



CHAPTER 1

Introduction

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

- [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 can be integrated into new or existing environments through a provisioning application programming interface (API) that lets you control how Cisco BAC operates. You can use the provisioning API to register devices in Cisco BAC, assign device configurations, and configure the entire Cisco BAC provisioning system.

Cisco BAC supports provisioning and managing of CPE that is compliant with the DOCSIS 3.0 specification. With IP version 6 (IPv6) being a large subset of DOCSIS 3.0, this release supports DHCPv6 and DNSv6. It also supports other devices like Computer, PacketCable Multimedia Terminal Adaptor (Packetcable MTA), Set Top Box (STB), CableHomeWanData, and CableHomeWanMan.

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, which 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 set operations on the CPE.
- Configure the Cisco BAC provisioning system.

**Note**

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

- API Javadocs, located at *BAC_42_SolarisK9/docs/BAC_Javadoc_API_Provisioning*
- Sample API client code, located at *BPR_HOME/rdu/samples/provapi*.

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 operations:

- Provisioning operations.

You can:

- Add, modify, 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.
- Reset the device.
- Reset the device settings to default configuration.
- Perform individual sets on a device.

- 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.

**Note**

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 Center Administrator's Guide 4.2*.
For more details on how to perform provisioning and device management operations, see [Use Cases](#).
