

# APPLICATION NOTES

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## CONFIGURING THE MAX<sup>®</sup> IP WITH CISCO<sup>®</sup> CALL MANAGER

### Purpose

This application note defines the required configuration parameters for configuring the MAX IP to register with a Cisco Call Manager. It is intended to provide guidelines for identifying the necessary information needed to correctly configure a MAX IP to register and operate on the Cisco Call Manager. The examples used in this document are from Cisco Call Manager 8.6 and MAX IP version 4.0.10.0.

### Cisco Call Manager Setup

Create a Third Party SIP Device (Basic) endpoint for the MAX IP with an assigned User and Extension in Cisco Call Manager (CCM). Ensure the User has Digest Credentials set. If needed refer to Cisco documentation on how to set up this type of extension. Cisco has a very helpful checklist here:

[http://www.cisco.com/en/US/docs/voice\\_ip\\_comm/cucm/admin/5\\_0\\_1/ccmcf/b09sip3p.html](http://www.cisco.com/en/US/docs/voice_ip_comm/cucm/admin/5_0_1/ccmcf/b09sip3p.html)

### MAX IP SIP Settings Using MAX IP CCM Information

There are three pieces of user information you used in the Cisco SIP endpoint configuration to setup the MAX IP that will also be entered into the MAX IP SIP Settings to register it to the CCM. This information is created in the CCM End User Configuration screen.

1. User ID and Digest Credentials as entered in the User Information Section. (See Figure 1)
2. Extension number as entered in the Directory Number Association Section. (See Figure 2)
3. Proxy IP address or Fully Qualified Domain Name (FQDN). (Typically this is the address used to log in to the Cisco Call Manager).

**User Information**

NOTE: The add and delete function are disabled because the user directory is sync with LDAP.  
(i.e. The Enable Synchronization From LDAP Server flag on the LDAP System Configuration is checked).

LDAP Sync Status	Active	
User ID*	maxip	
Password	.....	<b>Edit Credential</b>
Confirm Password	.....	
PIN	.....	<b>Edit Credential</b>
Confirm PIN	.....	
Last name*	IP	
Middle name		
First name	Max	
Telephone Number		
Mail ID		
Manager User ID		
Department		
User Locale	English, United States	
Associated PC		
Digest Credentials	.....	
Confirm Digest Credentials	.....	

**Figure 1. User ID and Digest Credentials**

**Directory Number Associations**

Primary Extension 1017 in Everyone

**Figure 2. Directory Number Associations**

Using a web browser, log into the **MAX IP Web Portal**. For information on how to access the web portal, consult the MAX IP Administration Guide at:

[http://www.clearone.com/resources#unified\\_communications](http://www.clearone.com/resources#unified_communications)

In the **MAX IP SIP Settings** page (See Figure 3):

1. Enter the **Phone Number** in the dialog box using the Primary Extension from the CCM configuration.  
Phone Number = Primary Extension from CCM
2. Enter the **Authorization User** and **Authorization Password** in the SIP Credentials dialog boxes using the User ID and Digest Credentials from the CCM configuration.  
Authorization User = User ID from CCM  
Authorization Password = Digest Credentials from CCM
3. Set the **SIP Proxy** type to Cisco and enter the **Proxy server IP address/FQDN** of the Cisco Call Manager into the SIP Proxy and **Outbound Proxy** dialog boxes.

MAX IP WebPortal

- General Settings
- User Preferences
- Dial Plan
- Network Settings
- SIP Settings**
- Audio Settings
- Trace/Logging Settings

### SIP Settings

Phone number:

Phone name:

Registration timeout:

SIP Proxy Type

Cisco Proxy

Generic Proxy

Select Primary Proxy

Enable SIP Proxy registration

Proxy server IP address/FQDN:

Proxy port:

SIP Credentials

Authorization user:

Authorization password:

Enable Outbound proxy

Outbound proxy server IP address/URL:

Outbound proxy port:

SIP Transport:

UDP Listen port:

TCP Listen port:

Enable TLS

TLS port:

Private Key:

Local Cert:

CA Cert:

Figure 3. SIP Settings

In the **Dial Plan** page, confirm that extension dialing is set correctly for the extension length setup in the Call Manager. If the extension length in Call Manager is “4” then setting **Rule 3** in the dial plan to +& and Auto dial after 4 will dial any 4 digit extension entered (See Figure 4). Select “OK” to confirm changes

MAX IP WebPortal

- General Settings
- User Preferences
- Dial Plan**
- Network Settings
- SIP Settings
- Audio Settings
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### Dial Plan

Load From File

File location:

Manual Configuration

<input checked="" type="checkbox"/> Rule 1	Starts with	<input type="text" value="911"/>	Auto dials after	<input type="text" value="3"/>	digits
<input checked="" type="checkbox"/> Rule 2	Starts with	<input type="text" value="0"/>	Auto dials after	<input type="text" value="1"/>	digits
<input checked="" type="checkbox"/> Rule 3	Starts with	<input type="text" value="+&amp;"/>	Auto dials after	<input type="text" value="4"/>	digits
<input type="checkbox"/> Rule 4	Starts with	<input type="text"/>	Auto dials after	<input type="text"/>	digits
<input type="checkbox"/> Rule 5	Starts with	<input type="text"/>	Auto dials after	<input type="text"/>	digits

Timeout  sec (3sec - 30sec)

Figure 4. Dial Plan Settings

## VoIP Worksheet

The ClearOne VoIP/SIP Network Settings Worksheet can be downloaded from here:

[http://www.clearone.com/uploads/resource/voip\\_worksheet.pdf](http://www.clearone.com/uploads/resource/voip_worksheet.pdf)

Have the IT representative that will be provisioning the SIP extension fill out the Basic Settings section. The necessary elements are: Phone number, Authorization user/password and Proxy/Outbound Proxy IP or FQDN. A completed form would be similar to this:

<b>Phone Number/Extension</b>	1017
<b>Authorization User</b>	maxip
<b>Authorization Password</b>	ClearOne
<b>Proxy IP Address/FDQN</b>	192.168.1.12
<b>Outbound Proxy IP/FDQN</b>	192.168.1.12

Port numbers and SIP Transport can usually be left as default. The MAX IP will automatically insert the Proxy address into the dial plan.

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