



Supported Syslogs and Traps in Cisco Broadband Access Center 4.0 and 4.0.1

Revised: March 31, 2010, OL-22203-01

This document provides the detailed information about the traps and syslogs supported in Cisco BAC 4.0 and 4.0.1 releases.

Contents

This document includes the following sections:

- [SNMP Traps, page 1](#)
- [Syslog Alerts and Messages, page 3](#)
 - [RDU Alerts, page 5](#)
 - [DPE Alerts, page 6](#)
 - [Watchdog Alerts, page 7](#)
 - [Network Registrar Extension Points Alerts, page 8](#)
- [Related Documentation, page 9](#)
- [Obtaining Documentation and Submitting a Service Request, page 9](#)

SNMP Traps

Cisco BAC provides basic SNMP v2-based monitoring of the RDU and DPE servers. The Cisco BAC SNMP agents support SNMP informs and traps, collectively called notifications.

You can configure an SNMP agent on the DPE by using `snmp-server` CLI commands. For additional information of the commands, see [Cisco Broadband Access Center DPE CLI Reference 4.0](#)

You can configure an SNMP agent on the RDU by using the `snmpAgentCfutil.sh` tool. For information about configuring SNMP agent on the RDU using `snmpAgentCfutil.sh` tool, see [Cisco Broadband Access Center Administrator Guide 4.0](#)



Americas Headquarters:
Cisco Systems, Inc., 170 West Tasman Drive, San Jose, CA 95134-1706 USA

Table 1 lists the Cisco BAC RDU SNMP Traps

Table 1 Cisco BAC RDU SNMP Traps

MIB	Trap Name	Trap OID	Sub Type Varbind OID	Sub Type Varbind Value	Sub Type Varbind Value Description	Trap Description
CISCO-BAC C-RDU-MIB	ciscoBaccRdu LicenseLimit	.1.3.6.1.4.1. 9.9.353.0.0	.1.3.6.1.4.1.9.9.353.1. 1.2.1.2.(1-n) (LicenseName)	[<i>Technology name</i>]	Indicates the corresponding technology name of the license. For example, DOCSIS, PacketCable and so on.	The notification appears when the number of devices exceeds the limit allowed by the license for a specific technology.
			.1.3.6.1.4.1.9.9.353.1. 1.2.1.3.(1 - n) (LicenseMaxAllowed)	0..4294967295	Indicates the total number of devices or server components allowed for the technology.	
			.1.3.6.1.4.1.9.9.353.1. 1.2.1.4.(1 - n) (cbrLicenseUsage)	0..4294967295	Indicates the total number of licenses of specific technology type already in use.	

MIB	Trap Name	Trap OID	Sub Type Varbind OID	Sub Type Varbind Value	Sub Type Varbind Value Description	Trap Description
CISCO-BACC-SERVER-MIB	ciscoBaccServerStateChanged	.1.3.6.1.4.1.9.9.349.0.0	.1.3.6.1.4.1.9.9.349.1.1.1.3.(1 - n) (cbsState)	1..8	Indicates the status of the server.	This notification appears when the status of the server is changed: <ul style="list-style-type: none"> • Unknown (1) • initializing (2) • disconnected (3) • shuttingDown(4) • readyOverloaded (5) • ready (6) • offline (7) • unlicensed (8)
			.1.3.6.1.4.1.9.9.349.1.1.1.6.(1 - n) (cbsServerType)	[ServerType] RDU,DPE,etc.	A unique name identifying the type of the server. For example: RDU, DPE and so on.	
			.1.3.6.1.2.1.1.5.0 (sysName)	DisplayString (SIZE (0..255))	An administratively-assigned name for the managed node. By convention, this is the fully-qualified domain name of the node. If the name is unknown, the value is a zero-length string.	

Syslog Alerts and Messages

Cisco BAC generates alerts through the Solaris syslog service. Syslog is a client-server protocol that manages the logging of information on Solaris. Cisco BAC syslog alerts are not a logging service; they provide a notification if a problem exist, but do not necessarily define the specific cause of the problem. You might find this information in the appropriate Cisco BAC log files. For more information on Cisco BAC logging events see [Cisco Broadband Access Center Administrator Guide 4.0](#)

This section describes the alerts generated by the components of Cisco BAC. The alerts include:

- [RDU Alerts, page 5](#)
- [DPE Alerts, page 6](#)
- [Watchdog Alerts, page 7](#)
- [Network Registrar Extension Points Alerts, page 8](#)

Message Format

When Cisco BAC generates an alert message, the format is:

XXX-#-###: Message

- *XXX*—Identifies the facility code, which can include:
 - RDU (Regional Distribution Unit)
 - DPE (Device Provisioning Engine)
 - AGENT (rduSnmpAgent or dpeSnmpAgent)
 - NR_EP (Cisco Network Registrar extension points)
 - KDC (Key Distribution Center)
- *#*—Identifies the severity level in use. The three levels of alert are:
 - 1—Identifies an alert
 - 2—Identifies and critical alert
 - 3—Identifies an error
 - 4—Identifies and informational message
- *###*—Identifies the numeric error code.
- *Message*—Provides the alert text or message.

RDU Alerts

Whenever an RDU syslog alert is sent, additional details (if any) can be found in the log file, BPR_DATA/rdu/logs/rdu.log.

Table 2 identifies the RDU Alerts.

Table 2 Cisco BAC RDU Syslog Alerts

Syslog Name	Description
RDU-1-101:RDU ran out of disk space	Indicates that the storage partition of the RDU server ran out of space. After encountering this error, the RDU attempts to restart automatically, but will typically encounter the same error again until more storage space is available. You can remove or compress some of the log files.
RDU-1-103:RDU ran out of memory	Indicates that the RDU ran out of memory. After encountering this error, the RDU server restarts automatically.
RDU-1-111: Evaluation key for technology <i>[technology_name]</i> expired	Indicates that an evaluation key for the technology specified expired. You must contact Cisco sales or TAC for a new license key.
RDU-1-115:You have used <i>[]</i> percent of available <i>[technology_name]</i> licenses.	Identifies, in percentage, the quantity of licenses used out of the total number of allowable licenses. Appears when you reach 80 percent of the license capacity.
RDU-1-116	Generated when the: <ul style="list-style-type: none"> • DPE evaluation license expires. • DPE drops connection with the database. • DPE is deleted from the database.
BPR-RDU-1-122: DNS took <i>[]</i> seconds for lookup of address <i>[ip/hostname]</i> . Check DNS configuration and health of servers	Indicates that BAC performance may be slow due to delayed response from the DNS. The alert is generated whenever IP address lookup takes more than 60 seconds.
RDU-2-119: Directory <i>[]</i> that contains the RDU database has a filesystem block size of <i>[]</i> bytes that does not match the required size of <i>[]</i> bytes. Corruption may occur.	Indicates that the BAC database may not be reliable because the file system that contains the database files is not configured to support an 8-KB or greater block size. For details on configuring the file-system block size, see the Installation and Setup Guide for the Cisco Broadband Access Center 4.0 .
RDU-2-200: Directory <i>[]</i> that contains the RDU database transaction logs has a filesystem block size of <i>[]</i> bytes that does not match the required size of <i>[]</i> bytes. Corruption may occur.	Indicates that the BAC database may not be reliable because the file system that contains the database log files is not configured to support an 8-KB or greater block size. For details on configuring the file system block size, refer to the Installation and Setup Guide for the Cisco Broadband Access Center 4.0 .

DPE Alerts

Whenever a DPE syslog alert is sent, you can find additional details in the DPE logs.

You can use the `show log` command to access the DPE logs. For additional information, see [Cisco Broadband Access Center DPE CLI Reference 4.0](#).

Some DPE errors are also propagated to the RDU server log files. You can find these in the `BPR_DATA/rdu/logs/rdu.log` file.

Table 3 lists the DPE syslog alerts.

Table 3 Cisco BAC DPE Syslog Alerts

Syslog Name	Description
DPE-1-102: DPE ran out of disk space	<p>The storage partition that the DPE server uses ran out of space. You have three options:</p> <ol style="list-style-type: none"> Clear out any excess support bundles from the disk. You can do this by moving those support bundles to another machine and then running the <code>clear bundles</code> command from the DPE CLI. Run the <code>clear logs</code> command from the DPE CLI to clear more disk space. As a last resort, run the <code>clear cache</code> command from the DPE CLI to remove any cache files and force the DPE to resynchronize with the RDU server.
DPE-1-104: DPE ran out of memory	<p>The DPE process ran out of memory. After encountering this error condition, the DPE restarts automatically.</p> <p>Determine how many device configurations are on the DPE; the larger the number of device configurations, the more memory is used. To reduce device configurations, limit the number of devices in the provisioning groups that the DPE serves.</p>
DPE-1-109: Failed to connect to RDU	<p>The RDU cannot be contacted. You must:</p> <ol style="list-style-type: none"> Verify if the DPE network is configured and connected correctly. Check if the DPE is configured to connect to the proper RDU, and that the connecting port is configured properly by using the <code>dpe rdu-server</code> command. Check if the RDU process is running on the correct server and listening on the correct port. The DPE attempts to reconnect to the RDU process every few seconds until a connection is established.
DPE-1-117: DPE license nodes have been exceeded or there is no valid DPE license	<p>Indicates that the DPE license nodes have been exceeded or there is no valid DPE license.</p>
DPE-1-116: DPE evaluation license has expired. Dropping DPE connections and deleting DPEs from database	<p>Indicates that an evaluation license key for the DPE expired. You must contact Cisco sales or TAC for a new license key.</p>
DPE-2-118: Directory [] that contains the DPE's cache has a filesystem block size of [] bytes that does not match the required size of [] bytes. Corruption may occur.	<p>Indicates that the DPE cache may not be reliable because the file system is not configured to support an 8-KB or greater block size.</p> <p>For details on configuring the file system block size, refer to the Installation and Setup Guide for the Cisco Broadband Access Center 4.0.</p>

Watchdog Alerts

Whenever the process watchdog sends a syslog alert, you can find error details (if any) in the *BPR_DATA/agent/logs/agent_console.log* file and the log files corresponding to the specific component mentioned in the alert (if any). For example, if you receive an alert similar to *The rdu unexpectedly terminated*, you would check the RDU server log file (*BPR_DATA/rdu/logs/rdu.log*) for additional information.

Table 4 lists the process watchdog alerts:

Table 4 **Process Watchdog Alerts**

Alert	Description
AGENT-3-9001: Failed to start the <i>[component]</i>	Indicates that the watchdog has failed to start the specified component.
AGENT-3-9002: The <i>[component]</i> unexpectedly terminated	Indicates that the specified component, monitored by the process watchdog, has unexpectedly failed.
AGENT-6-9004: The <i>[component]</i> has started	Generated any time a component is successfully started by the process watchdog. This message is for informational purposes only.
AGENT-6-9005: The <i>[component]</i> has stopped	Generated any time a component is successfully stopped through the process watchdog. This message is for informational purposes only.
AGENT-3-9003: Failed to stop the <i>[component]</i>	Indicates that a component did not stop when the process watchdog attempted to stop it.
AGENT-3-9003: Failed to create listener thread; <i>[error no]</i> Failed to close listen socket; <i>[error no]</i> Failed to cancel listen thread, and so on	Indicates errors that are not defined in other alert messages.

The *[component]* variable presented in the process watchdog alerts list shown in Table 4 represents any of these component values:

- rdu
- dpe
- tomcat
- cli
- snmpAgent
- kdc

Network Registrar Extension Points Alerts

Whenever a BAC Network Registrar extension point syslog alert is sent, you can find additional details in the Network Registrar log file.

Table 5 lists the Network Registrar Extension Points alerts:

Table 5 Cisco BAC Network Registrar Extension Points Alerts

Syslog Name	Description
NR_EP-1-106: Failed to connect to RDU	<p>The Network Registrar server cannot connect to the RDU. You should verify that the RDU process is running, and, if it is not already running, start the RDU.</p> <p>If the RDU is running, use the Network Registrar computer to ping the RDU. If you are unable to ping the RDU, fix the routing tables or other communication parameters, between the two devices.</p> <p>If this alert is frequently repeated, you may have an unstable connection between the two hosts. Use generally accepted network troubleshooting techniques to improve the connectivity between the two hosts.</p>
NR_EP-1-107: Failed to connect to any DPEs	<p>The Network Registrar extension cannot connect to the DPEs.</p> <p>Check that there are DPEs in the provisioning group for each Network Registrar extension. If not, change the Network Registrar provisioning group to one that has DPEs available. If DPEs are in the provisioning group, ensure that the Network Registrar extension has registered with the RDU; if it has not, it will not recognize any of the DPEs.</p> <p>If, after completing the check, the alert continues, check that there is network connectivity between the Network Registrar extension and the DPEs in the provisioning group.</p> <p>If this alert is frequently repeated, you may have an unstable connection between the two hosts. Use generally accepted network troubleshooting techniques to improve the connectivity between the two hosts.</p>
NR_EP-6-108: The BAC NR extensions have started	The Network Registrar extensions have been started.
NR_EP-6-109: The BAC NR extensions have stopped	The Network Registrar extensions have been stopped.
NR_EP-6-110: Registered with RDU [address and port]	The Network Registrar extensions have been registered with the RDU. The <i>address and port</i> identifies the address of the RDU that has registered the Network Registrar extensions.
NR_EP-1-111: Failed to find usable (best) DPEs	The Network Registrar extensions are unable to find a usable DPE.

Related Documentation

This release of the Cisco BAC product is supported by the following documents:

- [Cisco Broadband Access Center Administrator Guide 4.0](#)
- [Installation and Setup Guide for Cisco Broadband Access Center 4.0](#)
- [Cisco Broadband Access Center DPE CLI Reference 4.0](#)
- [Release Notes for Cisco Broadband Access Center 4.0](#)
- [Release Notes for Cisco Broadband Access Center 4.0.1](#)

Obtaining Documentation and Submitting a Service Request

For information on obtaining documentation, submitting a service request, and gathering additional information, see the monthly *What's New in Cisco Product Documentation*, which also lists all new and revised technical documentation, at:

<http://www.cisco.com/en/US/docs/general/whatsnew/whatsnew.html>.

Subscribe to the *What's New in Cisco Product Documentation* as a Really Simple Syndication (RSS) feed and set content to be delivered directly to your desktop using a reader application. The RSS feeds are a free service and Cisco currently supports RSS version 2.0.

This document is to be used in conjunction with the documents listed in the section [Related Documentation, page 9](#).

CCDE, CCENT, CCSI, Cisco Eos, Cisco Explorer, Cisco HealthPresence, Cisco IronPort, the Cisco logo, Cisco Nurse Connect, Cisco Pulse, Cisco SensorBase, Cisco StackPower, Cisco StadiumVision, Cisco TelePresence, Cisco TrustSec, Cisco Unified Computing System, Cisco WebEx, DCE, Flip Channels, Flip for Good, Flip Mino, Flipshare (Design), Flip Ultra, Flip Video, Flip Video (Design), Instant Broadband, and Welcome to the Human Network are trademarks; Changing the Way We Work, Live, Play, and Learn, Cisco Capital, Cisco Capital (Design), Cisco:Financed (Stylized), Cisco Store, Flip Gift Card, and One Million Acts of Green are service marks; and Access Registrar, Aironet, AllTouch, AsyncOS, Bringing the Meeting To You, Catalyst, CCDA, CCDP, CCIE, CCIP, CCNA, CCNP, CCSP, CCVP, Cisco, the Cisco Certified Internetwork Expert logo, Cisco IOS, Cisco Lumin, Cisco Nexus, Cisco Press, Cisco Systems, Cisco Systems Capital, the Cisco Systems logo, Cisco Unity, Collaboration Without Limitation, Continuum, EtherFast, EtherSwitch, Event Center, Explorer, Follow Me Browsing, GainMaker, iLYNX, IOS, iPhone, IronPort, the IronPort logo, Laser Link, LightStream, Linksys, MeetingPlace, MeetingPlace Chime Sound, MGX, Networkers, Networking Academy, PCNow, PIX, PowerKEY, PowerPanels, PowerTV, PowerTV (Design), PowerVu, Prisma, ProConnect, ROSA, SenderBase, SMARTnet, Spectrum Expert, StackWise, WebEx, and the WebEx logo are registered trademarks of Cisco 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. (1002R)

Any Internet Protocol (IP) addresses and phone numbers used in this document are not intended to be actual addresses and phone numbers. Any examples, command display output, network topology diagrams, and other figures included in the document are shown for illustrative purposes only. Any use of actual IP addresses or phone numbers in illustrative content is unintentional and coincidental.

© 2010 Cisco Systems, Inc. All rights reserved.

