DUT + Reference 1,2 are registered and able to access IMS/RCS core network and relevant servers. 2. Reference 1,2 are entries in DUT's address book and their RCS capabilities are known and not expired. 3. Supported by network: Cellular, Wi-Fi
Test procedure	1. DUT selects Reference 1,2 from IM/chat application to start a Group Chat and sends a 3 messages into the created Group Chat 2. DUT goes offline (loses coverage or activates flight mode) 3. Reference 1,2 keep exchanging messages in the Group Chat 4. DUT gets back online before Group Chat session expires
Expected results	1. Group Chat is successfully established and Messages are displayed on target devices.
Post-conditions	2. DUT is offline 3. Reference 1,2 do not get delivery notifications 4. Once DUT is back online, it gets the messages and Reference 1,2 get the delivery notifications
Deep inspection	1. Verify CPIM FROM of the message contains the public user identity and does not contain device identifier (e.g. sip.instance) 2. Verify successful re-join once DUT gets back online 3. Verify delivery notifications sent through MSRP 4. Verify CPIM TO of the notification is equal to the URI received in CPIM FROM and does not contain device identifier

Test case ID	ID_RCS_T_3_2_19
Related test cases	

Feature	Group Chat
Reason for test	User coming online in inactive session (store and forward) R6-29-12
Pre-conditions Scenario	<ol style="list-style-type: none"> 1. Minimal Setup: 2. DUT + Reference 1,2 are registered and able to access IMS/RCS core network and relevant servers. 3. Reference 1,2 are entries in DUT's address book and their RCS capabilities are known and not expired. 4. Chat inactivity Timeout of the messaging server is known and e.g. set to 300 seconds 5. Supported by network: Cellular, Wi-Fi
Test procedure	<ol style="list-style-type: none"> 1. DUT selects Reference 1,2 from IM/chat application to start a Group Chat and sends a 3 messages into the created Group Chat 2. DUT goes offline (looses coverage or activates flight mode) 3. Reference 1,2 keep exchanging messages in the Group Chat 4. Reference 1,2 stop exchanging messages and wait until Chat activity Timer has expired 5. DUT gets back online
Expected results Post-conditions	<ol style="list-style-type: none"> 1. Group Chat is successfully established and Messages are displayed on target devices. 2. DUT is offline 3. Reference 1,2 do not get delivery notifications 4. No Notifications are received within this period 5. Once DUT is back online, it gets the messages (notification bar) and 6. Reference 1,2 get the delivery notifications
Deep inspection	<ol style="list-style-type: none"> 1. Verify CPIM FROM of the message contains the public user identity and does not contain device identifier (e.g. sip.instance) 2. Verify successful re-join once DUT gets back online 3. Verify delivery notifications sent through MSRP 4. Verify CPIM TO of the notification is equal to the URI received in CPIM FROM and does not contain device identifier

Test case ID	ID_RCS_T_3_2_20
Related test cases	
Feature	Group Chat
Reason for test	User coming online in new Group Chat (store and forward)

Pre-conditions Scenario	<ol style="list-style-type: none"> Reference 1,2 are registered and able to access IMS/RCS core network and relevant servers. DUT is offline Reference 1,2 are entries in DUT's address book and their RCS capabilities are known and not expired. Supported by network: Cellular, Wi-Fi
Test procedure	<ol style="list-style-type: none"> Reference 1 starts a Group Chat with DUT and Reference 2 Reference 1,2 exchange messages in the Group Chat DUT comes online DUT sends messages
Expected results Post-conditions	<ol style="list-style-type: none"> Reference 1,2 do not get delivery notifications for DUT DUT does not receive any messages or notifications DUT gets the messages and References 1,2 get the delivery notifications References 1,2 get the messages and DUT gets the delivery notifications
Deep inspection	<ol style="list-style-type: none"> Verify SIP INVITE received if DUT comes online Verify delivery notifications sent through MSRP Verify CPIM TO of the notification is equal to the URI received in CPIM FROM

Test case ID	ID_RCS_T_3_2_21
Related test cases	
Feature	Group Chat
Reason for test	Crosstest between WiFi and cellular Connection
Pre-conditions Scenario	<ol style="list-style-type: none"> Minimum setup: DUT 1,2 are two samples of DUT DUT1 + DUT2 + Reference 1,2 are registered and able to access IMS/RCS core network and relevant servers. Contacts addresses of Reference 1,2 are entries in DUT1's+ DUT2's address book and RCS capabilities are known and not expired. Supported by network: DUT 1, Reference 1 are on Cellular, DUT 2, Reference 2 are on Wi-Fi
Test procedure	<ol style="list-style-type: none"> DUT1 selects DUT2, Reference 1 from IM/chat application to start a Group Chat and sends a 3 messages into the created Group Chat DUT adds Reference 2 into the Group Chat and sends 3 message into the new, extended Group Chat DUT sends a random file (e.g. Picture) into the Group Chat Reference 2 activates Flight mode Reference 2 tries to send messages into the existing Group Chat DUT sends 3 messages into the Group Chat Reference 2 deactivates Flight mode

Expected results	1. All Group Chat Messages from DUT1 displayed on target devices
Post-conditions	2. All Group Chat Messages from DUT1 displayed on target devices 3. File is received on target devices 4. Cellular and Wifi Connection is dropped on Reference 2. 5. Device indicates that due to Flight mode Messages cannot be sent but will be stored locally on the device 6. All messages are received on target devices. 7. Locally stored messaged are sent out from Reference 2 and displayed by target devices
Deep inspection	1. Verify no OPTIONS exchange when selecting Reference 2 to join 2. Verify 'is typing' notifications are still working 3. Verify REFER transaction

Test case ID	ID_RCS_T_3_2_22
Related test cases	
Feature	Group Chat
Reason for test	Location share in Group Chat ; R6-29-33
Pre-conditions Scenario	1. Minimum setup: 2. DUT + Reference 1,2 are registered and able to access IMS/RCS core network and relevant servers. 3. Contacts addresses of Reference 1,2 are entries in DUT's address book and RCS capabilities are known and not expired. 4. Supported by network: Cellular, Wi-Fi
Test procedure	1. DUT selects Reference 1,2 from IM/chat application to start a Group Chat 2. DUT sends a location share as first message 3. Reference 1 sends a location share
Expected results	1. Group Chat is successfully established
Post-conditions	2. Locationshare is received and correctly displayed by Reference 1,2. Delivery Notification is displayed on DUT side 3. Locationshare is received and correctly displayed by DUT, Reference 2. Delivery Notification is displayed on DUT side
Deep inspection	1. Verify participants status update (MSRP, new participant) 2. Verify no 1st message in CPIM of INVITE 3. Verify participants status update (MSRP, new participant) 4. Verify Contribution-ID (no IP address etc.)

Test case ID	ID_RCS_T_3_2_23
---------------------	-----------------

Related test cases	
Feature	Group Chat
Reason for test	Consolidation of participant lists
Pre-conditions Scenario	<ol style="list-style-type: none"> 1. Minimum setup: 2. DUT + Reference 1,2,3 are registered and able to access IMS/RCS core network and relevant servers. 3. Contacts addresses of Reference 1,2,3 are entries in DUT's address book and RCS capabilities are known and not expired. 4. Chat inactivity Timeout of the messaging server is known and e.g. set to 300 seconds 5. Reference 3 is offline 6. Supported by network: Cellular, Wi-Fi
Test procedure	<ol style="list-style-type: none"> 1. DUT selects Reference 1,2 from IM/chat application to start a Group Chat and sends 3 messages into the created Group Chat 2. DUT adds Reference 3 into the Group Chat (while Reference 3 is offline) 3. After Group Chat Inactivity Timeout has expired, Reference 3 gets back online 4. Reference 1 sends a new message into the Group Chat 5. Verify the participant lists of all Group Chat participants
Expected results Post-conditions	<ol style="list-style-type: none"> 1. 3 Group Chat Messages from DUT received and displayed on target devices 2. SIP Invite is sent to Reference 3 3. As soon as reference 3 is back, it gets a notification about the new Group Chat 4. All target devices (including Reference 3 display the message. 5. DUT, Reference 1,2,3 are shown as Group Chat participants on all devices.
Deep inspection	<ol style="list-style-type: none"> 1. Verify SIP REFER from DUT 2. Upon expiry of the Group Chat timer SIP BYE is received byDUT 3. Verify SIP NOTIFY to contain Reference 1,2,3 set to connected

Test case ID	ID_RCS_T_3_2_25
Related test cases	
Feature	Group Chat
Reason for test	Verification of UP defined Configuration Parameter; R6-29-14, R6-29-15

Pre-conditions Scenario	<ol style="list-style-type: none"> 1. Minimum setup: 2. DUT + Reference 1,2 are registered and able to access IMS/RCS core network and relevant servers. 3. Contacts addresses of Reference 1,2 are entries in DUT's address book and RCS capabilities are known and not expired. 4. At least one file with a size of 80-100MB is available on DUT and Reference 1 5. One Text with Message size close to 8KB is available on DUT and Reference 1 6. The test of max. number of participants (100) shall be carried out via simulator based tests to reduce testing efforts, 7. Supported by network: Cellular, Wi-Fi
Test procedure	<ol style="list-style-type: none"> 1. DUT selects Reference 1,2 from IM/chat application to start a Group Chat and sends 3 messages into the created Group Chat 2. DUT sends the file (80-100MB) into the Group Chat 3. Reference 1 sends the file (80-100MB) into the Group Chat 4. DUT sends a message with the relevant size (7-8 KB) 5. Reference 1 sends a message with the relevant size (7-8 KB)
Expected results Post-conditions	<ol style="list-style-type: none"> 1. 3 Group Chat Message from DUT received and displayed on target devices 2. File is received on Reference 1+2 side 3. File is received on DUT and Reference 2 side 4. Message is received on Reference 1+2 side 5. Message is received on DUT +Reference 1 side
Deep inspection	<ol style="list-style-type: none"> 1. Verify delivery of 3 messages to Reference 1,2 in a Group Chat 2. Verify notifications delivered to DUT 3. Verify Reference 1,2 received file and notifications delivered to DUT 4. Verify DUT and Reference 2 received file and notifications delivered to Reference 1 5. Verify message is received on Reference 1,2 sides 6. Verify message is received on DUT and Reference 2 side

Test case ID	ID_RCS_T_3_2_26
Related test cases	
Feature	Group Chat
Reason for test	Sending and receiving small graphics in Group Chat conversation. R6-29-13
Pre-conditions Scenario	<ol style="list-style-type: none"> 1. DUT + Reference 1 are registered and able to access IMS/RCS core network and relevant servers. 2. GROUP CHAT AUTH configuration parameter set to 1. 3. DUT and Reference 1 are in an ongoing Group Chat. 4. Supported by network: Cellular, Wi-Fi

Test procedure	<ol style="list-style-type: none"> Reference 1 selects and sends a small graphic as defined in Annex A.2 and Annex A.3 in [GSMA RCC.71 UP-SDD]. Reference 1 types and sends ";-)" text message
Expected results Post-conditions	<ol style="list-style-type: none"> DUT displays a small graphic as defined in Annex A.2 and Annex A.3 in [GSMA RCC.71 UP-SDD]. DUT receives the text message, and displays "smile" small graphic as defined in Annex A.2 and Annex A.3 in [GSMA RCC.71 UP-SDD].
Deep inspection	<ol style="list-style-type: none"> Verify that DUT and Reference 1 support small graphic message exchanging.

Test case ID	ID_RCS_T_3_2_27
Related test cases	
Feature	Group Chat
Reason for test	Multimedia is exchanged via FT HTTP R6-29-23
Pre-conditions Scenario	<ol style="list-style-type: none"> GROUP CHAT AUTH configuration parameter set to 1. DUT ,Reference 1 and Reference 2 are in an ongoing Group Chat. FT DEFAULT MECH set to HTTP set the following parameters: FT HTTP CS USER FT HTTP CS PWD FT HTTP CS URI
Test procedure	<ol style="list-style-type: none"> DUT sends an image file in the Group Chat. Reference 1 accepts the image file in the Group Chat.
Expected results Post-conditions	<ol style="list-style-type: none"> DUT uploads the image file to NUT, and receives the file info (including file URL). DUT sends the message (including the file URL) in the Group Chat. NUT sends a message (including the file URL) to Reference 1. Reference 1 downloads the file and displays it.
Deep inspection	<ol style="list-style-type: none"> Verify successfully upload file (with thumbnail if DUT sends too) to content server and recipient of correct file description XML by making an HTTPs post request to FT HTTP CS URI. Verify DUT receives HTTP 200OK with file information xml. A MSRP group message with File transfer via HTTP message body content should be delivered successfully.

Test case ID	ID_RCS_T_3_2_28
---------------------	-----------------

Related test cases	
Feature	Group Chat
Reason for test	Receiving notification on message status when the Reference 1 come online R6-29-17
Pre-conditions Scenario	<ol style="list-style-type: none"> 1. GROUP CHAT AUTH configuration parameter set to 1. 2. DISPLAY NOTIFICATION SWITCH is set to 0 3. DUT and Reference 1 are in an ongoing Group Chat
Test procedure	<ol style="list-style-type: none"> 1. Reference 1 becomes offline. 2. DUT sends message 1 in the Group Chat conversation. 3. DUT becomes offline. 4. Reference 1 becomes online. 5. DUT becomes online.
Expected results Post-conditions	<ol style="list-style-type: none"> 1. NUT receives the message 1 and store it. 2. NUT sends the message 1 to Reference 1. 3. Reference 1 sends notification "delivered" to NUT, and NUT store it since DUT is offline. 4. NUT sends the notification "delivered" to DUT, and DUT display the statues of message 1.
Deep inspection	<ol style="list-style-type: none"> 1. Delivery notifications are stored and forwarded

Test case ID	ID_RCS_T_3_2_29
Related test cases	
Feature	Group Chat
Reason for test	<p>As a user, I want to view my sent and received Group Chat Messages in a time-based order.</p> <p>As a user, I want to see the timestamp associated with each of my sent and received messages.</p> <p>R6-29-24 R6-29-25</p>
Pre-conditions Scenario	<ol style="list-style-type: none"> 1. GROUP CHAT AUTH configuration parameter set to 1. 2. DUT , Reference 1 and Reference 2 are in an ongoing Group Chat.
Test procedure	<ol style="list-style-type: none"> 1. Reference 1 sends text message 1 in Group Chat. 2. After 1 minute, Reference 2 sends text message 2 in Group Chat. 3. Reference 1 sends a text message 3 in the Group Chat. 4. DUT opens the Group Chat conversation and views all messages.

Expected results Post-conditions	<ol style="list-style-type: none"> 1. NUT sends message 1 to DUT. 2. NUT sends message 2 to DUT. 3. NUT sends message 3 to DUT. 4. DUT displays message 1, message 2 and message 3 in a time-based order with timestamp.
Deep inspection	<ol style="list-style-type: none"> 1. Verify the CPIM.DateTime field.

Test case ID	ID_RCS_T_3_2_31
Related test cases	
Feature	Group Chat
Reason for test	Manually deleting a Group Chat conversation from the list of chat conversations automatically triggers leaving the Group Chat. R6-29-29
Pre-conditions Scenario	<ol style="list-style-type: none"> 1. GROUP CHAT AUTH configuration parameter set to 1. 2. DUT and Reference 1 are in an ongoing Group Chat.
Test procedure	<ol style="list-style-type: none"> 1. Reference 1 sends message 1 in Group Chat session. 2. DUT deletes the message 1 after receiving. 3. DUT deletes the Group Chat conversation from conversation list. 4. Reference 1 sends message 2 in the Group Chat.
Expected results Post-conditions	<ol style="list-style-type: none"> 1. DUT receive the message 1 in Group Chat session. 2. DUT will never display the message 1 after deleting. 3. DUT sends BYE to NUT to leave the Group Chat session. 4. Reference 1 receives NOTIFY to indicate DUT's leaving Group Chat. 5. DUT will not receive the message 2.
Deep inspection	<ol style="list-style-type: none"> 1. DUT sends SIP BYE with Reason Header including the text: cause=200;text="Call completed". 2. Reference 1 receives SIP NOTIFY with DUT's leaving, for example: <pre> <user entity=DUT address > <roles> <entry>participant</entry> </roles> <endpoint entity=DUT address> <displayname>Nickname</displayname> <state>deleted</state> <status>disconnected</status> <disconnection-method>departed</disconnection-method> </pre>

	</endpoint> <etype>unknown</etype> </user>
--	--

3.3 File Transfer

3.3.1 Functional test cases

Test case ID	ID_RCS_F_3_3_1
Related test cases	
Feature	File Transfer
Reason for test	To validate UP 1.0 Reference section R7-1-2 to R7-1-6
Pre-conditions Scenario	<ol style="list-style-type: none"> 1. A-Party's device is online. 2. On A-Party's device, there are pictures stored in .jpg, .gif and .png format. 3. Pictures can be displayed on A-Party's device within the messaging application (e.g. if sent or received within a messaging conversation). 4. On A-Party's device, there is a video file in .mpeg4 format stored. This video file can be replayed on A-Party's device from within the messaging application (e.g. if sent or received within a messaging conversation). 5. On A-Party's device, there is an audio file in .mp3 format stored. This audio file can be replayed on A-Party's device from within the messaging application (e.g. if sent or received within a messaging conversation). 6. B-Party's device is known to be RCS capable to A-Party and online. 7. B-Party is stored as a contact in A-Party's device.
Test procedure	<ol style="list-style-type: none"> 1. Send one or more pictures of each picture format (.jpg; .gif; .png) from A-Party's device to B-Party using the RCS application under test. 2. Send one or more videos in .mpeg4 format from A-Party's device to B-Party using the RCS application under test. 3. Send one or more audio file in .mp3 format from A-Party's device to B-Party using the RCS application under test. 4. Send a contact from A-party's contact list to B-Party.
Expected results Post-conditions	<ol style="list-style-type: none"> 1. B-Party's device receives the pictures that were sent from A-Party. Pictures can be displayed within the messaging application under test on B-Party's device. 2. B-Party's device receives the video file(s) that were sent from A-Party. Video file(s) can be started from within the messaging application under test on B-Party's device, replay is either within the messaging application under test or the screen returns to the messaging application under test after the replay is finished. 3. B-Party's device receives the audio file(s) that were sent from A-Party.

	<p>Audio file(s) replay can be controlled from within the messaging application under test on B-Party's device.</p> <p>4. B-Party's device receives the contact that was sent from A-Party. The contact can be opened from within the messaging application under test on B-Party's device and saved to B-Party's contact list.</p>
Deep inspection	–

Test case ID	ID_RCS_F_3_3_2
Related test cases	
Feature	File Transfer
Reason for test	To validate UP 1.0 Reference section R7-1-7 and subsequent requirement R7-1-7-1
Pre-conditions Scenario	<ol style="list-style-type: none"> 1. A-Party's device is online. 2. B-Party's device is not RCS enabled (legacy device). 3. B-Party is a contact in A-Party's contact list. 4. A-Party's MNO has configured RCS clients to send files to non-RCS users as "SMS with a link". This setting is still set to default value.
Test procedure	<ol style="list-style-type: none"> 1. Open the messaging application on A-Party's device. 2. Open an existing conversation with B-Party on A-Party's device <u>or</u> create a new conversation with B-Party on A-Party's device. 3. In the conversation with B-Party, select a random picture (existing or new picture from camera) and send. 4. On B-Party's device, select the link to download the picture.
Expected results Post-conditions	<ol style="list-style-type: none"> 1. On A-Party's device, the user sees the picture thumbnail that was sent using SMS. On B-Party's device, the user sees a "short link" which is identifiable to be sent from an operator. The link is accompanied with a message that explains to the recipient that a file was sent to the user which can be accessed by clicking the link. 2. The picture is displayed on B-Party's device – either within the messaging application or in a browser view.
Deep inspection	–

Test case ID	ID_RCS_F_3_3_3
Related test cases	
Feature	File Transfer
Reason for test	To validate UP 1.0 Reference section R7-1-7 and subsequent requirement R7-1-7-2
Pre-conditions Scenario	<ol style="list-style-type: none"> 1. A-Party's device is online. 2. B-Party's device is not RCS enabled (legacy device). 3. B-Party is a contact in A-Party's contact list. 4. A-Party's MNO has configured RCS clients to send files to non-RCS users as "MMS". This setting is still set to default value. 5. B-Party's device is configured to auto-download MMS.
Test procedure	<ol style="list-style-type: none"> 1. Open the messaging application on A-Party's device. 2. Open an existing conversation with B-Party on A-Party's device <u>or</u> create a new conversation with B-Party on A-Party's device. 3. In the conversation with B-Party, select a random picture (existing or new picture from camera) and send.
Expected results Post-conditions	<ol style="list-style-type: none"> 1. On A-Party's device, the user sees the picture thumbnail that was sent using MMS. On B-Party's device, the user sees an incoming MMS.
Deep inspection	–

Test case ID	ID_RCS_F_3_3_5
Related test cases	
Feature	File Transfer
Reason for test	To validate UP 1.0 Reference section US7-2 and subsequent requirements.
Pre-conditions Scenario	<ol style="list-style-type: none"> 1. A-Party's device is online. 2. B-Party's device is RCS UP 1.0 and online. 3. B-Party is a known RCS user to A-Party's device. 4. The user setting on A-Party's device for Client Fallback to SMS (File Transfer Case) is set to "Always ask" (default configuration).

Test procedure	<ol style="list-style-type: none"> 1. Send an RCS 1-to-1 message from A-Party to B-Party. 2. Send an RCS 1-to-1 message from B-Party to A-Party. 3. Go offline on B-Party's device. 4. Send a picture from A-Party to B-Party and wait for more than 5 minutes. 5. Select wait. 6. Go online on B-Party's device.
Expected results Post-conditions	<ol style="list-style-type: none"> 1. The message is received by B-Party as RCS 1-to-1 message. 2. The message is received by A-Party as RCS 1-to-1 message. 3. After 5 minutes, the A-Party's device asks the user to re-send the file as SMS with link. The user has the option to send the file as SMS with link, wait (and not to send the file as SMS with link) and there shall be an option that the application shall always ask or perform one of the two actions without asking. 4. The file remains in "sent" Message Sent State. 5. The file is marked "delivered" once the new file was received by B-Party's device.
Deep inspection	—

Test case ID	ID_RCS_F_3_3_6
Related test cases	
Feature	File Transfer
Reason for test	To validate UP 1.0 Reference section US7-2 and subsequent requirements.
Pre-conditions Scenario	<ol style="list-style-type: none"> 1. A-Party's device is online. 2. A-Party's device is enabled for SMS delivery notifications. 3. B-Party's device is RCS UP 1.0 and offline but with CS connectivity. 4. B-Party is a known RCS user to A-Party's device. 5. The user setting on A-Party's device for Client Fallback to SMS (File Transfer Case) is set to "Always ask" (default configuration).
Test procedure	<ol style="list-style-type: none"> 1. Send a picture from A-Party to B-party and wait for 5 minutes. 2. After 5 minutes, select to "send the file as SMS with link" (on request by the A-Party device). 3. Send a second picture from A-Party to B-Party. 4. Go online on B-Party's device and send a RCS 1-to-1 message to A-party. 5. Send a third picture from A-Party to B-Party.

<p>Expected results Post-conditions</p>	<ol style="list-style-type: none"> 1. On A-Party's device, the file transfer remains in "sent" status. 2. A-Party's device asks to re-send the file as SMS with link. On B-Party's device, SMS with link is received. On A-Party's device, the file transfer is shown as "delivered". 3. On B-Party's device, the second picture is received as SMS with link. On A-party's device, the file transfer is shown as "delivered". 4. A-party's device, an RCS 1-to-1 message is received. 5. The file transfer is received on B-Party's device as RCS File Transfer. On A-Party's device, the file transfer is shown as "delivered" or "displayed" (after the thumbnail icon is represented on the active messaging screen on B-Party's device).
<p>Deep inspection</p>	<p>–</p>

<p>Test case ID</p>	<p>ID_RCS_F_3_3_7</p>
<p>Related test cases</p>	<p></p>
<p>Feature</p>	<p>File Transfer</p>
<p>Reason for test</p>	<p>To validate UP 1.0 Reference section US7-2 and subsequent requirements.</p>
<p>Pre-conditions Scenario</p>	<ol style="list-style-type: none"> 1. A-Party's device is online. 2. B-Party's device is a pre-UP1.0 RCS device (e.g. CPR) and offline.
<p>Test procedure</p>	<ol style="list-style-type: none"> 1. Send a picture from A-Party's device in the conversation with B-Party.
<p>Expected results Post-conditions</p>	<ol style="list-style-type: none"> 1. The File Transfer on A-Party's device is sent. After 5 minutes, A-Party's device asks to send a SMS notification to B-Party with a link to the picture.
<p>Deep inspection</p>	<p>–</p>

Test case ID	ID_RCS_F_3_3_8
Related test cases	
Feature	File Transfer
Reason for test	To validate UP 1.0 Reference section US7-5 and subsequent requirements
Pre-conditions Scenario	<ol style="list-style-type: none"> 1. A-Party's device is online and user setting to resize pictures before sending is set to "always ask" (see US18-9 and subsequent requirements). 2. B-Party's device is online. 3. On A-Party's device there is a picture with high resolution and file size (order of magnitude 3-5MB).
Test procedure	<ol style="list-style-type: none"> 1. Select a picture of high resolution to be sent from A-Party to B-Party. 2. Select "resize to small" on request of the device and send the picture. 3. Check picture size on B-Party's device.
Expected results	<ol style="list-style-type: none"> 1. The file size on B-Party's device (use file browser or similar tool) is significantly reduced compared to the original file size.
Post-conditions	
Deep inspection	–

Test case ID	ID_RCS_F_3_3_9
Related test cases	
Feature	File Transfer
Reason for test	To validate UP 1.0 Reference section US7-6 and subsequent requirements
Pre-conditions Scenario	<ol style="list-style-type: none"> 1. A-Party's device is online and user setting to resize video files before sending is set to "always ask" (see US18-10 and subsequent requirements). 2. B-Party's device is online. 3. On A-Party's device there is a high resolution video file of approximately 50MB file size.
Test procedure	<ol style="list-style-type: none"> 1. Select a video of high resolution to be sent from A-Party to B-Party. 2. Select "resize to small" on request of the device and send the video. 3. Check picture size on B-Party's device.

Expected results	1. The file size on B-Party's device (use file browser or similar tool) is significantly reduced compared to the original file size.
Post-conditions	
Deep inspection	–

Test case ID	ID_RCS_F_3_3_10
Related test cases	
Feature	File Transfer
Reason for test	To validate UP 1.0 Reference section R7-7-2
Pre-conditions Scenario	<ol style="list-style-type: none"> 1. A-Party's device is online. 2. B-Party's device is online. 3. B-Party's device is set to File Transfer auto-download. 4. B-Party's operator (no user setting) has set a File Transfer Warn Size Limit
Test procedure	<ol style="list-style-type: none"> 1. Send a file from A-Party to B-Party with file size bigger than the B-Party operator Warn Size setting. 2. Confirm the file download on B-Party's device.
Expected results	1. On A-Party's device, the file is sent and delivered to B-Party. On B-Party's device, the file is represented in the conversation with A by a thumbnail.
Post-conditions	2. On selection of the thumbnail, the file is downloaded to B-Party's device.
Deep inspection	–

Test case ID	ID_RCS_F_3_3_11
Related test cases	
Feature	File Transfer

Reason for test	To validate UP 1.0 Reference section US7-9 anr R7-9-1
Pre-conditions Scenario	<ol style="list-style-type: none"> 1. A-Party's device is online. 2. B-Party's device is online. 3. B-Party's device is set to File Transfer auto-download.
Test procedure	<ol style="list-style-type: none"> 1. A-Party enters a conversation with B-Party and selects a file for file transfer. (remark: it makes sense to select a decent file size to allow the tester for time between selecting the file to send and cancel the operation). 2. During the upload of the file, A-Party cancels the file transfer. 3. On A-Party's device, the file is selected again and sent
Expected results Post-conditions	<ol style="list-style-type: none"> 1. On A-Party's device, the aborted file transfer is marked either cancelled, or failed, or the entire operation is removed from the UI. 2. The file arrives at B-Party's device in line with file transfer requirements.
Deep inspection	–

Test case ID	ID_RCS_F_3_3_12
Related test cases	
Feature	File Transfer
Reason for test	To validate UP 1.0 Reference section US7-2, US7-4, US7-11, US7-13, US7-14, US7-15
Pre-conditions Scenario	<ol style="list-style-type: none"> 1. A-Party's device is online. 2. B-Party's device is offline. 3. NFS or CFS is implemented by B-Party's network. 4. SMS delivery receipt is enabled on B-Party's device (in user settings).
Test procedure	<ol style="list-style-type: none"> 1. Send a picture from A-Party's device to B-Party. 2. Send a video from A-Party's device to B-Party. 3. Send a contact from A-Party's device to B-Party. 4. Send an audio file from A-Party's device to B-Party. 5. Open the conversation with A-Party on B-Party's device. 6. Select the picture icon in the conversation with A-Party on B-Party's device. 7. Confirm the request to go online and make cellular data or WiFi data available. 8. Select the video icon in the conversation with A-Party on B-Party's

	<p>device.</p> <ol style="list-style-type: none"> 9. Select the contact icon in the conversation with A-Party on B-Party's device. 10. Select the audio icon in the conversation with A-Party on B-Party's device.
<p>Expected results Post-conditions</p>	<ol style="list-style-type: none"> 1. On A-Party's device, the picture is represented as a thumbnail, can be expanded by a click, and the status is 'sent'. B-Party's device notifies the user with an incoming file notification. On A-Party's device, the status of the file changes to 'delivered' after B-Party's device notifies the incoming file. <i>NOTE: depending on Delivery Assurance configuration, for the first file it may take more than 5 minutes that B-Party's device notifies the user of an incoming file.</i> 2. On A-Party's device, the video is represented as a thumbnail, can be replayed by a click, and the status is 'sent'. B-Party's device notifies the user with an incoming file notification. On A-Party's device, the status of the file changes to 'delivered' after B-Party's device notifies the incoming file. 3. On A-Party's device, the contact is represented as a thumbnail, contact details can be displayed by a click, and the status is 'sent'. B-Party's device notifies the user with an incoming file notification. On A-Party's device, the status of the file changes to 'delivered' after B-Party's device notifies the incoming file. 4. On A-Party's device, the audio file is represented as a thumbnail, can be replayed by a click, and the status is 'sent'. B-Party's device notifies the user with an incoming file notification. On A-Party's device, the status of the file changes to 'delivered' after B-Party's device notifies the incoming file. 5. On B-Party's device, in the conversation with A-Party an icon is shown that represents a generic picture, a generic video, a generic contact and a generic audio file. 6. B-Party's device informs the user that there is content available for download, and the user needs to go online to download. There shall be a UI shortcut presented to go online. After user selection and picture download, the picture is displayed. 7. B-Party's device goes online. On A-Party's device, that status of the four files (steps 1 through 4) changes to "displayed". All four generic file icons are replaced with the actual representation of the content (which may not change for audio file and contact, but will change for picture and video). 8. The video is replayed. 9. The contact card is displayed, an option to store in contact list shall be available. 10. The audio file is replayed.
<p>Deep inspection</p>	<p>–</p>

3.3.2 Technical test cases

Test Case ID	ID_RCS_T_3_3_1
Related Test Cases	
Feature	File Transfer
Reason for test	To verify file can be selected and transferred.
Pre-conditions Scenario	<ol style="list-style-type: none"> 1. DUT and Reference 1 are online. 2. DUT has one file with file format not supported by Reference1 and one file with file format supported by Reference1. 3. DUT and Reference 1 all set STANDALONE MSG AUTH to 1 and set CHAT AUTH to 0. 4. FT DEFAULT MECH configuration parameter is set to HTTP. 5. The size of the File being transferred is less than FT MAX SIZE.
Test procedure	<ol style="list-style-type: none"> 1. DUT sends a file (e.g. JPEG file), whose file format is supported by Reference 1. 2. DUT sends a file (e.g. Word file), whose file format is not supported by Reference 1.
Expected results	<ol style="list-style-type: none"> 1. File can be sent out and received by Reference 1. 2. File can be sent out and received by Reference 1.
Post-conditions	
Deep inspection	<ol style="list-style-type: none"> 1. Verify successfully upload file (with thumbnail if DUT sends too) to content server and recipient of correct file description XML by making an HTTPs post request to FT HTTP CS URI. 2. Verify DUT receives HTTP 200OK with file information xml. 3. Verify file-info element is as per 3.5.4.8.3.1 of [GSMA RCC.07 RCS6.0 UNI]. 4. Verify SIP StandAlone Message with feature-tag "+g.3gpp.iari-ref="urn%3Aurn-7%3A3gpp-application.ims.iari.rcs.fthttp"and content-type "application/vnd.gsma.rcs-ft-http+xml" is delivered successfully. 5. HTTP URL for the file should be included in message body content(HTTP URL for thumbnail should be included if thumbnail is sent too) 6. Verify delivery notification is delivered to the DUT when Reference 1 receives file.

Test Case ID	ID_RCS_T_3_3_2
Related Test Cases	

Feature	File Transfer
Reason for test	To verify that if the originating device is offline, File Transfer cannot be sent from the device.
Pre-conditions Scenario	<ol style="list-style-type: none"> 1. DUT is offline. 2. DUT and Reference 1 all set STANDALONE MSG AUTH to 1 and set CHAT AUTH to 0. 3. FT DEFAULT MECH configuration parameter is set to HTTP. 4. The size of the File being transferred is less than FT MAX SIZE. 5. DUT does not support MMS service.
Test procedure	<ol style="list-style-type: none"> 1. DUT sends file (e.g. JPEG file) to Reference 1. 2. DUT is online.
Expected results Post-conditions	<ol style="list-style-type: none"> 1. DUT can create an RCS File Transfer but the File Transfer status is 'pending'. 2. File Transfer shall be executed once DUT is online again without further user interaction.
Deep inspection	<ol style="list-style-type: none"> 1. Verify no any SIP message is sent out when DUT is offline. 2. When DUT is online. Verify successfully upload file (with thumbnail if DUT sends too) to content server and recipient of correct file description XML by making an HTTPs post request to FT HTTP CS URI. 3. Verify DUT receives HTTP 200OK with file information xml. 4. Verify SIP StandAlone Message with feature-tag "+g.3gpp.iari-ref="urn%3Aurn-7%3A3gpp-application.ims.iari.rcs.fthttp" and content-type "application/vnd.gsma.rcs-ft-http+xml" is delivered successfully. 5. HTTP URL for the file should be included in message body content(HTTP URL for thumbnail should be included if thumbnail is sent too) 6. Verify delivery notification is delivered to the DUT when Reference 1 receives file.

Test Case ID	ID_RCS_T_3_3_3
Related Test Cases	
Feature	File Transfer
Reason for test	To verify that user can transfer a file to multiple users at one time and all recipients are RCS user.
Pre-conditions Scenario	<ol style="list-style-type: none"> 1. DUT, Reference 1, Reference 2 and Reference 3 are online. 2. CHAT AUTH of all devices is set to 0. 3. STANDALONE AUTH of all devices is set to 1. 4. FT DEFAULT MECH configuration parameter is set to HTTP. 5. The size of File being transferred is less than FT MAX SIZE. 6. FT MAX 1 TO MANY RECIPIENTS is set to 0.

	7. GROUP CHAT AUTH is set to 0
Test procedure	1. DUT sends file (e.g. JPEG file) to Reference 1, Reference 2 and Reference 3 as recipients.
Expected results	1. Reference 1, Reference 2 and Reference 3 receive file as RCS File Transfer.
Post-conditions	
Deep inspection	<ol style="list-style-type: none"> 1. Verify successfully upload file (with thumbnail if DUT sends too) to content server and recipient of correct file description XML by making an HTTPs post request to FT HTTP CS URI. 2. Verify DUT receives HTTP 200OK with file information xml. 3. Verify SIP StandAlone Message with feature-tag "+g.3gpp.iari-ref="urn%3Aurn-7%3A3gpp-application.ims.iari.rcs.fthttp"" and with File transfer via HTTP message body as content and Reference1 and Reference 2 and Reference 3 as the recipient-list body is delivered successfully. 4. HTTP URL for the file should be included in message body content (HTTP URL for thumbnail should be included if thumbnail is sent too)

Test Case ID	ID_RCS_T_3_3_4
Related Test Cases	
Feature	File Transfer
Reason for test	To verify that user can transfer a file to multiple users at one time and one of recipients is Non-RCS user.
Pre-conditions Scenario	<ol style="list-style-type: none"> 1. DUT, Reference 1 and Reference 2 are online. 2. Reference 3 is Non-RCS contact. 3. CHAT AUTH of all users is set to 1. 4. STANDALONE AUTH of all users is set to 0. 5. FT DEFAULT MECH configuration parameter is set to HTTP. 6. The size of File being transferred is less than FT MAX SIZE. 7. FT MAX 1 TO MANY RECIPIENTS is set to 0. 8. FT HTTP FALLBACK is set to 1. 9. File Content server in DUT's Network provides a Branded-url
Test procedure	1. DUT sends file (e.g. JPEG file) to Reference 1, Reference 2 and Reference 3 as recipients.

Expected results Post-conditions	1. Reference 1 and Reference 2 receive file as RCS File Transfer, Reference 3 receives SMS with link (including the branded-url content received from the FT Server and a cover note letting the user know the aim of the message).
Deep inspection	<ol style="list-style-type: none"> 1. Verify successfully upload file (with thumbnail if DUT sends too) to content server and recipient of correct file description XML by making an HTTPs post request to FT HTTP CS URI. 2. Verify DUT receives HTTP 200OK with file information xml. 3. Verify file is delivered successfully to Reference1 and Reference 2 individually in Chat 1-to-1 sessions. 4. HTTP URL for the file should be included in message body content (HTTP URL for thumbnail should be included if thumbnail is sent too) 5. Verify SMS with file link which includes the branded-url and a cover note is delivered to Reference 3 successfully.

Test Case ID	ID_RCS_T_3_3_5
Related Test Cases	
Feature	File Transfer
Reason for test	To verify that user can transfer a file to multiple users at one time and all recipients are Non-RCS user.
Pre-conditions Scenario	<ol style="list-style-type: none"> 1. DUT is online. 2. Reference 1, Reference 2 and Reference 3 are Non-RCS contact. 3. CHAT AUTH of all users is set to 0. 4. STANDALONE AUTH of all users is set to 1. 5. FT DEFAULT MECH configuration parameter is set to HTTP. 6. File size being transferred is less than FT MAX SIZE. 7. FT MAX 1 TO MANY RECIPIENTS is set to 0. 8. FT HTTP FALLBACK is set to 1. 9. File Content server in DUT's Network provides a Branded-url
Test procedure	1. DUT sends file (e.g. JPEG file) to Reference 1, Reference 2 and Reference 3 as recipients.
Expected results Post-conditions	1. Reference 1, Reference 2 and Reference 3 receive file as SMS with link (including the branded-url content received from the FT Server and a cover note letting the user know the aim of the message).
Deep inspection	<ol style="list-style-type: none"> 1. Verify successfully upload file (with thumbnail if DUT sends too) to content server and recipient of correct file description XML by making an HTTPs post request to FT HTTP CS URI. 2. Verify DUT receives HTTP 200OK with file information xml. 3. Verify SMS with file link as content is delivered to Reference 1, Reference 2 and Reference 3 successfully.

Test Case ID	ID_RCS_T_3_3_6
Related Test Cases	
Feature	File Transfer
Reason for test	To verify required file types (JPEG file) shall be supported and content can be generated or displayed / played.
Pre-conditions Scenario	<ol style="list-style-type: none"> 1. DUT and Reference 1 are online. 2. There are some JPEG files on DUT 3. DUT and Reference all set STANDALONE MSG AUTH to 1 and set CHAT AUTH to 0. 4. FT DEFAULT MECH configuration parameter is set to HTTP. 5. The size of File being transferred is less than FT MAX SIZE.
Test procedure	<ol style="list-style-type: none"> 1. DUT sends a JPEG file to Reference 1.
Expected results	<ol style="list-style-type: none"> 1. Reference 1 receives the file, and can display it.
Post-conditions	
Deep inspection	<ol style="list-style-type: none"> 1. Verify successfully upload file (with thumbnail) to content server and recipient of correct file description XML by making a HTTPs post request to FT HTTP CS URI. 2. Verify DUT receives HTTP 200OK with file information xml. 3. Verify SIP StandAlone Message with feature-tag "+g.3gpp.iari-ref="urn%3Aurn-7%3A3gpp-application.ims.iari.rcs.fthttp"and content-type "application/vnd.gsma.rcs-ft-http+xml" is delivered successfully. 4. HTTP URL for the file should be included in message body content (HTTP URL for thumbnail should also be included) 5. Verify the content-type element of file in message body content should be the type of file being transferred. 6. Verify delivery notification is delivered to the DUT when Reference 1 receives file.

Test Case ID	ID_RCS_T_3_3_7
Related Test Cases	
Feature	File Transfer
Reason for test	To verify required file types (Panoramic Photo) shall be supported and content can be generated or displayed / played.

Pre-conditions Scenario	<ol style="list-style-type: none"> 1. DUT and Reference 1 are online. 2. There are some Panoramic Photo files on DUT 3. DUT and Reference all set STANDALONE MSG AUTH to 1 and set CHAT AUTH to 0. 4. FT DEFAULT MECH configuration parameter is set to HTTP. 5. The size of File being transferred is less than FT MAX SIZE.
Test procedure	<ol style="list-style-type: none"> 1. DUT sends a Panoramic Photo to Reference 1.
Expected results	<ol style="list-style-type: none"> 1. Reference 1 receives the file, and can display it.
Post-conditions	
Deep inspection	<ol style="list-style-type: none"> 1. Verify successfully upload file (with thumbnail) to content server and recipient of correct file description XML by making a HTTPs post request to FT HTTP CS URI. 2. Verify DUT receives HTTP 200OK with file information xml. 3. Verify SIP StandAlone Message with feature-tag "+g.3gpp.iari-ref="urn%3Aurn-7%3A3gpp-application.ims.iari.rcs.fthttp"and content-type "application/vnd.gsma.rcs-ft-http+xml" is delivered successfully. 4. HTTP URL for the file should be included in message body content (HTTP URL for thumbnail should also be included) 5. Verify the content-type element of file in message body content should be the type of file being transferred. 6. Verify delivery notification is delivered to the DUT when Reference 1 receives file.

Test Case ID	ID_RCS_T_3_3_8
Related Test Cases	
Feature	File Transfer
Reason for test	To verify required file types (GIF file) shall be supported and content can be generated or displayed / played.
Pre-conditions Scenario	<ol style="list-style-type: none"> 1. DUT and Reference 1 are online. 2. There are some GIF files on DUT 3. DUT and Reference all set STANDALONE MSG AUTH to 1 and set CHAT AUTH to 0. 4. FT DEFAULT MECH configuration parameter is set to HTTP. 5. The size of File being transferred is less than FT MAX SIZE.

Test procedure	1. DUT sends a GIF file to Reference 1.
Expected results Post-conditions	1. Reference 1 receives the file, and can display and play it.
Deep inspection	<ol style="list-style-type: none"> 1. Verify successfully upload file (with thumbnail) to content server and recipient of correct file description XML by making a HTTPs post request to FT HTTP CS URI. 2. Verify DUT receives HTTP 200OK with file information xml. 3. Verify SIP StandAlone Message with feature-tag "+g.3gpp.iari-ref="urn%3Aurn-7%3A3gpp-application.ims.iari.rcs.fthttp"and content-type "application/vnd.gsma.rcs-ft-http+xml" is delivered successfully. 4. HTTP URL for the file should be included in message body content (HTTP URL for thumbnail should also be included) 5. Verify the content-type element of file in message body content should be the type of file being transferred. 6. Verify delivery notification is delivered to the DUT when Reference 1 receives file.

Test Case ID	ID_RCS_T_3_3_9
Related Test Cases	
Feature	File Transfer
Reason for test	To verify required file types (MP3 file) shall be supported and content can be generated or displayed / played.
Pre-conditions Scenario	<ol style="list-style-type: none"> 1. DUT and Reference 1 are online. 2. There are some MP3 files on DUT 3. DUT and Reference all set STANDALONE MSG AUTH to 1 and set CHAT AUTH to 0. 4. FT DEFAULT MECH configuration parameter is set to HTTP. 5. The size of File being transferred is less than FT MAX SIZE.
Test procedure	1. DUT sends MP3 file to Reference 1.
Expected results Post-conditions	1. Reference 1 receives the file, and can display and play it.

Deep inspection	<ol style="list-style-type: none"> 1. Verify successfully upload file (with thumbnail if DUT sends too) to content server and recipient of correct file description XML by making an HTTPs post request to FT HTTP CS URI. 2. Verify DUT receives HTTP 200OK with file information xml. 3. Verify SIP StandAlone Message with feature-tag "+g.3gpp.iari-ref="urn%3Aurn-7%3A3gpp-application.ims.iari.rcs.fthttp"and content-type "application/vnd.gsma.rcs-ft-http+xml" is delivered successfully. 4. HTTP URL for the file should be included in message body content(HTTP URL for thumbnail should be included if thumbnail is sent too) 5. Verify the content-type element of file in message body content should be the type of file being transferred. 6. Verify delivery notification is delivered to the DUT when Reference 1 receives file.
------------------------	---

Test Case ID	ID_RCS_T_3_3_10
Related Test Cases	
Feature	File Transfer
Reason for test	To verify required file types (MPEG4 file) shall be supported and content can be generated or displayed / played.
Pre-conditions Scenario	<ol style="list-style-type: none"> 1. DUT and Reference 1 are online. 2. There are some MPEG4 files on DUT 3. DUT and Reference all set STANDALONE MSG AUTH to 1 and set CHAT AUTH to 0. 4. FT DEFAULT MECH configuration parameter is set to HTTP. 5. The size of File being transferred is less than FT MAX SIZE.
Test procedure	<ol style="list-style-type: none"> 1. DUT sends a MPEG4 file to Reference 1.
Expected results	<ol style="list-style-type: none"> 1. Reference 1 receives the file, and can display and play it.
Post-conditions	
Deep inspection	<ol style="list-style-type: none"> 1. Verify successfully upload file (with thumbnail) to content server and recipient of correct file description XML by making a HTTPs post request to FT HTTP CS URI. 2. Verify DUT receives HTTP 200OK with file information xml. 3. Verify SIP StandAlone Message with feature-tag "+g.3gpp.iari-ref="urn%3Aurn-7%3A3gpp-application.ims.iari.rcs.fthttp"and content-type "application/vnd.gsma.rcs-ft-http+xml" is delivered successfully. 4. HTTP URL for the file should be included in message body content (HTTP URL for thumbnail should also be included) 5. Verify the content-type element of file in message body content should

	<p>be the type of file being transferred.</p> <p>6. Verify delivery notification is delivered to the DUT when Reference 1 receives file.</p>
--	--

Test Case ID	ID_RCS_T_3_3_11
Related Test Cases	
Feature	File Transfer
Reason for test	To verify that if the recipient is not RCS capable, but the originating device is connected to RCS, the originating device can send file via SMS with short link
Pre-conditions Scenario	<ol style="list-style-type: none"> 1. DUT is online. 2. Reference 1 is Non-RCS contact. 3. FT DEFAULT MECH configuration parameter is set to HTTP. 4. The size of File being transferred is less than FT MAX SIZE. 5. FT HTTP FALLBACK is set to 1. 6. File Content server in DUT's Network provides a Branded-url
Test procedure	<ol style="list-style-type: none"> 1. DUT sends file (e.g. JPEG file) to Reference 1.
Expected results	<ol style="list-style-type: none"> 1. The file is sent by SMS with link that allows Reference 1 to download the file
Post-conditions	
Deep inspection	<ol style="list-style-type: none"> 1. Verify successfully upload file (with thumbnail if DUT sends also) to content server and recipient of correct file description XML by making an HTTPs post request to FT HTTP CS URI. 2. Verify DUT receives HTTP 200OK with file information xml. 3. Verify DUT sends SMS with link extracted from message body content carrying a branded-url parameter from the FT server

Test case ID	ID_RCS_T_3_3_13
Related test cases	
Feature	File Transfer
Reason for test	<p>R7-2-1-1,R7-4-1-5-3(7.3.2.5.2 File Transfer Client Fall-back)</p> <p>File transfer Fall-back: Network Interworking to SMS for Files</p> <p>To Verify the network supporting NFS handles no fallback scenario when remote device does not support FT fall back to SMS.</p>

Pre-conditions Scenario	<ol style="list-style-type: none"> 1. DUT and Reference 1 are registered and able to access IMS/RCS core network and relevant servers. 2. Reference 1 does not support FT fall back to SMS 3. Reference 1 network supports delivery assurance via network interworking 4. DUT and Reference1 are configured with CHAT AUTH = 1 and MESSAGING UX = 1.
Test procedure	<ol style="list-style-type: none"> 1. DUT selects image from gallery and chooses to share with Reference 1. 2. Reference 1 goes out of coverage and becomes offline. 3. DUT sends image selected at step 1 to Reference 1 4. Reference 1 gets network coverage back but yet to become IMS registered. 5. Reference 1 becomes IMS registered 6. File is marked delivered
Expected results Post-conditions	<ol style="list-style-type: none"> 1. User should be able to select the image 2. Reference 1 goes offline , RCS gets disabled 3. After sending: the message status of sent message changes to "pending" and then "sent" on DUT. 4. DUT does neither resend message as SMS nor offers to DUT to resend as SMS any time after location was sent 5. After network attach: Reference 1 device does not receive file link in SMS 6. After step5 file is delivered to Reference 1 as ST&FW message. 7. File is marked as delivered at DUT after it is received at Reference 1
Deep inspection	<ol style="list-style-type: none"> 1. Verify contact header of REGISTER sent by Reference 1 2. Does not include IARI +g.3gpp.iari-ref="urn%3Aurn-7%3A3gpp-application.ims.iari.rcs.ftsms" (Table 31: SIP OPTIONS tag for File Transfer via SMS of [GSMA RCC.71 UP-SDD]) or : org.3gpp.urn:urn-7:3gpp-application.ims.iari.rcs.ftsms (Table 32: Presence document) 3. Verify SIP 200 OK to DUT for presence of "+g.gsma.rcs.msgfallback" media feature tag (section 5.3.2 of [GSMA RCC.71 UP-SDD]). 4. DUT initiates chat session to Reference 1 and learns that network interworking is supported. 5. Verify that CPIM body containing http ft xml of DUT client does not contain requests for "Interworking" Disposition Notification (as defined in Appendix O of [GSMA RCC.11]) in addition to "Delivered" and "Displayed". 6. Referece 1 receives File as ST&FW message as per 3.3.4 Technical Realisation of [GSMA RCC.07 RCS6.0 UNI] 7. DUT receives delivery notification for this message

Test case ID	ID_RCS_T_3_3_14
Related test cases	
Feature	1-to-1 Messaging

Reason for test	R7-2-1-1,R7-4-1-5-3(7.3.2.5.2 File Transfer Client Fall-back) File transfer Fall-back: Network Interworking to SMS for Files To Verify the network fallback of standalone message carrying file URI to SMS
Pre-conditions Scenario	<ol style="list-style-type: none"> 1. DUT and Reference 1 are registered and able to access IMS/RCS core network and relevant servers. 2. Reference 1 supports File Transfer via SMS. 3. Reference 1 network supports delivery assurance via network interworking 4. DUT supports Standalone Messaging only. DUT is configured with MESSAGING UX = 1,CHAT AUTH = 0 and STANDALONE MSG AUTH = 1 5. Reference1 is configured with MESSAGING UX = 1, CHAT AUTH = 1 and STANDALONE MSG AUTH = 1
Test procedure	<ol style="list-style-type: none"> 1. DUT selects an image from galary and chooses to share with Reference 1 2. Reference 1 goes out of coverage and becomes offline. 3. DUT sends image selected at step 1 to Reference 1 4. Reference 1 gets network coverage back but yet to become IMS registered.
Expected results Post-conditions	<ol style="list-style-type: none"> 1. User should be able to select the image 2. Reference 1 goes offline , RCS gets disabled 3. After sending: the message status of sent message changes to "pending" and then "sent" on DUT. 4. DUT does neither resend message as SMS nor offers to DUT to resend as SMS any time after location was sent 5. Reference 1 device receives DUT message as SMS message
Deep inspection	<ol style="list-style-type: none"> 1. Verify contact header of REGISTER sent by Reference 1 does not include IARI +g.3gpp.iari-ref="urn%3Aurn-7%3A3gpp-application.ims.iari.rcs.ftsms" (Table 31: SIP OPTIONS tag for File Transfer via SMS of [GSMA RCC.71 UP-SDD]) or : org.3gpp.urn:urn-7:3gpp-application.ims.iari.rcs.ftsms (Table 32: Presence document) 2. Verify SIP 200 OK to DUT for presence of "Network Interworking supported" media feature tag (section 5.3.2 of [GSMA RCC.71 UP-SDD]). 3. Verify that DUT sends out standalone SIP message (carrying file URL) as per 3.2.4.1 Standalone messaging of [GSMA RCC.07 RCS6.0 UNI] 4. Verify that File URL Uri sent by DUT is as per RFC3986 5. Verify that CPIM body in MSRP SEND of DUT client does not contain requests for "Interworking" Disposition Notification (as defined in Appendix O of [GSMA RCC.11]) in addition to "Delivered" and "Displayed". 6. Referece 1 receives file link in SMS

Test Case ID	ID_RCS_T_3_3_15
Related Test Cases	

Feature	File Transfer
Reason for test	To verify that if File Transfer cannot be delivered by RCS within an MNO configurable period and the terminating network does not support NFS, the client shall use the procedures of CFS to ensure Delivery Assurance. HTTPS Get parameter for FT fall-back is provided from the content server
Pre-conditions Scenario	<ol style="list-style-type: none"> 1. DUT is online. 2. FT DEFAULT MECH configuration parameter is set to HTTP. 3. The size of File being transferred is less than FT MAX SIZE. 4. NUT configures the device CHAT REVOKE TIMER higher than 0. 5. NUT configures the device FT FALLBACK DEFAULT to 1. 6. NUT configures the device FT HTTP FALLBACK to 1. 7. NUT configures the device RECONNECT GUARD TIMER to 0. 8. DUT supports CFS. 9. Reference 1 network supports CFS. 10. Reference 1 supports FT fallback to SMS (from a previous capability exchange feature tag "urn%3Aurn-7%3A3gpp-application.ims.iari.rcs.ftsms"). 11. DUT and Reference 1 all set STANDALONE MSG AUTH to 0 and set CHAT AUTH to 1. 12. DUT configured the device CFS TRIGGER to 1. 13. File Content server includes meta information in the HTTP URL for FT fallback to SMS
Test procedure	<ol style="list-style-type: none"> 1. DUT sends file (e.g. JPEG file) to Reference 1 but file cannot be instantly delivered over the time of CHAT REVOKE TIMER. 2. DUT accepts to send message as SMS with link.
Expected results Post-conditions	<ol style="list-style-type: none"> 1. DUT offer the option to send the message as SMS. 2. A revocation for the original chat message shall be triggered. DUT will send via SMS the HTTP URL for File Transfer fallback to SMS.
Deep inspection	<ol style="list-style-type: none"> 1. Verify successfully upload file (with thumbnail if DUT sends too) to content server and recipient of correct file description XML by making an HTTPs post request to FT HTTP CS URI. 2. Verify DUT receives HTTP 200OK with file information xml, providing the HTTPS Get parameter for FT fall-back from the content server (meta-data information as per RCC71, table 34 3. Verify the network includes the "+g.gsma.rcs.msgrevoke" feature tag in the SIP INVITE dialog when initiating the chat session 4. DUT sends Message Revoke Request Message with content-type 'application/vnd.gsma.rcsrevoke.xml'. 5. The DUT should receive Message Revoke Response Message with content-type 'application/vnd.gsma.rcsrevoke.xml' and <result>success</result>. 6. Verify DUT sends SMS with link instead of chat message, including the provided HTTPS Get parameter for FT fall-back from the content server (meta-data information as per RCC71, table 3

Test Case ID	ID_RCS_T_3_3_16
Related Test Cases	
Feature	File Transfer
Reason for test	To verify that user can reject File Transfer fall back to SMS.
Pre-conditions Scenario	<ol style="list-style-type: none"> 1. DUT is online. 2. FT DEFAULT MECH configuration parameter is set to HTTP. 3. The size of File being transferred is less than FT MAX SIZE. 4. NUT configures the device CHAT REVOKE TIMER higher than 0. 5. NUT configures the device FT FALLBACK DEFAULT to 1. 6. NUT configures the device FT HTTP FALLBACK to 1. 7. NUT configures the device RECONNECT GUARD TIMER to 0. 8. DUT supports CFS. 9. Reference 1 network does not support NFS. 10. Reference 1 supports FT fallback to SMS (from a previous capability exchange feature tag "urn%3Aurn-7%3A3gpp-application.ims.iari.rcs.ftsms"). 11. DUT and Reference 1 all set STANDALONE MSG AUTH to 0 and set CHAT AUTH to 1. 12. NUT configures the device CFS TRIGGER to 1.
Test procedure	<ol style="list-style-type: none"> 1. DUT sends file (e.g. JPEG file) to Reference 1 but messages cannot be instantly delivered over the time of CHAT REVOKE TIMER. 2. DUT rejects to send the message as SMS.
Expected results Post-conditions	<ol style="list-style-type: none"> 1. DUT offer the option to send the message as SMS. 2. A revocation of the original download link notification shall not be triggered, neither an SMS link shall be sent. The File Transfer status is updated according to the delivery status.
Deep inspection	<ol style="list-style-type: none"> 1. The RCS File Transfer notification to the recipient user will stay in the store & forward of the terminating network (according to terminating MNO policies). 2. Verify DUT does not send Message Revoke Request Message with content-type 'application/vnd.gsma.rcsrevoke.xml'.

Test Case ID	ID_RCS_T_3_3_17
Related Test Cases	
Feature	File Transfer
Reason for test	To verify that the function of SMS Latching.

Pre-conditions Scenario	<ol style="list-style-type: none"> 1. DUT is online. 2. FT DEFAULT MECH configuration parameter is set to HTTP. 3. The size of File being transferred is less than FT MAX SIZE. 4. NUT configures the device CHAT REVOKE TIMER higher than 0. 5. NUT configures the device FT FALLBACK DEFAULT to 1. 6. NUT configures the device FT HTTP FALLBACK to 1. 7. NUT configures the device RECONNECT GUARD TIMER to 0. 8. DUT supports CFS. 9. Reference network 1 supports CFS. 10. Reference 1 supports FT fallback to SMS (from a previous capability exchange feature tag "urn:3Aurn-7:3A3gpp-application.ims.iari.rcs.ftsms"). 11. DUT and Reference 1 all set STANDALONE MSG AUTH to 0 and set CHAT AUTH to 1. 12. NUT configures the device CFS TRIGGER to 1. 13. Content server includes meta information in the HTTP URL for FT fallback to SMS
Test procedure	<ol style="list-style-type: none"> 1. DUT sends a file (e.g. JPEG file) to Reference 1 but messages cannot be instantly delivered by RCS within MNO's configurable period. 2. DUT sends two files (e.g. JPEG file) to Reference 1. 3. DUT sends a file (e.g. JPEG file) to Reference 1 when RCS availability of Reference 1 is confirmed.
Expected results Post-conditions	<ol style="list-style-type: none"> 1. DUT offer the option to send the file as SMS with link for the initial File sent 2. Subsequent two files are sent as SMS with link, sending via SMS the HTTP URL for File Transfer fallback to SMS 3. Next file is sent as RCS chat message, once Reference 1 is back online
Deep inspection	<ol style="list-style-type: none"> 1. No SIP Message for this file transfer is sent. 2. FT fallback to SMS as defined in 7.3.2.5.2 from RCC71 shall be used as the default messaging service. 3. Once there has been a fallback to SMS, subsequent messages shall continue to be sent as SMS until RCS availability is confirmed. 4. Message service is changed back to RCS message when RCS availability is confirmed.

Test Case ID	ID_RCS_T_3_3_18
Related Test Cases	
Feature	File Transfer
Reason for test	To verify that the sent file status.
Pre-conditions Scenario	<ol style="list-style-type: none"> 1. DUT and Reference 1 are online. 2. DISPLAY NOTIFICATION SWITCH configuration parameter is set to 0. 3. FT DEFAULT MECH configuration parameter is set to HTTP. 4. The size of File being transferred is less than FT MAX SIZE. 5. DUT and Reference 1 all set STANDALONE MSG AUTH to 1 and set CHAT AUTH to 0.

Test procedure	1. DUT sends a file (e.g. JPEG file) to Reference 1, transfer of the file has been triggered but not actually started (e.g. queuing on device).
Expected results Post-conditions	1. Message status is Pending.
Deep inspection	1. Verify DUT HTTPs post message to FT HTTP CS URI for uploading file (with thumbnail if DUT sends too) to content server and recipient of correct file description XML has been transferred, but DUT has not received the 200OK response message in timeout time or DUT just initiated sending of the file.

Test Case ID	ID_RCS_T_3_3_19
Related Test Cases	
Feature	File Transfer
Reason for test	To verify that the sent file status.
Pre-conditions Scenario	<ol style="list-style-type: none"> 1. DUT and Reference 1 are online. 2. DISPLAY NOTIFICATION SWITCH configuration parameter is set to 0. 3. FT DEFAULT MECH configuration parameter is set to HTTP. 4. The size of File being transferred is less than FT MAX SIZE. 5. DUT and Reference 1 all set STANDALONE MSG AUTH to 1 and set CHAT AUTH to 0.
Test procedure	1. DUT sends a file (e.g. JPEG file) to Reference 1, file transfer is started but not completed.
Expected results Post-conditions	1. Message status is In Progress.
Deep inspection	<ol style="list-style-type: none"> 1. Verify successfully upload file (with thumbnail if DUT sends too) to content server and recipient of correct file description XML by making an HTTPs post request to FT HTTP CS URI. 2. Verify DUT receives HTTP 200OK with file information xml. 3. Verify DUT SIP StandAlone Message carrying File Transfer via HTTP message body has been transferred and DUT has not received the

	SIP 200OK response message.
--	-----------------------------

Test Case ID	ID_RCS_T_3_3_20
Related Test Cases	
Feature	File Transfer
Reason for test	To verify that the sent file status.
Pre-conditions Scenario	<ol style="list-style-type: none"> 1. DUT and Reference 1 are online. 2. DISPLAY NOTIFICATION SWITCH configuration parameter is set to 0. 3. FT DEFAULT MECH configuration parameter is set to HTTP. 4. The size of File being transferred is less than FT MAX SIZE. 5. DUT and Reference 1 all set STANDALONE MSG AUTH to 1 and set CHAT AUTH to 0. 6. There is a file transfer "Pending" from DUT to Reference 1
Test procedure	<ol style="list-style-type: none"> 1. DUT has cancelled the File Transfer during the File Transfer 'Pending'.
Expected results	<ol style="list-style-type: none"> 1. Message status is Cancelled.
Post-conditions	
Deep inspection	<ol style="list-style-type: none"> 1. Verify DUT interrupt the ongoing HTTP file upload flow at the time of user input.

Test Case ID	ID_RCS_T_3_3_21
Related Test Cases	
Feature	File Transfer
Reason for test	To verify that the sent file status.

Pre-conditions Scenario	<ol style="list-style-type: none"> 1. DUT and Reference 1 are online. 2. DISPLAY NOTIFICATION SWITCH configuration parameter is set to 0. 3. FT DEFAULT MECH configuration parameter is set to HTTP. 4. The size of File being transferred is less than FT MAX SIZE. 5. DUT and Reference 1 all set STANDALONE MSG AUTH to 1 and set CHAT AUTH to 0.
Test procedure	<ol style="list-style-type: none"> 1. DUT sends a file (e.g. JPEG file) to Reference 1, transmission of the File Transfer request has been successfully completed.
Expected results Post-conditions	<ol style="list-style-type: none"> 1. Message status is Sent.
Deep inspection	<ol style="list-style-type: none"> 1. Verify successfully upload file (with thumbnail if DUT sends too) to content server and recipient of correct file description XML by making an HTTPs post request to FT HTTP CS URI. 2. Verify DUT receives HTTP 200OK with file information xml. 3. Verify SIP StandAlone Message with feature-tag "+g.3gpp.iari-ref="urn%3Aurn-7%3A3gpp-application.ims.iari.rcs.fhttp" and with File transfer via HTTP message body as content is delivered successfully. 4. HTTP URL for the file should be included in message body content(HTTP URL for thumbnail should be included if thumbnail is sent too) 5. Verify DUT receives the SIP 200OK response message.

Test Case ID	ID_RCS_T_3_3_22
Related Test Cases	
Feature	File Transfer
Reason for test	To verify that the sent file status.
Pre-conditions Scenario	<ol style="list-style-type: none"> 1. DUT and Reference 1 are online. 2. DISPLAY NOTIFICATION SWITCH configuration parameter is set to 0. 3. FT DEFAULT MECH configuration parameter is set to HTTP. 4. The size of File being transferred is less than FT MAX SIZE. 5. DUT and Reference 1 all set STANDALONE MSG AUTH to 1 and set CHAT AUTH to 0.

Test procedure	1. DUT sends a file (e.g. JPEG file) to Reference 1 and the file has been successfully delivered to Reference 1's device.
Expected results Post-conditions	1. Message status is Delivered.
Deep inspection	<ol style="list-style-type: none"> 1. Verify successfully upload file (with thumbnail if DUT sends too) to content server and recipient of correct file description XML by making an HTTPs post request to FT HTTP CS URI. 2. Verify DUT receives HTTP 200OK with file information xml. 3. Verify SIP StandAlone Message with feature-tag "+g.3gpp.iari-ref="urn%3Aurn-7%3A3gpp-application.ims.iari.rcs.fthttp"" and with File transfer via HTTP message body as content is delivered successfully. 4. HTTP URL for the file should be included in message body content(HTTP URL for thumbnail should be included if thumbnail is sent too) 5. Verify DUT receives the SIP 200OK response message. 6. Verify DUT receives the "Delivered" message notification.

Test Case ID	ID_RCS_T_3_3_23
Related Test Cases	
Feature	File Transfer
Reason for test	To verify that the sent file status.
Pre-conditions Scenario	<ol style="list-style-type: none"> 1. DUT and Reference 1 are online. 2. DISPLAY NOTIFICATION SWITCH configuration parameter set to 0. 3. FT DEFAULT MECH configuration parameter is set to HTTP. 4. The size of File being transferred is less than FT MAX SIZE. 5. DUT and Reference 1 all set STANDALONE MSG AUTH to 1 and set CHAT AUTH to 0.
Test procedure	1. DUT sends a file (e.g. JPEG file) to Reference 1 and the expected outcome of the operation could not be confirmed by the network. DUT does not attempt to send the message anymore.

Expected results Post-conditions	1. Message status is Failed.
Deep inspection	<ol style="list-style-type: none"> here may be two kinds of deep inspection: Verify DUT HTTPs Post Message has been transferred, but DUT has not received the HTTP 200OK response message over timeout time. Verify DUT SIP StandAlone Message carrying File Transfer via HTTP message body has been transferred, but DUT has not received the SIP 200OK response message over timeout time.

Test Case ID	ID_RCS_T_3_3_24
Related Test Cases	
Feature	File Transfer
Reason for test	To verify that user cannot transfer a file larger than file transfer limit.
Pre-conditions Scenario	<ol style="list-style-type: none"> DUT and Reference 1 are online. NUT sets the FT MAX SIZE. FT DEFAULT MECH configuration parameter is set to HTTP. STANDALONE AUTH configuration parameter is set to 1 CHAT AUTH configuration parameter is set to 0.
Test procedure	1. DUT sends a file (e.g. JPEG file) with size over File Transfer limit.
Expected results Post-conditions	1. File Transfer Message cannot be sent out.
Deep inspection	1. No SIP message for this file transfer should be sent.

Test Case ID	ID_RCS_T_3_3_25
Related Test Cases	
Feature	File Transfer

Reason for test	To verify that user can transfer file in Group Chat.
Pre-conditions Scenario	<ol style="list-style-type: none"> 1. DUT, Reference 1 and Reference 2 are online. All of them are in one Group Chat named "Test". 2. GROUP CHAT AUTH configuration parameter is set to 1. 3. FT DEFAULT MECH configuration parameter is set to HTTP.
Test procedure	<ol style="list-style-type: none"> 1. DUT sends a file (e.g. JPEG file) in Group Chat named "Test".
Expected results Post-conditions	<ol style="list-style-type: none"> 1. Reference 1 and Reference 2 receive the file in Group Chat.
Deep inspection	<ol style="list-style-type: none"> 1. The feature-tag "+g.3gpp.iari-ref="urn%3Aurn-7%3A3gpp-application.ims.iari.rcs.fthttp"" should be in the Contact Header field of the SIP INVITE and SIP 200 OK responses that it sends during the setup of the Group Chat. 2. Verify successfully upload file (with thumbnail if DUT sends too) to content server and recipient of correct file description XML by making an HTTPs post request to FT HTTP CS URI. 3. Verify DUT receives HTTP 200OK with file information xml. 4. A MSRP group message with File transfer via HTTP message body content should be delivered successfully.

Test Case ID	ID_RCS_T_3_3_26
Related Test Cases	
Feature	File Transfer
Reason for test	To verify that user should be informed when attempts to download an expired file.
Pre-conditions Scenario	<ol style="list-style-type: none"> 1. DUT is online. 2. FT DEFAULT MECH configuration parameter is set to HTTP. 3. File Transfer Auto-Accept is set to off. 4. DUT has a RCS File Transfer and a SMS with the original download link on it. 5. The files in RCS file Transfer and download link have not been downloaded and has expired from network storage.

Test procedure	<ol style="list-style-type: none"> 1. DUT tries to download the expired file from RCS file transfer. 2. DUT tries to download the expired file from SMS with link.
Expected results Post-conditions	<ol style="list-style-type: none"> 1. DUT should be informed that the file is no longer available. 2. DUT should be informed that the file is no longer available.
Deep inspection	<ol style="list-style-type: none"> 1. Verify that when DUT attempts to download the expired file, a HTTP 404 NOT FOUND error would be received.

Test Case ID	ID_RCS_T_3_3_27
Related Test Cases	
Feature	File Transfer
Reason for test	To verify that user downloads file when File Transfer Auto-Accept is set to off.
Pre-conditions Scenario	<ol style="list-style-type: none"> 1. DUT is online. 2. FT DEFAULT MECH configuration parameter is set to HTTP. 3. DUT has a RCS File Transfer and a SMS with the original download link. 4. File Transfer Auto-Accept is set to off. 5. The File in HTTP Content Server is not expired.
Test procedure	<ol style="list-style-type: none"> 1. DUT downloads the file from RCS File Transfer. 2. DUT downloads the file from SMS with link.
Expected results Post-conditions	<ol style="list-style-type: none"> 1. The file can be downloaded correctly. 2. The file can be downloaded correctly.
Deep inspection	<ol style="list-style-type: none"> 1. The file thumbnail can be downloaded successfully by HTTPs Get if file thumbnail is available. 2. The file can be downloaded successfully by HTTPs Get. 3. The file can be downloaded successfully by HTTPs Get.

Test Case ID	ID_RCS_T_3_3_28
---------------------	-----------------

Related Test Cases	
Feature	File Transfer
Reason for test	To verify that user downloads file when File Transfer Auto-Accept is set to on.
Pre-conditions Scenario	<ol style="list-style-type: none"> 1. DUT is online. 2. FT DEFAULT MECH configuration parameter is set to HTTP. 3. File Transfer Auto-Accept is set to ON.
Test procedure	<ol style="list-style-type: none"> 1. DUT receive a RCS File Transfer. 2. DUT is set to offline, and then receives a SMS with download File link. 3. DUT is set to online and the above File in HTTP Content Server is not expired.
Expected results Post-conditions	<ol style="list-style-type: none"> 1. The file is downloaded automatically from RCS File Transfer. 2. The file is not downloaded automatically as DUT is offline. 3. The file is downloaded automatically from SMS with download link as DUT is online.
Deep inspection	<ol style="list-style-type: none"> 1. The file thumbnail can be downloaded successfully by HTTPs Get if file thumbnail exists. 2. The file can be downloaded successfully by HTTPs Get. 3. The file is not downloaded automatically as DUT is offline. 4. The file can be downloaded successfully by HTTPs Get.

Test Case ID	ID_RCS_T_3_3_29
Related Test Cases	
Feature	File Transfer
Reason for test	To verify that user can transfer contact card and store received contact.
Pre-conditions Scenario	<ol style="list-style-type: none"> 1. DUT, Reference 1 and Reference 2 are online. 2. DUT saves Reference 2 as contact. 3. FT DEFAULT MECH configuration parameter is set to HTTP. 4. The size of the Contact File being transferred is less than FT MAX SIZE 5. STANDALONE AUTH configuration parameter is set to 1 6. CHAT AUTH configuration parameter is set to 0.

Test procedure	1. DUT sends the contact of Reference 2 from contact list to Reference 1.
Expected results Post-conditions	1. Reference 1 receives the contact of Reference 2 and saves it to contact list.
Deep inspection	<ol style="list-style-type: none"> 1. Verify successfully upload of thumbnail and file to content server and receiving of correct file description XML by making an HTTPs post request to FT HTTP CS URI. 2. Verify DUT receives HTTP 200OK with file information xml. 3. A SIP StandAlone Message with File transfer via HTTP message body content and carrying content type "text/vcard" should be delivered successfully. 4. Verify delivery notification is delivered to the DUT.

Test Case ID	ID_RCS_T_3_3_30
Related Test Cases	
Feature	File Transfer
Reason for test	To verify that the File Transfer shall resume automatically from the point of interruption once the required conditions have been restored.
Pre-conditions Scenario	<ol style="list-style-type: none"> 1. DUT and Reference 1 are online. 2. FT DEFAULT MECH configuration parameter is set to HTTP. 3. The size of the File being transferred is less than FT MAX SIZE 4. STANDALONE AUTH configuration parameter set to 1 5. CHAT AUTH configuration parameter set to 0.
Test procedure	<ol style="list-style-type: none"> 1. DUT sends a file (e.g. JPEG file) to Reference 1 but during sending the File Transfer has been interrupted as DUT lose radio coverage. 2. DUT is back into radio coverage. 3. Reference 1 receives the File and tries to download it, but downloading is interrupted as Reference 1 lost radio coverage. 4. Reference 1 is back into radio coverage.
Expected results Post-conditions	<ol style="list-style-type: none"> 1. File is not sent out. 2. The File Transfer shall resume automatically from the point of interruption. 3. Downloading is stopped and file is not downloaded. 4. The downloading shall resume automatically from the point of interruption.
Deep inspection	<ol style="list-style-type: none"> 1. DUT should fetch the upload information of the file by a HTTP GET request to the content server including the TID related to former resume upload. 2. The server sends back the upload information in the XML structure describing the file content without optional thumbnail including the stored byte range within a file-range tag and the direct upload URI.

	<ol style="list-style-type: none"> 3. DUT should resume the upload of the file content it generates an HTTP PUT request to the upload URL that was included in the XML description. 4. Reference 1 should resume the download of the file content it generates an HTTP GET request to the download URL that was included in the XML description with header "Range". 5. Reference 1 should receive a HTTP 206 response with header "Content-Range" and left file content.
--	--

Test Case ID	ID_RCS_T_3_3_31
Related Test Cases	ID_RCS_T_3_3_12
Feature	File Transfer
Reason for test	To verify that if File Transfer cannot be delivered by RCS within an MNO configurable period and the terminating network does not support NFS, the client shall use the procedures of CFS to ensure Delivery Assurance. HTTPS Get parameter for FT fall-back is not provided from the content server
Pre-conditions Scenario	<ol style="list-style-type: none"> 1. DUT is online. 2. FT DEFAULT MECH configuration parameter is set to HTTP. 3. The size of File being transferred is less than FT MAX SIZE. 4. NUT configures the device CHAT REVOKE TIMER higher than 0. 5. NUT configures the device FT FALLBACK DEFAULT to 1. 6. NUT configures the device FT HTTP FALLBACK to 1. 7. NUT configures the device RECONNECT GUARD TIMER to 0. 8. DUT supports CFS. 9. Reference 1 network supports CFS. 10. Reference 1 supports FT fallback to SMS (from a previous capability exchange feature tag "urn:3Aurn-7:3A3gpp-application.ims.iari.rcs.ftsms"). 11. DUT and Reference 1 all set STANDALONE MSG AUTH to 0 and set CHAT AUTH to 1. 12. DUT configured the device CFS TRIGGER to 1. 13. Content server does not include meta information in the HTTP URL for FT fallback to SMS
Test procedure	<ol style="list-style-type: none"> 1. DUT sends file (e.g. JPEG file) to Reference 1 but file cannot be instantly delivered over the time of CHAT REVOKE TIMER. 2. DUT accepts to send message as SMS with link.
Expected results Post-conditions	<ol style="list-style-type: none"> 1. DUT offer the option to send the message as SMS. 2. A revocation for the original chat message shall be triggered. DUT will send via SMS the HTTP URL for File Transfer fallback to SMS. 3. As this is not provided by the server, client shall be able to render the response received by the FT server and generate the required parameters to be added to the URL

Deep inspection	<ol style="list-style-type: none"> 1. Verify successfully upload file (with thumbnail if DUT sends too) to content server and recipient of correct file description XML by making an HTTPs post request to FT HTTP CS URI. 2. Verify DUT receives HTTP 200OK with file information xml, which does not contains the HTTPS Get parameter for FT fall-back (meta-data information as per RCC71, table 3 3. Verify SIP INVITE with feature tag “+g.gsma.rcs.msgrevoke” when initiating chat session. 4. DUT sends Message Revoke Request Message with content-type ‘application/vnd.gsma.rcsrevoke.xml’. 5. The DUT should receive Message Revoke Response Message with content-type ‘application/vnd.gsma.rcsrevoke.xml’ and <result>success</result>. 6. Verify DUT sends SMS with link instead of chat message, including the provided HTTPS Get parameter for FT fall-back from the content server (meta-data information as per RCC71, table 3
------------------------	--

3.4 Audio Messaging

3.4.1 Functional test cases

Test case ID	ID_RCS_F_3_4_1
Related test cases	
Feature	Audio Messaging
Reason for test	UP 1.0. Reference section US8-1 (and subsequent requirements R8-1-1 to R8-1-1. Record and send Audio Message.
Pre-conditions Scenario	<ol style="list-style-type: none"> 1. A-Party’s device is online. 2. B-Party’s device is known to be RCS capable to A-Party and online.
Test procedure	<ol style="list-style-type: none"> 1. A-Party creates a new 1-to-1 Messaging conversation or enters the existing Chat Conversation with B. 2. A- Party records an Audio Message. 3. A-Party sends the Audio Message to B-Party.
Expected results Post-conditions	<ol style="list-style-type: none"> 1. In the conversation the A-Party user is presented with a 1-click UI option to record an Audio Message. 2. A-Party records the Audio Message. After recording, A-Party is offered to listen to the recorded Audio Message or send directly to B-Party (probably amongst other UI options). 3. Once A-Party has selected “Send”, A-Party shall have the option to cancel the sending before the file transfer of the Audio Message has been completed.

	<p>After the Audio Message was sent, both conversation histories shall represent the Audio Message with a clickable icon that illustrates the audio character of the message (in contrast to e.g. pictures). On selection of the icon, the Audio Message shall be played back. Media settings of the device (e.g. volume, speaker, etc.) shall apply.</p> <p>On A-Party's device, the file transfer progress (pending, sending, sent, delivered, 'displayed' (if 'displayed' feedback is allowed in B-Party's device settings)) shall be visible.</p>
Deep inspection	–

Test case ID	ID_RCS_F_3_4_2
Related test cases	
Feature	Audio Messaging
Reason for test	UP 1.0. Reference section US8-1 (and subsequent requirements R8-1-1 and R8-1-13 and R8-3-4-1). Record and send Audio Message.
Pre-conditions Scenario	<ol style="list-style-type: none"> 1. A-Party's device is online. 2. B-Party's device is known to be RCS capable (to A). 3. C-Party's device is known to be RCS capable (to A).
Test procedure	<ol style="list-style-type: none"> 1. A-Party creates a new Group Chat or enters an existing Group Chat with B and C. 2. A- Party records an Audio Message. The recording shall not be stopped manually. 3. After the recording stopped automatically, A-Party sends the Audio Message to the Group Chat.
Expected results Post-conditions	<ol style="list-style-type: none"> 1. In the Group Chat the A-Party user is presented with a 1-click UI option to record an Audio Message. 2. A-Party records the Audio Message. After recording, A-Party is offered to listen to the recorded Audio Message or send directly to the Group Chat (probably amongst other UI options). 3. Once A-Party has selected "Send", A-Party shall have the option to cancel the sending before the file transfer of the Audio Message has been completed. <p>After the Audio Message was sent, all conversation histories shall represent the Audio Message with a clickable icon that illustrates the</p>

	<p>audio character of the message (in contrast to e.g. pictures). On selection of the icon, the Audio Message shall be played back. Media settings of the particular device (e.g. volume, speaker, etc.) shall apply. The user shall be presented with playback, stop and forward / rewind options to operate the audio player (R8-3-4-1).</p> <p>On A-Party's device, the file transfer progress (pending, sending, sent, delivered, 'displayed' (if 'displayed' feedback is allowed in B- and C-Party's device settings)) shall be visible.</p>
Deep inspection	–

Test case ID	ID_RCS_F_3_4_3
Related test cases	
Feature	Audio Messaging
Reason for test	UP 1.0. Reference section US8-2 (and subsequent requirements). Receiving Audio Messages.
Pre-conditions Scenario	<ol style="list-style-type: none"> 1. A-Party's device is online. 2. B-Party's device is known to be RCS capable (to A). B-Party device is in idle mode (screen black).
Test procedure	<ol style="list-style-type: none"> 1. A-Party creates a new conversation or enters an existing conversation with B. 2. A- Party records an Audio Message. 3. After the recording, A-Party sends the Audio Message to B.
Expected results Post-conditions	<ol style="list-style-type: none"> 1. Once B-Party has received the Audio Message, a visual notification shall be provided allowing the B-Party user to easily identify the incoming message as an Audio Message. An audible notification shall be provided (B-Party device settings for notification sounds apply). On selection of the notification, the Audio Message shall be played back using the active audio speaker. The B-Party user shall have the option to switch to device loudspeaker at any time.

Deep inspection	–
------------------------	---

Test case ID	ID_RCS_F_3_4_4
Related test cases	
Feature	Audio Messaging
Reason for test	UP 1.0. Reference section US8-3 (and subsequent requirements). Audio Messaging features.
Pre-conditions Scenario	<ol style="list-style-type: none"> 1. A-Party's device is online. 2. B-Party's device is known to be RCS capable (to A). B-Party device is in idle mode (screen black).
Test procedure	<ol style="list-style-type: none"> 1. A-Party creates a new conversation or enters an existing conversation with B. 2. A- Party records an Audio Message. 3. After the recording, A-Party sends the Audio Message to B. 4. Delete an Audio Message from the conversation history. 5. After replay of an Audio Message, record a new Audio Message and send. 6. Check time and date stamp of the Audio Message on A- and B-Party's device.
Expected results Post-conditions	<ol style="list-style-type: none"> 1. Audio Messages, represented by their icon in the conversation history on A-Party's and B-Party's device, shall allow replay and stop of replay. 2. Deleted Audio Messages disappear from the conversation history on the device they have been deleted from. 3. The UI shall offer an easy (1-click) option to record and send a new Audio Message. 4. Time and Date stamps are correct on both devices.
Deep inspection	–

3.4.2 Technical test cases

Test case ID	ID_RCS_T_3_4_1
Related test cases	
Feature	Audio Messaging
Reason for test	UP 1.0. Reference section 8.2.1. Sending Audio Messages in active one-to-one chat
Pre-conditions Scenario	<ol style="list-style-type: none"> 1. DUT and Reference 1 are online and in active 1-to-1 Chat session. 2. Reference 1 has enough free storage space to receive a Audio Messages. 3. Audio Message recording is limited to a duration based on the maximum file size supported by the MNO.
Test procedure	<ol style="list-style-type: none"> 1. DUT selects the Audio Message option to record and send an Audio Message to Reference 1. 2. Reference 1 receives the Audio Messages exchange. 3. Reference 1 opens Audio Message e.g. presented with playback, stop and forward / rewind options to operate the audio player.
Expected results Post-conditions	<ol style="list-style-type: none"> 1. DUT sees that Audio Message option is available for the recipient. 2. The Audio Message is transferred and received by Reference 1 and he can access and save it. 3. Delivery and display notification are received and shown on client DUT.
Deep inspection	<ol style="list-style-type: none"> 1. Verify successful upload of Audio Messages info to content server and recipient of correct file description XML adding the length of the RRAM in the playing-length element of [GSMA RCC.07 RCS6.0 UNI]. 2. Verify FT notification XML is sent inside the active chat. 3. Verify the URL complies to ftcontentserver.rcs.mnc<MNC>.mcc<MCC>.pub.3gppnetwork.org. 4. Verify File Disposition being set to 'render' according section 3.11.4.2.2. of [GSMA RCC.07 RCS6.0 UNI]. 5. Verify delivery and display notifications are sent within MSRP session or SIP MESSAGEs if chat session closed. 6. Verify Audio Message has recorded on the sender's device using the Adaptive Multi-Rate (AMR) codec.

Test case ID	ID_RCS_T_3_4_2
Related test cases	
Feature	Audio Messaging

Reason for test	UP 1.0. Reference section 8.2.3. Receiving Audio Message in active one-to-one chat
Pre-conditions Scenario	<ol style="list-style-type: none"> 1. DUT and Reference 1 are online and in active 1-to-1 Chat session. 2. DUT has enough free storage space to receive a Audio Message. 3. Audio Message recived does not exceed the maximum file size supported by the MNO.
Test procedure	<ol style="list-style-type: none"> 1. Reference 1 selects one contact and then selects the Audio Message option to record and send an Audio Message to DUT. 2. DUT receives the Audio Messages exchange. 3. DUT opens Audio Message e.g. presented with playback, stop and forward / rewind options to operate the audio player.
Expected results Post-conditions	<ol style="list-style-type: none"> 1. Reference 1 sees that Audio Message option is available for the recipient. 2. The Audio Message is transferred and received by DUT and he can access and save it. 3. Delivery and display notification are received and shown on client Reference 1.
Deep inspection	<ol style="list-style-type: none"> 1. Verify FT notification XML is received inside the active chat. 2. Verify File Disposition being set to 'render' according section 3.11.4.2.2. of [GSMA RCC.07 RCS6.0 UNI]. 3. Verify the URL complies to ftcontentserver.rcs.mnc<MNC>.mcc<MCC>.pub.3gppnetwork.org.

3.5 Settings

3.5.1 Functional test cases

Test case ID	ID_RCS_F_3_5_1
Related test cases	
Feature	Settings
Reason for test	UP 1.0. Reference section US18-1 and subsequent requirements. RCS (de) activation.
Pre-conditions Scenario	<ol style="list-style-type: none"> 1. Device has an activated UP 1.0 RCS native client.
Test procedure	<ol style="list-style-type: none"> 1. Set Master Switch for RCS functionality to 'off' 2. Set Master Switch for RCS functionality to 'on'

Expected results	1. RCS functionalities are disabled. All locations / entry points of the (Master) switch are synced to “off”.
Post-conditions	2. RCS functionalities are enabled. All locations / entry points of the (Master) switch are synced to “on”.
Deep inspection	–

Test case ID	ID_RCS_F_3_5_2
Related test cases	
Feature	Settings
Reason for test	UP 1.0. Reference section US18-2 and subsequent requirements. RCS Messaging Alias
Pre-conditions Scenario	1. A-Party’s & B-Party’s devices are RCS online. 2. A-Party is not in the contact list of B-Party. 3. B-Party is in the contact list of A-Party.
Test procedure	1. Set an RCS Messaging Alias on the A-party’s device. 2. Send an RCS 1-to-1 Message from A-Party to B-Party
Expected results	1. On B-Party’s device, A-party’s RCS Messaging Alias is visible in the conversation thread and in the list of messaging conversations.
Post-conditions	
Deep inspection	–

Test case ID	ID_RCS_F_3_5_3
Related test cases	
Feature	Settings
Reason for test	UP 1.0. Reference section US18-4 and subsequent requirements. SMS delivery notification
Pre-conditions Scenario	1. A- and B-Party’s devices are configured for Integrated Messaging.
Test procedure	1. On A-Party’s device, make sure the option to automatically send a Delivery Notification for SMS is selected. 2. A-Party sends an SMS to B-Party.

	<ol style="list-style-type: none"> 3. On A-Party's device, deselect the option to automatically send a Delivery Notification for SMS. 4. A-Party sends an SMS towards B-Party.
Expected results	1. B-Party's device receives SMS, A-Party's device presents 'sent' and then 'delivered' Message Status Notification.
Post-conditions	2. B-Party device receives SMS, A-Party's device presents "sent" as Message Status Notification (does not change to 'delivered').
Deep inspection	–

Test case ID	ID_RCS_F_3_5_4
Related test cases	
Feature	Settings
Reason for test	UP 1.0. Reference section US18-5 and subsequent requirements. MMS download
Pre-conditions Scenario	<ol style="list-style-type: none"> 1. A- and B-Party's devices are configured for Integrated Messaging. 2. MMS is enabled by the network(s) of A- and B-Party. 3. A- and B-Party's devices are on home network (not roaming).
Test procedure	<ol style="list-style-type: none"> 1. A-Party sends File to B-Party selecting MMS as File Transfer Service. B-Party's device is set to (the default) "automatic download of MMS" enabled. Wait until file has been successfully delivered to B-Party's device. 2. B-Party disables automatic MMS download. A-Party sends a File to B-Party selecting MMS as File Transfer Service. 3. B-Party confirms to download the File.
Expected results	1. B-Party device receives MMS. The File is automatically downloaded.
Post-conditions	2. B-Party device receives notification that an MMS is waiting for download and offers to B-Party to download the MMS.
Deep inspection	–
	3. Upon confirmation to download the MMS, B-Party's device downloads the MMS.

Test case ID	ID_RCS_F_3_5_5
Related test cases	
Feature	Settings

Reason for test	UP 1.0. Reference section US18-6 and subsequent requirements. Personalization
Pre-conditions Scenario	<ol style="list-style-type: none"> 1. A-Party's & B-Party's devices are online. 2. B-Party's device has a hardware feature "notification LED". The personalization setting is set to default setting "notify incoming new messages".
Test procedure	<ol style="list-style-type: none"> 1. A-Party sends a message to B-Party. 2. B-party opens the message after reception of the message. 3. B-Party disables LED notification in settings for incoming messages. 4. A-Party sends a message to B Party.
Expected results Post-conditions	<ol style="list-style-type: none"> 1. After reception of the message, B-Party's device LED indicates an unread message. 2. The message is displayed on B-Party's device, the notification LED is reset (dark). 3. B-Party's device LED does not indicate a new unread message after the message was received.
Deep inspection	–

Test case ID	ID_RCS_F_3_5_6
Related test cases	
Feature	Settings
Reason for test	UP 1.0. Reference section US18-6-2 and subsequent requirements. Personalization
Pre-conditions Scenario	<ol style="list-style-type: none"> 1. A-Party's & B-Party's devices are online. 2. B-Party's device has a hardware feature "vibration notification". The personalization setting is set to default setting "notify incoming new messages".
Test procedure	<ol style="list-style-type: none"> 1. A-Party sends a message to B-Party. 2. B-party opens the message after reception of the message. 3. B-Party disables vibration notification in settings for incoming messages. 4. A-Party sends a message to B Party.
Expected results Post-conditions	<ol style="list-style-type: none"> 1. After reception of the message, B-Party's device vibrates to indicate a new incoming message. 2. The message is displayed on B-Party's device. 3. B-Party's device does not vibrate to indicate a new incoming message when the message is received.
Deep inspection	–

Test case ID	ID_RCS_F_3_5_7
Related test cases	
Feature	Settings
Reason for test	UP 1.0. Reference section US18-6-3 and subsequent requirements. Personalization
Pre-conditions Scenario	1. A-Party's device is RCS enabled.
Test procedure	<ol style="list-style-type: none"> 1. Check whether following personalization features are present within the client: 2. Notification sounds for incoming messages (e.g. xMS, 1-to -1 Messaging Group Chat Messages, File Transfers) 3. Notification preferences 4. Customised ringtones (for Voice calls or IP Video) 5. Visual customisation for chat (for example fonts, bubble styles, backgrounds etc.)
Expected results	1. The user should be able to set the above features according to their own preferences.
Post-conditions	
Deep inspection	–

Test case ID	ID_RCS_F_3_5_8
Related test cases	
Feature	Settings
Reason for test	UP 1.0. Reference section US18-7 and subsequent requirements. Display notification
Pre-conditions Scenario	<ol style="list-style-type: none"> 1. A-Party's & B-Party's devices are online. 2. The send 'display' notification setting on-B-Party's device is set to "send display notification". 3. A- and B-Party's MNO(s) support display notification feature.
Test procedure	<ol style="list-style-type: none"> 1. A-Party sends a message to B Party. 2. B-Party opens the message. 3. On B-Party's device, the send 'display notification' setting is set to 'do not send display notification'.

	<ol style="list-style-type: none"> 4. A-Party sends a message to B Party. 5. B-Party opens the message.
Expected results Post-conditions	<ol style="list-style-type: none"> 1. The message is received on B-Party's device. 2. The message is displayed on B-Party's device Party. On A-Party's device, the message is notified as "displayed" in the conversation with B. 3. Feedback of display notification is disabled. 4. The message is received on B-Party's device. 5. The message is displayed on B-Party's device. On A-Party's device, the message stays as "delivered" in the conversation with B.
Deep inspection	–

Test case ID	ID_RCS_F_3_5_9
Related test cases	
Feature	Settings
Reason for test	UP 1.0. Reference section US18-8 and requirements R18-8-1 & R18-8-1-1. File Transfer
Pre-conditions Scenario	<ol style="list-style-type: none"> 1. A-Party's & B-Party's devices are online and on home network (not roaming). 2. The "automatic File Transfer download" setting on-B-Party's device is set to default value "download automatically on home network".
Test procedure	<ol style="list-style-type: none"> 1. A-Party sends a file (e.g. a picture) to B-Party. 2. B-party enters the conversation with A-Party and accesses the file. 3. B-Party disabled the setting "automatic download on home network". 4. A-Party sends a file (e.g. a picture) to B-Party.
Expected results Post-conditions	<ol style="list-style-type: none"> 1. The file is received on B-Party's device. 2. The file can instantly be accessed, no waiting for download. 3. The setting "auto download on home network" is disabled. 4. When the thumbnail icon is accesses on B-Party's device, the user needs to wait for the file download first before the file is on B-Party's device (and e.g. the picture can be displayed in full resolution).
Deep inspection	–

Test case ID	ID_RCS_F_3_5_10
Related test cases	

Feature	Settings
Reason for test	UP 1.0. Reference section US18-9, US18-10 (and subsequent requirements) Resizing options
Pre-conditions Scenario	<ol style="list-style-type: none"> 1. A-Party's device is online and known to be RCS capable. Picture and video resizing options set to default. At least one picture and one video are available in the device repository for pictures and video. 2. B-Party's device is online and known to be RCS capable
Test procedure	<ol style="list-style-type: none"> 1. On A-Party's device, select a picture to be sent B-Party. 2. On request, select 'resize', "don't ask again" and send the picture. 3. On A-Party's device, select the same picture again and send to B-Party. 4. On A-Party's device, select a video to be sent to B-Party. 5. On request, select "resize" and "don't ask again", select an option that is provided for the resizing of the video and send the video. 6. On A-Party's device, select the same video again and send to B-Party.
Expected results Post-conditions	<ol style="list-style-type: none"> 1. A-Party's device displays an option to resize the image. An option to select "always resize" is available. On B-party's device, a picture is received which is smaller than the original picture that was selected to be sent from A-Party's device. 2. The same picture is sent from A-Party's device without asking to resize. On B-Party's device, the picture is received again. The second picture shall have the same format / data volume as the original picture. 3. A-Party has the option to select a video from existing video repository on A-Party's device. 4. A-Party's device displays one or more options to resize the video. On B-party's device, a video is received which is in the format as selected and sent from A-Party's device. 5. The same video is sent from A-Party's device without asking to resize. On B-Party's device, the video is received again. The second video shall have the same format / data volume as the first video that was received on B-Party's device.
Deep inspection	–

Test case ID	ID_RCS_F_3_5_11
Related test cases	
Feature	Settings
Reason for test	UP 1.0. Reference section US18-12 (and subsequent requirements) Selection of default sending preferences

Pre-conditions Scenario	<ol style="list-style-type: none"> 1. A-Party's device is RCS enabled, online and configured for Integrated Messaging. In settings on A-Party's device, the setting described in US18-12 is set to "Proposed Messaging Service". The proposed messaging service on A-Party's device for communication with B-Party is not latched to SMS (see R5-2-4-). 2. A-Party's MNO supports MMS. 3. B-Party's device is online and known to be RCS capable 4. C-Party is a non-RCS user. 5. - There are existing messaging threads with B-Party and C-Party on A-Party's device.
Test procedure	<ol style="list-style-type: none"> 1. Open the messaging application on the A-Party's device 2. Select and open the conversation with B-Party from the list of conversations 3. Select and open the conversation with C-Party on A-Party's device.
Expected results Post-conditions	<ol style="list-style-type: none"> 1. The messaging application suggests to send messages and files as RCS 2. The messaging application suggests to send messages as SMS and files as MMS.
Deep inspection	–

Test case ID	ID_RCS_F_3_5_12
Related test cases	
Feature	Settings
Reason for test	UP 1.0. Reference section US18-13, US18-14 (and subsequent requirements) Selection of Client Fallback SMS (CFS) preferences
Pre-conditions Scenario	<ol style="list-style-type: none"> 1. A- and B-Party's MNO(s) support Integrated Messaging 2. A-Party's device is online 3. B-Party's device is offline but available for CS 4. B-Party's RCS Service Provider supports CFS 5. - The CFS Timer is set to 5 minutes (no user setting).
Test procedure	<ol style="list-style-type: none"> 1. Go to settings on the A-Party's device and set the option 'always ask' for re-sending RCS messages and RCS files as SMS. 2. Send an RCS 1-to-1 Message on A-Party's device to B-Party. 3. Wait for 5 minutes after 'sent' was confirmed by the network on A-Party's device. 4. Confirm to re-send the message as SMS.

Expected results Post-conditions	<ol style="list-style-type: none"> 1. The A-Party's device is set to 'always ask'. 2. On A-Party's device, the message state is 'sent' but does not show 'delivered'. On B-Party's device, the message will not arrive. 3. After 5 minutes, A-Party will be asked to resend as SMS. 4. After re-sending as SMS, the original message is removed from the conversation on A-Party's device. A new message is indicated as SMS in 'sent' status until the message arrives at B-Party's device and the 'delivered' notification is presented on A-Party's device.
Deep inspection	–

Test case ID	ID_RCS_F_3_5_13
Related test cases	
Feature	Settings
Reason for test	UP 1.0. Reference section US18-13, US18-14 (and subsequent requirements) Selection of Client Fallback SMS (CFS) preferences
Pre-conditions Scenario	<ol style="list-style-type: none"> 1. A- and B-Party's MNO(s) support Integrated Messaging 2. A-Party's device is online 3. B-Party's device is offline but available for CS 4. B-Party's RCS Service Provider supports CFS 5. - The CFS Timer is set to 5 minutes (no user setting).
Test procedure	<ol style="list-style-type: none"> 1. Go to settings on the A-Party's device and set the option 'Always resend undelivered RCS messages as SMS (and don't ask)'/ 'Always resend undelivered RCS Files as SMS link (and don't ask)' 2. Send an RCS 1-to-1 Message on A-Party's device to B-Party. 3. Wait for 5 minutes after 'sent' was confirmed by the network on A-Party's device.
Expected results Post-conditions	<ol style="list-style-type: none"> 1. The A-Party's device is set to 'Always resend undelivered RCS messages as SMS (and don't ask)'/ 'Always resend undelivered RCS Files as SMS link (and don't ask)'. 2. On A-Party's device, the message state is 'sent' but does not show 'delivered' for about 5 minutes. On B-Party's device, the message will not arrive. 3. After 5 minutes, the original RCS 1-to-1 message is removed and a new message appears sent as SMS. The new message is indicated as 'sent' until the message arrives at B-Party's device and the 'delivered' notification is presented on A-Party's device.
Deep inspection	–

Test case ID	ID_RCS_F_3_5_14
Related test cases	
Feature	Settings
Reason for test	UP 1.0. Reference section US18-13, US18-14 (and subsequent requirements) Selection of Client Fallback SMS (CFS) preferences
Pre-conditions Scenario	<ol style="list-style-type: none"> 1. A- and B-Party's MNO(s) support Integrated Messaging 2. A-Party's device is online 3. B-Party's device is offline but available for CS 4. B-Party's RCS Service Provider supports CFS 5. - The CFS Timer is set to 5 minutes (no user setting).
Test procedure	<ol style="list-style-type: none"> 1. Go to settings on the A-Party's device and set the option 'Never resend undelivered RCS messages as SMS (and don't ask)'/ 'Never resend undelivered RCS Files as SMS link (and don't ask)' 2. Send an RCS 1-to-1 Message on A-Party's device to B-Party. 3. Wait for 6 minutes after 'sent' was confirmed by the network on A-Party's device. 4. Go online with B-Party's device.
Expected results Post-conditions	<ol style="list-style-type: none"> 1. The A-Party's device is set to 'Never resend undelivered RCS messages as SMS (and don't ask)'/ 'Never resend undelivered RCS Files as SMS link (and don't ask)'. 2. On A-Party's device, the message state is 'sent' but does not show 'delivered'. On B-Party's device, the message will not arrive. 3. No change. 4. The message arrives at B-Party's device. On A-Party's device, the Message Status changes to 'delivered'.
Deep inspection	–

Test case ID	ID_RCS_F_3_5_15
Related test cases	
Feature	Settings
Reason for test	UP 1.0. Reference section US18-15 (and subsequent requirements) Blocking contacts

Pre-conditions Scenario	<ol style="list-style-type: none"> 1. A-Party's device is online and known to be RCS capable 2. B-Party's device is online and known to be RCS capable 3. On A-Party's device, there is a 1-to-1 Messaging conversation with B-Party, and a Group Chat that has B-Party as a participant. 4. B-Party has blocked incoming communication from A-Party on the device.
Test procedure	<ol style="list-style-type: none"> 1. Send a 1-to-1 message from A-Party to B-Party. 2. Send a file on the A-Party device to B-Party 3. Send a Group Chat message from A-Party to the group that has B-Party as a participant. 4. Make a call on the A-Party device to B-Party
Expected results Post-conditions	<ol style="list-style-type: none"> 1. The B-Party device entirely ignores the message from A-party. The A-Party user is not notified about the status of being blocked. The A-Party device indicates the message in "sent" state and shall not indicate "displayed". 2. The B-Party device entirely ignores the file from A-party. The A-Party user is not notified about the status of being blocked. The A-Party device indicates the file in "delivered" state and shall not indicate "displayed". 3. The B-Party device alerts the B-Party user that there is an incoming Group Chat message from A-Party and the message can be accessed in the Group Chat thread. 4. The B-Party device does not alert the B-Party user that there is an incoming call from A-Party. The A-Party user hears a ringtone or busy tone.
Deep inspection	–

Test case ID	ID_RCS_F_3_5_16
Related test cases	
Feature	Settings
Reason for test	UP 1.0. Reference section US18-16 (and subsequent requirements) Dual SIM
Pre-conditions Scenario	<ol style="list-style-type: none"> 1. A-Party's device is a Dual SIM device 2. A-Party's device is online on SIM 1 and SIM2 is from an operator known to be RCS capable
Test procedure	<ol style="list-style-type: none"> 1. Go to settings on the A-Party's device and select SIM2 that is RCS capable

Expected results	1. The A-Party user is able to select the SIM2 as the active RCS SIM.
Post-conditions	
Deep inspection	–

Test case ID	ID_RCS_F_3_5_17
Related test cases	
Feature	Settings
Reason for test	UP 1.0. Reference section US18-16 (and subsequent requirements) Dual SIM
Pre-conditions Scenario	1. A-Party's device is a Dual SIM device 2. A-Party's device is online on SIM1, SIM2 is from an operator not known to support RCS.
Test procedure	1. Go to settings on the A-Party's device and try to select SIM2 for RCS services.
Expected results	1. The A-Party's device does not offer to change the active SIM for RCS services.
Post-conditions	
Deep inspection	–

3.6 Chatbots

3.6.1 Universal Profile 2.0: A2P Basic

3.6.1.1 Technical Test Cases

Test case ID	ID_RCS_RBM_1
Related test cases	
Feature	Device Provisioning / Registration

Reason for test	First-time registration over 3GPP. First-time successful configuration
Pre-conditions Scenario	<ol style="list-style-type: none"> 1. Autoconfiguration Server (ACS) ready to fulfil the requirements described in Section D.2 and D.3 of [GSMA RCC.71 UP2.1] (equals provisioning_version 4.0) 2. RCS services have not been previously configured on the phone/SIM pair 3. DUT is in cellular coverage 4. DUT is powered off 5. ACS supports Header Enrichement
Test procedure	<ol style="list-style-type: none"> 1. DUT is powered up 2. If Terms and Conditions or a Welcome message is provided in the configuration they are accepted
Expected results Post-conditions	<ol style="list-style-type: none"> 1. If applicable, the welcome message is displayed 2. RCS services are registered and ready to be used
Deep inspection	<ol style="list-style-type: none"> 1. Inspect HTTP request includes new or updated GET parameters (rcs_version=7.0, rcs_profile=UP_2.0-b1, provisioning_version=4.0) 2. DUT resolves the IP address and port to perform RCS registration 3. Verify successful SIP Registration and 4. Verify that the SIP registration includes 'Chatbot support' and 'Chatbot version support' feature headers in Contact header as defined in section Table 8 – section 2.4.4 of [GSMA RCC.07 RCS7.0 UNI] [Encoded as defined in section 3.6.2 of [GSMA RCC.07 RCS7.0 UNI]. Check clarifications done in [GSMA RCC.72] are included.

Test case ID	ID_RCS_RBM_2
Related test cases	
Feature	Capability Discovery and Service Availability - OPTIONS
Reason for test	DUT capability query towards Chatbot
Pre-conditions Scenario	<ol style="list-style-type: none"> 1. DUT is RCS registered 2. DUT and Chatbot platform are ready to handle capability request 3. DUT and Chatbot have had a previous interaction, but not recently (i.e. capabilities have expired according to CAPABILITY INFO EXPIRY configuration parameter) 4. Chatbot Information Function ready to provide Chatbot information 5. Cache-Control max-age validity for the Chatbot Info has expired 6. Chatbot information has not changed

	7. CAPABILITY DISCOVERY MECHANISM is set to SIP OPTIONS
Test procedure	<ol style="list-style-type: none"> 1. DUT opens a chat 1to1 window with the known Chatbot 2. DUT send a message to the Chatbot
Expected results Post-conditions	<ol style="list-style-type: none"> 1. The phone/client shows the messaging services that can be used towards Chatbot 2. A message is shown as sent from DUT to Chatbot
Deep inspection	<ol style="list-style-type: none"> 1. Verify that SIP OPTIONS exchange includes the right tags in the Contact header field 2. Verify that SIP request includes, among others, the Chatbot application related feature tags (as defined in Table 8 – section 2.6.1.3 of [GSMA RCC.07 RCS7.0 UNI]) 3. Verify that response returned by the Chatbot Platform shall include the SIP URI and may include TEL URI in the P-Asserted-Identity (Verify Chatbot Service Identification based on SIP-URI follows section 2.5.4.1 of [GSMA RCC.07 RCS7.0 UNI]) 4. Verify that response returned by the Chatbot Platform includes the Chatbot application related feature tags and Chatbot role tag (as defined in Table 8 – section 2.6.1.3 of [GSMA RCC.07 RCS7.0 UNI]) [Encoded as defined in section 3.6.2 of [GSMA RCC.07 RCS7.0 UNI]]. 5. Verify that Contact header does not include Chat IARI (as explained in section 3.6.2.4 - [GSMA RCC.07 RCS7.0 UNI]) 6. Verify that Chatbot information retrieval takes place: Verify HTTPs request follows the format 'https://<root_domain>/bot?<set_of_query_parameters>' as defined in Table 47 in section 3.6.4.1 of [GSMA RCC.07 RCS7.0 UNI] corrected as per section 3.2.11 of [GSMA RCC.72], where: <ul style="list-style-type: none"> • “root_domain” is set to the domain part of the Chatbot ServiceID from SIP URI defined in section 2.5.4.1 of [GSMA RCC.07 RCS7.0 UNI] if BOTINFO FQDN ROOT is not configured and to the value of BOTINFO FQDN ROOT otherwise • "set_of_query_parameters" using the parameters defined in Table 48 of [GSMA RCC.07 RCS7.0 UNI], including the paramts 'id' with the chatbot servide identifier SIP URI, 'hl' for controlling the launguage as ISO 639-1 and 'ho' with <MCCMNC> from the Home Operator 7. Verify that the HTTPs 304 NOT_MODIFIED response includes the mandatory Etag and Cache-Control headers among others as defined in Table 49 in section 3.6.4.1 of [GSMA RCC.07 RCS7.0 UNI].

	8. Verify that SIP INVITE is sent to the Chatbot SIP-URI address.
--	---

Test case ID	ID_RCS_RBM_3
Related test cases	
Feature	Capability Discovery and Service Availability - OPTIONS
Reason for test	Chatbot capability query towards DUT
Pre-conditions Scenario	<ol style="list-style-type: none"> 1. DUT is RCS registered 2. DUT and Chatbot platform are ready to handle capability request 3. CAPABILITY DISCOVERY MECHANISM is set to SIP OPTIONS
Test procedure	<ol style="list-style-type: none"> 1. Chatbot requests capabilities for DUT
Expected results	NA (this should be handled without impact on the user)
Post-conditions	
Deep inspection	<ol style="list-style-type: none"> 1. Verify that OPTIONS exchange includes the right tags in the Contact header field. 2. Verify that SIP OPTIONS request sent by Chatbot includes the Chatbot application related feature tags and Chatbot role tag (Table 8 in section 2.6.1.3 of [GSMA RCC.07 RCS7.0 UNI]) [Encoded as defined in section 3.6.2 of [GSMA RCC.07 RCS7.0 UNI]]. 3. Verify that the Contact header does not include Chat IARI (as explained in section 3.6.2.4 of [GSMA RCC.07 RCS7.0 UNI]) 4. Verify that the SIP-URI in From and P-Asserted-Identity headers in SIP OPTIONS request follows definitions in section 2.5.4.1 - Chatbot Service Identification of [GSMA RCC.07 RCS7.0 UNI] 5. Verify that the SIP response returned by the client includes, among others, the Chatbot application related feature tags (as defined in Table 8 - 2.6.1.3 of RCC.07v08)

Test case ID	ID_RCS_RBM_4
---------------------	--------------

Related test cases	
Feature	Capability Discovery and Service Availability - Presence
Reason for test	DUT capability query towards Chatbot
Pre-conditions Scenario	<ol style="list-style-type: none"> 1. DUT is RCS registered 2. DUT and Chatbot platform are ready to handle capability request 3. DUT and Chatbot have had a previous interaction, but not recently (i.e. capabilities have expired according to CAPABILITY INFO EXPIRY configuration parameter) 4. Chatbot Information Function ready to provide Chatbot information 5. Cache-Control max-age validity for the Chatbot Info has expired 6. Chatbot information has not changed 7. CAPABILITY DISCOVERY MECHANISM is set to Presence
Test procedure	<ol style="list-style-type: none"> 1. DUT opens a messaging thread with the known Chatbot 2. DUT send a message to the Chatbot
Expected results Post-conditions	<ol style="list-style-type: none"> 1. The phone/client shows the messaging services that can be used towards Chatbot 2. A message is shown as sent from DUT to Chatbot
Deep inspection	<ol style="list-style-type: none"> 1. Verify that a SIP SUBSCRIBE request is sent to Chatbot Platform 2. Verify that the SIP 200 OK from Chatbot Platform includes the SIP URI and may include TEL URI in the P-Asserted-Identity (Verify Chatbot Service Identification based on SIP-URI follows section 2.5.4.1 of [GSMA RCC.07 RCS7.0 UNI]) 3. Verify that the SIP NOTIFY request returned by the Chatbot Platform includes the Chatbot Cummunication Service ID and Chatbot role Service ID (as defined in Table 8 in section 2.6.1.3 of [GSMA RCC.07 RCS7.0 UNI]) [Encoded as defined in section 3.6.2 of [GSMA RCC.07 RCS7.0 UNI]] and does not include Chat IARI (as explained in section 3.6.2.4 of [GSMA RCC.07 RCS7.0 UNI]) 4. Verify that the Chatbot information retrieval takes place: Verify that the HTTPs request follows the format 'https://<root_domain>/bot?<set_of_query_parameters>' as defined in Table 47 in section 3.6.4.1 of [GSMA RCC.07 RCS7.0 UNI], corrected as per section 3.2.11 of [GSMA RCC.72], where: <ul style="list-style-type: none"> • "root_domain" is set to the domain part of the Chatbot ServiceID from SIP URI defined in section 2.5.4.1 of [GSMA RCC.07 RCS7.0 UNI] if BOTINFO FQDN ROOT is not configured and to the value of BOTINFO FQDN ROOT otherwise • "set_of_query_parameters" using the parameters defined in Table 48 of

	<p>[GSMA RCC.07 RCS7.0 UNI], including the paramts 'id' with the chatbot service identifier SIP URI, 'hl' for controlling the language as ISO 639-1 and 'ho' with <MCCMNC> from the Home Operator</p> <p>5. Verify that the HTTPs 304 NOT_MODIFIED response includes the mandatory Etag and Cache-Control headers among others as defined in Table 49 in section 3.6.4.1 of [GSMA RCC.07 RCS7.0 UNI].</p> <p>6. Verify that the SIP INVITE request is sent to the ChatBot SIP-URI address.</p>
--	--

Test case ID	ID_RCS_RBM_5
Related test cases	
Feature	Capability Discovery and Service Availability - Presence
Reason for test	Chatbot capability query towards DUT - SIP URI
Pre-conditions Scenario	<ol style="list-style-type: none"> 1. DUT is offline and not RCS registered 2. Chatbot platform are ready to handle capability request 3. CAPABILITY DISCOVERY MECHANISM is set to Presence
Test procedure	<ol style="list-style-type: none"> 1. DUT comes online 2. Chatbot queries DUT's capabilities
Expected results	NA (this should be handled without impact on the user)
Post-conditions	
Deep inspection	<ol style="list-style-type: none"> 1. Verify that the SIP PUBLISH includes the Service ID for Chatbot communication Service ID with the Version set to 1.0 2. Verify that the SIP-URI in From and P-Asserted-Identity header in the SIP SUBSCRIBE request from the Chatbot follows the definitions in section 2.5.4.1 - Chatbot Service Identification of [GSMA RCC.07 RCS7.0 UNI] 3. Verify that the SIP NOTIFY request returned by the network includes, among others, the Chatbot Communication Service ID (as defined in Table 8 in section 2.6.1.3 of [GSMA RCC.07 RCS7.0 UNI])

Test case ID	ID_RCS_RBM_6
---------------------	--------------

Related test cases	
Feature	Chatbot Information Retrieval
Reason for test	Chatbot Platform: Initiating a 1-to-1 Chatbot session request to a user from an unknown Chatbot. CIF - Successful info retrieval.
Pre-conditions Scenario	<ol style="list-style-type: none"> 1. DUT is RCS Registered 2. DUT supports Chatbot traffic 3. DUT and Chatbot platform are ready to handle a Chatbot session 4. Chatbot Information Function ready to provide Chatbot information 5. DUT and Chatbot have not interacted previously
Test procedure	<ol style="list-style-type: none"> 1. Chatbot initiates a 1to1 Chat session with DUT using the user's public identity (i.e. MSISDN) and sends a message 2. DUT opens the message
Expected results Post-conditions	<ol style="list-style-type: none"> 1. DUT receives the message and it appears in the chatbot conversation. 2. DUT will show all the chatbot information received from the chatbot information function with the following possible fields; <ul style="list-style-type: none"> • Service Name (Mandatory) • Service ID (Mandatory) • T&C Page (Mandatory) • Email (Optional) • Call-back Phone Number (Optional) • Website (Optional) • Service Icon (Optional) • SMS (Optional) • Colour (Optional) • Service description (Optional)
Deep inspection	<ol style="list-style-type: none"> 1. Verify that the SIP INVITE request received follows section 3.2.3.1 of [GSMA RCC.07 RCS7.0 UNI] 2. Verify that the SIP INVITE request received contains Chatbot IARI, the Chatbot application version feature tag and the isbot feature tag as defined in section 3.6.2 of [GSMA RCC.07 RCS7.0 UNI], in the Contact header 3. Verify that the SIP INVITE request contains an additional Accept-contact header to include Chatbot IARI feature tag and the Chatbot application version feature tag (as defined in section 3.6.2 of [GSMA RCC.07 RCS7.0 UNI]), together with the explicit and require parameters 4. Verify that the P-Asserted-Identity header reflects the SIP-URI Service-id from the chatbot as per section 2.5.4.1 of [GSMA RCC.07 RCS7.0 UNI] 5. If the PRIVACY DISABLE configuration parameter is not set to 1 (i.e. it is not provided or set to 0), verify that for each of the identities included in the P-

	<p>Asserted-Identity header field a tk parameter is provided with the value "off". (NOTE: [GSMA RCC.72] section 2.4.2.2 mandates that PRIVACY DISABLE is set to 1 if the network doesn't support anonymisation, e.g. on a network supporting only A2P)</p> <ol style="list-style-type: none"> 6. Verify that SDP in the received SIP INVITE request contains Chatbot-related content-types (defined in section 3.6.8.1 of [GSMA RCC.07 RCS7.0 UNI]) among others (as per section 3.2.3.1 of [GSMA RCC.07 RCS7.0 UNI]) in the a=accept-wrapped-types 7. Verify the inclusion of Chatbot IARI and the Chatbot application version feature tag as defined in section 3.6.2 of [GSMA RCC.07 RCS7.0 UNI] in the Contact header of SIP 200 OK. 8. Verify that SDP in the 200OK response contains Chatbot-related content-types willing to receive (defined in section 3.6.10.2 of [GSMA RCC.07 RCS7.0 UNI]) among others (as per section 3.2.3.1 of [GSMA RCC.07 RCS7.0 UNI]) in the a=accept-wrapped-types 9. Verify the MSRP session establishment 10. Verify the MSRP SEND carrying the CPIM message from the Chatbot 11. Verify that Chatbot information retrieval takes place: Verify HTTPs request follows the format 'https://<root_domain>/bot?<set_of_query_parameters>' as defined in Table 47 in section 3.6.4.1 of [GSMA RCC.07 RCS7.0 UNI] corrected as per section 3.2.11 of [GSMA RCC.72], where: <ul style="list-style-type: none"> • "root_domain" is set to the domain part of the Chatbot ServiceID from SIP URI defined in section 2.5.4.1 of [GSMA RCC.07 RCS7.0 UNI] if BOTINFO FQDN ROOT is not configured and to the value of BOTINFO FQDN ROOT otherwise • "set_of_query_parameters" using the parameters defined in Table 48 of [GSMA RCC.07 RCS7.0 UNI], including the paramts 'id' with the chatbot servide identifier SIP URI, 'hl' for controlling the language as ISO 639-1 and 'ho' with <MCCMNC> from the Home Operator 12. Verify that the HTTPS 200OK response includes the mandatory Etag and Cache-Control headers among others as defined in Table 49 in section 3.6.4.1 of [GSMA RCC.07 RCS7.0 UNI]. 13. Verify that the payload carrying the Chatbot information data follows the JSON format using the OMA CAB PCC schema as per Table 51 of [GSMA RCC.07 RCS7.0 UNI] 14. Verify that the JSON based on 'organization' type PDD format includes among others elements defined in Table 50 of [GSMA RCC.07 RCS7.0 UNI], the mandatory elements 'service name', 'Service ID' and 'T&C page'. Any JSON object not recognized should be ignored. 15. Verify, if those properties are provided in the 200OK response, the file download procedures for downloading the files in mediaUrl properties of a Media object
--	--

Test case ID	ID_RCS_RBM_7
---------------------	--------------

Related test cases	
Feature	Chatbot Information Retrieval
Reason for test	Chatbot Platform: Initiating a 1-to-1 Chatbot session request to a user from an unknown Chatbot. CIF - Unsuccessful info retrieval.
Pre-conditions Scenario	<ol style="list-style-type: none"> 1. DUT is RCS Registered 2. DUT supports Chatbot traffic 3. DUT and Chatbot platform are ready to handle a Chatbot session 4. Chatbot Information Function ready to provide Chatbot information 5. DUT and Chatbot have not interacted previously
Test procedure	<ol style="list-style-type: none"> 1. Chatbot initiates a 1to1 Chat session with DUT using the user's public identity (i.e. MSISDN) and sends a message 2. Chatbot Info Retrieval is performed in the background and the response obtained is: <ul style="list-style-type: none"> • HTTPs 4XX but 408 • HTTPs 5XX but 503 • HTTPs 200OK but the JSON with the PCC information from the Chatbot is malformed <p>(Note: This test case can be simulated)</p>
Expected results Post-conditions	<ol style="list-style-type: none"> 2. The user is not notified of the reception of the message 2. The message is not available anywhere in the UI
Deep inspection	<ol style="list-style-type: none"> 1. Verify that the SIP INVITE request received follows section 3.2.3.1 of [GSMA RCC.07 RCS7.0 UNI] 2. Verify that the SIP INVITE request received contains Chatbot IARI, the Chatbot application version feature tag and the isbot feature tag as defined in section 3.6.2 of [GSMA RCC.07 RCS7.0 UNI], in the Contact header 3. Verify that the SIP INVITE request contains an additional Accept-contact header to include Chatbot IARI feature tag and the Chatbot application version feature tag (as defined in section 3.6.2 of [GSMA RCC.07 RCS7.0 UNI]), together with the explicit and require parameters 4. Verify that the P-Asserted-Identity header reflects the SIP-URI Service-id from chatbot as per section 2.5.4.1 of [GSMA RCC.07 RCS7.0 UNI] 5. If the PRIVACY DISABLE configuration parameter is not set to 1 (i.e. it is not provided or set to 0), verify that for each of the identities included in the P-Asserted-Identity header field a tk parameter is provided with the value "off". (NOTE: [GSMA RCC.72] section 2.4.2.2 mandates that PRIVACY DISABLE is set to 1 if the network doesn't support anonymisation, e.g. on a network supporting only A2P) 6. Verify that the SDP in the received SIP INVITE request contains Chatbot-

- related content-types (defined in section 3.6.8.1 of [GSMA RCC.07 RCS7.0 UNI]) among others (as per section 3.2.3.1 of [GSMA RCC.07 RCS7.0 UNI]) in the a=accept-wrapped-types
7. Verify the inclusion of the Chatbot IARI and the Chatbot application version feature tag as defined in section 3.6.2 of [GSMA RCC.07 RCS7.0 UNI] in the Contact header of SIP 200 OK.
 8. Verify that the SDP in the 200OK response contains Chatbot-related content-types willing to receive (defined in section 3.6.10.2 of [GSMA RCC.07 RCS7.0 UNI]) among others (as per section 3.2.3.1 of [GSMA RCC.07 RCS7.0 UNI]) in the a=accept-wrapped-types
 9. Verify the MSRP session establishment
 10. Verify the MSRP SEND carrying the CPIM message from the Chatbot
 11. Verify that the Chatbot information retrieval takes place: Verify HTTPs request follows the format 'https://<root_domain>/bot?<set_of_query_parameters>' as defined in Table 47 in section 3.6.4.1 of [GSMA RCC.07 RCS7.0 UNI] corrected as per section 3.2.11 of [GSMA RCC.72], where:
 - "root_domain" is set to the domain part of the Chatbot ServiceID from SIP URI defined in section 2.5.4.1 of [GSMA RCC.07 RCS7.0 UNI] if BOTINFO FQDN ROOT is not configured and to the value of BOTINFO FQDN ROOT otherwise
 - "set_of_query_parameters" using the parameters defined in Table 48 of [GSMA RCC.07 RCS7.0 UNI], including the paramts 'id' with the chatbot service identifier SIP URI, 'hl' for controlling the language as ISO 639-1 and 'ho' with <MCCMNC> from the Home Operator
 12. Verify that the 4XX/5XX or malformed JSON which does not allow DUT retrieve the Chatbot information

Test case ID	ID_RCS_RBM_8
Related test cases	
Feature	Chatbot Information Retrieval
Reason for test	Chatbot Platform: Initiating a 1-to-1 Chatbot session request to a user from an unknown Chatbot. CIF - Retry mechanism for retrieving chatbot info (HTTPs 503/408 response)
Pre-conditions Scenario	<ol style="list-style-type: none"> 1. DUT is RCS Registered 2. DUT supports Chatbot traffic 3. DUT and Chatbot platform are ready to handle a Chatbot session 4. Chatbot Information Function ready to provide Chatbot information 5. DUT and Chatbot have not interacted previously
Test procedure	<ol style="list-style-type: none"> 1. Chatbot initiates a 1to1 Chat session with DUT using the user's public identity (i.e. MSISDN) and sends a message 2. Chatbot Info Retrieval is performed in the background and the response obtained is: <ul style="list-style-type: none"> • HTTPs 503 with a retry-after header • HTTPs 408 • After retrying, DUT is able to get CIF information from chatbot <p>(Note: This test case can be simulated)</p>
Expected results Post-conditions	<ol style="list-style-type: none"> 3. DUT receives the message and it appears in the chatbot conversation. 3. When entering into the conversation, DUT will show all the chatbot information received from the chatbot information function with the following possible fields; <ul style="list-style-type: none"> • Service Name (Mandatory) • Service ID (Mandatory) • T&C Page (Mandatory) • Email (Optional) • Call-back Phone Number (Optional) • Website (Optional) • Service Icon (Optional) • SMS (Optional) • Colour (Optional) • Service description (Optional)
Deep inspection	<ol style="list-style-type: none"> 1. Verify that the SIP INVITE request received follows section 3.2.3.1 of [GSMA RCC.07 RCS7.0 UNI] 2. Verify that the SIP INVITE request received contains Chatbot IARI, the Chatbot application version feature tag and the isbot feature tag as defined in section 3.6.2 of [GSMA RCC.07 RCS7.0 UNI], in the Contact header 3. Verify that the SIP INVITE request contains an additional Accept-contact header to include Chatbot IARI feature tag and the Chatbot application version

	<p>feature tag (as defined in section 3.6.2 of [GSMA RCC.07 RCS7.0 UNI]), together with the explicit and require parameters</p> <ol style="list-style-type: none"> 4. Verify that the P-Asserted-Identity reflects SIP-URI Service-id from chatbot as per section 2.5.4.1 of [GSMA RCC.07 RCS7.0 UNI] 5. Verify that the SDP in the received SIP INVITE request contains Chatbot-related content-types (defined in section 3.6.8.1 of [GSMA RCC.07 RCS7.0 UNI]) among others (as per section 3.2.3.1 of [GSMA RCC.07 RCS7.0 UNI]) in the a=accept-wrapped-types 6. Verify the inclusion of Chatbot IARI and the Chatbot application version feature tag as defined in section 3.6.2 of [GSMA RCC.07 RCS7.0 UNI] in the Contact header of SIP 200 OK. 7. Verify that the SDP in the 200OK response contains Chatbot-related content-types willing to receive (defined in section 3.6.10.2 of [GSMA RCC.07 RCS7.0 UNI]) among others (as per section 3.2.3.1 of [GSMA RCC.07 RCS7.0 UNI]) in the a=accept-wrapped-types 8. Verify the MSRP session establishment 9. Verify the MSRP SEND carrying the CPIM message from the Chatbot 10. Verify that the Chatbot information retrieval takes place: Verify HTTPs request follows the format 'https://<root_domain>/bot?<set_of_query_parameters>' as defined in Table 47 in section 3.6.4.1 of [GSMA RCC.07 RCS7.0 UNI] corrected as per section 3.2.11 of [GSMA RCC.72], where: <ul style="list-style-type: none"> • "root_domain" is set to the domain part of the Chatbot ServiceID from SIP URI defined in section 2.5.4.1 of [GSMA RCC.07 RCS7.0 UNI] if BOTINFO FQDN ROOT is not configured and to the value of BOTINFO FQDN ROOT otherwise • "set_of_query_parameters" using the parameters defined in Table 48 of [GSMA RCC.07 RCS7.0 UNI], including the paramts 'id' with the chatbot servide identifier SIP URI, 'hl' for controlling the launauge as ISO 639-1 and 'ho' with <MCCMNC> from the Home Operator 11. Verify that after getting 408 or 503, client retries the CIF HTTPs request (no more than 5 times). 12. Verify that DUT finally gets the HTTPs 200OK with the CIF information from the chatbot.
--	--

Test case ID	ID_RCS_RBM_9
Related test cases	
Feature	Chatbot Information Retrieval
Reason for test	CIF - Successful info retrieval after Cache-control max-age (CIF validity) has expired

Pre-conditions Scenario	<ol style="list-style-type: none"> 1. DUT is RCS Registered 2. DUT supports Chatbot traffic 3. DUT and Chatbot platform are ready to handle a Chatbot session 4. Chatbot Information Function ready to provide Chatbot information 5. DUT and Chatbot had previously a chat session 6. Cache-Control max-age validity for the Chatbot Info has expired 7. Chatbot information has changed
Test procedure	<ol style="list-style-type: none"> 1. DUT triggers a Chatbot Info Retrieval refresh as one of the following events are reached: <ul style="list-style-type: none"> • User enters in the chatbot conversation and there in the previous cached chatbot info which it is no longer valid • User receives a new chatbot session from a chatbot of which the chatbot information is no longer valid • User re-start a chatbot session with a Chatbot of which the information is no longer valid 2. Chatbot Information Function answers request successfully
Expected results Post-conditions	<ol style="list-style-type: none"> 2. DUT shows the refreshed information received from the Chatbot Information Function 2. DUT is able to start and receive a session with this chatbot
Deep inspection	<ol style="list-style-type: none"> 1. Verify that the Chatbot information retrieval takes place: Verify HTTPs GET request follows the format 'https://<root_domain>/bot?<set_of_query_parameters>' as defined in Table 47 in section 3.6.4.1 of [GSMA RCC.07 RCS7.0 UNI] corrected as per section 3.2.11 of [GSMA RCC.72], where: <ul style="list-style-type: none"> • "root_domain" is set to the domain part of the Chatbot ServiceID from SIP URI defined in section 2.5.4.1 of [GSMA RCC.07 RCS7.0 UNI] if BOTINFO FQDN ROOT is not configured and to the value of BOTINFO FQDN ROOT otherwise • "set_of_query_parameters" using the parameters defined in Table 48 of [GSMA RCC.07 RCS7.0 UNI], including the params 'id' with the chatbot servide identifier SIP URI, 'hl' for controlling the language as ISO 639-1 and 'ho' with <MCCMNC> from the Home Operator 2. Verify that the HTTPs GET requests includes the 'if-none-match' header set to the Etag value from a previous retrieval 3. Verify that the HTTPs 200OK response includes the mandatory Etag and Cache-Control headers among others as defined in Table 49 in section 3.6.4.1 of [GSMA RCC.07 RCS7.0 UNI]. Verify payload carrying the Chatbot information data follows the JSON format using the OMA CAB PCC schema as per Table 51 of [GSMA RCC.07 RCS7.0 UNI] 4. Verify that JSON based on 'organization' type PDD format includes among others elements defined in Table 50 of [GSMA RCC.07 RCS7.0 UNI], the

	<p>mandatory elements 'Service name', 'Service ID' and 'T&C page'. Any JSON object not recognized should be ignored.</p> <p>5. Verify, if those properties are provided in the 200OK response, the file download procedures for downloading the files in mediaUrl properties of a Media object</p>
--	--

Test case ID	ID_RCS_RBM_10
Related test cases	
Feature	Chatbot Information Retrieval
Reason for test	CIF - Unsuccessful info retrieval after Cache-control max-age (CIF validity) has expired
Pre-conditions Scenario	<ol style="list-style-type: none"> 1. DUT is RCS Registered 2. DUT supports Chatbot traffic 3. DUT and Chatbot platform are ready to handle a Chatbot session 4. Chatbot Information Function ready to provide Chatbot information 5. DUT and Chatbot had previously a chat session 6. Cache-Control max-age validity for the Chatbot Info has expired
Test procedure	<ol style="list-style-type: none"> 1. DUT triggers a Chatbot Info Retrieval refresh as one of the following events are reached: <ul style="list-style-type: none"> • User enters in the chatbot conversation and there in the previous cached chatbot info which it is no longer valid • User receives a new chatbot session from a chatbot of which the chatbot information is no longer valid • User re-start a chatbot session with a Chatbot of which the information is no longer valid 2. Chatbot Information Function answers 4XX or 5XX HTTPs error <p>(Note: This test case can be simulated)</p>
Expected results	<ol style="list-style-type: none"> 2. DUT shows the previous valid information retrieved for this chatbot
Post-conditions	<ol style="list-style-type: none"> 2. DUT is still able to start and receive a session with this chatbot
Deep inspection	<ol style="list-style-type: none"> 1. Verify that the Chatbot information retrieval takes place: Verify HTTPs GET request follows the format 'https://<root_domain>/bot?<set_of_query_parameters>' as defined in Table 47 in section 3.6.4.1 of [GSMA RCC.07 RCS7.0 UNI] corrected as per section 3.2.11 of [GSMA RCC.72], where: <ul style="list-style-type: none"> • "root_domain" is set to the domain part of the Chatbot ServiceID from SIP URI defined in section 2.5.4.1 of [GSMA RCC.07 RCS7.0 UNI] if BOTINFO

	<p>FQDN ROOT is not configured and to the value of BOTINFO FQDN ROOT otherwise</p> <ul style="list-style-type: none"> • "set_of_query_parameters" using the parameters defined in Table 48 of [GSMA RCC.07 RCS7.0 UNI], including the paramts 'id' with the chatbot servide identifier SIP URI, 'hl' for controlling the laanguage as ISO 639-1 and 'ho' with <MCCMNC> from the Home Operator <p>2. Verify that HTTPs GET requests includes the 'if-none-match' header set to the Etag value from a previous retrieval</p> <p>3. Verify the 4XX/5XX which does not allow DUT retrieve the Chatbot information</p>
--	--

Test case ID	ID_RCS_RBM_11
Related test cases	
Feature	Chatbot Information Retrieval
Reason for test	CIF - No changes response after Cache-control max-age (CIF validity) has expired
Pre-conditions Scenario	<ol style="list-style-type: none"> 1. DUT is RCS Registered 2. DUT supports Chatbot traffic 3. DUT and Chatbot platform are ready to handle a Chatbot session 4. Chatbot Information Function ready to provide Chatbot information 5. DUT and Chatbot had previously a chat session 6. Cache-Control max-age validity for the Chatbot Info has expired 7. Chatbot information has not changed
Test procedure	<ol style="list-style-type: none"> 1. DUT triggers a Chatbot Info Retrieval refresh as one of the following events are reached: <ul style="list-style-type: none"> • User enters in the chatbot conversation and there is previously cached chatbot information which is no longer valid • User receives a new chatbot session from a chatbot of which the chatbot information is no longer valid • User re-start a chatbot session with a Chatbot for which the Chatbot Information is no longer valid 2. Chatbot Information Function answers HTTPs 304
Expected results	2. DUT does not show changes for the Chatbot information as previous information remains
Post-conditions	2. DUT is able to start and receive a session with this chatbot

Deep inspection	<ol style="list-style-type: none"> Verify that the Chatbot information retrieval takes place: Verify that the HTTPs GET request follows the format 'https://<root_domain>/bot?<set_of_query_parameters>' as defined in Table 47 in section 3.6.4.1 of [GSMA RCC.07 RCS7.0 UNI] corrected as per section 3.2.11 of [GSMA RCC.07 RCS7.0 UNI], where: <ul style="list-style-type: none"> “root_domain” is set to the domain part of the Chatbot ServiceID from SIP URI defined in section 2.5.4.1 of [GSMA RCC.07 RCS7.0 UNI] if BOTINFO FQDN ROOT is not configured and to the value of BOTINFO FQDN ROOT otherwise "set_of_query_parameters" using the parameters defined in Table 48 of [GSMA RCC.07 RCS7.0 UNI], including the paramts 'id' with the chatbot servide identifier SIP URI, 'hl' for controlling the laanguage as ISO 639-1 and 'ho' with <MCCMNC> from the Home Operator Verify that the HTTPs GET request includes the 'if-none-match' header set to the Etag value from a previous retrieval Verify that the HTTPs 304 NOT_MODIFIED response includes the mandatory Etag and Cache-Control headers among others as defined in Table 49 in section 3.6.4.1 of [GSMA RCC.07 RCS7.0 UNI]. Verify DUT stores the new values provided in these headers Verify that there is no payload with chatbot information data as no changes are provided
------------------------	--

Test case ID	ID_RCS_RBM_12
Related test cases	
Feature	Chatbot Information Retrieval
Reason for test	CIF - No chatbot info retrieval when Cache-control max-age is up to date
Pre-conditions Scenario	<ol style="list-style-type: none"> DUT is RCS Registered DUT supports Chatbot traffic DUT and Chatbot platform are ready to handle a Chatbot session Chatbot Information Function ready to provide Chatbot information DUT and Chatbot had previously a chat session Cache-Control max-age validity for the Chatbot Info has not expired
Test procedure	<ol style="list-style-type: none"> DUT enters in the chatbot info within the chatbot conversation DUT leaves the chatbot conversation DUT enters again in the chatbot info within the chatbot conversation DUT leaves the chatbot conversation

Expected results	1-4. DUT does not show changes for the Chatbot information
Post-conditions	
Deep inspection	1. Verify that there are no HTTPs GET requests towards the Chatbot Information Function

Test case ID	ID_RCS_RBM_13
Related test cases	
Feature	Chatbot Service
Reason for test	Chatbot Platform: Initiating a 1-to-1 Chatbot session request to a user from an already known Chatbot
Pre-conditions Scenario	<ol style="list-style-type: none"> 1. DUT is RCS Registered 2. DUT supports Chatbot traffic 3. DUT and Chatbot platform are ready to handle a Chatbot session 4. DUT and Chatbot had previously a chat session 5. Cache-Control max-age validity for the Chatbot Info has not expired
Test procedure	<ol style="list-style-type: none"> 1. Chatbot initiates a chat 1to1 session with DUT using the user's public identity (i.e. MSISDN) and sends a text message in public mode 2. DUT opens the received message
Expected results	1. DUT receives the message and it appears in the chatbot conversation.
Post-conditions	
Deep inspection	<ol style="list-style-type: none"> 1. Verify the successful capability exchange (if required to start the session) 2. Verify that the SIP INVITE received follows section 3.2.3.1 of [GSMA RCC.07 RCS7.0 UNI] 3. Verify that the SIP INVITE received contains Chatbot IARI, the Chatbot application version feature tag and the isbot feature tag as defined in section 3.6.2 of [GSMA RCC.07 RCS7.0 UNI], in the Contact header 4. Verify that the SIP INVITE contains an additional Accept-contact header to include Chatbot IARI feature tag and the Chatbot application version feature tag (as defined in section 3.6.2 of [GSMA RCC.07 RCS7.0 UNI]), together with the explicit and require parameters

	<ol style="list-style-type: none"> 5. Verify that the P-Asserted-Identity reflects SIP-URI Service-id from chatbot as per section 2.5.4.1 of [GSMA RCC.07 RCS7.0 UNI] 6. If the PRIVACY DISABLE configuration parameter is not set to 1 (i.e. it is not provided or set to 0), verify that for each of the identities included in the P-Asserted-Identity header field, a tk parameter is provided with the value "off". (NOTE: [GSMA RCC.72] section 2.4.2.2 mandates that PRIVACY DISABLE is set to 1 if the network doesn't support anonymisation, e.g. on a network supporting only A2P) 7. Verify that the SDP in the received SIP INVITE request contains Chatbot-related content-types (defined in section 3.6.8.1 of [GSMA RCC.07 RCS7.0 UNI]) among others (as per section 3.2.3.1 of [GSMA RCC.07 RCS7.0 UNI]) in the a=accept-wrapped-types 8. Verify that the SIP 200 OK sent by DUT follows section 3.2.3.1 of [GSMA RCC.07 RCS7.0 UNI] 9. Verify that the 200OK response includes Chatbot IARI and the Chatbot application version feature tag as defined in section 3.6.2 of [GSMA RCC.07 RCS7.0 UNI], in the Contact header. 10. Verify that the SDP in the 200OK response contains Chatbot-related content-types willing to receive (defined in section 3.6.10.2 of [GSMA RCC.07 RCS7.0 UNI]) among others (as per section 3.2.3.1 of [GSMA RCC.07 RCS7.0 UNI]) in the a=accept-wrapped-types 11. Verify that the MSRP session is established 12. Verify that the MSRP SEND is carrying the CPIM message from the Chatbot 13. Verify that the Delivery/Display notifications are sent by DUT for the message received
--	---

Test case ID	ID_RCS_RBM_14
Related test cases	
Feature	Chatbot Service
Reason for test	Chatbot Platform: Initiating a 1-to-1 Chatbot session request to a user from an already known Chatbot with Chip List
Pre-conditions Scenario	<ol style="list-style-type: none"> 1. DUT is RCS Registered 2. DUT supports Chatbot traffic 3. DUT and Chatbot platform are ready to handle a Chatbot session 4. DUT and Chatbot had previously a chat session 5. Cache-Control max-age validity for the Chatbot Info has not expired 6. DUT and Chatbot are not in an active session
Test procedure	<ol style="list-style-type: none"> 1. Chatbot initiates a chat 1-to-1 session with DUT using the user's public identity (i.e. MSISDN) and sends a text message with a suggested chip list 2. DUT opens the received message

<p>Expected results</p> <p>Post-conditions</p>	<ol style="list-style-type: none"> 1. DUT notifies user of the message received 2. The message appears in the chatbot conversation. 2. A suggested chip list appears in the chatbot conversation.
<p>Deep inspection</p>	<ol style="list-style-type: none"> 1. Verify the successful capability exchange (if required to start the session) 2. Verify that the SIP INVITE received follows section 3.2.3.1 of [GSMA RCC.07 RCS7.0 UNI] 3. Verify that the SIP INVITE received contains Chatbot IARI, the Chatbot application version feature tag and the isbot feature tag as defined in section 3.6.2 of [GSMA RCC.07 RCS7.0 UNI], in the Contact header 4. Verify that the SIP INVITE received contains an additional Accept-contact header to include Chatbot IARI feature tag and the Chatbot application version feature tag (as defined in section 3.6.2 of [GSMA RCC.07 RCS7.0 UNI]), together with the explicit and require parameters 5. Verify that the P-Asserted-Identity header reflects the SIP-URI Service-id from chatbot as per section 2.5.4.1 of [GSMA RCC.07 RCS7.0 UNI] 6. If the PRIVACY DISABLE configuration parameter is not set to 1 (i.e. it is not provided or set to 0), verify that for each of the identities included in the P-Asserted-Identity header field a tk parameter is provided with the value "off". (NOTE: [GSMA RCC.72] section 2.4.2.2 mandates that PRIVACY DISABLE is set to 1 if the network doesn't support anonymisation, e.g. on a network supporting only A2P) 7. Verify that the SDP in the received SIP INVITE request contains Chatbot-related content-types (defined in section 3.6.8.1 of [GSMA RCC.07 RCS7.0 UNI]) among others (as per section 3.2.3.1 of [GSMA RCC.07 RCS7.0 UNI]) in the a=accept-wrapped-types 8. Verify that the 200OK is sent by DUT follows section 3.2.3.1 of [GSMA RCC.07 RCS7.0 UNI] 9. Verify that 200OK response includes Chatbot IARI and the Chatbot application version feature tag as defined in section 3.6.2 of [GSMA RCC.07 RCS7.0 UNI], in the Contact header. 10. Verify that the SDP in the 200OK response contains Chatbot-related content-types willing to receive (defined in section 3.6.10.2 of [GSMA RCC.07 RCS7.0 UNI]) among others (as per section 3.2.3.1 of [GSMA RCC.07 RCS7.0 UNI]) in the a=accept-wrapped-types 11. Verify the MSRP session is established 12. Verify the MSRP SEND carrying the CPIM message from the Chatbot 13. Verify that the Content-Type wrapped in the CPIM is set to multipart/mixed. 14. Verify that the boundaries differentiate the two parts of the CPIM message 15. Verify that the Content-Type for the chatmessage content is set to text/plain 16. Verify that the content-type for the Suggested Chip List content is set to application/vnd.gsma.botsuggestion.v1.0+json (as per section 3.6.10.2.2 of [GSMA RCC.07 RCS7.0 UNI]) 17. Verify that the JSON for the Suggested Chip List received complies with the format defined in section 3.6.10.6.1.3 of [GSMA RCC.07 RCS7.0 UNI] 18. Verify that the Delivery/Display notifications are sent by DUT for the message

	received
--	----------

Test case ID	ID_RCS_RBM_15
Related test cases	
Feature	Chatbot Service
Reason for test	Client: Initiating a 1-to-1 Chatbot session request to a Chatbot
Pre-conditions Scenario	<ol style="list-style-type: none"> 1. DUT is RCS Registered 2. DUT supports Chatbot traffic 3. DUT and Chatbot platform are ready to handle a Chatbot session 4. DUT and Chatbot had previously a chat session 5. Cache-Control max-age validity for the Chatbot Info has not expired 6. DUT and Chatbot are not in an active session 7. PRIVACY DISABLE is set to 1 or communication is selected to be in public mode <p>(NOTE: RCC.72 section 2.4.2.2 mandates that PRIVACY DISABLE is set to 1 if the network doesn't support anonymisation, e.g. on a network supporting only A2P)</p>
Test procedure	<ol style="list-style-type: none"> 1. DUT open a chat thread with a known chatbot 2. DUT sends an RCS message (message, FT, geolocation) 3. Chatbot receives the message and it sends back delivery/display notification
Expected results	<ol style="list-style-type: none"> 2. DUT shows message as sent 3. DUT shows message as displayed
Post-conditions	
Deep inspection	<ol style="list-style-type: none"> 1. Verify the successful capability exchange (if required to start the session) 2. Verify that the SIP INVITE sent follows section 3.2.3.1 of [GSMA RCC.07 RCS7.0 UNI] 3. Verify that the SIP INVITE sent contains among other tags, the Chatbot IARI, the Chatbot application version feature tag as defined in section 3.6.2 of [GSMA RCC.07 RCS7.0 UNI], in the Contact header 4. Verify that the SIP INVITE sent contains an additional Accept-contact header to include Chatbot IARI feature tag and the Chatbot application version feature tag (as defined in section 3.6.2 of [GSMA RCC.07 RCS7.0 UNI]), together with the explicit and require parameters

	<ol style="list-style-type: none"> 5. Verify that the Request-URI is set to the service-id of the Chatbot defined as per section 2.5.4.1 of [GSMA RCC.07 RCS7.0 UNI] 6. Verify that the SDP in the SIP INVITE request sent contains Chatbot-related content-types (defined in section 3.6.8.3 of [GSMA RCC.07 RCS7.0 UNI]) among others (as per section 3.2.3.1 of [GSMA RCC.07 RCS7.0 UNI]) in the a=accept-wrapped-types 7. Verify that the 200OK sent by chatbot follows section 3.2.3.1 of [GSMA RCC.07 RCS7.0 UNI] 8. Verify that the received 200OK response includes the Chatbot IARI, the Chatbot application version feature tag and the isbot feature tag as defined in section 3.6.2 of [GSMA RCC.07 RCS7.0 UNI], in the Contact header. 9. Verify that the 200OK response does not include tags to reflect NFS/CFS support 10. if PRIVACY DISABLE is not set to 1 (i.e. it is not provided or set to 0), verify that P-Asserted-Identity header field is included in the 200 OK response with a tk parameter for each identity provided with a value set to "off" (NOTE: [GSMA RCC.72] section 2.4.2.2 mandates that PRIVACY DISABLE is set to 1 if the network doesn't support anonymisation, e.g. on a network supporting only A2P) 11. Verify that the SDP in the 200OK response contains Chatbot-related content-types willing to be received by the chatbot (defined in section 3.6.10.2 of [GSMA RCC.07 RCS7.0 UNI]) among others (as per section 3.2.3.1 of [GSMA RCC.07 RCS7.0 UNI]) in the a=accept-wrapped-types 12. Verify that the MSRP session is established 13. Verify the MSRP SEND carrying the CPIM message to the Chatbot 14. Verify that the Delivery/Display notifications are received by DUT for the message
--	--

Test case ID	ID_RCS_RBM_16
Related test cases	
Feature	Chatbot Content Types
Reason for test	Receiving a RichCard message - Single CPIM - Session established
Pre-conditions Scenario	<ol style="list-style-type: none"> 1. DUT is RCS Registered 2. DUT supports Chatbot traffic 3. DUT and Chatbot platform are ready to handle a Chatbot session 4. DUT and Chatbot are in an active chat session 5. Cache-Control max-age validity for the Chatbot Info has not expired

<p>Test procedure</p>	<ol style="list-style-type: none"> 1. Chatbot sends a Rich Card that includes 4 suggested replies to DUT 2. DUT taps on one of the suggested replies <p>Repeat the test case to cover the different medias changing the Richcard media to cover:</p> <ul style="list-style-type: none"> • Image (not animated) • Video • Audio
<p>Expected results Post-conditions</p>	<ol style="list-style-type: none"> 1. DUT notifies the user of the message received 1. DUT renders and shows in the conversation with the Chatbot a unique Rich Card that includes the suggested replies 2. DUT shows in the UI the suggested reply as a new message sent in the chat thread. 2. The rest of the suggested replies are still shown in DUT"s UI
<p>Deep inspection</p>	<ol style="list-style-type: none"> 1. Verify that Maap CPIM namespace header is included as defined in section 3.6.7.1 of [GSMA RCC.07 RCS7.0 UNI] 2. Verify that, if included, the Traffic-Type header for the Maap messages follows the definitions in section 3.6.7.2 of [GSMA RCC.07 RCS7.0 UNI] 3. Verify that the content-type wrapped in the CPIM message is set to application/vnd.gsma.botmessage.v1.0+json (as per section 3.6.10.2.1 of [GSMA RCC.07 RCS7.0 UNI]) 4. Verify that the JSON received complies with the format defined in section 3.6.10.5.1.2 of [GSMA RCC.07 RCS7.0 UNI] 5. Verify that the files referred to in the mediaUrl and thumbnailUrl properties of a Media object are automatically downloaded (because [GSMA RCC.71 UP2.1] defines that the FT AUT ACCEPT configuration parameter is set to 1 for the UP) 6. If the FT HTTP DL URI configuration parameter is set verify that the URLs for downloading the files referred to in the mediaUrl and thumbnailUrl properties of a Media object are composed as defined in step 1 of section 3.2.5.3.2.1 of [GSMA RCC.07 RCS7.0 UNI] 7. If a HTTP 401 AUTHENTICATION REQUIRED response is received to the HTTP request, verify that it is handled as defined in step 5 of section 3.2.5.3.2.1 of [GSMA RCC.07 RCS7.0 UNI] 8. Verify that the delivery and display notifications sent back to Chatbot 9. Verify that an MSRP message sent back to platform when tapping on the suggested response complies with section 3.6.10.6.2 of [GSMA RCC.07 RCS7.0 UNI] 10. Verify that the Content-type for this MSRP message sent back is set to application/vnd.gsma.botsuggestion.response.v1.0+json as defined in section 3.6.10.2.3 of [GSMA RCC.07 RCS7.0 UNI] 11. Verify that the payload of this MSRP message sent back follows format defined in section 3.6.10.6.2.1 of [GSMA RCC.07 RCS7.0 UNI] 12. Verify that, if included in the received MSRP, the MSRP message sent back includes the Traffic-Type header set to the same value as the MSRP packet

	received
--	----------

Test case ID	ID_RCS_RBM_17
Related test cases	
Feature	Chatbot Content Types
Reason for test	Receiving a Carrousel - Single CPIM - Session established
Pre-conditions Scenario	<ol style="list-style-type: none"> 1. DUT is RCS Registered 2. DUT supports Chatbot traffic 3. DUT and Chatbot platform are ready to handle a Chatbot session 4. DUT and Chatbot are in an active chat session 5. Cache-Control max-age validity for the Chatbot Info has not expired
Test procedure	<ol style="list-style-type: none"> 1. Chatbot sends a Caroussel of 2 Rich Cards to DUT that include suggested replies 2. DUT selects in one of the suggested replies in Rich Card 2
Expected results Post-conditions	<ol style="list-style-type: none"> 1. DUT notifies the user of the message received 1. DUT renders and shows the Carrousel of Richard in the conversation with the chatbot. 1. DUT can navigate and scroll into the different Richcards 2. DUT shows in the UI the suggested reply as a new message sent in the chat thread. 2. The rest of the suggested responses are still shown in the UI
Deep inspection	<ol style="list-style-type: none"> 1. Verify that the Maap CPIM namespace header is included as defined in section 3.6.7.1 of [GSMA RCC.07 RCS7.0 UNI] 2. Verify that, if included, the Traffic-Type header for the Maap messages follows the definitions in section 3.6.7.2 of [GSMA RCC.07 RCS7.0 UNI] 3. Verify that the content-type wrapped in the CPIM message is set to application/vnd.gsma.botmessage.v1.0+json (as per section 3.6.10.2.1 of [GSMA RCC.07 RCS7.0 UNI]) 4. Verify that the JSON received complies with the format defined in section 3.6.10.5.1.2 of [GSMA RCC.07 RCS7.0 UNI] 5. Verify that the files referred to in the mediaUrl and thumbnailUrl properties of a Media object are automatically downloaded (because [GSMA RCC.71 UP2.1] defines that the FT AUT ACCEPT configuration parameter is set to 1 for the UP) 6. If the FT HTTP DL URI configuration parameter is set verify that the URLs for

	<p>downloading the files referred to in the mediaUrl and thumbnailUrl properties of a Media object are composed as defined in step 1 of section 3.2.5.3.2.1 of [GSMA RCC.07 RCS7.0 UNI]</p> <p>7. If a HTTP 401 AUTHENTICATION REQUIRED response is received to the HTTP request, verify that it is handled as defined in step 5 of section 3.2.5.3.2.1 of [GSMA RCC.07 RCS7.0 UNI]</p> <p>8. Verify the delivery and display notifications sent back to Chatbot</p> <p>9. Verify that the MSRP message sent back to platform when tapping on the suggested response complies with section 3.6.10.6.2 of [GSMA RCC.07 RCS7.0 UNI]</p> <p>10. Verify that the Content-type for this MSRP message sent back is set to application/vnd.gsma.botsuggestion.response.v1.0+json as defined in section 3.6.10.2.3 of [GSMA RCC.07 RCS7.0 UNI]</p> <p>11. Verify that the payload of this MSRP message sent back follows format defined in section 3.6.10.6.2.1 of [GSMA RCC.07 RCS7.0 UNI]</p> <p>12. Verify that, if included in the received MSRP, the MSRP message sent back includes the Traffic-Type header set to the same value as the MSRP packet received</p>
--	---

Test case ID	ID_RCS_RBM_18
Related test cases	
Feature	Chatbot Content Types
Reason for test	Receiving a RCS Chat Message and Suggested Chip list - Multipart CPIM - Session established
Pre-conditions Scenario	<ol style="list-style-type: none"> 1. DUT is RCS Registered 2. DUT supports Chatbot traffic and Multipart CPIM 3. DUT and Chatbot platform are ready to handle a Chatbot session 4. DUT and Chatbot are in an active chat session
Test procedure	<ol style="list-style-type: none"> 1. Chatbot sends a multipart message with a text messages and a Suggested Chip List that includes at least 2 suggested replies and 2 suggested actions to DUT 2. DUT taps in one of the suggested actions 3. DUT returns to the Chat thread after execution of the action 4. DUT taps one of the suggested replies
Expected results	<ol style="list-style-type: none"> 1. DUT notifies the user of the message received
Post-conditions	<ol style="list-style-type: none"> 1. DUT renders and shows the message and the Suggested Chip List in the conversation with the chatbot. 1. The suggested replies are shown before the suggested actions 1. DUT can navigate and scroll into the list of suggestions 2. The associated action is performed (e.g. the web page is opened for a urlAction)

	<ul style="list-style-type: none"> 3. There is no residual indication of the selection in the Chat UI. 3. The suggestions are still available in the Chat UI 4. DUT shows in the UI the suggested reply as a new message sent in the chat thread. 4. The suggested Chip List is not shown in the Chat UI anymore
Deep inspection	<ul style="list-style-type: none"> 1. Verify that the Maap CPIM namespace header is included as defined in section 3.6.7.1 of [GSMA RCC.07 RCS7.0 UNI] together with the CPIM namespace header for Instant Message Disposition 2. Verify that, if included, the Traffic-Type header for the Maap messages follows the definitions in section 3.6.7.2 of [GSMA RCC.07 RCS7.0 UNI] 3. Verify that the Content-Type wrapped in the CPIM is set to multipart/mixed 4. Verify that the Content-Type for the chatmessage content is set to text/plain 5. Verify that the content-type for the Suggested Chip List content is set to application/vnd.gsma.botsuggestion.v1.0+json (as per section 3.6.10.2.2 of [GSMA RCC.07 RCS7.0 UNI]) 6. Verify that JSON for the Suggested Chip List received complies with the format defined in section 3.6.10.6.1.3 of [GSMA RCC.07 RCS7.0 UNI] 7. Verify the delivery and display notifications sent back to Chatbot 8. Verify that the MSRP message sent back to platform when tapping on the suggested action complies with section 3.6.10.6.2 of [GSMA RCC.07 RCS7.0 UNI] 9. Verify that the Content-type for this MSRP message sent back is set to application/vnd.gsma.botsuggestion.response.v1.0+json as defined in section 3.6.10.2.3 of [GSMA RCC.07 RCS7.0 UNI] 10. Verify that the payload of this MSRP message sent back follows format defined in section 3.6.10.6.2.2 of [GSMA RCC.07 RCS7.0 UNI] 11. Verify that, if included in the received MSRP, the MSRP message sent back includes the Traffic-Type header set to the same value as the MSRP packet received

Test case ID	ID_RCS_RBM_19
Related test cases	
Feature	Chatbot Content Types
Reason for test	Receiving a RCS File Transfer Message and Suggested Chip list - Multipart CPIM - Session established
Pre-conditions Scenario	<ul style="list-style-type: none"> 1. DUT is RCS Registered 2. DUT supports Chatbot traffic and Multipart CPIM 3. DUT and Chatbot platform are ready to handle a Chatbot session 4. DUT and Chatbot are in an active chat session 5. Cache-Control max-age validity for the Chatbot Info has not expired

<p>Test procedure</p>	<ol style="list-style-type: none"> 1. Chatbot sends a multipart message with an RCS FT Message and Suggested Chip List message which includes at least 2 suggested replies and 2 suggested actions to DUT 2. DUT opens the file received in the message and closes it 3. DUT taps in one of the suggested actions 4. DUT returns to the Chat thread after execution of the action 5. DUT taps in one of the suggested replies
<p>Expected results Post-conditions</p>	<ol style="list-style-type: none"> 1. DUT notifies the user of the message received 1. DUT renders and shows the FT message and the Suggested Chip List in the conversation with the chatbot. 1. DUT can navigate and scroll into the list of suggestions 2. The file received is shown in the screen. 3. The associated action is performed (e.g. the web page is opened for a urlAction) 4. There is no residual indication of the selection in the Chat UI. 4. The suggestions are still available in the Chat UI 5. DUT shows in the UI the suggested reply as a new message sent in the chat thread. 5. The suggested Chip List is not shown in the Chat UI anymore
<p>Deep inspection</p>	<ol style="list-style-type: none"> 1. Verify that the Maap CPIM namespace header is included as defined in section 3.6.7. of [GSMA RCC.07 RCS7.0 UNI] together with the CPIM namespace header for Message Disposition 2. Verify that, if included, the Traffic-Type header for the Maap messages follows the definitions in section 3.6.7.2 of [GSMA RCC.07 RCS7.0 UNI] 3. Verify that the Content-Type wrapped in the CPIM is set to multipart/mixed 4. Verify that the Content-Type for the chatmessage content is set to application/vnd.gsma.rcs-ft-http+xml 5. Verify that the content-type for the Suggested Chip List content is set to application/vnd.gsma.botsuggestion.v1.0+json (as per section 3.6.10.2.2 of [GSMA RCC.07 RCS7.0 UNI]) 6. Verify that JSON for the Suggested Chip List received complies with the format defined in section 3.6.10.6.1.3 of [GSMA RCC.07 RCS7.0 UNI] 7. Verify that the files referred to in the mediaUrl and thumbnailUrl properties of a Media object are automatically downloaded (because [GSMA RCC.71 UP2.1] defines that the FT AUT ACCEPT configuration parameter is set to 1 for the UP) 8. If the FT HTTP DL URI configuration parameter is set verify that the URLs for downloading the files referred to in the mediaUrl and thumbnailUrl properties of a Media object are composed as defined in step 1 of section 3.2.5.3.2.1 of [GSMA RCC.07 RCS7.0 UNI] 9. If a HTTP 401 AUTHENTICATION REQUIRED response is received to the HTTP request, verify that it is handled as defined in step 5 of section 3.2.5.3.2.1 of [GSMA RCC.07 RCS7.0 UNI] 10. Verify the delivery and display notifications sent back to Chatbot 11. Verify that the MSRP message sent back to platform when tapping on the suggested action complies with section 3.6.10.6.2 of [GSMA RCC.07 RCS7.0

	<p>UNI]</p> <ol style="list-style-type: none"> 12. Verify that the Content-type for this MSRP message sent back is set to application/vnd.gsma.botsuggestion.response.v1.0+json as defined in section 3.6.10.2.3 of [GSMA RCC.07 RCS7.0 UNI] 13. Verify that the payload of this MSRP message sent back follows format defined in section 3.6.10.6.2.1 of [GSMA RCC.07 RCS7.0 UNI] 14. Verify that, if included in the received MSRP, the MSRP message sent back includes the Traffic-Type header set to the same value as the MSRP packet received
--	--

Test case ID	ID_RCS_RBM_20
Related test cases	
Feature	Chatbot Content Types
Reason for test	Receiving a RCS Geolocation Push Message and Suggested Chip list - Multipart CPIM - - Session established
Pre-conditions Scenario	<ol style="list-style-type: none"> 1. DUT is RCS Registered 2. DUT supports Chatbot traffic and Multipart CPIM 3. DUT and Chatbot platform are ready to handle a Chatbot session 4. DUT and Chatbot are in an active chat session 5. Cache-Control max-age validity for the Chatbot Info has not expired
Test procedure	<ol style="list-style-type: none"> 1. Chatbot sends a multipart message with an RCS Geolocation Push Message and Suggested Chip List message which includes at least 2 suggested responses and 2 suggested actions to DUT 2. DUT opens the location received in the message and close it 3. DUT selects in one of the suggested action 4. DUT returns to the Chat thread with the Chatbot
Expected results Post-conditions	<ol style="list-style-type: none"> 1. DUT notifies the user of the message received 1. DUT renders and shows the geolocation push message and the Suggested Chip List in the conversation with the chatbot. 1. DUT can navigate and scroll into the list of suggestions 2. the location received is shown the screen. DUT closes it and come back to the chat window 3. The associated action is performed (e.g. the web page is opened for a urlAction) 4. There is no residual indication of the selection in the Chat UI. 4. The suggestions are still available in the Chat UI
Deep inspection	<ol style="list-style-type: none"> 1. Verify that the Maap CPIM namespace header is included as defined in section 3.6.7.1 of [GSMA RCC.07 RCS7.0 UNI] together with the CPIM namespace header for Message Disposition 2. Verify that, if included, the Traffic-Type header for the Maap messages follows the definitions in section 3.6.7.2 of [GSMA RCC.07 RCS7.0 UNI]

	<ol style="list-style-type: none"> 3. Verify that the Content-Type wrapped in the CPIM is set to multipart/mixed 4. Verify that the Content-Type for the chatmessage content is set to application/vnd.gsma.rcspushlocation+xml 5. Verify that the Content-Type for the Suggested Chip List content is set to application/vnd.gsma.botsuggestion.v1.0+json (as per section 3.6.10.2.2 of [GSMA RCC.07 RCS7.0 UNI]) 6. Verify that the JSON for the Suggested Chip List received complies with the format defined in section 3.6.10.6.1.3 of [GSMA RCC.07 RCS7.0 UNI] 7. Verify the delivery and display notifications sent back to Chatbot 8. Verify that the MSRP message sent back to platform when tapping on the suggested action complies with section 3.6.10.6.2 of [GSMA RCC.07 RCS7.0 UNI] 9. Verify that the Content-type for this MSRP message sent back is set to application/vnd.gsma.botsuggestion.response.v1.0+json as defined in section 3.6.10.2.3 of [GSMA RCC.07 RCS7.0 UNI] 10. Verify that the payload of this MSRP message sent back follows format defined in section 3.6.10.6.2.2 of [GSMA RCC.07 RCS7.0 UNI] 11. Verify that, if included in the received MSRP, the MSRP message sent back includes the Traffic-Type header set to the same value as the MSRP packet received
--	---

Test case ID	ID_RCS_RBM_21
Related test cases	
Feature	Chatbot Content Types
Reason for test	Receiving a large Carousel - MSRP Session established
Pre-conditions Scenario	<ol style="list-style-type: none"> 1. DUT is RCS Registered 2. DUT supports Chatbot traffic 3. DUT and Chatbot platform are ready to handle a Chatbot session 4. DUT and Chatbot are in an active chat session 5. Cache-Control max-age validity for the Chatbot Info has not expired
Test procedure	<ol style="list-style-type: none"> 1. Chatbot sends a Carousel of 10 Rich Cards to DUT including 4 suggested replies in the Rich Cards 2. DUT selects one of the suggested replies from the 7th Rich Card
Expected results	<ol style="list-style-type: none"> 1. DUT notifies the user of the message received
Post-conditions	<ol style="list-style-type: none"> 1. DUT renders and shows the Carousel of Rich Card in the conversation with the chatbot. 1. DUT can navigate and scroll into the different Rich Cards 2. DUT shows in the UI the suggested response as a new message sent in the

	<p>chat thread.</p> <p>2. The Carousel including the suggested replies is still shown in the UI</p>
<p>Deep inspection</p>	<ol style="list-style-type: none"> 1. Verify that the MSRP packet containing the CPIM message is chunked 2. Verify that the CPIM headers are included only in the first chunk. 3. Verify that the content-type payload wrapped in the CPIM message is set to application/vnd.gsma.botmessage.v1.0+json (as per section 3.6.10.2.1 of [GSMA RCC.07 RCS7.0 UNI]) 4. Verify that the Maap CPIM namespace header is included as defined in section 3.6.7.1 of [GSMA RCC.07 RCS7.0 UNI] in the first chunk. 5. Verify that, if included, the Traffic-Type header for the Maap messages follows the definitions in section 3.6.7.2 of [GSMA RCC.07 RCS7.0 UNI] 6. Verify that the MSRP Content-Type: message/cpim and Byte-Range headers, present in all chunks, refer to the whole CPIM message. 7. Verify that, if the message was chunked (note this is optional for the network), all MSRP chunked messages belonging to the same message share the same Message-ID value 8. Verify once compiled, that the JSON received complies with the format defined in section 3.6.10.5.1.2 of [GSMA RCC.07 RCS7.0 UNI] 9. Verify that the files referred to in the mediaUrl and thumbnailUrl properties of a Media object are automatically downloaded (because [GSMA RCC.71 UP2.1] defines that the FT AUT ACCEPT configuration parameter is set to 1 for the UP) 10. If the FT HTTP DL URI configuration parameter is set verify that the URLs for downloading the files referred to in the mediaUrl and thumbnailUrl properties of a Media object are composed as defined in step 1 of section 3.2.5.3.2.1 of [GSMA RCC.07 RCS7.0 UNI] 11. If a HTTP 401 AUTHENTICATION REQUIRED response is received to the HTTP request, verify that it is handled as defined in step 5 of section 3.2.5.3.2.1 of [GSMA RCC.07 RCS7.0 UNI] 12. Verify the delivery and display notifications sent back to Chatbot 13. Verify that the MSRP message sent back to platform when tapping on the suggested response complies with section 3.6.10.6.2 of [GSMA RCC.07 RCS7.0 UNI] 14. Verify that the Content-type for this MSRP message sent back is set to application/vnd.gsma.botsuggestion.response.v1.0+json as defined in section 3.6.10.2.3 of [GSMA RCC.07 RCS7.0 UNI] 15. Verify that the payload of this MSRP message sent back follows the format defined in section 3.6.10.6.2.1 of [GSMA RCC.07 RCS7.0 UNI] 16. Verify that, if included in the received MSRP, the MSRP message sent back includes the Traffic-Type header set to the same value as the MSRP packet received

Test case ID	ID_RCS_RBM_22
Related test cases	
Feature	Chatbot Content Types
Reason for test	Receiving a Richcard and Suggested Chip list - Multipart CPIM - Session established
Pre-conditions Scenario	<ol style="list-style-type: none"> 1. DUT is RCS Registered 2. DUT supports Chatbot traffic and Multipart CPIM 3. DUT and Chatbot platform are ready to handle a Chatbot session 4. DUT and Chatbot are in an active chat session 5. Cache-Control max-age validity for the Chatbot Info has not expired
Test procedure	<ol style="list-style-type: none"> 1. DUT and Chatbot are in active session and Chatbot sends a multipart message with a RichCard message and Suggested Chip List message which includes 6 suggested replies and 5 suggested actions to DUT 2. DUT selects one of the suggested actions in the Suggested Chip List 3. DUT returns to the chat thread with the Chatbot
Expected results Post-conditions	<ol style="list-style-type: none"> 1. DUT notifies the user of the message received 1. DUT renders and shows the Rich Card and the Suggested Chip List in the conversation with the chatbot. 1. DUT can navigate and scroll into the list of suggestions 2. The associated action is performed (e.g. the web page is opened for a urlAction) 3. There is no residual indication of the selection in the Chat UI. 3. The Suggested Chip List is still available
Deep inspection	<ol style="list-style-type: none"> 1. Verify that the Maap CPIM namespace header is included as defined in section 3.6.7.1 of [GSMA RCC.07 RCS7.0 UNI] together with the CPIM namespace header for Message Disposition 2. Verify that, if included, the Traffic-Type header for the Maap messages follows the definitions in section 3.6.7.2 of [GSMA RCC.07 RCS7.0 UNI] 3. Verify that the Content-Type wrapped in the CPIM is set to multipart/mixed 4. Verify that the Content-Type for the Richcard content is set to application/vnd.gsma.botmessage.v1.0+json (as per section 3.6.10.2.1 of [GSMA RCC.07 RCS7.0 UNI]) 5. Verify that the JSON received complies with the format defined in section 3.6.10.5.1.2 of [GSMA RCC.07 RCS7.0 UNI] 6. Verify that the files referred to in the mediaUrl and thumbnailUrl properties of a Media object are automatically downloaded (because RCC.71 defines that the FT AUT ACCEPT configuration parameter is set to 1 for the UP) 7. If the FT HTTP DL URI configuration parameter is set, verify that the URLs for downloading the files referred to in the mediaUrl and thumbnailUrl properties of a Media object are composed as defined in step 1 of section 3.2.5.3.2.1 of [GSMA RCC.07 RCS7.0 UNI] 8. If a HTTP 401 AUTHENTICATION REQUIRED response is received to the

	<p>HTTP request, verify that it is handled as defined in step 5 of section 3.2.5.3.2.1 of [GSMA RCC.07 RCS7.0 UNI]</p> <p>9. Verify that the Content-Type for the Suggested Chip List content is set to application/vnd.gsma.botsuggestion.v1.0+json (as per section 3.6.10.2.2 of [GSMA RCC.07 RCS7.0 UNI])</p> <p>10. Verify that the JSON for the Suggested Chip List received complies with the format defined in section 3.6.10.6.1.3 of [GSMA RCC.07 RCS7.0 UNI]</p> <p>11. Verify the delivery and display notifications sent back to Chatbot</p> <p>12. Verify that the MSRP message sent back to platform when tapping on the suggested action complies with section 3.6.10.6.2 [GSMA RCC.71 UP2.1]</p> <p>13. Verify that the Content-type for this MSRP message sent back is set to application/vnd.gsma.botsuggestion.response.v1.0+json as defined in section 3.6.10.2.3 [GSMA RCC.71 UP2.1]</p> <p>14. Verify that the payload of this MSRP message sent back follows format defined in section 3.6.10.6.2.2 [GSMA RCC.71 UP2.1]</p> <p>15. Verify that, if included in the received MSRP, the MSRP message sent back includes the Traffic-Type header set to the same value as the MSRP packet received</p>
--	--

Test case ID	ID_RCS_RBM_23
Related test cases	
Feature	Chatbot Content Types
Reason for test	Suggested actions in a Suggested Chip List - Payload for suggested actions and postbacks - MSRP session established
Pre-conditions Scenario	<ol style="list-style-type: none"> 1. DUT is RCS Registered 2. DUT supports Chatbot traffic 3. DUT and Chatbot platform are ready to handle a Chatbot session 4. DUT and Chatbot are in an active chat session 5. Cache-Control max-age validity for the Chatbot Info has not expired
Test procedure	<ol style="list-style-type: none"> 1. Chatbot sends a text Message with a Suggested Chip List message to DUT which includes all the suggested actions listed below: <ol style="list-style-type: none"> a. Open a web URL b. Initiate a voice call to a defined destination c. Compose an Enriched Call to a defined destination d. Send a message to a defined destination e. Open the user's default mapping app to a position indicated by either latitude-longitude coordinates or a mapping search query f. Open the user's default calendar app to the new event page, with start time, end time, title, and description pre-filled g. Send a geolocation push back to the Chatbot 2. DUT performs the following steps for each action in the list <ol style="list-style-type: none"> a. DUT selects the suggested action

	b. DUT returns to the Chat Thread with the Chatbot
Expected results	1. DUT notifies the user of the message received
Post-conditions	<p>1. DUT renders and shows the message and the Suggested Chip List in the conversation with the chatbot.</p> <p>1. DUT can navigate and scroll into the list of suggestions</p> <p>2a. The associated action is performed (e.g. the web page is opened for the urlAction)</p> <p>2b. There is no residual indication of the selection in the Chat UI.</p> <p>2b. The Suggested Chip List is still available</p>
Deep inspection	<ol style="list-style-type: none"> 1. Verify that the Maap CPIM namespace header is included as defined in section 3.6.7.1 of [GSMA RCC.07 RCS7.0 UNI] together with the CPIM namespace header for Message Disposition 2. Verify that, if included, the Traffic-Type header for the Maap messages follows the definitions in section 3.6.7.2 of [GSMA RCC.07 RCS7.0 UNI] 3. Verify that the Content-Type wrapped in the CPIM is set to multipart/mixed 4. Verify that the Content-Type for the chatmessage content is set to text/plain 5. Verify that the content-type for the Suggested Chip List content is set to application/vnd.gsma.botsuggestion.v1.0+json (as per section 3.6.10.2.2 of [GSMA RCC.07 RCS7.0 UNI]) 6. Verify that the JSON for the Suggested Chip List received complies with the format defined in section 3.6.10.6.1.3 of [GSMA RCC.07 RCS7.0 UNI] 7. Verify the delivery and display notifications sent back to Chatbot 8. Verify that the MSRP message sent back to platform when tapping on the suggested action complies with section 3.6.10.6.2 of [GSMA RCC.07 RCS7.0 UNI] 9. Verify that the Content-type for this MSRP message sent back is set to application/vnd.gsma.botsuggestion.response.v1.0+json as defined in section 3.6.10.2.3 of [GSMA RCC.07 RCS7.0 UNI] 10. Verify that the payload of this MSRP message sent back follows format defined in section 3.6.10.6.2.2 of [GSMA RCC.07 RCS7.0 UNI] for each postback per suggested action 11. Verify that, if included in the received MSRP, the MSRP message sent back includes the Traffic-Type header set to the same value as the MSRP packet received

Test case ID	ID_RCS_RBM_24
Related test cases	
Feature	Chatbot Content Types

Reason for test	Shared Client data as Suggested actions in a Suggested Chip List - MSRP session established
Pre-conditions Scenario	<ol style="list-style-type: none"> 1. DUT is RCS Registered 2. DUT supports Chatbot traffic 3. DUT and Chatbot platform are ready to handle a Chatbot session 4. DUT and Chatbot are in an active chat session 5. Cache-Control max-age validity for the Chatbot Info has not expired
Test procedure	<ol style="list-style-type: none"> 1. Chatbot sends a text Message with a Suggested Chip List message to DUT which includes among others the 'requestDeviceSpecifics' suggested action 2. DUT selects the 'requestDeviceSpecifics' suggested action 3. If a request for confirmation to share the data is shown the user accepts
Expected results Post-conditions	<ol style="list-style-type: none"> 1. DUT notifies the user of the message received 1. DUT renders and shows the message and the Suggested Chip List in the conversation with the chatbot. 1. DUT can navigate and scroll into the list of suggestions 2. A client-defined user interface to confirm sharing data with the Chatbot may be shown. 3. The UI indicates that device data was sent to the Chatbot 3. The Suggested Chip List is no longer available
Deep inspection	<ol style="list-style-type: none"> 1. Verify that the Maap CPIM namespace header is included as defined in section 3.6.7.1 of [GSMA RCC.07 RCS7.0 UNI] together with the CPIM namespace header for Message Disposition 2. Verify that, if included, the Traffic-Type header for the Maap messages follows the definitions in section 3.6.7.2 of [GSMA RCC.07 RCS7.0 UNI] 3. Verify that the Content-Type wrapped in the CPIM is set to multipart/mixed 4. Verify that the Content-Type for the chatmessage content is set to text/plain 5. Verify that the content-type for the Suggested Chip List content is set to application/vnd.gsma.botsuggestion.v1.0+json (as per section 3.6.10.2.2 of [GSMA RCC.07 RCS7.0 UNI]) 6. Verify that the JSON for the Suggested Chip List received complies with the format defined in section 3.6.10.6.1.3 of [GSMA RCC.07 RCS7.0 UNI] 7. Verify the delivery and display notifications sent back to Chatbot 8. Verify that an MSRP message is sent back to platform when tapping on the suggested action complies with section 3.6.10.6.2 of [GSMA RCC.07 RCS7.0 UNI] 9. Verify that Content-type for this MSRP message sent back is set to application/vnd.gsma.botsuggestion.response.v1.0+json as defined in section 3.6.10.2.3 of [GSMA RCC.07 RCS7.0 UNI] 10. Verify that the payload of this MSRP message sent back follows format defined in section 3.6.10.6.2.2 of [GSMA RCC.07 RCS7.0 UNI] 11. Verify that an additional MSRP message sent back with the client data information. Content-type of this MSRP message is to application/vnd.gsma.botsharedclientdata.v1.0+json as defined in section 3.6.10.2.4 of [GSMA RCC.07 RCS7.0 UNI]

	<ol style="list-style-type: none"> 12. Verify that the payload of this MSRP message sent back follows format defined in section 3.6.10.6.2.3 of [GSMA RCC.07 RCS7.0 UNI] 13. Verify that, if included in the received MSRP, the MSRP message sent back includes the Traffic-Type header set to the same value as the MSRP packet received
--	---

Test case ID	ID_RCS_RBM_25
Related test cases	
Feature	Chatbot Content Types
Reason for test	Sending a postback response - No MSRP session established with the Chatbot
Pre-conditions Scenario	<ol style="list-style-type: none"> 1. DUT is RCS Registered 2. DUT supports Chatbot traffic 3. DUT and Chatbot platform are ready to handle a Chatbot session 4. DUT and Chatbot are in an active chat session 5. Cache-Control max-age validity for the Chatbot Info has not expired
Test procedure	<ol style="list-style-type: none"> 1. The Chatbot sends a multipart message with a text message and Suggested Chip List which includes at least 2 suggested responses and 2 suggested actions to DUT using the user's public identity (i.e. the MSISDN) 2. DUT opens the chat thread (if not open already) and takes no action 3. DUT waits until the MSRP session expires (aprox 5min) 4. DUT selects one of the suggested actions 5. DUT returns to the chat thread with the Chatbot
Expected results Post-conditions	<ol style="list-style-type: none"> 1. DUT notifies the user of the message received 1. DUT renders and shows the text message and the Suggested Chip List in the conversation with the chatbot. 1. DUT can navigate and scroll into the list of suggestions 4. The associated action is performed (e.g. the web page is opened for the urlAction) 5. There is no residual indication of the selection in the Chat UI. 5. The Suggested Chip List is still available
Deep inspection	<ol style="list-style-type: none"> 1. Verify that the Maap CPIM namespace header is included as defined in section 3.6.7.1 of [GSMA RCC.07 RCS7.0 UNI] together with the CPIM namespace header for Message Disposition 2. Verify that, if included, the Traffic-Type header for the Maap messages follows the definitions in section 3.6.7.2 of [GSMA RCC.07 RCS7.0 UNI] 3. Verify that the Content-Type wrapped in the CPIM is set to multipart/mixed 4. Verify that the Content-Type for the chatmessage content is set to text/plain 5. Verify that the content-type for the Suggested Chip List content is set to application/vnd.gsma.botsuggestion.v1.0+json (as per section 3.6.10.2.2 of [GSMA RCC.07 RCS7.0 UNI])

6. Verify that the JSON for the Suggested Chip List received complies with the format defined in section 3.6.10.6.1.3 of [GSMA RCC.07 RCS7.0 UNI]
7. Verify that the delivery and display notifications sent back to Chatbot
8. Verify the SIP BYE and the closing of the MSRP session
9. Verify that the SIP INVITE sent by DUT follows section 3.2.3.1 of [GSMA RCC.07 RCS7.0 UNI]
10. Verify that the SIP INVITE sent contains among other tags, the Chatbot IARI, the Chatbot application version feature tag as defined in section 3.6.2 of [GSMA RCC.07 RCS7.0 UNI], in the Contact header
11. Verify that the SIP INVITE contains an additional Accept-Contact header including the Chatbot IARI feature tag and the Chatbot application version feature tag (as defined in section 3.6.2 of [GSMA RCC.07 RCS7.0 UNI]), together with the explicit and require parameters
12. Verify that the Request-URI is set to the service-id of the Chatbot defined as per section 2.5.4.1 of [GSMA RCC.07 RCS7.0 UNI]
13. Verify that the SDP in the SIP INVITE request sent contains Chatbot-related content-types (defined in section 3.6.8.3 of [GSMA RCC.07 RCS7.0 UNI]) among others (as per section 3.2.3.1 of [GSMA RCC.07 RCS7.0 UNI]) in the a=accept-wrapped-types
14. Verify that the 200OK sent by chatbot follows section 3.2.3.1 of [GSMA RCC.07 RCS7.0 UNI]
15. Verify that the received 200OK response include the Chatbot IARI, the Chatbot application version feature tag and the isbot feature tag as defined in section 3.6.2 of [GSMA RCC.07 RCS7.0 UNI], in the Contact header.
16. if the PRIVACY DISABLE configuration parameter is not set to 1 (i.e. it is not provided or set to 0), verify that P-Asserted-Identity header field is included in the 200 OK response with a tk parameter for each identity provided with a value set to "off"
(NOTE: [GSMA RCC.72] section 2.4.2.2 mandates that PRIVACY DISABLE is set to 1 if the network doesn't support anonymisation, e.g. on a network supporting only A2P)
17. Verify that the 200OK response does not include tags to reflect NFS/CFS support
18. Verify that the SDP in the 200OK response contains Chatbot-related content-types willing to be received by the chatbot (defined in section 3.6.10.2 of [GSMA RCC.07 RCS7.0 UNI]) among others (as per section 3.2.3.1 of [GSMA RCC.07 RCS7.0 UNI]) in the a=accept-wrapped-types
19. Verify that the MSRP session is established
20. Verify that the MSRP SEND carrying the CPIM message to the Chatbot is carrying the CPIM message in the MessageBody.
21. Verify that the Content-type wrapped in the CPIM is set to application/vnd.gsma.botsuggestion.response.v1.0+json as defined in section 3.6.10.2.3 of [GSMA RCC.07 RCS7.0 UNI]
22. Verify that the payload of this message follows format defined in section 3.6.10.6.2.2 of [GSMA RCC.07 RCS7.0 UNI] and verify that, if included in the received MSRP, the MSRP message sent back includes the Traffic-Type header set to the same value as the MSRP packet received

Test case ID	ID_RCS_RBM_26
Related test cases	
Feature	Chatbot Service
Reason for test	Blocked Chatbot Platform - Receiving a 1-to-1 Chatbot session request to a user
Pre-conditions Scenario	<ol style="list-style-type: none"> 1. DUT is RCS Registered 2. DUT supports Chatbot traffic 3. DUT had a previous chatbot session with a Chatbot (Chatbot Service Identification)
Test procedure	<ol style="list-style-type: none"> 1. DUT adds the Chatbot to the blacklisted/blocked contacts 2. The Chatbot sends an RCS message (message, FT, geolocation) to DUT
Expected results Post-conditions	<ol style="list-style-type: none"> 2. The user is not notified of the reception of the message 2. The message is not available anywhere in the UI
Deep inspection	<ol style="list-style-type: none"> 1. Verify that the SIP INVITE received follows section 3.2.3.1 of [GSMA RCC.07 RCS7.0 UNI] 2. Verify that the SIP INVITE received contains Chatbot IARI, the Chatbot application version feature tag and the isbot feature tag as defined in section 3.6.2 of [GSMA RCC.07 RCS7.0 UNI], in the Contact header 3. Verify that the SIP INVITE received contains an additional Accept-contact header to include Chatbot IARI feature tag and the Chatbot application version feature tag (as defined in section 3.6.2 of [GSMA RCC.07 RCS7.0 UNI]), together with the explicit and require parameters 4. Verify that the the P-Asserted-Identity reflects the SIP-URI Service-id from chatbot as per section 2.5.4.1 of [GSMA RCC.07 RCS7.0 UNI] 5. Verify that the SDP in the received SIP INVITE request contains Chatbot-related content-types (defined in section 3.6.8.1 of [GSMA RCC.07 RCS7.0 UNI]) among others (as per section 3.2.3.1 of [GSMA RCC.07 RCS7.0 UNI]) in the a=accept-wrapped-types 6. Verify that a SIP 486 Busy Here response is sent back from DUT

Test case ID	ID_RCS_RBM_27
Related test cases	

Feature	Chatbot Service
Reason for test	Store and forward - Receiving a 1-to-1 Chatbot session request from an already known Chatbot
Pre-conditions Scenario	<ol style="list-style-type: none"> 1. DUT supports Chatbot traffic 2. DUT is offline 3. Messaging server is ready to handle a chatbot session on behalf of DUT
Test procedure	<ol style="list-style-type: none"> 1. A known chatbot platform starts a conversation towards DUT using the user's public identity (i.e. the MSISDN) and sends in the following order: <ul style="list-style-type: none"> • A multipart CPIM message with RichCard and suggested chip list • A single CPIM with a Carousel • A Multipart CPIM with a FileTransfer and a suggested chip list 2. DUT comes back online
Expected results Post-conditions	<ol style="list-style-type: none"> 2. DUT receives and successfully displays all the stored messages. Delivery/display notifications are sent back to chatbot 2. only the suggested chip list associated to the last message is displayed
Deep inspection	<ol style="list-style-type: none"> 1. Verify that the SIP INVITE received follows section 3.6.9 of [GSMA RCC.07 RCS7.0 UNI] 2. Verify that the SIP INVITE received contains Chatbot IARI, the Chatbot application version feature tag and the isbot feature tag as defined in section 3.6.2 of [GSMA RCC.07 RCS7.0 UNI], in the Contact header 3. Verify that the SIP INVITE contains an additional Accept-Contact header including Chatbot IARI feature tag and the Chatbot application version feature tag (as defined in section 3.6.2 of [GSMA RCC.07 RCS7.0 UNI]), together with the explicit and require parameters 4. If the PRIVACY DISABLE configuration parameter is not set to 1 (i.e. it is not provided or set to 0), verify the Referred-by header reflects SIP-URI Service-id from the chatbot with a tk parameter with a value set to "off" (NOTE: RCC.72 section 2.4.2.2 mandates that PRIVACY DISABLE is set to 1 if the network doesn't support anonymisation, e.g. on a network supporting only A2P) 5. Verify that the SDP in the received SIP INVITE request contains Chatbot-related Content-Types (defined in section 3.6.8.1 of [GSMA RCC.07 RCS7.0 UNI]) among others (as per section 3.2.3.1 of [GSMA RCC.07 RCS7.0 UNI]) in the a=accept-wrapped-types 6. Verify that the 200OK sent by DUT follows section 3.2.3.1 of [GSMA RCC.07 RCS7.0 UNI] 7. Verify that the 200OK response includes Chatbot IARI and the Chatbot application version feature tag as defined in section 3.6.2 of [GSMA RCC.07 RCS7.0 UNI], in the Contact header. 8. Verify that the SDP in the 200OK response contains Chatbot-related content-

	<p>types willing to receive (defined in section 3.6.10.2 of [GSMA RCC.07 RCS7.0 UNI]) among others (as per section 3.2.3.1) in the a=accept-wrapped-types</p> <ol style="list-style-type: none"> 9. Verify that the MSRP session is established 10. Verify the delivery of the stored messages through MSRP SEND requests carrying the messages in CPIM bodies 11. Verify that the Traffic-Type indication is preserved if included in the message sent from the Chatbot 12. Verify that Delivery/Display notifications are sent by DUT for all messages received in the MSRP session
--	---

4 Enriched Calling

4.1 Enriched Voice Calling

4.1.1 Pre-Call Experience

4.1.1.1 Functional Test Cases

Test case ID	ID_RCS_F_4_1_1
Related test cases	
Feature	RCS Enriched Calling
Reason for test	UP 1.0. Reference section 12.2: Pre-Call experience
Pre-conditions Scenario	<ol style="list-style-type: none"> 1. A-Party's device is enabled for Enriched Calling and offline. 2. On A-Party's device, the supplementary service CLIR (Calling Line Identifier Restriction) is disabled (see R12-4-). 3. The A-Party's device is configured to Variant A (as per R3-3-1-1) by A-Party's operator. 4. B-Party's device is known to be Enriched Calling enabled and stored in A-Party's contact list.
Test procedure	<ol style="list-style-type: none"> 1. User A goes to each touch point where they can start a call: 2. Open Contact Card of B-Party (from Contact list / Favourites / Top contacts). 3. Open call details of calls with B-Party from call logs. 4. Open dialler, typing B-Party's number on A-Party's device. 5. Conversation view in Messaging with B-Party (if a service entry point is available).
Expected results	<ol style="list-style-type: none"> 1. In all cases 1 through 4, the Call Composer service entry point is shown but inactive.
Post-conditions	
Deep inspection	

Test case ID	ID_RCS_F_4_1_2
Related test cases	
Feature	RCS Enriched Calling
Reason for test	UP 1.0. Reference section 12.2: Pre-Call experience
Pre-conditions Scenario	<ol style="list-style-type: none"> 1. A-Party's device is enabled for EnRiched Calling and online. 2. On A-Party's device, the supplementary service CLIR (Calling Line Identifier Restriction) is disabled (see R12-4-). 3. The A-Party's device is configured to Variant A (as per R3-3-1-1) by A-Party's operator. 4. B-Party's device is enabled for EnRiched Calling and online. 5. B-Party is stored in A-Party's contact list as a contact.
Test procedure	<ol style="list-style-type: none"> 1. User A goes to each touch point where they can start a call: <ol style="list-style-type: none"> a. Open Contact Card of B-Party (from Contact list / Favourites / Top contacts) b. Open call details of calls with B-Party from call logs c. Open dialler, typing B-Party's number on A-Party's device. d. Conversation view in Messaging with B-Party (if a service entry point is available)
Expected results	<ol style="list-style-type: none"> 1. In all cases 1 through 4, all Call Composer service entry points are presented and are selectable.
Post-conditions	
Deep inspection	

Test case ID	ID_RCS_F_4_1_3
Related test cases	
Feature	RCS Enriched Calling
Reason for test	UP 1.0. Reference section 12.2: Pre-Call experience
Pre-conditions Scenario	<ol style="list-style-type: none"> 1. A-Party's device is enabled for EnRiched Calling and online. 2. On A-Party's device, the supplementary service CLIR (Calling Line Identifier Restriction) is disabled (see R12-4-). 3. The A-Party's device is configured to Variant A (as per R3-3-1-1) by A-Party's operator. 4. B-Party's device is enabled for EnRiched Calling and online. 5. B-Party is stored in A-Party's contact list as a contact.

Test procedure	<ol style="list-style-type: none"> 1. User A goes to each touch point where they can start a call: <ol style="list-style-type: none"> a. Open Contact Card of B-Party (from Contact list / Favourites / Top contacts) b. Open call details of calls with B-Party from call logs c. Open dialler, typing B-Party's number on A-Party's device. d. Conversation view in Messaging with B-Party (if a service entry point is available).
Expected results Post-conditions	<ol style="list-style-type: none"> 1. In all cases 1 through 4, calling B-Party is available on A-Party's device with a single click. The capability to do Enriched Calling shall not require additional actions for a straightforward voice call.
Deep inspection	

Test case ID	ID_RCS_F_4_1_4
Related test cases	
Feature	RCS Enriched Calling
Reason for test	UP 1.0. Reference section 12.2: Pre-Call experience
Pre-conditions Scenario	<ol style="list-style-type: none"> 1. A-Party's device is enabled for EnRiched Calling and online. 2. On A-Party's device, the supplementary service CLIR (Calling Line Identifier Restriction) is disabled (see R12-4-). 3. The A-Party's device is configured to Variant A (as per R3-3-1-1) by A-Party's operator. 4. B-Party's device is <u>not</u> enabled for EnRiched Calling. 5. B-Party is stored in A-Party's contact list as a contact.
Test procedure	<ol style="list-style-type: none"> 1. User A goes to each touch point where they can start a call: <ol style="list-style-type: none"> a. Open Contact Card of B-Party (from Contact list / Favourites / Top contacts) b. Open call details of calls with B-Party from call logs c. Open dialler, typing B-Party's number on A-Party's device. d. Conversation view in Messaging with B-Party (if a service entry point is available).
Expected results Post-conditions	<ol style="list-style-type: none"> 1. In all cases 1 through 4, no service entry points for Enriched Calling are shown to the user.
Deep inspection	

Test case ID	ID_RCS_F_4_1_5
---------------------	----------------

Related test cases	
Feature	RCS Enriched Calling
Reason for test	UP 1.0. Reference section 12.2: Pre-Call experience
Pre-conditions Scenario	<ol style="list-style-type: none"> 1. A-Party's device is enabled for EnRiched Calling and online. 2. On A-Party's device, the supplementary service CLIR (Calling Line Identifier Restriction) is disabled (see R12-4-). 3. The A-Party's device is configured to Variant A (as per R3-3-1-1) by A-Party's operator. 4. B-Party's device is enabled for EnRiched Calling and online. 5. B-Party is stored in A-Party's contact list as a contact.
Test procedure	<ol style="list-style-type: none"> 1. On A-party's device, open a calling service entry point with B-Party and select the following pre-call content: <ol style="list-style-type: none"> a. Add a pre-call image. b. Mark the call as important. c. Add a call subject (manually or by selection of a suggested list of call subjects). d. Add the current position or select a location. e. Re-select a different image to the one selected under step 1. f. Place a call from A-Party to B-Party <p>NOTE: Please note that not all implementations may allow to add the full feature set of pre-call content. However, all implementations shall support the reception and display of the full list of pre-call content.</p>
Expected results Post-conditions	<ol style="list-style-type: none"> 1. It shall be possible to cancel any of the selected items from the above list 1 to 4. 2. A-Party shall be always aware which content will be displayed on B-party's device at any stage of the call preparation. 3. The pre-call content that was selected before placing the call (location, important indicator, call subject and last valid picture) shall be displayed on B-Party's device when ringing. 4. Basic call management functions such as accept, reject, mute, speaker, etc., shall not be impacted by the availability of Enriched Calling features.
Deep inspection	

Test case ID	ID_RCS_F_4_1_6
Related test cases	
Feature	RCS Enriched Calling
Reason for test	UP 1.0. Reference section 12.2: Pre-Call experience

Pre-conditions Scenario	<ol style="list-style-type: none"> 1. A-Party's device is enabled for EnRiched Calling and online. 2. On A-Party's device, the supplementary service CLIR (Calling Line Identifier Restriction) is disabled (see R12-4-). 3. The A-Party's device is configured to Variant A (as per R3-3-1-1) by A-Party's operator. 4. B-Party's device is enabled for EnRiched Calling and online. 5. B-Party is stored in A-Party's contact list as a contact.
Test procedure	<ol style="list-style-type: none"> 1. On A-Party's device, select B-Party and enter the call composer. 2. Add an image as pre-call content. 3. Check file size of the image on B-Party's device.
Expected results Post-conditions	<ol style="list-style-type: none"> 1. The A-Party's device allows browsing of the local image repository. 2. The A-party's device allows selection of an image and offers basic image tools, including crop and rotate. 3. On-Party's device, the image size (memory space) shall not exceed circa 80kB.
Deep inspection	

Test case ID	ID_RCS_F_4_1_7
Related test cases	
Feature	RCS Enriched Calling
Reason for test	UP 1.0. Reference section 12.2: Pre-Call experience
Pre-conditions Scenario	<ol style="list-style-type: none"> 1. A-Party's device is enabled for EnRiched Calling and online. 2. On A-Party's device, the supplementary service CLIR (Calling Line Identifier Restriction) is disabled (see R12-4-). 3. The A-Party's device is configured to Variant A (as per R3-3-1-1) by A-Party's operator. 4. B-Party's device is enabled for EnRiched Calling and online. 5. B-Party is stored in A-Party's contact list as a contact.
Test procedure	<ol style="list-style-type: none"> 1. Open B-Party contact on A-Party's device. 2. Initiate a call with B-Party on A-Party's device. 3. During the ringing phase, toggle the importance indicator on and off and on. 4. Accept the call on B-Party's device.
Expected results Post-conditions	<ol style="list-style-type: none"> 1. On A-Party's device, it is possible to switch the importance indicator on and off and on. 2. Before accepting the call on B-Party's device, the call is marked as important.
Deep inspection	

4.1.1.2 Technical Test Cases

Test case ID	ID_RCS_T_4_1_1
Related test cases	
Feature	Enriched Calling
Reason for test	Call Composer. Initiating session: picture file sent prior to call initiation and downloaded by B before call started. Importance, location, subject set
Pre-conditions Scenario	<ol style="list-style-type: none"> 1. DUT and Reference 1 are registered RCS users 2. Both users are under 3G, HSPA, LTE or Wi-Fi 3. Capabilities exchange has taken place confirming both parties support call composer
Test procedure	<ol style="list-style-type: none"> 1. DUT adds a picture into the call composer 2. After receiving notification that pre-call added picture is received by Reference 1, DUT adds importance, location and subject. 3. DUT places the call.
Expected results Post-conditions	<ol style="list-style-type: none"> 1. DUT receives notification that pre-call added picture is received by Reference 1, but nothing is shown on Reference 1 2. Picture location, importance and subject are shown on Reference 1's incoming call screen and on DUT's outgoing call screen.
Deep inspection	<ol style="list-style-type: none"> 1. File is uploaded and XML message based on HTTP content server response is sent by DUT 2. Verify that after file upload is finished and file URL is received from the server, DUT sends file URL in a separate MSRP send request with CPIM/message and content-type application/vnd.gsma.rcs-ft-http+xml 3. Verify that delivery/display notification is sent from Reference 1 to DUT 4. Verify the content elements for subject, importance, location and picture of the call composer are sent (after the call button is pressed on the DUT side) as per section 2.4.4 of RCC.20 and section 6.1 of RCC.72. 5. Verify the MSRP SEND content-type header field carrying the content elements of the call composer service is application/vnd.gsma.encall+xml.

Test case ID	ID_RCS_T_4_1_2
Related test cases	
Feature	Enriched Calling
Reason for test	Call Composer. Initiating session: picture file sent prior to call initiation but not finished upload when call started.

Pre-conditions Scenario	<ol style="list-style-type: none"> 1. DUT and Reference 1 are registered RCS users 2. Both users are under 3G, HSPA, LTE or Wi-Fi 3. Capabilities exchange has taken place confirming both parties support call composer
Test procedure	<ol style="list-style-type: none"> 1. DUT sets importance in the call composer 2. Add a picture into the call composer 3. DUT immediately places the call. Reference 1 does not answer the call immediately 4. Wait until DUT receives notification that pre-call added picture is displayed by Reference 1
Expected results Post-conditions	<ol style="list-style-type: none"> 1. Importance is set in DUT's call composer 2. Picture is added in DUT's call composer 3. Importance is shown on Reference 1's incoming call screen 4. A picture is shown on Reference 1's incoming call screen and on DUT's outgoing call screen with an indication that it was displayed.
Deep inspection	<ol style="list-style-type: none"> 1. Verify that file is uploaded 2. Verify the content elements for importance of the call composer is sent (after the call button is pressed on the DUT side) with content type application/vnd.gsma.encall+xml as per section 2.4.4 of RCC.20 3. Verify that after file upload is finished and file URL is received from the server, DUT sends file URL in a separate MSRP send request with CPIM/message and content-type application/vnd.gsma.rcs-ft-http+xml 4. Verify that after file upload is finished the content element for picture of the call composer is sent with the url attribute in an MSRP SEND request with content type application/vnd.gsma.encall+xml and with the composerid element set to same value as in the first call composer information (i.e. the one with importance) 5. Verify that delivery and display notifications are sent from Reference 1 to DUT

Test case ID	ID_RCS_T_4_1_3
Related test cases	
Feature	Enriched Calling
Reason for test	Call Composer. Receiving session with picture file: user still downloads the picture while incoming call
Pre-conditions Scenario	<ol style="list-style-type: none"> 1. DUT and Reference 1 are registered RCS users 2. Both users are under 3G, HSPA, LTE or Wi-Fi 3. Capabilities exchange has taken place confirming both parties support call composer 4. To allow Reference 1 side to answer the call while still downloading the picture it is recommended that Reference 1 uses a slow IP connection

Test procedure	<ol style="list-style-type: none"> 1. DUT adds a picture into the call composer 2. Wait until DUT receives notification that pre-call added picture information is delivered to Reference 1 3. DUT places the call . 4. Reference 1 answers the call immediately (i.e. before picture transfer is completed). 5. Picture is displayed to Reference 1 in in-call screen
Expected results Post-conditions	<ol style="list-style-type: none"> 1. Picture is added in DUT's call composer 2. DUT receives notification that pre-call added picture information is delivered to Reference 1 3. Call is initiated 4. DUT displays that picture information was delivered Reference 1 displays the picture once download is completed 5. DUT indicates display notification for the picture
Deep inspection	<ol style="list-style-type: none"> 1. Verify the Reference 1 client generates an MSRP SEND request containing the IMDN delivered status when the picture file is delivered 2. Verify that another MSRP SEND request containing the IMDN displayed status is received when the picture is downloaded

Test case ID	ID_RCS_T_4_1_4
Related test cases	
Feature	Enriched Calling
Reason for test	Call Composer. Initiating session with picture, importance, location, subject. Change of picture, importance, location and subject before initiating the call
Pre-conditions Scenario	<ol style="list-style-type: none"> 1. DUT and Reference 1 are registered RCS users 2. Both users are under 3G, HSPA, LTE or Wi-Fi 3. Capabilities exchange has taken place confirming both parties support call composer 4. DUT has set picture, importance, location and subject
Test procedure	<ol style="list-style-type: none"> 1. DUT changes the pre-call added picture, importance, location and subject. 2. After receiving indication that picture is downloaded, DUT places the call 3. Reference 1 answers the call
Expected results Post-conditions	<ol style="list-style-type: none"> 1. DUT receives picture delivery and display notifications 2. Changed call subject, importance, location and picture are displayed on Reference 1's incoming call screen and on DUT's outgoing call screen 3. Call composer information is displayed on DUT's and Reference 1's in call screen

Deep inspection	<ol style="list-style-type: none"> 1. Verify existing enriched calling session 2. Verify that new File is uploaded 3. Verify that after file upload is finished and file URL is received from the server, DUT sends file URL in a separate MSRP send request with CPIM/message and content-type application/vnd.gsma.rcs-ft-http+xml 4. Verify the MSRP SEND request that carries the file information includes 'positive delivery, display' in the value for the CPIM/IMDN Disposition-Notification header field 5. Verify the content elements of the call composer sent when the call button is pressed on the A side as per section 2.4.4 of RCC.20 and section 6.1 of RCC.72 6. Verify the MSRP SEND content-type header field carrying the content elements of the call composer service is application/vnd.gsma.encall+xml. 7. Verify delivery and display notification for pre-call picture is received 8. Verify call composer session and incoming call correlation 9. Verify session release based on conditions described in section 2.4.3 of RCC.20
------------------------	---

Test case ID	ID_RCS_T_4_1_5
Related test cases	
Feature	Enriched Calling
Reason for test	Call Composer. Initiating session with picture, connection interrupted during file upload
Pre-conditions Scenario	<ol style="list-style-type: none"> 1. DUT and Reference 1 are registered RCS users 2. Both users are under 3G, HSPA, LTE or Wi-Fi 3. Capabilities exchange has taken place confirming both parties support call composer
Test procedure	<ol style="list-style-type: none"> 1. DUT selects one file from the call composer prior to pressing the call button. 2. During file upload DUT gets out of coverage, e.g. switch to flight mode. 3. DUT returns to coverage 4. After receiving confirmation that the picture was received, DUT presses the call button. <p>NOTE: To facilitate self-accreditation this test can be simulated</p>
Expected results Post-conditions	<ol style="list-style-type: none"> 1. File is added in DUT's call composer 2. Coverage interruption is experienced 3. Delivery/display for the file is received by DUT 4. File is displayed on Reference 1's incoming call screen and on DUT's outgoing call screen

Deep inspection	<ol style="list-style-type: none"> 1. Verify file upload procedure including TID form sent by client A initially 2. Verify additional 3 HTTPS requests steps for resume operation (as described in [GSMA RCC.07 RCS6.0 UNI] section 3.5.4. Verify correct file description XML. 3. Verify enriched calling session re-establishment 4. Verify the DUT client receives an MSRP SEND request containing the IMDN delivered status when the file is delivered and another MSRP SEND request containing the IMDN displayed status when the file is downloaded
------------------------	---

Test case ID	ID_RCS_T_4_1_6
Related test cases	
Feature	Enriched Calling
Reason for test	Call Composer. Initiating session with picture >80KB
Pre-conditions Scenario	<ol style="list-style-type: none"> 1. DUT and Reference 1 are registered RCS users 2. Both users are under 3G, HSPA, LTE or Wi-Fi 3. Capabilities exchange has taken place confirming both parties support call composer
Test procedure	<ol style="list-style-type: none"> 1. DUT adds a picture into the call composer with size bigger than 80KB 2. After receiving notification that pre-call added picture is received by Reference 1, DUT adds importance, location and subject. 3. DUT places the call.
Expected results Post-conditions	<ol style="list-style-type: none"> 1. DUT receives notification that pre-call added picture is received by Reference 1, but nothing is shown on Reference 1 2. Picture location, importance and subject are shown on Reference 1's incoming call screen and on DUT's outgoing call screen. 3. The call is successfully initiated by DUT.
Deep inspection	<ol style="list-style-type: none"> 1. Verify that the picture is that is uploaded has been resized to a size below 80KB

Test case ID	ID_RCS_T_4_1_7
Related test cases	
Feature	Enriched Calling

Reason for test	Call Composer. Initiating session: Entering call composer, adding picture, press call button after more than 60 minutes.
Pre-conditions Scenario	<ol style="list-style-type: none"> 1. DUT and Reference 1 are registered RCS users 2. Both users are under 3G, HSPA, LTE or Wi-Fi 3. Capabilities exchange has taken place confirming both parties support call composer 4. DUT has set picture into the call composer
Test procedure	<ol style="list-style-type: none"> 1. DUT initiates the call after more than 60 minutes after the picture is set
Expected results Post-conditions	<ol style="list-style-type: none"> 1. Delivery/display for the file is received by DUT 2. picture is displayed on Reference 1's incoming call screen and on DUT's outgoing call screen
Deep inspection	<ol style="list-style-type: none"> 1. Verify enriched calling session is established because previous enriched calling session has timeout 2. Verify the MSRP SEND request that carries the file information content-type header field is message/cpim 3. Verify the CPIM content-type header field for the file information is application/vnd.gsma.rcs-ft-http+xml 4. Verify the MSRP SEND request that carries the file information includes 'positive delivery, display' in the value for the CPIM/IMDN Disposition-Notification header field 5. Verify the content element for file url of the call composer sent when the call button is pressed on the DUT side as per section 2.4.4 of RCC.20 and section 6.1 of RCC.72 6. Verify the MSRP SEND content-type header field carrying the content elements of the call composer service is application/vnd.gsma.encall+xml. 7. Verify delivery and display notification for pre-call picture is received 8. Verify call composer session and incoming call correlation 9. Verify session release based on conditions described in section 2.4.3 of RCC.20

Test case ID	ID_RCS_T_4_1_8
Related test cases	
Feature	Enriched Calling
Reason for test	Call Composer. Initiating session: Starting call composer, but keep it open for a longer time than call composer timer idle

Pre-conditions Scenario	<ol style="list-style-type: none"> 1. DUT and Reference 1 are registered RCS users 2. Both users are under 3G, HSPA, LTE or Wi-Fi 3. Capabilities exchange has taken place confirming both parties support call composer 4. DUT sets pre-call content (e.g. importance or location) 5. The callComposerTimerIdle is configured to value different from 0
Test procedure	<ol style="list-style-type: none"> 1. DUT does not add/change any pre-call content for more than the configured value for callComposerTimerIdle and DUT does not place the call with Reference 1
Expected results Post-conditions	<ol style="list-style-type: none"> 1. No verification
Deep inspection	<ol style="list-style-type: none"> 1. Verify enriched calling session timeout due to inactivity

Test case ID	ID_RCS_T_4_1_9
Related test cases	
Feature	Enriched Calling
Reason for test	Call Composer. Use session for updating data (importance) after the call was set up but not answered yet
Pre-conditions Scenario	<ol style="list-style-type: none"> 1. DUT and Reference 1 are registered RCS users 2. Both users are under 3G, HSPA, LTE or Wi-Fi 3. Capabilities exchange has taken place confirming both parties support call composer 4. DUT has set importance into the call composer to standard call
Test procedure	<ol style="list-style-type: none"> 1. User sets subject for call 2. User presses the call button on DUT 3. User changes the call importance to important call on DUT before Reference 1 answers
Expected results Post-conditions	<ol style="list-style-type: none"> 1. Reference 1 displays call subject on incoming call screen 2. Call is successfully initiated by DUT and call importance is changed 3. Reference 1 displays call importance as important call

Deep inspection	<ol style="list-style-type: none"> 1. Verify enriched calling session is set up 2. Verify that the content element for subject of the call composer sent when the call button is pressed on the DUT side as per section 2.4.4 of RCC.20 3. Verify the MSRP SEND content-type header field carrying the content elements of the call composer service is application/vnd.gsma.encall+xml. 4. Verify enriched calling session is used for importance update after the call is initiated through an MSRP SEND request with the content-type header field set to application/vnd.gsma.encall+xml. 5. Verify the content element for importance with updated value that is sent after the call button has been pressed is using the same composerid already used to provide subject
------------------------	---

Test case ID	ID_RCS_T_4_1_10
Related test cases	
Feature	Enriched Calling
Reason for test	Call Composer. Receiving call composer session with picture without matching call and subsequent call composer session
Pre-conditions Scenario	<ol style="list-style-type: none"> 1. DUT and Reference 1 are registered RCS users 2. Both users are under 3G, HSPA, LTE or Wi-Fi 3. Capabilities exchange has taken place confirming both parties support call composer 4. Reference 1 has set picture into the call composer
Test procedure	<ol style="list-style-type: none"> 1. After 60 minutes, Reference 1 adds importance and subject information into the call composer. 2. After receiving delivery notification, Reference 1 places the call.
Expected results	<ol style="list-style-type: none"> 1. Reference 1 indicates picture delivery notification 2. DUT displays importance, subject and picture
Post-conditions	
Deep inspection	<ol style="list-style-type: none"> 1. Verify enriched calling session is established because previous enriched calling session has timeout 2. Verify the MSRP SEND request that carries the file information content-type header field is message/cpim 3. Verify the CPIM content-type header field for the file information is application/vnd.gsma.rcs-ft-http+xml 4. Verify the MSRP SEND request that carries the file information includes 'positive delivery, display' in the value for the CPIM/INDM Disposition-Notification header field 5. Verify the content element for subject, importance and file url of the call

	<p>composer sent when the call button is pressed on the B side as per section 2.4.4 of RCC.20 and section 6.1 of RCC.72</p> <ol style="list-style-type: none"> 6. Verify the MSRP SEND content-type header field carrying the content elements of the call composer service is application/vnd.gsma.encall+xml. 7. Verify delivery and display notification for pre-call picture is sent 8. Verify call composer session and incoming call correlation 9. Verify session release based on conditions described in section 2.4.3 of RCC.20
--	---

Test case ID	ID_RCS_T_4_1_11
Related test cases	
Feature	Enriched Calling
Reason for test	Call Composer. Handover after call composer is opened
Pre-conditions Scenario	<ol style="list-style-type: none"> 1. DUT and Reference 1 are registered RCS users 2. Both users under HSPA 3. Capabilities exchange has taken place confirming both parties support call composer 4. DUT has opened the call composer MSRP session to Reference 1
Test procedure	<ol style="list-style-type: none"> 1. DUT goes from 3G to Wi-Fi coverage 2. DUT adds importance and subject information into the call composer and presses the call button.
Expected results	<ol style="list-style-type: none"> 1. DUT successfully re-establishes connectivity on WiFi network 2. Call composer session is re-established and call composer information is sent
Post-conditions	
Deep inspection	<ol style="list-style-type: none"> 1. Verify Re-registration of DUT due to IP address change. 2. Verify enriched calling session is re-established 3. Verify call composer information with subject and importance is sent 4. Verify session release based on conditions described in section 2.4.3 of RCC.20

4.1.2 In-Call Experience

4.1.2.1 Functional Test Cases

Test case ID	ID_RCS_F_4_2_1
---------------------	----------------

Related test cases	
Feature	RCS Enriched Calling
Reason for test	UP 1.0. Reference section 12.6: In-Call experience
Pre-conditions Scenario	<ol style="list-style-type: none"> 1. A-Party's device is enabled for EnRiched Calling and online (WiFi). 2. On A-Party's device, the supplementary service CLIR (Calling Line Identifier Restriction) is disabled (see R12-4-). 3. The A-Party's device is configured to Variant A (as per R3-3-1-1) by A-Party's operator. 4. A-Party's network is configured to allow Video Share only in HSPA (or better). 5. B-Party's device is enabled for EnRiched Calling and online (HSPA, LTE or WiFi). 6. - B-Party is stored in A-Party's contact list as a contact.
Test procedure	<ol style="list-style-type: none"> 1. Call B-party from A-Party's device. 2. On A-party's device, turn off WiFi and resume data coverage in 3G. 3. Select "Live Video" on B-Party's device.
Expected results Post-conditions	<ol style="list-style-type: none"> 1. Verify that Video Share is available on both devices after the call is established. 2. Verify that Video Share is no longer available on A-Party's device. On B-Party's device, Video Share and all other in-Call services (1-to-1 Messaging during a call, share any file, share location and share sketch) are still available. 3. On A-Party's device there is no option to join Video Share.
Deep inspection	

Test case ID	ID_RCS_F_4_2_2
Related test cases	
Feature	RCS Enriched Calling
Reason for test	UP 1.0. Reference section 12.6: In-Call experience
Pre-conditions Scenario	<ol style="list-style-type: none"> 1. A-Party's device is enabled for EnRiched Calling and online (HSPA, LTE or WiFi). 2. On A-Party's device, the supplementary service CLIR (Calling Line Identifier Restriction) is disabled (see R12-4-). 3. The A-Party's device is configured to Variant A (as per R3-3-1-1) by A-Party's operator. 4. B-Party's device is enabled for EnRiched Calling and online (HSPA, LTE or WiFi). 5. - B-Party is stored in A-Party's contact list as a contact.
Test procedure	<ol style="list-style-type: none"> 1. Call B-party from A-Party's device and accept the call on B-Party's device. 2. Select "Video Share" on A-Party's device. 3. On B-Party's device, confirm the incoming invite with "accept and share own camera view".

	<ol style="list-style-type: none"> 4. On both devices, switch between front and rear camera view. 5. On A-Party's device, end the Video Share. 6. On B-Party's device, end the call (red button).
Expected results Post-conditions	<ol style="list-style-type: none"> 1. Call between A- and B-Party is established. 2. On A-Party's device, Video Share is presented and selectable. 3. On B-Party's device, an invite for Video Share is presented. The options are "Accept and share own camera view" and "Accept and do not share my camera view". (NOTE: exact wording is at the discretion of the client developer.) 4. The view of the selected camera is processed appropriately. 5. Video share is ended on both devices. 6. Call ends.
Deep inspection	

Test case ID	ID_RCS_F_4_2_3
Related test cases	
Feature	RCS Enriched Calling
Reason for test	UP 1.0. Reference section 12.6: In-Call experience
Pre-conditions Scenario	<ol style="list-style-type: none"> 1. A-Party's device is enabled for EnRiched Calling and online (HSPA, LTE or WiFi). 2. On A-Party's device, the supplementary service CLIR (Calling Line Identifier Restriction) is disabled (see R12-4-). 3. The A-Party's device is configured to Variant A (as per R3-3-1-1) by A-Party's operator. 4. B-Party's device is enabled for EnRiched Calling and online (HSPA, LTE or WiFi). 5. C-Party's device is enabled for EnRiched Calling and online (HSPA, LTE or WiFi). 6. B-Party and C-Party are stored in A-Party's contact list as a contact.
Test procedure	<ol style="list-style-type: none"> 1. Call B-Party from A-Party's device. 2. Accept the call on B-Party's device. 3. Call A-Party from C-Party's device. 4. Accept the call from C-Party on A-Party's device and put call with B-Party on hold. 5. Start a Video Share session on C-Party's device with A-Party. 6. End all calls.
Expected results Post-conditions	<ol style="list-style-type: none"> 1. A call is established between A- and B-Party. Video Share is available. 2. When A-Party's device rings, video share with B-party is no longer available on A-Party's device. 3. Once the call between C-Party and A-Party is established, VS between the two participants of the call is available.

	<ol style="list-style-type: none"> 4. A Video Share session between C- and A-Party is established. 5. All calls including the Video Share end.
Deep inspection	

Test case ID	ID_RCS_F_4_2_4
Related test cases	
Feature	RCS Enriched Calling
Reason for test	UP 1.0. Reference section 12.6: In-Call experience
Pre-conditions Scenario	<ol style="list-style-type: none"> 1. A-Party's device is enabled for EnRiched Calling and online (HSPA, LTE or WiFi). 2. On A-Party's device, the supplementary service CLIR (Calling Line Identifier Restriction) is disabled (see R12-4-). 3. The A-Party's device is configured to Variant A (as per R3-3-1-1) by A-Party's operator. 4. B-Party's device is enabled for EnRiched Calling and online (HSPA, LTE or WiFi). 5. B-Party is stored in A-Party's contact list as a contact.
Test procedure	<ol style="list-style-type: none"> 1. A-Party calls B-Party. B-Party accepts call. 2. Place call in the background on A-Party's device. 3. Invite A-Party's device to Video Share from B-Party's device. 4. Share any file from device B to device A 5. Send location from device B to device A 6. Send a message (Chat or SMS) from device B to device A 7. Send a sketch invitation from device B to device A
Expected results Post-conditions	<ol style="list-style-type: none"> 1. On A-Party's device, the home screen is in foreground. 2. When receiving an invite for Video Share, the call screen is displayed. 3. When receiving the file, the user is made aware by showing the call screen. 4. When receiving the location, the user is made aware by showing the call screen. 5. When receiving the message, the user is made aware by showing the call screen. 6. When receiving an invite for the sketch, the call screen is displayed.
Deep inspection	

Test case ID	ID_RCS_F_4_2_5
---------------------	----------------

Related test cases	
Feature	RCS Enriched Calling
Reason for test	UP 1.0. Reference section 12.6: In-Call experience
Pre-conditions Scenario	<ol style="list-style-type: none"> 1. A-Party's device is enabled for EnRiched Calling and online (HSPA, LTE or WiFi). 2. On A-Party's device, the supplementary service CLIR (Calling Line Identifier Restriction) is disabled (see R12-4-). 3. The A-Party's device is configured to Variant A (as per R3-3-1-1) by A-Party's operator. 4. B-Party's device is enabled for EnRiched Calling and online (HSPA, LTE or WiFi). 5. B-Party is stored in A-Party's contact list as a contact.
Test procedure	<ol style="list-style-type: none"> 1. Call B-Party from A-Party's device. 2. Trigger video share on A-Party's device. 3. Accept Video Share on B-Party's device including sharing own camera view. 4. Rotate A- and B-Party's device in 90 degrees steps and check screens.
Expected results Post-conditions	<ol style="list-style-type: none"> 1. B-Party receives invite for Video Share. 2. Two-way Video Share is set up. 3. Screens always adjust according to the changing orientation and display correct video share orientation.
Deep inspection	

Test case ID	ID_RCS_F_4_2_6
Related test cases	
Feature	RCS Enriched Calling
Reason for test	UP 1.0. Reference section 12.6: In-Call experience
Pre-conditions Scenario	<ol style="list-style-type: none"> 1. A-Party's device is enabled for EnRiched Calling and online. 2. On A-Party's device, the supplementary service CLIR (Calling Line Identifier Restriction) is disabled (see R12-4-). 3. B-Party's device is enabled for EnRiched Calling and online. 4. B-Party is stored in A-Party's contact list as a contact.
Test procedure	<ol style="list-style-type: none"> 1. Call B-Party from A-Party's device. 2. Share a location from the call screen of A-Party's device.

Expected results	1. On B-Party's device, the location is received and displayed on request in a map view.
Post-conditions	3.
Deep inspection	

Test case ID	ID_RCS_F_4_2_7
Related test cases	
Feature	RCS Enriched Calling
Reason for test	UP 1.0. Reference section 12.6: In-Call experience
Pre-conditions Scenario	<ol style="list-style-type: none"> 1. A-Party's device is enabled for EnRiched Calling and online. 2. On A-Party's device, the supplementary service CLIR (Calling Line Identifier Restriction) is disabled (see R12-4-). 3. B-Party's device is enabled for EnRiched Calling and online. 4. B-Party is stored in A-Party's contact list as a contact.
Test procedure	<ol style="list-style-type: none"> 1. Call B-Party from A-Party's device. 2. Share a picture (share any file function) from the call screen of A-Party's device. 3. Close the picture view on B-Party's device.
Expected results	2. On B-Party's device, the picture is received and displayed on request in the call screen.
Post-conditions	3. B-Party's device goes back to the call screen.
Deep inspection	

Test case ID	ID_RCS_F_4_2_8
Related test cases	
Feature	RCS Enriched Calling
Reason for test	UP 1.0. Reference section 12.6: In-Call experience

Pre-conditions Scenario	<ol style="list-style-type: none"> 1. A-Party's device is enabled for EnRiched Calling and online. 2. On A-Party's device, the supplementary service CLIR (Calling Line Identifier Restriction) is disabled (see R12-4-). 3. B-Party's device is enabled for EnRiched Calling and online. 4. B-Party is stored in A-Party's contact list as a contact.
Test procedure	<ol style="list-style-type: none"> 1. Call B-Party from A-Party's device. 2. Share a picture (share any file function) from the call screen of A-Party's device. 3. End the call before the upload process of the picture on A-Party's device has ended.
Expected results	<ol style="list-style-type: none"> 1. On B-Party's device, the picture is received irrespectively of the fact that the call has ended and displayed on request.
Post-conditions	
Deep inspection	

Test case ID	ID_RCS_F_4_2_9
Related test cases	
Feature	RCS Enriched Calling
Reason for test	UP 1.0. Reference section 12.6: In-Call experience
Pre-conditions Scenario	<ol style="list-style-type: none"> 1. A-Party's device is enabled for EnRiched Calling and online. 2. On A-Party's device, the supplementary service CLIR (Calling Line Identifier Restriction) is disabled (see R12-4-). 3. On A-Party's device gallery, there is at least one of the following file formats: .jpg, .png, .gif 4. B-Party's device is enabled for EnRiched Calling and online. 5. B-Party is stored in A-Party's contact list as a contact.
Test procedure	<ol style="list-style-type: none"> 1. Call B-Party from A-Party's device. 2. Share a picture in .jpg format (share any file function) from the call screen of A-Party's device. 3. Share a picture in .png format (share any file function) from the call screen of A-Party's device. 4. Share a picture in .gif format (share any file function) from the call screen of A-Party's device.
Expected results	<ol style="list-style-type: none"> 1. On B-Party's device, the.jpg picture is received and displayed on request in the call screen.
Post-conditions	<ol style="list-style-type: none"> 2. On B-Party's device, the.png picture is received and displayed on request in the call screen. 3. On B-Party's device, the.gif picture is received and displayed on request in the

	call screen.
Deep inspection	

Test case ID	ID_RCS_F_4_2_10
Related test cases	
Feature	RCS Enriched Calling
Reason for test	UP 1.0. Reference section 12.6: In-Call experience
Pre-conditions Scenario	<ol style="list-style-type: none"> 1. A-Party's device is enabled for EnRiched Calling and online. 2. On A-Party's device, the supplementary service CLIR (Calling Line Identifier Restriction) is disabled (see R12-4-). 3. B-Party's device is enabled for EnRiched Calling and online. 4. B-Party is stored in A-Party's contact list as a contact.
Test procedure	<ol style="list-style-type: none"> 1. Call B-Party from A-Party's device. 2. Select to share any file function from the call screen of A-Party's device. 3. Select to share a picture from the device gallery, select a picture, and send.
Expected results	<ol style="list-style-type: none"> 1. A-Party is presented with options to select a picture from gallery or camera. 2. The selected picture is by default sent in a small size. The user has at any time before sending the option to select sending in original picture size.
Post-conditions	
Deep inspection	

Test case ID	ID_RCS_F_4_2_11
Related test cases	
Feature	RCS Enriched Calling
Reason for test	UP 1.0. Reference section 12.6: In-Call experience
Pre-conditions Scenario	<ol style="list-style-type: none"> 1. A-Party's device is enabled for EnRiched Calling and online. 2. On A-Party's device, the supplementary service CLIR (Calling Line Identifier Restriction) is disabled (see R12-4-). 3. B-Party's device is enabled for EnRiched Calling and online. 4. B-Party is stored in A-Party's contact list as a contact.

Test procedure	<ol style="list-style-type: none"> 1. Call B-Party from A-Party's device. 2. Select to send a message from the call screen of A-Party's device. 3. On B-Party's device, answer on the reception of the message.
Expected results Post-conditions	<ol style="list-style-type: none"> 1. On A-Party's in-call screen, there is a service entry point to 1-to-1 Messaging with the contact on the call. 2. On B-Party's device, there is an option to see the incoming message in the call screen and the possibility to select to answer to that message.
Deep inspection	

Test case ID	ID_RCS_F_4_2_12
Related test cases	
Feature	RCS Enriched Calling
Reason for test	UP 1.0. Reference section 12.6: In-Call experience
Pre-conditions Scenario	<ol style="list-style-type: none"> 1. A-Party's device is enabled for EnRiched Calling and online. 2. On A-Party's device, the supplementary service CLIR (Calling Line Identifier Restriction) is disabled (see R12-4-). 3. B-Party's device is enabled for EnRiched Calling and online. 4. B-Party is stored in A-Party's contact list as a contact.
Test procedure	<ol style="list-style-type: none"> 1. Call B-Party from A-Party's device. 2. Select "shared sketch" from the call screen of A-Party's device. 3. On B-Party's device, accept the share sketch invite. 4. Cancel the share sketch session from A-Party's device.
Expected results Post-conditions	<ol style="list-style-type: none"> 1. A-Party is able to see that the invite for shared sketch is not yet accepted. 2. A-Party sees the session is confirmed. For both A- and B-Party, the standard in-call features (mute, speaker, end call etc.) are still accessible. 3. B-Party is informed that the sketch has ended.
Deep inspection	

Test case ID	ID_RCS_F_4_2_13
Related test cases	
Feature	RCS Enriched Calling
Reason for test	UP 1.0. Reference section 12.6: In-Call experience

Pre-conditions Scenario	<ol style="list-style-type: none"> 1. A-Party's device is enabled for EnRiched Calling and online. 2. On A-Party's device, the supplementary service CLIR (Calling Line Identifier Restriction) is disabled (see R12-4-). 3. B-Party's device is enabled for EnRiched Calling and online. 4. B-Party is stored in A-Party's contact list as a contact.
Test procedure	<ol style="list-style-type: none"> 1. Call B-Party from A-Party's device. 2. Select "shared sketch" from the call screen of A-Party's device. 3. On B-Party's device, accept the share sketch invite. 4. A-Party adds a picture background to the sketch.
Expected results Post-conditions	<ol style="list-style-type: none"> 1. A-Party is able to see that the invite for shared sketch is not yet accepted. 2. A-Party sees the session is confirmed. Both parties are able to start sketching, in by default different drawing colours. 3. On both screens, the picture background is visible. Sketching and pictures on both devices match.
Deep inspection	

4.1.2.2 Technical Test Cases

4.1.2.2.1 Interaction with supplementary services

Test case ID	ID_RCS_T_4_2_1
Related test cases	
Feature	Enriched Calling
Reason for test	Call Hold. Enriched Calling - Call Hold
Pre-conditions Scenario	<ol style="list-style-type: none"> 1. DUT, Reference 1 and Reference 2 are registered RCS users 2. DUT, Reference 1 and Reference 2 support Video Share 3. All users' coverage is 3G, HSPA, LTE or Wi-Fi 4. DUT and Reference 1 are in an active voice call 5. Capabilities exchange has taken place confirming Video Share is possible 6. A video share session is already in place from DUT to Reference 1
Test procedure	<ol style="list-style-type: none"> 1. Reference 2 initiates a voice call to DUT 2. DUT accepts the call from Reference 2 and places the call with Reference 1 on hold 3. DUT initiates a Video Share session to Reference 2 4. Reference 2 accepts the Video Share 5. DUT sends Video in the sharing session 6. DUT terminates the Video Share 7. DUT terminates the call with Reference 2 and resumes the call with Reference 1

Expected results Post-conditions	<ol style="list-style-type: none"> 1. The Video Share session is terminated: Reference 1 no longer receives Video 2. Video Share is not possible on DUT for the call to Reference 1 and on Reference 1 3. Video Share is possible on Reference 2 and on DUT or the Call to Reference 2 4. Reference 2 receives an invitation to add Video to the call 5. Reference 2 receives Video 6. Reference 2 stops receiving Video 7. Voice call between DUT and Reference 2 is terminated 8. Video Share is available on DUT and Reference 1
Deep inspection	<ol style="list-style-type: none"> 1. Verify that in call share session is closed once the call is put on hold 2. Verify Capability exchange on call hold (i.e. DUT and Reference 1) 3. Verify capability exchange between DUT and Reference 2 4. Verify graceful establishment of the video share session (media) via traces (active session) 5. Verify H.264 support in SDP negotiation 6. Verify session termination (sip/media) 7. Verify Capability exchange on resuming call (i.e. DUT and Reference 1)

Test case ID	ID_RCS_T_4_2_2
Related test cases	
Feature	Enriched Calling
Reason for test	Call on hold and Live video. Call on hold. Retrieve call on hold + video sharing
Pre-conditions Scenario	<ol style="list-style-type: none"> 1. DUT and Reference 1 are registered RCS users 2. Both users under HSPA or Wi-Fi 3. DUT and Reference 1 are in an active voice call 4. Capabilities exchange has taken place confirming video share is possible
Test procedure	<ol style="list-style-type: none"> 1. DUT initiates a voice call with Reference 1 2. Reference 1 accepts the call 3. DUT invites Reference 1 to share a live video 4. Reference 1 accepts video sharing 5. DUT puts voice call to Reference 1 on hold 6. DUT resumes voice call to Reference 1 7. DUT invites Reference 1 to share a video 8. Reference 1 accepts video sharing
Expected results Post-conditions	<ol style="list-style-type: none"> 1. Voice call established between DUT and Reference 1. 2. Video Share is indicated as available to both parties 3. Reference 1 receives an invitation to add Video to the call 4. Video sharing starts 5. Voice call on hold

	<ol style="list-style-type: none"> 6. Video sharing between Users A and B ends 7. RCS capabilities are updated for DUT: video share services and other in call services are no longer available 8. Voice call between Users A and B restored 9. Reference 1 receives an invitation to add Video to the call 10. Video sharing starts
Deep inspection	<ol style="list-style-type: none"> 1. Verify graceful establishment of the video share sessions (signalling) via traces (active session) 2. Verify graceful establishment of the video share sessions (media) via traces (active session) 3. Verify H.264 support in SDP negotiations 4. Verify session termination (sip/media) 5. Verify capability exchange following call on hold establishment (with Reference 1) and with Reference 1 when the call becomes active again

Test case ID	ID_RCS_T_4_2_3
Related test cases	
Feature	Enriched Calling
Reason for test	Call on hold and Live video. Call waiting. Users were in a CS call using video share.
Pre-conditions Scenario	<ol style="list-style-type: none"> 1. DUT and Reference 1 are registered RCS users 2. Both users under HSPA or Wi-Fi 3. DUT and Reference 1 are in an active voice call 4. Capabilities exchange has taken place confirming video share is possible 5. Reference 2 is a telephony capable user (e.g. fixed line, mobile subscriber, etc.) 6. A video share session is already in place from DUT to Reference 1
Test procedure	<ol style="list-style-type: none"> 1. Reference 2 calls DUT. 2. DUT ignores the incoming call
Expected results	<ol style="list-style-type: none"> 1. DUT gets a call waiting indication 2. Video sharing between users A and B continues
Post-conditions	
Deep inspection	<ol style="list-style-type: none"> 1. Verify no impact from call waiting on to the current session

Video Share

Test case ID	ID_RCS_T_4_3_1
Related test cases	
Feature	Enriched Calling
Reason for test	Live Video. Video share: sending video – caller under HSPA/LTE/WiFi
Pre-conditions Scenario	<ol style="list-style-type: none"> 1. DUT and Reference 1 are registered RCS users 2. DUT coverage is HSPA, LTE or Wi-Fi 3. Reference 1 coverage is 3G and VS is enabled under 3G 4. DUT and Reference 1 are in an active voice call 5. Capabilities exchange has taken place confirming video share is possible
Test procedure	<ol style="list-style-type: none"> 1. After the call established, DUT starts video share to Reference 1. 2. Reference 1 accepts the invite. 3. DUT sends video to Reference 1.
Expected results Post-conditions	<ol style="list-style-type: none"> 1. Reference 1 receives invitation to add video to call 2. No more sharing capabilities available for DUT 3. Reference 1 receives the video.
Deep inspection	<ol style="list-style-type: none"> 1. Verify share session establishment (including SDP negotiation) 2. Verify H.264 (Baseline profile, level: 1b) support in SDP negotiation

Test case ID	ID_RCS_T_4_3_2
Related test cases	
Feature	Enriched Calling
Reason for test	Live Video. Video share: sending video – receiver (with sender under HSPA/LTE/WiFi)
Pre-conditions Scenario	<ol style="list-style-type: none"> 1. DUT and Reference 1 are registered RCS users 2. DUT coverage is 3G and VS is enabled under 3G 3. Reference 1 coverage is HSPA, Wi-Fi or LTE 4. DUT and Reference 1 are in an active voice call 5. Capabilities exchange has taken place confirming video share is possible

Test procedure	<ol style="list-style-type: none"> 1. After the call is established, Reference 1 starts video share to DUT. 2. DUT accepts the invite. 3. Reference 1 sends video to DUT.
Expected results Post-conditions	<ol style="list-style-type: none"> 1. DUT receives invitation to add video to call 2. DUT receives the video.
Deep inspection	<ol style="list-style-type: none"> 1. Verify share session establishment (including SDP negotiation) 2. Verify H.264 (Baseline profile, level: 1b) support in SDP negotiation

Test case ID	ID_RCS_T_4_3_3
Related test cases	
Feature	Enriched Calling
Reason for test	Live Video. Simultaneous video share session
Pre-conditions Scenario	<ol style="list-style-type: none"> 1. DUT and Reference 1 are registered RCS users 2. Both users are under HSPA or Wi-Fi 3. DUT and Reference 1 are in an active voice call 4. Capabilities exchange has taken place confirming video share is possible
Test procedure	<ol style="list-style-type: none"> 1. After the call established, DUT starts video share to Reference 1. 2. Reference 1 accepts the invite and indicate they want to share their video back to DUT. 3. DUT sends video to Reference 1 and Reference 1 sends video to DUT. 4. DUT stops sharing live video. 5. Reference 1 stops sharing live video.
Expected results Post-conditions	<ol style="list-style-type: none"> 1. Reference 1 receives invitation to add video to call 2. DUT receives no invitation to accept video from Reference 1 3. Reference 1 receives the video. DUT receives the video and Reference 1 keeps receiving video simultaneously 4. Reference 1 stops receiving video 5. DUT stops receiving video

Deep inspection	<ol style="list-style-type: none"> 1. Verify share session establishment (including SDP offer from DUT). SIP INVITE sent by DUT 2. Verify share session establishment (including SDP answer from DUT). SIP INVITE sent by Reference 1 3. Verify graceful termination of the share session (signalling) via traces. SIP BYE sent by DUT 4. Verify graceful termination of the share session (media) via traces 5. Verify graceful termination of the share session (signalling) via traces. SIP BYE sent by Reference 1 6. Verify graceful termination of the share session (media) via traces 7. If a video session, verify H.264 support in SDP negotiation (BP/CBP profiles)
------------------------	---

Test case ID	ID_RCS_T_4_3_4
Related test cases	
Feature	Enriched Calling
Reason for test	Live Video. Simultaneous video share session. Reference 1 on LTE
Pre-conditions Scenario	<ol style="list-style-type: none"> 1. DUT and Reference 1 are registered RCS users 2. DUT coverage is HSPA or Wi-Fi 3. Reference 1 coverage is LTE 4. DUT and Reference 1 are in an active voice call 5. Capabilities exchange has taken place confirming video share is possible
Test procedure	<ol style="list-style-type: none"> 1. After the call established, DUT starts video share to Reference 1. 2. Reference 1 accepts the invite and indicate they want to share their video back to DUT. 3. DUT sends video to Reference 1. Reference 1 sends video to DUT. 4. DUT stops sharing live video. 5. Reference 1 stops sharing live video.
Expected results Post-conditions	<ol style="list-style-type: none"> 1. Reference 1 receives invitation to add video to call 2. DUT receives no invitation to accept video from Reference 1 3. Reference 1 receives the video. DUT receives the video and Reference 1 keeps receiving video simultaneously 4. Reference 1 stops receiving video 5. DUT stops receiving video
Deep inspection	<ol style="list-style-type: none"> 1. Verify share session establishment (including SDP offer from DUT). SIP INVITE sent by DUT 2. Verify share session establishment (including SDP answer from DUT). SIP INVITE sent by Reference 1 3. Verify graceful termination of the share session (signalling) via traces. SIP BYE sent by DUT 4. Verify graceful termination of the share session (media) via traces

	<ol style="list-style-type: none"> 5. Verify graceful termination of the share session (signalling) via traces. SIP BYE sent by Reference 1 6. Verify graceful termination of the share session (media) via traces 7. If a video session, verify H.264 support in SDP negotiation (BP/CBP, level: 1b when DUT under Wi-Fi, level: 1.2 when DUT under HSPA)
--	---

Test case ID	ID_RCS_T_4_3_5
Related test cases	
Feature	Enriched Calling
Reason for test	Live Video. Video share: Handover
Pre-conditions Scenario	<ol style="list-style-type: none"> 1. DUT and Reference 1 are registered RCS users 2. Both users under HSPA 3. DUT and Reference 1 are in an active voice call 4. Capabilities exchange has taken place confirming video share is possible 5. A video share session is already in place from DUT to Reference 1
Test procedure	<ol style="list-style-type: none"> 1. DUT goes to Wi-Fi coverage 2. DUT manually initiates another video share 3. Reference 1 accepts the invite
Expected results	<ol style="list-style-type: none"> 1. The initial video share is terminated (video share is interrupted) 2. Reference 1 receives video again
Post-conditions	
Deep inspection	<ol style="list-style-type: none"> 1. Verify signalling/media termination of the initial video share session 2. Verify DUT re-registration takes place due to IP reconfiguration 3. Re-registration flow 4. Verify delay/impact on video share service 5. Verify share session establishment (including SDP negotiation)

Test case ID	ID_RCS_T_4_3_6
Related test cases	
Feature	Enriched Calling
Reason for test	Live Video. Call termination (video share)

Pre-conditions Scenario	<ol style="list-style-type: none"> 1. DUT and Reference 1 are registered RCS users 2. Both users are under HSPA or Wi-Fi 3. DUT and Reference 1 are in an active voice call 4. Capabilities exchange has taken place confirming video share is possible 5. DUT is sharing video to Reference 1
Test procedure	<ol style="list-style-type: none"> 1. DUT ends the call while sharing.
Expected results Post-conditions	<ol style="list-style-type: none"> 1. The video share is terminated (video no longer displayed)
Deep inspection	<ol style="list-style-type: none"> 1. Verify graceful termination of the share session (signalling) via traces 2. Verify graceful termination of the share session (media) via traces 3. Verify H.264 support in SDP negotiation 4. Verify RTCP always used 5. Verify dummy packets sent

Test case ID	ID_RCS_T_4_3_7
Related test cases	
Feature	Enriched Calling
Reason for test	Live Video. Graceful termination of a simultaneous video share session due to changing conditions
Pre-conditions Scenario	<ol style="list-style-type: none"> 1. DUT and Reference 1 are registered RCS users 2. Both users under HSPA or Wi-Fi 3. DUT and Reference 1 are in an active voice call 4. Capabilities exchange has taken place confirming video share is possible 5. A video share session is already in place from DUT to Reference 1 and from Reference 1 to DUT
Test procedure	<ol style="list-style-type: none"> 1. DUT goes to 3G coverage, consequently, the 2-ways video share cannot be maintained. 2. DUT stops sending video to Reference 1
Expected results Post-conditions	<ol style="list-style-type: none"> 1. Reference 1 stops receiving the video from DUT, however DUT keeps receiving video simultaneously

Deep inspection	<ol style="list-style-type: none"> 1. Verify share session establishment (including SDP negotiation) 2. Verify graceful termination of the share session (signalling) via traces 3. Verify graceful termination of the share session (media) via traces 4. If a video session, verify H.264 support in SDP negotiation
------------------------	--

Test case ID	ID_RCS_T_4_3_8
Related test cases	
Feature	Enriched Calling
Reason for test	Live Video. Video share: invite cancellation
Pre-conditions Scenario	<ol style="list-style-type: none"> 1. DUT and Reference 1 are registered RCS users 2. Both users under HSPA or Wi-Fi 3. DUT and Reference 1 are in an active voice call 4. Capabilities exchange has taken place confirming video share is possible
Test procedure	<ol style="list-style-type: none"> 1. DUT sends video share invite to Reference 1 2. DUT decides to cancel the invite
Expected results Post-conditions	<ol style="list-style-type: none"> 1. Reference 1 receives invitation to add video to call 2. Reference 1 gets notification that the video share invite has been cancelled. 3. The call remains without video share
Deep inspection	<ol style="list-style-type: none"> 1. Verify invitation process 2. Verify cancelation response

Test case ID	ID_RCS_T_4_3_9
Related test cases	
Feature	Enriched Calling
Reason for test	Live Video. Video share: no answer

Pre-conditions Scenario	<ol style="list-style-type: none"> 1. DUT and Reference 1 are registered RCS users 2. Both users under HSPA or Wi-Fi 3. DUT and Reference 1 are in an active voice call 4. Capabilities exchange has taken place confirming video share is possible
Test procedure	<ol style="list-style-type: none"> 1. DUT sends video share invite to Reference 1 2. Reference 1 stays passive after receiving invite for video share from DUT
Expected results Post-conditions	<ol style="list-style-type: none"> 1. The call remains and the video share session is not established
Deep inspection	<ol style="list-style-type: none"> 1. Verify signalling flow (invite+timeout) 2. Verify capability exchange following timeout (capability update)

Test case ID	ID_RCS_T_4_3_10
Related test cases	
Feature	Enriched Calling
Reason for test	Live Video. Video share: reject
Pre-conditions Scenario	<ol style="list-style-type: none"> 1. DUT and Reference 1 are registered RCS users 2. Both users under HSPA or Wi-Fi 3. DUT and Reference 1 are in an active voice call 4. Capabilities exchange has taken place confirming video share is possible
Test procedure	<ol style="list-style-type: none"> 1. DUT sends video share invite to Reference 1 2. Reference 1 rejects DUT's invite to video share. It is not possible for DUT to start sharing.
Expected results Post-conditions	<ol style="list-style-type: none"> 1. The call remains without video share

Deep inspection	1. Verify signalling flow (invite+rejection)
------------------------	--

Test case ID	ID_RCS_T_4_3_11
Related test cases	
Feature	Enriched Calling
Reason for test	Live Video. Video share: end by sender
Pre-conditions Scenario	<ol style="list-style-type: none"> 1. DUT and Reference 1 are registered RCS users 2. Both users under HSPA or Wi-Fi 3. DUT and Reference 1 are in an active voice call 4. Capabilities exchange has taken place confirming video share is possible 5. A video share session is already in place from DUT to Reference 1
Test procedure	1. DUT stops video share while sharing.
Expected results	<ol style="list-style-type: none"> 1. Reference 1 gets notification that the video share has been cancelled/terminated. 2. The voice call remains
Post-conditions	
Deep inspection	<ol style="list-style-type: none"> 1. Verify signalling flow (cancellation) 2. Verify media graceful termination

Test case ID	ID_RCS_T_4_3_12
Related test cases	
Feature	Enriched Calling
Reason for test	Live Video. Video share: end by receiver

Pre-conditions Scenario	<ol style="list-style-type: none"> 1. DUT and Reference 1 are registered RCS users 2. Both users under HSPA or Wi-Fi 3. DUT and Reference 1 are in an active voice call 4. Capabilities exchange has taken place confirming video share is possible 5. A video share session is already in place from DUT to Reference 1
Test procedure	<ol style="list-style-type: none"> 1. Reference 1 cancels video share while sharing.
Expected results Post-conditions	<ol style="list-style-type: none"> 1. DUT gets notification that the video share has been cancelled/terminated. 2. The voice call remains
Deep inspection	<ol style="list-style-type: none"> 1. Verify signalling flow (cancellation) 2. Verify media graceful termination 3. Verify Capability exchange following cancelation (capability update)

Test case ID	ID_RCS_T_4_3_13
Related test cases	
Feature	Enriched Calling
Reason for test	Live Video. Video share: Non-successful simultaneous invites
Pre-conditions Scenario	<ol style="list-style-type: none"> 1. DUT and Reference 1 are registered RCS users 2. Reference 1 is on 3G 3. DUT and Reference 1 are in an active voice call 4. Capabilities exchange has taken place confirming video share is possible
Test procedure	<ol style="list-style-type: none"> 1. Both DUT & Reference 1 send video share invites simultaneously. 2. The first session DUT-> Reference 1 is accepted
Expected results Post-conditions	<ol style="list-style-type: none"> 1. DUT->Reference 1 video share is established. 2. Reference 1 sees that video share is not available (simultaneous session)

Deep inspection	<ol style="list-style-type: none"> 1. Verify graceful establishment of the video share session (signalling) via traces (active session) and cancellation of the other invitation 2. Verify graceful establishment of the video share session (media) via traces (active session) 3. Verify H.264 support in SDP negotiation 4. Verify cancellation process by Reference 1 5. Verify Capability exchange by DUT on receiving cancellation.
------------------------	--

Test case ID	ID_RCS_T_4_3_14
Related test cases	
Feature	Enriched Calling
Reason for test	Live Video. Video share: non-graceful termination -sender
Pre-conditions Scenario	<ol style="list-style-type: none"> 1. DUT and Reference 1 are registered RCS users 2. Both users under HSPA or Wi-Fi 3. DUT and Reference 1 are in an active voice call 4. Capabilities exchange has taken place confirming video share is possible 5. A video share session is already in place from Reference 1 to DUT
Test procedure	<ol style="list-style-type: none"> 1. Reference 1 loses the data connection
Expected results Post-conditions	<ol style="list-style-type: none"> 1. DUT stops receiving video 2. The video share is terminated on both ends and the video share capability is shown as unavailable
Deep inspection	<ol style="list-style-type: none"> 1. Verify RTCP SR/timeout process (DUT Timer expires) 2. Verify signalling/media termination 3. Verify capability exchange following the event

Test case ID	ID_RCS_T_4_3_15
Related test cases	
Feature	Enriched Calling

Reason for test	Live Video. Video share: non-graceful termination -receiver
Pre-conditions Scenario	<ol style="list-style-type: none"> 1. DUT and Reference 1 are registered RCS users 2. Both users under HSPA or Wi-Fi 3. DUT and Reference 1 are in an active voice call 4. Capabilities exchange has taken place confirming video share is possible 5. A video share session is already in place from DUT to Reference 1
Test procedure	<ol style="list-style-type: none"> 1. Reference 1 loses the data connection
Expected results Post-conditions	<ol style="list-style-type: none"> 1. Reference 1 no longer receives video 2. The video share is terminated on both ends and the video share capability is shown as unavailable
Deep inspection	<ol style="list-style-type: none"> 1. Verify RTCP RR/timeout process (DUT Timer expires) 2. Verify signalling/media termination 3. Verify capability exchange following the event

Test case ID	ID_RCS_T_4_3_16
Related test cases	
Feature	Enriched Calling
Reason for test	Live Video. Video share: sending video – caller. DUT is roaming
Pre-conditions Scenario	<ol style="list-style-type: none"> 1. DUT and Reference 1 are registered RCS users 2. Both users coverage is 3G, HSPA or Wi-Fi 3. DUT is roaming
Test procedure	<ol style="list-style-type: none"> 1. Reference 1 initiates a voice call to DUT 2. DUT accepts the voice call 3. Reference 1 starts video share to DUT. 4. DUT accepts the invite. 5. Reference 1 sends video to DUT. 6. Reference 1 stops sharing video

Expected results Post-conditions	<ol style="list-style-type: none"> 1. A voice call is established 2. Video Share is shown as available on both sides 3. DUT gets an invitation for Video Share 4. DUT receives the video. 5. DUT stops receiving video
Deep inspection	<ol style="list-style-type: none"> 1. Verify Capability Exchange where for DUT the originator identity of the incoming in call SIP OPTION requests and originator identity of the voice call are matched based on the format of the identities as defined in section 2.5.2.2.2 of [GSMA RCC.07 RCS6.0 UNI]. 2. Verify for DUT originator identity of the incoming in call SIP INVITE request for Video Share and originator identity of the telephony call are matched based on the procedures defined in section 2.5.2.2.2 of [GSMA RCC.07 RCS6.0 UNI]. 3. Verify share session establishment (including SDP negotiation) 4. Verify graceful termination of the share session (signalling) via traces 5. Verify graceful termination of the share session (media) via traces 6. verify H.264 support in SDP negotiation

Test case ID	ID_RCS_T_4_3_17
Related test cases	
Feature	Enriched Calling
Reason for test	Live Video. Video share: sending video – callee. Non international format
Pre-conditions Scenario	<ol style="list-style-type: none"> 1. DUT and Reference 1 are registered RCS users 2. Both users coverage is 3G, HSPA or Wi-Fi 3. DUT (caller) and B (callee) are in an active voice call 4. DUT calls Reference 1 dialling non international format entry (e.g. 0785444444 and without having international format entry in address book
Test procedure	<ol style="list-style-type: none"> 1. DUT initiates a voice call to Reference 1 dialling a non international format entry (e.g. 0785444444 and without having international format entry in address book 2. Reference 1 accepts the voice call 3. Reference 1 starts video share to DUT. 4. DUT accepts the invite. 5. Reference 1 sends video to DUT. 6. Reference 1 stops sharing video
Expected results Post-conditions	<ol style="list-style-type: none"> 1. A voice call is established 2. Video Share is shown as available on both sides 3. DUT gets an invitation for Video Share 4. DUT receives the video. 5. DUT stops receiving video

Deep inspection	<ol style="list-style-type: none"> 1. Verify for DUT the originator identity of the incoming in call SIP OPTION requests and destination identity of the telephony call are matched based on the format of the identities as defined in section 2.5.2.2.1 of [GSMA RCC.07 RCS6.0 UNI]. 2. Verify for DUT originator identity of the incoming in call SIP INVITE request for Video Share and destination identity of the telephony call are matched based on the procedures defined in section 2.5.2.2.1 of [GSMA RCC.07 RCS6.0 UNI]. 3. Verify share session establishment (including SDP negotiation) 4. Verify graceful termination of the share session (signalling) via traces 5. Verify graceful termination of the share session (media) via traces 6. If a video session, verify H.264 support in SDP negotiation
------------------------	--

Test case ID	ID_RCS_T_4_3_18
Related test cases	
Feature	Enriched Calling
Reason for test	Live Video. Video share: sending video – callee. DUT is roaming
Pre-conditions Scenario	<ol style="list-style-type: none"> 1. DUT and Reference 1 are registered RCS users 2. Both users coverage is 3G, HSPA or Wi-Fi 3. DUT (callee) and Reference 1 (caller) are in an active voice call 4. DUT is roaming 5. Capabilities exchange has taken place confirming video share is possible
Test procedure	<ol style="list-style-type: none"> 1. DUT starts video share to Reference 1. 2. Reference 1 accepts the invite. 3. DUT sends video to Reference 1. 4. DUT stops Video Share
Expected results Post-conditions	<ol style="list-style-type: none"> 1. Reference 1 gets an invitation for Video Share 2. Reference 1 receives the video. 3. Reference 1 stops receiving video
Deep inspection	<ol style="list-style-type: none"> 1. Verify DUT addresses Reference 1 for sending the outgoing in call SIP INVITE request for video share based on originator identity of the telephony call format as defined in section 2.5.3.2.2 of [GSMA RCC.07 RCS6.0 UNI]. 2. Verify share session establishment (including SDP negotiation) 3. Verify graceful termination of the share session (signalling) via traces 4. Verify graceful termination of the share session (media) via traces 5. If a video session, verify H.264 support in SDP negotiation

Shared Map

Test case ID	ID_RCS_T_4_4_1
Related test cases	
Feature	Enriched Calling
Reason for test	Shared map. Send shared map
Pre-conditions Scenario	<ol style="list-style-type: none"> 1. DUT and Reference 1 are registered RCS users 2. Both users are under 3G, HSPA, LTE or Wi-Fi 3. DUT and Reference 1 are in an active voice call 4. Capabilities exchange has taken place confirming shared map is possible
Test procedure	<ol style="list-style-type: none"> 1. DUT invites Reference 1 to share map. 2. Reference 1 accepts the invite.
Expected results Post-conditions	<ol style="list-style-type: none"> 1. Reference 1 receives shared map sketch invitation 2. DUT is notified that Reference 1 has accepted 3. Map is shared
Deep inspection	<ol style="list-style-type: none"> 1. Verify share session establishment (including SDP negotiation) 2. Verify correct usage of shared map ICSI: (see RCC.20 section 2.9.7 Shared Map) 3. Verify the MSRP messages MIME content types (the a=accept-types shall only include application/vnd.gsma.sharedmap+xml MIME type) 4. Verify that the <version> element and the <user> element is sent

Test case ID	ID_RCS_T_4_4_2
Related test cases	
Feature	Enriched Calling
Reason for test	Shared map. Receive shared map
Pre-conditions Scenario	<ol style="list-style-type: none"> 1. DUT and Reference 1 are registered RCS users 2. Both users are under 3G, HSPA, LTE or Wi-Fi 3. DUT and Reference 1 are in an active voice call 4. Capabilities exchange has taken place confirming shared map is possible

Test procedure	<ol style="list-style-type: none"> Reference 1 invites DUT to share map. DUT accepts the invite.
Expected results Post-conditions	<ol style="list-style-type: none"> DUT receives shared map sketch invitation Map is shared
Deep inspection	<ol style="list-style-type: none"> Verify share session establishment (including SDP negotiation) Verify correct usage of shared map ICSI: (see RCC.20 section 2.9.7 Shared Map) Verify the MSRP messages MIME content types (the a=accept-types shall only include application/vnd.gsma.sharedmap+xml MIME type) Verify that the <version> element and the <user> element is sent

Test case ID	ID_RCS_T_4_4_3
Related test cases	
Feature	Enriched Calling
Reason for test	Shared map. Map sketch edit: changes that cannot currently be seen
Pre-conditions Scenario	<ol style="list-style-type: none"> DUT and B are registered RCS users Both users are under 3G, HSPA, LTE or Wi-Fi DUT and B are in an active voice call Capabilities exchange has taken place confirming shared map is possible A shared map session is already in place from DUT to Reference 1
Test procedure	<ol style="list-style-type: none"> Reference 1 edits a part of the map that DUT currently is not viewing
Expected results Post-conditions	<ol style="list-style-type: none"> DUT does not see the map edits that Reference 1 is performing DUT gets indication that map edits are happening outside of the view

Deep inspection	1. Verify the <bounds> element sent by Reference 1 are different from what DUT is watching
------------------------	--

Test case ID	ID_RCS_T_4_4_4
Related test cases	
Feature	Enriched Calling
Reason for test	Shared map. Map sketch edit: send marker
Pre-conditions Scenario	<ol style="list-style-type: none"> 1. DUT and B are registered RCS users 2. Both users are under 3G, HSPA, LTE or Wi-Fi 3. DUT and B are in an active voice call 4. Capabilities exchange has taken place confirming shared map is possible 5. A shared map session is already in place from DUT to Reference 1
Test procedure	1. DUT sends a location marker to Reference 1
Expected results	1. Reference 1 receives the location marker
Post-conditions	
Deep inspection	1. Verify DUT sends <marker> element as per section 2.9.10 of RCC.20

Test case ID	ID_RCS_T_4_4_5
Related test cases	
Feature	Enriched Calling
Reason for test	Shared map. Shared map: session is unexpectedly closed (due to error to MSRP session)

Pre-conditions Scenario	<ol style="list-style-type: none"> 1. DUT and B are registered RCS users 2. Both users are under 3G, HSPA, LTE 3. DUT and B are in an active voice call 4. Capabilities exchange has taken place confirming shared map is possible 5. A shared map session is already in place from DUT to Reference 1
Test procedure	<ol style="list-style-type: none"> 1. DUT switches to Wi-Fi 2. DUT and Reference 1 attempt to do a change to the map simultaneously 3. Reference 1 terminates the call
Expected results Post-conditions	<ol style="list-style-type: none"> 1. The shared map remains available 2. The changes are shown on both devices 3. the call is terminated 4. the shared map is available in the call logs
Deep inspection	<ol style="list-style-type: none"> 1. verify termination of the SIP/MSRP session 2. Verify simultaneous session setup is handled as described in section 2.9.9.1 of RCC.20 3. Verify Shared Map session closure as defined in section 2.9.9.2 of RCC.20

Test case ID	ID_RCS_T_4_4_6
Related test cases	
Feature	Enriched Calling
Reason for test	Shared map. Shared map: session is unexpectedly closed (due to error to MSRP session)
Pre-conditions Scenario	<ol style="list-style-type: none"> 1. DUT and B are registered RCS users 2. Both users are under 3G, HSPA, LTE 3. DUT and B are in an active voice call 4. Capabilities exchange has taken place confirming shared map is possible 5. A shared map session is already in place from DUT to Reference 1
Test procedure	<ol style="list-style-type: none"> 1. Reference 1 switches to Wi-Fi 2. Reference 1 does an update of the shared map 3. DUT does an update of the shared map
Expected results Post-conditions	<ol style="list-style-type: none"> 1. The shared map remains available 2. the update is shown on both devices 3. the update is shown on both devices

Deep inspection	<ol style="list-style-type: none"> 1. Verify the closing of the SIP/MSRP session 2. Verify DUT accepts the new INVITE that is sent after Reference 1's update of the map as described in section 2.9.9.1 3. Verify DUT sends Shared Map update in the new session
------------------------	--

Shared Sketch

Test case ID	ID_RCS_T_4_5_1
Related test cases	
Feature	Enriched Calling
Reason for test	Shared sketch. Send shared sketch
Pre-conditions Scenario	<ol style="list-style-type: none"> 1. DUT and Reference 1 are registered RCS users 2. Both users are under 3G, HSPA, LTE or Wi-Fi 3. DUT and Reference 1 are in an active voice call 4. Capabilities exchange has taken place confirming shared sketch is possible
Test procedure	<ol style="list-style-type: none"> 1. DUT invites Reference 1 to share sketch. 2. Reference 1 accepts the invite.
Expected results Post-conditions	<ol style="list-style-type: none"> 1. Reference 1 receives shared sketch invitation. 2. DUT is notified that Reference 1 has accepted 3. sketch is shared
Deep inspection	<ol style="list-style-type: none"> 1. Verify share session establishment (including SDP negotiation) 2. Verify correct usage of shared sketch ICSI: (see RCC.20 section 2.9.8 Shared Sketch) 3. Verify the MSRP messages MIME content types (the a=accept-types shall only include application/vnd.gsma.sharedsketch+xml MIME type) 4. Verify that the <version> element is sent

Test case ID	ID_RCS_T_4_5_2
Related test cases	
Feature	Enriched Calling
Reason for test	Shared sketch. Receive shared sketch

Pre-conditions Scenario	<ol style="list-style-type: none"> 1. DUT and Reference 1 are registered RCS users 2. Both users are under 3G, HSPA, LTE or Wi-Fi 3. DUT and Reference 1 are in an active voice call 4. Capabilities exchange has taken place confirming shared sketch is possible
Test procedure	<ol style="list-style-type: none"> 1. Reference 1 invites DUT to share sketch. 2. Reference 1 accepts the invite.
Expected results Post-conditions	<ol style="list-style-type: none"> 1. DUT receives shared sketch invitation. 2. sketch is shared
Deep inspection	<ol style="list-style-type: none"> 1. Verify share session establishment (including SDP negotiation) 2. Verify correct usage of shared sketch ICSI: (see RCC.20 section 2.9.8 Shared Sketch) 3. Verify the MSRP messages MIME content types (the a=accept-types shall only include application/vnd.gsma.sharedsketch+xml MIME type) 4. Verify that the <version> element is sent

Test case ID	ID_RCS_T_4_5_3
Related test cases	
Feature	Enriched Calling
Reason for test	Shared sketch. Send share sketch and DUT cancels before session is established
Pre-conditions Scenario	<ol style="list-style-type: none"> 1. DUT and Reference 1 are registered RCS users 2. Both users are under 3G, HSPA, LTE or Wi-Fi 3. DUT and Reference 1 are in an active voice call 4. Capabilities exchange has taken place confirming shared sketch is possible
Test procedure	<ol style="list-style-type: none"> 1. DUT sends shared sketch invite to Reference 1 2. DUT then decides to cancel it.

Expected results Post-conditions	<ol style="list-style-type: none"> Reference 1 receives invite for the shared sketch session Reference 1 gets notification that the shared sketch invite has been cancelled before it has accepted it.
Deep inspection	<ol style="list-style-type: none"> Verify invitation process Verify cancelation response

Test case ID	ID_RCS_T_4_5_4
Related test cases	
Feature	Enriched Calling
Reason for test	Shared sketch. Send share sketch and Invite timeout
Pre-conditions Scenario	<ol style="list-style-type: none"> DUT and Reference 1 are registered RCS users Both users are under 3G, HSPA, LTE or Wi-Fi DUT and Reference 1 are in an active voice call Capabilities exchange has taken place confirming shared sketch is possible
Test procedure	<ol style="list-style-type: none"> After the call established, DUT invites Reference 1 to share sketch. Reference 1 does not respond to the invite.
Expected results Post-conditions	<ol style="list-style-type: none"> Reference 1 receives invite for shared sketch from DUT. It is not possible for DUT to start sharing sketch. The call continues uninterrupted
Deep inspection	<ol style="list-style-type: none"> Verify that Reference 1 terminated the shared sketch session with 408 Request Timeout response once supervision timer expired

Test case ID	ID_RCS_T_4_5_5
Related test cases	

Feature	Enriched Calling
Reason for test	Shared sketch. reject Shared Sketch session
Pre-conditions Scenario	<ol style="list-style-type: none"> 1. DUT and Reference 1 are registered RCS users 2. Both users are under 3G, HSPA, LTE or Wi-Fi 3. DUT and Reference 1 are in an active voice call 4. Capabilities exchange has taken place confirming shared sketch is possible
Test procedure	<ol style="list-style-type: none"> 1. DUT initiates a shared Sketch session 2. Reference 1 rejects the invite to the Shared Sketch session
Expected results Post-conditions	<ol style="list-style-type: none"> 1. Referene 1 receives invite for the shared sketch session 2. It is not possible for DUT to start sharing sketch. 3. The call continues uninterrupted
Deep inspection	<ol style="list-style-type: none"> 1. Verify the error response codes to from Reference 1 to the invite from DUT 2. Verify that no Shared Sketch xml element is sent

Test case ID	ID_RCS_T_4_5_6
Related test cases	
Feature	Enriched Calling
Reason for test	Shared sketch. Sketch edit with open sketch session: draw on the sketch background
Pre-conditions Scenario	<ol style="list-style-type: none"> 1. DUT and Reference 1 are registered RCS users 2. Both users are under 3G, HSPA, LTE or Wi-Fi 3. DUT and Reference 1 are in an active voice call 4. Capabilities exchange has taken place confirming shared sketch is possible 5. A shared sketch session is already in place from DUT to Reference 1
Test procedure	<ol style="list-style-type: none"> 1. DUT draws on the sketch background (e.g. with their finger and/or a stylus) 2. Reference 1 draws on the sketch background (e.g. with their finger and/or a stylus)

Expected results	1. Reference 1 can see that DUT draws on the sketch background
Post-conditions	2. DUT can see that Reference 1 draws on the sketch background
Deep inspection	1. Verify the shared sketch XML elements used as per section 2.9.10 of the RCC.20

Test case ID	ID_RCS_T_4_5_7
Related test cases	
Feature	Enriched Calling
Reason for test	Shared sketch. Sketch edit with open sketch session: remove lines on the sketch
Pre-conditions Scenario	<ol style="list-style-type: none"> 1. DUT and Reference 1 are registered RCS users 2. Both users are under 3G, HSPA, LTE or Wi-Fi 3. DUT and Reference 1 are in an active voice call 4. Capabilities exchange has taken place confirming shared sketch is possible 5. A shared sketch session is already in place from DUT to Reference 1
Test procedure	<ol style="list-style-type: none"> 1. DUT removes any line drawn by DUT on the sketch by using an undo function. 2. Reference 1 removes any line drawn by Reference 1 on the sketch by using an undo function. 3. DUT removes any line drawn by Reference 1 on the sketch by using an eraser tool. 4. Reference 1 removes any line drawn by DUT on the sketch by using an eraser tool.
Expected results	1. Reference 1 can see that DUT removed any line drawn by DUT on the sketch by using an undo function.
Post-conditions	<ol style="list-style-type: none"> 2. DUT can see that Reference 1 removed any line drawn by Reference 1 on the sketch by using an undo function. 3. Reference 1 can see that DUT removed any line drawn by Reference 1 on the sketch by using an eraser tool. 4. DUT can see that Reference 1 removed any line drawn by DUT on the sketch by using an eraser tool.
Deep inspection	1. Verify the shared sketch XML elements used as per section 2.9.10 of the RCC.20

Test case ID	ID_RCS_T_4_5_8
Related test cases	
Feature	Enriched Calling
Reason for test	Shared sketch. End shared sketch session
Pre-conditions Scenario	<ol style="list-style-type: none"> 1. DUT and Reference 1 are registered RCS users 2. Both users are under 3G, HSPA, LTE or Wi-Fi 3. DUT and Reference 1 are in an active voice call 4. Capabilities exchange has taken place confirming shared sketch is possible 5. A shared sketch session is already in place from DUT to Reference 1
Test procedure	<ol style="list-style-type: none"> 1. DUT ends the shared sketch session from the shared sketch screen
Expected results Post-conditions	<ol style="list-style-type: none"> 1. DUT ends the shared sketch session
Deep inspection	<ol style="list-style-type: none"> 1. Verify the shared sketch XML elements used as per section 2.9.10 of the RCC.20 2. Verify that the <close> tag is sent

Test case ID	ID_RCS_T_4_5_9
Related test cases	
Feature	Enriched Calling
Reason for test	Shared sketch. Session persistence after device back or home keys
Pre-conditions Scenario	<ol style="list-style-type: none"> 1. DUT and Reference 1 are registered RCS users 2. Both users are under 3G, HSPA, LTE or Wi-Fi 3. DUT and Reference 1 are in an active voice call 4. Capabilities exchange has taken place confirming shared sketch is possible 5. A shared sketch session is already in place from DUT to Reference 1

Test procedure	1. DUT presses the device back or home keys
Expected results Post-conditions	1. The shared sketch session is not ended
Deep inspection	1. Verify that no shared sketch XML element is sent

Test case ID	ID_RCS_T_4_5_10
Related test cases	
Feature	Enriched Calling
Reason for test	Shared sketch. Shared sketch termination once voice call ends
Pre-conditions Scenario	<ol style="list-style-type: none"> 1. DUT and Reference 1 are registered RCS users 2. Both users are under 3G, HSPA, LTE or Wi-Fi 3. DUT and Reference 1 are in an active voice call 4. Capabilities exchange has taken place confirming shared sketch is possible 5. A shared sketch session is already in place from DUT to Reference 1
Test procedure	1. DUT ends the call while sharing sketch
Expected results Post-conditions	<ol style="list-style-type: none"> 1. The shared sketch session is closed 2. The call is terminated
Deep inspection	<ol style="list-style-type: none"> 1. Verify that the <close> tag is sent 2. Verify the termination of the shared sketch session

Test case ID	ID_RCS_T_4_5_11
Related test cases	

Feature	Enriched Calling
Reason for test	Shared sketch. Shared sketch: session is unexpectedly closed (due to error to MSRP session)
Pre-conditions Scenario	<ol style="list-style-type: none"> 1. DUT and Reference 1 are registered RCS users 2. Both users are under 3G, HSPA, LTE 3. DUT and Reference 1 are in an active voice call 4. Capabilities exchange has taken place confirming shared sketch is possible 5. A shared sketch session is already in place from DUT to Reference 1
Test procedure	<ol style="list-style-type: none"> 1. DUT switches to Wi-Fi 2. DUT and Reference 1 attempt to do a change to the sketch simultaneously 3. Reference 1 terminates the call
Expected results Post-conditions	<ol style="list-style-type: none"> 1. The shared sketch remains available 2. The changes are shown on both devices 3. the call is terminated 4. the shared sketch is available in the call logs
Deep inspection	<ol style="list-style-type: none"> 1. verify termination of the SIP/MSRP session 2. Verify simultaneous session setup is handled as described in section 2.9.9.1 of RCC.20 3. Verify Shared Sketch session closure as defined in section 2.9.9.2 of RCC.20

Test case ID	ID_RCS_T_4_5_12
Related test cases	
Feature	Enriched Calling
Reason for test	Shared sketch. Shared sketch: session is unexpectedly closed (due to error to MSRP session)
Pre-conditions Scenario	<ol style="list-style-type: none"> 1. DUT and Reference 1 are registered RCS users 2. Both users are under 3G, HSPA, LTE 3. DUT and Reference 1 are in an active voice call 4. Capabilities exchange has taken place confirming shared sketch is possible 5. A shared sketch session is already in place from DUT to Reference 1
Test procedure	<ol style="list-style-type: none"> 1. Reference 1 switches to Wi-Fi 2. Reference 1 does an update of the shared sketch 3. DUT does an update of the shared sketch

Expected results	1. The shared sketch remains available between DUT and Reference 1 and the session remains ongoing
Post-conditions	2. The shared sketch update by Reference 1 is shown on both devices 3. The shared sketch update by DUT is shown on both devices
Deep inspection	1. Verify the closing of the SIP/MSRP session 2. Verify DUT accepts the new INVITE that is sent after Reference 1's update of the sketch as described in section 2.9.9.1 of the RCC.20 3. Verify DUT sends Shared Sketch update in the new session

Test case ID	ID_RCS_T_4_5_13
Related test cases	
Feature	Enriched Calling
Reason for test	Shared sketch. Loss of data connectivity before Shared Sketch session is established
Pre-conditions Scenario	1. DUT and Reference 1 are registered RCS users 2. Both users are under 3G, HSPA, LTE or Wi-Fi 3. DUT and Reference 1 are in an active voice call 4. Capabilities exchange has taken place confirming shared sketch is possible
Test procedure	1. DUT initiates a shared Sketch session 2. Reference 1 loses data connectivity before the Invite is received
Expected results	1. The sketch session is not established. 2. Time out display is shown on DUT
Post-conditions	
Deep inspection	1. Verify that the request is terminated with a time out sent to DUT.

Test case ID	ID_RCS_T_4_5_14
Related test cases	

Feature	Enriched Calling
Reason for test	Shared sketch. Edit Sketch: change Line Colour
Pre-conditions Scenario	<ol style="list-style-type: none"> 1. DUT and Reference 1 are registered RCS users 2. Both users are under 3G, HSPA, LTE or Wi-Fi 3. DUT and Reference 1 are in an active voice call 4. Capabilities exchange has taken place confirming shared sketch is possible 5. A shared sketch session is already in place from DUT to Reference 1
Test procedure	<ol style="list-style-type: none"> 1. DUT modifies the colour of the line 2. DUT makes a new drawing
Expected results Post-conditions	<ol style="list-style-type: none"> 1. Reference 1 can see that the Line colour is modified 2. The next drawing from DUT comes with the new colour
Deep inspection	<ol style="list-style-type: none"> 1. Verify line color attribute in Shared Sketch xml

4.1.2.2.5

File Transfer

Test case ID	ID_RCS_T_4_6_1
Related test cases	
Feature	Enriched Calling
Reason for test	Share any file in a call. Successful file transfer in active one-to-one chat
Pre-conditions Scenario	<ol style="list-style-type: none"> 1. DUT and Reference 1 are online and in active 1-to-1 Chat session. 2. Both users are RCS users in an active voice call 3. Reference 1 has enough free storage space to receive file. 4. File size being transferred is less than the warning file size. 5. DUT and Reference 1 support File Transfer according to former capability exchange.
Test procedure	<ol style="list-style-type: none"> 1. DUT selects to share any file from his in-call screen 2. Reference 1 opens the file.

Expected results Post-conditions	<ol style="list-style-type: none"> 1. DUT sees that file transfer option is available for the recipient from his in-call screen 2. Reference 1 receives file transfer download notification 3. The file is transferred and received. The recipient can access the file from the in-call screen 4. Delivery and display notification are received by DUT. 5. The file is opened
Deep inspection	<ol style="list-style-type: none"> 1. Verify successful upload of thumbnail and file to content server and recipient of correct file description XML (as per RCC.0). 2. Verify FT notification XML is sent inside the active chat. 3. Verify the URL complies to ftcontentserver.rcs.mnc<MNC>.mcc<MCC>.pub.3gppnetwork.org. 4. Verify HTTPS requests for file and optional thumbnail are sent to the content server in DUT's network and the content is received. 5. Verify delivery and display notifications are sent within MSRP session or SIP MESSAGEs is chat session closed.

Test case ID	ID_RCS_T_4_6_2
Related test cases	
Feature	Enriched Calling
Reason for test	Share any file in a call. Successful file transfer in new one-to-one chat
Pre-conditions Scenario	<ol style="list-style-type: none"> 1. DUT has Reference 1 as RCS contact. 2. DUT and Reference 1 are online but not in active 1-to-1 Chat session. 3. Both users are RCS users in an active voice call 4. Reference 1 has enough free storage space to receive file. 5. File size being transferred is smaller than the warning file size. 6. DUT and Reference 1 support HTTP-based File Transfer according to capabilities exchange.
Test procedure	<ol style="list-style-type: none"> 1. DUT selects to share any file from his in-call screen 2. Reference 1 opens the file.
Expected results Post-conditions	<ol style="list-style-type: none"> 1. DUT sees that file transfer option is available for the recipient from his in-call screen 2. Reference 1 receives file transfer download notification 3. The file is transferred and received. The recipient can access the file from his in-call screen 4. Delivery and display notification are received by DUT. 5. The file is opened

Deep inspection	<ol style="list-style-type: none"> 1. Verify successful upload of thumbnail and file to content server and recipient of correct file description XML (as per RCC.0). 2. Verify a new 1-to-1 Chat session is created carrying the http File Transfer tag in the accept contact header and used to send the File Transfer notification to Reference 1. 3. Verify support of FT HTTP xml content type during SDP negotiation. 4. Verify the URL complies to ftcontentserver.rcs.mnc<MNC>.mcc<MCC>.pub.3gppnetwork.org. 5. Verify HTTPS requests for file and optional thumbnail are sent to the content server in DUT's network and the content is received. 6. Verify delivery and display notifications are sent within MSRP session or in SIP MESSAGEs if chat session closed.
------------------------	--

Test case ID	ID_RCS_T_4_6_3
Related test cases	
Feature	Enriched Calling
Reason for test	Share any file in a call. Successful file transfer in active one-to-one chat (resume file upload)
Pre-conditions Scenario	<ol style="list-style-type: none"> 1. DUT and Reference 1 are online and in active 1-to-1 chat session. 2. Both users are RCS users in an active voice call 3. Reference 1 has enough free storage space to receive file. 4. File size being transferred is less than the warning file size 5. DUT and Reference 1 support HTTP-based File Transfer according to capabilities exchange.
Test procedure	<ol style="list-style-type: none"> 1. DUT selects one file from his in-call screen 2. During file upload DUT gets out of coverage, e.g. Data Mode is set to off. 3. DUT returns to coverage (automatically). 4. Reference 1 opens the file.
Expected results Post-conditions	<ol style="list-style-type: none"> 1. DUT sees that file transfer is available for the recipient from his in-call screen 2. The upload of the file starts 3. the upload stops before the transfer is complete. 4. When back in data coverage, the transfer proceeds automatically. 5. Reference 1 receives file transfer notification and can access the file from the in call screen 6. Delivery and display notifications are received by DUT. 7. the file is opened
Deep inspection	<ol style="list-style-type: none"> 1. Verify resume file upload procedure including TID form sent by DUT initially and additional 3 HTTPS requests steps resume operation. 2. Verify correct file description XML. 3. Verify support of FT HTTP xml content type during SDP negotiation. 4. Verify FT notification XML is sent inside the active chat. 5. Verify the URL complies to

	<p>ftcontentserver.rcs.mnc<MNC>.mcc<MCC>.pub.3gppnetwork.org.</p> <ol style="list-style-type: none"> 6. Verify HTTPS requests for file and optional thumbnail are sent to the content server in DUT's network and the content is received. 7. Verify delivery and display notifications are sent within MSRP session or in SIP MESSAGEs if chat session closed.
--	---

Test case ID	ID_RCS_T_4_6_4
Related test cases	
Feature	Enriched Calling
Reason for test	Share any file in a call. Successful file transfer in active one-to-one chat (resume file download)
Pre-conditions Scenario	<ol style="list-style-type: none"> 1. DUT and Reference 1 are online but not in active 1-to-1 chat session. 2. Both users are RCS users 3. DUT and Reference 1 are in an active voice call 4. DUT has enough free storage space to receive file. 5. File size being transferred is smaller than the warning file size. 6. DUT and Reference 1 support HTTP-based File Transfer according to capabilities exchange.
Test procedure	<ol style="list-style-type: none"> 1. Reference 1 selects one file from his in-call screen 2. During file download DUT gets out of coverage, e.g. Data Mode is set to off. 3. DUT returns to coverage. 4. DUT opens the file.
Expected results Post-conditions	<ol style="list-style-type: none"> 1. Reference 1 sees that file transfer is available for the recipient from his in-call screen 2. DUT receives file transfer notification 3. A Delivery notifications is received by Reference 1 4. The download of the file starts 5. The download of the file stops before the transfer is complete. 6. The transfer proceeds automatically until the file received by DUT. 7. A Display notifications is received by Reference 1.
Deep inspection	<ol style="list-style-type: none"> 1. Verify support of FT HTTP xml content type during SDP negotiation 2. Verify FT notification XML is sent inside the active chat. 3. Verify the URL complies to ftcontentserver.rcs.mnc<MNC>.mcc<MCC>.pub.3gppnetwork.org. 4. Verify HTTPS requests for file and optional thumbnail are sent to content server in DUT's network and first content is received. 5. Verify HTTPS requests for file is resumed and not restarted when client gets back in coverage. 6. Verify delivery and display notifications are sent within MSRP session or in SIP MESSAGEs if chat session closed.

Test case ID	ID_RCS_T_4_6_5
Related test cases	
Feature	Enriched Calling
Reason for test	Share any file in a call. Unsuccessful file transfer. File upload fails
Pre-conditions Scenario	<ol style="list-style-type: none"> 1. DUT and Reference 1 are online and in active 1-to-1 chat session. 2. Both users are RCS users in 3. DUT and Reference 1 are in an active voice call 4. File size being transferred is less than the warning file size 5. DUT and Reference 1 support HTTP-based FT according to capabilities exchange. 6. A file name is in a language that is not recognisable by the server
Test procedure	<ol style="list-style-type: none"> 1. DUT selects one file from the local storage and then selects the file transfer option to Reference 1. 2. During file upload DUT gets HTTP error response from content server. 3. Client automatically attempts the upload resume procedure (as per 3.5.4.8.3.1.1 RCS 6.0) 3 times 4. File upload fails 5. NOTE: To facilitate self-accreditation this test can be simulated
Expected results Post-conditions	<ol style="list-style-type: none"> 1. DUT sees that file transfer is available for the recipient from his in-call screen 2. The upload of the file starts but stops before the transfer is complete. 3. DUT is not able to upload file
Deep inspection	<ol style="list-style-type: none"> 1. Verify resume file upload procedure including TID form sent by DUT initially and additional 3 HTTPS requests steps resume operation. 2. Verify client stops file upload after 3 unsuccessful retries

4.1.2.2.6

Geolocation Push

Test case ID	ID_RCS_T_4_7_1
Related test cases	
Feature	Enriched Calling
Reason for test	In-Call Geolocation Push. Share Location: 'send my location'

Pre-conditions Scenario	<ol style="list-style-type: none"> 1. DUT and Reference 1 are registered RCS users 2. Both users are under 3G, HSPA, LTE or Wi-Fi 3. Capabilities exchange has taken place confirming both parties support Geolocation Push 4. DUT and Reference 1 are in an active voice call
Test procedure	<ol style="list-style-type: none"> 1. DUT selects 'send my location' option to share location information from his in-call screen 2. Reference 1 clicks the Location Share item 3. Wait for longer than the configured value for the IM SESSION TIMER configuration parameter
Expected results Post-conditions	<ol style="list-style-type: none"> 1. Reference 1 receives the notification of Location Share, it is displayed in the in-call screen 2. DUT is notified of the delivery of the Location Share 3. the location is shown in a map in the in-call screen 4. DUT is notified of the display of the Location Share
Deep inspection	<ol style="list-style-type: none"> 1. Verify session is established as per section 2.1.11 of RCC.72 2. Verify that no label attribute is included 3. Verify Session is correctly completed

Test case ID	ID_RCS_T_4_7_2
Related test cases	
Feature	Enriched Calling
Reason for test	In-Call Geolocation Push. Share Location: several location share
Pre-conditions Scenario	<ol style="list-style-type: none"> 1. DUT and Reference 1 are registered RCS users 2. Both users are under 3G, HSPA, LTE or Wi-Fi 3. Capabilities exchange has taken place confirming both parties support Geolocation Push 4. DUT and Reference 1 are in an active voice call
Test procedure	<ol style="list-style-type: none"> 1. DUT shares location information using the 'my location' option 2. DUT shares location information using the 'send a place' option 3. DUT shares location information using the 'send a pre-defined location' option 4. When Reference 1 clicks one of the shared Location Share items
Expected results Post-conditions	<ol style="list-style-type: none"> 1. Reference 1 receives the notification of each Location Share, it is displayed in the in-call screen 2. DUT is notified of the delivery of each Location Share 3. the location is shown in a map in the in-call screen.

Deep inspection	<ol style="list-style-type: none"> 1. New session is established as per as per section 2.1.11 of RCC.72 2. all locations are sent in this same session 3. For the locations shared using the “send a place” and “send pre-defined location” options Plain Text information is included in the label attribute
Test case ID	ID_RCS_T_4_7_3
Related test cases	
Feature	Enriched Calling
Reason for test	In-Call Geolocation Push. Share Location: ‘send a pre-defined location’ with no plain text information
Pre-conditions Scenario	<ol style="list-style-type: none"> 1. DUT and Reference 1 are registered RCS users 2. Both users are under 3G, HSPA, LTE or Wi-Fi 3. both parties support Geolocation Push 4. The CHAT AUTH configuration parameter is set to ‘1’ for both users
Test procedure	<ol style="list-style-type: none"> 1. DUT sends a text message to Reference 1 2. DUT initiates a voice call with Reference 1 3. Reference 1 accepts the voice call 4. DUT selects ‘send pre-defined’ option to share location information within a call and enters no text 5. DUT previews the details of the Geolocation Push and then sends it 6. Reference 1 clicks the Location Share item
Expected results Post-conditions	<ol style="list-style-type: none"> 1. A voice call is established 2. Geolocation Push is shown to be available to both parties 3. DUT sees the information that they are about to send 4. Pre-defined place information sent by DUT is received by Reference 1 5. DUT is notified of the delivery of each Location Share 6. the location is shown in a map in the in-call screen.
Deep inspection	<ol style="list-style-type: none"> 1. Verify that a Chat session is established and text message is sent as Chat Message 2. Verify that no new session is established for sending the Geolocation Push as per section 2.1.11 of RCC.72 and that Geolocation Push is sent inside existing Chat Session 3. Verify that an empty string is sent as the label 4. Verify delivery and display notifications

4.1.3 Post-Call Experience

4.1.3.1 Functional Test Cases

Test case ID	ID_RCS_F_4_3_1
Related test cases	
Feature	RCS Enriched Calling
Reason for test	UP 1.0. Reference section 12.10: Post-Call experience
Pre-conditions Scenario	<ol style="list-style-type: none"> 1. A-Party's device is enabled for EnRiched Calling and offline. 2. On A-Party's device, the supplementary service CLIR (Calling Line Identifier Restriction) is disabled (see R12-4-). 3. B-Party is stored in A-Party's contact list as a contact.
Test procedure	<ol style="list-style-type: none"> 1. Call B-Party from A-Party's device. 2. Do <u>not</u> answer the call on B-Party's device (no voicemail). 3. Cancel call setup on A-Party's device.
Expected results	<ol style="list-style-type: none"> 1. B-Party's device rings. 2. After call cancellation, A-Party is not offered any post-call services.
Post-conditions	
Deep inspection	

Test case ID	ID_RCS_F_4_3_2
Related test cases	
Feature	RCS Enriched Calling
Reason for test	UP 1.0. Reference section 12.10: Post-Call experience
Pre-conditions Scenario	<ol style="list-style-type: none"> 1. A-Party's device is enabled for EnRiched Calling and online. 2. On A-Party's device, the supplementary service CLIR (Calling Line Identifier Restriction) is disabled (see R12-4-). 3. B-Party's device is enabled for EnRiched Calling and online. 4. B-Party is stored in A-Party's contact list as a contact.
Test procedure	<ol style="list-style-type: none"> 1. Call B-Party from A-Party's device. 2. Do <u>not</u> answer the call on B-Party's device (no voicemail). 3. Cancel call setup on A-Party's device.

Expected results	1. B-Party's device rings.
Post-conditions	2. After call cancellation, A-Party is offered to leave a post-call note or post-call audio message.
Deep inspection	

Test case ID	ID_RCS_F_4_3_3
Related test cases	
Feature	RCS Enriched Calling
Reason for test	UP 1.0. Reference section 12.10: Post-Call experience
Pre-conditions Scenario	<ol style="list-style-type: none"> 1. A-Party's device is enabled for EnRiched Calling and online. 2. On A-Party's device, the supplementary service CLIR (Calling Line Identifier Restriction) is disabled (see R12-4-). 3. B-Party's device is enabled for EnRiched Calling and online. 4. B-Party is stored in A-Party's contact list as a contact.
Test procedure	<ol style="list-style-type: none"> 1. Call B-Party from A-Party's device. 2. Do <u>not</u> answer the call on B-Party's device (no voicemail). 3. Cancel call setup on A-Party's device. 4. Send a post-call note from A-Party's device
Expected results	1. B-Party's device rings.
Post-conditions	<ol style="list-style-type: none"> 2. After call cancellation, A-Party is offered to leave a post-call note or post-call audio message. 3. A-Party gets a confirmation that post-call note was sent. B-Party receives the post-call note and can read the post-call note: <ol style="list-style-type: none"> a. In an update of the missed call notification (if that missed call notification has not been cancelled on B-Party's device). b. From the call log.
Deep inspection	

Test case ID	ID_RCS_F_4_3_4
Related test cases	
Feature	RCS Enriched Calling
Reason for test	UP 1.0. Reference section 12.10: Post-Call experience

Pre-conditions Scenario	<ol style="list-style-type: none"> 1. A-Party's device is enabled for EnRiched Calling and online. 2. On A-Party's device, the supplementary service CLIR (Calling Line Identifier Restriction) is disabled (see R12-4-). 3. B-Party's device is enabled for EnRiched Calling and online. 4. B-Party is stored in A-Party's contact list as a contact.
Test procedure	<ol style="list-style-type: none"> 1. Call B-Party from A-Party's device. 2. Do <u>not</u> answer the call on B-Party's device (no voicemail). 3. Cancel call setup on A-Party's device. 4. Send a post-call audio message from A-Party's device
Expected results Post-conditions	<ol style="list-style-type: none"> 1. B-Party's device rings. 2. After call cancellation, A-Party is offered to leave a post-call note or post-call audio message. 3. A-Party gets a confirmation that post-call audio message was sent. B-Party receives the post-call audio message and can play it: <ol style="list-style-type: none"> a. From an update of the missed call notification (if that missed call notification has not been cancelled on B-Party's device). b. From the call log.
Deep inspection	

Test case ID	ID_RCS_F_4_3_5
Related test cases	
Feature	RCS Enriched Calling
Reason for test	UP 1.0. Reference section 12.10: Post-Call experience
Pre-conditions Scenario	<ol style="list-style-type: none"> 1. A-Party's device is enabled for EnRiched Calling and online. 2. On A-Party's device, the supplementary service CLIR (Calling Line Identifier Restriction) is disabled (see R12-4-). 3. B-Party's device is <u>not</u> enabled for EnRiched Calling. 4. B-Party is stored in A-Party's contact list as a contact.
Test procedure	<ol style="list-style-type: none"> 1. Call B-Party from A-Party's device. 2. Do <u>not</u> answer the call on B-Party's device (no voicemail). 3. Cancel call setup on A-Party's device. 4. Send a post-call note from A-Party's device.
Expected results Post-conditions	<ol style="list-style-type: none"> 1. B-Party's device rings. 2. After call cancellation, A-Party is offered to leave a post-call note. 3. A-Party gets a confirmation that post-call note was sent. B-Party receives the post-call note as 1-to-1 Messaging (RCS message or SMS).

Deep inspection	
------------------------	--

4.1.3.2 Technical Test Cases

Test case ID	ID_RCS_T_4_8_1
Related test cases	
Feature	Enriched Calling
Reason for test	Post-call. Call unanswered: user leaves a note (reason)
Pre-conditions Scenario	<ol style="list-style-type: none"> 1. DUT and Reference 1 are registered RCS users 2. Both users are under 3G, HSPA, LTE or Wi-Fi 3. Capabilities exchange has taken place confirming both parties support call unanswered services 4. The Communication Forwarding on No Reply supplementary service is not active for Reference 1 (e.g. no redirect to voice mail)
Test procedure	<ol style="list-style-type: none"> 1. DUT initiates a call to Reference 1 2. Reference 1 ignores the incoming call 3. DUT sends a Post-call note to Reference 1
Expected results Post-conditions	<ol style="list-style-type: none"> 1. The post-call service is offered to DUT 2. note is available in DUT's call logs 3. note will be displayed in the missed call log of Reference 1
Deep inspection	<ol style="list-style-type: none"> 1. Verify successful capability discovery for post call service 2. Verify the enriched calling session initiation based on procedures described in section 2.3. of RCC.20 and ICSI defined in section 2.5.1 of RCC.20 as soon as the user confirms to send the post-call note 3. Verify SDP content as described in section 2.3.3 of RCC.20 4. Verify MSRP session handling as described in section 2.3.4 of RCC.20 5. Verify correct usage of post call ICSI 6. Verify the note is sent based on format described in section 2.5.4 of RCC.20 7. Verify the MSRP SEND content-type header field carrying the XML body for the note is application/vnd.gsma.encall+xml. 8. Verify post-call note and unanswered call association

Test case ID	ID_RCS_T_4_8_2
Related test cases	

Feature	Enriched Calling
Reason for test	Post-call. Call unanswered: DUT attempts to leave a note but MSRP session setup fails
Pre-conditions Scenario	<ol style="list-style-type: none"> 1. DUT and Reference 1 are registered RCS users 2. Both users are under 3G, HSPA, LTE or Wi-Fi 3. Capabilities exchange has taken place confirming both parties support call unanswered services 4. The Communication Forwarding on No Reply supplementary service is not active for Reference 1 (e.g. no redirect to voice mail)
Test procedure	<ol style="list-style-type: none"> 1. DUT initiates a call to Reference 1 2. Reference 1 ignores the incoming call 3. Reference 1 goes offline 4. DUT sends a note to Reference 1 5. Reference 1 comes online again
Expected results Post-conditions	<ol style="list-style-type: none"> 1. The post-call service is offered to DUT 2. note is displayed on Reference 1 as part of the message exchange with DUT.
Deep inspection	<ol style="list-style-type: none"> 1. Verify successful capability discovery for post call service 2. Verify the enriched calling session initiation based on procedures described in section 2.3. of RCC.20 and ICSI defined in section 2.5.1 of RCC.20 as soon as the user confirms to send the post-call note 3. Verify SDP content as described in section 2.3.3 of RCC.20 4. Verify correct usage of post call ICSI 5. Verify SIP final Response to SIP INVITE is 4xx or 6xx e.g. SIP 408 Request Timeout 6. Verify note information is sent using operator messaging

Test case ID	ID_RCS_T_4_8_3
Related test cases	
Feature	Enriched Calling
Reason for test	Post-call. Call unanswered: user leaves a voice message
Pre-conditions Scenario	<ol style="list-style-type: none"> 1. DUT and Reference 1 are registered RCS users 2. Both users are under 3G, HSPA, LTE or Wi-Fi 3. Capabilities exchange has taken place confirming both parties support call unanswered services 4. The Communication Forwarding on No Reply supplementary service is not active for Reference 1 (e.g. no redirect to voice mail)

Test procedure	<ol style="list-style-type: none"> 1. DUT initiates a call to Reference 1 2. Reference 1 ignores the incoming call 3. DUT sends a voice message to Reference 1
Expected results Post-conditions	<ol style="list-style-type: none"> 1. The post-call service is offered to DUT 2. Audio message is available in DUT's call logs 3. Audio message is available in the missed call log on Reference 1
Deep inspection	<ol style="list-style-type: none"> 1. Verify successful capability discovery for post call service 2. Verify the enriched calling session initiation based on procedures described in section 2.3. of RCC.20 and ICSI defined in section 2.5.1 of RCC.20 as soon as the user confirms to send the post-call audio message 3. Verify SDP content as described in section 2.3.3 of RCC.20 4. Verify MSRP session handling as described in section 2.3.4 of RCC.20 5. Verify correct usage of post call ICSI 6. Verify audio message upload and the MSRP SEND request that carries the audio message information content-type header field is set to application/vnd.gsma.rcs-ft-http+xml 7. Verify the audio message is sent based on format described in section 2.5 of RCC.20

Test case ID	ID_RCS_T_4_8_4
Related test cases	
Feature	Enriched Calling
Reason for test	Post-call. Call unanswered: DUT attempts to leave a voice message whereas MSRP session is terminated due to non receiving an MSRP SEND response
Pre-conditions Scenario	<ol style="list-style-type: none"> 1. DUT and Reference 1 are registered RCS users 2. Both users are under 3G, HSPA, LTE or Wi-Fi 3. Capabilities exchange has taken place confirming both parties support call unanswered services 4. The Communication Forwarding on No Reply supplementary service is not active for Reference 1 (e.g. no redirect to voice mail)
Test procedure	<ol style="list-style-type: none"> 1. DUT initiates a call to Reference 1 2. Reference 1 ignores the incoming call 3. DUT attempts to send an audio message to Reference 1 4. Reference 1 goes offline after setup of postcall session 5. Reference 1 comes online again 6. NOTE: To facilitate self-accreditation this test can be simulated

Expected results Post-conditions	<ol style="list-style-type: none"> 1. DUT sends audio message sent using operator messaging 2. note is displayed on Reference 1 as part of the message exchange with DUT.
Deep inspection	<ol style="list-style-type: none"> 1. Verify successful capability discovery for post call service 2. Verify the enriched calling session initiation based on procedures described in section 2.3. of RCC.20 and ICSI defined in section 2.5.1 of RCC.20 as soon as the user confirms to send the post-call audio message 3. Verify SDP content as described in section 2.3.3 of RCC.20 4. Verify MSRP session handling as described in section 2.3.4 of RCC.20 5. Verify correct usage of post call ICSI 6. Verify audio message upload and the MSRP SEND request that carries the audio message information content-type header field is set to application/vnd.gsma.rcs-ft-http+xml 7. Verify the audio message is sent based on format described in section 2.5 of RCC.20 8. Verify SIP BYE request received by DUT (e.g. SIP; cause=503;text="Service Unavailable") 9. Verify audio message information is sent using operator messaging

Test case ID	ID_RCS_T_4_8_5
Related test cases	
Feature	Enriched Calling
Reason for test	Post-call. Receiving note (reason)
Pre-conditions Scenario	<ol style="list-style-type: none"> 1. DUT and Reference 1 are registered RCS users 2. Both users are under 3G, HSPA, LTE or Wi-Fi 3. Capabilities exchange has taken place confirming both parties support call unanswered services 4. The Communication Forwarding on No Reply supplementary service is not active for DUT (e.g. no redirect to voice mail)
Test procedure	<ol style="list-style-type: none"> 1. Reference 1 initiates a call to DUT 2. DUT ignores the incoming call 3. Reference 1 sends a post-call note to DUT
Expected results Post-conditions	<ol style="list-style-type: none"> 1. The post-call service is offered to DUT 2. Note is available in Reference 1's call logs 3. Note will be displayed in the missed call log of DUT 4. Note is available in missed call notification on DUT

Deep inspection	<ol style="list-style-type: none"> 1. Verify successful capability discovery for post call service 2. Verify the enriched calling session initiation based on procedures described in section 2.3. of RCC.20 and ICSI defined in section 2.5.1 of RCC.20 as soon as the user confirms to send the post-call note 3. Verify SDP content as described in section 2.3.3 of RCC.20 4. Verify MSRP session handling as described in section 2.3.4 of RCC.20 5. Verify correct usage of post call ICSI 6. Verify the note is received with the format described in section 2.5.4 of RCC.20 7. Verify the MSRP SEND content-type header field carrying the XML body for the note is application/vnd.gsma.encall+xml.
------------------------	--

Test case ID	ID_RCS_T_4_8_6
Related test cases	
Feature	Enriched Calling
Reason for test	Post-call. Receiving audio message
Pre-conditions Scenario	<ol style="list-style-type: none"> 1. DUT and Reference 1 are registered RCS users 2. Both users are under 3G, HSPA, LTE or Wi-Fi 3. Capabilities exchange has taken place confirming both parties support call unanswered services 4. The Communication Forwarding on Busy supplementary service is not active for DUT (e.g. no redirect to voice mail)
Test procedure	<ol style="list-style-type: none"> 1. Reference 1 initiates a call to DUT 2. DUT rejects the incoming call 3. Reference 1 sends a voice message to DUT
Expected results Post-conditions	<ol style="list-style-type: none"> 1. The post-call service is offered to DUT 2. voice message is available in Reference 1's call logs 3. voice message will be displayed in the missed call log of DUT 4. DUT shows indication on voice message
Deep inspection	<ol style="list-style-type: none"> 1. Verify successful capability discovery for post call service 2. Verify the enriched calling session initiation based on procedures described in section 2.3. of RCC.20 and ICSI defined in section 2.5.1 of RCC.20 as soon as the user confirms to send the post-call audio message 3. Verify SDP content as described in section 2.3.3 of RCC.20 4. Verify MSRP session handling as described in section 2.3.4 of RCC.20 5. Verify correct usage of post call ICSI 6. Verify the received MSRP SEND request that carries the audio message information content-type header field is set to application/vnd.gsma.rcs-ft-http+xml

	<ol style="list-style-type: none"> 7. Verify the audio message is received with the format described in section 2.5 of RCC.20 8. Verify audio message automatic download once the XML document with the audio message information is received 9. Verify audio message auto-accept
--	--

Test case ID	ID_RCS_T_4_8_7
Related test cases	
Feature	Enriched Calling
Reason for test	Post-call. (if client allows) DUT attempts to leave a note which is longer than 60 characters
Pre-conditions Scenario	<ol style="list-style-type: none"> 1. DUT and Reference 1 are registered RCS users 2. Both users are under 3G, HSPA, LTE or Wi-Fi 3. Capabilities exchange has taken place confirming both parties support call unanswered services 4. The Communication Forwarding on No Reply supplementary service is not active for Reference 1 (e.g. no redirect to voice mail)
Test procedure	<ol style="list-style-type: none"> 1. DUT initiates a call to Reference 1 2. Reference 1 ignores the incoming call 3. DUT attempts to send a note longer than 60 characters
Expected results Post-conditions	<ol style="list-style-type: none"> 1. DUT does not send the message with the note information 2. The client implementation will not allow the user to type more than 60 characters into the "leave a note" field.
Deep inspection	<ol style="list-style-type: none"> 1. none

Test case ID	ID_RCS_T_4_8_8
Related test cases	
Feature	Enriched Calling
Reason for test	Post-call. Legacy and offline support - reason

Pre-conditions Scenario	<ol style="list-style-type: none"> 1. DUT is registered RCS user 2. Reference 1 is not registered RCS user or Reference 1 is using a non enriched calling capable client or is offline 3. DUT is under 3G, HSPA, LTE or Wi-Fi 4. Capabilities exchange has taken place confirming call unanswerd services not supported by Reference 1 5. The Communication Forwarding on No Reply supplementary service is not active for Reference 1 (e.g. no redirect to voice mail)
Test procedure	<ol style="list-style-type: none"> 1. DUT initiates a call to Reference 1 2. Reference 1 ignores the incoming call 3. DUT sends a note to Reference 1
Expected results Post-conditions	<ol style="list-style-type: none"> 1. DUT sends the post-call note using operator messaging service 2. note is displayed on Reference 1 as part of the message exchange with DUT
Deep inspection	<ol style="list-style-type: none"> 1. Verify capability discovery for post call service is not successful 2. Verify note is sent using operator messaging service

4.2 Enriched Call Logs

4.2.1 Functional test cases

Test case ID	ID_RCS_F_4_4_1
Related test cases	
Feature	RCS Enriched Calling
Reason for test	UP 1.0. Reference section 12.12: Enriched Call Logs
Pre-conditions Scenario	<ol style="list-style-type: none"> 1. A-Party's device is enabled for EnRiched Calling and online. 2. On A-Party's device, the supplementary service CLIR (Calling Line Identifier Restriction) is disabled (see R12-4-). 3. B-Party's device is enabled for EnRiched Calling and online. 4. B-Party is stored in A-Party's contact list as a contact.
Test procedure	<ol style="list-style-type: none"> 1. A-Party selects B-Party as a contact to call. 2. In Call Composer, A-Party sets the call as important, introduces a subject, shares location and shares a picture. 3. A-Party calls B-Party. 4. B-Party accepts the call. 5. A-Party shares location, a picture and sends a message during the call.

	<ol style="list-style-type: none"> 6. A-Party ends the call. 7. Open Call logs on A- and B-Party's devices. 8. Open messaging conversation with A-Party and B-Party on B-Party's and A-Party's devices.
Expected results Post-conditions	<ol style="list-style-type: none"> 1. Pre-call media are selected for the call with B-Party. 2. On B-Party's screen, Pre-Call media elements are displayed while ringing. 3. The call is established. 4. On B-Party's screen, the shared media elements are displayed or accessible. 5. Call is ended. 6. In A- and B-Party's Call Logs, Pre-Call location, important flag and call subject as are accessible. Pre-Call picture and any In-Call media content may be accessible from Call Logs. 7. In the messaging conversations on both devices, pre-call location, important flag and call subject as may be accessible. Pre-Call picture and any In-Call media content are accessible in both messaging conversations.
Deep inspection	

Test case ID	ID_RCS_F_4_4_2
Related test cases	
Feature	RCS Enriched Calling
Reason for test	UP 1.0. Reference section 12.12: Enriched Call Logs
Pre-conditions Scenario	<ol style="list-style-type: none"> 1. A-Party's device is enabled for EnRiched Calling and online. 2. On A-Party's device, the supplementary service CLIR (Calling Line Identifier Restriction) is disabled (see R12-4-). 3. B-Party's device is enabled for EnRiched Calling and online. 4. B-Party is stored in A-Party's contact list as a contact.
Test procedure	<ol style="list-style-type: none"> 1. A-Party selects B-Party as a contact to call. 2. In Call Composer, A-Party sets the call as important, introduces a subject, shares location and shares a picture. 3. A-Party calls B-Party. 4. Before B-Party's device starts ringing, A-Party cancels the call setup. 5. Check B-Party's call logs.
Expected results Post-conditions	<ol style="list-style-type: none"> 1. Pre-call content is selected for the call with B-Party. A confirmation for media upload is provided to A-Party. 2. Call is set up on A-party's device. 3. No call was established, neither did B-Party's device alert. No missed call notification visible on B-Party's device. 4. No call log of the cancelled call are in B-Party's call logs.

Deep inspection	
Test case ID	ID_RCS_F_4_4_3
Related test cases	
Feature	RCS Enriched Calling
Reason for test	UP 1.0. Reference section 12.12: Enriched Call Logs
Pre-conditions Scenario	<ol style="list-style-type: none"> 1. A-Party's device is enabled for EnRiched Calling and online. 2. On A-Party's device, the supplementary service CLIR (Calling Line Identifier Restriction) is disabled (see R12-4-). 3. B-Party's device is enabled for EnRiched Calling and online. 4. B-Party is stored in A-Party's contact list as a contact.
Test procedure	<ol style="list-style-type: none"> 1. A-Party selects B-Party as a contact to call. 2. In Call Composer, A-Party sets the call as important, introduces a subject, shares location and shares a picture. 3. A-Party calls B-Party. 4. A-Party cancels the call setup before B-Party accepted the call. 5. Create and send a post call note from A-Party's device. 6. Check A- and B-Party's call logs.
Expected results Post-conditions	<ol style="list-style-type: none"> 1. Pre-call content is selected for the call with B-Party. A confirmation for media upload is provided to A-Party. 2. Call is set up on A-party's device. 3. B-Party's device rings. No call was established. A missed call notification is visible on B-Party's device. 4. B-Party's device receives a post call note from A-Party. 5. A- and B-Party's call logs shall contain important indicator and shared location. The post-call note is available in the call logs as well, but not the pre-call subject. 6. A- and B-Party's call logs may contain the pre-call picture
Deep inspection	

Test case ID	ID_RCS_F_4_4_4
Related test cases	
Feature	RCS Enriched Calling

Reason for test	UP 1.0. Reference section 12.12: Enriched Call Logs
Pre-conditions Scenario	<ol style="list-style-type: none"> 1. A-Party's device is enabled for EnRiched Calling and online. 2. On A-Party's device, the supplementary service CLIR (Calling Line Identifier Restriction) is disabled (see R12-4-). 3. B-Party's device is enabled for EnRiched Calling and online. 4. B-Party is stored in A-Party's contact list as a contact.
Test procedure	<ol style="list-style-type: none"> 1. A-Party selects B-Party as a contact to call. 2. In Call Composer, A-Party sets the call as important, introduces a subject, shares location and shares a picture. 3. A-Party calls B-Party. 4. A-Party cancels the call setup before B-Party accepted the call. 5. Create and send a post call audio message from A-Party's device. 6. Check A- and B-Party's call logs.
Expected results Post-conditions	<ol style="list-style-type: none"> 1. Pre-call content is selected for the call with B-Party. A confirmation for media upload is provided to A-Party. 2. Call is set up on A-party's device. 3. B-Party's device rings. No call was established. A missed call notification is visible on B-Party's device. 4. A- and B-Party's call logs contain important indicator, call subject, shared location and the post-call audio message. A- and B-Party's call logs may contain pre-call picture.
Deep inspection	

5 Multi-Device Messaging

This section left intentionally blank

6 Data off

This section left intentionally blank

7 Backup and Restore

This section left intentionally blank

8 APIs

This section left intentionally blank

9 Green Button Promise for Voice

This section left intentionally blank

10 Green Button Promise for IP Video Call Services

This section left intentionally blank

11 Multi-Device for Voice & Video

This section left intentionally blank

Annex A Test Cases guidelines for Phase 1 of OMA SIMPLE IM-CPM transition

A.1 Framework

A.1.1 Device Provisioning

This feature set to be tested in accordance with test cases provided in section 2.1 of the current document.

A.1.2 Capability Discovery

This feature set to be tested in accordance with test cases provided in section 2.2.2.1 of the current document.

A.1.3 Security Against Malware

This feature set to be tested in accordance with test cases provided in section 3.4 of the current document.

A.2 Messaging

A.2.1 1-to-1 Messaging

This feature set to be tested using the generic set of test cases provided in section 3.1 of the current document and additional specific to SIMPLE IM test cases provided in this section.

The list of IDs for generic test cases is provided below:

- ID_RCS_T_3_1_6
- ID_RCS_T_3_1_7
- ID_RCS_T_3_1_8
- ID_RCS_T_3_1_9
- ID_RCS_T_3_1_10
- ID_RCS_T_3_1_11
- ID_RCS_T_3_1_12
- ID_RCS_T_3_1_13
- ID_RCS_T_3_1_14
- ID_RCS_T_3_1_15
- ID_RCS_T_3_1_16
- ID_RCS_T_3_1_17
- ID_RCS_T_3_1_18
- ID_RCS_T_3_1_19
- ID_RCS_T_3_1_20
- ID_RCS_T_3_1_21
- ID_RCS_T_3_1_22
- ID_RCS_T_3_1_24
- ID_RCS_T_3_1_25
- ID_RCS_T_3_1_27
- ID_RCS_T_3_1_28
- ID_RCS_T_3_1_29

- ID_RCS_T_3_1_30
- ID_RCS_T_3_1_35
- ID_RCS_T_3_1_37
- ID_RCS_T_3_1_38
- ID_RCS_T_3_1_39
- ID_RCS_T_3_1_41
- ID_RCS_T_3_1_42
- ID_RCS_T_3_1_43
- ID_RCS_T_3_1_44
- ID_RCS_T_3_1_45
- ID_RCS_T_3_1_46
- ID_RCS_T_3_1_47
- ID_RCS_T_3_1_48
- ID_RCS_T_3_1_49
- ID_RCS_T_3_1_50
- ID_RCS_T_3_1_51
- ID_RCS_T_3_1_52
- ID_RCS_T_3_1_53
- ID_RCS_T_3_1_54
- ID_RCS_T_3_1_55
- ID_RCS_T_3_1_56
- ID_RCS_T_3_1_57
- ID_RCS_T_3_1_58
- ID_RCS_T_3_1_59
- ID_RCS_T_3_1_62
- ID_RCS_T_3_1_63
- ID_RCS_T_3_1_64
- ID_RCS_T_3_1_65
- ID_RCS_T_3_1_67
- ID_RCS_T_3_1_73

Test case ID	ID_RCS_T_A_2_1_1
Related test cases	
Feature	1-to-1 Messaging
Reason for test	Share Location: 'send my location'
Pre-conditions Scenario	<ol style="list-style-type: none"> 1. RCS services have been previously configured successfully on the phone/SIM pair 2. Users are registered RCS users 3. Both users coverage is 3G, HSPA, LTE or Wi-Fi or bearer where Geolocation Push is available by MNO 4. Users are not in an active 1-to-1 Chat 5. Receiver is online

Test procedure	<ol style="list-style-type: none"> 1. DUT selects 'send my location' option to share location information within a 1-to-1 Chat 2. Reference 1 can see location of DUT 3. Reference 1 waits until session expires 4. Reference 1 selects 'send my location' option to share location information within a 1-to-1 Chat 5. DUT can see location of Reference 1
Expected results Post-conditions	<ol style="list-style-type: none"> 1. DUT's location is received by Reference 1 2. Reference 1 receives the notification of Location Share 3. DUT is notified of the status of delivery of his location share (delivered, displayed) 4. Reference 1's location is received by DUT 5. DUT receives the notification of Location Share 6. Reference 1 is notified of the status of delivery of his location share (delivered, displayed)
Deep inspection	<ol style="list-style-type: none"> 1. Option exchange is applied with the right tag (i.e. geoplacatiopush IARI) 2. Verify 1-to-1 Chat session establishment with the right tags in the Contact (i.e. geolocationpush IARI, sip.im) and Accept-Contact with sip.im and a separate Accept-Contact with geolocationpush IARI&require&explicit parameters 3. Contact and Accept-Contact contains the following tags: 4. +g.oma.sip-im; 5. +g.3gpp.iari-ref=""urn%3Aurn-7%3A3gpp-application.ims.iari.rcs.geopush 6. SDP contains following Media Attribute (a): accept-wrapped-types: application/vnd.gsma.rcspushlocation+xml 7. Sender is notified of the delivery and display of the content 8. Verify session has expired 9. Verify new INVITE with Location share info 10. Sender is notified of the delivery and display of the content

Test case ID	ID_RCS_T_A_2_1_2
Related test cases	
Feature	1-to-1 Messaging
Reason for test	Share Location: 'send a place'
Pre-conditions Scenario	<ol style="list-style-type: none"> 1. RCS services have been previously configured successfully on the phone/SIM pair 2. Users are registered RCS users 3. Both users coverage is 3G, HSPA, LTE or Wi-Fi or bearer where Geolocation Push is available by MNO 4. Users are in the active 1-to-1 Chat

	5. Receiver is online
Test procedure	<ol style="list-style-type: none"> 1. DUT selects 'send a place' option to share location information within a 1-to-1 chat, he adds Plain Text information 2. Reference 1 can see location of DUT 3. Reference 1 waits until session expires 4. Reference 1 selects 'send a place' option to share location information within a 1-to-1 chat, he adds Plain Text information 5. DUT can see location of Reference 1
Expected results Post-conditions	<ol style="list-style-type: none"> 1. Place information sent by DUT is received by Reference 1 2. Reference 1 receives the notification of Location Share 3. DUT is notified of the status of delivery of his location share (delivered, displayed) 4. Place information sent by Reference 1 is received by DUT 5. DUT receives the notification of Location Share 6. Reference 1 is notified of the status of delivery of his location share (delivered, displayed)
Deep inspection	<ol style="list-style-type: none"> 1. Option exchange is applied with the right tag (i.e. geoplacatiopush IARI) 2. Verify 1-to-1 Chat session establishment with the right tags in the Contact (i.e. geolocationpush IARI, sip.im) and Accept-Contact with sip.im and a separate Accept-Contact with geolocationpush IARI&require&explicit parameters 3. Contact and Accept-Contact contains the following tags: 4. +g.oma.sip-im; 5. +g.3gpp.iari-ref=""urn%3Aurn-7%3A3gpp-application.ims.iari.rcs.geopush 6. SDP contains following Media Attribute (a): accept-wrapped-types: application/vnd.gsma.rcspushlocation+xml 7. Plain Text information is sent, it is included in the label attribute 8. Sender is notified of the delivery and display of the content 9. Verify session has expired 10. Verify new INVITE with Location share info 11. Sender is notified of the delivery and display of the content

Test case ID	ID_RCS_T_A_2_1_3
Related test cases	
Feature	1-to-1 Messaging

Reason for test	Share Location: 'send my location'
Pre-conditions Scenario	<ol style="list-style-type: none"> 1. RCS services have been previously configured successfully on the phone/SIM pair 2. Users are registered RCS users 3. Both users coverage is 3G, HSPA, LTE or Wi-Fi or bearer where Geolocation Push is available by MNO 4. There is no Group Chat 5. Receiver is online
Test procedure	<ol style="list-style-type: none"> 1. DUT selects 'send my location' option to share location information within a Group Chat 2. Group Chat has expired 3. Reference 1 selects 'send my location' option to share location information within a Group Chat 4. Reference 1 can see delivery notifications 5. Users can see location of Reference 1
Expected results Post-conditions	<ol style="list-style-type: none"> 1. Location information sent by DUT is received by Reference 1 and 2 2. DUT is notified of the status of delivery of his location share (delivered) 3. Group Chat restarted 4. Location information sent by Reference 1 is received by DUT and Reference 2 5. Reference 1 is notified of the status of delivery of his location share (delivered)
Deep inspection	<ol style="list-style-type: none"> 1. Option exchange is applied with the right tag (i.e. fthttp, geoplaciopush IARI) 2. Verify that client includes geolocation push IARI into Contact of Group Chat INVITE 3. and Accept-Contact contains +g.oma.sip-im only; 4. SDP contains following Media Attribute (a): accept-wrapped-types: application/vnd.gsma.rcspushlocation+xml 5. Sender is notified of the delivery of the content 6. Verify Group Chat session has expired 7. Verify Group Chat restarted by Reference 1 8. Sender is notified of the delivery of the content

Test case ID	ID_RCS_T_A_2_1_4
Related test cases	
Feature	1-to-1 Messaging
Reason for test	Share Location: 'send a place' within a Group Chat session

Pre-conditions Scenario	<ol style="list-style-type: none"> 1. RCS services have been previously configured successfully on the phone/SIM pair 2. Users are registered RCS users 3. Both users coverage is 3G, HSPA, LTE or Wi-Fi or bearer where Geolocation Push is available by MNO 4. Users are in the active Group Chat 5. Receiver is online
Test procedure	<ol style="list-style-type: none"> 1. DUT selects 'send a place' option to share location information within a Group Chat 2. Group Chat has expired 3. Reference 1 selects 'send a place' option to share location information within a Group Chat 4. Reference 1 can see delivery notification 5. Users can see location of Reference 1
Expected results Post-conditions	<ol style="list-style-type: none"> 1. Location information sent by DUT is received by Reference 1 and 2 2. DUT is notified of the status of delivery of his location share (delivered) 3. Group Chat restarted 4. Location information sent by Reference 1 is received by DUT and Reference 2 5. Reference 1 is notified of the status of delivery of his location share (delivered)
Deep inspection	<ol style="list-style-type: none"> 1. Option exchange is applied with the right tag (i.e. fhttp, geoplaciopush IARI) 2. Verify that client includes geolocation push IARI into Contact of Group Chat INVITE and Accept-Contact contains +g.oma.sip-im only; 3. SDP contains following Media Attribute (a): accept-wrapped-types: application/vnd.gsma.rcspushlocation+xml 4. Sender is notified of the delivery of the content 5. Verify Group Chat session has expired 6. Verify Group Chat restarted by Reference 1 7. Sender is notified of the delivery of the content

A.2.2 Group Chat

This feature set to be tested using the generic set of test cases provided in section 3.2 of the current document and additional specific to SIMPLE IM test cases provided in this section.

The list of IDs for generic test cases is provided below:

- ID_RCS_T_3_2_5
- ID_RCS_T_3_2_6
- ID_RCS_T_3_2_7
- ID_RCS_T_3_2_8
- ID_RCS_T_3_2_9
- ID_RCS_T_3_2_10
- ID_RCS_T_3_2_11
- ID_RCS_T_3_2_12

- ID_RCS_T_3_2_13
- ID_RCS_T_3_2_14
- ID_RCS_T_3_2_15
- ID_RCS_T_3_2_16
- ID_RCS_T_3_2_17
- ID_RCS_T_3_2_18
- ID_RCS_T_3_2_19
- ID_RCS_T_3_2_20
- ID_RCS_T_3_2_21
- ID_RCS_T_3_2_22
- ID_RCS_T_3_2_23
- ID_RCS_T_3_2_24
- ID_RCS_T_3_2_25
- ID_RCS_T_3_2_26
- ID_RCS_T_3_2_27
- ID_RCS_T_3_2_28
- ID_RCS_T_3_2_29
- ID_RCS_T_3_2_30
- ID_RCS_T_3_2_31
- ID_RCS_T_3_2_32

Test case ID	ID_RCS_T_A_2_2_1
Related test cases	
Feature	Group Chat
Reason for test	Chat 1 to many. Change Chat 1 to 1 -> one to many
Pre-conditions Scenario	1. DUT and Reference 1, 2 are RCS capable and online.
Test procedure	<ol style="list-style-type: none"> 1. DUT starts a chat conversation by sending a message to Reference 1 (invitation) 2. Reference 1 accepts invitation to start chatting (opens the chat window). DUT sends another message to Reference 1 3. DUT selects Reference 2 (Reference 2's RCS capabilities previously detected) and invites him/her to join the chat by sending a message invitation

Expected results Post-conditions	<ol style="list-style-type: none"> 1. There should be a handover to a new chat screen. 2. This new chat screen should follow the UX specs of Group Chat (visible participant lists, subject, etc.) and it shall not have any message from the 1-to-1 Chat on its history.
Deep inspection	<ol style="list-style-type: none"> 1. Verify SIP INVITE containing resource-list with Reference 1,2 2. Verify Contribution ID 3. Verify +g.oma.sip-im tag in Contact and Accept-Contact of INVITE 4. Verify Subscription to conference event package

Test case ID	ID_RCS_T_A_2_2_2
Related test cases	
Feature	Group Chat
Reason for test	Initiating a chat / add a new participant; R6-29-2; R6-29-7; R6-29-8; R6-29-10; 6-29-13, R6-29-20;R6-29-22
Pre-conditions Scenario	<ol style="list-style-type: none"> 1. Minimum setup: 2. DUT + Reference 1,2,3 are registered and able to access IMS/RCS core network and relevant servers. 3. Contacts addresses of Reference 1,2,3 are entries in DUT's address book and RCS capabilities are known and not expired. 4. GROUP CHAT AUTH configuration parameter set to 1 5. IM SESSION AUTO ACCEPT GROUP CHAT set to 1 6. Supported by network: Cellular, Wi-Fi 7. Important information: Correct Implementation of the "icon in a Group Chat" feature is currently under GSG review. Related CR: GSG_RCS_CR076R01
Test procedure	<ol style="list-style-type: none"> 1. DUT selects Reference 1,2 from IM/Chat application to start a Group Chat, selects a Subject and an icon for the GC and sends 3 messages into the created Group Chat 2. DUT adds Reference 3 into the Group Chat and sends 3 message into the new, extended Group Chat 3. DUT sends 5 different small graphics into the Group Chat
Expected results Post-conditions	<ol style="list-style-type: none"> 1. GC Subject is visible to all participants.3 Group Chat Messages from DUT received and displayed on Reference 1+2. All GC participants are visible for all participants 2. GC Subject is visible to all participants.3 Group Chat Message from DUT received and displayed on Reference 1-3. All Group Chat participants are visible for all participants 3. All 5 small graphics are correctly displayed on Reference 1-3

Deep inspection	<ol style="list-style-type: none"> 1. Verify NO options exchange when selecting new user to join due to non expired capability (see pre-condition) 2. Verify INVITE containing subject header 3. Verify INVITE containing resource-list with Reference 1,2 4. Verify Contact and Accept-Contact tag +g.oma.sip-im in the INVITE 5. Verify Cotribution-ID 6. Verify subscription to conference event package 7. Verify REFER containing subject header 8. Verify NOTIFY processing with added Reference 3
------------------------	--

A.2.3 File Transfer

This feature set to be tested in accordance with test cases provided in this section.

Test Case ID	ID_RCS_T_A_2_3_1
Related Test Cases	
Feature	File Transfer
Reason for test	Reference section - R7-24-1, R7-24-3 (<i>US7-1</i>) To verify file can be selected and transferred.
Pre-conditions Scenario	<ol style="list-style-type: none"> 1. DUT and Reference 1 are online. 2. DUT and Reference 1 are configured CHAT AUTH to 1. 3. DUT and Reference 1 are configured FT DEFAULT MECH configuration parameter to HTTP. 4. The size of the File being transferred is less than FT MAX SIZE. 5. FT HTTP CS URI is valid URI
Test procedure	<ol style="list-style-type: none"> 1. DUT sends any file (e.g. JPEG, Word,.. file) to Reference 1
Expected results	<ol style="list-style-type: none"> 1. The File sent out by DUT is received by Reference 1 and DUT receives Delivery report from the Reference 1.
Post-conditions	
Deep inspection	<ol style="list-style-type: none"> 1. Verify successfully upload file (with thumbnail if DUT sends too) to content server and recipient of correct file description XML by making an HTTPs post request to FT HTTP CS URI. 2. Verify DUT receives HTTP 200OK with file information xml. 3. Verify file-info element is as per 3.5.4.8.3.1 of [GSMA RCC.07 RCS6.0 UNI]. 4. Verify SIP INVITE Message with feature-tag "+g.3gpp.iari-ref="urn%3Aurn-7%3A3gpp-application.ims.iari.rcs.fthttp"and content-type "application/vnd.gsma.rcs-ft-http+xml" is delivered successfully. 5. Verify delivery notification is delivered to the DUT when Reference 1 receives file.

Test Case ID	ID_RCS_T_A_2_3_2
---------------------	------------------

Related Test Cases	
Feature	File Transfer
Reason for test	Reference section - R7-24-1, R7-24-2, R7-24-16 (R7-1-1) To verify that if the originating device is offline, File Transfer cannot be sent from the device until DUT becomes online.
Pre-conditions Scenario	<ol style="list-style-type: none"> 1. DUT is offline. 2. DUT and Reference 1 are configured CHAT AUTH to 1. 3. DUT and Reference 1 are configured FT DEFAULT MECH configuration parameter to HTTP. 4. The size of the File being transferred is less than FT MAX SIZE.
Test procedure	<ol style="list-style-type: none"> 1. DUT sends file (e.g. JPEG file) to Reference 1. 2. DUT waits for a minute 3. DUT comes online
Expected results Post-conditions	<ol style="list-style-type: none"> 1. DUT creates a RCS File Transfer. And stays in File Transfer status as 'Pending'. 2. The DUT File Transfer status moves to 'Queued'. 3. File Transfer shall be executed once DUT is online again without further user interaction and DUT receives delivery report from the Reference 1.
Deep inspection	<ol style="list-style-type: none"> 1. Verify NO SIP message is sent out when DUT is offline. 2. When DUT is online. 3. Verify successfully upload file (with thumbnail if DUT sends too) to content server and recipient of correct file description XML by making an HTTPs post request to FT HTTP CS URI. 4. Verify DUT receives HTTP 200OK with file information xml. 5. Verify SIP INVITE Message with feature-tag "+g.3gpp.iari-ref="urn%3Aurn-7%3A3gpp-application.ims.iari.rcs.fthttp"and content-type "application/vnd.gsma.rcs-ft-http+xml" is delivered successfully. 6. Verify delivery notification is delivered to the DUT when Reference 1 receives file

Test Case ID	ID_RCS_T_A_2_3_3
Related Test Cases	
Feature	File Transfer
Reason for test	Reference section - R7-24-3, R7-24-7, R7-24-8 (R7-1-7, R7-1-7-1, R7-1-7-2) To verify that if the Reference 1 is Non RCS capable it received FT transfer link in SMS.
Pre-conditions Scenario	<ol style="list-style-type: none"> 1. DUT is online. 2. Reference 1 is Non RCS enabled. 3. DUT device configured CHAT AUTH to 1. 4. DUT is configured FT DEFAULT MECH configuration parameter to HTTP. 5. The size of the File being transferred is less than FT MAX SIZE. 6. DUT configured to FT HTTP FALLBACK to 1 7. File Content server in DUT's Network provides a Branded-url

Test procedure	1. Send a picture file from DUT to the Reference 1.
Expected results Post-conditions	1. The file shall be uploaded and 2. The sending device creates a SMS containing the branded-url that allows the recipient to download the file. 3. This link shall be accompanied by a 'cover note' in local language that conveys the following message: "You have received a file <from DUT's MSISDN number>. If you wish to download the file, please click the link."
Deep inspection	1. Verify successfully upload file (with thumbnail if DUT sends too) to content server and recipient of correct file description XML by making an HTTPs post request to FT HTTP CS URI. 2. Verify DUT receives HTTP 200OK with file information XML including the branded-url parameter 3. Verify message is sent to Reference 1 using SMS link

Test Case ID	ID_RCS_T_A_2_3_4
Related Test Cases	
Feature	File Transfer
Reason for test	Reference section - R7-24-4, R7-24-20, R7-10-4 , R7-1-3, US7-8, US7-10 To verify that DUT transfers file to all RCS users in the Group Chat.
Pre-conditions Scenario	1. DUT, Reference 1 and Reference 2 are online. 2. GROUP CHAT AUTH configuration parameter is set to 1. 3. DUT and Reference devices are configured FT DEFAULT MECH configuration parameter to HTTP. 4. DUT creates a Group Chat with reference 1 and reference 2
Test procedure	1. DUT sends a file (e.g. JPEG file) to a Group Chat created with participants Reference 1 & Reference 2
Expected results Post-conditions	1. Reference 1 and Reference 2 receive the file in Group Chat and the file should be visible in the Group Chat conversation.
Deep inspection	1. The feature-tag "+g.3gpp.iari-ref="urn%3Aurn-7%3A3gpp-application.ims.iari.rcs.fthttp"" should be in the Contact Header field of the SIP INVITE and SIP 200 OK responses that it sends during the setup of the Group Chat and accept wrapped type "application/vnd.gsma.rcs-ft-http+xml" 2. Verify successfully upload file (with thumbnail if DUT sends too) to content server and recipient of correct file description XML by making an HTTPs post request to FT HTTP CS URI. 3. Verify DUT receives HTTP 200OK with file information xml. 4. A MSRP group message with File transfer via HTTP message body

	content should be delivered successfully.
--	---

Test Case ID	ID_RCS_T_A_2_3_5
Related Test Cases	
Feature	File Transfer
Reason for test	Reference section - R7-24-4, R7-10-3, R7-1-3 US7-8, US7-10 To verify that DUT transfers file to RCS and Non RCS contact lists selected by user.
Pre-conditions Scenario	<ol style="list-style-type: none"> 1. DUT, Reference 1 are online and Reference 2 is Non RCS capable. 2. GROUP CHAT AUTH configuration parameter is set to 1. 3. DUT set FT DEFAULT MECH configuration parameter to HTTP. 4. FT HTTP FALLBACK set to 1.
Test procedure	<ol style="list-style-type: none"> 1. DUT sends a file (e.g. JPEG file) to reference 1 and 2
Expected results	<ol style="list-style-type: none"> 1. Reference 1 receives a file as incoming FT-INVITE and Reference 2 receives file as SMS with File link.
Post-conditions	
Deep inspection	<ol style="list-style-type: none"> 1. Verify successfully upload file (with thumbnail if DUT sends too) to content server and recipient of correct file description XML by making an HTTPs post request to FT HTTP CS URI. 2. Verify DUT receives HTTP 200OK with file information XML including the branded-url parameter 3. Reference 1 Verify SIP INVITE Message with content-type "application/vnd.gsma.rcs-ft-http+xml" is delivered successfully. 4. Reference 2 receives the file URL in SMS.

Test Case ID	ID_RCS_T_A_2_3_6
Related Test Cases	
Feature	File Transfer
Reason for test	Reference section - R7-24-5,R7-24-6 R7-1-4, R7-1-5, R7-1-6 <ol style="list-style-type: none"> 1. To verify File Transfer should be sent exactly one file at a time. 2. To test different file types are supported by DUT and reference device.
Pre-conditions Scenario	<ol style="list-style-type: none"> 1. DUT, Reference 1 are online Both of them are in Contact list 2. CHAT AUTH configuration parameter is set to 1. 3. DUT and Reference 1 set FT DEFAULT MECH configuration

	parameter to HTTP. 4. Each of File selected should be within the FT MAX SIZE limit.
Test procedure	1. 1. DUT Selects multiple files with different file types (Ex: JPEG, GIF, panoramic photos, mp3, mpeg-4, vcard in .vcf format) and sends to reference 1.
Expected results	1. All the files sent by DUT are received at reference 1.
Post-conditions	
Deep inspection	<ol style="list-style-type: none"> 1. Verify successfully upload file (with thumbnail if DUT sends too) to content server and recipient of correct file description XML by making an HTTPs post request to FT HTTP CS URI. 2. Verify DUT receives HTTP 200OK with file information xml. 3. Verify SIP INVITE Message with content-type "application/vnd.gsma.rcs-ft-http+xml" is delivered successfully. 4. Steps 1 to 2 will repeat for all selected files and XML received from the content server will be forward to Reference 1 for each of them 5. File URL details in XML format will be sent in MSRP to Reference 1 6. File Content-type received at Reference 1 should match the file type sent by DUT.

Test Case ID	ID_RCS_T_A_2_3_7
Related Test Cases	
Feature	File Transfer
Reason for test	Reference section - R7-24-8, R7-24-9 (R7-1-, R7-1-7-2 To verify that user is able to modify the MNO defined FT fallback preference from SMS-link to MMS.
Pre-conditions Scenario	<ol style="list-style-type: none"> 1. DUT is online. 2. Reference 1 is Non RCS enabled. 3. DUT and Reference 1 all set CHAT AUTH to 1. 4. DUT and Reference 1 set FT DEFAULT MECH configuration parameter is to HTTP. 5. The size of the File being transferred is less than FT MAX SIZE. 6. DUT configured FT HTTP FALLBACK to 1. 7. File chosen conforms to the formats and codecs defined in [OMA-MMS-CONF].
Test procedure	<ol style="list-style-type: none"> 1. Send a picture file from DUT to the Reference 1. 2. DUT changes the FT fallback pReference 1 to MMS 3. Send a picture file from DUT to the Reference 1.
Expected results	1. The file shall be uploaded and the sending device creates a SMS containing the link that allows the recipient to download the file. This link shall be accompanied by a 'cover note' in local language that
Post-	

conditions	<p>conveys the following message: “You have received a file from <DUT's MSISDN number>. If you wish to download the file, please click the link.”</p> <ol style="list-style-type: none"> 2. FT HTTP FALLBACK should be set as 0.(MMS) 3. File shall be sent as MMS from DUT and shall be received as MMS at Reference 1 device.
Deep inspection	–

Test Case ID	ID_RCS_T_A_2_3_8
Related Test Cases	
Feature	File Transfer
Reason for test	Reference section - R7-24-10 (R7-1- To verify that user modified defined FT fallback preference will be used even after Auto Re-Config
Pre-conditions Scenario	<ol style="list-style-type: none"> 1. DUT is online. 2. Reference 1 is Non RCS enabled. 3. DUT and Reference 1 all set CHAT AUTH to 1. 4. DUT and Reference 1 set FT DEFAULT MECH configuration parameter is to HTTP. 5. The size of the File being transferred is less than FT MAX SIZE. 6. DUT configured with FT HTTP FALLBACK to 1. 7. Server is configured to send FT HTTP FALLBACK to 1 in Re-Configuration
Test procedure	<ol style="list-style-type: none"> 1. DUT changes the ft fallback preference to MMS and sends a picture file from DUT to the Reference 1. 2. Wait for the autoconfiguration service provisioning timer to expire. 3. After Re-Configuration is success, send a picture file from DUT to the Reference 1.
Expected results Post-conditions	<ol style="list-style-type: none"> 1. File shall be sent as MMS from DUT and shall be received as MMS at Reference 1. 2. Verify DUT ft fallback preference it should be set to MMS(Re-Configuration value of ft fallback preference should be ignored) 3. File shall be sent as MMS from DUT and shall be received as MMS at reference 1.
Deep inspection	<ol style="list-style-type: none"> 1. Verify the FT fallback preference is the same as what user has set.

Test Case ID	ID_RCS_T_A_2_3_9
Related Test Cases	

Feature	File Transfer
Reason for test	Reference section - R7-2-2, R7-24-13. To verify that if the reference device is offline, after delivery time out reference 1 receives file as SMS. HTTPS Get parameter for FT fall-back is provided from the content server
Pre-conditions Scenario	<ol style="list-style-type: none"> 1. DUT and Reference 1 are RCS enabled and make DUT online and reference 1 offline. 2. DUT and Reference 1 all set CHAT AUTH to 1. 3. DUT and Reference 1 set FT DEFAULT MECH configuration parameter is to HTTP 4. The size of the File being transferred is less than FT MAX SIZE. 5. CHAT REVOKE TIMER set to X. 6. DUT's MNO has configured RCS clients as FT FALLBACK DEFAULT set to 0) 7. DUT is configured with FT HTTP FALLBACK set to 1 8. Reference's network support CFS. 9. File transfer via SMS feature tag is supported by DUT and Reference 1.
Test procedure	<ol style="list-style-type: none"> 1. Open an existing conversation with Reference 1 on DUT's device <u>or</u> create a new conversation with Reference 1 on DUT's device and Send a picture file to the Reference 1 from DUT. 2. When the REVOKE TIMER value is expired and with no user interaction,DUT will send via SMS the HTTP URL for File Transfer fallback to SMS to reference 1. 3. Send one more file immediately after the 1st file send is success.
Expected results Post-conditions	<ol style="list-style-type: none"> 1. DUT sends File to reference 1 in Chat. 2. After X amount of time, file should be sent via SMS the HTTP URL for File Transfer fallback to SMS which includes the meta-data parameters to reference 1. 3. When sending a subsequent file, as DUT is latched to SMS for Reference 1, file should be sent via SMS to reference 1 directly using the FT fallback to SMS method (Not in chat and later wait for revocation timer to expire to send as SMS.)
Deep inspection	<ol style="list-style-type: none"> 1. Verify 200 OK response to Options of the reference 1 includes feature tag "urn:3Aurn-7%3A3gpp-application.ims.iari.rcs.ftsms " 2. Verify successfully upload file (with thumbnail if DUT sends too) to content server and recipient of correct file description XML by making an HTTPs post request to FT HTTP CS URI. 3. Verify DUT receives HTTP 200OK with file information xml, providing the HTTPS Get parameter for FT fall-back from the content server (meta-data information as per RCC71, table 3 4. Verify SIP INVITE Message with content-type "application/vnd.gsma.rcs-ft-http+xml" is delivered successfully. 5. Verify after X duration message is sent to Reference 1 using SMS link as mentioned in the File Transfer Client Fall-back mentioned in 7.3.2.5.2 of UP_PDD
Test Case ID	ID_RCS_T_A_2_3_10

Related Test Cases	
Feature	File Transfer
Reason for test	Reference section - R7-2-2, R7-24-13. To verify that if the reference 1 is offline, after delivery time out reference 1 receives file URL as SMS. Reference 1 does not support FT Fallback to SMS
Pre-conditions Scenario	<ol style="list-style-type: none"> 1. DUT and Reference 1 is RCS enabled and online 2. DUT and Reference 1 all set CHAT AUTH to 1. 3. DUT and Reference 1 set FT DEFAULT MECH configuration parameter is set to HTTP. 4. The size of the File being transferred is less than FT MAX SIZE. 5. CHAT REVOKE TIMER set to X. 6. DUT's MNO has configured RCS clients to send files to non-RCS users as "SMS with a link" (FT HTTP fallback set to 1) 7. FT FALLBACK DEFAULT set to 0 8. Reference's network support CFS. 9. Make reference 1 RCS offline. 10. Content server has a branded URL defined
Test procedure	<ol style="list-style-type: none"> 1. Open an existing conversation with Reference 1 on DUT's device <u>or</u> create a new conversation with Reference 1 on DUT's device. And send a picture file to the Reference 1 from DUT. 2. When the REVOKE TIMER value is expired and with no user interaction, SMS with branded-url file link should be sent to reference 1. 3. Send one more file immediately after the 1st file send is success.
Expected results	<ol style="list-style-type: none"> 1. DUT sends File to reference 1 in Chat. 2. After X amount of time, file should be sent via SMS to reference 1, including the 'branded-url' and some explanatory text indicating the purpose of the message 3. When sending a subsequent file, as DUT is latched to SMS for Reference 1, file should be sent via SMS to reference 1 directly (Not in chat and later wait for revocation timer to expire to send as SMS.)
Post-conditions	
Deep inspection	<ol style="list-style-type: none"> 1. Verify successfully upload file (with thumbnail if DUT sends too) to content server and recipient of correct file description XML by making an HTTPs post request to FT HTTP CS URI. 2. Verify DUT receives HTTP 200OK with file information xml, including the branded-url parameter. 3. Verify SIP INVITE Message with content-type "application/vnd.gsma.rcs-ft-http+xml" is delivered successfully. 4. Verify after X duration message is sent to Reference 1 using SMS link as mentioned in the File Transfer Client Fall-back mentioned in 7.3.2.5.2 of UP_PDD
Test Case ID	ID_RCS_T_A_2_3_11
Related Test Cases	

Feature	File Transfer
Reason for test	Reference section - R7-2-2-1-1, R7-2-2, R7-24-13. To verify user have the option to modify MNO defined FT fallback preferences.
Pre-conditions Scenario	<ol style="list-style-type: none"> 1. DUT and Reference 1 is RCS enabled and DUT is online. Make reference 1 offline. 2. DUT and Reference 1 all set CHAT AUTH to 1. 3. DUT and Reference 1 set FT DEFAULT MECH configuration parameter is set to HTTP 4. The size of the File being transferred is less than FT MAX SIZE. 5. DUT does not support MMS service. 6. CHAT REVOKE TIMER set to X. 7. DUT's MNO has configured RCS clients to send files to non-RCS users as "SMS with a link" (FT HTTP FALLBACK set to 1) 8. FT FALLBACK DEFAULT set to 1 9. DUT support CFS. 10. File transfer via SMS feature tag is supported by DUT and Reference 1 device.
Test procedure	<ol style="list-style-type: none"> 1. Open an existing conversation with Reference 1 on DUT's device <u>or</u> create a new conversation with Reference 1 on DUT's device and send a picture file to the Reference 1 from DUT. 2. When the REVOKE TIMER values is expired, DUT user should be prompted with pop-up to send file via SMS. 3. DUT user selects "YES". 4. Make reference 1 RCS online then offline. 5. DUT changes the default FT fallback to "Never ask" configuration(FT FALLBACK DEFAULT set to 0). 6. Send one more file.
Expected results Post-conditions	<ol style="list-style-type: none"> 1. DUT sends File to reference 1 in Chat. 2. After X amount of time, User should be prompted file should be sent via SMS to reference 1. 3. DUT sends another File to reference 1 in Chat. 4. After X amount of time, User should not be prompted pop-up and file should be sent via SMS to reference 1.
Deep inspection	<ol style="list-style-type: none"> 1. Verify successfully upload file (with thumbnail if DUT sends too) to content server and recipient of correct file description XML by making an HTTPs post request to FT HTTP CS URI. 2. Verify DUT receives HTTP 200OK with file information xml. 3. Verify SIP INVITE Message with content-type "application/vnd.gsma.rcs-ft-http+xml" is delivered successfully. 4. Verify after X duration, pop up should be displayed to send file link via SMS. 5. SMS message is sent to Reference 1 using SMS link as mentioned in the File Transfer Client Fallback mentioned in 7.3.2.5.2 of UP_PDD. 6. Verify successfully upload file (with thumbnail if DUT sends too) to content server and recipient of correct file description XML by making an HTTPs post request to FT HTTP CS URI. 7. Verify DUT receives HTTP 200OK with file information xml. 8. Verify SIP INVITE Message with content-type "application/vnd.gsma.rcs-ft-http+xml" is delivered successfully.

	9. Verify after X duration, SMS message is sent to Reference 1 using SMS link as mentioned in the File Transfer Client Fall-back mentioned in 7.3.2.5.2 of UP_PDD.
--	--

Test case ID	ID_RCS_T_A_2_3_12
Related test cases	
Feature	File Transfer
Reason for test	R7-24-13 (7.3.2.5.2 File Transfer Client Fall-back) File transfer Fall-back: Client Interworking to SMS for Files FT fallback to SMS is disabled.
Pre-conditions Scenario	<ol style="list-style-type: none"> 1. DUT is registered and able to access IMS/RCS core network and relevant servers. 2. Supported by network: 2G, 3G, HSPA, LTE, Wi-Fi 3. DUT is configured with: CHAT REVOKE TIMER=X 4. DUT is configured with: FT FALLBACK DEFAULT=-1 5. DUT is configured with: CFS TRIGGER=1 6. DUT network supports delivery assurance via Client Fall-back to SMS 7. DUT is registered and able to access IMS/RCS core network and relevant servers.
Test procedure	<ol style="list-style-type: none"> 1. DUT selects an image from galary and chooses to share with Reference 1 2. Reference 1 goes out of coverage and becomes offline. 3. DUT sends image selected at step 1 to Reference 1 4. Reference 1 gets network coverage back but yet to become IMS registered.
Expected results Post-conditions	<ol style="list-style-type: none"> 1. Reference 2an select any image from gallery to share 2. Reference 1 registration icon is removed 3. After sending: the message status of sent message changes to "pending" and then "sent" on DUT. After X seconds: DUT does not resend file as link in SMS 4. After network attach: Reference 1 does not receive DUT message as SMS message. Delivery of the message relies on Store and Forward policies
Deep inspection	<ol style="list-style-type: none"> 1. Verify SIP 200 OK response to Invite 1-to-1 Chat to DUT for presence of "Message Revoke is supported" media feature tag (section 5.3.2 of [GSMA RCC.71 UP-SDD]). 2. DUT initiates IM session, sends message to Reference 1, and learns that network supports message revocation. 3. Verify that CPIM body in MSRP SEND of DUT client does not contain requests for "Interworking" Disposition Notification (as defined in Appendix O of [GSMA RCC.11]) in addition to "Delivered" and "Displayed". 4. DUT does not initiate Messgqe Revocation for FT message and neither it

	sends SMS to Reference 1
--	--------------------------

Test case ID	ID_RCS_T_A_2_3_13
Related test cases	
Feature	File Transfer
Reason for test	Reference section - R7-24-15, US7-4 To verify that File Transfer states are updated properly on DUT
Pre-conditions Scenario	<ol style="list-style-type: none"> 1. DUT's device is online. 2. Reference 1 device is RCS enabled online 3. Reference 1 is a contact in DUT's contact list. 4. CHAT AUTH configuration parameter is set to 1. 5. FT DEFAULT MECH configuration parameter is set to HTTP.
Test procedure	<ol style="list-style-type: none"> 1. Open an existing conversation with Reference 1 on DUT's device <u>or</u> create a new conversation with Reference 1 on DUT's device. In the conversation with Reference 1, select a random picture (existing or new picture from camera) and send.
Expected results Post-conditions	<ol style="list-style-type: none"> 1. In the process doing the FT, observe the file transferring states and it should be updated as the following states. 2. Pending. 3. Progress. 4. Sent. 5. Delivered. 6. Displayed.
Deep inspection	<ol style="list-style-type: none"> 1. Check the states are updated correctly 2. Pending: When the DUT yet to receive 200OK from the content server for HTTP post request of file. 3. Progress: For File Transfer via HTTP; from the reception of the first success HTTP response from the network and until a MSRP 200 OK is received from the network for the chat message carrying the File Transfer via HTTP message body content 4. Sent: For File Transfer via HTTP if a MSRP 200 OK is received from the network for the chat message carrying the File Transfer via HTTP

	<p>message body content.</p> <ol style="list-style-type: none"> 5. Delivered: For File Transfer via HTTP, when receiving the Delivery Notification. 6. Displayed: For File Transfer via HTTP, when receiving the Display Notification from the Reference 1. 7. Reference 1 received the request, check IMDN response from the reference 1 for the above state information.
--	---

Test case ID	ID_RCS_T_A_2_3_14
Related test cases	
Feature	File Transfer
Reason for test	Reference section - R7-24-19, US7-7 To verify network file size restrictions FT MAX SIZE, FT WARN SIZE, FT MAX SIZE INCOMING
Pre-conditions Scenario	<ol style="list-style-type: none"> 1. DUT and Reference 1 are online. 2. Reference 1 is a contact in DUT's contact list. 3. CHAT AUTH configuration parameter is set to 1. 4. DUT is configured with FT MAX SIZE = X. 5. DUT is configured FT WARN SIZE is set to Y and Y<X. 6. DUT is configured FT MAX SIZE INCOMING is set to Z. 7. DUT's Gallery has a file of file size more than FT MAX SIZE and more than FT WARN SIZE and another file of file size smaller than FT MAX SIZE and more than FT WARN SIZE 8. Reference 1 Gallery has a file of file size more than FT MAX SIZE INCOMING
Test procedure	<ol style="list-style-type: none"> 1. Open an existing conversation with Reference 1 on DUT's device <u>or</u> create a new conversation with Reference 1 on DUT's device. DUT sends a file(file1) from gallery of size >Y and < X and send to reference 1 2. DUT accept to send the file. 3. DUT sends a file (file from gallery of size >X and send to reference 1. 4. Reference 1 sends file from gallery of size >Z and sends to DUT. 5. Reference 1 sends file from gallery of size < Z and >X and sends to DUT.
Expected results Post-conditions	<ol style="list-style-type: none"> 1. DUT presents a warning message to User for sending bigger size File 2. File is sent from DUT and received at Reference 1. 3. DUT is unable to send file due to max size. 4. DUT receives incoming file size restriction pop up message to user. File receive is auto cancelled at DUT. 5. DUT receives incoming file size restriction pop up message to user. File is receive at DUT.

Deep inspection	–
------------------------	---

Test case ID	ID_RCS_T_A_2_3_15
Related test cases	
Feature	File Transfer
Reason for test	Reference section - R7-24-21, R7-9-1.US7-9 To verify that on File Transfer cancel DUT does not send File to reference 1.
Pre-conditions Scenario	<ol style="list-style-type: none"> 1. DUT's device is online. 2. Reference 1 is RCS enabled and online 3. Reference 1 is a contact in DUT's contact list. 4. CHAT AUTH configuration parameter is set to 1. 5. FT DEFAULT MECH configuration parameter is set to HTTP. 6. FT HTTP FALLBACK set to 1.
Test procedure	<ol style="list-style-type: none"> 1. Open an existing conversation with Reference 1 on DUT's device or create a new conversation with Reference 1 on DUT's device. In the conversation with Reference 1, select a random file and send. 2. Select transfer "Cancel", when the file transfer is in progress.
Expected results	<ol style="list-style-type: none"> 1. File transfer should be cancelled, with transfer state as Failed 2. HTTP cancel should, stop communicating with the content server.
Post-conditions	
Deep inspection	<ol style="list-style-type: none"> 1. Verify DUT starts uploading file to content server by making a HTTPs post request to FT HTTP CS URI. 2. Verify DUT stops sending packet on HTTP stream

Test Case ID	ID_RCS_T_A_2_3_16
Related Test Cases	
Feature	File Transfer
Reason for test	Reference section - R7-24-22 File transfer - 1 to Many RCS Users – FT HTTP Fallback = 1
Pre-conditions Scenario	<ol style="list-style-type: none"> 1. DUT, Reference 1, Reference 2 and Reference 3 are online 2. DUT , Reference 1, Reference 2 and Reference 3 are configured CHAT AUTH to 1 3. 4. DUT is configured FT DEFAULT MECH configuration parameter to HTTP 5. DUT is configured with MAX_AD-HOC_GROUP_SIZE set to 3

	<ol style="list-style-type: none"> 6. DUT is configured with FT MAX 1 TO MANY RECIPIENTS is set to 0 7. DUT is configured with FT HTTP FALLBACK configured as 1 ("text message with a link")
Test procedure	<ol style="list-style-type: none"> 1. DUT selects a file from the gallery or file browser 2. DUT sends the selected file to Reference 1, Reference 2 and Reference 3
Expected results	<ol style="list-style-type: none"> 1. As a result of a capability discovery, DUT finds all selected users are RCS capable
Post-conditions	<ol style="list-style-type: none"> 2. Number of selected users exceeds max number of Group Chat participants. File transfer is carried out as multiple 1-to-1 File transfers, building up a chat conversation with each recipient
Deep inspection	<ol style="list-style-type: none"> 1. Verify capability exchange sent to all Reference 1 and responses compliant with 6.3, 7.3.1 and 7.3.2 of RCC71v1 2. Verify an unique successfully upload file (with thumbnail if DUT sends too) to content server and recipient of correct file description XML by making an HTTPs post request to FT HTTP CS URI 3. Verify DUT receives HTTPs 200OK XML response based on RCC71, including a branded-url apart from the URL for file download 4. Verify a SIP INVITE Message including accept-wrapped-types "application/vnd.gsma.rcs-ft-http+xml" is sent to each Reference 1 5. Verify delivery notification is send back to DUT when Reference 1 receive the file

Test Case ID	ID_RCS_T_A_2_3_17
Related Test Cases	
Feature	File Transfer
Reason for test	Reference section - R7-24-22 File transfer - 1 to Many RCS & non-RCS Users – FT HTTP Fallback = 1
Pre-conditions Scenario	<ol style="list-style-type: none"> 1. DUT, Reference 1, Reference 2 are online 2. Reference 3 device is a non-RCS user 3. DUT is configured CHAT AUTH to 1 4. DUT is configured FT DEFAULT MECH configuration parameter to HTTP 5. DUT is configured with FT MAX 1 TO MANY RECIPIENTS is set to 0 6. DUT is configured with FT HTTP FALLBACK configured as 1 ("text message with a link")
Test procedure	<ol style="list-style-type: none"> 1. DUT selects a file from the gallery or file browser 2. DUT sends the selected file to Reference 1, Reference 2 and Reference 3
Expected results	<ol style="list-style-type: none"> 1. As a result of a capability discovery, DUT finds at least one selected contact is a non RCS capable
Post-conditions	<ol style="list-style-type: none"> 2. File transfer is carried out as multiple 1-to-1 File transfers, building up a chat conversation with each recipient where if recipient is RCS capable, then RCS file transfer shall be used. Otherwise, DUT will send an SMS with a link (friendly URL delivered by the FT Server) accompanied with a cover note to the non-RCS user

Deep inspection	<ol style="list-style-type: none"> 1. Verify capability exchange sent to all Reference devices and responses compliant with 6.3, 7.3.1 and 7.3.2 of RCC71v1 for Reference 1 and 2. Verify capability exchange shows Reference 3 as non-RCS user 2. Verify successfully upload file (with thumbnail if DUT sends too) to content server and recipient of correct file description XML by making an HTTPs post request to FT HTTP CS URI 3. Verify DUT receives HTTPs 200OK XML response based on RCC71, including a branded-url apart from the URL for file download 4. Verify a SIP INVITE Message including accept-wrapped-types "application/vnd.gsma.rcs-ft-http+xml" is sent to Reference 1 and 2 5. Verify delivery notification is send back to DUT when Reference 1 and 2 devices receive the file 6. Verify an SMS is sent to Reference 3 including the friendly URL (branded-url)
------------------------	--

Test Case ID	ID_RCS_T_A_2_3_18
Related Test Cases	
Feature	File Transfer
Reason for test	Reference section - R7-24-22 File transfer - 1 to Many RCS Users – FT HTTP Fallback = 0
Pre-conditions Scenario	<ol style="list-style-type: none"> 1. DUT, Reference 1, Reference 2 and Reference 3 devices are online 2. DUT , Reference 1, Reference 2 and Reference 3 devices are configured CHAT AUTH to 1 3. DUT is configured FT DEFAULT MECH configuration parameter to HTTP 4. DUT is configured with MAX_AD-HOC_GROUP_SIZE set to 3 5. DUT is configured with FT MAX 1 TO MANY RECIPIENTS is set to 0 6. DUT is configured with FT HTTP FALLBACK configured as 0 ("MMS")
Test procedure	<ol style="list-style-type: none"> 1. DUT selects a file from the gallery or file browser 2. DUT sends the selected file to Reference 1, Reference 2 and Reference 3
Expected results	<ol style="list-style-type: none"> 1. As number of selected users exceed max number of Group Chat participants and FT HTTP FALLBACK is set to 0 2. File transfer is carried out as multiple MMS, building up a 1-to-1 Chat conversation with each recipient
Post-conditions	
Deep inspection	<ol style="list-style-type: none"> 1. Verify capability exchange sent to all Reference devices and responses compliant with 6.3, 7.3.1 and 7.3.2 of RCC71v1 2. Verify there is no HTTP Post request sent towards the File Transfer Server (FT HTTP CS URI) 3. Verify there are not SIP Invites sent to Reference devices

Test Case ID	ID_RCS_T_A_2_3_19
Related Test Cases	

Feature	File Transfer
Reason for test	Reference section - R7-24-22 File transfer - 1 to Many RCS & non-RCS Users – FT HTTP Fallback = 0
Pre-conditions Scenario	<ol style="list-style-type: none"> 1. DUT, Reference 1, Reference 2 are online 2. Reference 3 device is a non-RCS user 3. DUT is configured CHAT AUTH to 1 4. DUT is configured FT DEFAULT MECH configuration parameter to HTTP 5. DUT is configured with FT MAX 1 TO MANY RECIPIENTS is set to 0 6. DUT is configured with FT HTTP FALLBACK configured as 0 ('MMS')
Test procedure	<ol style="list-style-type: none"> 1. DUT selects a file from the gallery or file browser 2. DUT sends the selected file to Reference 1, Reference 2 and Reference 3
Expected results	<ol style="list-style-type: none"> 1. As a result of a capability discovery, DUT finds at least one selected contact is a non RCS capable 2. File transfer is carried out as multiple MMS, building up a 1-to-1 Chat conversation with each recipient
Post-conditions	
Deep inspection	<ol style="list-style-type: none"> 1. Verify capability exchange sent to all Reference devices and responses compliant with 6.3, 7.3.1 and 7.3.2 of RCC71v1 2. Verify there is no HTTP Post request sent towards the File Transfer Server (FT HTTP CS URI) 3. Verify there are not SIP Invites sent to Reference devices

Test Case ID	ID_RCS_T_A_2_3_20
Related Test Cases	
Feature	File Transfer
Reason for test	Reference section - R7-24-22 File transfer - 1 to Many RCS – Group Chat
Pre-conditions Scenario	<ol style="list-style-type: none"> 1. DUT, Reference 1, Reference 2 and Reference 3 are online 2. DUT is configured CHAT AUTH to 1 3. DUT is configured FT DEFAULT MECH configuration parameter to HTTP 4. DUT is configured with FT MAX 1 TO MANY RECIPIENTS is set to 0 5. DUT is configured with MAX_AD-HOC_GROUP_SIZE set to X (higher than the number of selected Reference devices for the test)
Test procedure	<ol style="list-style-type: none"> 1. DUT selects a file from the gallery or file browser 2. DUT sends the selected file to Reference 1, Reference 2 and Reference 3
Expected results	<ol style="list-style-type: none"> 1. As a result of a capability discovery, DUT finds all selected users are RCS capable 2. Number of selected users does not exceed max number of Group Chat participants. File transfer is transferred as RCS File Transfer in Group Chat
Post-conditions	

Deep inspection	<ol style="list-style-type: none"> 1. Verify capability exchange sent to all Reference devices and responses compliant with 6.3, 7.3.1 and 7.3.2 of RCC71v1 2. Verify an unique successfully upload file (with thumbnail if DUT sends too) to content server and recipient of correct file description XML by making an HTTPs post request to FT HTTP CS URI 3. Verify DUT receives HTTPs 200OK XML response based on RCC71, including a branded-url apart from the URL for file download 4. Verify a SIP INVITE for a Group Chat is sent to the conference focus including in the participant list Reference1, Reference2 and Reference3 5. Verify both SIP INVITE and SIP 200OK Response include the feature-tag "+g.3gpp.iari-ref="urn%3Aurn-7%3A3gpp-application.ims.iari.rcs.fhttp" in the contact header and the accept-wrapped-types "application/vnd.gsma.rcs-ft-http+xml" in the SDP negotiation. is sent to Reference 1 and 2 6. Verify delivery/display notifications are send back to DUT when Reference devices receive the file
------------------------	---

Test Case ID	ID_RCS_T_A_2_3_21
Related Test Cases	
Feature	File Transfer
Reason for test	Reference section - R7-24-22 File transfer - 1 to Many RCS & non-RCS Users – FT MAX 1 TO MANY RECIPIENTS config parameter is exceeded
Pre-conditions Scenario	<ol style="list-style-type: none"> 1. DUT, Reference 1, Reference 3 are online 2. Reference 2 device is a non-RCS user 3. DUT is configured CHAT AUTH to 1 4. DUT is configured FT DEFAULT MECH configuration parameter to HTTP 5. DUT is configured with FT MAX 1 TO MANY RECIPIENTS is set to 2 6. DUT is configured with FT HTTP FALLBACK configured as 1 ("text message with a link")
Test procedure	<ol style="list-style-type: none"> 1. DUT selects a file from the gallery or file browser 2. DUT tries to send the selected file to Reference 1, Reference 2 and Reference 3
Expected results	<ol style="list-style-type: none"> 1. Client gets a notification letting him know that the max number of FT recipients has been reached when selecting Reference 3. Reference 3 is therefore not added to the distribution list
Post-conditions	<ol style="list-style-type: none"> 2. File transfer is carried out as multiple 1-to-1 File transfers, building up a chat conversation with each recipient where if recipient is RCS capable, then RCS file transfer shall be used (Reference 1). Otherwise, DUT will send an SMS with a link (friendly URL delivered by the FT Server) accompanied with a cover note to the non-RCS user Reference. Reference 3 is not getting the File Transfer message
Deep inspection	<ol style="list-style-type: none"> 1. Verify capability exchange sent to all Reference devices and responses compliant with 6.3, 7.3.1 and 7.3.2 of RCC71v1 for Reference 1. No capability exchange is sent to Reference 3 as it is not included in the distribution list. 2. Verify capability exchange shows Reference 2 as non-RCS user

	<ol style="list-style-type: none"> 3. Verify successfully upload file (with thumbnail if DUT sends too) to content server and recipient of correct file description XML by making an HTTPs post request to FT HTTP CS URI 4. Verify DUT receives HTTPs 200OK XML response based on RCC71, including a branded-url apart from the URL for file download 5. Verify a SIP INVITE Message including accept-wrapped-types "application/vnd.gsma.rcs-ft-http+xml" is sent to Reference 1 6. Verify delivery notification is send back to DUT when Reference 1 receives the file 7. Verify there is no SIP INVITE sent to Reference 3 8. Verify an SMS is sent to Reference 2 including the friendly URL (branded-url)
--	---

Test Case ID	ID_RCS_T_A_2_3_22
Related Test Cases	
Feature	File Transfer
Reason for test	Reference section - R7-24-23 File transfer – Receiver procedures – File transfer has expired in the FT Server
Pre-conditions Scenario	<ol style="list-style-type: none"> 1. DUT and Reference 1 are online and in active 1-to-1 Chat session 2. DUT and Reference 1 are configured with FT AUT ACCEPT to 0 3. DUT is configured FT DEFAULT MECH configuration parameter to HTTP 4. DUT and Reference 2 support HTTP-based FT according to former capability exchange 5. DUT has enough free storage space to receive the file 6. File size being transferred is smaller than FT MAX SIZE and FT WARM SIZE 7. FT Server validity expiration is set to a lower value <p>NOTE: This test case can be simulated</p>
Test procedure	<ol style="list-style-type: none"> 1. Reference 1 selects one file from the local storage and send it to DUT 2. DUT receives the file in the conversation thread 3. Once the FT Server validity file has expired, DUT decides to download the file from the FT Content Server clicking on the thumbnail preview (MIME icon)
Expected results	<ol style="list-style-type: none"> 1. Reference 1 sees that file transfer is available for DUT 2. DUT receives file transfer notification and sees the size of the file and an indication of the file type (e.g. MIME icon or mini-preview)
Post-conditions	<ol style="list-style-type: none"> 3. The download of the file does not start as FT AUT ACCEPT is set to 0 4. DUT manually decides to download the file but file has expires in the FT Server. DUT shows the file as Failed
Deep inspection	<ol style="list-style-type: none"> 1. Verify support of FT HTTP xml content type during SDP negotiation for the 1-to-1 Chat establishment 2. Verify download of the file is answered with 404 as file has expires in the File Transfer Server

Test Case ID	ID_RCS_T_A_2_3_23
---------------------	-------------------

Related Test Cases	
Feature	File Transfer
Reason for test	Reference section - R7-24-26 File transfer – Successful HTTP-based file transfer in active 1-to-1 Chat (resume file upload)
Pre-conditions Scenario	<ol style="list-style-type: none"> 1. DUT and Reference 1 are online and in active 1-to-1 Chat session 2. DUT and Reference 1 are configured with CHAT AUTH to 1 3. DUT is configured FT DEFAULT MECH configuration parameter to HTTP 4. DUT and Reference 1 are configured with FT AUT ACCEPT to 1 5. DUT and Reference 2 support HTTP-based FT according to former capability exchange 6. Reference 1 has enough free storage space to receive the file 7. File size being transferred is smaller than FT MAX SIZE and FT WARM SIZE 8. DUT and File transfer server support HTTP-based file resume upload
Test procedure	<ol style="list-style-type: none"> 1. DUT selects one file from the local storage and send it to Reference 1 2. During file upload, DUT gets out of coverage, e.g. switch to flight mode 3. A resumes upload when returning to coverage (without user interaction) 4. Reference 1 receives and accepts the file and this is automatically downloaded. Reference 1 opens the file
Expected results Post-conditions	<ol style="list-style-type: none"> 1. DUT sees that file transfer is available for the recipient 2. The upload of the file starts but stops before the transfer is completed as DUT is out of coverage 3. When DUT is back in data coverage, the transfer proceeds until the file is fully uploaded and received by Reference 1. 4. Reference 1 receives file transfer notification and sees the size of the file and an indication of the file type (e.g. MIME icon or mini-preview). Delivery and display notifications are sent back by Reference 1 and received and shown on DUT
Deep inspection	<ol style="list-style-type: none"> 1. Verify resume file upload procedure including TID form sent by DUT initially and whole procedure for resume operation is implemented, refer to 3.5.4.8.3.1 of [GSMA RCC.07 RCS6.0 UNI]. Verify correct file description XML. 2. Verify finally DUT receives HTTPs 200OK XML response based on RCC71 3. Verify support of FT HTTP xml content type during SDP negotiation for the 1-to-1 Chat establishment 4. Verify delivery and display notifications are sent within MSRP session or in SIP MESSAGEs if chat session closed

Test Case ID	ID_RCS_T_A_2_3_24
Related Test Cases	
Feature	File Transfer

Reason for test	Reference section - R7-24-29 File transfer – Successful HTTP-based file transfer in active 1-to-1 Chat (resume file download)
Pre-conditions Scenario	<ol style="list-style-type: none"> 1. DUT and Reference 1 are online and in active 1-to-1 Chat session 2. DUT and Reference 1 are configured with CHAT AUTH to 0 3. DUT is configured FT DEFAULT MECH configuration parameter to HTTP 4. DUT and Reference 2 support HTTP-based FT according to former capability exchange 5. DUT has enough free storage space to receive the file 6. File size being transferred is smaller than FT MAX SIZE and FT WARM SIZE 7. DUT and File transfer server support HTTP-based file resume upload
Test procedure	<ol style="list-style-type: none"> 1. Reference 1 selects one file from the local storage and send it to DUT 2. DUT receives the file and starts to download it from the FT Content Server 3. During file download DUT gets out of coverage, e.g. switch to flight mode. 4. DUT resumes download when returning to coverage (without user interaction) 5. File is fully downloaded on DUT. DUT opens the file.
Expected results Post-conditions	<ol style="list-style-type: none"> 1. Reference 1 sees that file transfer is available for DUT 2. DUT receives file transfer notification and sees the size of the file and an indication of the file type (e.g. MIME icon or mini-preview) 3. The download of the file starts but stops before the transfer is completed as DUT is out of coverage 4. When DUT is back in data coverage, the transfer proceeds automatically until the file is fully downloaded by DUT 5. Delivery and display notifications are sent back by DUT and received and shown on Reference 1
Deep inspection	<ol style="list-style-type: none"> 1. Verify support of FT HTTP xml content type during SDP negotiation for the 1-to-1 Chat establishment 2. Verify resume file download is executed by DUT, refer to 3.5.4.8.3.2 of [GSMA RCC.07 RCS6.0 UNI]. Make sure file is resumed and procedure is not restarted from scratch 3. Verify delivery and display notifications are sent within MSRP session or in SIP MESSAGEs if chat session closed

Test Case ID	ID_RCS_T_A_2_3_25
Related Test Cases	
Feature	File Transfer
Reason for test	Reference section - R7-24-26 File transfer – Receiver with FT AUT ACCEPT = 0 – Chat121
Pre-conditions Scenario	<ol style="list-style-type: none"> 1. DUT and Reference 1 are online and in active 1-to-1 Chat session 2. DUT and Reference 1 are configured with FT AUT ACCEPT to 0 3. DUT is configured FT DEFAULT MECH configuration parameter to HTTP 4. DUT and Reference 2 support HTTP-based FT according to former capability exchange

	<ol style="list-style-type: none"> 5. DUT has enough free storage space to receive the file 6. File size being transferred is smaller than FT MAX SIZE and FT WARN SIZE
Test procedure	<ol style="list-style-type: none"> 1. Reference 1 selects one file from the local storage and send it to DUT 2. DUT receives the file in the conversation thread 3. DUT decides to download the file from the FT Content Server clicking on the thumbnail preview (MIME icon) 4. File is fully downloaded on DUT. DUT opens the file.
Expected results Post-conditions	<ol style="list-style-type: none"> 1. Reference 1 sees that file transfer is available for DUT 2. DUT receives file transfer notification and opens the conversation 1-to-1 Chat thread 3. DUT sees the thumbnail preview and the size of the file and an indication of the file type (e.g. MIME icon or mini-preview) 4. Download of the full file is triggered by DUT. Delivery and display notifications are sent back by DUT and received and shown on Reference 1
Deep inspection	<ol style="list-style-type: none"> 1. Verify support of FT HTTP xml content type during SDP negotiation for the 1-to-1 Chat establishment 2. Verify thumbnail preview is implemented as defined in 3.5.4.8 of RCC07 3. Verify full download of the file is not performed until there is a user interaction 4. Verify delivery and display notifications are sent within MSRP session or in SIP MESSAGES if chat session closed

Test Case ID	ID_RCS_T_A_2_3_26
Related Test Cases	
Feature	File Transfer
Reason for test	Reference section - R7-24-26 File transfer – Receiver – FT Transfer via SMS supported
Pre-conditions Scenario	<ol style="list-style-type: none"> 1. DUT and Reference 1 are RCS users 2. DUT and Reference 2 support HTTP-based and FT Transfer via SMS according to former capability exchange 3. DUT and Reference 1 are configured with FT AUT ACCEPT to 1 4. DUT and Reference 1 is configured FT DEFAULT MECH configuration parameter to HTTP 5. DUT has enough free storage space to receive the file 6. File size being transferred is smaller than FT MAX SIZE and FT WARM SIZE in DUT and Reference 1 7. File has been received by DUT as a result of Delivery Assurance via SMS including URL and meta-data information 8. DUT has no data coverage
Test procedure	<ol style="list-style-type: none"> 1. Reference 1 selects one file from the local storage and sends it to DUT. Once chatRevokeTime expires, file is sent by Reference 1 to DUT via SMS 2. DUT receives a notification with a new incoming file from Reference 1 and decides to download it unsuccessfully

	<ol style="list-style-type: none"> 3. DUT recovers data coverage and file is fully downloaded on DUT without user interaction. DUT shows a thumbnail of the file 4. DUT opens the file.
Expected results Post-conditions	<ol style="list-style-type: none"> 1. As a result of a capability exchange, Reference 1 sees DUT as an RCS user who supports HTTP-based and FT Transfer via SMS. Reference 1 sends a FT as a chat message (FTHTTP procedures) and once the chat revoke timer expires, Reference 1 sends the file via SMS using the URL and metadata received from the FT Transfer server 2. DUT receives an SMS which is rendered and shown as a file transfer notification and opens the conversation 1-to-1 Chat thread. DUT client shows the received file as an icon (it differentiates preview with different icons, it shows the size of the file and an indication of the file type). 3. As DUT has no data coverage, download of the file is not possible. Once device recovers data coverage, download of the file from the FT server is triggered automatically based on the URL received in the SMS 4. DUT shows a thumbnail preview of the file once file is downloaded
Deep inspection	<ol style="list-style-type: none"> 1. Verify Options exchange shows both users support File Transfer via SMS as defined in 7.3.2.2 of RCC71 2. Verify request to download the file is done using the URL received in the SMS, based on definitions in 7.3.2.4 of RCC71 3. Verify URL received via SMS includes META Data including the information of size, MIME and expiration of the file 4. Verify full download of the file is performed once DUT recover data coverage 5. Verify thumbnail preview for FT is implemented as defined in 3.5.4.8 of RCC07

Test Case ID	ID_RCS_T_A_2_3_27
Related Test Cases	
Feature	File Transfer
Reason for test	Reference section - R7-24-26 File transfer – Receiver – FT Transfer via SMS not supported
Pre-conditions Scenario	<ol style="list-style-type: none"> 1. DUT and Reference 1 are RCS users 2. Both DUT and Reference 2 supports HTTP-based but only FT Transfer via SMS is supported by Reference according to former capability exchange 3. DUT and Reference 1 are configured with FT AUT ACCEPT to 1 4. Reference 1 is configured FT DEFAULT MECH configuration parameter to HTTP 5. DUT has enough free storage space to receive the file 6. File size being transferred is smaller than FT MAX SIZE and FT WARM SIZE in DUT and Reference 1 7. File has been received by DUT as a result of Delivery Assurance via SMS including URL (friendlyURL or URL) 8. DUT has no data coverage

Test procedure	<ol style="list-style-type: none"> Reference 1 selects one file from the local storage and sends it to DUT. Once chatRevokeTime expires, file is sent by Reference 1 to DUT via SMS DUT reference SMS notification from Reference 1 DUT recovers data coverage and DUT decides to download the file Download of the file is triggered when clicking on the received SMS which includes an URL (branded-url) DUT shows a thumbnail of the file. DUT opens the file.
Expected results Post-conditions	<ol style="list-style-type: none"> As a result of a capability exchange, Reference 1 sees DUT as an RCS user who supports HTTP-based but FT Transfer via SMS Reference 1 sends a FT as a chat message (FTHTTP procedures) and once the chat revoke timer expires, Reference 1 sends the file via SMS using the branded-url included in the response from the FT Server (or former URL in case branded-url is not included) accompanied with a cover note DUT receives the SMS with the branded-URL and the cover note SMS As DUT has no data coverage, download of the file is not possible. Once device recovers data coverage, download of the file from the FT server is triggered by DUT clicking on the URL received in the SMS DUT shows a thumbnail preview of the file once file is downloaded
Deep inspection	<ol style="list-style-type: none"> Verify Options exchange shows DUT does not support File Transfer via SMS as defined in 7.3.2.2 of RCC71 Verify request to download the file is done using the URL received in the SMS Verify successful download of the file from the File Transfer Server Verify thumbnail preview for FT is implemented as defined in 3.5.4.8 of RCC07

Test Case ID	ID_RCS_T_A_2_3_28
Related Test Cases	
Feature	File Transfer
Reason for test	Reference section - R7-24-28 File transfer – vCard – Sender vCard 3.0
Pre-conditions Scenario	<ol style="list-style-type: none"> DUT and Reference 1 and Reference 2 are RCS users DUT and Reference 2 support HTTP-based and FT Transfer via SMS according to former capability exchange DUT saves Reference 1 as contact in the address book Devices are configured with FT AUT ACCEPT to 1 Devices are configured FT DEFAULT MECH configuration parameter to HTTP DUT has enough free storage space to receive the file File size being transferred is smaller than FT MAX SIZE and FT WARM SIZE in DUT and Reference 1
Test procedure	<ol style="list-style-type: none"> DUT selects the contact of Reference 1 from the address book DUT sends it to Reference 2

Expected results Post-conditions	<ol style="list-style-type: none"> As a result of a capability exchange, DUT sees Reference 1 as an RCS user who supports HTTP-based. DUT upload vCard information to the File Transfer Server using FTHTTP procedure DUT send contact's information to Reference 1
Deep inspection	<ol style="list-style-type: none"> Verify successfully upload of thumbnail and file to content server and receiving of correct file description XML by making an HTTPs post request to FT HTTP CS URI Verify vCard 3.0 is used for transferring the contact information Verify DUT receives HTTP 200OK with file information xml. Verify SIP INVITE is sent and xml File transfer message body content is content type "text/vcard". Verify delivery notification is delivered to the DUT.

Test Case ID	ID_RCS_T_A_2_3_29
Related Test Cases	
Feature	File Transfer
Reason for test	Reference section - R7-24-28 File transfer – vCard – Receiver vCard 2.1, vCard 3.0 and 1.0 PCC XML
Pre-conditions Scenario	<ol style="list-style-type: none"> DUT and Reference 1 and Reference 2 are RCS users DUT and Reference 2 support HTTP-based and FT Transfer via SMS according to former capability exchange Reference 2 saves Reference 1 as contact in the address book Devices are configured with FT AUT ACCEPT to 1 Devices are configured FT DEFAULT MECH configuration parameter to HTTP DUT has enough free storage space to receive the file File size being transferred is smaller than FT MAX SIZE and FT WARM SIZE in DUT and Reference 1 Reference 2 sends Reference 1 Contact's information with different formats (vCard 2.1, vCard 3.0 and 1.0 PCC XML) <p>Note: This test can be simulated</p>
Test procedure	<ol style="list-style-type: none"> Reference 2 selects the contact of Reference 1 from the address book and send it to DUT Reference 2 sends Reference 1 Contact's information with different formats (vCard 2.1, vCard 3.0 and 1.0 PCC XML) to DUT DUT renders all the received vCard files and open the content of the vCard
Expected results Post-conditions	<ol style="list-style-type: none"> As a result of a capability exchange, Reference 2 sees DUT as an RCS user who supports HTTP-based Reference 2 upload vCard information to the File Transfer Server using FTHTTP procedure. Reference 2 send contact's information to DUT in different formats DUT is capable to render the vCard files formats received (vCard 2.1, vCard 3.0 and 1.0 PCC XML) and offer to store the received Contact in the device contact list

Deep inspection	<ol style="list-style-type: none"> 1. Verify DUT is able to manage (vCard 2.1, vCard 3.0 and 1.0 PCC XML received formats and none information is lost when render the received file as defined in Annex A1 in RCC71 2. Verify SIP INVITE is received and xml File transfer message body content is content type "text/vcard" for supported formats vCard 2.1, vCard 3.0 or "application/vnd.oma.cab-pcc+xml" in case 1.0 PCC XML format is used. 3. Verify delivery and display notifications are sent by DUT
------------------------	---

Test Case ID	ID_RCS_T_A_2_3_30
Related Test Cases	ID_RCS_T_A_2_3_9
Feature	File Transfer
Reason for test	Reference section - R7-2-2, R7-24-13. To verify that if the reference device is offline, after delivery time out reference 1 receives file as SMS. HTTPS Get parameter for FT fall-back is not provided from the content server
Pre-conditions Scenario	<ol style="list-style-type: none"> 1. DUT and Reference 1 are RCS enabled and make DUT online and reference 1 offline. 2. DUT and Reference 1 all set CHAT AUTH to 1. 3. DUT and Reference 1 set FT DEFAULT MECH configuration parameter is to HTTP 4. The size of the File being transferred is less than FT MAX SIZE. 5. CHAT REVOKE TIMER set to X. 6. DUT's MNO has configured RCS clients as FT FALLBACK DEFAULT set to 0) 7. DUT is configured with FT HTTP FALLBACK set to 1 8. Reference's network support CFS. 9. File transfer via SMS feature tag is supported by DUT and Reference 1. 10. Content server does not include meta information in the HTTP URL for FT fallback to SMS
Test procedure	<ol style="list-style-type: none"> 1. Open an existing conversation with Reference 1 on DUT's device <u>or</u> create a new conversation with Reference 1 on DUT's device and Send a picture file to the Reference 1 from DUT. 2. When the REVOKE TIMER values is expired and with no user interaction, DUT will send via SMS the HTTP URL for File Transfer fallback to SMS to reference 1.
Expected results Post-conditions	<ol style="list-style-type: none"> 1. DUT sends File to Reference 1 in Chat. 2. After X amount of time, file should be sent via SMS the HTTP URL for File Transfer fallback to SMS, which includes the meta-data parameters to reference 1. 3. As this is not provided by the server, client shall be able to render the response received by the FT server and generate the required parameters to be added to the URL
Deep inspection	<ol style="list-style-type: none"> 1. Verify 200 OK response to Options of the reference 1 includes feature tag "urn%3Aurn-7%3A3gpp-application.ims.iari.rcs.ftsms " 2. Verify successfully upload file (with thumbnail if DUT sends too) to content server and recipient of correct file description XML by making

	<p>an HTTPs post request to FT HTTP CS URI.</p> <ol style="list-style-type: none"> 3. Verify DUT receives HTTP 200OK with file information xml, which does not contains the HTTPS Get parameter for FT fall-back (meta-data information as per RCC71, table 3 4. Verify client renders and generates the meta-data information from the XML received from the FT server 5. Verify SIP INVITE Message with content-type "application/vnd.gsma.rcs-ft-http+xml" is delivered successfully. 6. Verify after X duration message is sent to Reference 1 using SMS link as mentioned in the File Transfer Client Fall-back mentioned in 7.3.2.5.2 of UP_PDD
--	---

A.2.4 Audio Messaging

This feature set to be tested in accordance with test cases provided in section 3.4 of the current document.

Annex B Test Cases guidelines for Phase 2 of OMA SIMPLE IM-CPM transition

This section left intentionally blank.

Annex C Document Management

C.1 Document History

Version	Date	Brief Description of Change	Approval Authority	Editor / Company
1.0	28 June 2017	New PRD CR1001 Approved by TG#1.	TG	Ian Crawford / GSMA
2.0	17 August 2017	CR1002 CR1002 Approved by GSG#146	GSG	Ian Crawford / GSMA
2.1	30 April 2018	CR1003 Approved by GSG "Post META Test Fest Enhancements"	GSG	Tom Van Pelt / GSMA
3.0	10 April 2020	CR1002 Approved by NG "UP 2.0 A2P Basic Test Cases"	NG	Tom Van Pelt / GSMA

C.2 Other Information

Type	Description
Document Owner	Network Group / GSG

Editor / Company	Tom Van Pelt / GSMA
------------------	---------------------

It is our intention to provide a quality product for your use. If you find any errors or omissions, please contact us with your comments. You may notify us at prd@gsma.com

Your comments or suggestions & questions are always welcome.