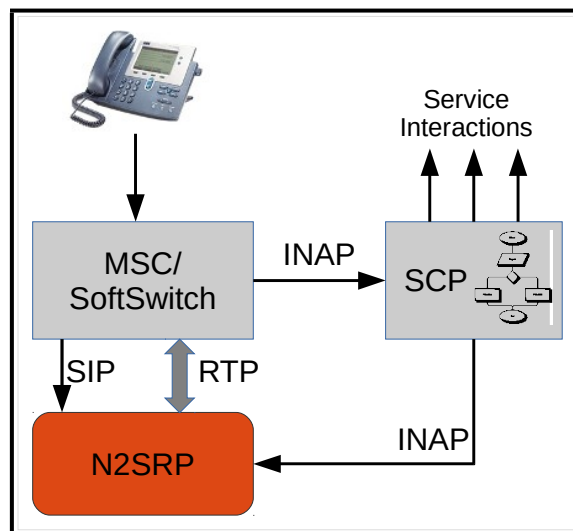


## Summary

The *N-Squared Specialized Resource Platform (N2SRP)* is a cost-effective, industry-grade INAP-controlled Intelligent Peripheral (IP) or Specialized Resource Function (SRF) using SIP trunking.

Built on Linux and commodity hardware (including VM), the *N2SRP* solution combines easy scalability and simple service design with modern management features and low operational costs.

## External INAP-Controlled Logic



The N2SRP is controlled by an external INAP/CAP - compliant Service Control Platform (SCP) via:

- **AssistRequestInstructions**
- **PlayAnnouncement**
- **PromptAndCollectUserInteraction**

## SIP & RTP Protocol Support

Standard RFC 3261 SIP INVITE is used for call set-up, including support for many standard options such as Early Media 183, PRACK, 401 Authentication, SIP REGISTER, SIP INFO, etc.

Audio is via RTP using G.711 or other open codecs. DTMF detection is via in-band RTP telephony-event, SIP INFO, or Goertzel FFT in software.

## Interaction Features

Text-to-speech for “variable parts”: *Numbers, Digit Strings, Dates, Times, and Prices* is built-in, using a separate “codec” for each language. Language codecs can be provided for most languages.

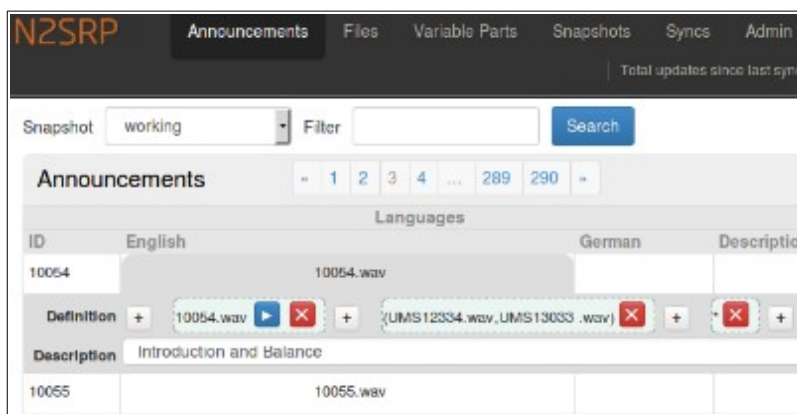
Free-form natural language text-to-speech (via third-party codec) is a separately-licensed add-on.

## Graphical Provisioning Interface

Audio mapping configuration for *N2SRP* is managed via an intuitive web-based provisioning interface. Fine-grained security control allows Telcos to grant secure self-management of announcements to resellers and virtual network operators.

Key Features:

- Secure Management Interface
- User-Based Resource Access
- Automatic Format Conversion
- In-Browser Audio Playback
- Per-File Version Control & Backup
- Global Snapshot & Restore
- Integrated Node Synchronisation



## Platform Management & Control

The N2SRP service layer includes a web-based point-and-click interface for interaction with the run-time service-layer components.

N2SVCD - Status				
#	App Name	Resources	Statistics	Configurati
Now: 2014-10-08 17:59:44.259114				
0	Manage	1=# Active Instances 0=# Queued Timeouts	1=# Instances Started	HTTP Host=0.0.0.0 HTTP Port=8088
1	SIGTRAN	1=# Connections 1=# Routes 0=# Handlers 0=# Active_TIDs 0=# Posthumous_TIDs 0=# Open_Correlations	0=# TCAP Sent 0=# TCAP Sent BEGIN 0=# TCAP Sent CONTINUE 0=# TCAP Sent END 0=# TCAP Sent ABORT 0=# TCAP Rcvd 0=# TCAP Rcvd BEGIN 0=# TCAP Rcvd CONTINUE 0=# TCAP Rcvd END 0=# TCAP Rcvd ABORT	Own SSN =10 Own Point Code =4114 Own Global Title=
2	SRP	2=# Languages 1=# SCP_Addresses 2=# RTP_Workers 1=# SIP_Connections 0=# Active_SIP_Instances 0=# Transaction_IDs 0=# Queued Timeouts		SIP Protocol =udp SIP Host =0.0.0.0 SIP Port =5660 Correlation ID Len =3 SCP ID Len =1 RTP Local IP =18.42.2.1 RTP Start Port =6970 INAP Language Extension ID=400 Default Language =English Scripter Audio Dir =/home/jco Default SIGTRAN App =SIGTRAN

Via any modern web-browser, system administrators may:

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

## Platform Monitoring & Reporting

Platform activities are reported by:

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

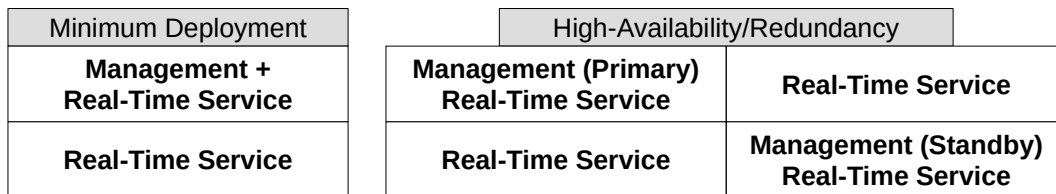
### Key Protocol Specifications

ETSI INAP (ETS 300 374-1)  
 CAMEL Phase 2+ (ETSI TS 101 046)  
 SIGTRAN (RFC 2960, 4666, 3868)  
 SIP (RFC 3261)  
 RTP (RFC 3550)  
 RTP DTMF (RFC 4733)

Note: Protocols are supported to the extent necessary for advertised features.

## Scalability & Redundancy

The modular architecture of N2SRP supports flexible HA and DR deployment models, e.g.:



## 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.

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