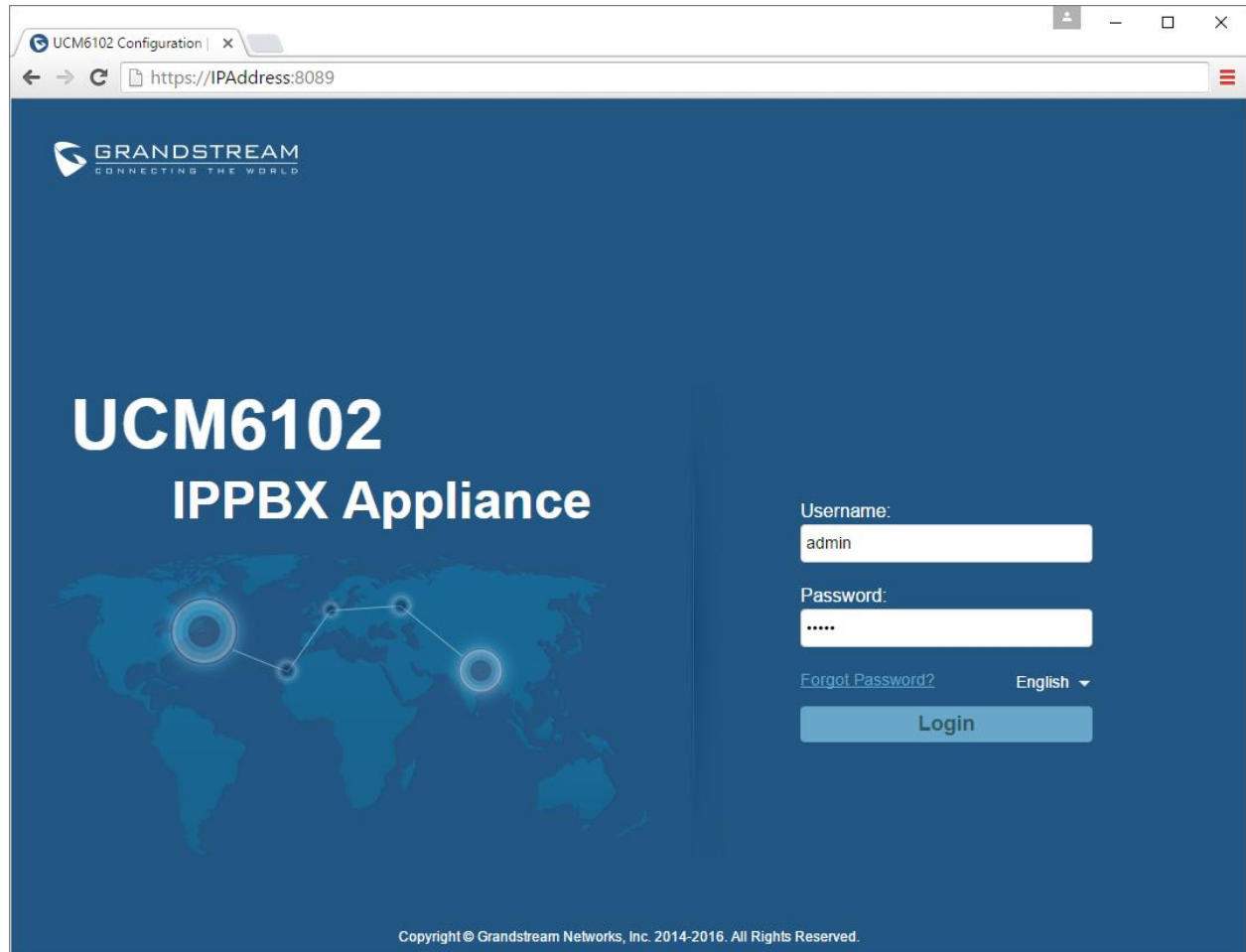
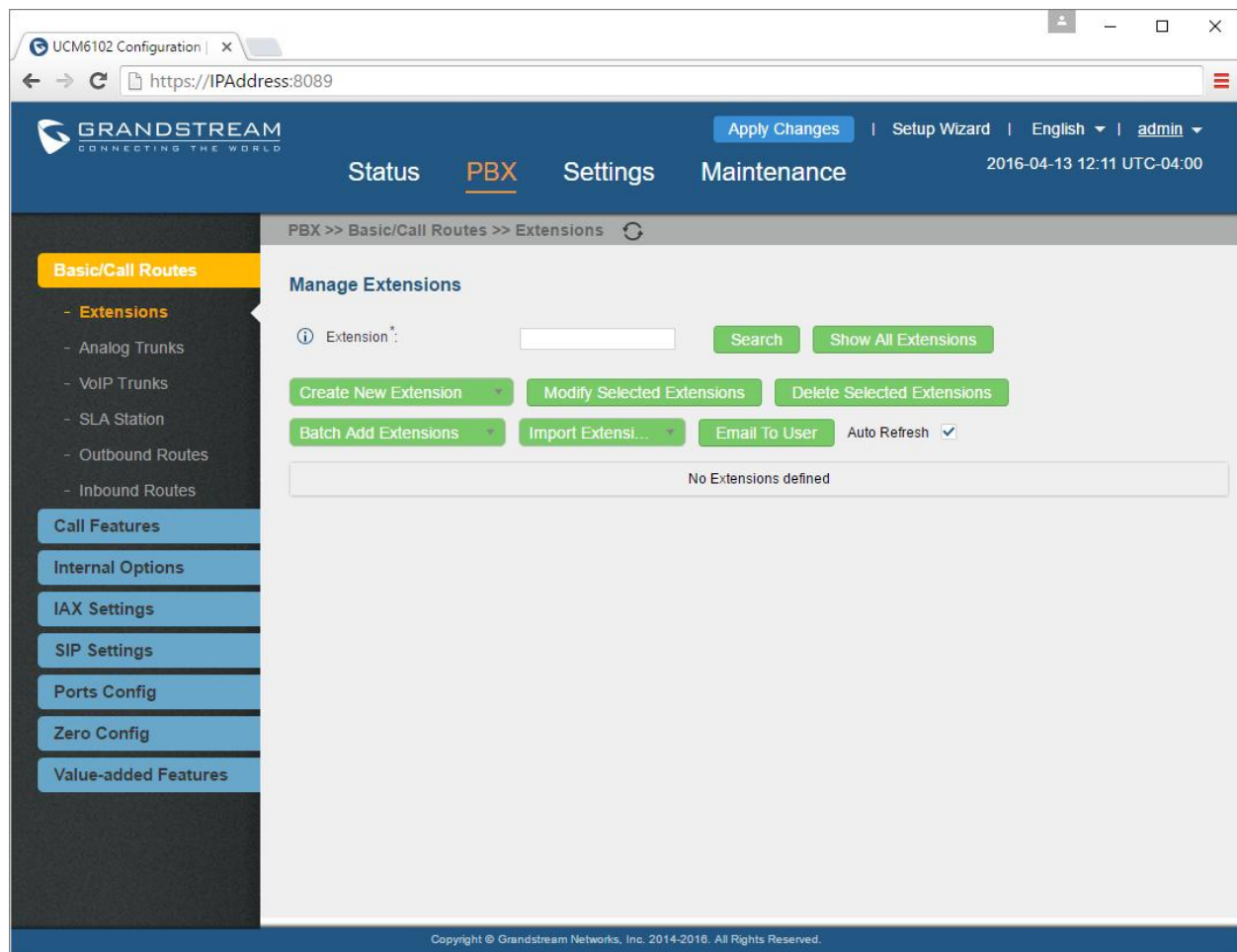


How to setup your Grandstream UCM with QuestBlue Systems Grandstream UCM6102 PBX

First, locate the IP address of the Grandstream UCM PBX from the LCD Enter the IP into the web browser as shown below and login.



Programming the call flow of the PBX will be set under the PBX tab at the top.



A Call flow needs to be built backwards; from the endpoints to the beginning of where the call enters the system

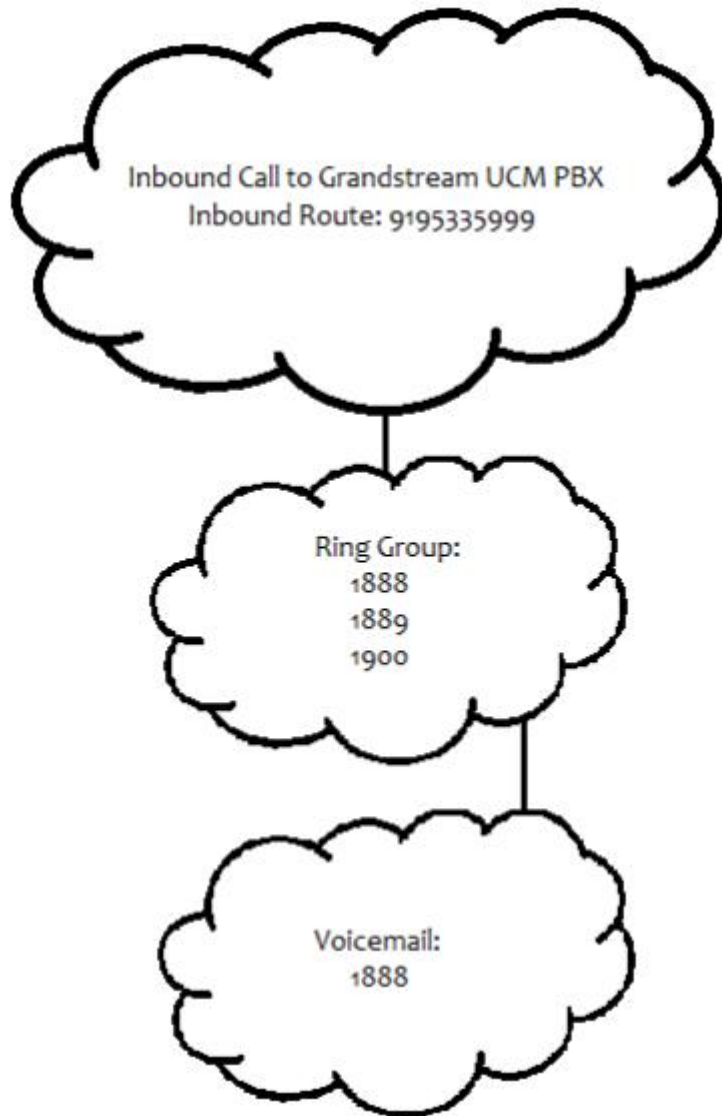
All call flows need to be planned accordingly and carefully. The larger the call flow the more detail you must pay attention to. For the customers with complicated, lengthy call flows we advise to sketch it out. This helps with planning and with knowing what to create next in the PBX settings

You will see why creating the call flow backwards is necessary

Before setting up your PBX, you must first secure your system

The default username and password is admin / admin. This should be the first change made in the system Next, set up the firewall under the Setting tab

The call flow the Grandstream UCM PBX will utilize will be as follows



In simple terms, the caller will dial into 9195335999. Three phones will ring; the extensions 1888, 1889, and 1990. If none of those phones ring in the allotted time then the caller will be sent to the voicemail box of 1888

Prior to setting up the call flow within your PBX you must be able to set up the Trunk and the outbound route to route your calls inbound and outbound

How to create a VOIP Trunk

Select VoIP Trunk from the grey task bar on the left

Click on Create New SIP Trunk

The TYPE will be Peer SIP Trunk

Enter QuestBlue as the Provider Name

Host Name: sbc.questblue.com

Make your selections for Original CID and Trunk CID (this are adjustable by you)

Select your NAT settings based on your network environment

Do NOT check Disable This Trunk

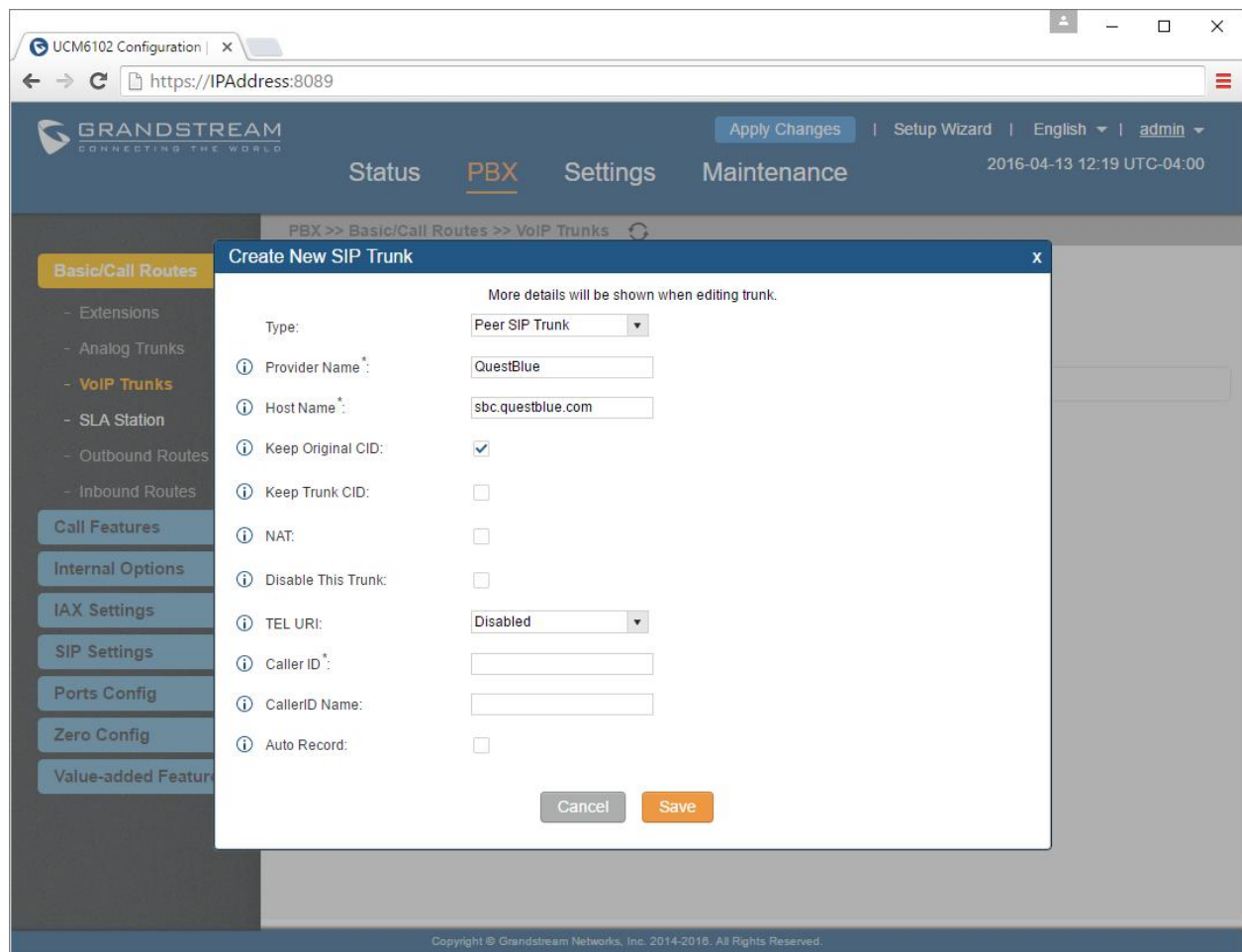
TEL URI: Ignor, that is only for PSTN connectivity not VoIP

If you wish to enable Caller ID at the trunk level then provide a Caller ID and a Caller ID Name

Note, caller ID can be set a trunk level or caller ID can be set at a per basis extension level. If you wish to enable caller ID at the trunk level, which is globally set to the system, then check the Keep Trunk CID

Auto Record is optional and dependant on storage space you have.

See Screen Shot below



On the Next POP UP select OK

UCM6102 Configuration

https://IPAddress:8089

GRANDSTREAM

CONNECTING THE WORLD

Apply Changes

Setup Wizard

English

admin

Status

PBX

Settings

Maintenance

2016-04-13 12:19 UTC-04:00

Basic/Call Routes

Extensions

Analog Trunks

VoIP Trunks

SLA Station

Outbound Routes

Inbound Routes

Call Features

Internal Options

IAX Settings

SIP Settings

Ports Config

Zero Config

Value-added Features

PBX >> Basic/Call Routes >> VoIP Trunks

VoIP Trunks

Create New SIP T

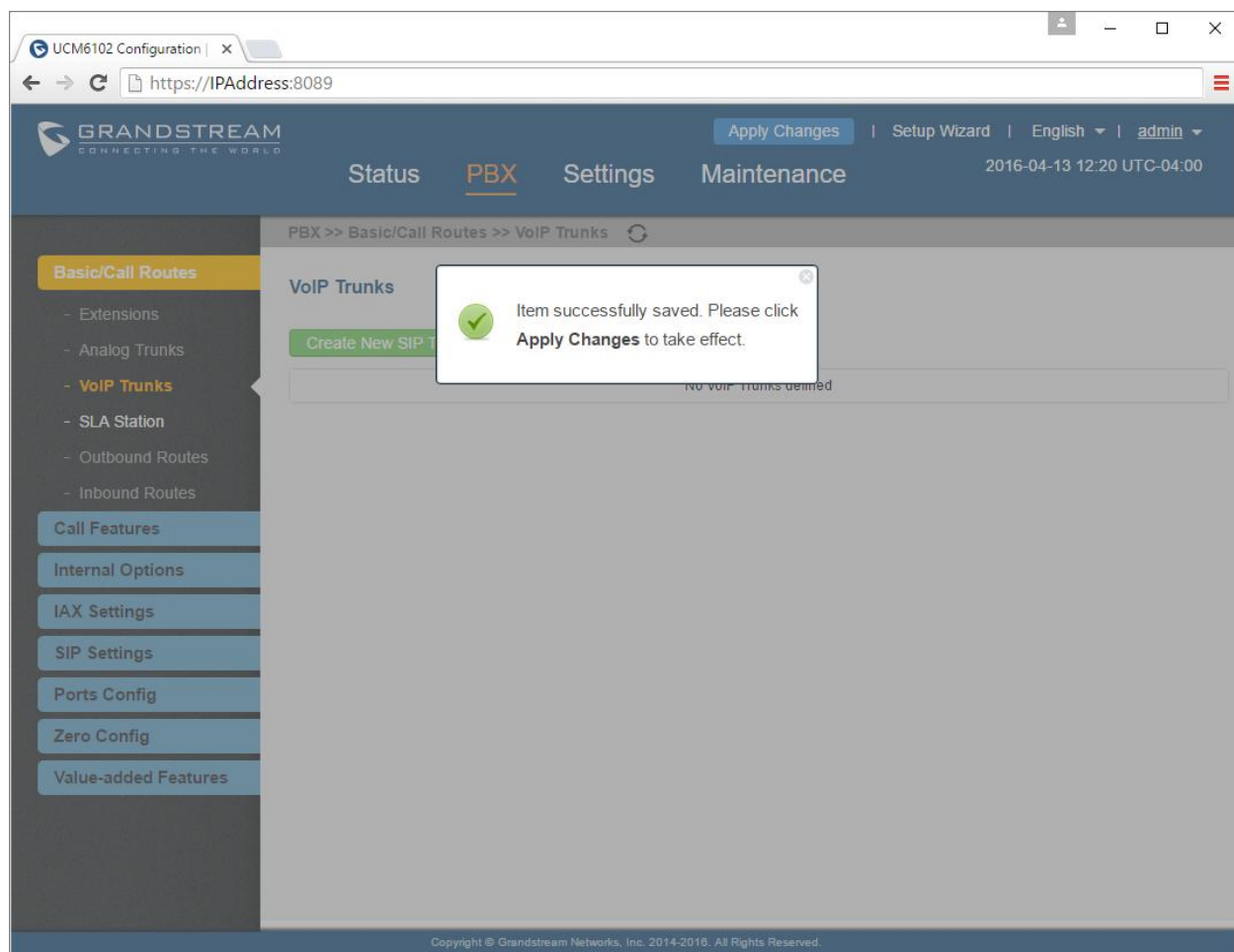
Prompt information

If the host is not a numeric IP address, but port number is present in the URI, the UCM performs an A or AAAA record lookup of the domain name. If you set a domain without port number, the UCM will do SRV record lookup.

CancelOK

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Next you will be prompted to Apply Changes



When you return you will want to edit this trunk.

Click on the Pencil Icon on the right.

UCM6102 Configuration | X

https://IPAddress:8089

GRANDSTREAM
CONNECTING THE WORLD

Apply Changes | Setup Wizard | English | admin

2016-04-13 12:21 UTC-04:00

Status **PBX** Settings Maintenance

PBX >> Basic/Call Routes >> VoIP Trunks

Basic/Call Routes

- Extensions
- Analog Trunks
- **VoIP Trunks**
- SLA Station
- Outbound Routes
- Inbound Routes

Call Features

Internal Options

IAX Settings

SIP Settings

Ports Config





Zero Config

Value-added Features

VoIP Trunks

Create New SIP Trunk Create New IAX Trunk

View: 10

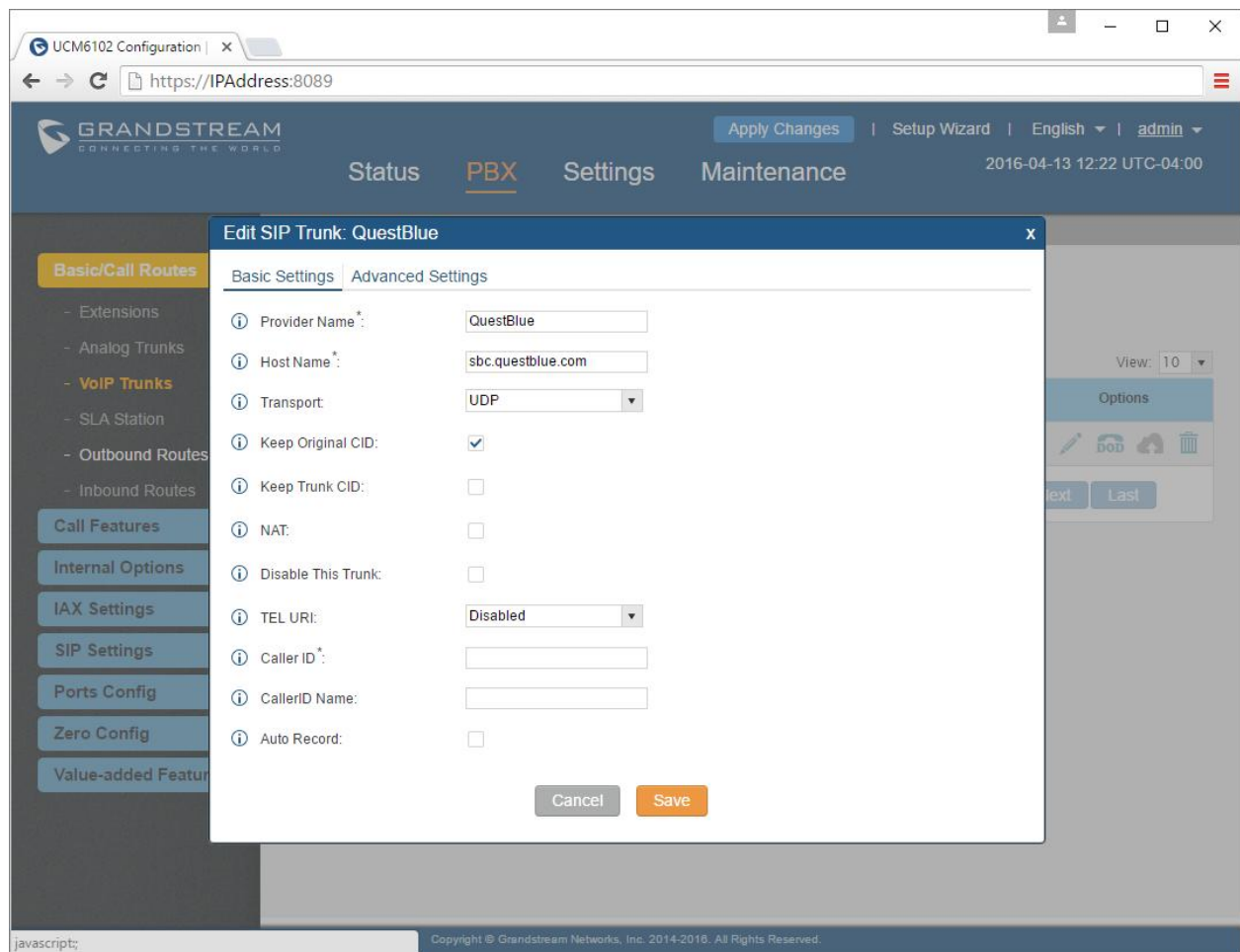
Provider Name	Technology	Type	Hostname/IP	Username	Options
QuestBlue	SIP	peer	sbc.questblue.com		   

Total: 1 Show: 1/1 Go to: Go

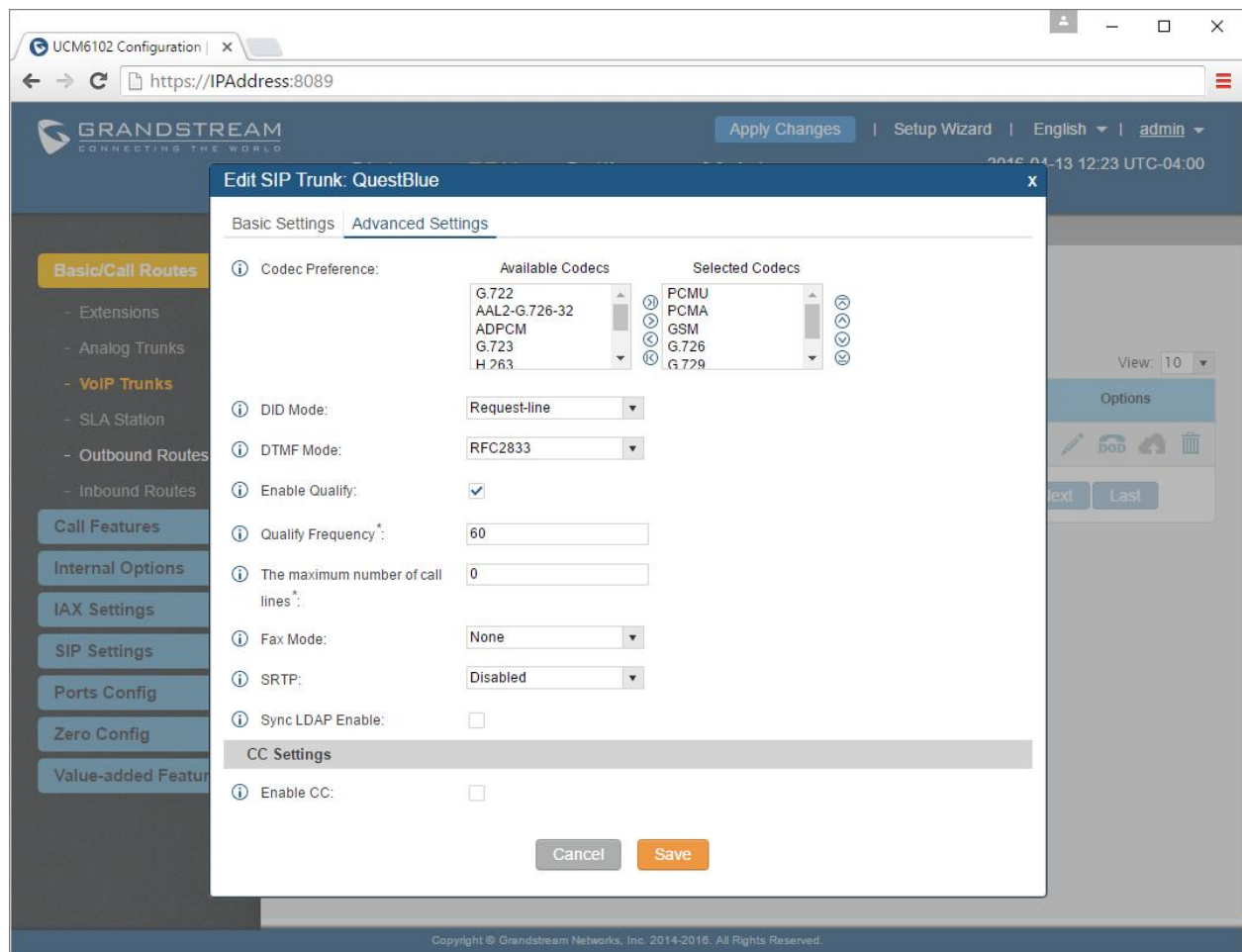
First Prev Next Last

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When the trunk screen opens click on Advanced.



Here you will want to select Enable Qualify and DTMF Mode: Set it to RFC2833




After making your changes and pressing the BLUE APPLY Changes button at the top please check your trunk in the Status Link in the top of the menu options.

You should see the trunk is now Reachable and ready to process calls.

UCM6102 Configuration

https://IPAddress:8089

 GRANDSTREAM
CONNECTING THE WORLD

Status

PBX

Settings

Maintenance

Setup Wizard

English

admin

2016-04-13 12:25 UTC-04:00

PBX Status

- PBX Status

- Active Calls

System Status

System Events

CDR

Status >> PBX Status >> PBX Status

Trunks

Status	Trunks	Type	Username	Port/Hostname/IP
Reachable	QuestBlue	SIP		sbc.questblue.com

Total: 1 Show: 1/1 Go to: Go

First Prev Next Last

Extensions

All Analog IAX SIP WebRTC Ring Groups

Voicemail Groups

No Extensions defined

Queues

Conference Rooms

Interfaces Status

Parking Lot

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Outbound Routes:

Click on PBX in the Top Menu Options

Select Outbound Route from the left task bar under Basic / Call Routes

Create a New Outbound Route

For National level calls you must create two outbound routes

10 Digit Outbound Route

Enter Pattern: nxxnxxxxxx

Select National as the Privilege level

From the drop down menu of Use Trunk select the QuestBlue trunk created

In the Prepend section add the 1

Click SAVE

The screenshot shows the Grandstream UCM6102 Configuration web interface. The browser address bar shows 'https://IPAddress:8089'. The left sidebar contains a menu with 'Basic/Call Route' selected, and sub-items: 'Extensions', 'Analog Trunks', 'VoIP Trunks', 'SLA Station', 'Outbound Route', and 'Inbound Route'. The 'Outbound Route' item is highlighted. The main content area is titled 'Create New Outbound Rule'. The form contains the following fields:

- Calling Rule Name: 10DigitOutboundRoute
- Pattern: nxxnxxxxxx
- Password: (empty)
- Call Duration Limit: (checkbox, unchecked)
- Privilege Level: National (dropdown menu)
- Enable Filter on Source Caller ID: (checkbox, unchecked)
- Send this call through trunk: (checkbox, checked)
- Use Trunk: SIPTrunks -- QuestBlue (dropdown menu)
- Strip: (empty)
- Prepend: 1
- Use Failover Trunk: (checkbox, unchecked)

Below the form is a table with columns: Trunks, Strip, Prepend, and Options. The table is currently empty, and a link 'Click to add failover trunk' is visible. At the bottom of the form are 'Cancel' and 'Save' buttons. The footer of the page reads: 'Copyright © Grandstream Networks, Inc. 2014-2018. All Rights Reserved.'

To enable dialing with the 1 please repeat and make one adjustment in the Prepend field by leaving it blank

You will add the 1 to the 1nxxnxxxxxx pattern. See image below

The screenshot shows the Grandstream UCM6102 Configuration web interface. The browser address bar shows `https://IPAddress:8089`. The left sidebar contains a menu with the following items: Basic/Call Route, Extensions, Analog Trunk, VoIP Trunks, SLA Station, Outbound Route (highlighted), Inbound Route, Call Features, Internal Options, IAX Settings, SIP Settings, Ports Config, Zero Config, and Value-added Features. The main content area displays the 'Create New Outbound Rule' dialog box. The dialog box has the following fields and options:

- Calling Rule Name: 11DigitOutboundRoute
- Pattern: 1nxxnxxxxxx
- Password: (empty field)
- Call Duration Limit: (checkbox, unchecked)
- Privilege Level: National (dropdown menu)
- Enable Filter on Source Caller ID: (checkbox, unchecked)
- Send this call through trunk: (checkbox, unchecked)
- Use Trunk: SIPTrunks - QuestBlue (dropdown menu)
- Strip: (empty field)
- Prepend: (empty field)
- Use Failover Trunk: (checkbox, unchecked)

Below the 'Use Failover Trunk' section, there is a table with the following columns: Trunks, Strip, Prepend, and Options. The table is currently empty, and a link 'Click to add failover trunk' is visible below the table.

At the bottom of the dialog box, there are two buttons: 'Cancel' and 'Save'.

Now you should see the following:

UCM6102 Configuration | X

https://IPAddress:8089

GRANDSTREAM
CONNECTING THE WORLD

Setup Wizard | English | admin

2016-04-13 12:30 UTC-04:00

Status **PBX** Settings Maintenance

PBX >> Basic/Call Routes >> Outbound Routes

Outbound Routes

Create New Outbound Rule

An outgoing calling rule associates an extension pattern with a trunk used to dial the pattern. This allows different patterns to be dialed through different trunks. For example, 'local' allows 7-digit dialed through FXO port while 'long distance' allows 10-digit dialed through a low-cost SIP trunk. A failover trunk can be set up to be used when the primary trunk fails. Note: This panel only manages individual outgoing calling rules.

View: 10

Sequence	Outbound Rule Name	Pattern	Privilege Level	Options
1	10DigitOutboundRoute	_nxxxxxxx	National	[Edit] [Delete] [Up] [Down] [Check]
2	11DigitOutboundRoute	_1nxxxxxxx	National	[Edit] [Delete] [Up] [Down] [Check]

Total: 2 Show: 1/1 Go to: Go

First Prev Next Last

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Two outbound routes so if you do not dial the 1 and if you dial the 1 the call will route to the QuestBlue SIP Trunk.

*After you save this trunk you will notice each trunk adds a '_' to the pattern. This is automatic. Do not manually enter the underscore.

Next: Enter the SIP Setting from the left side of the PBX.


Click on Edit Session Timer

Select the SIP Settings tab on the left task bar. Click on Session Timer

Change Session Timer to Refuse by UNCHECKING the Timer Box as shown below.

UCM6102 Configuration

https://IPAddress:8089

 **GRANDSTREAM**
CONNECTING THE WORLD

Status

PBX

Settings

Maintenance

Setup Wizard | English | admin | 2016-04-13 12:32 UTC-04:00

Basic/Call Routes

Call Features

Internal Options

IAX Settings

SIP Settings

- General

- Misc

- **Session Timer**

- TCP/TLS

- NAT

- ToS

Ports Config

Zero Config

Value-added Features

PBX >> SIP Settings >> Session Timer

SIP Session Timer

Force Timer:

☐

Timer:

☐

Session Expire *:

Min SE *:

Cancel

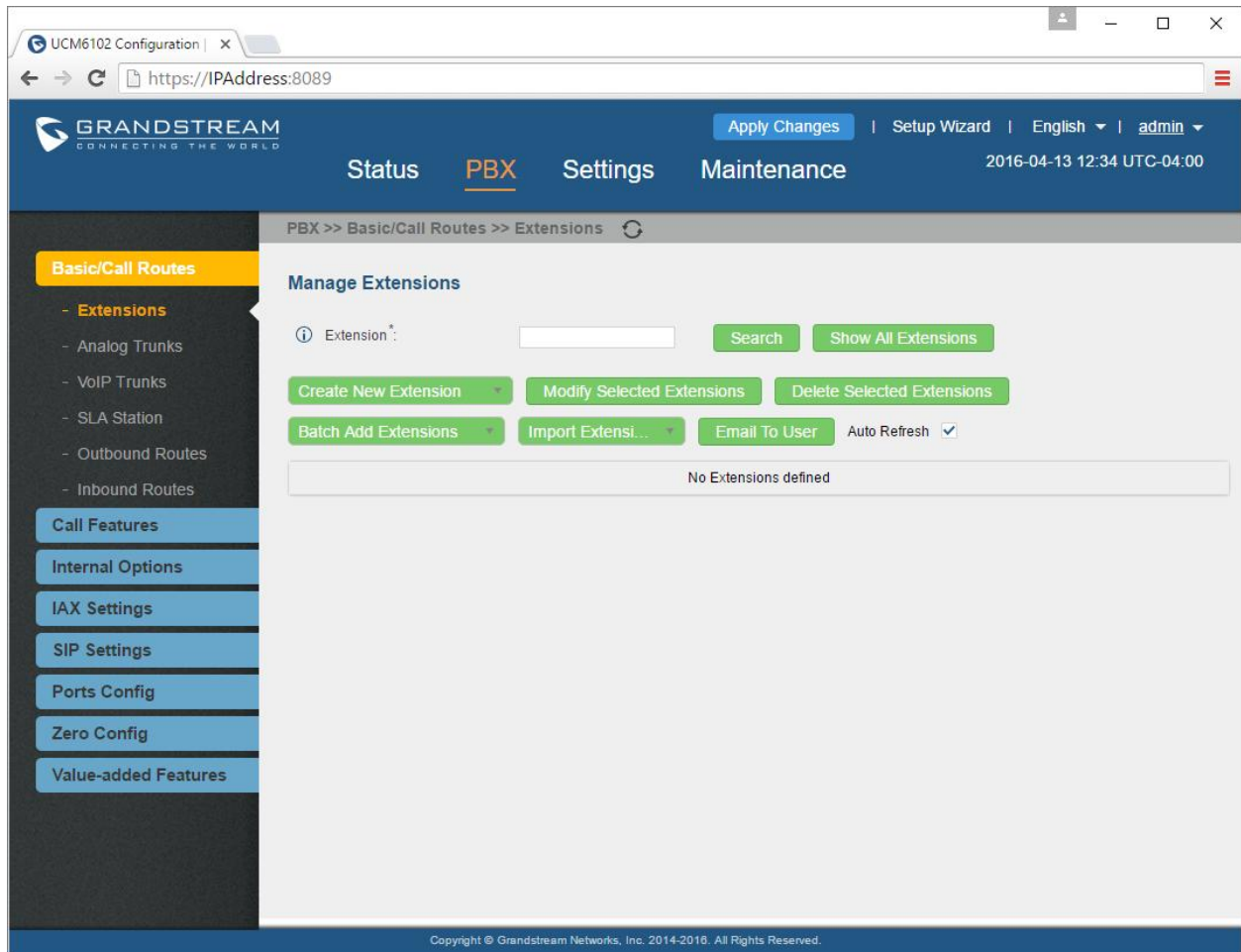
Save

Copyright © Grandstream Networks, Inc. 2014-2016. All Rights Reserved.

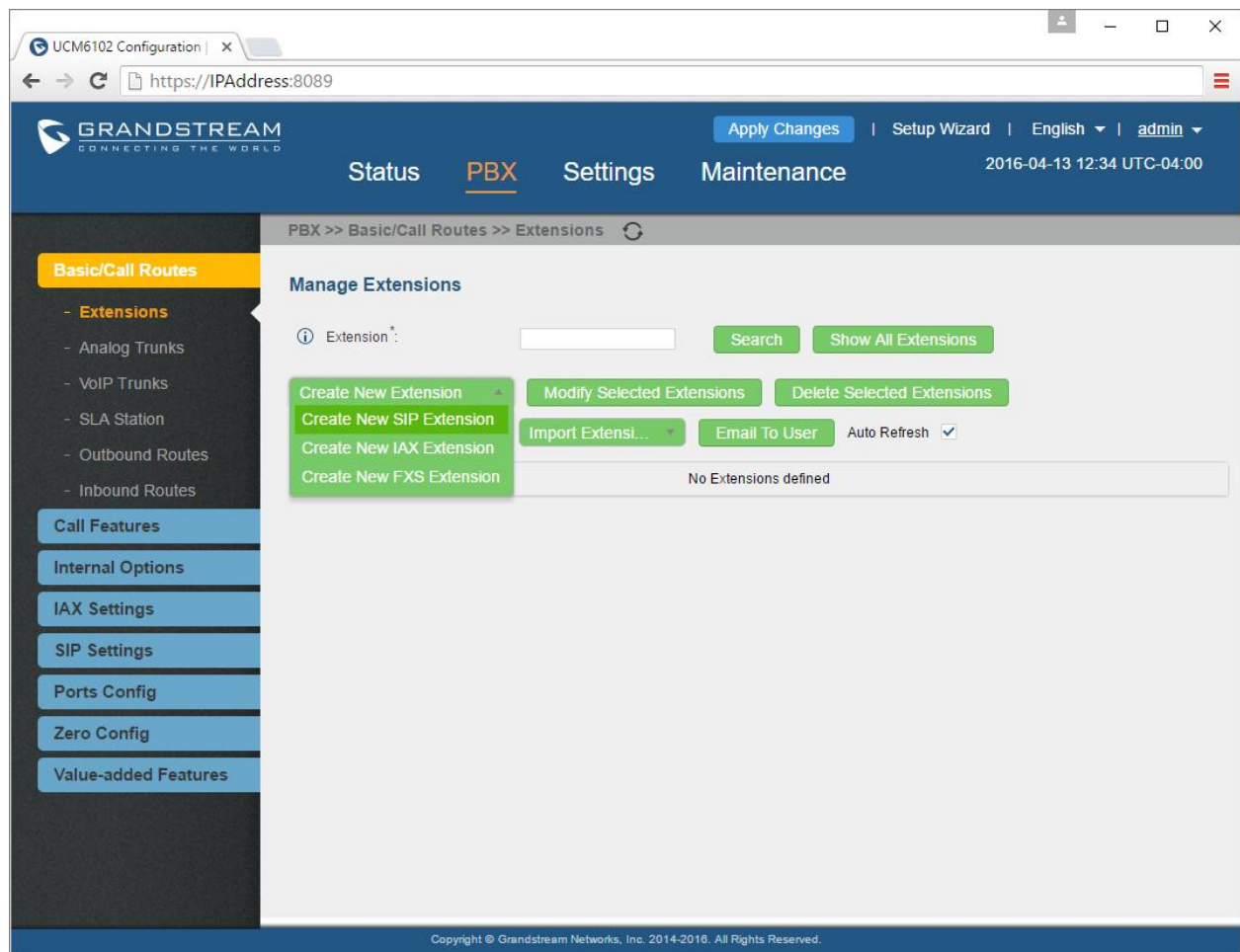
Creating a SIP Extension

As mentioned, the call flow has to be built backwards. From the image in the previous page the extensions must be built first

You will need to first select Basic/Call Routes from the left as shown below



On this screen you will look at the drop down for Create New SIP Extension.



Set the extension number

Permission level will be based on the users permission to make outbound calls (Select National)

National is the most commonly used permission level as this selection can make USA, Canada, and PR calls

International is set to make calls including and out of the USA, Canada, and PR region

*Note, you must have International active for your QuestBlue account, and activate International per SIP Trunk

Enable voicemail based on preference

Enter a CallerID Number that will display when the extension calls outbound

Enter the User Settings with a First Name and Last Name. Enter the email address to forward the voicemails left at that extension to the email entered

*Note, depending on your Caller ID at the trunk level the First Name and Last Name will show up on the caller ID when the extension calls outbound

After you save the create extension and select the edit option you will see more options within the extension settings.

Select SAVE

The screenshot shows the Grandstream UCM6102 Configuration web interface. A modal window titled "Create New SIP Extension" is open, displaying the "Basic Settings" tab. The "General" section contains the following fields: Extension (1000), Permission (National), AuthID (empty), Voicemail Password (93100770), Disable This Extension (checkbox), CallerID Number (5555551212), SIP/IAX Password (IOdEte7), Enable Voicemail (checked), and Skip Voicemail Password Verification (checkbox). The "User Settings" section contains: First Name (Jon), Last Name (Doe), Email Address (jon@doe.domain), User Password (Hv89##t8), Language (Default), and Concurrent Registrations (1). At the bottom of the modal are "Cancel" and "Save" buttons. The background interface shows a sidebar with navigation options like "Extension", "Analog Trunk", "VoIP Trunk", "SLA Statistics", "Outbound", "Inbound", "Call Features", "Internal Options", "IAX Settings", "SIP Settings", "Ports Configuration", "Zero Configuration", and "Value-added Services". The top of the interface includes a status bar with "Apply Changes", "Setup Wizard", "English", "admin", and a timestamp "2016-04-13 12:37 UTC-04:00".

Don't forget to APPLY Changes in the blue button up top.

Now it is time to go back to the call flow for this system the voicemail of extension 1000 is the destination if there is no answer when a caller dials the main number: 5555551212

Make sure extension 1000 has voicemail setup and enabled

Now that the extensions are created for the ring group, the next step in building the call flow is to create a ring group

How to create a ring group

Select the Call Features tab on the left gray task menu

Select the submenu in the left menu called Ring Groups

Select the green Create New Ring Group button

In the Ring Group Name I am calling it InboundRingGroup

I am going to use the arrow icon to slide Jon Doe 1000 over to Ring Group Members.

If we had more than one extension in our PBX we would be able to keep adding members.

Next you will want to Enable Destination with a Check Mark

This will allow you to have the caller go to the VM of Extension 1000 Jon Doe in the event the call is not answered.

The screenshot displays the 'Create New Ring Group' configuration page in the Grandstream UCM6102 Configuration web interface. The browser address bar shows 'https://IPAddress:8089'. The left sidebar contains a 'Call Features' menu with 'Ring Groups' highlighted. The main form includes the following fields and options:

- Ring Group Name:** InboundRingGroup
- Extension:** 6400
- Available Extensions/Extension Groups:** (Empty list)
- Ring Group Members:** 1000 "Jon Doe"
- Available LDAP Numbers:** (Empty list)
- Selected LDAP Numbers:** (Empty list)
- Ring Group Options:**
 - Ring Strategy:** Ring in order
 - Custom Prompt:** None (with a 'Prompt' link)
 - Ring Timeout on Each Member (s):** 60
 - Auto Record:** ☐
 - Enable Destination:** ☒
 - Default Destination:** Extension 1000 "Jon Doe"

At the bottom of the form are 'Cancel' and 'Save' buttons.

Please SAVE and Apply Changes.

The final step to creating the call flow is the inbound route. The inbound route is used to tell the PBX where to send the call once the caller dials the number and it enters the system

How to create an Inbound Route

Let's go back to the left menu for Basic/Call Routes

Select Inbound Routes in the grey area.

Click the green button Create New Inbound Rule

Enter the number for your system without 1 before the number as shown in the example below and select the Default Destination to Ring Group and in our case we chose InboundRingGroup as the name just like we created it above.

The screenshot shows the Grandstream UCM6102 Configuration web interface. The browser address bar shows 'https://IPAddress:8089'. The top navigation bar includes 'Status', 'PBX', 'Settings', and 'Maintenance'. The left sidebar menu is expanded to 'Basic/Call Routes', with 'Inbound Routes' selected. The main content area displays the 'Create New Inbound Rule' dialog box.

Create New Inbound Rule

Trunks*: SIPTrunks -- QuestBlue

DID Pattern*: 5555551234

Prepend Trunk Name: ☐

Alert-Info: None

Inbound Multiple Mode: ☐

Default Mode: Mode 1

Default Destination*: Ring Group InboundRingGroup

Time Condition	Time	Destination	Options
Click to add Time Condition			

Cancel Save

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Click Save and Apply Changes button.

If there are additional questions you may have about your Grandstream device not covered in this help document please contact us via a support ticket. We will be happy to assist if we have the ability to. It may be required to open a case ticket with Grandstream directly if we are unable to assist.