



The Peeredge Datasource Fabric

LNP

Local number portability (LNP) is a mandate passed by both the United States and Canadian governments, that allow individuals to keep their existing telephone numbers when moving between carriers. When a number is ported, it is assigned a local routing number (LRN). This LRN is linked to the carrier that manages the number and can be changed, while the dialed telephone number cannot be. The **Peeredge Datasource Fabric** enables limitless access to the LNP database, through our licensed interconnection with Neustar, the only third-party administrator of NPAC data.

LERG

The LERG Routing Guide is primarily designed to be used for routing of calls by service providers (wireless, wireline, inter and intra exchange, etc.). It also supports functions such as networking planning and engineering, numbering administration, and is used by companies, including many outside of the telecommunications industry, to support a wide range of business operations and planning needs. The LERG has been in existence since 1984,

and provides for a common basis for service providers within the NANP to directly report their numbering and routing information.

LCAD (LOCAL CALLING AREA DATABASE)

The Local Calling Area Database identifies North American local exchange carriers' local calling areas by Rate Center. This local calling area data in conjunction with the LERG database can be used to determine local call status between any two North American telephone exchange (i.e. NPA NXX) combinations by cross-referencing the originating and terminating NPA NXX pair to their associated Rate Center. The local calling data is based (largely) on those local calling areas defined by the incumbent wireline local exchange carrier.

There are no attempt or calls per second limitations on the **Peeredge Datasource Fabric** and the service has native high-availability and automatically self-heals.

Datasource Fabric Capabilities (LRN)

— CAPABILITIES

- An unlimited amount of lookups/dips per second
- Sub-5ms query responses (302-redirect) or Sub-2ms query responses (Peeredge switching fabric)
- Automatic update of LNP data from Neustar for all regions, including Canada.
- Automatic update of LERG data from Telcordia for all exchanges
- Automatic update of LCAD data from our neutral third-party provider
- Support of individual and numbering block LNP lookups

— SIGNALING

- SIP 302 response for LNP, LERG and LCAD queries
- Customized redirect response, which supports any switching hardware capable of a SIP 302 request
- Responses to multiple datasources can be combined into a single SIP 302 message
- Can be combined with Peeredge Routing Fabric to extend LNP based jurisdictional lookups or LCAD based local lookups

— CALL CONTROL

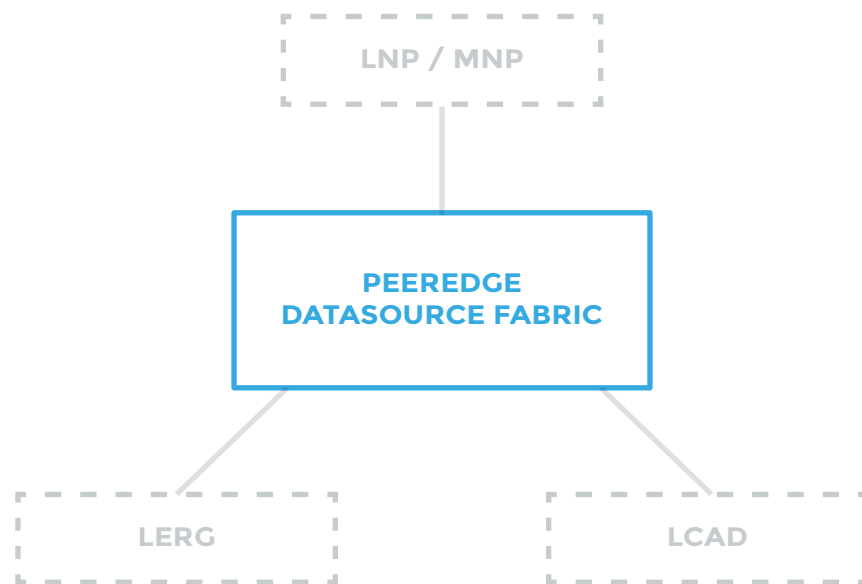
- Can be throttled on a per-IP basis, to limit the maximum number of simultaneous requests per second
- Can accept 302 requests from a global footprint of SBC or proxies
- Management

- Full integration into the Peeredge Ecosystem of products with one touch management of external SBCs
- Automatic LNP updates and monitoring by the 46 Labs staff

— REDUNDANCY

- Multiple 302-based endpoints with direct redundant integration with the Peeredge Routing Fabric
- Self-healing update and query backends
- Virtual Datasource Elements contained redundant virtualized elements for on-prem deployments

Peeredge VDE Virtualized Datasource Element



The Peeredge VDE (Virtualized Datasource Element) gives carriers that require on-premise datasource requests, the advantage of Peeredge Datasources inside of their own facilities. The features present in the Peeredge Datasource Fabric convey to the VDEs and users may run a hybrid of VDEs alongside the native Peeredge Datasource Fabric. The entire deployment can be managed using a single unified interface inside the Peeredge Ecosystem.

The Peeredge VDEs can be coupled with the Peeredge VREs (Virtualized Routing Elements) and Peeredge VSEs (Virtualized Switching Elements) to have a fully remote deployment for latency-sensitive or high CPS applications.