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 Patton SmartNode 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:

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

2) Define custom and system tags and add them to the *device template* files. Note that these custom and system tags must also be defined on BroadWorks.

3) Create a device profile type on BroadWorks for each device model to be integrated with Device Management.

4) Add the device template files and other associated files to the device profile type.

5) Create a device profile instance of the device profile type and assign it to a user. A user name and password are assigned to this device profile.

6) 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 Patton SmartNode products.

As part of the Patton SmartNode 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 Patton SmartNode 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 Patton SmartNode'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 Patton SmartNode.

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	NA	
	Inspect Device-Specific Config File	No	
	Inspect Other Config Files	NA	
	Inspect Static Files	Yes	
Device Inspection	Inspect SIP Settings	Yes	
	Inspect Line Settings	Yes	
	Inspect Service Settings	NA	
HTTP File Upload	HTTP Upload Using Xtended Services Platform IP Address	NA	
	HTTP Upload Using Xtended Services Platform FQDN	NA	
	HTTP Upload Using Xtended Services Platform Cluster FQDN	NA	
Call Processing Sanity Tests	Register with Authentication	Yes	
	Call Origination	Yes	
	Call Termination	Yes	
	Remote Restart	No	
	Shared Line Origination	NA	
	Shared Line Termination	NA	

BroadWorks Device Management Interoperability Test Plan Support Table			
Test Plan Package	Test Plan Package Items	Supported	Comments
	Shared Line Status	NA	
	Busy Lamp Field	NA	
	Network-Based Conference	NT	

5.2 Device Management Configuration

This section identifies the steps required to enable the Patton SmartNode 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 Patton phone models.

The Patton SmartNode 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. Patton 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%	IP address/FQDN	Network Time Protocol (NTP) server address.
%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.
%DNS_SERVER%	IP address	DNS server address.