



CHAPTER 1

Introduction

This chapter provides an overview of the Cisco Broadband Access Center (BAC) Application Programming Interface (API) and the API functions that you can use to perform the Regional Distribution Unit (RDU) tasks. This chapter contains the following sections:

- [Overview, page 1-1](#)
- [API Functions, page 1-2](#)

Overview

Cisco BAC automates the tasks of provisioning and managing Customer Premises Equipment (CPE) in a broadband service-provider network.

It enables secure provisioning and management of CPE by using the Broadband Forum's CPE WAN Management Protocol (CWMP). This is a standard defined in the TR-069 specification. Cisco BAC integrates the capabilities defined in TR-069 to increase operator efficiency and reduce network-management problems.

You can integrate Cisco BAC into new or existing environments, using an API that lets you control how Cisco BAC operates. Using the API, you can integrate various Business Support Systems (BSS) and Operational Support Systems (OSS) with Cisco BAC. The API is a programmatic interface through which the various BSS and OSS clients connect to the RDU. The RDU is the central server in a Cisco BAC deployment.

You can use the Cisco BAC API to:

- Register devices in the RDU database.
- Assign configuration policies for devices.
- Execute CWMP operations on the CPE.
- Configure the Cisco BAC provisioning system.

Use this guide along with the following resources that are integrated with the Cisco BAC software:

- API Javadocs, located at `<BPR_HOME>/docs/nb-api/javadoc`.
- Sample API client code, located at `<BPR_HOME>/rdu/samples/nb-api`.

`<BPR_HOME>` refers to the home directory in which you install Cisco BAC. The default home directory is `/opt/CSCObac`.

API Functions

Using the Cisco BAC API, you can perform the following:

- Provisioning operations.

You can:

- Add, modify, and search device records in the RDU database.
- Associate device records with Classes of Service in the RDU database.
- Associate device records with the groups in the RDU database.
- Retrieve discovered device data stored in the RDU database.
- Retrieve device operation history from the RDU database.
- Retrieve device faults from the BAC servers.

- Device management operations.

You can:

- Retrieve live data, such as statistics, from a device.
- Execute diagnostics on a device.
- Reboot the device.
- Reset the device settings to default configuration.
- Perform individual sets on a device.
- Execute any TR-069 remote procedure calls (RPC) in pass-through mode.

- System configuration and management operations.

You can:

- Configure Class of Service objects in the RDU.
- Manage firmware rules, configuration templates, and other files.
- Configure device grouping objects in the RDU.
- Configure licenses.
- Configure users.
- Configure system settings for BAC.
- Retrieve BAC server status and statistics.

You can perform all system configuration and management operations from the Cisco BAC administrator user interface as well. For details on how to perform these operations, see the [Cisco Broadband Access 3.8 Center Administrator Guide](#).

For more details on how to perform provisioning and device management operations, see [Use Cases](#).