	Innovation Network App Note
		TPP: 10104 Date: July, 2013
Product: ShoreTel Ascom i62		System version: ShoreTel 13.2

Abstract

The Ascom i62 offers a high class telephony, messaging and alarm solution for enterprise business based on the WiFi technology. With offering Voice over WiFi, only one network is needed to be installed and maintained for all applications running, such as Internet access, e-mail, voice and other business related applications. The latest 802.11n standard provides the benefits of higher throughput and longer range possibilities which will increase the ability to integrate to other systems and build efficient applications. With the new generation networks and handsets the capacity and versatility outperforms any other on-site wireless technology. The Ascom i62 offers a unique management tool with central management concept enabling remote management and SW upgrades of the handsets over the air.

Combining ShoreTel® IP-PBX together with Ascom i62 VoWiFi handsets allows our customers the opportunity to utilize ShoreTel’s unique distributed call control architecture and Ascom’s rugged, feature-rich wireless i62 handsets.

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ShoreTel tests and validates the interoperability of the Member's solution with ShoreTel's published software interfaces. ShoreTel does not test, nor vouch for the Member's development and/or quality assurance process, nor the overall feature functionality of the Member's solution(s). ShoreTel does not test the Member's solution under load or assess the scalability of the Member's solution. It is the responsibility of the Member to ensure their solution is current with ShoreTel's published interfaces.

The ShoreTel Technical Support organization will provide Customers with support of ShoreTel's published software interfaces. This does not imply any support for the Member's solution directly. Customers or reseller partners will need to work directly with the Member to obtain support for their solution.

Overview

This Application Note describes the configuration process necessary to provide interoperability between ShoreTel Unified Communications solution and Ascom wireless i62 VoWiFi Session Initiation Protocol (SIP) handsets. Specific calling features tested and verified to operate correctly include attended/unattended transfer, conference call participation, conference call add/drop, conference call creation, multiple call appearances, caller ID operation, call forwarding unconditional, call forwarding on busy, call forwarding clear, pick groups, call pickup, bridged appearances, voicemail, MWI, hold and return from hold.

Ascom Overview and Contact

Sales support for the Ascom i62 VoWiFi handset can be obtained through the following:

For local US/Canada:

- Phone: 1-877-71ASCOM or 1-877-712-7266
- Internet: <http://www.ascom.us/us-en/index-us/products-solutions/sales-us.htm> (for your Regional Sales Director)
- Email: techsupport@ascomwireless.com (for Technical support)

For international customers:

- Internet: www.ascom.com/ws and select your country of interest, to find local sales and support contact information.



Ascom Product Information

The Ascom i62 is available in three versions based on license, i62 Talker, i62 Messenger and i62 Protector.



Handset/Licence	i62 Talker	i62 Messenger	i62 Protector
Key features			
IP44 and possible to disinfect, perfectly suited for healthcare	✓	✓	✓
Location capabilities	✓	✓	✓
Loud-speaking function	✓	✓	✓
Standard headset connector	✓	✓	✓
Administrate all handsets centrally over-the-air, no need to collect all handsets for configurations or updates	✓	✓	✓
Central phone-book support, always have an up-to-date phone book of all employees and customer contacts	✓	✓	✓
Message receipt during active call		✓	✓
Large font option in messages		✓	✓
Remote control functions, e.g. open doors, set process values or ask for medical data		✓	✓
Push-to-talk, PTT, functionality to quickly set up group calls		✓	✓
Color-coded messages		✓	✓
Receive messages with acknowledge and reject options		✓	✓
Ascom Interactive Messaging - receive interactive message with several answer options		✓	✓
Activated alarm button with two different alarm types			✓
Man-down / no-movement alarm			✓
Several alarm customization possibilities			✓

Architecture Overview

The network diagram shown below illustrates the testing environment used for compliance testing. The network consists of: a ShoreTel ShoreWare® Director, a ShoreTel Personal Call Manager, three different models of ShoreTel IP telephones (IP110, IP230, and IP560), three Ascom wireless i62 handsets, one non wireless non IP telephone, and a wireless network infrastructure providing network services such as Dynamic Host Configuration Protocol (DHCP), Trivial File Transfer Protocol (TFTP) and an access point (AP).

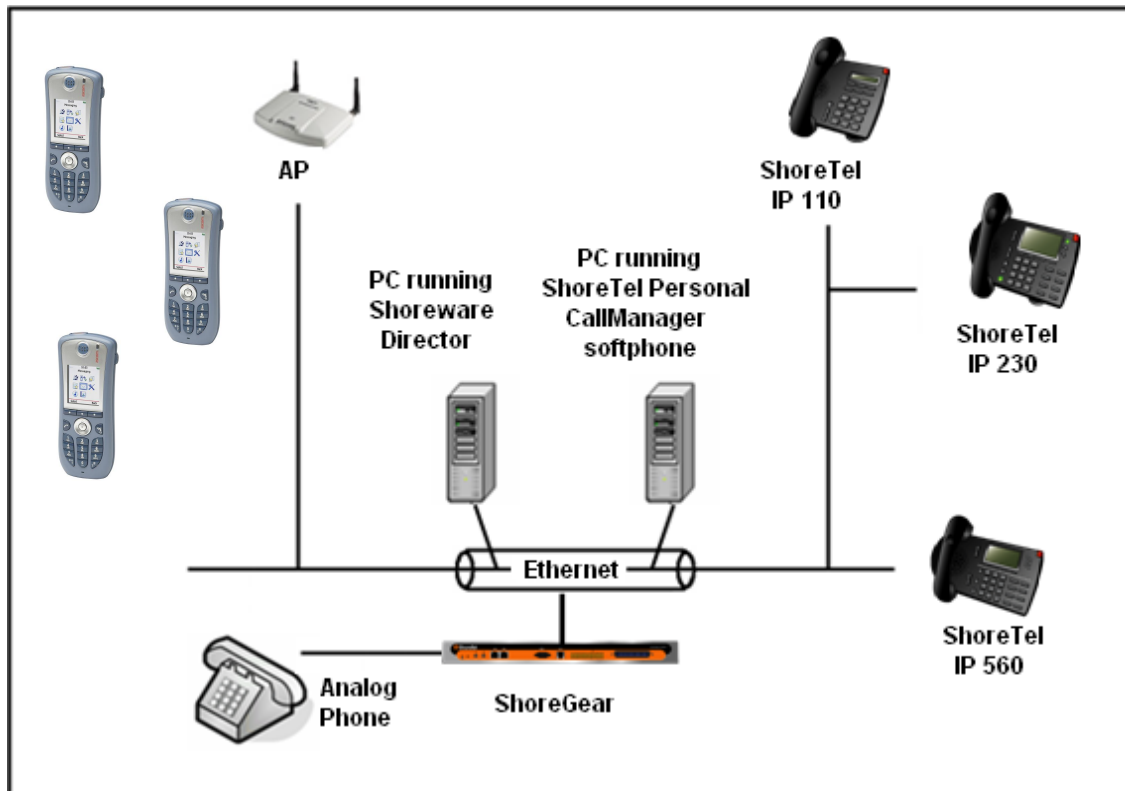


Figure 1 – Testing Environment

Requirements, Certification and Limitations

Ascom Portable Device Manager (PDM) requirements include:

- PC with Windows XP® Professional SP2 or Windows Vista® Business operating system
- Sun Java Runtime Environment (JRE) 6 or higher
- Microsoft Internet Explorer 6.0™ (IE6) or higher
- USB port (USB 1.1 required, USB 2.0 supported)
- Acrobat Reader 4.0 or higher

NOTE: Deployment of Ascom i62 handsets require ShoreTel SIP Phone License(s) (one per Ascom i62 handset) as well as the either the Extension & Mailbox License OR the Extension Only License.

Version Support

		Ascom i62 VoWiFi handset
		4.3.12
ShoreTel Release	13.2 Build 18.42.1304.0 (or above)	✓

Certification Testing Results Summary

Table 1: Basic Test Cases

ID	Name	Description	Results
1.1	Device initialization with static IP address	Verify successful startup and initialization of the device up to a READY/IDLE state using a static IP address	Pass
1.2	Device reset – idle (for static configurations)	Verify successful re-initialization of device after power loss while device is idle	Pass
1.3	Device initialization with DHCP	Verify successful startup and initialization of the device up to a READY/IDLE state using DHCP	Pass
1.4	Device reset – idle (for dynamic configurations)	Verify successful re-initialization of device after power loss while device is idle	Pass
1.5	Verify Diffserv Code Point support	Verify the ability to set Diffserv Code Point from SIP DUT (device under test)	Not Tested
1.6	Verify Date and Time Update support	Verify setting of Date and Time Update on SIP DUT	Pass
1.7	Place call	Verify successful call placement with normal dialing to a variety of terminating phones	Pass
1.8	Receive call	Verify successful call placement with normal dialing to a variety of terminating phones	Pass
1.9	CODEC support (DUT to ShoreTel Phone)	Verify successful call connection and audio path using all supported CODECs (G.711-Ulaw and G.729)	Pass
1.10	CODEC support (DUT to SIP reference)	Verify successful call connection and audio path using all supported CODECs (G.711-Ulaw and G.729)	Pass
1.11	CODEC negotiation	Verify successful negotiation between devices configured with different default CODECs (G.711-Ulaw and G.729)	Pass
1.12	Hold DUT to SIP reference	Verify successful hold and resume of connected call	Pass
1.13	Hold DUT to ShoreTel	Verify successful hold and resume of connected call	Pass
1.14	Forward	Verify successful forwarding of incoming calls	Pass *
1.15	Forward from SIP DUT	Verify successful forwarding of incoming calls	Pass *
1.16	Dual-tone multi-frequency (DTMF) transmission	Verify successful transmission of in-band and out-of-band digits (RFC2833) for calls placed to and from the DUT with a variety of other devices	Pass RFC2833 only



Table 2: Extended Feature Test Cases

ID	Name	Description	Notes
2.1	Call waiting	Verify appropriate notification and successful connection of incoming call while busy with another party	Pass
2.2	Park	Verify successful park and retrieval of connected call	Pass
2.3	Transfer – blind	Verify successful blind transfer of connected call	Pass
2.4	Transfer – monitored	Verify successful monitored transfer of connected call	Pass
2.5	Conference – ad hoc	Verify successful ad hoc conference of three parties	Pass
2.6	Caller ID	Verify that Caller ID name and number is sent and received from SIP endpoint device	Pass **
2.7	911	Verify dialing “911” on DUT could connect with “911” services	Not Tested
2.8	Auto Attendant Menu	Verify that calls are properly terminated on the ShoreTel Auto Attendant menu and that you can transfer to the desired extension.	Pass
2.9	Auto Attendant Menu “Dial by Name”	Verify that calls are properly terminated on the ShoreTel Auto Attendant menu and that you can transfer to the desired extension using the “Dial by Name” feature.	Pass
2.10	Auto Attendant Menu checking Voice Mail mailbox	Verify that calls are properly terminated on the ShoreTel Auto Attendant menu and that you can transfer to the Voice Mail Login Extension.	Pass
2.11	Initiate call to a Hunt Group	Initiate a call from DUT and verify that calls route to the proper Hunt Group and are answered by an available hunt group member with audio in both directions using G.729 and G.711 codecs.	Pass
2.12	Initiate call to a Workgroup	Initiate a call from DUT and verify that calls route to the proper Workgroup and are answered successfully by an available workgroup agent with audio in both directions using G.729 and G.711 codecs.	Pass
2.13	Hunt Group Member	Verify that incoming calls to a hunt group can be answered properly when DUT is a member of the hunt group.	Pass
2.14	Workgroup Agent	Verify that incoming calls to a workgroup can be answered properly when DUT is an agent of the workgroup.	Pass
2.15	Call Forward – “FindMe”	Verify that calls are forwarded to DUT’s “FindMe” destination.	Pass
2.16	ShoreTel Converged Conferencing Server	Verify that calls are properly forwarded to the ShoreTel Converged Conferencing Server and it properly accepts the access code and you’re able to participate in the conference bridge.	Pass
2.17	Bridged Call Appearance (BCA) extension	Verify that calls are properly presented to all of the phones that have BCA configured and that the call can be answered, placed on-hold and then transferred.	Pass

*) Call forwarding was configured from Shoretel GUI (Web Client). Local Call Forward not possible as ShoreTel does not allow 3rd party devices to redirect calls.

**) Caller initiating a call will see only called party’s number and not name. Called party will display the callers name. This applies to internal calls.



Remarks

- Call forwarding has to be done via the ShoreTel user interface.
- The de-registration (Expire=0) that was sent prior to registration after lost WLAN connection is removed from i62 version 2.3.11 and above.
It is still recommended to add the parameter **DelayUnregister=15** to the SIP profile in order to alleviate re-registration issues. Refere to ShoreTel configuration section for details.
- Display information. Caller will see only called party's number.
If A calls B. B will see A's name but A will see only B's number.



Configuration Overview

This document describes the major steps needed to configure the ShoreTel system and the Ascom i62 VoWiFi handset for interoperability.

ShoreTel Configuration

This section describes the ShoreTel system configuration to support the Ascom. The section is divided into general system settings and individual user configuration needed to support the Ascom i62 VoWiFi handsets.

ShoreTel System Settings - General

The first settings to address within the ShoreTel system are the general system settings. These configurations include the call control, the switch and the site settings. If these items have already been configured on the system, skip this section and go on to the “ShoreTel System Settings – Individual Users” section below.

Call Control Settings

The Call Control Options within ShoreWare Director may need to be reconfigured. To configure these settings for the ShoreTel system, log into ShoreWare Director and select “Administration” “Call Control” and then “Options” (Figure 2).

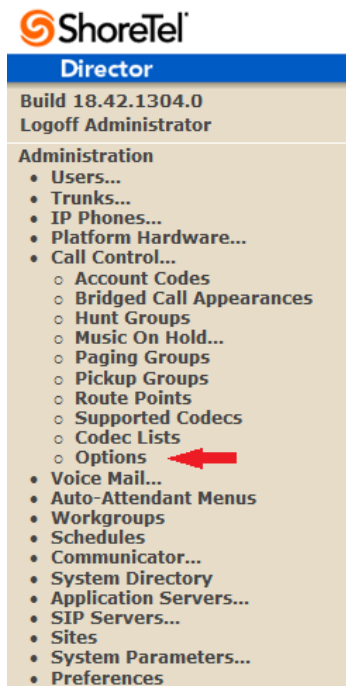


Figure 2 – Administration Call Control/Options

The “Call Control/Options” screen will then appear (**Figure 3**).

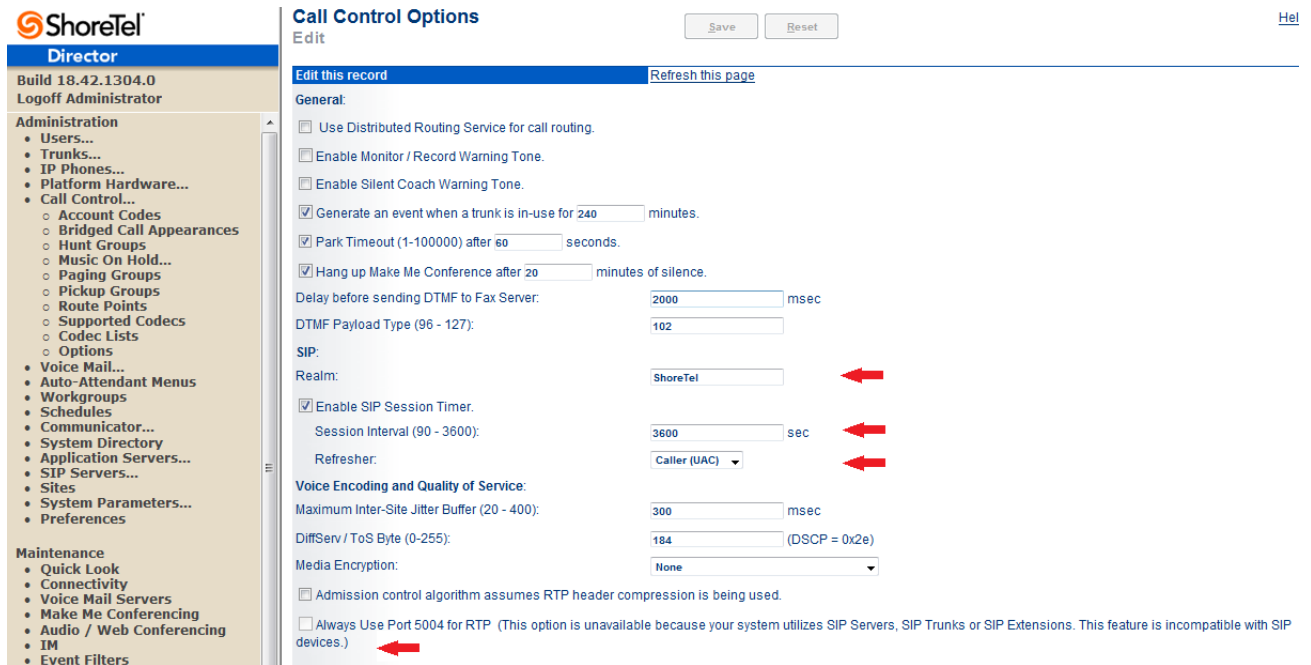
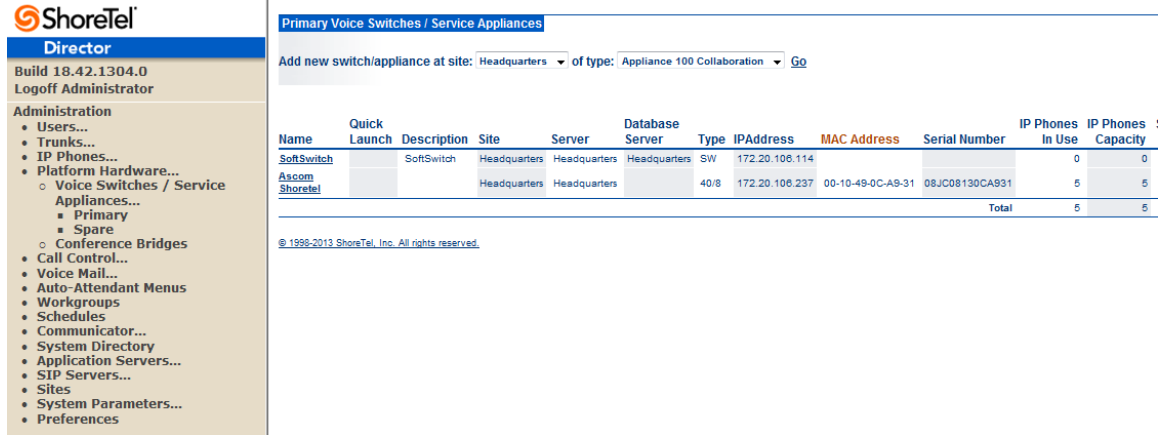


Figure 3 – Call Control/Options Screen

- If this is an upgrade from previous ShoreTel versions, you may see a parameter named “Always Use Port 5004 for RTP.” If so, you will need to disable this parameter by unchecking the box and saving the setting. When enabled, SIP extension configuration will fail. It is also important to note that this “one time” setting requires a system restart (all servers first, then ShoreGear switches followed by IP Phones) to take effect. Once the server has been restarted, this configuration parameter will no longer be visible, or may be grayed out. The default for new installations is disabled, thus the parameter is not visible (as shown in Figure 3).
- Realm: The realm is used in authenticating all SIP devices. It is typically a description of the computer or system being accessed. Changing this value will require reboot of switches serving as SIP extensions. It is not necessary to modify this parameter to get the i62 VoWiFi handsets functional.
- SIP session interval: Session interval value indicates the session (call) “keep alive” period. There is no need to modify the default value of “3600” seconds.
- SIP session refresher: The refresher setting decides if user agent client or user agent server refreshes the session. Again, there is no need to modify the default value of “Caller (UAC).” This allows the i62 VoWiFi handset to be in control of the session timer refresh.

Switch Settings

When allocating Ports for SIP extensions, these changes are modified by selecting “Administration” “Platform Hardware...” followed by “Voice Switches / Service Appliances...”, then “Primary” in ShoreWare Director (**Figure 4**).



The screenshot shows the ShoreTel Director Administration interface. The left sidebar contains a navigation menu with the following items:

- Director
- Build 18.42.1304.0
- Logoff Administrator
- Administration
 - Users...
 - Trunks...
 - IP Phones...
 - Platform Hardware...
 - Voice Switches / Service Appliances...
 - Primary
 - Spare
 - Conference Bridges
 - Call Control...
 - Voice Mail...
 - Auto-Attendant Menus
 - Workgroups
 - Schedules
 - Communicator...
 - System Directory
 - Application Servers...
 - SIP Servers...
 - Sites
 - System Parameters...
 - Preferences

The main content area displays the 'Primary Voice Switches / Service Appliances' screen. It includes a form to add a new switch/appliance and a table of existing switches.

Add new switch/appliance at site: Headquarters of type: Appliance 100 Collaboration Go

Name	Quick Launch	Description	Site	Server	Database Server	Type	IP Address	MAC Address	Serial Number	IP Phones In Use	IP Phones Capacity
SoftSwitch		SoftSwitch	Headquarters	Headquarters	Headquarters	SW	172.20.108.114			0	0
Ascom ShoreTel			Headquarters	Headquarters		40/8	172.20.106.237	00-10-49-0C-A9-31	08JC08130CA931	5	5
Total										5	5

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Figure 4 – Administration/Switches

This action brings up the “Switches” screen. From the “Switches” screen, simply select the name of the switch to configure. The “Edit ShoreGear ...Switch” screen will be displayed. Within the “Edit ShoreGear ...Switch” screen, define one of the “Port Type” settings from the available ports to “100 SIP Proxy” as well as sufficient “IP Phone” ports to support the total number of i62 VoWiFi handsets (**Figure 5**), then save the change.

Note: If your installation requires more than 100 SIP extensions configure the “Port Type” as “100 SIP Proxy” as necessary (i.e., two ports configured for “100 SIP Proxy” will provide 200 SIP extensions). Remember, SIP endpoints also utilize IP Phone Ports.

Voice Switches
Edit ShoreGear 40/8 Switch

Buttons: [New](#) [Copy](#) [Save](#) [Delete](#) [Reset](#)

[Edit this record](#) [Refresh this page](#)

Name:

Description:

Site:

IP Address: [Find Switches](#)

Ethernet Address:

Server to Manage Switch:

Caller's Emergency Service Identification (CESID): (e.g. +1 (408) 331-3300)

Enable Jack Based Music On Hold

ShoreTel LAN 1 LAN 2 MAINT EXT 5 ShoreGear-40/8
Ascom ShoreTel

Port	Port Type	Trunk Group	Description	Jack Number	Location
1	Conference		P01		
2	Conference		P02		
3	Conference		P03		
4	Conference		P04		
5	Edit Extension		Analog Ext 1709		
6	5 IP Phones		P06		
7	100 SIP Proxy		P07		
8	5 SIP Trunks		P08		

Figure 5 – Edit Switches

If the ShoreGear switch that you have selected has “built-in” capacity (i.e., ShoreGear 50/90/220T1/E1, etc.) for IP phones and SIP trunks, you can also remove 5 ports from the total number available to provide the “100 SIP Proxy” configuration necessary (**Figure 6**).

Note: Every 5 ports you remove from the total available will result in “100 SIP Proxy” ports being made available.

One dedicated ShoreGear 120 switch can act as a proxy for the entire site and support up to 2400 SIP phones.

Switches
Edit ShoreGear 90 Switch

New Copy Save Delete Reset

Edit this record Refresh this page

Name: HQ-SG90

Description: HQ-SG90

Site: Headquarters

IP Address: 10.23.102.100 Find Switches

Ethernet Address: 00-10-49-07-27-CE

Server to Manage Switch: Headquarters

Caller's Emergency Service Identification (CESID): +1 (509) 921-2221 (e.g. +1 (408) 331-3300)

Built-in Capacity: IP Phone + SIP Trunk = Total
20 + 5 = 25 of 30 (100 SIP proxy ports) ←

Music On Hold Source
Music On Hold Gain (-49 to 13): 5 dB

Use Analog Extension Ports as DID Trunks


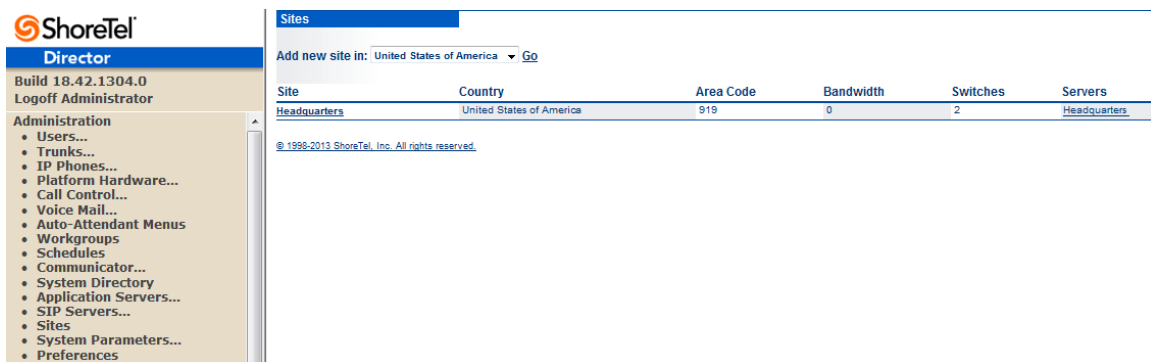


Figure 6 – ShoreGear Switch Built-in Capacity

Sites Settings

The next settings to address are the administration of sites. These settings are modified under the ShoreWare Director by selecting “**Administration**” then “**Sites**” (Figure 7).



ShoreTel Director
Build 18.42.1304.0
Logoff Administrator

Administration

- Users...
- Trunks...
- IP Phones...
- Platform Hardware...
- Call Control...
- Voice Mail...
- Auto-Attendant Menus
- Workgroups
- Schedules
- Communicator...
- System Directory
- Application Servers...
- SIP Servers...
- Sites
- System Parameters...
- Preferences

Sites

Add new site in: United States of America Go

Site	Country	Area Code	Bandwidth	Switches	Servers
Headquarters	United States of America	919	0	2	Headquarters

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Figure 7 – Administration/Sites

This selection brings up the “Sites” screen. Within the “Sites” screen, select the name of the site to configure. The “Edit Site” screen will then appear. Scroll down to the “SIP Proxy” parameters (Figure 8).

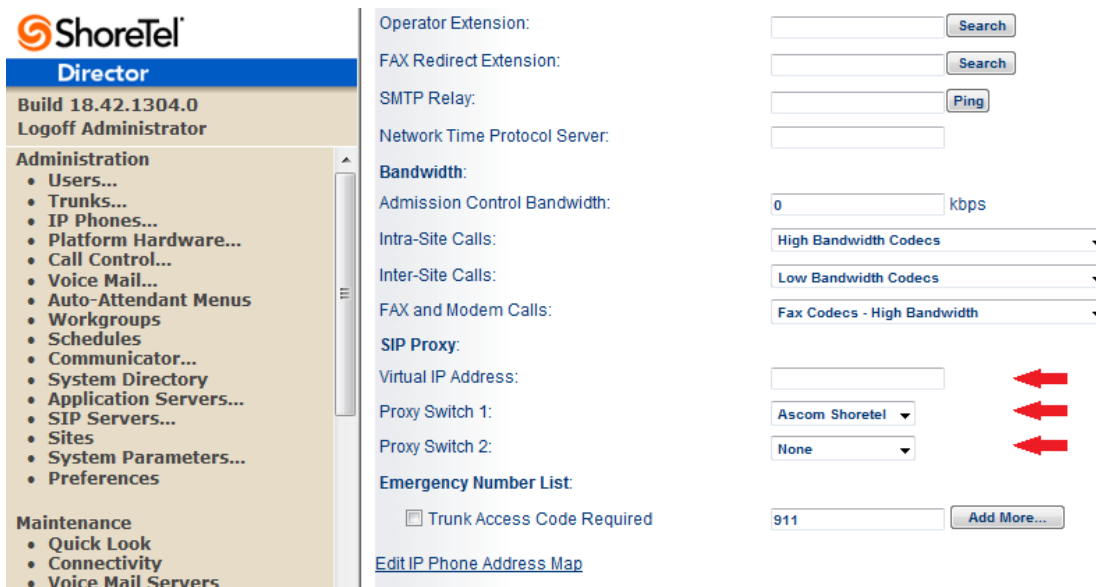


Figure 8 – Site Screen SIP Proxies

The “Virtual IP Address” parameter is a new configuration parameter beginning with ShoreTel 8. This “Virtual IP Address” is an IP address that can be moved to a different switch during a failure. For each site that supports SIP extensions, one “Virtual IP Address” is defined that will act as the SIP Proxy for the site. This IP address must be unique and static.

The ShoreTel server will assign this “Virtual IP Address” to the ShoreGear that is configured as SIP proxy for the site. Two ShoreGear switches can be configured as SIP proxy servers for redundancy and reliability purposes. If the primary proxy server goes down, the other proxy switch will take over the “Virtual IP Address.” Due to this “Virtual IP Address” mechanism, SIP phones will not know if the proxy switch goes off-line.

Note: If you choose not to define a “Virtual IP Address,” you can only define one proxy switch, and there is no redundancy or failover capabilities. The switches available in the “Proxy Switch 1 / 2” will only be shown if proxy resources have been enabled on the switch.

The Admission Control Bandwidth defines the bandwidth available to and from the site. This is important as SIP endpoints may be counted against the site bandwidth. See the ShoreTel Planning and Installation Guide for more information about this.

Beginning with ShoreTel 8.1, we now add 11 CODECs by default. These CODECs can be grouped as “Codec Lists” and defined in the sites page for “Inter-site” and “Intra-site” calls. See ShoreTel’s

Administration Guide for more information. The default settings will work properly with the Ascom i62 VoWiFi handsets.

Creating SIP Extension

You need to create a user extension for the Ascom i62 VoWiFi handset. This is accomplished from ShoreWare Director by selecting “**Administration**” followed by “**Users...**” then “**Individual Users**” This action will bring up the “Individual Users” screen at the top of the page. To the right of “**Add new user at site:**” select the site you wish to create the user in (from the drop down menu), and select “**Go**” (Figure 9).

The screenshot shows the ShoreTel Director interface. On the left is a navigation sidebar with the following menu items: Administration, Users..., Individual Users (highlighted with a red arrow), User Groups, Class of Service, Anonymous Telephones, Extension Lists, Batch Update Utility, Call Handling Mode Defaults..., Trunks..., IP Phones..., Platform Hardware..., Call Control..., and Voice Mail... The main content area is titled 'Individual Users' and includes a 'Help' link. Below the title is a form to 'Add new user at site:' with a dropdown menu set to 'Headquarters' and a 'Go' button. Below that is a 'Show page:' dropdown set to '1 : Analog - ShoreTel230', navigation buttons, and a display of '6 Records' with a '25' per page dropdown and an 'Export to Excel' link. A table lists the following users:

First Name	Last Name	Site	User Group	Access License	Extension	Mailbox	Switch	Port	Status
Analog	Ext 1709	Headquarters	Executives	Personal	1709	1709	Ascom Shoretel	5	Home
AscomPhone1	x1703	Headquarters	Codes required	Personal	1703	1703	SoftSwitch		Assigned
AscomPhone2	x1704	Headquarters	Executives	Personal	1704	1704	SoftSwitch		Assigned
AscomPhone3	x1705	Headquarters	Executives	Personal	1705	1705	SoftSwitch		Assigned
ShoreTel230	One	Headquarters	Executives	Personal	1701	1701	Ascom Shoretel	00-10-49-0A-F5-90	Home
ShoreTel230	Two	Headquarters	Executives	Personal	1702	1702	Ascom Shoretel	00-10-49-0A-F5-8F	Home

At the bottom of the page, it says: © 1998-2013 ShoreTel, Inc. All rights reserved.

Figure 9 – Individual Users Settings

This action brings up the “Users” “Edit Users” screen (Figure 10).

Figure 10 – Adding/Editing Users

Define the “**First Name**” and “**Last Name**” as you deem appropriate. ShoreWare Director will auto-assign the next available “**Number**” (i.e. extension), but you can modify it to any available extension. Define the “**License Type**” and “Access License” type as needed; in this example we chose “Extension and Mailbox” although it’s not necessary to have a mailbox, and “Professional” for “Access License”. Define the proper “**User Group**” and set the “**Primary Phone Port**” to “Any IP Phone.” , the Primary Phone Port will automatically update once the Ascom i62 handset registers to the ShoreTel system.

Note: If you configured the “License Type” for “Extension-Only,” you cannot select “Any IP Phone” but instead must set the “Home Port” for the “SoftSwitch” selection. Save your changes, then scroll down to the “**SIP Password:**” section (**Figure 11**).

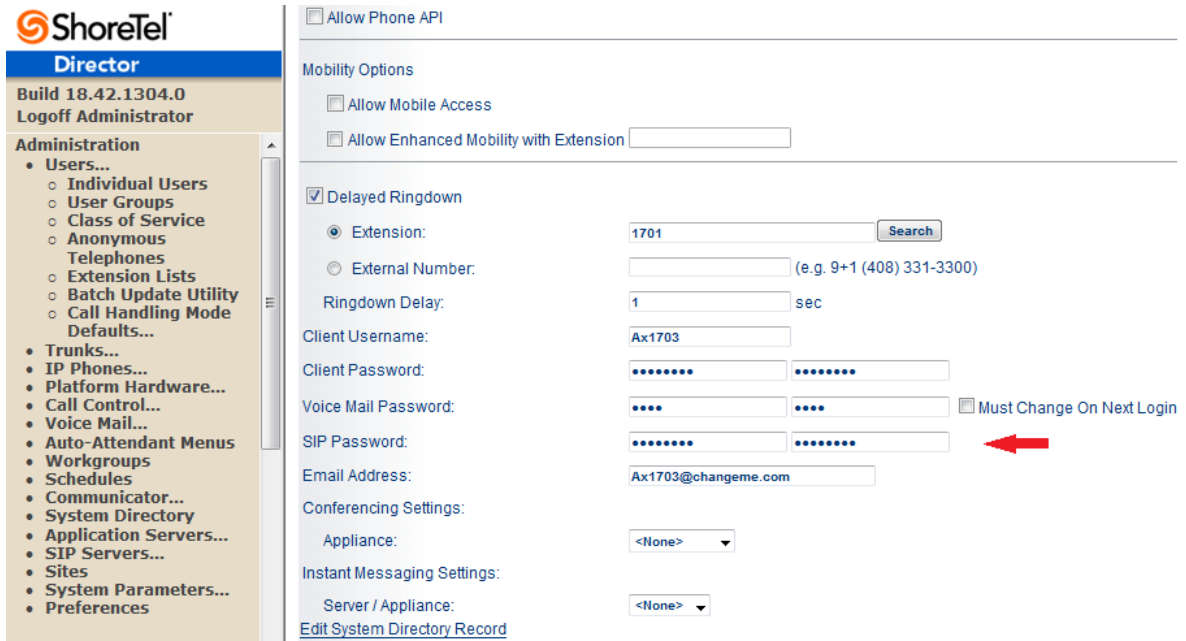


Figure 11 – Individual User SIP Settings

There is no default “**SIP Password**” it is masked with the appearance that there is, but don’t be confused to think that there’s a default password. You can modify it to any value you wish, but be certain to note what you changed it to, as you will need it when configuring the i62 VoWiFi handset parameters. **Save** your changes.

SIP Profiles

ShoreWare Director’s “Call Control...” section contains an “SIP Profiles” option. ShoreTel 12.1 comes standard with a “_System” and “_ShorePhoneIP8000” SIP profiles (they cannot be deleted - only disabled). By default, the Ascom i62 VoWiFi handsets utilize the “_System” profile. In order to optimize the functionality, you will need to add a custom profile. This is accomplished from ShoreWare Director by selecting “**Administration**” followed by “**IP Phones...**” then “**SIP Profiles**” This action brings up the “SIP Profiles” screen. At the top of the page, below the “SIP Profiles List” , select the “**New...**” radio button, as shown in **Figure 12**.

SIP Profiles [Help](#)

SIP Extension Profiles 0 records checked.

<input type="checkbox"/>	Name	User Agent	Enabled	Priority
<input type="checkbox"/>	Ascom DECT	Ascom IP-DECT	Yes	100
<input type="checkbox"/>	Ascom i62	Ascom i62	Yes	100
<input type="checkbox"/>	Ascom i75	Ascom i75	Yes	100
<input type="checkbox"/>	RoamAnywhere Client	^ShoreTelMR.*^AgitoRAMR.*	Yes	50
<input type="checkbox"/>	ShorePhone IP8000	^ShoreTel/ST_PH1_[2-6].[0-9].[0-9]([0-9])\$	Yes	50
<input type="checkbox"/>	System	*	Yes	10

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Figure 12 – SIP Profiles

This action brings up the “Edit SIP Profile” screen, Figure 13.

SIP Profile

Edit SIP Extension Profile

Edit this record [Refresh this page](#)

Name:

User Agent:

Priority:

Enable

System Parameters: OptionsPing=0
SendEarlyMedia=0
MWI=none
1CodecAnswer=1
StripVideoCodec=0

Custom Parameters: OptionsPing=1
MWI=notify
FakeDeclineAsRedirect=1
XferFailureNotSupported=1
AddGracePeriod=90
DelayUnregister=15

Warning! Please use ShoreTel's recommended SIP profile configurations to ensure optimal functionality. Improper customization may lead to faulty operation of telephone features.

Figure 13 – Edit SIP Profile

Define a “**Name:**” for the entry, and be sure to define an appropriate name. For the “**User Agent:**” option, enter “Ascom i62.*” (without quotes); the “**Priority:**” defaults to 100, no change is required. Enable the profile by checking (enabling) the “**Enable**” option. In the “**Custom Parameters:**” options, add the following entries:

OptionsPing=0
MWI=notify
FakeDeclineAsRedirect=1
XferFailureNotSupported=1
AddGracePeriod=90
DelayUnregister=15

Save the changes.

Note: Please do not disable any of the default SIP profiles. In case there are issues with the custom profile defined, disabling the system profiles may cause the Ascom i62 VoWiFi handsets to not be added to the ShoreTel system. Refer to the ShoreTel's Planning and Installation Guide for more information.

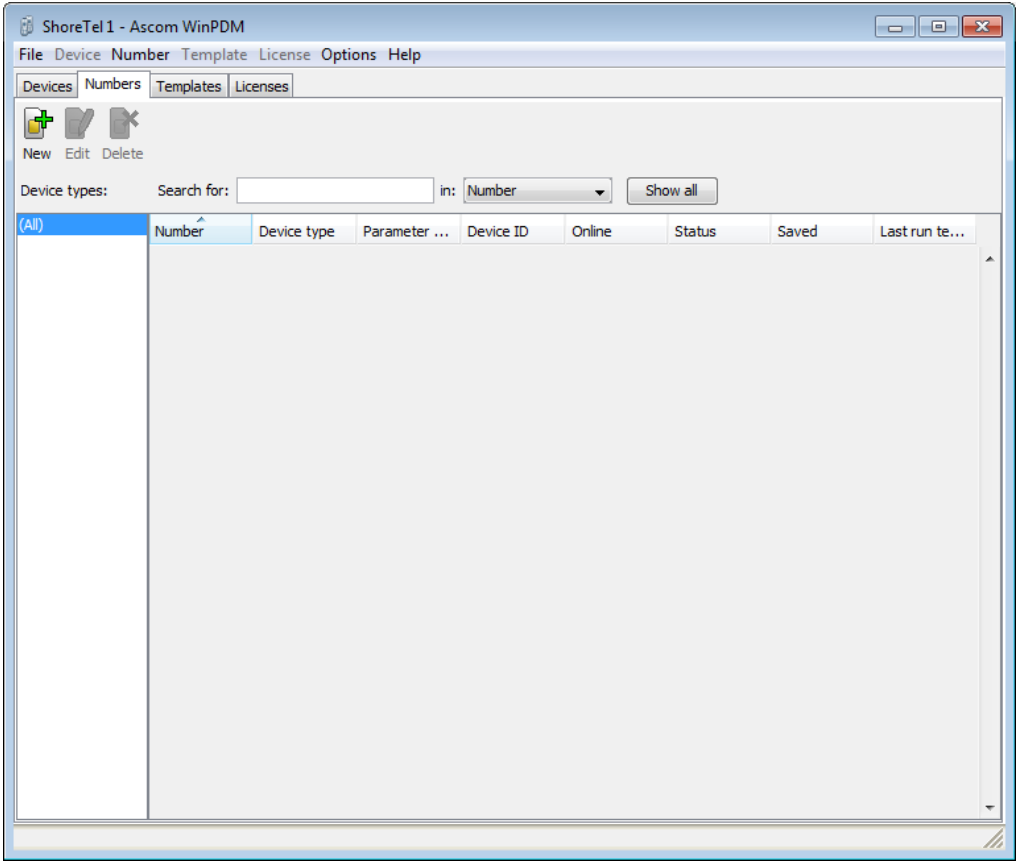
IP address Phone Map

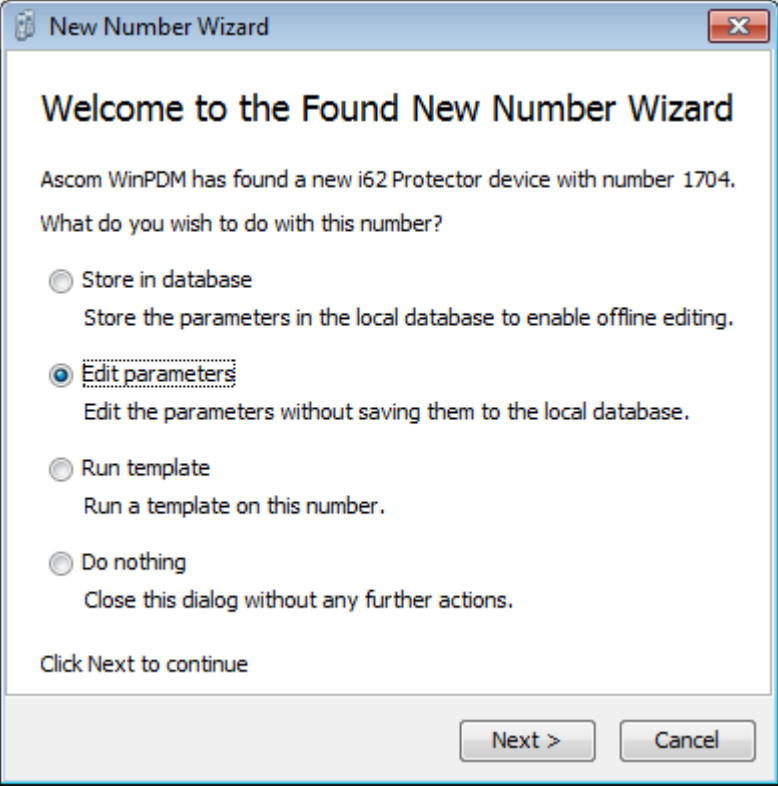
If you plan on adding Ascom i62 VoWiFi handsets at a different site, you will need to create an "IP Address Phone Map". Create an "IP Address Phone Map". You can do so via ShoreWare Director, navigating to the "**Administration**" "**IP Phones...**" "**IP Address Phone Map**" screen, then adding an entry for the desired site, with the IP address range of the i62 VoWiFi handsets. For more information on creating sites and adding switches, please refer to the ShoreTel Planning and Installation Guide.

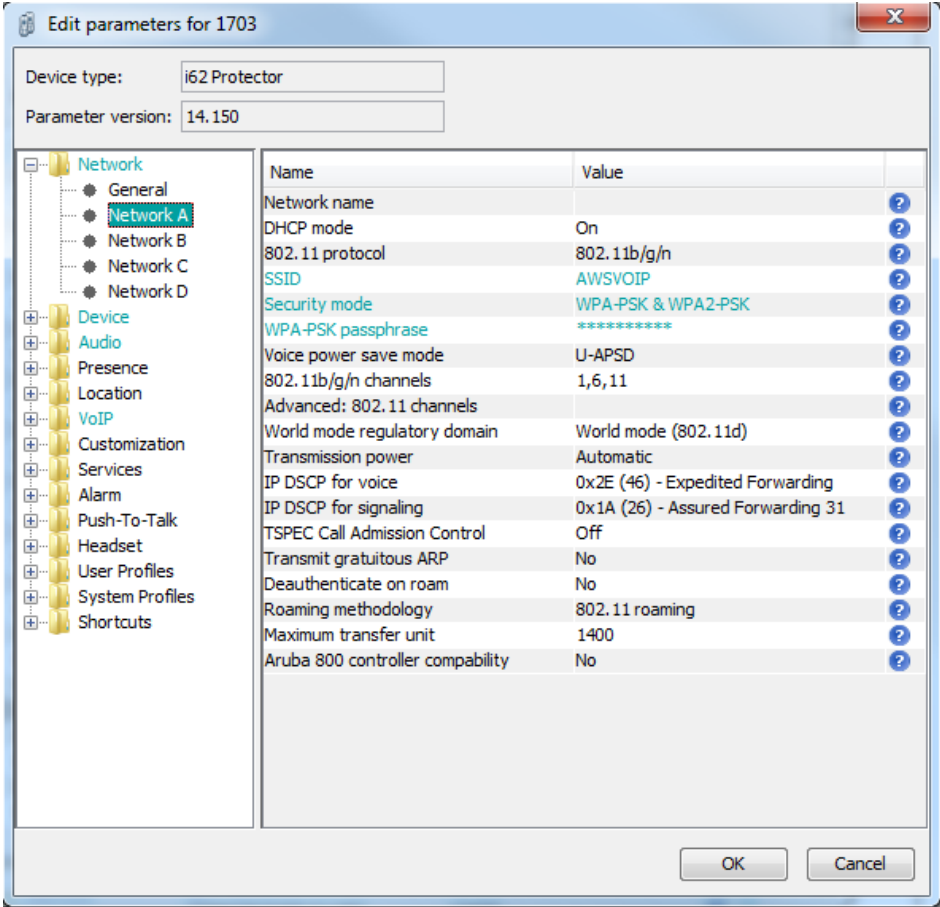
This completes all of the ShoreTel configuration parameters necessary to install the Ascom i62 VoWiFi handsets.

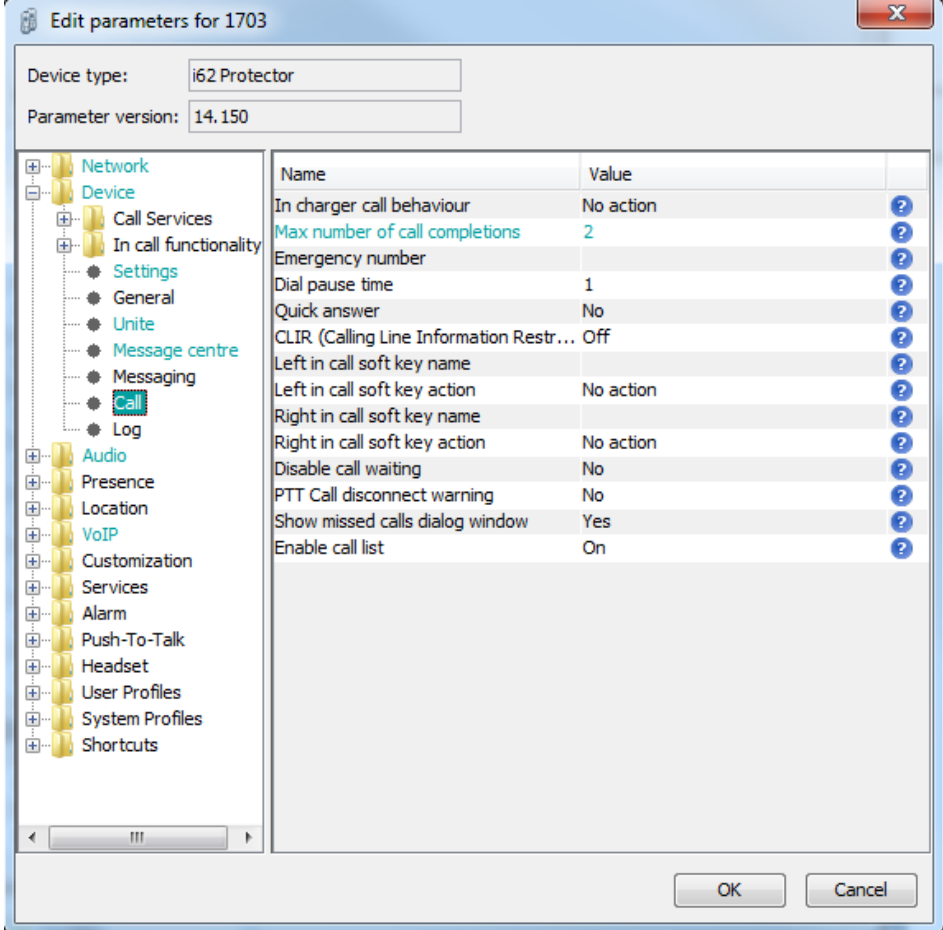
Ascom Configuration

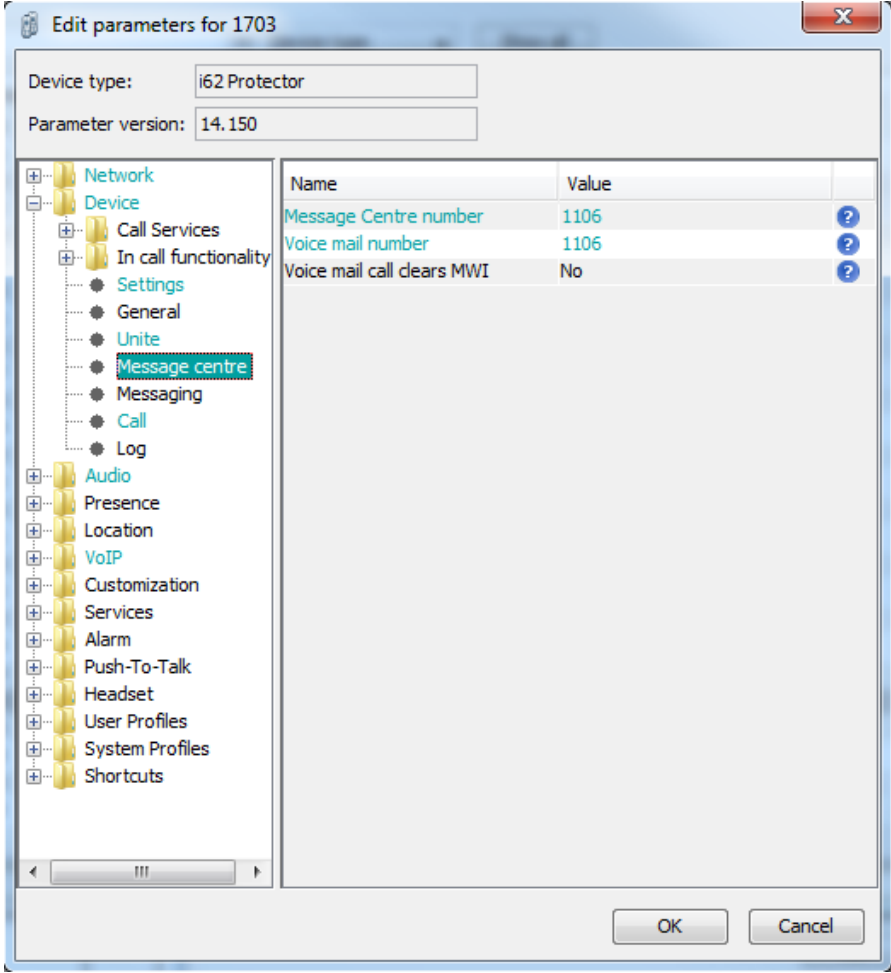
The following steps detail the configuration process for the Ascom i62 VoWiFi handset using the Ascom Portable Device Manager (PDM) Windows-based application.

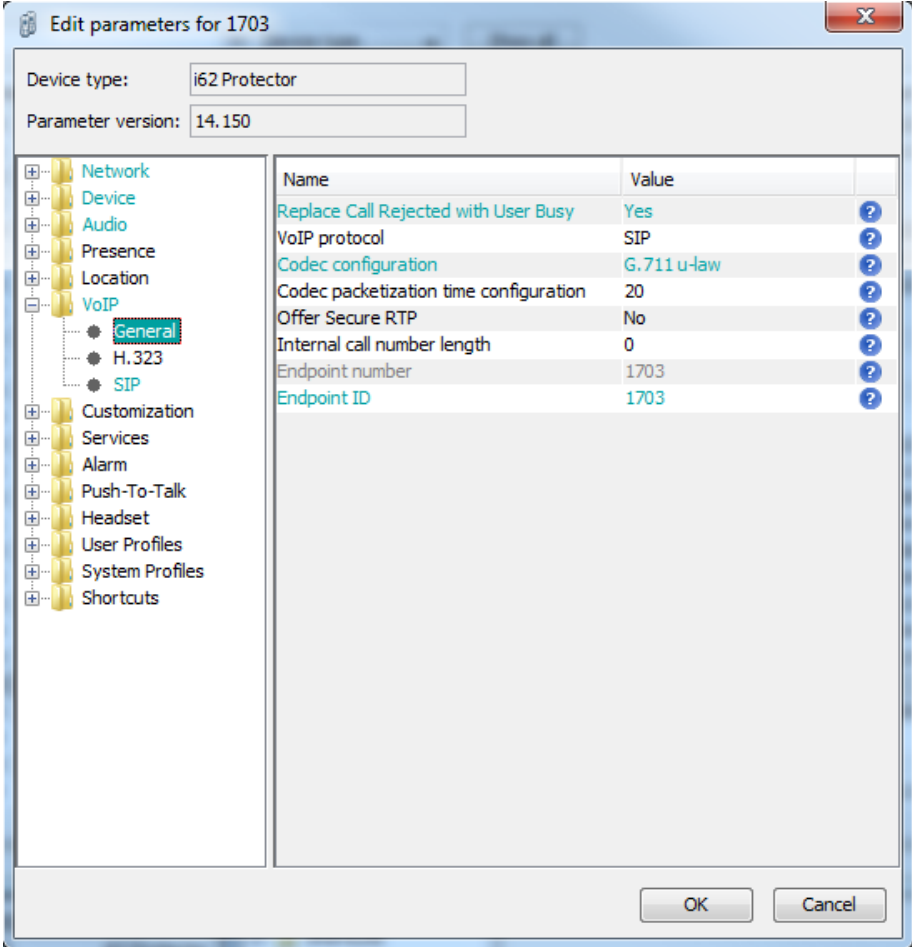
Step	Description
1	<p>Launch the PDM application from the computer that has the application installed and has the PDM cradle physically attached via a USB cable. Before the user is presented with the following screen, a login is required. See Section 10 [3] for administration and configuration information on the PDM.</p> <p>After the user has logged onto the PDM, the following screen is displayed showing the devices found in the database. Since no devices have been plugged into the PDM, none are shown at this time.</p> 

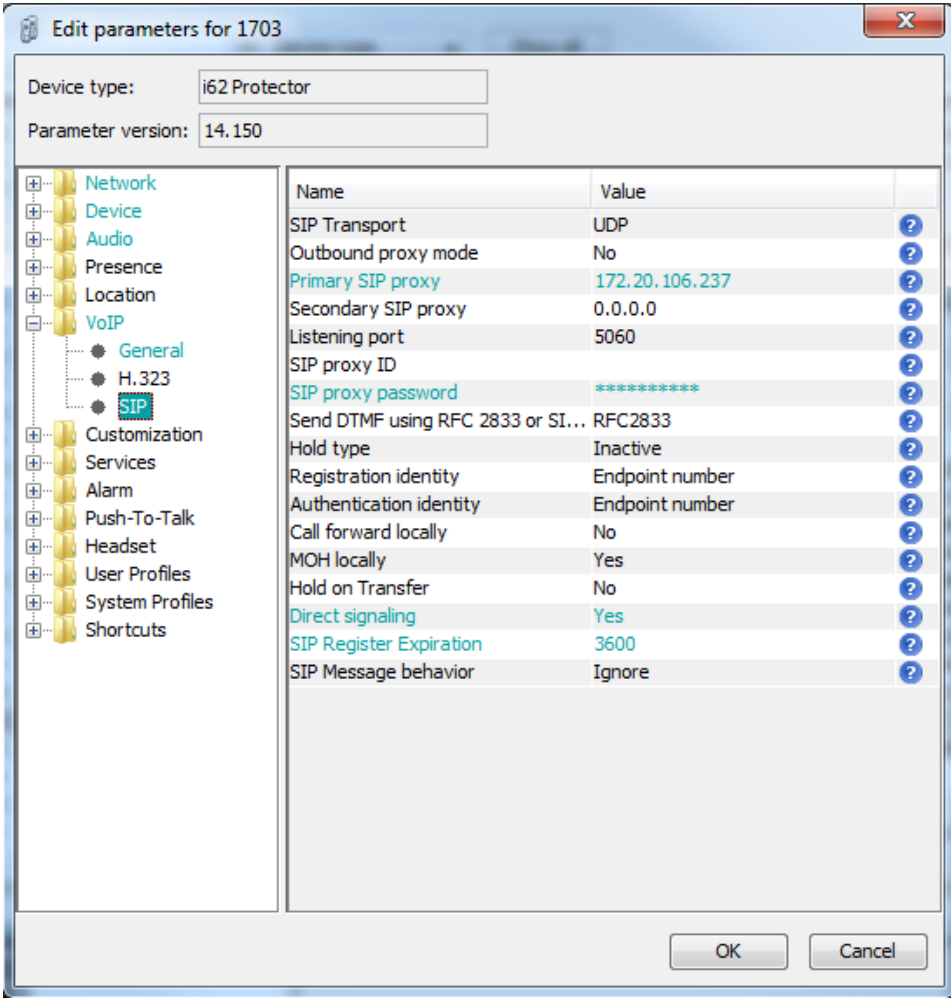
Step	Description
2	<p>Once an Ascom i62 portable handset is placed into the cradle, the PDM recognizes the telephone and cross references the database of telephones. If the telephone is not found in the database, the PDM prompts the user to save the new telephone to the database. Click the radio button labeled Edit parameters and then click Next.</p> 

Step	Description
3	<p>Navigate to the “System -> A” configuration page by clicking System and then A. Configure the following parameters. These settings should be repeated for each Ascom i62 VoWiFi handset being provisioned. The ESSID field value must match the ESSID value specified in the AP.</p> <p>Note: Below is a typical configuration utilizing. Different Security modes might be used.</p> <p>SSID: AWSVOIP2</p> <p>Security mode: WPA2-PSK</p> <p>IP DSCP for voice “0x2e (46) – Expedited Forwarding”</p> <p>IP DSCP for signaling “0x1A (26) – Assured Forwarding 31”</p> 

Step	Description
4	<p>Navigate to the “Device -> General” configuration page by clicking Device and then Call.</p> 

Step	Description
5	<p>Navigate to the “Device -> Message Centre” configuration page by clicking Device and then Message Centre.</p> <p>Enter the number to the Voice Mail at both Message centre number and at Voice mail number. Voice mail number will speed dial the specified VM number when long pressing button no 1.</p> 

Step	Description
6	<p>Navigate to the “VoIP/General” configuration page by clicking VoIP and then General. Configure the following parameters.</p> <p>Replace Call Rejected with User Busy: Enable. If this value is not set correctly, certain calling features such as transfer will not operate properly.</p> <p>VoIP protocol “SIP”</p> <p>Coder configuration “G.711 u-law”</p> <p>Endpoint number – This is the extension associated with the Ascom i62 VoWiFi handset being provisioned. This setting should be repeated for each Ascom i62 VoWiFi handset being provisioned.</p> 

Step	Description																																				
7	<p>Navigate to the “VoIP / SIP” configuration page by clicking VoIP and then SIP. Configure the following information and then click OK. The SIP proxy password field must match the Media Server Extension password configured on ShoreTel IP-PBX. Once the information has been configured, the PDM reports the information as *****. After clicking OK, pick up the telephone from the PDM cradle in order to reboot the handset and activate the new configuration.</p> <p>The following screen shot shows: SIP proxy IP address “172.20.106.237” SIP proxy password “*****” Direct signaling: Enabled SIP Registration Expiration: 3600</p>  <table border="1" data-bbox="350 800 1295 1791"> <caption>Edit parameters for 1703</caption> <thead> <tr> <th>Name</th> <th>Value</th> </tr> </thead> <tbody> <tr><td>SIP Transport</td><td>UDP</td></tr> <tr><td>Outbound proxy mode</td><td>No</td></tr> <tr><td>Primary SIP proxy</td><td>172.20.106.237</td></tr> <tr><td>Secondary SIP proxy</td><td>0.0.0.0</td></tr> <tr><td>Listening port</td><td>5060</td></tr> <tr><td>SIP proxy ID</td><td></td></tr> <tr><td>SIP proxy password</td><td>*****</td></tr> <tr><td>Send DTMF using RFC 2833 or SI...</td><td>RFC2833</td></tr> <tr><td>Hold type</td><td>Inactive</td></tr> <tr><td>Registration identity</td><td>Endpoint number</td></tr> <tr><td>Authentication identity</td><td>Endpoint number</td></tr> <tr><td>Call forward locally</td><td>No</td></tr> <tr><td>MOH locally</td><td>Yes</td></tr> <tr><td>Hold on Transfer</td><td>No</td></tr> <tr><td>Direct signaling</td><td>Yes</td></tr> <tr><td>SIP Register Expiration</td><td>3600</td></tr> <tr><td>SIP Message behavior</td><td>Ignore</td></tr> </tbody> </table>	Name	Value	SIP Transport	UDP	Outbound proxy mode	No	Primary SIP proxy	172.20.106.237	Secondary SIP proxy	0.0.0.0	Listening port	5060	SIP proxy ID		SIP proxy password	*****	Send DTMF using RFC 2833 or SI...	RFC2833	Hold type	Inactive	Registration identity	Endpoint number	Authentication identity	Endpoint number	Call forward locally	No	MOH locally	Yes	Hold on Transfer	No	Direct signaling	Yes	SIP Register Expiration	3600	SIP Message behavior	Ignore
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Ascom Troubleshooting

For troubleshooting of the Ascom i62 handset, see the following Ascom documentation:

User Manual – Ascom i62 VoWiFi Handset TD92597GB

Configuration Manual – Ascom i62 VoWiFi Handset 92675GB

Ascom Technical Support

Technical support for the Ascom i62 VoWiFi handset can be obtained through the following:

For local US/Canada support:

- **Phone:** 1-877-71ASC0M or 1-877-712-7266
- **Email:** techsupport@ascomwireless.com (for Technical support)

For world wide support:

- **Phone:** 46 31 55 9450
- **Email:** support@ascom.se (for Technical support)

For international customer:

- **Internet:** www.ascom.com/ws and select your country of interest, to find local sales and support contact information.

ShoreTel Technical Support

ShoreTel technical support can be obtained through the following:

- **Phone:** +1 800 742-2348
- **Web:** www.support.shoretel.com



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