Setup Reference guide for KX-NS700/1000
Version 4.2 Firmware
“British Telecom” SIP Trunk service
(with External Router)

Version 1.0 (PSCEU) 5 October 2015

◆ SUMMARY

This document is a reference for configuring "**British Telecom**" SIP trunks with Panasonic KX-NS Series systems and includes the settings required for Incoming Call DDI routing and Outgoing Call CLI presentation. . SIP trunk specific account details are provided to you by BT.
The BT Sip services covered by this Inter-Operability Test include:

- **BT Wholesale SIP Trunks (WSIPT)**
- **BT Global Services One Voice SIP Trunk UK**

◆ Attention:

This document was created based on the results of test environment accounts.
Panasonic cannot guarantee SIP Trunk operation in all environments, however as a result of completing this Inter-Operability Test Panasonic will provide technical support for any issues experienced an assist as far as possible in providing a resolution.
Please obtain relevant information from Service provider before configuration of SIP trunks.
Panasonic will not be held liable for any information provided in this guidance document.
Information used in this document is for interoperability testing.
Information and Specifications in this document are subject to change without notice.

◆ Note

SIP Registration

As per British Telecom procedures, the example configurations use a Global IP Address for authentication.

Transfer Function

British Telecom does not support REFER transfer method – use CO to CO Transfer.

FAX

Recommended G.711 Inband codec.

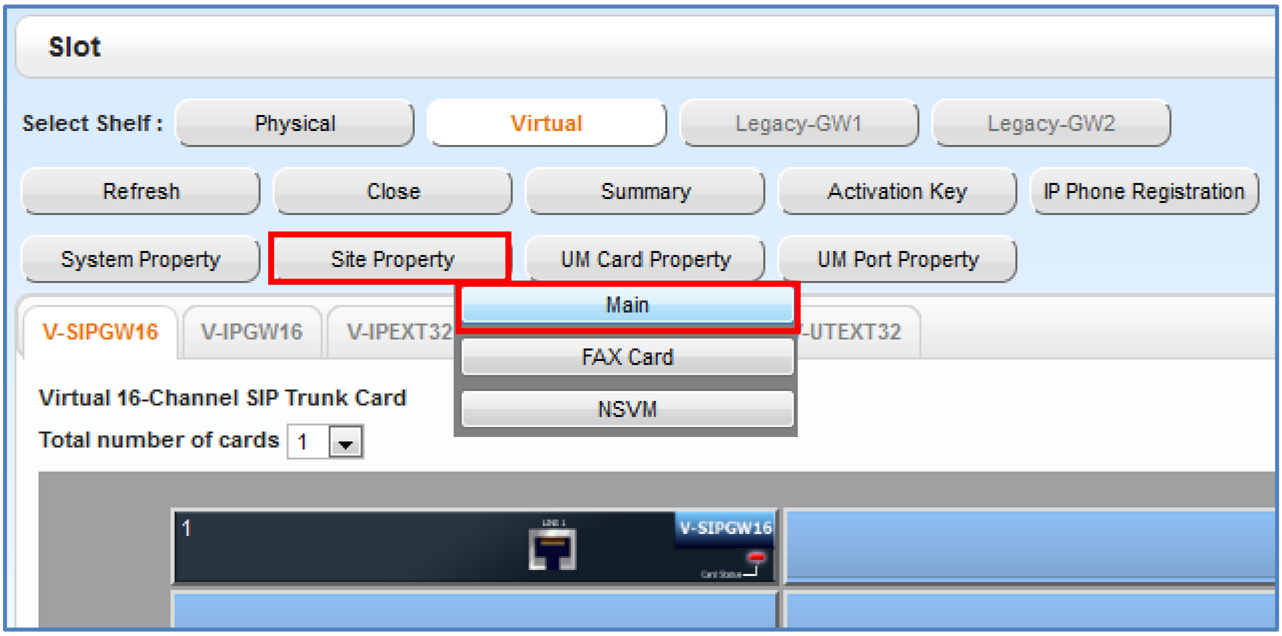
◆ Table of Contents

(1) SIP Trunk and Extension Port Number Configuration

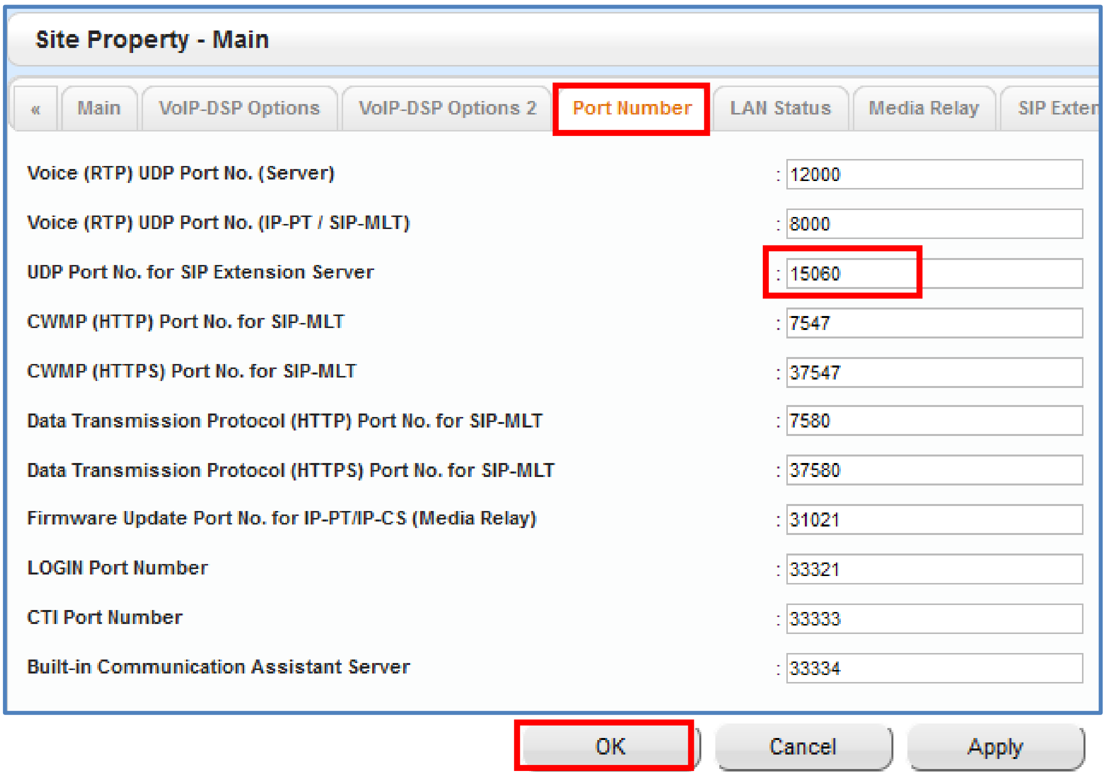
- Note:

  SIP Trunk Port number for British Telecom must be **5060** therefore SIP Extension ports are reconfigured, in this example to port **15060**.

Click **[1. Slot]** Move mouse over **[Site Property]** and click **[Main]**.



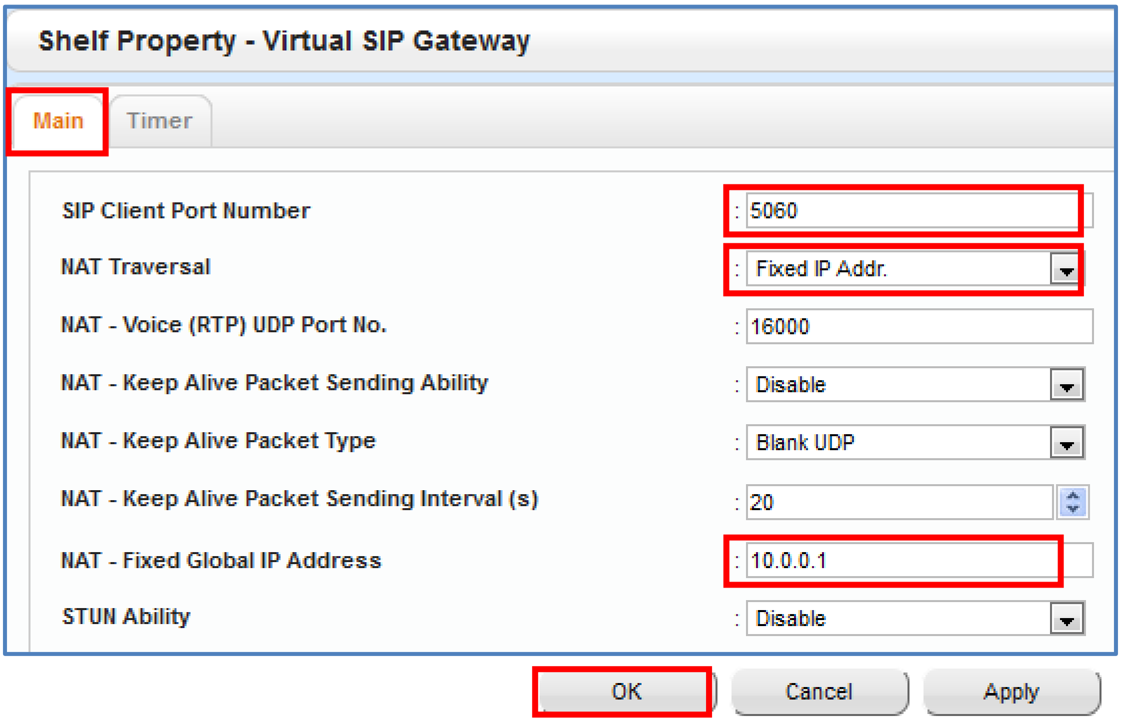
Click **[Port Number]** tab and change **[UDP Port No. for SIP Extension Server]** (Default:5060) to ***other number.*** *(i.e.15060).* and click **[OK]**.



Go to **[1.Configuration – 1.Slot]**
Click **[Virtual]** and move mouse over **[V-SIPGW16]**, and click **[Ous]**. Click **[OK]** pop-up window.
Move mouse over **[V-SIPGW16]** again, and click [**Shelf Property]**.

Select **[Main]** tab and change the two items.

[SIP Client Port Number] (Default:35060) to	**5060**
[NAT – Traversal]	***Fixed IP Addr.***
[NAT – Fixed Global IP]	***10.0.0.1 (Enter your actual Global IP address)***



and click **[OK]**.
Move mouse over **[V-SIPGW16]** again, and click **[Ins]**.

****Note: Save the System data and Restart the PBX after making these port changes.***

Port Forwarding

For External router setup, configure Port Forwarding on the router as follows:

udp port 5060 – to NS LAN IP address (e.g. 192.168.0.101)

udp port range 16000-16511 (RTP) – to NS DSP1 LAN IP address (192.168.0.102)

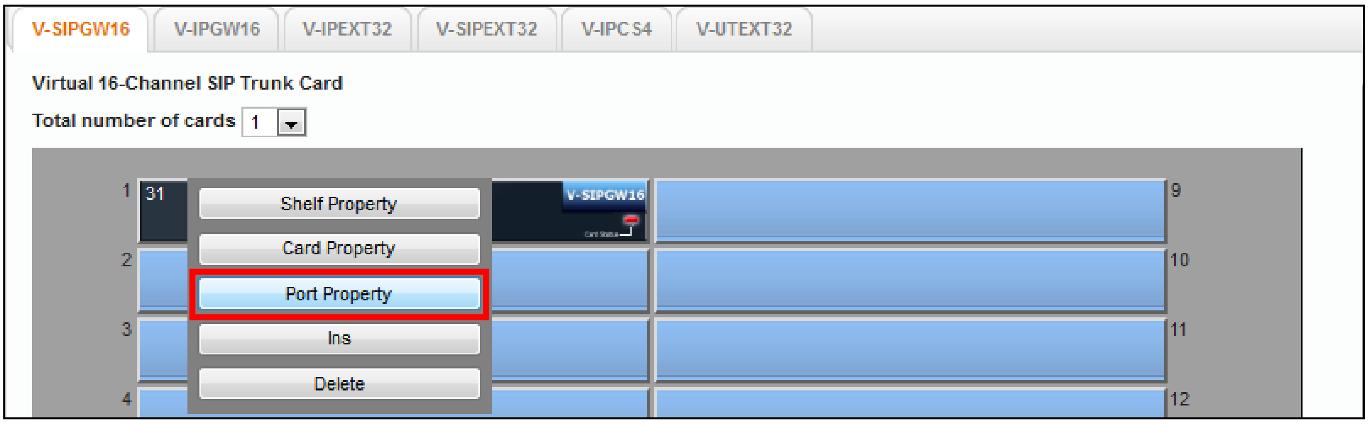
For larger installations where additional DSP resources are installed:
udp port range 16512-17023 (RTP) – to NS DSP2 LAN IP address (192.168.0.103)
udp port range 17024-17535 (RTP) – to NS DSP3 LAN IP address (192.168.0.104)
udp port range 17536-18047 (RTP) – to NS DSP4 LAN IP address (192.168.0.105)

IMPORTANT!
To secure the PBX from illegal attacks, please restrict the above port forwarding ports to *only* be accessible from the British Telecom source IP addresses.

(2) Provisioning the SIP Trunk

SIP Trunk – Port Property

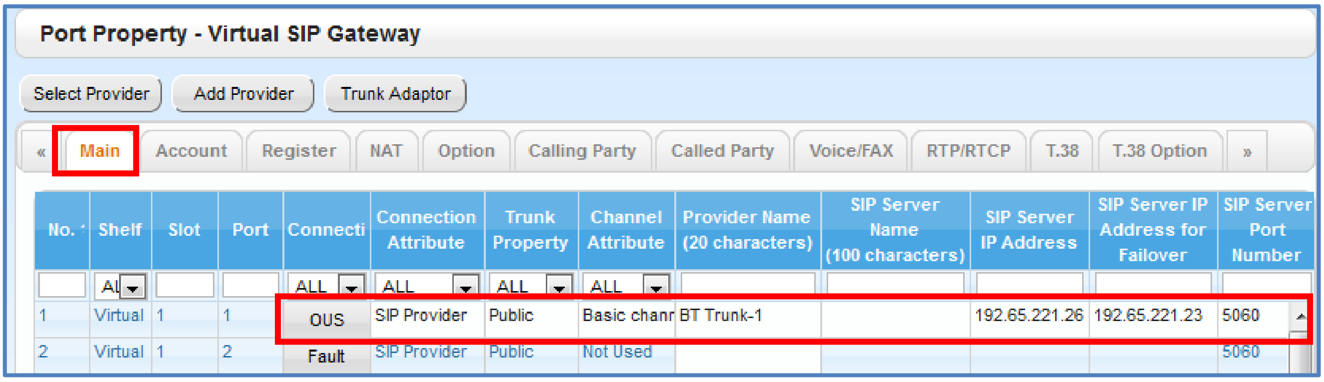
Move mouse over **[V-SIPGW16]** and click **[Ous]** and Select **[Port Property]**



SIP Trunk – Port Property continued

[Main] Tab

1. **Channel Attribute:** ***Basic Channel***
2. **Provider Name:** ***Enter a name – reference only***
3. **SIP Server Location – Name:** *Not required*
4. **SIP Server Location – IP Address:** ***192.65.221.26 – (British Telecom provided)***
5. **SIP Server IP for Failover:** ***192.65.221.23 – (British Telecom provided)***
6. **SIP Server port Number:** *Leave at 5060*
7. **SIP Service Domain:** *Not required*
8. **Subscriber Number:** *Not required*



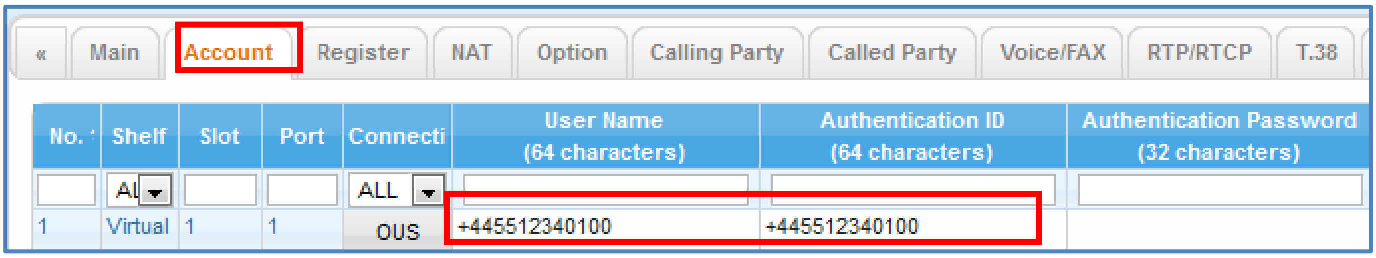
SIP Trunk – Port Property continued

[Account] Tab

1. User name: ***Enter the SIP Account (User name) as supplied by British Telecom.***
(Note this is user name without @192.65.221.26)
For example: SIP Account (User name) = +445512340100
Enter: +445512340100

2. Authentication ID: ***Enter the Authentication ID as supplied by British Telecom.***
(Note this is authentication ID without @192.65.221.26)
For example: Authentication ID = +445512340100
Enter: +445512340100

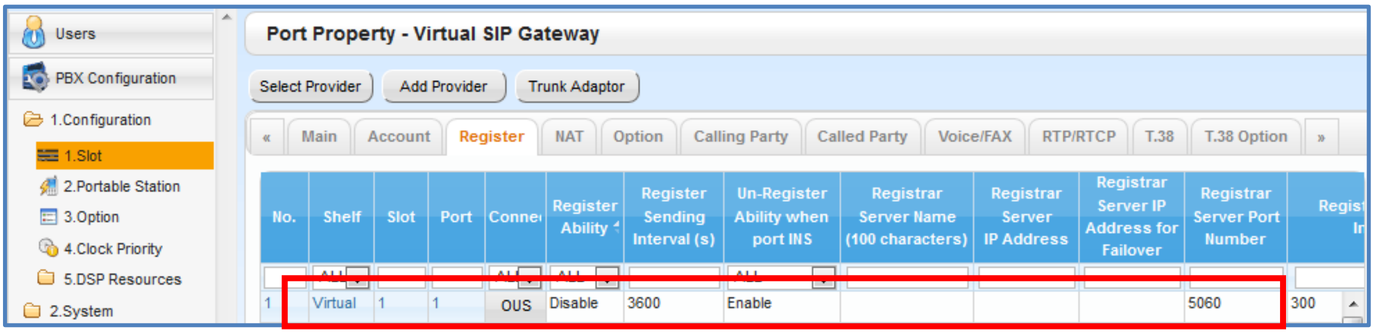
3. Authentication Password: ***Not required.***



SIP Trunk – Port Property continued

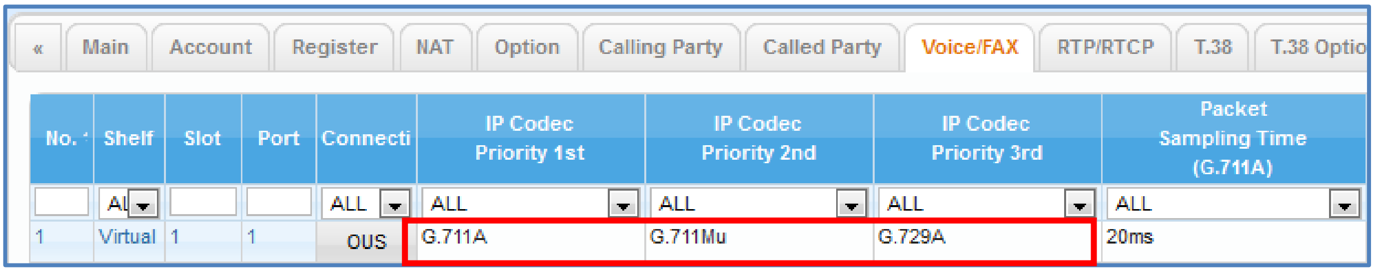
[Register] Tab

1. **Register Ability:** ***Disable***
2. **Register Interval:** *Leave at 3600*
3. **Un-Register Ability:** *Leave enabled*
4. **Registrar Server – Name:** *Not required*
5. **Registrar Server – IP Address:** *Not required*
6. **Registrar Server port number:** *Leave at 5060*



[Voice/FAX] Tab

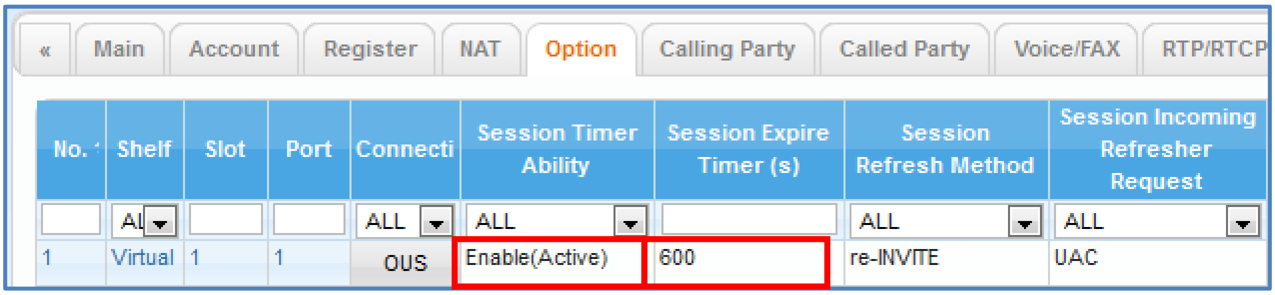
1. **IP Codec Priority 1st:** ***G.711A***
2. **IP Codec Priority 2nd:** ***G.711Mu***
3. **IP Codec Priority 3rd:** ***G.729A***



[Option] Tab

Session Timer Ability: ***Enable (Active)***

Session Expire Timer: ***600***



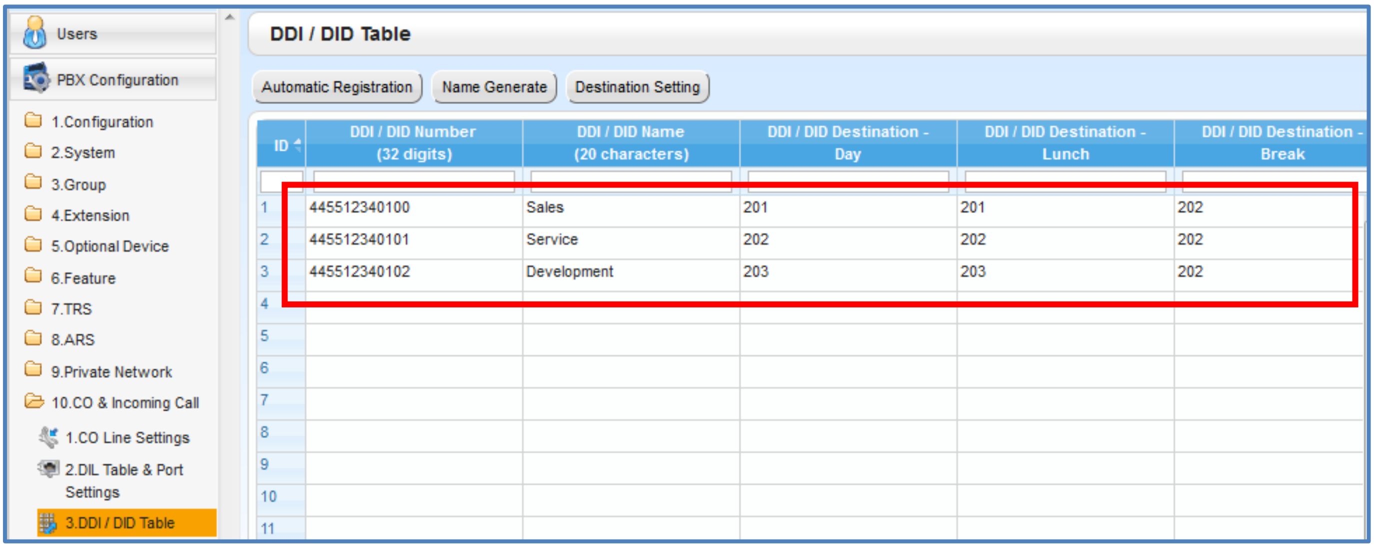
(3) Incoming Call Routing

Go to **[CO & Incoming call]** and select **[3.DDI /DID Table]**

1. DDI/DID Number: *Enter the DDI number in the appropriate format (see below)*
Example: 44-55-1234-0100
Enter: ***445512340100***

2. DDI/DID Name: *Determined by the installer (optional setting)*

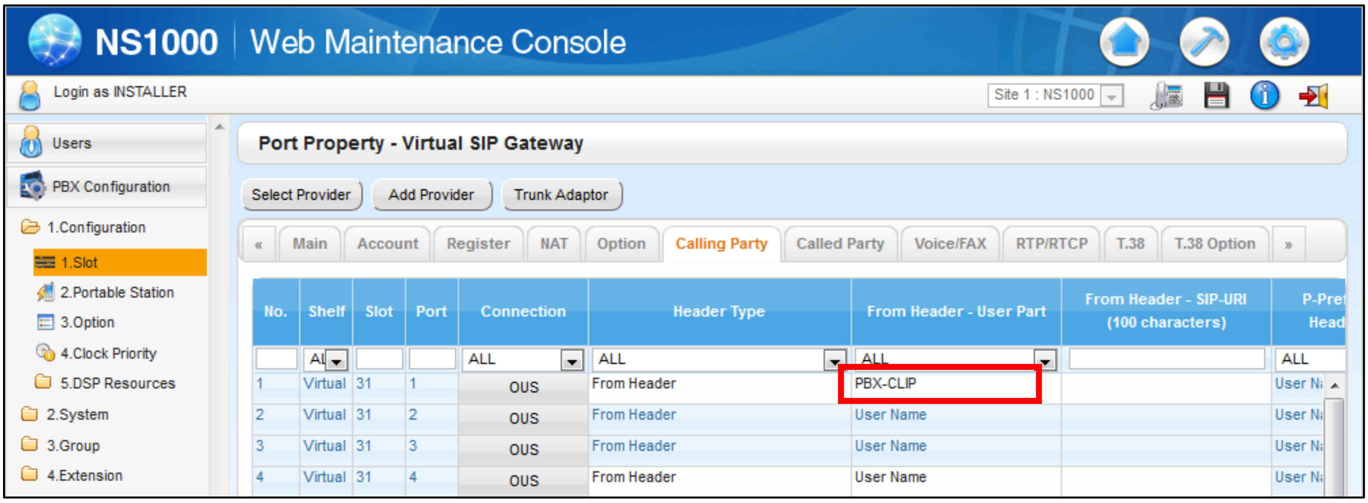
3. DDI/DID Destination: *Determined by the installer (extension number, group etc)*



(4) Outgoing Call CLI

Move mouse over **[V-SIPGW16]** click **[Ous]** Select **[Port Property]** and **[Calling Party] Tab**

From Header – User Part: ***PBX-CLIP***



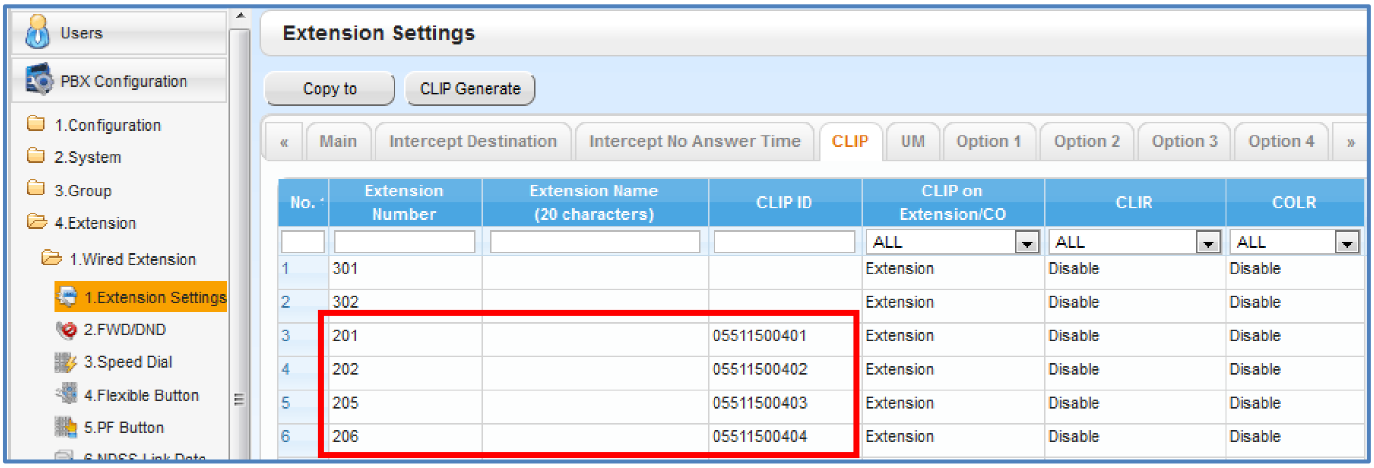
Click **[OK]**.

Go to **[4.Extension, 1.Wired Extension, 1.Extension Settings]** & select **[CLIP]**

[CLIP] tab

Enter a valid CLI number for each required extension in the ***CLIP ID*** field

Click **[OK]**.



(5) CLIR Outgoing Call (Withholding Number)

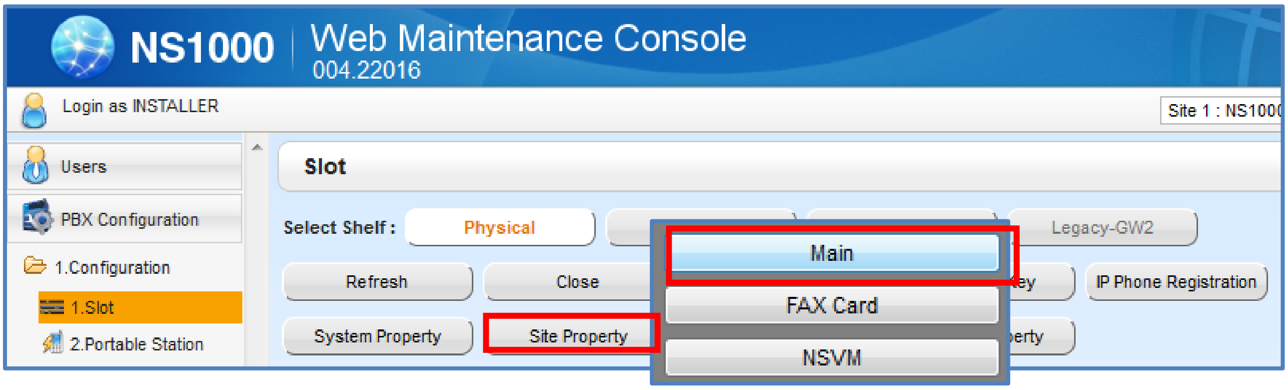
Place call to called party with a 141 prefix, call proceed to endpoint with withholding CLI information. (e.g.) 141 055 1234 0020

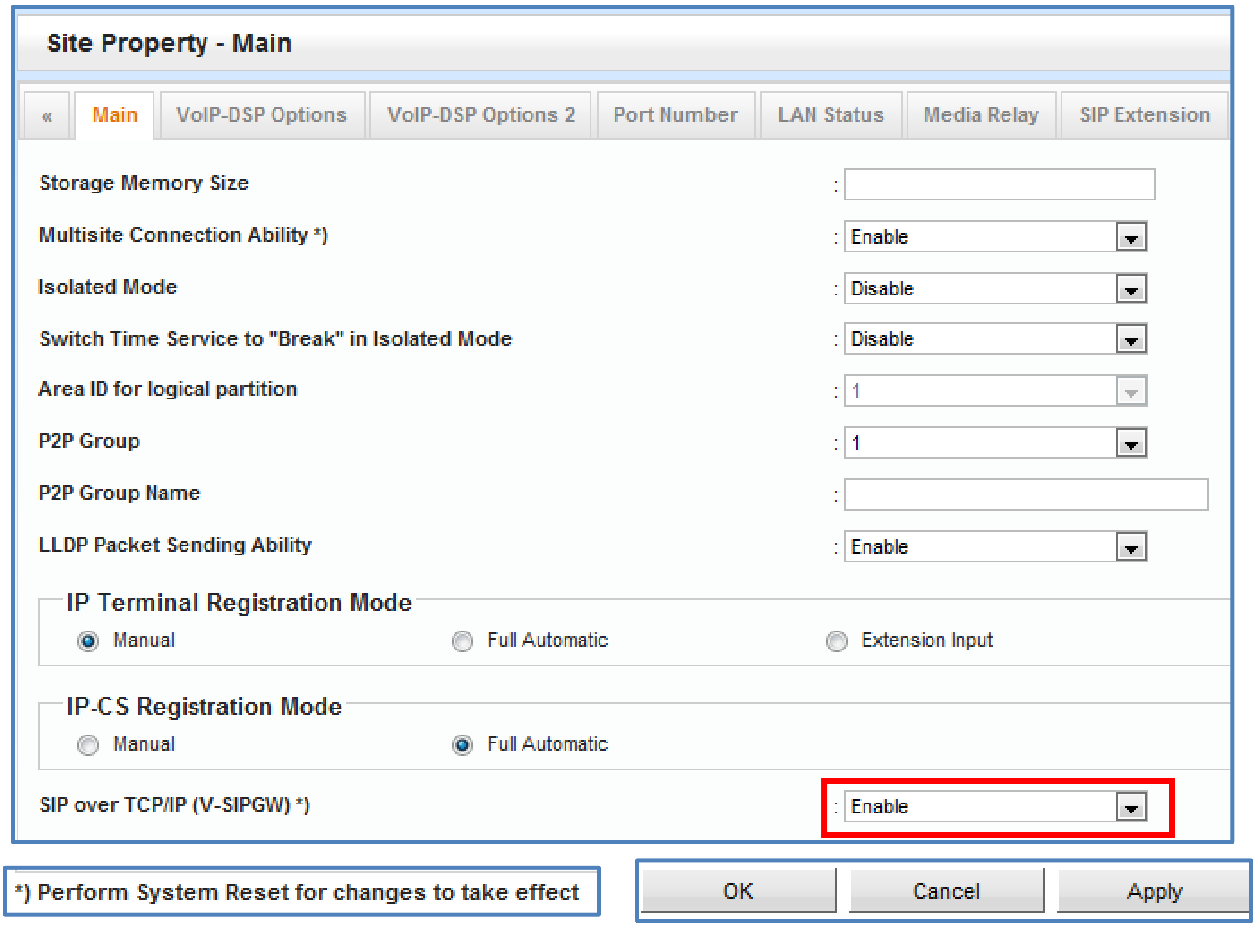
(6) Enabling SIP over TCP/IP

IMPORTANT NOTES

Enabling SIP over TCP/IP will delete all existing SIPGW and IPGW (H323) cards in the system. Also IPGW (H323) Trunks cannot be configured (see Feature Guide: Direct SIP Connection). To use SIP over TCP with H323 IPGW (or SIP over UDP) in the same system requires a One-Look network with a second NS controller to provide a second IPGW (or SIPGW) shelf.

Go to **[1.Configuration, 1. Slot]** & Move mouse over **[Site Property]** and click **[Main]**





Click **[OK]** then Save the System data and Restart the PBX to apply the change to TCP/IP. (Existing SIPGW and IPGW cards in the system will be deleted at this point).

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