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# **Cisco BroadWorks**

# **Partner Configuration Guide**

Ascom IP-DECT IPBS2-A3/1B1

September 2020 Document Version 1.2

# Cisco<sup>®</sup> Guide

### Notification

BroadSoft BroadWorks has been renamed to Cisco BroadWorks. You will begin to see the Cisco name and company logo, along with the new product name on the software, documentation, and packaging. During the transition process, you may see both BroadSoft and Cisco brands and former product names. These products meet the same high standards and quality that both BroadSoft and Cisco are known for in the industry.

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# **Document Revision History**

Version	Reason for Change
1.1	Introduced document for Ascom IP-DECT IPBS2-A3/1B1 version 11.1.5
1.2	Completed document with comments

### **Table of Contents**

1	Overview	6
2	Interoperability Status	7
2.1	VerifiedVersions	7
2.2	Interface Capabilities Supported	7
	2.2.1 SIP Interface Capabilities	8
	2.2.2 Other Interface Capabilities	13
2.3	Known Issues	177
3	Cisco BroadWorks Configuration	18
3.1	Cisco BroadWorks Device Profile Type Configuration	18
3.2	Cisco BroadWorks Configuration Steps	18
4	Ascom IP-DECT Configuration	20
5	Device Management	233
5.1	Device Management Capabilities Supported	23
5.2	Device Management Configuration	26
	5.2.1 Configure Cisco BroadWorks Tag	26
	5.2.2 Configure Cisco BroadWorks Device Profile Type	28
	5.2.3 Create Device Profile Instance	33
	5.2.4 Configure Cisco BroadWorks User	34
	5.2.5 Configure Ascom IP-DECT	34
Арр	pendix A: Reference Ascom IP-DECT Configuration File	36
Refe	erences	40

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# **Table of Figures**

Figure 1	Device Identity/Profile Type	18
Figure 2	DUT Configuration for BroadWorks Usage	20
Figure 3	DUT User Configuration	21
Figure 4	Codec & SRTP Configuration	21
Figure 5	Call Functionality Configuration	22
Figure 6	System Default Tag Settings	27
Figure 7	Device Access FQDN	29
Figure 8	Dynamic Per-Device File Example	32
Figure 9	Static File Example	33
Figure 10	0 Device Profile Instance	
Figure 1	1 DMS/XSI Configuration	35
-	-	

#### 1 Overview

This guide describes the configuration procedures required for connecting the Ascom IP-DECT IPBS2-A3/1B1 to the Cisco BroadWorks system. The IP-DECT IPBS2-A3/1B1 is designed for North American usage.

The Ascom IP-DECT device uses the Session Initiation Protocol (SIP) to communicate with Cisco BroadWorks for call control. The Ascom IP-DECT supports the following infrastructure with BroadWorks:

- IPBS1
- IPBS2
- IPBS3
- IPBL

The Ascom IP-DECT is comprised of the following IP-DECT handsets:

- d41/d62/d81 (Talker, Messenger and Protector variants)
- d63 (Talker, Messenger and Protector variants)

This guide describes the specific configuration items that are important for use with Cisco BroadWorks. It does not describe the purpose and use of all configuration items on the Ascom IP-DECT products. Throughout this guide, the term IP-DECT shall be used to refer to the device under test, or DUT.

### 2 Interoperability Status

This section provides the known interoperability status of the Ascom IP-DECT with Cisco BroadWorks. This includes the version(s) tested, capabilities supported and known issues.

Interoperability testing validates that the device interfaces properly with Cisco BroadWorks via the SIP interface. Qualitative aspects of the device or device capabilities not affecting the SIP interface such as display features, performance, and audio qualities are not covered by interoperability testing. Requests for information and/or issues regarding these aspects should be directed to Ascom.

#### 2.1 Verified Versions

The following table identifies the verified Ascom IP-DECT and Cisco BroadWorks versions and the month/year the testing occurred. If the device has undergone more than one test cycle, versions for each test cycle are listed, with the most recent listed first.

*Compatible Versions* in the following table identify specific Ascom IP-DECT versions, which the partner has identified as compatible and they should interface properly with Cisco BroadWorks. Generally, maintenance releases of the validated version are considered compatible and are not specifically listed here. For any questions concerning maintenance and compatible releases, contact Ascom.

**NOTE**: Interoperability testing is usually performed with the latest generally available (GA) device firmware/software and the latest GA Cisco BroadWorks release and service pack at the time the testing occurs. If there is a need to use a non-verified mix of Cisco BroadWorks and device software versions, customers can mitigate their risk by self-testing the combination themselves using the *BroadWorks SIP Phone Interoperability Test Plan* [4].

Verified Versions				
Date (mm/yyyy)	Cisco BroadWorks Release	DECT Verified Version	DECT Compatible Versions	
9/2020	Release 23.0	Ascom IP-DECT Base Station IPBS2-A3/1B1 11.1.5	Any maintenance revision of the validated releases.	

#### 2.2 Interface Capabilities Supported

This section identifies interface capabilities that have been verified through testing as supported by Ascom IP-DECT Base Station.

The *Supported* column in the tables in this section identifies the Ascom IP-DECT support for each of the items covered in the test plan, with the following designations:

- Yes Test item is supported
- No Test item is not supported
- NA Test item is not applicable to the device type

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NT Test item was not tested

Caveats and clarifications are identified in the Comments column.

#### 2.2.1 SIP Interface Capabilities

The Ascom IP-DECT Base Station has completed interoperability testing with Cisco BroadWorks using the *BroadWorks SIP Phone Interoperability Test Plan* [4]. The results are summarized in the following table.

The Cisco BroadWorks test plan is composed of packages, each covering distinct interoperability areas, such as "Basic" call scenarios and "Redundancy" scenarios. Each package is composed of one or more test items, which in turn are composed of one or more test cases. The test plan exercises the SIP interface between the device and Cisco BroadWorks with the intent to ensure interoperability sufficient to support the Cisco BroadWorks feature set.

**NOTE**: *DUT* in the following table refers to the *Device Under Test,* which in this case is the Ascom IP-DECT.

Cisco BroadWorks SIP Phone Interoperability Test Plan Support Table			
Test Plan Package	Test Plan Package Items	Supported	Comments
Basic	Call Origination	Yes	
	Call Termination	Yes	
	Session Audit	Yes	Must Disable ICE on DECT to function properly for Call HELD Session Audit.
	Ringback	No	DUT sending of PRACK causes issues with signaling process. (No 200 OK received)
	Forked Dialog	NT	
	181 Call Being Forwarded	Yes	
	Dial Plan	Yes	
	DTMF – Inband	No	DUT only supports SIP INFO or RFC 2833.
	DTMF – RFC 2833	Yes	Tested with G729 & G722.2
	DTMF – DTMF Relay	NT	
	Codec Negotiation	Yes	Tested with G729 & G722.2
	Codec Renegotiation	Yes	Tested with G729 & G722.2
Cisco BroadWorks Services	Third-Party Call Control – Basic	No	
	Third-Party Call Control – Advanced	No	
	Voice Message Deposit/Retrieval	Yes	

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	Message Waiting Indicator	No	DUT does display message waiting, but does not increase count for every new message received.
	Voice Portal Outcall	NA	Can dial Voice Portal, but this test not applicable to case.
	Advanced Alerting – Ringing	No	
	Advanced Alerting – Call Waiting	No	
	Advanced Alerting – Ring Splash	No	
	Advanced Alerting – Silent Alerting	No	
	Calling Line ID	Yes	Must set "Display Calling Party Number Together with Name" on DUT software to 'Yes' on bandset software

Cisco BroadWorks SIP Phone Interoperability Test Plan Support Table

Test Plan Package	Test Plan Package Items	Supported	Comments
	Calling Line ID with Unicode Characters	Yes	Must set "Display Calling Party Number Together with Name" on DUT software to 'Yes' on handset software.
	Connected Line ID	Yes	Must set "Display Calling Party Number Together with Name" on DUT software to 'Yes' on handset software.
	Connected Line ID with Unicode Characters	Yes	Must set "Display Calling Party Number Together with Name" on DUT software to 'Yes' on handset software.
	Connected Line ID on UPDATE	Yes	Must set "Display Calling Party Number Together with Name" on DUT software to 'Yes' on handset software.
	Connected Line ID on Re-INVITE	Yes	Must set "Display Calling Party Number Together with Name" on DUT software to 'Yes' on handset software.
	Diversion Header	Yes	Showed both user tags. Error in test case.
	Call Decline Policy	Yes	
DUT Services – Call Control Services	Call Waiting	Yes	R2 used to answer second incoming calls, R1 used to hang up individual calls. (Call button functionality configured on handset software)
	Call Hold	Yes	There is no MoH, so SDP sends INACTIVE across the board.
	Call Transfer	Yes	For attended transfers, Direct Route & Route List services MUST be disabled on user otherwise REFER is rejected.

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	Three-Way Calling	No	DUT cannot initiate conference, but can be invited into a conference.
	Network-Based Conference	No	DUT cannot initiate conference, but can be invited into a conference
DUT Services – Registration and	Register Authentication	Yes	
Authentication	Maximum Registration	Yes	
	Minimum Registration	Yes	
	Invite Authentication	Yes	
	Re-Invite/Update Authentication	Yes	
	Refer Authentication	NT	
	Device Authenticating BroadWorks	Yes	
DUT Services – Emergency Call	Emergency Call	NT	
	Emergency Call with Ringback	NT	

#### Cisco BroadWorks SIP Phone Interoperability Test Plan Support Table

Test Plan Package	Test Plan Package Items	Supported	Comments
DUT Services – Miscellaneous	Do Not Disturb	Yes	
	Call Forwarding Always	Yes	
	Call Forwarding Always Diversion Inhibitor	No	DUT does CFA internally, so 302 is not used. Diversion Inhibitor is ignored.
	Anonymous Call	No	DUT sends "User=phone" syntax, causing BroadWorks to search for caller when using Star Codes. BroadWorks sends 480 response.
	Remote Restart Via Notify	No	
Advanced Phone Services – Busy	Busy Lamp Field	No	
Lamp Field	Call Park Notification	No	
Advanced Phone	Do Not Disturb	No	

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Services – Feature Key Synchronization.	Do Not Disturb Ring Splash	No	
Private Line	Call Forwarding	No	
	Call Forwarding Always Ring Splash	No	
	Call Forwarding Always Diversion Inhibitor	No	
	Call Center Agent Logon/Logoff	No	
	Call Center Agent Unavailable Code	No	
	Executive – Call Filtering	No	
	Executive-Assistant – Call Filtering	No	
	Executive-Assistant – Diversion	No	
	Call Recording	No	
	Security Classification	No	
Advanced Phone	Do Not Disturb	No	
Key Synchronization, Shared Line	Do Not Disturb Ring Splash	No	
	Call Forwarding	No	
	Call Forwarding Always Ring Splash	No	
	Call Forwarding Always Diversion Inhibitor	No	
Advanced Phone Services – Missed Calls Display Synchronization	Missed Calls Display Sync	No	
Advanced Phone Services – Shared	Line-Seize	No	
Call Appearance using Call Info	Call-Info/Lamp Management	No	
	Public Hold	No	
	Private Hold	No	
	Hybrid Key System	No	

#### Cisco BroadWorks SIP Phone Interoperability Test Plan Support Table

Test Plan Package	Test Plan Package Items	Supported	Comments
	Multiple Call Arrangement	No	
	Bridge Active Line	No	
	Bridge Active Line – Silent Monitor	No	

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	Call Park Notification	No		
Advanced Phone Services – Call Park Notification	Call Park Notification	No		
Advanced Phone	Hold Reminder	No		
Services – Call	Call Information	No		
Center	Hetelien Frank	Ne		
		NO		
	Status Event	No		
	Disposition Code	No		
	Emergency Escalation	No		
	Customer Originated Trace	No		
Advanced Phone	Pause/Resume	No		
Recording Controls	Start/Stop	No		
	Record Local Conference	No		
	Record Network Conference	No		
Advanced Phone	Basic Call	No		
Recording Video	Record Local Conference	No		
	Record Network Conference	No		
Advanced Phone Services – Security Classification	Security Classification	No		
Advanced Phone Services –	Network-Based Conference Creator	No		
Conference Event	Network-Based Conference Participant	No		
	Meet-Me Conference Participant	No		
SBC/ALG - Basic	Register	Yes		
	Outgoing Invite	Yes		
	Incoming Invite	Yes		
SBC/ALG – Failover/Failback	Register Failover/Failback	NT		
	Invite Failover/Failback	No		
Cisco BroadWorks SIP	Cisco BroadWorks SIP Phone Interoperability Test Plan Support Table			
Test Plan Package	Test Plan Package Items	Supported	Comments	
Video – Basic Video Calls	Call Origination	No		
	Call Termination	No		

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	Call Hold	No	
	Call Waiting	No	
	Call Transfer	No	
Video – BroadWorks Video Services	Auto Attendant	No	
	Auto Attendant – HD	No	
	Voice Messaging	No	
	Voice Messaging – HD	No	
	Custom Ringback	No	
Video – BroadWorks Video Conference	Network-based Conference	No	
	Network-based Conference – HD	No	
	Collaborate – Video	No	
	Collaborate – Video – HD	No	
Video – BroadWorks WebRTC Client	Call from WebRTC Client	No	
	Call to WebRTC Client	No	
IPV6	Call Origination	NT	
	Call Termination	NT	
	Session Audit	NT	
	Ringback	NT	
	Codec Negotiation/Renegotiation	NT	
	Voice Message Deposit/Retrieval	NT	
	Call Control	NT	
	Registration with Authentication	NT	
	Busy Lamp Field	NT	
	Redundancy	NT	
	SBC	NT	
	Video	NT	
	Dual Stack with Alternate	NT	

### 2.2.2 Other Interface Capabilities

The Ascom IP-DECT may have implemented support for the following:

- Cisco BroadWorks Xtended Services Interface (Xsi)
- Extensible Messaging and Presence Protocol (XMPP) (BroadCloud/BroadWorks Collaborate Instant Messaging and Presence [IM&P])

PARTNER CONFIGURATION GUIDE – ASCOM IP-DECT IPBS2-A3/1B1 ©2020 CISCO SYSTEMS, INC. CISCO CONFIDENTIAL Support for these interfaces is demonstrated by completing the *BroadWorks SIP Phone Functional Test Plan* [5]. Support for these interfaces is summarized in the following table.

Interface	Feature	Supported	Comments
Xsi Features – Authentication	Authenticate with SIP Credentials	Yes	Known limitation: Authentication credentials used by IP-DECT needs to correspond to BroadWorks credentials under "Passwords" within the Profile section of the User. Must be set to 'set web access password'.
	Authenticate with BroadWorks User Login Credentials	No	
	Authenticate with BroadWorks User Directory Number	No	
Xsi Features – User Service	Remote Office	No	
Configuration	BroadWorks Anywhere	No	
	Simultaneous Ringing	No	
	Caller ID Blocking	No	
	Call Forwarding Always	No	
	Call Forwarding Busy	No	
	Call Forwarding No Answer	No	
	Do Not Disturb	No	
Xsi Features – Directories	Enterprise Directory	Yes	Search options just as "Exact Match" or "Starts With", is configured on base station, ergo is done using System Tags.
	Enterprise Common Phone List	NT	
	Group Directory	Yes	Search options just as "Exact Match" or "Contains", is configured on base station, ergo is done using System Tags.
	Group Common Phone List	NT	
	Personal Phone List	NT	
	Search All Directories	No	

Cisco BroadWorks Xtended Services Interface (Xsi) and BroadCloud IM&P Support Table

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Xsi Features – Call	Placed Calls	No	
2090	Received Calls	No	
	Missed Calls	No	
	All Calls	No	
	Sort by Name	No	
Xsi Features – Visual Voice Mail	View Messages	No	
	Listen to Audio Message	No	
	Watch Video Message	No	
	Mark Message Read/Unread	No	
	Delete Message	No	

Interface	Feature	Supported	Comments
	Mark All Messages Read/Unread	No	
Xsi Features – Push Notification	Register/Deregister for Push Notifications	No	
	Incoming Call via Push Notification	No	
	Call Update via Push Notification	No	
	Incoming Call via Push Notification; Second Incoming Call	No	
	MWI via Push Notification	No	
	Ring Splash via Push Notification	No	
Xsi Features – Call Recording	Call Record Mode Get	No	
Configurations	Set Record Mode	No	
	Set Play Call Recording to Start and Stop Announcement	No	
	Set Record Voice Messaging	No	
	Set Pause and Resume Notification	No	
	Set Recording Notification	No	

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Xsi Features – Call Recording	Record Mode set to Never	No	
Controls	Record Mode set to Always	No	
	Record Mode set to Always with Pause/Resume	No	
	Start Recording Mid-Call with Record Mode set to On Demand	No	
	Start Recording During Call Setup with Record Mode set to On Demand	No	
	Perform User Initiated Start with Record Mode set to On Demand	No	
	Perform Mid-Call Start Recording after Placing Call on Hold	No	
	Perform Mid-Call Change to Call Recording Mode	No	
	Record Local Three-Way Call	No	
	Record Network Three-Way Call	No	
XMPP Features – Contact/Buddy List	Contacts	No	
	Favorites	No	
	Groups	No	
	Non-XMPP Contacts	No	
	Conferences	No	
XMPP Features – Presence	Login Invisible	No	
	Presence State	No	

Cisco BroadWorks Xtended Services Interface (Xsi) and BroadCloud IM&P Support Table

Interface	Feature	Supported	Comments
	Presence Status	No	
	Contact's Presence State	No	

#### 2.3 Known Issues

This section lists the known interoperability issues between Cisco BroadWorks and specific partner release(s). Issues identified during interoperability testing and known issues identified in the field are listed.

The following table provides a description of each issue and, where possible, identifies a workaround. The verified partner device versions are listed with an "X" indicating that the issue occurs in the specific release. The issues identified are device deficiencies or bugs and are typically not Cisco BroadWorks release dependent.

The *Issue Number* is a tracking number for the issue. If it is an IP-DECT issue, the issue number is from IP-DECT's tracking system. If it is a Cisco BroadWorks issue, the issue number is from Cisco's tracking system.

For more information on any issues related to the particular partner device release, see the partner release notes.

Issue Number	Issue Description	Par	tner Ve	rsion	
EV 208952	Ascom IP-DECT does not support Allow-Events Hold	Х			
	There is a partial implementation of advanced call control where the Hold event is un-available. This causes the 3 <sup>rd</sup> party advanced call control functionalities to be broken. Further, the call hold scenario can only be invoked at the end point.				
	Workaround: Call hold needs to be invoked on the device and cannot be perform through 3 <sup>rd</sup> party call control.				

#### 3 Cisco BroadWorks Configuration

This section identifies the required Cisco BroadWorks device profile type for the Ascom IP-DECT as well as any other unique Cisco BroadWorks configuration required for interoperability with the IP-DECT.

#### 3.1 Cisco BroadWorks Device Profile Type Configuration

This section identifies the device profile type to use when deploying the IP-DECT with Cisco BroadWorks.

Create a device profile type for the IP-DECT as shown in the following example. A separate device profile type should be created for each IP-DECT model. The settings shown are recommended for use when deploying the IP-DECT with Cisco BroadWorks. Please note that the number of ports must be equal or greater than the number of handsets in the system. For an explanation of the profile parameters, see the *BroadWorks Device Management Configuration Guide* [1].

Identity/Device Profile Type Modify Modify an existing identity/device profile type OK Apply Delete Export Cancel Identity/Device Profile Type: Ascom-Test Signaling Address Type: Intelligent Proxy Addressing
Obsolete Number of Ports: O Unlimited 

Limited To 25 Ringback Tone/Early Media Support: ORTP - Session O RTP - Early Session Local Ringback - No Early Media
 Authentication: 
 Enabled Olisabled Hold Normalization: O Unspecified Address Inactive REC3264 Registration Capable
 Authenticate REFER Static Registration Capable Video Capable Use History Info Header E164 Capable Trusted Averanced Options

Oute Advance

PBX Integration

PBX Integration

Outer Advance

PBX Integration

Outer Advance

Averance

Outer Advance

O Advanced Options Support Identity In UPDATE and Re-INVITE Static Line/Port Ordering Support Client Session Info Support Call Info Conference Subscription Support Remote Party Info Support Visual Device Management Bypass Media Treatment Support Cause Parameter Support Calling Party Category In Outbound From Header Reset Event: O reSync O checkSync 
Not Supported Trunk Mode: 
Output
User
Opilot
Oproxy Hold Announcement Method: 
 Inactive 
 Bandwidth Attributes Unscreened Presentation Identity Policy: 
 Profile Presentation Identity O Unscreened Presentation Identi

Figure 1 – Device Profile Type

#### 3.2 Cisco BroadWorks Configuration Steps

Within Group Administrative mode, browse to Resources  $\rightarrow$  Identity/Device Profiles. Click "Add" and give unique name. Choose the "Identity/Device Profile Type" created earlier and click "OK". Browse to Profile  $\rightarrow$  Users and choose the user assigned to the handsets configured on IP-DECT. When in User Administrative mode, browse to Profile  $\rightarrow$  Addresses and choose the Identity/Device Profile Name given in earlier step in Group mode. Click "Apply" and "OK".

PARTNER CONFIGURATION GUIDE – ASCOM IP-DECT IPBS2-A3/1B1 <sup>®</sup>2020 CISCO SYSTEMS, INC. CISCO CONFIDENTIAL Another example of this can be seen in Section 5.2.3 *Create Device Profile Instance.* 

### 4 Ascom IP-DECT Configuration

The Ascom IP-DECT can be configured through its web server. The following examples describe how to configure users on the IP-DECT for use on BroadWorks. This configuration description assumes the DECT station uses the Dynamic Host Configuration Protocol (DHCP) to get an IP address, HTTP server, and other network settings, and that handsets have already been subscribed to the IP-DECT base station. Subscription in this sense has nothing to do between the IP-DECT and BroadWorks, but rather has to do with the inner workings and connection between the handsets and the base station.

The capabilities of the Ascom IP-DECT have been verified for use with Cisco BroadWorks based on the settings described in the following descriptions. For more information on the meaning, purpose, and applicability of the individual configuration items see the *IP-DECT Base Station IPBS IOM*.

On the IP-DECT Base Station Web UI, browse to  $DECT \rightarrow Master$ . In the *IP-PBX* section, ensure that 'Protocol' is set to desired settings, like SIP/TCP, or SIP/TLS. For this test, 'SIP/UDP' was used. In 'Proxy', input the IP or FQDN of the BroadWorks SBC. Input the domain within 'Domain' field. Ensure that 'Allow DTMF Through RTP' is checked to use RFC 2833. All other settings can remain default.

	<b>IP-DECT Base S</b>	Station
Configuration	System Suppl. Serv. Master	Crypto Master Mobility Master Radio
General		
LAN	Mode Active V	
IP4	- Multi-Master	
IP6	Master ID 0	
LDAP	Enable PARI Function	
DECT	Region Code	
VolP		
Unite	IP-PBX	
Services	Protocol	SIP/UDP 🗸
Administration	Proxy	lopsbc2.tekvizion.com
Users	Alt. Proxy	
Device Overview	Alt. Proxy	
DECT Sync	Alt. Proxy	
Traffic	Domain	iopas.tekvizion.com
Gateway	Max. Internal Number Length	0
Backup	International CPN Prefix	
Update	Registration with system password	0
Diagnostics	Enbloc Dialing	
Reset	Enable Enbloc Send-Key	0
	Allow DTMF Through RTP	
	Short Disconnect Tone	0
	Treat rejected calls as	Busy 👻
	Configured With Local GK	0
	SIP Interoperability Settings	

Figure 2 - DUT Configuration for BroadWorks Usage

Go to Users  $\rightarrow$  Users, click 'Show' and then select one of the available users. Fill in the 'Number', 'Auth. Name', and 'Password' sections with the credentials and information created on BroadWorks end. 'IPEI/IPDI' is local information not dependent upon any BroadWorks configuration but necessary for operation. 'Display Name' and 'Idle Display' should be set to the unique first and last name given to the user in BroadWorks configuration.

Configuration	Users Anonymous		A Edit User - Google (	Changes
General		User Administr	a con oser obogie i	and an and the second se
LAN	PARK 31100421444246	Long Name	A Not secure   1	0.70.50.55/GW-DECT/mod_cmd_login.
IP4	Auth Code 0869	User Administr	User type	
IP6	Master Id 0	Users	User	
LDAP	show	Long Name	O User Administra	ator
DECT		SERCOCRA		
VolP		Users 1 Regi	Long Name	[5FBCCC8A
Unite		oscio, i, ricgi	Display Name	user3 Isaac
Services			Name	9725981003
Administration			Number	9725981003
Users			Auth. Name	9725981003
Device Overview			Password	·
DECT Sync			Confirm Password	·····
Traffic			IPEL/ IPDI	131600103818
Gateway			Idle Display	user3 Isaac
Backup			Auth. Code	03746241
Update			( <b>A</b>	No. contraction of the second se
Diagnostics			Cancel	

Figure 3 - DUT User Configuration

In order to change the codec, browse to  $DECT \rightarrow System$ , and set the 'Coder' tab to desired setting. To set RTP encryption settings, in same area, set 'Secure RTP Key Exchange' to desired setting. See *Figure 4*.

U		U			0		
Configuration	System	Suppl. Serv.	Μ	aster	Crypto Master N		
General							
LAN	System Na	ame		DECT			
IP4	Password			•••••			
IP6	Confirm Password			•••••			
LDAP	Subscriptions			With System AC 🗸			
DECT	Authentica	tion Code		0869			
VoIP	Tones			US 🗸			
Unite	Default La	nguage		Englis	h 🗸		
Services	Frequency			1920-	1930 MHz (North Ame		
Administration	Eachlade			23 24	4 25 26 27		
Users	Enabled C	Enabled Carriers		Image: Contract of the second seco			
Device Overview	Local R-K	ey Handling		✓			
DECT Sync	No Transfe	No Transfer on Hangup					
Traffic	No On-Ho	No On-Hold Display					
Gateway	Display Or	iginal Called					
Backup	Early Encr	yption					
Update	RFP Loca	tion					
Diagnostics	Unite Data	Channel					
Reset	Disable IC	E					
	Coder			G722	.2/G711A 🗸 Frame (r		
	Secure RT	P Key Exchange	e	No en	cryption 🗸		
	Unencrypt	ed RTCP					
	OK	Cancel					

Figure 4 - Codec & SRTP Configuration

To set all necessary call functions such as CFA, Do Not Disturb, etc, browse to  $DECT \rightarrow Suppl.$  Serv.. Uncheck the 'Disable box' and click 'OK'. Either use default script or configure script to use for Activation and Deactivation. See *Figure 5*.

Configuration	System Suppl. Serv. Ma	ster Crypto Master	Mobility Master Radio	Radio config
General				
LAN	Enable Supplementary Serv	ices		
IP4		Activate	Deactivate	Disab
IP6	Call Forwarding Unconditional	*21*\$#	#21#	
LDAP	Call Forwarding Busy			
DECT	Call Forwarding No Reply			
/oIP	Do Not Disturb			
Jnite	Call Waiting	·		
Services	Call Completion	,		
Administration	Call Completion			<b></b>
Jsers	Call Park			
Device Overview	Interception		I	
ECT Sync	Call Service URI			<b>~</b>
Traffic	Call Service URI (Argument)	,		<b>~</b>
Gateway	Soft key			<b>~</b>
Backup	Logout User			<b>~</b>
Jpdate				
Diagnostics	Clear Local Setting			<b>~</b>
Reset	MWI Mode	User dependent interro	gate number 🛛 🗸	
	MWI Notify Number			
	Local Clear of MWI			
	External Idle Display			
	OK Canaal			0

Figure 5 - Call Functionality Configuration

Note that the above image is an example for CFA. For other Supplementary Services refer to Ascom Configuration Manual.

### 5 Device Management

The Cisco BroadWorks Device Management feature provides the capability to automate generation of device configuration files to support mass deployment of devices. This section identifies the device management capabilities supported by the Ascom IP-DECT and the configuration steps required. For Device Management configuration details not covered here, see the *BroadWorks Device Management Configuration Guide* [1] and the *BroadWorks CPE Kit Usage Guide* [7].

#### 5.1 Device Management Capabilities Supported

The Ascom IP-DECT has completed Device Management interoperability testing with Cisco BroadWorks using the *BroadWorks Device Management Interoperability Test Plan* [6]. The results are summarized in the following table.

The Cisco BroadWorks test plan is composed of packages, each covering distinct interoperability areas. Each package is composed of one or more test items, which in turn, are composed of one or more test cases. The test plan exercises the Device Management interface between the device and Cisco BroadWorks with the intent to ensure interoperability.

The *Supported* column in the following table identifies the Ascom IP-DECT support for each of the items covered in the test plan packages, with the following designations:

- Yes Test item is supported
- No Test item is not supported
- NA Test item is not applicable
- NT Test item was not tested
- No\* Test item is supported only in limited capacity and does not fully comply with Cisco BroadWorks requirements.

Caveats and clarifications are identified in the Comments column.

**NOTE**: *DUT* in the following table refers to the *Device Under Test*, which in this case is the Ascom IP-DECT.

Cisco BroadWorks Device Management Interoperability Test Plan Support Table			
Test Plan Package	Test Plan Package Items	Supported	Comments
HTTP File Download	HTTP Download Using XSP IP Address	Yes	DMS settings input from DUT GUI. (Services > DMS) Can also be done by factory resetting device and setting DMS as operation.
	HTTP Download Using XSP FQDN	Yes	DMS settings input from DUT GUI. (Services > DMS) Can also be done by factory resetting device and setting DMS as operation.

	HTTP Download Using XSP Cluster FQDN	Yes	DMS settings input from DUT GUI. (Services > DMS) Can also be done by factory resetting device and setting DMS as operation.
	HTTP Download With Double Slash	No	Base station did not send GET request to broadworks for boot file. This situation happened with IP & with FQDN. DUT however does not require boot file to operate.
HTTPS File Download	HTTPS Download Using XSP IP Address	No	
	HTTPS Download Using XSP FQDN	No	
	HTTPS Download Using XSP Cluster FQDN	No	

Cisco BroadWorks De	vice Management Interoperability Test Pl	an Support Table	•
Test Plan Package	Test Plan Package Items	Supported	Comments
HTTPS File Download with Client	HTTPS Download with Client Authentication Using XSP FQDN	NT	
Authentication	HTTPS Download with Client Authentication Using XSP Cluster FQDN	NT	
Time Zone Mapping	Inspect Time Zone Setting	NA	
Language Mapping	Inspect Language Setting	NA	
File Inspection	Inspect System Config File	NA	DUT only uses device- specific config files & tags. DUT master.cfg contains the tags necessary for operation. System tags not specific enough for DUT to use for functionality.
	Inspect Device-Specific Config File	Yes	
	Inspect Other Config Files	NA	
	Inspect Static Files	Yes	Used DUT specific means to verify (i.e. checked Device Overview > Firmware)
Device Inspection	Inspect SIP Settings	Yes	Proxy on device is the Outbound Proxy.
	Inspect Line Settings	Yes	
	Inspect Service Settings	No	
HTTP File Upload	HTTP Upload Using XSP IP Address	No	
	HTTP Upload Using XSP FQDN	No	
	HTTP Upload Using XSP Cluster FQDN	No	
Call Processing Sanity Tests	Register with Authentication	Yes	
·	Call Origination	Yes	
	Call Termination	Yes	
	Remote Restart	No	
	Shared Line Origination	No	
	Shared Line Termination	No	

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	Shared Line Status	No	
	Busy Lamp Field	No	
	Network-Based Conference	No	
Flexible Seating	Association via Voice Portal	No	
	Association via Phone	No	
No Touch Provisioning	Provision via DHCP Options Field	No	
	No Touch Provision via DM redirect	No	
	No Touch Provision via Vendor redirect	No	

#### 5.2 Device Management Configuration

This section identifies the steps required to enable the IP-DECT for device management. For Device Management configuration details not covered here, see the *BroadWorks Device Management Configuration Guide* [1] and the *BroadWorks CPE Kit Usage Guide* [7].

#### 5.2.1 Configure Cisco BroadWorks Tags

The template files in Device Management use tags to represent the data stored on Cisco BroadWorks. When a configuration changes for a user, Device Management parses the template files and replaces the Device Management tags with the associated data stored on Cisco BroadWorks. There are default tags defined in the Device Management software and there are custom tags that the service provider can create/define via the web portal for use by Device Management. There are two types of custom tags that can be defined: systemdefault tags are common to all phones on the system; device type specific tags are common to Ascom IP-DECT models only.

The IP-DECT makes use of dynamic tags, which may be configured by a Cisco BroadWorks administrator as either system default or device type-specific tags. This section identifies the required tags.

#### 5.2.1.1 Create System Default Tags

Browse to  $System \rightarrow Resources \rightarrow Device Management Tag Sets$  and select the System Default tag set. Add the system default tags in the following table if they do not already exist.

Tag Name	Valid Settings	Description
%SNTP_SERVER_1%	IP address/FQDN	NTP server address.
%SNTP_SERVER_2%	IP address/FQDN	NTP server address alternate.
%DNS_SERVER_1%	IP address	DNS server address.
%DNS_SERVER_2%	IP address	DNS server address alternate.
%SBC_ADDRESS%	IP address/FQDN	SBC SIP address.

# cisco.

%SBC_F	PORT% Port	SBC SIP port.	
Tyample	System Default Tag Settin	ae	
Device	Management Tag Sets	s Modify	
D <mark>ispl</mark> ay all th	e device management tags defined in the tag	set. Tags can be added to the set or deleted fror	m <mark>t</mark> he set.
ОК	Apply Add Car	Icel	
Tag Se	et: System Default		
Delete	Tag Name	Tag Value	Edit
	%APPLICATION_DOMAIN%	as.iop1.broadworks.net	<u>Edit</u>
	%DNS_SERVER_1%	199.19.193.13	<u>Edit</u>
	%DNS_SERVER_2%	199.19.193.29	<u>Edit</u>
	%DNS_SERVER%	199.19.193.12	Edit
	%KWS300_XSP_PATH%	http://xsp.broadsoft.com/dms/kws300	Edit
	%OUTBOUNDPROXYADDRESS%	199.19.193.9	Edit
	%OUTBOUNDPROXYPORT%	5060	<u>Edit</u>
	%OUTBOUNDPROXYTRANSPORT%	UDP	Edit
	%SBC_ADDRESS%	sbc1.iop2.broadworks.net	Edit
	%SBC_PORT%	5060	Edit
	%SIP_TRANSPORT%	0	Edit
	%SNTP_SERVER_1%	time-a.nist.gov	Edit
	%SNTP_SERVER_2%	time-b.nist.gov	Edit
	%SNTP_SERVER%	time-b.nist.gov	Edit
	%SNTP_SERVERIP%	192.5.41.41	Edit
	%USE_SBC_BOOLEAN%	1	Edit
	%XSP_ADDRESS_XSI_ACTIONS%	xsp1.iop1.broadworks.net	Edit
	%XSP_ADDRESS%	xsp1.iop1.broadworks.net	Edit
	[Pag	je 1 of 1]	

Figure 6 - System Default Tag Settings

#### 5.2.1.2 Create Device Type-Specific Tags

When in Group Administrative mode, browse to *Utilities*  $\rightarrow$  *Device Configuration* and select the Identity/Device Profile Type created at System level. Click the *Custom* Tags tab and click "Add". This is where you'll add all specific tags that are replaced in the master.cfg file.

NOTE: These tags shown below are only the tags used in testing. If other tags required, follow these same steps.

Tag Name	Valid Settings	Description
%IPDECT-DMS-VERSION- BOOT%	11.1.5	Version number of the bootfile.

%IPDECT-DMS-VERSION- d63%	2.9.6	Version number of the handset device.
%IPDECT-DMS-VERSION- FIRM%	11.1.5	Version number of the firmware.
Tag Name	Valid Settings	Description
%IPDECT-IPEI-1%	13 character numerical string.	Unique identifier for each handset device.
%IPDECT-NTP- SERVER1%	IP address.	NTP server.
%IPDECT-PHONEBOOK- NUMBER-MATCH%	Only 3 options: 'Contains', 'Exact-Match', 'Starts-with'.	Search method. How handsets are able to search in the phone directories
%IPDECT-SIP-DOMAIN%	FQDN address.	Domain of BroadWorks network, application server.
%IPDECT-SIP-PROXY%	IP or FQDN address.	SBC address
%IPDECT-SIP-PROXY- PROT%	VoIP Protocol (H323 or SIP)	VoIP Protocol being used in network.
%IPDECT-XSI-AUTH- DOMAIN%	FQDN address.	Domain of BroadWorks network, XSI server.
%IPDECT-XSI-FQDN%	FQDN address.	XSI FQDN.

#### 5.2.2 Configure Cisco BroadWorks Device Profile Type

The device profile type is a system-level structure that defines how the device interfaces with Cisco BroadWorks. It also identifies the default configuration files and other files, such as firmware, which are required for the device to operate correctly. The device profile type is created by the system administrator. Group administrators use the device profile type to create a device profile. The device profile is an instance of the device profile type that is associated with a physical device.

There are two Cisco BroadWorks device profile configuration methods described: import and manual. The import method takes a DTAF as input and builds the Cisco BroadWorks device profile type(s) automatically. The manual method takes the administrator through the steps to manually add and configure the device profile type(s).

The import method should be used if all the following prerequisites are met:

- The Cisco BroadWorks Release is 17.0 or later.
- The device profile type(s) being imported do not already exist on the system. (If either a previous import or manual configuration was done, then the import fails.)
- There is a DTAF file available for import with a Cisco BroadWorks release level that is the same as or prior to the release to which it is being imported. If the DTAF file is at a release level later than the release being imported to, then the import can fail.

Otherwise, use the manual method.

For more detailed instructions, see the *BroadWorks CPE Kit Usage Guide* [7] and the *BroadWorks Device Management Configuration Guide* [1].

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#### 5.2.2.1 Configuration Method 1: Import

This section identifies the steps necessary to make use of the Device Management import feature to configure Cisco BroadWorks to add the IP-DECT as a Device Managementenabled device type. Also, see the BroadWorks CPE Kit Usage Guide [7].

If available, download the IP-DECT CPE kit from BroadSoft Xchange at xchange.broadsoft.com. Extract the DTAF file(s) from the CPE kit. These are the import files. Repeat the following steps for each model you wish to import.

- 1) Log in to Cisco BroadWorks as an administrator.
- 2) Browse to System  $\rightarrow$  Resources  $\rightarrow$  Identity/Device Profile Types and then click Import.
- 3) Select Browse to find the extracted DTAF file for the model and then click OK to start the import.

After the import finishes, complete the following post-import configuration steps:

- 4) Browse to System  $\rightarrow$  Resources  $\rightarrow$  Identity/Device Profile Types.
- 5) Perform a search to find the imported Ascom IP-DECT device profile type.
- 6) Browse to the *Profile* page and change the Device Management Device Access FQDN to your Xtended Services Platform (Xsp) or Xtended Services Platform cluster address.

Device Management	
Device Type URL:	http://iopxsp1.tekvizion.com:80/dms//Ascom-Test/
	O No Tag Sets
Device Configuration Tag Sets:	Use Default System Tag Set Only
	O Use Default System Tag Set and Tag Set: Ascom Tags
<b>Z</b>	Allow Identity/Device Profiles to Configure Custom Tags
<b>Z</b>	Allow Groups to Configure Custom Tags
	Allow Enterprises/Service Providers to Configure Custom Tags
0	Send Email Notification to User upon Device Reset Failure
Device Access Protocol:	http 🗸
Device Access FQDN:	lopxsp1.tekvizion.com
Device Access Port:	80
Device Access Context Name:	dms/
Device Access URI:	Ascom-Test/
Default Device Language:	
Default Device Encoding:	UTF-8
Authentication Mode: 📃 MAC	-Based 🔽 User Name and Password
Device Access User	name: ipdect
Device Access Pass	word:
Re-type Device Access Pass	word:
MAC Addre	ISS In: O HTTP Request URI
	O HTTP Header
	O Client Certificate
MAC Address Fi	ormat:

Figure 7 - Device Access FQDN

7) Click the Files and Authentication link and then select the option to rebuild all the system files.

Firmware files must be obtained from Ascom. These files are not included in the import. Complete the steps in section 5.2.2.2 Define Device Profile Type Files to define the static firmware files and to upload the firmware.

#### 5.2.2.2 Configuration Method 2: Manual

This section identifies the basic steps necessary for an administrator to manually configure Cisco BroadWorks to add the IP-DECT as a Device Management enabled device type. This method should not be used except in special cases as described in the opening to section 5.2.2 Configure Cisco BroadWorks Device Profile Type.

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For more detailed instructions on the manual configuration, see the *BroadWorks CPE Kit* Usage Guide [7] and the *BroadWorks Device Management Configuration Guide* [1].

The steps in this section can also be followed to update previously imported or configured device profile type(s) with new configuration files and firmware.

If there are DTAFs for more than one device model, these steps must be completed for each model.

#### 5.2.2.2.1 Create or Modify Device Profile Type

This section identifies the Cisco BroadWorks device profile type settings relevant to Device Management for the IP-DECT.

Browse to System  $\rightarrow$  Resources  $\rightarrow$  Identity/Device Profile Types and perform a search to find the IP-DECT device profile type(s) created in section 3.1 Cisco BroadWorks Device Profile Type Configuration or add the device profile type for each model using the settings from section 3.1 Cisco BroadWorks Device Profile Type Configuration if they do not exist.

Configure the device profile type *Signaling Address Type*, *Standard* and *Advanced* options settings to match the settings in section 3.1 Cisco BroadWorks Device Profile Type Configuration.

Configure the device profile type *Device Management* options as shown in section 5.2.2.1 *Configuration Method 1: Import.* 

The following subsections identify the required settings specific to Device Management.

#### 5.2.2.2.2 Define Device Profile Type Files

This section describes the Cisco BroadWorks Device Management configuration necessary to identify the configuration files and other files that the IP-DECT downloads.

Configuration templates, firmware, and other files the IP-DECT uses must be uploaded to Cisco BroadWorks. Obtain the firmware files directly from Ascom.

The following table identifies the Ascom IP-DECT configuration files used in this test:

File Name	File Type	Description
Examples		
master.cfg	Device- specific (Dynamic Per-Device)	In the DMS environment, this file contains user-related data and contains all custom tag information. This file has the bulk of all necessary configuration material for IP-DECT.
Boot_ipbs2.bin	Device- specific (Static)	This file contains the boot file.
lpbs2.bin	Device- specific (Static)	This file contains the firmware.
d63.bin	Device- specific (Static)	This file contains the firmware of the d63 handset models. (Note, this can be uploaded to handset via individual software. Otherwise,

		once DECT base station downloads this file, it is sent OTA to handsets)
Dectusers.xml	Device- specific (Dynamic Per-Device)	This file contains handset/user specific info such as BWAuthPassword, IPEI system info, BWAuthUsername, & Time/Date info.
Hsparamters.xml	Device- specific (Dynamic Per-Device)	This file contains handset specific parameters such as Voice-Portal info, Language settings, Time Format settings, & Device ID.

Browse to System  $\rightarrow$  Resources  $\rightarrow$  Identity/Device Profile Types  $\rightarrow$  Files and Authentication to add the files as described in the following subsections.

For additional configuration parameters, please refer to "*IP-DECT BroadWorks, Quick Reference Guide*".

#### 5.2.2.2.1 Dynamic Per-Device File

This section identifies the dynamic per-device files used by IP-DECT and provides instructions for defining the files and uploading for Device Management.

Ascom IP-DECT downloads the file based on the user's name and passwords using the following file name format:

- Master.cfg
- Hsparamters.xml
- Dectusers.xml

Add the dynamic per-device files to the device profile type with the settings shown in *Figure 4.* Be sure to click **Apply** after uploading the file.

K	Apply	Delete	Cancel		
)evice A	ccess File Form	at: master.cfo			
Repo	ository File Form	at: %BWFQDEV	ICEID%_ma	ster.cfg	
	Access Fi	le: http://iopxsp1	.tekvizion.co	m:80/dms//Ascom-	-Test/master.cfg
	Repository Fi	le: In: Download			
	File Catego	IV: Otatic	Dunamia Ro	r Turno 🔍 Dunomiu	- Por Dovice
	File Customizatio	n: Administrat	tor and Llea	-Type Oynamic	C Pel-Device
	(	Allow Lipload	from Device		
		- Extended	File Conture		
		Defaul	t Extended F	ile Capture Mode	
		Enable	e for All File I	nstances	Disable for All File Instance
Assign	File				
С	Manual				
0	Custom				
		Upload File:	Choose File	No file chosen	
Cu	mently using con	figuration file: /w	ar/broadwor	ks/InDeviceConfi	n/tyne/Ascom Test/master.cf
##	# BroadWorks D	evice Managem	ent configura	tion for Ascom IP-	DECT
##	# Template Vers	ion: 1.0.0	0.6		
##	# Generated: %	BWTIMESTAMP	%		
mo	od cmd UP1 repl od cmd UP0 scfo	ace all #(DMS-SCHEN	IE)://#(DMS-I	USER):#(DMS-PW	/D)@#
(D	MS-BASE-URL)	/master-local.cfg	no-op Week	ly /force 168	
CO	nfig change FLA	CK Ireseth "%BVN SHMAN0	TIMESTAME	70	-
CO	nfig change VAF	s			10
File Au	thentication		Liner Marrie	e and Dessured	
Authen	tAC Addross In:	WAC-Based	<ul> <li>User Nam</li> </ul>	e anu massword	
IV	AUGRESS IN:	HTTP Requ	est URI		
		O HTTP Head	er		
MAC	ddress Format	Client Certifi	сате		
Davis	Access Furfiel.	uthentication			
Device	ACCESS HITP A	vumentication: (	U Basic 🔍 E	Digest	
	d Access Protoc	ole: 🔽 http	https 🗾 t	ftp	

Figure 8 - Dynamic-Per Device file Example

#### 5.2.2.2.2.2 Static Files

Add the Static files to the device profile type with the settings shown. Be sure to click **Apply** after uploading the file.



Figure 9 - Static File Example

#### 5.2.3 Create Device Profile Instance

The previous sections defined the device profile type such that the system is ready to mass deploy device profiles. A device profile is an instance of the device profile type and defines the Cisco BroadWorks interface to an individual IP-DECT.

Browse to the Cisco BroadWorks  $\langle group \rangle \rightarrow Resources \rightarrow Identity/Device Profiles$  page and then select **Add** to add a new IP-DECT device profile. Configure the device profile as shown in the *Figure 6 Device Profile Instance* example.

Another example of this can be seen in Section 3.2 Cisco BroadWorks Configuration Steps

OK Apply	Delete	Cancel			
le		lsers		Files	
Identity/Device Pr	ofic Name: Accom				
Identity/Device F	Profile Type: Ascom	-Test			
Device	Type URL: http://ie	opxsp1.tekvizion.	com:80/dms//A	.scom-Test/	
	Protocol: SIP 2	.0 🗸			
Host Name/	IP Address:			Port:	
	Transport: Unsp	ecified 🗸			
MA	C Address:				
Ser	ial Number:				
001	Description:				-
0.11	Description.				-
Outbound Pr	oxy Server:				4
ST	UN Server:				
Physic	al Location:				
	Lines/Ports: 25				
Assigned I	Lines/Ports: 1				
ondooigned	Version: (Ascor	n IP-DECT Base	Station/ [11.1.5	/11.1.5/IPBS2-A3	/1B1]
Authentication					
Use Identity/De	vice Profile Type C	redentials			
OUse Custom Cr	edentials				
* Device Ac	cess User Name: 9	725981003@i	pas.tekvizior	i.com	
* Device A	ccess Password:				

Figure 10 - Device Profile Instance

#### 5.2.4 Configure Cisco BroadWorks User

Configure the user with the desired Cisco BroadWorks configuration and services. Any services that require a specific configuration on the device are managed via Device Management and are defined in the device configuration files, if the template files are created with the correct Device Management tags.

The device profile created in the previous section must be assigned to the Cisco BroadWorks user. Assigning the device profile to the user automatically causes the Device Management feature to generate the device configuration files for this user's device.

#### 5.2.5 Configure Ascom IP-DECT

This section describes the steps necessary to configure the SIP DECT to integrate with Cisco BroadWorks Device Management when the configuration server is provisioned through the Web UI.

- 1) Under Services  $\rightarrow$  DMS enter the following data as shown in the following figure.
- 2) Enter the XSP IP address or FQDN.
- 3) Enter the Username & Password configured at System level of BroadWorks Identity/Device Profile Type.
- 4) Click "OK". Go to  $Reset \rightarrow Reset \rightarrow OK$

	IP-DI	ЕСТ	Base	e Stati	on			
Configuration	Update	Logging	HTTP	HTTP Client	SNMP	Phonebook	ICP	DMS
General	_							
LAN	DMS URI		http://iop>	sp1.tekvizion.co	m:80/dms	/Ascom-Test		
IP4	DMS User	r	ipdect					
IP6	DMS Pass	sword	•••••					
LDAP	Config Po	ll Interval	60	1				
DECT	OK	Cancel	1	r				
VoIP		Cancer						
Unite								
Services								
Administration								
Users								
Device Overview								
DECT Sync								
Traffic								
Gateway								
Backup								
Update								
Diagnostics								
Reset								

Figure 11 – DMS/XSI Configuration

### Appendix A: Reference Ascom IP-DECT Configuration File

The following is a reference configuration for the IP-DECT configured for use with Cisco BroadWorks.

**NOTE**: The following samples are examples and should be used as a reference only. DO NOT CUT AND PASTE THESE EXAMPLES TO GENERATE YOUR CONFIGURATION FILES. Use the configuration files obtained from Ascom with the specific release to generate your configuration files.

#### Device-specific File: master.cfg

### BroadWorks Device Management configuration for Ascom IP-DECT

### Template Version: 1.0.0 ### Device ID: %BWFQDEVICEID% ### Generated: %BWTIMESTAMP% mod cmd UP1 replace all mod cmd UP0 scfg #(DMS-SCHEME)://#(DMS-USER):#(DMS-PWD)@#(DMS-BASE-URL)/master-local.cfg no-op Weekly /force 168 mod cmd UP1 check iresetn "%BWTIMESTAMP%" config change FLASHMAN0 config change VARS config change SNMP0 config change ASC SUBAGNT0 config change LOG0 config change LOG0 FAULT config change LO0 CNT config change CDR0 config change CDR1 config change CPU config change ASC\_LOGGING0 config change SER0 config change SER1 config change ETH0 config change IP0 /priority-tos 0xb8 /priority-tos1 0x68 config change IP0 ETH0 /addr 192.168.1.1 /mask 255.255.255.0 /dns 8.8.8.8 config change IP0 RT0 /gateway 192.168.1.254 config change IP0 RT1 config change IP0 RT2 config change IP0 RT3 config change IP6 config change IP6 ETH0

```
cisco.
```

config change IP6 6TO4-00 config change IP6 6TO4-01 config change IP6 6TO4-02 config change IP6 6TO4-03 config change IP6 6TO4-04 config change IP6 6TO4-05 config change IP6 6TO4-06 config change IP6 6TO4-07 config change LLDP0 config change DNS0 config change KEYGEN config change RSA config change X509 config change TLS\_CIPHER0 config change ENET1X0 config change TLS0 config change TLS6 config change CMD0 /logout 10 /no-native /no-native-except LOG0/FAULT config change HTTPCLIENT0 config change WEBDAV0 config change HTTP0 /force-https /no-cache config change TELNET0 config change PING0 config change PCAP config change WEBMEDIA config change MEDIA-FWD config change MEDIA config change NTP0 /offset CST6CDT5,M3.2.0/2,M11.1.0/2 config change DHCP-SYNC config change DHCP0 /mode off config change DHCP6-0 /mode disabled config change FLASHDIR0 config change LDAPSRV0 config change LDAPDIR0 config change LDAPREP0 config change KERBEROS config change KDB0 config change TESTIF0 config change RFP0 config change RFP0 RFPDWL config change RFPSTAT0 config change RFPINIT0 /mode master config change RFPINIT0 PRODPARAM config change DECT /cipher

### uluilu cisco

config change H323 config change SIP config change TSIP /share-local-port config change SIPS /share-local-port config change TEST config change TONE config change HTTP config change ECHO config change SIG0 config change SIG1 config change WEBSOCKET0 config change UP0 config change UP1 /hide-credentials /arg-quotes config change ASDP config change ASDPSERVER config change ASDPROUTER config change UNITED config change CUNITE config change CUNITE FILEGET /no-http-range config change CUNITE CALLINFO config change CUNITE KEYVALUE config change CUNITE SUPERVISION config change DEVICELIC config change UNITE config change UNITE UTP config change UNITE GROUPHANDLER config change UNITE FAULTHANDLER config change UNITE DEVMANSERVER /boot-label %IPDECT-DMS-VERSION-BOOT% /firm-label %IPDECT-DMS-VERSION-FIRM% config change UNITE DEVMANHANDLER config change UNITE SUPERVISIONHANDLER config change MATP config change DEVMANPP /firm-d43 %IPDECT-DMS-VERSION-d43% /firm-d63 %IPDECT-DMS-VERSION-d63% /firm-d81 %IPDECT-DMS-VERSION-d81% config change CUTP config change SMSRL config change SMSC config change AIRSYNCCTRL config change PHONEBOOK XSI /auth-domain %IPDECT-XSI-AUTH-DOMAIN% /fgdn %IPDECT-XSI-FQDN% config change PHONEBOOK /enable /int-text %IPDECT-PHONEBOOK-TEXT-HEADING% /nores-text %IPDECT-PHONEBOOK-TEXT-NO-RESULT% /moreres-text %IPDECT-PHONEBOOK-MENU-ITEM-MORE-RESULTS% /bs-searchdir %IPDECT-PHONEBOOK-NUMBER-MATCH%

config change PHONEBOOK PHBFLASH0 config change PHONEBOOK-LDAP config change ICP config add GW-DECT /kp /disc-no-ct /coder G711u,20, config change GW-DECT LOCALUSERS /kp config change GW-DECT CRYPTOMASTER config change GW-DECT MOBMASTER config change GW-DECT MASTER /allow-rtp-dtmf /mode ACTIVE /pari-active /enbloc /auth-name /direct-sig /prot %IPDECT-SIP-PROXY-PROT% /proxy %IPDECT-SIP-PROXY1% /alt-proxy %IPDECT-SIP-PROXY2% /gk-id %IPDECT-SIP-DOMAIN% /int-%IPDECT-DR-MAX-INTERNAL-LEN% /stun-srv %IPDECT-SIP-STUNnum-len SERVER% config change GW-DECT DYNCFG /ntp-srv1 %IPDECT-NTP-SERVER1% /ntp-srv2 %IPDECT-NTP-SERVER2% /ntp-interval %IPDECT-NTP-INTERVAL% /tz %IPDECT-NTP-TZ-STRING% /priority-tos %IPDECT-IP-TOS% /rtp-base %IPDECT-RTP-PORT-FIRST% /rtp-range %IPDECT-RTP-PORT-COUNT% /stun-server %IPDECT-RTP-STUN-SERVER% /turn-server %IPDECT-RTP-TURN-SERVER% /nat-detect %IPDECT-**RTP-NAT-DETECT-INTERVAL%** config change GW-DECT DISPLAY config add GW-DECT RADIO config change GW-DECT SMSCLGA config change GW-DECT MIHOTDESK config change GW-DECT DATAFWD config add GW-DECT DECTPARI config change GW-DECT FTY /enable /pin . /lock . /lock0 . /dnd-int . /dnd-int0 . /dnd-ext . /dnd-ext0 . /pick . /pick-grp . /pick-dir . /park . /park0 . /park-to . /park-to0 . /grp . /grp0 . /cc . /cc0 . /nclir . /nclir0 . /clir . /clir0 . /suri . /suria . /ic . /ic0 . /softkey . /cfu . /cfu0 . /cfb . /cfb0 . /cfnr . /cfnr0 . /dnd . /dnd0 . /cw . /cw0 . /logout . /clr . /mwi-mode USER-INTERROGATE-NOTIFY /mwi-notify %IPDECT-MWI-VOICE-MAIL-NUMBER% config change GW-DECT USERMANAGEMENT config change SETUP config change DEVMANBW /cfg-poll-interval %IPDECT-DMS-CONFIG-POLL-**INTERVAL%** config write config activate

#### References

- [1] Cisco Systems, Inc. 2019. *BroadWorks Device Management Configuration Guide, Release 22.0.* Available from Cisco at <u>xchange.broadsoft.com</u>.
- [2] Cisco Systems, Inc. 2019. *BroadWorks Redundancy Guide, Release 22.0.* Available from Cisco at <u>xchange.broadsoft.com</u>.
- [3] Cisco Systems, Inc. 2019. *BroadWorks SIP Access Interface Interworking Guide, Release 22.0.* Available from Cisco at <u>xchange.broadsoft.com</u>.
- [4] Cisco Systems, Inc. 2019. *BroadWorks SIP Phone Interoperability Test Plan, Release 22.0.* Available from Cisco at <u>xchange.broadsoft.com</u>.
- [5] Cisco Systems, Inc. 2019. BroadWorks SIP Phone Functional Test Plan, Release
   22.0. Available from Cisco at xchange.broadsoft.com.
- [6] Cisco Systems, Inc. 2019. *BroadWorks Device Management Interoperability Test Plan, Release 22.0.* Available from Cisco at <u>xchange.broadsoft.com</u>.
- [7] Cisco Systems, Inc. 2015. *BroadWorks CPE Kit Usage Guide, Release 22.0.* Available from Cisco at <u>xchange.broadsoft.com.</u>