# Intermedia SIP Trunk Configuration Guide for SmartNode4970

Configuration of SN4970 Gateway – GUI Management Pages

This is the reference diagram for configuration of the SmartNode. Here are the key points in understanding the building blocks and the relationship between them.

1. There are three contexts: Context IP Router, Context CS Switch, and Context SIP Gateway.

    a. Creating connections require ports and interfaces.

    b. Circles are interfaces and are a logical representation.

    c. The white rectangles at the diagram's bottom are ports. Ports are the actual physical construct.

    d. To make a functioning port/interface group, bind ports to interfaces. (Represented by lines with a single direction arrow.)

2. Context IP Router

    a. Primarily provides the IP Networking connection that includes IP addresses, MAC addresses, and IP routing tables.

    b. There is more, but it is the basic function.

    c. It also is the connection to SIP trunks, etc.

3. The Context SIP Gateway

    a. has interfaces inside that are bound to the IP Interfaces,

    b. points to the Location Service which is associated with the Authentication Service.

4. Context CS Switch

    a. This context provides the telephony basis and connects to FXS/FXO/ISDN ports and to the Context SIP Gateway.

    b. It also provides the call routing capabilities, such as routing tables, mapping tables, and functions. Very powerful tool.
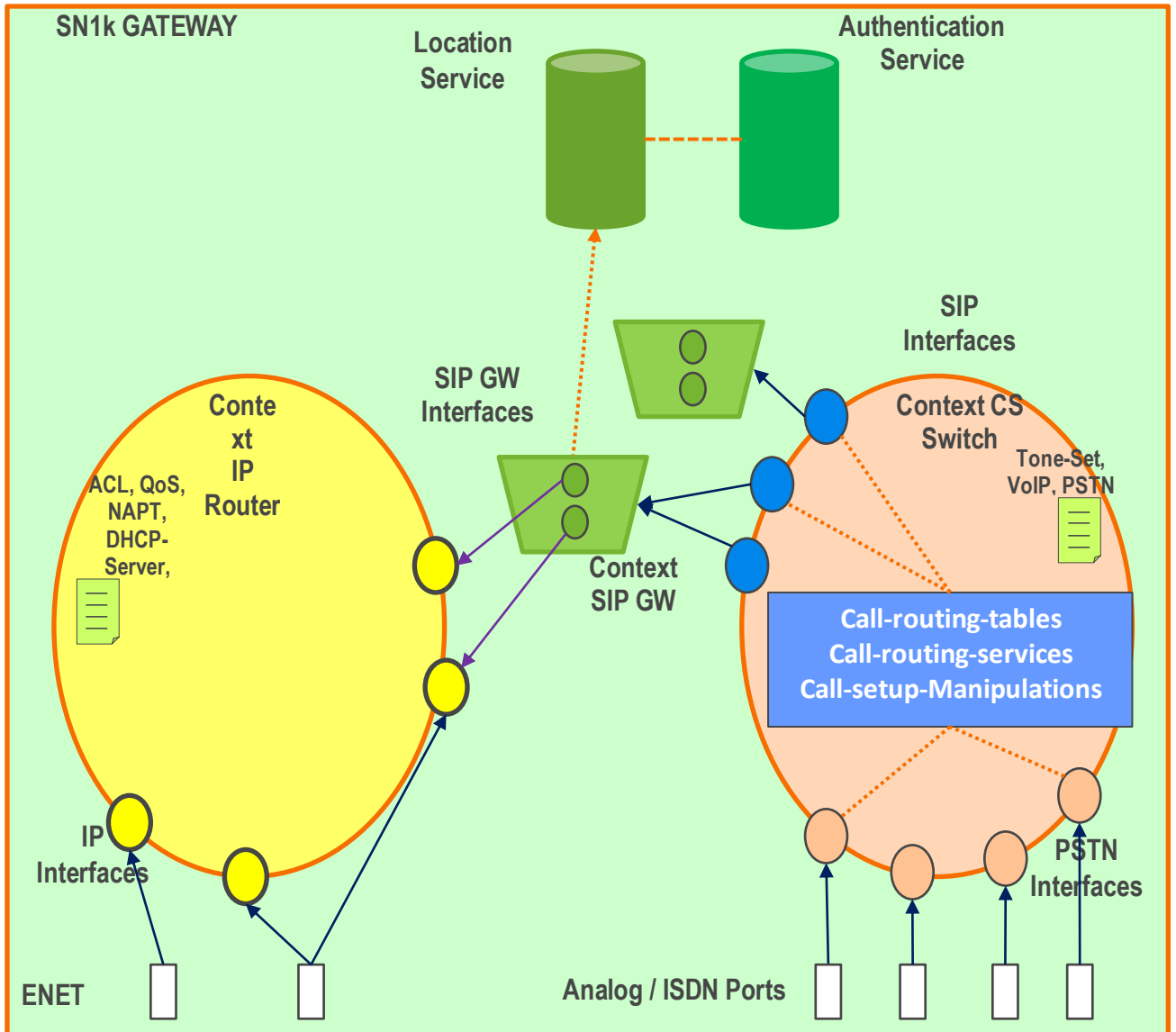
The steps for the basic configuration are as follows:

NOTE: The path is given by the label of the system -> label of subsystem, etc, beginning with the left-hand panel showing all systems.

- IP address & subnet: Network -> IP/DNS -> Interfaces -> eth0

- Default Route: Network -> IP/DNS -> Routes

- DNS Resolver: Network -> IP/DNS -> DNS Resolver

- T1/E1 Interface: Ports -> E1/T1 -> Name (e1t1 0/0)

  - This will later be associated with a routing table

Note: the Routing Tables will be created later.

AUTHENTICATION & LOCATION SERVICES

- Authentication Services: Telephony -> SIP -> Authentication Services

    o Create Name of Authentication Service (AUTH)

    o Under Authentication Users, add

        ▪ Username (dgwsidxxxxxx) and

        ▪ Password (******)

After configuration of Authentication Services:

- Location Service: Telephony -> SIP -> Location Services

  - Create Name (LOC_SVC)

  - Enter Domain and Port (This information can found in the welcome email from Intermedia)

  - Add Identities (the Identity Name is in the Authentication Service)

    - Name = dgwsidxxxxxx

After configuration of Location Services:

CONTEXT SIP GATEWAY (Green Trapezoid)

- SIP Gateway: Telephony -> SIP -> Gateways

    o Create Gateway Name: (GW_SIP)

- -> GW_SIP to create the Context SIP Gateway interface (green circles in SIP Gateway)

    o Create SIP Interface: (IF_GW_SIP)

- o Bind SIP Gateway's SIP Interface to IP Interface (in Context IP Router) (ETH0)

- o Assign port (5060) to SIP Gateway's Interface

- o Bind SIP Gateway to Location Service.

After configuration of SIP Gateway:

CONTEXT CS (Orange Circle)

- • SIP Interfaces (dark blue circles on Context CS Switch's periphery): Telephony -> SIP -> Interfaces

  - o Create Name (IF_SIP)

  - o Bind to SIP Gateway (GW_SIP)

  - o Call-Routing Destination -> (will be created later)

    - ▪ calls are incoming from SIP and will be routed to the T1/E1 interface.

  - o Remote User Agent / Port: 64.28.xxx.xx:6060. (Please use the Sip Server IP address provided by Intermedia).

After configuration of the SIP Interface:

- Call-Router: Telephony -> Call-Router -> Configuration

  o Enable Call-Router

  o Although you will probably leave the other parameters at their default settings, note that the timeout for digit-collection can be changed.

- Function: Telephony -> Call-Router -> Functions

- o Create Name: in this instance, it is '911_DIALBACK_TABLE'.

- o In this instance, we create a Mapping Table for the express purpose of providing a single callback number regardless of which FXS extension makes a call to '911'. The basic idea is that it looks at the 'called-e164' number, which if it matches '911', the calling-e164 number is changed to the desired callback number.

- o The Function (Mapping Table) will be called in the Routing Tables.

Configuration

Looks Up For called-e164 Of	Modifies calling-e164 To	
911	12066864899	✕

After configuration of Mapping Table (Function):

Interfaces	Routing Tables	**Functions**	Services	Configuration	Active Calls	Status

Mapping Tables

Name	Looks up for	Modifies	
911_DIALBACK_TABLE	called-e164	calling-e164	✕

- • Call 'Routing Tables': Telephony -> Call-Router -> Routing Tables

  - o Create Name of the <u>first table</u> (RT_FROM_T1E1): this table routes calls from FXS interfaces to the SIP interface for outgoing calls.

    - ▪ Destination: IF_SIP (a SIP Interface)

    - ▪ Execute Function: 911_CALLBACK_TABLE

      - • This function is executed before being sent to the destination.

Configuration

Looks Up For called-e164 Of	Destination	Execute Function (Optional)	
	IF_SIP (SIP Interface)	911_DIALBACK_TABLE (Mapping Table)	✕

  - o Create Name of the <u>second table</u> (RT_FROM_SIP): this table routes incoming SIP calls to the T1E1 interface.

    - ▪ The Destination is based on the best match in the column 'Looks Up For called-e164 Of'.

- Since we are listing specific '*called-e164*' numbers, any other number will not be routed.

Configuration

Looks Up For called-e164 Of	Destination	Execute Function (Optional)	
2066864899	IF_T1E1_00 (ISDN Interface)		✕
12066864899	IF_T1E1_00 (ISDN Interface)		✕
2066864903	IF_T1E1_00 (ISDN Interface)		✕
12066864903	IF_T1E1_00 (ISDN Interface)		✕

After configuration of routing tables:

Interfaces	Routing Tables	Functions	Services	Configuration	Active Calls	Status

Routing Tables

Name	Looks up for	
RT_FROM_T1E1	called-e164	✕
RT_FROM_SIP	called-e164	✕

SAVE Configuration