



Grandstream Networks, Inc.

How To Interconnect Multiple UCM6510 IPPBX



Index

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OVERVIEW

This document describes basic configuration to interconnect two UCM6510s. In this example, we will be using two UCM6510s and name them UCM6510-A and UCM6510-B for the following illustration. This is typically applied to the scenario where users would like to have UCM6510s share trunks as well as calls from one UCM6510 extension to the other.

CONNECT TWO UCM6510 USING PEER SIP TRUNK

CREATE PEER SIP TRUNK FOR UCM6510

On the UCM6510-A web GUI, create a Peer SIP Trunk by navigating to **PBX->Basic/Call Routes->VoIP Trunks** and click on “Create New SIP Trunk”.

In the “Create New SIP Trunk” dialog:

- Select “Peer SIP Trunk” for option “Type”.
- Enter a name to identify the trunk in option “Provider Name”. This is mainly for reference purpose. In this example “UCM-A” is used.
- For option “Host Name” enter the IP address/domain of the other UCM6510 to be peered. In this case 1.1.1.1 is the IP address of UCM6510-A.
- Click “Save” when done.

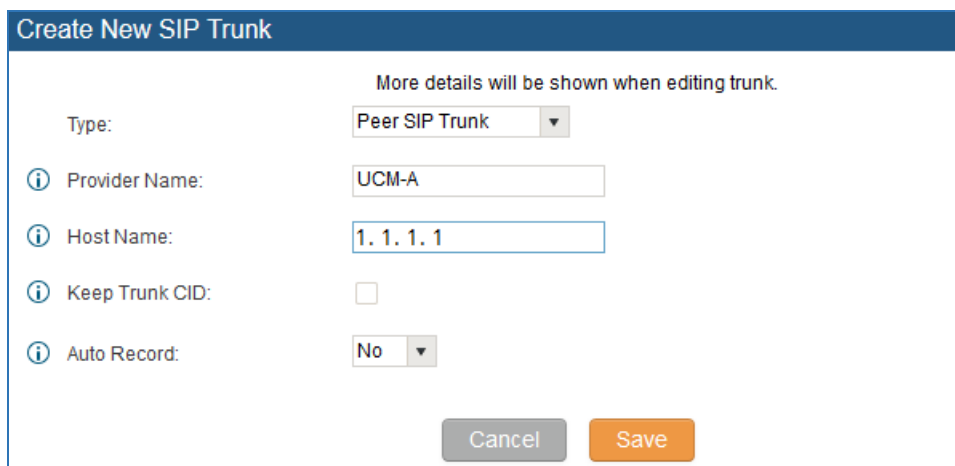

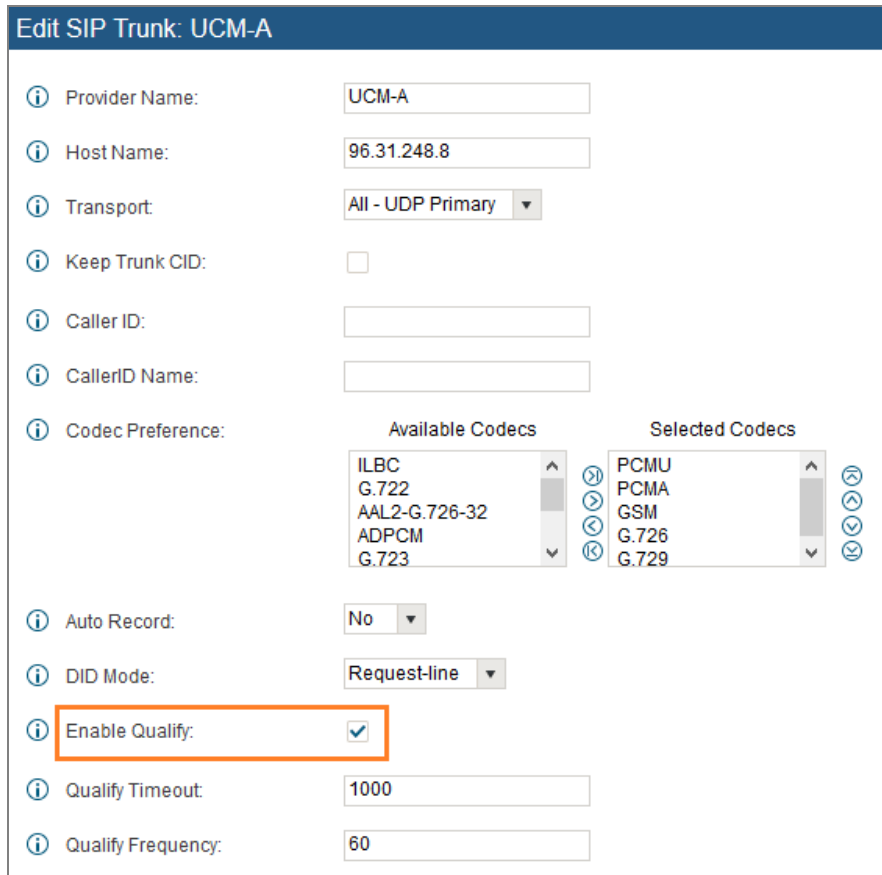


Figure 1: SIP Trunk - Create New SIP Trunk

- After clicking “Save” the new VoIP trunk will be displayed under **PBX->Basic/Call Routes->VoIP Trunks**. Click on icon  to edit the trunk.

- Locate the option “Enable Qualify” and enable this option by clicking the check box. This is a SIP option that allows UCM6510-A to monitor the status of UCM6510-B.



Edit SIP Trunk: UCM-A

Provider Name: UCM-A

Host Name: 96.31.248.8

Transport: All - UDP Primary

Keep Trunk CID:

Caller ID:

CallerID Name:

Codec Preference:

Available Codecs	Selected Codecs
ILBC	PCMU
G.722	PCMA
AAL2-G.726-32	GSM
ADPCM	G.726
G.723	G.729

Auto Record: No

DID Mode: Request-line

Enable Qualify:

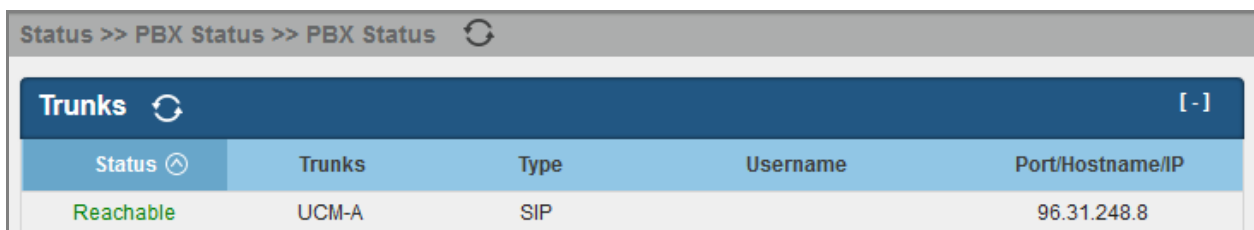
Qualify Timeout: 1000

Qualify Frequency: 60

Figure 2: SIP Trunk - Set Enable Qualify

- Click “Save” when done.

Once the trunk has been created and “Enable Qualify” is set, users can view the status of the peered trunk by navigating to web UI->**Status**->**PBX Status** page.



Status >> PBX Status >> PBX Status

Status	Trunks	Type	Username	Port/Hostname/IP
Reachable	UCM-A	SIP		96.31.248.8

Figure 3: SIP Trunk - Trunk Status

If the status of the trunk displays “Unreachable” it means that UCM6510-A and UCM6510-B are unable to reach each other. In this case, please ensure physical connectivity of both devices. Please also verify that from the UCM6510-A network, the UCM6510-B is responding to ping and vice versa.



Note:

The steps below will need to be performed on the UCM6510-B as well. When configuring UCM6510-B, set the peered SIP trunk host name as UCM6510-A’s IP address or domain name.

CONFIGURE OUTBOUND RULE ON UCM6510

On the UCM6510-A web GUI, go to **PBX->Basic/Call Routes->Outbound Routes** to create a new outbound rule. This would allow the extension on the UCM6510-A to reach extensions on UCM6510-B.

Here’s what to configure:

- Calling Rule Name: This is for reference purposes so we chose to use “toUCMB”.
- Pattern: the pattern used in this example is 1XX since the UCM6510-B is using an extension range of 100-199.
- Privilege Level: configured as “Internal”. This can be changed to regulate which users can make outbound calls through this particular route.
- Use Trunk: select the SIP Peer Trunk UCM-A.
- Click on “Save” and “Apply Changes” on the top of the web page.

Create New Outbound Rule
X

i Calling Rule Name:

i Pattern: +

i Password:

i Privilege Level: Internal Warning: Setting privilege level at 'Internal' has potential security risks.

i Enable Filter on Source Caller ID:

Send this call through trunk

i Use Trunk: SIP Trunks -- UCM-A

i Strip:

i Prepend:

Use Failover Trunk:

Trunks	Strip	Prepend	Options
Click to add failover trunk			

Cancel
Save

Figure 4: Outbound Rule - Create New Outbound Rule

In this example "1XX" means that when a user on the UCM6510-A dials a 3 digit number that has a leading "1" it will use this route and send the call out to the UCM6510-B.

 **Note:**

These steps will also apply to UCM6510-B when configuring the outbound route from UCM6510-B to the UCM6510-A. The only difference in the configuration are "Pattern" and "Use Trunk". Since the UCM6510-A has an extension range of 200-299, then the UCM6510-B would configure the outbound route Pattern as "2XX".

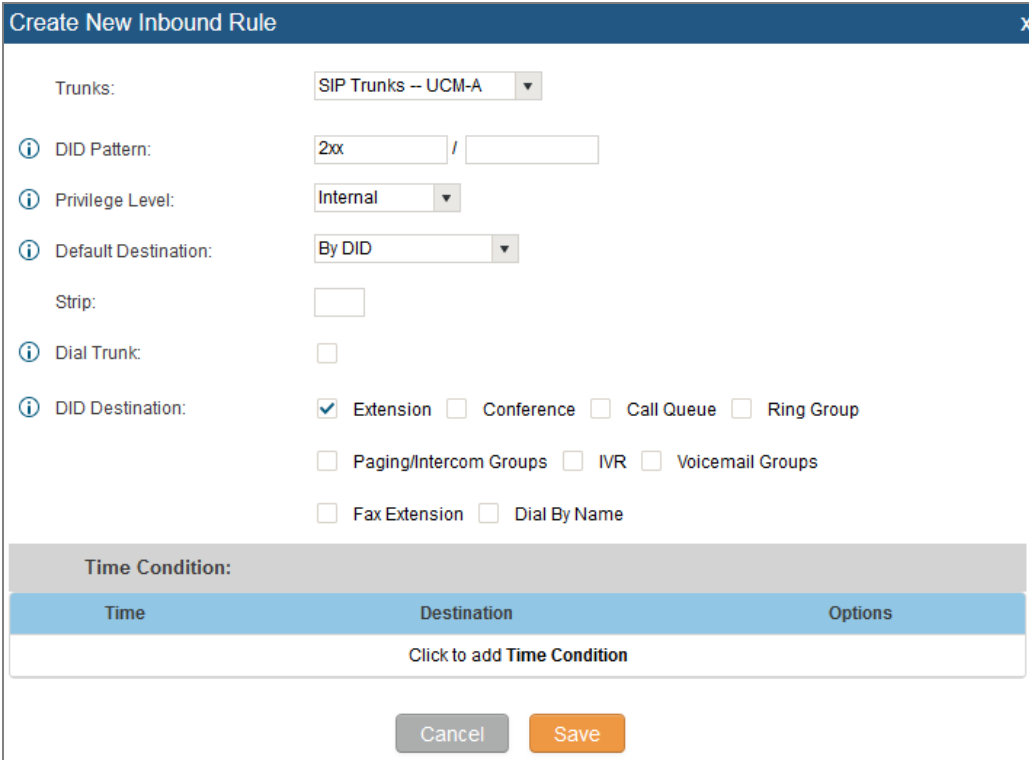
CONFIGURE INBOUND RULE ON UCM6510

To configure the Inbound Rule, navigate to the web GUI, go to **PBX->Basic/Call Routes->Inbound Routes** to create a new inbound rule.

In this example, the UCM6510-A inbound rule needs be configured so that when UCM6510-B dials a UCM6510-A extension the call can be routed to the specified user.

On the UCM6510-A configure the following:

- Trunks: Select the SIP Peer Trunk “UCM-A”.
- DID Pattern: Enter 2XX
- Privilege Level: Internal
- Default Destination: By DID
- DID Destination: select “Extension”



Create New Inbound Rule

Trunks: SIP Trunks -- UCM-A

DID Pattern: 2xx /

Privilege Level: Internal

Default Destination: By DID

Strip:

Dial Trunk:

DID Destination:
 Extension
 Conference
 Call Queue
 Ring Group

 Paging/Intercom Groups
 IVR
 Voicemail Groups

 Fax Extension
 Dial By Name

Time Condition:

Time	Destination	Options
Click to add Time Condition		

Cancel Save

Figure 5: Inbound Rule - Create New Inbound Rule

With this inbound rule configured, if an extension user on UCM6510-B dials any extension between 200 and 299, it will send the call to UCM6510-A, then the UCM6510-A will use the inbound rule above to determine where to route the call. In this case the default destination is set to “By DID”, which will route the call based on the digits dialed by the UCM6510-B user.

These steps will also be used to create an inbound rule on the UCM6510-B. When an extension user on UCM6510-A dials a number that ranges from 100 to 199 (UCM6510-B extensions range), the call will be routed to the user on UCM6510-B.

Here’s what to configure on the UCM6510-B Inbound Rule:

- Trunks: Select the UCM-B
- DID Pattern: Enter 1XX
- Privilege Level: Internal
- Default Destination: By DID
- DID Destination: select “Extension”

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