

Broadvox SIP Trunks Configuration Guide

PBX Platform: KX-NS1000



Overview

This document describes the configuration procedures required for the KX-NS1000 to make full use of the capabilities of Broadvox SIP Trunks Services.

The SIP trunks services of the KX-NS1000 PBX are provided through virtual CO line cards (V-SIPGW16) which are designed to be easily integrated into an Internet Telephony Service provided by an ITSP (Internet Telephony Service Provider).

This guide describes the specific configuration items for the virtual SIP Gateway card in addition to the PBX basic configuration related to SIP trunks functionality. It also describes basic Network configuration to familiarize dealers with the network setup. It does not describe the purpose and use of all configuration options on the virtual SIP Gateway card. For those details, see the KX-NS1000 Programming Manual for Virtual SIP CO Line Card and the KX-NS1000 Manuals available from Panasonic Communication Solutions.

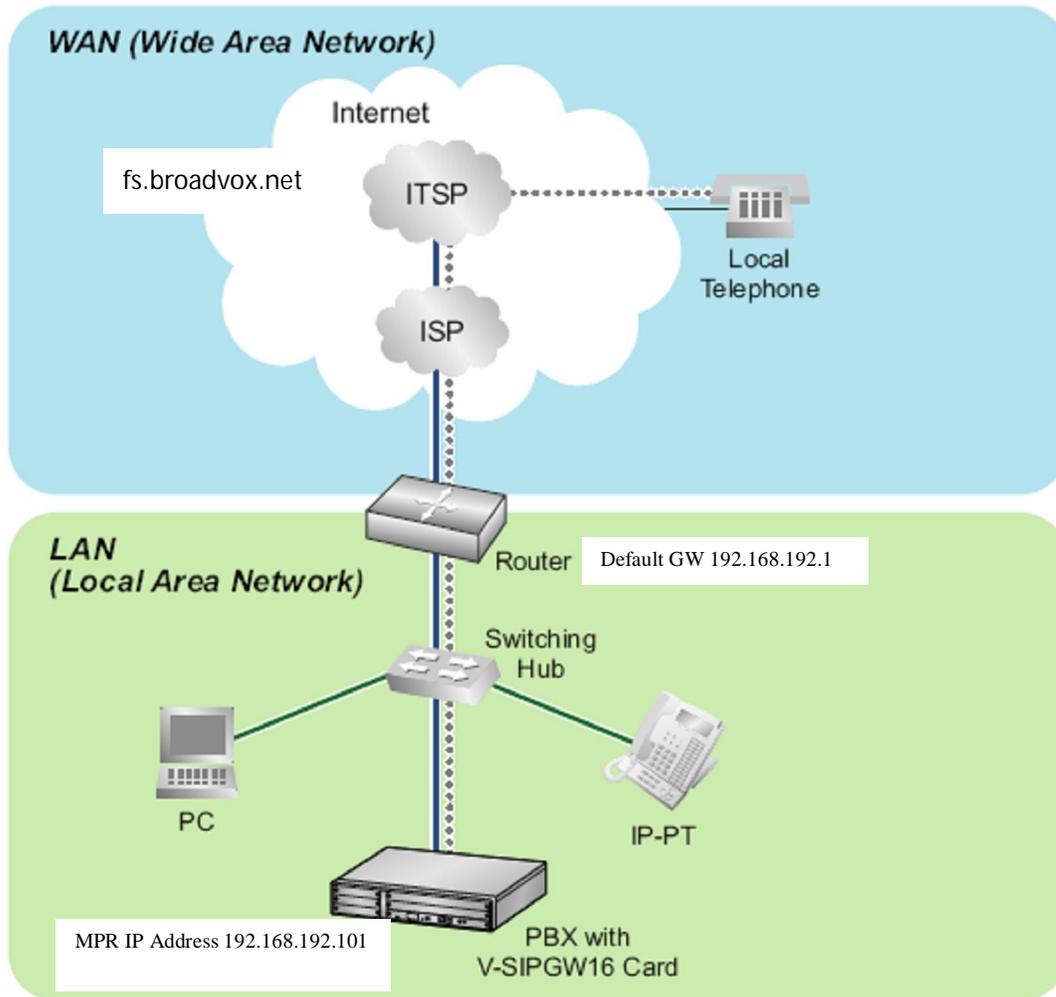
DSP card and Activation keys

- ✓ The PBX has to be equipped with a DSP card.
- ✓ Activation keys for SIP-Trunks has to be installed in the PBX to provide the SIP-trunks functionality

To check the number of activation keys installed into the PBX and add new licenses please refer to [Page 11](#) in this guide

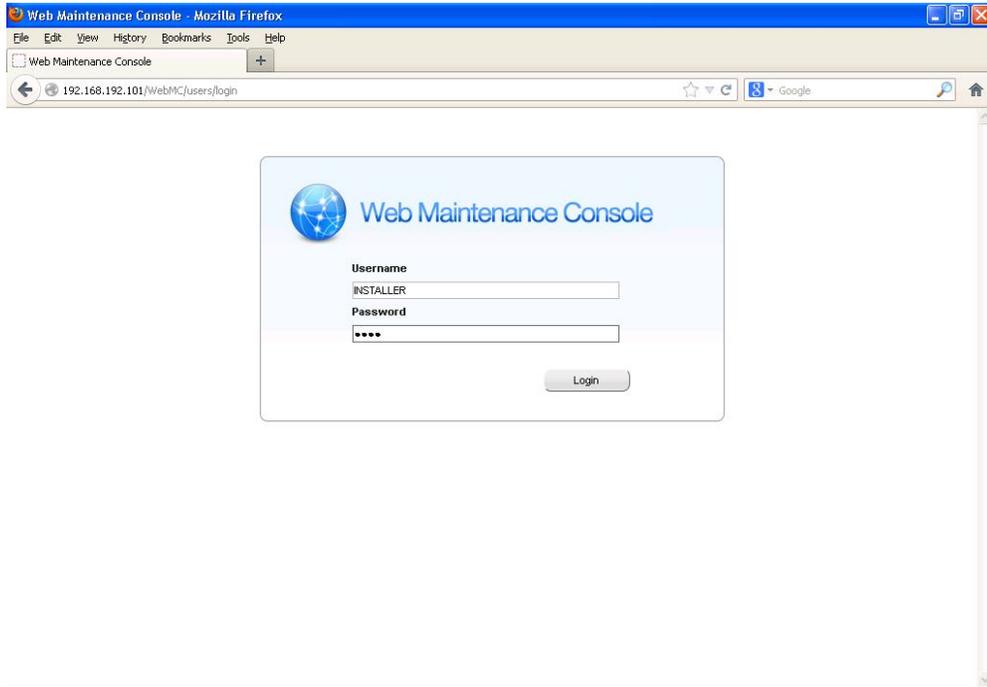
Architecture Overview

The following diagram illustrates simple VOIP networks connecting the NS1000 PBX:
The Case of Broadvox Setup: Broadvox will provide its services over the Public Internet

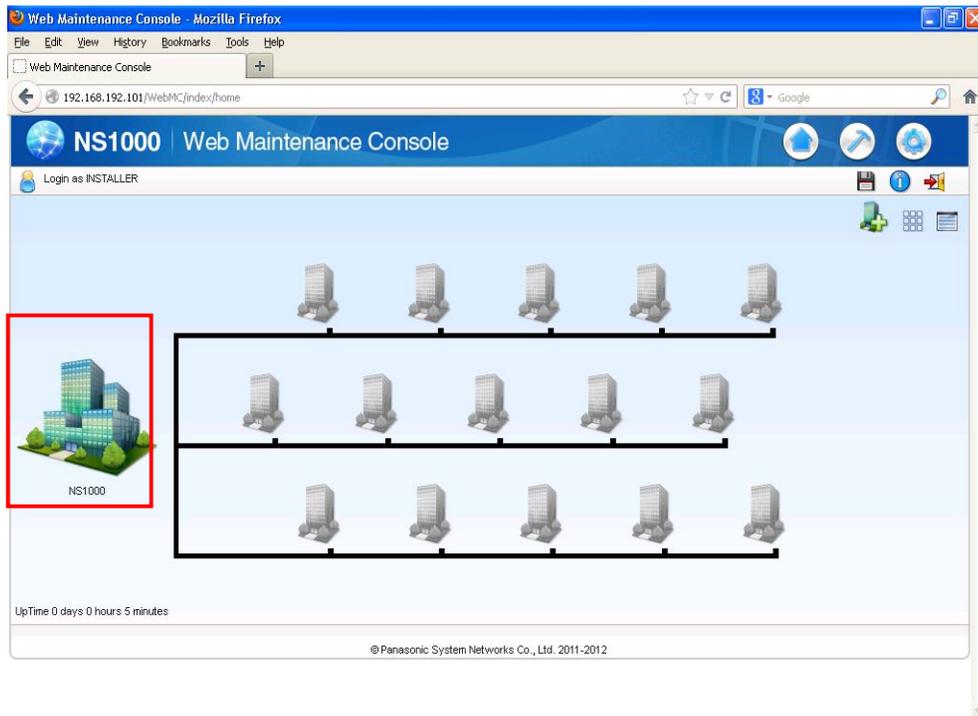


Basic V-SIPGW16 Settings for Broadvox Trunks

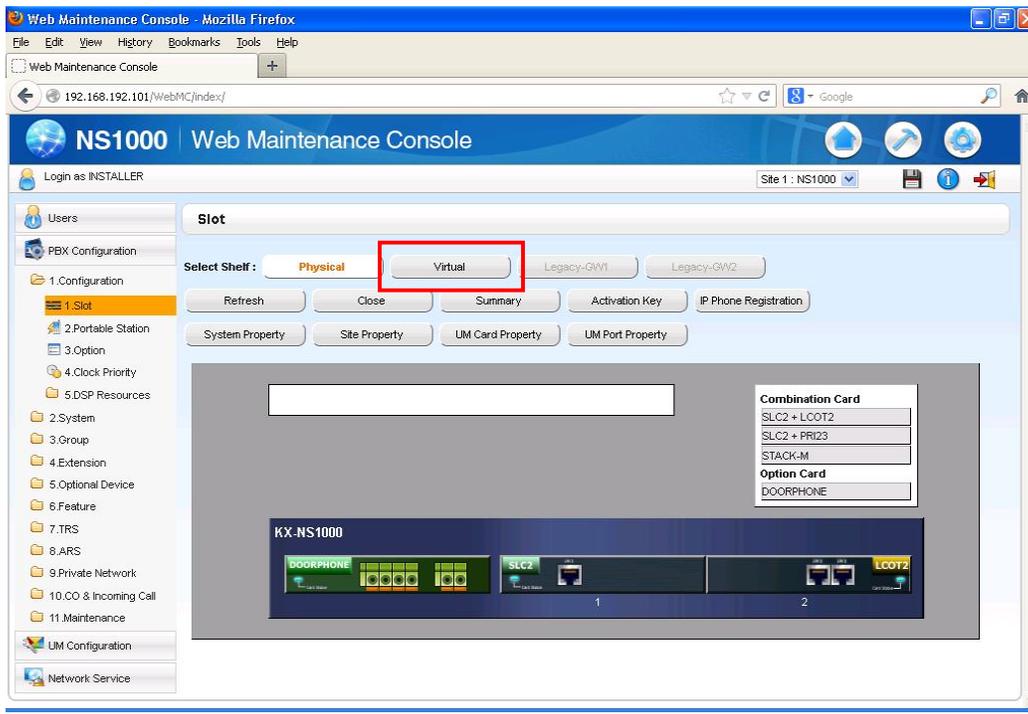
1- Log into the KX-NS1000 Web Portal



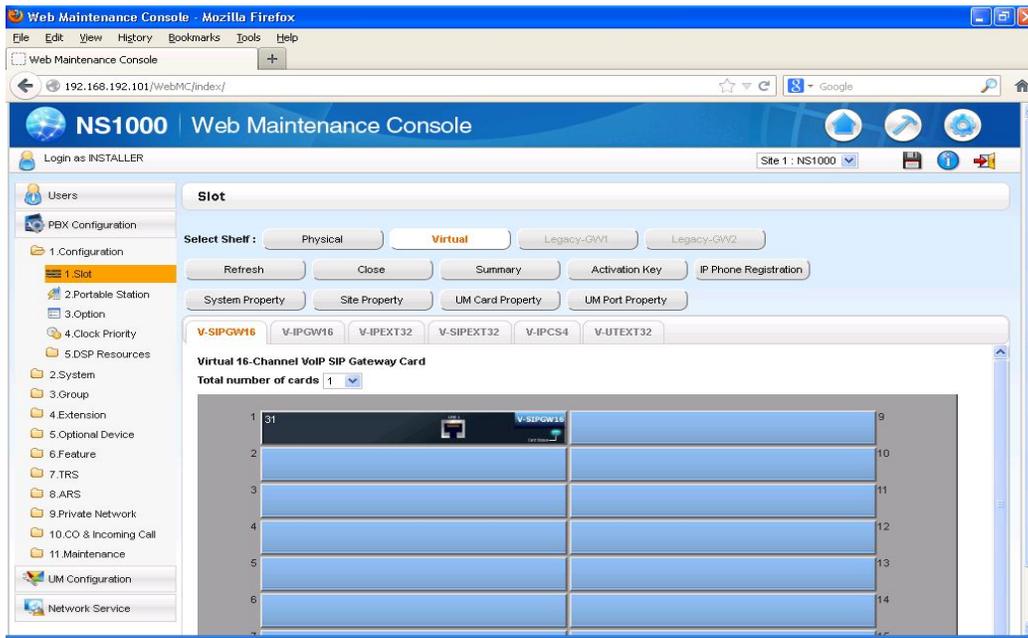
2- Click on the Main KX-NS1000 site



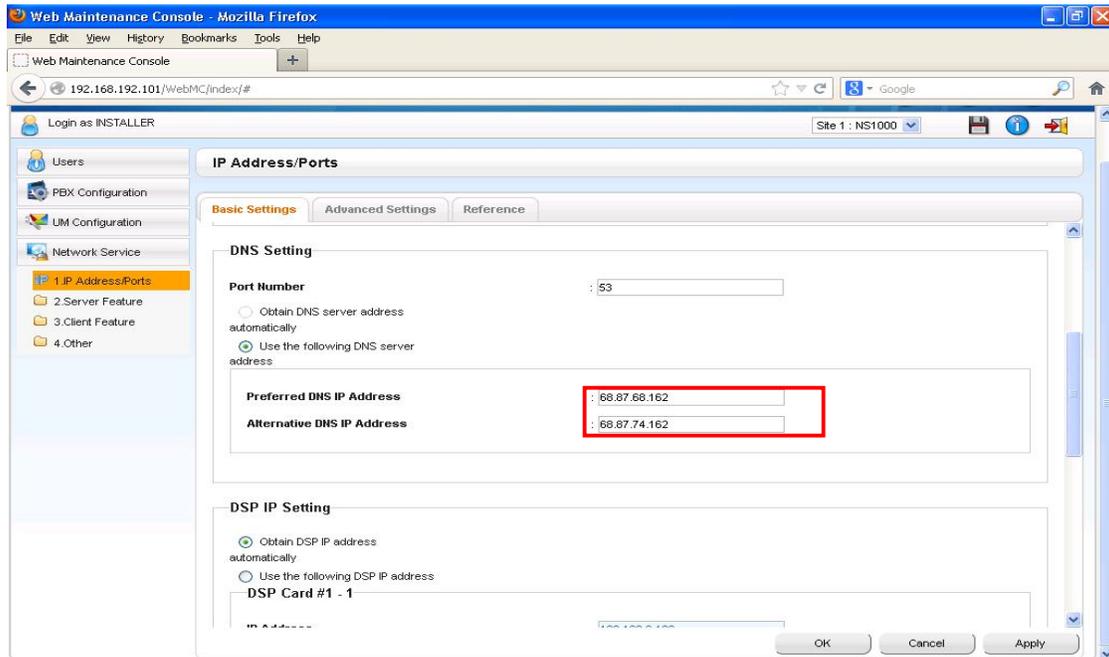
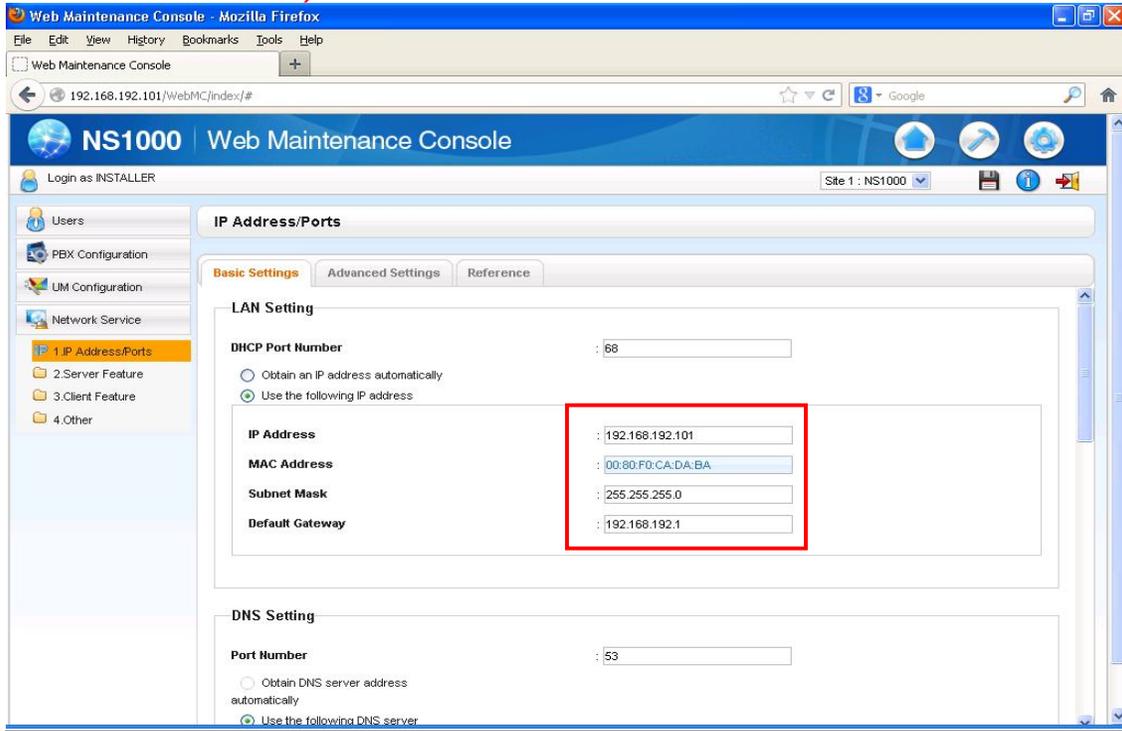
3- Go to the Virtual Shelf



4- Install the V-SIPGW card

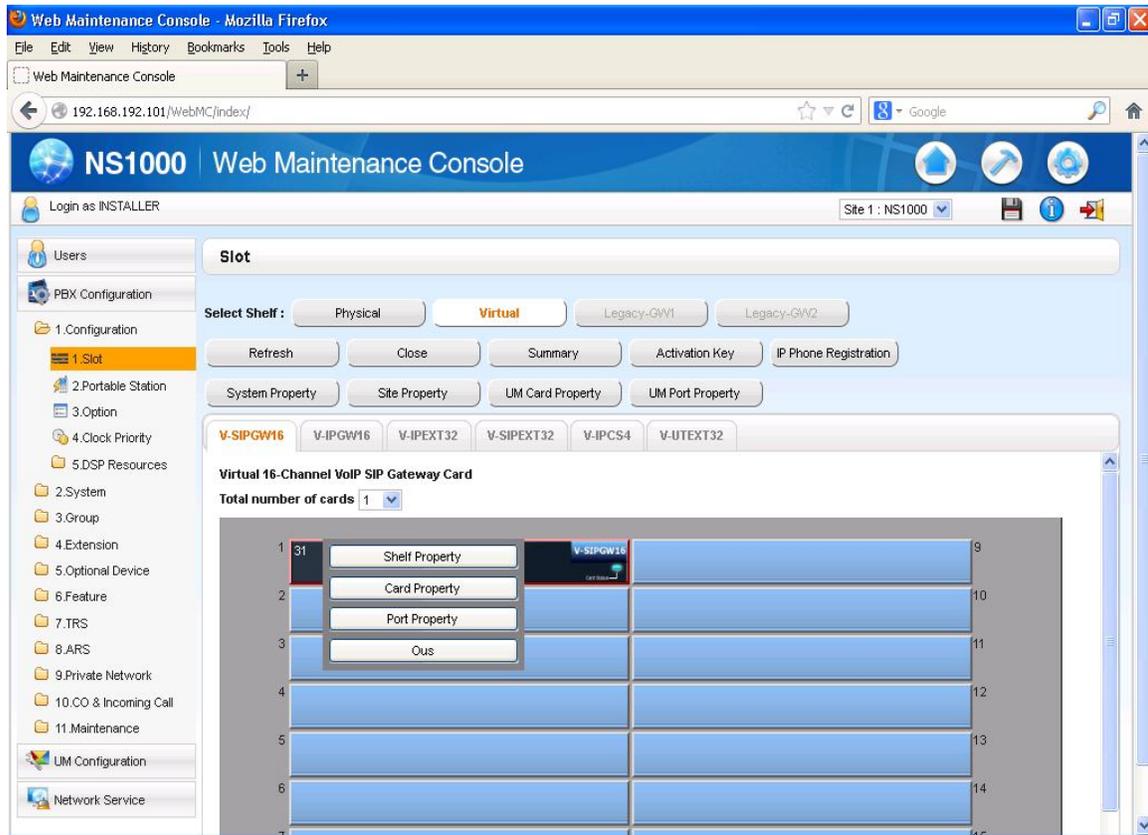


5- KX-NS1000 Network Settings *(The settings provided in this guide is just an example, please follow your site network configuration or consult with your Network administrator for details.)*



6- The V-SIPGW Card and Shelf Properties

The settings of the card and shelf property should be as Default settings



7- The V-SIPGW Port Property

The screenshot shows the 'Port Property - Virtual SIP Gateway' configuration page in the Web Maintenance Console. The page is accessed via a Mozilla Firefox browser at the URL 192.168.192.101/WebMC/index/#. The user is logged in as 'INSTALLER'. The page title is 'Port Property - Virtual SIP Gateway'. There are buttons for 'Select Provider', 'Add Provider', and 'Trunk Adaptor'. Below these are tabs for 'Main', 'Account', 'Register', 'NAT', 'Option', 'Calling Party', 'Called Party', 'Voice/FAX', 'RTP/RTCP', and 'T.38'. The 'Main' tab is active, displaying a table with the following columns: No., Shelf, Slot, Port, Connection, Connection Attribute, Channel Attribute, and Provider Name. The table contains 12 rows of data.

No.	Shelf	Slot	Port	Connection	Connection Attribute	Channel Attribute	Provider Name (20 characters)
1	Virtual	31	1	INS	SIP Provider	Basic channel	Broadvox
2	Virtual	31	2	INS	SIP Provider	Additional channel for Slot 31 Ch 1	
3	Virtual	31	3	INS	SIP Provider	Additional channel for Slot 31 Ch 1	
4	Virtual	31	4	Fault	SIP Provider	Not Used	
5	Virtual	31	5	Fault	SIP Provider	Not Used	
6	Virtual	31	6	Fault	SIP Provider	Not Used	
7	Virtual	31	7	Fault	SIP Provider	Not Used	
8	Virtual	31	8	Fault	SIP Provider	Not Used	
9	Virtual	31	9	Fault	SIP Provider	Not Used	
10	Virtual	31	10	Fault	SIP Provider	Not Used	
11	Virtual	31	11	Fault	SIP Provider	Not Used	
12	Virtual	31	12	Fault	SIP Provider	Not Used	

At the bottom of the page, there are buttons for 'OK', 'Cancel', and 'Apply'. The page number is 'Page 1 of 1' and the view count is 'View 1 - 16 of 18'.

SIP Server Address should be obtained from your Broadvox Welcome Letter

The screenshot shows the 'SIP Server Address' configuration page in the Web Maintenance Console. The page is accessed via a Mozilla Firefox browser at the URL 192.168.192.101/WebMC/index/#. The user is logged in as 'INSTALLER'. The page title is 'Port Property - Virtual SIP Gateway'. There are buttons for 'Select Provider', 'Add Provider', and 'Trunk Adaptor'. Below these are tabs for 'Main', 'Account', 'Register', 'NAT', 'Option', 'Calling Party', 'Called Party', 'Voice/FAX', 'RTP/RTCP', and 'T.38'. The 'Main' tab is active, displaying a table with the following columns: Provider Name (20 characters), SIP Server Name (100 characters), SIP Server IP Address, SIP Server Port Number, SIP Service Domain (100 characters), and Subscriber Number. The table contains 12 rows of data.

Provider Name (20 characters)	SIP Server Name (100 characters)	SIP Server IP Address	SIP Server Port Number	SIP Service Domain (100 characters)	Subscriber Number
Broadvox	nd01-03.fs.broadvox.net		5060		
			5060		
			5060		
			5060		
			5060		
			5060		
			5060		
			5060		
			5060		
			5060		
			5060		
			5060		

At the bottom of the page, there are buttons for 'OK', 'Cancel', and 'Apply'. The page number is 'Page 1 of 1' and the view count is 'View 1 - 16 of 18'.

User Name = BTN number (From Your Welcome Letter)
Authentication ID = Same as BTN
Authentication Password is obtained from your welcome letter

Web Maintenance Console - Mozilla Firefox
 192.168.192.101/WebMC/index/#

Port Property - Virtual SIP Gateway

Select Provider Add Provider Trunk Adaptor

Main Account Register NAT Option Calling Party Called Party Voice/FAX RTP/RTCP T.38

No.	Shelf	Slot	Port	Connection	User Name (64 characters)	Authentication ID (64 characters)	Authentication Password (32 characters)
1	Virtual	31	1	INS	Same as BTN	Same as BTN	Auth Pass
2	Virtual	31	2	INS			
3	Virtual	31	3	INS			
4	Virtual	31	4	Fault			
5	Virtual	31	5	Fault			
6	Virtual	31	6	Fault			
7	Virtual	31	7	Fault			
8	Virtual	31	8	Fault			
9	Virtual	31	9	Fault			
10	Virtual	31	10	Fault			
11	Virtual	31	11	Fault			
12	Virtual	31	12	Fault			

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OK Cancel Apply

Change the Register Sending Interval to 180

Web Maintenance Console - Mozilla Firefox
 192.168.192.101/WebMC/index/#

Port Property - Virtual SIP Gateway

Select Provider Add Provider Trunk Adaptor

Main Account Register NAT Option Calling Party Called Party Voice/FAX RTP/RTCP T.38

No.	Shelf	Slot	Port	Connection	Register Ability	Register Sending Interval (s)	Un-Register Ability when port INS	Register (100 s)
1	Virtual	31	1	INS	Enable	180	Enable	
2	Virtual	31	2	INS	Enable	3600	Enable	
3	Virtual	31	3	INS	Enable	3600	Enable	
4	Virtual	31	4	Fault	Enable	3600	Enable	
5	Virtual	31	5	Fault	Enable	3600	Enable	
6	Virtual	31	6	Fault	Enable	3600	Enable	
7	Virtual	31	7	Fault	Enable	3600	Enable	
8	Virtual	31	8	Fault	Enable	3600	Enable	
9	Virtual	31	9	Fault	Enable	3600	Enable	
10	Virtual	31	10	Fault	Enable	3600	Enable	
11	Virtual	31	11	Fault	Enable	3600	Enable	
12	Virtual	31	12	Fault	Enable	3600	Enable	

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OK Cancel Apply

Change the CNIP Receive (ALL channels) to Yes

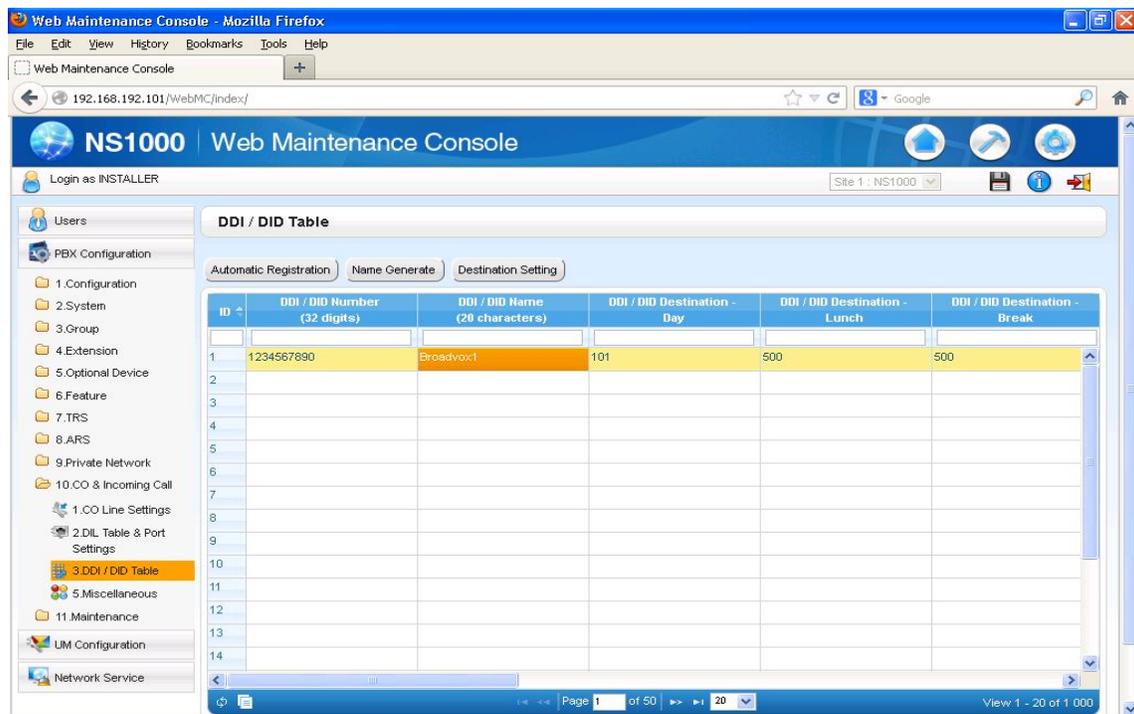
The screenshot shows the 'Port Property - Virtual SIP Gateway' configuration page in the NS1000 Web Maintenance Console. The page is accessed via a Mozilla Firefox browser at the URL 192.168.192.101/WebMC/index/. The user is logged in as 'INSTALLER'. The left sidebar shows a navigation menu with '1. Slot' selected. The main content area displays a table of supplementary services under the 'Supplementary Service' tab. The table has columns for No., Shelf, Slot, Port, Connection, CLIR, CHIP (Send), and CHIP (Receive). Row 3 is highlighted in orange, indicating the target configuration.

No.	Shelf	Slot	Port	Connection	CLIR	CHIP (Send)	CHIP (Receive)
1	Virtual	31	1	OUS	Yes	Yes	Yes
2	Virtual	31	2	OUS	Yes	Yes	Yes
3	Virtual	31	3	OUS	Yes	Yes	Yes
4	Virtual	31	4	Fault	Yes	Yes	No
5	Virtual	31	5	Fault	Yes	Yes	No
6	Virtual	31	6	Fault	Yes	Yes	No
7	Virtual	31	7	Fault	Yes	Yes	No
8	Virtual	31	8	Fault	Yes	Yes	No
9	Virtual	31	9	Fault	Yes	Yes	No
10	Virtual	31	10	Fault	Yes	Yes	No
11	Virtual	31	11	Fault	Yes	Yes	No
12	Virtual	31	12	Fault	Yes	Yes	No
13	Virtual	31	13	Fault	Yes	Yes	No

Essential PBX Configuration:

Please locate your DID information in the Broadvox Welcome letter/account Portal

To Assign the DID numbers destinations, Go to 10-3.CO & Incoming Call→ DDI/DID table



SIP trunks Activation keys:

- 1- To obtain additional activation keys, you need to purchase the appropriate activation key codes (For IP Trunks) and access the Key Management System. You can download the activation keys as an activation key file from the Key Management System. To download the activation keys, enter the MPR ID number shown on the IPCMPR Card in the PBX, and activation key number and registration ID provided on each activation key code.
- 2- To check the Number of Activation Keys Installed into your system
[Go to PBX Configuration, 1- Configuration, 1-Slot, click on Activation Keys \(Top of the PBX image\)](#)

Important Notes:

1- E911:

Please Work Closely with *Broadvox* team to ensure that E911 service is configured and tested properly