



# CHAPTER 1

## Overview

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Broadband Access Center for Cable (BACC) automates the process of configuring and provisioning cable network devices. BACC interfaces with Cisco Network Registrar, which includes a high-speed DHCP server for IP address management and a DNS server.

This chapter describes:

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- [Network Registrar Requirements, page 1-2](#)
- [Hardware Requirements, page 1-2](#)
- [Types of Installations, page 1-4](#)

## Operating System Requirements

You must install BACC on a computer running the Solaris 8 or 9 operating system. You must have the correct type and number of patches installed on your system before you can install BACC.

### JDK Patches for Solaris 8

The JDK patches recommended for successful BACC installation include:

- |             |             |             |
|-------------|-------------|-------------|
| • 112003-03 | • 108773-18 | • 111310-01 |
| • 109147-31 | • 111308-05 | • 112438-03 |
| • 108434-18 | • 108435-18 | • 113886-26 |
| • 113887-26 | • 111111-04 | • 112396-02 |
| • 110386-03 | • 111023-03 | • 111317-05 |
| • 113648-03 | • 115827-01 | • 116602-01 |
| • 108652-86 | • 108921-22 | • 108940-65 |
| • 108987-14 | • 108528-29 | • 108989-02 |
| • 108993-39 | • 109326-16 | • 110615-13 |

## JDK Patches for Solaris 9

The JDK patches recommended for successful BACC installation include:

- 113886-26
- 112785-44
- 113887-26
- 113096-03

## KDC Patches

The KDC patches required for successful BACC installation include:

- 112438-01
- 109326-06

## Network Registrar Requirements

Before you install BACC, be aware of these Cisco Network Registrar requirements:

- We recommend that you use Network Registrar 6.1.2.3 or higher with BACC 2.7.
- A Network Registrar DHCP server must be installed on a computer with Solaris 8 or 9.
- In a failover deployment of BACC, you must configure two redundant DHCP servers for failover.
- After you install BACC, ensure that Network Registrar scopes are configured to reflect failover capability and the topology of the network on which BACC is installed.

For more information about configuring failover on Network Registrar servers, see the *Network Registrar User's Guide*.

## Hardware Requirements

A BACC installation requires these servers:

- A regional distribution unit (RDU). This is the primary server in a BACC deployment. It contains the central BACC database and manages the generation of configurations.
- One or more device provisioning engines (DPE). A Cisco device provisioning engine caches provisioning information and handles all configuration requests including the transfer of configuration files to devices. It is integrated with the Cisco Network Registrar DHCP server to control the assignment of IP addresses. Multiple DPEs can communicate with a single DHCP server. DPEs include factory installed software that enables provisioning, but you must perform some initial set up.

**Note**

The hardware installation procedures for the device provisioning engine are described in the following guides:

- For the DPE-590, refer to the *Cisco Content Engine 500 Series Hardware Installation Guide*. This can be found at:  
[http://www.cisco.com/en/US/docs/app\\_ntwk\\_services/waas/ce/ce500/installation/guide/ce500hig.html](http://www.cisco.com/en/US/docs/app_ntwk_services/waas/ce/ce500/installation/guide/ce500hig.html)
- For the DPE-2115, refer to the *Installation and Setup Guide for the Cisco 1102 VLAN Policy Server*. This can be found at:  
[www.cisco.com/en/US/products/sw/secursw/ps2136/products\\_installation\\_and\\_configuration\\_guide\\_book09186a00801f0d02.html](http://www.cisco.com/en/US/products/sw/secursw/ps2136/products_installation_and_configuration_guide_book09186a00801f0d02.html)

- A key distribution center (KDC). The KDC and the DPE registration services handle the authentication of all voice technology media terminal adapters (MTAs). When a lab installation is performed, the KDC is installed on the lab computer. For performance reasons however, in a component installation, the KDC should be installed on a separate server.



**Note** The KDC is required only when configuring a system to support voice technology operations.

- One or more Cisco Network Registrar servers. Network Registrar provides Dynamic Host Configuration Protocol (DHCP) and Domain Name System (DNS) functionality. Implementing dynamic DNS (DDNS) within Network Registrar, increases the number of servers you need to deploy.

Table 1-1 describes the hardware requirements for each server.

**Table 1-1 Hardware Recommendations per Provisioning Group**

# Subscribers	Server	Min. # Servers	Recommended # Servers <sup>1</sup>	Server Class	# Processors	Memory
10000	DPE	1	2	SUN V210 1GHz <sup>2</sup>	1	1 GB
	CNR	1	2	SUN V210 1GHz	1	1 GB
	KDC	1	-	SUN V210 1GHz	1	1 GB
25000	DPE	1	2	SUN V210 1GHz <sup>2</sup>	1	1 GB
	CNR	1	2	SUN V210 1GHz	1	1 GB
	KDC	1	-	SUN V210 1GHz	2	2 GB
100000	DPE	1	2	SUN V210 1GHz <sup>2</sup>	2	2 GB
	CNR	1	2	SUN V210 1GHz	2	2 GB
	KDC	1	-	SUN V210 1GHz	2	2 GB
250000	DPE	2	2	SUN V210 1GHz <sup>2</sup>	2	2 GB
	CNR	2	2	SUN V210 1GHz	2	2 GB
	KDC	-	-	NA <sup>3</sup>	-	-
500000	DPE	2	2	SUN V210 1GHz <sup>2</sup>	2	2 GB
	CNR	2	2	SUN V210 1GHz	2	2 GB
	KDC	-	-	NA <sup>3</sup>	-	-

Table 1-1 Hardware Recommendations per Provisioning Group (continued)

# Subscribers	Server	Min. # Servers	Recommended # Servers <sup>1</sup>	Server Class	# Processors	Memory
1 million	DPE	2	2	SUN V210 1GHz <sup>2</sup>	2	2 GB or 4 GB <sup>4</sup>
	CNR	2	2	SUN V210 1GHz	2	2 GB or 4 GB <sup>4</sup>
	KDC	-	-	NA <sup>3</sup>	-	-
Lab Install	Single server for all	1	1	SUN V210 1GHz	1	1 GB

1. The number of recommended servers is based on the average subscriber with two devices (1 cable modem and 1 PC).
2. With BACC 2.6.1 and later releases, the non-appliance Sun DPE can be replaced with a DPE-2115 single 3.06 Ghz CPU and 2 GB memory, which yields equal or better performance.
3. Only 100000 MTA devices are currently supported per provisioning group.
4. 2 GB for configuration files that are less than or equal to 1.5 KB and 4 GB for configuration files that are more than 1.5 KB.

## Types of Installations

This guide discusses two types of installation:

- Individual component installation—The installation program enables you to install one or more individual components of BACC. The individual components are the RDU, Cisco Network Registrar extensions, the Solaris device provisioning engine (DPE), and the KDC. Refer to [Chapter 3, “Installing Components”](#) for specifics about installing the individual components.
- Lab installation—The installation program enables you to install BACC for use in a laboratory environment for demonstration or evaluation prior to deploying BACC into a full network implementation. Refer to [Chapter 4, “Installing in a Lab Environment”](#) for more information.

You can install BACC from the installation program’s graphical user interface (GUI) or from the command line.