



BroadSoft Partner Configuration Guide

Algo 8028 SIP Doorphone

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BroadWorks® Guide

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1 Overview

This document describes the configuration procedures required for the Algo 8028 to be interoperable with BroadWorks.

The 8028 door phone is a SIP access device 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 8028. For more information, see the *8028 SIP Doorphone Installation and User Guide* [\[1\]](#).

2 Interoperability Status

This section provides the known interoperability status of the Algo 8028 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 Algo Communication Products.

2.1 Verified Versions

The following table identifies the verified Algo 8028 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 8028 versions that 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 Algo Communication Products 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 | 8028 Verified Version | 8028 Compatible Versions |
|----------------|--------------------|-----------------------|---|
| 02/2012 | Release 18.sp1 | 1.6.6 | Any maintenance revision of validated release(s). |

2.2 Interface Capabilities Supported

The Algo 8028 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 Algo 8028 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 Algo 8028.

| 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 | Local ringback tone. |
| | Forked Dialog | No | |
| | Early UPDATE | No | |
| | Early-Session | No | |
| | 181 Call Being Forwarded | No | |
| | Dial Plan | Yes | |
| | DTMF – Inband | No | |
| | DTMF – RFC 2833 | No | |
| | DTMF – DTMF Relay | No | |
| | Codec Negotiation | Yes | |
| | Codec Renegotiation | Yes | |
| BroadWorks Services | Third-Party Call Control – Basic | No | |
| | Third-Party Call Control – Advanced | No | |
| | Voice Message Deposit/Retrieval | No | |
| | Message Waiting Indicator | No | |
| | Voice Portal Outcall | No | |
| | Advanced Alerting | No | |
| | Calling Line ID | No | |
| | Connected Line ID | No | |
| Connected Line ID on UPDATE | No | | |

| BroadWorks SIP Access Device Interoperability Test Plan Support Table | | | |
|---|---|-----------|----------|
| Test Plan Package | Test Plan Package Items | Supported | Comments |
| | Connected Line ID on Re-INVITE | No | |
| | Diversion Header | Yes | |
| | History-Info Header | Yes | |
| | Advice of Charge | No | |
| | Meet-Me Conferencing | No | |
| DUT Services – Call Control Services | Call Waiting | No | |
| | Call Hold | No | |
| | Call Transfer | No | |
| | Three-Way Call | No | |
| | 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 | No | |
| | Refer Authentication | No | |
| | 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 | No | |
| | Call Forward Always | No | |
| | Call Forward Always Diversion Inhibitor | No | |
| | Anonymous Call | No | |
| | Anonymous Call Block | No | |
| | Remote Restart Via Notify | No | |
| Advanced Phone | Busy Lamp Field | No | |

| BroadWorks SIP Access Device Interoperability Test Plan Support Table | | | |
|---|---|-----------|----------|
| Test Plan Package | Test Plan Package Items | Supported | Comments |
| Services – Busy Lamp Field | Call Park Notification | No | |
| Advanced Phone Services – Feature Key Synchronization, Private Line | Do Not Disturb | No | |
| | Do Not Disturb Ring Splash | No | |
| | Call Forward | No | |
| | Call Forward Always Ring Splash | No | |
| | Call Forward Always Diversion Inhibitor | No | |
| | Call Center Agent Logon/Logoff | No | |
| | Call Center Agent Unavailable Code | No | |
| Advanced Phone Services – Feature Key Synchronization, Shared Line | Do Not Disturb | No | |
| | Do Not Disturb Ring Splash | No | |
| | Call Forward | No | |
| | Call Forward Always Ring Splash | No | |
| | Call Forward Always Diversion Inhibitor | 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 | |
| | Multiple Call Arrangement | No | |
| | Bridging | No | |
| | Call Park Notification | No | |
| 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 | |

| BroadWorks SIP Access Device Interoperability Test Plan Support Table | | | |
|---|----------------------------|-----------|----------|
| Test Plan Package | Test Plan Package Items | Supported | Comments |
| 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 Park Notification | Call Park Notification | No | |
| Redundancy | DNS SRV Lookup | No | |
| | Register Failover/Failback | No | |
| | Invite Failover/Failback | No | |
| | Bye Failover | No | |
| SBC/ALG | Register | Yes | |
| | Outgoing Invite | Yes | |
| | Incoming Invite | Yes | |
| Video – Basic Video Calls | Call Origination | NA | |
| | Call Termination | NA | |
| | Call Hold | NA | |
| | Call Waiting | NA | |
| | Call Transfer | NA | |
| Video – BroadWorks Video Services | Auto Attendant | NA | |
| | Auto Attendant – HD | NA | |
| | Voice Messaging | NA | |
| | Voice Messaging – HD | NA | |
| | Custom Ringback | NA | |
| TCP | Register | No | |
| | Outgoing Invite | No | |
| | Incoming Invite | No | |

| BroadWorks SIP Access Device Interoperability Test Plan Support Table | | | |
|---|---------------------------------|-----------|----------|
| Test Plan Package | Test Plan Package Items | Supported | Comments |
| IPV6 | Call Origination | No | |
| | Call Termination | No | |
| | Session Audit | No | |
| | Ringback | No | |
| | Codec Negotiation/Renegotiation | No | |
| | Call Control | No | |
| | Registration w/ Authentication | No | |
| | T38 Fax Messaging | No | |
| | Busy Lamp Field | No | |
| | Redundancy | No | |
| | SBC | No | |
| | Video | 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, 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 | | | |
|--------------|-------------------|-----------------|--|--|--|
| | | 1.6.6 | | | |
| | None | | | | |

3 BroadWorks Configuration

This section identifies the required BroadWorks device profile for the Algo 8028 as well as any other unique BroadWorks configuration required for interoperability with the 8028.

3.1 BroadWorks Device Profile Configuration

This section identifies the device profile to use when deploying the Algo 8028 with BroadWorks.

The following table identifies the required BroadWorks device identity/profile settings for interoperability between the 8028 and BroadWorks. For an explanation of the profile parameters, refer to the *BroadWorks Device Management Configuration Guide* [2].

For most of the following 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.

| Algo 8028 Identity/Device Profile | |
|---------------------------------------|---------------------------------|
| Signaling Address Type | Intelligent Proxy Addressing |
| Standard Options | |
| Number of Ports | 1 |
| Ringback Tone/ Early Media Support | Local Ringback – No Early Media |
| Authentication | Enable |
| Registration Capable | X |
| Static Registration Capable | |
| E.164 Capable | |
| Trusted | |
| Authenticate REFER | |
| RFC 3264 Hold | |
| Video Capable | |
| 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 | |
| Forwarding Override | |

| Algo 8028 Identity/Device Profile | |
|---------------------------------------|---------------|
| Conference Device | |
| Music On Hold Device | |
| Requires BroadWorks Digit Collection | |
| Requires MWI Subscription | |
| Support Call Center MIME Type | |
| Reset Event | Not Supported |
| Trunk Mode | User |
| Auto Configuration Options | |
| Web Based Configuration URL Extension | |
| Auto Configuration Type | Not Supported |
| Enable Monitoring | |
| CPE System File Name | Not_Used |
| Device File Format | Not_Used |

3.2 BroadWorks Configuration Steps

There are no additional BroadWorks configurations required.

4 8028 Configuration

The 8028 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 8028 will use the Dynamic Host Configuration Protocol (DHCP) to obtain an IP address, TFTP server, and other network settings. The 8028 should be configured to load the configuration file each time it resets or re-synchronizes. For detailed information on automated provisioning, see the *8028 SIP Doorphone Installation and User Guide* supplied by Algo Communication Products.

The capabilities of the 8028 have been verified for use with BroadWorks based on the settings described in the following table. For more information on the meaning, purposes, and applicability of the individual configuration items, see the *8028 SIP Doorphone Installation and User Guide* supplied by Algo Communication Products.

Configuration Files

| Files Provided by Partner | Level | Description |
|---|------------|---|
| algo-8028-VERSION.fw & algo-8028-VERSION.md5 | System | Contains the device firmware load. If the firmware version in the new provisioning file does not match the actual device firmware version then the device will start downloading. |
| algo-pa-kernel-VERSION.fw & algo-pa-kernel-VERSION.md5 | System | Contains the device kernel load. If the kernel version in the new provisioning file does not match the actual device kernel version, then the device will start downloading. |
| algop8028.conf | System | Contains configurable parameters that apply to all devices in a given deployment. |
| Algom[MAC address].conf Example: <i>algom0022EE020009.conf</i> | Subscriber | Contains configurable parameters that apply to an individual device in a deployment. |

4.1 System Level Configuration

This section describes system-wide configuration items that are generally required for each 8028 to work with BroadWorks. Subscriber-specific settings are described in the next section.

| Step | Command | Purpose |
|----------------------------------|--|---|
| System Configuration File | | |
| Step 1 | Set SIP Proxy/Domain. <code>sip.proxy = as.broadworks.net</code> Set Outbound Proxy. <code>sip.obproxy = xxx.xxx.xxx.xxx</code> (as.broadworks.net IP address) | Set the 8028 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. With redundant Application Servers, set the <i>outBoundProxy</i> to the main SIP server IP address (when a Session Border Controller [SBC] is not used). |

| Step | Command | Purpose |
|----------------------------------|---|---|
| System Configuration File | | |
| Step 2 | Set Outbound Proxy. <code>sip.obproxy = sbc.broadworks.net</code> | Set the outbound proxy to the SBC when one is deployed between the 8028 and BroadWorks. If there are redundant SBCs, set the outbound proxy to the FQDN for the SBC cluster. |
| Step 3 | Register Period. <code>sip.regexp = 3600</code> | This is the maximum requested period of time whereby the 8028 will re-register with the SIP server. The default setting is 3600 seconds (1 hour). Change this setting only when instructed to do so. |
| Step 4 | Set Extension. <code>sip.ul.user = 8028 extension #</code> | This is the phone number that the Algo 8028 registers with the SIP server and is used to auto-answer any inbound calls. |
| Step 5 | Dialing Extension. <code>sip.ul.spdiall = Extension #</code> | This is the the phone number to be dialed when the Call button on the door station is pressed. |
| Step 6 | DHCP. <code>net.dhcp.use = 1</code> | This is usually set to "On" and the DHCP will automatically configure IP addresses for each 8028 on the network. Alternatively, if your IT administrator has assigned one or more static IP addresses, set the DHCP setting to "Off". |

4.2 Subscriber Level Configuration Parameters

This section identifies the device-specific parameters; 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 device; 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 8028 | | |
| Step 1 | Enable SIP Authentication <code>sip.ul.auth = SIP Authentication ID</code> <code>sip.ul.pwd = SIP password</code> | If the Authentication service is configured on BroadWorks, then these parameters must be set to match the BroadWorks settings. The Authentication ID used to register the device on the SIP server. The SIP password used to register the device on the SIP server. |

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 Algo 8028 and the configuration steps required. For Device Management configuration details not covered here, see the *BroadWorks Device Management Configuration Guide* [2].

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

Create device template files for the device with the appropriate BroadWorks Device Management tags.

- 1) 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.
- 2) Create a device profile type on BroadWorks for each device model to be integrated with Device Management.
- 3) Add the device template files and other associated files to the device profile type.
- 4) 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.
- 5) Configure the end device with the Device Management URL for device files, as well as the user name and password access credentials.

This section describes the steps to integrate the Algo 8028 products.

As part of the Algo 8028 customer premises equipment (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 Device Type Archive File (DTAF) files that are used to import the device type and template files.

5.1 Device Management Capabilities Supported

The Algo 8028 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 Algo 8028'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 Algo 8028.

| 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 | No | |
| | HTTPS Download Using Xtended Services Platform FQDN | No | |
| | HTTPS Download Using Xtended Services Platform Cluster FQDN | No | |
| 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 | No | |
| 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 | No | |
| | Call Termination | Yes | |
| | Remote Restart | Yes | |
| | Shared Line Origination | No | |
| | Shared Line Termination | No | |

| BroadWorks Device Management Interoperability Test Plan Support Table | | | |
|---|--------------------------|-----------|----------|
| Test Plan Package | Test Plan Package Items | Supported | Comments |
| | Shared Line Status | No | |
| | Busy Lamp Field | No | |
| | Network-Based Conference | No | |

5.2 Device Management Configuration

This section identifies the steps required to enable the Algo 8028 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. Default tags are defined in the Device Management software and there are custom tags that a service provider can create and define via the web portal for use by Device Management. Two types of custom tags can be defined:

- System default – These tags are common to all phones on the system.
- Device type-specific – These tags are only common to Algo phone models.

The Algo 8028 also makes use of dynamic tags, which can be configured by a BroadWorks administrator as 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. Algo 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 |
|---------------|-----------------|---|
| %SBC_ADDRESS% | IP address/FQDN | SBC SIP address. |
| %SBC_PORT% | Port | SBC SIP port. The port should be set if the defined SBC address is an IP address. If the SBC address is an FQDN, the SBC port should be left unset. |

Example System Default Tag Settings

The screenshot shows the 'Device Management Tag Sets Modify' page. The page title is 'Device Management Tag Sets Modify' and it includes a subtitle: 'Display all the device management tags defined in the tag set. Tags can be added to the set or deleted from the set.' The page is for the 'System Default' tag set. The table below lists the tags and their values.

| 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% | sbc1.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 1 System Default Tag Settings

5.2.1.2 Create Device Type Specific Tags

Browse to *System* → *Resources* → *Device Management Tag Sets* and click **Add** to add a new tag set. Configure the tag set name using the device name appended by *Tags*: *Algo_8028_DM-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 |
|---------------|-------------------------------|---------------------------------|
| ALGOFIRMWAREV | <x.x.x.x> Example: 2.1.0.1 | Identify 8028 firmware version. |
| ALGOKERNELV | r<x> Example: r5 | Identify 8028 kernel version. |

Example Device Type Specific Tag Settings

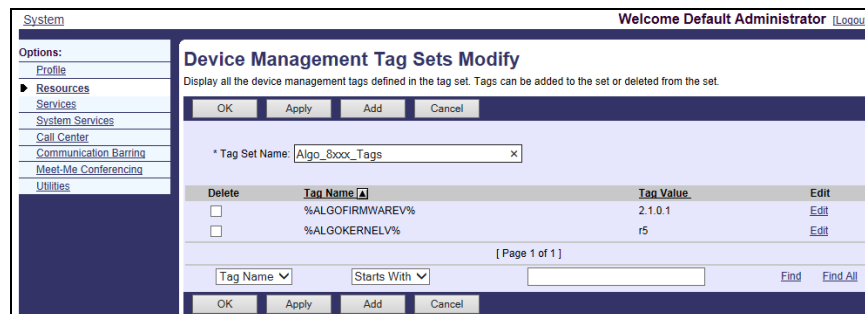


Figure 2 Device Type-Specific Tag Settings

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 DTAF as input and builds the BroadWorks device profile type(s) automatically. The manual method walks 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 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 fails.)
- 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 can fail.

Otherwise, use the manual method.

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 Algo 8028 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 Algo 8028 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 want to import.

Log in to BroadWorks as an administrator.

- 1) Browse to *System* → *Resources* → *Identity/Device Profile Types* and select *Import*.

- 2) Click **Browse** to find the extracted DTAF file for the model and click **OK** to start the import.
After the import finishes, complete the following post-import configuration.
- 3) Browse to *System* → *Resources* → *Identity/Device Profile Types*.
- 4) Perform a search to find the imported Algo device profile type, Algo 8028.
- 5) Browse to the *Profile* page and change the Device Management Device Access FQDN to your Xtended Services Platform or Xtended Services Platform cluster address.

Figure 3 Device Access FQDN

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

Firmware files must be obtained from Algo. These files are not included in the import. Complete the steps in section [5.2.2.2.3 Static Files](#) to define the static firmware files and to upload the firmware.

NOTE: The non-firmware static files in section [5.2.2.2.3 Static Files](#) are included in the import.

5.2.2.2 Configuration Method 2: Manual

This section identifies the manual steps necessary to configure BroadWorks to add the Algo 8028 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. To determine when to use the manual method, see section [5.2.2 Configure BroadWorks Device Profile Type](#). 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 Algo 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 Algo 8028.

Browse to *System* → *Resources* → *Identity/Device Profile Types* and perform a search to find the Algo 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.

The *Standard Options* and *Advanced Options* should already be configured as specified in section [3.1 BroadWorks Device Profile Type Configuration](#). If there are differences, perform an update to match the settings in section [3.1 BroadWorks Device Profile Type 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 figure shows Device Management enablement for BroadWorks Release 18.0 and later.

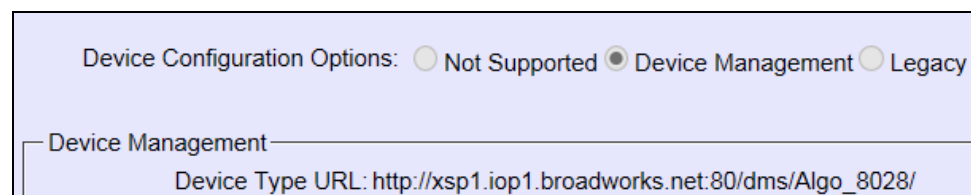


Figure 4 Enable Device Management (Release 18.0 and Later)

For BroadWorks releases prior to Release 18.0, configure as described in the following table.

NOTE: 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 Enable Device Management (pre-Release 18.0)

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 usually be left at the default values.

| Parameter | Value | Description |
|---|--|-------------|
| 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 |

| Parameter | Value | Description |
|----------------------------|--|--|
| Device Access Protocol | http | |
| Device Access FQDN | <BroadWorks-XSP-Cluster-Address> Example: xsp.iop1.broadworks.net | Set to the Xtended Services Platform cluster FQDN if using an Xtended Services Platform farm. Otherwise, set to the individual Xtended Services Platform FQDN or IP address. |
| Device Access Port | <BroadWorks-XSP-Port> Example: 80 | This 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 | Algo_8028 | This defines the directory the Xtended Services Platform uses to access the configuration files. |

Example Device Management Options Settings

Device Configuration Options: Not Supported Device Management Legacy

Device Management

Device Type URL: http://xsp1.iop1.broadworks.net:80/dms/Algo_8028/

No Tags

Device Configuration Tags: Use Default System Tag Set Only
 Use Default System Tag Set and Tag Set:

Allow Identity/Device Profiles to Configure Custom Tags
 Allow Groups to Configure Custom Tags
 Send Email Notification to User upon Device Reset Failure

Device Access Protocol:

Device Access FQDN:

Device Access Port:

Device Access Context Name:

Device Access URI:

Default Device Language:

Default Device Encoding:

Authentication Mode: MAC-Based User Name and Password

Device Access Username:

Device Access Password:

Re-type Device Access Password:

MAC Address In: HTTP Request URI
 HTTP Header with Following Format:

Device Access HTTP Authentication: Basic Digest

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 Algo 8028 downloads.

Configuration templates, firmware, and other files the 8028 uses must be uploaded to BroadWorks. Download the Algo 8028 CPE kit from BroadSoft Xchange at broadsoft.com/xchange. Extract the configuration files from the *Configuration Files* folder of CPE kit. Obtain the firmware files directly from Algo.

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

| File Name | CPE Kit Template File Name | File Type | Description |
|---------------------------------|--|-----------------|---|
| Examples | | | |
| <i>algom%BWMACADDRESS%.conf</i> | <i>algom%BWMACADDRESS%.conf.template</i> | Device-specific | This file contains configurable parameters that apply to an individual device. |
| <i>algop8028.conf</i> | <i>algop8028.conf.template</i> | System-level | This file contains configurable parameters that apply to all devices in a given deployment. |

The following table identifies other files that the Algo 8028 downloads from the server or uploads to the server. These files are not provided in the CPE kit and must be obtained from Algo.

| File Name | File Type | Description |
|---|--------------|--|
| <i>algo-8028-%ALGOFIRMWAREV%.fw</i> | System-level | This file contains 8028 firmware load. |
| <i>algo-8028-%ALGOFIRMWAREV%.md5</i> | System-level | This file contains 8028 firmware MD5. |
| <i>algo-pa-kernel-%ALGOKERNELV%.fw</i> | System-level | This file contains 8028 kernel load. |
| <i>algo-pa-kernel-%ALGOKERNELV%.md5</i> | System-level | This file contains 8028 kernel MD5. |

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 Algo and provides instructions for defining the files and uploading for Device Management.

The 8028 downloads a system file, named as follows: *algop8028.conf*.

Add a BroadWorks device profile type file to the Algo 8028 device profile for the system file using the settings described in the following table.

Parameters not identified in the following table can usually be left at the default values.

| Parameter | Value | Description |
|---------------------------|-----------------------|---|
| Device Access File Format | <i>algop8028.conf</i> | This is the file name that 8028 uses to request the file. |

| Parameter | Value | Description |
|-----------------------------------|------------------------------|---|
| Repository File Format | algot8028_%BWTIMESTAMP%.conf | This is the file name as stored in 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 | 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 the user name and password. |
| Device Access HTTP Authentication | Basic | Basic mode is supported authentication method on device. |

After defining the system file type, upload the corresponding system file template downloaded from BroadSoft Xchange. Click the **Browse** button on the file definition screen and then click **Apply** after uploading the file.

Example System File Settings

Identity/Device Profile Type File Modify
Modify or delete a file type defined in an Identity/Device Profile Type.

OK Apply Delete Cancel

Device Access File Format: algop8028.conf
Repository File Format: algop8028_%BWTIMESTAMP%.conf
Access File: http://xsp1.iop1.broadworks.net:80/dms/Algo_8028/algop8028.conf
Repository File: [Download](#)
Template File: [Download](#)
File Category: Static Dynamic Per-Type Dynamic Per-Device
File Customization: Administrator
 Enable caching

Assign File
 Manual
 Custom
Upload File: Browse...

Currently using configuration file: /var/broadworks/lpDeviceConfig/type/Algo_8028/algop8028.conf.template

```
admin.watchdog = 0
admin.welcome = 1
dp.code.act =
dp.code.dtmf = 0
dp.code.open = 6
dp.code.rls =
dp.ctrl.clopen = 0
dp.ctrl.clring = 0
dp.ctrl.disc = 0
dp.ctrl.remote = 0
```

File Authentication
Authentication Mode: MAC-Based User Name and Password
MAC Address In: HTTP Request URI
 HTTP Header with Following Format:
Device Access HTTP Authentication: Basic Digest
Allowed Access Protocols: http https ftp

Figure 7 algop8028.conf File

5.2.2.2.2 Device-Specific Files

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

Each 8028 downloads a device-specific file based on the MAC address using the following file name format: *Algom[MAC-address].conf*.

Add a BroadWorks device profile type file to the Algo 8028 device profile for the device specific file using the settings described in the following table.

Parameters not identified in the following table can be left at the default values.

| Parameter | Value | Description |
|---------------------------|--------------------------|---|
| Device Access File Format | algom%BWMACADDRESS%.conf | This is the file name format the 8028 uses to request the file. |
| Repository File Format | algom%BWFQDEVICEID%.conf | This is the file name format as stored in the Device Management repository. |

| Parameter | Value | Description |
|-----------------------------------|------------------------|---|
| 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 device-specific file is authenticated with the username and password. |
| Device Access HTTP Authentication | Basic | Basic mode is supported authentication method on device. |

After defining the device-specific file type, upload the corresponding device-specific file template downloaded from BroadSoft Xchange. Click the **Browse** button on the file definition screen and then click **Apply** after uploading the file.

Example Device-Specific File Settings

Identity/Device Profile Type File Modify
Modify or delete a file type defined in an Identity/Device Profile Type.

Saved

OK Apply Delete Cancel

Device Access File Format: `algom%BWMACADDRESS%.conf`
 Repository File Format: `algom%BWFQDEVICEID%.conf`
 Access File: `http://xsp1.lsp1.broadworks.net:80/dms/Algo_8028/algom(%25BWMACADDRESS%25).conf`
 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

Assign File:
 Manual
 Custom
 Upload File: [Browse...](#)

Currently using configuration file: `/var/broadworks/lpDeviceConfig/type/Algo_8028/algom%BWMACADDRESS%.conf.template`

```
admin.devname = doorphone
admin.pwd = algo
admin.watchdog = 0
admin.welcome = 1
dp.code.act =
dp.code.dtmf = 0
dp.code.open = 6
dp.code.rls =
dp.ctrl.clopen = 0
dp.ctrl.clring = 0
```

File Authentication:
 Authentication Mode: MAC-Based User Name and Password
 MAC Address In: HTTP Request URI
 HTTP Header with Following Format:
 Device Access HTTP Authentication: Basic Digest
 Allowed Access Protocols: http https tftp

OK Apply Delete Cancel

Figure 8 `algom%BWMACADDRESS%.conf` File

5.2.2.2.3 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 Algo 8028 requires the following static files:

- *algo-8028-<ALGO Firmware Version>.fw*
- *algo-8028-<ALGO Firmware Version>.md5*
- *algo-pa-kernel-<ALGO Kernel Version>.fw*
- *algo-pa-kernel-<ALGO Kernel Version>.md5*

Add a BroadWorks device profile type file to the Algo 8028 device profile for each of the static files using the settings described in the following table.

Parameters not identified in the following table can usually be left at the default values.

| Parameter | Value | Description |
|-----------------------------------|--|---|
| Device Access File Format | <file-name> Examples: algo-8028- %ALGOFIRMWAREV%.fw algo-8028- %ALGOFIRMWAREV%.md5 algo-pa-kernel- %ALGOKERNELV%.fw algo-pa-kernel- %ALGOKERNELV%.md5 | This is the file name the phone uses to request the file. |
| Repository File Format | <file-name> Examples: algo-8028- %ALGOFIRMWAREV%.fw algo-8028- %ALGOFIRMWAREV%.md5 algo-pa-kernel- %ALGOKERNELV%.fw algo-pa-kernel- %ALGOKERNELV%.md5 | This is the file name as stored in 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 is recommended for static files. |
| Assign File | Custom | |
| Authentication Mode | User Name and Password | The device-specific file is authenticated with the username and password. |
| Device Access HTTP Authentication | Basic | Basic mode is supported authentication method on device. |

After defining the static file types, upload the corresponding static files. Firmware must be obtained from Algo. Click the **Browse** button on the file definition screen and then click the **Apply** button after uploading the file.

Example Static File Settings

Identity/Device Profile Type File Modify
Modify or delete a file type defined in an Identity/Device Profile Type.

OK Apply Delete Cancel

Device Access File Format: algo-8028-%ALGOFIRMWARE%.fw
Repository File Format: algo-8028-%ALGOFIRMWARE%.fw
Access File: http://xsp1.iop1.broadworks.net:80/dms/Algo_8028/algo-8028-{%25ALGOFIRMWARE%25}.fw
Note: this URL has undefined content. Validate it manually by replacing any content between {} with valid value(s).

Repository File:
Template File:
File Category: Static Dynamic Per-Type Dynamic Per-Device
File Customization: Administrator
 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 with Following Format:
Device Access HTTP Authentication: Basic Digest
Allowed Access Protocols: http https tftp

OK Apply Delete Cancel

Figure 9 algo-8028-%ALGOFIRMWARE%.fw File

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 Algo phone deployed at a user's desk.

This section describes how to create a BroadWorks device profile instance for an individual Algo 8028 phone. Device profile instances are usually created at the BroadWorks Group level and assigned to users.

When you create the device profile, you must define the authentication data. 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.

Browse to the BroadWorks <group> → Resources → Identity/Device Profiles page and select *Add* to add a new Algo 8028 device profile. Define the device profile instance using the settings described in the following table.

Parameters not identified in the following table can usually be left at the default values.

| Parameter | Value | Description |
|------------------------------|--|--|
| Identity/Device Profile Name | <device-profile-name> Example: Algo8028-1 | The device profile name is a unique identifier for the device profile instance. |
| Identity/Device Profile Type | Algo_8028 | From the drop-down list, select the Algo device profile type created in the previous section. |
| Authentication | Use Custom Credentials | Use the unique login name and password for each phone. |
| Device Access User Name | <device-login-name> Example: algouser1 | User name used to log in from the device. The device login user naming convention must be determined by the service provider. |
| Device Access Password | <device-login-password> Example: 654321 | Password used to log in from the device. |

Example Identity/Device Profile Add Settings

Identity/Device Profile Modify
Modify or delete an existing group identity/device profile.

OK Apply Delete Cancel

Profile Users Files Custom Tags

Identity/Device Profile Name: Algo8028-1
Identity/Device Profile Type: Algo_8028
Device Type URL: http://xsp1.iop1.broadworks.net:80/dms/Algo_8028/

Protocol: SIP 2.0
Host Name/IP Address: Port:
Transport: Unspecified
MAC Address:
Serial Number:
Description:
Outbound Proxy Server:
STUN Server:
Physical Location:
Lines/Ports: Unlimited
Assigned Lines/Ports: 0
Unassigned Lines/Ports: Unlimited
Version:

Authentication

Use Identity/Device Profile Type Credentials
 Use Custom Credentials

* Device Access User Name:
* Device Access Password:
* Re-type Device Access Password:

OK Apply Delete Cancel

Figure 10 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, provided 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 |
|------------------------------|---|--|
| Identity/Device Profile Name | <device-profile-name> Example: Algo8028-1 | From the drop-down list, select the device profile instance created in the previous section. |
| Line/Port | <SIP register address-of-record> Example: 2404980341@as.iop1.broadworks.net | Supply the desired SIP register Address-of-Record. |

Example User Addresses Settings

Figure 11 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.

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 Algo device profile (example: <partner-model>). Perform the following steps.

Click on the *Custom Tags* tab.

- 1) Click **Add**.
- 2) Add the SBC tag.
- 3) For the tag, enter “SBC_ADDRESS”.
- 4) For the value, enter the IP address (that is, the edge device LAN IP address).
- 5) To save the tag data, click **OK**.

This Tag/Value is applied to all Algo model phones in the group using the modified *Device Profile Type*.

Repeat for each Algo model provisioned in the group.

5.2.6 Configure Algo 8028

This section describes the steps necessary to configure the Algo 8028 for integrating with BroadWorks Device Management.

Log in to the 8028 web user interface.

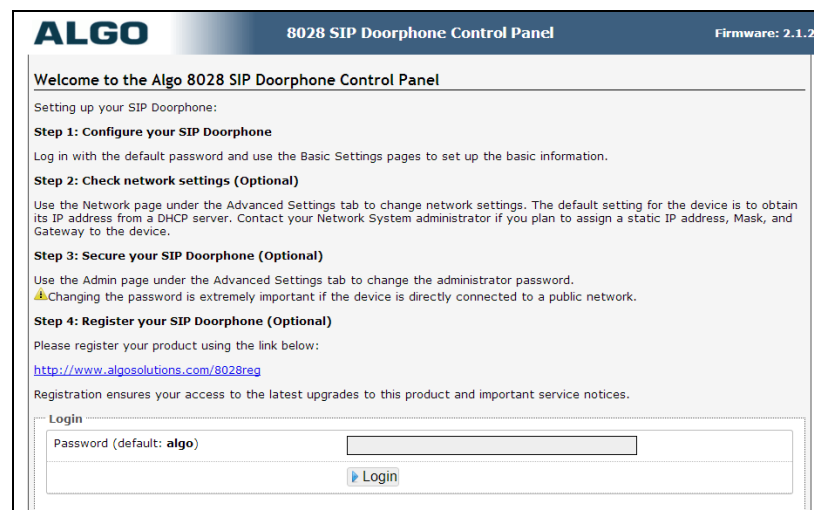


Figure 12 Algo 8028 Login Screen – Default Password is “Algo”

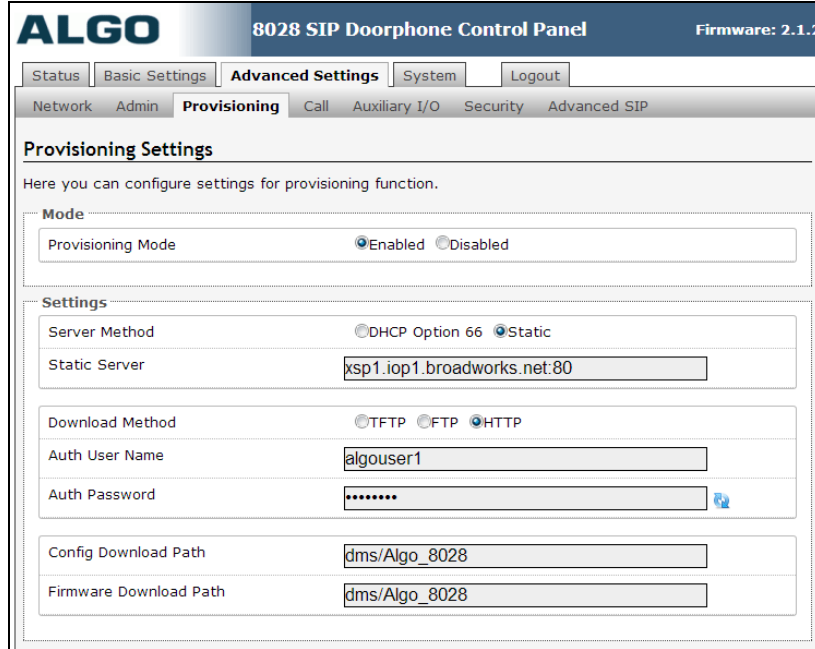
Browse to *Advanced Settings* → *Provisioning*.

Set the *Provisioning Mode* to “Enabled”.

Set the *Server Method* to “Static” and under *Static Server* enter the Xtended Services Platform (Xsp) IP Address with the port number (for example: xsp1.iop1.broadworks.net:80).

Set the *Download Method* to “HTTP”. Under the *Auth User Name* enter the *Device Access User Name* and under *Auth Password* enter the *Device Access Password*.

The *Config Download Path* and the *Firmware Download Path* are the same and they both have to be set to “Device Access Context Name/Device Access URI” (for example: dms/Algo_8028).



ALGO 8028 SIP Doorphone Control Panel Firmware: 2.1.2

Status Basic Settings **Advanced Settings** System Logout

Network Admin **Provisioning** Call Auxiliary I/O Security Advanced SIP

Provisioning Settings

Here you can configure settings for provisioning function.

Mode

Provisioning Mode Enabled Disabled

Settings

Server Method DHCP Option 66 Static

Static Server

Download Method TFTP FTP HTTP

Auth User Name

Auth Password

Config Download Path

Firmware Download Path

Figure 13 Algo 8028 Provisioning Screen

Restart the 8028 and log back into the device web interface.

Appendix A: Sample 8028 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 Algo Communication Products with the specific release to generate your configuration files.

System Default File: algot8028.conf

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

```
admin.devname = doorphone
admin.pwd = algo
admin.welcome = 1
dp.code.act =
dp.code.open = 6
dp.code.rls =
dp.code.dtmf = 0
dp.ctrl.clopen = 0
dp.ctrl.clring = 0
dp.ctrl.disc = 0
dp.ctrl.remote = 0
dp.io.ctrlin = 1
dp.io.ctrlout = 0
dp.io.relay = 3
dp.io.stin = 2
dp.io.stout = 2
dp.timeout.alarm = 4
dp.timeout.maxopen = 7
dp.timeout.open = 3
dp.timeout.ring = 5
dp.timeout.dsdisc = 4
dp.tone.page = 1
dp.tone.ringback = 1
dsp.aec = 1
dsp.agc = 1
dsp.nr = 0
log.level = error
log.method = local
log.server =
log.size = 100
net.dhcp.timeout = 60
net.dhcp.use = 1
net.discovery = 1
net.dns1 =
net.dns2 =
net.gateway =
net.http = 1
net.ip =
net.mask =
net.time =
net.vlan.id = 0
net.vlan.priority = 0
net.vlan.use = 0
```

```
prov.download.method = tftp
prov.download.path =
prov.server.method = option66
prov.server.static =
prov.use = 1
sip.inbound = 1
sip.ka.method = 0
sip.ka.period = 30
sip.obproxy =
sip.proxy =
sip.regexp = 3600
sip.registrar =
sip.stun =
sip.ul.auth =
sip.ul.pwd =
sip.ul.spdiall =
sip.ul.user =
vol.mic = 7
vol.spk = 8
```

8028-Specific File: *algom[MAC address].conf*

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

```
admin.devname = doorphone
admin.pwd = algo
admin.welcome = 1
dp.code.act =
dp.code.open = 6
dp.code.rls =
dp.code.dtmf = 0
dp.ctrl.clopen = 0
dp.ctrl.clring = 0
dp.ctrl.disc = 0
dp.ctrl.remote = 0
dp.io.ctrlin = 1
dp.io.ctrlout = 0
dp.io.relay = 3
dp.io.stin = 2
dp.io.stout = 2
dp.timeout.alarm = 4
dp.timeout.maxopen = 7
dp.timeout.open = 3
dp.timeout.ring = 5
dp.timeout.dsdisc = 4
dp.tone.page = 1
dp.tone.ringback = 1
dsp.aec = 1
dsp.agc = 1
dsp.nr = 0
log.level = error
log.method = local
log.server =
log.size = 100
net.dhcp.timeout = 60
net.dhcp.use = 1
net.discovery = 1
net.dnsl =
```

```
net.dns2 =
net.gateway =
net.http = 1
net.ip =
net.mask =
net.time =
net.vlan.id = 0
net.vlan.priority = 0
net.vlan.use = 0
prov.download.method = tftp
prov.download.path =
prov.server.method = option66
prov.server.static =
prov.use = 1
sip.inbound = 1
sip.ka.method = 0
sip.ka.period = 30
sip.obproxy =
sip.proxy =
sip.regexp = 3600
sip.registrar =
sip.stun =
sip.ul.auth =
sip.ul.pwd =
sip.ul.spdial1 =
sip.ul.user =
vol.mic = 7
vol.spk = 8
```

References

- [1] Algo Communication Products Ltd. 2012. *Algo 8028 SIP Doorphone Installation and User Guide*. Available from Algo Communication at <http://www.algosolutions.com/8028>.
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- [3] BroadSoft, Inc. 2013. *BroadWorks Redundancy Guide, Release 18.0*. Available from BroadSoft at xchange.broadsoft.com.
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