Extron DMP Plus Series Interactive Intelligence PBX System User Guide

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Extron

Extron DMP Plus Series Interactive Intelligence PBX System

DMP Plus Series C V DMP Plus Series C V AT Interactive Intelligence Configuration Guide

Product Information

The DMP Plus Series C V and C V AT models are VoIP devices that can be registered to the Interactive Intelligence PBX system running CIC version 2017 R1 or later. These devices require Firmware Version 1.08.0002 or higher for registration. They have two LAN connections, LAN 1 and LAN 2, that have the same capabilities for connecting, configuring, and controlling the hardware. The recommended LAN for VoIP traffic is LAN 1.

Product Usage Instructions

To register the DMP Plus Series VoIP device to the Interactive Intelligence PBX system, follow these steps:

Step 1: Create a New Line

1. Open the Interaction Administrator platform with administrator credentials.
2. Click on the Lines item on the left-hand side of the screen.
3. Right-click on the right-hand list portion of the screen and select New.
4. Edit the Line Value fields as required and click OK.
5. Edit the Audio fields as shown and check the Allow Multiple Codecs box if more than one codec will be assigned to the DMP Plus Series. Click OK.
6. Set the signaling Transport Protocol as required. The default is UDP.
7. Change Media Timing and Media reINVITE Timing to Normal. Uncheck the Use SIP Session Timer box.
8. Click on Proxy followed by Add. Enter the IP address of the DMP Plus Series and the port number being used (the default port for UDP and TCP is 5060). Click OK.
9. Click on Access followed by the Denied Access radio button. Add the DMP Plus Series as an exception by clicking on the Add button and entering its IP address, followed by OK.

Step 2: Create a New Station

Add a New Station for the DMP Plus Series to complete the registration process.

Revision Log

Date	Version	Notes
Feb 9, 2018	1.0	First Release: Applies to Firmware Version **1.01.0007.004**
Mar 7, 2018	1.0.1	Layout and language changes for emphasis
July 26, 2019	1.0.2	Added Appendix C
Feb. 12, 2020	1.1.0	Updated DMP Plus Series
Sep. 1, 2020	1.2.0	Added VoIP Configuration file
Sep. 12, 2022	1.2.2	Updated Appendix
Mar. 27, 2023	1.3.1	Update Network Troubleshooting

Introduction

This document provides essential instructions for registering the VoIP lines of DMP Plus Series, C V and C V AT models to Interactive Intelligence PBX system running CIC version 2017 R1 or later.
DMP Plus Relates to the following products:

- DMP 128 Plus C V / C V AT
- DMP 128 FlexPlus C V AT
- DMP 64 Plus C V / C V AT

Note: Requires Firmware Version 1.08.0002 or higher

Networking Note:
LAN 1 and LAN 2 on the DMP both have the same capabilities for connecting, configuring, and controlling the hardware. If the call manager intends to register the DMP Plus VoIP interface and the control system reside on the same IP subnet, only a single LAN connection is needed.
For best performance, it is recommended that LAN 1 be used to for VoIP traffic.

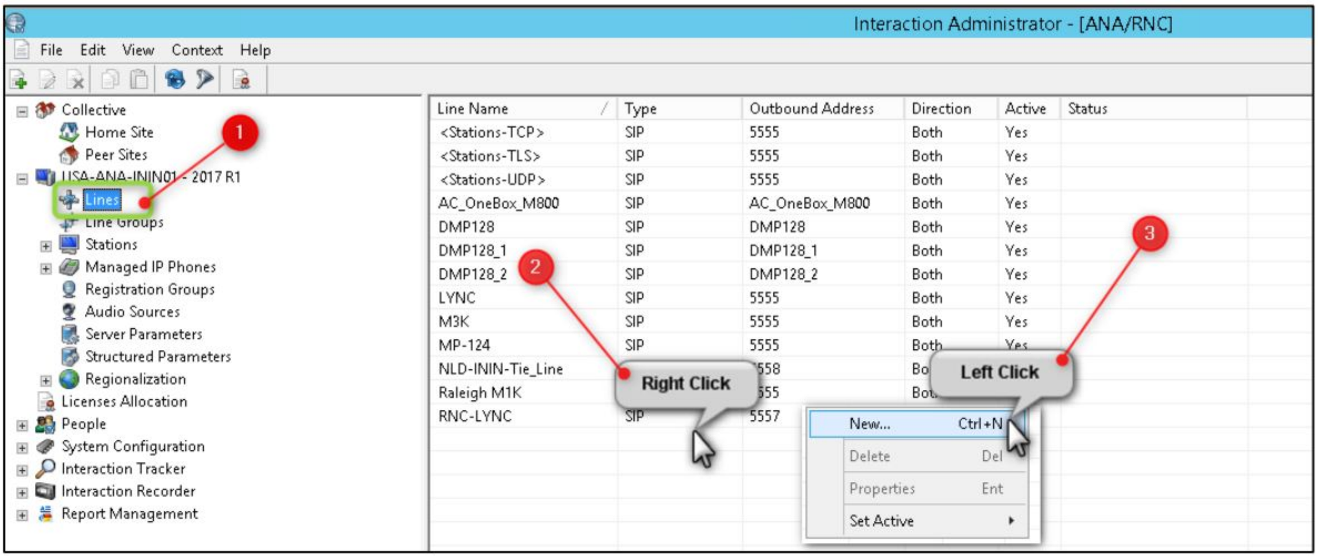
Configuring Interactive Intelligence for DMP Plus Series VoIP Registration

- VoIP functionality within the DMP Plus Series is built around the Session Initiation Protocol (SIP) signaling system, as defined in RFC 3261. The Interactive Intelligence platform must be licensed to allow the addition of generic basic third-party SIP endpoints before any line registration can take place.
- The DMP Plus Series requires that the Early Offer call initialization model be used, referred to as Normal Media Timing within Interactive Intelligence systems.
- It is recommended that a static IP address is assigned to the network interface used for VoIP traffic on the DMP Plus Series.

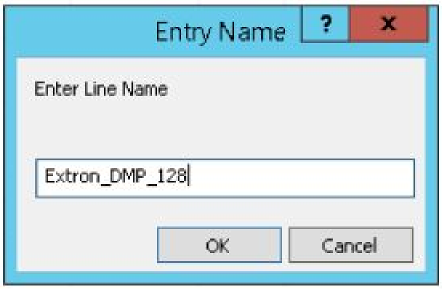
Note: When TLS is used only Line 1 can be used on the DMP Plus VoIP Interface.

Create a New Line
Registration of a DMP Plus Series VoIP device requires the creation of a new line within the Interaction Administrator platform. Start the application with administrator credentials.

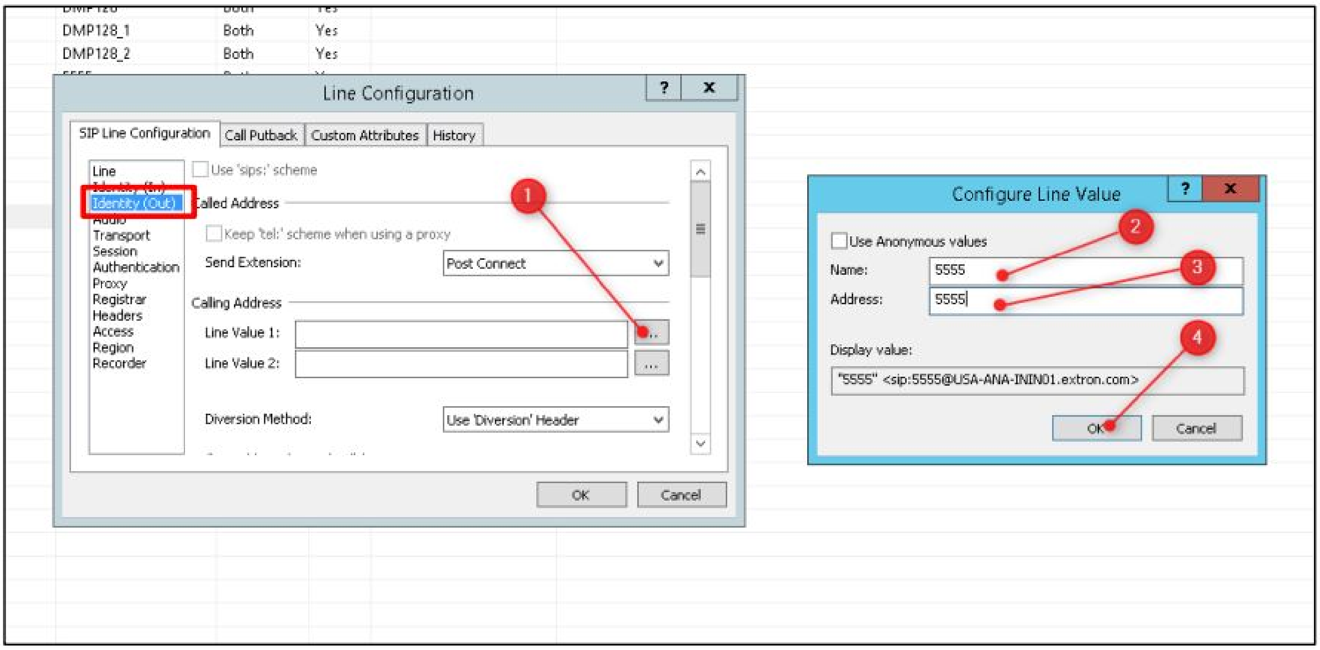
1. Click on the Lines [1] item on the left-hand side of the screen.
2. Right-click on the right-hand list portion of the screen [2].
3. Select New [3].



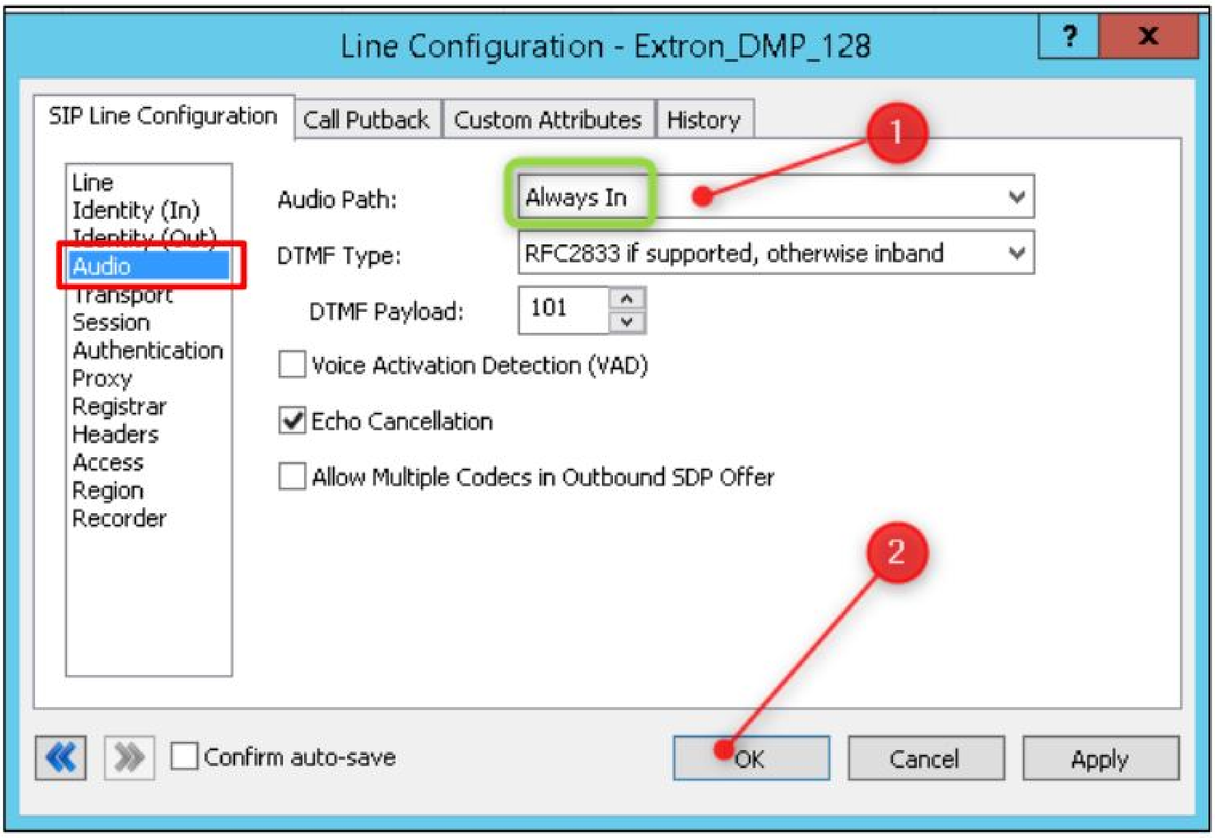
4. Enter a name for the line and click on OK.



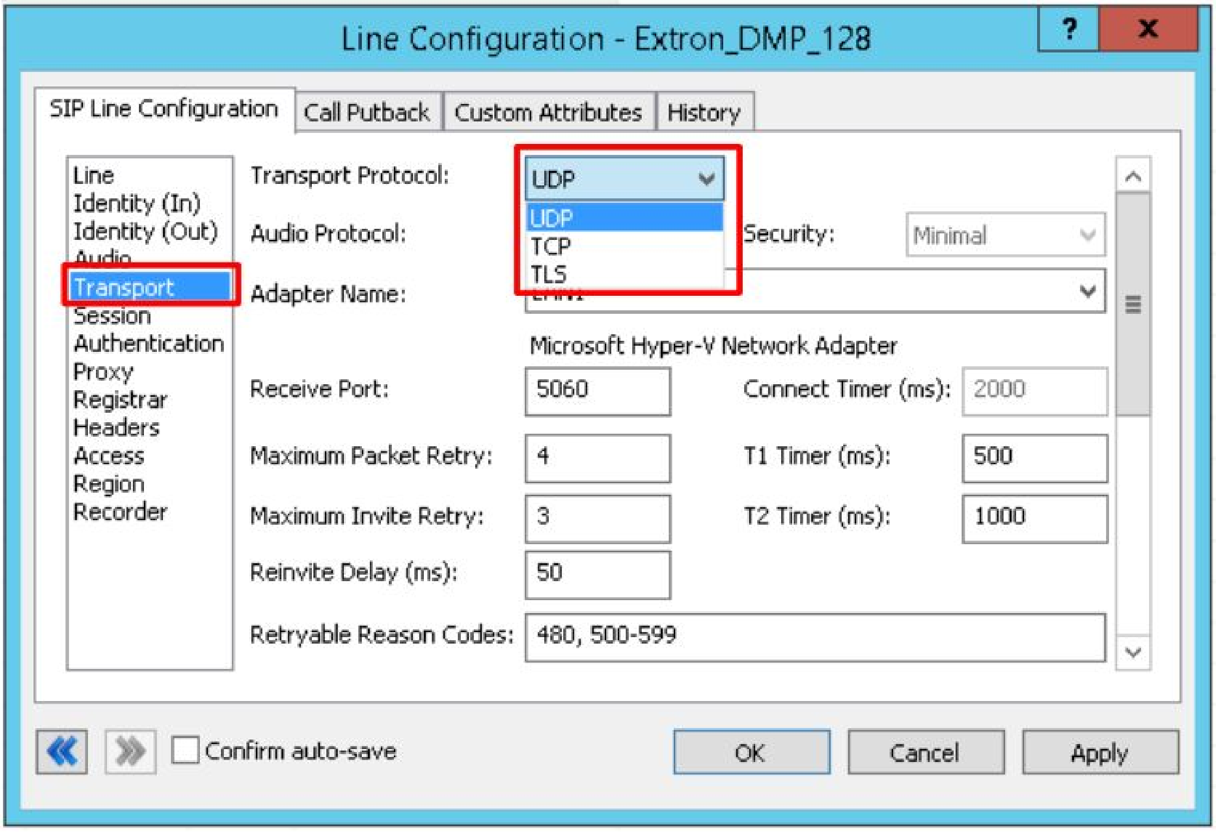
5. Click on Identity (OUT) [1] and edit Line Value fields as required [2] and [3]. Click OK [4].



6. Click on Audio and edit the fields as shown below [1]. Check the Allow Multiple Codecs box if more than one codec will be assigned to the DMP Plus Series. Click OK [2].

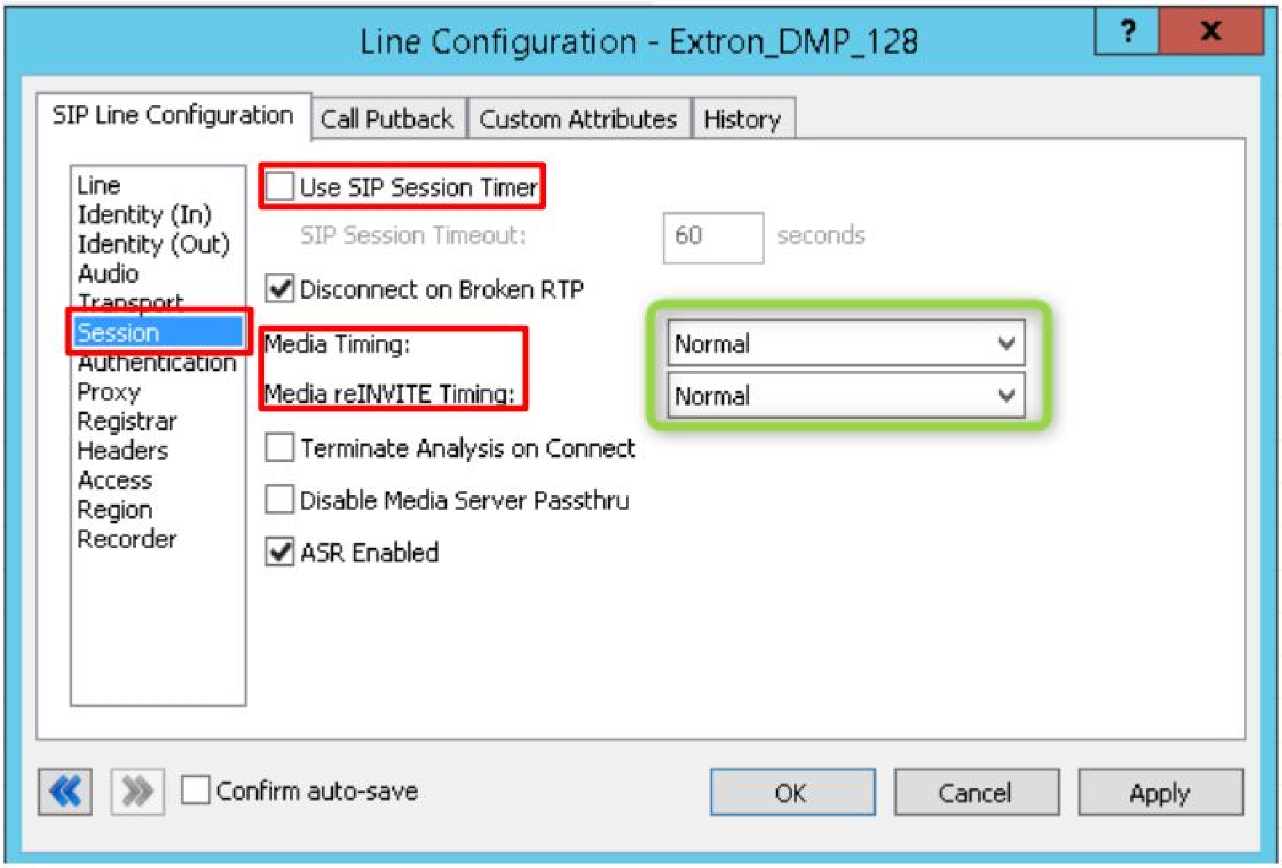


7. Set the signaling Transport Protocol as required. The default is UDP.

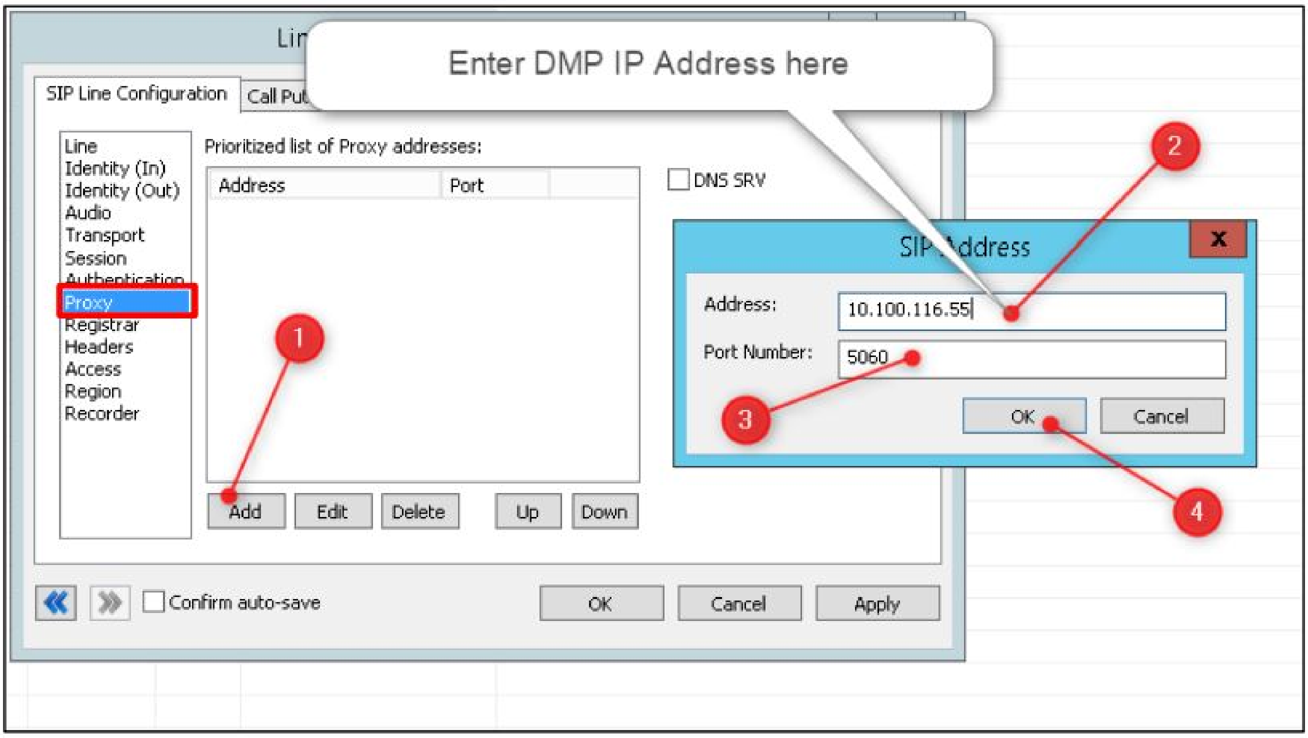


8. Click on Session and change Media Timing and Media reINVITE Timing to Normal.

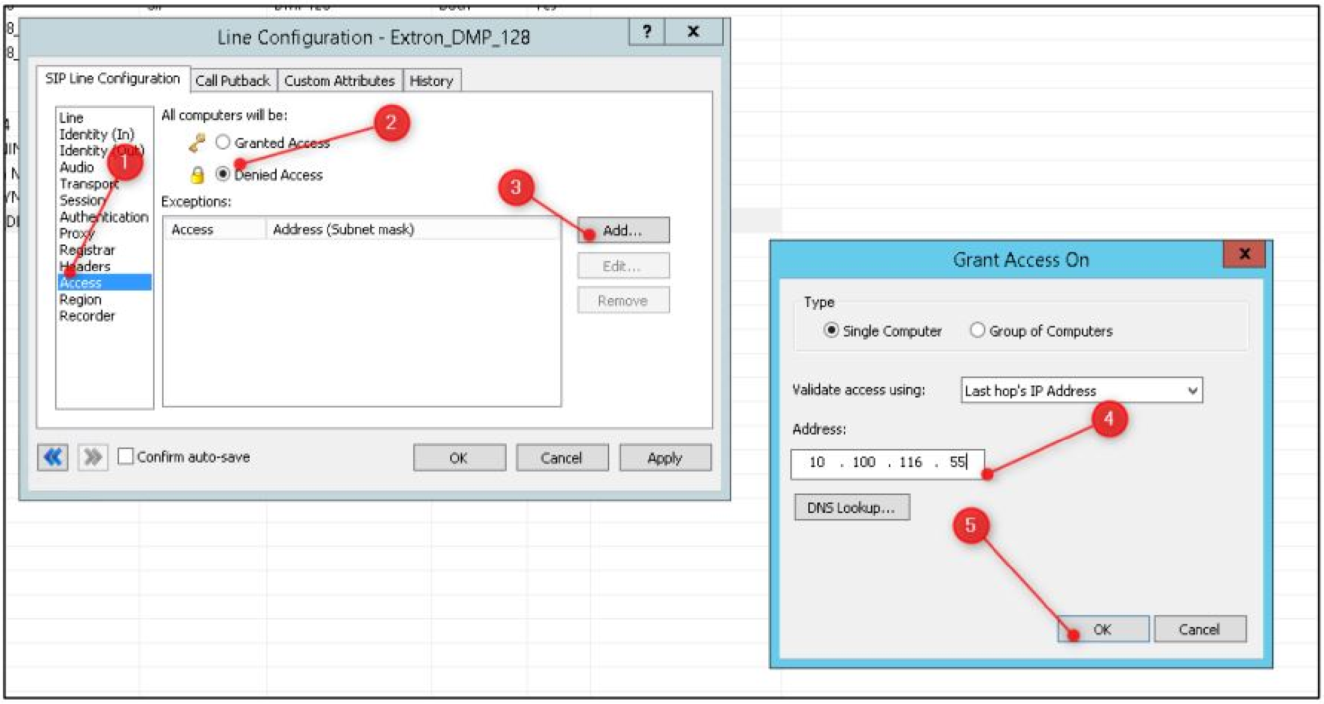
Uncheck the Use SIP Session Timer box.



9. Click on Proxy followed by Add [1]. Enter the IP address of the DMP Plus Series [2] and the port number [3] being used (the default port for UDP and TCP is 5060). Click OK [4].

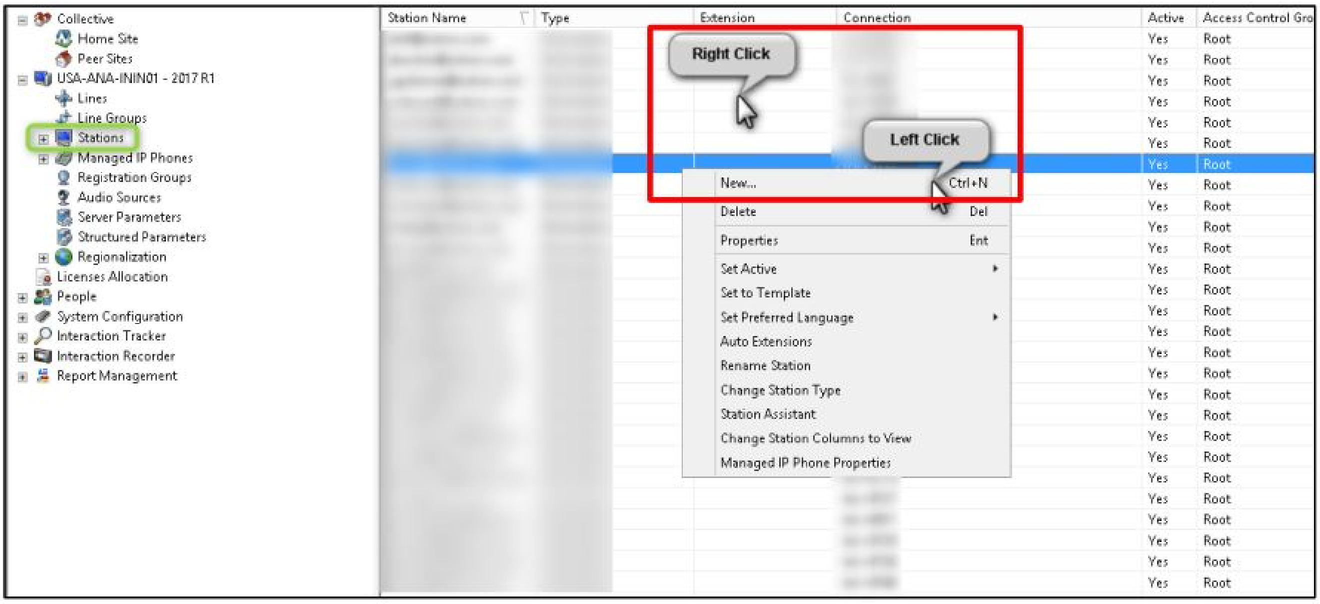


10. Click on Access [1] followed by the Denied Access [2] radio button. Add the DMP Plus Series as an exception by clicking on the Add [3] button and entering its IP address [4], followed by OK [5].

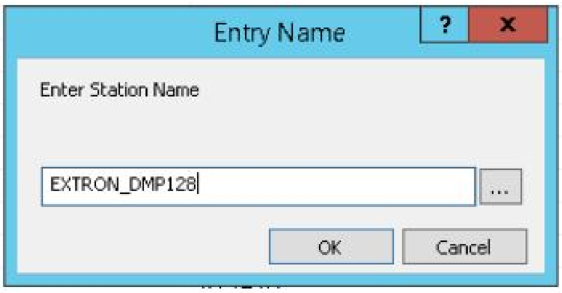


Create a New Station
Add a New Station for the DMP Plus Series.

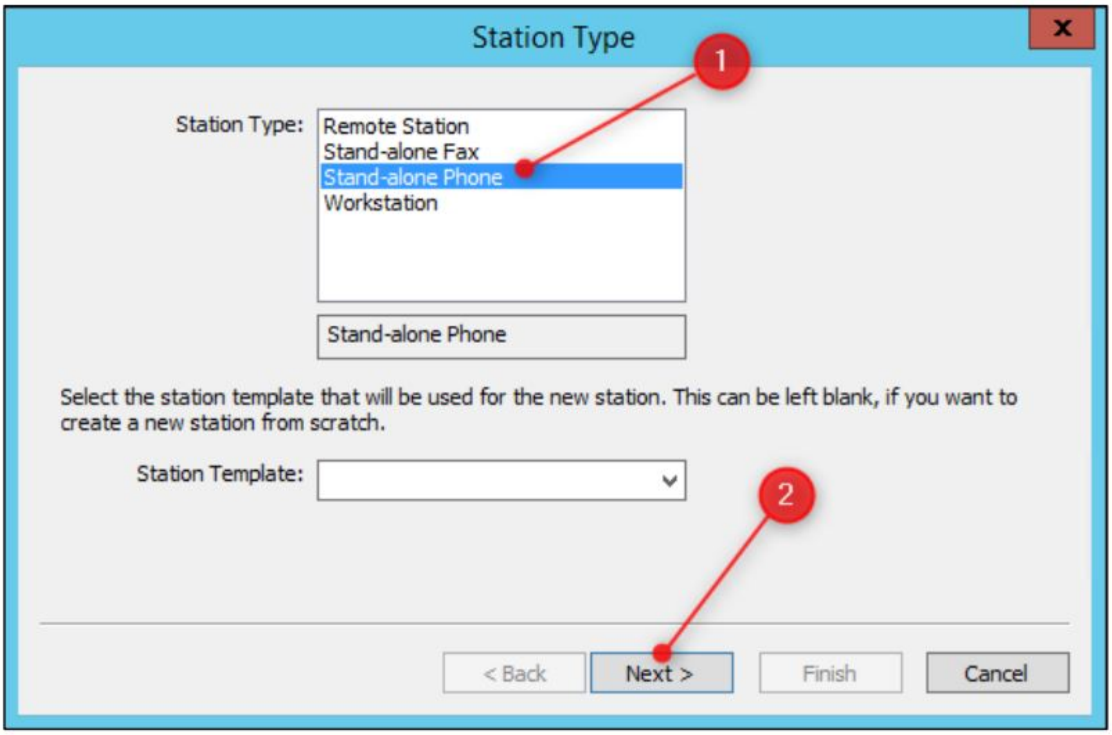
1. Click on the Stations container, right-click in the list area, then select New.



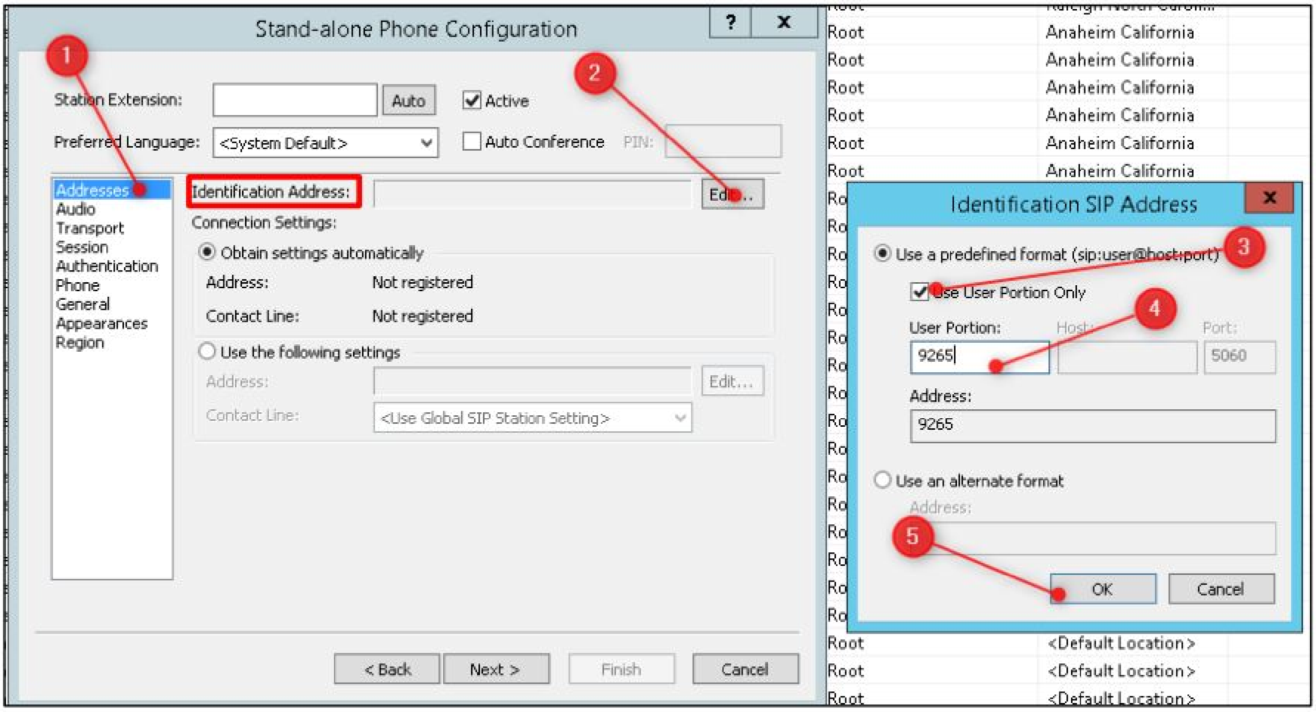
2. Enter a name for the new station and click OK.



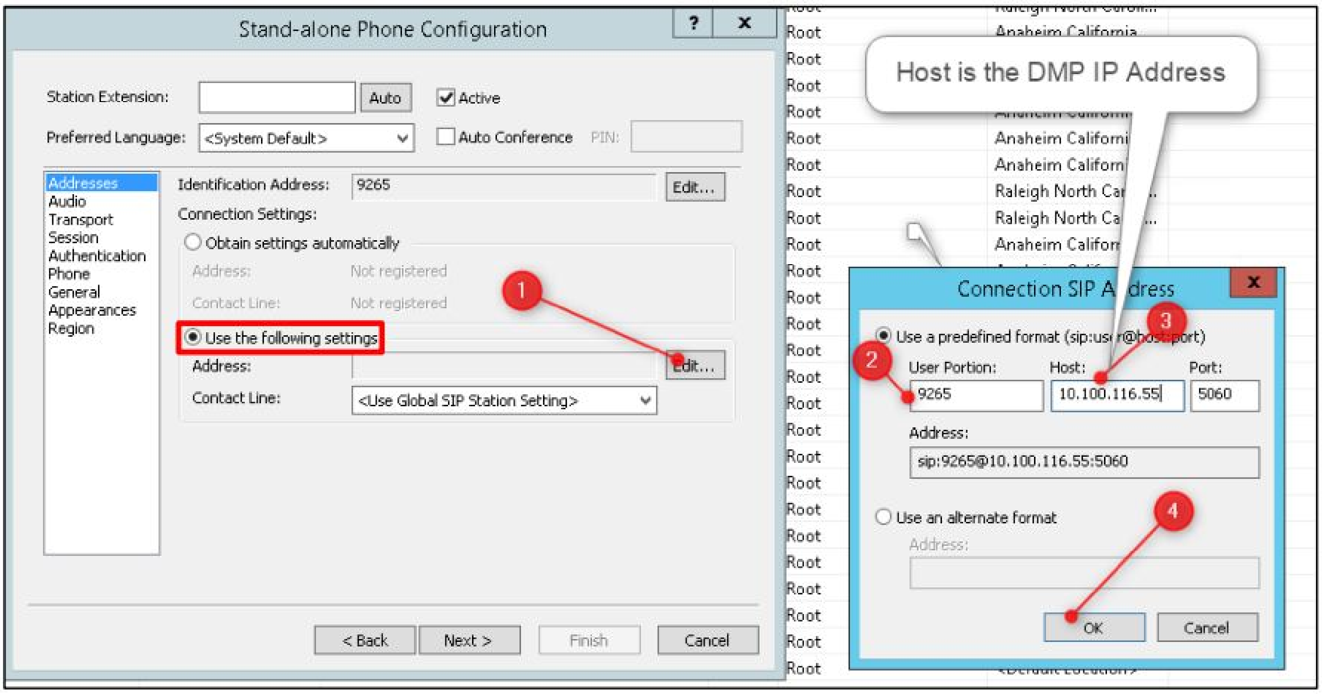
3. Select Stand-alone Phone [1] as the Station Type followed by Next [2].



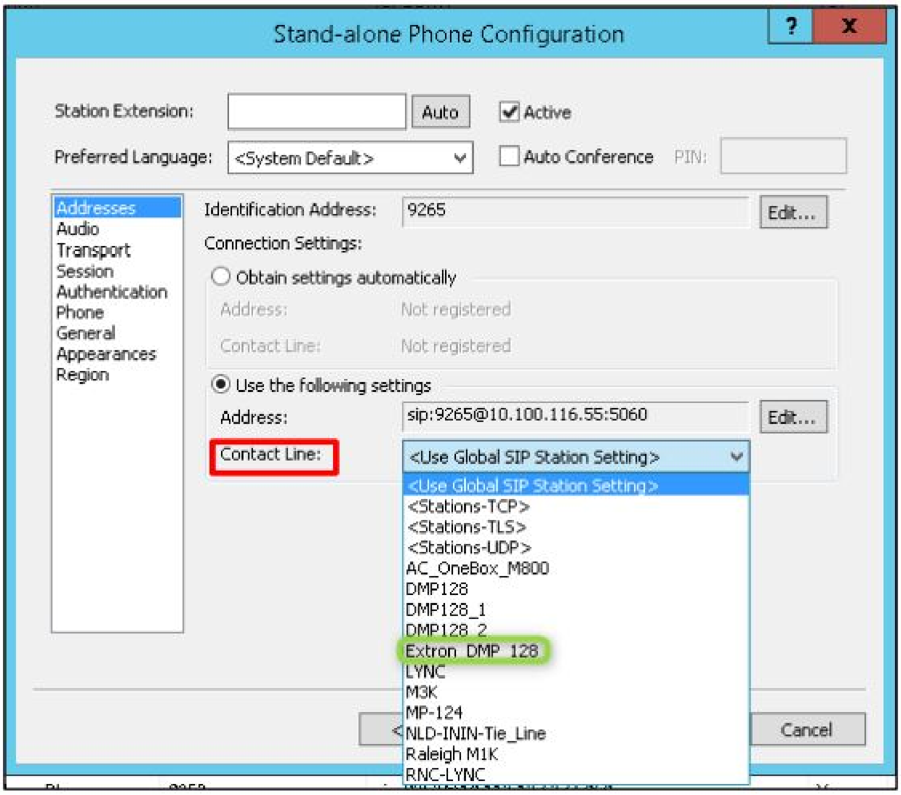
4. Click Edit [2] from the Identification Address section of the Addresses [1] section. Select Use User Portion Only [3] and enter the extension number [4] assigned to the DMP Plus Series, followed by OK [5].



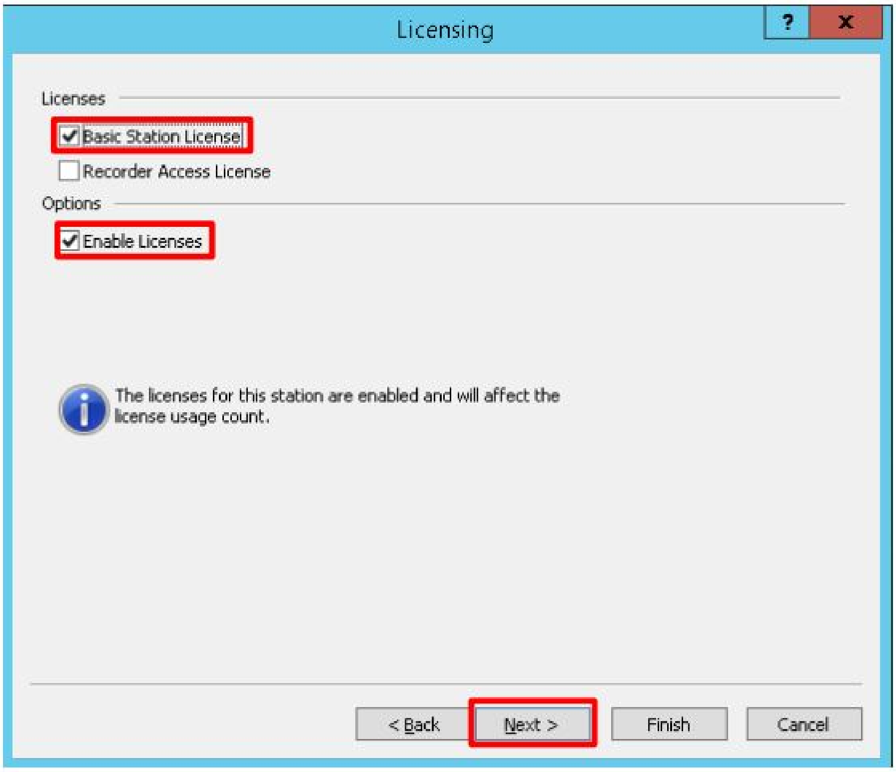
5. Select the Use the following settings radio button followed by Edit [1]. Enter the extension number assigned to the DMP Plus Series in the User Portion [2] field, followed by the IP address and SIP port number in the Host and Port fields [3], respectively. Click OK [4].



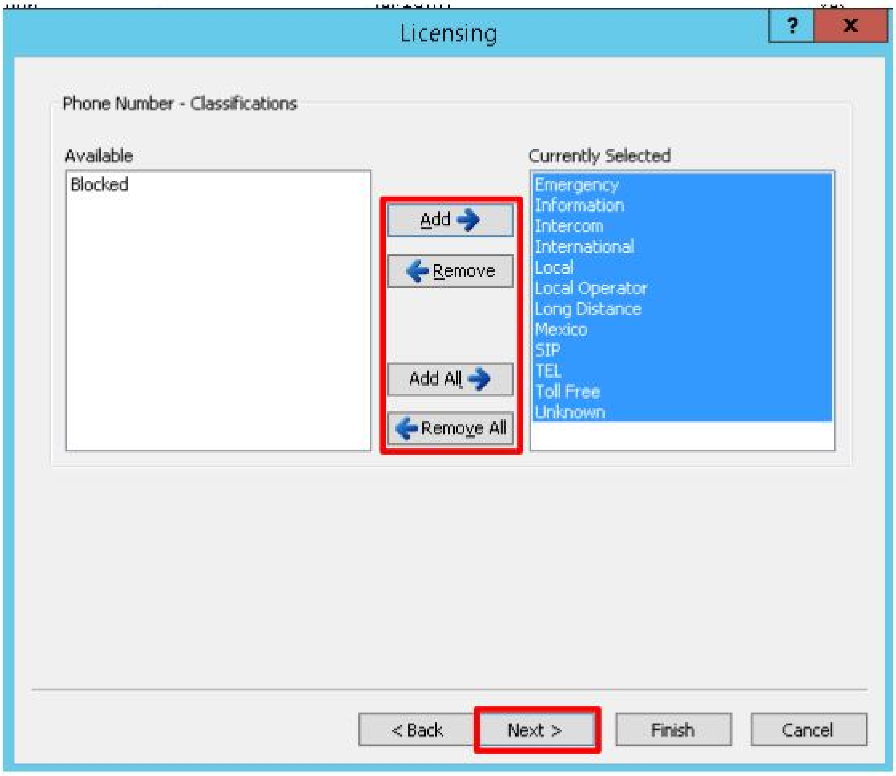
6. From the Contact Line drop-down box, select the line created in Section 2.1 followed by Next.



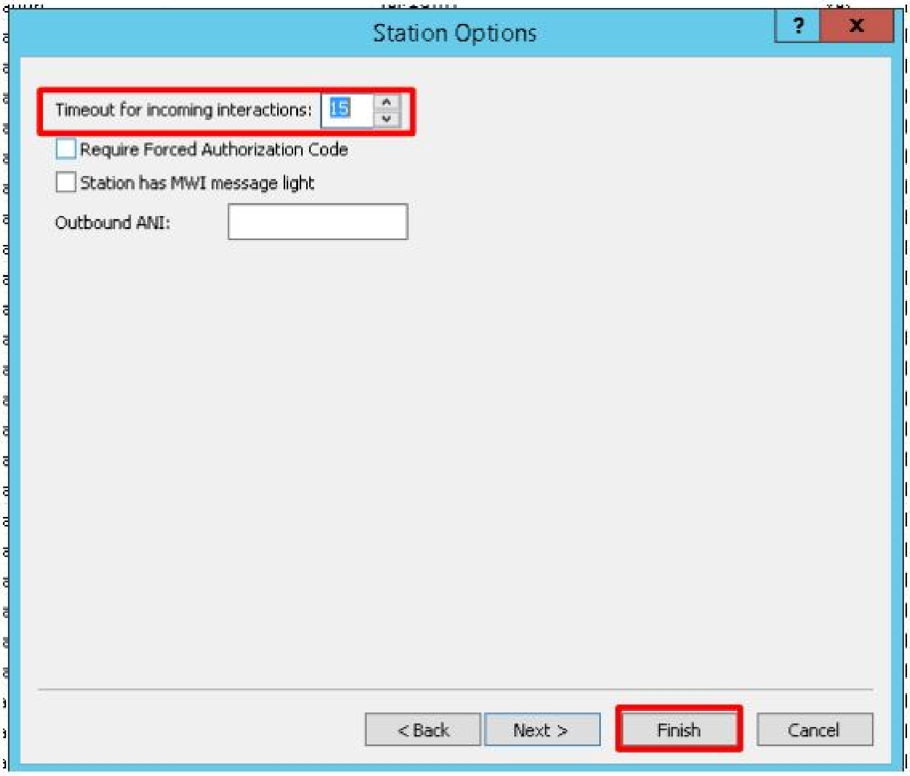
7. Select the Basic Station License and Enable Licenses checkboxes followed by Next.



8. Add any required Phone Number Classifications to the Currently Selected panel followed by Next.



9. Adjust the Timeout for incoming connections timer to the desired value and click Finish.

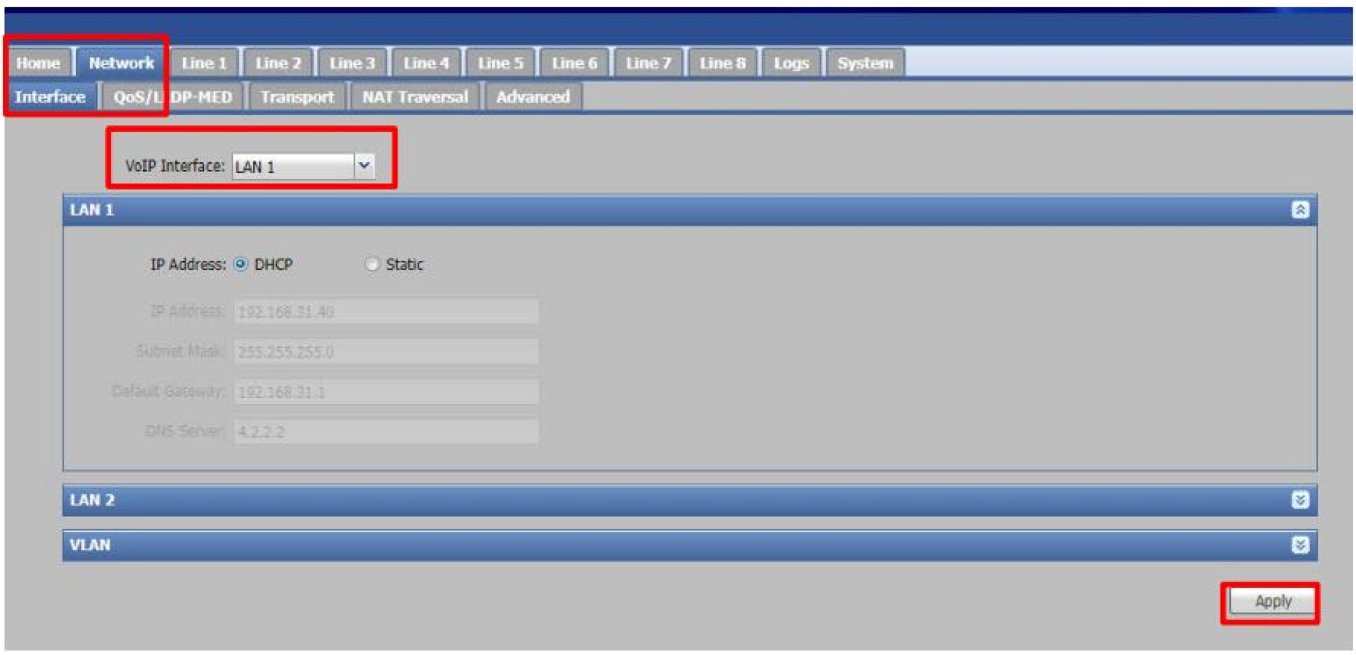


Configuring DMP Plus Series C V (AT) VoIP Lines

VoIP configuration of the DMP Plus Series is handled exclusively through a web interface, served from the device itself. The VoIP landing page is accessed through an address of the format –
http://192.168.254.254/www/voip.html
where 192.168.254.254 in this example is the default IP address of the DMP Plus Series device.
Up to 8 lines may be configured. Note that each line intended for use will require a unique extension to be specified as part of the configuration process in Section 2.0.

Network Interface Configuration

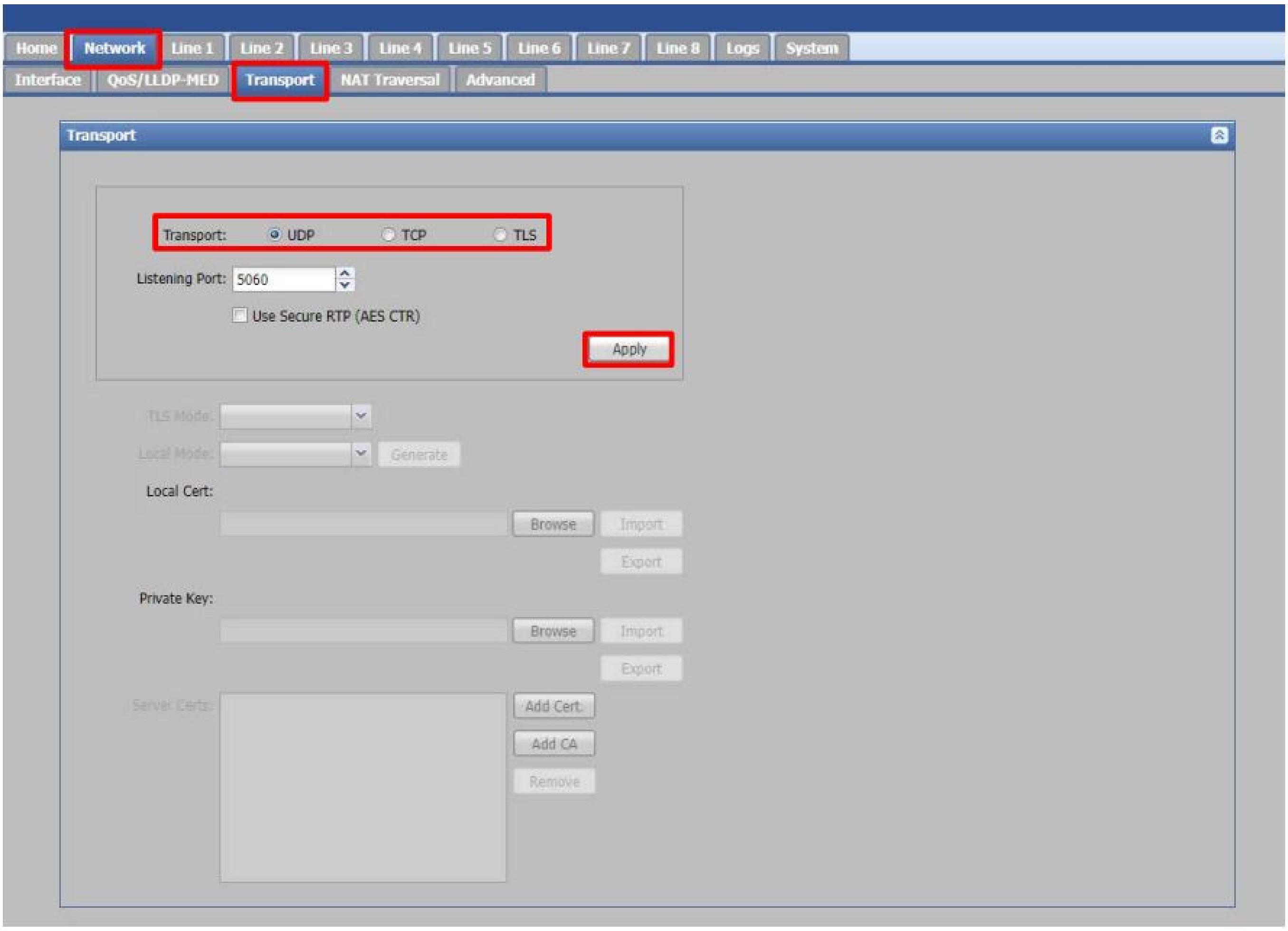
Clicking on the Network followed by Interface tabs allows changes to be made to the desired network interface on the DMP Plus Series; either LAN1 or LAN2 may be used for VoIP. VLAN tagging is available on either interface if required. Up to two DNS entries may be manually specified.
Click Apply after making any changes to restart the networking services on the device.



Note: When using multiple network connections, it is recommended to use LAN 1 for VoIP. Configuration and control are available on both network connections.

Transport Configuration

Click on the Transport tab to access signaling transport configuration. Set the transport to either UDP or TCP per Section 2.1. The default transport type for the DMP Plus Series is UDP.
In the event that changes need to be made, click Apply to commit any adjustments to the device.



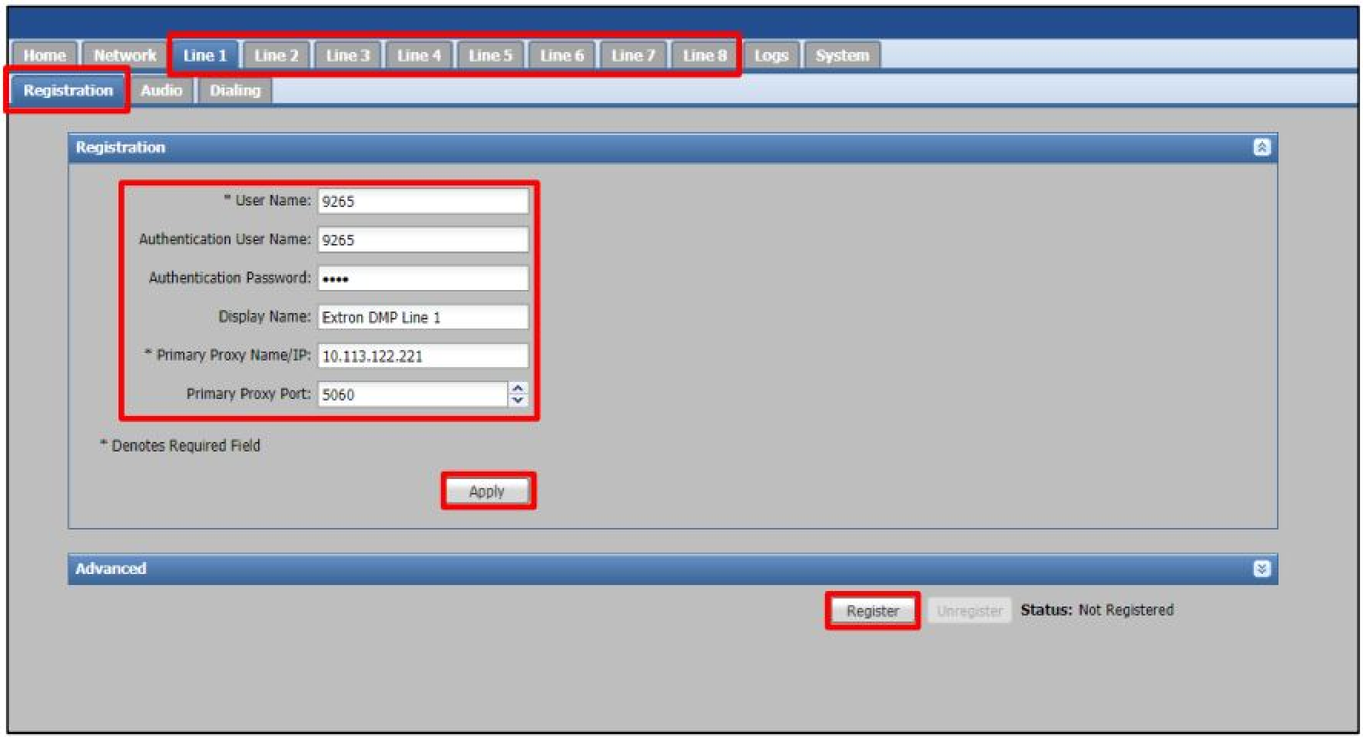
Note: When TLS is used only Line 1 can be used on the DMP Plus VoIP Interface.

Line Registration

Click on the first line tab to be configured as part of the system, e.g. Line 1.

1. **User Name:** Set this to match the extension number from Section 2.2.
2. **Authentication User Name:** Set this field to match the extension number above.
3. **Authentication Password:** Use the extension number from (1) and (2) as the password.
4. **Display Name:** Optional. Specify an identifier for the line if required.
5. **Primary Proxy Name/IP:** Specify either the IP address or domain name of call server.
6. **Primary Proxy Port:** Specify the port number as required. The default is 5060.

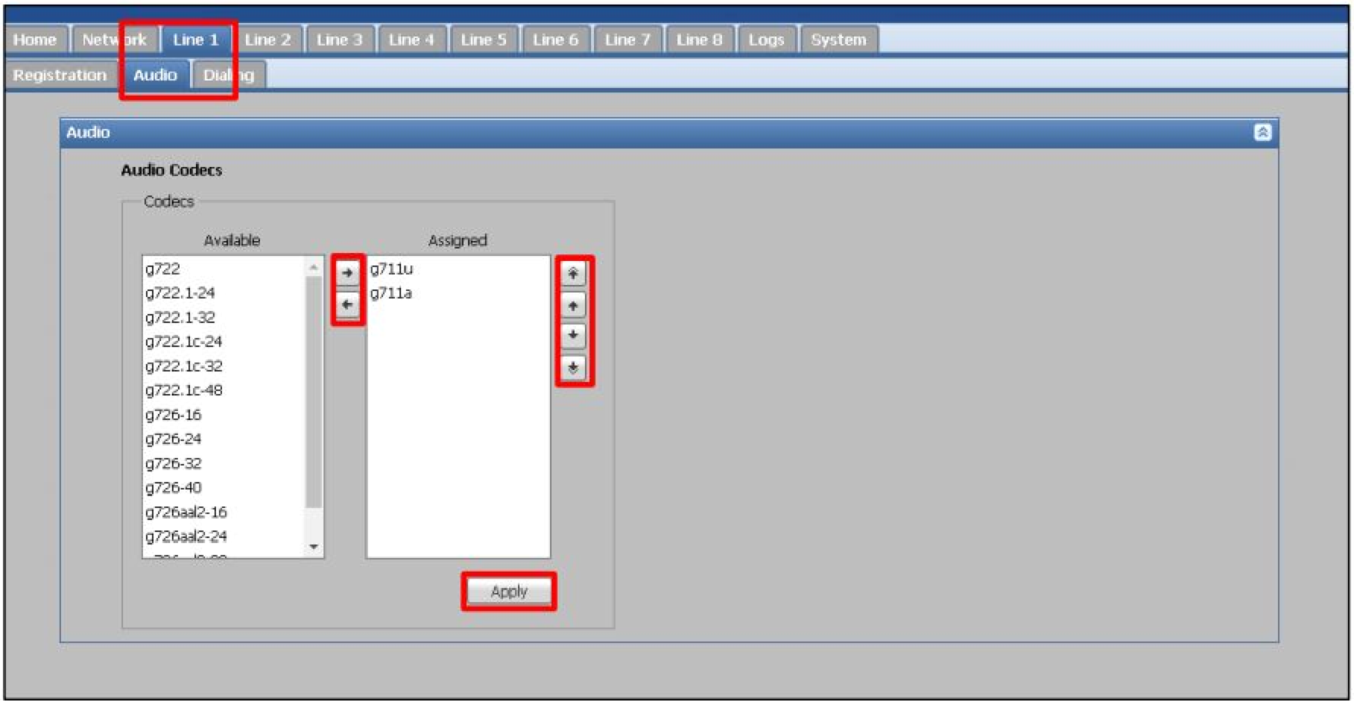
Once the above settings have been entered, click the Apply button to save to the device.
Click the Register button to initiate registration to the call server. If successful, the registration status to the right of the Register/Unregister buttons will indicate Registered – Primary.



Codecs

The availability and priority of codecs may be changed from within the Audio tab. Codecs will only be available for use within phone calls if they are moved from the Available to the Assigned column. By default, G.711u and G.711a are assigned to the system. Codec assignment and priority can be set per line.

Click the Apply button to commit any changes to the device.

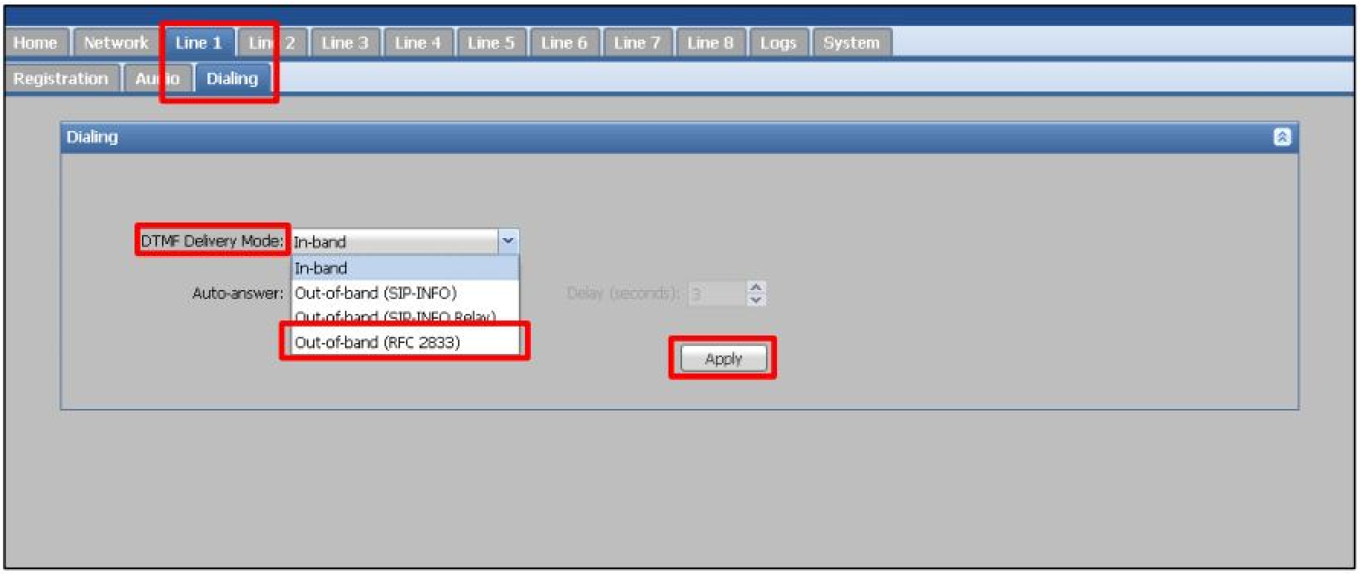


Dialing

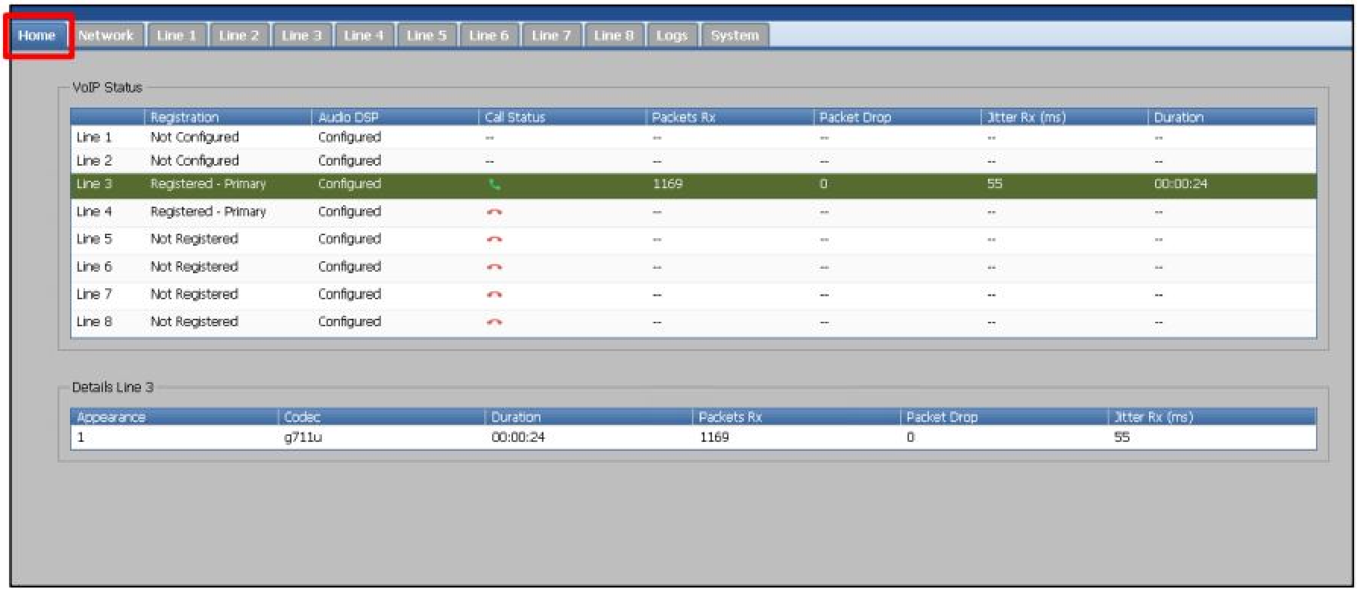
Use the Dialing tab to select the desired DTMF signaling method. The default DMP Plus Series mode is In-Band. Other available options are as follows:

- **Out of Band –** SIP INFO
- **Out of Band –** SIP INFO (RELAY)
- **Out of Band –** RFC 2833

Recommend DTMF delivery method is Out of Band – RFC 2833
Click Apply after selecting Out of Band – RFC 2833 DTMF signaling method for the line. This can be set per line.



System Overview
Once all required lines have been registered to the call server, use the Home tab to view a summary of the system, as required. In the example below, one of two registered lines (line 3) is currently in an active call. Appearance-specific (caller-specific) details for active calls can be accessed by clicking on the corresponding Line entry.



Troubleshooting

In the event of failure to register, review the following:

- When using multiple network connections, it is recommended to use LAN 1 for VoIP.
  - Configuration and control are available on both network connections.
  - If VoIP and Control system reside on the same IP subnet, only a single network is required.
- Check that the DMP Plus can ping the VoIP server by using proxy ping. This can verify network access and verify DNS name resolution.
  - Using telnet (port 23) or SSH (22023) ping the address of the VoIP server.
  - Command: (esc)<VoIP server Address>ping(cr)
    - **Example:** (esc)192.168.10.10ping(cr)

- Check that the credentials specified as part of the Interactive Intelligence setup are correctly entered into the registration fields for each line.
- Check network interface settings, including DNS fields (particularly if a proxy domain name is being used rather than an IP address).
- When TLS is used only Line 1 can be used on the DMP Plus VoIP Interface.
- Click on the Logs tab to inbound and outbound SIP transactions. The absence of inbound transactions indicates a network routing problem. Registration-specific problems may be indicated by corresponding SIP responses such as 403 – Forbidden.

Configuration File – Attached to PDF
If needed, the configuration file "voipConfig.conf" is attached to the PDF

- To access the file select "Attachments"  from the left side bar – see figure A1
- Then save the attachment, before uploading to DMP Plus – see Figure A2 below

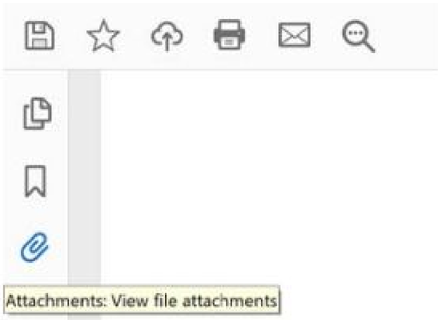


Figure A1 Save Attachment

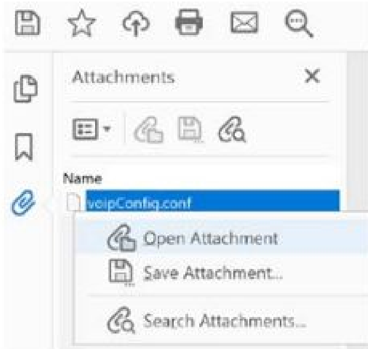


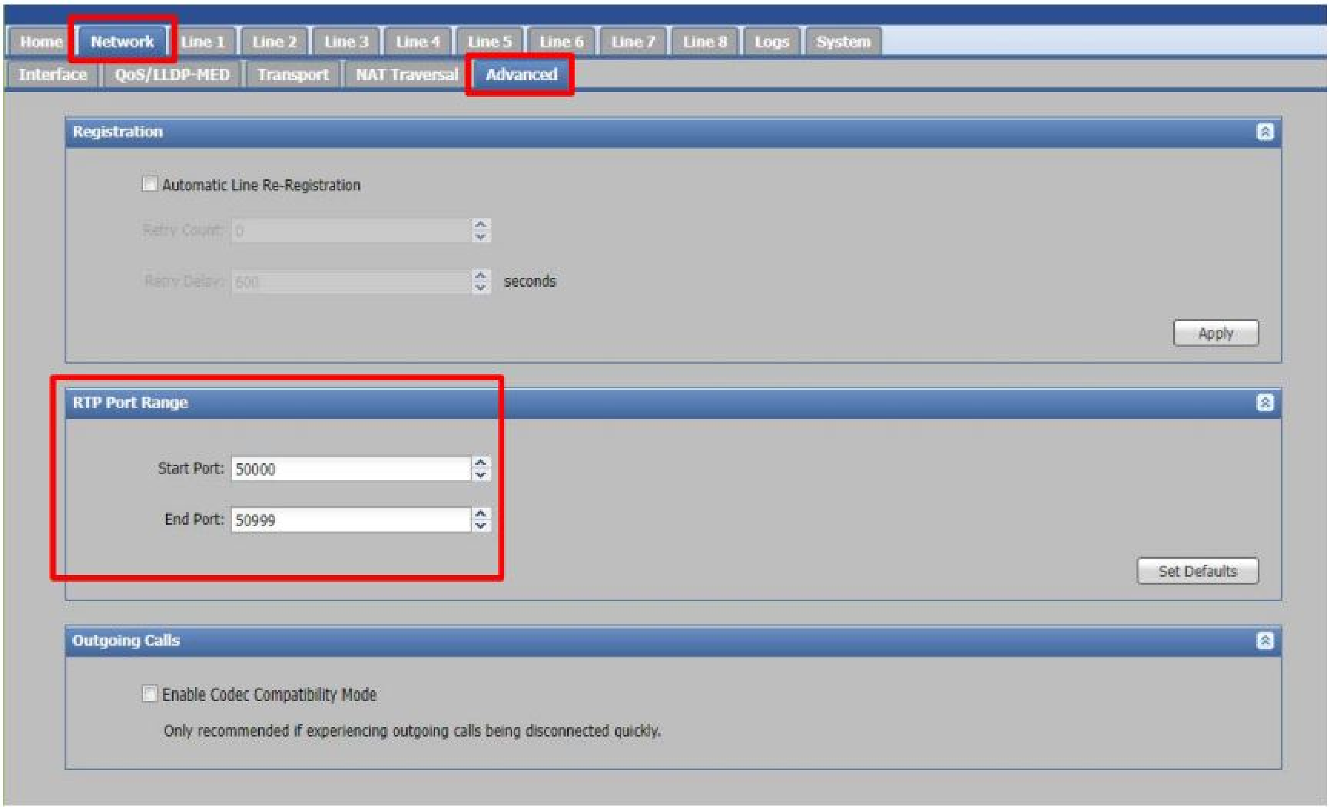
Figure A2 Show Attachments

Appendix A: RTP Port Range

The default port range for VoIP RTP traffic on the DMP Plus Series is 50000 – 50999. To change this range, the following steps must be carried out. There are two methods that can be used to change adjust the RTP port Range
Note: Requires Firmware 1.08.0002 or later.

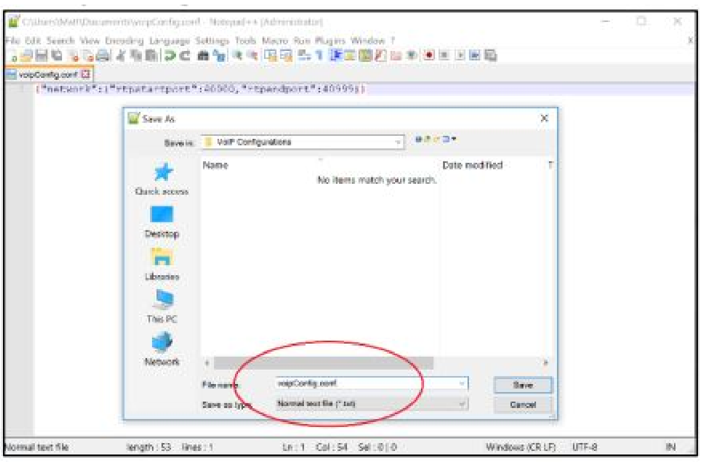
Method 1 – Internal Webpage

1. From internal webpage Select Network then Advanced Tab
2. Adjust the Start and End port for RDP

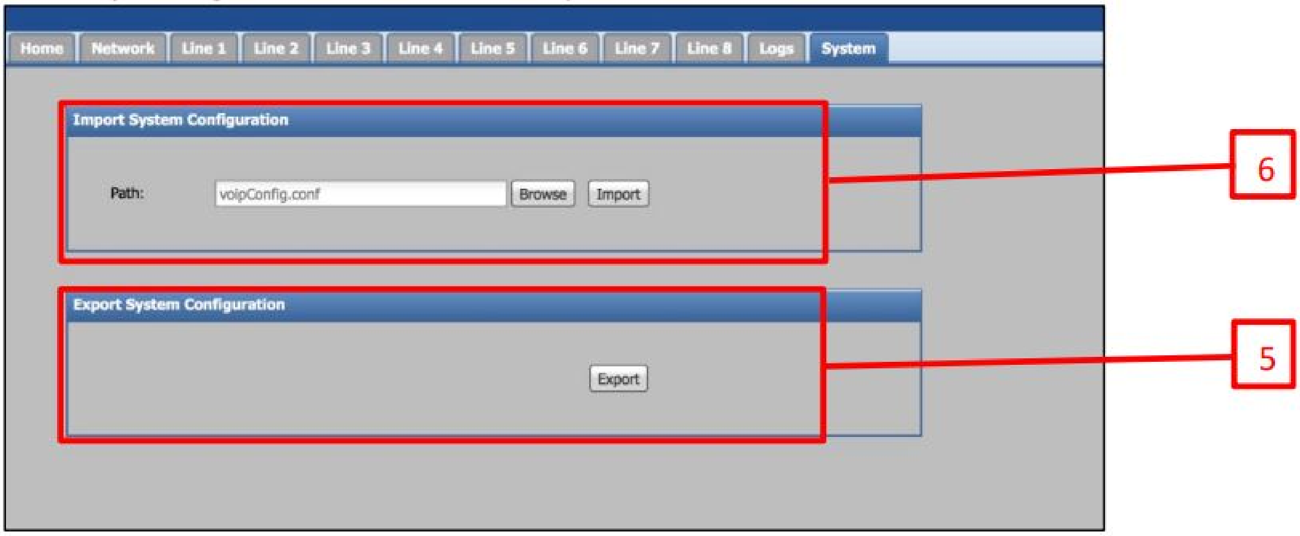


Method 2 – Configuration file

- **a.** Create a new blank text file using a suitable basic text editor.
  - **i.** Example “voipConfig.conf”is attached to this PDF, see Section 3.9
- **b.** Enter the following text into the document (in this example, the port range is being changed to 50000 – 50999; replace these values with the desired range) -{“network”:{“rtpstartport”:50000,”rtpendport”:50999}}
- **c.** Save the file as voipConfig.conf.



- **d.** Navigate to the VoIP configuration webpage and click on the System tab.
- **e.** Under Export System Configuration, click the Export button to back up the current VoIP configuration to disk. The file will be saved in the default web browser download directory.
- **f.** Under Import System Configuration, click the Browse button to locate the voipConfig.conf file created in steps 1 to 3.



- **g.** Click the Import button to update the DMP Plus Series with the new RTP Port Range settings. A notification will appear once the settings have applied successfully.

Appendix B: Automatic Line Re-Registration

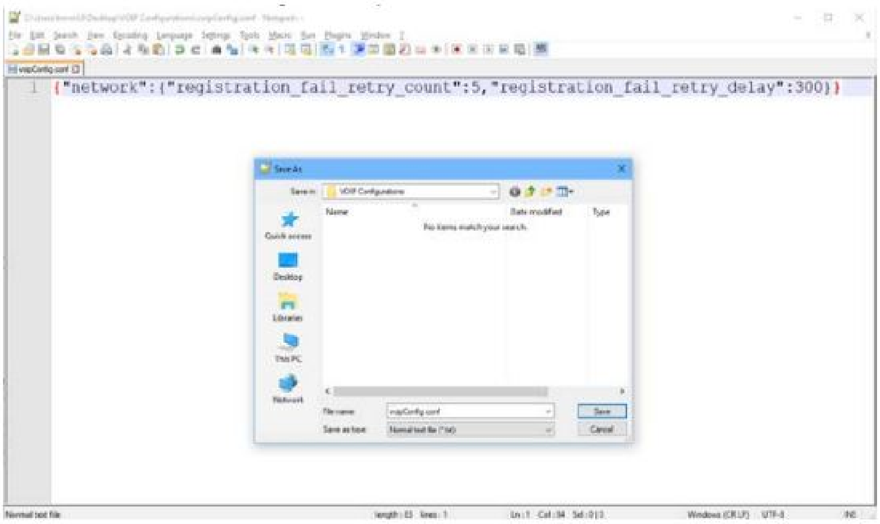
Some call managers and networks go into maintenance windows which do not allow VoIP endpoints to register or maintain their registration. To help resolve this issue the Automatic Line Re-Registration function can be configured to re-register a line if line registration is unexpectedly lost. This function causes the VoIP interface to re-attempt a line re-registration if the first automatic re-registration attempt fails.
In order to use this feature, the line must first be registered to the call manager.
Note: When enabled, this function will attempt re-registration once the SIP timer has expired. By default the SIP timer is set to 3600 seconds (60 mins). By default, the Automatic Line Re-Registration feature is disabled, with the "registration_fail_retry_count" set to zero (0).
To set up Automatic Line Re-Registration, the following steps must be carried out.
Requires Firmware 1.08.0002 or later.

Method 1 – Internal Webpage

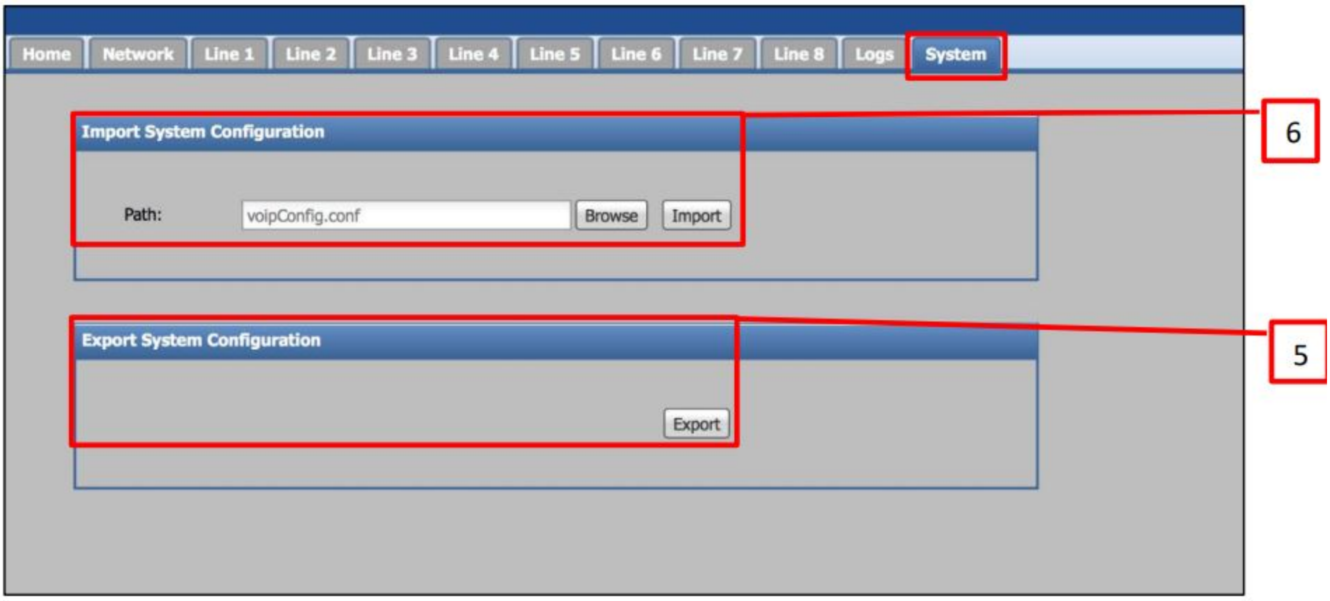
1. From internal webpage Select Network then Advanced Tab
2. To Enable the Automatic Line Re-Registration select the check box
3. Enter Retry Count (0 – 99)
    - **a.** This is the number of attempts a Line will make to re-register
        - **i.** Example below is set to twenty (20) reconnections attempts
        - **ii.** If this is set to zero (0), the feature is disabled
4. Enter Retry Delay (120 – 3600 seconds)
    - **a.** Amount time between registration attempts in seconds
        - **i.** Example above is set to 300 seconds (5 mins) between reconnections attempts
5. Once Set hit Apply

Method 2 – Configuration file

1. Create a new blank text file using a suitable basic text editor
    - **a.** Example “voipConfig.conf”is attached to this PDF, see Section 3.9
2. Enter the following text into the document –{“network”:
   {“registration_fail_retry_count”:5,”registration_fail_retry_delay”:300}}
    - **a.** registration_fail_retry_count”:5
      This is the number of attempts a Line will make to re-register
        - **i.** Example above is set to five (5) reconnections attempts
        - **ii.** If this is set to zero (0), the feature is disabled
        - **iii.** Valid Range of values: 0 – 99
    - **b.** registration_fail_retry_delay”:300
      Amount time between registration attempts in seconds
        - **i.** Example above is set to 300 seconds (5 mins) between reconnections attempts
        - **ii.** Valid Range of values: 120 – 3600
3. Save the file as voipConfig.conf.

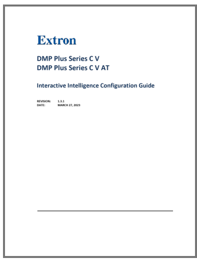


4. Navigate to the VoIP configuration webpage and click on the System tab.
5. Under Export System Configuration, click the Export button in order to back up the current VoIP configuration to disk. The file will be saved in the default web browser download directory.
6. Under Import System Configuration, click the Browse button to locate the voipConfig.conf file created in steps 1 to 3.



Click the Import button to update the DMP Plus Series with the new settings. A notification will appear once the settings have applied successfully.
To disable to Auto-Reregistration mode, send the following string using the same method:
{"network":{"registration_fail_retry_count":0,"registration_fail_retry_delay":200}}

Documents / Resources

	Extron DMP Plus Series Interactive Intelligence PBX System [pdf] User Guide DMP Plus Series, DMP Plus Series Interactive Intelligence PBX System, Interactive Intelligence PBX System, Intelligence PBX System, PBX System