



DATA SHEET



KEY BENEFITS

Delivery of Critical Services

Access to an ENUM registry provides the necessary carrier-of-record information to enable delivery of critical services, including short messaging service (SMS), multimedia messaging service (MMS), and voice over IP (VoIP), as well as ready to support new IP Multimedia Services (IMS).

Highly Scalable Query-Response Registry

The VeriSign Number Identity Registry is built on the VeriSign® Advanced Transaction Lookup and Signaling (ATLAS®) platform - the same platform that operates the Internet's .com and .net domain name services.

Quick Integration and Interoperability

VeriSign's Operations Test and Evaluation (OT&E) system is available to conduct ENUM certification of your application. Additionally, VeriSign makes available an optional Java API that may be integrated with the application as an ENUM Client, ready to communicate out of the box with the VeriSign Number Identity Registry.

VeriSign® Number Identity Registry

Communication services become more valuable when calls and messages can be received from and sent to users of other service providers' networks. VeriSign® Number Identity Registry, an ENUM-based carrier-of-record registry, empowers your application by providing accurate information which is critical in the successful routing of communication services, including MMS, SMS, and VoIP.

Lookups to the registry result in the return of carrier-of-record information including Service Provider Identifier (SPID), Location Routing Number (LRN), and when available, the Uniform Resource Locator (URL) associated with the service provider.

+ Business Challenge: Accurately Identifying Carrier-of-Record

Currently, the industry faces a challenge that stems from applications using internet protocols to communicate with consumer devices that are addressed by telephone numbers. The application must have the ability to identify the carrier-of-record for the destined telephone number to enable successful message delivery. Number portability complicates carrier-of-record identification. Subscribers porting telephone numbers to other carriers results in an application's inability to determine, at any given time, through which carrier the device is reachable.

The ideal solution to this problem is a domain name system (DNS) populated with line information sourced from industry and regulatory number management systems as well as directly from the authoritative entity (carrier or reseller). This permits the application to discover the carrier-of-record of a given telephone number by simply performing a number lookup in the form of an ENUM query. For example, the carrier-of-record information for telephone number 1-650-555-1234 can be retrieved through a lookup of the fully qualified domain name 4.3.2.1.5.5.0.5.6.1.enum.verisign.com

+ Access to Accurate Carrier-of-Record Information

VeriSign operates an intelligent infrastructure that can facilitate this critical functionality. VeriSign Number Identity Registry is a comprehensive registry that provides accurate and timely carrier-of-record information accessible via an ENUM query. The registry is populated with essential information for ported, non-portable, and pooled telephone numbers. Information stored in the registry is derived from industry sources and in some cases directly from the authoritative entity (carrier or reseller). When queried the registry



Advantages of a Managed Service Model

The VeriSign Number Identity Registry is offered as a managed service, helping you speed service delivery and reduce the expense and resources associated with investing in your own infrastructure.

returns carrier-of-record information including; (a) the Service Provider Identifier (SPID) of the carrier or reseller, (b) if the number has been ported, the Location Routing Number (LRN) that is necessary to route telephone calls to the carrier of the ported telephone number, and (c) when available, service routing information in the form a Uniform Resource Locator (URL) such as a “mailto:” URL.

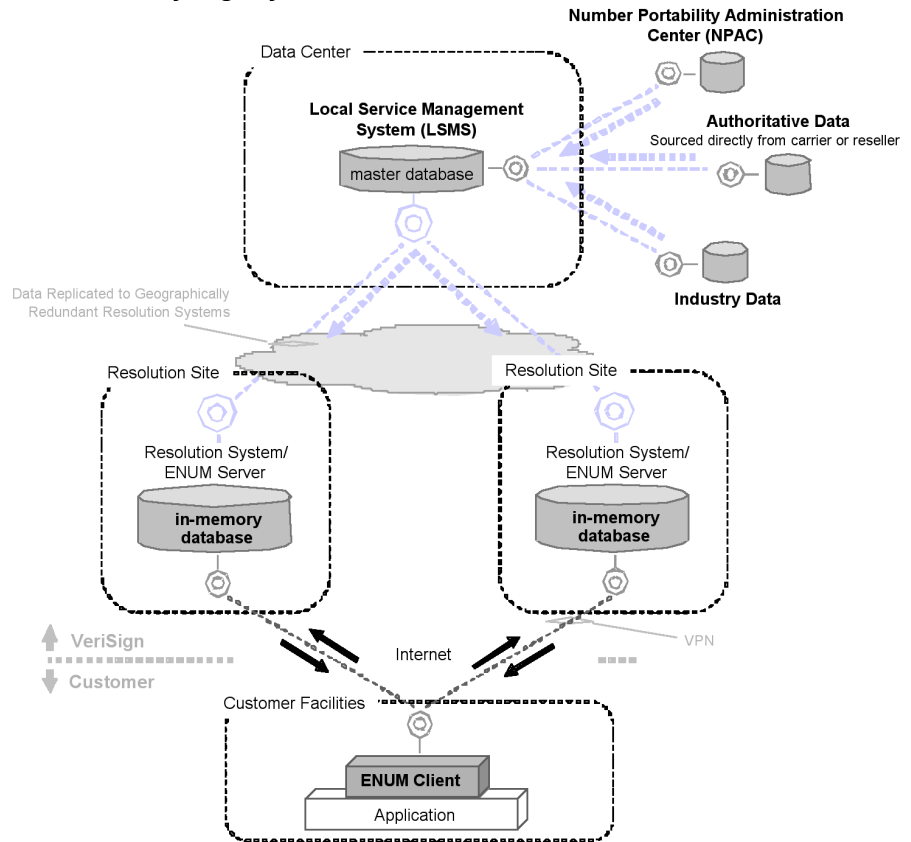
+ Proven Reliability

The VeriSign Number Identity Registry is highly scalable, capable of handling billions of transactions daily. It is built on the same platform that manages look-ups for the Internet’s .com and .net domains so it can easily scale to handle rapidly increasing volume of queries.

+ VeriSign Number Identity Registry Architecture

The VeriSign Number Identity Registry service architecture consists of three key components; Local Service Management System, Resolution System, and the ENUM Client.

VeriSign Number Identity Registry Architecture





The Local Service Management System (LSMS) maintains the master database and manages its replication to geographically redundant resolution systems. The VeriSign LSMS uploads industry data from the North American Number Portability Administration Centers (NPACs), as well as number block information from industry sources. The VeriSign LSMS also supports the ability for an authoritative entity to upload an exhaustive list of telephone numbers and selectively publish them to users (ENUM Clients) of the VeriSign Number Identity Registry. This feature is valuable for a number of business reasons, such as issue relating to indistinct or lack of reliable industry data sources.

The Resolution System, modeled after the global DNS architecture based on the VeriSign platform which hosts the Internet's .com and .net domain name services, is designed to be geographically dispersed across multiple resolution sites, each logically containing its own in-memory database. Each site utilizes a real-time mechanism to synchronize with the LSMS master database and to perform conflict resolution.

The ENUM Client typically co-located with the customer's voice or messaging application queries the Resolution System (also known as the ENUM Server) which responds with carrier-of-record data. The application then utilizes this information applying the relevant service logic.

+ Features

SPID Discovery

Utilizing metadata from both industry and authoritative sources, ENUM queries are returned with the SPID associated with the telephone number. Industry sources include Number Portability Administration Centers (NPACs). Authoritative data is sourced directly from the carrier-of-record and selectively published to users of the VeriSign Number Identity Registry.

LRN Discovery

If the telephone number being queried has been ported or pooled, the VeriSign Number Identity Registry returns the LRN, which provides telephony routing information of the current service provider. One of the major sources of the LRN is the North American Portability Administration Centers (NPACs) which is available real-time.

URL Discovery

VeriSign maintains tables within the Number Identity Registry that map the identified SPID to an associated URL. For instance, queried mobile directory numbers may respond with the "mailto:" URL associated with the mobile operator's mobile message service.

Access and Administration

The Number Identity Registry is accessed via a web portal through secure VPN connectivity. SIP and ENUM protocols are supported for query of data, as well as availability of Java API.

Visit us at www.Verisign.com for more information.