

## APPLICATION NOTES

**PRODUCTS SUPPORTED:**  
ClearOne CONVERGE® Pro VH20,  
Microsoft® Lync® Server, ASTERISK® PBX

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### INTEGRATING THE CLEARONE CONVERGE PRO VH20 TO MICROSOFT LYNC SERVER USING AN ASTERISK PBX

#### Overview

This application note provides a basic guide to explain how to configure and integrate the CONVERGE Pro VH20 to dial SIP calls via Asterisk PBX to endpoints registered to a Microsoft Lync server.

#### Preparation

To be able to integrate and use the CONVERGE Pro VH20 with a Microsoft Lync server, an Asterisk SIP server must first be deployed and configured as a SIP trunk to the Lync Mediation server. The Asterisk server is required because the VH20 cannot register to the Lync server directly, due to proprietary SIP signaling used by the Lync system.

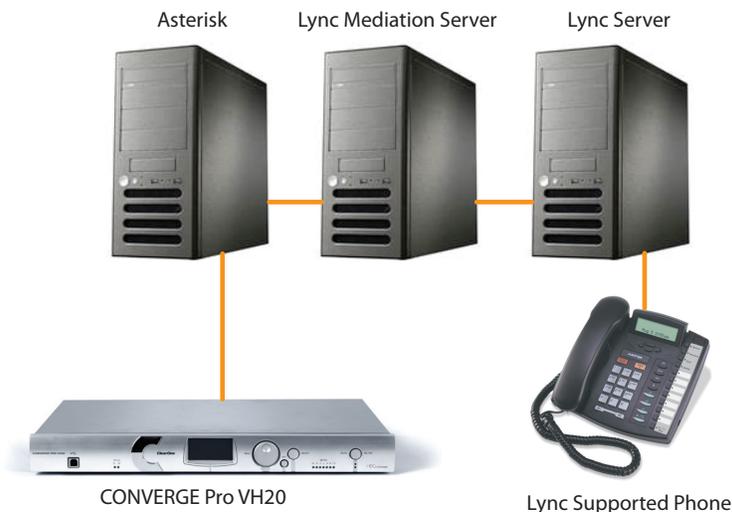
Download Chapter 11 of the Microsoft Lync Server Resource Kit and follow the instructions for installing and configuring an Asterisk server to act as a trunk to the Microsoft Lync server:

[http://download.microsoft.com/download/9/4/E/94ED1EF4-A2EF-4686-9841-B0390072D524/Chapter\\_11\\_Interoperability\\_with\\_Asterisk\\_and\\_Skype.doc](http://download.microsoft.com/download/9/4/E/94ED1EF4-A2EF-4686-9841-B0390072D524/Chapter_11_Interoperability_with_Asterisk_and_Skype.doc)

Also, follow the steps for creating a SIP extension in the **sip.conf** file for Asterisk as you will use it for registering the VH20 to the Asterisk server.

#### System Topology

A typical network configuration to support using a VH20 would look like the diagram below.



## System Topology

Once all the components are installed and configured a basic call flow from the VH20 to an endpoint registered to the Lync server would look like this:

**VH20>Asterisk Server>Lync Mediation Server>Lync Phone or Soft phone.**

A call from a Lync client to the VH20 would follow the path in reverse:

**Lync Phone or Soft phone>Lync Mediation Server>Asterisk Server>VH20**

## Registering the VH20 to Asterisk

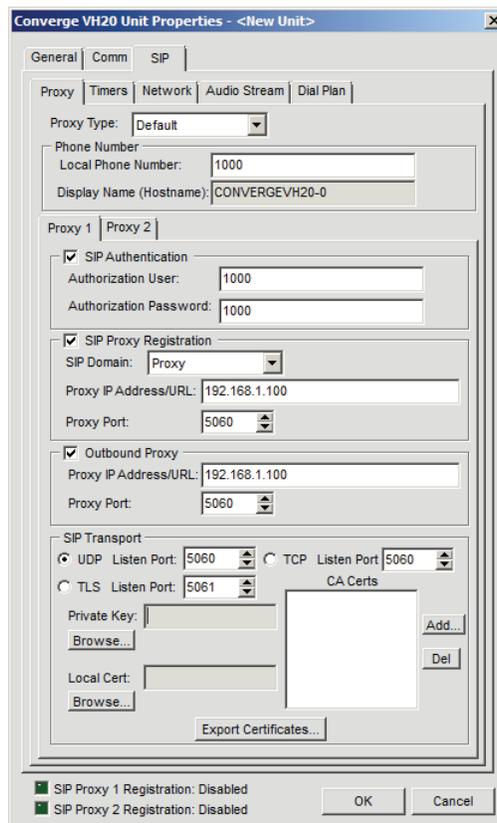
If you followed the instructions for adding a user extension in the **sip.conf** configuration file, you should have an extension 1000 available for the VH20 to register to Asterisk with. The extension information will look like the example below.

```
Extension Number [1000]
Secret           callerid = Test User 1000
                secret = 1000
                dtmfmode = rfc2833
                disallow = all
                allow = ulaw
                transport = udp
```

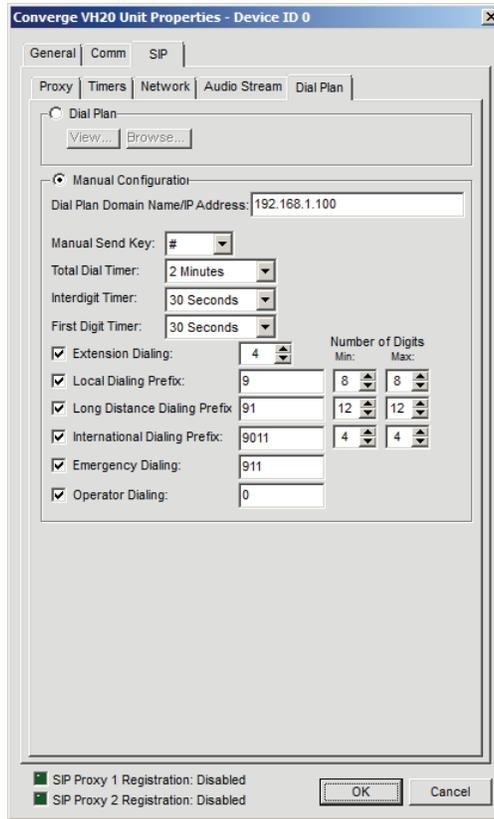
The configuration of the VH20 only needs 2 pieces of information from this configuration plus the IP address of the Asterisk server itself (for example 192.168.1.100) to complete the registration process.

The first part is the **Extension Number** [1000] and the second is **Secret** (1000). In this configuration, the **Extension Number** is used as the **Local Phone Number** and the **Authorization User** and **Secret** is used as the **Authorization Password**. The other components of the extension configuration in the Asterisk **sip.conf** file are used by Asterisk and no matching changes are needed in the VH20.

The configuration for the VH20 will look like this in CONVERGE Console.



Also include the IP address of the Asterisk server in the **Dial Plan Domain Name/IP Address** on the Dial Plan page.



## Conclusion

The system configuration described in this document is for Lync systems that are not interfaced to a PBX system such as Cisco Call Manager or Avaya Aura. In systems where a PBX is present the VH20 can be registered to the PBX using standard SIP signaling.

If further assistance is required, please contact ClearOne Technical Support at 1-800-823-5936, or email [tech.support@clearone.com](mailto:tech.support@clearone.com).

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