

AudioCodes MP-104 Installation & Configuration

TNo21

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1 Introduction

The AudioCodes MP-104 is a 4 port analog gateway which may be used in UC Server installations to provide a gateway between internal (SIP) phone calls and the outside phone network (PSTN). Voice communications from an internal phone have their Local Area Network (LAN) voice over IP (VOIP) signals converted into traditional analog voice which are transmitted over the PSTN.

1.1 Overview of Procedure

To provide its functionality the MP-104 must be connected to the internal LAN (a 100 Mbps connection is recommended) and from 1 to 4 PSTN analog phone lines.

The basic steps for installation and configuration are:

1. Unpack the MP-104.
2. Mount the MP-104.
3. Connect cables.
4. Correlate a PC and the MP-104 IP initial IP addresses and subnet mask
5. Access the MP-104 web page and set the IP address and subnet mask for the MP-104.
6. Restore PC IP address & subnet mask to normal values.
7. Configure the MP-104.

Steps 1-4 are standard for any MP-104. Please follow the instructions provided by AudioCodes in "LTRT-61402 MP-1xx Fast Track Installation Guide Ver 4.21.pdf" for these steps. Step 6 is dependent on the PC and Operating System and will not be covered here.

The rest of this document details Steps 4 and 7 to configure the MP-104 for operation with UC Server.

2 Configuration

There are a large number of configuration parameters (but not all) that may be set using the web page interface for the MP-104. The recommended (and easier) approach is to download files to the unit. These files are provided by AudioCodes with one replacement file provided by Objectworld Communications Corp. to configure the gateway for UC Server. These pages are downloaded to the unit from the web page as described in subsequent sections.

2.1 Correlate PC and MP-104 IP Addresses and Subnet Mask

In general the procedure outlined in Section 3.1 of "LTRT-61402 MP-1xx Fast Track Installation Guide Ver 4.21.pdf" should be followed.

The default user name and password for the MP-104 is admin/admin. The IP address and subnet mask of the MP-104 must be set so that it is compatible with the LAN at the installation site. The MP-104 must be allocated an IP address that does not change. The above step will assign it a static IP address. An alternate method is to use a pseudo static IP address by enabling DHCP on the MP-104 and mapping the MAC address of the gateway to an IP address within the DHCP server.

2.2 .INI File

The file MP-104UCServer.ini provided by Objectworld is a template to be used for configuration. The first stage is to modify key fields in the file specific to your installation and then download it to the gateway unit.

2.2.1 Field Modification

Use any text editor to modify the fields given below in the .INI file and save the new file on a computer. For reference Appendix A is a listing of the template .INI file.

[SYSTEM Params]

SyslogServerIP: may be left unmodified unless a syslog server is required for debug messages.

EnableSyslog: 0 if there is no intention of using the syslog function.

NTPServerIP: address of time server.

NTPServerUTCOffset: offset from GMT in seconds. -18000 is EST.

[SIP Params]

PROXYNAME: the domain name of the UC Server. If you do not have one leave it blank as long as the IP address is given.

REGISTRARIP: the IP address of UC Server

SIPGATEWAYNAME: may be left as is unless there is more than one AudioCodes gateway in which case something like audiocodes2, etc. is suggested.

PREFIX: IP address of UC Server.

PROXYIP: the IP address of UC Server

2.2.2 INI Download

On the web page navigate to the Advanced Configuration -> Configuration File page.



In the "Send the ini file from your computer to the device" box Browse to the file you modified in the Field Modification section. Now "Send ini File".

2.3 Save Configuration

Navigate to Save Configuration and Save the Configuration to Flash Memory. Now Reset the MP-104.

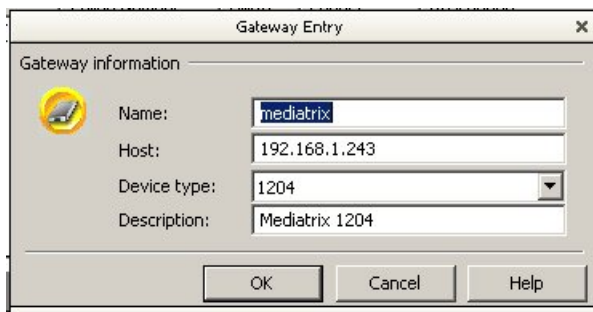
3 Configure UC Server

Once the gateway has been added to your network the UC Server must be configured to handle incoming and outgoing phone calls.

3.1 Add a SIP Gateway

To add a new gateway entry

1. In the Administration view, double-click Communication Systems to open the PBX options.
2. Double-click the PBX to which you want to add a new gateway entry.
3. Click Routing.
4. Right-click anywhere in the gateways content pane.
5. Select Add...
6. Type the information that you want in any of the following boxes:
 - Name – A friendly name for the gateway
 - Host – The host is the IP of the gateway
 - Device type – Specify Other
 - Description – A friendly description that allows you to manage the gateway effectively.
7. Click OK.



3.2 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 UC Server Administration manual for the correct usage of regular expressions to match your companies dialing patterns. It will be explained in detail in the "Managing PBX Configuration Categories" section of the manual.

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 | |

3.2.1 Toll Restrictions

Configure the toll restrictions to match the requirements of your organization. Consult the UC Server Administration manual 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 of the UC Server Administration manual.

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| Calling Number | Called Number | Priority | Allow | Description |
|----------------|--------------------|----------|-------|---|
| .* | 011.*@.* 9011.*@.* | 50 | 0 | Restrict International Calls |
| 1000 1001 | 011.*@.* 9011.*@.* | 40 | 1 | Allow Extension 1000 and 1001 international dialing |

4 Appendix A - MP-104UCServer.ini Contents

```
;*****
```

```
;** Ini File **
```

```
;*****
```

```
;Board: MP-104 FXO
```

```
;Serial Number: 540002
```

```
;Slot Number: 1
```

```
;Software Version: 4.60A.016.003
```

```
;Board IP Address: 192.168.1.75
```

```
;Board Subnet Mask: 255.255.255.0
```

```
;Board Default Gateway: 192.168.1.1
```

```
;Ram size: 16M Flash size: 4M
```

```
;Num DSPs: 1 Num DSP channels: 4
```

```
;Profile: NONE
```

```
;-----
```

```
[SYSTEM Params]
```

```
DisableSNMP = 1
```

```
SNMPTrapManagerHostName = '192.168.1.249'
```

```
SyslogServerIP = 192.168.1.249
```

```
NTPServerIP = 192.168.1.1
```

```
NTPServerUTCOffset = -18000
```

```
[BSP Params]
```

```
LocalOAMIPAddress = 192.168.1.75
```

```
[ATM Params]
```

[Analog Params]

FXOLoopCharacteristicsFilename = 'MP1xx12-1-16khz-fxo.dat'

CallProgressTonesFilename = 'usa_tones_11.dat'

FlashHookPeriod = 700

[ControlProtocols Params]

MGCPDTMFDetectionPoint = 0

[MGCP Params]

[MEGACO Params]

[SS7 Params]

[Voice Engine Params]

VoiceVolume = 1

InputGain = 1

BrokenConnectionEventTimeout = 12000

CNGDetectorMode = 1

EnableAnswerDetector = 1

AnswerDetectorRedirection = 1

[WEB Params]

LogoWidth = '339'

[SIP Params]

ENABLECALLERID = 1

MAXDIGITS = 13

REGISTRATIONTIME = 3600
ISPROXYUSED = 1
ISTWOSTAGEDIAL = 0
ENABLECURRENTDISCONNECT = 1
ENABLEREVERSALPOLARITY = 1
ENABLEHOLD = 1
ENABLEFORWARD = 1
GWDEBUGLEVEL = 5
ENABLEEARLYMEDIA = 1
PROXYNAME = '<<Proxy Domain Name>>'
REGISTRARIP = '<<IP Address of UC Server>>'
SIPGATEWAYNAME = 'audiocodes'
USERNAME = 'User1'
CNONCE = '0a123bcf'
PASSWORD = '787899'
ENABLEVOICEDETECTION = 1
RXDTMFOPTION = 0
ALWAYSSENDTOPROXY = 1
PRACKMODE = 0
SENDINVITETOPROXY = 1
ISFAXUSED = 1
ENABLETRANSFER = 1
CODERNAME = g711Ulaw64k,20
CODERNAME = g729,20
CODERNAME = g729_AnnexB,20
CODERNAME = g7231,30
CODERNAME_1 = g711Ulaw64k,20
CODERNAME_1 = g729,20
CODERNAME_1 = g729_AnnexB,20
CODERNAME_1 = g7231,30
PREFIX = *,<<UC Server IP Address>>*,*,0
PSTNPREFIX = *,1,*,*,1
TARGETOFCHANNEL0 = 10000,1
TARGETOFCHANNEL1 = 10000,1
TARGETOFCHANNEL2 = 10000,1

TARGETOFCHANNEL3 = 10000,1

TRUNKGROUP_1 = 1-4,1000,0

PROXYIP = 192.168.1.161

TRUNKGROUPSETTINGS = 1,5

TXDTMFOPTION = 4

TELPROFILE_1 = Default Tel Profile,1,1,0,70,7,0,0,-11,4,0,1,1,0,1

IPPROFILE_1 = Default Ip Profile,1,1,1,70,7,0,0,0,0,0

[VXML Params]

[Audio Staging Params]

[PSTN-SDH Params]