ADTRAN

NetVanta Unified Communications Technical Note

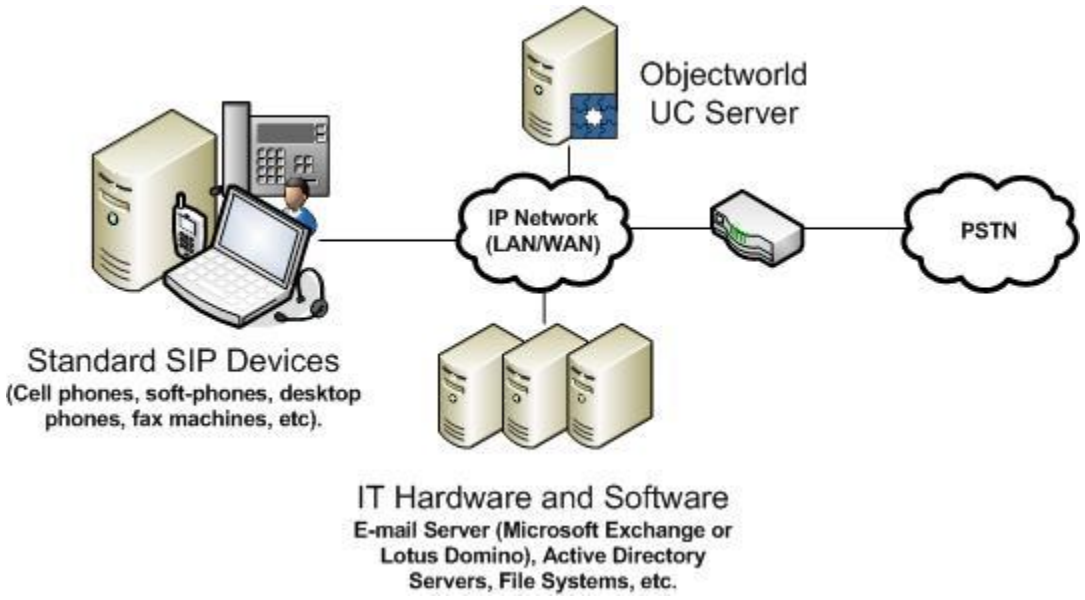
Installing and Configuring Mediatrix 1204

Introduction

The Mediatrix 1204 is a 4-port analog gateway used in UC server installations to provide a gateway between internal session initiation protocol (SIP) phone calls and the public switched telephone network (PSTN). Voice over Internet Protocol (VoIP) signals are converted into traditional analog signals, which are transmitted over the PSTN.

A gateway works in conjunction with a SIP proxy and SIP registrar in the UC server. All telephony services are provided through the mutual cooperation of SIP gateways, SIP telephones, SIP proxy and the Core Application Service.

The following diagram illustrates the NetVanta UC Server SIP architecture and its relationship with other components in a typical customer network.



Supported Features

Feature Name	Supported	Notes
Accept Incoming Calls	X	
Accept Outgoing Calls	X	
Trunk-to-Trunk Connect	X	
Calling Party Name	X	
Calling Party Number	X	
Answer Supervision	X	
Disconnect Detection	X	
DTMF Tone Support (RFC2833 Compliant)	X	
Conferencing with SIP Endpoints	X	
Direct Inward Dialing	X	
System Music on Hold Support	X	
Outgoing Fax Support	TBD	Not tested yet.
Incoming Fax Support	TBD	Not tested yet.
Unified Communication Features Supported by Gateway		
Active Message Delivery	X	
Paging Notification	X	
Transfer—Assisted/Supervised	X	
Transfer—Blind	X	

Interoperability Software Versions

The following gateway version was tested for interoperability:

- **System Description**: Mediatrix 1204 v5.0.9.66 SIP MIB 1.5.3.44 Profile MX-S5001-02-E
- **MIB Version:** 1.5.3.44
- **Hardware Version:** 7
- **Firmware Version:** 5.0.9.66

Overview of Procedure

The Mediatrix 1204 must be connected to the internal local area network (LAN) (a 100 Mbps connection is recommended) and from one to four PSTN analog phone lines.

It is possible to configure the Mediatrix 1204 primarily through its Web interface. However, because of the large number of parameters, ADTRAN provides a configuration file that, with customized modifications, allows for convenient configuration of the gateway.

The basic steps for installation and configuration are:

1. Unpack and mount the Mediatrix 1204 and connect all cables as outlined in the Mediatrix documentation.
2. Set a Dynamic Host Configuration Protocol (DHCP) IP address reservation for the Mediatrix 1204 based on its medium access control (MAC) address.
3. Power up the Mediatrix 1204.
4. Access the Mediatrix 1204 Web interface and enable HTTP configuration file access.
5. Ensure that the Microsoft® Internet Information Services (IIS) is running on the UC server.
6. Modify the NetVanta configuration file and put a copy on the Web root of the HTTP server.
7. Upload the configuration file to the Mediatrix 1204.
8. Configure the UC server to use the Mediatrix 1204.

The rest of this technical note provides the details required for Steps 2 through 8 to configure the Mediatrix 1204 for operation with the UC server.

NOTE: In all cases below, the string <<…>> should be replaced by the value specified, For example, <<IP Address of UC Server>> would be completely replaced by 192.168.1.161.

DHCP Address Reservation

In the standard configuration, the Mediatrix 1204 receives its IP address using DHCP. It is recommended that this not be changed and that a semi-static IP address is reserved using DHCP. Using the gateway's MAC address, located on the bottom of the gateway and on the product packaging, reserve an unallocated IP address for the Mediatrix 1204. The Mediatrix 1204 must have an IP address that does not change for routing calls out from the UC server.

If it is not feasible to use a DHCP reservation, then a static IP address must be set in the Mediatrix 1204. The instructions for this are provided as an alternate method in the configuration file section.

Enabling HTTP Configuration File Access

In a Web browser, enter http://<<IP address of Mediatrix 1204>>. Navigate to **Management > Configuration File**.

Enter the following settings:

Configuration File Server Source:	Static
Configuration File Server Host:	<<IP address of UC Server>>
Configuration File Server Port:	80
Configuration File Transfer Protocol:	HTTP
Configuration File Path:	Mediatrix
Specific Configuration File Name:	%mac%.xml

Submit these changes.

Ensure Microsoft IIS Service is Running

On the UC server, select **Start > Controls > Add or Remove Programs > Add/Remove Windows Components**. Install Internet Information Services (IIS) if it is not already installed.

In the Web root (the default location is C:\Inetpub\wwwroot), create a folder called **Mediatrix**.

Modify NetVanta Configuration File

DHCP Reservation Method

Using the provided configuration file (Mediaxtrix1204.xml), make changes to the configuration parameters. For convenience it is suggested that a search be done for the first line in each section below in order to find the parameter. For example, search for <Object Name="MX-SIP-MIB_sipHomeDomainProxyStaticHost" to change the first parameter.

<Object Name="MX-SIP-MIB_sipHomeDomainProxyStaticHost"
Prefix="1.3.6.1.4.1.4935.15.1.70.10.5" Suffix="0" Value="<<IP address of UC Server>>"/>
<Object Name="MX-SIP-MIB_sipOutboundProxyStaticHost"
Prefix="1.3.6.1.4.1.4935.15.1.70.10.15" Suffix="0" Value="<<IP address of UC Server>>"/>

```
<Object Name="MX-CONFIG-FILE-FETCHING-MIB_configFileFetchingStaticHost"
```

Prefix="1.3.6.1.4.1.4935.15.1.9.100.50" Suffix="0" Value="<<IP address of UC Server>>"/>

Save the file in the Mediatrix folder that was created on the UC server Web root and give it the name <<MAC address of Mediatrix 1204>>.xml.

Upload the Configuration

The configuration file may be uploaded to the Mediatrix 1204 by restarting the gateway. Before the restart, select **Management > Configuration File**, and ensure that **Configuration File Update On Restart** is enabled.

Configure the NetVanta UC Server

After the gateway is added to your network, the UC server must be configured to handle incoming and outgoing phone calls. For outgoing calls, a SIP gateway must be added, along with a dial plan entry to route calls through the gateway and a toll restriction entry to allow those calls. For incoming calls, a call attendant identity must be added that will answer incoming calls from the gateway.

Add a SIP Gateway

To add a new gateway entry:

1. In the **Administration** menu, select **Gateways**.
2. Right-click in the right-hand panel and select **New Gateway**.
3. Select **Next**.
4. Choose the PSTN option
5. Enter the fully qualified domain name (FQDN) or IP address of the gateway for the Host Name and select **Next**.
6. Give the gateway an easily understood name for the unique name.
7. Choose the communication system (usually UC Server).
8. Give the gateway any description you would like and select **Next**.
9. Select **Submit**.

Dial Plan

The dial plan provides specific incoming and outgoing call routing rules. Ensure that you have entries in the dial plan to allow matched set of digits to route through the newly added gateway. The digits to be matched used **Regular Expressions** which is a sophisticated method of describing search patterns. Consult the *NetVanta Unified Communications Server Administrator Guide*, available online at *http://kb.adtran.com*, for the correct usage of regular expressions to match your company's dialing patterns. It will be explained in detail in the *Managing PBX Configuration Categories* section.

Here is an example of the default configurations for accessing this PSTN gateway from a SIP telephone.

Host	Digits	Priority	Digits to Skip	Prefix to Add	Suffix to Add	Description	Forwarding Interval
pstngateway1	[0-9]{7,}	20	0			PSTN Calls	
Pstngateway1	9[0-9]{7,}	20	1			PSTN Calls	

Toll Restrictions

Configure the toll restrictions to match the requirements of your organization. Consult the *NetVanta Unified Communications Server Administrator Guide*, available online at *http://kb.adtran.com*, for the correct usage of regular expressions in the toll restrictions to enforce corporate dialing policy. It will be explained in detail in the *Managing PBX Configuration Categories > Routing—Toll Restrictions* section.

UC Server Identity

To create an identity:

1. In the UC client, right-click anywhere in the **Identities** content pane.
2. Select **New > Next > Attendant**.

   Name: As desired.

   Address: 10000

   Run Service: Default Trunk Service

3. Finish the creation of the Attendant Identity.

Note that the default configuration for the gateway is to route all calls incoming from the PSTN to 10000 on the UC server. The above operation creates an identity that will answer the call. Many other options are possible such as having individual PSTN trunk routed to a different identity including a telephone. These options are not part of the scope of this document and should be discussed with ADTRAN Technical Support.