# 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:
  - o KX-NSM102
  - o KX-NSM104
  - o KX-NSM108
  - o 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:
  - o LAN
  - o RS-232
  - o Modem

- $\circ$  ~ 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**.

PBX Unified Mainter	nance Console
Connect	
Profile File(P) 💌	
Profile Name : ( Connection Proper	JiveNCP500 Demo 🔹 🎹 🌄 🛄 ty
	P5X Model : KX+NCP500/1000 ▼
LAN Moder	RS-232C USB
	IP Address : 192.168.0.101
	Port: 35300
	Enter Password : ••••
	<ul> <li>Save Password</li> <li>Please change the password frequently.</li> </ul>
	Connect((2) Cancel((;)

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.

Login as INSTALLER	Web Maintenance Console 004.42025		Property Investment Analysis - Google Sheets https://docs.google.com/spreadsheets/d/ 1dW106g449itw- DsT068Ae690qH22dNuglarNFEU9Y/ edit#gid=08upid=A1	0 =
🔒 Users	Slot			
PBX Configuration	System Property Activation Key IP Phone Registration	n) VoiP Property UM Property	1	
1.Configuration				
WE 1.Skt		Trunk Slot Card	Extension Slot Card	
# 2 Portable Station		LCOTE	MCSLC16	
3.Option		PRI23	MCSLC8	
4.Clock Priority		Div6	DLC16	
5.05P Resources			DHLC4	
2.System				
3.Group	Panasonic KX-N5700		Basic	
4.Extension	Panasonic KATORO		Dasic	
5 Optional Device		Trunk/DPH2	Extension 6	
6.Feature		In all the second se		
7.TRS				
8 ARS				
9.Private Network	• 🖻 🖵	00		
10.CO & Incoming Call		•• • • •	a sala sa	
11.Maintenance			2	
UM Configuration				
Network Service				
	Witnessor			

- 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.
  - o Default Gateway IP address
  - o 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**.

Login as INSTALLER							
🔒 Users	Activation Key Status	1					
PBX Configuration	Activation Key Installatio	e.					
2 1.Configuration							
NE 1.Slot	MPR-ID	(4401-0802-23A8-72F9		Number of ac	tivated IP-GW :0		/ 16
2.Portable Station	Number of activated IP-	:0	/0				
3.Option	Sofiphone						
3 4.Clock Priority	Activate Pre-installed Activ	ation keys)					
5.05P Resources			_				
2.System	a second provide the second seco	Activated feature		Pre-installed	Activation key	Features in total	1
3.0000	IP Trunk (ch)		0		6	(16)	
4.Extension	IP Proprietary Telephone/IP S	ofphone/ P-SIP Extension (ch)	0	0		0	
5.Optional Device	IP Proprietary Telephone/P-S	P Extension (ch)	. 4	0		4	
6.Feature	SIP Extension (ch)		0	0	(	0	
7.TRS	Expansion Capacity		0	0		0	
a ARS	IP-CS channel expansion (CS	(unit)	0	0	£	0	
9.Private Network	One-look Network		0	0	)	0	
10.00 & Incoming Call	QSIG Network		0	0		0	
11 Maintenance	Two-way Recording Control		0	0		0	1
VM Configuration	Message Backup		0	0	6	0	
de on conguttion	UM Port (ch)		2	0	1	2	
S Network Service	1946 and band		ale.	facts .		Mar Bank	
	To activate virtual IP to Restart all virtual IP Trunk co						

- 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.
  - Red dot: OUS
  - o Green dot: INS

Login as INSTALLER		- 😼 🛤 🗎 🔘 🛃
Users	Slot	
PEX Configuration	System Property Activation Key IP Phone Registration VolP Property UM Property	
1.Configuration		
ISIN 1.SIN	Trunk Slot Card Extension Slot Card	
2.Portable Station	V-SPOW16 V-IPDXT32	
3.Option	V-POW16 V-POW16 V-POW16	
3 4. Clock Priority		-
5.DSP Resources	V-PCS4	
2.System		
3.Group	Panasonic KX-NS708 Virtual	
4.Extension		
5.Optional Device	4 8 12 12	
6.Feature		
7.TRS	3 Trunk 7 Extension 11 IP-CS 15	
8.ARS		
9.Private Network	2 2 2	
10.CO & Incoming Call		
11.Maintenance	1 V SPONIO 5	
UM Configuration		
Network Service	Internet Antonio Antonio Antonio	

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**.

🤛 NS700	Web Maintenance Console			i 💿 📀 💿
Login as INSTALLER				😽 🛤 💾 🕥 🛃
🔒 Users	Shelf Property - Virtual SIP Gateway			
PBX Configuration	Main Timer			
6 1.Configuration	and the second se			
ISot	SIP Client Port Number	35060		
n 2.Portable Station	NAT Traversal	: Of	0	
3.Option	NAT - Voice (RTP) UDP Port No.	: 16000		
4.Clock Priority 5.DSP Resources	NAT - Keep Alive Packet Sending Ability	Enable	•	
2.System	NAT - Keep Alive Packet Type	Blank UDP		
3.Group	NAT - Keep Alive Packet Sending Interval (s)	: 20		
a.Extension				
5.Optional Device	NAT - Fixed Global IP Address	24.6.31.5		
C 6.Feature	STUN Ability	Disable	•	
7.TRS	STUN Client Port Number	: 33478		
C BARS	STUN External Address Detection Retry Counter	4(1	•)	
9.Private Network	STUN Resending Interval	1 500 ms	•)	
10.00 & Incoming Call 11.Maintenance	SIP Called Party Number Check Ability	: Disable(Low->High)	•	
Set UM Configuration	SIP Called Party Number Search Mode	I Model	•	
Network Service	Symmetric Response Routing Ability	Enable		
	100rel Ability	: Enable(Passive)	•	
	Ringback Tone to Outside Caller	Disable		
	SIP QoS Ability	:( 106	•)	
				OK Cancel Apply

## 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.</domain>

Login as INSTALLER											8	🥉 🛤 🚹 🚺 🚽
Users	Port P	roperty	- Virtual SIF	Gate	way							
PBX Configuration	Select Pro	ovider )	Add Provider	)								
1.Configuration	Main	Account	Register	NAT	Option	Calling Party	Called Party	Voice/FAX	RTP/RTCP	T.38 T.38 Option	DSP Succience	tary Service Advanced
NE 1.Set												
2 Portable Station	-		trer (	544	Port	Connection		a Property		arreal AlleReda	Provider Name (P0 character)	
4 Clock Priority		ALL	1			ALL	ALL		ALL		)	1
S.DSP Resources	1	Vitual			1	ous	Public		Basic channel		Jive Test	jatest jue rtdrast.net
2.5ystem	2	Vitual			2	ous	Public		Not Used			
3.Group	3	Vrtual	1	1	3	ous	Public		Not Used			
4.Extension	4	Whyal		C	4	ous	Public		Not Used			
5.Optional Device	5	Vrtual	1	1	5	ous	Public		Not Used			
6.Feature	6	Wrtual	1		6	ous	Public		Not Used			
7.1RS	7	Vrtual	1		7	ous	Public		Not Used			
8.A/G		Virtual	1		8	ous	Public		Not Used			
9.Private Network 10.00 & Incoming Call		Vitual	1	1	9	ous	Public		Not Used			
11.Maintenance	10	Virtual			10	ous	Public		Not Used			
	11	Vrtual	1	1	11	ous	Public		Not Used			
UM Configuration	12	Virtual		t	12	ous	Public		Not Used			
Network Service	13	Wrtuel	1	1	13	ous	Public		Not Used			
	14	Whuel		(	54	ous	Public		Not Used			
	15	Vitual	-		15	ous	Public Page 1	20 1	Not Used			

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)

Login as INSTALLER										- 🔞 🛤 💐 🕘 🕇
Users	Port Pr	operty	Virtual SIF	Gate	way					
PBX Configuration	Select Pro	vider)	Add Provider	)						
• 1.Configuration	Main	Account	Register	NAT	Option	Calling Party	Called Party Vo	ICH/TAX RTP/RTCP T.38	T.58 Option DSP Supp	Inmentary Service Advanced
NE 1.Slot				100000						
n 2.Portable Station	HA.		Staff	-	Port	Connection	Register	Register Sending	Un-Register	Registrar Berver Name
3.Option		1					Access	Interval (c)	Ability when port INS	(100 characters)
3 4.Clock Priority	-	ALL	1)				: ALL		ALL :	
5.05P Resources	1	Wrtual	1		1	ous	Enable	800	Enable	
2.5ystem	2	Wrtual	1	())	2	ous	Enable	3600	Enable	
3.Group	3	Wrtual	1		3	ous	Enable	3600	Enable	
4.Extension	4	Wrball	1	6 - N	4	ous	Enable	3600	Enable	
5.Optional Device	5	Vrtual	1		5	ous	Enable	3600	Enable	
6.Feature	6	Wrtual	1	b = 0	6	OUS	Enable	3600	Enable	
7.TRS	7	Wrbal	1		7	ous	Enable	3600	Enable	
8.ARS		Virtual	1	6 - T		OUS	Enable	3600	Enable	
9.Private Network	9	Wrtual	1		9	ous	Enable	3600	Enable	
10.00 & Incoming Call	10	Wrtual	,	6	10	ous	Enable	3600	Enable	
11.Maintenance	11	Wrhull	1		11	ous	Enable	3600	Enable	
UM Configuration	12	Virtual	1	6	12	OUS	Enable	3600	Enable	
Network Service	13	Virtual	1		13	ous	Enable	3600	Enable	
	14	Wrtual	,		14	ous	Enable	3600	Enable	
	15	Wrbuil	1		15	ous	Enable	5600	Enable	
	00						Page 1 of 1	- 20 :		Vew 1-18 of 16

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

Login as INSTALLER							🐻 🚂 💾	1 🛈 🛃							
Outres *	Port P	roperty - Virta	ual SIP Gat	eway											
PBX Configuration	Select Pr	Select Provider Add Provider													
2 1.Configuration	Main Account Register NAT Option Calling Party Called Party Voice/FAX RTP/RTCP T.38 T.38 Option +														
HE 1 Slot		in Provens	nagasar	norti	Carry Fart	Cares range Powerrow	nitration iss iss option								
🛒 2 Portable Station															
3 Option	No.	Shelf	Slot	Port	Connection	Header Type	From Header - User Part	From 15 (100							
3 4 Clock Priority								1.00							
S DSP Resources		ALL		-		ALL	• AL •								
2.5ystem	1	Virtual	1	1	INS	P.Preferred-Identity Header	Authentication ID	<u>^</u>							
3 Group	2	Virtual	1	2	INS	From Header	User Name								
4 Extension	3	Vitual	1	3	INS	From Header	User Name								
5 Optional Device	4	Virtual	1	4	INS	P-Preferred-Identity Header	Authentication ID								
6.Feature	5	Virtual	1	5	ous	P-Preferred-Identity Header	PBX-CLIP								
7.TRS	6	Virtual	1	6	OUS	From Header	User Name								
ars 6	7	Virtual	1	7	OUS	From Header	User Name								
9.Private Network	8	Virtual	1	8	OUS	From Header	User Name								
10.CO & Incoming Call	9	Virtual	1	9	OUS	From Header	User Name								
11.Maintenance	10	Virtual	1	10	OUS	P-Preferred-Identity Header	Authentication ID								
VM Configuration	11	Virtual	1	11	OUS	From Header	User Name								
Network Service	12	Virtual	1	12	OUS	From Header	User Name								
A MERCE DEVICE	13	Vitual	1	13	Fault	From Header	User Name								
				100	4										
	0.00				to the Page 1	of 1 20 •		ew 1-16 of 16							

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

# **Option Description**

Type Request-URI (Default is To Header)

Login as INSTALLER												- 🗿 🗄 🔍 🖓		
👌 Users	Port P	roperty	- Virtual SI	P Gate	way									
PBX Configuration	Select Pr	Select Provider ) Add Provider												
1.Configuration	Main	Account	Register	NAT	Option	Calling Party	Called Part	Voice/FAX	RTP/RTCP	T.58	T.38 Option DSP Su	oplementary Service Advanced		
HE 1.Stor														
# 2.Portable Station			*100 FT		a constant	The second second	1 mar				E.164 - Prefix for own	E164 - Prefa for other		
3.Option	No		Shelf	Slot	Port	Connection	Nor	iber Format	Type		system	system		
3 4.Clock Priority											(16 characters)	(18 characters)		
5.08P Resources		ALL	•		1.		ALL	•	ALL	+				
2.System	1	Virtual		1	1	OUS	National		Request-URI	_		•		
3.Group	2	Virtual		1	2	OUS	National		To header	9		9		
4.Extension	3	Virtual		1	3	OUS	National		To header			9		
5.Optional Device	4	Virtual 1 4 OUS		National To header					9					
6.Feature	5	Virtual		1	5	OUS	National		To header			9		
7.TRS	8	Virtual		1	6	ous	National		To header			9		
BARS	7	Virtual		1	7	OUS	National		To header			9		
9.Private Network	8	Virtual		1		OUS	National		To header			9		
10.CO & Incoming Call	0	Virtual		1	9	OUS	National		To header			9		
11.Maintenance	10	Virtual		1	10	OUS	National		To header			9		
UM Configuration	11.	Virtual		1	11	OUS	National		To header			9		
Network Service	12	Virtual		1	12	OUS	National		To header			9		
	13	Virtual		1	13	OUS	National		To header			9		
	54	Virtual		1	14	OUS	National		To header			9		
	0.0						Page 1	ef 1				View 1-16 of 1		

- 10. Click **PBX Configuration** in the left sidebar and then click **CO & Incoming Call > DID Table** to complete the following settings:
  - Enter the DID numbers or phone numbers of the account.
  - Enter a valid destination for day, lunch, break, and night.
  - Enter extension numbers or group numbers.
- 11. Click **Apply > OK**.

Login as INSTALLER							)# 🗎 🛈 🖸
🔒 Users	DDI /	DID Table					
PBX Configuration	Automat	ic Registration) Name Gener	ate ) Destination Setting)				
<ul> <li>1.Configuration</li> <li>2.System</li> <li>3.Group</li> </ul>		DDI / DID Humber (32 digits)	DDI / DIO Name (20 characters)	DDI / DID Destination - Day	DOI / DID Destination - Lunch	DDI / DID Destination - Break	DDI / DID Destinatis Night
4.Extension	1	1112223333	Test Extension	101			-
5.Optional Device	2						
6.Feature	3						
7.TRS	4						
3 8.ARS 9.Private Network	5						
<ul> <li>9.0mste Network</li> <li>10.00 &amp; incoming Call</li> </ul>	6						
	7						
1.00 Line Settings	8						
S.DOI / DID Table	9						
5 Miscellaneous	10						
11.Maintenance	11						
UM Configuration	12						
Pe ow comprision	13						
A Network Service	14						
	15						
	16						
	17						
	0.00		- 492. 	Page 1 of 50 ++ +1 20	•		View 1-20 of 100

#### 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.

Login as INSTALLER													100	- 0 -
🔒 Users	Port P	roperty	- Virtual SIF	Gate	way									
PBX Configuration	Select P	Select Provider Add Provider												
1.Configuration	Main	Account	Register	NAT	Option	Calling Party	Called Party Voice/FAX		RTP/RTCP	T.38 T.38 Option	DSP Supplementary		Service Advanced	
III 1.Slot		recount		100	apoon	coming i si q	dance ( and	TUTUSUTPUT	minut	noo noo opnon		out free states and st	Cer mee	Platerious
2.Portable Station	No	No. Shelf		Slot Port		Connection	Trunk Property		Ch	annel Attribute	Provider Name (20 characters)		SIP Server Na (100 characte	
3 4.Clock Priority		ALL				ALL \$	ALL	:	ALL	•	-			
6.DSP Resources	1	Virtual	1		1	INS	Public	blic Basic channel			Jive Test reg.		reg.jive	ip.net
2.System	2	Virtual	1		2	Fault	Public	c Not Used						
3.Group	3	Virtual	1		3	Fault	Public		Not Used					
4.Extension	4	Virtual	1		4	Fault	Public		Not Used					
5.Optional Device	5	Virtual	1		5	Fault	Public	lic Not Used						
6.Feature	6 V		1		6	Fault	Public		Not Used					
7.TRS	7	Virtual	1	1 7 Fault Public Not Used										
8.ARS	8	Virtual	1		8	Fault	Public		Not Used					
9.Private Network	9	Virtual	1		9	Fault	Public		Not Used					
10.CO & Incoming Call 11.Maintenance	10	Virtual	1		10	Fault	Public		Not Used					
	11	Virtual	1		11	Fault	Public		Not Used					
VM Configuration	12	Virtual	1		12	Fault	Public		Not Used					
Network Service	13	Virtual	1		13	Fault	Public		Not Used					
	14	Virtual	1		14	Fault	Public		Not Used					
	15	Virtual	1	6 - C	15	Fault	Public		Not Used					
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