Summary

The *N-Squared Text Telephony Gateway (N2TTG)* is a flexible and powerful user interaction platform for the implementation of subscriber self-management services in telecommunications networks.

Running on commodity x86-64 hardware/VM under all major modern Linux variants, the *N2TTG* solution combines easy scalability and simple service design with modern management/integration and low operational overhead.

Interaction Features

The *N2TTG* provides all user interaction services via a script-based service definition language for USSD and/or SMPP text interactions initiated by subscribers, including:

- USSD one-shot requests
- USSD interactive, hierarchical menus
- Inbound SMPP requests

The *N2TTG* can also be instructed to assemble and send outbound non-interactive SMPP or USSD messages, as required.

Illustration 1. N2TTG + SMPP + MAP

Integration Enrichment

As it is integrated to the N-Squared Service Daemon (*N2SVCD*), the *N2TTG* scripting logic can freely access data and information from external sources using the following standard provided client interfaces for:

- Querying or updating a wide range of relational and document-base databases.
- REST/SOAP operations to read/write to/from external components.
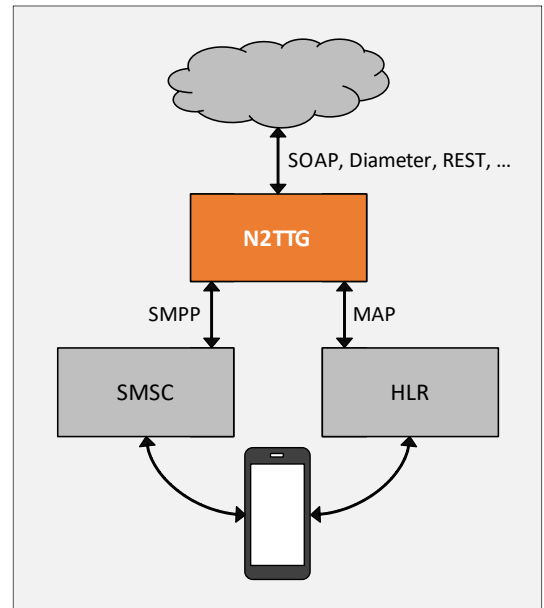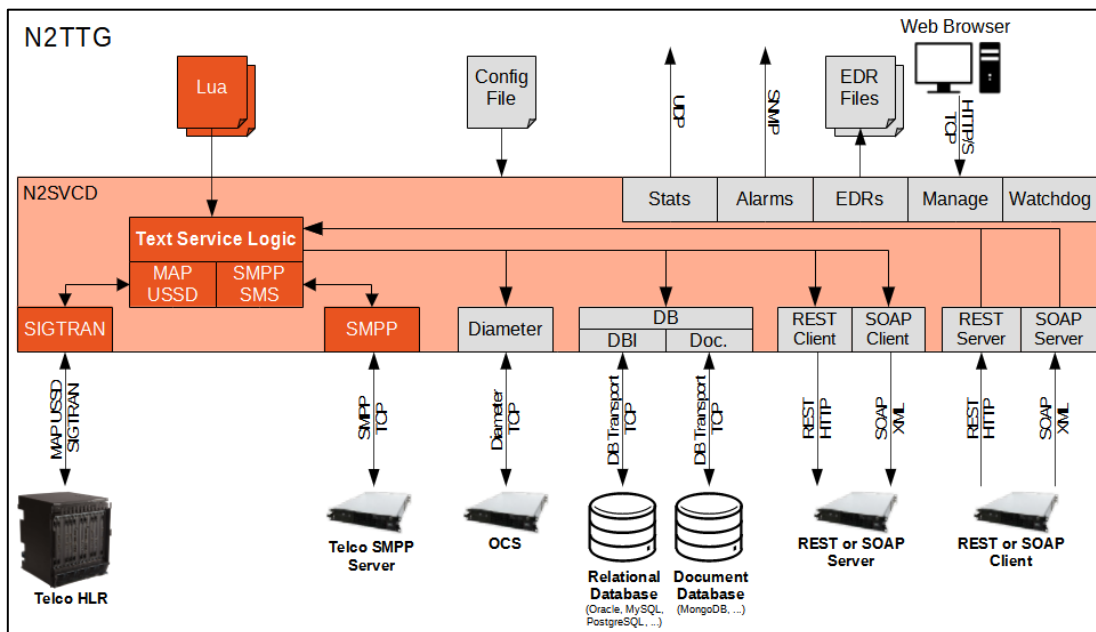- Diameter application requests, e.g. for Credit-Control balance/price/debit/credit.

Illustration 2. N2TTG integration enrichment via N2SVCD

Subscriber Interaction Scripting

The Text/Telephony Gateway service logic supports the popular embedded Lua scripting language for the definition of arbitrary service logic, with standard functions for branching, mathematics and string manipulation, arrays, and tables. In addition, there is a wide range of third-party libraries for JSON and XML manipulation, etc.

Platform Management & Control

The *N2TTG* service layer includes a web-based point-and-click interface for interaction with the run-time service-layer components.

Via web-browser, system administrators may:

- View running configuration.
- Track service statistics.
- Interrogate in-progress sessions.
- Monitor resource usage.
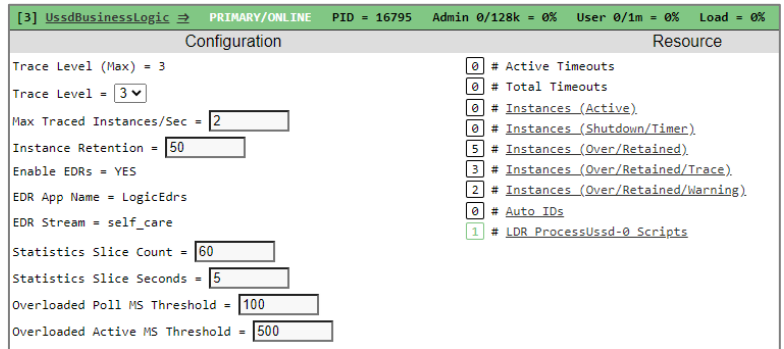- View system alarms.
- Modify platform configuration.

Illustration 3. N2TTG platform management

Scalability & Redundancy

N2SRP nodes are modular and can support flexible HA and DR deployment models. For example:

- Multiple nodes with single management instance.
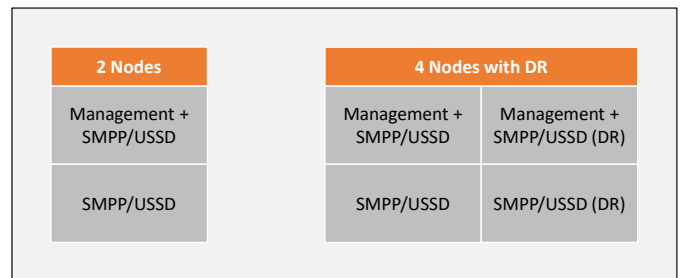- DR site synchronised with primary platforms.
- … and more.

Illustration 4. Example N2TTG deployments

Platform Monitoring & Reporting

Platform activities are reported by:

- Alarms off-platform via SNMP.
- Statistics off-platform via Graphite (Etsy/StatsD).
- Event Data Records in flat-file format.

Technical Guide & Protocol Conformance

Full Technical Guide and Protocol Conformance Statements are available online at:

https://www.nsquared.nz/product/n2ttg.html

Support & Maintenance

Ongoing 24/7 platform support and maintenance contracts are offered.

About N-Squared

N-Squared is an Oracle Gold Partner based in New Zealand. We are specialist providers of products and services for the Telecommunications domain.

Web: http://www.nsquaredsoftware.com/

Email: info@nsquaredsoftware.com