



# **BroadWorks Access Mediation Server Command Line Interface Administration Guide**

Release 21.0  
Version 1

9737 Washingtonian Boulevard, Suite 350  
Gaithersburg, MD 20878  
Tel +1 301.977.9440

[WWW.BROADSOFT.COM](http://WWW.BROADSOFT.COM)

## **BroadWorks® Guide**

---

### **Copyright Notice**

Copyright © 2014 BroadSoft, Inc.

All rights reserved.

Any technical documentation that is made available by BroadSoft, Inc. is proprietary and confidential and is considered the copyrighted work of BroadSoft, Inc.

This publication is for distribution under BroadSoft non-disclosure agreement only. No part of this publication may be duplicated without the express written permission of BroadSoft, Inc., 9737 Washingtonian Boulevard, Suite 350, Gaithersburg, MD 20878.

BroadSoft reserves the right to make changes without prior notice.

### **Trademarks**

Any product names mentioned in this document may be trademarks or registered trademarks of BroadSoft or their respective companies and are hereby acknowledged.

This document is printed in the United States of America.

## Document Revision History

---

Release	Version	Reason for Change	Date	Author
19.0	1	Created initial DITA version of the document.	July 13, 2012	Charles Leduc
19.0	1	Updated document with minor editorial changes.	July 25, 2012	Margot Hovey-Ritter
19.0	1	Generated content for Release 19.0.	November, 2012	Charles Leduc
20.0	1	Inserted table headings for EV 177508 and modified glossary items.	March 12, 2013	Margot Hovey-Ritter
20.0	1	Updated DRH for Release 20.0 and validated Release 20.0 content.	August 14, 2013	Margot Hovey-Ritter
20.0	1	Updated content with final Release 20.0 build.	November 20, 2013	Margot Hovey-Ritter
21.0	1	Updated content with Release 21.0 content.	November 20, 2014	Charles Leduc
21.0	1	Updated DRH and published document.	December 9, 2014	Margot Hovey-Ritter

## Table of Contents

---

<b>Document Revision History.....</b>	<b>3</b>
<b>1 Summary of Changes.....</b>	<b>8</b>
1.1 Changes from Release 20.0 to Release 21.0.....	8
1.1.1 Added Contexts.....	8
1.1.2 Modified Contexts.....	8
1.1.3 Removed Contexts.....	8
1.2 Changes from Release 19.0 to Release 20.0.....	9
1.2.1 Added Contexts.....	9
1.2.2 Modified Contexts.....	9
1.2.3 Removed Contexts.....	10
1.3 Changes from Release 18.0 to Release 19.0.....	10
1.3.1 Added Contexts.....	10
1.3.2 Modified Contexts.....	10
1.3.3 Removed Contexts.....	10
<b>2 Purpose.....</b>	<b>11</b>
<b>3 Document Conventions.....</b>	<b>12</b>
3.1 Data You Enter.....	12
3.2 Keys You Use.....	12
3.3 BroadWorks Server Software Version.....	12
3.4 BroadWorks Server Messages.....	12
<b>4 BroadWorks Server System Conventions.....</b>	<b>13</b>
4.1 Start CLI.....	13
4.2 Enter CLI Commands.....	13
4.2.1 Enter 0 Digits or Characters.....	13
4.2.2 Enter Uppercase and Lowercase Data.....	13
4.2.3 Enter SIP URL.....	13
4.2.4 Help.....	13
4.3 Command Syntax.....	14
4.3.1 Entering Commands.....	14
4.3.2 Shortcuts.....	14
4.4 Menu System.....	15
4.4.1 Hierarchical Tree Structure.....	15
4.4.2 Change Levels.....	15
4.5 Read Files.....	16
4.6 Write Output to a File.....	17
4.7 Configure CLI.....	17
4.8 CLI Commands History.....	19
4.9 CLI Command Alias.....	19
4.10 Exit CLI.....	20
4.11 Procedural Steps.....	21
<b>COMMAND LINE INTERFACE ADMINISTRATION.....</b>	<b>22</b>
<b>5 Applications.....</b>	<b>23</b>
5.1 AccessMediationServer.....	23
5.1.1 AMSLogging.....	23
5.1.2 AMSTSLogging.....	26
5.1.3 DeviceMgt.....	28
5.1.4 Diagnostics.....	29
5.1.5 GeneralSettings.....	30
5.1.6 RTP.....	31
5.1.7 SCCP.....	35
5.1.8 SIP.....	36

5.2 LogServer.....	37
5.2.1 GeneralSettings.....	37
5.2.2 Logging.....	38
<b>6 Monitoring.....</b>	<b>41</b>
6.1 Alarm.....	41
6.1.1 get.....	41
6.1.2 set.....	45
6.1.3 clear.....	46
6.1.4 close.....	46
6.1.5 open.....	46
6.1.6 show.....	47
6.1.7 showConfig.....	47
6.1.8 AlarmsTable.....	47
6.1.9 Threshold.....	48
6.2 PM.....	53
6.2.1 AccessMediationServer.....	53
6.2.2 ConfigurationManagement.....	57
6.2.3 HostResources.....	61
6.2.4 LicenseManager.....	65
6.2.5 Mib-II.....	69
6.2.6 UCD-SNMP.....	73
<b>7 Maintenance.....</b>	<b>78</b>
7.1 ContainerOptions.....	78
7.1.1 get.....	78
7.1.2 add.....	78
7.1.3 set.....	78
7.1.4 delete.....	79
7.1.5 removeObsolete.....	79
7.1.6 showOption.....	79
7.1.7 showOptions.....	79
7.2 Extraview.....	80
7.2.1 upload.....	80
7.3 ManagedObjects.....	81
7.3.1 get.....	81
7.3.2 detail.....	82
7.3.3 set.....	83
7.3.4 activate.....	85
7.3.5 deactivate.....	85
7.3.6 deploy.....	86
7.3.7 lock.....	86
7.3.8 start.....	87
7.3.9 stop.....	87
7.3.10 undeploy.....	88
7.3.11 unlock.....	89
7.4 Patching.....	89
7.4.1 detail.....	89
7.4.2 apply.....	90
7.4.3 checkPeer.....	90
7.4.4 execute.....	90
7.4.5 getModifiedFile.....	91
7.4.6 listBundle.....	91
7.4.7 listPatch.....	91
7.4.8 listRelation.....	92
7.4.9 patchHistory.....	93
7.4.10 refresh.....	94

7.4.11 remove.....	94
7.5 Scheduler.....	94
7.5.1 get.....	94
7.5.2 add.....	95
7.5.3 delete.....	96
7.5.4 FileCollector.....	97
7.6 Tools.....	98
7.6.1 healthmon.....	98
7.6.2 tech-support.....	98
7.6.3 upgradeCheck.....	99
<b>8 Interface.....</b>	<b>100</b>
8.1 LDAP.....	100
8.1.1 Client.....	100
8.2 SNMP.....	103
8.2.1 AccessList.....	103
8.2.2 Agent.....	104
8.2.3 Logging.....	105
8.2.4 SMAP.....	108
8.2.5 TrapTable.....	109
8.2.6 V3AccessControl.....	111
8.2.7 V3Users.....	113
<b>9 System.....</b>	<b>117</b>
9.1 ConfigAgent.....	117
9.1.1 Logging.....	117
9.2 GeneralSettings.....	119
9.2.1 get.....	119
9.2.2 set.....	119
9.3 Licensing.....	120
9.3.1 get.....	120
9.3.2 LicenseManager.....	120
9.4 ManagementAccessList.....	126
9.4.1 get.....	127
9.4.2 add.....	127
9.4.3 set.....	127
9.4.4 delete.....	127
9.4.5 clear.....	128
9.5 ProfileTuning.....	128
9.5.1 GeneralSettings.....	128
9.6 Resources.....	129
9.6.1 Memory.....	129
9.7 Security.....	130
9.7.1 BlackList.....	130
9.7.2 WhiteList.....	133
<b>Acronyms and Abbreviations.....</b>	<b>135</b>
<b>Index.....</b>	<b>136</b>
<b>References.....</b>	<b>139</b>

## List of Tables

---

Table 1: Added CLI Contexts for Release 21.0.....	8
Table 2: Modified CLI Contexts for Release 21.0.....	8
Table 3: Removed CLI Contexts for Release 21.0.....	8
Table 4: Added CLI Contexts for Release 20.0.....	9
Table 5: Modified CLI Contexts for Release 20.0.....	9
Table 6: Removed CLI Contexts for Release 20.0.....	10
Table 7: Added CLI Contexts for Release 19.0.....	10
Table 8: Modified CLI Contexts for Release 19.0.....	10
Table 9: Navigational Shortcuts.....	14
Table 10: Editing Shortcuts.....	15

## 1 Summary of Changes

### 1.1 Changes from Release 20.0 to Release 21.0

This section provides the changes to the Access Mediation Server CLI between Release 21.0 and Release 20.0, the previous major release of BroadWorks.

#### 1.1.1 Added Contexts

**Table 1: Added CLI Contexts for Release 21.0**

Context
AMS_CLI/Interface/LDAP
AMS_CLI/Interface/LDAP/Client
AMS_CLI/Interface/LDAP/Client/LocalUsers
AMS_CLI/Interface/LDAP/Client/Servers
AMS_CLI/Monitoring/PM/HostResources
AMS_CLI/Monitoring/PM/LicenseManager
AMS_CLI/System/Licensing/LicenseManager
AMS_CLI/System/Licensing/LicenseManager/Bcct
AMS_CLI/System/Licensing/LicenseManager/Bcct/Ports
AMS_CLI/System/Licensing/LicenseManager/GeneralSettings
AMS_CLI/System/Licensing/LicenseManager/GracePeriods
AMS_CLI/System/Licensing/LicenseManager/LicenseStore
AMS_CLI/System/Licensing/LicenseManager/Logging
AMS_CLI/System/Licensing/LicenseManager/Logging/InputChannels
AMS_CLI/System/Licensing/LicenseManager/Logging/OutputChannels
AMS_CLI/System/ManagementAccessList

#### 1.1.2 Modified Contexts

**Table 2: Modified CLI Contexts for Release 21.0**

Context
AMS_CLI/Maintenance/ContainerOptions
AMS_CLI/Monitoring/Alarm
AMS_CLI/System/GeneralSettings

#### 1.1.3 Removed Contexts

**Table 3: Removed CLI Contexts for Release 21.0**

Context
AMS_CLI/Interface/Ldap
AMS_CLI/Interface/Ldap/Client
AMS_CLI/Interface/Ldap/Client/Servers



**Context**

AMS\_CLI/Monitoring/PM/HostResources

## 1.2 Changes from Release 19.0 to Release 20.0

This section provides the changes to the Access Mediation Server CLI between Release 20.0 and Release 19.0, the previous major release of BroadWorks.

### 1.2.1 Added Contexts

**Table 4: Added CLI Contexts for Release 20.0**

Context
AMS_CLI/Interface/SNMP/Logging
AMS_CLI/Interface/SNMP/Logging/InputChannels
AMS_CLI/Interface/SNMP/Logging/OutputChannels
AMS_CLI/Interface/SNMP/SMAP
AMS_CLI/Interface/SNMP/SMAP/BCCT
AMS_CLI/Interface/SNMP/TrapTable
AMS_CLI/Interface/SNMP/V3AccessControl
AMS_CLI/Interface/SNMP/V3AccessControl/Groups
AMS_CLI/Interface/SNMP/V3AccessControl/Groups/AccessLevels
AMS_CLI/Interface/SNMP/V3Users
AMS_CLI/System/ProfileTuning
AMS_CLI/System/ProfileTuning/GeneralSettings

### 1.2.2 Modified Contexts

**Table 5: Modified CLI Contexts for Release 20.0**

Context
AMS_CLI/Applications/AccessMediationServer/DeviceMgt
AMS_CLI/Applications/AccessMediationServer/GeneralSettings
AMS_CLI/Applications/AccessMediationServer/RTP/Private
AMS_CLI/Applications/AccessMediationServer/RTP/Public
AMS_CLI/Applications/AccessMediationServer/SCCP
AMS_CLI/Applications/AccessMediationServer/SIP/Interface
AMS_CLI/Interface/Ldap/Client
AMS_CLI/Interface/SNMP/Agent
AMS_CLI/Maintenance/ManagedObjects
AMS_CLI/Maintenance/Patching

### 1.2.3 Removed Contexts

**Table 6: Removed CLI Contexts for Release 20.0**

Context
AMS_CLI/Interface/SNMP/Trap
AMS_CLI/Interface/SNMP/V3User

## 1.3 Changes from Release 18.0 to Release 19.0

This section provides the changes to the Access Mediation Server CLI between Release 19.0 and Release 18.0, the previous major release of BroadWorks.

### 1.3.1 Added Contexts

**Table 7: Added CLI Contexts for Release 19.0**

Context
AMS_CLI/Monitoring/Alarm/Threshold/Default
AMS_CLI/Monitoring/PM/HostResources
AMS_CLI/Monitoring/PM/UCD-SNMP

### 1.3.2 Modified Contexts

**Table 8: Modified CLI Contexts for Release 19.0**

Context
AMS_CLI/Interface/SNMP/Agent

### 1.3.3 Removed Contexts

No contexts were removed in this release.

## 2 Purpose

---

This document is designed to assist system providers with management of all Access Mediation Server command line interface (CLI) functions. Detailed instructions for each function of the Access Mediation Server can be found both in the manual and in the online help, available using the **help** command from all levels of the CLI.

This document covers the administrative features of the Access Mediation Server, which are available from the CLI. For administrative procedures for the CLI for other servers, see the following documents:

- For the Access Mediation Server, see the [\*BroadWorks Access Mediation Server Command Line Interface Administration Guide\*](#).
- For the Application Server, see the [\*BroadWorks Application Server Command Line Interface Administration Guide\*](#).
- For the Database Server, see the [\*BroadWorks Database Server Command Line Interface Administration Guide\*](#).
- For the Element Management System, see the [\*BroadWorks Element Management Server Command Line Interface Administration Guide\*](#).
- For the Execution Server, see the [\*BroadWorks Execution Server Command Line Interface Administration Guide\*](#).
- For Lawful Intercept, see the [\*BroadWorks Lawful Intercept Command Line Interface Administration Guide\*](#).
- For the Media Server, see the [\*BroadWorks Media Server Command Line Interface Administration Guide\*](#).
- For the Messaging Server, see the [\*BroadWorks Messaging Server Command Line Interface Administration Guide\*](#).
- For the Network Function Manager, see the [\*BroadWorks Network Function Manager Command Line Interface Administration Guide\*](#).
- For the Network Server, see the [\*BroadWorks Network Server Command Line Interface Administration Guide\*](#).
- For the Profile Server, see the [\*BroadWorks Profile Server Command Line Interface Administration Guide\*](#).
- For the Service Control Function, see the [\*BroadWorks Service Control Function Command Line Interface Administration Guide\*](#).
- For the Sharing Server, see the [\*BroadWorks Sharing Server Command Line Interface Administration Guide\*](#).
- For the Video Server, see the [\*BroadWorks Video Server Command Line Interface Administration Guide\*](#).
- For the WebRTC Server, see the [\*BroadWorks WebRTC Server Command Line Interface Administration Guide\*](#).
- For the Xtended Services Platform, see the [\*BroadWorks Xtended Services Platform Command Line Interface Administration Guide\*](#).

## 3 Document Conventions

---

This section describes the conventions used in this document to distinguish between different types of information you enter.

### 3.1 Data You Enter

Data you enter appears in a different type font and in **bold**.

For example, enter:

**bwcli**

Commands and fixed data appear as they are entered. Variable data appears in angle brackets.

For example:

<password>

Optional data that you enter to apply an option for a command is enclosed in square brackets.

For example:

[profile]

### 3.2 Keys You Use

The ENTER key is represented in commands by the ↵ symbol. Press the ENTER key after each command where the ↵ symbol appears.

### 3.3 BroadWorks Server Software Version

Before starting the CLI, you can show the software version of the BroadWorks server.

At the UNIX prompt, enter:

**bwshowver** ↵

The system displays the BroadWorks server software version, build date, and other software version information.

### 3.4 BroadWorks Server Messages

Messages from the server in response to commands, including error messages, are shown on separate lines.

To start the CLI, enter:

**bwcli** ↵

The system responds with the following.

```
=====
BroadWorks Command Line Interface
Type HELP for more information
=====
```

For the purpose of this document, long system messages may be abbreviated using ellipses (...).

## 4 BroadWorks Server System Conventions

This section describes the configuration and provisioning commands using a CLI specific to this server. Each CLI has context-sensitive commands and dynamic contexts that are added to the CLI when data is obtained from the BroadWorks server. Commands are extendable and reusable. Changes made through the CLI are immediately applied to the server. The CLI also has general-purpose session commands usable from any context or level (that is, help, exit, quit, read, write, tree, and config).

### 4.1 Start CLI

To start the CLI, enter:

```
bwcli ↵
```

```
=====
BroadWorks Command Line Interface
Type HELP for more information
=====
AMS_CLI>
```

Server commands are entered after the AMS\_CLI> prompt.

### 4.2 Enter CLI Commands

The CLI commands have short and long versions. Commands are given by entering:

- The corresponding command number. For example, at the top level to go to the `System` level, type `0`.
- The full command name. For example, to quit a level, type `quit`.
- The first letters of the command that identify the command uniquely. For example, to quit a level, type `q`. If another command at that level begins with `q`, you type as many letters of `quit` that identify it uniquely from the other command (for example, `qu` or `qui` or even `quit`).

Session commands are available at any level in their long version (`quit`) or in their short version (`q` or `qu`).

#### 4.2.1 Enter 0 Digits or Characters

Use empty quotation marks ("" ) to enter 0 digits or characters as values in fields taking 0 or more digits or characters.

#### 4.2.2 Enter Uppercase and Lowercase Data

Enter data in a case sensitive format. Uppercase and lowercase characters are important, especially when searching for data using the `get` command.

#### 4.2.3 Enter SIP URL

Some SIP URLs contain semi-colons (;). To enter a semi-colon in a command string, precede the semi-colon with a slash. For example: `sip:5046938826@10.10.233.60/;user=phone SIP/2.0`.

#### 4.2.4 Help

Enter `?`, or `help`, or `h` to display help. The commands available at that level appear.

To obtain information on a command, enter `help` followed by the command. For example:

```
help get ↵
```

```
or
```

```
? get ↵
```

or  
h g ↵

### 4.3 Command Syntax

The CLI uses a command syntax that visually represents the required and optional values. For example, the following appears when you request help for the *add new Admin User* command:

help add ↵

```
This command is used to add a new Administrator in the system.
A system or provisioning administrator may be added
=====
add
  <userId>, String {2 to 80 characters}
  <type>, Choice = {system, prov}
  <readOnly>, Choice = {false, true}
  [<attribute>, Multiple Choice = {lastName, firstName, language}]
    <lastName>, String {1 to 30 characters}
    <firstName>, String {1 to 30 characters}
    <language>, String {1 to 40 characters}
```

The first line provides a description of the command. Subsequent lines provide the command syntax. In this example, the add command requires the following values <userId>, <type> and <readOnly>. The <attribute> value is optional (indicated by the square brackets [ ]), but if used, it has three possible values indicated by the indent: <firstName>, <lastName> and <language>.

#### 4.3.1 Entering Commands

The CLI can assist you completing commands. The CLI provides the command completion if you type "?". The parameters available at that point display, as well as any currently defined values.

To obtain information on how to complete a command:

- Enter the command at any point followed by "?". For example:

add Carrier1 ? ↵

```
<CAC>, Number {4 to 4 digits}
Currently defined CAC = {1234, 5372, 6677}
add Carrier1
```

- Enter the subsequent parameter(s).

2000 yes yes yes ↵

If you do not know all the required parameters, you can continue entering one parameter at a time, followed by a question mark, until you complete the command.

#### 4.3.2 Shortcuts

You can navigate and edit in the CLI with the same shortcuts used in a bash command line.

**Table 9: Navigational Shortcuts**

Task	Shortcut
To move the cursor to the left:	Use the left arrow or <b>Ctrl-b</b> .
To move the cursor to the right:	Use the right arrow or <b>Ctrl-f</b> .
To navigate backward in the command history:	Use the up arrow or <b>Ctrl-p</b> .

Task	Shortcut
To navigate forward in the command history:	Use the down arrow or <b>Ctrl-n</b> .
To move the cursor to the beginning of a line:	Use the <b>Home</b> key or <b>Ctrl-a</b> .
To move the cursor to the end of a line:	Use the <b>End</b> key or <b>Ctrl-e</b> .
To move the cursor one word forward:	Press <b>Alt-f</b> .
To move the cursor one word backward	Press <b>Alt-b</b> .

**Table 10: Editing Shortcuts**

Task	Shortcut
To complete a command:	Press the <b>Tab</b> key. If the command is ambiguous, it will show all possible options. The completion will be done for commands, parameters, and aliases.
To clear the line before the position of the cursor:	Press <b>Ctrl-u</b> .
To clear the line after the position of the cursor:	Press <b>Ctrl-k</b> .
To delete from the cursor to the start of the first word on its left side:	Press <b>Ctrl-w</b> .
To erase the character before the cursor:	Press the <b>Backspace</b> key.
To erase the character at the cursor's position:	Press the <b>Delete</b> key.

## 4.4 Menu System

This section describes how to navigate through the CLI menu system.

### 4.4.1 Hierarchical Tree Structure

The CLI menu system is hierarchical, with menus and submenus. The tree command allows you to see the menus system hierarchy, including available commands.

To see the complete tree structure for the CLI levels only, from the top level enter:

```
tree -r ↵
```

Entering this command at other levels shows the hierarchy from that level down.

The available commands at any level can also be viewed using the tree command. To see the complete tree structure for the CLI including available commands, from the top level enter:

```
tree -r -f ↵
```

Entering this command at another level shows the hierarchy, including available commands (in square brackets [ ]), from that level down.

### 4.4.2 Change Levels

To change to a lower level, type the level name, abbreviation, or the corresponding number. For example, to change to the system level from the top level, enter:

```
system ↵
```

```
or
```

```
s ↵
```

```
or
```

```
0 ↵
```

To go directly to a level, type each of the level names making up the level path separated by a semi-colon (;). For example, to go directly to the `System/Device/Media>` level from the top level, enter:

```
system;device;media ↵
```

The abbreviated form of each level name can also be used. The abbreviated form must uniquely identify it from other commands at that level. For example, to go directly to the `System/Device/Media>` level from the top level using abbreviations, enter:

```
s;d;m ↵
```

To return to a previous level, type `q` or `quit`.

To return directly to the top level, type `q all` or `quit all`.

## 4.5 Read Files

The CLI commands can be executed from a file. The format of commands in a file are the same as when they are used the CLI. The following is an example of a small command file:

```
system;device;hostingne  
get
```

The absolute file path for the read file is used. If no file path is provided, the default directory is assumed to be the directory from which the CLI was invoked.

To execute CLI commands from a file, at any level prompt, enter:

```
read <file name> [<pwProtOff>] [<stepByStep>] [<userEmulation>] ↵
```

where:

Variable	Type	Valid Values	Description
<file name>	String	1 to 300 characters	The name of the file containing the CLI commands. The absolute path can be provided.
<pwProtOff>	String	pwProtOff	Lets you turn off password protection and enter passwords in the read file and have the CLI accept those passwords.
<stepByStep>	String	stepByStep	Lets you turn on the operator step-by-step confirmation mode.
<user Emulation>	String	userEmulation	Lets you view the commands that are executed instead of only the results.

The commands in the file will execute. Results and any messages appear on the CLI.

Examples:

```
read /usr/local/broadworks/comfiles/file1.txt
```

or

```
read /usr/local/broadworks/comfiles/file1.txt pwProtOff
```



## 4.6 Write Output to a File

The output from CLI commands can be redirected to a file. The absolute file path for the write file is used.

If no file path is provided, the default directory is assumed to be the directory from which the CLI was invoked. When writing output to a file, output is no longer directed to the screen.

Output can be started and stopped using this command.

You can start writing output to a file at any time.

At any level prompt, enter:

write <action> <file name> ↵

where:

Variable	Type	Valid Values	Description
<action>	Choice	start	Starts output to the specified file.
<file name>	String	1 to 300 characters	The name of the file to which output should be redirected. The absolute path can be provided.

Example:

```
write start /usr/local/broadworks/outfiles/output.txt
You can stop writing output to a file at any time.
At any level prompt, enter:
write stop
```

## 4.7 Configure CLI

The CLI can be configured in the following ways:

- The Yes/No prompt - when the Yes/No prompt is set to true, you will be prompted to respond Yes/No during various commands. For example, you will be asked whether you want to display multiple records. Setting the Yes/No prompt to "false", displays all records found without asking.
- The Continue prompt - when the Continue prompt is set to "true", you will be prompted whether to continue during various commands. For example, you will be asked whether you want to continue displaying the next screen of data. Setting the Continue prompt to "false", displays all data found without pausing.
- Command Completion - when Command Completion is set to "true", you will be automatically prompted for the next value when the command being entered is incomplete. When Command Completion is set to "false", you will not be prompted for the next value.
- Script Echoing - when Script Echoing is set to "true", the names of any scripts called by a command will be displayed when they are run. When Script Echoing is set to "false", you will not see the names of scripts as they are being run.
- You can view the current settings for these CLI features at any time.

At any level prompt, enter:

config get ↵

Example:

```
config get
    yesNoPromptEnabled = true
    continuePromptEnabled = true
```

```
alwaysCommandCompletion = false
scriptEchoingEnabled = false
displayErrorDetail = false
alwaysDeleteConfirmation = false
```

To change the settings for these CLI features:

At any level prompt, enter:

config set <attribute> ↵

where:

Variable	Type	Valid Values	Description
<attribute>	MultipleChoice	yesNoPromptEnabled, continuePromptEnabled, alwaysCommandCompletion, scriptEchoingEnabled, displayErrorDetail, alwaysDeleteConfirmation	
<yesNoPromptEnabled>	Choice	true, false	When the Yes/No prompt is set to "true", you are prompted to respond Yes or No during various commands. For example, you are asked whether you want to display multiple records. Setting the Yes/No prompt to "false", displays all records found without asking.
<continuePromptEnabled>	Choice	true, false	When the Continue prompt is set to "true", you are prompted to continue during various commands. For example, you are asked whether you want to continue displaying the next screen of data. Setting the Continue prompt to "false", displays all data found without pausing.
<alwaysCommandCompletion>	Choice	true, false	When Command Completion is set to "true", you are prompted for the next value when the command being entered is incomplete. When Command Completion is set to "false", you are not prompted for the next value.
<scriptEchoingEnabled>	Choice	true, false	When Script Echoing is set to "true", the names of any scripts called by a command are displayed when they are run. When Script Echoing is set to "false", you do not see the names of scripts as they run.
<displayErrorDetail>	Choice	true, false	When the Display Error Details is set to "true", detailed error message provided on supported CLI command. When the Display Error Details is set to "false", detailed error messages are disabled.

Variable	Type	Valid Values	Description
<alwaysDeleteConfirmation>	Choice	true, false	When the Always Delete Confirmation is set to "true", confirmation not required upon command completion. When the Always Delete Confirmation is set to "false", confirmation required upon command completion.

Example:

```
config set yesNoPromptEnabled false
```

## 4.8 CLI Commands History

The history command prints out (on the CLI window) recent commands that were typed in for the current CLI session. This is useful to view, re-enter, or edit, past commands. The default history size is 20.

To view the CLI command history, enter:

history ↵

To re-execute a CLI command from the history, enter:

!**<cmdId>** ↵

where:

Variable	Type	Valid Values	Description
<CmdId>	Integer	1 through 32767	A valid command ID read from the CLI history.

To re-execute the previous command, enter:

!! ↵

To configure CLI command history, enter:

history <size> ↵

where:

Variable	Type	Valid Values	Description
<Size>	Integer	10 through 1000	The new history size.

## 4.9 CLI Command Alias

An alias is a command that contains one or more CLI commands separated by "\;". An alias command runs as if the commands it contains were run sequentially. Parameters typed after the alias command, are passed as parameters to the last command defined in the alias. Upon completion, the alias command returns the CLI session at the level it was when the alias command was typed, unless "stayInContext" is specified.

To view the list of aliases currently defined in a CLI session, enter:

alias ↵

To execute an alias, enter:

<aliasName> ↵

where:

Variable	Type	Valid Values	Description
<aliasName>	String	1 to 80 characters	The name of an alias.

To see a detailed view of an alias currently defined in a CLI session, enter:

alias <aliasName> ↵

where:

Variable	Type	Valid Values	Description
<aliasName>	String	1 to 80 characters	The name of an alias.

To add an alias to a CLI session, enter:

alias <aliasName> <result> [<attribute>] ↵

Aliases created at the CLI are not persisted. To have persisted CLI Alias, one can either capture CLI alias in a CLI read file or modify the CLI alias bwcli\_aliases.txt file under /usr/local/broadworks/bw\_base/conf. Note that this file is not persisted during a software upgrade.

where:

Variable	Type	Valid Values	Description
<aliasName>	String	1 to 80 characters	The name of a new alias.
<result>	String	0 to 256 characters	The string of commands to be executed by the alias, enclosed in quotes if it contains any spaces.
<stayInContext>	Choice	true, false	Upon completion, the CLI session resumes at the level it was when the alias command was typed, unless "stayInContext" is specified set to "false".
<description>	String	0 to 80 characters	The description of the CLI command alias.

Example:

```
alias getNetServ "q all\;System\;Device\;NetServ\;get"
stayInContext false
```

To delete an alias, enter:

alias <aliasName> "" ↵

where:

Variable	Type	Valid Values	Description
<aliasName>	String	1 to 80 characters	The name of an alias.

## 4.10 Exit CLI

You can exit the CLI at any time.

At any CLI prompt, enter:

exit ↵

```
Please confirm (Yes, Y, No, N):
```

Then enter:

y ↵

```
This session is now ending...
```

## 4.11 Procedural Steps

Usually the commands available for a BroadWorks server are performed according to the following procedure:

- Start the CLI. When you have finished using it, use the exit command.
- Configure basic elements of the server.

Basic configuration is provided when the server is installed. However, from time to time this basic configuration may require changing. Basic information includes information such as addresses of associated other BroadWorks network elements, system administration tasks, licensing, routing and treatments, configuration of emergency numbers, and tracking of long duration call accounting events.

- Configure interfaces.

Basic configuration of interfaces used by the server is provided when the server is installed. However, from time to time this basic configuration may require changing.

- Manage the applications.

In order to manage the applications, information management is necessary. It is the administrator's responsibility to enter and maintain information such as groups, group members, and group administrators.

- Maintain the server.

The day-to-day operations of the BroadWorks server are monitored through alarms, performance measurements, and shutdown and restart procedures.

- Read and write command files.

The BroadWorks server CLI commands can be read from a file. Output from the CLI can be directed to a file.

# COMMAND LINE INTERFACE ADMINISTRATION

---

## 5 Applications

This level is used to view and modify applications entries.

### 5.1 AccessMediationServer

This level is used to view and modify AccessMediationServer entries. This level supports the Skinny Call Control Protocol (SCCP) on BroadWorks.

The Access Mediation Server provides conversion between the SCCP and the Session Initiation Protocol (SIP). This conversion allows the BroadWorks Application Server to control and route calls to and from SCCP devices connected to the Access Mediation Server. The Access Mediation Server maps the SCCP signaling from SCCP devices to SIP signaling so that the Application Server can establish device and call sessions. The Access Mediation Server also provides network address translation for Real-Time Transport Protocol (RTP) sent to or received from the SCCP device that is being serviced by the Access Mediation Server.

#### 5.1.1 AMSLogging

This level is used to view and modify the logging for the Signaling Gateway process.

##### 5.1.1.1 get

This command is used to view logging-related attributes.

- 1) Ensure you are at the `/AMS_CLI/Applications/AccessMediationServer/AMSLogging>` level.
- 2) Enter:

**get** ↵

##### 5.1.1.2 set

This command is used to modify logging-related attributes.

- 1) Ensure you are at the `/AMS_CLI/Applications/AccessMediationServer/AMSLogging>` level.
- 2) Enter:

**set <attribute>** ↵

where:

Variable	Field	Type	Valid Values	Description
<attribute>		MultipleChoice	enabled, severity, priority, max QueueSize, showThreadName	The name of an attribute to modify.
<enabled>		Choice	true, false	This parameter turns the logging on and off.
<severity>		Choice	Debug, FieldDebug, Info, Notice, Warn	This parameter specifies the default logging severity level.
<priority>		Integer	1 through 5	This parameter specifies the priority of the logging thread. The value "1" indicates the lowest priority and "5" indicates the highest.
<maxQueue Size>		Integer	0 through 2147483647	This parameter specifies the maximum size of the logging queue.

Variable	Field	Type	Valid Values	Description
<showThreadName>		Choice	true, false	This parameter enables thread name logging.

#### 5.1.1.3 InputChannels

This level is used to view, modify, or clear input channels entries.

##### 5.1.1.3.1 get

This command is used to view input channels-related attributes.

- 1) Ensure you are at the /AMS\_CLI/Applications/AccessMediationServer/AMSLogging/InputChannels> level.

- 2) Enter:

**get** ↵

##### 5.1.1.3.2 set

This command is used to modify input channels-related attributes.

- 1) Ensure you are at the /AMS\_CLI/Applications/AccessMediationServer/AMSLogging/InputChannels> level.

- 2) Enter:

**set <name> <attribute>** ↵

where:

Variable	Field	Type	Valid Values	Description
<name>		Choice	Generic, ServiceOS, BroadsoftCommonCommunicationTransport, BroadsoftCommonCommunicationTransportKeepAlive, SMAP, Sip, AMS, Sccp, OverloadControls, NameService, Timer	This parameter specifies the name of the logging input channel.
<attribute>		MultipleChoice	enabled, severity	The name of an attribute to modify.
<enabled>		Choice	true, false	This parameter turns the logging to the logging input channel on and off.
<severity>		Choice	Debug, FieldDebug, Info, Notice, Warn	This parameter specifies the severity level of the logging input channel.

##### 5.1.1.3.3 clear

This command is used to clear input channels-related attributes.

- 1) Ensure you are at the /AMS\_CLI/Applications/AccessMediationServer/AMSLogging/InputChannels> level.

- 2) Enter:

**clear <name> <attribute>** ↵

where:



Variable	Field	Type	Valid Values	Description
<name>		Choice	Generic, ServiceOS, Broadsoft CommonCommunication Transport, BroadsoftCommonCommunicationTransportKeep Alive, SMAP, Sip, AMS, Sccp, OverloadControls, NameService, Timer	This parameter specifies the name of the logging input channel.
<attribute>		MultipleChoice	severity	The name of an attribute to clear.

#### 5.1.1.4 OutputChannels

This level is used to view, modify, or clear output channels.

##### 5.1.1.4.1 get

This command is used to view output channels-related attributes.

- 1) Ensure you are at the `/AMS_CLI/Applications/AccessMediationServer/AMSLogging/OutputChannels>` level.

- 2) Enter:

**get** ↵

##### 5.1.1.4.2 set

This command is used to modify output channels-related attributes.

- 1) Ensure you are at the `/AMS_CLI/Applications/AccessMediationServer/AMSLogging/OutputChannels>` level.

- 2) Enter:

**set <name> <attribute>** ↵

where:

Variable	Field	Type	Valid Values	Description
<name>		Choice	Stdout, File	This parameter specifies the name of the logging output channel.
<attribute>		MultipleChoice	enabled, directory, filePrefix, file SizeInMB, numberOfFiles	The name of an attribute to modify.
<enabled>		Choice	true, false	This parameter turns the logging to the logging output channel on and off.
<directory>		String	1 to 256 characters	This parameter specifies the directory where the log files are located.
<filePrefix>		String	1 to 256 characters	This parameter specifies the prefix of the log files.
<fileSizeInMB>		Integer	1 through 2000	This parameter specifies the maximum size of a log file.

Variable	Field	Type	Valid Values	Description
<numberOfFiles>		Integer	1 through 65535	This parameter specifies the maximum number of log files that exist before the old log files are deleted.

### 5.1.2 AMSTSLogging

This level is used to view and modify the logging for the turn server front end process of the Access Mediation Server application.

#### 5.1.2.1 get

This command is used to view logging-related attributes.

- 1) Ensure you are at the /AMS\_CLI/Applications/AccessMediationServer/AMSTSLogging> level.
- 2) Enter:  
**get** ↵

#### 5.1.2.2 set

This command is used to modify logging-related attributes.

- 1) Ensure you are at the /AMS\_CLI/Applications/AccessMediationServer/AMSTSLogging> level.
- 2) Enter:  
**set <attribute>** ↵

where:

Variable	Field	Type	Valid Values	Description
<attribute>		MultipleChoice	enabled, severity, priority, max QueueSize, showThreadName	The name of an attribute to modify.
<enabled>		Choice	true, false	This parameter turns the logging on and off.
<severity>		Choice	Debug, FieldDebug, Info, Notice, Warn	This parameter specifies the default logging severity level.
<priority>		Integer	1 through 5	This parameter specifies the priority of the logging thread. The value "1" indicates the lowest priority and "5" indicates the highest.
<maxQueueSize>		Integer	0 through 2147483647	This parameter specifies the maximum size of the logging queue.
<showThreadName>		Choice	true, false	This parameter enables thread name logging.

#### 5.1.2.3 InputChannels

This level is used to view, modify, or clear input channels entries.

#### 5.1.2.3.1 get

This command is used to view input channels-related attributes.

- 1) Ensure you are at the `/AMS_CLI/Applications/AccessMediationServer/AMSTSLogging/InputChannels>` level.

- 2) Enter:

**get** ↵

#### 5.1.2.3.2 set

This command is used to modify input channels-related attributes.

- 1) Ensure you are at the `/AMS_CLI/Applications/AccessMediationServer/AMSTSLogging/InputChannels>` level.

- 2) Enter:

**set <name> <attribute>** ↵

where:

Variable	Field	Type	Valid Values	Description
<name>		Choice	Generic	This parameter specifies the name of the logging input channel.
<attribute>		MultipleChoice	enabled, severity	The name of an attribute to modify.
<enabled>		Choice	true, false	This parameter turns the logging to the logging input channel on and off.
<severity>		Choice	Debug, FieldDebug, Info, Notice, Warn	This parameter specifies the severity level of the logging input channel.

#### 5.1.2.3.3 clear

This command is used to clear input channels-related attributes.

- 1) Ensure you are at the `/AMS_CLI/Applications/AccessMediationServer/AMSTSLogging/InputChannels>` level.

- 2) Enter:

**clear <name> <attribute>** ↵

where:

Variable	Field	Type	Valid Values	Description
<name>		Choice	Generic	This parameter specifies the name of the logging input channel.
<attribute>		MultipleChoice	severity	The name of an attribute to clear.

#### 5.1.2.4 OutputChannels

This level is used to view, modify, or clear output channels.

##### 5.1.2.4.1 get

This command is used to view output channels-related attributes.

1) Ensure you are at the /AMS\_CLI/Applications/AccessMediationServer/AMSTSLogging/OutputChannels> level.

2) Enter:

**get** ↵

#### 5.1.2.4.2 set

This command is used to modify output channels-related attributes.

1) Ensure you are at the /AMS\_CLI/Applications/AccessMediationServer/AMSTSLogging/OutputChannels> level.

2) Enter:

**set <name> <attribute>** ↵

where:

Variable	Field	Type	Valid Values	Description
<name>		Choice	Stdout, File	This parameter specifies the name of the logging output channel.
<attribute>		MultipleChoice	enabled, directory, filePrefix, file SizeInMB, numberOfFiles	The name of an attribute to modify.
<enabled>		Choice	true, false	This parameter turns the logging to the logging output channel on and off.
<directory>		String	1 to 256 characters	This parameter specifies the directory where the log files are located.
<filePrefix>		String	1 to 256 characters	This parameter specifies the prefix of the log files.
<fileSizeInMB>		Integer	1 through 2000	This parameter specifies the maximum size of a log file.
<numberOf Files>		Integer	1 through 65535	This parameter specifies the maximum number of log files that exist before the old log files are deleted.

### 5.1.3 DeviceMgt

This level is used to view and modify the Device Management attributes. The Access Mediation Server is based on the Device Management functionality.

#### 5.1.3.1 get

This command is used to view the Device Management-related attributes in the application.

1) Ensure you are at the /AMS\_CLI/Applications/AccessMediationServer/DeviceMgt> level.

2) Enter:

**get** ↵

#### 5.1.3.2 set

This command is used to modify Device Management attributes in the application.

- 1) Ensure you are at the `/AMS_CLI/Applications/AccessMediationServer/DeviceMgt>` level.
- 2) Enter:

**set <attribute>** ↵

where:

Variable	Field	Type	Valid Values	Description
<attribute>		MultipleChoice	url, requestTimeout	The name of an attribute to modify.
<url>		String	1 to 1023 characters	This parameter specifies the Uniform Resource Locator (URL) of the Device Management Server to download configuration information.
<request Timeout>		Integer	1 through 10	This parameter specifies the time period (in seconds) of the request. The request times out at the end of this time period.

#### 5.1.4 Diagnostics

This level is used to perform diagnostics.

##### 5.1.4.1 Diag

This level is used to audit, dump details, kill, and list the sessions on the system.

##### 5.1.4.1.1 dump

This command is used to dump the details of a specific session.

- 1) Ensure you are at the `/AMS_CLI/Applications/AccessMediationServer/Diagnostics/Diag>` level.
- 2) Enter:

**dump <attribute>** ↵

where:

Variable	Field	Type	Valid Values	Description
<attribute>		Choice	macAddress, addressOfRecord, sessionKey	The name of an attribute to modify.
<sessionKey>		String	1 to 1023 characters	This parameter identifies the session key for a specific session.
<addressOf Record>		String	3 to 255 characters	This parameter identifies the address of record for a specific session.
<macAddress>		String	12 to 12 characters	This parameter identifies a Media Access Control (MAC) device address for a specific session.

##### 5.1.4.1.2 heap

This command is used to view the heap usage of the application. \* The "gc" option forces the process to perform a full garbage collection. This option is intended for use by BroadSoft support personnel. Since a full garbage collection can halt the process for an extended period of time this option should only be used during low traffic periods. \* The "show" option displays the following information about the heap: current

used memory, current free memory, current heap size. Note that the heap only collects when the heap reaches a certain size. Utilization up to 80% can be considered normal. \* The "dump" option displays the size of various data structures within the process. This option is intended as a diagnostic tool for high memory usage conditions.

- 1) Ensure you are at the /AMS\_CLI/Applications/AccessMediationServer/Diagnostics/ Diag> level.

- 2) Enter:

**heap <mainOption>**

where:

Variable	Field	Type	Valid Values	Description
<mainOption>		Choice	gc, show, dump	This parameter determines the heap management option.

#### 5.1.4.1.3 kill

This command is used to kill a specific session.

- 1) Ensure you are at the /AMS\_CLI/Applications/AccessMediationServer/Diagnostics/ Diag> level.

- 2) Enter:

**kill <sessionKey>**

where:

Variable	Field	Type	Valid Values	Description
<sessionKey>		String	1 to 1023 characters	This parameter identifies the session key for a specific session to kill.

#### 5.1.4.1.4 list

This command is used to list all sessions.

- 1) Ensure you are at the /AMS\_CLI/Applications/AccessMediationServer/Diagnostics/ Diag> level.

- 2) Enter:

**list**

### 5.1.5 GeneralSettings

This level is used to view and modify the general settings.

#### 5.1.5.1 get

This command is used to view General Settings-related attributes in the application.

- 1) Ensure you are at the /AMS\_CLI/Applications/AccessMediationServer/ GeneralSettings> level.

- 2) Enter:

**get**

#### 5.1.5.2 set

This command is used to modify General Settings-related attributes in the application.

- 1) Ensure you are at the /AMS\_CLI/Applications/AccessMediationServer/ GeneralSettings> level.

2) Enter:

**set <attribute>** ↵

where:

Variable	Field	Type	Valid Values	Description
<attribute>		MultipleChoice	numberOfThreads, numberOfNonCallThread	An attribute to be modified.
<numberOfThreads>		Integer	1 through 10	Sets the number of processing threads for the Access Mediation Server call sessions handling. If you change the value, restart the Access Mediation Server.
<numberOfNonCallThread>		Integer	1 through 10	This parameter specifies the number of processing threads available to the Access Mediation Server for non-call sessions handling. If you change the value, restart the Access Mediation Server.

### 5.1.6 RTP

This level is used to view, modify, and clear the Real-Time Transport Protocol (RTP) attributes.

#### 5.1.6.1 get

This command is used to view the Real-Time Transport Protocol (RTP)-related attributes in the application.

1) Ensure you are at the `/AMS_CLI/Applications/AccessMediationServer/RTP>` level.

2) Enter:

**get** ↵

#### 5.1.6.2 set

This command is used to modify the Real-Time Transport Protocol (RTP)-related attributes in the application.

1) Ensure you are at the `/AMS_CLI/Applications/AccessMediationServer/RTP>` level.

2) Enter:

**set <attribute>** ↵

where:

Variable	Field	Type	Valid Values	Description
<attribute>		MultipleChoice	typeOfService	The name of an attribute to modify.
<typeOfService>		Integer	0 through 255	This parameter specifies the value of the <i>Type of Service (TOS)</i> field in the <i>IP</i> header of Real-Time Transport Protocol (RTP) packets for the private network.

### 5.1.6.3 Private

This level is used to view, modify, and clear the Real-Time Transport Protocol (RTP)-handling attributes for the Private interface.

#### 5.1.6.3.1 get

This command is used to view the Private Real-Time Transport Protocol (RTP)-related attributes in the application.

- 1) Ensure you are at the `/AMS_CLI/Applications/AccessMediationServer/RTP/Private>` level.

- 2) Enter:

**get** ↵

#### 5.1.6.3.2 set

This command is used to modify the Private Real-Time Transport Protocol (RTP)-related attributes in the application.

- 1) Ensure you are at the `/AMS_CLI/Applications/AccessMediationServer/RTP/Private>` level.

- 2) Enter:

**set <attribute>** ↵

where:

Variable	Field	Type	Valid Values	Description
<attribute>		MultipleChoice	address, backupAddress, virtualAddress, backupVirtualAddress, portFirst, portLast, virtualRouterId, backupVirtualRouterId	The name of an attribute to modify.
<address>		Choice	An IP interface that is currently defined on the server.	This parameter specifies the Internet Protocol (IP) address of the private network interface to send mirroring BroadWorks Common Communication Transport (BCCT) messages to the Access Mediation Server's collocated redundant server. The address also identifies the physical interface to which the private virtual IP address is bound if the Access Mediation Server is currently routing traffic with Real-Time Transport Protocol (RTP).
<backup Address>		String	1 to 39 characters	This parameter specifies the private Internet Protocol (IP) address of the collocated redundant Access Mediation Server.
<virtual Address>		String	1 to 39 characters	This parameter specifies the virtual Internet Protocol (IP) address of the private network interface that uses the Real-Time Transport Protocol (RTP) from and to the private network.



Variable	Field	Type	Valid Values	Description
<backupVirtualAddress>		String	1 to 39 characters	This parameter specifies the private virtual Internet Protocol (IP) address of the collocated Access Mediation Server. This Access Mediation Server acts as a backup for the virtual IP address when the collocated Access Mediation Server fails or is shut down.
<portFirst>		Integer	1024 through 65535	This parameter specifies the lower bound of the range of User Datagram Protocol (UDP) ports available for Real-Time Transport Protocol (RTP) traffic on the private network.
<portLast>		Integer	1024 through 65535	This parameter specifies the upper bound of the range of User Datagram Protocol (UDP) ports available for Real-Time Transport Protocol (RTP) traffic on the private network.
<virtualRouterId>		Integer	0 through 255	This parameter specifies the virtual router ID on the private network.
<backupVirtualRouterId>		Integer	0 through 255	This parameter specifies the backup virtual router ID on the private network.

#### 5.1.6.4 Public

This level is used to view, modify, and clear the Real-Time Transport Protocol (RTP)-handling attributes for the Public interface.

##### 5.1.6.4.1 get

This command is used to view the Public Real-Time Transport Protocol (RTP)-related attributes in the application.

- 1) Ensure you are at the `/AMS_CLI/Applications/AccessMediationServer/RTP/Public>` level.
- 2) Enter:

**get** ↵

##### 5.1.6.4.2 set

This command is used to modify the Public Real-Time Transport Protocol (RTP)-related attributes in the application.

- 1) Ensure you are at the `/AMS_CLI/Applications/AccessMediationServer/RTP/Public>` level.
- 2) Enter:

**set <attribute>** ↵

where:

Variable	Field	Type	Valid Values	Description
<attribute>		MultipleChoice	address, backupAddress, virtualAddress, backupVirtualAddress, portFirst, portLast, virtualRouterId, backupVirtualRouterId	The name of an attribute to modify.
<address>		Choice	An IP interface that is currently defined on the server.	This parameter specifies the Internet Protocol (IP) address of the physical interface to which the public virtual IP address is bound if the Access Mediation Server is routing traffic using the Real-Time Transport Protocol (RTP).
<backupAddress>		String	1 to 39 characters	This parameter specifies the public Internet Protocol (IP) address of the collocated redundant Access Mediation Server.
<virtualAddress>		String	1 to 39 characters	This parameter specifies the virtual Internet Protocol (IP) address of the public network interface that routes the Real-Time Transport Protocol (RTP) messages to and from the Skinny Call Control Protocol (SCCP) phones.
<backupVirtualAddress>		String	1 to 39 characters	This parameter specifies the public virtual Internet Protocol (IP) address of the collocated Access Mediation Server. This Access Mediation Server acts as a backup for the virtual IP address when the collocated Access Mediation Server fails or is shut down.
<portFirst>		Integer	1024 through 65535	This parameter specifies the lower bound of the range of User Datagram Protocol (UDP) ports available for Real-Time Transport Protocol (RTP) traffic on the public network.
<portLast>		Integer	1024 through 65535	This parameter specifies the upper bound of the range of User Datagram Protocol (UDP) ports available for Real-Time Transport Protocol (RTP) traffic on the public network.
<virtualRouterId>		Integer	0 through 255	This parameter specifies the virtual router ID on the public network.

Variable	Field	Type	Valid Values	Description
<backupVirtualRouterId>		Integer	0 through 255	This parameter specifies the backup virtual router ID on the public network.

### 5.1.7 SCCP

This level is used to view, modify, and clear the Skinny Call Control Protocol (SCCP) attributes.

#### 5.1.7.1 get

This command is used to view the Skinny Call Control Protocol (SCCP)-related attributes in the application.

- 1) Ensure you are at the /AMS\_CLI/Applications/AccessMediationServer/SCCP> level.
- 2) Enter:

**get** ↵

#### 5.1.7.2 set

This command is used to modify the Skinny Call Control Protocol (SCCP)-related attributes in the application.

- 1) Ensure you are at the /AMS\_CLI/Applications/AccessMediationServer/SCCP> level.
- 2) Enter:

**set <attribute>** ↵

where:

Variable	Field	Type	Valid Values	Description
<attribute>		MultipleChoice	interface, serverKeepAliveInternal, mirrorKeepAliveInternal, registrationThreshold	The name of an attribute to modify.
<interface>		Choice	An IP interface that is currently defined on the server.	This parameter specifies the listening interface of the Skinny Call Control Protocol (SCCP) server. Restart the Access Mediation Server for new settings to take effect.
<serverKeepAliveInternal>		Integer	30 through 600	This parameter specifies the keep-alive interval for the active server.
<mirrorKeepAliveInternal>		Integer	30 through 600	This parameter specifies the keep-alive interval for the mirror server.
<registrationThreshold>		Integer	1 through 1000	This parameter specifies the total number of outstanding Skinny Call Control Protocol (SCCP) registrations that the server allows. <b>NOTE:</b> When the threshold is reached, the server does not accept registrations until the number of outstanding registrations drops below half the threshold.

### 5.1.8 SIP

This level is used to view, modify, and clear the SIP-handling attributes.

#### 5.1.8.1 get

This command is used to view SIP-related attributes in the application.

- 1) Ensure you are at the `/AMS_CLI/Applications/AccessMediationServer/SIP>` level.
- 2) Enter:

**get** ↵

#### 5.1.8.2 set

This command is used to modify SIP-related attributes in the application.

- 1) Ensure you are at the `/AMS_CLI/Applications/AccessMediationServer/SIP>` level.
- 2) Enter:

**set <attribute>** ↵

where:

Variable	Field	Type	Valid Values	Description
<attribute>		MultipleChoice	t1Milliseconds, t2Milliseconds, maxForwardingHops	An attribute to be modified..
<t1 Milliseconds>		Choice	500, 1000, 2000, 5000, 7000, 9000	This parameter specifies the Session Initiation Protocol (SIP) response retransmission interval (in milliseconds).
<t2 Milliseconds>		Choice	4000, 6000, 8000, 10000, 12000	This parameter specifies the maximum retransmission time (in milliseconds) of Session Initiation Protocol (SIP) request messages (excluding INVITEs).
<max Forwarding Hops>		Integer	0 through 70	This parameter specifies the value to place in the <i>Max-Forwards</i> header of requests sent by the Access Mediation Server.

#### 5.1.8.3 Interface

This level is used to view, modify, and clear the SIP interface-related attributes.

##### 5.1.8.3.1 get

This command is used to view the SIP interface setting-related attributes in the application.

- 1) Ensure you are at the `/AMS_CLI/Applications/AccessMediationServer/SIP/Interface>` level.
- 2) Enter:

**get** ↵

##### 5.1.8.3.2 set

This command is used to modify the SIP interface setting-related attributes in the application.

- 1) Ensure you are at the `/AMS_CLI/Applications/AccessMediationServer/SIP/Interface>` level.
- 2) Enter:

**set <attribute>** ↵

where:

Variable	Field	Type	Valid Values	Description
<attribute>		MultipleChoice	port, interface, UseTcp	The name of an attribute to modify.
<port>		Integer	1025 through 65535	This parameter specifies the listening port of the Session Initiation Protocol (SIP) server.
<interface>		Choice	An IP interface that is currently defined on the server.	This parameter specifies the listening interface of the Session Initiation Protocol (SIP) server.
<UseTcp>		Choice	true, false	This parameter enables the Transmission Control Protocol (TCP). If TCP is disabled, the Access Mediation Server deactivates TCP support for the Session Initiation Protocol (SIP). If TCP is enabled, the Access Mediation Server uses the TCP to send REGISTER, INVITE, and SUBSCRIBE messages outside of a dialog. As well, when the Access Mediation Server sends a SIP <i>Contact</i> header over the TCP, the Contact's <i>sip-uri transport</i> parameter uses the TCP. The Access Mediation Server continues to support the User Datagram Protocol (UDP) when TCP is enabled and allows a SIP dialog to switch to UDP.

## 5.2 LogServer

This level is used to view and modify logging services.

### 5.2.1 GeneralSettings

This level is used to view, modify, and clear the general settings of the log server.

#### 5.2.1.1 get

This command is used to view the general settings of the log server.

- 1) Ensure you are at the `/AMS_CLI/Applications/LogServer/GeneralSettings>` level.
- 2) Enter:

**get** ↵

#### 5.2.1.2 set

This command is used to modify the general settings of the log server.

- 1) Ensure you are at the `/AMS_CLI/Applications/LogServer/GeneralSettings>` level.
- 2) Enter:

**set <attribute>** ↵

where:

Variable	Field	Type	Valid Values	Description
<attribute>		MultipleChoice	udpPort	The name of an attribute to modify.
<udpPort>		Integer	1 through 65535	This parameter specifies the log server port.

## 5.2.2 Logging

This level is used to view and modify the logging for the log server application.

### 5.2.2.1 get

This command is used to view logging-related attributes.

- 1) Ensure you are at the `/AMS_CLI/Applications/LogServer/Logging>` level.
- 2) Enter:

**get** ↵

### 5.2.2.2 set

This command is used to modify logging-related attributes.

- 1) Ensure you are at the `/AMS_CLI/Applications/LogServer/Logging>` level.
- 2) Enter:

**set <attribute>** ↵

where:

Variable	Field	Type	Valid Values	Description
<attribute>		MultipleChoice	enabled, severity, priority, max QueueSize, showThreadName	The name of an attribute to modify.
<enabled>		Choice	true, false	This parameter turns the logging on and off.
<severity>		Choice	Debug, FieldDebug, Info, Notice, Warn	This parameter specifies the default logging severity level.
<priority>		Integer	1 through 5	This parameter specifies the priority of the logging thread. The value "1" indicates the lowest priority and "5" indicates the highest.
<maxQueue Size>		Integer	0 through 2147483647	This parameter specifies the maximum size of the logging queue.
<showThread Name>		Choice	true, false	This parameter enables thread name logging.

### 5.2.2.3 InputChannels

This level is used to view, modify, or clear input channels entries.

#### 5.2.2.3.1 get

This command is used to view input channels-related attributes.

- 1) Ensure you are at the `/AMS_CLI/Applications/LogServer/Logging/InputChannels>` level.
- 2) Enter:

**get** ↵

#### 5.2.2.3.2 set

This command is used to modify input channels-related attributes.

- 1) Ensure you are at the `/AMS_CLI/Applications/LogServer/Logging/InputChannels>` level.
- 2) Enter:

**set <name> <attribute>** ↵

where:

Variable	Field	Type	Valid Values	Description
<name>		Choice	Generic, LogServer	This parameter specifies the name of the logging input channel.
<attribute>		MultipleChoice	enabled, severity	The name of an attribute to modify.
<enabled>		Choice	true, false	This parameter turns the logging to the logging input channel on and off.
<severity>		Choice	Debug, FieldDebug, Info, Notice, Warn	This parameter specifies the severity level of the logging input channel.

#### 5.2.2.3.3 clear

This command is used to clear input channels-related attributes.

- 1) Ensure you are at the `/AMS_CLI/Applications/LogServer/Logging/InputChannels>` level.
- 2) Enter:

**clear <name> <attribute>** ↵

where:

Variable	Field	Type	Valid Values	Description
<name>		Choice	Generic, LogServer	This parameter specifies the name of the logging input channel.
<attribute>		MultipleChoice	severity	The name of an attribute to clear.

#### 5.2.2.4 OutputChannels

This level is used to view, modify, or clear output channels.

##### 5.2.2.4.1 get

This command is used to view output channels-related attributes.

- 1) Ensure you are at the `/AMS_CLI/Applications/LogServer/Logging/OutputChannels>` level.
- 2) Enter:

**get** ↵

#### 5.2.2.4.2 set

This command is used to modify output channels-related attributes.

- 1) Ensure you are at the `/AMS_CLI/Applications/LogServer/Logging/OutputChannels>` level.
- 2) Enter:

**set <name> <attribute>** ↵

where:

Variable	Field	Type	Valid Values	Description
<name>		Choice	File	This parameter specifies the name of the logging output channel.
<attribute>		MultipleChoice	enabled, directory, filePrefix, fileSizeInMB, numberOfFiles	The name of an attribute to modify.
<enabled>		Choice	true, false	This parameter turns the logging to the logging output channel on and off.
<directory>		String	1 to 256 characters	This parameter specifies the directory where the log files are located.
<filePrefix>		String	1 to 256 characters	This parameter specifies the prefix of the log files.
<fileSizeInMB>		Integer	1 through 2000	This parameter specifies the maximum size of a log file.
<numberOfFiles>		Integer	1 through 65535	This parameter specifies the maximum number of log files that exist before the old log files are deleted.



## 6 Monitoring

This level is used to view and modify monitoring entries to check the status of the system, troubleshoot issues using logs and audit trails, and review performance and reports.

### 6.1 Alarm

This level is used to view and modify alarms. BroadWorks servers trigger alarms and include the ability to obtain and view these alarms. A BroadWorks server alarm can be informational, low severity, medium severity, high severity, or critical severity.

Please refer to the application specific fault and alarms Management Information Base (MIB) for a detailed list of alarms.

#### 6.1.1 get

This command is used to get and search for system alarms. These are alarms are located in the local CLI buffer.

- 1) Ensure you are at the `/AMS_CLI/Monitoring/Alarm>` level.
- 2) Enter:

**get [<attribute>] [<back>] <numAlarms>** ↵

where:

Variable	Field	Type	Valid Values	Description
<attribute>		MultipleChoice	type, trapName, problem, subcomp, recommendation, state, time, comp, sysname, trap Severity, id	A type of alarm sub-component to filter on.
Variable: type				
type				This parameter identifies the filter as a trap type.
	<relation>	Choice	<=, ==, >=, HAS	This nested parameter determines the relation. *"<=": less than or equal to. * "==": equal to. * ">=": greater than or equal to. * "HAS": is inclusive of.
	<TrapType>	Choice	Notification, Alarm, Software Error	This nester parameter determines the trap type. *Use "notification" to display the traps at informational purposes. *Use "alarm" to display the reporting alarms. *Use "software error" to display the software errors.

Variable	Field	Type	Valid Values	Description
Variable: trapName				
trapName				This parameter identifies the filter as a trap name.
	<relation>	Choice	<=, ==, >=, HAS	This nested parameter determines the relation. *"<=": less than or equal to. *"==" : equal to. *">=": greater than or equal to. *"HAS": is inclusive of.
	<Name>	String	0 to 255 characters	This nested parameter specifies the trap name.
Variable: problem				
problem				This parameter identifies the filter as problem text.
	<relation>	Choice	<=, ==, >=, HAS	This nested parameter determines the relation. *"<=": less than or equal to. *"==" : equal to. *">=": greater than or equal to. *"HAS": is inclusive of.
	<ProblemText>	String	0 to 255 characters	This nested parameter specifies a text element that may represent an actual trap text (partially or entirely).
Variable: subcomp				
subcomp				This parameter identifies the filter as a BroadWorks software component or area.
	<relation>	Choice	<=, ==, >=, HAS	This nested parameter determines the relation. *"<=": less than or equal to. *"==" : equal to. *">=": greater than or equal to. *"HAS": is inclusive of.
	<Subcomponent>	String	0 to 255 characters	This nested parameter specifies the software component within the BroadWorks entity that is reporting the alarm: "SIP", "database", and so on. Refer to the BroadWorks fault MIBs for a list valid sub-components.

Variable	Field	Type	Valid Values	Description
Variable: recommendation				
recommendation				This parameter identifies the filter as recommendation text.
	<relation>	Choice	<=, ==, >=, HAS	This nested parameter determines the relation. *"<=": less than or equal to. * "==": equal to. * ">=": greater than or equal to. * "HAS": is inclusive of.
	<RecommendationText>	String	0 to 255 characters	This nested parameter specifies a text element that may represent an actual trap recommended action text (partially or entirely).
Variable: state				
state				This parameter identifies the filter is based on the state of an alarm.
	<relation>	Choice	<=, ==, >=, HAS	This nested parameter determines the relation. *"<=": less than or equal to. * "==": equal to. * ">=": greater than or equal to. * "HAS": is inclusive of.
	<AlarmState>	Choice	true, false	This nested parameter determines the state of an alarm.
Variable: time				
time				This parameter identifies the filter based on the trap generation time. The acceptable time formats are as follow: * MM/DD/YY hh:mm AM PM * MM/DD/YY
	<relation>	Choice	<=, ==, >=, HAS	This nested parameter determines the relation. *"<=": less than or equal to. * "==": equal to. * ">=": greater than or equal to. * "HAS": is inclusive of.
	<TimeStamp>	String	0 to 255 characters	This nested parameter specifies the date and time the alarm was generated.

Variable	Field	Type	Valid Values	Description
Variable: comp				
comp				This parameter identifies the filter as an entity reporting the alarm.
	<relation>	Choice	<=, ==, >=, HAS	This nested parameter determines the relation. *"<=": less than or equal to. * "==": equal to. * ">=": greater than or equal to. * "HAS": is inclusive of.
	<Component>	String	0 to 255 characters	This nested parameter specifies the BroadWorks entity reporting the alarm. Refer to the BroadWorks fault MIBs for a list valid entities.
Variable: sysname				
sysname				This parameter identifies the filter as the system name.
	<relation>	Choice	<=, ==, >=, HAS	This nested parameter determines the relation. *"<=": less than or equal to. * "==": equal to. * ">=": greater than or equal to. * "HAS": is inclusive of.
	<System Name>	String	0 to 255 characters	This nested parameter specifies the host name of the system running the BroadWorks software.
Variable: trapSeverity				
trapSeverity				This parameter identifies the filter based on alarm severity.
	<relation>	Choice	<=, ==, >=, HAS	This nested parameter determines the relation. *"<=": less than or equal to. * "==": equal to. * ">=": greater than or equal to. * "HAS": is inclusive of.
	<Severity>	Choice	Informational, Low, Medium, High, Critical	This nested parameter determines the severity. * "Informational Warning": no immediate problems. * "Low": minor problem with a possible service impact. * "Medium": minor problem with a minor service impact. * "High": major problem with a major service impact. * "Critical": emergency system outage.

Variable	Field	Type	Valid Values	Description
Variable: id				
id				This parameter identifies the filter based on alarm ID.
	<relation>	Choice	<=, ==, >=, HAS	This nested parameter determines the relation. "*"<= ": less than or equal to. "*"=="": equal to. "*">=: greater than or equal to. "*"HAS": is inclusive of.
	<Identifier>	Integer	0 through 2147483647	This nested parameter specifies a sequentially generated number that is used to uniquely identify the alarm.
<back>		String	back	This parameter specifies a report based on the last N alarms.
<numAlarms>		Integer	1 through 5000	This parameter specifies the number of alarms to move back.

### 6.1.2 set

This command is used to view and modify the size of the CLI buffer for alarms. The recommended buffer size is "1,000" alarms.

- 1) Ensure you are at the `/AMS_CLI/Monitoring/Alarm>` level.
- 2) Enter:

**set <attribute>**

where:

Variable	Field	Type	Valid Values	Description
<attribute>		MultipleChoice	localsize, size, logging	The name of an attribute to modify.
<localsize>		Integer	1 through 5000	This parameter specifies the local alarms backlog size (in number of alarms). Note that , alarms are searched and displayed by accessing the local backlog and not the Simple Network Management Protocol (SNMP) agent's backlog. This parameter returns to its default value ("1000") for each new CLI session.

Variable	Field	Type	Valid Values	Description
<size>		Integer	1 through 5000	This parameter specifies the SNMP agent alarms backlog size (in number of alarms). The SNMP agent backlog size determines how many alarms are stored in memory and (optionally) on disk and represents the maximum number of alarms that can be retrieved by CLI clients. When the actual number of historical alarms overflows the "size" parameter, the oldest alarms are deleted. The "localsize" is limited by the "size".
<logging>		Choice	true, false	This parameter turns logging on and off. When the value is "false", logging to disk is turned off. Logging to disk allows alarms to be persisted across SNMP agent restarts. When the value is "true", logging to disk is turned on. Logging to disk allows alarms to be persisted across SNMP agent restarts.

### 6.1.3 clear

This command is used to delete alarms from the local CLI backlog buffer, from the SNMP agent backlog buffer, and from disk.

- 1) Ensure you are at the `/AMS_CLI/Monitoring/Alarm>` level.
- 2) Enter:

**clear** ↵

### 6.1.4 close

This command is used to close the connection with the SNMP agent, which is used to obtain system alarms and event logs generated by the BroadWorks Server.

- 1) Ensure you are at the `/AMS_CLI/Monitoring/Alarm>` level.
- 2) Enter:

**close** ↵

### 6.1.5 open

This command is used to open a connection with the SNMP agent to obtain system alarms and event logs generated by the BroadWorks Server. When opening system alarms, the port to be used is specified. If a port is not specified the agent default is used.

- 1) Ensure you are at the `/AMS_CLI/Monitoring/Alarm>` level.
- 2) Enter:

**open [<port>]** ↵

where:

Variable	Field	Type	Valid Values	Description
<port>		Integer	1000 through 65535	This parameter specifies the port used to communicate with the SNMP agent. When not specified the agent default is used.

### 6.1.6 show

This command is used to enable or disable real-time alarm echoing. When real-time alarm echoing is enabled, alarms display at the CLI as they occur. When alarms occur, they appear in the window from which this command was invoked. To avoid interrupting other BroadWorks Server CLI commands, open a separate window.

- 1) Ensure you are at the `/AMS_CLI/Monitoring/Alarm>` level.
- 2) Enter:

**show <onoff>**

where:

Variable	Field	Type	Valid Values	Description
<onoff>		Choice	true, false	This parameter enables the alarm show function. The "on" option enables the alarm show function. The "off" option disables the alarm show function.

### 6.1.7 showConfig

This command is used to display the alarm-related configuration.

- 1) Ensure you are at the `/AMS_CLI/Monitoring/Alarm>` level.
- 2) Enter:

**showConfig**

### 6.1.8 AlarmsTable

This level is used to clear a specific active alarm, clear all active alarms, list currently active alarms, resend an active alarm, and resend all active alarms. When an alarm is raised, its state is set to "On". When an alarm is resolved and cleared by the server, its state is set to "Off". When an alarm is manually cleared, its state is set to "Cleared". "Off" and "Cleared" alarms are equivalent; however, a "Cleared" alarm indicates that the alarm was cleared manually.

#### 6.1.8.1 clear

This command is used to clear an alarm.

- 1) Ensure you are at the `/AMS_CLI/Monitoring/Alarm/AlarmsTable>` level.
- 2) Enter:

**clear <identifier>**

where:

Variable	Field	Type	Valid Values	Description
<identifier>		Integer	0 through 2147483647	This parameter specifies the identifier of the alarm to resend.

#### 6.1.8.2 clearAll

This command is used to clear all active alarms.

- 1) Ensure you are at the /AMS\_CLI/Monitoring/Alarm/AlarmsTable> level.
- 2) Enter:

**clearAll** ↵

#### 6.1.8.3 list

This command is used to display the list of currently active alarms.

- 1) Ensure you are at the /AMS\_CLI/Monitoring/Alarm/AlarmsTable> level.
- 2) Enter:

**list** ↵

#### 6.1.8.4 resend

This command is used to resend a currently active alarm to a remote host.

- 1) Ensure you are at the /AMS\_CLI/Monitoring/Alarm/AlarmsTable> level.
- 2) Enter:

**resend <identifier> <ipAddress> <port>** ↵

where:

Variable	Field	Type	Valid Values	Description
<identifier>		Integer	0 through 2147483647	This parameter specifies the identifier of the alarm to be resent.
<ipAddress>		String	1 to 80 characters	This parameter identifies the remote host that the alarm is sent to.
<port>		Integer	1 through 65535	This parameter specifies the port number of the remote host.

#### 6.1.8.5 resendAll

This command is used to resend all currently active alarms to a remote host.

- 1) Ensure you are at the /AMS\_CLI/Monitoring/Alarm/AlarmsTable> level.
- 2) Enter:

**resendAll <ipAddress> <port>** ↵

where:

Variable	Field	Type	Valid Values	Description
<ipAddress>		String	1 to 80 characters	This parameter identifies the remote host that the alarm is sent to.
<port>		Integer	1 through 65535	This parameter specifies the port number of the remote host.

#### 6.1.9 Threshold

This level is used to define thresholds against alarms defined for the BroadWorks Server.



### 6.1.9.1 get

This command is used to view a list of the alarm thresholds defined on the BroadWorks server.

- 1) Ensure you are at the `/AMS_CLI/Monitoring/Alarm/Threshold>` level.
- 2) Enter:

**get [<attribute>]** ↵

where:

Variable	Field	Type	Valid Values	Description
<attribute>		MultipleChoice	alarmName	The name of an attribute to modify.
<alarmName>		String	1 to 128 characters	This parameter specifies the alarm name.

### 6.1.9.2 add

This command is used to add a new threshold against an alarm defined in the BroadWorks server.

- 1) Ensure you are at the `/AMS_CLI/Monitoring/Alarm/Threshold>` level.
- 2) Enter:

**add <alarmName> <maxNumTrapsPerTimePeriod> <timePeriodInSeconds> <status> [<attribute>]** ↵

where:

Variable	Field	Type	Valid Values	Description
<alarmName>		String	1 to 128 characters	This parameter specifies the alarm name.
<maxNumTrapsPerTimePeriod>		Integer	0 through 100000	This parameter specifies the maximum number of traps for the time period.
<timePeriodInSeconds>		Integer	1 through 2678400	This parameter specifies the time period (in seconds).
<status>		Choice	inactive, active	This parameter determines if the alarm is active or inactive.
<attribute>		MultipleChoice	problemTextVariable1, problemTextVariable2, problemTextVariable3, problemTextVariable4, problemTextVariable5	The name of an attribute to modify. Note that problem text variables can be defined.
<problemTextVariable1>		Integer	1 through 16	This parameter specifies a problem text variable filter (one of five) that is defined per threshold. When the agent compares the content of this problem text variable, the comparison is not case sensitive.

Variable	Field	Type	Valid Values	Description
<problemTextVariable2>		Integer	1 through 16	This parameter specifies a problem text variable filter (one of five) that is defined per threshold. When the agent compares the content of this problem text variable, the comparison is not case sensitive.
<problemTextVariable3>		Integer	1 through 16	This parameter specifies a problem text variable filter (one of five) that is defined per threshold. When the agent compares the content of this problem text variable, the comparison is not case sensitive.
<problemTextVariable4>		Integer	1 through 16	This parameter specifies a problem text variable filter (one of five) that is defined per threshold. When the agent compares the content of this problem text variable, the comparison is not case sensitive.
<problemTextVariable5>		Integer	1 through 16	This parameter specifies a problem text variable filter (one of five) that is defined per threshold. When the agent compares the content of this problem text variable, the comparison is not case sensitive.

#### 6.1.9.3 set

This command is used to modify a threshold against an alarm defined in the BroadWorks server.

- 1) Ensure you are at the `/AMS_CLI/Monitoring/Alarm/Threshold>` level.
- 2) Enter:

**set <alarmName> [<index>] <attribute>**

where:

Variable	Field	Type	Valid Values	Description
<alarmName>		String	1 to 128 characters	This parameter specifies the alarm name.
<index>		Integer	0 through 65000	This parameter specifies the index number.
<attribute>		MultipleChoice	maxNumTrapsPerTimePeriod, timePeriodInSeconds, problemTextVariable1, problemTextVariable2, problemTextVariable3, problemTextVariable4, problemTextVariable5, status	The name of an attribute to modify. Note that problem text variables can be defined.

Variable	Field	Type	Valid Values	Description
<maxNumTrapsPerTimePeriod>		Integer	0 through 100000	This parameter specifies the maximum number of traps for the time period.
<timePeriodInSeconds>		Integer	1 through 2678400	This parameter specifies the time period (in seconds).
<problemTextVariable1>		Integer	1 through 16	This parameter specifies a problem text variable filter (one of five) that is defined per threshold. When the agent compares the content of this problem text variable, the comparison is not case sensitive.
<problemTextVariable2>		Integer	1 through 16	This parameter specifies a problem text variable filter (one of five) that is defined per threshold. When the agent compares the content of this problem text variable, the comparison is not case sensitive.
<problemTextVariable3>		Integer	1 through 16	This parameter specifies a problem text variable filter (one of five) that is defined per threshold. When the agent compares the content of this problem text variable, the comparison is not case sensitive.
<problemTextVariable4>		Integer	1 through 16	This parameter specifies a problem text variable filter (one of five) that is defined per threshold. When the agent compares the content of this problem text variable, the comparison is not case sensitive.
<problemTextVariable5>		Integer	1 through 16	This parameter specifies a problem text variable filter (one of five) that is defined per threshold. When the agent compares the content of this problem text variable, the comparison is not case sensitive.
<status>		Choice	inactive, active	This parameter determines if the alarm is active or inactive.

#### 6.1.9.4 delete

This command is used to delete an existing alarm threshold.

- 1) Ensure you are at the `/AMS_CLI/Monitoring/Alarm/Threshold>` level.
- 2) Enter:

**delete <alarmName> [<index>]**

where:

Variable	Field	Type	Valid Values	Description
<alarmName>		String	1 to 128 characters	This parameter specifies the alarm name.
<index>		Integer	0 through 65000	This parameter specifies the index number.

#### 6.1.9.5 clear

This command is used to clear all alarm threshold attributes.

- 1) Ensure you are at the `/AMS_CLI/Monitoring/Alarm/Threshold>` level.
- 2) Enter:

**clear <alarmName> [<index>] <attribute>**

where:

Variable	Field	Type	Valid Values	Description
<alarmName>		String	1 to 128 characters	This parameter specifies the alarm name.
<index>		Integer	0 through 65000	This parameter specifies the index number.
<attribute>		MultipleChoice	problemTextVariable1, problemTextVariable2, problemTextVariable3, problemTextVariable4, problemTextVariable5	The name of an attribute to modify. Note that problem text variables can be defined.

#### 6.1.9.6 Default

This level is used to set the system default alarm threshold attributes.

##### 6.1.9.6.1 get

This command is used to view the system default alarm threshold attributes.

- 1) Ensure you are at the `/AMS_CLI/Monitoring/Alarm/Threshold/Default>` level.
- 2) Enter:

**get**

##### 6.1.9.6.2 set

This command is used to modify the system default alarm threshold attributes defined on the BroadWorks server.

- 1) Ensure you are at the `/AMS_CLI/Monitoring/Alarm/Threshold/Default>` level.
- 2) Enter:

**set <attribute>**

where:

Variable	Field	Type	Valid Values	Description
<attribute>		MultipleChoice	maxNumTrapsPerTimePeriod, timePeriodInSeconds, status, minSeverity	The name of an attribute to modify.

Variable	Field	Type	Valid Values	Description
<maxNumTrapsPerTimePeriod>		Integer	0 through 100000	This parameter specifies the maximum number of traps for the time period.
<timePeriodInSeconds>		Integer	1 through 2678400	This parameter specifies the time period (in seconds).
<status>		Choice	inactive, active	This parameter determines if the attribute is active or inactive.
<minSeverity>		Choice	informational, low, medium, high, critical	This parameter determines the severity level. Valid values include: "informational", "low", "medium", "high", and "critical".

## 6.2 PM

This level is used to navigate and view the values of the Management Information Base (MIB) nodes. Performance Measurements (PMs) are used to monitor the BroadWorks server performance, as well as, the operating system and hardware performance. To simplify navigation, PMs are organized in a tree structure.

### 6.2.1 AccessMediationServer

This level is used to navigate and view the values of the Management Information Base (MIB) nodes. Performance Measurements (PMs) are used to monitor the BroadWorks server performance, as well as, the operating system and hardware performance. To simplify navigation, PMs are organized in a tree structure.

#### 6.2.1.1 get

This command is used to view the Management Information Base (MIB) node values. MIB node values can be viewed in the following ways: All performance measurements throughout the MIB nodes tree structure. Performance measurements related to the current node. Performance measurements of a specified path.

- 1) Ensure you are at the `/AMS_CLI/Monitoring/PM/AccessMediationServer>` level.
- 2) Enter:

**get [<option>] [<path>] [<tableKey>]** ↵

where:

Variable	Field	Type	Valid Values	Description
<option>		MultipleChoice	-r, -f	This parameter displays Performance Measurements (PMs). Use the "-r" option to display all PMs for the current tree structure of the Management Information Base (MIB) nodes. Use the "-f" option to display a full description of PMs.
<path>		String	0 to 1023 characters	This parameter specifies the path of the node of the Performance Measurements (PMs) to view.

Variable	Field	Type	Valid Values	Description
<tableKey>		String	0 to 127 characters	This parameter specifies the value of a row key for a node (to display as a table).

#### 6.2.1.2 set

This command is used to modify a Management Information Base (MIB) node values.

- 1) Ensure you are at the /AMS\_CLI/Monitoring/PM/AccessMediationServer> level.
- 2) Enter:

**set <attribute>**

where:

Variable	Field	Type	Valid Values	Description
<attribute>		Choice	counter, table	The name of an attribute to modify. Use the "counter" option to set a scalar entry in a MIB (outside of a table). Use the "table" option to set a value in a table.
Variable: counter				
counter				This parameter specifies the value of an individual counter.
	<name>	String	0 to 127 characters	This nested parameter specifies the name of a node in the Management Information Base (MIB).
	<value>	Integer	0 through 2147483647	This nested parameter specifies the value of a counter.

Variable	Field	Type	Valid Values	Description
Variable: table				
table				This parameter specifies the value of the table, column, row, or table entry.
	<tableName>	String	0 to 127 characters	This nested parameter specifies the name of a table in the Management Information Base (MIB).
	<option>	Choice	all, column, row, entry	This nested parameter determines the options. Use the "all" option to set all writable values in a table at once. Use the "column" option to set all the writable values of a specific column in a table. Use the "row" option to set all the writable values of a specific row in a table. Use the "entry" option to set a specific entry in a table; specifying the row and column.
Variable: all				
all				This parameter specifies all of the values in a table.
	<value>	Integer	0 through 2147483647	This nested parameter specifies the value of a counter.
Variable: column				
column				This parameter specifies the values of a specific column in a table.
	<columnName>	String	0 to 127 characters	This nested parameter specifies the name of a column.
	<value>	Integer	0 through 2147483647	This nested parameter specifies the value of a counter.
Variable: row				
row				This parameter specifies the values of a specific row in a table.
	<rowKey>	Integer	0 through 2147483647	This nested parameter specifies the value of a row index or key.
	<value>	Integer	0 through 2147483647	This nested parameter specifies the value of a counter.
Variable: entry				

Variable	Field	Type	Valid Values	Description
entry				This parameter specifies the values of a specific entry (row and column) in a table.
	<columnName>	String	0 to 127 characters	This nested parameter specifies the name of a column.
	<rowKey>	Integer	0 through 2147483647	This nested parameter specifies the value of a row index or key.
	<value>	Integer	0 through 2147483647	This nested parameter specifies the value of a counter.

#### 6.2.1.3 cd

This command is used to navigate through the BroadWorks server Management Information Base (MIB) nodes in a manner similar to the standard "cd"(change directory) command. Use the "/"parameter to navigate back to the root. Use the ".."parameter to go back one level.

- 1) Ensure you are at the /AMS\_CLI/Monitoring/PM/AccessMediationServer> level.
- 2) Enter:

**cd [<path>]**↵

where:

Variable	Field	Type	Valid Values	Description
<path>		String	0 to 1023 characters	This parameter specifies the CLI context path.

#### 6.2.1.4 ls

This command is used to view the next BroadWorks server Management Information Base (MIB) nodes in a manner similar to the standard "ls"(list) command.

- 1) Ensure you are at the /AMS\_CLI/Monitoring/PM/AccessMediationServer> level.
- 2) Enter:

**ls [<option>] [<path>]**↵

where:

Variable	Field	Type	Valid Values	Description
<option>		MultipleChoice	-r, -n	This parameter determines the options. Use the "-r" option to show the tree structure of the Management Information Base (MIB) nodes. Use the "-n" option to show the name of the nodes containing values.
<path>		String	0 to 1023 characters	This parameter specifies the path to the node.



### 6.2.1.5 pwd

This command is used to view the current position in the BroadWorks server Management Information Base (MIB) in a manner similar to the standard "pwd"(present working directory) command.

- 1) Ensure you are at the /AMS\_CLI/Monitoring/PM/AccessMediationServer> level.
- 2) Enter:

**pwd** ↵

### 6.2.2 ConfigurationManagement

This level is used to navigate and view the values of the Management Information Base (MIB) nodes. Performance Measurements (PMs) are used to monitor the BroadWorks server performance, as well as, the operating system and hardware performance. To simplify navigation, PMs are organized in a tree structure.

#### 6.2.2.1 get

This command is used to view the Management Information Base (MIB) node values. MIB node values can be viewed in the following ways: All performance measurements throughout the MIB nodes tree structure. Performance measurements related to the current node. Performance measurements of a specified path.

- 1) Ensure you are at the /AMS\_CLI/Monitoring/PM/ConfigurationManagement> level.
- 2) Enter:

**get [<option>] [<path>] [<tableKey>]** ↵

where:

Variable	Field	Type	Valid Values	Description
<option>		MultipleChoice	-r, -f	This parameter displays Performance Measurements (PMs). Use the "-r" option to display all PMs for the current tree structure of the Management Information Base (MIB) nodes. Use the "-f" option to display a full description of PMs.
<path>		String	0 to 1023 characters	This parameter specifies the path of the node of the Performance Measurements (PMs) to view.
<tableKey>		String	0 to 127 characters	This parameter specifies the value of a row key for a node (to display as a table).

#### 6.2.2.2 set

This command is used to modify a Management Information Base (MIB) node values.

- 1) Ensure you are at the /AMS\_CLI/Monitoring/PM/ConfigurationManagement> level.
- 2) Enter:

**set <attribute>** ↵

where:

Variable	Field	Type	Valid Values	Description
<attribute>		Choice	counter, table	The name of an attribute to modify. Use the "counter" option to set a scalar entry in a MIB (outside of a table). Use the "table" option to set a value in a table.
Variable: counter				
counter				This parameter specifies the value of an individual counter.
	<name>	String	0 to 127 characters	This nested parameter specifies the name of a node in the Management Information Base (MIB).
	<value>	Integer	0 through 2147483647	This nested parameter specifies the value of a counter.

Variable	Field	Type	Valid Values	Description
Variable: table				
table				This parameter specifies the value of the table, column, row, or table entry.
	<tableName>	String	0 to 127 characters	This nested parameter specifies the name of a table in the Management Information Base (MIB).
	<option>	Choice	all, column, row, entry	This nested parameter determines the options. Use the "all" option to set all writable values in a table at once. Use the "column" option to set all the writable values of a specific column in a table. Use the "row" option to set all the writable values of a specific row in a table. Use the "entry" option to set a specific entry in a table; specifying the row and column.
Variable: all				
all				This parameter specifies all of the values in a table.
	<value>	Integer	0 through 2147483647	This nested parameter specifies the value of a counter.
Variable: column				
column				This parameter specifies the values of a specific column in a table.
	<columnName>	String	0 to 127 characters	This nested parameter specifies the name of a column.
	<value>	Integer	0 through 2147483647	This nested parameter specifies the value of a counter.
Variable: row				
row				This parameter specifies the values of a specific row in a table.
	<rowKey>	Integer	0 through 2147483647	This nested parameter specifies the value of a row index or key.
	<value>	Integer	0 through 2147483647	This nested parameter specifies the value of a counter.
Variable: entry				

Variable	Field	Type	Valid Values	Description
entry				This parameter specifies the values of a specific entry (row and column) in a table.
	<columnName>	String	0 to 127 characters	This nested parameter specifies the name of a column.
	<rowKey>	Integer	0 through 2147483647	This nested parameter specifies the value of a row index or key.
	<value>	Integer	0 through 2147483647	This nested parameter specifies the value of a counter.

#### 6.2.2.3 cd

This command is used to navigate through the BroadWorks server Management Information Base (MIB) nodes in a manner similar to the standard "cd"(change directory) command. Use the "/"parameter to navigate back to the root. Use the ".."parameter to go back one level.

- 1) Ensure you are at the /AMS\_CLI/Monitoring/PM/ConfigurationManagement> level.
- 2) Enter:

**cd [<path>]**↵

where:

Variable	Field	Type	Valid Values	Description
<path>		String	0 to 1023 characters	This parameter specifies the CLI context path.

#### 6.2.2.4 ls

This command is used to view the next BroadWorks server Management Information Base (MIB) nodes in a manner similar to the standard "ls"(list) command.

- 1) Ensure you are at the /AMS\_CLI/Monitoring/PM/ConfigurationManagement> level.
- 2) Enter:

**ls [<option>] [<path>]**↵

where:

Variable	Field	Type	Valid Values	Description
<option>		MultipleChoice	-r, -n	This parameter determines the options. Use the "-r" option to show the tree structure of the Management Information Base (MIB) nodes. Use the "-n" option to show the name of the nodes containing values.
<path>		String	0 to 1023 characters	This parameter specifies the path to the node.

### 6.2.2.5 pwd

This command is used to view the current position in the BroadWorks server Management Information Base (MIB) in a manner similar to the standard "pwd"(present working directory) command.

- 1) Ensure you are at the /AMS\_CLI/Monitoring/PM/ConfigurationManagement> level.
- 2) Enter:

**pwd** ↵

### 6.2.3 HostResources

This level is used to navigate and view the values of the Management Information Base (MIB) nodes. Performance Measurements (PMs) are used to monitor the BroadWorks server performance, as well as, the operating system and hardware performance. To simplify navigation, PMs are organized in a tree structure.

#### 6.2.3.1 get

This command is used to view the Management Information Base (MIB) node values. MIB node values can be viewed in the following ways: All performance measurements throughout the MIB nodes tree structure. Performance measurements related to the current node. Performance measurements of a specified path.

- 1) Ensure you are at the /AMS\_CLI/Monitoring/PM/HostResources> level.
- 2) Enter:

**get [<option>] [<path>] [<tableKey>]** ↵

where:

Variable	Field	Type	Valid Values	Description
<option>		MultipleChoice	-r, -f	This parameter displays Performance Measurements (PMs). Use the "-r" option to display all PMs for the current tree structure of the Management Information Base (MIB) nodes. Use the "-f" option to display a full description of PMs.
<path>		String	0 to 1023 characters	This parameter specifies the path of the node of the Performance Measurements (PMs) to view.
<tableKey>		String	0 to 127 characters	This parameter specifies the value of a row key for a node (to display as a table).

#### 6.2.3.2 set

This command is used to modify a Management Information Base (MIB) node values.

- 1) Ensure you are at the /AMS\_CLI/Monitoring/PM/HostResources> level.
- 2) Enter:

**set <attribute>** ↵

where:

Variable	Field	Type	Valid Values	Description
<attribute>		Choice	counter, table	The name of an attribute to modify. Use the "counter" option to set a scalar entry in a MIB (outside of a table). Use the "table" option to set a value in a table.
Variable: counter				
counter				This parameter specifies the value of an individual counter.
	<name>	String	0 to 127 characters	This nested parameter specifies the name of a node in the Management Information Base (MIB).
	<value>	Integer	0 through 2147483647	This nested parameter specifies the value of a counter.

Variable	Field	Type	Valid Values	Description
Variable: table				
table				This parameter specifies the value of the table, column, row, or table entry.
	<tableName>	String	0 to 127 characters	This nested parameter specifies the name of a table in the Management Information Base (MIB).
	<option>	Choice	all, column, row, entry	This nested parameter determines the options. Use the "all" option to set all writable values in a table at once. Use the "column" option to set all the writable values of a specific column in a table. Use the "row" option to set all the writable values of a specific row in a table. Use the "entry" option to set a specific entry in a table; specifying the row and column.
Variable: all				
all				This parameter specifies all of the values in a table.
	<value>	Integer	0 through 2147483647	This nested parameter specifies the value of a counter.
Variable: column				
column				This parameter specifies the values of a specific column in a table.
	<columnName>	String	0 to 127 characters	This nested parameter specifies the name of a column.
	<value>	Integer	0 through 2147483647	This nested parameter specifies the value of a counter.
Variable: row				
row				This parameter specifies the values of a specific row in a table.
	<rowKey>	Integer	0 through 2147483647	This nested parameter specifies the value of a row index or key.
	<value>	Integer	0 through 2147483647	This nested parameter specifies the value of a counter.
Variable: entry				

Variable	Field	Type	Valid Values	Description
entry				This parameter specifies the values of a specific entry (row and column) in a table.
	<columnName>	String	0 to 127 characters	This nested parameter specifies the name of a column.
	<rowKey>	Integer	0 through 2147483647	This nested parameter specifies the value of a row index or key.
	<value>	Integer	0 through 2147483647	This nested parameter specifies the value of a counter.

#### 6.2.3.3 cd

This command is used to navigate through the BroadWorks server Management Information Base (MIB) nodes in a manner similar to the standard "cd" (change directory) command. Use the "/" parameter to navigate back to the root. Use the "." parameter to go back one level.

- 1) Ensure you are at the /AMS\_CLI/Monitoring/PM/HostResources> level.
- 2) Enter:

**cd [<path>]**↵

where:

Variable	Field	Type	Valid Values	Description
<path>		String	0 to 1023 characters	This parameter specifies the CLI context path.

#### 6.2.3.4 ls

This command is used to view the next BroadWorks server Management Information Base (MIB) nodes in a manner similar to the standard "ls" (list) command.

- 1) Ensure you are at the /AMS\_CLI/Monitoring/PM/HostResources> level.
- 2) Enter:

**ls [<option>] [<path>]**↵

where:

Variable	Field	Type	Valid Values	Description
<option>		MultipleChoice	-r, -n	This parameter determines the options. Use the "-r" option to show the tree structure of the Management Information Base (MIB) nodes. Use the "-n" option to show the name of the nodes containing values.
<path>		String	0 to 1023 characters	This parameter specifies the path to the node.



### 6.2.3.5 pwd

This command is used to view the current position in the BroadWorks server Management Information Base (MIB) in a manner similar to the standard "pwd"(present working directory) command.

- 1) Ensure you are at the /AMS\_CLI/Monitoring/PM/HostResources> level.
- 2) Enter:

**pwd** ↵

### 6.2.4 LicenseManager

This level is used to navigate and view the values of the Management Information Base (MIB) nodes. Performance Measurements (PMs) are used to monitor the BroadWorks server performance, as well as, the operating system and hardware performance. To simplify navigation, PMs are organized in a tree structure.

#### 6.2.4.1 get

This command is used to view the Management Information Base (MIB) node values. MIB node values can be viewed in the following ways: All performance measurements throughout the MIB nodes tree structure. Performance measurements related to the current node. Performance measurements of a specified path.

- 1) Ensure you are at the /AMS\_CLI/Monitoring/PM/LicenseManager> level.
- 2) Enter:

**get [<option>] [<path>] [<tableKey>]** ↵

where:

Variable	Field	Type	Valid Values	Description
<option>		MultipleChoice	-r, -f	This parameter displays Performance Measurements (PMs). Use the "-r" option to display all PMs for the current tree structure of the Management Information Base (MIB) nodes. Use the "-f" option to display a full description of PMs.
<path>		String	0 to 1023 characters	This parameter specifies the path of the node of the Performance Measurements (PMs) to view.
<tableKey>		String	0 to 127 characters	This parameter specifies the value of a row key for a node (to display as a table).

#### 6.2.4.2 set

This command is used to modify a Management Information Base (MIB) node values.

- 1) Ensure you are at the /AMS\_CLI/Monitoring/PM/LicenseManager> level.
- 2) Enter:

**set <attribute>** ↵

where:

Variable	Field	Type	Valid Values	Description
<attribute>		Choice	counter, table	The name of an attribute to modify. Use the "counter" option to set a scalar entry in a MIB (outside of a table). Use the "table" option to set a value in a table.
Variable: counter				
counter				This parameter specifies the value of an individual counter.
	<name>	String	0 to 127 characters	This nested parameter specifies the name of a node in the Management Information Base (MIB).
	<value>	Integer	0 through 2147483647	This nested parameter specifies the value of a counter.

Variable	Field	Type	Valid Values	Description
Variable: table				
table				This parameter specifies the value of the table, column, row, or table entry.
	<tableName>	String	0 to 127 characters	This nested parameter specifies the name of a table in the Management Information Base (MIB).
	<option>	Choice	all, column, row, entry	This nested parameter determines the options. Use the "all" option to set all writable values in a table at once. Use the "column" option to set all the writable values of a specific column in a table. Use the "row" option to set all the writable values of a specific row in a table. Use the "entry" option to set a specific entry in a table; specifying the row and column.
Variable: all				
all				This parameter specifies all of the values in a table.
	<value>	Integer	0 through 2147483647	This nested parameter specifies the value of a counter.
Variable: column				
column				This parameter specifies the values of a specific column in a table.
	<columnName>	String	0 to 127 characters	This nested parameter specifies the name of a column.
	<value>	Integer	0 through 2147483647	This nested parameter specifies the value of a counter.
Variable: row				
row				This parameter specifies the values of a specific row in a table.
	<rowKey>	Integer	0 through 2147483647	This nested parameter specifies the value of a row index or key.
	<value>	Integer	0 through 2147483647	This nested parameter specifies the value of a counter.
Variable: entry				

Variable	Field	Type	Valid Values	Description
entry				This parameter specifies the values of a specific entry (row and column) in a table.
	<columnName>	String	0 to 127 characters	This nested parameter specifies the name of a column.
	<rowKey>	Integer	0 through 2147483647	This nested parameter specifies the value of a row index or key.
	<value>	Integer	0 through 2147483647	This nested parameter specifies the value of a counter.

#### 6.2.4.3 cd

This command is used to navigate through the BroadWorks server Management Information Base (MIB) nodes in a manner similar to the standard "cd"(change directory) command. Use the "/"parameter to navigate back to the root. Use the ".."parameter to go back one level.

- 1) Ensure you are at the /AMS\_CLI/Monitoring/PM/LicenseManager> level.
- 2) Enter:

**cd [<path>]**↵

where:

Variable	Field	Type	Valid Values	Description
<path>		String	0 to 1023 characters	This parameter specifies the CLI context path.

#### 6.2.4.4 ls

This command is used to view the next BroadWorks server Management Information Base (MIB) nodes in a manner similar to the standard "ls"(list) command.

- 1) Ensure you are at the /AMS\_CLI/Monitoring/PM/LicenseManager> level.
- 2) Enter:

**ls [<option>] [<path>]**↵

where:

Variable	Field	Type	Valid Values	Description
<option>		MultipleChoice	-r, -n	This parameter determines the options. Use the "-r" option to show the tree structure of the Management Information Base (MIB) nodes. Use the "-n" option to show the name of the nodes containing values.
<path>		String	0 to 1023 characters	This parameter specifies the path to the node.

#### 6.2.4.5 pwd

This command is used to view the current position in the BroadWorks server Management Information Base (MIB) in a manner similar to the standard "pwd"(present working directory) command.

- 1) Ensure you are at the /AMS\_CLI/Monitoring/PM/LicenseManager> level.
- 2) Enter:

**pwd** ↵

#### 6.2.5 Mib-II

This level is used to navigate and view the values of the Management Information Base (MIB) nodes. Performance Measurements (PMs) are used to monitor the BroadWorks server performance, as well as, the operating system and hardware performance. To simplify navigation, PMs are organized in a tree structure.

##### 6.2.5.1 get

This command is used to view the Management Information Base (MIB) node values. MIB node values can be viewed in the following ways: All performance measurements throughout the MIB nodes tree structure. Performance measurements related to the current node. Performance measurements of a specified path.

- 1) Ensure you are at the /AMS\_CLI/Monitoring/PM/Mib-II> level.
- 2) Enter:

**get [<option>] [<path>] [<tableKey>]** ↵

where:

Variable	Field	Type	Valid Values	Description
<option>		MultipleChoice	-r, -f	This parameter displays Performance Measurements (PMs). Use the "-r" option to display all PMs for the current tree structure of the Management Information Base (MIB) nodes. Use the "-f" option to display a full description of PMs.
<path>		String	0 to 1023 characters	This parameter specifies the path of the node of the Performance Measurements (PMs) to view.
<tableKey>		String	0 to 127 characters	This parameter specifies the value of a row key for a node (to display as a table).

##### 6.2.5.2 set

This command is used to modify a Management Information Base (MIB) node values.

- 1) Ensure you are at the /AMS\_CLI/Monitoring/PM/Mib-II> level.
- 2) Enter:

**set <attribute>** ↵

where:

Variable	Field	Type	Valid Values	Description
<attribute>		Choice	counter, table	The name of an attribute to modify. Use the "counter" option to set a scalar entry in a MIB (outside of a table). Use the "table" option to set a value in a table.
Variable: counter				
counter				This parameter specifies the value of an individual counter.
	<name>	String	0 to 127 characters	This nested parameter specifies the name of a node in the Management Information Base (MIB).
	<value>	Integer	0 through 2147483647	This nested parameter specifies the value of a counter.

Variable	Field	Type	Valid Values	Description
Variable: table				
table				This parameter specifies the value of the table, column, row, or table entry.
	<tableName>	String	0 to 127 characters	This nested parameter specifies the name of a table in the Management Information Base (MIB).
	<option>	Choice	all, column, row, entry	This nested parameter determines the options. Use the "all" option to set all writable values in a table at once. Use the "column" option to set all the writable values of a specific column in a table. Use the "row" option to set all the writable values of a specific row in a table. Use the "entry" option to set a specific entry in a table; specifying the row and column.
Variable: all				
all				This parameter specifies all of the values in a table.
	<value>	Integer	0 through 2147483647	This nested parameter specifies the value of a counter.
Variable: column				
column				This parameter specifies the values of a specific column in a table.
	<columnName>	String	0 to 127 characters	This nested parameter specifies the name of a column.
	<value>	Integer	0 through 2147483647	This nested parameter specifies the value of a counter.
Variable: row				
row				This parameter specifies the values of a specific row in a table.
	<rowKey>	Integer	0 through 2147483647	This nested parameter specifies the value of a row index or key.
	<value>	Integer	0 through 2147483647	This nested parameter specifies the value of a counter.
Variable: entry				

Variable	Field	Type	Valid Values	Description
entry				This parameter specifies the values of a specific entry (row and column) in a table.
	<columnName>	String	0 to 127 characters	This nested parameter specifies the name of a column.
	<rowKey>	Integer	0 through 2147483647	This nested parameter specifies the value of a row index or key.
	<value>	Integer	0 through 2147483647	This nested parameter specifies the value of a counter.

#### 6.2.5.3 cd

This command is used to navigate through the BroadWorks server Management Information Base (MIB) nodes in a manner similar to the standard "cd"(change directory) command. Use the "/"parameter to navigate back to the root. Use the ".."parameter to go back one level.

- 1) Ensure you are at the /AMS\_CLI/Monitoring/PM/Mib-II> level.
- 2) Enter:

**cd [<path>]**↵

where:

Variable	Field	Type	Valid Values	Description
<path>		String	0 to 1023 characters	This parameter specifies the CLI context path.

#### 6.2.5.4 ls

This command is used to view the next BroadWorks server Management Information Base (MIB) nodes in a manner similar to the standard "ls"(list) command.

- 1) Ensure you are at the /AMS\_CLI/Monitoring/PM/Mib-II> level.
- 2) Enter:

**ls [<option>] [<path>]**↵

where:

Variable	Field	Type	Valid Values	Description
<option>		MultipleChoice	-r, -n	This parameter determines the options. Use the "-r" option to show the tree structure of the Management Information Base (MIB) nodes. Use the "-n" option to show the name of the nodes containing values.
<path>		String	0 to 1023 characters	This parameter specifies the path to the node.



### 6.2.5.5 pwd

This command is used to view the current position in the BroadWorks server Management Information Base (MIB) in a manner similar to the standard "pwd"(present working directory) command.

- 1) Ensure you are at the /AMS\_CLI/Monitoring/PM/Mib-II> level.
- 2) Enter:

**pwd** ↵

### 6.2.6 UCD-SNMP

This level is used to navigate and view the values of the Management Information Base (MIB) nodes. Performance Measurements (PMs) are used to monitor the BroadWorks server performance, as well as, the operating system and hardware performance. To simplify navigation, PMs are organized in a tree structure.

#### 6.2.6.1 get

This command is used to view the Management Information Base (MIB) node values. MIB node values can be viewed in the following ways: All performance measurements throughout the MIB nodes tree structure. Performance measurements related to the current node. Performance measurements of a specified path.

- 1) Ensure you are at the /AMS\_CLI/Monitoring/PM/UCD-SNMP> level.
- 2) Enter:

**get [<option>] [<path>] [<tableKey>]** ↵

where:

Variable	Field	Type	Valid Values	Description
<option>		MultipleChoice	-r, -f	This parameter displays Performance Measurements (PMs). Use the "-r" option to display all PMs for the current tree structure of the Management Information Base (MIB) nodes. Use the "-f" option to display a full description of PMs.
<path>		String	0 to 1023 characters	This parameter specifies the path of the node of the Performance Measurements (PMs) to view.
<tableKey>		String	0 to 127 characters	This parameter specifies the value of a row key for a node (to display as a table).

#### 6.2.6.2 set

This command is used to modify a Management Information Base (MIB) node values.

- 1) Ensure you are at the /AMS\_CLI/Monitoring/PM/UCD-SNMP> level.
- 2) Enter:

**set <attribute>** ↵

where:

Variable	Field	Type	Valid Values	Description
<attribute>		Choice	counter, table	The name of an attribute to modify. Use the "counter" option to set a scalar entry in a MIB (outside of a table). Use the "table" option to set a value in a table.
Variable: counter				
counter				This parameter specifies the value of an individual counter.
	<name>	String	0 to 127 characters	This nested parameter specifies the name of a node in the Management Information Base (MIB).
	<value>	Integer	0 through 2147483647	This nested parameter specifies the value of a counter.

Variable	Field	Type	Valid Values	Description
Variable: table				
table				This parameter specifies the value of the table, column, row, or table entry.
	<tableName>	String	0 to 127 characters	This nested parameter specifies the name of a table in the Management Information Base (MIB).
	<option>	Choice	all, column, row, entry	This nested parameter determines the options. Use the "all" option to set all writable values in a table at once. Use the "column" option to set all the writable values of a specific column in a table. Use the "row" option to set all the writable values of a specific row in a table. Use the "entry" option to set a specific entry in a table; specifying the row and column.
Variable: all				
all				This parameter specifies all of the values in a table.
	<value>	Integer	0 through 2147483647	This nested parameter specifies the value of a counter.
Variable: column				
column				This parameter specifies the values of a specific column in a table.
	<columnName>	String	0 to 127 characters	This nested parameter specifies the name of a column.
	<value>	Integer	0 through 2147483647	This nested parameter specifies the value of a counter.
Variable: row				
row				This parameter specifies the values of a specific row in a table.
	<rowKey>	Integer	0 through 2147483647	This nested parameter specifies the value of a row index or key.
	<value>	Integer	0 through 2147483647	This nested parameter specifies the value of a counter.
Variable: entry				

Variable	Field	Type	Valid Values	Description
entry				This parameter specifies the values of a specific entry (row and column) in a table.
	<columnName>	String	0 to 127 characters	This nested parameter specifies the name of a column.
	<rowKey>	Integer	0 through 2147483647	This nested parameter specifies the value of a row index or key.
	<value>	Integer	0 through 2147483647	This nested parameter specifies the value of a counter.

#### 6.2.6.3 cd

This command is used to navigate through the BroadWorks server Management Information Base (MIB) nodes in a manner similar to the standard "cd"(change directory) command. Use the "/"parameter to navigate back to the root. Use the ".."parameter to go back one level.

- 1) Ensure you are at the /AMS\_CLI/Monitoring/PM/UCD-SNMP> level.
- 2) Enter:

**cd [<path>]**↵

where:

Variable	Field	Type	Valid Values	Description
<path>		String	0 to 1023 characters	This parameter specifies the CLI context path.

#### 6.2.6.4 ls

This command is used to view the next BroadWorks server Management Information Base (MIB) nodes in a manner similar to the standard "ls"(list) command.

- 1) Ensure you are at the /AMS\_CLI/Monitoring/PM/UCD-SNMP> level.
- 2) Enter:

**ls [<option>] [<path>]**↵

where:

Variable	Field	Type	Valid Values	Description
<option>		MultipleChoice	-r, -n	This parameter determines the options. Use the "-r" option to show the tree structure of the Management Information Base (MIB) nodes. Use the "-n" option to show the name of the nodes containing values.
<path>		String	0 to 1023 characters	This parameter specifies the path to the node.

#### 6.2.6.5 pwd

This command is used to view the current position in the BroadWorks server Management Information Base (MIB) in a manner similar to the standard "pwd" (present working directory) command.

- 1) Ensure you are at the /AMS\_CLI/Monitoring/PM/UCD-SNMP> level.
- 2) Enter:

**pwd** ↵

## 7 Maintenance

This level is used to view and modify maintenance entries to check the general status of the system and the software that is currently running.

### 7.1 ContainerOptions

This level is used to view and modify special configuration options for Java containers. These options are typically used to control specific behaviors introduced by patches.

#### 7.1.1 get

This command is used to view the list of container options and their values.

- 1) Ensure you are at the `/AMS_CLI/Maintenance/ContainerOptions>` level.
- 2) Enter:

**get** ↵

#### 7.1.2 add

This command is used to add a new container option.

- 1) Ensure you are at the `/AMS_CLI/Maintenance/ContainerOptions>` level.
- 2) Enter:

**add <container> <name> <value>** ↵

where:

Variable	Field	Type	Valid Values	Description
<container>		Choice	AMSSignalingGateway, AMSTurn Server, keepalived, LogServer, snmpd, lmd, configd, platform	This parameter determines the type of container.
<name>		String	1 to 80 characters	This parameter specifies the option name.
<value>		String	1 to 512 characters	This parameter specifies the option value.

#### 7.1.3 set

This command is used to modify an existing container option.

- 1) Ensure you are at the `/AMS_CLI/Maintenance/ContainerOptions>` level.
- 2) Enter:

**set <container> <name> <value>** ↵

where:

Variable	Field	Type	Valid Values	Description
<container>		Choice	AMSSignalingGateway, AMSTurn Server, keepalived, LogServer, snmpd, lmd, configd, platform	This parameter determines the type of container.
<name>		String	1 to 80 characters	This parameter specifies the option name.

Variable	Field	Type	Valid Values	Description
<value>		String	1 to 512 characters	This parameter specifies the option value.

#### 7.1.4 delete

This command is used to delete a container option.

- 1) Ensure you are at the `/AMS_CLI/Maintenance/ContainerOptions>` level.
- 2) Enter:

**delete <container> <name>** ↵

where:

Variable	Field	Type	Valid Values	Description
<container>		Choice	AMSSignalingGateway, AMSTurn Server, keepalived, LogServer, snmpd, lmd, configd, platform	This parameter determines the type of container.
<name>		String	1 to 80 characters	This parameter specifies the option name.

#### 7.1.5 removeObsolete

This command is used to remove the container options that are documented as obsolete.

- 1) Ensure you are at the `/AMS_CLI/Maintenance/ContainerOptions>` level.
- 2) Enter:

**removeObsolete** ↵

#### 7.1.6 showOption

This command is used to view information about a specific container option.

- 1) Ensure you are at the `/AMS_CLI/Maintenance/ContainerOptions>` level.
- 2) Enter:

**showOption <name>** ↵

where:

Variable	Field	Type	Valid Values	Description
<name>		String	1 to 80 characters	This parameter specifies the name of a container option. The container option specified will be searched across all available containers.

#### 7.1.7 showOptions

This command is used to view a list of container options or display information about a specific container.

- 1) Ensure you are at the `/AMS_CLI/Maintenance/ContainerOptions>` level.
- 2) Enter:

**showOptions [<criteria>]** ↵

where:

Variable	Field	Type	Valid Values	Description
<criteria>		MultipleChoice	filter, container	This parameter specifies the criteria of the container options and the name of the container to search.
Variable: filter				
filter				This parameter filters the output of the container option definitions to contain the definitions currently available or the obsolete definitions. When omitted, it displays all container options.
	<content>	Choice	available, obsolete	This parameter determines if the filter should match available or obsolete container options.
Variable: container				
container				This parameter is used to view the container options that apply to the specified container. If omitted, all the container options currently available for this server are listed.
	<container Name>	Choice	AMSSignalingGateway, AMSTurn Server, keepalived, LogServer, snmpd, lmd, configd, platform	Specifies the name of a specific container.

## 7.2 Extraview

This level is used to interact with ExtraView (BroadSoft's problem reporting system). It is used to upload a file as an attachment to an ExtraView ticket to be sent to BroadSoft for troubleshooting.

### 7.2.1 upload

This command is used to upload a document from the local server to an existing ExtraView ticket.

- 1) Ensure you are at the /AMS\_CLI/Maintenance/Extraview> level.
- 2) Enter:

**upload <EVUserId> <EVId> <FileName> <FileDescription>**

where:

Variable	Field	Type	Valid Values	Description
<EVUserId>		String	2 to 80 characters	This parameter specifies the ExtraView user ID.
<EVId>		Integer	10000 through 999999	This parameter specifies the ExtraView ID number.
<FileName>		String	1 to 300 characters	This parameter specifies the file name of the file to be uploaded.



Variable	Field	Type	Valid Values	Description
<File Description>		String	1 to 80 characters	This parameter specifies the description of the file to be uploaded.

## 7.3 ManagedObjects

This level is used to view and modify Managed Objects (MOs).

### 7.3.1 get

This command is used to view Managed Object (MO)-related information.

- 1) Ensure you are at the `/AMS_CLI/Maintenance/ManagedObjects>` level.
- 2) Enter:

**get <option>** ↵

where:

Variable	Field	Type	Valid Values	Description
<option>		Choice	broadworks, devices, versions	This parameter determines the option. *Use the "broadworks" option to view information about the BroadWorks component installed on the current host. *Use the "devices" option to view information about the devices configured for use with the current host. *Use the "versions" option to view information about the version of the BroadWorks component installed on the current host.
Variable: broadworks				
broadworks				This parameter displays information on the active BroadWorks server: identity, version, applications, web container, and third-party software.
	<attribute>	Choice	full	The name of an attribute. Use the "full" option to get an extended view of the status of the BroadWorks server.

Variable	Field	Type	Valid Values	Description
Variable: devices				
devices				This parameter displays device information.
	<filters>	MultipleChoice	deviceName, protocol, device Type, adminState, opState	This nested parameter determines the filter to use to narrow the result of the get command.
	<deviceName>	String	1 to 40 characters	This nested parameter specifies the name of a device. When it is used, the GET command applies a case-sensitive prefix match on all device names.
	<protocol>	String	1 to 30 characters	This nested parameter specifies the protocol supported by the device.
	<deviceType>	String	1 to 40 characters	This nested parameter specifies the type of the device to display.
	<adminState>	Choice	locked, locking, unlocked	This nested parameter specifies the administrative state of the device.
	<opState>	Choice	enabled, disabled	This nested parameter specifies the operating state of the device.
<versions>		Choice	current, all	This parameter displays information on the installed software on this server.

### 7.3.2 detail

This command is used to display detailed information about an application. Data presented in the output includes the application name, version, install date, upgrade mode, status, and description.

- 1) Ensure you are at the `/AMS_CLI/Maintenance/ManagedObjects>` level.
- 2) Enter:

**detail <type>**

where:

Variable	Field	Type	Valid Values	Description
<type>		Choice	application	This parameter specifies the type of element.

Variable	Field	Type	Valid Values	Description
Variable: application				
application				This parameter displays information of a BroadWorks application.
	<name>	String	1 to 255 characters	This nested parameter specifies the name of the application.
	<version>	String	1 to 80 characters	This nested parameter specifies the version of the application.

### 7.3.3 set

This command is used to modify the Managed Object (MO)-related attributes.

- 1) Ensure you are at the `/AMS_CLI/Maintenance/ManagedObjects>` level.
- 2) Enter:

**set [<forceOption>] <option>**

where:

Variable	Field	Type	Valid Values	Description
<forceOption>		Choice	force	This parameter determines the force option. Use the "force" option to apply the change immediately. Otherwise, a restart of the application is required for the changes to apply.
<option>		Choice	activeSoftwareVersion	This parameter determines the options.

Variable	Field	Type	Valid Values	Description
Variable: activeSoftwareVersion				
activeSoftwareVersion				This parameter specifies the active software version.
	<type>	Choice	server	This nested parameter determines the version of the server. Use this option when a different version of the server needs to be activated. The software automatically determines if it needs to upgrade or rollback.
Variable: server				
server				This parameter specifies server-related information.
	<identity>	String	1 to 80 characters	This nested parameter specifies the name of the server identity to set to "active". It is usually the short name of a BroadWorks server (for example, Profile Server, Network Server, and so on).
	<version>	String	1 to 80 characters	This nested parameter specifies the version of the software to activate.
	<revert>	Choice	revert	This parameter provides the ability to revert to a previous release. Use the "revert" option to perform a revert to the specified previous release. Otherwise, a rollback to the specified previous release is performed.
Variable: revert				
revert				This parameter provides the ability to revert to a previous release. Use the "revert" option to perform a revert to the specified previous release. Otherwise, a rollback to the specified previous release is performed.
	<backup Location>	String	0 to 80 characters	This nested parameter specifies the full path of the database backup file to use when performing a revert.

### 7.3.4 activate

This command is used to activate an application. Active applications can be configured, deployed, and started.

- 1) Ensure you are at the `/AMS_CLI/Maintenance/ManagedObjects>` level.
- 2) Enter:

**activate <type>**

where:

Variable	Field	Type	Valid Values	Description
<type>		Choice	application	This parameter determines the type. Use the "application" option to activate a BroadWorks application.
Variable: application				
application				This parameter determines the "application" option to activate a BroadWorks application.
	<name>	String	1 to 80 characters	This nested parameter specifies the name of the application.
	<version>	String	1 to 80 characters	This nested parameter specifies the application version.
	<contextPath>	String	1 to 80 characters	This nested parameter specifies the context path.

### 7.3.5 deactivate

This command is used to deactivate an application.

- 1) Ensure you are at the `/AMS_CLI/Maintenance/ManagedObjects>` level.
- 2) Enter:

**deactivate <type>**

where:

Variable	Field	Type	Valid Values	Description
<type>		Choice	application	This parameter determines which software is deactivated.
Variable: application				
application				This parameter determines the "application" option to deactivate a BroadWorks application.
	<nameOr ContextPath>	String	1 to 255 characters	The name or context path of the application.

### 7.3.6 deploy

This command is used to deploy an application.

- 1) Ensure you are at the /AMS\_CLI/Maintenance/ManagedObjects> level.
- 2) Enter:

**deploy <type>** ↵

where:

Variable	Field	Type	Valid Values	Description
<type>		Choice	application	This parameter determines which software type is deployed.
Variable: application				
application				This parameter determines the "application" option to deploy a BroadWorks application.
	<nameOrContextPath>	String	1 to 255 characters	This nested parameter specifies the name or context path of the application.

### 7.3.7 lock

This command is used to lock the server. Upon normal completion, the server goes into the "Lock" state. During the stop process, the server temporarily goes into the "Locking" state. This command can be run when the server is in the "Unlock" state. Refer to the BroadWorks Software Management Guide for further details on server state management.

- 1) Ensure you are at the /AMS\_CLI/Maintenance/ManagedObjects> level.
- 2) Enter:

**lock [<option>] [<type>]** ↵

where:

Variable	Field	Type	Valid Values	Description
<option>		Choice	force	This parameter determines the option. Use the "force" option if the lock must be enforced even if the lock target is not ready to go into the "Lock" state.
<type>		Choice	application	This parameter specifies the type.

Variable	Field	Type	Valid Values	Description
Variable: application				
application				This parameter determines the "application" option to lock a BroadWorks application. If a specific application must be locked individually, this parameter must be set. This is an optional parameter and, if not set, the lock applies to the whole server.
	<name>	String	1 to 80 characters	This nested parameter specifies the name of an application.

### 7.3.8 start

This command is used to start the server. Upon normal completion, the server goes into an "Unlock" state. Note that this command can only be run when the server is in a "Shutdown" state.

- 1) Ensure you are at the `/AMS_CLI/Maintenance/ManagedObjects>` level.
- 2) Enter:

**start [<type>]** ↵

where:

Variable	Field	Type	Valid Values	Description
<type>		Choice	application	This parameter specifies the type. If a specific application or the web container must be started individually, this parameter must be set. This is an optional parameter and, if not set, the start applies to the whole server.
Variable: application				
application				This parameter determines the "application" option to start a BroadWorks application. If a specific application must be started individually, this parameter must be set. This is an optional parameter and, if not set, the start applies to the whole server.
	<name>	String	1 to 80 characters	This nested parameter specifies the name of an application.

### 7.3.9 stop

This command is used to stop the server. Upon normal completion, the server goes into a "Shutdown" state. During the stop process, the server temporarily goes into the "Shuttingdown" state. This command can be run from any state.

- 1) Ensure you are at the `/AMS_CLI/Maintenance/ManagedObjects>` level.

2) Enter:

**stop [<option>] [<type>]**↵

where:

Variable	Field	Type	Valid Values	Description
<option>		Choice	force	This parameter determines the option. Use the "force" option if the stop must be enforced even if the target is not ready to go into the "Stopped" state.
<type>		Choice	application	This parameter specifies the type. If a specific application or the web container must be started individually, this parameter must be set. This is an optional parameter and, if not set, the start applies to the whole server.
Variable: application				
application				This parameter determines the "application" option to stop a BroadWorks application. If a specific application must be started individually, this parameter must be set. This is an optional parameter and, if not set, the start applies to the whole server.
	<name>	String	1 to 80 characters	This nested parameter specifies the name of an application.

### 7.3.10 undeploy

This command is used to undeploy an application.

1) Ensure you are at the /AMS\_CLI/Maintenance/ManagedObjects> level.

2) Enter:

**undeploy <type>**↵

where:

Variable	Field	Type	Valid Values	Description
<type>		Choice	application	This parameter specifies the type. If a specific application or the web container must be started individually, this parameter must be set. This is an optional parameter and, if not set, the start applies to the whole server.



Variable	Field	Type	Valid Values	Description
Variable: application				
application				This parameter determines the "application" option to undeploy a BroadWorks application. Use the "application" option to undeploy a BroadWorks application.
	<nameOr ContextPath>	String	1 to 255 characters	This nested parameter specifies the name or context path of the application.

### 7.3.11 unlock

This command is used to unlock the BroadWorks server. Once the command is executed, the server goes into the Unlock state. This command is executed when the server is in the Lock state.

- 1) Ensure you are at the `/AMS_CLI/Maintenance/ManagedObjects>` level.
- 2) Enter:

**unlock [<type>]** ↵

where:

Variable	Field	Type	Valid Values	Description
<type>		Choice	application	This parameter specifies the type. If a specific application or the web container must be started individually, this parameter must be set. This is an optional parameter and, if not set, the start applies to the whole server.
Variable: application				
application				This parameter determines the "application" option to unlock a BroadWorks application.
	<name>	String	1 to 80 characters	This nested parameter specifies the name of an application.

## 7.4 Patching

This level is used to display detailed information about patches or patch bundles. It is also used to apply patches, check peers, execute operations, modify files, list patches or patch bundles, display the history of a patch, refresh the patch database or remove a patch. This level provides additional services for patches such as showing more details and performing batch operations based on a given filter (for example, apply or remove installed patches and delete inactive patches).

### 7.4.1 detail

This command is used to display detailed information for the requested patch or patch bundle. Data presented in the output for a patch includes the patch name, the current state of the patch, and the date since it reached this current state. It also shows the first level of patches on which it depends

(dependencies), the patches directly depending on it (dependents) and the name of the patch bundle(s) in which it is found. Data presented in the output for a patch bundle displays a list of the bundled patches and their states.

- 1) Ensure you are at the `/AMS_CLI/Maintenance/Patching>` level.
- 2) Enter:

**detail <name>** ↵

where:

Variable	Field	Type	Valid Values	Description
<name>		String	1 to 80 characters	This parameter specifies the name of the patch or patch bundle.

#### 7.4.2 apply

This command is used to change the state of installed patches to "active". When an error occurs, all patches are brought back to their initial state.

- 1) Ensure you are at the `/AMS_CLI/Maintenance/Patching>` level.
- 2) Enter:

**apply <names>** ↵

where:

Variable	Field	Type	Valid Values	Description
<names>		String	1 to 1023 characters	This parameter specifies names of the patches or bundles to apply delimited by colons.

#### 7.4.3 checkPeer

This command is used to verify (on a redundant system) that all servers have the same active patches. The command scans all peers and compiles a list of all active patches on all servers. It then compares the list of each individual server with the full list and displays any missing patches for a particular server. This command is exclusive meaning that requests for any other command, invoked by any client, are rejected while this command is executing.

- 1) Ensure you are at the `/AMS_CLI/Maintenance/Patching>` level.
- 2) Enter:

**checkPeer** ↵

#### 7.4.4 execute

This command is used to commit patch operations and make them effective. This command commits all changes since the last time the "execute" was called, and makes them effective. Modifications to patches states are not active until this call is made. This command is exclusive meaning that requests for any other command, invoked by any client, are rejected while this command is executing.

- 1) Ensure you are at the `/AMS_CLI/Maintenance/Patching>` level.
- 2) Enter:

**execute [<force>]** ↵

where:

Variable	Field	Type	Valid Values	Description
<force>		String	force	This parameter commits the patch operations and makes them effective.

#### 7.4.5 getModifiedFile

This command is used to list the patches that modified the file requested in the query.

- 1) Ensure you are at the /AMS\_CLI/Maintenance/Patching> level.
- 2) Enter:

**getModifiedFile <fileNameContains>** ↵

where:

Variable	Field	Type	Valid Values	Description
<fileNameContains>		String	1 to 256 characters	This parameter specifies a pattern that is contained in one or more file names.

#### 7.4.6 listBundle

This command is used to display a list of patch bundles or one or more specific patch bundles.

- 1) Ensure you are at the /AMS\_CLI/Maintenance/Patching> level.
- 2) Enter:

**listBundle [<criteria>]** ↵

where:

Variable	Field	Type	Valid Values	Description
<criteria>		Choice	bundleNameContains	This parameter specifies the criteria. Enter the name of the desired patch bundle or a given pattern that matches a pattern found in one or more patch bundle names.
Variable: bundleNameContains				
bundleNameContains				This parameter specifies the filtering option. Use "bundleNameContains" to filter based on the bundle name.
	<bundleName>	String	1 to 80 characters	Specifies a pattern that is contained in a number of patch bundle names.

#### 7.4.7 listPatch

This command is used to display a list of patches along with their states. All patches appear no matter if they were installed or applied individually or as part of a patch bundle. Data presented in the output of this command includes the patch name, the current state of the patch, and the date since the patch reached the indicated state. Search criteria can be used to narrow the output of results. The patchNameContains

is used to list patches matching a given pattern in their name, whereas the `currentState` is used to list patches with a specified state.

- 1) Ensure you are at the `/AMS_CLI/Maintenance/Patching>` level.
- 2) Enter:

**listPatch [<criteria>]** ↵

where:

Variable	Field	Type	Valid Values	Description
<criteria>		MultipleChoice	patchNameContains, currentState	This parameter specifies the criteria. Enter the name of the desired patch bundle or a given pattern that matches a pattern found in one or more patch bundle names.
Variable: patchNameContains				
patchNameContains				This parameter specifies a filter based on the content of the patch name.
	<patchName>	String	1 to 80 characters	Specifies a pattern that is contained in a number of patch names.
Variable: currentState				
currentState				This parameter specifies a filter based on the current state of a patch.
	<state>	Choice	installed, active, installedPending Active, activePendingInstalled, installedMissingDependencies, missing	The state of the patch.

#### 7.4.8 listRelation

This command displays all dependencies or dependents of a given patch along with their states.

- 1) Ensure you are at the `/AMS_CLI/Maintenance/Patching>` level.
- 2) Enter:

**listRelation <option> <patchName>** ↵

where:

Variable	Field	Type	Valid Values	Description
<option>		Choice	dependencies, dependencyOf	This parameter determines the type of relation to display. Values include "dependencies" and "dependencyOf". Use the "dependencies" option to view all patches which are required to be applied before the given patch. Use the "dependencyOf" option to view all patches which are required to be removed before the given patch.
<patchName>		String	1 to 80 characters	This parameter specifies the name of the patch.

### 7.4.9 patchHistory

This command is used to display the history of one or more patches. Data presented in the output of this command includes the patch name, the date of an event for the patch, and the state of the patch at that time. Search criteria can be used to narrow the output of results. The "dateStartsAt" criterion is used to set a starting date so that the results do not include events prior to this date. It is also possible to retrieve the history of patches matching a given pattern in their name, or a combination of both criteria.

- 1) Ensure you are at the /AMS\_CLI/Maintenance/Patching> level.
- 2) Enter:

**patchHistory [<criteria>]** ↵

where:

Variable	Field	Type	Valid Values	Description
<criteria>		MultipleChoice	patchNameContains, dateStarts At	This parameter specifies the name of the desired patch bundle or a given pattern that matches a pattern found in one or more patch bundle names.
Variable: patchNameContains				
patchNameContains				This parameter specifies a filter based on the content of the patch name.
	<patchName>	String	1 to 80 characters	Specifies a pattern that is contained in a number of patch names.

Variable	Field	Type	Valid Values	Description
Variable: dateStartsAt				
dateStartsAt				Filter based start at date.
	<month>	Integer	1 through 12	This nested parameter specifies the the month of starting date so that the results do not include events prior to this date.
	<day>	Integer	1 through 31	This nested parameter specifies the day of starting date so that the results do not include events prior to this date.
	<year>	Integer	2000 through 2014	This nested parameter specifies the year of starting date so that the results do not include events prior to this date.

#### 7.4.10 refresh

This command is used to refresh the patch database. This command is exclusive, which means that requests for any other command, invoked by any client, are rejected while the refresh command is executing. This command analyzes the patches installed on the system. From the gathered data, it updates the internal database and processes dependencies.

- 1) Ensure you are at the `/AMS_CLI/Maintenance/Patching>` level.
- 2) Enter:

**refresh** ↵

#### 7.4.11 remove

This command is used to change the state of active patches to "installed." When an error occurs, all patches are brought back to their initial state.

- 1) Ensure you are at the `/AMS_CLI/Maintenance/Patching>` level.
- 2) Enter:

**remove <names>** ↵

where:

Variable	Field	Type	Valid Values	Description
<names>		String	1 to 1023 characters	This parameter specifies the names of the patches or bundles to remove delimited by colons.

### 7.5 Scheduler

This level is used to view and modify scheduler entries in the system.

#### 7.5.1 get

This command is used to view the list of scheduled tasks.

- 1) Ensure you are at the `/AMS_CLI/Maintenance/Scheduler>` level.

2) Enter:

**get** ↵

### 7.5.2 add

This command is used to add a new scheduled task. You can configure a task to execute on a minute, day, or date basis. Any given task can have multiple-scheduled entries. Following are examples: \* The command "taskx minute 2" means execute the task "x" every two minutes. \* The command "taskx day monday 0 30" means execute task "x" every Monday at 0h30. \* The command "taskx date 15 2 15" means execute task "x" on the 15th of each month at 2h15. "NOTE": To minimize the impact of running concurrent scheduled tasks, use minutes that are different between tasks and that do not match the hour (when applicable).

1) Ensure you are at the /AMS\_CLI/Maintenance/Scheduler> level.

2) Enter:

**add <tasks> <frequency>** ↵

where:

Variable	Field	Type	Valid Values	Description
<tasks>		Choice	dbMaint, healthmon, backup, autoCleanup, regAudit, dbSync Check, cpuMon, tech-support, check_dbpages, serviceLicense Collect, fileCollector, healthmon Light, btluReport, securityMon	This parameter specifies the BroadWorks maintenance task type.
<frequency>		Choice	minute, daily, day, date	This parameter specifies the task frequency: * select "minute" to execute the task on a per-minute basis; * "daily" to execute the task every day at a specific hour and minute; * "day" to execute the task once a week on a specific day, hour, and minute; * or "date" to execute the task once a month on the specified date.
Variable: minute				
minute				This parameter specifies the minute.
	<value>	Choice	1, 2, 3, 4, 5, 6, 10, 12, 15, 30, 60, 120, 180, 240, 360, 480, 720, 1440	This nested parameter specifies the frequency in minutes. For example, "1" means every minute, "2" means every two minutes and so on.
	<offset>	Integer	0 through 59	This nested parameter specifies the start of the hour offset value in minutes. It is important that not all tasks are executed at the same time. The different offset for each task manages the execution of tasks.

Variable	Field	Type	Valid Values	Description
Variable: daily				
daily				This parameter specifies the daily option.
	<hour>	Integer	0 through 23	This nested parameter specifies a day in the week.
	<minute>	Integer	0 through 59	This parameter specifies the minute.
Variable: day				
day				This parameter specifies a specific day in the week.
	<day>	Choice	monday, tuesday, wednesday, thursday, friday, saturday, sunday	This parameter specifies a specific day in the week.
	<hour>	Integer	0 through 23	This nested parameter specifies a day in the week.
	<minute>	Integer	0 through 59	This parameter specifies the minute.
Variable: date				
date				This parameter specifies a specific day in the month.
	<date>	Integer	1 through 28	This parameter specifies a specific day in the month.
	<hour>	Integer	0 through 23	This nested parameter specifies a day in the week.
	<minute>	Integer	0 through 59	This parameter specifies the minute.

### 7.5.3 delete

This command is used to remove a scheduled task from the list. Scheduled tasks must be deleted using their corresponding ID number.

- 1) Ensure you are at the `/AMS_CLI/Maintenance/Scheduler>` level.
- 2) Enter:

**delete <id>** ↵

where:

Variable	Field	Type	Valid Values	Description
<id>		Integer	0 through 255	This parameter specifies the ID for the scheduled task.



## 7.5.4 FileCollector

This level is used to view and modify file collector task attributes.

### 7.5.4.1 get

This command is used to view the file collector task attributes.

- 1) Ensure you are at the `/AMS_CLI/Maintenance/Scheduler/FileCollector>` level.
- 2) Enter:

**get** ↵

### 7.5.4.2 set

This command is used to modify the file collector task attributes.

- 1) Ensure you are at the `/AMS_CLI/Maintenance/Scheduler/FileCollector>` level.
- 2) Enter:

**set <attribute>** ↵

where:

Variable	Field	Type	Valid Values	Description
<attribute>		MultipleChoice	uri, keepFileAfterTransfer, user	The name of an attribute to modify.
<uri>		String	0 to 255 characters	This parameter specifies the URI to identify the remote log repository.
<keepFileAfter Transfer>		Choice	true, false	This parameter determines if the files are preserved after transfer.
<user>		String	1 to 30 characters	This parameter specifies the user to connect to the log repository web application.

### 7.5.4.3 clear

This command is used to clear the user attribute of the file collector task.

- 1) Ensure you are at the `/AMS_CLI/Maintenance/Scheduler/FileCollector>` level.
- 2) Enter:

**clear <attribute>** ↵

where:

Variable	Field	Type	Valid Values	Description
<attribute>		Choice	user	The name of an attribute to clear.

### 7.5.4.4 SrcDestPathsContext

This level is used to add and modify file collector task source and destination paths.

#### 7.5.4.4.1 get

This command is used to view the file collector task source and destination paths.

- 1) Ensure you are at the `/AMS_CLI/Maintenance/Scheduler/FileCollector/SrcDestPathsContext>` level.
- 2) Enter:

## get ↵

### 7.5.4.4.2 add

This command is used to add the source and destination paths to the file collector task.

- 1) Ensure you are at the /AMS\_CLI/Maintenance/Scheduler/FileCollector/ SrcDestPathsContext> level.
- 2) Enter:

**add <sourcePath> <destinationPath>** ↵

where:

Variable	Field	Type	Valid Values	Description
<sourcePath>		String	1 to 255 characters	This parameter specifies the source path of the logs on the local machine. This source path can contain wildcards.
<destination Path>		String	1 to 255 characters	This parameter specifies the destination path of the remote machine.

### 7.5.4.4.3 delete

This command is used to remove the source and destination paths from the file collector task.

- 1) Ensure you are at the /AMS\_CLI/Maintenance/Scheduler/FileCollector/ SrcDestPathsContext> level.
- 2) Enter:

**delete <sourcePath>** ↵

where:

Variable	Field	Type	Valid Values	Description
<sourcePath>		String	1 to 255 characters	This parameter specifies the source path of the logs on the local machine. This source path can contain wildcards.

## 7.6 Tools

This level is used to view and modify the tools entries.

### 7.6.1 healthmon

This command is used to report the status.

- 1) Ensure you are at the /AMS\_CLI/Maintenance/Tools> level.
- 2) Enter:

**healthmon** ↵

### 7.6.2 tech-support

This command is used to capture the status of the system.

- 1) Ensure you are at the /AMS\_CLI/Maintenance/Tools> level.
- 2) Enter:

**tech-support [<attribute>]** ↵

where:

Variable	Field	Type	Valid Values	Description
<attribute>		MultipleChoice	day	The name of an attribute to modify. Tech-support includes some information extracted from log files on disk. Use the "day" option to get this information for a specific day in the month.
<day>		Integer	1 through 31	This parameter specifies the date of a day in the month.

### 7.6.3 upgradeCheck

This command is used to perform a software activation dry run during which a system validation is performed to determine if the upgrade will be successful.

- 1) Ensure you are at the /AMS\_CLI/Maintenance/Tools> level.
- 2) Enter:

**upgradeCheck <version to switch to>** ↵

where:

Variable	Field	Type	Valid Values	Description
<version to switch to>		String	1 to 255 characters	Specifies the version to which the system is upgraded.

## 8 Interface

This level is used to view and modify interface-related attributes.

### 8.1 LDAP

This level is used to view and modify attributes related to the Lightweight Directory Access Protocol (LDAP).

#### 8.1.1 Client

This level is used to view and modify attributes related to the Lightweight Directory Access Protocol (LDAP) client.

##### 8.1.1.1 get

This command is used to view the Lightweight Directory Access Protocol (LDAP) client options.

- 1) Ensure you are at the `/AMS_CLI/Interface/LDAP/Client>` level.
- 2) Enter:

**get** ↵

##### 8.1.1.2 set

This command is used to modify the Lightweight Directory Access Protocol (LDAP) client options.

- 1) Ensure you are at the `/AMS_CLI/Interface/LDAP/Client>` level.
- 2) Enter:

**set <attribute>** ↵

where:

Variable	Field	Type	Valid Values	Description
<attribute>		MultipleChoice	baseDistinguishedName, bind Password, enabled	The name of an attribute to modify.
<base Distinguished Name>		String	1 to 80 characters	This parameter specifies the distinguished name of the search base(for example, dc=broadsoft,dc=com).
<bind Password>		Password (prompted)	1 to 40 characters	This parameter specifies the credentials to bind to the Lightweight Directory Access Protocol (LDAP) server.
<enabled>		Choice	true, false	This parameter specifies whether the BroadWorks Lightweight Directory Access Protocol (LDAP) client is enabled.

##### 8.1.1.3 clear

This command is used to clear the Lightweight Directory Access Protocol (LDAP) client options.

- 1) Ensure you are at the `/AMS_CLI/Interface/LDAP/Client>` level.
- 2) Enter:

**clear <attribute>** ↵

where:

Variable	Field	Type	Valid Values	Description
<attribute>		MultipleChoice	baseDistinguishedName	The name of an attribute to modify.

#### 8.1.1.4 LocalUsers

This level is used to view and modify Lightweight Directory Access Protocol (LDAP) local users.

##### 8.1.1.4.1 get

This command is used to view local users.

- 1) Ensure you are at the `/AMS_CLI/Interface/LDAP/Client/LocalUsers>` level.
- 2) Enter:

**get** ↵

##### 8.1.1.4.2 add

This command is used to add local user.

- 1) Ensure you are at the `/AMS_CLI/Interface/LDAP/Client/LocalUsers>` level.
- 2) Enter:

**add <name>** ↵

where:

Variable	Field	Type	Valid Values	Description
<name>		String	1 to 80 characters	This parameter specifies the local user name for which the group membership lookups are not performed to the Lightweight Directory Access Protocol (LDAP) server. This can be useful in case of unavailability of the LDAP server.

##### 8.1.1.4.3 delete

This command is used to delete local user.

- 1) Ensure you are at the `/AMS_CLI/Interface/LDAP/Client/LocalUsers>` level.
- 2) Enter:

**delete <name>** ↵

where:

Variable	Field	Type	Valid Values	Description
<name>		String	1 to 80 characters	This parameter specifies the local user name for which the group membership lookups are not performed to the Lightweight Directory Access Protocol (LDAP) server. This can be useful in case of unavailability of the LDAP server.

#### 8.1.1.5 Servers

This level is used to view and modify Lightweight Directory Access Protocol (LDAP) servers.

#### 8.1.1.5.1 get

This command is used to view the Lightweight Directory Access Protocol (LDAP) servers.

- 1) Ensure you are at the `/AMS_CLI/Interface/LDAP/Client/Servers>` level.
- 2) Enter:

**get** ↵

#### 8.1.1.5.2 add

This command is used to add a Lightweight Directory Access Protocol (LDAP) server.

- 1) Ensure you are at the `/AMS_CLI/Interface/LDAP/Client/Servers>` level.
- 2) Enter:

**add <name> <port> <secured>** ↵

where:

Variable	Field	Type	Valid Values	Description
<name>		String	1 to 80 characters	This parameter specifies the fully qualified domain name (FQDN) of the Lightweight Directory Access Protocol (LDAP) server.
<port>		Integer	0 through 65535	This parameter specifies the port number.
<secured>		Choice	true, false	This parameter specifies if secure communication is enabled.

#### 8.1.1.5.3 set

This command is used to modify the Lightweight Directory Access Protocol (LDAP) server options.

- 1) Ensure you are at the `/AMS_CLI/Interface/LDAP/Client/Servers>` level.
- 2) Enter:

**set <name> <attribute>** ↵

where:

Variable	Field	Type	Valid Values	Description
<name>		String	1 to 80 characters	This parameter specifies the fully qualified domain name (FQDN) of the Lightweight Directory Access Protocol (LDAP) server.
<attribute>		MultipleChoice	port, secured	The name of an attribute to modify.
<port>		Integer	0 through 65535	This parameter specifies the port number.
<secured>		Choice	true, false	This parameter specifies if secure communication is enabled.

#### 8.1.1.5.4 delete

This command is used to delete a Lightweight Directory Access Protocol (LDAP) server.

- 1) Ensure you are at the `/AMS_CLI/Interface/LDAP/Client/Servers>` level.

2) Enter:

**delete <name>** ↵

where:

Variable	Field	Type	Valid Values	Description
<name>		String	1 to 80 characters	This parameter specifies the fully qualified domain name (FQDN) of the Lightweight Directory Access Protocol (LDAP) server.

## 8.2 SNMP

This level is used to view and modify the Simple Network Management Protocol (SNMP) agent.

### 8.2.1 AccessList

This level is used to view and modify the list of entries in the Simple Network Management Protocol (SNMP) access list.

#### 8.2.1.1 get

This command is used to view the nodes that currently can access the Simple Network Management Protocol (SNMP) agent.

1) Ensure you are at the `/AMS_CLI/Interface/SNMP/AccessList>` level.

2) Enter:

**get** ↵

#### 8.2.1.2 add

This command is used to add a node to the Simple Network Management Protocol (SNMP) access list. To obtain performance measurements, the SNMP manager must have access to the individual nodes in the network. The SNMP manager Internet Protocol (IP) address is used by the agent to identify managers that are granted access.

1) Ensure you are at the `/AMS_CLI/Interface/SNMP/AccessList>` level.

2) Enter:

**add <ipAddress>** ↵

where:

Variable	Field	Type	Valid Values	Description
<ipAddress>		String	1 to 39 characters	This parameter specifies the Internet Protocol (IP) address of an external Simple Network Management Protocol (SNMP) manager.

#### 8.2.1.3 delete

This command is used to remove a node from the Simple Network Management Protocol (SNMP) access list. When the node is removed from the access list, it is longer able to obtain performance measurements from the SNMP Agent. The node's IP address is used to identify the manager.

1) Ensure you are at the `/AMS_CLI/Interface/SNMP/AccessList>` level.

2) Enter:

**delete <ipAddress>**

where:

Variable	Field	Type	Valid Values	Description
<ipAddress>		String	1 to 39 characters	This parameter specifies the Internet Protocol (IP) address of an external Simple Network Management Protocol (SNMP) manager.

## 8.2.2 Agent

This level is used to view and modify the current Simple Network Management Protocol (SNMP) Agent settings, modify the listening port, modify the read community string, or modify the write community string. You can set the source address that is used to send traps, which supports configurations whereby a server can have multiple network interfaces, including a dedicated maintenance/management interface.

### 8.2.2.1 get

This command is used to view the current Simple Network Management Protocol (SNMP) Agent-related attributes.

- 1) Ensure you are at the `/AMS_CLI/Interface/SNMP/Agent>` level.
- 2) Enter:

**get**

### 8.2.2.2 set

This command is used to modify Simple Network Management Protocol (SNMP) Agent-related attributes.

- 1) Ensure you are at the `/AMS_CLI/Interface/SNMP/Agent>` level.
- 2) Enter:

**set <attribute>**

where:

Variable	Field	Type	Valid Values	Description
<attribute>		MultipleChoice	port, encoding, readCommunity, writeCommunity, trapCommunity, trapSourceAddress, disableV2	The name of an attribute to modify.
<port>		Integer	1024 through 65535	This parameter specifies the port used to communicate to the Simple Network Management Protocol (SNMP) Agent.
<encoding>		Choice	UTF-8, ISO-8859-1	This parameter controls whether ISO-8859-1 or UTF-8 (Unicode) encoding is used by the Simple Network Management Protocol (SNMP) Agent to send traps.
<read Community>		String	1 to 255 characters	This parameter specifies the read community string used to access the Simple Network Management Protocol (SNMP) Agent.



Variable	Field	Type	Valid Values	Description
<writeCommunity>		String	1 to 255 characters	This parameter specifies the write community string used to access the Simple Network Management Protocol (SNMP) Agent.
<trapCommunity>		String	1 to 255 characters	This parameter specifies the trap community string used by the Simple Network Management Protocol (SNMP) Agent when sending SNMP Traps.
<trapSourceAddress>		Choice	An IP interface that is currently defined on the server.	This parameter specifies the trap source for the Simple Network Management Protocol (SNMP) Agent.
<disableV2>		Choice	true, false	This parameter is used to disable Simple Network Management Protocol (SNMP) v2.

### 8.2.3 Logging

This level is used to view and modify logging for the Simple Network Management Protocol (SNMP) Agent.

#### 8.2.3.1 get

This command is used to view logging-related attributes.

- 1) Ensure you are at the `/AMS_CLI/Interface/SNMP/Logging>` level.
- 2) Enter:

**get** ↵

#### 8.2.3.2 set

This command is used to modify logging-related attributes.

- 1) Ensure you are at the `/AMS_CLI/Interface/SNMP/Logging>` level.
- 2) Enter:

**set <attribute>** ↵

where:

Variable	Field	Type	Valid Values	Description
<attribute>		MultipleChoice	enabled, severity, priority, max QueueSize, showThreadName	This parameter specifies the attribute to be modified.
<enabled>		Choice	true, false	This parameter turns the logging on and off.
<severity>		Choice	Debug, FieldDebug, Info, Notice, Warn	This parameter specifies the default logging severity level.
<priority>		Integer	1 through 5	This parameter specifies the priority of the logging thread. The value "1" indicates the lowest priority and "5" indicates the highest.

Variable	Field	Type	Valid Values	Description
<maxQueueSize>		Integer	0 through 2147483647	This parameter specifies the maximum size of the logging queue.
<showThreadName>		Choice	true, false	This parameter enables thread name logging.

### 8.2.3.3 InputChannels

This level is used to view, modify, or clear input channels entries.

#### 8.2.3.3.1 get

This command is used to view input channels-related attributes.

- 1) Ensure you are at the `/AMS_CLI/Interface/SNMP/Logging/InputChannels>` level.
- 2) Enter:

**get** ↵

#### 8.2.3.3.2 set

This command is used to modify input channels-related attributes.

- 1) Ensure you are at the `/AMS_CLI/Interface/SNMP/Logging/InputChannels>` level.
- 2) Enter:

**set <name> <attribute>** ↵

where:

Variable	Field	Type	Valid Values	Description
<name>		Choice	Generic, BroadsoftCommonCommunicationTransport, BroadsoftCommonCommunicationTransportKeepAlive, SMAP, SNMP	This parameter specifies the name of the logging input channel.
<attribute>		MultipleChoice	enabled, severity	The name of an attribute to modify.
<enabled>		Choice	true, false	This parameter turns the logging to the logging input channel on and off.
<severity>		Choice	Debug, FieldDebug, Info, Notice, Warn	This parameter specifies the severity level of the logging input channel.

#### 8.2.3.3.3 clear

This command is used to clear input channels-related attributes.

- 1) Ensure you are at the `/AMS_CLI/Interface/SNMP/Logging/InputChannels>` level.
- 2) Enter:

**clear <name> <attribute>** ↵

where:

Variable	Field	Type	Valid Values	Description
<name>		Choice	Generic, BroadsoftCommonCommunicationTransport, BroadsoftCommonCommunicationTransportKeepAlive, SMAP, SNMP	This parameter specifies the name of the logging input channel.
<attribute>		MultipleChoice	severity	The name of an attribute to clear.

#### 8.2.3.4 OutputChannels

This level is used to view, modify, or clear output channels.

##### 8.2.3.4.1 get

This command is used to view output channels-related attributes.

- 1) Ensure you are at the `/AMS_CLI/Interface/SNMP/Logging/OutputChannels>` level.
- 2) Enter:

**get** ↵

##### 8.2.3.4.2 set

This command is used to modify output channels-related attributes.

- 1) Ensure you are at the `/AMS_CLI/Interface/SNMP/Logging/OutputChannels>` level.
- 2) Enter:

**set <name> <attribute>** ↵

where:

Variable	Field	Type	Valid Values	Description
<name>		Choice	Stdout, File	This parameter specifies the name of the logging output channel.
<attribute>		MultipleChoice	enabled, directory, filePrefix, fileSizeInMB, numberOfFiles	The name of an attribute to modify.
<enabled>		Choice	true, false	This parameter turns the logging to the logging output channel on and off.
<directory>		String	1 to 256 characters	This parameter specifies the directory where the log files are located.
<filePrefix>		String	1 to 256 characters	This parameter specifies the prefix of the log files.
<fileSizeInMB>		Integer	1 through 2000	This parameter specifies the maximum size of a log file.
<numberOfFiles>		Integer	1 through 65535	This parameter specifies the maximum number of log files that exist before the old log files are deleted.

## 8.2.4 SMAP

This level is used to view, add, modify, and delete Software Management Application Protocol (SMAP)-related attributes.

### 8.2.4.1 get

This command is used to view the Software Management Application Protocol (SMAP)-related attributes.

- 1) Ensure you are at the `/AMS_CLI/Interface/SNMP/SMAP>` level.
- 2) Enter:

**get** ↵

### 8.2.4.2 set

This command is used to modify the Software Management Application Protocol (SMAP)-related attributes.

- 1) Ensure you are at the `/AMS_CLI/Interface/SNMP/SMAP>` level.
- 2) Enter:

**set <attribute>** ↵

where:

Variable	Field	Type	Valid Values	Description
<attribute>		MultipleChoice	timeout	The name of an attribute to modify.
<timeout>		Integer	1 through 60	This parameter specifies the length of time that the agent waits for a server's response to its requests (in seconds).

### 8.2.4.3 BCCT

This level is used to view and modify the Software Management Application Protocol (SMAP) BroadWorks Common Communication Transport (BCCT)-related attributes.

#### 8.2.4.3.1 get

This command is used to view the Software Management Application Protocol (SMAP) BroadWorks Common Communication Transport (BCCT)-related attributes.

- 1) Ensure you are at the `/AMS_CLI/Interface/SNMP/SMAP/BCCT>` level.
- 2) Enter:

**get** ↵

#### 8.2.4.3.2 set

This command is used to modify the Software Management Application Protocol (SMAP) BroadWorks Common Communication Transport (BCCT)-related attributes.

- 1) Ensure you are at the `/AMS_CLI/Interface/SNMP/SMAP/BCCT>` level.
- 2) Enter:

**set <attribute>** ↵

where:

Variable	Field	Type	Valid Values	Description
<attribute>		MultipleChoice	port	The name of an attribute to modify.

Variable	Field	Type	Valid Values	Description
<port>		Integer	1024 through 65535	This parameter specifies the port number for the Software Management Application Protocol (SMAP) BroadWorks Common Communication Transport (BCCT) Channel.

## 8.2.5 TrapTable

This level is used to view and modify entries in the Simple Network Management Protocol (SNMP) trap table.

### 8.2.5.1 get

This command is used to view information in the current Simple Network Management Protocol (SNMP) trap table, such as the IP address of the machine the BroadWorks server is sending traps to and the corresponding port.

- 1) Ensure you are at the `/AMS_CLI/Interface/SNMP/TrapTable>` level.
- 2) Enter:

**get** ↵

### 8.2.5.2 add

This command is used to add a node to the Simple Network Management Protocol (SNMP) trap table. To send traps, the BroadWorks server must be able to identify the node where traps are sent. This is usually a machine designated as the central point for monitoring. The node's IP address and port are used to identify the node.

- 1) Ensure you are at the `/AMS_CLI/Interface/SNMP/TrapTable>` level.
- 2) Enter:

**add <ipAddress> <port> <model> <useAlarms>** ↵

where:

Variable	Field	Type	Valid Values	Description
<ipAddress>		String	1 to 80 characters	This parameter specifies the Internet Protocol (IP) address of the node.
<port>		Integer	0 through 65535	This parameter specifies the port of the node.

Variable	Field	Type	Valid Values	Description
<model>		Choice	shared, unique	This parameter determines how Simple Network Management Protocol (SNMP) traps are sent. When the value is set to "shared", the SNMP Agent wraps every trap in an envelope with the same name. The recipient can receive three different types of envelopes: a notification, an alarm, or a software error. The content of the envelope provides an explanation of the source of the problem. When the value is set to "unique", the SNMP Agent sends every instance of a notification in a different envelope. Each of these uniquely identifies the problem without having to open the envelope.
<useAlarms>		Choice	true, false	This parameter determines if the system sends pairs of notifications or alarms. This is a backward-compatibility flag.

#### 8.2.5.3 set

This command is used to modify an entry in the Simple Network Management Protocol (SNMP) trap table.

- 1) Ensure you are at the `/AMS_CLI/Interface/SNMP/TrapTable>` level.
- 2) Enter:

**set <ipAddress> <port> <attribute>**

where:

Variable	Field	Type	Valid Values	Description
<ipAddress>		String	1 to 80 characters	This parameter specifies the Internet Protocol (IP) address of the node.
<port>		Integer	0 through 65535	This parameter specifies the port of the node.
<attribute>		MultipleChoice	model, useAlarms	This parameter specifies the name of an attribute to modify.

Variable	Field	Type	Valid Values	Description
<model>		Choice	shared, unique	This parameter determines how Simple Network Management Protocol (SNMP) traps are sent. When the value is set to "shared", the SNMP Agent wraps every trap in an envelope with the same name. The recipient can receive three different types of envelopes: a notification, an alarm, or a software error. The content of the envelope provides an explanation of the source of the problem. When the value is set to "unique", the SNMP Agent sends every instance of a notification in a different envelope. Each of these uniquely identifies the problem without having to open the envelope.
<useAlarms>		Choice	true, false	This parameter determines if the system sends pairs of notifications or alarms. This is a backward-compatibility flag.

#### 8.2.5.4 delete

This command is used to remove a node from the Simple Network Management Protocol (SNMP) trap table. Nodes removed from the SNMP trap table are no longer sent traps. The node's IP address and port are used to identify the node.

- 1) Ensure you are at the `/AMS_CLI/Interface/SNMP/TrapTable>` level.
- 2) Enter:

**delete <ipAddress> <port>**

where:

Variable	Field	Type	Valid Values	Description
<ipAddress>		String	1 to 80 characters	This parameter specifies the Internet Protocol (IP) address of the node.
<port>		Integer	0 through 65535	This parameter specifies the port of the node.

#### 8.2.6 V3AccessControl

This level is used to view and modify the Simple Network Management Protocol (SNMP) V3 Access Control level.

##### 8.2.6.1 Groups

This level is used to view and modify Simple Network Management Protocol (SNMP) V3 groups.

##### 8.2.6.1.1 get

This command is used to view Simple Network Management Protocol (SNMP) V3 groups-related attributes.

- 1) Ensure you are at the `/AMS_CLI/Interface/SNMP/V3AccessControl/Groups>` level.

2) Enter:

**get** ↵

#### 8.2.6.1.2 add

This command is used to add a Simple Network Management Protocol (SNMP) V3 groups.

1) Ensure you are at the `/AMS_CLI/Interface/SNMP/V3AccessControl/Groups>` level.

2) Enter:

**add <name>** ↵

where:

Variable	Field	Type	Valid Values	Description
<name>		String	2 to 30 characters	This parameter specifies the name of the group.

#### 8.2.6.1.3 delete

This command is used to delete an existing Simple Network Management Protocol (SNMP) v3 group.

1) Ensure you are at the `/AMS_CLI/Interface/SNMP/V3AccessControl/Groups>` level.

2) Enter:

**delete <name>** ↵

where:

Variable	Field	Type	Valid Values	Description
<name>		String	2 to 30 characters	This parameter specifies the name of the group.

#### 8.2.6.1.4 AccessLevels

This level is used to view and modify levels of access for the group.

##### 8.2.6.1.4.1 get

This command is used to view Simple Network Management Protocol (SNMP) V3 group access levels.

1) Ensure you are at the `/AMS_CLI/Interface/SNMP/V3AccessControl/Groups/AccessLevels>` level.

2) Enter:

**get <name>** ↵

where:

Variable	Field	Type	Valid Values	Description
<name>		String	2 to 30 characters	This parameter specifies the name of the group.

##### 8.2.6.1.4.2 add

This command is used to add Simple Network Management Protocol (SNMP) V3 access levels to a group.

1) Ensure you are at the `/AMS_CLI/Interface/SNMP/V3AccessControl/Groups/AccessLevels>` level.

2) Enter:

**add <name> <level>** ↵

where:



Variable	Field	Type	Valid Values	Description
<name>		String	2 to 30 characters	This parameter specifies the name of the group.
<level>		Choice	all, management, performance	This parameter specifies a level of access for the group. When the value is set to "all", complete access is provided; when the value is set to "management", access to the managed objects is provided; when the value is set to "performance", access to the performance measurements is provided.

#### 8.2.6.1.4.3 delete

This command is used to remove Simple Network Management Protocol (SNMP) V3 access levels from a group.

- 1) Ensure you are at the `/AMS_CLI/Interface/SNMP/V3AccessControl/Groups/AccessLevels>` level.
- 2) Enter:

**delete <name> <level>**

where:

Variable	Field	Type	Valid Values	Description
<name>		String	2 to 30 characters	This parameter specifies the name of the group.
<level>		Choice	all, management, performance	This parameter specifies a level of access for the group. When the value is set to "all", complete access is provided; when the value is set to "management", access to the managed objects is provided; when the value is set to "performance", access to the performance measurements is provided.

### 8.2.7 V3Users

This level is used to view, add, modify, delete and clear the V3 User level attributes. The V3 User level provides support for the Simple Network Management Protocol (SNMP) version 3 (SNMPv3). The primary feature of SNMPv3 is additional security. The only security feature in SNMPv2 is the support of community strings (that can be viewed as a simple password with no user name). SNMPv3 supports multiple user name/password pairs, as well as encryption. System administrators are able to configure the version of SNMP that BroadWorks should support (v2 or v3), as well as parameters specific to each version. Note that some SNMPv3 features, such as View-based Access Control Model (VACM), are not supported. In fact, BroadWorks is configured with a single view that gives access to all performance measurements. The only supported view name is "default".

#### 8.2.7.1 get

This command is used to view Simple Network Management Protocol (SNMP) V3 user-related attributes.

- 1) Ensure you are at the `/AMS_CLI/Interface/SNMP/V3Users>` level.

2) Enter:

**get** ↵

#### 8.2.7.2 add

This command is used to add a Simple Network Management Protocol (SNMP) V3 user.

1) Ensure you are at the `/AMS_CLI/Interface/SNMP/V3Users>` level.

2) Enter:

**add <user> <read> <write> <security> [<attribute>]** ↵

where:

Variable	Field	Type	Valid Values	Description
<user>		String	1 to 80 characters	This parameter specifies the SNMP v3 user ID. It is required to perform SNMP v3 access to the server.
<read>		Choice	true, false	This parameter determines whether this user is authorized for read access.
<write>		Choice	true, false	This parameter determines whether this user is authorized for write access.
<security>		Choice	NoAuthNoPriv, AuthNoPriv, Auth Priv	This parameter specifies the security implemented for this Simple Network Management Protocol (SNMP) v3 user.
<attribute>		MultipleChoice	authenticationKey, privacyKey, group	Additional attributes to include through the add command.
<authentication Key>		Password (prompted)	8 to 40 characters	This parameter specifies the user authentication key.
<privacyKey>		Password (prompted)	8 to 40 characters	This parameter specifies the privacy key used for encryption.
<group>		String	2 to 30 characters	This parameter specifies the user Simple Network Management Protocol (SNMP) v3 group name.

#### 8.2.7.3 set

This command is used to modify Simple Network Management Protocol (SNMP) V3 user-related attributes.

1) Ensure you are at the `/AMS_CLI/Interface/SNMP/V3Users>` level.

2) Enter:

**set <user> <attribute>** ↵

where:

Variable	Field	Type	Valid Values	Description
<user>		String	1 to 80 characters	This parameter specifies the SNMP v3 user ID. It is required to perform SNMP v3 access to the server.
<attribute>		MultipleChoice	read, write, security, authenticationKey, privacyKey, group	The name of an attribute to modify.
<read>		Choice	true, false	This parameter determines whether this user is authorized for read access.
<write>		Choice	true, false	This parameter determines whether this user is authorized for write access.
<security>		Choice	NoAuthNoPriv, AuthNoPriv, AuthPriv	This parameter specifies the security implemented for this Simple Network Management Protocol (SNMP) v3 user.
<authenticationKey>		Password (prompted)	8 to 40 characters	This parameter specifies the user authentication key.
<privacyKey>		Password (prompted)	8 to 40 characters	This parameter specifies the privacy key used for encryption.
<group>		String	2 to 30 characters	This parameter specifies the user Simple Network Management Protocol (SNMP) v3 group name.

#### 8.2.7.4 delete

This command is used to delete an existing Simple Network Management Protocol (SNMP) v3 user.

- 1) Ensure you are at the `/AMS_CLI/Interface/SNMP/V3Users>` level.
- 2) Enter:

**delete <user>** ↵

where:

Variable	Field	Type	Valid Values	Description
<user>		String	1 to 80 characters	This parameter specifies the SNMP v3 user ID. It is required to perform SNMP v3 access to the server.

#### 8.2.7.5 clear

This command is used to clear Simple Network Management Protocol (SNMP) V3 user-related attributes.

- 1) Ensure you are at the `/AMS_CLI/Interface/SNMP/V3Users>` level.
- 2) Enter:

**clear <user> <attribute>** ↵

where:

Variable	Field	Type	Valid Values	Description
<user>		String	1 to 80 characters	This parameter specifies the SNMP v3 user ID. It is required to perform SNMP v3 access to the server.
<attribute>		MultipleChoice	authenticationKey, privacyKey, group	The name of the attribute to clear.

## 9 System

This level is used to view and modify the BroadWorks communication utility attributes.

### 9.1 ConfigAgent

This level is used to view and modify the BroadWorks Configuration Agent information for the BroadWorks server.

#### 9.1.1 Logging

This level is used to view and modify logging for the Configuration Agent.

##### 9.1.1.1 get

This command is used to view logging-related attributes.

- 1) Ensure you are at the `/AMS_CLI/System/ConfigAgent/Logging>` level.
- 2) Enter:

**get** ↵

##### 9.1.1.2 set

This command is used to modify logging-related attributes.

- 1) Ensure you are at the `/AMS_CLI/System/ConfigAgent/Logging>` level.
- 2) Enter:

**set <attribute>** ↵

where:

Variable	Field	Type	Valid Values	Description
<attribute>		MultipleChoice	enabled, severity, priority, max QueueSize, showThreadName	The name of an attribute to modify.
<enabled>		Choice	true, false	This parameter turns the logging on and off.
<severity>		Choice	Debug, FieldDebug, Info, Notice, Warn	This parameter specifies the default logging severity level.
<priority>		Integer	1 through 5	This parameter specifies the priority of the logging thread. The value "1" indicates the lowest priority and "5" indicates the highest.
<maxQueue Size>		Integer	0 through 2147483647	This parameter specifies the maximum size of the logging queue.
<showThread Name>		Choice	true, false	This parameter enables thread name logging.

##### 9.1.1.3 InputChannels

This level is used to view, modify, or clear input channels entries.

#### 9.1.1.3.1 get

This command is used to view input channels-related attributes.

- 1) Ensure you are at the `/AMS_CLI/System/ConfigAgent/Logging/InputChannels>` level.
- 2) Enter:

**get** ↵

#### 9.1.1.3.2 set

This command is used to modify input channels-related attributes.

- 1) Ensure you are at the `/AMS_CLI/System/ConfigAgent/Logging/InputChannels>` level.
- 2) Enter:

**set <name> <attribute>** ↵

where:

Variable	Field	Type	Valid Values	Description
<name>		Choice	Generic, BroadsoftCommonCommunicationTransport, BroadsoftCommonCommunicationTransportKeepAlive, Config, SMAP	This parameter specifies the name of the logging input channel.
<attribute>		MultipleChoice	enabled, severity	The name of an attribute to modify.
<enabled>		Choice	true, false	This parameter turns the logging to the logging input channel on and off.
<severity>		Choice	Debug, FieldDebug, Info, Notice, Warn	This parameter specifies the severity level of the logging input channel.

#### 9.1.1.3.3 clear

This command is used to clear input channels-related attributes.

- 1) Ensure you are at the `/AMS_CLI/System/ConfigAgent/Logging/InputChannels>` level.
- 2) Enter:

**clear <name> <attribute>** ↵

where:

Variable	Field	Type	Valid Values	Description
<name>		Choice	Generic, BroadsoftCommonCommunicationTransport, BroadsoftCommonCommunicationTransportKeepAlive, Config, SMAP	This parameter specifies the name of the logging input channel.
<attribute>		MultipleChoice	severity	The name of an attribute to clear.

#### 9.1.1.4 OutputChannels

This level is used to view, modify, or clear output channels.

##### 9.1.1.4.1 get

This command is used to view output channels-related attributes.

- 1) Ensure you are at the `/AMS_CLI/System/ConfigAgent/Logging/OutputChannels>` level.
- 2) Enter:

**get** ↵

#### 9.1.1.4.2 set

This command is used to modify output channels-related attributes.

- 1) Ensure you are at the `/AMS_CLI/System/ConfigAgent/Logging/OutputChannels>` level.
- 2) Enter:

**set <name> <attribute>** ↵

where:

Variable	Field	Type	Valid Values	Description
<name>		Choice	Stdout, File	This parameter specifies the name of the logging output channel.
<attribute>		MultipleChoice	enabled, directory, filePrefix, fileSizeInMB, numberOfFiles	The name of an attribute to modify.
<enabled>		Choice	true, false	This parameter turns the logging to the logging output channel on and off.
<directory>		String	1 to 256 characters	This parameter specifies the directory where the log files are located.
<filePrefix>		String	1 to 256 characters	This parameter specifies the prefix of the log files.
<fileSizeInMB>		Integer	1 through 2000	This parameter specifies the maximum size of a log file.
<numberOfFiles>		Integer	1 through 65535	This parameter specifies the maximum number of log files that exist before the old log files are deleted.

## 9.2 GeneralSettings

This level is used to view and modify the general settings of the BroadWorks server.

### 9.2.1 get

This command is used to view general attributes.

- 1) Ensure you are at the `/AMS_CLI/System/GeneralSettings>` level.
- 2) Enter:

**get** ↵

### 9.2.2 set

This command is used to modify general attributes.

- 1) Ensure you are at the `/AMS_CLI/System/GeneralSettings>` level.

2) Enter:

**set <attribute>** ↵

where:

Variable	Field	Type	Valid Values	Description
<attribute>		MultipleChoice	preferIPv4Stack, configureIPFilter	The name of an attribute to modify.
<preferIPv4Stack>		Choice	true, false	This parameter specifies the value of the java.net.preferIPv4Stack property used to start starting java processes. The default value is "true". It must be set to "false" to to use IPV6 for the process.
<configureIPFilter>		Choice	true, false	This parameter indicates whether or not Broadworks configure the IP filtering functionality of the OS. In case the functionality currently supported by Broadworks is not sufficient, an administrator could manually configure the IP filtering function by setting this parameter to false. When doing, the file produced by Broadworks containing the rules are still produced but are not transferred into the OS.

## 9.3 Licensing

This level is used to view licensing information for the BroadWorks server.

### 9.3.1 get

This command is used to view licensing information, such as the license type, the number of ports, and the licensing expiration date.

1) Ensure you are at the `/AMS_CLI/System/Licensing>` level.

2) Enter:

**get** ↵

### 9.3.2 LicenseManager

This level is used to view and modify the License Manager settings.

#### 9.3.2.1 getpermission

This command forces the License Manager to execute the entire license permission request process, including the validation of the license.

1) Ensure you are at the `/AMS_CLI/System/Licensing/LicenseManager>` level.

2) Enter:

**getpermission** ↵



### 9.3.2.2 showpermission

This command shows the current license permission state of the License Manager.

- 1) Ensure you are at the `/AMS_CLI/System/Licensing/LicenseManager>` level.
- 2) Enter:

**showpermission** ↵

### 9.3.2.3 Bcct

This level is used to view and modify the BroadWorks Common Communication Transport (BCCT) settings.

#### 9.3.2.3.1 Ports

This level is used to view and modify the BroadWorks Common Communication Transport (BCCT) ports settings.

##### 9.3.2.3.1.1 get

This command is used to view the BroadWorks Common Communication Transport (BCCT) ports settings.

- 1) Ensure you are at the `/AMS_CLI/System/Licensing/LicenseManager/Bcct/Ports>` level.
- 2) Enter:

**get** ↵

##### 9.3.2.3.1.2 set

This command is used to modify the BroadWorks Common Communication Transport (BCCT) ports settings.

- 1) Ensure you are at the `/AMS_CLI/System/Licensing/LicenseManager/Bcct/Ports>` level.
- 2) Enter:

**set <attribute>** ↵

where:

Variable	Field	Type	Valid Values	Description
<attribute>		MultipleChoice	secured	Identifies an attribute to modify.
<secured>		Integer	1024 through 65535	This parameter specifies the Transport Layer Security (TLS) secured port for the license manager.

### 9.3.2.4 GeneralSettings

This level is used to view and modify the general settings.

#### 9.3.2.4.1 get

This command is used to view general settings-related attributes.

- 1) Ensure you are at the `/AMS_CLI/System/Licensing/LicenseManager/GeneralSettings>` level.
- 2) Enter:

**get** ↵

#### 9.3.2.4.2 set

This command is used to modify general settings-related attributes.

- 1) Ensure you are at the `/AMS_CLI/System/Licensing/LicenseManager/GeneralSettings>` level.
- 2) Enter:

**set <attribute>** ↵

where:

Variable	Field	Type	Valid Values	Description
<attribute>		MultipleChoice	nfmURI, nfmResponseTimeoutInSeconds, licenseProcessingPeriodInMinutes	The name of an attribute to modify.
<nfmURI>		String	1 to 1024 characters	This parameter specified the Network Function Manager farm Uniform Resource Identifier (URI). This URI is used by the node to request license permission usage to the Network Function Manager.
<nfmResponseTimeoutInSeconds>		Integer	1 through 20	This parameter determines the maximum amount of time the license manager waits for a response from the Network Function Manager's license management web application for a license request.
<licenseProcessingPeriodInMinutes>		Integer	1440 through 14400	This parameter specifies at which interval the license processing is executed (in minutes).

#### 9.3.2.4.3 clear

This command is used to clear (set to no value) general settings-related attributes.

- 1) Ensure you are at the `/AMS_CLI/System/Licensing/LicenseManager/GeneralSettings>` level.
- 2) Enter:

**clear <attribute>** ↵

where:

Variable	Field	Type	Valid Values	Description
<attribute>		MultipleChoice	nfmURI	The name of the attribute to clear.

#### 9.3.2.5 GracePeriods

This level is used to view and modify the grace periods settings.

##### 9.3.2.5.1 get

This command is used to view grace periods settings-related attributes.

- 1) Ensure you are at the `/AMS_CLI/System/Licensing/LicenseManager/GracePeriods>` level.
- 2) Enter:

**get** ↵

##### 9.3.2.5.2 set

This command is used to modify grace periods settings-related attributes.

- 1) Ensure you are at the `/AMS_CLI/System/Licensing/LicenseManager/GracePeriods>` level.
- 2) Enter:

**set <attribute>** ↵

where:

Variable	Field	Type	Valid Values	Description
<attribute>		MultipleChoice	mediumSeverityThreshold, highSeverityThreshold, criticalSeverityThreshold	The name of an attribute to modify.
<mediumSeverityThreshold>		Integer	1 through 100	This parameter specifies how long (in % of total grace period) the license manager waits before sending a medium severity notification after a grace period starts.
<highSeverityThreshold>		Integer	1 through 100	This parameter specifies how long (in % of total grace period) the license manager waits before sending a high severity notification after a grace period starts.
<criticalSeverityThreshold>		Integer	1 through 100	This parameter specifies how long (in % of total grace period) the license manager waits before sending a critical severity notification after a grace period starts.

#### 9.3.2.6 LicenseStore

This level is used to view and manage the BroadWorks License Store.

##### 9.3.2.6.1 delete

This command deletes the specified license version from the License Manager store. Only non-active local license can be deleted, NFM provided license can only be managed from the NFM.

- 1) Ensure you are at the `/AMS_CLI/System/Licensing/LicenseManager/LicenseStore>` level.
- 2) Enter:

**delete <version>** ↵

where:

Variable	Field	Type	Valid Values	Description
<version>		String	1 to 10 characters	This parameter specifies the version of the license to delete.

##### 9.3.2.6.2 import

This command imports a license file into the License Manager license store.

- 1) Ensure you are at the `/AMS_CLI/System/Licensing/LicenseManager/LicenseStore>` level.
- 2) Enter:

**import <fileName>** ↵

where:

Variable	Field	Type	Valid Values	Description
<fileName>		String	1 to 300 characters	This parameter specifies the license file to import into the License Manager license store.

#### 9.3.2.6.3 showLicenses

This command shows the content of the License Manager license store.

- 1) Ensure you are at the `/AMS_CLI/System/Licensing/LicenseManager/LicenseStore>` level.
- 2) Enter:

**showLicenses** ↵

#### 9.3.2.7 Logging

This level is used to view and modify logging for the License Manager.

##### 9.3.2.7.1 get

This command is used to view logging-related attributes.

- 1) Ensure you are at the `/AMS_CLI/System/Licensing/LicenseManager/Logging>` level.
- 2) Enter:

**get** ↵

##### 9.3.2.7.2 set

This command is used to modify logging-related attributes.

- 1) Ensure you are at the `/AMS_CLI/System/Licensing/LicenseManager/Logging>` level.
- 2) Enter:

**set <attribute>** ↵

where:

Variable	Field	Type	Valid Values	Description
<attribute>		MultipleChoice	enabled, severity, priority, max QueueSize, showThreadName	This parameter specifies the attribute to be modified.
<enabled>		Choice	true, false	This parameter turns the logging on and off.
<severity>		Choice	Debug, FieldDebug, Info, Notice, Warn	This parameter specifies the default logging severity level.
<priority>		Integer	1 through 5	This parameter specifies the priority of the logging thread. The value "1" indicates the lowest priority and "5" indicates the highest.
<maxQueue Size>		Integer	0 through 2147483647	This parameter specifies the maximum size of the logging queue.
<showThread Name>		Choice	true, false	This parameter enables thread name logging.

#### 9.3.2.7.3 InputChannels

This level is used to view, modify, or clear input channels entries.

### 9.3.2.7.3.1 get

This command is used to view input channels-related attributes.

- 1) Ensure you are at the /AMS\_CLI/System/Licensing/LicenseManager/Logging/ InputChannels> level.

- 2) Enter:

**get** ↵

### 9.3.2.7.3.2 set

This command is used to modify input channels-related attributes.

- 1) Ensure you are at the /AMS\_CLI/System/Licensing/LicenseManager/Logging/ InputChannels> level.

- 2) Enter:

**set <name> <attribute>** ↵

where:

Variable	Field	Type	Valid Values	Description
<name>		Choice	LicenseManager, Generic, BroadsoftCommon CommunicationTransport, BroadsoftCommon CommunicationTransportKeep Alive, NameService, Timer, SMAP	This parameter specifies the name of the logging input channel.
<attribute>		MultipleChoice	enabled, severity	The name of an attribute to modify.
<enabled>		Choice	true, false	This parameter turns the logging to the logging input channel on and off.
<severity>		Choice	Debug, FieldDebug, Info, Notice, Warn	This parameter specifies the severity level of the logging input channel.

### 9.3.2.7.3.3 clear

This command is used to clear input channels-related attributes.

- 1) Ensure you are at the /AMS\_CLI/System/Licensing/LicenseManager/Logging/ InputChannels> level.

- 2) Enter:

**clear <name> <attribute>** ↵

where:

Variable	Field	Type	Valid Values	Description
<name>		Choice	LicenseManager, Generic, BroadsoftCommon CommunicationTransport, BroadsoftCommon CommunicationTransportKeep Alive, NameService, Timer, SMAP	This parameter specifies the name of the logging input channel.

Variable	Field	Type	Valid Values	Description
<attribute>		MultipleChoice	severity	The name of an attribute to clear.

#### 9.3.2.7.4 OutputChannels

This level is used to view, modify, or clear output channels.

##### 9.3.2.7.4.1 get

This command is used to view output channels-related attributes.

- 1) Ensure you are at the /AMS\_CLI/System/Licensing/LicenseManager/Logging/OutputChannels> level.
- 2) Enter:

**get** ↵

##### 9.3.2.7.4.2 set

This command is used to modify output channels-related attributes.

- 1) Ensure you are at the /AMS\_CLI/System/Licensing/LicenseManager/Logging/OutputChannels> level.
- 2) Enter:

**set <name> <attribute>** ↵

where:

Variable	Field	Type	Valid Values	Description
<name>		Choice	Stdout, File	This parameter specifies the name of the logging output channel.
<attribute>		MultipleChoice	enabled, directory, filePrefix, fileSizeInMB, numberOfFiles	The name of an attribute to modify.
<enabled>		Choice	true, false	This parameter turns the logging to the logging output channel on and off.
<directory>		String	1 to 256 characters	This parameter specifies the directory where the log files are located.
<filePrefix>		String	1 to 256 characters	This parameter specifies the prefix of the log files.
<fileSizeInMB>		Integer	1 through 2000	This parameter specifies the maximum size of a log file.
<numberOfFiles>		Integer	1 through 65535	This parameter specifies the maximum number of log files that exist before the old log files are deleted.

## 9.4 ManagementAccessList

This level is used to view, add, set, delete, and clear a management access list entry.

### 9.4.1 get

This command is used to view management access list entry-related attributes.

- 1) Ensure you are at the `/AMS_CLI/System/ManagementAccessList>` level.
- 2) Enter:

**get** ↵

### 9.4.2 add

This command is used to add a new management access list entry-related attributes.

- 1) Ensure you are at the `/AMS_CLI/System/ManagementAccessList>` level.
- 2) Enter:

**add <host> [<attribute>]** ↵

where:

Variable	Field	Type	Valid Values	Description
<host>		String	1 to 39 characters	This parameter specifies the Internet Protocol (IP) address of the network element that sends requests to the BroadWorks node.
<attribute>		MultipleChoice	description	Additional attributes to include through the add command.
<description>		String	1 to 80 characters	This parameter specifies the description of the entry.

### 9.4.3 set

This command is used to modify an existing management access list entry.

- 1) Ensure you are at the `/AMS_CLI/System/ManagementAccessList>` level.
- 2) Enter:

**set <host> <attribute>** ↵

where:

Variable	Field	Type	Valid Values	Description
<host>		String	1 to 39 characters	This parameter specifies the Internet Protocol (IP) address of the network element that sends requests to the BroadWorks node.
<attribute>		MultipleChoice	description	The name of an attribute to modify.
<description>		String	1 to 80 characters	This parameter specifies the description of the entry.

### 9.4.4 delete

This command is used to delete an existing management access list entry.

- 1) Ensure you are at the `/AMS_CLI/System/ManagementAccessList>` level.

2) Enter:

**delete <host>** ↵

where:

Variable	Field	Type	Valid Values	Description
<host>		String	1 to 39 characters	This parameter specifies the Internet Protocol (IP) address of the network element that sends requests to the BroadWorks node.

#### 9.4.5 clear

This command is used to clear management access list entry-related attributes.

1) Ensure you are at the `/AMS_CLI/System/ManagementAccessList>` level.

2) Enter:

**clear <host> <attribute>** ↵

where:

Variable	Field	Type	Valid Values	Description
<host>		String	1 to 39 characters	This parameter specifies the Internet Protocol (IP) address of the network element that sends requests to the BroadWorks node.
<attribute>		MultipleChoice	description	The name of an attribute to modify.

### 9.5 ProfileTuning

This level is used to view and modify the profile tuning for the server.

#### 9.5.1 GeneralSettings

This level is used to view and modify the general settings of profile tuning.

##### 9.5.1.1 get

This command is used to view the general settings of profile tuning.

1) Ensure you are at the `/AMS_CLI/System/ProfileTuning/GeneralSettings>` level.

2) Enter:

**get** ↵

##### 9.5.1.2 set

This command is used to modify the general settings of profile tuning.

1) Ensure you are at the `/AMS_CLI/System/ProfileTuning/GeneralSettings>` level.

2) Enter:

**set <attribute>** ↵

where:



Variable	Field	Type	Valid Values	Description
<attribute>		MultipleChoice	profileTuningName	The name of an attribute to modify.
<profileTuning Name>		Choice	default	This parameter specifies the name of the selected profile tuning.

#### 9.5.1.3 clear

This command is used to clear (set to no value) the general settings of profile tuning.

- 1) Ensure you are at the `/AMS_CLI/System/ProfileTuning/GeneralSettings>` level.
- 2) Enter:

**clear <attribute>** ↵

where:

Variable	Field	Type	Valid Values	Description
<attribute>		MultipleChoice	profileTuningName	The name of the attribute to clear.

## 9.6 Resources

This level is used to view and modify the physical resources of the server.

### 9.6.1 Memory

This level is used to view and modify the memory allocation rules for the applications running on the server.

#### 9.6.1.1 get

This command is used to show memory allocation general settings. They include the over-allocation protection, which will adjust the container memory allocation if the configured memory settings exceed physical memory available.

- 1) Ensure you are at the `/AMS_CLI/System/Resources/Memory>` level.
- 2) Enter:

**get** ↵

#### 9.6.1.2 set

This command is used to set memory allocation general settings.

- 1) Ensure you are at the `/AMS_CLI/System/Resources/Memory>` level.
- 2) Enter:

**set <attribute>** ↵

where:

Variable	Field	Type	Valid Values	Description
<attribute>		MultipleChoice	overAllocationProtection	The name of an attribute to modify.

Variable	Field	Type	Valid Values	Description
<overAllocation Protection>		Choice	true, false	This parameter controls whether the software manager adjusts the containers memory allocation if the configured memory settings exceed the physical memory available. The default value is "true".

### 9.6.1.3 Containers

This level is used to view and modify the memory allocation rules for each container.

#### 9.6.1.3.1 get

This command is used to display container memory allocation settings and runtime values.

- 1) Ensure you are at the `/AMS_CLI/System/Resources/Memory/Containers>` level.
- 2) Enter:

**get** ↵

#### 9.6.1.3.2 set

This command is used to modify the memory allocation settings for a container. For the purpose of the set command, the memory can be expressed as an amount of memory (in megs) or a percentage of physical memory. Modifying one of the values causes the other to be recalculated.

- 1) Ensure you are at the `/AMS_CLI/System/Resources/Memory/Containers>` level.
- 2) Enter:

**set <containerName> <attribute>** ↵

where:

Variable	Field	Type	Valid Values	Description
<container Name>		String	1 to 255 characters	This parameter specifies the container name.
<attribute>		MultipleChoice	amount, percentage	The name of an attribute to modify.
<amount>		Integer	0 through 65535	This parameter specifies the amount of memory that is allocated to a container (in megs).
<percentage>		Real	0.0 through 100.0	This parameter specifies the percentage of physical memory that is allocated to a container.

## 9.7 Security

This level is used to view and modify the Access Control List (ACL) security options for the server.

### 9.7.1 BlackList

This level is used to view and modify the Access Control List (ACL) black list security options for the BroadWorks server.

### 9.7.1.1 get

This command is used to display network security-related attributes. It displays the Access Control List (ACL) black list that filters inbound network packets to the BroadWorks server. Packets that match entries in the black list are processed by the BroadWorks server.

- 1) Ensure you are at the `/AMS_CLI/System/Security/BlackList>` level.
- 2) Enter:

**get** ↵

### 9.7.1.2 add

This command is used to add an entry to the Access Control List (ACL) black list.

- 1) Ensure you are at the `/AMS_CLI/System/Security/BlackList>` level.
- 2) Enter:

**add <SourceAddress> <Mask> <DestinationAddress> <destinationPortFirst>  
<destinationPortLast> <protocol>** ↵

where:

Variable	Field	Type	Valid Values	Description
<Source Address>		String	1 to 80 characters	This parameter specifies the sourceIp/sourceMask pair as a subnet range of IPs. The sourceIp is always the string representation of the IP whether IPv4 or IPv6.
<Mask>		String	1 to 80 characters	This parameter specifies the source mask. It is in dotted string format for IPv4 (for example, 255.255.0.0) or the number of bits in the mask for IPv4 and IPv6.
<Destination Address>		String	1 to 80 characters	This parameter specifies the destination IP address of the packet matches against this IP address. This is one of the configured IP addresses of the BroadWorks server.
<destination PortFirst>		Integer	0 through 65535	This parameter specifies the first port of the range of inbound packets that match against a range of destination ports. For protocol Internet Control Message Protocol (ICMP), this is "0".
<destination PortLast>		Integer	0 through 65535	This parameter specifies the last port of the range of inbound packets that match against a range of destination ports. For protocol Internet Control Message Protocol (ICMP), this is "0".

Variable	Field	Type	Valid Values	Description
<protocol>		Choice	TCP, UDP, ICMP	This parameter determines the received network packet matches against this protocol. Values include "tcp", "udp", or "icmp".

### 9.7.1.3 delete

This command is used to remove an entry from the Access Control List (ACL) black list.

- 1) Ensure you are at the /AMS\_CLI/System/Security/BlackList> level.
- 2) Enter:

```
delete <SourceAddress> <Mask> <DestinationAddress> <destinationPortFirst>  
<destinationPortLast> <protocol>
```

where:

Variable	Field	Type	Valid Values	Description
<Source Address>		String	1 to 80 characters	This parameter specifies the sourceIp/sourceMask pair as a subnet range of IPs. The sourceIp/sourceMask pair defines a subnet range of IPs. The sourceIp is always the string representation of the IP whether IPv4 or IPv6.
<Mask>		String	1 to 80 characters	This parameter specifies the sourceMask is in dotted string for IPv4 (for example, 255.255.0.0) or the number of bits in the mask for IPv4 and IPv6.
<Destination Address>		String	1 to 80 characters	This parameter specifies the destination IP address of the packet matches against this IP address. This is one of the configured IP addresses of the BroadWorks server.
<destination PortFirst>		Integer	0 through 65535	This parameter specifies the first port of the range of inbound packets that match against a range of destination ports. For protocol Internet Control Message Protocol (ICMP), this is "0".
<destination PortLast>		Integer	0 through 65535	This parameter specifies the last port of the range of inbound packets that match against a range of destination ports. For protocol Internet Control Message Protocol (ICMP), this is "0".
<protocol>		Choice	TCP, UDP, ICMP	This parameter determines the received network packet matches against this protocol. Values include: "tcp", "udp", or "icmp".

## 9.7.2 WhiteList

This level is used to view and modify the Access Control List (ACL) white list security options for the BroadWorks server.

### 9.7.2.1 get

This command is used to display the network security-related attributes. It displays the Access Control List white list that filters inbound network packets to the BroadWorks Server. Packets match entries in the white list to be processed by the BroadWorks server.

- 1) Ensure you are at the `/AMS_CLI/System/Security/WhiteList>` level.
- 2) Enter:

**get** ↵

### 9.7.2.2 add

This command is used to add an entry to the Access Control List (ACL) white list.

- 1) Ensure you are at the `/AMS_CLI/System/Security/WhiteList>` level.
- 2) Enter:

**add <SourceAddress> <Mask> <DestinationAddress> <destinationPortFirst>  
<destinationPortLast> <protocol>** ↵

where:

Variable	Field	Type	Valid Values	Description
<Source Address>		String	1 to 80 characters	This parameter specifies the sourceIp/sourceMask pair as a subnet range of IPs. The sourceIp is always the string representation of the IP whether IPv4 or IPv6.
<Mask>		String	1 to 80 characters	This parameter specifies the sourceMask is in dotted string for IPv4 (for example, 255.255.0.0) or the number of bits in the mask for IPv4 and IPv6.
<Destination Address>		String	1 to 80 characters	This parameter specifies the destination IP address of the packet matches against this IP address. This is one of the configured IP addresses of the BroadWorks Server.
<destination PortFirst>		Integer	0 through 65535	This parameter specifies the first port of the range of inbound packets that match against a range of destination ports. For protocol Internet Control Message Protocol (ICMP), this is "0".
<destination PortLast>		Integer	0 through 65535	This parameter specifies the last port of the range of inbound packets that match against a range of destination ports. For protocol Internet Control Message Protocol (ICMP), this is "0".

Variable	Field	Type	Valid Values	Description
<protocol>		Choice	TCP, UDP, ICMP	This parameter determines the received network packet matches against this protocol. Values include: "tcp", "udp", or "icmp".

### 9.7.2.3 delete

This command is used to remove an entry from the Access Control List (ACL) white list.

- 1) Ensure you are at the `/AMS_CLI/System/Security/WhiteList>` level.
- 2) Enter:

```
delete <SourceAddress> <Mask> <DestinationAddress> <destinationPortFirst>  
<destinationPortLast> <protocol>↵
```

where:

Variable	Field	Type	Valid Values	Description
<Source Address>		String	1 to 80 characters	This parameter specifies the sourceIp/sourceMask pair as a subnet range of IPs. The sourceIp/sourceMask pair defines a subnet range of IPs. The sourceIp is always the string representation of the IP whether IPv4 or IPv6.
<Mask>		String	1 to 80 characters	This parameter specifies the sourceMask is in dotted string for IPv4 (for example, 255.255.0.0) or the number of bits in the mask for IPv4 and IPv6.
<Destination Address>		String	1 to 80 characters	This parameter specifies the destination IP address of the packet matches against this IP address. This is one of the configured IP addresses of the BroadWorks Server.
<destination PortFirst>		Integer	0 through 65535	This parameter specifies the first port of the range of inbound packets that match against a range of destination ports. For protocol Internet Control Message Protocol (ICMP), this is "0".
<destination PortLast>		Integer	0 through 65535	This parameter specifies the last port of the range of inbound packets that match against a range of destination ports. For protocol Internet Control Message Protocol (ICMP), this is "0".
<protocol>		Choice	TCP, UDP, ICMP	This parameter determines the received network packet matches against this protocol. Values include: "tcp", "udp", or "icmp".

## Acronyms and Abbreviations

---

<b>ACL</b>	Access Control List
<b>AMS</b>	Access Mediation Server
<b>BCCT</b>	BroadWorks Common Communication Transport
<b>BW</b>	BroadWorks
<b>CAC</b>	Carrier Access Code
<b>CLI</b>	Command Line Interface
<b>EV</b>	ExtraView
<b>FQDN</b>	Fully Qualified Domain Name
<b>IP</b>	Internet Protocol
<b>IPv4</b>	Internet Protocol Version 4
<b>IPv6</b>	Internet Protocol Version 6
<b>ISO</b>	International Organization for Standardization
<b>LDAP</b>	Lightweight Directory Access Protocol
<b>MAC</b>	Media Access Control
<b>MIB</b>	Management Information Base
<b>PM</b>	Performance Measurement
<b>RTP</b>	Real-Time Transport Protocol
<b>SIP</b>	Session Initiation Protocol
<b>SNMP</b>	Simple Network Management Protocol
<b>TCP</b>	Transmission Control Protocol
<b>TOS</b>	Type of Service
<b>UDP</b>	User Datagram Protocol
<b>URI</b>	Uniform Resource Identifier
<b>URL</b>	Uniform Resource Locator

## Index

---

### A

- AccessLevels 112
- AccessList 103
- AccessMediationServer 23, 53
- Agent 104
- Alarm 41
- AlarmsTable 47
- AMSLogging 23
- AMSTSLogging 26
- Applications 23

### B

- Bcct 121
- BCCT 108
- BlackList 130
- BroadWorks server
  - Keys 12
  - Messages 12
  - Software version 12
  - System conventions
  - Shortcuts 14

### C

- Change levels 15
- CLI
  - Change levels 15
  - Commands
    - Alias 19
    - Entering 13, 14
    - Exit 20
    - Help 13
    - History 19
    - SIP URL 13
    - Start 13
    - Syntax 14
  - Configure 17
  - Guides 11
  - Menus 15
  - Read files 16
  - Write (output to file) 17
- CLI level
  - Applications
    - AccessMediationServer
      - AMSLogging
        - InputChannels 24
        - OutputChannels 25
      - AMSTSLogging
        - InputChannels 26
        - OutputChannels 27
      - DeviceMgt 28
      - Diagnostics
        - Diag 29
      - GeneralSettings 30
      - RTP
        - Private 32
        - Public 33
    - SCCP 35
    - SIP
      - Interface 36
    - LogServer
      - GeneralSettings 37
      - Logging
        - InputChannels 38
        - OutputChannels 39
  - Interface
    - LDAP
      - Client
        - LocalUsers 101
        - Servers 101
    - SNMP
      - AccessList 103
      - Agent 104
      - Logging
        - InputChannels 106
        - OutputChannels 107
    - SMAP
      - BCCT 108
      - TrapTable 109
      - V3AccessControl
        - Groups
          - AccessLevels 112
      - V3Users 113
  - Maintenance
    - ContainerOptions 78
    - Extraview 80
    - ManagedObjects 81
    - Patching 89
    - Scheduler
      - FileCollector
        - SrcDestPathsContext 97
    - Tools 98
  - Monitoring
    - Alarm
      - AlarmsTable 47
      - Threshold
        - Default 52
    - PM
      - AccessMediationServer 53
      - ConfigurationManagement 57
      - HostResources 61
      - LicenseManager 65
      - Mib-II 69
      - UCD-SNMP 73
  - System
    - ConfigAgent
      - Logging
        - InputChannels 117
        - OutputChannels 118
    - GeneralSettings 119
    - Licensing
      - LicenseManager
        - Bcct
          - Ports 121
        - GeneralSettings 121
        - GracePeriods 122



- LicenseStore 123
- Logging
  - InputChannels 124
  - OutputChannels 126
- ManagementAccessList 126
- ProfileTuning
  - GeneralSettings 128
- Resources
  - Memory
    - Containers 130
- Security
  - BlackList 130
  - WhiteList 133
- Client 100
- Command alias 19
- Commands history 19
- ConfigAgent 117
- ConfigurationManagement 57
- Configure 17
- ContainerOptions 78
- Containers 130

## D

- Default 52
- DeviceMgt 28
- Diag 29
- Diagnostics 29
- Document conventions 12

## E

- Entering commands 13
- Exit 20
- Extraview 80

## F

- FileCollector 97

## G

- GeneralSettings 30, 37, 119, 121, 128
- GracePeriods 122
- Groups 111

## H

- HostResources 61

## I

- InputChannels 24, 26, 38, 106, 117, 124
- Interface 36, 100

## L

- LDAP 100
- LicenseManager 65, 120
- LicenseStore 123

- Licensing 120
- LocalUsers 101
- Logging 38, 105, 117, 124
- LogServer 37

## M

- Maintenance 78
- ManagedObjects 81
- ManagementAccessList 126
- Memory 129
- Menus 15
- Mib-II 69
- Monitoring 41

## O

- OutputChannels 25, 27, 39, 107, 118, 126

## P

- Patching 89
- PM 53
- Ports 121
- Private 32
- Procedural steps 21
- ProfileTuning 128
- Public 33
- Purpose 11

## R

- Read files 16
- Resources 129
- RTP 31

## S

- SCCP 35
- Scheduler 94
- Security 130
- Servers 101
- SIP 36
- SMAP 108
- SNMP 103
- SrcDestPathsContext 97
- Start command 13
- Syntax 14
- System 117
- System conventions 13, 14

## T

- Threshold 48
- Tools 98
- TrapTable 109

## U

- UCD-SNMP 73

## **V**

V3AccessControl 111  
V3Users 113

## **W**

WhiteList 133  
Write (output to file) 17

## References

---

- [1] BroadSoft, Inc. 2014. *BroadWorks Access Mediation Server Command Line Interface Administration Guide, Release 21.0*. Available from BroadSoft at <http://xchange.broadsoft.com/php/xchange/getFile?name=BW-AMSCLIAdminGuide-R210.pdf>.
- [2] BroadSoft, Inc. 2014. *BroadWorks Application Server Command Line Interface Administration Guide, Release 21.0*. Available from BroadSoft at <http://xchange.broadsoft.com/php/xchange/getFile?name=BW-ASCLIAAdminGuide-R210.pdf>.
- [3] BroadSoft, Inc. 2014. *BroadWorks Database Server Command Line Interface Administration Guide, Release 21.0*. Available from BroadSoft at <http://xchange.broadsoft.com/php/xchange/getFile?name=BW-DBSCLIAdminGuide-R210.pdf>.
- [4] BroadSoft, Inc. 2014. *BroadWorks Element Management System Command Line Interface Administration Guide, Release 21.0*. Available from BroadSoft at <http://xchange.broadsoft.com/php/xchange/getFile?name=BW-EMSCLIAdminGuide-R210.pdf>.
- [5] BroadSoft, Inc. 2014. *BroadWorks Execution Server Command Line Interface Administration Guide, Release 21.sp1*. Available from BroadSoft at <http://xchange.broadsoft.com/php/xchange/getFile?name=BW-XSCLIAdminGuide-R21.sp1.pdf>.
- [6] BroadSoft, Inc. 2014. *BroadWorks Media Server Command Line Interface Administration Guide, Release 21.0*. Available from BroadSoft at <http://xchange.broadsoft.com/php/xchange/getFile?name=BW-MSCLIAAdminGuide-R210.pdf>.
- [7] BroadSoft, Inc. 2014. *BroadWorks Messaging Server Command Line Interface Administration Guide, Release 21.sp1*. Available from BroadSoft at <http://xchange.broadsoft.com/php/xchange/getFile?name=BW-UMSCLIAdminGuide-R21.sp1.pdf>.
- [8] BroadSoft, Inc. 2014. *BroadWorks Network Function Manager Command Line Interface Administration Guide, Release 21.sp1*. Available from BroadSoft at <http://xchange.broadsoft.com/php/xchange/getFile?name=BW-NFMCLIAdminGuide-R21.sp1.pdf>.
- [9] BroadSoft, Inc. 2014. *BroadWorks Network Server Command Line Interface Administration Guide, Release 21.0*. Available from BroadSoft at <http://xchange.broadsoft.com/php/xchange/getFile?name=BW-NSCLIAAdminGuide-R210.pdf>.
- [10] BroadSoft, Inc. 2014. *BroadWorks Profile Server Command Line Interface Administration Guide, Release 21.0*. Available from BroadSoft at <http://xchange.broadsoft.com/php/xchange/getFile?name=BW-PSCLIAAdminGuide-R210.pdf>.
- [11] BroadSoft, Inc. 2014. *BroadWorks Service Control Function Command Line Interface Administration Guide, Release 21.0*. Available from BroadSoft at <http://xchange.broadsoft.com/php/xchange/getFile?name=BW-SCFCLIAAdminGuide-R210.pdf>.
- [12] BroadSoft, Inc. 2014. *BroadWorks Sharing Server Command Line Interface Administration Guide, Release 21.sp1*. Available from BroadSoft at <http://xchange.broadsoft.com/php/xchange/getFile?name=BW-USSCLIAAdminGuide-R21.sp1.pdf>.

- [13] BroadSoft, Inc. 2014. *BroadWorks Video Server Command Line Interface Administration Guide, Release 21.sp1*.  
Available from BroadSoft at <http://xchange.broadsoft.com/php/xchange/getFile?name=BW-UVSCLIAdminGuide-R21.sp1.pdf>.
- [14] BroadSoft, Inc. 2014. *BroadWorks WebRTC Server Command Line Interface Administration Guide, Release 21.sp1*.  
Available from BroadSoft at <http://xchange.broadsoft.com/php/xchange/getFile?name=BW-WRSCLIAdminGuide-R21.sp1.pdf>.
- [15] BroadSoft, Inc. 2014. *BroadWorks Xtended Services Platform Command Line Interface Administration Guide, Release 21.0*.  
Available from BroadSoft at <http://xchange.broadsoft.com/php/xchange/getFile?name=BW-XspCLIAdminGuide-R210.pdf>.