

Cisco Broadband Access Center 4.0

Overview

Q. What is Cisco® Broadband Access Center (BAC)?

A. Cisco BAC is a distributed, scalable application that helps enable the automated flow-through provisioning of subscriber services and management of subscriber devices. Cisco BAC provides a centralized and automated platform for service providers to control and configure residential home gateways and the IP devices behind the gateways. Cisco BAC automatically recognizes devices, assigns the appropriate class of service, dynamically creates and generates device configuration files, and activates subscribers. Cisco BAC provides a single device management platform to support multiple technologies including DOCSIS®, PacketCable™, CableHome™, satellite, and Session Initiation Protocol (SIP).

Q. Who should deploy Cisco Broadband Access Center 4.0?

A. Cisco BAC 4.0 is designed for use by service providers seeking an automated means of provisioning and managing subscriber devices supporting the CableLabs standards such as DOCSIS, PacketCable, and CableHome. Cisco BAC can be easily extended to support other devices as well. This version of BAC adds support for DOCSIS 3.0. Any service provider planning to deploy and support IPv6 CPEs should use BAC 4.0.

Q. How is Cisco Broadband Access Center 4.0 used?

A. Cisco BAC 4.0 is used to replace manual provisioning processes by service providers seeking a more scalable, automated, and higher performance device management platform. It provides service providers an easy means to support newer versions of existing CableLabs standards as well as to implement new technologies such as PacketCable voice and CableHome for home network management.

Q. What benefits can be expected from deploying Cisco Broadband Access Center 4.0?

- A.** Cisco BAC 4.0 provides the following benefits:
- **Reliability:** Cisco BAC provides high reliability and high availability supporting autonomous headends, multiple distributed device provisioning engines (DPEs), each of which includes its own data-caching repository, a Trivial File Transfer Protocol (TFTP) server, and a time-of-day (ToD) server. During central server outages or communication problems, Cisco BAC provides continued service to existing registered subscribers.
 - **Scalability and performance:** Cisco BAC can support millions of devices in distributed deployments. Cisco BAC uses multiple distributed device management and caching engines to balance processing of device requests. A single DPE can support as many as 1 million devices. These DPEs can be combined in groups to provide redundancy and load sharing. Cisco BAC includes a central component called a regional distribution unit (RDU) to handle service requests and modifications. A single RDU server in conjunction with the appropriate number of DPE groups can support as many as 35 million devices with a sustained rate of hundreds of thousands of new devices a day.
 - **Easy integration with current systems:** Cisco BAC integrates with existing service provider systems, such as billing systems, operations support systems (OSSs), and other customer

management systems, through a Java provisioning API. It can also notify interested applications of certain events within the system through an event-notification registration procedure.

- Extendable technology support: Cisco BAC supports DOCSIS cable modems and set-top boxes for high-speed data provisioning, PacketCable voice provisioning of media termination adapters (MTAs), DOCSIS cable modems, CableHome devices, SIP ATAs, and SIP voice gateways. It also can be extended to support other Dynamic Host Configuration Protocol (DHCP)-based devices, including non-DOCSIS cable modems.

Q. What are the features of Cisco Broadband Access Center 4.0?

A. Cisco BAC 4.0 provides:

- Embedded high-performance database, optimized for device provisioning
- Integrated Kerberos Protocol server (KDC) for PacketCable voice service provisioning
- Java-based provisioning API
- Distributed device management servers
- Distributed architecture
- High availability
- Dynamic DOCSIS file generation
- DOCSIS 3.0 support (channel bonding and IPv6 support)
- Support for mixed IPv4/IPv6 CPE environment

Q. What equipment is managed by Cisco Broadband Access Center 4.0?

A. Cisco BAC is a standards-based device management application that supports multiple technologies including DOCSIS 1.0, 2.0, and 3.0, PacketCable 1.0, 1.1, and 1.5, CableHome 1.0, satellite, and SIP. Cisco BAC supports all end-user CPE devices that adhere to these standards.

Product Licensing and Platform Requirements

Q. How is Cisco Broadband Access Center 4.0 software licensed?

A. The software is licensed on a per subscriber service basis. Service licenses are offered in volumes of 10,000 and 500,000. Volume discounts apply.

Q. What hardware platform is required to run Cisco Broadband Access Center 4.0?

A. The Cisco BAC RDU and DPE components are supported on the Sun Solaris 8 and 9 operating systems, SPARC. A typical recommended configuration of the Cisco BAC RDU installation is a Sun V440 class workstation, 2 GHz, with 4 GB of RAM and an 18-GB hard drive. This supports up to 5 million devices. The DPEs may require a similar configuration, but this is dependent on number and type of devices being managed. The Cisco Network Registrar[®] component requires a Sun V210 workstation with 1 MB of RAM and a 5-GB hard drive.

For More Information

For additional product information, visit

<http://www.cisco.com/en/US/products/sw/netmgts/ps529/index.html> or contact your local account representative.



Americas Headquarters
Cisco Systems, Inc.
170 West Tasman Drive
San Jose, CA 95134-1706
USA
www.cisco.com
Tel: 408 526-4000
800 553-NETS (6387)
Fax: 408 527-0883

Asia Pacific Headquarters
Cisco Systems (USA) Pte. Ltd.
168 Robinson Road
#28-01 Capital Tower
Singapore 068912
www.cisco.com
Tel: +65 6317 7777
Fax: +65 6317 7799

Europe Headquarters
Cisco Systems International BV
Haarlerbergpark
Haarlerbergweg 13-19
1101 CH Amsterdam
The Netherlands
www-europe.cisco.com
Tel: +31 0 800 020 0791
Fax: +31 0 20 357 1100

Cisco has more than 200 offices worldwide. Addresses, phone numbers, and fax numbers are listed on the Cisco Website at www.cisco.com/go/offices.

©2007 Cisco Systems, Inc. All rights reserved. CCVP, the Cisco logo, and Welcome to the Human Network are trademarks of Cisco Systems, Inc.; Changing the Way We Work, Live, Play, and Learn is a service mark of Cisco Systems, Inc.; and Access Registrar, Aironet, BPX, Catalyst, CCDA, CCDP, CCIE, CCIP, CCNA, CCNP, CCSP, Cisco, the Cisco Certified Internetwork Expert logo, Cisco IOS, Cisco Press, Cisco Systems, Cisco Systems Capital, the Cisco Systems logo, Cisco Unity, Enterprise/Solver, EtherChannel, EtherFast, EtherSwitch, Fast Step, Follow Me Browsing, FormShare, GigaDrive, HomeLink, Internet Quotient, IOS, iPhone, IP/TV, IQ Expertise, the iQ logo, iQ Net Readiness Scorecard, iQuick Study, LightStream, Linksys, MeetingPlace, MGX, Networkers, Networking Academy, Network Registrar, PIX, ProConnect, ScriptShare, SMARTnet, StackWise, The Fastest Way to Increase Your Internet Quotient, and TransPath are registered trademarks of Cisco Systems, Inc. and/or its affiliates in the United States and certain other countries.

All other trademarks mentioned in this document or Website are the property of their respective owners. The use of the word partner does not imply a partnership relationship between Cisco and any other company. (0710R)