Yealink

BroadSoft Partner Configuration Guide

Yealink VPx Series

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BroadWorks® Guide

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Document Revision History

Version	Reason for Change
1.1	Introduced document for Yealink VPx series version 23.70.0.10 validation with BroadWorks Release 18.sp1.
1.2	Edited and published document.

Table of Contents

Table of Figures

1 Overview

This document describes the configuration procedures required for the Yealink VPx series to be interoperable with BroadWorks. This includes the following model:

- VP530

The VPx series is a video phone that uses the Session Initiation Protocol (SIP) to communicate with BroadWorks for call control.

This guide describes the specific configuration items that are important for use with BroadWorks. It does not describe the purpose and use of all configuration items on the VPx series. For those details, see the *Yealink VPx Phone User Manual* [1] supplied by Yealink.

2 Interoperability Status

This section provides the known interoperability status of the Yealink VPx series with BroadWorks. This includes the version(s) tested, capabilities supported and known issues.

Interoperability testing validates that the device interfaces properly with 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 Yealink.

2.1 Verified Versions

The following table identifies the verified Yealink VPx series and 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 identifies specific VPx series versions, which the partner has identified as compatible and should interface properly with BroadWorks. Generally, maintenance releases of the validated version are considered compatible and may not be specifically listed here. Contact Yealink for any questions concerning maintenance and compatible releases.

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

Verified Versions Table

Date (mm/yyyy)	BroadWorks Release	VPx series Verified Version	VPx series Compatible Versions
05/2012	Release 18.sp1	VP530 23.70.0.10	Any maintenance version of the verified version.

2.2 Interface Capabilities Supported

The Yealink VPx series has completed interoperability testing with BroadWorks using the *BroadWorks SIP Access Device Interoperability Test Plan* [4]. The results are summarized in the following table.

The 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 BroadWorks with the intent to ensure interoperability sufficient to support the BroadWorks feature set.

The *Supported* column in the following table identifies the Yealink VPx series’ 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 to the device type.
- NT Test item was not tested.

Caveats or clarifications are identified in the *Comments* column.

Note that *DUT* in the following table refers to the *Device Under Test,* which in this case is the Yealink VPx series.

BroadWorks SIP Access Device Interoperability Test Plan Support Table

Test Plan Package	Test Plan Package Items	Supported	Comments
Basic	Call Origination	Yes	
	Call Termination	Yes	
	Session Audit	Yes	
	Session Timer	Yes	
	Ringback	Yes	
	Forked Dialog	Yes	
	Early UPDATE	No	
	Early-Session	No	
	181 Call Being Forwarded	Yes	
	Dial Plan	Yes	
	DTMF – Inband	Yes	
	DTMF – RFC 2833	Yes	
	DTMF – DTMF Relay	Yes	
	Codec Negotiation	Yes	
	Codec Renegotiation	Yes	
BroadWorks Services	Third-Party Call Control – Basic	NA	
	Third-Party Call Control – Advanced	Yes	
	Voice Message Deposit/Retrieval	Yes	
	Message Waiting Indicator	Yes	
	Voice Portal Outcall	Yes	
	Advanced Alerting	Yes	
	Calling Line ID	Yes	
	Connected Line ID	Yes	
	Connected Line ID on UPDATE	Yes	
	Connected Line ID on Re-INVITE	Yes	
	Diversion Header	Yes	
	History-Info Header	Yes	
	Advice of Charge	No	
	Meet-Me Conferencing	Yes	

BroadWorks SIP Access Device Interoperability Test Plan Support Table			
Test Plan Package	**Test Plan Package Items**	**Supported**	**Comments**
DUT Services – Call Control Services	Call Waiting	Yes	
	Call Hold	Yes	
	Call Transfer	Yes	
	Three-Way Call	Yes	
	Network-Based Conference	Yes	
DUT Services – Registration and Authentication	Register Authentication	Yes	
	Maximum Registration	Yes	
	Minimum Registration	Yes	
	Invite Authentication	Yes	
	Re-Invite/Update Authentication	Yes	
	Refer Authentication	Yes	
	Device Authenticating BroadWorks	No	
DUT Services – Fax	G711 Fax Passthrough	NA	
	G711 Fax Fallback	NA	
	T38 Fax Messaging	NA	
DUT Services – Short Message Service	Short Message Service	No	
DUT Services – Miscellaneous	Do Not Disturb	Yes	
	Call Forward Always	Yes	
	Call Forward Always Diversion Inhibitor	Yes	
	Anonymous Call	Yes	
	Anonymous Call Block	Yes	
	Remote Restart Via Notify	No	
Advanced Phone Services – Busy Lamp Field	Busy Lamp Field	Yes	
	Call Park Notification	Yes	
Advanced Phone Services – Feature Key Synchronization, Private Line	Do Not Disturb	Yes	
	Do Not Disturb Ring Splash	Yes	
	Call Forward	Yes	
	Call Forward Always Ring Splash	Yes	
	Call Forward Always Diversion Inhibitor	Yes	
	Call Center Agent Logon/Logoff	No	
	Call Center Agent Unavailable Code	No	
Advanced Phone	Do Not Disturb	Yes	

BroadWorks SIP Access Device Interoperability Test Plan Support Table			
Test Plan Package	**Test Plan Package Items**	**Supported**	**Comments**
Services – Feature Key Synchronization, Shared Line	Do Not Disturb Ring Splash	Yes	
	Call Forward	Yes	
	Call Forward Always Ring Splash	Yes	
	Call Forward Always Diversion Inhibitor	Yes	
Advanced Phone Services – Missed Calls Display Synchronization	Missed Calls Display Sync	Yes	
Advanced Phone Services – Shared Call Appearance using Call Info	Line-Seize	Yes	
	Call-Info/Lamp Management	Yes	
	Public Hold	Yes	
	Private Hold	Yes	
	Multiple Call Arrangement	Yes	
	Bridging	Yes	
	Call Park Notification	Yes	
Advanced Phone Services – Shared Call Appearance using Dialog Event	Dialog Event	No	
	Hold/Retrieve	No	
	Multiple Call Arrangement	No	
	Bridging	No	
	Call Park Notification	No	
Advanced Phone Services – Call Center	Hold Reminder	Yes	
	Call Information	No	
	Hoteling Event	No	
	Status Event	No	
	Disposition Code	No	
	Emergency Escalation	No	
	Customer Originated Trace	No	
Advanced Phone Services – Call Park Notification	Call Park Notification	No	
Redundancy	DNS SRV Lookup	Yes	
	Register Failover/Failback	Yes	
	Invite Failover/Failback	Yes	
	Bye Failover	Yes	
SBC/ALG	Register	Yes	
	Outgoing Invite	Yes	

BroadWorks SIP Access Device Interoperability Test Plan Support Table			
Test Plan Package	**Test Plan Package Items**	**Supported**	**Comments**
	Incoming Invite	Yes	
Video – Basic Video Calls	Call Origination	Yes	
	Call Termination	Yes	
	Call Hold	Yes	
	Call Waiting	Yes	
	Call Transfer	Yes	
Video – BroadWorks Video Services	Auto Attendant	Yes	
	Auto Attendant – HD	No	
	Voice Messaging	Yes	
	Voice Messaging – HD	No	
	Custom Ringback	Yes	
TCP	Register	Yes	
	Outgoing Invite	Yes	
	Incoming Invite	Yes	
IPV6	Call Origination	NT	
	Call Termination	NT	
	Session Audit	NT	
	Ringback	NT	
	Codec Negotiation/Renegotiation	NT	
	Call Control	NT	
	Registration w/ Authentication	NT	
	T38 Fax Messaging	NT	
	Busy Lamp Field	NT	
	Redundancy	NT	
	SBC	NT	
	Video	NT	

2.3 Known Issues

This section lists the known interoperability issues between 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, so typically not BroadWorks release dependent.

The *Issue Number* is a BroadSoft ExtraView partner issue number if the testing was performed by BroadSoft. If the testing was performed by the partner or a third party, the partner may or may not supply a tracking number.

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

Issue Number	Issue Description	Partner Version			
		23.70.0.10			
	No issue identified.				

3 BroadWorks Configuration

This section identifies the required BroadWorks device profile for the Yealink VPx series as well as any other unique BroadWorks configuration required for interoperability with the VPx series.

3.1 BroadWorks Device Profile Configuration

This section identifies the device profile to use when deploying the Yealink VPx series with BroadWorks.

The following table identifies the required BroadWorks device identity/profile settings for interoperability between the VPx series and BroadWorks. For an explanation of the profile parameters, refer to the *BroadWorks Device Management Configuration Guide* [2].

For most of the parameters, an "X" indicates the parameter function is supported and/or required. If the item is blank, it is not supported. For items where text is supplied, the text content maps directly to the web page for adding or modifying a device profile.

Yealink VPx series Identity/Device Profile	
Signaling Address Type	Intelligent Proxy Addressing
Standard Options	
Number of Ports	VP530: 4
Ringback Tone/ Early Media Support	Local Ringback – No Early Media
Authentication	Enabled
Registration Capable	X
Static Registration Capable	
E.164 Capable	
Trusted	
Authenticate REFER	
RFC 3264 Hold	X
Video Capable	X
Use History-Info Header	
Advanced Options	
Route Advance	
Wireless Integration	
PBX Integration	
Add P-Called-Party-ID	
Auto Configuration Soft Client	
Requires BroadWorks Call Waiting Tone	
Advice of Charge Capable	
Enable Monitoring	

Yealink VPx series Identity/Device Profile	
Forwarding Override	
Conference Device	
Music On Hold Device	
Requires BroadWorks Digit Collection	
Requires MWI Subscription	
Support Call Center MIME Type	
Support Identity in UPDATE an Re-INVITE	
Reset Event	Not Supported
Trunk Mode	User
Unscreened Presentation Identity Policy	Profile Presentation Identity
Web Based Configuration URL Extension	
Device Configuration Options	
Device Configuration Options	Device Management

3.2 BroadWorks Configuration Steps

No other steps are needed on BroadWorks for setting up the device.

4 VPx Series Configuration

The VPx can be configured with a configuration file using the Trivial File Transfer Protocol (TFTP) or through its embedded web server. The following examples describe how to set the parameters using a configuration file. This configuration description assumes the VPx will use the Dynamic Host Configuration Protocol (DHCP) to obtain an IP address, TFTP server, and other network settings. The VPx should be configured to load the configuration file each time it resets or re-synchronizes. For detailed information on automated provisioning, see the *Yealink VPx Phone User Manual* [1].

The capabilities of the VPx have been verified for use with BroadWorks based on the settings described in the following table. For more information on the meaning, purpose, and applicability of the individual configuration items see the *Yealink VPx Phone User Manual* [1].

Configuration Files

Files Provided by Partner	Level	Description
y000000000023.cfg	system configuration file	
%BWMACADDRESS%.cfg	device-specific configuration file	

4.1 System Level Configuration

This section describes system-wide configuration items that are generally required for each VPx to work with BroadWorks. Subscriber-specific settings are described in the next section.

Step	Command	Purpose
System Configuration Items < y000000000023.cfg >		
Step 1	**Set SIP Proxy/Domain.** Example: account.X.sip_server_host = as.broadworks.net account.X.sip_server_port = 5060	Set the VPx series SIP server to the Fully Qualified Domain Name (FQDN) for the BroadWorks Application Server cluster. The domain must match the domain configured for the BroadWorks subscriber's line/port domain.
Step 2	**Set Outbound Proxy.** Example: account.X.outbound_proxy_enable = 1 account.X.outbound_host = sbc.broadworks.net account.X.outbound_port = 5060	Set the Outbound Proxy to the Session Border Controller (SBC) if one is deployed between the VPx series and BroadWorks. If there are redundant SBCs, set it to the FQDN for the SBC cluster.
Step 3	**Set SIP Timers.** account.X.advanced.timer_t1 = 0.5 account.X.advanced.timer_t2 = 4	The SIP timers should be set to levels short enough to support a timely failover when there is no server response.
Step 4	**Set Register Expire Timer.** account.X.expires = 3600	Set the registration period.

Step	Command	Purpose
System Configuration Items < y000000000023.cfg >		
Step 5	**Enable reliable response.** account.X.100rel_enable = 0	Reliable provisional response (PRACK) should be enabled.
Step 6	**Enable Session Timer.** account.X.session_timer.enable = 0 account.X.session_timer.expires = 3600 account.X.session_timer.refresher = 0	Set the VPx series to enable Session Timer. Session Refresher: 0 = uac 1 = uas
Step 7	**Enable Call Waiting.** call_waiting.enable = 1 call_waiting.tone = 1	Set the VPx series to enable Call Waiting and Call Waiting Tone.
Step 8	**Enable MWI.** account.X.subscribe_mwi = 0 account.X.subscribe_mwi_expires = 3600	MWI: Solicited when setting SubscribeMWI = 1. MWI: Not solicited when setting SubscribeMWI = 0.
Step 9	**Enable negotiated DTMF type.** account.X.dtmf.type = 1	Set the Temporis IPx00 to enable inband or RFC 2833 negotiated DTMF.
Step 10	**Select Transport Type.** account.X.transport = 0	Set the SIP transport: Transport = 0 (UDP) Transport = 1 (TCP) Transport = 2 (TLS) Transport = 3 (DNS-SRV)
Step 11	**Enable Feature Key Sync.** bw.feature_key_sync = 1	Enable Feature Key Sync: 1: Enable 0: Disable

4.2 Subscriber Level Configuration Parameters

This section identifies the device-specific parameters, including registration and authentication. These settings must be unique across devices to be matched with the settings for a BroadWorks subscriber.

Provisioning a subscriber to register with BroadWorks allows calls to terminate to the subscriber's line. Registration requires that a unique Address of Record (AoR) is provisioned on BroadWorks and the phone; provisioning an AoR on BroadWorks consists of setting the line/port parameter to a unique value within the Application Server cluster.

Step	Command	Purpose
Subscriber parameters for the < %BWMACADDRESS%.cfg >		
Step 1	**Enable a line to be used.** Example: account.X.enable = 1	Enable a line of VPx series in use.

Step	Command	Purpose
Subscriber parameters for the < %BWMACADDRESS%.cfg >		
Step 2	**Configure display name for a line.** Example: account.X.display_name = Joe	For a line, configure the name to be displayed on the device.
Step 3	**Set Register User ID for a line.** Example: account.X.user_name = 2405551111	The register user ID must correspond with the line/port setting on BroadWorks.
Step 4	**Enable SIP Authentication for a line.** Example: account.X.auth_name = 2405551111 account.X.password = 123456	If the Authentication service is configured on BroadWorks, these parameters must be configured to match the BroadWorks settings.
Step 5	**Configure eventlist BLF for a line.** account.X.blf.blf_list_uri = <broadworks-blf-list-uri> Example: account.X.blf.blf_list_uri = myblflist@as.iop1.broadworks.net	Configure eventlist BLF under Account Settings page.
Step 6	**Configure Net-Work Conference for a line.** account.X.conf_type = 2 account.X.conf_uri = conf@as.iop1.broadworks.net	If the Authentication service is configured on BroadWorks, these parameters must be configured to match the BroadWorks settings.

4.3 Shared Call Appearance Configuration

The Shared Call Appearance (SCA) feature allows the administrator to add multiple locations to a given line. Any of the locations can be used to originate or receive calls.

When a call comes in to an idle line, all the provisioned locations for that line are alerted. The first location to answer the call is connected to the originator. If the line is already active in a call, only the active location is alerted.

A subscriber can originate calls from any of the configured locations. All other locations are unable to originate calls until all calls are released.

It is recommended that the phone number plus an index (<phoneNumber>_<index>) is used when provisioning the unique Address of Record (AoR) for each shared line. For example: 2405551111_2. If a phone number does not exist, the MAC address plus an index could be used (<macAddress>_<index>).

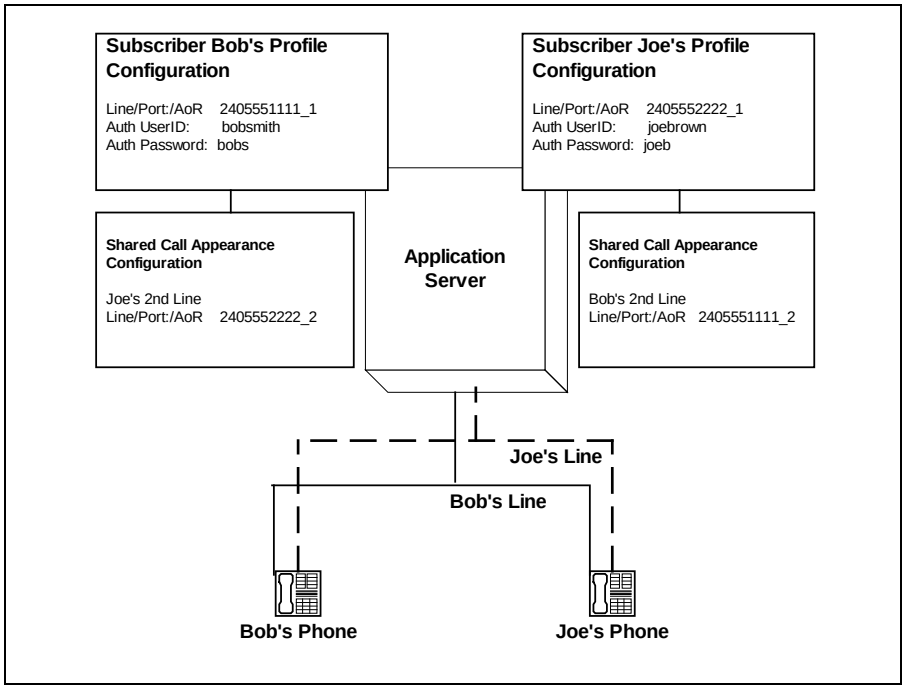

Figure 1 Shared Call Appearance Configuration

Figure 1 Shared Call Appearance Configuration shows that Bob and Joe each have two lines and that Bob shares a line with Joe and Joe shares a line with Bob. The figure also shows the applicable Subscriber Profile and Shared Call Appearance Configuration data for subscribers Bob and Joe.

When Bob (2405551111) is called, Bob's first line and Joe's second line will ring. When Joe (2405552222) is called, Joe's first line and Bob's second line will ring.

The following steps show how to configure both phones for this Shared Call Appearance configuration.

For configurations of SCA for the device, refer to the following example:

4.3.1 Bob's Phone Configuration – MAC.cfg

SCA configurations as specified in MAC.cfg. That is, 0015651130dc.cfg where "0015651130dc" is the MAC Address of the SIP phone.

The following steps are used to configure line 1 for Bob's phone. This line rings when Bob is called, so it has Bob's authentication information.

Step	Command	Purpose
Step 1	**Configure line as shared.** `account.1.shared_line = 1;`	Configure the line as "shared" (as opposed to "private").
Step 2	**Set Register User ID.** Example: `account.1.user_name = 2405551111_1;`	The register user ID must correspond with the line/port setting on BroadWorks.

Step	Command	Purpose

Step 3	**Enable SIP Authentication.**
	Example:
	account.1.auth_name = bobsmith;
	account.1.password = bobs;
		If the Authentication service is configured on BroadWorks, these parameters must be configured to match the BroadWorks settings.
		This line rings when Bob is called, so it has Bob's authentication information.

Step 4	**Configure display name.** Example: account.1.display_name = Bob Smith;	Configure the name to be displayed on the device for this line.

The following steps are used to configure line 2 for Bob's phone. This line rings when Joe is called, so it has Joe's authentication information.

Step	Command	Purpose
Step 1	**Configure line as shared.** account.2.shared_line = 1;	Configure the line as "shared" (as opposed to "private").
Step 2	**Set Register User ID.** Example: account.2.user_name = 2405551111_2;	The register user ID must correspond with the line/port setting on BroadWorks.

Step 3	**Enable SIP Authentication.**
	Example:
	account.2.auth_name = joebrown;
	account.2.password = joeb;
		If the Authentication service is configured on BroadWorks, these parameters must be configured to match the BroadWorks settings.
		This line rings when Joe is called, so it has Joe's authentication information.

Step 4	**Configure display name.** Example: account.2.display_name = Joe Brown;	Configure the name to be displayed on the device for this line.

4.3.2 Joe's Phone Configuration – MAC.cfg

The following steps are used to configure line 1 for Joe's phone. This line rings when Joe is called, so it has Joe's authentication information.

Step	Command	Purpose
Step 1	**Configure line as shared.** account.1.shared_line = 1;	Configure the line as "shared" (as opposed to "private").
Step 2	**Set Register User ID.** Example: account.1.user_name = 2405552222_1;	The register user ID must correspond with the line/port setting on BroadWorks.

Step	Command	Purpose

Step 3	**Enable SIP Authentication.**
	Example:
	account.1.auth_name = joebrown;
	account.1.password = joeb;
		If the Authentication service is configured on BroadWorks, these parameters must be configured to match the BroadWorks settings.
		This line rings when Joe is called, so it has Joe's authentication information.

Step 4	**Configure display name.** Example: account.1.display_name = Joe Brown;	Configure the name to be displayed on the device for this line.

The following steps are used to configure line 2 for Joe's phone. This line rings when Bob is called, so it has Bob's authentication information.

Step	Command	Purpose
Step 1	**Configure line as shared.** account.2.shared_line = 1;	Configure the line as "shared" (as opposed to "private").
Step 2	**Set Register User ID.** Example: account.2.user_name = 2405552222_2;	The register user ID must correspond with the line/port setting on BroadWorks.

Step 3	**Enable SIP Authentication.**
	Example:
	account.2.auth_name = bobsmith;
	account.2.password = bobs;
		If the Authentication service is configured on BroadWorks, these parameters must be configured to match the BroadWorks settings.
		This line rings when Bob is called, so it has Bob's authentication information.

Step 4	**Configure display name.** Example: account.2.display_name = Bob Smith;	Configure the name to be displayed on the device for this line.

5 Device Management

The 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 Yealink VPx Series and the configuration steps required. For Device Management configuration details not covered here, refer to the *BroadWorks Device Management Configuration Guide* [2].

The basic steps to integrate a device with Device Management are as follows:

1) Create device template files for the device with the appropriate BroadWorks Device Management tags.
2) Define custom and system tags and add them to the *device template* files. Note that these custom and system tags must also be defined on BroadWorks.
3) Create a device profile type on BroadWorks for each device model to be integrated with Device Management.
4) Add the device template files and other associated files to the device profile type.
5) Create a device profile instance of the device profile type and assign it to a user. A user name and password are assigned to this device profile.
6) The end device is configured with the Device Management URL for device files, as well as the user name/password access credentials.

As part of the Yealink VPx Series CPE kit, BroadSoft has defined a standard device configuration in the device template files that service providers can use on their systems. These files can be uploaded directly to Device Management without modification. However, the service provider also has the option to modify these template files as required to fit their deployment needs.

The CPE kit also includes tools to help automate the integration effort. For releases after Release 17.0, there is a Device Management import/export utility. The CPE kit contains DTAF files that can be used to import the device type and template files.

5.1 Device Management Capabilities Supported

The Yealink VPx Series has completed Device Management interoperability testing with BroadWorks using the *BroadWorks Device Management Interoperability Test Plan* [5]. The results are summarized in the following table.

The 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 BroadWorks with the intent to ensure interoperability.

The *Supported* column in the following table identifies the <partner> <device name>'s 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.

Caveats or clarifications are identified in the *Comments* column.

Note that *DUT* in the following table refers to the *Device Under Test,* which in this case is the Yealink VPx Series.

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	
	HTTP Download Using XSP FQDN	Yes	
	HTTP Download Using XSP Cluster FQDN	Yes	
	HTTP Download With Double Slash	Yes	
HTTPS File Download	HTTPS Download Using XSP IP Address	Yes	
	HTTPS Download Using XSP FQDN	Yes	
	HTTPS Download Using XSP Cluster FQDN	Yes	
File Inspection	Inspect System Config File	Yes	
	Inspect Device-Specific Config File	Yes	
	Inspect Other Config Files	Yes	
	Inspect Static Files	Yes	
Device Inspection	Inspect SIP Settings	Yes	
	Inspect Line Settings	Yes	
	Inspect Service Settings	Yes	
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	Yes	
	Shared Line Termination	Yes	
	Shared Line Status	Yes	
	Busy Lamp Field	Yes	

5.2 Device Management Configuration

This section identifies the steps required to enable the Yealink VPx Series for device management. For Device Management configuration details not covered here, refer to the *BroadWorks Device Management Configuration Guide* [2].

5.2.1 Configure BroadWorks Tags

The template files in Device Management use tags to represent the data stored on 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 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: System-default tags are common to all phones on the system; device-type-specific tags are common to Yealink phone models only.

The Yealink VPx Series makes use of dynamic tags, which may be configured by a 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 → Resources → Device Management Tag Sets* and select the *System Default* tag set. Yealink configuration templates make use of the tags in the following table. Add the tags 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.
%SBC_PORT%	Port	SBC SIP port.
%USE_SBC_BOOLEAN%	0/1	Use SBC: 1=yes, 0=no.

Example system default tag settings:

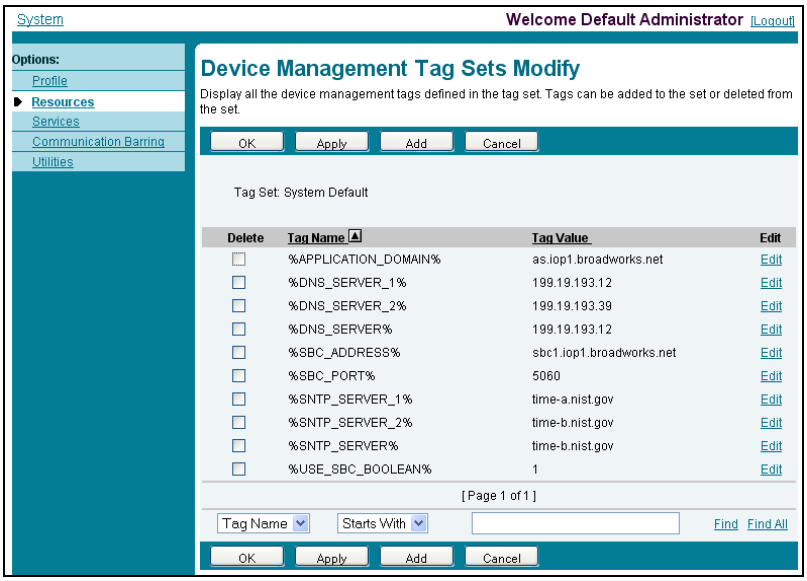

Figure 2 System Default Tag Settings

5.2.1.2 Create Device Type Specific Tags

Browse to *System → Resources → Device Management Tag Sets* and select *Add* to add a new tag set. Configure the tag set name using the device name appended by *Tags*: *Yealink-VPx Tags*. Add the device type specific tags in the following table to the device tag set. If the tag set already exists, ensure the following tags are defined.

Tag Name	Valid Settings	Description
%FEATURE_KEY_SYN%	0/1	Enable or disable the feature key synchronization, 0-Disabled, 1-Enabled (default).
%FIRMWARE_VERSION%	<Firmware version>.rom Example: 23.70.0.10.rom	Defines the VP530 firmware version.
%LANGUAGEGUI%	English Chinese_S	Defines the language for phone interface.
%LANGUAGEWEB%	English Chinese_S	Defines the language for web interface.
%TIMEZONENAME%	Default value is China (Beijing). Refer to Appendix B: Time Zone for the list of available time zone name on the IP phone.	Defines the time zone name. Note that the default value is set to China (Beijing). However, if the user is not provisioned with a timezone value of +8, an override tag value must be provided at each of the device profile levels.

Example device type specific tag settings:

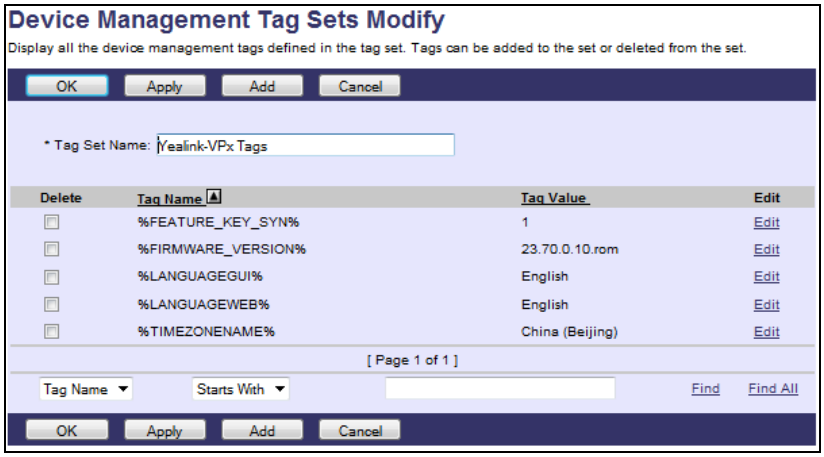

Figure 3 Device Type Specific Tag Settings

5.2.2 Configure BroadWorks Device Profile Type

The device profile type is a system-level structure that defines how the device interfaces with BroadWorks. It also identifies the default configuration files and other files, such as firmware, which are required for the phone 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 or IP phone.

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

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

- The 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, the import will fail.)
- There is a DTAF file available for import with a BroadWorks release level that is the same as or prior to the release being imported to. If the DTAF file is at a release level later than the release being imported to, the import may fail.

Otherwise, the manual method must be used.

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 BroadWorks to add the Yealink VPx Series as a Device Management-enabled device type.

The import method is available in BroadWorks Release 17.0 and later. For previous releases, use the manual configuration method described in the next section.

Download the Yealink VPx Series CPE kit from BroadSoft Xchange at www.broadsoft.com/xchange. 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.

Log in to BroadWorks as an administrator. Browse to *System* → *Resources* → *Identity/Device Profile Types* and select *Import*. Select *Browse* to find the extracted DTAF file for the model and select *OK* to start the import.

After the import finishes, the following post-import configuration steps must be completed.

Browse to *System* → *Resources* → *Identity/Device Profile Types* and perform a search to find the imported Yealink device profile type, *Yealink VPx Series*. Browse to the Profile page and change the Device Management Device Access FQDN to your Xtended Services Platform or Xtended Services Platform cluster address.

Example:

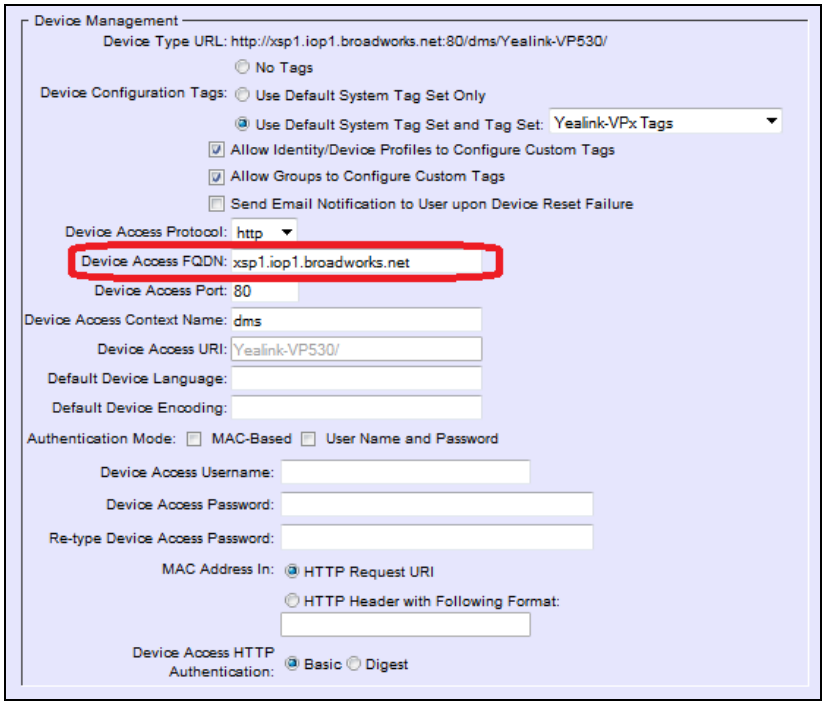

Figure 4 Device Access FQDN

Next, using the *Files and Authentication* link, select the option to rebuild all the system files.

Firmware files must be obtained from Yealink. These files are not included in the import. Complete the steps in section *5.2.2.2.2.3 Static Files* to define the static firmware files and to upload the firmware. Note that the non-firmware static files in section *5.2.2.2.2.3 Static Files* are included in the import.

After importing the DTAFs, the Application Server must be restarted to load the TimeZoneAlias files.

5.2.2.2 Configuration Method 2: Manual

This section identifies the manual steps necessary to configure BroadWorks to add the Yealink VPx as a Device Management-enabled device type.

The manual method must be used for BroadWorks releases prior to Release 17.0. It is an optional method in Release 17.0 and later. See section *5.2.2 Configure BroadWorks Device Profile Type* to determine when to use the manual method. 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.

The steps in this section must be completed for the device profile type for each Yealink model.

5.2.2.2.1 Modify Device Profile Type

This section identifies the BroadWorks device profile type settings relevant to Device Management for the Yealink VPx series.

Browse to *System* → *Resources* → *Identity/Device Profile Types* and perform a search to find the Yealink VPx device profile type(s) created in section *3.1 BroadWorks Device*

Profile Configuration or add the device profile type for each model using the settings from section *3.1 BroadWorks Device Profile Configuration* if they do not exist.

The *Standard Options* and *Advanced Options* should already be configured as specified in section *3.1 BroadWorks Device Profile Configuration*. If there are differences, update to match the settings in section *3.1 BroadWorks Device Profile Configuration*.

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

5.2.2.2.1.1 Configure Device Configuration Options

If Device Management has been enabled previously for the device profile type(s), proceed to the next section.

Device Configuration is enabled differently depending on the deployed BroadWorks release.

For BroadWorks Release 18.0 and later, configure as described in the following table.

Parameter	Value	Description
Device Configuration Options	Device Management	Use BroadWorks Device Management

The following screen capture shows Device Management enablement for BroadWorks Release 18.0 and later.

For BroadWorks releases prior to Release 18.0, configure as described in the following table. Note that these settings serve only to enable Device Management and are otherwise not meaningful in this context.

Parameter	Value	Description
Auto Configuration Type	2 Config File	Not meaningful other than it must be selected.
CPE System File Name	not_used	This parameter must not be blank, so set it to “not_used”.
Device File Format	not_used	This parameter must not be blank, so set it to “not_used”.

The following figure shows Device Management enablement for BroadWorks release prior to Release 18.0.

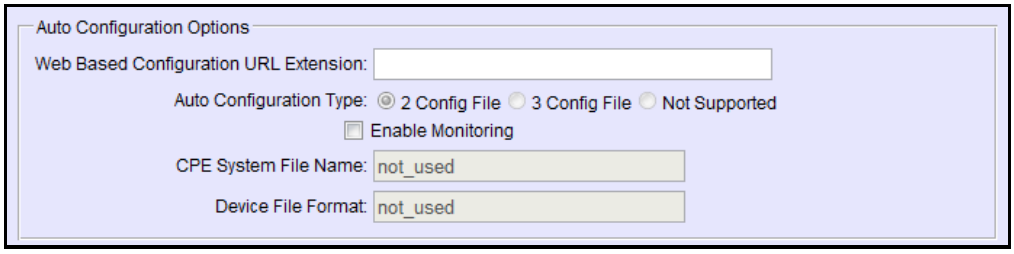

Figure 5 Device Management Enablement

5.2.2.2.1.2 *Configure Device Management Options*

Modify the device profile type *Device Management Options* as directed in the following table. These are common settings that apply to all devices enabled for Device Management.

If Device Management has been enabled previously for the device profile type(s), ensure the existing settings match the settings described in this section.

Parameters not identified in the following table can normally be left as defaults.

Parameter	Value	Description/Notes
Device Configuration Tags	Use Default System Tag Set and Tag Set *Select the device tag set created in section 5.2.1.2 Create Device Type Specific Tags.*	
Allow Identity/Device Profiles to Configure Custom Tags	checked	Optional.
Allow Groups to Configure Custom Tags	checked	Optional.
Device Access Protocol	http	
Device Access FQDN	<BroadWorks-XSP-Cluster-Address> Example: xsp.iop1.broadworks.net	Set to the XSP cluster FQDN if using an XSP farm. Otherwise, set to the individual XSP FQDN or IP address.
Device Access Port	<BroadWorks-XSP-Port> Example: 80	Should be set to 80.
Device Access Context Name	dms	This does not need to be defined. BroadWorks defaults to the system-defined value.
Device Access URI	<device name> Example: Yealink-VP530	This defines the directory the XSP uses to access the configuration files.

Example *Device Management Options* settings:

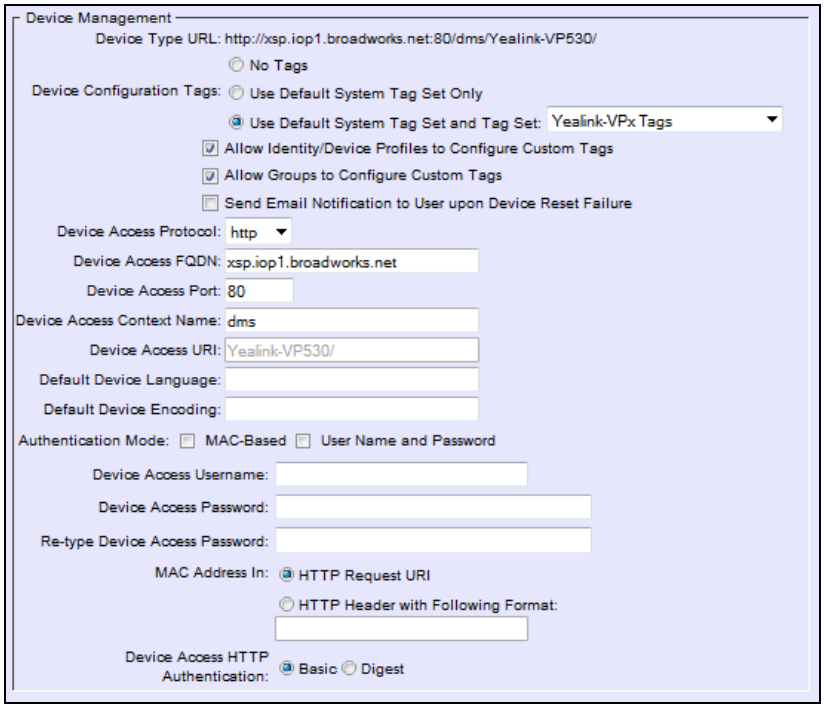

Figure 6 Device Management Options Settings

5.2.2.2.2 Define Device Profile Type Files

This section describes the BroadWorks Device Management configuration necessary to identify the configuration files and other files that the Yealink VPx downloads.

Configuration templates, firmware, and other files the VPx series use must be uploaded to BroadWorks. Download the Yealink VPx CPE kit from BroadSoft Xchange at www.broadsoft.com/xchange. Extract the configuration files from the *Configuration Files* folder of CPE kit. Obtain the firmware files directly from Yealink.

The following table identifies the Yealink configuration files distributed with the 23.70.0.10 CPE kit.

File Name	CPE Kit Template File Name	File Type	Description
		System-level, Device-specific, Static, Time Zone Alias	
Examples:			
y000000000023.cfg	y000000000023.cfg.template	System-level	This file contains all the configuration and firmware files that the phone needs to load
%BWMACADDRESS%.cfg	%BWMACADDRESS%.cfg.template	Device-specific	This is the template file used to build the Yealink directory file.
TimeZoneAliasLabels_Yealink-<*model*>.properties	TimeZoneAliasLabels_Yealink-<*model*>.properties	Time Zone Alias	The Time zone Alias file is a BroadWorks Device Management file used to map time zone identifiers between BroadWorks and Polycom phones. A Time zone Alias file is required for each model.

The following table identifies other files that the Yealink VPx downloads from the server or uploads to the server. Some of these files may not be provided in the CPE kit and must be obtained from Yealink.

File Name	File Type	Description
23.70.0.10-Yealink.rom	Static	This is the firmware file for Yealink VP530.
song.wav	Static	This file licenses the Polycom Productivity Suite applications to all phones on a BroadWorks System.
contactData.xml	Static	Local Contact data.
dialnow.xml	Static	Dialnow rules.
dialplan.xml	Static	Dialplan replace rule.
contact.png	Static	Customized image of local contact.
wallpaper.jpg	Static	Customized image for wallpaper.

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

5.2.2.2.2.1 System Files

This section identifies the system-level files used by Yealink and provides instructions for defining the files and uploading for Device Management.

The VPx downloads a system file, named as follows:

VP530: y000000000023.cfg

Add a BroadWorks device profile type file to the Yealink VPx device profile for the system file using the settings described in the following table.

Parameters not identified in the following table can normally be left as defaults.

Parameter	Value	Description/Notes
Device Access File Format	<system-file-name> Example: y000000000023.cfg	This is the filename the phone uses to request the file.
Repository File Format	<system-file-name>-%BWTIMESTAMP% Example: y000000000023-%BWTIMESTAMP%.cfg	This is the filename as stored on the Device Management repository. If group customization of the system file is required, the repository file name must contain the timestamp tag.
File Category	*Dynamic Per-Type*	The system file applies to the device type.
File Customization	*Administrator*	This identifies who can customize the system file template.
Enable Caching	Not Set	Caching is optional for a system file.
Assign File	*Custom*	
Authentication Mode	Not set or *User Name and Password*	This must be set based on what the device supports. If group customization of the system file is required, the authentication mode must be set to User Name and Password.
Device Access HTTP Authentication	*Digest*	

After defining the system file type, upload the corresponding system file template downloaded from BroadSoft Xchange. Use the *Browse* button on the file definition screen. Be sure to select *Apply* after uploading the file.

Example *System File* settings:

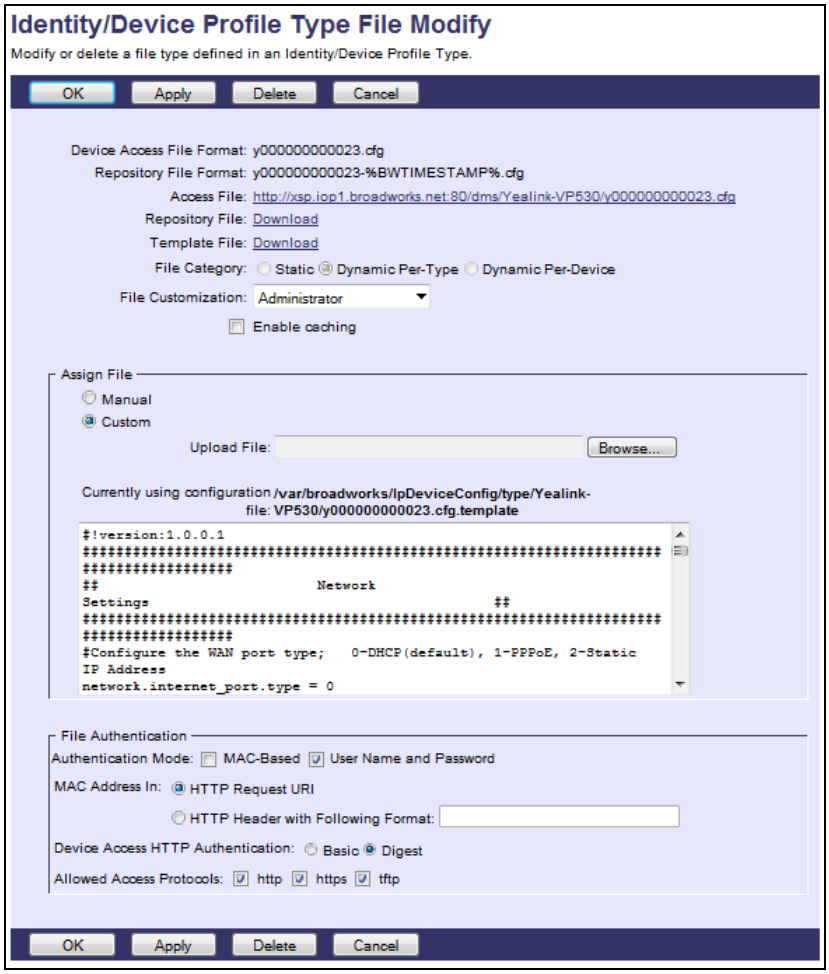

Figure 7 y000000000023.cfg file

5.2.2.2.2.2 Device-Specific Files

This section identifies the device-specific files used by Yealink and provides instructions for defining the files and uploading for Device Management.

Each VPx downloads a device-specific file based on the MAC address using the filename following format:

<mac-address>.cfg

Add a BroadWorks device profile type file to the Yealink VPx device profile for the device specific file using the settings described in the following table.

Parameters not identified in the following table can normally be left as defaults.

Parameter	Value	Description/Notes
Device Access File Format	<device-specific-file-format> *Example:* *%BWMACADDRESS%.cfg*	This is the filename format the phone uses to request the file.
Repository File Format	%BWFQDEVICEID%.cfg	This is the filename format as stored on the Device Management repository.
File Category	*Dynamic Per-Device*	This file is unique per device.
File Customization	*Administrator and User*	This identifies who can customize this file template.
Enable Caching	Not Set	Caching should not be enabled for device specific files.
Assign File	*Custom*	
Authentication Mode	*User Name and Password*	The phone-specific file is authenticated with user name and password.
Device Access HTTP Authentication	*Digest*	

After defining the device-specific file type, upload the corresponding device-specific file template downloaded from BroadSoft Xchange. Use the *Browse* button on the file definition screen. Be sure to select *Apply* after uploading the file.

Example *Device-Specific File* settings:

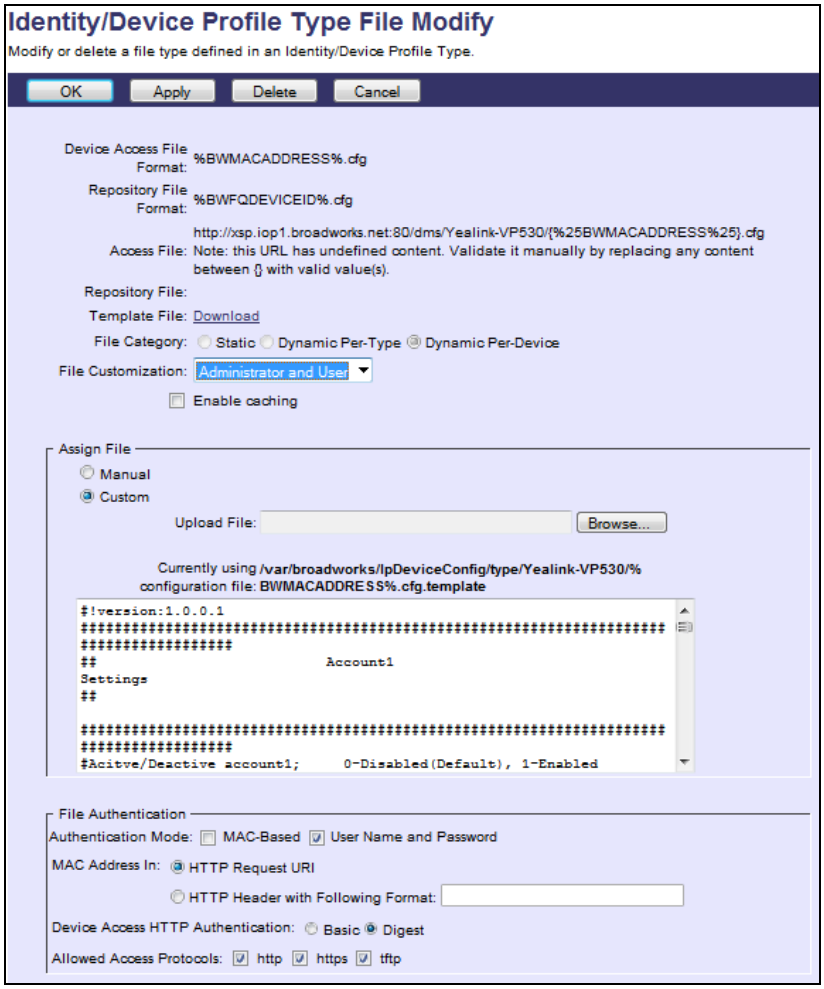

Figure 8 %BWMACADDRESS%.cfg File

5.2.2.2.2.3 Static Files

Static files are files such as firmware and media files that are not configurable and/or do not make use of the dynamic BroadWorks Device Management tags.

The Yealink VPx requires the following static files:

- <firmware-version>.rom
- song.wav
- contactData.xml
- dialnow.xml
- dialplan.xml
- contact.png
- wallpaper.jpg

Add a BroadWorks device profile type file to the Yealink VPx device profile for each of the static files using the settings described in the following table.

Parameters not identified in the following table can normally be left as defaults.

Parameter	Value	Description/Notes

Device Access File Format	<file-name>
	Examples:
	23.70.0.10-Yealink.rom
	song.wav
	`contactData.xml`
	`dialnow.xml`
	`dialplan.xml`
	`contact.png`
	`wallpaper.jpg`
		This is the filename the phone uses to request the file.

Repository File Format	<file-name>
	Examples:
	23.70.0.10-Yealink.rom
	song.wav
	`contactData.xml`
	`dialnow.xml`
	`dialplan.xml`
	`contact.png`
	`wallpaper.jpg`
		This is the filename as stored on the Device Management repository. Use the same name as the actual file name.

File Category	*Static*	This is a static file. There are no dynamic tags in the file.
File Customization	*Disallow*	This file must not be modified.
Enable Caching	Selected	Caching should normally be enabled for static files.
Assign File	*Custom*	
Authentication Mode	Not set	The static files are not authenticated so do not select either of the options.

After defining the static file types, upload the corresponding static files. Firmware must be obtained from Yealink. Use the *Browse* button on the file definition screen. Be sure to select *Apply* after uploading the file.

Example *Static File* settings:

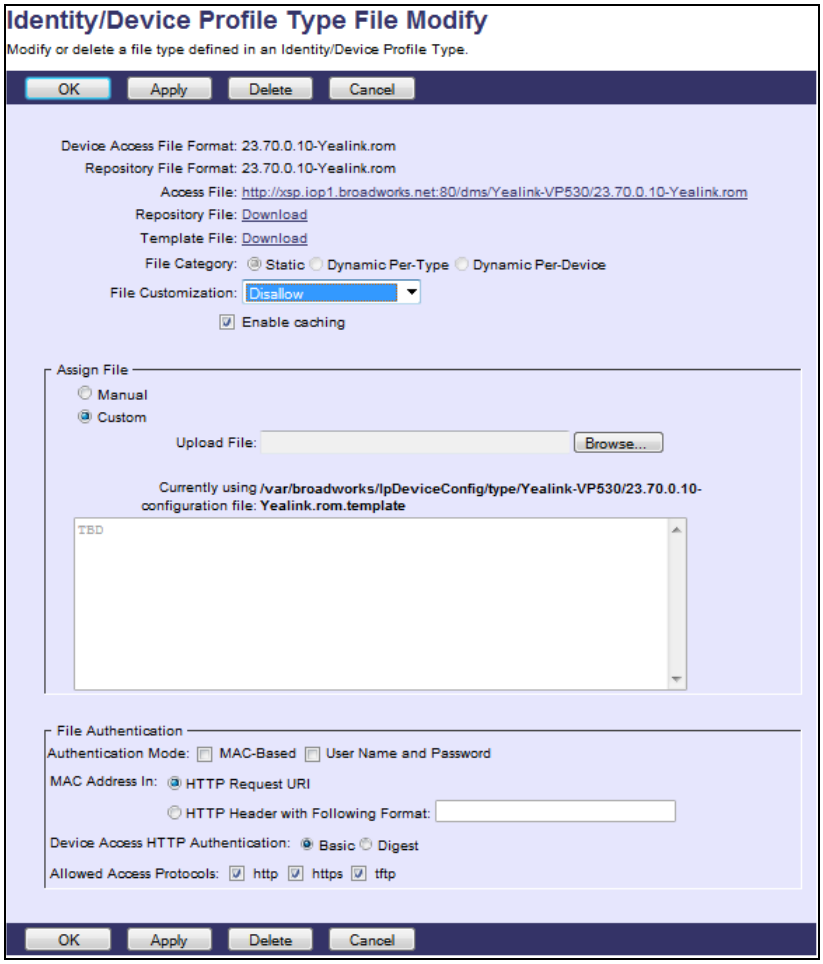

Figure 9 Static Firmware File

5.2.2.2.2.4 Time Zone Alias File

To properly map the BroadWorks configured user time zone to the Yealink VPx phone setting, a mapping file must be created on the BroadWorks system. This file maps the BroadWorks user time zone settings to the phone's time zone settings. Time zone mapping for the device profile type is documented in the *BroadWorks Device Management Configuration Guide* [2].

This time zone mapping file must be added to the */usr/local/broadworks/bw_base/conf/dms* directory on the Application Server using the following file name format:

TimeZoneAliasLabels_<Device_Type_Name>.properties

For example, if the device type name is *Yealink-VP530,* the time zone mapping file name must be *TimeZoneAliasLabels_Yealink-VP530.properties*. (If a space exists in the device name, the " " must be converted to a "+" in the file name.)

The file must contain the mapping of BroadWorks time zones values to Yealink VPx time zone values. Following is an example of the file contents:

```
US_ALASKA=-9
US_HAWAII=-10
CANADA_PACIFIC_TIME=-8
```

```
US_PACIFIC_TIME=-8
US_ARIZONA=-7
CANADA_MOUNTAIN_TIME=-7
US_MOUNTAIN_TIME=-7
CANADA_CENTRAL_TIME=-6
US_CENTRAL_TIME=-6
CANADA_EASTERN_TIME=-5
US_INDIANA=-5
US_EASTERN_TIME=-5
CANADA_ALTANTIC_TIME=-4
CANADA_NEWFOUNDLAND=-3.5
```

This file should contain all the time zones supported by the Service Provider's BroadWorks system. The Application server must be restarted to load this file.

The CPE kit contains the time zone properties files defined for the continental U.S. and Canadian time zones. Refer to the *Yealink VPx Phone User Manual* [1] for other time zone settings. When using the DTAF import, the TimeZoneAlias files are automatically copied onto the system.

The BroadWorks Application Server must be restarted for the TimeZoneAlias files to be picked up by the system.

5.2.3 Create Device Profile Instance and Custom Device Tag

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 BroadWorks interface to a Yealink phone deployed at a user's desk.

This section describes how to create a BroadWorks device profile instance for an individual Yealink VPx phone. Device profile instances are normally created at the BroadWorks Group level and assigned to users. Further, due to the timezone implementation, each Yealink VPx phone requires to be identified with Timezone Name in the device customized tags.

When the device profile is created, the authentication data must be defined. The authentication data is used by Device Management to challenge a request from a phone to download a configuration file. The device must send credentials that match the credentials stored in the device profile.

5.2.3.1 Create Device Profile Instance

Browse to the BroadWorks *<group>* → *Resources* → *Identity/Device Profiles* and select *Add* to add a new Yealink VPx device profile. Define the device profile instance using the settings described in the following table.

Parameters not identified in the following table can normally be left as defaults.

Parameter	Value	Description/Notes
Identity/Device Profile Name	<device-profile-name> Example: yealinkvp530	The device profile name is a unique identifier for the device profile instance.
Idenity/Device Profile Type	<yealink-txp-device-profile-type> Example: Yealink-VP530	Select from the dropdown the Yealink VPx device profile type created in the previous sections.
Authentication	*Use Custom Credentials*	Use unique login and password for each phone.

Parameter	Value	Description/Notes
Device Access User Name	<phone-login-name> Example: yealinkvp530	Username to login from the phone. The phone login user naming convention must be determined by the service provider.
Device Access Password	<phone-login-password> Example: 654321	Password to login from the phone.

Example *Identity/Device Profile Add* settings:

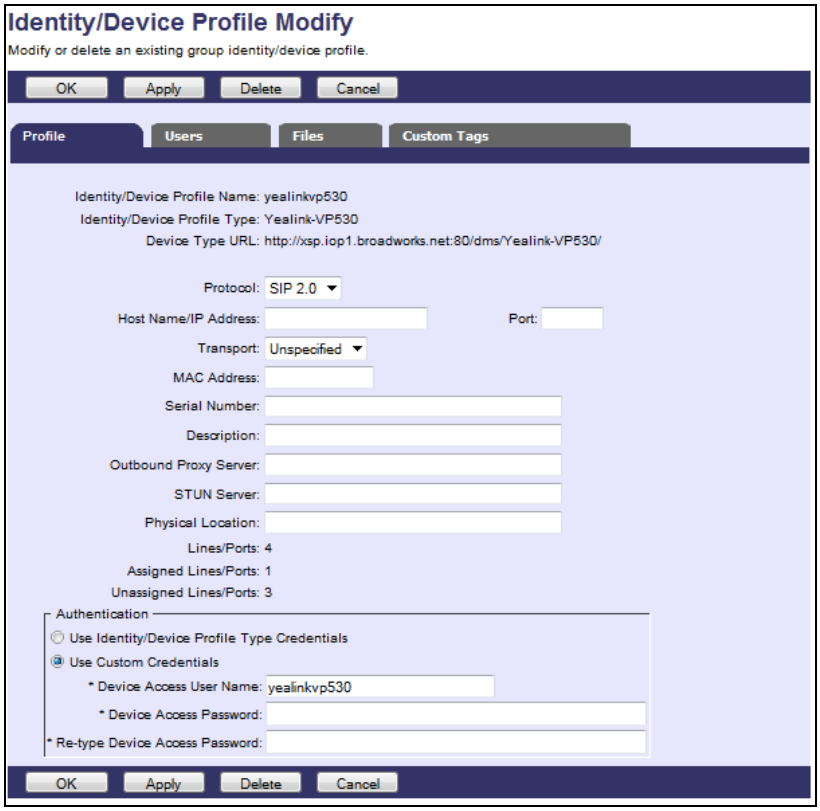

Figure 10 Device Profile Instance

5.2.3.2 Create Customize Device Tags

After device creation, the Time Zone Name of each VPx must be customized to match with the time zone specified in the user profile page.

Example of Time Zone specified in the user profile page.

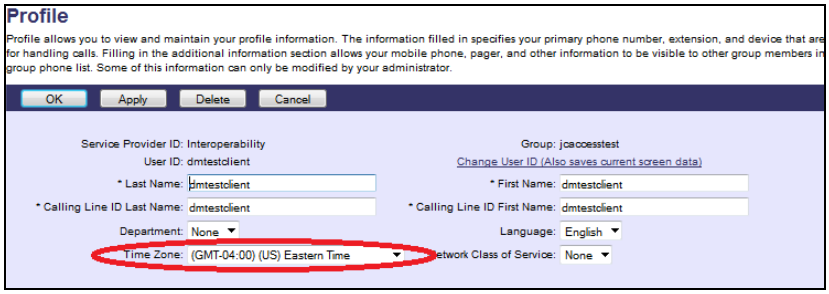

Figure 11 Time Zone

To access the customization page, select the *Custom Tags* tab as shown in the following figure:

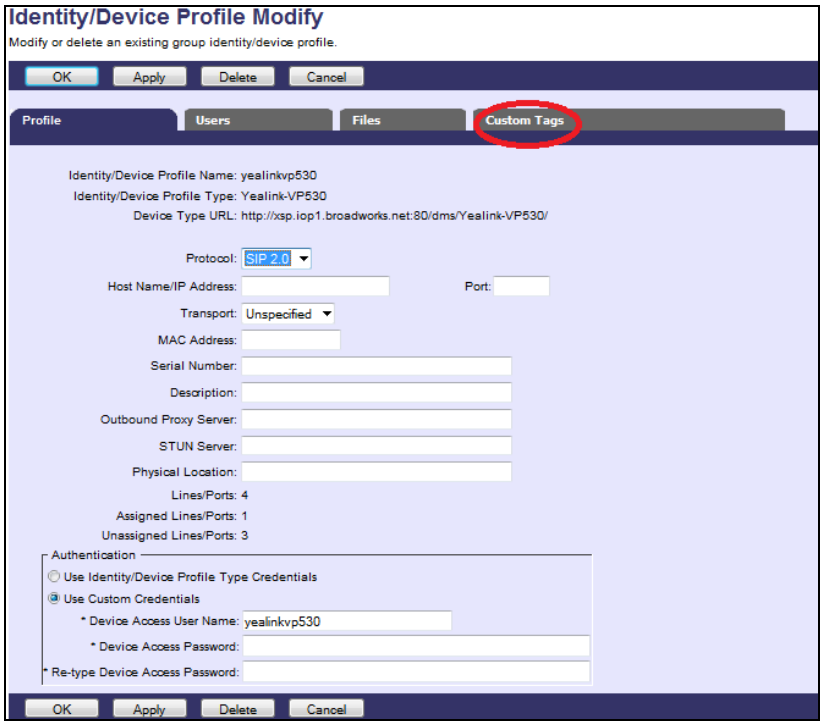

Figure 12 Custom Tags

Add custom tag at the device profile level to provide the time zone name, which is relevant to the particular Yealink VPx device according to the provisioned time zone on BroadWorks and the time zone table in Appendix B: Time Zone.

Example:

Figure 13 Time Zone

5.2.4 Configure BroadWorks User

The user should be configured with the desired BroadWorks configuration and services. Any services that require a specific configuration on the device are managed via Device Management and defined in the device configuration files, given that the template files are created with the correct Device Management tags.

The device profile created in the previous section should be assigned to the 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.

To assign the device profile to the user, browse to the BroadWorks *<user>* → *Addresses* page and set the parameters as described in the following table.

It is expected that parameters not identified in the following table are already set or are self-explanatory.

Parameter	Value	Description/Notes
Identity/Device Profile Name	<device-profile-name> Example: yealinkvp530	Select from the dropdown the device profile instance created in the previous section.
Line/Port	<SIP register address-of-record> Example: 8881001099@as.iop1.broadworks.net	Supply the desired SIP register address-of-record.

Example user *Addresses* settings:

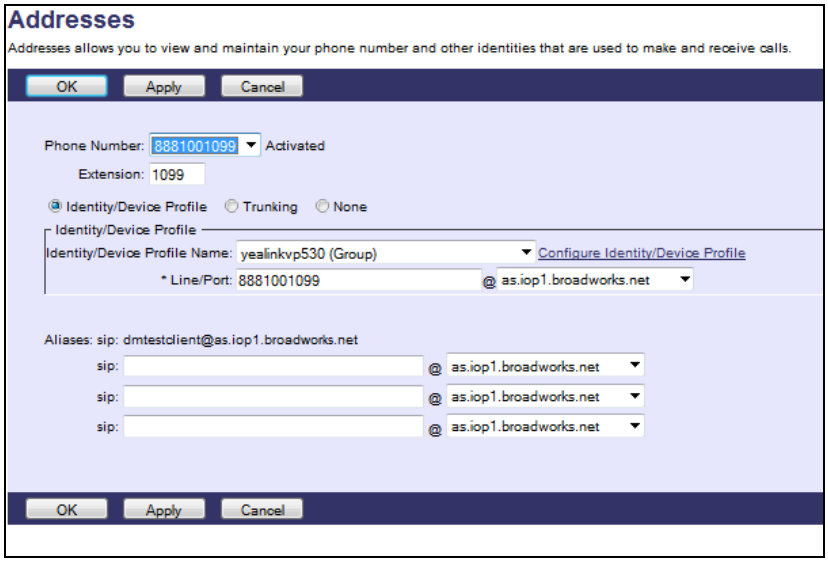

Figure 14 Assign Device Profile to User

5.2.5 Configure Edge Device

In many deployments, an edge device is deployed on the enterprise edge. Configure the edge device SIP server setting with the service provider's session border controller IP address or FQDN. If there is no edge device and the phones communicate directly with the service provider's SBC, skip this section.

To integrate the edge device with Device Management, the SBC address tag (%SBC_ADDRESS%) defined in section *5.2.1.1 Create System Default Tags* must be overridden at the group level with the LAN address of the edge device. At the *Group → Utilities → Configure Device* page, select the Yealink VPx device profile. Perform the following steps.

1) Click on the *Custom Tags* tab.
2) Click the **Add** button.
3) Add the SBC tag.
4) Enter SBC_ADDRESS as the tag.
5) Enter the IP address as the value (edge device LAN IP address).
6) Click **OK** to save the tag data.

This Tag/Value will be applied to all Yealink phones in the group using the modified *Device Profile Type*.

Repeat for each Yealink model provisioned in the group.

5.2.6 Configure Yealink VPx

This section describes the steps necessary to configure the Yealink VPx for integrating with BroadWorks Device Management.

Log in to the WEB UI for the VPx phone (https://<phone-ip-address>). Browse to the *Upgrade* web page. Set the following:

- Check New Config – Power On
- URL – Device Management server (Xtended Services Platform) device address URL

Example: http://xsp1.iop1.broadworks.net:80/dms/Yealink-VP530/

- Account – BroadWorks Device Access User Name

Example: yealinkvp530

- Password – BroadWorks Device Access Password

Example: 654321

Restart the phone to force the phone to download the Device Management configuration files and firmware.

Example of a Login Screen (Default Username/Password: admin/admin)**:**

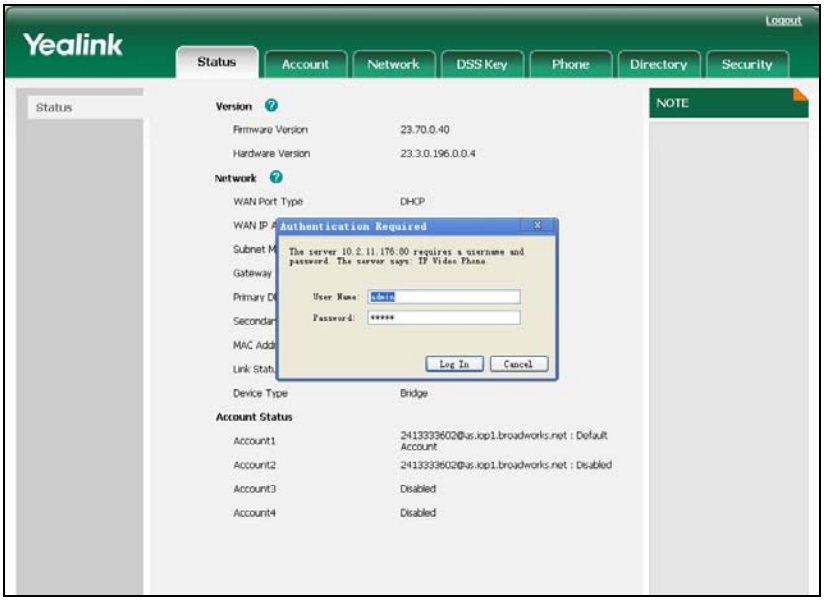

Figure 15 Login Screen

Example Upgrade screen:

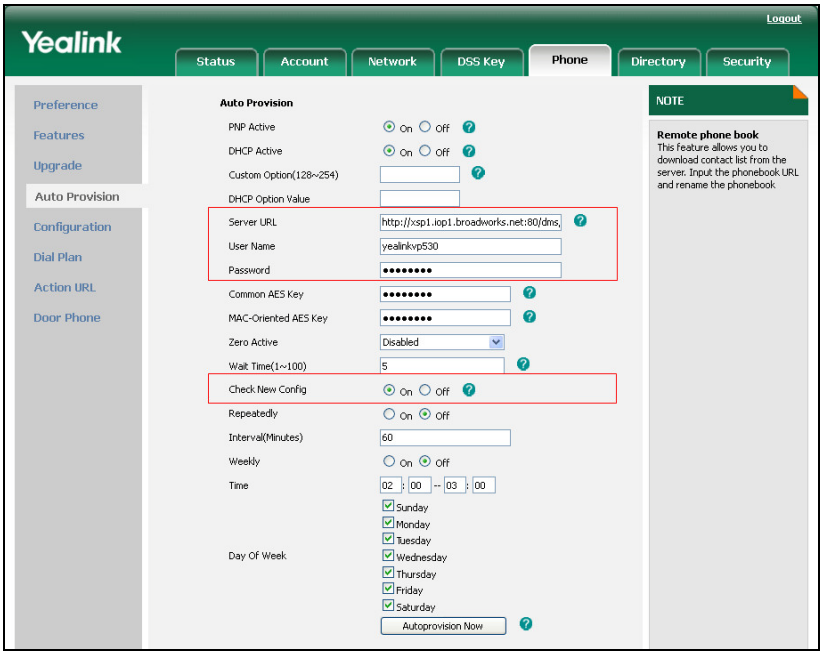

Figure 16 Upgrade Screen

Appendix A: Sample VPx Series Configuration Files

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 Yealink with the specific release to generate your configuration files.

System Default File: y000000000023.cfg

NOTE: This is an example file and should be used for reference only.

```
#!version:1.0.0.1

##File header "#!version:1.0.0.1" can not be edited or deleted.##

############################################################
##                          Network Settings              ##
############################################################
#Configure the WAN port type;   0-DHCP(default), 1-PPPoE, 2-Static IP
Address
network.internet_port.type = 0

#Configure the Static IP address,mask,gateway and DNS server
network.internet_port.ip =
network.internet_port.mask =
network.internet_port.gateway =
network.primary_dns= %DNS_SERVER_1%
network.secondary_dns = %DNS_SERVER_2%

#Configure the user and password for PPPOE connection;
#Require reboot;
network.pppoe.user =
network.pppoe.password =

#Enable or disable the internet port VLAN, 0-Disabled(default), 1-
Enabled;
#Require reboot;
network.vlan.internet_port_enable = 0

#Configure the VLAN ID, ranges from 0 to 4094, (0 by default);
#Require reboot;
network.vlan.internet_port_vid = 0

#Configure the VLAN priority, ranges from 0 to 7,(0 by default);
#Require reboot;
network.vlan.internet_port_priority = 0

#Configure the ports for HTTP (80 by default) and HTTPS (443 by
default) servers;
#Require reboot;
network.port.http = 80
network.port.https = 443

#Configure the maximum local rtp port, ranges from 0 to 65535 (11800 by
default);
#Require reboot;
```

```
network.port.max_rtpport = 11800

#Configure the minimum local rtp port, ranges from 0 to 65535 (11780 by
default);
#Require reboot;
network.port.min_rtpport = 11780

#Configure the voice qos, ranges from 0 to 63 (40 by default);
#Require reboot;
network.qos.rtptos = 40

#Configure the SIP qos, ranges from 0 to 63 (26 by default);
#Require reboot;
network.qos.signaltos = 26

# Configure the 802.1X mode;   0-disable(default), 1-enable(EAP-MD5)
network.802_1x.mode = 0

#Configure the username and password for 802.1x authentication;
#Require reboot;
network.802_1x.identity =
network.802_1x.md5_password =

#Enable or disable the VPN feature; 0-Disabled(default), 1-Enabled;
#Require reboot;
network.vpn_enable = 0

#Enable or disable the LLDP feature; 0-Disabled, 1-Enabled(default);
#Require reboot;
network.lldp.enable = 0

#Configure the interval(in seconds) of broadcasting the LLDP request,
ranges from 1 to 3600 (120 by default);
#Require reboot;
network.lldp.packet_interval = 120

##############################################################
##                 Syslog server Settings                   ##
##############################################################
#Configure the syslog mode   0-disable, 1-Local, 2-Server
#Require reboot;
syslog.mode = 1

#Configure the IP address of the syslog address;
#Require reboot;
syslog.server =

#Configure the syslog detailed level 0-6, level 3 by default;
#Require reboot;
syslog.log_level = 3

##############################################################
##                  TR069 Settings                          ##
##############################################################

#The TR069 feature is only applicable to some designated firmware
version;
#All settings of TR069 require reboot;
#Enable or disable the TR069 feature; 0-Disabled (default), 1-Enabled;
managementserver.enable = 0

#Configure the username and password for the phone to authenticate with
the ACS;
```



```
managementserver.username =
managementserver.password =

#Configure the access URL of the ACS;
managementserver.url =


#Configure the username and password for the phone to authenticate the
connection requests;
managementserver.connection_request_username =
managementserver.connection_request_password =

#Enable or disable the phone to report its configuration information to
the ACS;
managementserver.periodic_inform_enable = 0

#Configure the interval(in seconds) for the phone to report its
configuration information to the ACS (60 by default);
managementserver.periodic_inform_interval = 60

##############################################################
##                  auto provisioning                       ##
##############################################################

#Enable or disable the Plug and Play feature; 0-Disabled, 1-
Enabled(default);
auto_provision.pnp_enable = 1

#Enable or disable the phone to check new configruation when power on,
0-Disabled, 1-Enabled(default);
auto_provision.power_on_enable = 1

#Enable or disable the repeatedlly auto provisioning mode, 0-
Disabled(default), 1-Enabled;
auto_provision.repeat.enable = 0
auto_provision.repeat.minutes = 1440

#Enable or disable the weekly auto provisioning mode, 0-
Disabled(default), 1-Enabled;
auto_provision.weekly.enalbe = 0

#Configure the week time, when the auto provisioning mode is set to
weekly or power on + weekly;
auto_provision.weekly.mask = 0123456
auto_provision.weekly.begin_time = 00:00
auto_provision.weekly.end_time = 00:00

#Configure the url of the auto provisioning server;
auto_provision.server.url =

#Configure the username and password for the phone to be authenticated
by the auto provisioning server;
auto_provision.server.username =
auto_provision.server.password =

#Enable or disable the DHCP option mode; 0-Disabled, 1-Enabled(default)
auto_provision.dhcp_option.enable = 1

#Configure the value (manufacturer of the device) of DHCP option 60;
auto_provision.dhcp_option.option60_value =

#Configure the custom DHCP option number, ranges from 128 to 254;
auto_provision.dhcp_option.list_user_options =
```



```
#Configure AES key (16 bytes) for decrypting the common CFG file;
auto_provision.aes_key_16.com =

#Configure AES key (16 bytes) for decrypting the MAC-Oriented CFG file;
auto_provision.aes_key_16.mac =

##########################################################
##                    Auto Provisioning Code            ##
##########################################################

#This feature allows user to perform auto provisioning when entering
the predefined auto privisioning code on the phone;
#Require reboot;
# "X" ranges from 1 to 50

#Configure the auto provisioning name;
#The value format is String, the maximum length is 100;
#autoprovision.X.name =

#Configure the auto provisioning code;
#The value format is String, the maximum length is 100;
#autoprovision.X.code =

#Configure the url of the auto provisioning server;
#The value format is String, the maximum length is 256;
#autoprovision.X.url =

#Configure the username and password for the phone to be authenticated
by the auto provisioning server;
#The value format is String, the maximum length is 100;
#autoprovision.X.user =
#autoprovision.X.password =

#Configure AES key (16 bytes) for decrypting the common CFG file and
MAC-Oriented CFG file;
#autoprovision.X.com_aes =
#autoprovision.X.mac_aes =

autoprovision.1.name =
autoprovision.1.code =
autoprovision.1.url =
autoprovision.1.user =
autoprovision.1.password =
autoprovision.1.com_aes =
autoprovision.1.mac_aes =

autoprovision.2.name =
autoprovision.2.code =
autoprovision.2.url =
autoprovision.2.user =
autoprovision.2.password =
autoprovision.2.com_aes =
autoprovision.2.mac_aes =

##########################################################
##                      Phone Features                  ##
##########################################################

#Enable or disable the phone to convert pound sign to percent sign 23
when dialing out, 0-Disabled, 1-Enabled(default)
sip.use_23_as_pound = 1
```

```
#Enable or disable the RFC2543 Hold feature, 0-Disabled(default), 1-
Enabled;
sip.rfc2543_hold = 0

#Enable or disable the phone to send the SIP messages to the outbound
server, 0-Disabled, 1-Enabled(default);
sip.use_out_bound_in_dialog = 1

#Configure the registration random time(in seconds), ranges from 0 to
60 (0 by default);
sip.reg_surge_prevention = 0

#Enable or disable the watch dog feature, 0-Disabled, 1-
Enabled(default);
watch_dog.enable = 1

#Enable or disable the transferee to display the miss call prompt on
the LCD screen when performing semi_attended transfer;
#0-Disabled, 1-Enabled(default);
transfer.semi_attend_tran_enable = 1

#Enable or disable the phone to complete the blind/attended transfer
through on-hook;
#0-Disabled,1-Enabled(default);
transfer.blind_tran_on_hook_enable = 1
transfer.on_hook_trans_enable = 1

#Enable or disable to access the web user interface of phone using the
http/https protocol;
#0-Disabled,1-Enabled(default);
#Require Reboot;
wui.https_enable = 1
wui.http_enable = 1

#Enable or disable the feature key synchronization, 0-Disabled, 1-
Enabled(default);
bw.feature_key_sync = %FEATURE_KEY_SYN%


##############################################################
##                          Voice                           ##
##############################################################

#Configure the receiving volume of Speaker,HandSet and HeadSet,the
value ranges from 0 to 15 (5 by default);
voice.handfree.spk_vol =
voice.handset.spk_vol =
voice.headset.spk_vol =

#Configure the ring volume, the value ranges from 0 to 15 (5 by
default);
voice.ring_vol =

##############################################################
##                  Security Settings                       ##
##############################################################
#Enable or disable the phone to only accept the certificates in the
Trusted Certificates list;
#0-Disabled,1-Enabled(default);
security.trust_certificates = 0

#Set the password of the user or the administrator, the value format
is: user:password or admin:password;
```



```
#security.user_password = admin:admin123
security.user_password =

############################################################
DSS Key                              ##
############################################################
#memorykey.x.line: configure the desired line to apply this key
feature; ranges from 0 to 4;
#the value 0 can correspond to Auto(all lines) or Line 1.When the key
applies to the features: BLF, Shared Line, BLF List, Call Park, Group
Pickup, Paging, Pick Up and Voice Mail, the value 0 corresponds to line
1.
#memorykey.x.value: enter the value when setting some key features,
e.g. when setting the key to BLF, enter the number of the monitored
user;
#memorykey.x.pickup_value: set the pick up code, this parameter only
applies to BLF;
#memorykey.x.type: assign the desired feature the key, different digits
correspond to different features;
#Type: 0-N/A(default for memory key)    1-Conference    2-Forward    3-
Transfer    4-Hold    5-DND    6-Redial    7-Call Return    8-SMS    9-
Call Pickup    10-Call Park
#      11-DTMF    12-Voicemail    13-SpeedDial    14-Intercom    15-
Line(default for line key)    16-BLF    17-URL    18-Group Listening
19-Public Hold    20-Private Hold
#      21-Shared Line    22-XML Group    23-Group Pickup    24- Paging
25-Record    27-XMLbrowser    35-URLRecord    37-Switch    38-LDAP
39-BLF List
#      40-Prefix    41- Zero-Sp-Touch    42-ACD    45-Local Group
46-Broadsoft Group
#memorykey.x.xml_phonebook: specify the desired phonebook when multiple
phonebooks are configured on the phone. This parameter only applies to
key type XML Group/Local Group/Broadsoft Group.
#memorykey.x.label: configure the label for each key dispalying on LCD
screen.

# Configure DSS Key1
memorykey.1.line =
memorykey.1.value =
memorykey.1.pickup_value =
memorykey.1.type =
memorykey.1.xml_phonebook =
memorykey.1.label =

# Configure DSS Key2
memorykey.2.line =
memorykey.2.value =
memorykey.2.pickup_value =
memorykey.2.type =
memorykey.2.xml_phonebook =
memorykey.2.label =

# Configure DSS Key3
memorykey.3.line =
memorykey.3.value =
memorykey.3.pickup_value =
memorykey.3.type =
memorykey.3.xml_phonebook =
memorykey.3.label =

# Configure DSS Key4
memorykey.4.line =
memorykey.4.value =
```



```
memorykey.4.pickup_value =
memorykey.4.type =
memorykey.4.xml_phonebook =
memorykey.4.label =


# Configure DSS Key5
memorykey.5.line =
memorykey.5.value =
memorykey.5.pickup_value =
memorykey.5.type =
memorykey.5.xml_phonebook =
memorykey.5.label =

# Configure DSS Key6
memorykey.6.line =
memorykey.6.value =
memorykey.6.pickup_value =
memorykey.6.type =
memorykey.6.xml_phonebook =
memorykey.6.label =

# Configure DSS Key7
memorykey.7.line =
memorykey.7.value =
memorykey.7.pickup_value =
memorykey.7.type =
memorykey.7.xml_phonebook =
memorykey.7.label =

# Configure DSS Key8
memorykey.8.line =
memorykey.8.value =
memorykey.8.pickup_value =
memorykey.8.type =
memorykey.8.xml_phonebook =
memorykey.8.label =

# Configure DSS Key9
memorykey.9.line =
memorykey.9.value =
memorykey.9.pickup_value =
memorykey.9.type =
memorykey.9.xml_phonebook =
memorykey.9.label =

# Configure DSS Key10
memorykey.10.line =
memorykey.10.value =
memorykey.10.pickup_value =
memorykey.10.type =
memorykey.10.xml_phonebook =
memorykey.10.label =

# Configure DSS Key11
memorykey.11.line =
memorykey.11.value =
memorykey.11.pickup_value =
memorykey.11.type =
memorykey.11.xml_phonebook =
memorykey.11.label =

# Configure DSS Key12
```

```
memorykey.12.line =
memorykey.12.value =
memorykey.12.pickup_value =
memorykey.12.type =
memorykey.12.xml_phonebook =
memorykey.12.label =

# Configure DSS Key13
memorykey.13.line =
memorykey.13.value =
memorykey.13.pickup_value =
memorykey.13.type =
memorykey.13.xml_phonebook =
memorykey.13.label =

# Configure DSS Key14
memorykey.14.line =
memorykey.14.value =
memorykey.14.pickup_value =
memorykey.14.type =
memorykey.14.xml_phonebook =
memorykey.14.label =

# Configure DSS Key15
memorykey.15.line =
memorykey.15.value =
memorykey.15.pickup_value =
memorykey.15.type =
memorykey.15.xml_phonebook =
memorykey.15.label =

# Configure DSS Key16
memorykey.16.line =
memorykey.16.value =
memorykey.16.pickup_value =
memorykey.16.type =
memorykey.16.xml_phonebook =
memorykey.16.label =

# Configure DSS Key17
memorykey.17.line =
memorykey.17.value =
memorykey.17.pickup_value =
memorykey.17.type =
memorykey.17.xml_phonebook =
memorykey.17.label =

# Configure DSS Key18
memorykey.18.line =
memorykey.18.value =
memorykey.18.pickup_value =
memorykey.18.type =
memorykey.18.xml_phonebook =
memorykey.18.label =

##############################################################
##                  Line Key Settings                       ##
##############################################################
#Configure Linekey1
linekey.1.line =
linekey.1.value =
linekey.1.pickup_value =
linekey.1.type =
```

```
linekey.1.xml_phonebook =
linekey.1.label =

#Configure Linekey2
linekey.2.line =
linekey.2.value =
linekey.2.pickup_value =
linekey.2.type =
linekey.2.xml_phonebook =
linekey.2.label =

#Configure Linekey3
linekey.3.line =
linekey.3.value =
linekey.3.pickup_value =
linekey.3.type =
linekey.3.xml_phonebook =
linekey.3.label =

#Configure Linekey4
linekey.4.line =
linekey.4.value =
linekey.4.pickup_value =
linekey.4.type =
linekey.4.xml_phonebook =
linekey.4.label =

############################################################
##                       Action URL                       ##
############################################################

#action_url.incoming_call: configure the phone to send message to the
specified server when receiving incoming call;
#action_url.dnd_on: configure the phone to send message to the
specified server when DND feature is activated;
#The value format is: http://IP address of server/help.xml?mac=$mac
#action_url.log_on = http://192.168.1.20/help.xml?mac=$mac

action_url.setup_completed =
action_url.log_on =
action_url.log_off =
action_url.register_failed =
action_url.off_hook =
action_url.on_hook =
action_url.incoming_call =
action_url.outgoing_call =
action_url.call_established =
action_url.dnd_on =
action_url.dnd_off =
action_url.always_fwd_on =
action_url.always_fwd_off =
action_url.busy_fwd_on =
action_url.busy_fwd_off =
action_url.no_answer_fwd_on =
action_url.no_answer_fwd_off =
action_url.transfer_call =
action_url.blind_transfer_call =
action_url.attended_transfer_call =
action_url.hold =
action_url.unhold =
action_url.mute =
action_url.unmute =
action_url.missed_call =
```

```
action_url.call_terminated =
action_url.busy_to_idle =
action_url.idle_to_busy =

#Configure the phone to send message to the specified server when
changing the IP address;
action_url.ip_change =

#Configure the phone to send message to the specified server when
forwarding or rejecting incoming call, or answering new incoming call;
action_url.forward_incoming_call =
action_url.reject_incoming_call =
action_url.answer_new_incoming_call =

#Configure the phone to send message to the specified server when
transfer finished/transfer failed;
action_url.transfer_finished =
action_url.transfer_failed =

#Configure the phone to send message to the specified server when
rejecting the new incoming call;
action_url.reject_new_incoming_call=

#Configure the phone to send message to the specified server when the
phone cancels to call out,the remote called party is busy or the remote
party cancels the call;
action_url.cancel_callout =
action_url.remote_busy =
action_url.call_remote_canceled =

############################################################
##                    Language Settings             ##
############################################################Specify the
language displays on the web page, the avaiable values are: Engliash,
Chinese_s, German, Italian and Turkish;
lang.wui = %LANGUAGEWEB%

#Specify the language displays on the phone LCD screen, the avaiable
values are: Engliash
(default),Chinese_s,German,French,Turkish,Italiano,Polish and
Portungues;
lang.gui = %LANGUAGEGUI%

############################################################
##                  Time Settings                   ##
############################################################

#Configure the primary and secondary NTP servers. Default-
cn.pool.ntp.org.
#The value can be the domain name or IP address of the NTP server.
local_time.ntp_server1 = %SNTP_SERVER_1%
local_time.ntp_server2 = %SNTP_SERVER_2%

# Configure the update interval(in seconds) when using NTP Server,
(1000 by default);
local_time.interval = 1000

#Configure the daylight saving time feature. 0-Disabled, 1-Enabled, 2-
Automatic(default);
local_time.summer_time = 2

# Configure the DST type when the DST was set to Enabled. 0-Date, 1-
Week;
```

```
local_time.dst_time_type = 0

#Configure the start time of DST.(1/1/0 by default)
#If the DST type is set to By Date,the value format is Month/Day/Hour;
#If the DST type is set to By Week, the value format is Start
Month/Start Day of Week/Start Day of Week Last in Month/Start Hour of
Day.
#For example,the value is 1/4/2/5, it means the start time is at 5
o'clock on Tuesday, the 4th week in January;
local_time.start_time = 1/1/0

#Configure the end time of DST, (12/31/23 by default), the value format
is the same as the start time;
local_time.end_time = 12/31/23

#Configure the offset time (in minutes), ranges from -300 to 300,(60 by
default) the valid value is Integer;
local_time.offset_time = 60

#Configure the time format, 0-12 Hour, 1-24 Hour(default);
local_time.time_format = 1

#Configure the date format, 0-WWW MMM DD(default), 1-DD-MMM-YY, 2-YYYY-
MM-DD, 3-DD/MM/YYYY, 4-MM/DD/YY, 5-DD MMM YYYY, 6-WWW DD MMM;
local_time.date_format = 0

#Enable or disable the DHCP Time, 0-Disabled(default), 1-Enabled;
local_time.dhcp_time = 0


##############################################################
##                    Auto Redial                           ##
##############################################################

#Enable or disable the auto redial feature, 0-Disabled(default), 1-
Enabled;
auto_redial.enable = 0

#Configure the times (1 to 300) of auto redial and the seconds (1 to
300) to wait before redial,(10 by default);
auto_redial.interval = 10
auto_redial.times = 10

##############################################################
##               Zero Touch                                 ##
##############################################################
zero_touch.enable = 0
zero_touch.wait_time = 5

##############################################################
##                    push xml                              ##
##############################################################
push_xml.server =

#Enable or disable the phone to display the push xml interface when
receiving an incoming call
push_xml.block_in_calling= 0

Enable or disable the phone to use the push xml via SIP notify message;
push_xml.sip_notify= 0

##############################################################
##                   Dial plan                              ##
```



```
############################################################

#Configure the area code;
dialplan.area_code.code =
dialplan.area_code.min_len = 1
dialplan.area_code.max_len = 15

#When applying the rule to multiple lines, each line ID separated by
comma, e.g. dialplan.area_code.line_id = 1,2,3
dialplan.area_code.line_id =

#Configure the block out numbers for the phone, x ranges from 1 to 10;
#dialplan.block_out.number.x =
dialplan.block_out.number.1 =

#When applying the rule to multiple lines, each line ID separated by
comma, e.g. 1,2,3
#dialplan.block_out.line_id.X =
dialplan.block_out.line_id.1 =

#Configure the dialnow rule for the phone, x ranges from 1 to 10;
#dialplan.dialnow.rule.x =
#dialplan.dialnow.line_id.x =

dialplan.dialnow.rule.1 =
dialplan.dialnow.line_id.1 =

#Configure the replace rule for the phone, x ranges from 1 to 10;
#dialplan.replace.prefix.x =
#dialplan.replace.replace.x =
#dialplan.replace.line_id.x =

dialplan.replace.prefix.1 =
dialplan.replace.replace.1 =
dialplan.replace.line_id.1 =

############################################################
##    BSFT Phonebook("X" ranges from 1-5)  Settings  ##
############################################################

#Configuration of BW phonebook X ("X" ranges from 1-6);
#This feature is only applicable to some designated firmware version;
#bw_phonebook.display_name =
#bw_phonebook.data.X.server =
#bw_phonebook.data.X.port =
#bw_phonebook.data.X.username =
#bw_phonebook.data.X.password =
#bw_phonebook.data.X.name =

bw_phonebook.display_name =
bw_phonebook.data.1.server =
bw_phonebook.data.1.port =
bw_phonebook.data.1.username =
bw_phonebook.data.1.password =
bw_phonebook.data.1.name =

bw_phonebook.data.2.server =
bw_phonebook.data.2.port =
bw_phonebook.data.2.username =
bw_phonebook.data.2.password =
bw_phonebook.data.2.name =

bw_phonebook.data.3.server =
```

```
bw_phonebook.data.3.port =
bw_phonebook.data.3.username
bw_phonebook.data.3.password
bw_phonebook.data.3.name =

bw_phonebook.data.4.server =
bw_phonebook.data.4.port =
bw_phonebook.data.4.username
bw_phonebook.data.4.password
bw_phonebook.data.4.name =

bw_phonebook.data.5.server =
bw_phonebook.data.5.port =
bw_phonebook.data.5.username
bw_phonebook.data.5.password
bw_phonebook.data.5.name =

bw_phonebook.data.6.server =
bw_phonebook.data.6.port =
bw_phonebook.data.6.username
bw_phonebook.data.6.password
bw_phonebook.data.6.name =

############################################################
##                  BSFT Call Log                         ##
############################################################

#Configuration of the BW Call Log X ("X" ranges from 1-6)
#This feature is only applicable to some designated firmware version;
#bw_call_log.display_name =
#bw_call_log.data.X.server =
#bw_call_log.data.X.port =
#bw_call_log.data.X.username =
#bw_call_log.data.X.password =
#bw_call_log.data.X.name =

bw_call_log.display_name =
bw_call_log.data.1.server =
bw_call_log.data.1.port =
bw_call_log.data.1.username =
bw_call_log.data.1.password =
bw_call_log.data.1.name =

bw_call_log.data.2.server =
bw_call_log.data.2.port =
bw_call_log.data.2.username =
bw_call_log.data.2.password =
bw_call_log.data.2.name =

bw_call_log.data.3.server =
bw_call_log.data.3.port =
bw_call_log.data.3.username =
bw_call_log.data.3.password =
bw_call_log.data.3.name =

bw_call_log.data.4.server =
bw_call_log.data.4.port =
bw_call_log.data.4.username =
bw_call_log.data.4.password =
bw_call_log.data.4.name =

bw_call_log.data.5.server =
bw_call_log.data.5.port =
```

```
bw_call_log.data.5.username =
bw_call_log.data.5.password =
bw_call_log.data.5.name =

bw_call_log.data.6.server =
bw_call_log.data.6.port =
bw_call_log.data.6.username =
bw_call_log.data.6.password =
bw_call_log.data.6.name =

##########################################################
##             remote phonebook                         ##
##########################################################

#Configure the phone to access the remote phonebook, X ranges from 1 to
5;
#Configure the name of remote phonebook displayed on the phone;
remote_phonebook.display_name =

#remote_phonebook.X.url =
#remote_phonebook.X.name =
remote_phonebook.data.1.url =
remote_phonebook.data.1.name =

remote_phonebook.data.2.url =
remote_phonebook.data.2.name =

remote_phonebook.data.3.url =
remote_phonebook.data.3.name =

remote_phonebook.data.4.url =
remote_phonebook.data.4.name =

remote_phonebook.data.5.url =
remote_phonebook.data.5.name =

#Configure the interval(in minutes) for the phone to update
phonebook,(1440 by default);
directory.update_time_interval =

#Enable or disable the phone to match the incoming call with the
contact in the remote phonebook; 0-Disabled, 1-Enabled(default);
directory.incoming_call_match_enable =

##########################################################
##                    LDAP Settings                     ##
##########################################################

#Enableor disable the LDAP feature; 0-Disabled(default), 1-Enabled;
ldap.enable = 0
#Custom the display name of the LDAP;
ldap.customize_label =

#Configure the search criteria for name and number lookups;
ldap.name_filter =
ldap.number_filter =

ldap.host = 0.0.0.0
ldap.port = 389

ldap.base =
ldap.user =
ldap.password =
```

```
#Configure the maximum displayed search results, ranges from 1 to
32000(50 by default),the valid value is Integer;
ldap.max_hits = 50

ldap.name_attr =
ldap.numb_attr =
ldap.display_name =

#Configure the version of LDAP, the valid value is 2 or 3(default);
ldap.version = 3

#Enable or disable the phone to perform the LDAP search when reveiving
an incoming call; 0-Disabled(default), 1-Enabled;
ldap.call_in_lookup = 0
ldap.ldap_sort = 0

##############################################################
##               Phone Settings                             ##
##############################################################

#Configure the return code when DND, 404-No Found,480-Temporarily not
available(default),486-Busy here
features.dnd_refuse_code = 480

#Configure the return code when refuse; 404,480,486(default)
features.normal_refuse_code = 486

features.call_completion_enable = 0

#Enable or disable the call waiting feature; 0-Disabled, 1-
Enabled(default);
call_waiting.enable = 1

#Configure the phone to play warning tone when receiving an incoming
call during an active call, 0-Disabled, 1-Enabled(default);
call_waiting.tone = 1

#Enable or disable the intercom feature; 0-Disabled, 1-
Enabled(default);
features.intercom.allow  = 1

#Enable or disable the phone to mute the speaker when automatically
answer an intercom call, 0-Disabled(default), 1-Enabled;
features.intercom.mute  = 0

#Enable or disable the phone to play intercom warning tone, 0-Disabled,
1-Enabled(default);
features.intercom.tone  = 1

#Enable or disable the phone to barge in an intercom call; 0-
Disabled(default), 1-Enabled;
features.intercom.barge  = 0

#Configure the hotline number and delay time;
features.hotline_number =
features.hotline_delay = 4

#Configure the time(in seconds) for playing busy tone when a call is
hanged up by the other party; Valid value is 0(default), 3 and 5;
features.busy_tone_delay = 0

#Define "#" or "*" as the send key;     0-disable, 1-# key(default),
```

```
2-* key
features.pound_key.mode = 1

#Enable or disable the phone to play keytone, 0-Disabled, 1-
Enabled(default);
features.send_key_tone = 1
features.key_tone = 1

features.redial_tone =

#Enable or disable the phone to save the call history; 0-Disabled, 1-
Enabled(default);
features.save_call_history = 1

#Enable or disable the phone to receive the URI message from any IP;
#You can also configure the phone to receive the URI message from the
specifed IP address;
#0-Disabled(default), 1-Enabled, IP address(multiple IP addresses
separated by comma);
features.action_uri_limit_ip =

#Configure the over time(in minutes) for logging web user interface,
ranges from 1 to 1000 (5 by default);
features.relog_offtime =

#Enable or disable the phone to make direct IP call, 0-Disabled, 1-
Enabled(default);
#Require reboot;
features.direct_ip_call_enable = 1

#Specify the ring device when the phone is in the headset mode,0-use
Speaker(default) 1-use Headset;
features.ringer_device.is_use_headset = 0


#Enable or disable the phone to display the local camera when in the
fullscreen state, 0-Disabled, 1-Enabled(default);
features.fullscreen_local_visible = 1

#Configure the time (in seconds) to automatically dial out dialed
digit. Ranges from 1 to 14 (4 by default);
phone_setting.inter_digit_time = 4
#Configure the ring tone for the phone, System ring tones are:
common(default), Ring1.wav, Ring2.wav¡¡Ring8.wav;
#If you set the custom ring tone(Busy.wav) as phone ring tone,the value
format is: Custom:Busy.wav
#If you set the system ring tone(Ring2.wav) as phone ring tone,the
value format is: Resource:Ring2.wav
phone_setting.ring_type = common

#Configure the active backlight level, Integer,1-10 (2 by default);
phone_setting.active_backlight_level =

#Configure the inactive backlight level, Integer,0 or 1 (default);
phone_setting.inactive_backlight_level = 1

#Configure the backlight time, 0-Always off, 1-Always
on,15,30(default),60,120(in seconds);
phone_setting.backlight_time =

#Configure the background image;
#If you set the custom image(new.png) as backgroup,the value format is:
phone_setting.backgrounds = Config:new.png
```

```
#If you set the system image(1.jpg) as backgroup,the value format is:
phone_setting.backgrounds = Resource:1.jpg
phone_setting.backgrounds =

#Enable or disable the phone to automatically dial out the dialed
digits in the pre-dial interface, 0-Disabled(default), 1-Enabled;
phone_setting.predial_autodial = 0

#Enable or disable the phone to deal the 180 SIP messages after the 183
SIP message, 0-Disabled, 1-Enabled(default);
phone_setting.is_deal180 = 1

#Enable or disable the phone to deal the 180 SIP messages after the 183
SIP message, 0-Disabled, 1-Enabled(default);
phone_setting.dialnow_delay = 4

#Enable or disable the phone to display the shortcut menu on the idle
screen, 0-Disabled(default), 1-Enabled;
phone_setting.shortcuts_enable = 0


#Enable or disable the phone to display the recent call in the pre-dial
interface, 0-Disabled, 1-Enabled(default);
super_search.recent_call = 1

#Enable or disable the phone to display the soft dialpad in the pre-
dial interface, 0-Disabled, 1-Enabled(default);
super_search.dial_pad = 1

############################################################
##     Configure a server URL for firmware update    ##
############################################################

firmware.url =
http://%BWDEVICEACCESSFQDN%:%BWDEVICEACCESSPORT%/%BWDMSCONTEXT%/%BWDEVI
CEACCESSURI%%FIRMWARE_VERSION%

############################################################
##Configure a server URL for Customizing a ringtones ##
############################################################

ringtone.url
=http://%BWDEVICEACCESSFQDN%:%BWDEVICEACCESSPORT%/%BWDMSCONTEXT%/%BWDEV
ICEACCESSURI%song.wav

#ringtone.delete = http://localhost/all,delete all the customized ring
tones;
ringtone.delete =

############################################################
##                      Certificates                      ##
############################################################

trusted_certificates.url
=http://%BWDEVICEACCESSFQDN%:%BWDEVICEACCESSPORT%/%BWDMSCONTEXT%/%BWDEV
ICEACCESSURI%ca.pem

#trusted_certificates.delete = http://localhost/all,#delete all trusted
certificate files from localhost
trusted_certificates.delete =

server_certificates.url =
http://%BWDEVICEACCESSFQDN%:%BWDEVICEACCESSPORT%/%BWDMSCONTEXT%/%BWDEVI
```

```
CEACCESSURI%ca.crt

#server_certificates.delete = http://localhost/all, delete the server
certificate;
server_certificates.delete =

###########################################################
##  Local Contact/DST Time/Dialnow Rule/Replace Rule ##
###########################################################

local_contact.data.url
=http://%BWDEVICEACCESSFQDN%:%BWDEVICEACCESSPORT%/%BWDMSCONTEXT%/%BWDEV
ICEACCESSURI%contactData.xml
auto_dst.url
=http://%BWDEVICEACCESSFQDN%:%BWDEVICEACCESSPORT%/%BWDMSCONTEXT%/%BWDEV
ICEACCESSURI%Autodst.xml
dialplan_dialnow.url
=http://%BWDEVICEACCESSFQDN%:%BWDEVICEACCESSPORT%/%BWDMSCONTEXT%/%BWDEV
ICEACCESSURI%dialnow.xml
dialplan_replace_rule.url
=http://%BWDEVICEACCESSFQDN%:%BWDEVICEACCESSPORT%/%BWDMSCONTEXT%/%BWDEV
ICEACCESSURI%dialplan.xml

###########################################################
##    Customized Factory Configurations              ##
###########################################################

#Configure the access URL for downloading the customized factory
configurations;
custom_factory_configuration.url
=http://%BWDEVICEACCESSFQDN%:%BWDEVICEACCESSPORT%/%BWDMSCONTEXT%/%BWDEV
ICEACCESSURI%sample.cfg

###########################################################
##   Camera/Doorphone data/Contact image/Wallpaper   ##
###########################################################
#Configure the access URL for downloading the camera data;
doorphone_data.url =
http://%BWDEVICEACCESSFQDN%:%BWDEVICEACCESSPORT%/%BWDMSCONTEXT%/%BWDEVI
CEACCESSURI%doorphonedata.xml

#Configure access URL for downloading customized image of local
contact;
local_contact_image.url
=http://%BWDEVICEACCESSFQDN%:%BWDEVICEACCESSPORT%/%BWDMSCONTEXT%/%BWDEV
ICEACCESSURI%Contact.png

#Configure the server address for uploading a .tar file which contains
mutiple contact images;
local_contact_image.tar.url =

#Configure the access URL for downloading the customized wallpaper;
wallpaper_upload.url
=http://%BWDEVICEACCESSFQDN%:%BWDEVICEACCESSPORT%/%BWDMSCONTEXT%/%BWDEV
ICEACCESSURI%wallpaper.jpg

###########################################################
##            Call List                                  ##
###########################################################

#Configure the access URL for downloading the call list;
#Require reboot
call_list.url =
```



```
http://%BWDEVICEACCESSFQDN%:%BWDEVICEACCESSPORT%/%BWDMSCONTEXT%/%BWDEVI
CEACCESSURI%call_list.xml

##############################################################
##            OpenVPN                                       ##
##############################################################

#Configure the access URL for downloading the open VPN tar;
openvpn.url =
```

Phone-Specific File: %BWMACADDRESS%.cfg

NOTE: This is an example file and should be used for reference only.

```
#!version:1.0.0.1

##File header "#!version:1.0.0.1" can not be edited or deleted.##

############################################################
##                  Account1 Settings                     ##
############################################################

#Enable or disable the account1, 0-Disabled(default), 1-Enabled;
account.1.enable = %BWLINE-BINARY-1%

#Configure the account1 label which will display on the LCD screen.
account.1.label =%BWEXTENSION-1%

#Configure the display name of account1
account.1.display_name =%BWCLID-1%

#Configure the user and password for register authentication
account.1.auth_name = %BWAUTHUSER-1%
account.1.password =  %BWAUTHPASSWORD-1%

#Configure the register user name
account.1.user_name = %BWLINEPORT-1%

#Configure the SIP server address and port(5060 by default)
account.1.sip_server_host = %BWHOST-1%
account.1.sip_server_port = 5060

#Enable/Disable the outbound proxy server, fill the IP address/domain of
the outbound proxy server and the server port(5060 by default)
account.1.outbound_proxy_enable = %USE_SBC_BOOLEAN%
account.1.outbound_host = %SBC_ADDRESS%
account.1.outbound_port =  %SBC_PORT%
account.1.sip_server_host_readonly = 0

#Configure the transport type;     0-UDP(Default), 1-TCP, 2-TLS, 3-DNS
SRV
account.1.transport = 0

#Configure the backup outbound proxy server address and port(5060 by
default)
account.1.backup_outbound_host =
account.1.backup_outbound_port = 5060

#Configure the voice mail number of account1.
voice_mail.number.1 = %BWVOICE-PORTAL-NUMBER-1%

#Active/Deactive proxy require
account.1.proxy_require =

#Enable/Disable the anonymous call feature for account1;     0-
Disabled(Default), 1-Enabled
account.1.anonymous_call = 0

#Configure the oncode/offcode for turning on/off anonymous call feature
account.1.anonymous_call_oncode =
```

```
account.1.anonymous_call_offcode =

#Enable/Disable the reject anonymous call feature for account1;     0-
Disabled(Default), 1-Enabled
account.1.reject_anonymous_call = 0

#Configure the oncode/offcode for turning on/off reject anonymous call
feature
account.1.anonymous_reject_oncode =
account.1.anonymous_reject_offcode =

Configure the SIP port for local account1
account.1.sip_listen_port = 5060

#Configure the register expire time
account.1.expires = 3600

#Enable/Disable 100 reliable retransmission;      0-Disabled(Default),
1-Enabled
account.1.100rel_enable = 0

#Enable/Disable the resource reservation;      0-Disabled(Default), 1-
Enabled
account.1.precondition = 0

#Enble/Disable subscribe the register status;     0-Disabled(Default),
1-Enabled
account.1.subscribe_register = 0

#Enable/Disable subscribe the Message Waiting Indicator;     0-
Disabled(Default), 1-Enabled
account.1.subscribe_mwi = 0

#Configure MWI subscribe expires 3600 seconds by default
account.1.subscribe_mwi_expires = 3600

#Select SIP header(s) carrying the caller ID;     0-FROM(Default), 1-PAI
2-PAI-FROM, 3-PRID-PAI-FROM, 4-PAI-RPID-FROM, 5-RPID-FROM
account.1.cid_source = 0
account.1.cid_source = 0

#Select SIP header(s) carrying the called party ID;    0-FROM(Default),
1-PAI, 2-PAI-FROM, 3-PRID-PAI-FROM, 4-PAI-RPID-FROM, 5-RPID-FROM
account.1.cid_source = 0
account.1.cp_source = 0

#Enable/Disable session timer    0-Disabled(Default), 1-Enabled
account.1.session_timer.enable = 0

#Configure session timer expire
account.1.session_timer.expires = 3600

#Configure the session timer refresher;     0-Uac(Default), 1-Uas
account.1.session_timer.refresher = 0

#Enable/Disable "user=phone";     0-Disabled(Default), 1-Enabled
account.1.enable_user_equal_phone = 0

#Enable/Disable SRTP;     0-Disabled(Default), 1-Enabled
account.1.srtp_encryption = 0

#Configure the RTP packet time;     0(Disabled), 10, 20(Default), 30,
40, 50, 60
```

```
account.1.ptime = 20

#Assign account1 as shared line;     0-Disabled/Private(Default), 1-BSFT
shared line, 2-Draft bridge line_appearance
account.1.shared_line = %BWSHAREDLINE-BINARY-1%

#Configure BLA number and the subscribe period when account1 is a BLA
line
account.1.bla_number =
account.1.bla_subscribe_period = 300

#Enable/Disable call pickup using dialog-info sip header;     0-
Disabled(Default), 1-Enabled
account.1.dialoginfo_callpickup = 0

#Enable/Disable auto answer when receiving a incoming call for accout1;
0-Disabled(Default), 1-Enabled
account.1.auto_answer = 0

#Enable/Disable record the Missed calllog;     0-Disabled, 1-
Enabled(Default)
account.1.missed_calllog = 1

#Enable/Disable subscribe the voicemail number for MWI;     0-
Disabled(Default), 1-Enabled
account.1.subscribe_mwi_to_vm = 0

#Enable/Disable sending mac address and line number in the Register
message;     0-Disabled(Default), 1-Enabled
account.1.register_mac = 0
account.1.register_line = 0

#Configure interval time for retrying register when account1 register
failed 30 seconds by default
account.1.reg_fail_retry_interval = 30

#Enable/Disable network conference;     0-Local(Default), 2-Network
Conference
account.1.conf_type = 0

#Configure the factory conference uri(a SIP URI, or user part of the SIP
URI), for example, "conference@domain.com" or "conference"
account.1.conf_uri = %BWNETWORK-CONFERENCE-SIPURI-1%

#Connfigure the BLF List URI (a SIP URI, or user part of the SIP URI),
for example, "2300_blflist@domain.com" or "2300_blflist"
account.1.blf.blf_list_uri = %BWBLF-URI-1%


#Configure the blf subscribe period 1800 seconds by default
account.1.blf.subscribe_period = 1800

#Configure the code for pickup when the monitored user receives an
incoming call
account.1.blf_list_code =

#Configure the code for bargein when the monitored user is in
conversation
account.1.blf_list_barge_in_code =

#Assign the sip platform;     0-Local SIP Server(Default), 1-Cosmocom,
2-Broadsoft
account.1.sip_server_type = 0
```



```
#Enable/Disable the SIP signal encode, 0-Disabled (defaault), 1-Enabled
(RC 4);
account.1.enable_signal_encode = 0

#Configure the key for encoding;
account.1.signal_encode_key =

#Configure the music on hold server
account.1.music_server_uri =

#Configure the DTMF type;     0-INBAND, 1-RFC2833(Default), 2-SIP INFO
account.1.dtmf.type = 1

#Configure the RFC2833 payload, ranges from 96 to 225 (101 by default);
account.1.dtmf.dtmf_payload = 101

#Configure DTMF info type when using SIP INFO, 0-Disabled(default), 1-
DTMF-Relay, 2-DTMF, 3-Telephone-Event;
account.1.dtmf.info_type = 0

##############################################################
##                       NAT Settings                       ##
##############################################################
#Enable/Disable NAT traversal;    0-Disabled(Default), 1-STUN
account.1.nat.nat_traversal = 0

#Configure the STUN server address and port (3478 by default);
account.1.nat.stun_server =
account.1.nat.stun_port = 3478

#Configure the NAT keep-alive and the keep-alive interval
account.1.nat.udp_update_enable = 1
account.1.nat.udp_update_time = 30

#Enable/Disable Rport;     0-Disabled(Default), 1-Enabled
account.1.nat.rport = 0

#Define session timer T1 T2 T4
account.1.advanced.timer_t1 = 0.5
account.1.advanced.timer_t2 = 4
account.1.advanced.timer_t4 = 5

#Configure the audio and video attributes
account.1.advanced.audio_bandwidth = 0
account.1.advanced.video_frame_rate = 30
account.1.advanced.video_i_frame_refresh_time = 30
account.1.advanced.video_bandwidth = 0
account.1.advanced.total_bandwidth = 0

#Assign a ringtone special for account1; System ring tones are:
common(default),Ring1.wav,Ring2.wav,¡¡Ring8.wav;
#If you set the custom ring tone(Family.wav) as phone ring tone,the
value format is: Custom:Family.wav
#If you set the system ring tone(Ring2.wav) as phone ring tone,the value
format is: Resource:Ring2.wav
account.1.ringtone.ring_type =

#Audio codecs for account1 (Y ranges from 1 to 7)
#account.1.codec.Y.enable =
#account.1.codec.Y.payload_type =
#account.1.codec.Y.priority =
#account.1.codec.Y.rtpmap =
```

```
account.1.codec.1.enable = 1
account.1.codec.1.payload_type = PCMA
account.1.codec.1.priority = 2
account.1.codec.1.rtpmap = 8

account.1.codec.2.enable = 1
account.1.codec.2.payload_type = PCMU
account.1.codec.2.priority = 1
account.1.codec.2.rtpmap = 0

account.1.codec.3.enable = 1
account.1.codec.3.payload_type = G729
account.1.codec.3.priority =3
account.1.codec.3.rtpmap = 18

account.1.codec.4.enable = 1
account.1.codec.4.payload_type = G722
account.1.codec.4.priority = 4
account.1.codec.4.rtpmap = 9

account.1.codec.5.enable = 0
account.1.codec.5.payload_type = G723
account.1.codec.5.priority = 5
account.1.codec.5.rtpmap = 4

account.1.codec.6.enable = 0
account.1.codec.6.payload_type = AACLC
account.1.codec.6.priority = 6
account.1.codec.6.rtpmap = 102

account.1.codec.7.enable = 0
account.1.codec.7.payload_type = iLBC
account.1.codec.7.priority = 7
account.1.codec.7.rtpmap = 122

#Video codecs for account1 (X rangs from 1 to 3)
#account.1.video_codec.X.enable = 1
#account.1.video_codec.X.priority = 1
#account.1.video_codec.X.payload_type = H264
#account.1.video_codec.X.rtpmap = 99
#account.1.video_codec.X.para = profile-level-id=42800D; packetization-
mode=0; max-mbps=11880

account.1.video_codec.1.enable = 1
account.1.video_codec.1.priority = 1
account.1.video_codec.1.payload_type = H264
account.1.video_codec.1.rtpmap = 99
account.1.video_codec.1.para = profile-level-id=42800D; packetization-
mode=0; max-mbps=11880

account.1.video_codec.2.enable = 1
account.1.video_codec.2.priority = 2
account.1.video_codec.2.payload_type = H263
account.1.video_codec.2.rtpmap = 34
account.1.video_codec.2.para = CIF=1; QCIF=1

account.1.video_codec.3.enable = 1
account.1.video_codec.3.priority = 3
account.1.video_codec.3.payload_type = mp4v-es
account.1.video_codec.3.rtpmap = 102
account.1.video_codec.3.para = CIF=1; QCIF=1; MaxBR=3840
```

```
############################################################
##                  Call Forward Settings           ##
############################################################

# 1-Enable, 0-Disable(default) whether to Always Forward
forward.always.enable = %BWCFA-BINARY-1%

# target:phonenumber that the phone will Always Forward to
forward.always.target =

#On or off Code for Always Forward. String
forward.always.on_code = %BWFAC-CFA-ACTIVATE-1%
forward.always.off_code = %BWFAC-CFA-DEACTIVATE-1%

# Busy Forward enable:the default is 0(disabled)
forward.busy.enable = 0
forward.busy.target =
forward.busy.on_code = %BWFAC-CFB-ACTIVATE-1%
forward.busy.off_code = %BWFAC-CFB-DEACTIVATE-1%

# No answer. timeout:5s,10,15,20 (second)the time after which the call
will be forwarded when using No Answer Forward
forward.no_answer.enable = 0
forward.no_answer.target =
forward.no_answer.timeout = 10
forward.no_answer.on_code = %BWFAC-CFNA-ACTIVATE-1%
forward.no_answer.off_code = %BWFAC-CFNA-DEACTIVATE-1%

############################################################
##                DND Settings                          ##
############################################################

features.dnd.on_code =%BWFAC-DND-ACTIVATE-1%
features.dnd.off_code =%BWFAC-DND-DEACTIVATE-1%

############################################################
##                   Account2 Settings                  ##
############################################################
#Enable or disable the account2, 0-Disabled(default), 1-Enabled;
account.2.enable = %BWLINE-BINARY-2%

#Configure the account2 label which will display on the LCD screen.
account.2.label = %BWEXTENSION-2%

#Configure the display name of account2
account.2.display_name =%BWCLID-2%

#Configure the user and password for register authentication
account.2.auth_name =%BWAUTHUSER-2%
account.2.password =%BWAUTHPASSWORD-2%

#Configure the register user name
account.2.user_name = %BWLINEPORT-2%

#Configure the SIP server address and port(5060 by default)
account.2.sip_server_host = %BWHOST-2%
account.2.sip_server_port = 5060

#Enable/Disable the outbound proxy server, fill the IP address/domain of
the outbound proxy server and the server port(5060 by default)
account.2.outbound_proxy_enable = %USE_SBC_BOOLEAN%
account.2.outbound_host =%SBC_ADDRESS%
account.2.outbound_port = %SBC_PORT%
```



```
account.2.sip_server_host_readonly = 0

#Configure the transport type;     0-UDP(Default), 1-TCP, 2-TLS, 3-DNS
SRV
account.2.transport = 0

#Configure the backup outbound proxy server address and port(5060 by
default)
account.2.backup_outbound_host =
account.2.backup_outbound_port = 5060

#Configure the voice mail number of account2.
voice_mail.number.2 = %BWVOICE-PORTAL-NUMBER-2%

#Active/Deactive proxy require
account.2.proxy_require =

#Enable/Disable the anonymous call feature for account2;     0-
Disabled(Default), 1-Enabled
account.2.anonymous_call = 0

#Configure the oncode/offcode for turning on/off anonymous call feature
account.2.anonymous_call_oncode =
account.2.anonymous_call_offcode =

#Enable/Disable the reject anonymous call feature for account2;     0-
Disabled(Default), 1-Enabled
account.2.reject_anonymous_call = 0

#Configure the oncode/offcode for turning on/off reject anonymous call
feature
account.2.anonymous_reject_oncode =
account.2.anonymous_reject_offcode =

Configure the SIP port for local account2
account.2.sip_listen_port = 5060

#Configure the register expire time
account.2.expires = 3600

#Enable/Disable 100 reliable retransmission;      0-Disabled(Default),
1-Enabled
account.2.100rel_enable = 0

#Enable/Disable the resource reservation;      0-Disabled(Default), 1-
Enabled
account.2.precondition = 0

#Enble/Disable subscribe the register status;     0-Disabled(Default),
1-Enabled
account.2.subscribe_register = 0

#Enable/Disable subscribe the Message Waiting Indicator;     0-
Disabled(Default), 1-Enabled
account.2.subscribe_mwi = 0

#Configure MWI subscribe expires 3600 seconds by default
account.2.subscribe_mwi_expires = 3600

#Select SIP header(s) carrying the caller ID;     0-FROM(Default), 1-
PAI, 2-PAI-FROM, 3-PRID-PAI-FROM, 4-PAI-RPID-FROM, 5-RPID-FROM
account.2.cid_source = 0
account.2.cid_source = 0
```



```
#Select SIP header(s) carrying the called party ID    0-FROM(Default),
1-PAI, 2-PAI-FROM, 3-PRID-PAI-FROM, 4-PAI-RPID-FROM, 5-RPID-FROM
account.2.cid_source = 0
account.2.cp_source = 0

#Enable/Disable session timer     0-Disabled(Default), 1-Enabled
account.2.session_timer.enable = 0

#Configure session timer expire
account.2.session_timer.expires = 3600

#Configure the session timer refresher;     0-Uac(Default), 1-Uas
account.2.session_timer.refresher = 0

#Enable/Disable "user=phone";     0-Disabled(Default), 1-Enabled
account.2.enable_user_equal_phone = 0

#Enable/Disable SRTP;     0-Disabled(Default), 1-Enabled
account.2.srtp_encryption = 0

#Configure the RTP packet time;     0-Disabled, 10, 20(Default), 30, 40,
50, 60
account.2.ptime = 20

#Assign account2 as shared line;     0-Disabled/Private(Default), 1-
Broadsoft_shared_line, 2-Draft_bridge_line_appearance
account.2.shared_line = %BWSHAREDLINE-BINARY-2%

#Configure BLA number and the subscribe period when account2 is a BLA
line
account.2.bla_number =
account.2.bla_subscribe_period = 300

#Enable/Disable call pickup using dialog-info sip header;     0-
Disabled(Default), 1-Enabled
account.2.dialoginfo_callpickup = 0

#Enable/Disable auto answer when receiving a incoming call for accout2;
0-Disabled(Default), 1-Enabled
account.2.auto_answer = 0

#Enable/Disable record the Missed calllog;     0-Disabled, 1-
Enabled(Default)
account.2.missed_calllog = 1

#Enable/Disable subscribe the voicemail number for MWI;     0-
Disabled(Default), 1-Enabled
account.2.subscribe_mwi_to_vm = 0

#Enable/Disable sending mac address and line number in the Register
message;     0-Disabled(Default), 1-Enabled
account.2.register_mac = 0
account.2.register_line = 0

#Configure interval time for retrying register when account2 register
failed 30 seconds by default
account.2.reg_fail_retry_interval = 30

#Enable/Disable network conference;     0-Local(Default), 2-Network
Conference
account.2.conf_type = 0
```

```
#Configure the factory conference uri(a SIP URI, or user part of the SIP
URI), for example, "conference@domain.com" or "conference"
account.2.conf_uri = %BWNETWORK-CONFERENCE-SIPURI-2%

#Connfigure the BLF List URI (a SIP URI, or user part of the SIP URI),
for example, "2300_blflist@domain.com" or "2300_blflist"
account.2.blf.blf_list_uri =%BWBLF-URI-2%

#Configure the blf subscribe period 1800 seconds by default
account.2.blf.subscribe_period = 1800

#Configure the code for pickup when the monitored user receives an
incoming call
account.2.blf_list_code =

#Configure the code for bargein when the monitored user is in
conversation
account.2.blf_list_barge_in_code =

#Assign the sip platform;     0-Local SIP Server(Default), 1-Cosmocom,
2-Broadsoft
account.2.sip_server_type = 0

#Configure the key for encoding;
account.2.signal_encode_key =

#Configure the music on hold server
account.2.music_server_uri =

#Configure the DTMF type;     0-INBAND, 1-RFC2833(Default), 2-SIP INFO
account.2.dtmf.type = 1

#Configure the RFC2833 payload, ranges from 96 to 225(101 by default);
account.2.dtmf.dtmf_payload = 101

#Configure DTMF info type when using SIP INFO, 0-Disabled(default), 1-
DTMF-Relay, 2-DTMF, 3-Telephone-Event;
account.2.dtmf.info_type = 0

###########################################################
##                        NAT Settings                   ##
###########################################################
#Enable/Disable NAT traversal; 0-Disabled(Default), 1-STUN
account.2.nat.nat_traversal = 0

#Configure the STUN server address and port (3478 by default);
account.2.nat.stun_server =
account.2.nat.stun_port = 3478

#Configure the NAT keep-alive and the keep-alive interval(in seconds),
30 by default;
account.2.nat.udp_update_enable = 1
account.2.nat.udp_update_time = 30

#Enable/Disable Rport;     0-Disabled(Default), 1-Enabled
account.2.nat.rport = 0

#Define session timer T1 T2 T4
account.2.advanced.timer_t1 = 0.5
account.2.advanced.timer_t2 = 4
account.2.advanced.timer_t4 = 5

#Configure the audio and video attributes
```

```
account.2.advanced.audio_bandwidth = 0
account.2.advanced.video_frame_rate = 30
account.2.advanced.video_i_frame_refresh_time = 30
account.2.advanced.video_bandwidth = 0
account.2.advanced.total_bandwidth = 0

#Assign a ringtone special for account2; System ring tones are:
common(default),Ring1.wav,Ring2.wav,¡¡Ring8.wav;
#If you set the custom ring tone(Family.wav) as phone ring tone,the
value format is: Custom:Family.wav
#If you set the system ring tone(Ring2.wav) as phone ring tone,the value
format is: Resource:Ring2.wav
account.2.ringtone.ring_type =

#Audio codecs for account2 (Y rangs from 1 to 7)
#account.2.codec.Y.enable =
#account.2.codec.Y.payload_type =
#account.2.codec.Y.priority =
#account.2.codec.Y.rtpmap =

account.2.codec.1.enable = 1
account.2.codec.1.payload_type = PCMA
account.2.codec.1.priority = 2
account.2.codec.1.rtpmap = 8

account.2.codec.2.enable = 1
account.2.codec.2.payload_type = PCMU
account.2.codec.2.priority = 1
account.2.codec.2.rtpmap = 0

account.2.codec.3.enable = 1
account.2.codec.3.payload_type = G729
account.2.codec.3.priority = 3
account.2.codec.3.rtpmap = 18

account.2.codec.4.enable = 1
account.2.codec.4.payload_type = G722
account.2.codec.4.priority = 4
account.2.codec.4.rtpmap = 9

account.2.codec.5.enable = 0
account.2.codec.5.payload_type = G723
account.2.codec.5.priority = 5
account.2.codec.5.rtpmap = 4

account.2.codec.6.enable = 0
account.2.codec.6.payload_type = AACLC
account.2.codec.6.priority = 6
account.2.codec.6.rtpmap = 102

account.2.codec.7.enable = 0
account.2.codec.7.payload_type = iLBC
account.2.codec.7.priority = 7
account.2.codec.7.rtpmap = 122

#Video codecs for account2 (X rangs from 1 to 3)
#account.2.video_codec.X.enable =
#account.2.video_codec.X.priority =
#account.2.video_codec.X.payload_type =
#account.2.video_codec.X.rtpmap =
#account.2.video_codec.X.para =

account.2.video_codec.1.enable = 1
```

```
account.2.video_codec.1.priority = 1
account.2.video_codec.1.payload_type = H264
account.2.video_codec.1.rtpmap = 99
account.2.video_codec.1.para = profile-level-id=42800D; packetization-
mode=0; max-mbps=11880

account.2.video_codec.2.enable = 1
account.2.video_codec.2.priority = 2
account.2.video_codec.2.payload_type = H263
account.2.video_codec.2.rtpmap = 34
account.2.video_codec.2.para = CIF=1; QCIF=1

account.2.video_codec.3.enable = 1
account.2.video_codec.3.priority = 3
account.2.video_codec.3.payload_type = mp4v-es
account.2.video_codec.3.rtpmap = 102
account.2.video_codec.3.para = CIF=1; QCIF=1; MaxBR=3840

##############################################################
##            Call Forward Settings                         ##
##############################################################

# 1-Enable, 0-Disable(default) whether to Always Forward
forward.always.enable = %BWCFA-BINARY-2%

# target:phonenumber that the phone will Always Forward to
forward.always.target =

#On or off Code for Always Forward. String
forward.always.on_code = %BWFAC-CFA-ACTIVATE-2%
forward.always.off_code = %BWFAC-CFA-DEACTIVATE-2%

# Busy Forward enable:the default is 0(disabled)
forward.busy.enable = 0
forward.busy.target =
forward.busy.on_code = %BWFAC-CFB-ACTIVATE-2%
forward.busy.off_code = %BWFAC-CFB-DEACTIVATE-2%

# No answer. timeout:5s,10,15,20 (second)the time after which the call
will be forwarded when using No Answer Forward
forward.no_answer.enable = 0
forward.no_answer.target =
forward.no_answer.timeout = 10
forward.no_answer.on_code = %BWFAC-CFNA-ACTIVATE-2%
forward.no_answer.off_code = %BWFAC-CFNA-DEACTIVATE-2%

##############################################################
##                     DND Settings                         ##
##############################################################

features.dnd.on_code =%BWFAC-DND-ACTIVATE-2%
features.dnd.off_code =%BWFAC-DND-DEACTIVATE-2%

##############################################################
##               Account3 Settings                          ##
##############################################################

#Enable or disable the account3, 0-Disabled(default), 1-Enabled;
account.3.enable =%BWLINE-BINARY-3%

#Configure the account3 label which will display on the LCD screen.
account.3.label = %BWEXTENSION-3%
```



```
#Configure the display name of account3
account.3.display_name =%BWCLID-3%

#Configure the user and password for register authentication
account.3.auth_name = %BWAUTHUSER-3%
account.3.password =%BWAUTHPASSWORD-3%

#Configure the register user name
account.3.user_name = %BWLINEPORT-3%

#Configure the SIP server address and port(5060 by default)
account.3.sip_server_host =%BWHOST-3%
account.3.sip_server_port = 5060

#Enable/Disable the outbound proxy server, fill the IP address/domain of
the outbound proxy server and the server port(5060 by default)
account.3.outbound_proxy_enable = %USE_SBC_BOOLEAN%
account.3.outbound_host =%SBC_ADDRESS%
account.3.outbound_port = %SBC_PORT%
account.3.sip_server_host_readonly = 0

#Configure the transport type;     0-UDP(Default), 1-TCP, 2-TLS, 3-DNS
SRV
account.3.transport = 0

#Configure the backup outbound proxy server address and port(5060 by
default)
account.3.backup_outbound_host =
account.3.backup_outbound_port = 5060

#Configure the voice mail number of account3.
voice_mail.number.3 = %BWVOICE-PORTAL-NUMBER-3%

#Active/Deactive proxy require
account.3.proxy_require =

#Enable/Disable the anonymous call feature for account3;     0-
Disabled(Default), 1-Enabled
account.3.anonymous_call = 0

#Configure the oncode/offcode for turning on/off anonymous call feature
account.3.anonymous_call_oncode =
account.3.anonymous_call_offcode =

#Enable/Disable the reject anonymous call feature for account3;     0-
Disabled(Default), 1-Enabled
account.3.reject_anonymous_call = 0

#Configure the oncode/offcode for turning on/off reject anonymous call
feature
account.3.anonymous_reject_oncode =
account.3.anonymous_reject_offcode =

Configure the SIP port for local account3
account.3.sip_listen_port = 5060

#Configure the register expire time
account.3.expires = 3600

#Enable/Disable 100 reliable retransmission;      0-Disabled(Default),
1-Enabled
account.3.100rel_enable = 0
```

```
#Enable/Disable the resource reservation;      0-Disabled(Default), 1-
Enabled
account.3.precondition = 0

#Enble/Disable subscribe the register status;     0-Disabled(Default),
1-Enabled
account.3.subscribe_register = 0

#Enable/Disable subscribe the Message Waiting Indicator;     0-
Disabled(Default), 1-Enabled
account.3.subscribe_mwi = 0

#Configure MWI subscribe expires 3600 seconds by default
account.3.subscribe_mwi_expires = 3600

#Select SIP header(s) carrying the caller ID;     0-FROM(Default), 1-
PAI, 2-PAI-FROM, 3-PRID-PAI-FROM, 4-PAI-RPID-FROM, 5-RPID-FROM
account.3.cid_source = 0
account.3.cid_source = 0

#Select SIP header(s) carrying the called party ID    0-FROM(Default),
1-PAI, 2-PAI-FROM, 3-PRID-PAI-FROM, 4-PAI-RPID-FROM, 5-RPID-FROM
account.3.cid_source = 0
account.3.cp_source = 0

#Enable/Disable session timer;    0-Disabled(Default), 1-Enabled
account.3.session_timer.enable = 0

#Configure session timer expire
account.3.session_timer.expires = 3600

#Configure the session timer refresher;     0-Uac(Default), 1-Uas
account.3.session_timer.refresher = 0

#Enable/Disable "user=phone";     0-Disabled(Default), 1-Enabled
account.3.enable_user_equal_phone = 0

#Enable/Disable SRTP;     0-Disabled(Default), 1-Enabled
account.3.srtp_encryption = 0

#Configure the RTP packet time;     0-Disabled, 10, 20(Default), 30, 40,
50, 60
account.3.ptime = 20

#Assign account3 as shared line;     0-Disabled/Private(Default), 1-
Broadsoft_shared_line, 2-Draft_bridge_line_appearance
account.3.shared_line = %BWSHAREDLINE-BINARY-3%

#Configure BLA number and the subscribe period when account3 is a BLA
line
account.3.bla_number =
account.3.bla_subscribe_period = 300

#Enable/Disable call pickup using dialog-info sip header;     0-
Disabled(Default), 1-Enabled
account.3.dialoginfo_callpickup = 0

#Enable/Disable auto answer when receiving a incoming call for accout3;
0-Disabled(Default), 1-Enabled
account.3.auto_answer = 0

#Enable/Disable record the Missed calllog;     0-Disabled, 1-
Enabled(Default)
```

```
account.3.missed_calllog = 1

#Enable/Disable subscribe the voicemail number for MWI;     0-
Disabled(Default), 1-Enabled
account.3.subscribe_mwi_to_vm = 0

#Enable/Disable sending mac address and line number in the Register
message;     0-Disabled(Default), 1-Enabled
account.3.register_mac = 0
account.3.register_line = 0

#Configure interval time for retrying register when account3 register
failed 30 seconds by default
account.3.reg_fail_retry_interval = 30

#Enable/Disable network conference;     0-Local(Default), 2-Network
Conference
account.3.conf_type = 0

#Configure the factory conference uri(a SIP URI, or user part of the SIP
URI), for example, "conference@domain.com" or "conference"
account.3.conf_uri =%BWNETWORK-CONFERENCE-SIPURI-3%

#Connfigure the BLF List URI (a SIP URI, or user part of the SIP URI),
for example, "2300_blflist@domain.com" or "2300_blflist"
account.3.blf.blf_list_uri = %BWBLF-URI-3%


#Configure the blf subscribe period 1800 seconds by default
account.3.blf.subscribe_period = 1800

#Configure the code for pickup when the monitored user receives an
incoming call
account.3.blf_list_code =

#Configure the code for bargein when the monitored user is in
conversation
account.3.blf_list_barge_in_code =

#Assign the sip platform;     0-Local SIP Server(Default), 1-Cosmocom,
2-Broadsoft
account.3.sip_server_type = 0

#Enable/Disable the SIP signal encode, 0-Disabled (defaault), 1-Enabled
(RC 4);
account.3.enable_signal_encode = 0

#Configure the key for encoding;
account.3.signal_encode_key =

#Configure the music on hold server
account.3.music_server_uri =

#Configure the DTMF type;     0-INBAND, 1-RFC2833(Default), 2-SIP INFO
account.3.dtmf.type = 1

#Configure the RFC2833 payload, ranges from 96 to 225(101 by default);
account.3.dtmf.dtmf_payload = 101

#Configure DTMF info type when using SIP INFO, 0-Disabled(default), 1-
DTMF-Relay, 2-DTMF, 3-Telephone-Event;
account.3.dtmf.info_type = 0
```

```
############################################################
##                    NAT Settings                        ##
############################################################

#Enable/Disable NAT traversal;    0-Disabled(Default), 1-STUN
account.3.nat.nat_traversal = 0

#Configure the STUN server address and port
account.3.nat.stun_server =
account.3.nat.stun_port = 3478

#Configure the NAT keep-alive and the keep-alive interval
account.3.nat.udp_update_enable = 1
account.3.nat.udp_update_time = 30

#Enable/Disable Rport;     0-Disabled(Default), 1-Enabled
account.3.nat.rport = 0

#Define session timer T1 T2 T4
account.3.advanced.timer_t1 = 0.5
account.3.advanced.timer_t2 = 4
account.3.advanced.timer_t4 = 5

#Configure the audio and video attributes
account.3.advanced.audio_bandwidth = 0
account.3.advanced.video_frame_rate = 30
account.3.advanced.video_i_frame_refresh_time = 30
account.3.advanced.video_bandwidth = 0
account.3.advanced.total_bandwidth = 0

#Assign a ringtone special for account3; System ring tones are:
common(default),Ring1.wav,Ring2.wav,¡¡Ring8.wav;
#If you set the custom ring tone(Family.wav) as phone ring tone,the
value format is: Custom:Family.wav
#If you set the system ring tone(Ring2.wav) as phone ring tone,the value
format is: Resource:Ring2.wav
account.3.ringtone.ring_type =

#Audio codecs for account3 (Y rangs from 1 to 7)
#account.3.codec.Y.enable =
#account.3.codec.Y.payload_type =
#account.3.codec.Y.priority =
#account.3.codec.Y.rtpmap =

account.3.codec.1.enable = 1
account.3.codec.1.payload_type = PCMA
account.3.codec.1.priority = 2
account.3.codec.1.rtpmap = 8

account.3.codec.2.enable = 1
account.3.codec.2.payload_type = PCMU
account.3.codec.2.priority = 1
account.3.codec.2.rtpmap = 0

account.3.codec.3.enable = 1
account.3.codec.3.payload_type = G729
account.3.codec.3.priority = 3
account.3.codec.3.rtpmap = 18

account.3.codec.4.enable = 1
account.3.codec.4.payload_type = G722
account.3.codec.4.priority = 4
account.3.codec.4.rtpmap = 9
```

```
account.3.codec.5.enable = 0
account.3.codec.5.payload_type = G723
account.3.codec.5.priority = 5
account.3.codec.5.rtpmap = 4

account.3.codec.6.enable = 0
account.3.codec.6.payload_type = AACLC
account.3.codec.6.priority = 6
account.3.codec.6.rtpmap = 102

account.3.codec.7.enable = 0
account.3.codec.7.payload_type = iLBC
account.3.codec.7.priority = 7
account.3.codec.7.rtpmap = 122

#Video codecs for account3 (X rangs from 1 to 3)
#account.3.video_codec.X.enable =
#account.3.video_codec.X.priority =
#account.3.video_codec.X.payload_type =
#account.3.video_codec.X.rtpmap =
#account.3.video_codec.X.para =

account.3.video_codec.1.enable = 1
account.3.video_codec.1.priority = 1
account.3.video_codec.1.payload_type = H264
account.3.video_codec.1.rtpmap = 99
account.3.video_codec.1.para = profile-level-id=42800D; packetization-
mode=0; max-mbps=11880

account.3.video_codec.2.enable = 1
account.3.video_codec.2.priority = 2
account.3.video_codec.2.payload_type = H263
account.3.video_codec.2.rtpmap = 34
account.3.video_codec.2.para = CIF=1; QCIF=1

account.3.video_codec.3.enable = 1
account.3.video_codec.3.priority = 3
account.3.video_codec.3.payload_type = mp4v-es
account.3.video_codec.3.rtpmap = 102
account.3.video_codec.3.para = CIF=1; QCIF=1; MaxBR=3840

##############################################################
##            Call Forward Settings                 ##
##############################################################

# 1-Enable, 0-Disable(default) whether to Always Forward
forward.always.enable = %BWCFA-BINARY-3%

# target:phonenumber that the phone will Always Forward to
forward.always.target =

#On or off Code for Always Forward. String
forward.always.on_code = %BWFAC-CFA-ACTIVATE-3%
forward.always.off_code = %BWFAC-CFA-DEACTIVATE-3%

# Busy Forward enable:the default is 0(disabled)
forward.busy.enable = 0
forward.busy.target =
forward.busy.on_code = %BWFAC-CFB-ACTIVATE-3%
forward.busy.off_code = %BWFAC-CFB-DEACTIVATE-3%

# No answer. timeout:5s,10,15,20 (second)the time after which the call
```

```
will be forwarded when using No Answer Forward
forward.no_answer.enable = 0
forward.no_answer.target =
forward.no_answer.timeout = 10
forward.no_answer.on_code = %BWFAC-CFNA-ACTIVATE-3%
forward.no_answer.off_code = %BWFAC-CFNA-DEACTIVATE-3%

############################################################
##                  DND Settings                          ##
############################################################

features.dnd.on_code =%BWFAC-DND-ACTIVATE-3%
features.dnd.off_code =%BWFAC-DND-DEACTIVATE-3%

############################################################
##              Account4 Settings                         ##
############################################################

#Enable or disable the account4, 0-Disabled(default), 1-Enabled;
account.4.enable = %BWLINE-BINARY-4%

#Configure the account4 label which will display on the LCD screen.
account.4.label =%BWEXTENSION-4%

#Configure the display name of account4
account.4.display_name =%BWCLID-4%

#Configure the user and password for register authentication
account.4.auth_name =%BWAUTHUSER-4%
account.4.password =%BWAUTHPASSWORD-4%

#Configure the register user name
account.4.user_name = %BWLINEPORT-4%

#Configure account4 as the default account
account.4.default_account =

#Configure the SIP server address and port(5060 by default)
account.4.sip_server_host = %BWHOST-4%
account.4.sip_server_port = 5060

#Enable/Disable the outbound proxy server, fill the IP address/domain of
the outbound proxy server and the server port(5060 by default)
account.4.outbound_proxy_enable = %USE_SBC_BOOLEAN%
account.4.outbound_host = %SBC_ADDRESS%
account.4.outbound_port = %SBC_PORT%
account.4.sip_server_host_readonly = 0

#Configure the transport type;     0-UDP(Default), 1-TCP, 2-TLS, 3-DNS
SRV
account.4.transport = 0

#Configure the backup outbound proxy server address and port(5060 by
default)
account.4.backup_outbound_host =
account.4.backup_outbound_port = 5060

#Configure the voice mail number of account4.
voice_mail.number.4 = %BWVOICE-PORTAL-NUMBER-4%

#Active/Deactive proxy require
account.4.proxy_require =
```



```
#Enable/Disable the anonymous call feature for account4;     0-
Disabled(Default), 1-Enabled
account.4.anonymous_call = 0

#Configure the oncode/offcode for turning on/off anonymous call feature
account.4.anonymous_call_oncode =
account.4.anonymous_call_offcode =

#Enable/Disable the reject anonymous call feature for account4;     0-
Disabled(Default), 1-Enabled
account.4.reject_anonymous_call = 0

#Configure the oncode/offcode for turning on/off reject anonymous call
feature
account.4.anonymous_reject_oncode =
account.4.anonymous_reject_offcode =

Configure the SIP port for local account4
account.4.sip_listen_port = 5060

#Configure the register expire time
account.4.expires = 3600

#Enable/Disable 100 reliable retransmission;      0-Disabled(Default),
1-Enabled
account.4.100rel_enable = 0

#Enable/Disable the resource reservation;      0-Disabled(Default), 1-
Enabled
account.4.precondition = 0

#Enble/Disable subscribe the register status;     0-Disabled(Default),
1-Enabled
account.4.subscribe_register = 0

#Enable/Disable subscribe the Message Waiting Indicator;     0-
Disabled(Default), 1-Enabled
account.4.subscribe_mwi = 0

#Configure MWI subscribe expires 3600 seconds by default
account.4.subscribe_mwi_expires = 3600

#Select SIP header(s) carrying the caller ID;     0-FROM(Default), 1-
PAI, 2-PAI-FROM, 3-PRID-PAI-FROM, 4-PAI-RPID-FROM, 5-RPID-FROM
account.4.cid_source = 0
account.4.cid_source = 0

#Select SIP header(s) carrying the called party ID   0-FROM(Default), 1-
PAI, 2-PAI-FROM, 3-PRID-PAI-FROM, 4-PAI-RPID-FROM, 5-RPID-FROM
account.4.cid_source = 0
account.4.cp_source = 0

#Enable/Disable session timer;     0-Disabled(Default), 1-Enabled
account.4.session_timer.enable = 0

#Configure session timer expire
account.4.session_timer.expires = 3600

#Configure the session timer refresher;     0-Uac(Default), 1-Uas
account.4.session_timer.refresher = 0

#Enable/Disable "user=phone";     0-Disabled(Default), 1-Enabled
account.4.enable_user_equal_phone = 0
```



```
#Enable/Disable SRTP;     0-Disabled(Default), 1-Enabled
account.4.srtp_encryption = 0

#Configure the RTP packet time;     0-Disabled, 10, 20(Default), 30, 40,
50, 60
account.4.ptime = 20

#Assign account4 as shared line;     0-Disabled/Private(Default), 1-
Broadsoft_shared_line, 2-Draft_bridge_line_appearance
account.4.shared_line = %BWSHAREDLINE-BINARY-4%

#Configure BLA number and the subscribe period when account4 is a BLA
line
account.4.bla_number =
account.4.bla_subscribe_period = 300

#Enable/Disable call pickup using dialog-info sip header;     0-
Disabled(Default), 1-Enabled
account.4.dialoginfo_callpickup = 0

#Enable/Disable auto answer when receiving a incoming call for accout1;
0-Disabled(Default), 1-Enabled
account.4.auto_answer = 0

#Enable/Disable record the Missed calllog;     0-Disabled, 1-
Enabled(Default)
account.4.missed_calllog = 1

#Enable/Disable subscribe the voicemail number for MWI;     0-
Disabled(Default), 1-Enabled
account.4.subscribe_mwi_to_vm = 0

#Enable/Disable sending mac address and line number in the Register
message;     0-Disabled(Default), 1-Enabled
account.4.register_mac = 0
account.4.register_line = 0

#Configure interval time for retrying register when account4 register
failed 30 seconds by default
account.4.reg_fail_retry_interval = 30

#Enable/Disable network conference;     0-Local(Default), 2-Network
Conference
account.4.conf_type = 0

#Configure the factory conference uri(a SIP URI, or user part of the SIP
URI), for example, "conference@domain.com" or "conference"
account.4.conf_uri =%BWNETWORK-CONFERENCE-SIPURI-4%

#Connfigure the BLF List URI (a SIP URI, or user part of the SIP URI),
for example, "2300_blflist@domain.com" or "2300_blflist"
account.4.blf.blf_list_uri = %BWBLF-URI-4%


#Configure the blf subscribe period 1800 seconds by default
account.4.blf.subscribe_period = 1800

#Configure the code for pickup when the monitored user receives an
incoming call
account.4.blf_list_code =

#Configure the code for bargein when the monitored user is in
```

```
conversation
account.4.blf_list_barge_in_code =

#Assign the sip platform;     0-Local SIP Server(Default), 1-Cosmocom,
2-Broadsoft
account.4.sip_server_type = 0

#Enable/Disable the SIP signal encode, 0-Disabled (defaault), 1-Enabled
(RC 4);
account.4.enable_signal_encode = 0

#Configure the key for encoding;
account.4.signal_encode_key =

#Configure the music on hold server
account.4.music_server_uri =

#Configure the DTMF type;     0-INBAND, 1-RFC2833(Default), 2-SIP INFO
account.4.dtmf.type = 1

#Configure the RFC2833 payload, ranges from 96 to 225 (101 by default);
account.4.dtmf.dtmf_payload = 101

#Configure DTMF info type when using SIP INFO, 0-Disabled(default), 1-
DTMF-Relay, 2-DTMF, 3-Telephone-Event;
account.4.dtmf.info_type = 0

############################################################
##                       NAT Settings                     ##
############################################################

#Enable/Disable NAT traversal;    0-Disabled(Default), 1-STUN
account.4.nat.nat_traversal = 0

#Configure the STUN server address and port
account.4.nat.stun_server =
account.4.nat.stun_port = 3478

#Configure the NAT keep-alive and the keep-alive interval
account.4.nat.udp_update_enable = 1
account.4.nat.udp_update_time = 30

#Enable/Disable Rport;     0-Disabled(Default), 1-Enabled
account.4.nat.rport = 0

#Define session timer T1 T2 and T4;
account.4.advanced.timer_t1 = 0.5
account.4.advanced.timer_t2 = 4
account.4.advanced.timer_t4 = 5

#Configure the audio and video attributes
account.4.advanced.audio_bandwidth = 0
account.4.advanced.video_frame_rate = 30
account.4.advanced.video_i_frame_refresh_time = 30
account.4.advanced.video_bandwidth = 0
account.4.advanced.total_bandwidth = 0

#Assign a ringtone for account4; System ring tones are:
common(default),Ring1.wav,Ring2.wav,¡¡Ring8.wav;
#If you set the custom ring tone(Family.wav) as phone ring tone,the
value format is: Custom:Family.wav
#If you set the system ring tone(Ring2.wav) as phone ring tone,the value
format is: Resource:Ring2.wav
```



```
account.4.ringtone.ring_type =

#Audio codecs for account4 (Y rangs from 1 to 7)
#account.4.codec.Y.enable =
#account.4.codec.Y.payload_type =
#account.4.codec.Y.priority =
#account.4.codec.Y.rtpmap =

account.4.codec.1.enable = 1
account.4.codec.1.payload_type = PCMA
account.4.codec.1.priority = 2
account.4.codec.1.rtpmap = 8

account.4.codec.2.enable = 1
account.4.codec.2.payload_type = PCMU
account.4.codec.2.priority = 1
account.4.codec.2.rtpmap = 0

account.4.codec.3.enable = 1
account.4.codec.3.payload_type = G729
account.4.codec.3.priority = 3
account.4.codec.3.rtpmap = 18

account.4.codec.4.enable = 1
account.4.codec.4.payload_type = G722
account.4.codec.4.priority = 4
account.4.codec.4.rtpmap = 9

account.4.codec.5.enable = 0
account.4.codec.5.payload_type = G723
account.4.codec.5.priority = 5
account.4.codec.5.rtpmap = 4

account.4.codec.6.enable = 0
account.4.codec.6.payload_type = AACLC
account.4.codec.6.priority = 6
account.4.codec.6.rtpmap = 102

account.4.codec.7.enable = 0
account.4.codec.7.payload_type = iLBC
account.4.codec.7.priority = 7
account.4.codec.7.rtpmap = 122

#Video codecs for account4(X rangs from 1 to 3)
#account.4.video_codec.X.enable =
#account.4.video_codec.X.priority =
#account.4.video_codec.X.payload_type =
#account.4.video_codec.X.rtpmap =
#account.4.video_codec.X.para =

account.4.video_codec.1.enable = 1
account.4.video_codec.1.priority = 1
account.4.video_codec.1.payload_type = H264
account.4.video_codec.1.rtpmap = 99
account.4.video_codec.1.para = profile-level-id=42800D; packetization-
mode=0; max-mbps=11880

account.4.video_codec.2.enable = 1
account.4.video_codec.2.priority = 2
account.4.video_codec.2.payload_type = H263
account.4.video_codec.2.rtpmap = 34
account.4.video_codec.2.para = CIF=1; QCIF=1
```

```
account.4.video_codec.3.enable = 1
account.4.video_codec.3.priority = 3
account.4.video_codec.3.payload_type = mp4v-es
account.4.video_codec.3.rtpmap = 102
account.4.video_codec.3.para = CIF=1; QCIF=1; MaxBR=3840

##########################################################
##                 Call Forward Settings                ##
##########################################################

# 1-Enable, 0-Disable(default) whether to Always Forward
forward.always.enable = %BWCFA-BINARY-4%

# target:phonenumber that the phone will Always Forward to
forward.always.target =

#On or off Code for Always Forward. String
forward.always.on_code = %BWFAC-CFA-ACTIVATE-4%
forward.always.off_code = %BWFAC-CFA-DEACTIVATE-4%

# Busy Forward enable:the default is 0(disabled)
forward.busy.enable = 0
forward.busy.target =
forward.busy.on_code = %BWFAC-CFB-ACTIVATE-4%
forward.busy.off_code = %BWFAC-CFB-DEACTIVATE-4%

# No answer. timeout:5s,10,15,20 (second)the time after which the call
will be forwarded when using No Answer Forward
forward.no_answer.enable = 0
forward.no_answer.target =
forward.no_answer.timeout = 10
forward.no_answer.on_code = %BWFAC-CFNA-ACTIVATE-4%
forward.no_answer.off_code = %BWFAC-CFNA-DEACTIVATE-4%

##########################################################
##                   DND Settings                       ##
##########################################################

features.dnd.on_code =%BWFAC-DND-ACTIVATE-4%
features.dnd.off_code =%BWFAC-DND-DEACTIVATE-4%

##########################################################
##                   Time Zone Settings                 ##
##########################################################

#Configure the time zone and time zone name for the phone; time zone
ranges from -11 to +12 (+8 by default); time zone name (China(Beijing)
by default);
#local_time.time_zone = +8
#local_time.time_zone_name = China(Beijing)
local_time.time_zone = %BWTIMEZONE-1%
local_time.time_zone_name = %TIMEZONENAME%
```

Appendix B: Time Zone

Time Zone	Time Zone Value	Time Zone Name
−11:00	-11	Samoa
−10:00	-10	United States-Hawaii-Aleutian
−10:00	-10	United States-Alaska-Aleutian
−09:00	-9	United States-Alaska Time
−08:00	-8	Canada(Vancouver, Whitehorse)
−08:00	-8	Mexico(Tijuana, Mexicali)
−08:00	-8	United States-Pacific Time
−07:00	-7	Canada(Edmonton, Calgary)
−07:00	-7	Mexico(Mazatlan, Chihuahua)
−07:00	-7	United States-Mountain Time
−07:00	-7	United States-MST no DST
−06:00	-6	Canada-Manitoba(Winnipeg)
−06:00	-6	Chile(Easter Islands)
−06:00	-6	Mexico(Mexico City, Acapulco)
−06:00	-6	United States-Central Time
−05:00	-5	Bahamas(Nassau)
−05:00	-5	Canada(Montreal, Ottawa, Quebec)
−05:00	-5	Cuba(Havana)
−05:00	-5	United States-Eastern Time
−04:30	-4.5	Venezuela(Caracas)
−04:00	-4	Canada(Halifax, Saint John)
−04:00	-4	Chile(Santiago)
−04:00	-4	Paraguay(Asuncion)
−04:00	-4	United Kingdom-Bermuda(Bermuda)
−04:00	-4	United Kingdom(Falkland Islands)
−04:00	-4	Trinidad&Tobago
−03:30	-3.5	Canada- New Foundland(St.Johns)
−03:00	-3	Denmark-Greenland(Nuuk)
−03:00	-3	Argentina(Buenos Aires)
−03:00	-3	Brazil(no DST)
−03:00	-3	Brazil(DST)
−02:00	-2	Brazil(no DST)
−01:00	-1	Portugal(Azores)
0	0	GMT

Time Zone	Time Zone Value	Time Zone Name
0	0	Greenland
0	0	Denmark-Faroe Islands(Torshaven)
0	0	Ireland(Dublin)
0	0	Portugal(Lisboa, Porto, Funchal)
0	0	Spain-Canary Islands(Las Palmas)
0	0	United Kingdom(London)
0	0	Morocco
+01:00	+1	Albania(Tirana)
+01:00	+1	Austria(Vienna)
+01:00	+1	Belgium(Brussels)
+01:00	+1	Caicos
+01:00	+1	Chatam
+01:00	+1	Croatia(Zagreb)
+01:00	+1	Czech Republic(Prague)
+01:00	+1	Denmark(Copenhaven)
+01:00	+1	France(Paris)
+01:00	+1	Germany(Berlin)
+01:00	+1	Hungary(Budapest)
+01:00	+1	Italy(Rome)
+01:00	+1	Luxembourg(Luxembourg)
+01:00	+1	Macedonia(Skopje)
+01:00	+1	Netherlands(Amsterdam)
+01:00	+1	Namibia(Windhoek)
+02:00	+2	Estonia(Tallinn)
+02:00	+2	Finland(Helsinki)
+02:00	+2	Gaza Strip(Gaza)
+02:00	+2	Greece(Athens)
+02:00	+2	Israel(Tel Aviv)
+02:00	+2	Jordan(Amman)
+02:00	+2	Latvia(Riga)
+02:00	+2	Lebanon(Beirut)
+02:00	+2	Moldova(Kishinev)
+02:00	+2	Russia(Kaliningrad)
+02:00	+2	Romania(Bucharest)
+02:00	+2	Syria(Damascus)
+02:00	+2	Turkey(Ankara)

Time Zone	Time Zone Value	Time Zone Name
+02:00	+2	Ukraine(Kyiv, Odessa)
+02:00	+2	Syria(Damascus)
+03:00	+3	East Africa Time
+03:00	+3	Iraq(Baghdad)
+03:00	+3	Russia(Moscow)
+03:30	+3.5	Iran(Teheran)
+04:00	+4	Armenia(Yerevan)
+04:00	+4	Azerbaijan(Baku)
+04:00	+4	Georgia(Tbilisi)
+04:00	+4	Kazakstan(Aqtau)
+04:00	+4	Russia(Samara)
+05:00	+5	Kazakstan(Aqtobe)
+05:00	+5	Kyrgyzstan(Bishkek)
+05:00	+5	Pakistan(Islamabad)
+05:00	+5	Russia(Chelyabinsk)
+05:30	+5.5	India(Calcutta)
+06:00	+6	Kazakhstan(Astana, Almaty)
+06:00	+6	Russia(Novosibirsk, Omsk)
+07:00	+7	Russia(Krasnoyarsk)
+07:00	+7	Thailand(Bangkok)
+08:00	+8	China(Beijing)
+08:00	+8	Singapore(Singapore)
+08:00	+8	Australia(Perth)
+09:00	+9	Korea(Seoul)
+09:00	+9	Japan(Tokyo)
+09:30	+9.5	Australia(Adelaide)
+09:30	+9.5	Australia(Darwin)
+10:00	+10	Australia(Sydney, Melbourne, Canberra)
+10:00	+10	Australia(Brisbane)
+10:00	+10	Australia(Hobart)
+10:00	+10	Russia(Vladivostok)
+10:30	+10.5	Australia(Lord Howe Islands)
+11:00	+11	New Caledonia(Noumea)
+12:00	+12	New Zeland(Wellington, Auckland)
+12:45	+12.75	New Zeland(Chatham Islands)
+13:00	+13	Tonga(Nukualofa)

References

[1] Yealink, Inc. 2012. *Yealink VPx Phone User Manual*, *Release 70*. Available from Yealink at http://www.yealink.com/index.php/Support/.

[2] BroadSoft, Inc. 2012. *BroadWorks Device Management Configuration Guide*, *Release 18.0*. Available from BroadSoft at xchange.broadsoft.com.

[3] BroadSoft, Inc. 2011. *BroadWorks Redundancy Guide, Release 18.0*. Available from BroadSoft at xchange.broadsoft.com.

[4] BroadSoft, Inc. 2012. *BroadWorks SIP Access Device Interoperability Test Plan, Release 18.0*. Available from BroadSoft at xchange.broadsoft.com.

[5] BroadSoft, Inc. 2012. *BroadWorks Device Management Interoperability Test Plan*, *Release 18.0.* Available from BroadSoft at xchange.broadsoft.com.

