Using CyberData Devices with a Grandstream UCM6102 IP PBX

This is a sample of CyberData products, please visit cyberdata.net for a complete list.

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Configuration Procedure: Extension Creation

This section walks through creating the extension for CyberData Devices and the various settings that can be applied to the extensions.

Logging into the PBX

The UCM6102 features an LCD screen on the front of the device, this screen is used for notifications but when idle shows the IP address of the device. Please navigate to the IP address displayed on the screen, login to the device using the factory default login username and password: admin and admin.

PBX Settings

There are a couple settings on the PBX that need to be changed to ensure proper operation of CyberData Devices. Both settings are on the Type of Service (ToS) page, In-Band Ringing and DTMF Mode. To reach these settings first please navigate to the PBX tab. From the PBX tab please select SIP settings menu and finally ToS from the sub menu.

<p align="center">PBX → SIP Settings → ToS</p>

Generate In-Band Ringing: Please set this to No or Never. This setting uses early media for ringing on devices and this can cause issues with CyberData Devices.

DTMF Mode: Please set this to RFC2833. CyberData Devices transmit DTMF using RFC 2833.

Creating the Extension(s)

Now that the PBX is configured to work with CyberData Devices; let us now create extensions to be used by CyberData Devices. Depending on the amount of extensions desired there are multiple ways to create them, Single Extension, Bulk Extensions or Import via CSV. For this guide, we are going to walk through Bulk Extensions. Please select Batch Add SIP Extensions from the dropdown menu. This will result in a pop-up window with the various options.
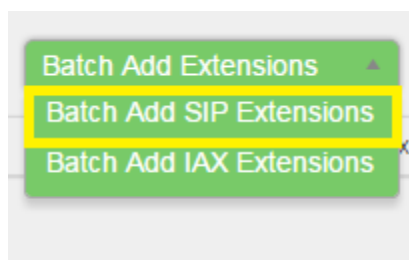
Configuring the Extension(s)

The first important field, **Start Extension** is the first extension created, in this example we are using 1000. **Create Number** determines the number of extensions that are created. Now that we have determined the number of extensions to be created we must determine the **Permission** of the newly created extensions. For this example, we are using internal; this allows for calls only inside the network.

> *Note* Please take care in determining the permission level of the extensions. Setting too high of a permission could result in toll fraud.

Enable Voicemail is enabled by default and can be disabled if desired, this is dependent on the use case. Typically, CyberData encourages the user to disable Voicemail for our devices as they do not require them, under normal circumstances. Dependent on the network infrastructure it may be beneficial to enable **Can Direct Media** this setting allows the device to send all media (Voice or Video traffic) directly to the endpoint. This will help reduce network traffic as the PBX will not be relaying the traffic between calling parties.

Please confirm that **DTMF Mode** is set to RFC 2833, we set this as default for the PBX so it should have propagated through to extensions.

Figure 1 Extension Settings Popup

Start Extension   Create Number   Permission   Enable Voicemail   Can Direct Media   DTMF Mode

There are two more settings that are recommended to be changed. **Strategy** should be set **to Local Subnet Only**, to help further prevent toll fraud. If a remote user is being setup, use the setting: **A Specific IP Address** this will let the remote user register, but prevent non-authorized users from registering and making calls

Note Leaving Strategy set to the default value of Allow All could result in toll fraud and other related SIP based network attacks.

Finally, we must determine which codecs are available. CyberData Devices use PCMU, PCMA and G.722 to transmit audio in that order.

Note If you are using a CyberData Video Intercom or CyberData Video Intercom with Keypad, please include **h.264** in the Selected Codecs.

Figure 2 Bottom Half of Settings Pop-up

Strategy   Codec Preference

Once you have finished selecting the desired settings please press Create Users. There will then be a conformation popup, please press OK to create the extensions.

Figure 3 Create Extensions Conformation Pop-up

Now that the extensions have been created we can now begin registering CyberData Devices with the UCM 6102.
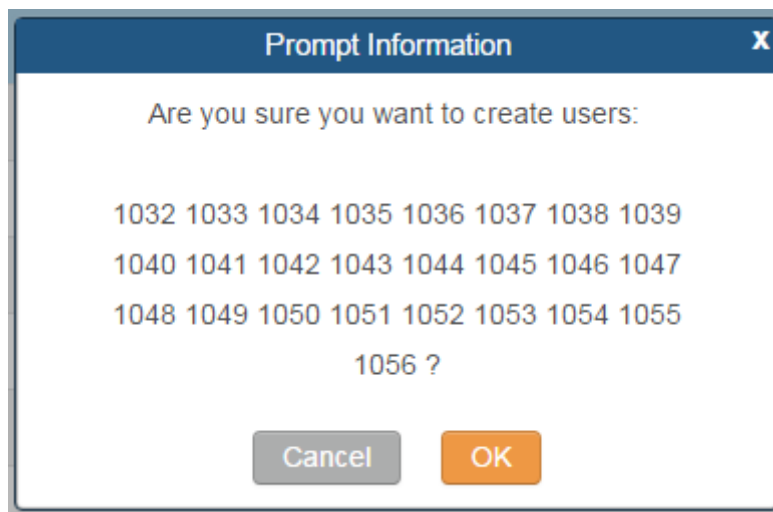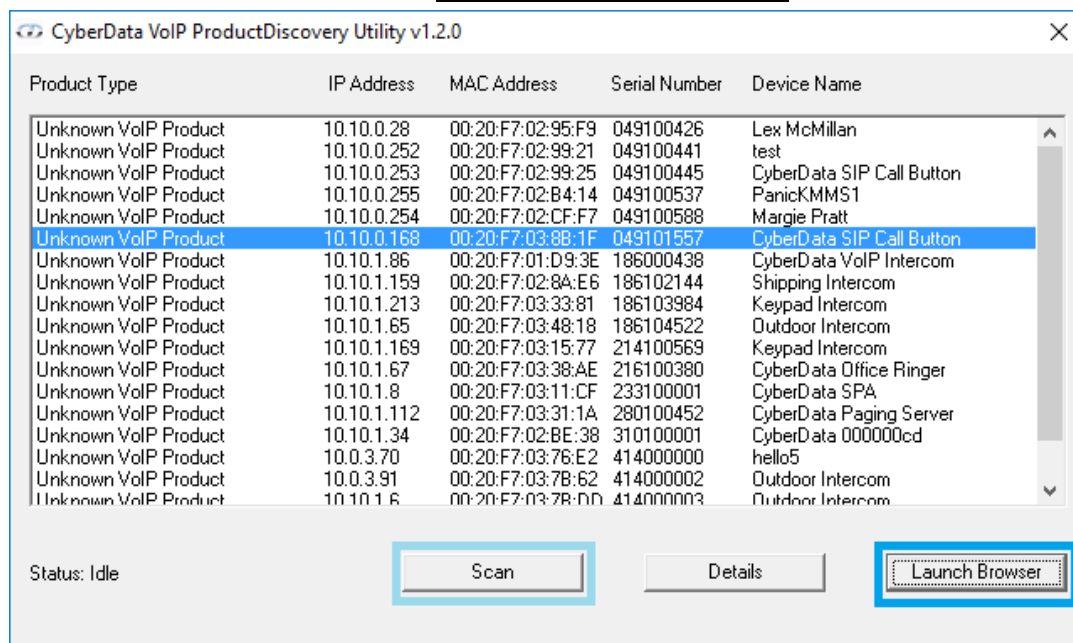

Configuring your CyberData Devices

Logging into the device

Figure 4 VoIP Discovery Utility

CyberData devices can be configured in many ways but this guide is going to focus on configuration by hand through the web interface of the device. The easiest way to discover CyberData devices on your network is to use our free VoIP discovery utility. Please see the Additional Resources section for a link to the download page.

The tool does not require installation and can simply be run after downloading. Please press the scan button to begin detection. This process typically takes about 5-10 seconds but can take upwards of 30 seconds depending on network conjestion and the ammount of devices. Once the tool has finished running it will be populated with the various different CyberData devices that are on your network. Simply select the device you want to configure from the menu and press Launch Browser.

CyberData uses default login information which is **admin** for both username and password.

Note CyberData recommends to change the default password once you have logged into your devices as using the default login informaton could leave your devices up for attack by outside users.

SIP Settings

Please navigate to the SIP tab by pressing the SIP menu bar.

SIP Operation and **Register with a SIP Server** are enabled by default.

Set the IP address of the UCM 6102 as the **Primary SIP server.**

Note It is also possible to use a Fully Qualified Domain Name (FQDN) in place of an IP Address.

Set the **Primary SIP user ID** as the desired extension.

Unless changed in the initial setup of the extension **Primary SIP Auth. ID** should also be the extension number.

Finally fill the **password** with the password generated by the PBX.

Note The Grandstream UCM 6102 requires each extension to have a password and it is recommended to use the random password generation to be secure as possible.

Please save and reboot your device to confirm that it has now registered with the PBX.

If your device has registered, it will show Registered in green next to Primary SIP Server on the home page of the device.

Figure 6 Registration Status

Figure 5 SIP Settings

SIP Settings	
Enable SIP operation:	✔
Register with a SIP Server:	✔
Use Cisco SRST:	☐
Primary SIP Server:	10.10.0.171
Primary SIP User ID:	1000
Primary SIP Auth ID:	1000
Primary SIP Auth Password:	•••••••
Backup SIP Server 1:	
Backup SIP User ID 1:	
Backup SIP Auth ID 1:	
Backup SIP Auth Password 1:	
Backup SIP Server 2:	
Backup SIP User ID 2:	
Backup SIP Auth ID 2:	
Backup SIP Auth Password 2:	
Remote SIP Port:	5060
Local SIP Port:	5060
Outbound Proxy:	
Outbound Proxy Port:	0
Disable rport Discovery:	☐
Re-registration Interval (in seconds):	360
Unregister on Boot:	☐
Keep Alive Period:	10000

Primary SIP Server: **Registered**
Backup Server 1: **Not registered**
Backup Server 2: Not registered
Nightringer Server: **Registered**

Contact CyberData Corporation

Technical Support

The fastest way to get technical support for your VoIP product is to submit a VoIP Technical Support form at the following website:

http://support.cyberdata.net/

Phone: (831) 373-2601, Ext. 333

Email: support@cyberdata.net

Fax: (831) 373-4193

Company and product information is at www.cyberdata.net

Additional Resources

CyberData VoIP Discovery Utility

http://www.cyberdata.net/assets/common/discovery.zip

CyberData VoIP Products

http://www.cyberdata.net/voip-category/sip/

Grandstream UCM 6100 Series Guides

http://www.grandstream.com/support/resources/?title=UCM6100%20series

Grandstream UCM 6102 Firmware

http://www.grandstream.com/support/firmware