



Enabling Live Communications at the Edge of IP Networks

Configuration Notes 288

Configuring A Mediatrix 41xx FXS Gateway with a MGCP Call Agent

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Proprietary

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Table of Contents

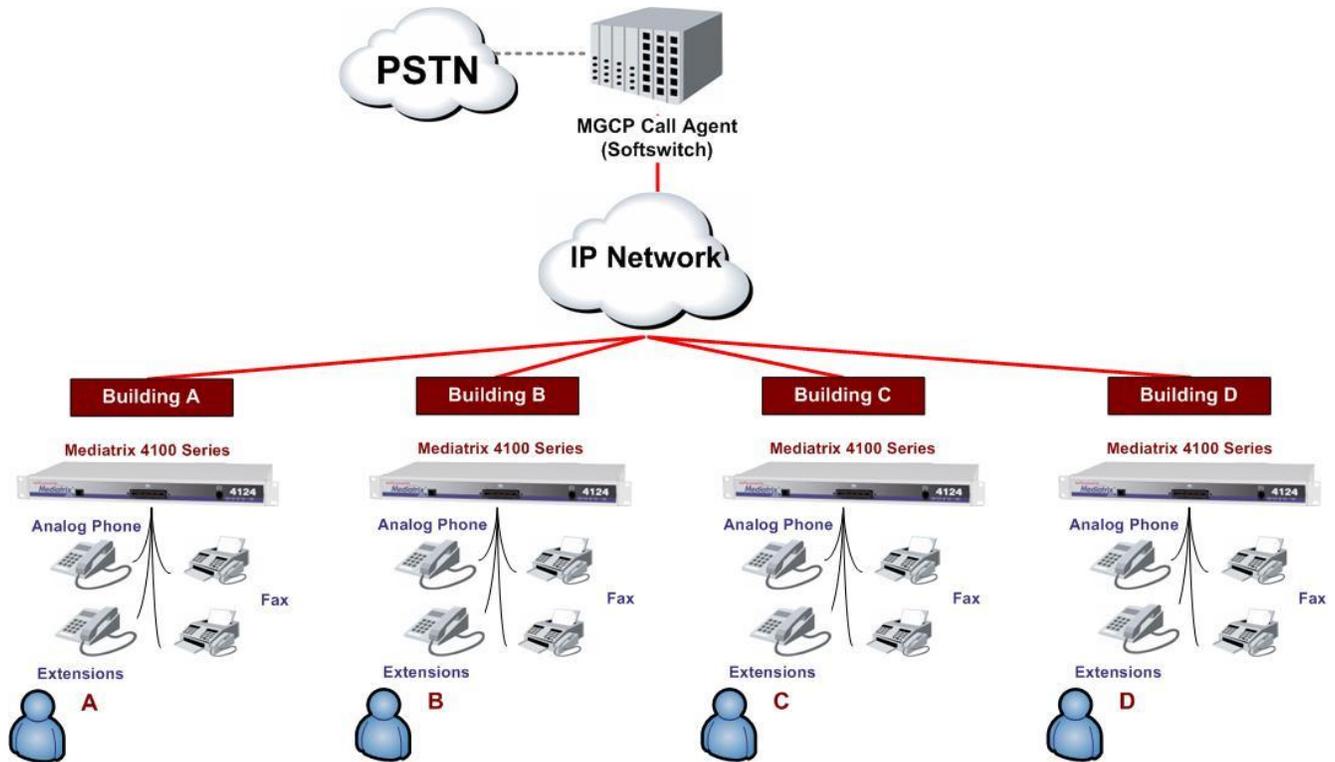
Introduction	3
Application Scenario	3
Versions Supported	3
Running the Unit Manager Network (UMN) Software	4
Configuring Network Parameters.....	6
Configuring MGCP Parameters	7
Second Ethernet Port Configuration (Optional).....	8
References	9

Introduction

This document outlines the configuration steps for deploying Mediatrix 4100 series FXS units in an MGCP environment with a generic MGCP soft-switch.

Application Scenario

This is a typical deployment scenario of Mediatrix 41xx in a MGCP-based MTU/MDU environment. The gateways provide connectivity to analog phones and fax machines and analog trunking to legacy PBX/KSU (for small business) in each building floor, whereas the softswitch provides call control and telephony services for all gateways.



Versions Supported

This configuration note was written and validated using the following platforms and versions.

- Mediatrix 41xx: MGCP 5.0.7.47
- Mediatrix Unit Manager Network: UMN 3.2.24.51

The following configuration notes are not a substitute for the Mediatrix Administration Documentation for Mediatrix analog products. Please have the following manuals available for reference:

- Mediatrix 4102, 4104 or 4108, 4116, and 4124 MGCP Reference Manual
- Mediatrix 4102, 4104 or 4108, 4116, and 4124 MGCP Quick Start
- Mediatrix Unit Manager Network Administration Manual
- All relevant softswitch Manuals

Running the Unit Manager Network (UMN) Software

The Unit Manager Network (UMN) software is a configuration and management tool for Mediatrix devices. The UMN can be downloaded from the Mediatrix Support Portal: <https://support.mediatrix.com/DownloadPlus/Download.asp>. It has a default 3-units limit upon installation. This will suffice for most configurations.

It is recommended that the administrator uses the UMN to configure the Mediatrix devices. Please refer to the UMN Quick Start guide for the installation of the software. Once the UMN software has been installed on your PC¹, proceed with the following steps.

Step 1: Start the UMN

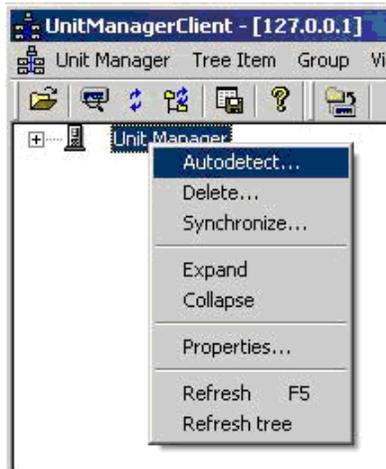
- Select from the *Start Menu > Programs > Unit Manager Network 3.2 > Unit Manager Network*.

Step 2: Login to the UMN

- In the *Administrator* login window (Connect to Unit Manager), a User Name and Password are not required. Click **OK** to proceed.

Step 3: Perform an Autodetect

- On the left pane, right-click the *Unit Manager* level, then select **Autodetect**.

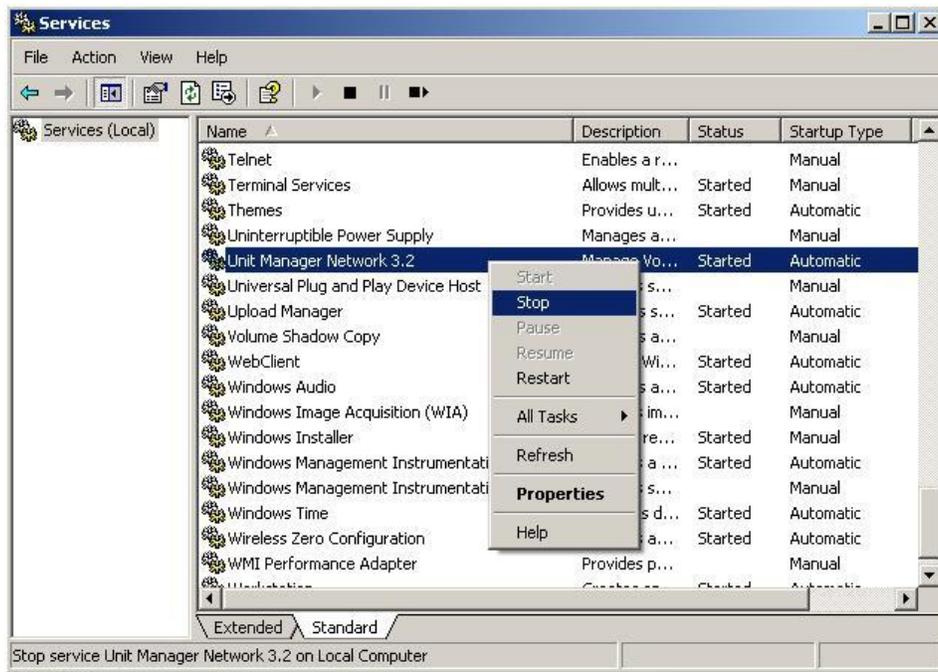


- Set the *IP Address Range* to minimize the time it takes to auto-detect the unit. Click **Start** to begin Mediatrix unit detection. When the unit is detected, the *Result* section lists the unit.
- Select the unit and click **OK**. If no DHCP server is used in your subnet, you must connect one unit at a time since they will start by using the default IP address 192.168.0.1 after a recovery reset. You will have to set a different static IP address when using multiple units. Please see the **Quick Start Guide** for more details on initial setup.

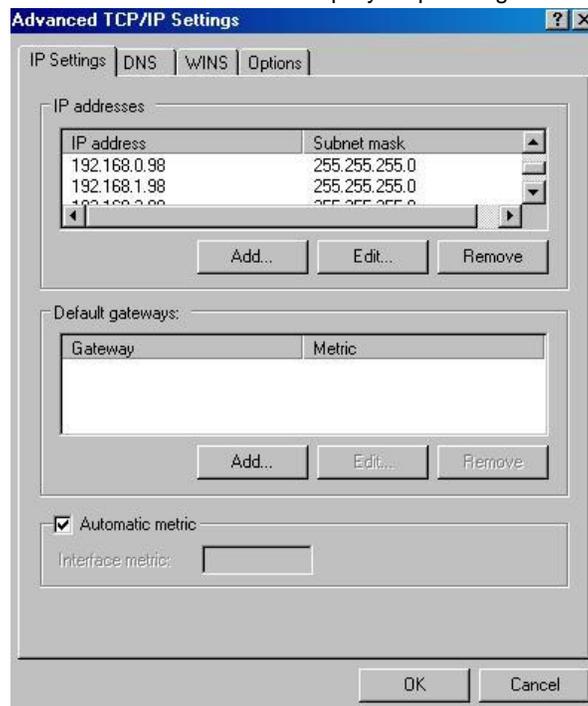
Note: The UMN runs in the Windows background. Mediatrix highly recommends that the administrator stops and restarts the UMN service whenever the IP address of the PC is changed. A restart may be needed depending on your Windows O/S.

- Go to *Start Menu > Settings > Control Panel > Administrative Tools > Services*.
- Stop and restart the **Unit Manager Network 3.2** service.

¹ If you are having trouble opening the UMN application, verify that the status of the "Unit Manager Network 3.2" service is started. See Page 5 to access Windows Services.



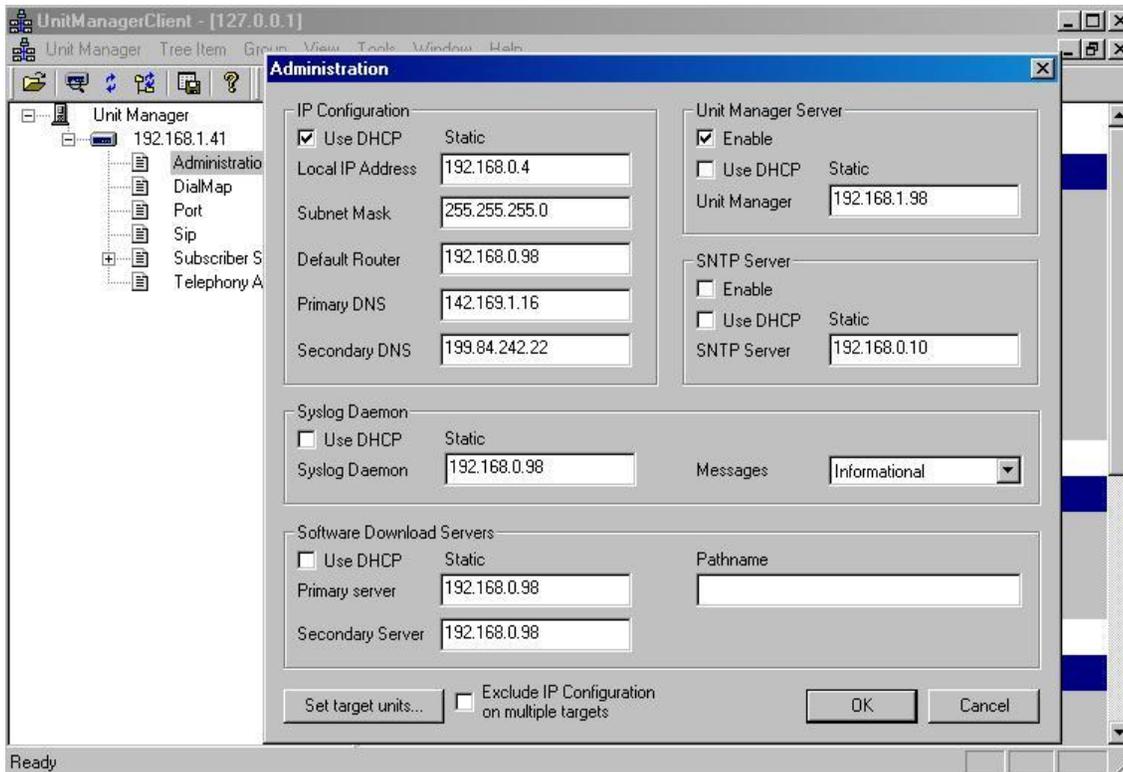
- Alternatively, you can configure multiple IP addresses on the same PC network interface card (only in static IP mode – not DHCP) to avoid restarting the computer or stopping and restarting the UMN service whenever you change the IP address and subnet of the Mediatrix unit. This is recommended for advanced IP network users, the current configuration notes do not cover the step-by-step setting for this alternative.



Configuring Network Parameters

Setting Basic Network Parameters

- Once the Mediatrix unit has been auto-detected, it should appear under the *Unit Manager* level. Right-click the *Administration* level of the Mediatrix unit and select the *Edit* menu.
- Configure the IP addresses to reflect your network. Uncheck **Use DHCP** if you are using static IP addresses. Restart the unit after the configuration of IP addresses for the unit to accept the new addresses.
- When using DHCP: you can also reserve the IP address for the Mediatrix unit by assigning the MAC address of the unit to a specific IP address in your DHCP server – it will be easier to auto-detect the unit for provisioning. An example of a unit IP address fetched by DHCP is shown in the figure below.

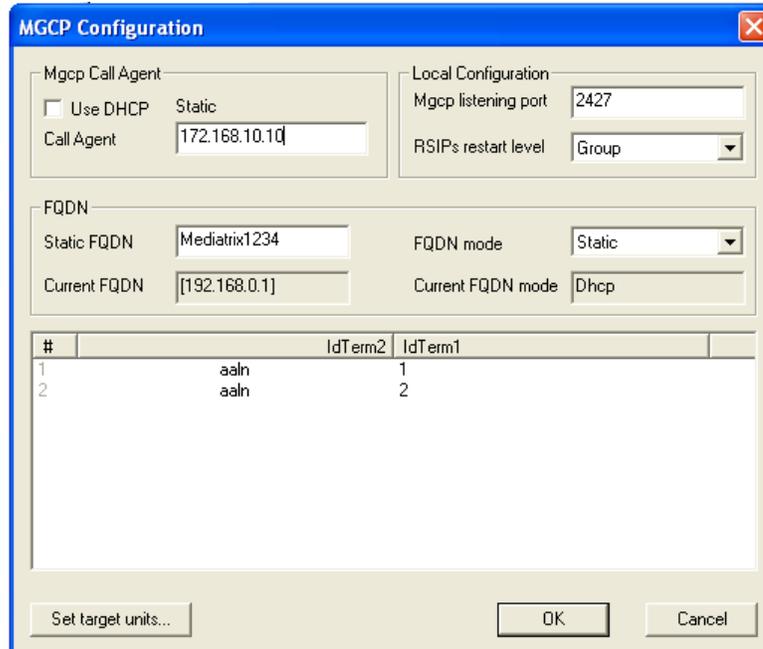


Configuring MGCP Parameters

Step 1: Setting up Call Agent IP Addresses

On the Mediatrix FXS unit, the Call Agent IP addresses can be statically assigned or acquired by DHCP. In this example, the *Use DHCP* option is unchecked, i.e., only static addresses are used. The IP address of your MGCP Call Agent, **172.168.10.10**, is manually assigned in the *Call Agent* section.

- Select the **MGCP** page and set the following:
 - Uncheck **Use DHCP**.
 - Set the *Call Agent* field to your MGCP Call Agent IP address.



Step 2: Setting up the MGCP Local Configuration

In this example, the MGCP listening port is set to **2427**; this is the default value for Mediatrix and should NOT be changed unless your softswitch is using another port number.

The RSIP restart Level is set to **Group** by default and please match it with your soft-witch setting.

Step 3: Define FQDN

The FQDN Mode specifies the method used to obtain the required information (hostname or IP address of the source unit) for Mediatrix unit to use in the MGCP signaling message.

There are four options:

- DHCP: The DHCP server will provide the host name
- DNS: The DNS server will provide the host name
- Static: Will use what is in the static FQDN box
- None: The IP address of the unit inserted within angle brackets is used.

In this example, the **Static** option is used as a FQDN Mode and **Mediatrix1234** is the pre-defined name for this endpoint that will be sending registration message to the softswitch call agent.

Note: The FQDN of all the gateways need to be provisioned in advance. Refer to your softswitch Documentation for more details.

Step 4: Define IdTerm

In this example, the MGCP IdTerm1 and IdTerm2 are configured to the Mediatrix default values. These values should match the values given in the softswitch Signalling Server.

Step 5: Restart the unit

Once the Mediatrix 41xx is in service, you are ready to make voice and fax calls across the VoIP network.

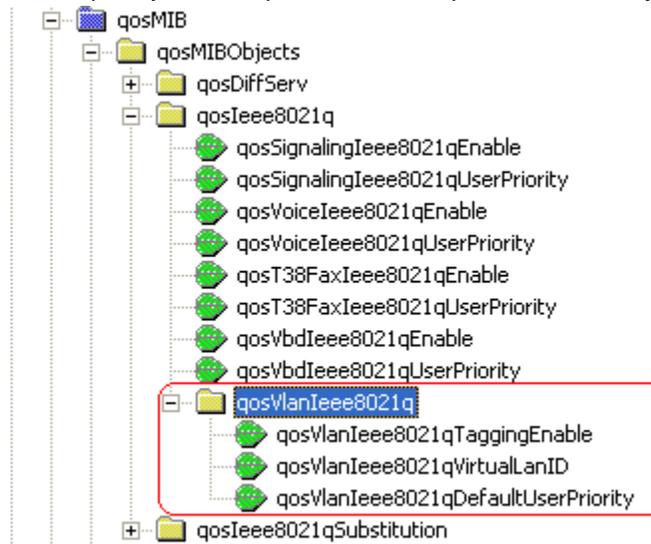
Second Ethernet Port Configuration (Optional)

Step 1: Enabling VLAN Tagging

The Mediatrix units that possess a second Ethernet port can be configured to perform VLAN Tagging for traffic prioritization. The unit can assign a different VLAN tagging to the DATA traffic generated in the LAN port by enabling the VLAN Tagging Substitution capability. This feature is mainly used with IP environments where DATA & VOICE packets receive different treatment across the network according to the VLAN Tagging assigned.

To enable VLAN Tagging for VOICE packets generated in a Mediatrix unit, open the **Edit SNMP...** option by right-clicking the unit in the UMN and set the following:

- Find the folder *qosVlanIeee802q* and set the following:
 - Set the *qosVlanIeee8021qTaggingEnable* variable to **enable**.
 - Set the VLAN Tagging with the *qosVlanIeee8021qVirtualLanID* variable.
 - Set the priority with the *qosVlanIeee8021qDefaultUserPriority* variable.



To enable VLAN Tagging Substitution for DATA packets generated behind the Mediatrix unit, open the **Edit SNMP...** by right-clicking the unit in the UMN and set the following:

- Find the folder *qosVlanIeee8021qSubstitution* and set the following:
 - Set the *qosVlanIeee8021qSubstitutionEnable* variable to **enable**.
 - Set the VLAN Tagging with the *qosVlanIeee8021qSubstitutionVirtualLanID* variable.
 - Set the priority with the *qosVlanIeee8021qDefaultSubstitutionUserPriority* variable.



Step 2: Set Static IP Address for Management at Ethernet Port 2

Once VLAN Tagging is enabled after restarting the unit, the Mediatrix unit is accessible for management with a computer within the VLAN network only. For easy management, the administrator can set a static IP address to the second Ethernet port so provisioning & troubleshooting is still available from a computer connected to this port.

To set a static IP address to the second Ethernet port, in the Mediatrix unit, open the **Edit SNMP...** option by right-clicking the unit in the UMN and set the following:

- Find the folder *qosVlanIeee8021q* and set the following:
 - Set the *lanStaticAddressActivation* variable to **vlanSubstitution**.
 - Set the static IP address in the *lanStaticAddress* variable.
 - Set the Mask Address in the *lanStaticNetworkMask* variable.

References

For more information on the Mediatrix products, visit these links:

- <http://www.media5corp.com>
- <http://www.media5corp.com/downloads>