

**Setup Reference guide for KX-NS Series
(Tested with NS700 Ver8.0)
“gnTel SIP-Trunk” service
with External Router**



Panasonic

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◆ SUMMARY

This document is a reference for configuring “gnTel” SIP trunks onto 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 gnTel.

◆ 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

STUN

gnTel recommend to use the NAT-Traversal method “STUN”.

Transfer method: REFER

Recommended setting: Select the "REFER" when need call transfer.

SIP REFER (Blind/Attended) is supported with "CLIP No screening".

Forward method: SIP “302 Moved Temporarily” (Login as Sales Company mode)

Recommended setting: Enable "302 Moved Temporarily" when call Forward (NS series only).

FAX T.38 Configuration

Configure FAX method T.38 and enable “T.38 FAX NAT Traversal” to “Blank UDP”.

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(1) Provisioning the SIP Trunk

V-SIPGW – Shelf Property

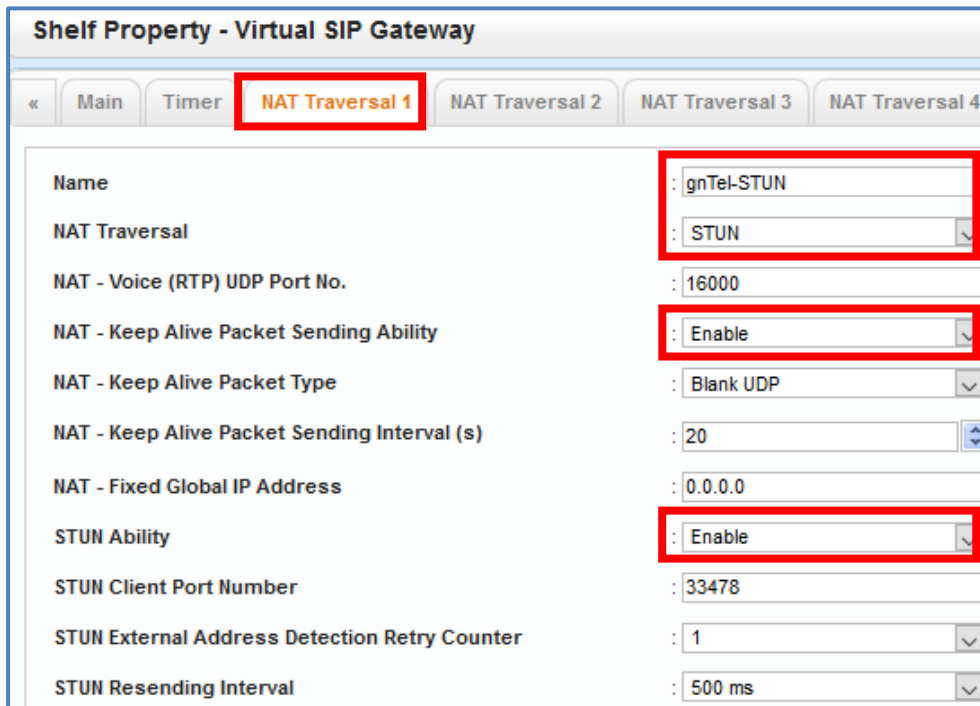
[1.Configuration – 1.Slot > V-SIPGW tab]

First, place the **V-SIPGW** Card into **[OUS]** condition.

Hover over **[V-SIPGW16]** and select **[Shelf Property]**



[NAT Traversal 1] Tab

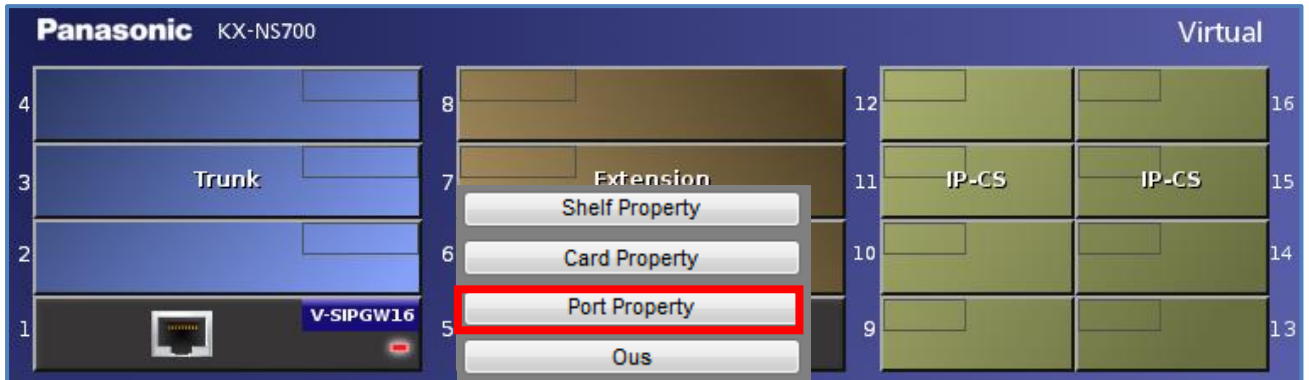


- 1. Name: *Enter a name – reference only (gnTel-STUN)*
- 2. NAT Traversal: *STUN*
- 3. NAT Keep Alive Packet Sending Ability: *Enable*
- 4. STUN Ability: *Enable*

Click **[Apply]** and **[OK]**

V-SIPGW – Port Property

Hover over **[V-SIPGW16]** and select **[Port Property]**



[Main] Tab

- | | |
|--|--|
| 1. Channel Attribute: | Basic Channel |
| 2. Provider Name: | Enter a name – reference only |
| 3. SIP Server Location - Name: | voip.gntel.de
<i>Enter the domain as supplied by gnTel</i> |
| 4. SIP Server IP Address: | <i>Not required</i> |
| 5. SIP Server IP Address for Failover: | <i>Not required</i> |
| 6. SIP Server port Number: | <i>Leave at 5060</i> |
| 7. SIP Service Domain: | <i>Not required</i> |
| 8. Subscriber Number: | <i>Not required</i> |

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.	Shel	Slot	Port	Connect	Trunk Property	Channel Attribute	Provider Name (20 characters)	SIP Server Name (100 characters)	SIP Server IP Address	SIP Server IP Address for Failover	SIP Server Port Number
	A			ALL	ALL	ALL					
1	Virtual	1	1	OUS	Public	Basic channel	gntel	voip.gntel.de			5060
2	Virtual	1	2	OUS	Public	Additional channel f					5060

SIP Trunk – Port Property continued

[Account] Tab

- 1. User name: *Enter the **User Name as supplied by gnTel.**
Note this is User name without @ voip.gntel.de)
For example: User name = 0123456700
Enter: 0123456700*

- 2. Authentication ID: *Enter the **Authentication ID as supplied by gnTel.**
(Note this is User name without @ voip.gntel.de)
For example: Authentication ID = 0123456700
Enter: 0123456700*

- 3. Authentication Password: *Enter the **password as supplied by gnTel.**
For example: password = pass1234
Enter: pass1234*

No.	Shel	Slot	Port	Connect	User Name (64 characters)	Authentication ID (64 characters)	Authentication Password (32 characters)
1	Virtual 1	1	OUS	ALL	0123456700	0123456700	pass1234
2	Virtual 1	2	OUS				

[Register] Tab

- 1. Register Ability: *Leave enabled*
- 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 IP Address for Failover: *Not required*
- 7. Registrar Server port number: *Leave at 5060*
- 8. Registrar Resending Interval(s): *Leave at 300*

No.	She	Slot	Port	Conne	Register Ability	Register Sending Interval (s)	Un-Register Ability when port INS	Registrar Server Name (100 characters)	Registrar Server IP Address	Registrar Server IP Address for Failover	Registrar Server Port Number	Register Resending Interval (s)
1	Virtua 1	1	OUS	ALL	Enable	3600	Enable				5060	300
2	Virtua 1	2	OUS		Enable	3600	Enable				5060	300

SIP Trunk – Port Property continued

[NAT] Tab

- 1. NAT Traversal Table: **1.gnTel-STUN (Entered in Shelf Property)**
- 2. STUN Server Name: **stun.gntel.de**
- 3. STUN Server Port Number: **Leave at 3478**

« Main Account Register NAT Option Calling Party Called Party Voice/FAX RTP/RTCP T.38									
No.	Shelf	Slot	Port	Connection	NAT Traversal Table	STUN Server Name (100 characters)	STUN Server IP Address	STUN Server Port Number	
	ALL			ALL	ALL				
1	Virtual	1	1	OUS	1:gnTel-STUN	stun.gntel.de		3478	
2	Virtual	1	2	OUS	None			3478	

[Voice/FAX] Tab

- 1. FAX Sending Method: **T.38**
- 2. Maximum Bit Rate: **9600bps**
- 3. FAX Detection Ability: **Leave Enable**

« Main Account Register NAT Option Calling Party Called Party Voice/FAX RTP/RTCP T.38								
No.	Shelf	Slot	Port	Fax Sending Method	Maximum Bit Rate	FAX Detection Ability	DTMF	
	ALL			ALL	ALL	ALL	ALL	
1	Virtual	1	1	T.38	9600bps	Enable	Outband(RFC2833)	
2	Virtual	1	2	T.38	9600bps	Enable	Outband(RFC2833)	
3	Virtual	1	3	G.711 Inband	No Speed Limit	Enable	Outband(RFC2833)	

[T.38] Tab

- 1. T.38 FAX NAT Traversal: **Blank UDP**

« Main Account Register NAT Option Calling Party Called Party Voice/FAX RTP/RTCP T.38 T.38 Option »									
No.	Shelf	Slot	Port	T38 FAX UDPTL Redundancy count for T.30 messages	T38 FAX UDPTL Redundancy count for data	T38 FAX Rate Management Method	Reject T.38 Request from Network	T38 FAX NAT Traversal	
	ALL			ALL	ALL	ALL	ALL	ALL	
1	Virtual	1	1	3	0	Transferred TCF	Disable	Blank UDP	
2	Virtual	1	2	3	0	Transferred TCF	Disable	Disable	

(2) Outgoing Call CLI

[Calling Party] Tab

- 1. Header Type: *Leave From Header*
- 2. From Header - User Part: *PBX-CLIP*
- 3. Number Format: *Leave National*

No.	Shelf	Slot	Port	Connect	Header Type	From Header - User Part	From Header - SIP-URI (100 characters)	P-Preferred-Identity Header - User Part	P-Preferred-Identity Header - SIP-URI (100 characters)	Number Format	Remove Digit	Additional Dial
1	Virtual	1	1	INS	From Header	PBX-CLIP		User Name		National	0	
2	Virtual	1	2	INS	From Header	User Name		User Name		National	0	

[Called Party] Tab

- 1. Number Format: *Leave National*
- 2. Type: *Leave To Header*

No.	Shelf	Slot	Port	Connect	Number Format	Type	MEX - Prefix for Incoming /E.164 - Prefix for own system (16 characters)	MEX - Prefix for Outgoing /E.164 - Prefix for other system (16 characters)	MEX /E.164 - Additional Dial (7 digits)
1	Virtual	1	1	INS	National	To header			0
2	Virtual	1	2	INS	National	To header			0

[Supplementary Service] Tab *Recommended Setting for Call Transfer to show CLIP

- 1. Blind Transfer (REFER): *Yes*
- 2. Attended Transfer (REFER): *Yes*

No.	Shelf	Slot	Port	CLIR	CNIP (Send)	CNIP (Receive)	AOC-D	AOC-E	E911	Blind Transfer(REFER)	Attended Transfer(REFER)
1	Virtual	1	1		Yes	No	No	No	No	Yes	Yes
2	Virtual	1	2		Yes	No	No	No	No	No	No

SIP Trunk – Port Property continued

[Advanced] Tab

1. Diversion Header(works with Basic channel): **Enable**

No.	Shelf	Slot	Port	Connec	Diversion Header
1	Virtual	1	1	OUS	Enable
2	Virtual	1	2	OUS	Enable

[SIP Option (bits)] Tab *Login as Sales Company mode.

***Note: A “Call forward” with “302 Moved Temporarily” supported by NS series. NSX not supported.**

1. Option16 (Works with Basic channel): **Enable**

No.	Shelf	Slot	Port	12	13	14	15	16	17	18
1	Virtual	1	1							
2	Virtual	1	2							

Click **[OK]**.

Select **[INS]** on the **[V-SIPGW16]** card to bring the SIP trunk ports into service.



Go to **[4.Extension] - [1.Wired Extension] - [1.Extension Settings]** and select **[CLIP]** tab

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

- 1. Extension Name: **Enter: Sales**
- 2. CLIP ID: **Enter: 020030004001**

No.	Extension Number	Extension Name (20 characters)	CLIP ID	CLIP on Extension/CO	CLIR	COLR
1	201	Sales	020030004001	Extension	Disable	Disable
2	202	Service	020030004002	Extension	Disable	Disable
3	203	Development	020030004003	Extension	Disable	Disable

Click **[OK]**

(3) Incoming Call Routing

Go to **[10.CO & Incoming call]** and select **[3.DDI /DID Table]**

- 1. **DDI/DID Number:** Enter the DDI number in the format with country code (as below)
Example: 020030004001
Enter: **4920030004001**
- 2. **DDI/DID Name:** Determined by the installer (optional setting)
- 3. **DDI/DID Destination:** Determined by the installer (extension number, group etc)

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	Tenant / Time Group
3	4920030004001	Sales	201	201	201	201	ALL
2	4920030004002	Service	202	202	202	202	1
1	4920030004003	Development	203	203	203	203	1
4							1
5							1
6							1
7							1
8							1
9							1
10							1

Click **[OK]**

(4) CLIR Outgoing Call (Anonymous Call)

Go to [4.Extension] - [1.Wired Extension] - [1.Extension Settings] and select [CLIP] tab
Under **CLIR**: select *Enable* and Click [OK].

The screenshot shows the 'Extension Settings' window. On the left is a navigation tree with 'PBX Configuration' > '4.Extension' > '1.Wired Extension' > '1.Extension Settings' selected. The main area has tabs for 'Main', 'Intercept Destination', 'Intercept No Answer Time', 'CLIP', 'UM', 'Option 1', and 'Option 2'. The 'CLIP' tab is active. Below the tabs is a table with the following data:

No.	Extension Number	Extension Name (20 characters)	CLIP ID	CLIP on Extension/CO	CLIR	COLR
1	201	Sales	02003004001	Extension	Enable	Disable
2	202	Service	02003004002	Extension	Disable	Disable
3	203	Development	02003004003	Extension	Disable	Disable

By extension operation, [Prog] – [1] [3] – [13:CLIR Mode] – [Enter] – Select [CLIR On]

(5) Router/Firewall Port Forwarding

gnTel server sends BLANK UDP packet to PBX approximately 30 seconds intervals thru external router, also PBX configured to enable the sending BLANK-UDP packets to gnTel server.

Therefore the port forwarding may be not necessary on the router.

If necessary,

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

udp port 35060 (SIP) – to NS LAN IP address (e.g. 192.168.0.101)

IMPORTANT!

To secure the PBX from illegal attacks, please restrict the above port forwarding ports to only be accessible from the gnTel source IP addresses.

END OF DOCUMENT