RESELLER BULLETIN

TelQuest International
973-808-4588

Panasonic AUTHORIZED RESELLER PROGRAM

Subject	Media Relay Gateway Remote IPPT Extension Setup
Bulletin Type	☐ Product ☐ Marketing ☒ Service
Bulletin Number	Unified Communications-2017-SB-81
Date	01/27/2017
Product	Unified Communications

The KX-NS1000 and KX-NS700/G systems have a built-in Media Relay Gateway feature providing a simple and easy remote connection for extensions without a Virtual Private Network (VPN) or Session Border Controller (SBC).

Setup Requirements

Please ensure the PBX and IP Proprietary extensions are running the latest firmware. The latest firmware can be obtained through the dealer support portal.

Firmware	
System	**Minimum**
KX-NS1000	V4.2xxx ▲
KX-NS700	
KX-NS700G	

Firmware	
Model	**Minimum**
KX-NT54X	1.0040 ▲
KX-NT55X	1.0060 ▲
KX-NT560	1.0040 ▲

You will need to ensure there are enough licenses to register all of the phones on the PBX system you are installing. The KX-NS700G will allow a maximum of 4 IP Proprietary telephones to be registered.

Setup Limitations

The following restrictions apply when setting up the MRG and IPPT for remote extensions:

- Security Gateway function is not supported.
- Maximum number of phones is dependent on DSP resources.[1]
- No encryption for signaling (PTAP, MGCP) and voice/media (RTP).
- Number of HTTPS sessions is up to 20 for each unit.
- Peer-to-peer function does not work with this setup.[2]
- Built-in router (WAN) function should be disabled.[3]

1 KX-NS700G is further restricted to 4 IPPT only.

2 DSP resource will be used.

3 KX-NS1000 System

Port Forwarding

The near-end NAT router will need to be configured to allow IP packets to be received from the remote IP proprietary telephones.

KX-NS1000

Protocol	Range of Ports	Destination (DSP)	Description
RTP	16000–16511 (UDP)	192.168.0.**102**	Send RTP to **DSP#1-1**
	16512–17023 (UDP)	192.168.0.**103**	Send RTP to **DSP#1-2**
	17024–17535 (UDP)	192.168.0.**104**	Send RTP to **DSP#2-1**
	17536–18047 (UDP)	192.168.0.**105**	Send RTP to **DSP#2-2**

KX-NS1000 will have 4 DSP-IP Addresses when (2) DSP-L cards are installed.

KX-NS700/G

Protocol	Range of Ports	Destination (DSP)	Description
RTP	16000–16511 (UDP)	192.168.0.**102**	Send RTP to **DSP#1-1**
	16512–17023 (UDP)	192.168.0.**103**	Send RTP to **DSP#1-2**

KX-NS700/G will have 2 DSP-IP Addresses when a DSP-L cards are installed.

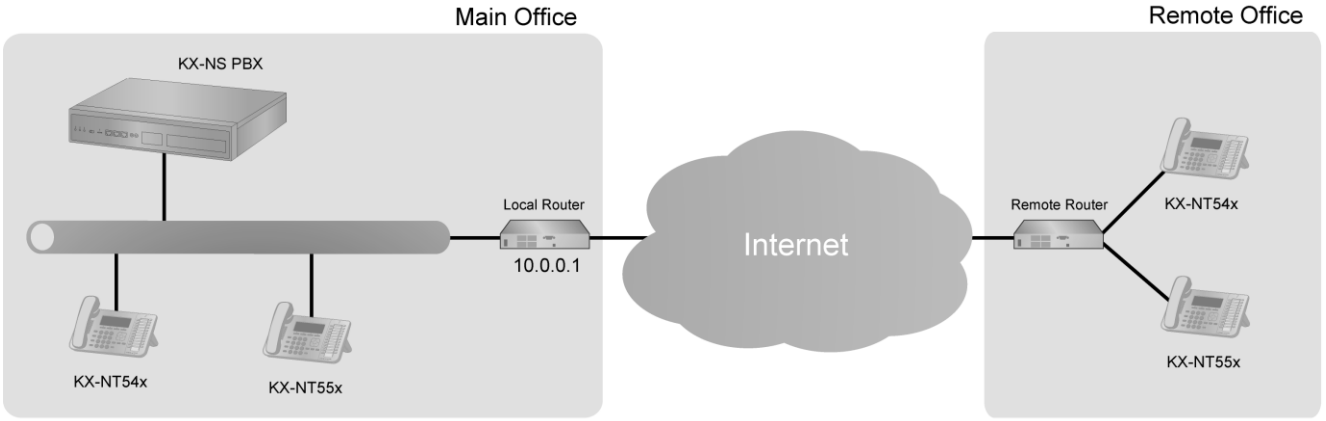
KX-NT Data Ports

Protocol	Range of Ports	Destination (PBX IP Address)	Description
MGCP	2727 (UDP)	192.168.0.**101**	Send MGCP to **PBX IP**
PTAP	9300 (UDP)	192.168.0.**101**	Send PTAP to **PBX IP**

NS Upgrade Push over MRG

Protocol	Range of Ports	Destination (PBX IP Address)	Description
FTP	31021 (TCP)	192.168.0.**101**	Send NAT FTP to **PBX IP**
	40000–40095 (TCP)	192.168.0.**101**	Send FTP/FTPS-Data to **PBX IP**

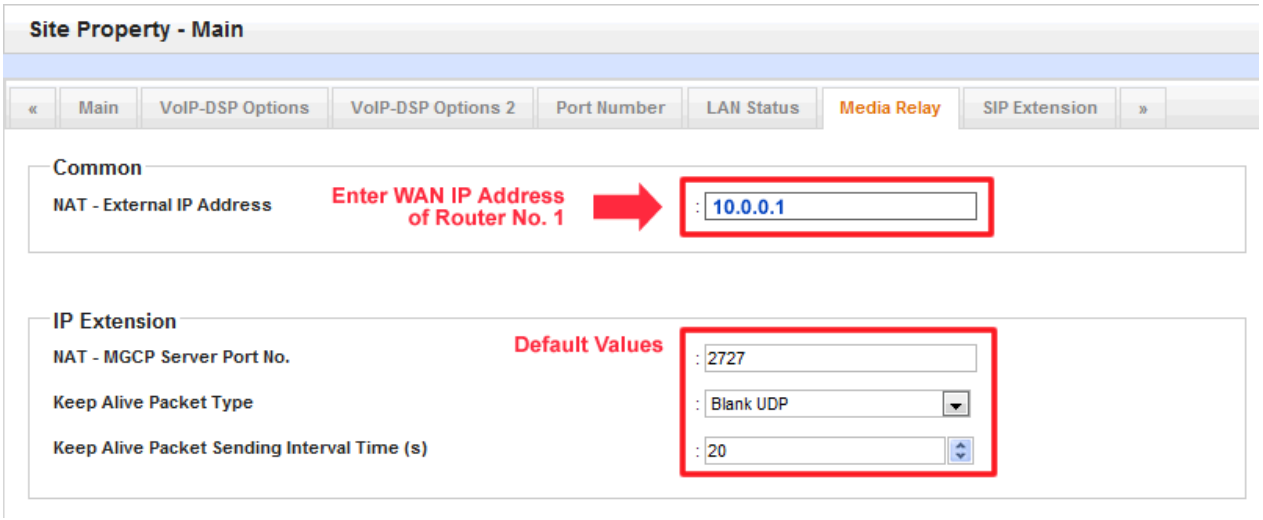
Network Diagram Example



Disclaimer
The PBX needs to be behind a firewall and assigned a private IP address. Use of a public IP address using MRG is at the sole responsibility of the installing dealer. Panasonic is not liable for any security breaches if a public IP addressed is used. There for Panasonic strongly recommends a private static IP behind a firewall is used.

Media Relay Configuration

Configure IP port number setting for Remote MGCP & SIP Extensions
[Site Property] → [Main] → [Media relay] → Edit the Common and IP Extension parameters →

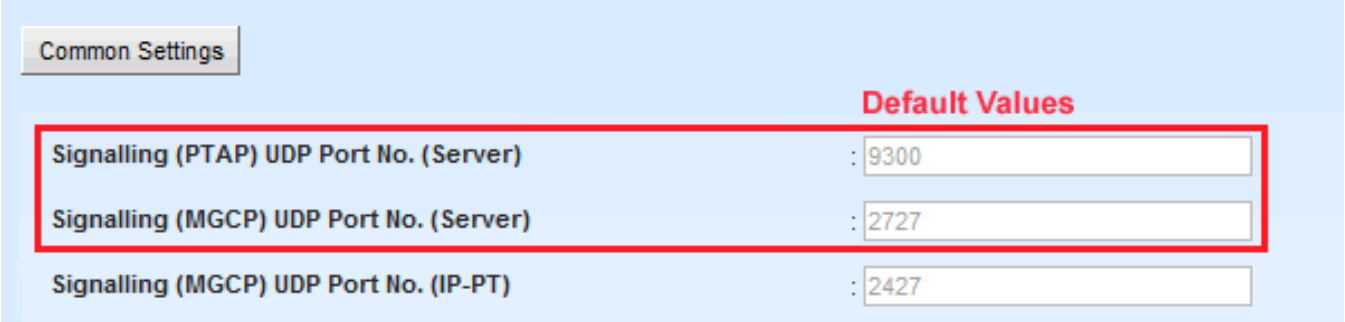


Enter the WAN IP Address of Router No. 1 [**See Network Diagram**]
[Apply] → [OK]

Virtual Card Configuration

[PBX Configuration] → [1.Configuration] → [1.Slot] ↴

IP Port Number settings
[Virtual] → [V-IPEXT32] → [Card Property] → [Common setting]



Extension Registration

All IP-PT and IP-SP extensions must complete their registration before they can be set to remote.

Model	Virtual Card	License Type	Licenses Number	Registration Type
KX-NT5XX	V-IPEXT32	IPPT	KX-NSM2xx, KX-NSM5xx	Automatic/Manual
KX-NCS8100	V-IPEXT32	IPSP	KX-NSM2xx	Manual Only

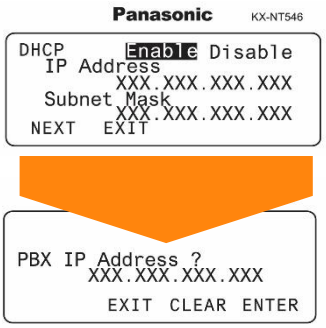
1 Updates are available while remote for the IP-PT series.

1. Install the appropriate **license** for the phone type.
2. Install the appropriate **virtual extension card** based on the phone type.

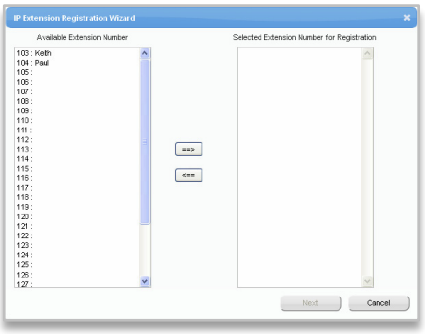
3. KX-NT5xx extensions will automatically register to their card when they are in a factory default state and they are on the same network.

4. All other IP-PT/IP-SP extensions require manual registration.

   a. Panasonic Phone Requirement:
   - Make sure the phone has an IP Address
   - DHCP or Static
   - Must be on the same subnet as PBX
   - Set PBX IP to the NS Local IP Address



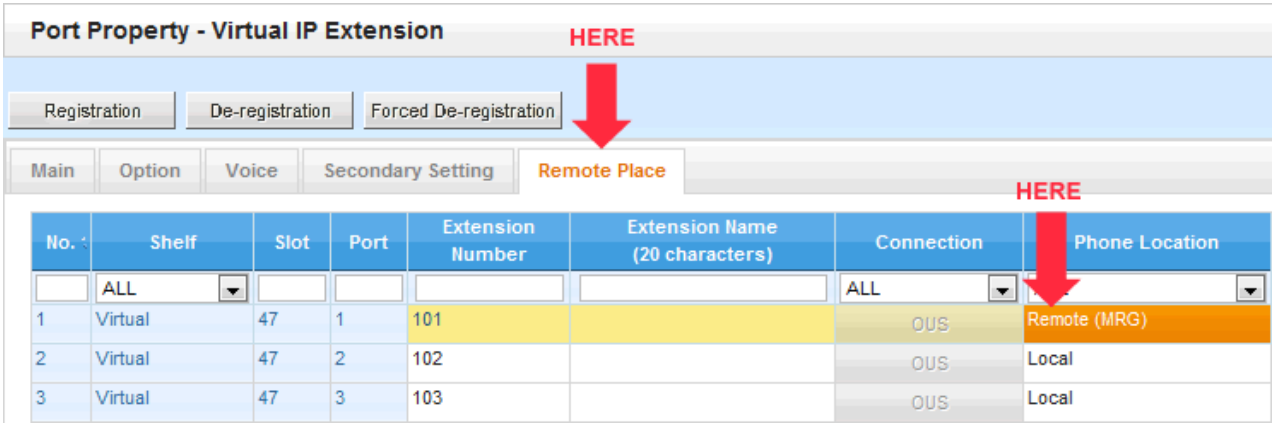
   b. Follow through with the phone registration process illustrated in the KX-NS Installation Manual (IM).



Once the phone is registered to the system, you can move forward with setting remote options on card.

Remote Status Settings

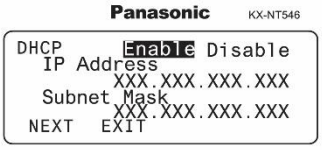
Proceed to remote MRG setting
[Virtual] → [V-IPEXT32] → [Port Property] → Remote Place → Phone Location



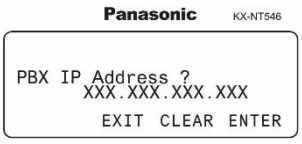
Remote Extension Settings

Relocate the extension to the remote location and connect it to the network.

5. Make sure the phone has an IP Address
   - DHCP or Static



6. Change the PBX IP Address
   - Enter WAN address set in **Media Relay Configuration.**



The phone reboots and it will search for the main office WAN IP address.