

HDX CUCM Security Setup

Phone Security Profile Information	
Product Type:	Third-party SIP Device (Advanced)
Device Protocol:	SIP
Name*	<input type="text" value="HDX Secure Profile"/>
Description	<input type="text" value="Digest Authentication for HDX"/>
Nonce Validity Time*	<input type="text" value="600"/>
Transport Type*	<input type="text" value="TCP+UDP"/>
<input checked="" type="checkbox"/> Enable Digest Authentication	
Parameters used in Phone	
SIP Phone Port*	<input type="text" value="5060"/>

- A phone security profile must be added for “Third-Party SIP Device (Advanced)”
- Digest Authentication must be checked
- Without this security setting phone only uses end user name and no password to access CUCM

HDX and CUCM Regions

Region Relationships		
Region	Audio Codec	Video Call Bandwidth
DP-Video-1	G.722	384
DP-Video-2	G.711	384
NOTE: Regions(s) not displayed	Use System Default	Use System Default

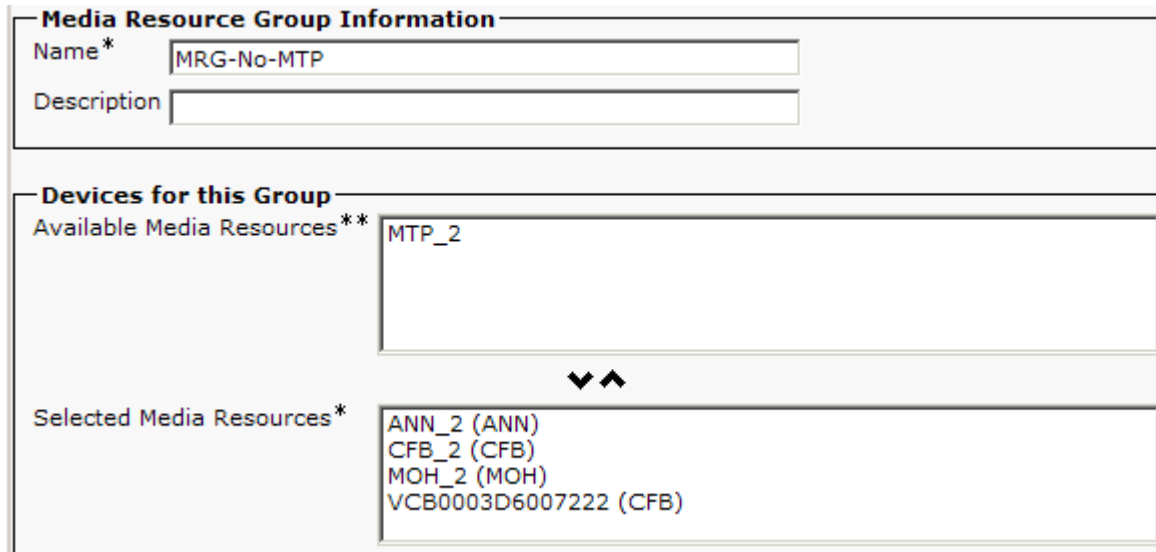
- Region settings in CUCM should be set to allow a minimum of 256k of video bandwidth (should match HDX maximum call rate)
- Recommend use of G.722 audio codec for best audio experience
- Most newer Cisco phones support G.722, older ones will connect at G.711 only (VVX supports both)

HDX and CUCM Locations

Location Information						
Name*	<input type="text" value="Loc-Video-1"/>					
Audio Calls Information						
Audio Bandwidth*	<input type="radio"/> Unlimited <input checked="" type="radio"/> <input type="text" value="1024"/> kbps					
If the audio quality is poor or choppy, lower the bandwidth setting. For ISDN, use multiples of 56 kbps or 64 kbps.						
Video Calls Information						
Video Bandwidth*	<input type="radio"/> None <input type="radio"/> Unlimited <input checked="" type="radio"/> <input type="text" value="1024"/> kbps					
Location RSVP Settings						
<table border="1"><thead><tr><th>Location</th></tr></thead><tbody><tr><td>Loc-Video-1</td></tr><tr><td>NOTE: Location(s) not displayed</td></tr></tbody></table>	Location	Loc-Video-1	NOTE: Location(s) not displayed	<table border="1"><tbody><tr><td>No Reservation</td></tr><tr><td>Use System Default</td></tr></tbody></table>	No Reservation	Use System Default
Location						
Loc-Video-1						
NOTE: Location(s) not displayed						
No Reservation						
Use System Default						

- Locations must support an appropriate amount of audio and video bandwidth
- CUCM will force call to audio only if no video bandwidth is available for a given call

HDX and CUCM Media Resources



The screenshot shows the 'Media Resource Group Information' configuration page in Cisco Unified Communications Manager. It includes fields for 'Name*' (MRG-No-MTP) and 'Description'. Below, the 'Devices for this Group' section shows 'Available Media Resources**' with 'MTP_2' and 'Selected Media Resources*' with a list of resources: 'ANN_2 (ANN)', 'CFB_2 (CFB)', 'MOH_2 (MOH)', and 'VCB0003D6007222 (CFB)'. Up and down arrow icons are positioned between the two lists.

Media Resource Group Information	
Name*	MRG-No-MTP
Description	

Devices for this Group	
Available Media Resources**	MTP_2
▼ ▲	
Selected Media Resources*	ANN_2 (ANN) CFB_2 (CFB) MOH_2 (MOH) VCB0003D6007222 (CFB)

- Due to the way CUCM handles DTMF (out-of-band) the media resource group list assigned to the phone must NOT contain any MTP resources
- MTP resources are typically used in calls across trunks (H.323, SIP)
- Symptom of an MTP being used for an HDX to HDX call is G.711 only audio and no video
- Verified by using Cisco VLT (MTP shows up as part of the call)

HDX CUCM End User Setup

Status
i Status: Ready

User Information

User ID*	vvx1
Password
Confirm Password
PIN
Confirm PIN
Last name*	VVX1
Middle name	
First name	
Telephone Number	
Mail ID	
Manager User ID	
Department	
User Locale	< None >
Associated PC	
Digest Credentials
Confirm Digest Credentials

- An End User must be created in CUCM for each device
- HDX uses “Digest Credentials” as part of authentication
- No device association is required
- HDX cannot be controlled via Cisco JTAPI or Cisco CSTA at this time

HDX CUCM Device Setup

Phone Type	
Product Type: Third-party SIP Device (Advanced)	
Device Protocol: SIP	
Device Information	
Registration	Registered with Cisco Unified Communications Manager :
IP Address	10.232.253.198
MAC Address*	00E0DB0A1AE8
Description	HDX 4000 SIP
Device Pool*	DP-Video-1
Common Device Configuration	< None >
Phone Button Template*	Third-party SIP Device (Advanced)
Common Phone Profile*	Standard Common Phone Profile
Calling Search Space	Full-Access
AAR Calling Search Space	< None >
Media Resource Group List	< None >
Location*	Loc-Video-1
AAR Group	< None >
Device Mobility Mode*	Default
Owner User ID	< None >
Use Trusted Relay Point*	Default
Calling Party Transformation CSS	< None >

MAC Address for tracking only, phone does not register using MAC

Select proper location that contains video bandwidth

- Remember to select CSS and all other location appropriate settings

HDX CUCM Device Setup (cont'd)

Protocol Specific Information

Presence Group*	Standard Presence group
MTP Preferred Originating Codec*	711ulaw
Device Security Profile*	HDX Secure Profile
Rerouting Calling Search Space	< None >
SUBSCRIBE Calling Search Space	Full-Access
SIP Profile*	Standard SIP Profile
Digest User	hdx4000

☐ Media Termination Point Required
☐ Unattended Port
☐ Require DTMF Reception

Select phone security profile with digest authentication

Select end user created for phone

- Each End User ID created can be used for only **one** phone (CUCM limitation)
- Use of End User ID on more than one device will break phone registration

HDX SIP Setup for CUCM

SIP Settings

Enable SIP:	<input checked="" type="checkbox"/>
Transport Protocol:	UDP
Authentication Name:	hdx4000
User Name:	2031@10.232.253.239
Change Password	<input type="checkbox"/>
Registrar Server:	10.232.253.239
Proxy Server:	10.232.253.239

- ▶ “Authentication Name” matches “Digest User” field on CUCM device page
- ▶ “User Name” is “extension@CUCM IP Address”
- ▶ Password must match “Digest Credential” field in CUCM End User
- ▶ Registrar and Proxy server fields must point to same CUCM IP Address
- ▶ No CUCM Fault Tolerance supported at this time