Cisco UC520

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SIP Trunking using the Optimum Business SIP Trunk Adaptor and the Cisco UC520 version 15.1 (4)M4b

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1. Overview

The purpose of this configuration guide is to describe the steps needed to configure the Cisco UC520 IP-PBX for proper operation with Optimum Business SIP Trunking.

2. Prerequisites

Please follow the instructions in the Optimum Business SIP Trunk Set-up Guide. The Set-up Guide was left by the Optimum Business technician at installation. If you do not have the Set-up Guide, go to www.optimumbusiness.com/SIP to download a copy.

SIP authentication credentials

- This knowledgebase solution provides the configuration steps for both PBX registration and static or non-registration modes of PBX operation.

Table 1 – PBX Information

Manufacturer:	Cisco
Model:	UC520
Version:	15.1(4)M4b
Does the PBX send SIP Registration messages (Yes/No)?	Yes
Vendor Contact:	www.cisco.com

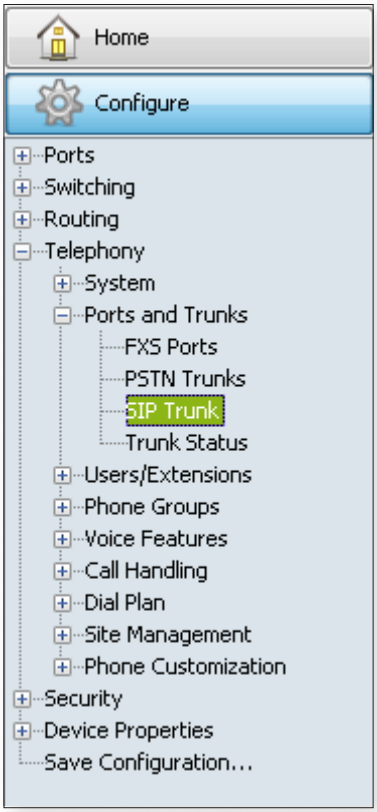
3. Cisco UC520 PBX Configuration

The steps below describe the minimum configuration required to enable the PBX to use a Optimum Business SIP Trunking for inbound and outbound calling. Please refer to the Cisco UC520 product documentation for more information on advanced PBX feature configuration.

The configuration described here assumes that the PBX is already configured and operational with station side phones using assigned extensions or DIDs. This configuration is based on Cisco UC520 version 15.1(4)M4b.

3.1 SIP Configuration

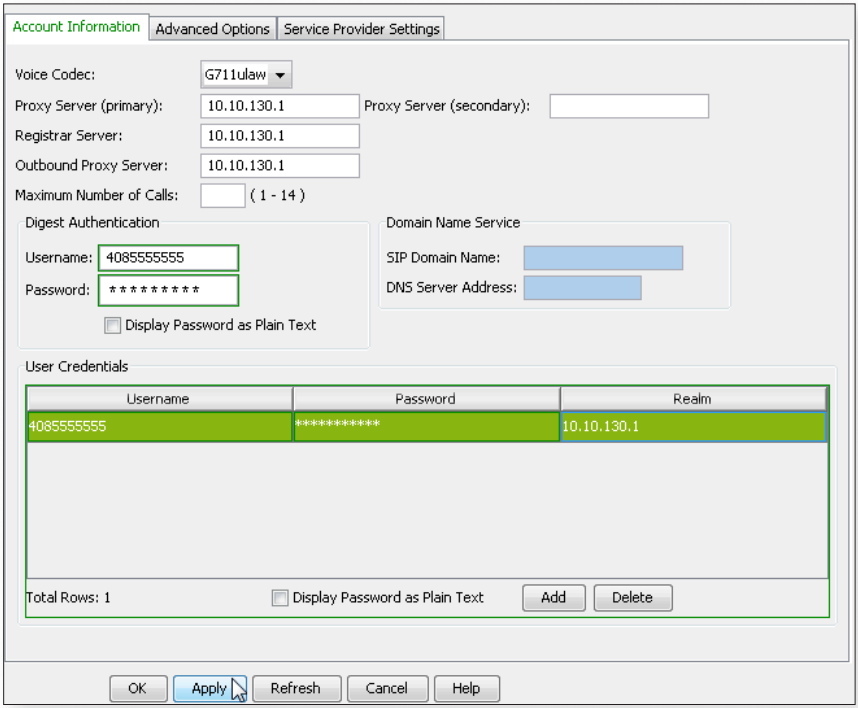
To establish a SIP connection from the PBX to the Optimum Business SIP Trunk Adaptore navigate to **Configure→Telephony→Ports and Trunks**.



Click on the **Account Information** tab. Select **G711ulaw** next to **Voice Codec**. Enter the Optimum Business SIP Trunk Adaptor's IP address in **Proxy Server**, **Registrar Server**, and **Outbound Proxy Server**. This is the IP address that was assigned to the Optimum Business SIP Trunk Adaptor LAN interface. This address was configured in step 2 of the Optimum Business SIP Trunk Set-Up guide. Enter the appropriate credentials under **Digest Authentication**. The user name and password should match what was configured in the Optimum Business SIP Trunk Adaptor. This was configured in step 3 in the Optimum Business SIP Trunk Set-Up Guide. Under

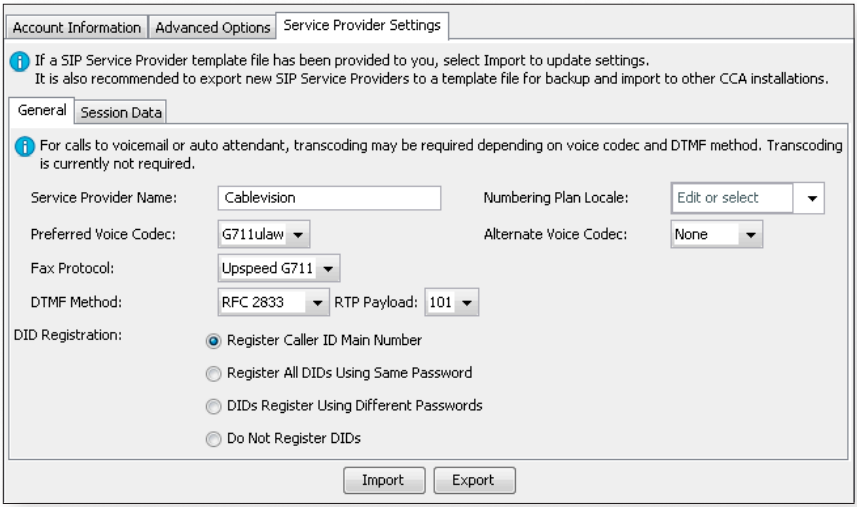
User Credentials enter the same credentials again.

Then enter the Optimum Business SIP Trunk Adaptor's IP address under **Realm** and click **Add**.



Modify the DTMF Method. Click the **Service Provider Settings** tab and Select **DTMF Method** to be RFC 2833.

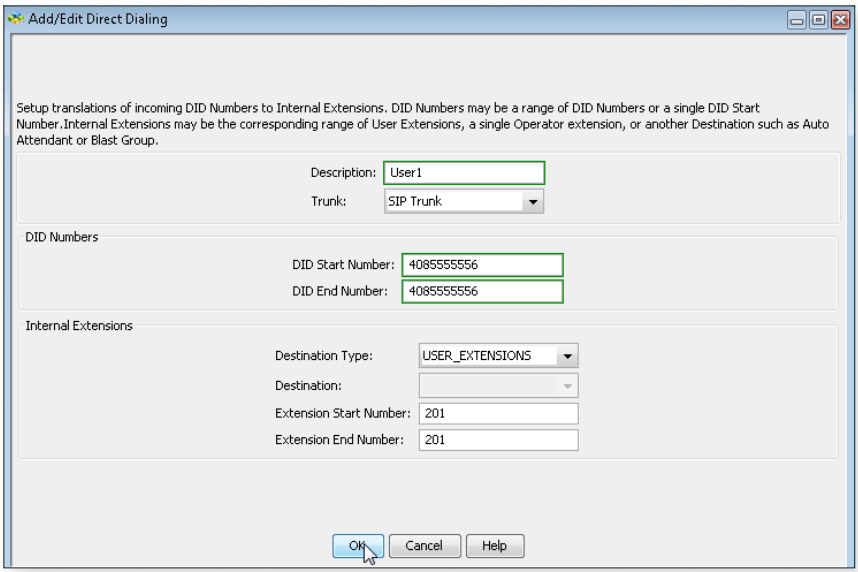
Click **Apply** when finished



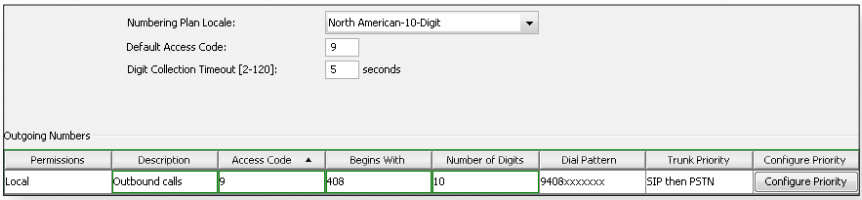
IMPORTANT: The Cablevision network only supports Inband DTMF tones. In order for the Cisco UC520 PBX to operate correctly with the Cablevision network, the Optimum SIP Trunk Adaptor must be configured to convert out-of-band DTMF tones sent by the PBX to inband DTMF tones. To enable this conversion, log into the Optimum Business Sip Trunk Adaptor using the login and password specified in the Optimum Business Set-up Guide. On the SIP Trunk Configuration page you must check the Convert Inband DTMF checkbox and click the submit button to update this setting. This is described in step 3 of the Optimum SIP Trunk Set-up Guide.

3.2 Dial Plan

To configure Dial Plan navigate to **Configure→Telephony→Dial Plan→Inbound**. This will be for mapping inbound numbers to appropriate extensions. Click **Add**. Enter description of the extension and next to **Trunk** select the appropriate trunk which in this case is **SIP Trunk**. Next to **DID Start Number** and **DID End Number** simply enter the DID being configured. Select the appropriate destination which in this case is **USER_EXTENSIONS** next to **Destination Type**. Enter the extension being configured next to **Extension Start Number** and **Extension End Number**. Configure remaining extensions similarly. When done click **OK**.

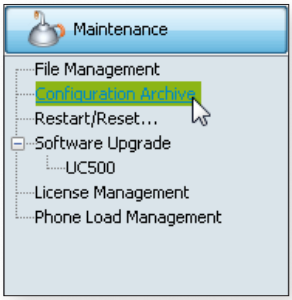
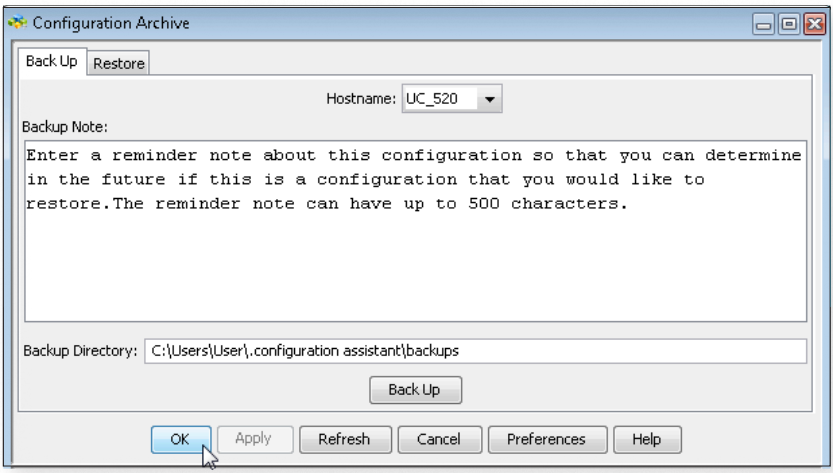


For outbound navigate to **Configure→Telephony→Dial Plan→Outbound**. Verify that **North American-10 Digit** is selected next to **Numbering Plan Locale**. Click **Add Number** below to begin adding outbound numbers. Select **Local** under **Permissions** and enter appropriate description under **Description**. Select **9** for the **Access Code**. Under **Begins With** enter number of unchanging beginning digits for this specific outbound string. Under **Number Of Digits** enter **10**. Select **SIP then PSTN** under **Trunk Priority**. Configure remaining strings as needed. When done click **Apply**.



3.3 Backup/Restore

To backup or restore a configuration navigate to **Maintenance→Configuration Archive.**



Select **Backup** or **Restore** from above.