

Interoperability Guide

Ascom i63 (2.2.8)



February 2021 Release
Session Initiation Protocol (SIP)

Morrisville, NC
February 2021

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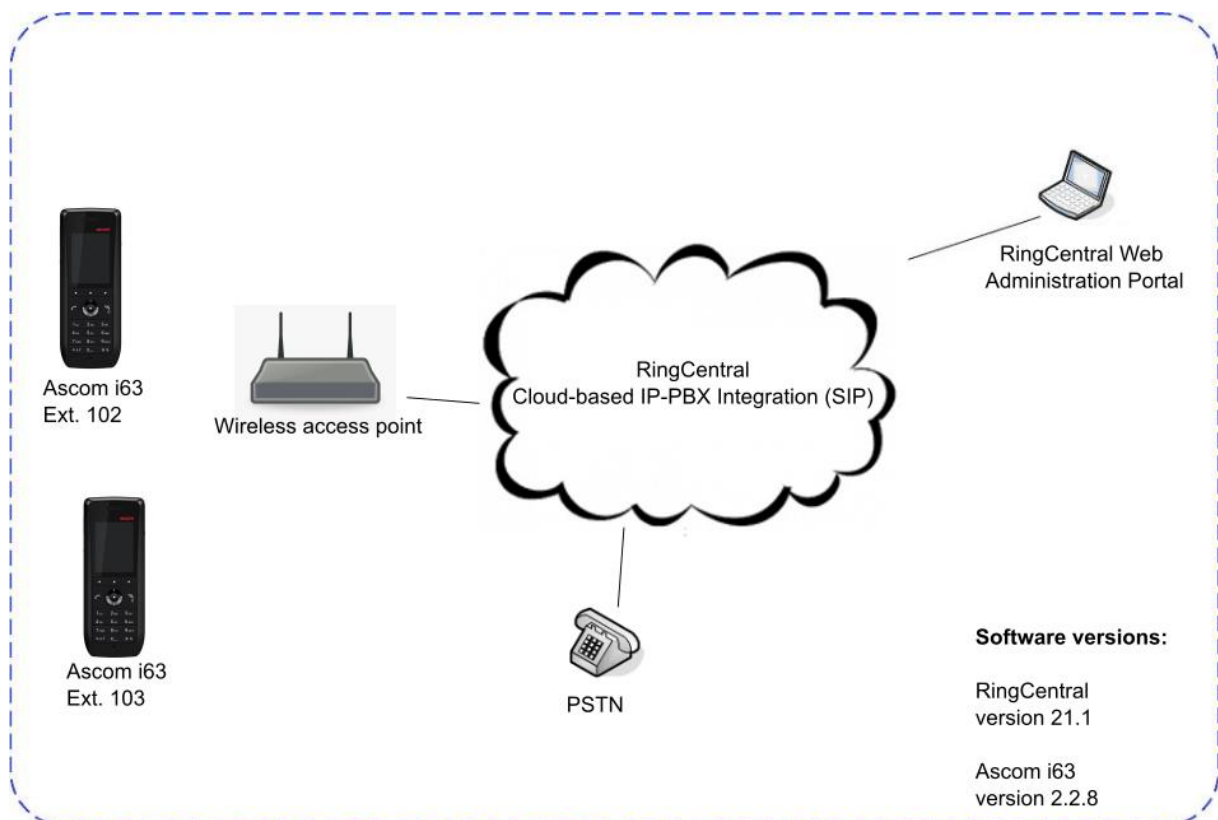
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Introduction

The Ascom interoperability team has together with RingCentral validated SIP interoperability for Ascom i63 version 2.2.8 with RingCentral.

This purpose of this document is to list currently available telephony features for the Ascom i63 & RingCentral products combination, and provide guidelines and necessary steps to configure and provision Ascom i63 with RingCentral.

High Level Topology



Additional references

Ascom Documentation	Link
Ascom - i63 Configuration Manual	https://confluence.ascom-ws.com/display/WIFI/Ascom+i63%2C+Configuration+Manual
Ascom - User Manual	https://confluence.ascom-ws.com/display/WIFI/Ascom+i63%2C+User+Manual
Ascom - VoWiFi System Planning	https://confluence.ascom-ws.com/display/WIFI/Ascom+VoWiFi+System+Planning
Ascom - Portable Device Manager, Installation and Operation Manual	https://confluence.ascom-ws.com/display/IPD/Portable+Device+Manager%2C+Installation+and+Operation+Manual

Note. Documentation for Ascom products can be obtained from an Ascom supplier or may be accessed at <https://www.ascom-ws.com/AscomPartnerWeb> (login account for the Ascom Partner Extranet required)

RingCentral Documentation	Link
RingCentral - Assign an existing device to an existing extension	https://support.ringcentral.com/article/Provisioning-Assign-an-existing-device-to-an-existing-extension.html
RingCentral - Manual Provisioning for Third-Party Phones	https://support.ringcentral.com/article/Manual-Provisioning-How-to-set-up-desk-phone-with-RingCentral.html
RingCentral - Get the SIP Settings for Manual Provisioning	https://support.ringcentral.com/article/Manual-Provisioning-How-get-SIP-Settings.html

Summary

General

Interoperability testing were carried out using SIP as the signaling protocol towards RingCentral's cloud SIP service. The Interoperability testing in all areas regarding Ascom i63 and RingCentral produced good results with few exceptions. For the latter, please refer to "Feature limitations" section on page 5.

For more information about the RingCentral solution, please contact RingCentral.

Features list

- Basic Call, TCP
- Basic Call, TLS 1.2 (Secure Voice)
- DTMF
- Hold, Retrieve, Enquiry and Brokering
- Music on Hold (MoH)
- Unattended Transfer (blind)
- Call Forward Unconditional
- Call Forward No Reply
- Call Forward Busy
- Call Waiting
- Check Voice Mail (*86)
- Do Not Disturb
- Conference Call (3 -Way)

Feature limitations

Description	Comment
Attended transfer	Attended transfer not executed with the expected outcome
Message Waiting Indication	Not supported
HD voice (G.722.2)	Not supported
Calling and Connected Line/Name Identification Presentation not updated appropriately.	i63 handsets won't always display the correct name and number in the following scenarios: calling party, brokering, and blind transfer.

For additional information regarding known issues and limitations, please contact interop@ascom.com or support@ascom.com.

Configuration

RingCentral, February 2021 Release

Admin Portal

This screenshot serves only as an overview of RingCentral's web-based Admin Portal application. Please refer to the partner's online help and documentation for further information about configuration and licensing

[Home -> Quick Access](#)

RingCentral [User Profile] Ext. 101 Admin Portal Support Log Out

Home Users Phone System Meetings Reports Billing More

Quick Access

- Company**
 - Business Hours
 - Caller ID Name
 - Company Greetings & Call Handling
 - Directory Assistance
- Users**
 - Add User
 - Add User Settings Template
 - Manage Users
 - Manage User Groups
- Phone Numbers**
 - Add Number
 - Reserve Numbers
 - Transfer Numbers
 - Manage Numbers
- Phones & Devices**
 - Add User Phone
 - Add Unassigned Phone
 - Manage Devices
- Groups**
 - Add Call Queue
 - Add Message-Only Extension
 - Manage Groups
- Billing**
 - Purchase Licenses
 - Licenses & Inventory
 - Manage Cost Center

Apps

App Gallery
Communicate Together. Integrate RingCentral communications solutions with the business apps of today and tomorrow.

Google Office 365 Salesforce

[Developer Portal](#)

Resources

- [Community](#)
- [Blog](#)

Provisioning Users

The following sections provide basic guidance when adding an international user with an existing phone. Note that there are various approaches to provisioning users.

Please see RingCentral's online help for further guidance.

Flow 1 (recommended by RingCentral)

Home -> Quick Access -> Phone System

The screenshot displays the RingCentral Admin Portal interface. At the top left is the RingCentral logo. To the right of the logo, there is a user profile icon with a green checkmark, the extension number 'Ext. 101', and a blue 'Admin Portal' dropdown menu. Further right are 'Support' and 'Log Out' links. Below the header is a navigation bar with 'Home', 'Users', 'Phone System' (highlighted with a red box), 'Meetings', 'Reports', 'Billing', and 'More'. The main content area is divided into a 'Quick Access' section on the left and an 'Apps' section on the right. The 'Quick Access' section contains six categories: 'Company' (with sub-items: Business Hours, Caller ID Name, Company Greetings & Call Handling, Directory Assistance), 'Users' (with sub-items: Add User, Add User Settings Template, Manage Users, Manage User Groups), 'Phone Numbers' (with sub-items: Add Number, Reserve Numbers, Transfer Numbers, Manage Numbers), 'Phones & Devices' (with sub-items: Add User Phone, Add Unassigned Phone, Manage Devices), 'Groups' (with sub-items: Add Call Queue, Add Message-Only Extension, Manage Groups), and 'Billing' (with sub-items: Purchase Licenses, Licenses & Inventory, Manage Cost Center). The 'Apps' section includes 'App Gallery' with a description and logos for Google, Office 365, and Skype, and a 'Developer Portal' link. Below the 'Apps' section is a 'Resources' section with links to 'Community' and 'Blog'.

Phone System -> Phones and Devices -> User Phones -> Add Device

Phones & Devices » **User Phones**

Search [] [] [] + Add Device

Status	Device	Assigned	Phone Number	Serial No.	Actions
✗	Existing Phone	Ascom i63 no1	(919) XXX-XXXX	N/A	⋮
✗	Existing Phone	Ascom i63 no2	(919) XXX-XXXX	N/A	⋮
✗	Existing Phone	Ascom i63 no3	(919) XXX-XXXX	N/A	⋮
✗	Existing Phone	Ascom i63 no4	+46 (31) XXXXXXXX	N/A	⋮
✗	Existing Phone	Ascom d81 no1	+46 (31) XXXXXXXX	N/A	⋮
✓	Existing Phone	Ascom d63 no2	+46 (31) XXXXXXXX	N/A	⋮
✗	RingCentral Phone app	Ascom Ringcentral App	(919) XXX-XXXX	N/A	⋮
✗	RingCentral Phone app	Ascom Ringcentral App2	+46 (31) XXXXXXXX	N/A	⋮
✗	RingCentral Phone desktop app	Nitish Khullar	(704) XXX-XXXX	N/A	⋮

Total: 9 Show: 25 < >

Phone System -> Phones and Devices -> User Phones -> Add Device -> Add User Phones

Run through all the steps of the “Add User Phones” wizard.

Select “Next”.

Add User Phones

1 Select Location 2 Select User 3 Select Devices 4 Select Numbers 5 Add Emergency Address 6 Add Shipping Info 7 Confirm

Select a Location

Domestic International

Select Country

Sweden [v]

Next

International numbers will have to be ordered for international users.

Select “Next”.

Note: The steps of ordering international numbers are not documented here.

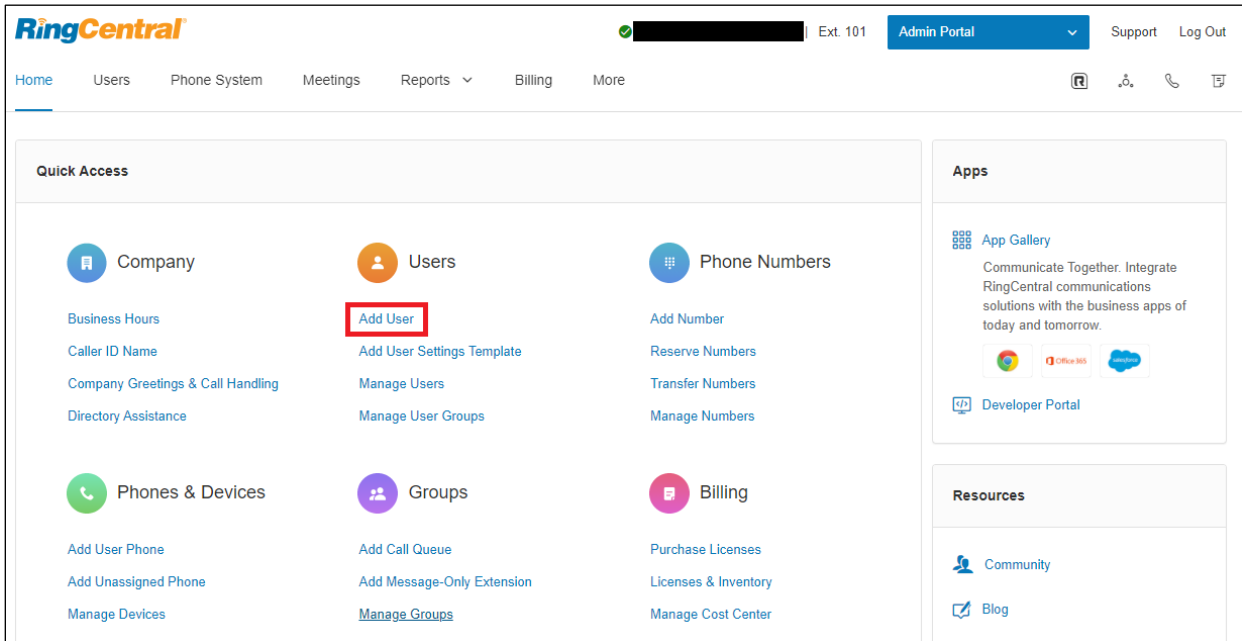
Run through the rest of the wizard and confirm the order by selecting “OK”.

Make sure “Existing Phone” is chosen as the device.

Go to page 12.

Flow 2 (used during testing)

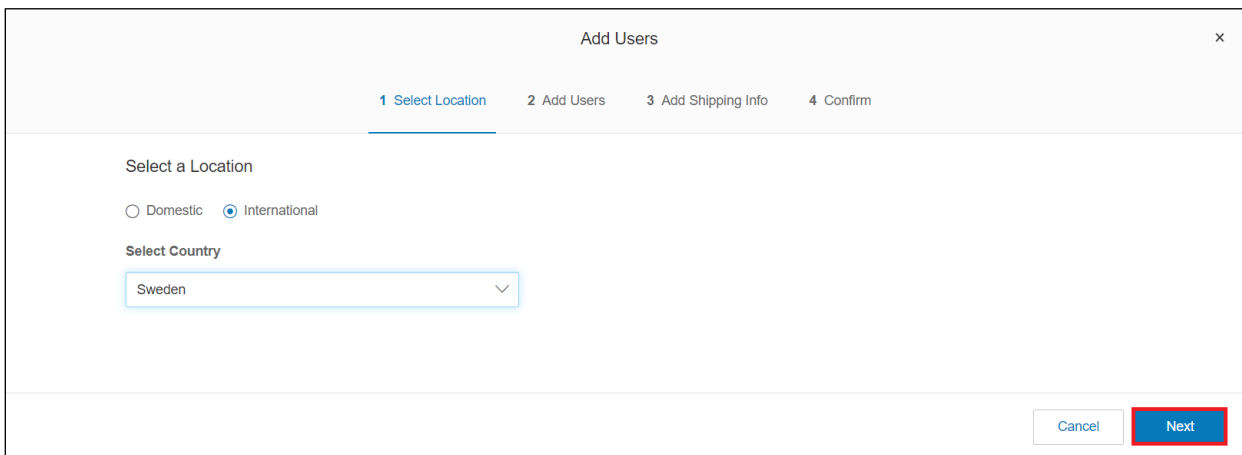
Home -> Quick Access -> Add User



Home -> Quick Access -> Add Users

Run through all the steps of the “Add Users” wizard.

Select “Next”.



Make sure “Existing Phone” is chosen under “Device”. Then select “Add” and “Next”.

Add Users ×

✓ Select Location **2 Add Users** 3 Add Shipping Info 4 Confirm

Add Users with Devices Add Users without Devices

Office Licenses - Global Office - EMEA available: 1

If the quantity of licenses added exceeds the available amount, you will be charged for the extra licenses to the selected Cost Center.

Only existing numbers can be used for Sweden as additional information is required to add new numbers. Click Order Number to request new numbers.

Qty	Cost Center ⓘ	Area Code	Number Option	Device	
1	Ascom	31 - Other Area	Number Inventory	Existing Phone	>

	Qty	Selected from Account ⓘ	Additional Purchase	Subtotal
Office Licenses - Global Office - E...	1	1	-	-
Existing Phone - New	1	-	1 X \$0.00	-

Run through the rest of the wizard and confirm the order by selecting “OK”.

Alert ×

Your order is being processed. An order confirmation will be sent to you by Email. It may take a few minutes.

You must enable International Calling for the country you have purchased Global Office license.

Adding a New User (method used during testing)

Users -> User List -> Unassigned Extensions

Select the “Ext. with Existing Phone” that corresponds to the phone number from the previous step.

The screenshot shows the 'Unassigned Extensions' page. On the left is a navigation menu with 'User List' selected. The main content area has a search bar and a table with the following data:

Name	Serial No.	Number	Actions
Ext. with Existing Phone		+46 (31)XXXXXXX	⋮
Ext. with RingCentral Phone app		(704)XXX-XXXX	⋮

Note here that “Activate by assigning credentials” is selected. Enter credentials and user details for this extension (or “Existing Phone”).

The screenshot shows the configuration page for an 'Existing Phone' extension. The 'Setup Option' is set to 'Activate by assigning credentials'. The following fields are present:

- Phone Number:** +46 (31) XXXXXXXX
- Serial Number:** Unknown
- Expansion Modu...:** 0
- Setup Option:**
 - Send invite
 - Activate by assigning credentials
 - Activate later
- Credential:**
 - Password *:** [Redacted]
 - Reenter Password *:** [Redacted]
 - Temporary Password
 - PIN *:** [Redacted]
 - Reenter PIN *:** [Redacted]
 - Security Question *:** In what city were you born?
 - Answer *:** Gothenburg

New User Info

First Name *	Last Name *
<input type="text" value="Ascom i63"/>	<input type="text" value="no1"/>
Email Address *	Extension Number
<input type="text" value="[REDACTED]"/>	<input type="text" value="102"/>
<input type="checkbox"/> Users require unique email IDs	
<input type="button" value="Verify Email Uniqueness"/>	
Contact Phone	Mobile Phone
<input type="text"/>	<input type="text"/>
Job Title	Department
<input type="text"/>	<input type="text"/>
Assigned Role ⓘ	
Standard (International)	
<input type="button" value="Edit Role"/>	

Settings

Select User Language	Select Greeting Language
<input type="text" value="English (U.S.)"/>	<input type="text" value="English (U.S.)"/>
Select Regional Format	
<input type="text" value="United States"/>	

Lastly, activate the user by selecting "Save & Enable".

Settings

Select User Language	Select Greeting Language
<input type="text" value="English (U.S.)"/>	<input type="text" value="English (U.S.)"/>
Select Regional Format	
<input type="text" value="United States"/>	
<input type="checkbox"/> Yes, I would like to receive information on product education, training materials, etc	
<input type="button" value="Delete"/>	<input type="button" value="Cancel"/> <input type="button" value="Save & Enable"/>

Users -> User List -> Users with Extensions

The user will now be added to the list of “Users with Extensions”.

User List

Users with Extensions

Unassigned Extensions

Roles

User Groups

Templates

User List » **Users with Extensions**

[+ Add User](#)
[↓ Download User List](#)

🗑 Delete
✓ Enable
✗ Disable
📧 Send Invite
🔑 Set Credentials
📄 Apply Templates

<input type="checkbox"/>	Status	Name	Number	Ext.	Roles	Department	Msg.	Actions
<input type="checkbox"/>	✓	Ascom d63 no2	+46 (31) 3644204	202	Standard (International)		0 / 0	⋮
<input type="checkbox"/>	✓	Ascom d63 no3	+46 (31) 3644207	203	Standard (International)		0 / 0	⋮
<input type="checkbox"/>	✓	Ascom d81 no1	+46 (31) 3644058	201	Standard (International)		3 / 3	⋮
<input type="checkbox"/>	✓	Ascom i63 no1	(919) 335-5105	102	Standard (International)		2 / 2	⋮
<input type="checkbox"/>	✓	Ascom i63 no2	(919) 249-1580	103	Standard (International)		1 / 1	⋮
<input type="checkbox"/>	✓	Ascom i63 no3	(919) 355-5645	104	Standard (International)		0 / 0	⋮
<input type="checkbox"/>	✓	Ascom i63 no4	+46 (31) 3644248	204	Standard (International)		1 / 1	⋮
<input type="checkbox"/>	✓	Ascom Ringcentral App	(919) 335-5788	106	Standard (International)		3 / 3	⋮
<input type="checkbox"/>	✓	Ascom Ringcentral App2	+46 (31) 3644230	205	Standard (International)		1 / 2	⋮

Users -> User List -> Users with Extensions -> User -> Extension -> Call Handling & Forwarding

^ **Call Handling & Forwarding**

[User Hours](#) [After Hours](#) [Settings](#) [Custom Rules](#)

To edit or set up the group and position the call forwarding number. [Learn More](#)

Incoming Calls Forward in this Order

↔
Sequentially
▼
ⓘ

+
Add Call Forwarding Phone
⋮

[👤 Create Ring Group](#) [🗑️ Ungroup](#)

<input type="checkbox"/>	Order	Active	Ring For ⓘ	Name	Number
<input type="checkbox"/>	1	<input type="checkbox"/>		Admin's Desktop ...	
<input type="checkbox"/>	1	<input checked="" type="checkbox"/>	<div style="border: 1px solid #ccc; padding: 2px; display: flex; align-items: center;"> 1 Ring / 5 Secs ▼ </div> <div style="margin-top: 5px;"> <input type="checkbox"/> Always ring for at least 30 seconds before forwarding is completed. ⓘ </div>	My Desktop & Mo...	
⋮ <input type="checkbox"/>	2	<input checked="" type="checkbox"/>	<div style="border: 1px solid #ccc; padding: 2px; display: flex; align-items: center;"> 4 Rings / 20 Secs ▼ </div>	Existing Phone	(919) XXX XXXX

This is where call forwarding is configured in RingCentral's web-based Admin Portal application.

Users -> User List -> Users with Extensions -> User -> Outbound Calls/Faxes -> Caller ID

The screenshot shows the 'Users with Extensions' page in the Ascom system. On the left is a navigation menu with options: User List, Users with Extensions (selected), Unassigned Extensions, Roles, User Groups, and Templates. The main area is titled 'User List >> Users with Extensions' and contains a search bar with 'i63', a 'Reset All' button, and '+ Add User' and 'Download User List' buttons. Below the search bar are action buttons: Delete, Enable, Disable, Send Invite, Set Credentials, and Apply Templates. A table lists four users with status icons and names: 'Ascom i63 no4', 'Ascom i63 no3', 'Ascom i63 no2', and 'Ascom i63 no1'. The 'Ascom i63 no1' user is selected, and a configuration panel is open for it. The panel has tabs for 'Ext. 102', 'Outbound Calls/Faxes' (selected), 'Meetings', and 'Notifications'. Under the 'Outbound Calls/Faxes' tab, there is a section for 'Caller ID' with the instruction 'Decide which phone number will display as Caller ID for outgoing calls.' Below this are two options: 'By Phone' and 'Existing Phone'. The 'Existing Phone' option is selected and shows '(919) xxx xxxx - Primary Number' with an 'Edit' button.

Here, the Caller ID for outgoing calls is configured.

SIP Registration

SIP registration details and credentials will be sent to email addresses specified in previous steps.

2. If following RingCentral manual instructions, or provisioning an unsupported device, use the settings below.

Field	Value
SIP Domain:	sip.ringcentral.com:5060
Outbound Proxy:	sip10.ringcentral.com:5090
User Name:	4631XXXXXX
Password:	YYYYYY
Authorization ID:	ZZZZZ

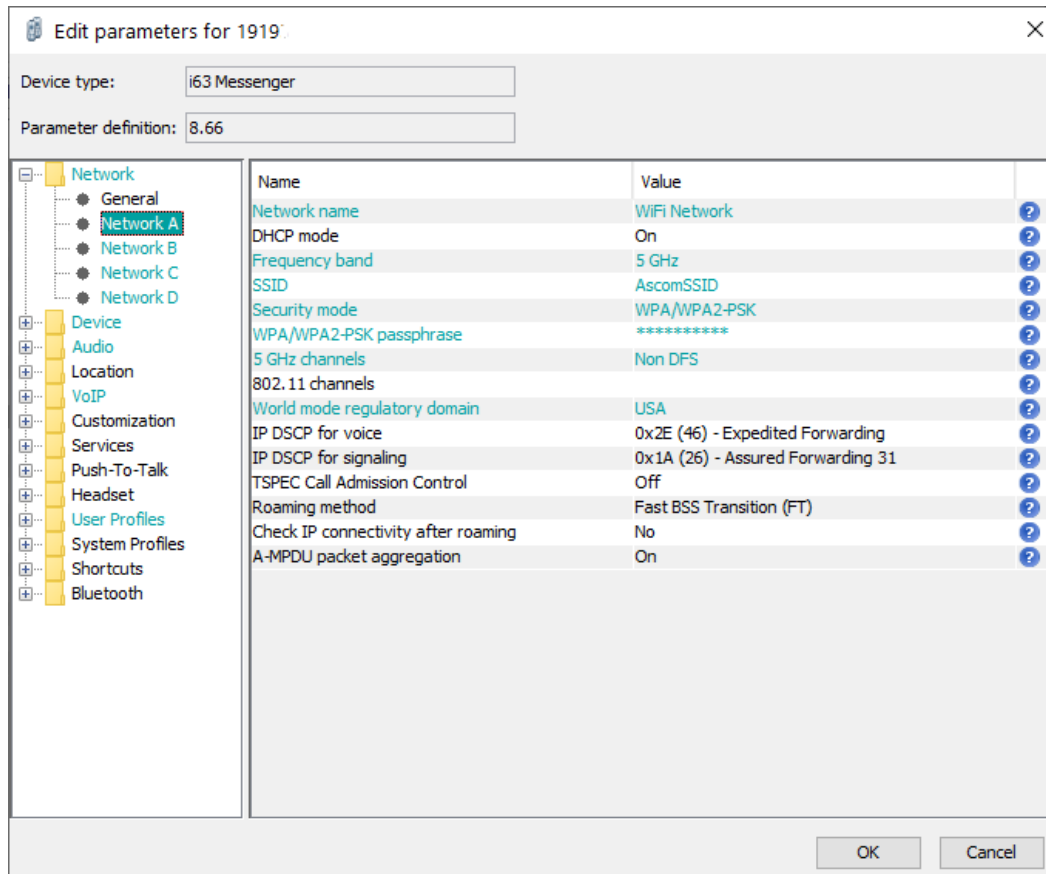
These details for respective subscriber/user are required when configuring the Ascom i63 handset:

RingCentral	Ascom i63
SIP Domain	Sip Proxy ID
Outbound Proxy	Outbound Proxy
User Name	Number (Endpoint Number)
Password	Sip Proxy Password
Authorization ID	Endpoint ID

Ascom i63, version 2.2.8

Following steps is using Ascom Device Manager (Windows based or system based version)
 Refer to Ascom documentation *Portable Device Manager, Installation and Operation Manual*

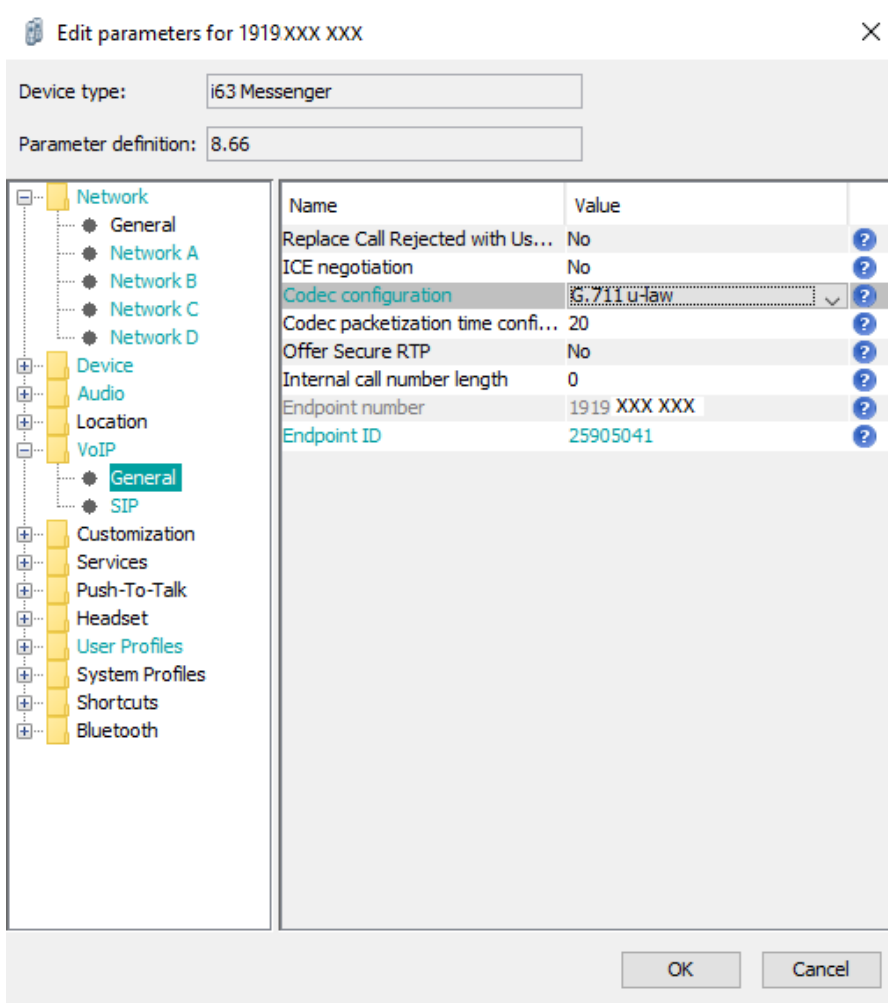
Network Configuration



Wireless Network parameters are all depending on the network infrastructure and its settings.

VoIP Configuration

VoIP settings are found under **VoIP > General**.



Note: The actual codec used during a call is dependent on negotiation between endpoints.

SIP settings are found under **VoIP > SIP**.

Edit parameters for 1919 XXX XXXX [X]

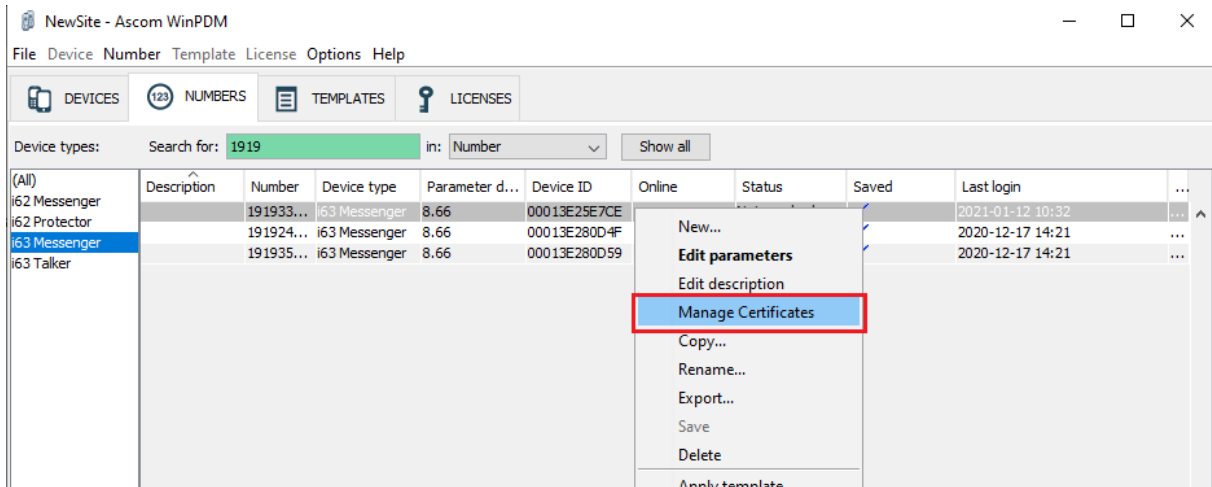
Device type:

Parameter definition:

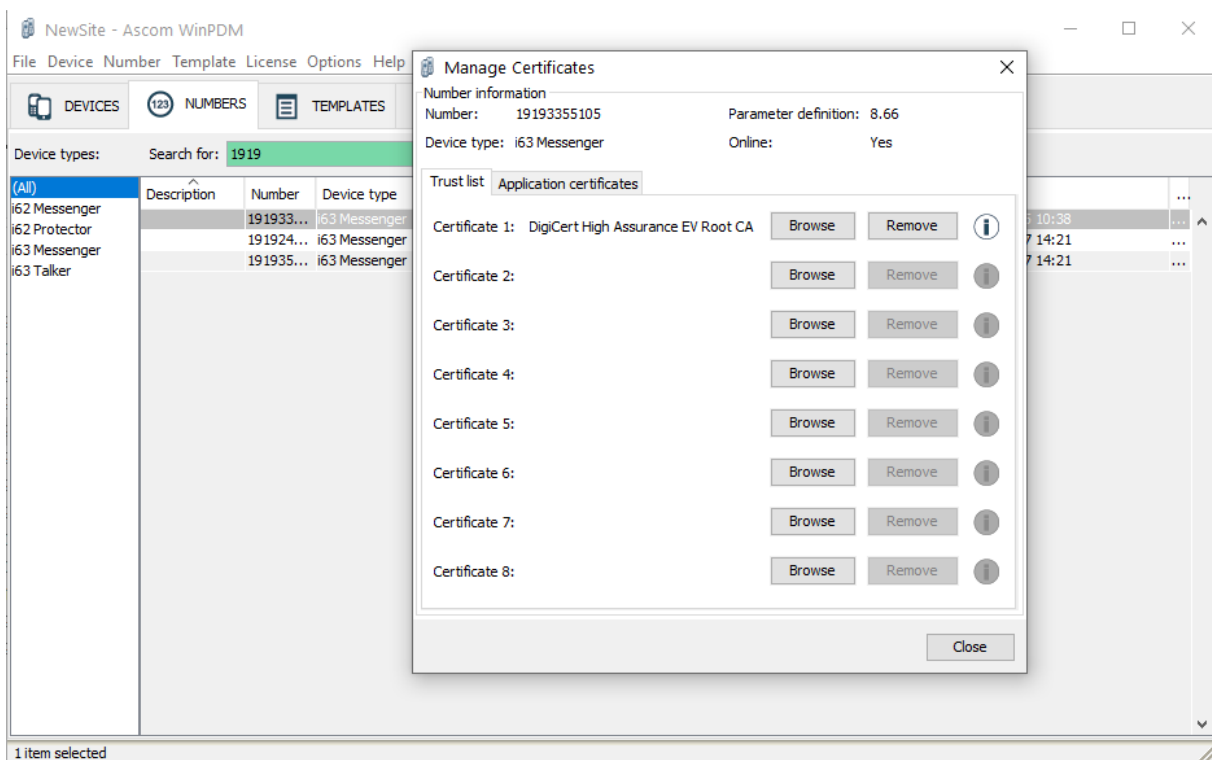
Name	Value	
SIP Transport	TCP	?
Outbound proxy mode	Yes	?
Outbound proxy	sip20.ringcentral.com:5090	?
Listening port	5060	?
SIP proxy ID	sip.ringcentral.com:5060	?
SIP proxy password	*****	?
Send DTMF using RFC 2833 or...	RFC2833	?
Hold type	Inactive	?
Registration identity	Endpoint number	?
Authentication identity	Endpoint ID	?
Call forward locally	No	?
MOH locally	Yes	?
Hold on Transfer	No	?
Direct signaling	No	?
SIP Register Expiration	3600	?
SIP Message behavior	Ignore	?
Disable PRACK	No	?
Far-End NAT Traversal	No	?

OK Cancel

Secure Voice (TLS/SRTP)



Use Ascom Device manager to Upload Certificate to the Trust list



Use Ascom Device manager to Upload Certificate to the Trust list

VoIP settings for SRTP **VoIP > General**.

Edit parameters for 1919 XXX XXXX

Device type: i63 Messenger

Parameter definition: 8.66

Name	Value	
Replace Call Rejected with User Busy	No	?
ICE negotiation	No	?
Codec configuration	G.711 u-law	?
Codec packetization time configuration	20	?
Offer Secure RTP	Yes	?
Secure RTP Crypto	AES_CM_128_HMAC_SHA1_80	?
Internal call number length	0	?
Endpoint number	1919 XXX XXXX	?
Endpoint ID	25905041	?

OK Cancel

SIP settings for Secure SIP VoIP > SIP

Edit parameters for 1919 XXX XXXX ✕

Device type:

Parameter definition:

Name	Value	
SIP TLS client certificate	Self-signed	?
SIP Transport	TLS	?
Validate server certificate	Yes	?
Outbound proxy mode	Yes	?
Outbound proxy	sip20.ringcentral.com:5096	?
Listening port	5060	?
SIP proxy ID	sip.ringcentral.com:5060	?
SIP proxy password	*****	?
Send DTMF using RFC 2833 or SIP INFO	RFC2833	?
Hold type	Inactive	?
Registration identity	Endpoint number	?
Authentication identity	Endpoint ID	?
Call forward locally	No	?
MOH locally	Yes	?
Hold on Transfer	No	?
Direct signaling	No	?
SIP Register Expiration	3600	?
SIP Message behavior	Ignore	?
Disable PRACK	No	?
Far-End NAT Traversal	No	?

General call related settings **Device - Call**

Edit parameters for 1919 XXX XXXX

Device type: i63 Messenger

Parameter definition: 8.66

Name	Value	
In charger call behavior	No action	?
Dial pause time	1	?
Quick answer	No	?
CLIR (Calling Line Identification Restriction)	Off	?
Always show name of incoming party (semi-CLIR)	Show name	?
Left in call soft key name		?
Left in call soft key action	No action	?
Right in call soft key name		?
Right in call soft key action	No action	?
Allow blind transfer	Yes	?
Call waiting behavior	Call waiting indication	?
Call waiting sound	beep	?
PTT Call disconnect warning	No	?
Multi func button for PTT	Off	?
Hide In Call function for PTT calls	No	?
Show missed calls dialog window	Yes	?
Enable call list	On	?

OK Cancel