

## Configure SIP trunking on Panasonic KX/NS systems

### Before you begin:

**Note:** It is recommended to start with a fresh base configuration—rather than using the initial NS700 wizard.

### Prerequisites:

- KX-NS700 version: 4.42025 or above.
- One of the following supported DSP are installed inside system:
  - KX-NS5110 (1-10 trunks)
  - KX-NS5111 (11-30 trunks)
  - KX-NS5112 (31-100 trunks)
- One of the following supported SIP Trunk Licenses are installed:
  - KX-NSM102
  - KX-NSM104
  - KX-NSM108
  - KX-NSM116
- System is fully registered on Panasonic Partner Portal.

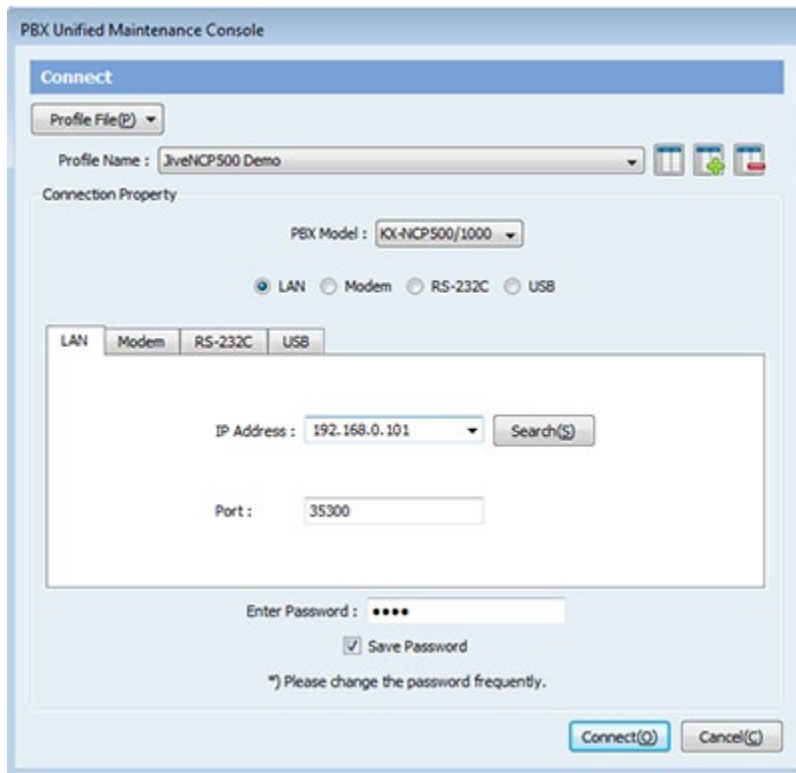
### First, prepare your Panasonic PBX.

1. Start the Panasonic Unified Maintenance Console.



2. Click **Connect**, verify that you will be doing so at the INSTALLER level and choose the method of connection:
  - LAN
  - RS-232
  - Modem

- USB to Connect to your PBX for interactive configuration
3. Provide the IP address of the MPR card and the password of the INSTALLER Level.
  4. Click **Connect**.



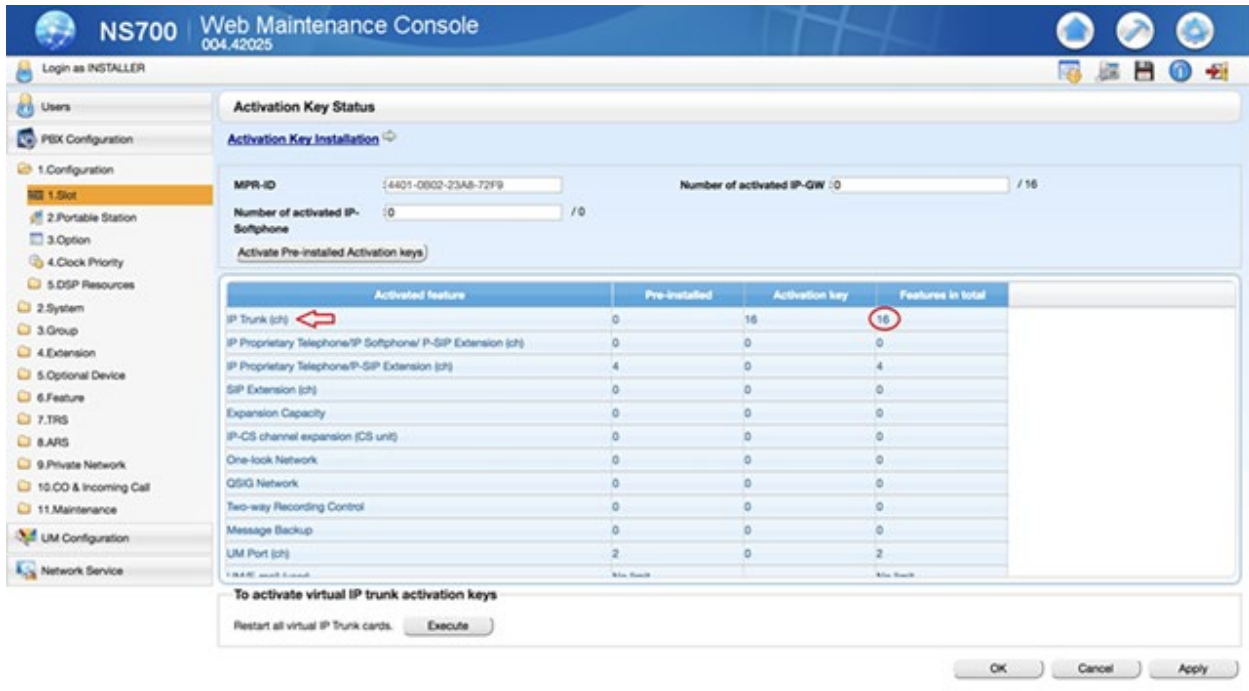
5. Login with the following information:

Option	Description
Default IP	192.168.0.101
Username	INSTALLER
Password	1234 (default password)

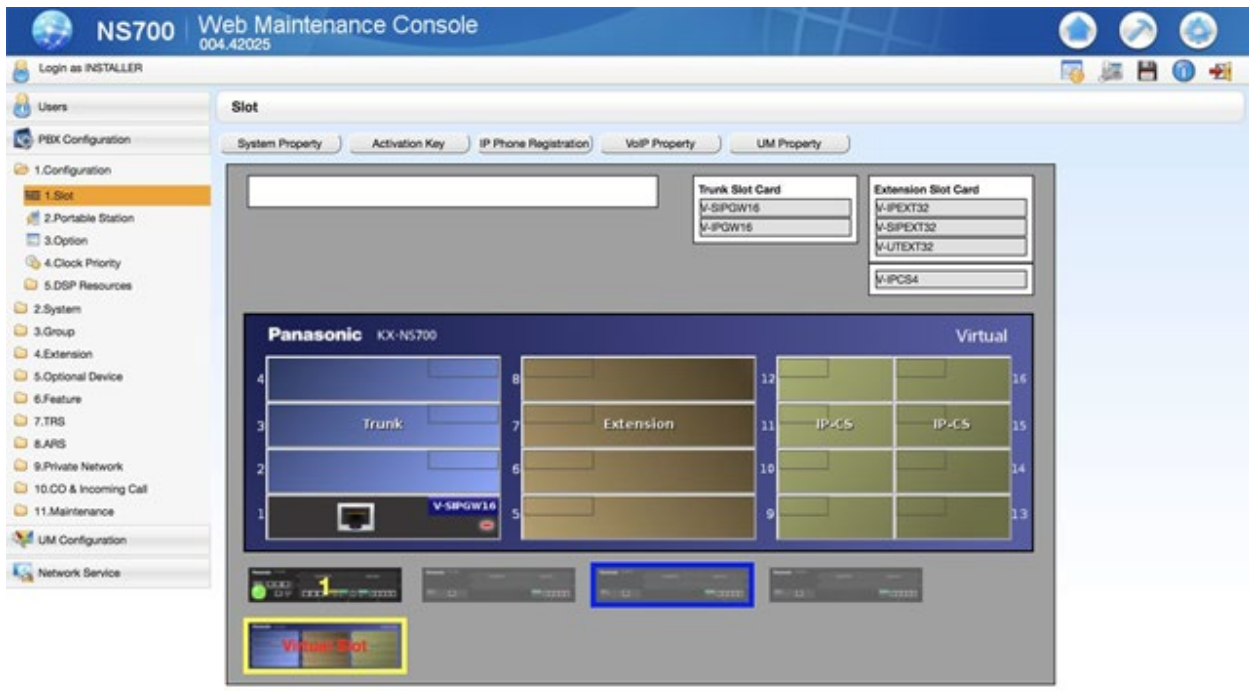
6. Verify that there is no pop-up for registration and verify the system version at top.



7. From **Network Service**, select **IP Address/Ports** and complete the following settings:
  - IP address and Subnet Mask, default is 192.168.0.202/24.
  - Default Gateway IP address
  - DNS server address, 8.8.8.8 is preferred 8.8.4.4 is an alternative option
8. Click **PBX Configuration** in the left sidebar and then click **Configuration > Slot > Activation Key Status**.
9. Look at the Features in total column to verify the row IP Trunk (ch) shows at least 2 or higher and then click **Apply > OK**.



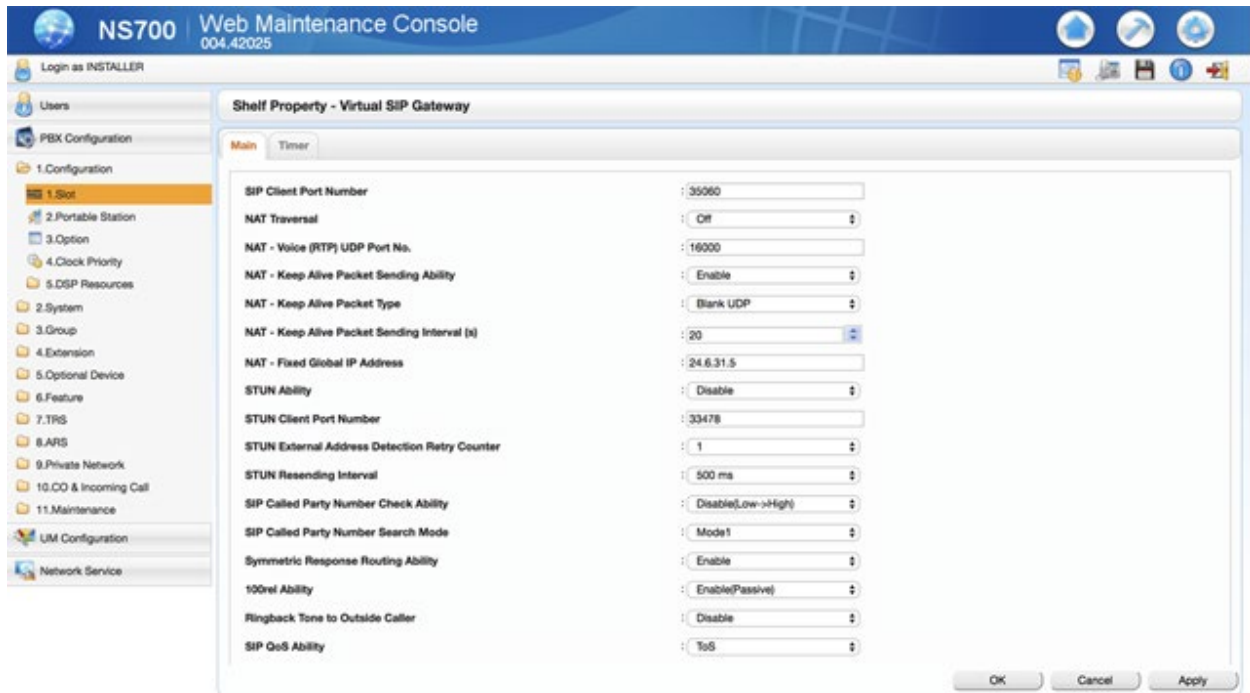
10. From **PBX Configuration**, click **Configuration > Slot** and mouse over the Virtual Slot at the bottom of your screen.
11. Select **V-SIPGW16** at the top of your screen and drag it into **Trunk slot 1**.
12. Hover over the newly added card and drag in into **OUS** so that configuration changes can be made.
  - o Red dot: OUS
  - o Green dot: INS



13. Hover over the **V-SIPGW16** card to select **Shelf Property** and then complete the following settings:

Option	Description
NAT Traversal	Off (Default)
NAT Keep Alive Packet Sending Ability	Enabled (Default is disabled)
SIP Called Party Number Check Ability	Disable Low to High (Default is High to Low)

14. Click **Apply > OK**.

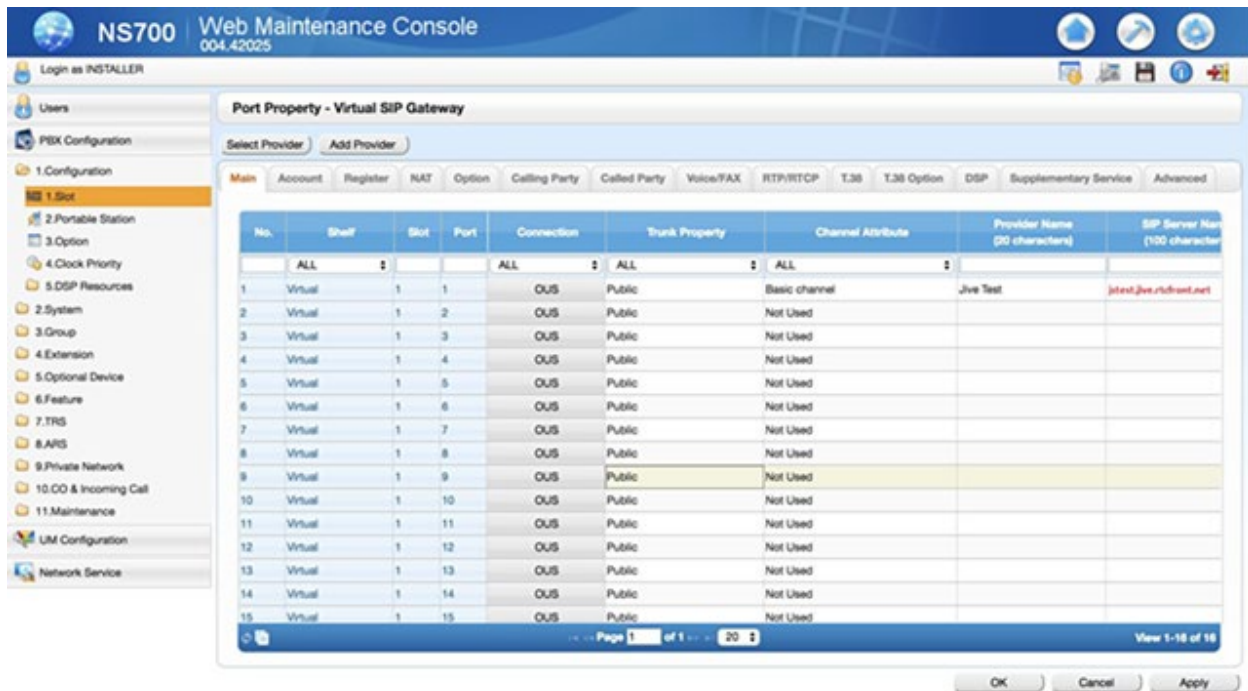


**Second, configure the SIP Trunk.**

1. Hover over the V-SIPGW16 card to select Port Property and then complete the following settings:

Option	Description
Channel Attribute	Basic Channel <b>Note:</b> If using more channels, set the additional channel attributes to <b>Additional Channel for...</b>
SIP Server Name	<domain>.my.domain <b>Note:</b> Replace <domain> with your unique domain.

2. Click **Apply > OK**.



3. From **Port Property > Account**, complete the following settings:

Option	Description
User Name	Provided by ThinkTel
Authentication ID	Provided by ThinkTel
Authentication Password	Provided by ThinkTel

4. From **Port Property > Register**, complete the following settings:

Option	Description
Register Sending Interval	300 seconds (Default is 3600)

5. Click **Apply > OK**.

NS700 Web Maintenance Console  
004.42025

Login as INSTALLER

Users

PBX Configuration

1. Configuration

1. Slot

2. Portable Station

3. Option

4. Clock Priority

5. DSP Resources

2. System

3. Group

4. Extension

5. Optional Device

6. Feature

7. TRS

8. ARS

9. Private Network

10. CO & Incoming Call

11. Maintenance

LM Configuration

Network Service

Port Property - Virtual SIP Gateway

Select Provider Add Provider

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

No.	Shelf	Slot	Port	Connection	Registrar Ability	Registrar Sending Interval (s)	Un-Registrar Ability when port INS	Registrar Server Name (100 characters)
ALL				ALL	ALL		ALL	
1	Virtual	1	1	OUS	Enable	300	Enable	
2	Virtual	1	2	OUS	Enable	3600	Enable	
3	Virtual	1	3	OUS	Enable	3600	Enable	
4	Virtual	1	4	OUS	Enable	3600	Enable	
5	Virtual	1	5	OUS	Enable	3600	Enable	
6	Virtual	1	6	OUS	Enable	3600	Enable	
7	Virtual	1	7	OUS	Enable	3600	Enable	
8	Virtual	1	8	OUS	Enable	3600	Enable	
9	Virtual	1	9	OUS	Enable	3600	Enable	
10	Virtual	1	10	OUS	Enable	3600	Enable	
11	Virtual	1	11	OUS	Enable	3600	Enable	
12	Virtual	1	12	OUS	Enable	3600	Enable	
13	Virtual	1	13	OUS	Enable	3600	Enable	
14	Virtual	1	14	OUS	Enable	3600	Enable	
15	Virtual	1	15	OUS	Enable	3600	Enable	

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OK Cancel Apply

6. From **Port Property > Calling Party**, complete the following settings:

Option	Description
Header Type	P-Preferred-Identity Header (Default - From Header)
From Header - User Part	PBX-Clip

7. Click **Apply > OK**.

NS700 Web Maintenance Console 004.42024

Login as INSTALLER

Port Property - Virtual SIP Gateway

Select Provider Add Provider

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

No.	Shelf	Slot	Port	Connection	Header Type	From Header - User Part	From H (100)
	ALL			ALL	ALL	ALL	
1	Virtual	1	1	INS	P-Preferred-Identity Header	Authentication ID	
2	Virtual	1	2	INS	From Header	User Name	
3	Virtual	1	3	INS	From Header	User Name	
4	Virtual	1	4	INS	P-Preferred-Identity Header	Authentication ID	
5	Virtual	1	5	OUS	P-Preferred-Identity Header	PBX-CLIP	
6	Virtual	1	6	OUS	From Header	User Name	
7	Virtual	1	7	OUS	From Header	User Name	
8	Virtual	1	8	OUS	From Header	User Name	
9	Virtual	1	9	OUS	From Header	User Name	
10	Virtual	1	10	OUS	P-Preferred-Identity Header	Authentication ID	
11	Virtual	1	11	OUS	From Header	User Name	
12	Virtual	1	12	OUS	From Header	User Name	
13	Virtual	1	13	Fault	From Header	User Name	

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OK Cancel Apply

8. From **Port Property > Calling Party**, complete the following settings:

**Option Description**

Type Request-URI (Default is To Header)

9. Click **Apply > OK**.



NS700 Web Maintenance Console 004.42025

Login as INSTALLER

Users

PBX Configuration

1. Configuration

1. Slot

2. Portable Station

3. Option

4. Clock Priority

5. DSP Resources

2. System

3. Group

4. Extension

5. Optional Device

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UM Configuration

Network Service

Port Property - Virtual SIP Gateway

Select Provider Add Provider

Main Account Register NAT Option Calling Party **Called Party** Voice/FAX RTP/RTCP T.38 T.38 Option DSP Supplementary Service Advanced

No.	Shelf	Slot	Port	Connection	Number Format	Type	E.164 - Prefix for own system (18 characters)	E.164 - Prefix for other system (18 characters)
1	Virtual	1	1	OUS	National	Request-URI		9
2	Virtual	1	2	OUS	National	To header		9
3	Virtual	1	3	OUS	National	To header		9
4	Virtual	1	4	OUS	National	To header		9
5	Virtual	1	5	OUS	National	To header		9
6	Virtual	1	6	OUS	National	To header		9
7	Virtual	1	7	OUS	National	To header		9
8	Virtual	1	8	OUS	National	To header		9
9	Virtual	1	9	OUS	National	To header		9
10	Virtual	1	10	OUS	National	To header		9
11	Virtual	1	11	OUS	National	To header		9
12	Virtual	1	12	OUS	National	To header		9
13	Virtual	1	13	OUS	National	To header		9
14	Virtual	1	14	OUS	National	To header		9

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OK Cancel Apply

10. Click **PBX Configuration** in the left sidebar and then click **CO & Incoming Call > DID Table** to complete the following settings:

- o Enter the DID numbers or phone numbers of the account.
- o Enter a valid destination for day, lunch, break, and night.
- o Enter extension numbers or group numbers.

11. Click **Apply > OK**.

NS700 Web Maintenance Console 004.42025

Login as INSTALLER

Users

PBX Configuration

1. Configuration

2. System

3. Group

4. Extension

5. Optional Device

6. Feature

7. TRS

8. ARS

9. Private Network

10. CO & Incoming Call

1. CO Line Settings

2. DIL Table & Port Settings

**3. DDI / DID Table**

5. Miscellaneous

11. Maintenance

UM Configuration

Network Service

DDI / DID Table

Automatic Registration Name Generate Destination Setting

ID	DDI / DID Number (32 digits)	DDI / DID Name (20 characters)	DDI / DID Destination - Day	DDI / DID Destination - Lunch	DDI / DID Destination - Break	DDI / DID Destination - Night
1	1112223333	Test Extension	101			
2						
3						
4						
5						
6						
7						
8						
9						
10						
11						
12						
13						
14						
15						
16						
17						

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OK Cancel Apply

## Add per extension outgoing caller ID (optional)

1. Click **PBX Configuration** in the left sidebar and then click **Extension > Wired Extension > Extension Settings > Clip**.

**Tip:** You can also do this for Portable Stations.

2. Select **Add CLIP**. This is the caller ID that you wish to show for each extension (default blank).

You can also add a **CLIP ID** (blank by default) for the **Incoming Call Distribution Group (Group Settings > ICD Group Button)**.

## Lastly, activate and test the SIP Trunk.

1. From **PBX Configuration > Configuration > Slot**, hover over Virtual Slot and the V-SIPGW16 card to select INS.

You should see a green indication on the card.

2. Verify **Port Property Connection** column reads **INS**, to ensure it is connected properly.

You may need to OUS and INS a couple of times if it's the first time connecting to ThinkTel Network.

3. Click **Apply > OK**.

The screenshot shows the NS700 Web Maintenance Console interface. The main content area is titled "Port Property - Virtual SIP Gateway". Below the title, there are tabs for "Main", "Account", "Register", "NAT", "Option", "Calling Party", "Called Party", "Voice/FAX", "RTP/RTCP", "T.38", "T.38 Option", "DSP", "Supplementary Service", and "Advanced". The "Main" tab is selected, displaying a table with the following columns: No., Shelf, Slot, Port, Connection, Trunk Property, Channel Attribute, Provider Name (20 characters), and SIP Server Name (100 characters). The table contains 15 rows, all of which are "Virtual" slots. The "Connection" column for all slots is set to "INS". The "Trunk Property" column is set to "Public". The "Channel Attribute" column is set to "Basic channel" for slot 1 and "Not Used" for the others. The "Provider Name" column is set to "Jive Test" for slot 1 and is empty for the others. The "SIP Server Name" column is set to "mg.jiveip.net" for slot 1 and is empty for the others. The table is paginated, showing "Page 1 of 1" and "20" items. At the bottom of the page, there are "OK", "Cancel", and "Apply" buttons.

No.	Shelf	Slot	Port	Connection	Trunk Property	Channel Attribute	Provider Name (20 characters)	SIP Server Name (100 characters)
1	Virtual	1	1	INS	Public	Basic channel	Jive Test	mg.jiveip.net
2	Virtual	1	2	Fault	Public	Not Used		
3	Virtual	1	3	Fault	Public	Not Used		
4	Virtual	1	4	Fault	Public	Not Used		
5	Virtual	1	5	Fault	Public	Not Used		
6	Virtual	1	6	Fault	Public	Not Used		
7	Virtual	1	7	Fault	Public	Not Used		
8	Virtual	1	8	Fault	Public	Not Used		
9	Virtual	1	9	Fault	Public	Not Used		
10	Virtual	1	10	Fault	Public	Not Used		
11	Virtual	1	11	Fault	Public	Not Used		
12	Virtual	1	12	Fault	Public	Not Used		
13	Virtual	1	13	Fault	Public	Not Used		
14	Virtual	1	14	Fault	Public	Not Used		
15	Virtual	1	15	Fault	Public	Not Used		