



BroadSoft Partner Configuration Guide

Grandstream DP7XX

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BroadWorks® Guide

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Version	Reason for Change
1.1	Introduced document for Grandstream DP7XX version 1.0.9.1 validation with BroadWorks Release 22.0.
1.2	Edited changes and published the document.

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1 Overview

This guide describes the configuration procedures required for the Grandstream DP7XX series phones for interoperability with BroadWorks.

The DP7XX is VoIP DECT 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 DP7XX. For those details, see the *DP7XX User Manual* [1] supplied by Grandstream.

2 Interoperability Status

This section provides the known interoperability status of the Grandstream DP7XX with BroadWorks. This includes the version(s) tested, the 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 Grandstream.

2.1 Verified Versions

The following table identifies the verified Grandstream DP7XX 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 identify specific DP7XX versions that the partner has identified as compatible so should interface properly with BroadWorks. Generally, maintenance releases of the validated version are considered compatible and may not be specifically listed here. For any questions concerning maintenance and compatible releases, contact Grandstream.

NOTE: Interoperability testing is usually 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 themselves using the *BroadWorks SIP Phone Interoperability Test Plan* [7].

Verified Versions			
Date (mm/yyyy)	BroadWorks Release	DP7XX Verified Version	DP7XX Compatible Versions
10/2016	Release 21.sp1	1.0.2.16	Any maintenance release of the verified version.
07/2019	Release 22.0	1.0.9.1	Any maintenance release of the verified version.

2.2 Interface Capabilities Supported

This section identifies interface capabilities that have been verified through testing as supported by Grandstream DP7XX.

The *Supported* column in the tables in this section identifies the Grandstream DP7XX's support for each of the items covered in the test plan, with the following designations:

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

- NT Test item was not tested

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

2.2.1 SIP Interface Capabilities

The Grandstream DP7XX has completed interoperability testing with BroadWorks using the *BroadWorks SIP Phone Interoperability Test Plan* [7]. 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.

NOTE: *DUT* in the following table refers to the *Device Under Test*, which in this case is the Grandstream DP7XX.

BroadWorks SIP Phone Interoperability Test Plan Support Table			
Test Plan Package	Test Plan Package Items	Supported	Comments
Basic	Call Origination	Yes	
	Call Termination	Yes	
	Session Audit	Yes	
	Session Timer	Yes	
	Ringback	Yes	
	Forked Dialog	Yes	
	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 – Unsolicited	Yes	
	Message Waiting Indicator – Solicited	Yes	
	Message Waiting Indicator – Detail	Yes	
	Voice Portal Outcall	Yes	

BroadWorks SIP Phone Interoperability Test Plan Support Table			
Test Plan Package	Test Plan Package Items	Supported	Comments
	Advanced Alerting – Ringing	Yes	
	Advanced Alerting – Call Waiting	No	
	Advanced Alerting – Ring Splash	No	
	Advanced Alerting – Silent Alerting	No	
	Calling Line ID	Yes	
	Calling Line ID with Unicode Characters	Yes	
	Connected Line ID	Yes	
	Connected Line ID with Unicode Characters	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	
	Meet-Me Conferencing – G722	Yes	
	Meet-Me Conferencing – AMR-WB	No	
	Collaborate – Audio	Yes	
	Collaborate – Audio – G722	Yes	
	Call Decline Policy	Yes	
	DUT Services – Call Control Services	Call Waiting	Yes
Call Hold		Yes	
Call Transfer		Yes	
Three-Way Calling		Yes	
Network-Based Conference		No	
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	Yes	
DUT Services – Emergency Call	Emergency Call	No	
	Emergency Call with Ringback	No	

BroadWorks SIP Phone Interoperability Test Plan Support Table			
Test Plan Package	Test Plan Package Items	Supported	Comments
DUT Services – Miscellaneous	Do Not Disturb	Yes	
	Call Forwarding Always	Yes	
	Call Forwarding Always Diversion Inhibitor	Yes	
	Anonymous Call	Yes	
	Anonymous Call Block	Yes	
	Remote Restart Via Notify	Yes	
Advanced Phone Services – Busy Lamp Field	Busy Lamp Field	No	
	Call Park Notification	No	
Advanced Phone Services – Feature Key Synchronization, Private Line	Do Not Disturb	No	
	Do Not Disturb Ring Splash	No	
	Call Forwarding	No	
	Call Forwarding Always Ring Splash	No	
	Call Forwarding Always Diversion Inhibitor	No	
	Call Center Agent Logon/Logoff	No	
	Call Center Agent Unavailable Code	No	
	Executive – Call Filtering	No	
	Executive-Assistant – Call Filtering	No	
	Executive-Assistant – Diversion	No	
	Call Recording	No	
	Security Classification	No	
Advanced Phone Services – Feature Key Synchronization, Shared Line	Do Not Disturb	No	
	Do Not Disturb Ring Splash	No	
	Call Forwarding	No	
	Call Forwarding Always Ring Splash	No	
	Call Forwarding Always Diversion Inhibitor	No	
	Security Classification	No	
Advanced Phone Services – Missed Calls Display Synchronization	Missed Calls Display Sync	No	
Advanced Phone Services – Shared Call Appearance using Call Info	Line-Seize	No	
	Call-Info/Lamp Management	No	
	Public Hold	No	
	Private Hold	No	

BroadWorks SIP Phone Interoperability Test Plan Support Table			
Test Plan Package	Test Plan Package Items	Supported	Comments
	Hybrid Key System	No	
	Multiple Call Arrangement	No	
	Bridge Active Line	No	
	Bridge Active Line – Silent Monitor	No	
	Call Park Notification	No	
Advanced Phone Services – Call Park Notification	Call Park Notification	No	
Advanced Phone Services – Call Center	Hold Reminder	No	
	Call Information	No	
	Hoteling Event	No	
	Status Event	No	
	Disposition Code	No	
	Emergency Escalation	No	
	Customer Originated Trace	No	
Advanced Phone Services – Call Recording Controls	Pause/Resume	No	
	Start/Stop	No	
	Record Local Conference	No	
	Record Network Conference	No	
Advanced Phone Services – Call Recording Video	Basic Call	No	
	Record Local Conference	No	
	Record Network Conference	No	
Advanced Phone Services – Security Classification	Security Classification	No	
Advanced Phone Services – Conference Event	Network-Based Conference Creator	No	
	Network-Based Conference Participant	No	
	Meet-Me Conference Participant	No	
Redundancy	DNS SRV Lookup	Yes	
	Register Failover/Failback	Yes	
	Invite Failover/Failback	Yes	
	Bye Failover	Yes	
SBC/ALG - Basic	Register	Yes	
	Outgoing Invite	Yes	
	Incoming Invite	Yes	
	Register Failover/Failback	Yes	

BroadWorks SIP Phone Interoperability Test Plan Support Table			
Test Plan Package	Test Plan Package Items	Supported	Comments
SBC/ALG – Failover/Failback	Invite Failover/Failback	Yes	
Video – Basic Video Calls	Call Origination	No	
	Call Termination	No	
	Call Hold	No	
	Call Waiting	No	
	Call Transfer	No	
Video – BroadWorks Video Services	Auto Attendant	No	
	Auto Attendant – HD	No	
	Voice Messaging	No	
	Voice Messaging – HD	No	
	Custom Ringback	No	
Video – BroadWorks Video Conference	Network-based Conference	No	
	Network-based Conference – HD	No	
	Collaborate – Video	No	
	Collaborate – Video – HD	No	
TCP	Register	Yes	
	Outgoing Invite	Yes	
	Incoming Invite	Yes	
IPV6	Call Origination	No	
	Call Termination	No	
	Session Audit	No	
	Ringback	No	
	Codec Negotiation/Renegotiation	No	
	Voice Message Deposit/Retrieval	No	
	Call Control	No	
	Registration with Authentication	No	
	Busy Lamp Field	No	
	Redundancy	No	
	SBC	No	
	Video	No	
	Dual Stack with Alternate Connectivity	No	

2.2.2 Other Interface Capabilities

The Grandstream DP7XX may have implemented support for the following:

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

Support for these interfaces is demonstrated by completing the *BroadWorks SIP Phone Functional Test Plan* [8]. Support for these interfaces is summarized in the following table.

BroadWorks Xtended Services Interface (Xsi) and BroadCloud IM&P Support Table			
Interface	Feature	Supported	Comments
Xsi Features – Authentication	Authenticate with SIP Credentials	No	
	Authenticate with BroadWorks User Login Credentials	No	
	Authenticate with BroadWorks User Directory Number	No	
Xsi Features – User Service Configuration	Remote Office	No	
	BroadWorks Anywhere	No	
	Simultaneous Ringing	No	
	Caller ID Blocking	No	
	Call Forwarding Always	No	
	Call Forwarding Busy	No	
	Call Forwarding No Answer	No	
Xsi Features – Directories	Do Not Disturb	No	
	Enterprise Directory	No	
	Enterprise Common Phone List	No	
	Group Directory	No	
	Group Common Phone List	No	
	Personal Phone List	No	
Xsi Features – Call Logs	Search All Directories	No	
	Placed Calls	No	
	Received Calls	No	
	Missed Calls	No	
	All Calls	No	
Xsi Features – Visual Voice Mail	Sort by Name	No	
	View Messages	No	
	Listen to Audio Message	No	
	Watch Video Message	No	
	Mark Message Read/Unread	No	
	Delete Message	No	

BroadWorks Xtended Services Interface (Xsi) and BroadCloud IM&P Support Table			
Interface	Feature	Supported	Comments
	Mark All Messages Read/Unread	No	
XMPP Features – Contact/Buddy List	Contacts	No	
	Favorites	No	
	Groups	No	
	Non-XMPP Contacts	No	
	Conferences	No	
XMPP Features – Presence	Login Invisible	No	
	Presence State	No	
	Presence Status	No	
	Contact's Presence State	No	

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, and are typically not BroadWorks release dependent.

The *Issue Number* is a tracking number for the issue. If it is a Grandstream issue, the issue number is from Grandstream’s tracking system. If it is a BroadWorks issue, the issue number is from BroadSoft’s tracking system.

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

Issue Number	Issue Description	Partner Version			
		1.0.2.16	1.0.9.1		
	None.				

3 BroadWorks Configuration

This section identifies the required BroadWorks device profile type for the Grandstream DP7XX as well as any other unique BroadWorks configuration required for interoperability with the DP7XX.

3.1 BroadWorks Device Profile Type Configuration

This section identifies the device profile type settings to use when deploying the Grandstream DP7XX with BroadWorks.

Create a device profile type for the Grandstream DP7XX with settings as shown in the following example. The settings shown are recommended for use when deploying the Grandstream DP7XX with BroadWorks. For an explanation of the profile parameters, see the *BroadWorks Device Management Configuration Guide* [4].

Model	Number of Lines
DP752	10
DP750	10
DP730	10
DP722	10
DP720	10

Identity/Device Profile Type: Grandstream-DP750_DP720
 Signaling Address Type: Intelligent Proxy Addressing
 Obsolete

Standard Options

Number of Ports: Unlimited Limited To

Ringback Tone/Early Media Support: RTP - Session
 RTP - Early Session
 Local Ringback - No Early Media

Authentication: Enabled
 Disabled
 Enabled With Web Portal Credentials

Hold Normalization: Unspecified Address
 Inactive
 RFC3264

Registration Capable Authenticate REFER
 Static Registration Capable Video Capable
 E164 Capable Use History Info Header
 Trusted

Advanced Options

Route Advance Forwarding Override
 Wireless Integration Conference Device
 PBX Integration Mobility Manager Device
 Add P-Called-Party-ID Music On Hold Device
 Auto Configuration Soft Client Requires BroadWorks Digit Collection
 Requires BroadWorks Call Waiting Tone Requires MWI Subscription
 Advice of Charge Capable Support Call Center MIME Type
 Support Emergency Disconnect Control Support Identity In UPDATE and Re-INVITE
 Enable Monitoring Support RFC 3398
 Static Line/Port Ordering Support Client Session Info
 Support Call Info Conference Subscription URI Support Remote Party Info
 Support Visual Device Management Bypass Media Treatment
 Support Cause Parameter

Reset Event: reSync checkSync Not Supported
 Trunk Mode: User Pilot Proxy
 Hold Announcement Method: Inactive Bandwidth Attributes

Unscreened Presentation Identity Policy: Profile Presentation Identity
 Unscreened Presentation Identity
 Unscreened Presentation Identity With Profile Domain

Web Based Configuration URL Extension:

Device Configuration Options: Not Supported Device Management Legacy

Figure 1 Device Identity/Profile Type

3.2 BroadWorks Configuration Steps

There are no additional BroadWorks configuration steps required.

4 DP7XX Configuration

This section describes the configuration settings required for the DP7XX integration with BroadWorks, primarily focusing on the SIP interface configuration.

The capabilities of the DP7XX 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 DP7XX *Grandstream Configuration Tool and Template* [3].

4.1 Configuration Method

Grandstream DP7XX can be configured via web GUI as well as via the Configuration File through TFTP or HTTP/HTTPS.

The DP7XX accepts configuration files in XML format in addition to the legacy proprietary binary format.

When Grandstream device boots up or reboots, it issues a request for a configuration file named “cfgMAC.xml”, where “MAC” is the MAC address of the device, for example, “cfg000b820102ab.xml”. The configuration file name should be in lower case.

The following examples describe how to set the parameters using a configuration file. The DP7XX should be configured to load the configuration file each time it resets or re-synchronizes. For detailed information on automated provisioning, see the *DP7XX User Manual* [1] and the *Grandstream XML Provisioning Guide* [2].

Configuration Files

DP7XX Configuration Files	Level	Description
cfgMAC.xml Example: cfg000b82000000.xml	Subscriber	Contains configurable parameters that apply to an individual device in a deployment.
Configuration Template Examples: dp7XX_config_1.0.9.1.txt	Subscriber	Contains a complete list of configurable parameters that apply to an individual device in a deployment.

4.2 System Level Configuration

This section describes system-wide configuration items that are generally required for each DP7XX to work with BroadWorks. Subscriber-specific settings are described in the next section.

4.2.1 Configure Network Settings

Step	Command	Description
Step 1	Set the Address Type used. Address Type = DHCP/PPPoE/Static	Set the DP7XX address type.
Step 2	Static IP Address = 192.168.0.160	Set the DP7XX static IP address if the Address Type is “Static”.
Step 3	Static Subnet Mask = 255.255.0.0	Set the DP7XX static subnet mask if the “Address Type” is “Static”.
Step 4	Static Default Gateway = 192.168.0.1	Set the DP7XX static default gateway if the Address Type is “Static”.

Step	Command	Description
Step 5	Static DNS Server 1 = 4.2.2.2 Static DNS Server 2 = 4.2.2.1 Preferred DNS Server = 4.2.2.2	Set the static DNS Server if the Address Type is "Static".
Step 6	SIP Transport = UDP/TCP/TLS	Set the DP7XX SIP Transport protocol.
Step 7	NTP Server = us.pool.ntp.org	Set the DP7XX NTP server address.

4.2.1.1 Configure IPV6 Settings

DP7XX current firmware does not support IPv6.

4.2.2 Configure SIP Interface Settings

Step	Command	Description
Step 1	Set SIP Proxy/Domain. SIP Server = as.broadworks.net	Set the DP7XX 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. Outbound Proxy = sbc.broadworks.net	Set the Outbound Proxy to the session border controller (SBC) if one is deployed between the DP7XX and BroadWorks. If there are redundant SBCs, set it to the FQDN for the SBC cluster.
Step 3	Enable DNS SRV lookup. DNS Mode = "SRV"	Enable DNS SRV lookups.
Step 4	Set register mode. SIP Registration = "Yes"	Enable SIP register.
Step 5	Set SIP Timers. Register Expiration = 60	The default registration period is 60 minutes.
Step 6	Enable reliable response. Enable 100rel = "Yes"	Reliable provisional response (PRACK) should be enabled.
Step 7	Enable negotiated DTMF type. Preferred DTMF Method = RFC2833	Set the DP7XX to enable RFC 2833 negotiated DTMF.
Step 8	Enable SIP Profile. Profile Active = "Yes"	Enable the corresponding SIP profile.

4.2.3 Configure Service Settings

Step	Command	Description
Step 1	Configure dialplan. Example: Dial Plan = "{x+ *x+ *xx*x+}"	Configure the DP7XX dial plan according to the locale. The dial plan shown is the DP7XX default dial plan.
Step 2	Disable local feature code services. Enable Call Features = "No"	Disable feature access codes controlled by the device.

Step	Command	Description
Step 3	Enable BroadSoft mode. Special Feature = "BroadSoft"	Set the DP7XX in BroadSoft mode.

4.3 Subscriber Level Configuration

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 SIP trunk or subscriber. SIP Registration requires that a unique address of record (AoR) be provisioned on BroadWorks and the device.

Step	Command	Description
Step 1	Enable each line to be used. Enable Handset = "Yes" ;	Enable each line to be used. Enable Handset = "Yes" ;.
Step 2	Set Hunting Group for each line. Example: Hunting Group = 0 ;	Set Hunting Group for each line. Example: Hunting Group = 0 ;.
Step 3	Set Register User ID for each line. Example: SIP User_ID = "2405551111";	The register user ID must correspond with the line/port setting on BroadWorks.
Step 4	Enable SIP Authentication for each line. Example: Authenticate ID = "1111@as.mycompany.com"; Authenticate Password = "welcome";	If the Authentication service is configured on BroadWorks, these parameters must be configured to match the BroadWorks settings.
Step 5	Configure Display name for each line. Example: Name = "Claire Smith" ;	For each line, configure the name to be displayed on the device.
Step 6	Set the Profile for each line. Example: Profile = "Profile 1";	For each line, select its Profile: Profile 1 or Profile 2.

4.4 SIP Advanced Feature Configuration

The Grandstream DP7XX does not currently support the BroadWorks Advanced SIP features.

4.5 Xtended Services Interface (Xsi) Feature Configuration

The Grandstream DP7XX does not currently support the Xsi feature.

4.6 Instant Message and Presence Configuration

The Grandstream DP7XX does not currently support the BroadCloud Instant Message and Presence.

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 Grandstream DP7XX and the configuration steps required. For Device Management configuration details not covered here, see the *BroadWorks Device Management Configuration Guide* [4] and the *BroadWorks CPE Kit Usage Guide* [10].

5.1 Device Management Capabilities Supported

The Grandstream DP7XX has completed Device Management interoperability testing with BroadWorks using the *BroadWorks Device Management 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. 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 Grandstream DP7XX'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 and clarifications are identified in the *Comments* column.

NOTE: *DUT* in the following table refers to the *Device Under Test*, which in this case is the Grandstream DP7XX.

BroadWorks Device Management Interoperability Test Plan Support Table			
Test Plan Package	Test Plan Package Items	Supported	Comments
HTTP File Download	HTTP Download Using Xtended Services Platform (Xsp) IP Address	Yes	
	HTTP Download Using Xtended Services Platform FQDN	Yes	
	HTTP Download Using Xtended Services Platform Cluster FQDN	Yes	
	HTTP Download With Double Slash	Yes	
HTTPS File Download	HTTPS Download Using Xtended Services Platform IP Address	Yes	
	HTTPS Download Using Xtended Services Platform FQDN	Yes	
	HTTPS Download Using Xtended Services Platform Cluster FQDN	Yes	

BroadWorks Device Management Interoperability Test Plan Support Table			
Test Plan Package	Test Plan Package Items	Supported	Comments
File Inspection	Inspect System Config File	Yes	
	Inspect Device-Specific Config File	Yes	
	Inspect Other Config Files	No	
	Inspect Static Files	Yes	
Device Inspection	Inspect SIP Settings	Yes	
	Inspect Line Settings	Yes	
	Inspect Service Settings	Yes	
HTTP File Upload	HTTP Upload Using Xtended Services Platform IP Address	No	
	HTTP Upload Using Xtended Services Platform FQDN	No	
	HTTP Upload Using Xtended Services Platform Cluster FQDN	No	
Call Processing Sanity Tests	Register with Authentication	Yes	
	Call Origination	Yes	
	Call Termination	Yes	
	Remote Restart	Yes	
	Shared Line Origination	No	
	Shared Line Termination	No	
	Shared Line Status	No	
	Busy Lamp Field	No	
	Network-Based Conference	No	
Flexible Seating	Association via Voice Portal	Yes	
	Association via Phone	No	
No Touch Provisioning	Provision via DHCP Options Field	Yes	
	No Touch Provision via DM redirect	No	
	No Touch Provision via Vendor redirect	Yes	

5.2 Device Management Configuration

This section identifies the steps required to enable the Grandstream DP7XX for device management. For Device Management configuration details not covered here, see the *BroadWorks Device Management Configuration Guide* [4] and the *BroadWorks CPE Kit Usage Guide* [10].

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 and define via the web portal for use by Device Management. There are two types of custom tags that can be defined: system-default tags that are common to all devices on the system and device type-specific tags that are common to Grandstream device models only.

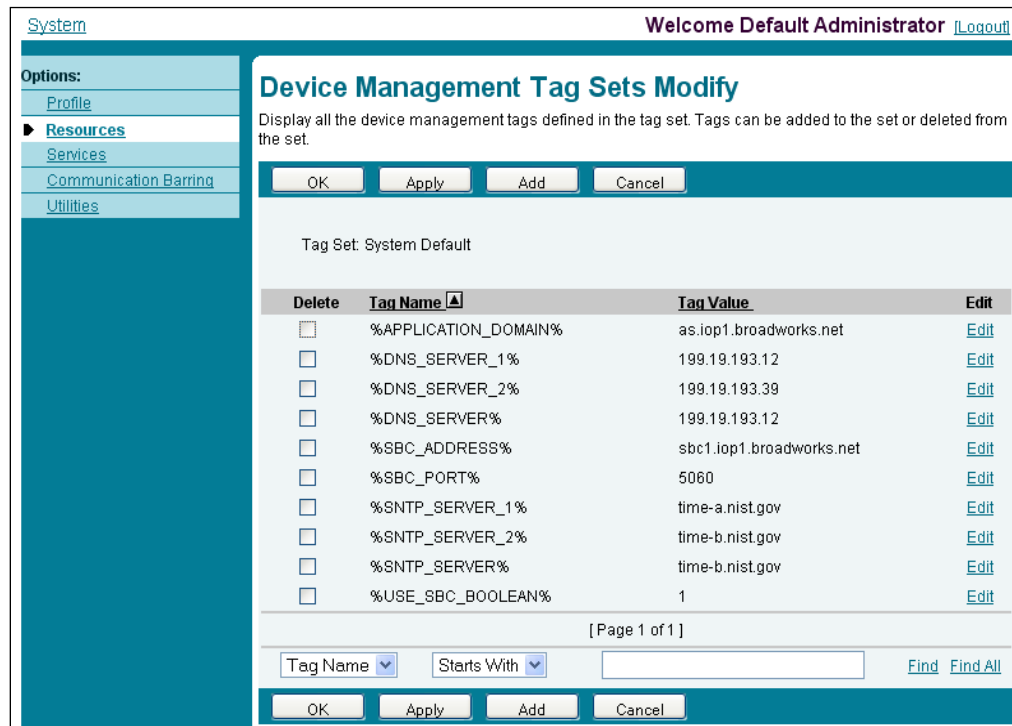
The Grandstream DP7XX makes use of custom tags which can be configured by a BroadWorks administrator as either system default or device type-specific tags. This section identifies the required tags.

5.2.1.1 Create System Default Tags

Browse to *System* → *Resources* → *Device Management Tag Sets* and select the *System Default* tag set. The Grandstream 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	Network Time Protocol (NTP) server address.
%SBC_ADDRESS%	IP address/FQDN	SBC SIP address.

Example System Default Tag Settings



The screenshot shows the 'Device Management Tag Sets Modify' page for the 'System Default' tag set. The page includes a navigation menu on the left with 'Resources' selected. The main content area displays a table of tags with columns for 'Delete', 'Tag Name', 'Tag Value', and 'Edit'. The table lists various system tags such as %APPLICATION_DOMAIN%, %DNS_SERVER_1%, %DNS_SERVER_2%, %DNS_SERVER%, %SBC_ADDRESS%, %SBC_PORT%, %SNTP_SERVER_1%, %SNTP_SERVER_2%, %SNTP_SERVER%, and %USE_SBC_BOOLEAN%. Each tag has a checkbox for deletion and a link to edit its value. The page also features search filters for 'Tag Name' and 'Starts With' at the bottom.

Delete	Tag Name	Tag Value	Edit
<input type="checkbox"/>	%APPLICATION_DOMAIN%	as.iop1.broadworks.net	Edit
<input type="checkbox"/>	%DNS_SERVER_1%	199.19.193.12	Edit
<input type="checkbox"/>	%DNS_SERVER_2%	199.19.193.39	Edit
<input type="checkbox"/>	%DNS_SERVER%	199.19.193.12	Edit
<input type="checkbox"/>	%SBC_ADDRESS%	sbcl.iop1.broadworks.net	Edit
<input type="checkbox"/>	%SBC_PORT%	5060	Edit
<input type="checkbox"/>	%SNTP_SERVER_1%	time-a.nist.gov	Edit
<input type="checkbox"/>	%SNTP_SERVER_2%	time-b.nist.gov	Edit
<input type="checkbox"/>	%SNTP_SERVER%	time-b.nist.gov	Edit
<input type="checkbox"/>	%USE_SBC_BOOLEAN%	1	Edit

Figure 2 System Default Tag Settings

5.2.1.2 Create Device Type-specific Tags

Browse to *System* → *Resources* → *Device Management Tag Sets* and then click **Add** to add a new tag set. Configure the tag set name using the device name appended by *Tags: Grandstream-DP7XX-Tags*. Add the device type specific tags in the following table to the device tag set. If the tag set already exists, make sure the following tags are defined.

Tag Name	Valid Settings	Description
%DHCP_OPTION_2%	Allow DHCP Option 2 to Override Time Zone 0 - Disabled, 1 – Enabled Example: 0	Allow DHCP Option 2 to Override Time Zone.
%DNS_ADDRESS_O1%	DNS Server IP address 1 st octet Example: 8	DNS Server IP address 1 st octet.
%DNS_ADDRESS_O2%	DNS Server IP address 2 nd octet Example: 8	DNS Server IP address 2 nd octet.
%DNS_ADDRESS_O3%	DNS Server IP address 3 rd octet Example: 8	DNS Server IP address 3 rd octet.
%DNS_ADDRESS_O4%	DNS Server IP address 4 th octet Example: 8	DNS Server IP address 4 th octet.
%SIP_TRANSPORT%	SIP Transport Protocol 0 - UDP, 1 - TCP, 2 - TLS Example: 0	SIP Transport Protocol.

Example Device Type-specific Tag Settings

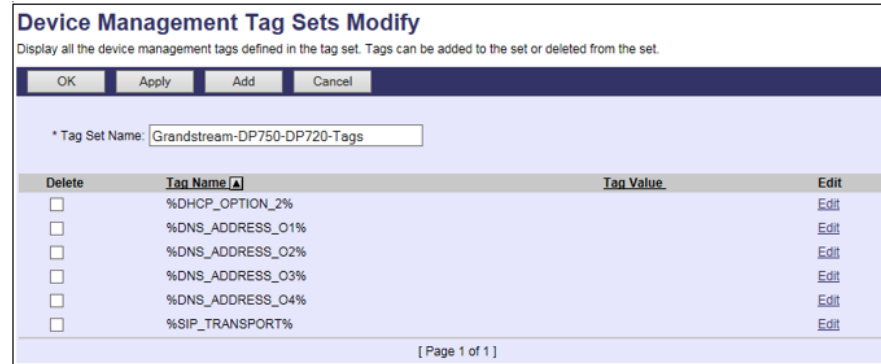


Figure 3 Device Type-specific Tag Settings

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 device to operate correctly. The device profile type is created by the system administrator. Group administrators use the device profile type to create a device profile. The device profile is an instance of the device profile type that is associated with a physical device.

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

The import method should be used if all of the following 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, then the import fails.)
- There is a DTAF file available for import with a BroadWorks release level that is the same as or prior to the release to which it is being imported. If the DTAF file is at a release level later than the release being imported to, then the import can fail.

Otherwise, use the manual method.

For more detailed instructions, see the *BroadWorks CPE Kit Usage Guide* [10] and the *BroadWorks Device Management Configuration Guide* [4].

5.2.2.1 Configuration Method 1: Import

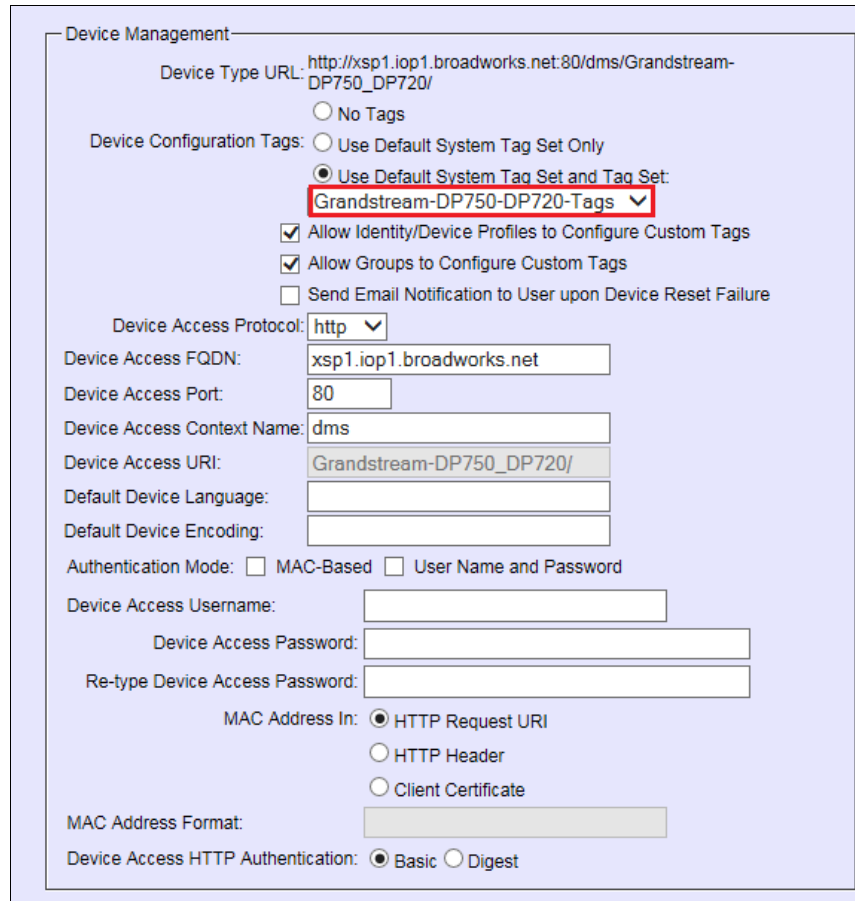
This section identifies the steps necessary to make use of the Device Management import feature to configure BroadWorks to add the Grandstream DP7XX as a Device Management-enabled device type. See the *BroadWorks CPE Kit Usage Guide* [10].

Download the Grandstream DP7XX CPE kit from BroadSoft Xchange at xchange.broadsoft.com. Extract the DTAF file(s) from the CPE kit. These are the import files. Repeat the following steps for each model you wish to import.

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

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

- 4) Browse to *System* → *Resources* → *Identity/Device Profile Types*.
- 5) Perform a search to find the imported Grandstream device profile type, Grandstream-DP7XX.
- 6) Browse to the *Profile* page and change the Device Management Device Access FQDN to your Xtended Services Platform (Xsp) or Xtended Services Platform cluster address.



The screenshot shows the 'Device Management' configuration page. The 'Device Type URL' is set to 'http://xsp1.iop1.broadworks.net:80/dms/Grandstream-DP750_DP720/'. Under 'Device Configuration Tags', the 'Use Default System Tag Set and Tag Set' option is selected, and a dropdown menu shows 'Grandstream-DP750-DP720-Tags' selected. Other options include 'Allow Identity/Device Profiles to Configure Custom Tags' (checked), 'Allow Groups to Configure Custom Tags' (checked), and 'Send Email Notification to User upon Device Reset Failure' (unchecked). The 'Device Access Protocol' is 'http'. The 'Device Access FQDN' is 'xsp1.iop1.broadworks.net', 'Device Access Port' is '80', 'Device Access Context Name' is 'dms', and 'Device Access URI' is 'Grandstream-DP750_DP720/'. The 'Authentication Mode' is 'User Name and Password'. The 'Device Access Username' and 'Device Access Password' fields are empty. The 'Re-type Device Access Password' field is also empty. The 'MAC Address In' is 'HTTP Request URI'. The 'MAC Address Format' field is empty. The 'Device Access HTTP Authentication' is 'Basic'.

Figure 4 Device Access FQDN

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

Firmware files must be obtained from Grandstream. These files are not included in the import. Complete the steps in section [5.2.2.2.2 Define Device Profile Type Files](#) to define the static firmware files and to upload the firmware.

NOTE: The non-firmware static files in section [5.2.2.2.2 Define Device Profile Type Files](#) are normally included in the import.

- 8) After importing the DTAFs, restart the Application Server to load the *TimeZoneAlias* files.

5.2.2.2 Configuration Method 2: Manual

This section identifies the basic steps necessary for an administrator to manually configure BroadWorks to add the Grandstream DP7XX as a Device Management-enabled device type. This method should not be used except in special cases as described in the opening to section [5.2.2 Configure BroadWorks Device Profile Type](#).

For more detailed instruction on manual configuration, see the *BroadWorks CPE Kit Usage Guide* [10] and the *BroadWorks Device Management Configuration Guide* [4].

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

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

5.2.2.2.1 Create or Modify Device Profile Type

This section identifies the BroadWorks device profile type settings relevant to Device Management for the Grandstream DP7XX.

Browse to *System* → *Resources* → *Identity/Device Profile Types* and perform a search to find the Grandstream device profile type(s) created in section [3.1 BroadWorks Device Profile Type Configuration](#) or add the device profile type for each model using the settings from section [3.1 BroadWorks Device Profile Type Configuration](#) if they do not exist.

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

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

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

5.2.2.2.2 Define Device Profile Type Files

This section describes the BroadWorks Device Management configuration necessary to identify the configuration files and other files that the Grandstream DP7XX downloads.

Configuration templates, firmware, and other files the DP7XX uses must be uploaded to BroadWorks. Download the Grandstream DP7XX CPE kit from BroadSoft Xchange at xchange.broadsoft.com. Extract the configuration files from the *Configuration Files* folder of CPE kit. Obtain the firmware files directly from Grandstream.

The following table identifies the Grandstream configuration files distributed with the 1.0.2.16 CPE kit.

File Name	CPE Kit Template File Name	File Type	Description
<i>cfg%BWMACADDRESS%.xml</i>	<i>cfg%BWMACADDRESS%.xml.template</i>	Device-specific	This file contains configurable parameters that apply to an individual device in a deployment.
<i>TimeZoneAliasLabels_Grandstream-DP7XX.properties</i>	<i>TimeZoneAliasLabels_Grandstream-DP7XX.properties</i>	Time Zone Alias	The time zone alias file is a BroadWorks Device Management file used to map time zone identifiers between BroadWorks and Grandstream devices.

The following table identifies other files that the Grandstream DP7XX downloads from the server or uploads to the server. These files are not provided in the CPE kit and must be obtained from Grandstream.

File Name	File Type	Description
dp75Xfw.bin	Static	This file contains firmware file.

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 *cfg%BWMACADDRESS%.xml*

Add the *cfg%BWMACADDRESS%.xml* file to the device profile type with the settings shown in *Figure 5*.

After creating the device profile type file, upload *cfg%BWMACADDRESS%.xml* extracted from the CPE kit. Use the **Browse** button on the file definition screen. Be sure to click **Apply** after uploading the file.



Device Access File: *cfg%BWMACADDRESS%.xml*
 Format: *cfg%BWMACADDRESS%.xml*

Repository File Format: *cfg%BWFQDEVICEID%.xml*

Access File: http://xsp1.iop1.broadworks.net:80/dms/Grandstream-DP750_DP720/cfg/%25BWMACADDRESS%25.xml
 Note: this URL has undefined content. Validate it manually by replacing any content between {} with valid value(s).

Repository File:
 Template File: [Download](#)

File Category: Static Dynamic Per-Type Dynamic Per-Device

File Customization: [Administrator and User](#) ▼

Allow Upload from Device

Extended File Capture

Default Extended File Capture Mode
[Enable for All File Instances](#) [Disable for All File Instances](#)

Assign File

Manual
 Custom

Upload File: [Browse...](#)

Currently using configuration */var/broadworks/lpDeviceConfig/type/Grandstream-DP750_DP720/cfg%*
 file: *BWMACADDRESS%.xml.template*

```
<?xml version="1.0" encoding="UTF-8" ?>
<!-- DP750 BroadSoft XML Provisioning Configuration Template -->
<gs_provision version="1">
<mac>*BWMACADDRESS%</mac>
  <config version="1">

<!-- System Setting -->

<!-- Network Settings -->
  <!-- DNS Server1 Address First Octet-->
```

File Authentication

Authentication Mode: MAC-Based User Name and Password

MAC Address In: HTTP Request URI
 HTTP Header
 Client Certificate

MAC Address Format:

Device Access HTTP Authentication: Basic Digest

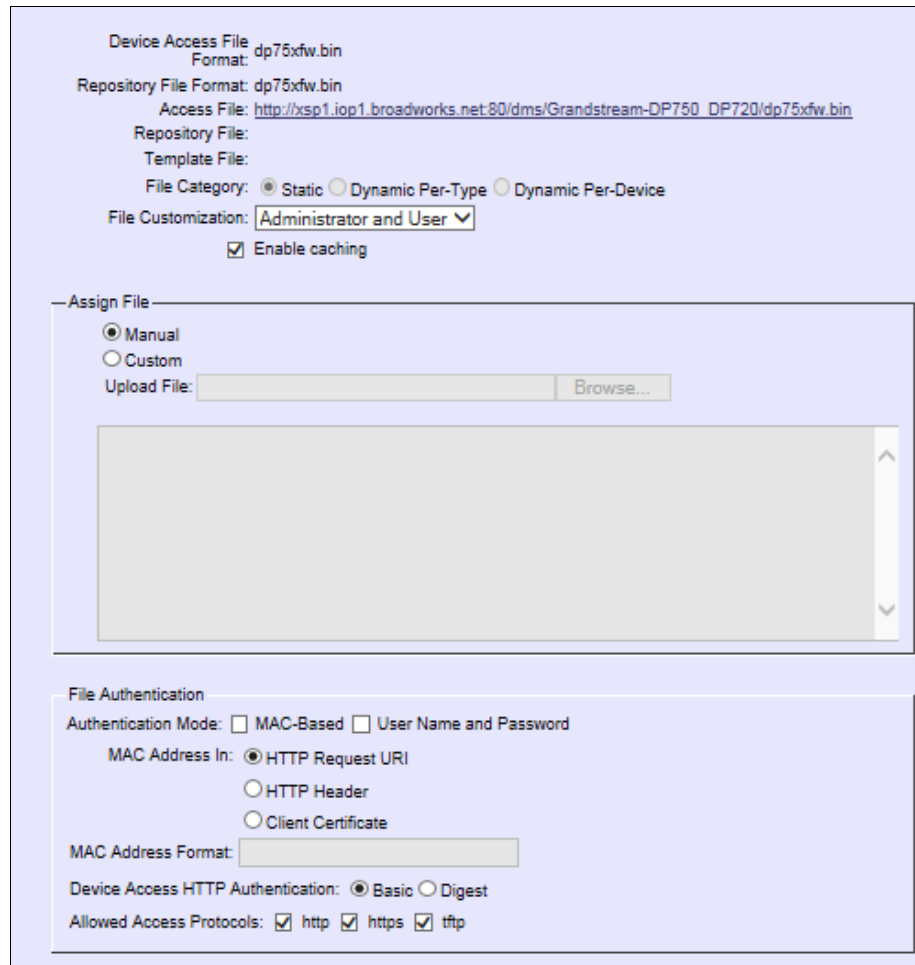
Allowed Access Protocols: http https ftp

Figure 5 *cfg%BWMACADDRESS%.xml* File Settings

5.2.2.2.2.2 *dp75Xfw.bin*

Add the *cfg%BWMACADDRESS%.xml* file to the device profile type with the settings shown in *Figure 6*.

After creating the device profile type file, upload `cfg%BWMACADDRESS%.xml` extracted from the CPE kit. Use the **Browse** button on the file definition screen. Be sure to click **Apply** after uploading the file.



Device Access File
Format: dp75xfw.bin

Repository File Format: dp75xfw.bin
Access File: http://xsp1.iop1.broadworks.net:80/dms/Grandstream-DP750_DP720/dp75xfw_bin

Repository File:
Template File:

File Category: Static Dynamic Per-Type Dynamic Per-Device

File Customization: Administrator and User

Enable caching

— Assign File —

Manual
 Custom

Upload File: Browse...

File Authentication

Authentication Mode: MAC-Based User Name and Password

MAC Address In: HTTP Request URI
 HTTP Header
 Client Certificate

MAC Address Format:

Device Access HTTP Authentication: Basic Digest

Allowed Access Protocols: http https tftp

Figure 6 dp75Xfw.bin

5.2.2.2.3 Time Zone Mapping

The CPE kit contains a time zone properties file for each device model. This file maps the BroadWorks user's time zone settings to the device's time zone settings.

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_Grandstream-DP7XX.properties`.

You must restart the Application Server for the `TimeZoneAlias` files to be picked up by the system.

5.2.2.2.4 Language Mapping

To enable Device Management control of the phone language for languages other than English, the languages defined on the BroadWorks Application Server must be mapped to the Grandstream DP7XX definitions.

To perform the mapping, select the device profile type and from there select the *Languages* link. The defined BroadWorks languages will be listed in a table. If languages other than English do not appear, they have not yet been defined on the BroadWorks Application Server.

The supported languages and required mapping are:

BroadWorks Language Identifier	Grandstream DP7XX Language Mapping
English (US)	0
English (BR)	0
French	9
German	4
Hungarian	12
Japanese	23
Russian	19
Spanish (CALA)	6
Spanish (Spain)	6
Swedish	20
Chinese	25
Italian	13

The language applied to an individual phone is determined by the language defined for the user on the *BroadWorks User's Profile* page (see [Figure 7](#)).

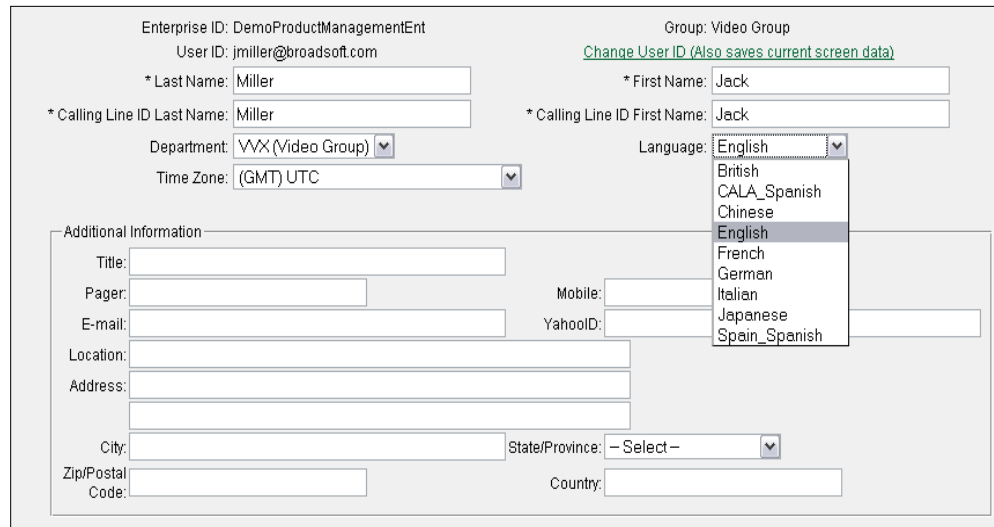


Figure 7 BroadWorks User Language Definition

5.2.3 Create Device Profile Instance

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

Browse to the BroadWorks <group> → Resources → Identity/Device Profiles page and then select **Add** to add a new Grandstream DP7XX device profile. Configure the device profile as shown in the *Figure 8* example.

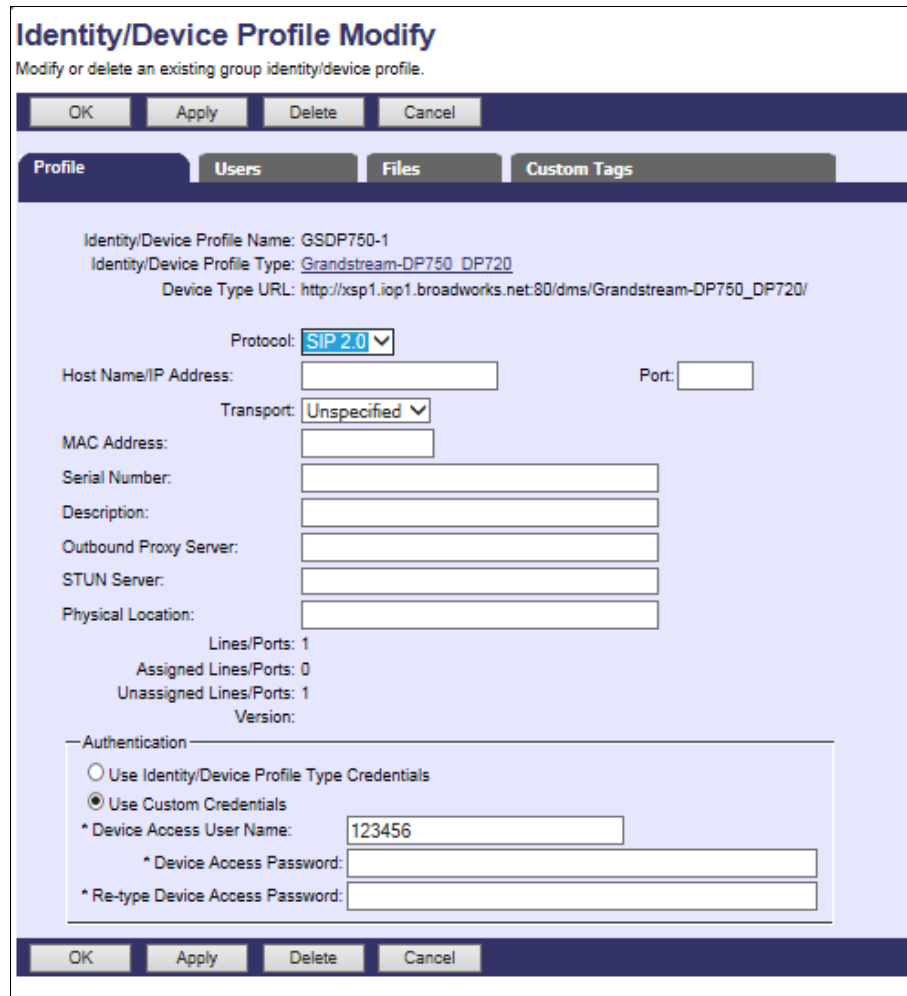


Figure 8 Device Profile Instance

5.2.4 Configure BroadWorks User

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

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

5.2.5 Customize Tags

This section identifies custom tags used by the DP7XX that may need to be customized at the group or device profile. Customizing a tag at the group level overrides the setting on the device profile type for the device profiles created within the group. Customizing a tag at the device profile level overrides the setting at the device profile type and/or group level for the individual device profile.

5.2.5.1 SBC Address Customization for Edge Device

In many deployments, an edge device, such as an enterprise SBC or application layer gateway, is deployed on the enterprise edge. The edge device's SIP server or outbound proxy setting is configured with the service provider's SBC IP address or FQDN. If there is no edge device, the following customization does not apply.

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. To do so, perform the following steps.

- 1) At the *Group* → *Utilities* → *Configure Device* page, select the Grandstream device profile, Grandstream-DP7XX.
- 2) Click on the *Custom Tags* tab.
- 3) Click **Add**.
- 4) For the tag, enter "SBC_ADDRESS".
- 5) For the value, enter the edge device LAN IP address.
- 6) To save the tag data, click **OK**.

5.2.6 Configure Grandstream DP7XX

This section describes the steps necessary to configure the Grandstream DP7XX to integrate with BroadWorks Device Management.

To auto-provision mass deployments, Grandstream provides service providers an HTTP/S redirection service. All Grandstream phones are pre-configured so that when a unit is powered up, it automatically contacts the Grandstream provisioning server, where the BroadWorks Xsp Server Device Management address is configured, for example, <http://xsp1.iop1.broadworks.net:80/dms/Grandstream-DP7XX>. The Grandstream provisioning server then redirects the unit to the appropriate BroadWorks Xsp server. The unit reboots and sends further HTTP/S provisioning requests to the BroadWorks Xsp Server.

5.2.6.1 Manually Configure DP7XX

If the Grandstream redirection service is not used, the phone can also be manually configured with the BroadWorks Xsp address. This is described in the following sections.

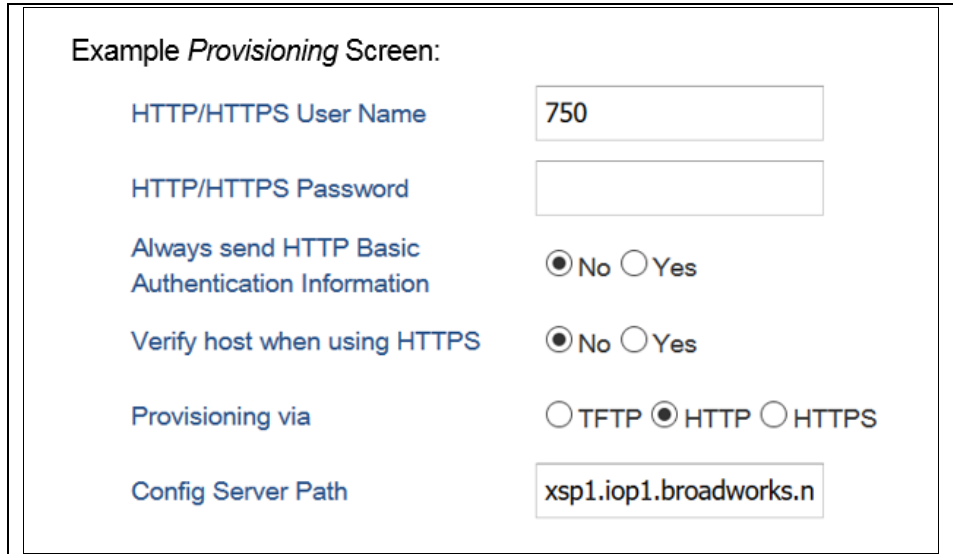
DP7XX Manual Configuration:

- 1) Log in to the phone's web user interface via <http://phone IP address>. (The default login is admin/admin.)
- 2) Browse to the *Maintenance* → *Provisioning* page. Set the following:
 - HTTP/HTTPS User Name: BroadWorks Device Access User Name
Example: 750

- HTTP/HTTPS Password: BroadWorks Device Access Password
Example: 750
- Provisioning Via: HTTP (or HTTPS)
- Config Server Path: Device Management server (XSP) device address URL
Example: xsp1.iop1.broadworks.net:80/dms/Grandstream-DP7XX

3) Click **Save and Apply** and then **Reboot**.

Example *Provisioning* Screen:



The screenshot shows a provisioning configuration screen with the following fields and options:

HTTP/HTTPS User Name	<input type="text" value="750"/>
HTTP/HTTPS Password	<input type="password"/>
Always send HTTP Basic Authentication Information	<input checked="" type="radio"/> No <input type="radio"/> Yes
Verify host when using HTTPS	<input checked="" type="radio"/> No <input type="radio"/> Yes
Provisioning via	<input type="radio"/> TFTP <input checked="" type="radio"/> HTTP <input type="radio"/> HTTPS
Config Server Path	<input type="text" value="xsp1.iop1.broadworks.n"/>

Figure 9 DP7XX Provisioning Screen

5.2.6.2 DHCP Server Configuration

Grandstream DP7XX can use address defined in DHCP Option 66 to retrieve its configuration file.

To utilize DHCP Options Field, the following value should be configured on the DHCP server for Option 66:

<Access Protocol>://<Device Access FQDN>:<Device Access Port>/ <Device Access Context Name>/<Device Access URI>

Example:

http://xsp1.iop1.broadworks.net:80/dms/Grandstream-DP7XX

Appendix A: Reference DP7XX Configuration Files

The following is a reference configuration for the DP7XX configured for use with BroadWorks.

Device-specific File: cfg%BWMACADDRESS%.xml

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

```
<?xml version="1.0" encoding="UTF-8" ?>
<!-- DP7XX BroadSoft XML Provisioning Configuration Template -->
<gs_provision version="1">
  <config version="1">

<!-- System Setting -->

  <!-- Network Settings -->
  <!-- DNS Server1 Address First Octet-->
  <P21>%DNS_ADDRESS_01%/P21>
  <!-- DNS Server1 Address Second Octet-->
  <P22>%DNS_ADDRESS_02%/P22>
  <!-- DNS Server1 Address Third Octet-->
  <P23>%DNS_ADDRESS_03%/P23>
  <!-- DNS Server1 Address Fourth Octet-->
  <P24>%DNS_ADDRESS_04%/P24>
  <!-- DNS Server2 Address First Octet-->
  <P25>%DNS_ADDRESS_01%/P25>
  <!-- DNS Server2 Address Second Octet-->
  <P26>%DNS_ADDRESS_02%/P26>
  <!-- DNS Server2 Address Third Octet-->
  <P27>%DNS_ADDRESS_03%/P27>
  <!-- DNS Server2 Address Fourth Octet-->
  <P28>%DNS_ADDRESS_04%/P28>

  <!-- Upgrading and Provisioning Settings -->
  <!-- Firmware and Config Upgrade Protocol. 0 - TFTP, 1 - HTTP, 2 -
HTTPS -->
  <P212>1</P212>
  <P6767>1</P6767>
  <!-- Firmware Upgrade Server -->

<P192>%BWDEVICEACCESSFQDN%:%BWDEVICEACCESSPORT%/%BWDMSCONTEXT%/%BWDEVICEA
CESSURI%/P192>
  <!-- Config Server Path -->
  <P237>%BWDEVICEACCESSFQDN%:%BWDEVICEACCESSPORT%/%BWDMSCONTEXT%/%BWDE
VICEACCESSURI%/P237>
  <!-- Config File HTTP/HTTPS User Name/ Device Access User Name -->
  <P1360>%BWDEVICEUSERNAME%/P1360>
  <!-- Automatic Handset Upgrade -->
  <P27740>1</P27740>

  <!-- Date and Time Settings -->
  <!-- NTP Server -->
  <P30>%SNTP_SERVER_1%/P30>
  <!-- Time Zone -->
  <P64>%BWTIMEZONE-1%/P64>
  <!-- Allow DHCP Option 2 to Override Time Zone -->
  <!-- 0 - Disabled, 1 - Enabled -->
  <P143>%DHCP_OPTION_2%/P143>
```

```
<!-- Language Settings -->
<!-- Display Language -->
<P30000>%BWLLANGUAGE-1%/P30000>
<P30001>%BWLLANGUAGE-1%/P30001>
<P30002>%BWLLANGUAGE-1%/P30002>
<P30003>%BWLLANGUAGE-1%/P30003>
<P30004>%BWLLANGUAGE-1%/P30004>
<P30005>%BWLLANGUAGE-1%/P30005>
<P30006>%BWLLANGUAGE-1%/P30006>
<P30007>%BWLLANGUAGE-1%/P30007>
<P30008>%BWLLANGUAGE-1%/P30008>
<P30009>%BWLLANGUAGE-1%/P30009>

<!-- Handset SIP Setting -->
<!-- Enable Account1 -->
<P4595>1</P4595>
<!-- Hunting Group HS1 (101 - Circular, 102 - Linear, 103 - Parallel,
104 - Shared, 1 - HS1, 2 - HS2, 3 - HS3, 4 - HS4, 5 - HS5) -->
<P27080>101</P27080>
<!-- Enable Account2 -->
<P4596>1</P4596>
<!-- Hunting Group HS2 (101 - Circular, 102 - Linear, 103 - Parallel,
104 - Shared, 1 - HS1, 2 - HS2, 3 - HS3, 4 - HS4, 5 - HS5) -->
<P27081>101</P27081>
<!-- Enable Account3 -->
<P4597>1</P4597>
<!-- Hunting Group HS3 (101 - Circular, 102 - Linear, 103 - Parallel,
104 - Shared, 1 - HS1, 2 - HS2, 3 - HS3, 4 - HS4, 5 - HS5) -->
<P27082>101</P27082>
<!-- Enable Account4 -->
<P4598>1</P4598>
<!-- Hunting Group HS4 (101 - Circular, 102 - Linear, 103 - Parallel,
104 - Shared, 1 - HS1, 2 - HS2, 3 - HS3, 4 - HS4, 5 - HS5) -->
<P27083>101</P27083>
<!-- Enable Account5 -->
<P4599>1</P4599>
<!-- Hunting Group HS5 (101 - Circular, 102 - Linear, 103 - Parallel,
104 - Shared, 1 - HS1, 2 - HS2, 3 - HS3, 4 - HS4, 5 - HS5) -->
<P27084>101</P27084>
<!-- Enable Account6 -->
<P4600>1</P4600>
<!-- Hunting Group HS5 (101 - Circular, 102 - Linear, 103 - Parallel,
104 - Shared, 1 - HS1, 2 - HS2, 3 - HS3, 4 - HS4, 5 - HS5) -->
<P27085>101</P27085>
<!-- Enable Account7 -->
<P4601>1</P4601>
<!-- Hunting Group HS5 (101 - Circular, 102 - Linear, 103 - Parallel,
104 - Shared, 1 - HS1, 2 - HS2, 3 - HS3, 4 - HS4, 5 - HS5) -->
<P27086>101</P27086>
<!-- Enable Account8 -->
<P4602>1</P4602>
<!-- Hunting Group HS5 (101 - Circular, 102 - Linear, 103 - Parallel,
104 - Shared, 1 - HS1, 2 - HS2, 3 - HS3, 4 - HS4, 5 - HS5) -->
<P27087>101</P27087>
<!-- Enable Account9 -->
<P4603>1</P4603>
<!-- Hunting Group HS5 (101 - Circular, 102 - Linear, 103 - Parallel,
104 - Shared, 1 - HS1, 2 - HS2, 3 - HS3, 4 - HS4, 5 - HS5) -->
<P27088>101</P27088>
<!-- Enable Account10 -->
<P4604>1</P4604>
```

```
<!-- Hunting Group HS5 (101 - Circular, 102 - Linear, 103 - Parallel,  
104 - Shared, 1 - HS1, 2 - HS2, 3 - HS3, 4 - HS4, 5 - HS5) -->  
<P27089>101</P27089>  
  
<!-- SIP User ID 1 -->  
<P4060>%BWLINERPORT-1%</P4060>  
<!-- Authenticate ID 1 -->  
<P4090>%BWAUTHUSER-1%</P4090>  
<!-- Authenticate password 1-->  
<P4120>%BWAUTHPASSWORD-1%</P4120>  
<!-- Display Name 1 -->  
<P4180>%BWCLID-1%</P4180>  
<!-- Profile ID (0 - Profile 1, 1 - Profile 2, 2 - Profile 3, 3 -  
Profile 4) -->  
<P4150>0</P4150>  
  
<!-- SIP User ID 2 -->  
<P4061>%BWLINERPORT-2%</P4061>  
<!-- Authenticate ID 2 -->  
<P4091>%BWAUTHUSER-2%</P4091>  
<!-- Authenticate password 2-->  
<P4121>%BWAUTHPASSWORD-2%</P4121>  
<!-- Display Name 2 -->  
<P4181>%BWCLID-2%</P4181>  
<!-- Profile ID (0 - Profile 1, 1 - Profile 2, 2 - Profile 3, 3 -  
Profile 4) -->  
<P4151>0</P4151>  
  
<!-- SIP User ID 3 -->  
<P4062>%BWLINERPORT-3%</P4062>  
<!-- Authenticate ID 3 -->  
<P4092>%BWAUTHUSER-3%</P4092>  
<!-- Authenticate password 3-->  
<P4122>%BWAUTHPASSWORD-3%</P4122>  
<!-- Display Name 3 -->  
<P4182>%BWCLID-3%</P4182>  
<!-- Profile ID (0 - Profile 1, 1 - Profile 2, 2 - Profile 3, 3 -  
Profile 4) -->  
<P4152>0</P4152>  
  
<!-- SIP User ID 4 -->  
<P4063>%BWLINERPORT-4%</P4063>  
<!-- Authenticate ID 4 -->  
<P4093>%BWAUTHUSER-4%</P4093>  
<!-- Authenticate password 4-->  
<P4123>%BWAUTHPASSWORD-4%</P4123>  
<!-- Display Name 4 -->  
<P4183>%BWCLID-4%</P4183>  
<!-- Profile ID (0 - Profile 1, 1 - Profile 2, 2 - Profile 3, 3 -  
Profile 4) -->  
<P4153>0</P4153>  
  
<!-- SIP User ID 5 -->  
<P4064>%BWLINERPORT-5%</P4064>  
<!-- Authenticate ID 5 -->  
<P4094>%BWAUTHUSER-5%</P4094>  
<!-- Authenticate password 5-->  
<P4124>%BWAUTHPASSWORD-5%</P4124>  
<!-- Display Name 5 -->  
<P4184>%BWCLID-5%</P4184>  
<!-- Profile ID (0 - Profile 1, 1 - Profile 2, 2 - Profile 3, 3 -  
Profile 4) -->
```

```
<P4154>0</P4154>

<!-- SIP User ID 6 -->
<P4065>%BWLINERPORT-6%</P4065>
<!-- Authenticate ID 6 -->
<P4095>%BWAUTHUSER-6%</P4095>
<!-- Authenticate password 6-->
<P4125>%BWAUTHPASSWORD-6%</P4125>
<!-- Display Name 6 -->
<P4185>%BWCLID-6%</P4185>
<!-- Profile ID (0 - Profile 1, 1 - Profile 2, 2 - Profile 3, 3 -
Profile 4) -->
<P4155>0</P4155>

<!-- SIP User ID 7 -->
<P4066>%BWLINERPORT-7%</P4066>
<!-- Authenticate ID 7 -->
<P4096>%BWAUTHUSER-7%</P4096>
<!-- Authenticate password 7-->
<P4126>%BWAUTHPASSWORD-7%</P4126>
<!-- Display Name 7 -->
<P4186>%BWCLID-7%</P4186>
<!-- Profile ID (0 - Profile 1, 1 - Profile 2, 2 - Profile 3, 3 -
Profile 4) -->
<P4156>0</P4156>

<!-- SIP User ID 8 -->
<P4067>%BWLINERPORT-8%</P4067>
<!-- Authenticate ID 8 -->
<P4097>%BWAUTHUSER-8%</P4097>
<!-- Authenticate password 8-->
<P4127>%BWAUTHPASSWORD-8%</P4127>
<!-- Display Name 8 -->
<P4187>%BWCLID-8%</P4187>
<!-- Profile ID (0 - Profile 1, 1 - Profile 2, 2 - Profile 3, 3 -
Profile 4) -->
<P4157>0</P4157>

<!-- SIP User ID 9 -->
<P4068>%BWLINERPORT-9%</P4068>
<!-- Authenticate ID 9 -->
<P4098>%BWAUTHUSER-9%</P4098>
<!-- Authenticate password 9-->
<P4128>%BWAUTHPASSWORD-9%</P4128>
<!-- Display Name 9 -->
<P4188>%BWCLID-9%</P4188>
<!-- Profile ID (0 - Profile 1, 1 - Profile 2, 2 - Profile 3, 3 -
Profile 4) -->
<P4158>0</P4158>

<!-- SIP User ID 10 -->
<P4069>%BWLINERPORT-10%</P4069>
<!-- Authenticate ID 10 -->
<P4099>%BWAUTHUSER-10%</P4099>
<!-- Authenticate password 10-->
<P4129>%BWAUTHPASSWORD-10%</P4129>
<!-- Display Name 10 -->
<P4189>%BWCLID-10%</P4189>
<!-- Profile ID (0 - Profile 1, 1 - Profile 2, 2 - Profile 3, 3 -
Profile 4) -->
<P4159>0</P4159>
```

```
<!-- Handset line Setting -->
  <!-- Account1 -->
  <!-- Line 1 -->
  <P4300>1</P4300>
  <P4301>2</P4301>
  <P4302>3</P4302>
  <P4303>4</P4303>
  <P4304>5</P4304>
  <P4305>6</P4305>
  <P4306>7</P4306>
  <P4307>8</P4307>
  <P4308>9</P4308>
  <P4309>10</P4309>
  <!-- Account2 -->
  <!-- Line 1 -->
  <P4310>1</P4310>
  <P4311>2</P4311>
  <P4312>3</P4312>
  <P4313>4</P4313>
  <P4314>5</P4314>
  <P4315>6</P4315>
  <P4316>7</P4316>
  <P4317>8</P4317>
  <P4318>9</P4318>
  <P4319>10</P4319>
  <!-- Account3 -->
  <!-- Line 1 -->
  <P4320>1</P4320>
  <P4321>2</P4321>
  <P4322>3</P4322>
  <P4323>4</P4323>
  <P4324>5</P4324>
  <P4325>6</P4325>
  <P4326>7</P4326>
  <P4327>8</P4327>
  <P4328>9</P4328>
  <P4329>10</P4329>

  <!-- Account4 -->
  <!-- Line 1 -->
  <P4250>1</P4250>
  <P4251>2</P4251>
  <P21320>3</P21320>
  <P21321>4</P21321>
  <P21322>5</P21322>
  <P21323>6</P21323>
  <P21324>7</P21324>
  <P21325>8</P21325>
  <P21326>9</P21326>
  <P21327>10</P21327>
  <!-- Account5 -->
  <!-- Line 1 -->
  <P21328>1</P21328>
  <P21329>2</P21329>
  <P21330>3</P21330>
  <P21331>4</P21331>
  <P21332>5</P21332>
  <P21333>6</P21333>
  <P21334>7</P21334>
  <P21335>8</P21335>
  <P21336>9</P21336>
  <P21337>10</P21337>
```

```
<!-- Profile1 Setting -->
<!-- Profile 1 Active. 0 - No, 1 - Yes -->
<P271>1</P271>
<!-- SIP Server -->
<P47>%BWHOST-1%</P47>
<!-- SIP Transport. 0 - UDP, 1 - TCP, 2 - TLS -->
<P130>%SIP_TRANSPORT%</P130>
<!-- Outbound Proxy -->
<P48>%SBC_ADDRESS%</P48>
<!-- DNS Mode. 0 - A Record, 1 - SRV, 2 - NAPTR/SRV. -->
<P103>1</P103>
<!-- SIP Registration. 0 - no, 1 - yes -->
<P31>1</P31>
<!-- Register Expiration (in minutes. default 1 hour, max 45 days) --
>
<P32>60</P32>
<!-- Preferred DTMF method. 100 - In-audio, 101 - RFC2833, 102 - SIP
INFO -->
<!-- Priority 1 -->
<P850>101</P850>
<!-- Priority 2 -->
<P851>102</P851>
<!-- Priority 3 -->
<P852>100</P852>
<!-- Dial Plan -->
<P4200>{ x+ | *x+ | *xx* | #xx+ }</P4200>
<!-- Enable 100rel. 0 - no, 1 - yes -->
<P272>1</P272>
<!-- Enable Call Features. 0 - no, 1 - yes -->
<P191>0</P191>
<!-- Special Feature. 102 - BroadSoft -->
<P198>102</P198>

<!-- Profile2 Setting -->
<!-- Profile 2 Active. 0 - No, 1 - Yes -->
<P401>1</P401>
<!-- SIP Server -->
<P747>%BWHOST-1%</P747>
<!-- SIP Transport. 0 - UDP, 1 - TCP, 2 - TLS -->
<P830>%SIP_TRANSPORT%</P830>
<!-- Outbound Proxy -->
<P748>%SBC_ADDRESS%</P748>
<!-- DNS Mode. 0 - A Record, 1 - SRV, 2 - NAPTR/SRV. -->
<P702>1</P702>
<!-- SIP Registration. 0 - no, 1 - yes -->
<P731>1</P731>
<!-- Register Expiration (in minutes. default 1 hour, max 45 days) --
>
<P732>60</P732>
<!-- Preferred DTMF method. 100 - In-audio, 101 - RFC2833, 102 - SIP
INFO -->
<!-- Priority 1 -->
<P860>101</P860>
<!-- Priority 2 -->
<P861>102</P861>
<!-- Priority 3 -->
<P862>100</P862>
<!-- Dial Plan -->
<P4201>{ x+ | *x+ | *xx* | #xx+ }</P4201>
<!-- Enable 100rel. 0 - no, 1 - yes -->
<P435>1</P435>
```

```
<!-- Enable Call Features. 0 - no, 1 - yes -->
<P751>0</P751>
<!-- Special Feature. 102 - BroadSoft -->
<P767>102</P767>

<!-- Profile3 Setting -->
<!-- Profile 1 Active. 0 - No, 1 - Yes -->
<P501>1</P501>
<!-- SIP Server -->
<P547>%BWHOST-1%</P547>
<!-- SIP Transport. 0 - UDP, 1 - TCP, 2 - TLS -->
<P530>%SIP_TRANSPORT%</P530>
<!-- Outbound Proxy -->
<P548>%SBC_ADDRESS%</P548>
<!-- DNS Mode. 0 - A Record, 1 - SRV, 2 - NAPTR/SRV. -->
<P502>1</P502>
<!-- SIP Registration. 0 - no, 1 - yes -->
<P531>1</P531>
<!-- Register Expiration (in minutes. default 1 hour, max 45 days) --
>
<P532>60</P532>
<!-- Preferred DTMF method. 100 - In-audio, 101 - RFC2833, 102 - SIP
INFO -->
<!-- Priority 1 -->
<P560>101</P560>
<!-- Priority 2 -->
<P561>102</P561>
<!-- Priority 3 -->
<P562>100</P562>
<!-- Dial Plan -->
<P4202>{ x+ | *x+ | *xx* | #xx+ }</P4202>
<!-- Enable 100rel. 0 - no, 1 - yes -->
<P535>1</P535>
<!-- Enable Call Features. 0 - no, 1 - yes -->
<P551>0</P551>
<!-- Special Feature. 102 - BroadSoft -->
<P567>102</P567>

<!-- Profile4 Setting -->
<!-- Profile 1 Active. 0 - No, 1 - Yes -->
<P601>1</P601>
<!-- SIP Server -->
<P602>%BWHOST-1%</P602>
<!-- SIP Transport. 0 - UDP, 1 - TCP, 2 - TLS -->
<P4648>%SIP_TRANSPORT%</P4648>
<!-- Outbound Proxy -->
<P603>%SBC_ADDRESS%</P603>
<!-- DNS Mode. 0 - A Record, 1 - SRV, 2 - NAPTR/SRV. -->
<P608>1</P608>
<!-- SIP Registration. 0 - no, 1 - yes -->
<P610>1</P610>
<!-- Register Expiration (in minutes. default 1 hour, max 45 days) --
>
<P612>60</P612>
<!-- Preferred DTMF method. 100 - In-audio, 101 - RFC2833, 102 - SIP
INFO -->
<!-- Priority 1 -->
<P4583>101</P4583>
<!-- Priority 2 -->
<P4584>102</P4584>
<!-- Priority 3 -->
<P4585>100</P4585>
```

```
<!-- Dial Plan -->
<P4203>{ x+ | *x+ | *xx* | #xx+ }</P4203>
<!-- Enable 100rel. 0 - no, 1 - yes -->
<P635>1</P635>
<!-- Enable Call Features. 0 - no, 1 - yes -->
<P620>0</P620>
<!-- Special Feature. 102 - BroadSoft -->
<P624>102</P624>

</config>
</gs_provision>
```


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