

PathFinder[®]

GSMA's NUMBER TRANSLATION SERVICE



Number Portability Discovery Service

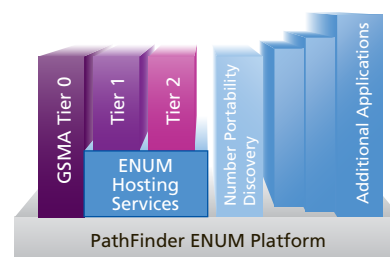


Number Portability (NP) has been implemented in over 50 countries around the world with potentially 20 more, including India and China planning to follow. More than 200 million telephone numbers have already ported and the total susceptible to porting will increase to over 4 billion in the near future. The importance of number portability correction on interconnect economics is set to become more and more significant as NP expands and adoption increases due to relentless competition in global markets.

Whilst NP benefits subscribers, it makes interconnect less efficient and more costly for Service Providers (SPs). An effect of NP is the inability to accurately determine the true destination operator for their traffic as it relates to routing, billing and managing interconnect agreements. It also poses significant problems to content and application providers who may not be aware of changes to an end destination operator the subscriber belongs to. Messaging hubs that carry wholesale traffic on behalf of MNOs, content and application providers are faced with the complexity of identifying the destination operator in NP-enabled corridors, often risking lost messaging traffic.

To mitigate the NP challenge, service providers typically acquire NP data from a variety of sources and manage that data on an ongoing basis. This requires bespoke content interfaces, disparate technologies and diverse business arrangements. A consistent and scalable mechanism that dynamically discovers the destination service provider network is critical to meeting the interconnection needs of voice and messaging traffic today. Additionally, with the explosive growth of IP services, this mechanism must also be extensible beyond voice and messaging to meet the inter-operator challenges of IP services, such as Rich Communications Services, Video, Presence, High Definition Voice, LTE.

The PathFinder Number Portability Discovery service, built upon the GSMA PathFinder Carrier ENUM platform, provides an aggregated source of global number portability corrected destination data and can be used to discover operator provisioned NGN interconnect data, fulfilling this market need.



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PathFinder Number Portability Discovery ("NP Discovery") is a GSMA managed service operated by Neustar. NP Discovery provides National Number Plan and NP information worldwide, enabling providers to identify the correct destination Service Provider Network (SPN) for relevant traffic corridors. Visibility regarding the destination SPN enables the inquiring network to be more intelligent about route optimization, traffic bundling, service delivery, quality of service, billing, and reconciliation. This enhanced destination knowledge further helps manage the voice traffic bundles and termination rates in commercial agreements and reduces missed message delivery.

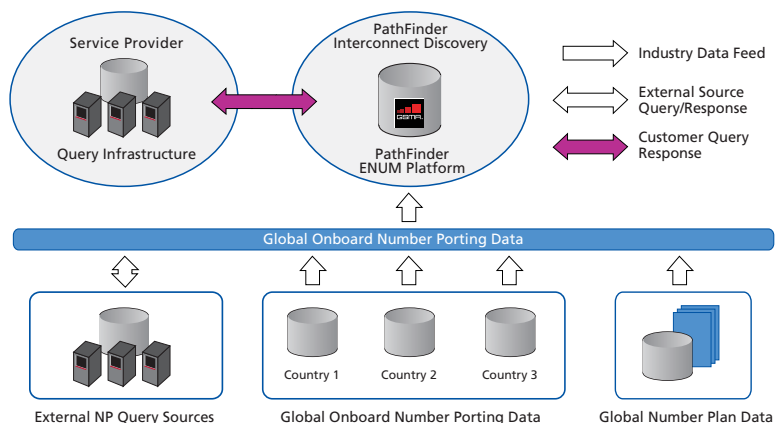
The Query service uses ENUM as an open, standards-based, lightweight mechanism to resolve E.164 telephone numbers to the true Service Provider Network when the telephone number is queried. NP Discovery also supports customer facing SS7/C7 interfaces with TCAP/INAP/GSM MAP through an SS7-ENUM gateway service. NP Discovery allows users to customize the information returned in the query response, including:

- PSTN or Tel URI (user@domain format)
- E.212 MCC/MNC
- Service Provider Network (SPN)
- Alternate SPN
- Number Portability Dip Indicator

Offered as a managed service, PathFinder NP Discovery is available to all Carriers, MNOs, FNOs, Hub Providers, ASPs, Content Providers and other industry verticals and is designed to reduce the cost and complexity of managing interconnect.

Global Number Plan and NP Data Integration

Industry Data is loaded into the PathFinder ENUM database via proprietary and extensible data integration technology. The platform acquires NP data using widely disparate protocols and assimilates the bespoke data formats from different 'ported' country data sources into the PathFinder database. Additionally, the data integration platform also extracts, validates and loads National Numbering Plan data into PathFinder on an ongoing basis.



Key Benefits

- **Worldwide Coverage:** The NP Discovery service has extensive reach to national NP data with a combination of onboard data and external access covering over 5 billion Telephone Numbers worldwide and approx 2 billion numbers susceptible to Number Portability.
- **Rapid Integration:** Number Portability adoption is spreading across the globe. The PathFinder NP Discovery service leverages powerful data integration technology to rapidly assimilate additional Number Portability data for new corridors as demand warrants.
- **Evolution Path:** PathFinder's innovative and flexible multi-function registry allows users to discover hosted ENUM data providing access to addresses and attributes for advanced IP services such as Rich Communication Services and Voice over LTE.
- **Simplicity and Efficiency:** Providing a 'one-stop-shop' access to worldwide NP data, PathFinder NP Discovery Service greatly alleviates System Integration complexity for SPs by allowing them to have a singular standardized data interface, technology and business arrangement for accessing NP data.
- **Custom Solutions:** PathFinder can be adapted to suit local networking and API environments and provide private application specific data for users.