AVAYA

Avaya Aura® Communication Manager Server Alarms

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protection against harmful interference when the equipment is operated in a commercial environment. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instruction manual, may cause harmful interference to radio communications. Operation of this equipment in a residential area is likely to cause harmful interference in which case the user will be required to correct the interference at his own expense.

For a Class B digital device or peripheral:

✳ Note:

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instruction manual, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

Equipment With Direct Inward Dialing ("DID"):

Allowing this equipment to be operated in such a manner as to not provide proper answer supervision is a violation of Part 68 of the FCC's rules.

Proper Answer Supervision is when:

1. This equipment returns answer supervision to the public switched telephone network (PSTN) when DID calls are:
   - answered by the called station,
   - answered by the attendant,
   - routed to a recorded announcement that can be administered by the customer premises equipment (CPE) user
   - routed to a dial prompt
2. This equipment returns answer supervision signals on all (DID) calls forwarded back to the PSTN.

Permissible exceptions are:

- A call is unanswered
- A busy tone is received
- A reorder tone is received

Avaya attests that this registered equipment is capable of providing users access to interstate providers of operator services through the use of access codes. Modification of this equipment by call aggregators to block access dialing codes is a violation of the Telephone Operator Consumers Act of 1990.

Automatic Dialers:

When programming emergency numbers and (or) making test calls to emergency numbers:

- Remain on the line and briefly explain to the dispatcher the reason for the call.
- Perform such activities in the off-peak hours, such as early morning or late evenings.

Toll Restriction and least Cost Routing Equipment:

The software contained in this equipment to allow user access to the network must be upgraded to recognize newly established network area codes and exchange codes as they are placed into service.

Failure to upgrade the premises systems or peripheral equipment to recognize the new codes as they are established will restrict the customer and the customer's employees from gaining access to the network and to these codes.

For equipment approved prior to July 23, 2001:

This equipment complies with Part 68 of the FCC rules. On either the rear or inside the front cover of this equipment is a label that contains, among other information, the FCC registration number, and ringer equivalence number (REN) for this equipment. If requested, this information must be provided to the telephone company.

For equipment approved after July 23, 2001:

This equipment complies with Part 68 of the FCC rules and the requirements adopted by the Administrative Council on Terminal Attachments (ACTA). On the rear of this equipment is a label that contains, among other information, a product identifier in the format US:AAAEQ##TXXX. If requested, this number must be provided to the telephone company.

The REN is used to determine the quantity of devices that may be connected to the telephone line. Excessive RENs on the telephone line may result in devices not ringing in response to an incoming call. In most, but not all areas, the sum of RENs should not exceed 5.0.

L'indice d'équivalence de la sonnerie (IES) sert à indiquer le nombre maximal de terminaux qui peuvent être raccordés à une interface téléphonique. La terminaison d'une interface peut consister en une combinaison quelconque de dispositifs, à la seule condition que la somme d'indices d'équivalence de la sonnerie de tous les dispositifs n'excède pas cinq.

To be certain of the number of devices that may be connected to a line, as determined by the total RENs, contact the local telephone company. For products approved after July 23, 2001, the REN for this product is part of the product identifier that has the format US:AAAEQ##TXXX. The digits represented by ## are the REN without a decimal point (for example, 03 is a REN of 0.3). For earlier products, the REN is separately shown on the label.

Means of Connection:

Connection of this equipment to the telephone network is shown in the following table:

Manufacturer's Port Identifier	FIC Code	SOC/ REN/ A.S. Code	Network Jacks
Off premises station	OL13C	9.0F	RJ2GX, RJ21X, RJ11C
DID trunk	02RV2.T	AS.2	RJ2GX, RJ21X, RJ11C
CO trunk	02GS2	0.3A	RJ21X, RJ11C
	02LS2	0.3A	RJ21X, RJ11C
Tie trunk	TL31M	9.0F	RJ2GX
Basic Rate Interface	02IS5	6.0F, 6.0Y	RJ49C
1.544 digital interface	04DU9.BN	6.0F	RJ48C, RJ48M
	04DU9.1KN	6.0F	RJ48C, RJ48M
	04DU9.1SN	6.0F	RJ48C, RJ48M
120A4 channel service unit	04DU9.DN	6.0Y	RJ48C

If this equipment causes harm to the telephone network, the telephone company will notify you in advance that temporary discontinuance of service may be required. But if advance notice is not practical, the telephone company will notify the customer as soon as possible. Also, you will be advised of your right to file a complaint with the FCC if you believe it is necessary.

The telephone company may make changes in its facilities, equipment, operations or procedures that could affect the operation of the equipment. If this happens, the telephone company will provide advance notice in order for you to make necessary modifications to maintain uninterrupted service.

If trouble is experienced with this equipment, for repair or warranty information, please contact the Technical Service Center at 1-800-242- 2121 or contact your local Avaya representative. If the equipment is causing harm to the telephone network, the telephone company may request that you disconnect the equipment until the problem is resolved.

A plug and jack used to connect this equipment to the premises wiring and telephone network must comply with the applicable FCC Part 68 rules and requirements adopted by the ACTA. A compliant telephone cord and modular plug is provided with this product. It is designed to be connected to a compatible modular jack that is also compliant.

Connection to party line service is subject to state tariffs. Contact the state public utility commission, public service commission or corporation commission for information.

Installation and Repairs

Before installing this equipment, users should ensure that it is permissible to be connected to the facilities of the local telecommunications company. The equipment must also be installed using an acceptable method of connection. The customer should be aware that compliance with the above conditions may not prevent degradation of service in some situations.

Repairs to certified equipment should be coordinated by a representative designated by the supplier. It is recommended that repairs be performed by Avaya certified technicians.

FCC Part 68 Supplier's Declarations of Conformity

Avaya Inc. in the United States of America hereby certifies that the equipment described in this document and bearing a TIA TSB-168 label identification number complies with the FCC's Rules and Regulations 47 CFR Part 68, and the Administrative Council on Terminal Attachments (ACTA) adopted technical criteria.

Avaya further asserts that Avaya handset-equipped terminal equipment described in this document complies with Paragraph 68.316 of the FCC Rules and Regulations defining Hearing Aid Compatibility and is deemed compatible with hearing aids.

Copies of SDoCs signed by the Responsible Party in the U. S. can be obtained by contacting your local sales representative and are available on the following Web site: http://support.avaya.com/DoC.

Canadian Conformity Information

This Class A (or B) digital apparatus complies with Canadian ICES-003.

Cet appareil numérique de la classe A (ou B) est conforme à la norme NMB-003 du Canada.

This product meets the applicable Industry Canada technical specifications/Le présent materiel est conforme aux specifications techniques applicables d'Industrie Canada.

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Avaya Inc. declares that the equipment specified in this document bearing the "CE" (Conformité Européenne) mark conforms to the European Union Radio and Telecommunications Terminal Equipment Directive (1999/5/EC), including the Electromagnetic Compatibility Directive (2004/108/EC) and Low Voltage Directive (2006/95/EC).

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Avaya Inc. supports European Union Battery Directive 2006/66/EC. Certain Avaya Inc. products contain lithium batteries. These batteries are not customer or field replaceable parts. Do not disassemble. Batteries may pose a hazard if mishandled.

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The power cord set included in the shipment or associated with the product is meant to be used with the said product only. Do not use the cord set for any other purpose. Any non-recommended usage could lead to hazardous incidents like fire disaster, electric shock, and faulty operation.

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If this is a Class A device:

This is a Class A product based on the standard of the Voluntary Control Council for Interference by Information Technology Equipment (VCCI). If this equipment is used in a domestic environment, radio disturbance may occur, in which case, the user may be required to take corrective actions.

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If this is a Class B device:

This is a Class B product based on the standard of the Voluntary Control Council for Interference from Information Technology Equipment (VCCI). If this is used near a radio or television receiver in a domestic environment, it may cause radio interference. Install and use the equipment according to the instruction manual.

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Preventing Toll Fraud

"Toll Fraud" is the unauthorized use of your telecommunications system by an unauthorized party (for example, a person who is not a corporate employee, agent, subcontractor, or is not working on your company's behalf). Be aware that there can be a risk of Toll Fraud associated with your system and that, if Toll Fraud occurs, it can result in substantial additional charges for your telecommunications services.

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Chapter 1: Introduction

Purpose

This document contains information about server alarms generated on various platforms. These alarms cover categories such as process watchdog, environmental, login, translation monitoring, and power supply alarms. This document also lists alarm identifications, levels, and resolutions.

Intended audience

The intended audience of this document are telecommunications managers and telephony administrators.

Related resources

Documentation

The following table lists the documents related to this product. Download the documents from the Avaya Support website at http://support.avaya.com.

Title	Description	Audience
Maintenance and Troubleshooting		
Maintenance Alarms for Avaya Aura® Communication Manager, Branch Gateways and Servers, 03-300430	Describes the alarms for Communication Manager.	Implementation Engineers, Support Personnel
Maintenance Commands for Avaya Aura® Communication Manager, Branch Gateways	Describes the alarms for Communication Manager.	Implementation Engineers, Support

Table continues…

Title	Description	Audience
and Servers, 03-300431		Personnel
Maintenance Procedures for Avaya Aura® Communication Manager, Branch Gateways and Servers, 03-300432	Describes the maintenance procedures for Communication Manager.	Implementation Engineers, Support Personnel

Finding documents on the Avaya Support website

About this task

Use this procedure to find product documentation on the Avaya Support website.

Procedure

1. Use a browser to navigate to the Avaya Support website at http://support.avaya.com/.

2. At the top of the screen, enter your username and password and click **Login**.

3. Put your cursor over **Support by Product**.

4. Click **Documents**.

5. In the **Enter your Product Here** search box, type the product name and then select the product from the drop-down list.

6. If there is more than one release, select the appropriate release number from the **Choose Release** drop-down list.

7. Use the **Content Type** filter on the left to select the type of document you are looking for, or click **Select All** to see a list of all available documents.

   For example, if you are looking for user guides, select **User Guides** in the **Content Type** filter. Only documents in the selected category will appear in the list of documents.

8. Click **Enter**.

Training

The following courses are available on the Avaya Learning website at www.avaya-learning.com. After logging into the website, enter the course code or the course title in the **Search** field and click **Go** to search for the course.

Course code	Course title
Understanding	
1A00234E	Avaya Aura® Fundamental Technology
AVA00383WEN	Avaya Aura® Communication Manager Overview

Table continues…

Course code	Course title
ATI01672VEN, AVA00832WEN, AVA00832VEN	Avaya Aura® Communication Manager Fundamentals
2007V	What is New in Avaya Aura® 7.0
2009V	What is New in Avaya Aura® Communication Manager 7.0
2011V	What is New in Avaya Aura® System Manager & Avaya Aura® Session Manager 7.0
2009T	What is New in Avaya Aura® Communication Manager 7.0 Online Test
2013V	Avaya Aura® 7.0 Solution Management
5U00060E	Knowledge Access: ACSS - Avaya Aura® Communication Manager and CM Messaging Embedded Support (6 months)
Implementation and Upgrading	
4U00030E	Avaya Aura® Communication Manager and CM Messaging Implementation
ATC00838VEN	Avaya Media Servers and Implementation Workshop Labs
AVA00838H00	Avaya Media Servers and Media Gateways Implementation Workshop
ATC00838VEN	Avaya Media Servers and Gateways Implementation Workshop Labs
2012V	Migrating and Upgrading to Avaya Aura® 7.0
Administration	
AVA00279WEN	Communication Manager - Configuring Basic Features
AVA00836H00	Communication Manager Basic Administration
AVA00835WEN	Avaya Communication Manager Trunk and Routing Administration
5U0041I	Avaya Aura® Communication Manager Administration
AVA00833WEN	Avaya Communication Manager - Call Permissions
AVA00834WEN	Avaya Communication Manager - System Features and Administration
5U00051E	Knowledge Access: Avaya Aura® Communication Manager Administration

Viewing Avaya Mentor videos

Avaya Mentor videos provide technical content on how to install, configure, and troubleshoot Avaya products.

About this task

Videos are available on the Avaya Support website, listed under the video document type, and on the Avaya-run channel on YouTube.

Procedure

- To find videos on the Avaya Support website, go to http://support.avaya.com and perform one of the following actions:

  - In **Search**, type `Avaya Mentor Videos` to see a list of the available videos.

  - In **Search**, type the product name. On the Search Results page, select **Video** in the **Content Type** column on the left.

- To find the Avaya Mentor videos on YouTube, go to www.youtube.com/AvayaMentor and perform one of the following actions:

  - Enter a key word or key words in the **Search Channel** to search for a specific product or topic.

  - Scroll down Playlists, and click the name of a topic to see the available list of videos posted on the website.

  ✱ Note:

  Videos are not available for all products.

Support

Go to the Avaya Support website at http://support.avaya.com for the most up-to-date documentation, product notices, and knowledge articles. You can also search for release notes, downloads, and resolutions to issues. Use the online service request system to create a service request. Chat with live agents to get answers to questions, or request an agent to connect you to a support team if an issue requires additional expertise.

Warranty

Avaya provides a 90-day limited warranty on Communication Manager. To understand the terms of the limited warranty, see the sales agreement or other applicable documentation. In addition, the standard warranty of Avaya and the details regarding support for Communication Manager in the warranty period is available on the Avaya Support website at http://support.avaya.com/ under **Help & Policies** > **Policies & Legal** > **Warranty & Product Lifecycle**. See also **Help & Policies** > **Policies & Legal** > **License Terms**.

Chapter 2: Server Alarms

Server Alarms

During normal operations, software or firmware may detect error conditions pertaining to specific Maintenance Objects (MOs). The system automatically attempts either to fix or circumvent these problems. Errors are detected in two ways:

- By firmware on the component during ongoing operations.
- A periodic test or a scheduled test started by software.

Tests that are run on demand are generally more comprehensive and potentially disruptive than the scheduled tests.

The Error Log records all the errors. Communication Manager raises an alarm if a component incurs too many errors.

Alarms on the Linux servers can occur in several areas:

- Media modules, servers, the media gateway processor, and the layer 2 switching processor are all capable of detecting internal failures and generating traps and alarms.
- Media gateways detect faults and alert the server. The server then raises an alarm and sends the alarm to an appropriate network management site.
- Communication Manager alarms reflect the condition of network elements such as circuit packs, media modules, and their associated links, ports, and trunks.
- Messaging alarms provide the condition of embedded or external messaging systems.

Alarms may be viewed using the following:

- System Management Interface (SMI): Provides alarms information related to Communication Manager, the server, and messaging.

  ✱ **Note:**

    For non-Communication Manager alarms, use the web page header Alarms and Notification and Diagnostics: View System Log. Choose the appropriate heading, and, if necessary, call Avaya support.

- Server bash shell: Provides alarms information related to Communication Manager, the server, and messaging.
- Server SAT (System Access Terminal) CLI (Command Line Interface): Provides alarms information related to Communication Manager.

- MGP CLI on the Media Gateway: Provides alarms and traps information related to the media gateway and its subsystems.
- Layer 2 switching processor CLI on the media gateway: Provides information related to the media gateway stack.

To display information related to Communication Manager, the server, and messaging alarms, use the System Management Interface (SMI) or the server bash shell.

This document provides information only for server alarms. For messaging alarms and repair procedures, see the appropriate documentation for the messaging system.

Server maintenance

Server maintenance focuses on the following functional roles:

- Provide the alarm logging and reporting service for all other system components.
- Provide support-specific interface and information for server duplication and maintenance software.
- Provide maintenance commands that the support technicians use to determine the condition of the system and perform repair or recovery actions or both.
- Provide server diagnostic, recovery, or notification mechanisms when a server processor is nonfunctional, that is, unable to execute the system software.

Alarm classifications

Alarms are classified depending on their impact on system operation:

- Major alarms identify failures that cause a critical degradation of service. These alarms require immediate attention.
- Minor alarms identify failures that cause some service degradation but do not render a crucial portion of the system inoperable. Minor alarms require attention. However, a minor alarm typically affects only a few trunks, stations, or a single feature.
- Warning alarms identify failures that cause no significant degradation of service or equipment failures external to the switch. These failures are not reported to INADS or to the attendant console.
- On-board problems originate in the circuitry on the alarmed media module or circuit pack.
- Off-board problems originate in a process or component that is external to the Media Module or circuit pack.

Alarm logs

A user can view alarms using the web interface, CLI, and SAT command-line interface.

Alarms logged by Communication Manager are stored in an alarm log. The following is an example of a server alarm in the syslog:

20070606:012435000:36096:lxsys:MED:volunteer-srv1 : >#2,YY,ACT,001,MED-GTWY,n,MAJ,MAJ,N,06/06:01:24:35,none,1,0x0:0x1:5156:31004:!#

When you enter the command **`almdisplay`** on the server command line, the system displays information from the text string in the following manner:

```
CommunicaMgr ALARMS
===================
ID   MO         Source     On Bd   Lvl    Ack   Date
1    DLY-MTCE               n       MIN    Y     Fri Jun 08 10:09:07 MDT 2007
2    IPMEDPRO   01A10       y       MIN    Y     Wed Jun 06 09:29:21 MDT 2007
3    MED-GTWY   002         n       MAJ    Y     Wed Jun 06 01:24:35 MDT 2007
4    MED-GTWY   001         n       MAJ    Y     Wed Jun 06 01:24:35 MDT 2007
```

Alarms in Linux servers

The server has an SNMP trap manager that collects traps from:

- Uploads and downloads to media modules
- VoIP media modules
- VoIP engines on media gateway motherboards
- Media gateway-associated UPS systems

Server alarms perform a similar role to Communication Manager alarms in a traditional telephony context. Server alarms:

- Comprise related sets of alarms
- Create an internal record of actual or potential problems
- Notify maintenance personnel of a problem
- Help isolate the source of the problem
- Point to and facilitate local and remote resolution of a problem

Setting up external notification for events

About this task

A Linux-based server can be configured to serve as the trap collector and provide external alarm notification.

Procedure

Perform one of the following tasks:

- Call INADS of the Avaya technical service center.

- Send an e-mail to specified destinations.
- Send an SNMP trap to a specified network management address.

Displaying alarms

Procedure

1. To view the verbose (-v) output of the alarm, type the **almdisplay -v** command.

2. If the **almdisplay** command returns a failure message, such as `almdisplay: 4: Unable to connect to MultiVantage`, enter the **man almdisplay** Linux command for command-related information.

Chapter 3: Linux Server Alarm Types

ARB (Arbiter)

The Arbiter process runs on duplicated servers to:

- Decide which server is in good condition and more able to be active
- Coordinate data shadowing between servers under the control of Duplication Manager

At the physical and data-link layers, three links may serve as redundant inter-arbiter UDP communication paths: the control network A link, the control network B link (if present), or an Ethernet-based duplication link. Two of these links must be present. The redundant inter-arbiter UDP communication paths perform the following functions:

- Enable arbitration between the active and standby servers
- Provide the necessary status signaling for memory refreshes

All inter-arbiter communication links use triple DES encryption for secure communication and control.

ARB alarms

The following table lists the Arbiter alarms and the related troubleshooting procedures.

Table 1: ARB alarms

Event ID	Link to description
3	See ARB Event ID 3 on page 18.
7	See ARB Event ID 7 on page 19.
8	See ARB Event ID 8 on page 19.
9	See ARB Event ID 9 on page 20.
11	See ARB Event ID 11 on page 21.
12	See ARB Event ID 12 on page 23.
13	See ARB Event ID 13 on page 23.
14	See ARB Event ID 14 on page 24

ARB Event ID 3

Alarm level	MIN
Alarm text	`Interchange handoff failed`

Cause

The standby server could not process the interchange request of the active server. The interchange does not occur, and the active side remains active.

Proposed Solution 1

1. From the Server section of the web interface, select **View Summary Status** to see if the standby side is Reset.

2. To manually clear the alarm, select **Alarms and Notification** and the appropriate alarm, and click **Clear**.

3. If the problem persists, troubleshoot the standby server:

    a. Check if the standby side is Reset. From the Server section of the web interface, select **View Summary Status**.

    b. Check for application problems by selecting **View Process Status** and restore any applications with problems.

    c. Check for problems with an Ethernet interface by selecting the **Execute Pingall** diagnostic. Check both sides of each failed link, and make necessary repairs.

4. If the applications and interfaces are okay but the problem persists, go to the Avaya Support website at http://support.avaya.com to open a service request.

Proposed Solution 2

1. Type `server`, and check if the standby side is Reset.

2. Type `almclear -n #id` to manually clear the alarm.

3. If the problem persists, troubleshoot the standby server:

    a. Type `server` and check if the standby side is Reset.

    b. Type `statapp` and check for application problems. Restore all applications with problems.

    c. Check for problems with an Ethernet interface by typing `pingall -a`. Check both sides of each failed link, and make any necessary repairs.

4. If the applications and interfaces are okay but the problem persists, go to the Avaya Support website at http://support.avaya.com to open a service request.

ARB Event ID 7

Alarm level MAJ

Alarm text **Arbiter in invalid/unknown state**

Cause

Memory corruption or bad code/build.

Proposed Solution

1. Verify that the server state is corrupt by entering the following commands on the Linux command line: **server stop -Sf -s arbiter start -s arbiter server -c**

   If the output no longer shows Mode: Corrupt!, then the problem is fixed. Otherwise, proceed to Step 2.

2. If the arbiter file is OK or if the problem persists, go to the Avaya Support website at http://support.avaya.com to open a service request.

ARB Event ID 8

Alarm level MIN

Aalrm text **Both servers thought they were active**

Cause

- A high-priority process caused the active Arbiter to hang for at least 4.1 seconds causing an interchange. Each Arbiter then realized that the other had assumed the active role. An automatic resolution process must leave the newly active server active, while the other server backs down to the standby role.

- Every Interarbiter link is down or misconfigured.

Proposed Solution 1

1. To check server status, see Verifying the server status.

2. If one server is active and the other is standby, manually clear the alarm:

   a. From the Web interface, select **Alarms and Notification** and the appropriate alarm, and click **Clear**.

   b. From the Linux command line, enter **almclear -n #id**.

3. If the problem persists, go to the Avaya Support website at http://support.avaya.com to open a service request.

Proposed Solution 2

1. To check server status, see Verifying the server status.

2. Check for problems with an Ethernet interface:

   a. From the Web interface, select the **Execute Pingall** diagnostic.

   b. From the Linux command line, enter `pingall -a`.

   Check both sides of each failed link, and make necessary repairs.

3. If the links are okay but the problem persists, go to the Avaya Support website at http://support.avaya.com to open a service request.

ARB Event ID 9

Alarm level   WRN

Cause

Before an interchange, the standby server is significantly in better condition than the active server requesting the interchange. The active server is probably unable to sustain call processing.

Proposed Solution

1. Compare the condition of both servers:

   a. From the Server section of the Web interface, select **View Summary Status**.

   b. From the Linux command line, enter `server.`

2. Using the output from Step 1, check the status of the individual processes of each server.

3. Check the status of the individual processes of the active server:

   a. From the Web interface, select **View Process Status**.

   b. From the Linux command line, enter `statapp.`

   After checking the status of the individual processes, restore any applications that have problems.

4. Check if the standby side is reset:

   a. From the Server section of the Web interface, select **View Summary Status**.

   b. From the Linux command line, enter `server.`

5. Check the status of the individual processes of the standby server:

   a. From the web interface, select **View Process Status**.

   b. From the Linux command line, enter `statapp.`

   After checking the status of the individual processes, restore any applications that have problems.

6. Check for problems with an Ethernet interface:

   a. From the web interface, select the **Execute Pingall** diagnostic.

    b. From the Linux command line, enter **`pingall -a.`**

Check both sides of each failed link, and make any necessary repairs.

On the Linux command line, enter **`ifconfig -a.`**. Ensure the IP addresses match `/etc/opt/ecs/servers.conf` and `/etc/hosts`, and check if all ethernet ports have been assigned IP addresses. Enter **`/sbin/arp -a`** to ensure that none of the MAC addresses display the `incomplete` message.

7. If the applications and interfaces of the standby server are OK but the problem persists, go to the Avaya Support website at http://support.avaya.com to open a service request.

After the interchange, the condition of the newly active server must be better than the condition of the standby server. See the SOH values bb and cc. See String pairs of ARB Event #9. The server with the larger bb value is considered to be in better condition. If the value of bb is the same for both the servers, the server with the larger cc value is considered to be in better condition. If the condition of the newly active server is better than the condition of the standby server, troubleshoot the standby server.

If the condition of the standby server is better than the newly active server:

    a. Manually clear the alarm:

       • From the web interface, select **Alarms and Notification** and the appropriate alarm, and click **Clear**.

       • From the Linux command line, enter **`almclear -n #id`**.

    b. If the problem persists, go to the Avaya Support website at http://support.avaya.com to open a service request.

ARB Event ID 11

Alarm level   WRN

Alarm text   `Cannot create receive socket.`

`Cannot create transmit socket.`

`Cannot bind receive socket.`

`Cannot (re)bind send socket.`

Cause

Since the Arbiter continuously attempts to create or bind the socket, the problem might resolve itself. Once resolved, the Arbiter can send and receive every Interarbiter link with no subsequent error messages in the trace log.

Proposed Solution

1. To examine the alarm log to distinguish between a bind or create problem or a send or receive problem:

    a. From the Web interface:

       a. Select **Alarms and Notification** and the appropriate alarm.

      b. Select the **View System Logs** diagnostic.

      c. Select the **Logmanager Debug** trace.

      d. Specify the **Event Range** for the appropriate time frame.

      e. Match the cannot create pattern

   b. From the Linux command line, enter **almdisplay -v**.

2. Check for completeness and consistency of the `hosts` and `servers.conf` files (containing IP addresses of the configured components of the system) located on the servers:

   a. From the web interface select **Configure Server**.

   b. From the Linux command line, enter:

more /etc/hostsmore /etc/opt/ecs/servers.conf

The Arbiter uses port number 1332 for sockets. Enter **netstat -a | grep 1332** to check if the alarm is still active. This command displays an output similar to the following:

upd 0 0<server-name>-cnb:1332 *.*

upd 0 0<server-name>-cna:1332 *.*

upd 0 0<server-name>-dup:1332 *.*

3. If the IP addresses match and there are no alarms for port 1332, manually clear the alarm:

   a. From the Web interface, select **Alarms and Notification** and the appropriate alarm, and click **Clear**.

   b. From the Linux command line, enter **almclear -n #id**.

4. If this problem affects call processing or if the problem persists, continue with Step 6. If this problem does not affect call processing or if the problem has resolved, continue only at the convenience of the customer.

5. Escalate this problem for explicit guidance with Steps 5a through 6.

   a. Enter **server** to verify that the suspected server is the standby.

   b. If the suspected server is not the standby, enter **server -if** to force a server interchange. Busyout the standby server from the Linux command line by entering **server -b**.

   c. Reboot the server (as the standby):

     • From the Web interface, select **Shutdown This Server**.

     • From the Linux command line, enter

     /sbin/shutdown -r now

6. If rebooting the standby server does not help or if the problem persists, go to the Avaya Support website at http://support.avaya.com to open a service request.

ARB Event ID 12

Alarm level	MIN
Alarm text	**Interchange without doing prep**

Cause

Since the Arbiter cannot create a thread to request file synchronization, some files did not get shadowed.

Proposed Solution

1. Examine the trace logs for the entry, `Can't create interchange-prep thread`:

   a. From the Web interface:

      a. Select the **View System Logs** diagnostic and **Logmanager Debug** trace.

      b. Specify the Event Range for the appropriate time frame.

      c. Match the interchange-prep pattern.

   b. From the Linux command line, enter `logv -t ts`

2. Resubmit any translation changes using the `save_trans` command.

3. Manually clear the alarm:

   a. From the Web interface, select **Alarms and Notification** and the appropriate alarm, and click **Clear**.

   b. From Linux command line, enter `almclear -n #id`.

ARB Event ID 13

Alarm level	MIN
Alarm text	**Heartbeat timeout from ACTIVE**

Cause

The two possible causes for this event are:

- An unexplained Linux lock-up that starved CPU cycles from all Communication Manager processes for more than 3.3 seconds.

- A third main server with a server ID that matches one of the other two main servers was somehow started and is accessible from the network.

In the case of a Linux lock-up, the problem corrects itself by the time the problem is detected and corrective action is not required.

Proposed Solution

1. On the Linux command line, enter `/sbin/arp -a` to determine the MAC addresses of the alternate server ethernet ports associated with the CNA, CNB, and duplication links.

2. Log in to the alternate server and verify that the MAC addresses match. Do this from both servers.

3. Check for a mismatch in the MAC addresses that indicates the presence of a third system posing as a doppelganger.

4. Use a network sniffer to find the third main server.

ARB Event ID 14

Alarm level   MIN

Alarm text   `Standby failed to come back up`

Cause

The standby server in a duplex system is nonoperational for longer than 15 minutes and cannot generate alarm on its own behalf. Typical causes are:

• The rolling Linux reboots due to reloading of a rolling Communication Manager or a failure to start Communication Manager.

• A server was turned down (manually or UPS failure) for more than 15 minutes without first being taken out of service (busied out). The correct procedure for doing a stop on a standby server is to busy it out first, then stop it.

Proposed Solution

Go to the Avaya Support website at http://support.avaya.com to open a service request.

Verifying the server status

Verifying the server status using the Web interface

Procedure

1. From the Server section of the web interface, select **View Summary Status** and verify that both the servers are active.

2. To distinguish the cause, examine the trace logs for Interarbiter messages with timestamps shortly before to shortly after the loss of heartbeat by:

   • Selecting the **View System Logs** diagnostic and **Logmanager Debug** trace.

   • Specifying the **Event Range** for the appropriate time frame.

• Matching the Interarb pattern.

3. Depending on the cause, continue with either Step 1 or Step 2.

Verifying the server status using the command line interface

Procedure

1. Type `server`, and verify that both servers are active.

2. To distinguish the cause, examine the trace logs for Interarbiter messages with timestamps shortly before to shortly after the loss of heartbeat by entering **`logv -t ts`**.

3. Depending on the cause, contiue with either Step 1 or Step 2.

ARB Event ID 9

Alarm level	WRN

Cause

Before an interchange, the standby server is significantly in better condition than the active server requesting the interchange. The active server is probably unable to sustain call processing.

Proposed Solution

1. Compare the condition of both servers:

    a. From the Server section of the Web interface, select **View Summary Status**.

    b. From the Linux command line, enter **`server.`**

2. Using the output from Step 1, check the status of the individual processes of each server.

3. Check the status of the individual processes of the active server:

    a. From the Web interface, select **View Process Status**.

    b. From the Linux command line, enter **`statapp.`**

    After checking the status of the individual processes, restore any applications that have problems.

4. Check if the standby side is reset:

    a. From the Server section of the Web interface, select **View Summary Status**.

    b. From the Linux command line, enter **`server.`**

5. Check the status of the individual processes of the standby server:

    a. From the web interface, select **View Process Status**.

    b. From the Linux command line, enter **`statapp.`**

    After checking the status of the individual processes, restore any applications that have problems.

6. Check for problems with an Ethernet interface:

    a. From the web interface, select the **Execute Pingall** diagnostic.

b. From the Linux command line, enter `pingall -a.`

Check both sides of each failed link, and make any necessary repairs.

On the Linux command line, enter `ifconfig -a.`. Ensure the IP addresses match /etc/opt/ecs/servers.conf and /etc/hosts, and check if all ethernet ports have been assigned IP addresses. Enter `/sbin/arp -a` to ensure that none of the MAC addresses display the incomplete message.

7. If the applications and interfaces of the standby server are OK but the problem persists, go to the Avaya Support website at http://support.avaya.com to open a service request.

After the interchange, the condition of the newly active server must be better than the condition of the standby server. See the SOH values bb and cc. See String pairs of ARB Event #9. The server with the larger bb value is considered to be in better condition. If the value of bb is the same for both the servers, the server with the larger cc value is considered to be in better condition. If the condition of the newly active server is better than the condition of the standby server, troubleshoot the standby server.

If the condition of the standby server is better than the newly active server:

a. Manually clear the alarm:

- From the web interface, select **Alarms and Notification** and the appropriate alarm, and click **Clear**.

- From the Linux command line, enter `almclear -n #id`.

b. If the problem persists, go to the Avaya Support website at http://support.avaya.com to open a service request.

ARB Event ID 11

Alarm level	WRN
Alarm text	`Cannot create receive socket.`

`Cannot create transmit socket.`

`Cannot bind receive socket.`

`Cannot (re)bind send socket.`

Cause

Since the Arbiter continuously attempts to create or bind the socket, the problem might resolve itself. Once resolved, the Arbiter can send and receive every Interarbiter link with no subsequent error messages in the trace log.

Proposed Solution

1. To examine the alarm log to distinguish between a bind or create problem or a send or receive problem:

a. From the Web interface:

a. Select **Alarms and Notification** and the appropriate alarm.

b. Select the **View System Logs** diagnostic.

      c. Select the **Logmanager Debug** trace.

      d. Specify the **Event Range** for the appropriate time frame.

      e. Match the cannot create pattern

  b. From the Linux command line, enter `almdisplay -v`.

2. Check for completeness and consistency of the `hosts` and `servers.conf` files (containing IP addresses of the configured components of the system) located on the servers:

  a. From the web interface select **Configure Server**.

  b. From the Linux command line, enter:

`more /etc/hostsmore /etc/opt/ecs/servers.conf`

The Arbiter uses port number 1332 for sockets. Enter `netstat -a | grep 1332` to check if the alarm is still active. This command displays an output similar to the following:

`upd 0 0<server-name>-cnb:1332 *.*`

`upd 0 0<server-name>-cna:1332 *.*`

`upd 0 0<server-name>-dup:1332 *.*`

3. If the IP addresses match and there are no alarms for port 1332, manually clear the alarm:

  a. From the Web interface, select **Alarms and Notification** and the appropriate alarm, and click **Clear**.

  b. From the Linux command line, enter `almclear -n #id`.

4. If this problem affects call processing or if the problem persists, continue with Step 6. If this problem does not affect call processing or if the problem has resolved, continue only at the convenience of the customer.

5. Escalate this problem for explicit guidance with Steps 5a through 6.

  a. Enter `server` to verify that the suspected server is the standby.

  b. If the suspected server is not the standby, enter `server -if` to force a server interchange. Busyout the standby server from the Linux command line by entering `server -b`.

  c. Reboot the server (as the standby):

    • From the Web interface, select **Shutdown This Server**.

    • From the Linux command line, enter

    `/sbin/shutdown -r now`

6. If rebooting the standby server does not help or if the problem persists, go to the Avaya Support website at http://support.avaya.com to open a service request.

ARB Event ID 12

Alarm level	MIN
Alarm text	`Interchange without doing prep`

Cause

Since the Arbiter cannot create a thread to request file synchronization, some files did not get shadowed.

Proposed Solution

1. Examine the trace logs for the entry, `Can't create interchange-prep thread`:
   a. From the Web interface:
      a. Select the **View System Logs** diagnostic and **Logmanager Debug** trace.
      b. Specify the Event Range for the appropriate time frame.
      c. Match the interchange-prep pattern.
   b. From the Linux command line, enter **logv -t ts**
2. Resubmit any translation changes using the **save_trans** command.
3. Manually clear the alarm:
   a. From the Web interface, select **Alarms and Notification** and the appropriate alarm, and click **Clear**.
   b. From Linux command line, enter **almclear -n #id**.

ARB Event ID 13

Alarm level   MIN

Alarm text   **Heartbeat timeout from ACTIVE**

Cause

The two possible causes for this event are:

- An unexplained Linux lock-up that starved CPU cycles from all Communication Manager processes for more than 3.3 seconds.
- A third main server with a server ID that matches one of the other two main servers was somehow started and is accessible from the network.

In the case of a Linux lock-up, the problem corrects itself by the time the problem is detected and corrective action is not required.

Proposed Solution

1. On the Linux command line, enter **/sbin/arp -a** to determine the MAC addresses of the alternate server ethernet ports associated with the CNA, CNB, and duplication links.
2. Log in to the alternate server and verify that the MAC addresses match. Do this from both servers.
3. Check for a mismatch in the MAC addresses that indicates the presence of a third system posing as a doppelganger.
4. Use a network sniffer to find the third main server.

ARB Event ID 14

Alarm level	MIN
Alarm text	`Standby failed to come back up`

Cause

The standby server in a duplex system is nonoperational for longer than 15 minutes and cannot generate alarm on its own behalf. Typical causes are:

- The rolling Linux reboots due to reloading of a rolling Communication Manager or a failure to start Communication Manager.

- A server was turned down (manually or UPS failure) for more than 15 minutes without first being taken out of service (busied out). The correct procedure for doing a stop on a standby server is to busy it out first, then stop it.

Proposed Solution

Go to the Avaya Support website at http://support.avaya.com to open a service request.

String pairs of ARB Event # 9

ARB Event #9 generates pairs of SOH strings. In each string pair, the first string represents the active and the second string represents the standby SOH of the server just before an interchange.

Since, unless prevented by external circumstances, Event 9 triggers a server interchange, the first string normally represents a less efficient server – which became the standby. So, the data of the first string is more pertinent.

The following is a sample string pair generated by ARB Event #9. Within this sample, four pairs of digits in each string have special meaning, and are labeled aa through dd.

```
aa bb cc dd

gmm 0700, pcd 00/00, dup 270, wd 81, actv 004

gmm 0700, pcd 06/06, dup 370, wd 01, actv 014
```

- For aa, any value other than 00 indicates a hardware problem. For example, the value 20 is common for a power failure.

  In the above example, neither server had hardware trouble.

- For bb and cc, bb indicates the number of PNs with IPSI that the server in question controls (if active) or is prepared to control (if standby), and cc indicates the number of connections to PNs with IPSIs. For non-survivable core servers, different values within the same string indicate a problem with controlling one or more IPSI-connected PNs.

  A PN reset can cause both the strings of the server to reflect equally degraded condition, but that event (in itself) must not trigger a server interchange.

- For dd, any value other than 01 indicates a failed software process. More precisely, a certain value indicates a problem with a discrete portion of the platform process set, including:

    - 21 for a Linux daemon, for example, atd, httpd, inetd, or xntpd

    - 41 for a platform service, for example, dbgserv, prune, or syslog

81 for reloaded Communication Manager software, as in the previous sample

BKP (Backup)

The system generates a backup (BKP) alarm only when a scheduled backup job fails. A backup now job does not have a BKP alarm.

The following table lists the Backup alarms and the related troubleshooting procedures.

Table 2: BKP Alarms

Event ID	Link to description
10	See BKP Event ID 10 on page 30.

BKP Event ID 10

Alarm level	MAJ
Alarm text	`Scheduled backup was terminated`

Proposed Solution

1. Log on to Communication Manager System Management Interface.

2. Click **Data Backup/Restore** > **Backup Logs**.

    The system displays the reason for the backup job failure.

3. To schedule a backup, click **Data Backup/Restore** > **Schedule Backup**.

    ⚠️ **Caution:**

    Attempting to restore a failed backup is not a valid recommendation since there is no backup image to restore.

CMG (Common Media Gateway)

See *Gateway Traps for the G250/G350/G430/G450/G700 Avaya S8xxx Servers*, 03-300430 for a description of CMG traps.

DUP (Duplication Manager)

The Duplication Manager process in coordination with the Arbiter process runs on the servers to control data shadowing between the servers.

At the physical and data-link layers, an Ethernet-based duplication link provides a TCP communication path between the Duplication Manager of each server to control data shadowing. This TCP/IP link provides the actual data shadowing for software duplication. For hardware duplication, there is an additional fiber optic link between the duplication memory boards that provides the data shadowing.

DUP alarms

The following table lists the Duplication Manager alarms and the related troubleshooting procedures.

Table 3: DUP alarms of

Event ID	Link to description
2	See DUP Event ID 2 on page 31.
6	See DUP Event ID 6 on page 32.

DUP Event ID 2

Alarm level	MAJ
Alarm text	`Duplication link down`

Cause

One Duplication Manager server cannot communicate with the other Duplication Manager server.

Proposed Solution 1

1. Access the trace log:
   a. Select the **View System Logs** diagnostic and **Logmanager Debug** trace
   b. Specify the **Event Range** for the appropriate time frame
   c. Match the "ndm" or "DUPLICATION" pattern
2. Examine the output of the trace-log query for one of the following messages:
3. "mainlp: get_addrs returned ***. Could not get IP address for other server.Verify name and address in servers.conf. ndm exiting." "san_check_msg() sync_msg failed: DUPLINK DOWN."
4. Check if the dup link status is "up" from the **Server** section of the Web interface by selecting **View Summary Status**.
5. If the dup link status is "up", manually clear the alarm by selecting **Alarms and Notification** and the appropriate alarm, and click **Clear**.

6. If the dup link status does not show "up", check the Ethernet interface of the duplication interface by selecting the **Execute Pingall** diagnostic.

7. If `pingall` passes, check the applications of the other server by selecting **View Process Status**.

Proposed Solution 2

1. Access the trace log by entering `logv -t ts.`

2. Examine the output of trace-log query for one of the following messages:

   "mainlp: get_addrs returned ***. Could not get IP address for other server.Verify name and address in servers.conf. ndm exiting." "san_check_msg() sync_msg failed: DUPLINK DOWN."

3. Enter `server` and check if the dup link is "up."

4. If the dup link status shows "up", manually clear the alarm by entering `almclear -n #id.`

5. If the dup link status does not show "up", check the Ethernet connectivity of the duplication interface by entering `pingall -d.`

6. If `pingall` passes, enter `statapp` and check the applications of the other server.

DUP Event ID 6

| Alarm text | `Incorrect duplication link speed` |

Cause

This alarm is generated when the NIC (Network Interface Card) that is used for the duplication does not have 1 GB capacity, when the cable is not functioning properly, or when Communication Manager does not have Ethernet with 1 GB capacity.

ENV (Environment)

The ENV environmental maintenance objects are monitored within the server. The objects include temperature, voltages, and fans.

Release 6.X and later, ENV alarms are generated by System Platform.

Event IDs with an alarm level of RES indicate that the problem has been cleared.

The following table lists the Environment alarms and the related troubleshooting procedures.

Table 4: ENV Alarms

Event ID	Link to description
32 G450	See ENV Event ID 32 G450 on page 33.
33 G450	See ENV Event ID 33 G450 on page 33.

Table continues…

Event ID	Link to description
34 G450	See ENV Event ID 34 G450 on page 33.
38	See ENV Event ID 38 on page 34.
39	See ENV Event ID 39 on page 34.

Related links

ENV Event ID 32 G450 on page 33
ENV Event ID 33 G450 on page 33
ENV Event ID 34 G450 on page 33
ENV Event ID 38 on page 34
ENV Event ID 39 on page 34

ENV Event ID 32 G450

Alarm level   MAJ

Alarm text   `G450 Fan Tray`

Cause

There is a problem with the fan tray on the G450.

Proposed Solution

Reinsert or replace the fan tray.

Related links

ENV (Environment) on page 32

ENV Event ID 33 G450

Alarm level   MAJ

Alarm text   `G450 Power Supply # 1`

Cause

There is a problem with Power Supply # 1 on the G450.

Proposed Solution

Reinsert or replace Power Supply #1.

Related links

ENV (Environment) on page 32

ENV Event ID 34 G450

Alarm level   MAJ

| **Alarm text** | `G450 Power Supply # 2` |

Cause

There is a problem with Power Supply # 2 on the G450.

Proposed Solution

Reinsert or replace Power Supply #2.

Related links

[ENV (Environment)](#) on page 32

ENV Event ID 38

| **Alarm level** | MIN |

| **Alarm text** | `ENV_SP_HEALTH_DEGRADED` |

Cause

When this alarm is generated, the system checks the cdom to see why the alarm was passed from System Platform to Communication Manager.

Related links

[ENV (Environment)](#) on page 32

ENV Event ID 39

| **Alarm level** | MAJ |

| **Alarm text** | `ENV_SP_HEALTH_GRAVE` |

Cause

When this alarm is generated, the system checks the cdom to see why the alarm was passed from System Platform to Communication Manager.

Related links

[ENV (Environment)](#) on page 32

Survivable core server

The following table describes the Survivable core server alarms and the related troubleshooting procedures.

Table 5: Survivable Core Server Alarms of

Event ID	Link to description
1	See [Survivable Core Server Event ID 1](#) on page 35.
2	See [Survivable Core Server Event ID 2](#) on page 35.
3	See [Survivable Core Server Event ID 3](#) on page 35.
4	See [Survivable Core Server Event ID 4](#) on page 35.
5	See [Survivable Core Server Event ID 5](#) on page 36.
6	See [Survivable Core Server Event ID 6](#) on page 36.
7	See [Survivable Core Server Event ID 7](#) on page 36.
8	See [Survivable Core Server Event ID 8](#) on page 36.
9	See [Survivable Core Server Event ID 9](#) on page 37.
10	See [Survivable Core Server Event ID 10](#) on page 37.

Survivable core server Event ID 1

Alarm level   MIN

Alarm text   `Survivable Core Server not controlling IPSI PN XX: cls RRR`

Cause

Server of cluster RRR does not control IPSI port network XX.

Survivable core server Event ID 2

Alarm level   MIN

Alarm text   `Survivable Core Server controlling IPSI PN XX: cls RRR`

Cause

Server of cluster RRR controls IPSI port network XX.

Survivable core server Event ID 3

Alarm level   MIN

Alarm text   `Survivable Core Server not controlling non-IPSI PN XX: cls RRR`

Cause

Server of cluster RRR does not control non-IPSI port network XX.

Survivable core server Event ID 4

Alarm level   MIN

Alarm text	`Survivable Core Server controlling non-IPSI PN XX: cls RRR`

Cause

Server of cluster RRR controls non-IPSI port network XX.

Survivable core server Event ID 5

Alarm level	MIN

Alarm text	`Survivable Core Server not registered cls YYY: cls RRR`

Cause

Survivable core server Cluster ID YYY is not registered to the active server of the main cluster. The main active server sends this trap for each survivable core server in the system (RRR != YYY). A survivable core server will only report status for itself (RRR = YYY).

Survivable core server Event ID 6

Alarm level	MIN

Alarm text	`Survivable Core Server registered cls YYY svid ZZZ: cls RRR`

Cause

Survivable core server Server ID ZZZ of cluster ID YYY is registered to the active server of the main cluster. The active server of the main cluster sends this trap for each survivable core server in the system (RRR != YYY). The survivable core server will only report status for itself (RRR = YYY). A survivable core server will only report status for itself (RRR = YYY).

Survivable core server Event ID 7

Alarm level	MIN

Alarm text	`Survivable Core Server changed to disable state: cls RRR`

Cause

Survivable core server cluster RRR is changed to the disable state.

Survivable core server Event ID 8

Alarm level	MIN

Alarm text	`Survivable Core Server changed to enable state: cls RRR`

Cause

Survivable core server cluster RRR is changed to the enable state.

Survivable core server Event ID 9

Alarm level   MIN

Alarm text   `IPSI (A/B) PN XX disconnected from Survivable Core Server: cls RRR`

Cause

Server of cluster RRR is not connected to IPSI (A/B) of port network XX. Each survivable core server in the system reports this event for all the IPSIs that the RRR cluster connects to as specified by system administration, that is., a local only survivable core server will provide connection event status for the IPSIs assigned to it at survivable core server community.

Survivable core server Event ID 10

Alarm level   MIN

Alarm text   `IPSI (A/B) PN XX connected to Survivable Core Server: cls RRR`

Cause

Server of cluster RRR is connected to IPSI (A/B) of port network XX. Each survivable core server in the system reports this event for all the IPSIs that the cluster connects to, as specified by system administration, that is, a local only survivable core server will provide connection event status for the IPSIs assigned to it at the survivable core server community.

FSY (File Synchronization)

The File Synchronization (FSY) process uses TCP-based communication over 100BaseT Ethernet links to provide synchronized duplication of critical data files, including translations and important Linux files.

There are two classes of FSY alarms, one class is associated with server communication failures and the other is associated with fileset configuration file errors.

The following table describes the FSY alarms and the related troubleshooting procedures.

Table 6: FSY Alarm

Event ID	Link to description
1 - 999	See FSY Event ID 1 - 999 on page 37.
1000 - 1999	See FSY Event ID 1000 - 1999 on page 38.

FSY Event ID 1 - 999

Alarm level   MIN

Alarm text   `event string (server): [server address] type`

Examples:

- `filesync failure (server): 10.115.9.12 ESS`
- `alarm resolved (server): 10.115.9.36 ESS`
- `filesync failure (server): 10.115.9.25 LSP`

Description	Server communication errors use Event IDs in the of range of 1 - 999, where each Event ID is associated with a particular server and the IP address of the server. The source of these alarms is always server, which indicates the server connection problems.

The event string can be one of the following:

- `filesync failure` — The alarm is generated because of a failure.
- `alarm cleared` — The alarm has been cleared by using a command.
- `alarm resolved` — The latest filesync has succeeded.

The alarm text also includes the type of the server and the IP address of the server. The following are the different types of server:

- DUP
- ESS
- LSP

Cause

File synchronization operation failed due to a server communication error. The IP address and server type indicate which connection to diagnose.

Proposed Solution

The type of the server and the IP address of the server indicate which connection should be diagonosed. For ESS and LSP server types, make sure that the server connection is working. For DUP server type, make sure that the Ethernet duplication link is working.

FSY Event ID 1000 - 1999

Alarm level	MIN

Alarm text	`event string (prescript): [fileset name] type`

Example:

- `filesync failure (prescript): trans DUP`

Description	Fileset configuration errors use Event IDs in the range of 1000 - 1999, where each Event ID is assiciated with a fileset. The source of these alarms is always prescript, which indicates that the prescript associated with the named fileset has failed on the local server.

> **✳ Note:**
>
> The system does not detect postscript failures.

The event string can be one of the following:

- `filesync failure` — The alarm is generated because of a failure.
- `alarm cleared` — The alarm has been cleared by using a command.
- `alarm resolved` — The filesync that was previously failing is now no longer failing. The latest filesync has succeeded.

The alarm text also includes the type of the server and the name of the fileset. The name of the fileset is taken from the fileset configuration file, that is `/etc/opt/ecs/filesync.conf`. The following are the different types of server:

- DUP
- ESS
- LSP

Proposed Solution

Go to the Avaya Support website at http://support.avaya.com to open a service request.

GW_ENV (Gateway Environment)

For the G650 gateway, Communication Manager generates SNMP traps to collect the threshold exception data for the following events:

- Jitter
- Packet Loss
- Round-trip Delay

Communication Manager does not generate any alarms for these events. However, Communication Manager generates a warning and sends the warning to the Fault and Performance Management (FPM) or the Secure Intelligent Gateway (SIG) or both for Managed Services. The warning message string includes the following information:

- Event Type (for example, Jitter, Packet Loss, and Round-trip Delay)
- Time Stamp of exception (in the month/day/hour:min:sec format)
- Board Type (TN2302 or TN2602)
- Board Location (5 alphanumeric characters)
- Peak threshold level/amount (in decimal notation) for the exceeded threshold

GW_ENV alarms

The following alarms apply to the G450 media gateway.

Table 7: GW_ENV Alarms

Event ID	Link to description
1	See GW_ENV Event ID 1 on page 40.
2	See GW_ENV Event ID 2 on page 40.
3	See GW_ENV Event ID 3 on page 40.
4	See GW_ENV Event ID 4 on page 40.
5	See GW_ENV Event ID 5 on page 40.
6	See GW_ENV Event ID 6 on page 41.
7	See GW_ENV Event ID 7 on page 41.
8	See GW_ENV Event ID 8 on page 41.
9	See GW_ENV Event ID 9 on page 41.
10	See GW_ENV Event ID 10 on page 41.

GW_ENV Event ID 1

Alarm level   MAJ

Alarm text   `AvEntFanFlt - Fan fault`

GW_ENV Event ID 2

Alarm level   MAJ

Alarm text   `AvEnt48vPwrFlt - 48v Power fault`

GW_ENV Event ID 3

Alarm level   MAJ

Alarm text   `AvEnt48vPwrFlt - 48v Power faultAvEnt5vPwrFlt - 5v Power fault`

GW_ENV Event ID 4

Alarm level   MAJ

Alarm text   `AvEnt3300mvPwrFlt - 3300 mv Power fault`

GW_ENV Event ID 5

Alarm level   MAJ

Alarm text   `AvEnt2500mvPwrFlt - 2500 mv Power fault`

GW_ENV Event ID 6

Alarm level   MAJ

Alarm text   `AvEnt1800mvPwrFlt - 1800 mv Power fault`

GW_ENV Event ID 7

Alarm level   MAJ

Alarm text   `AvEnt1600mvPwrFlt - 1600 mv Power fault`

GW_ENV Event ID 8

Alarm level   MAJ

Alarm text   `AvEntAmbientTempFlt - Ambient temperature fault`

GW_ENV Event ID 9

Alarm level   MAJ

Alarm text   `avEntPhyChFruRemoval - Field replaceable unit removal`

GW_ENV Event ID 10

Alarm level   MAJ

Alarm text   `avEntPhyChFruPsuFlt - Power supply fault.`

_LX (Linux)

The following table describes the server alarms for Linux and the related troubleshooting procedures.

Table 8: LX Server Alarms

Event ID	Link to description
3	See LX Event ID 3 on page 42.

Table continues…

Avaya Aura® Communication Manager Server Alarms

Event ID	Link to description
4	See LX Event ID 4 on page 42.
5	See LX Event ID 5 on page 42.

LX Event ID 3

Alarm level   WRN

Alarm text   `OVERLOAD CONTROL LEVEL 1`

Cause

The average CPU occupancy for the last 20 seconds exceeded 92.5%. New call originations from either stations or trunks are denied until the average CPU occupancy drops below 92.5% for at least 30 seconds.

LX Event ID 4

Alarm level   WRN

Alarm text   `OVERLOAD CONTROL LEVEL 2`

Cause

The average CPU occupancy for the last 30 seconds exceeded 92.5%. All new call originations and terminations are denied until the average CPU occupancy drops below 92.5% for at least 30 seconds.

LX Event ID 5

Alarm level   WRN

Cause

The system firewall might not be running on the system.

⚠️ **Caution:**

Not having a fully functional system firewall is a serious security risk.

Proposed Solution

1. Restart iptables by issuing the following command: `root: /etc/init.d/iptables restart`

2. Ensure that execute permission is enabled for the `/opt/ws/iptables` file.

Login alarms

The system monitors access to the server and alarms suspicious activity. The following table lists the Login alarms and their related troubleshooting procedures.

For S8300D Server, see S8300 Server Login Alarms.

Table 9: Login Alarms

Event ID	Link to description
1	See Login Event ID 1 on page 43.
2	See Login Event ID 2 on page 43.
3	See Login Event ID 3 on page 43.
5	See Login Event ID 5 on page 44.
6	See Login Event ID 6 on page 44.
7	See Login Event ID 7 on page 44.
8	See Login Event ID 8 on page 44.
10, 11, 12, and 13	See Login Event IDs 10, 11, 12, and 13 on page 44.

Login Event ID 1

Alarm level   WRN

Cause

Successful Communication Manager login.

Login Event ID 2

Alarm level   MIN

Alarm text   `SAT_auth:Login for [inads] invalid password`

Proposed Solution

1. Verify the alarm:

    a. From SMI, select **Current Alarms**.

    b. From the Linux command line, enter `almdisplay -v`.

2. Incorrectly typing a login sequence causes this alarm. Enter `almclear -n #id` to clear the alarm.

3. If this alarm occurs frequently, it may indicate a security threat. Notify the customer.

Login Event ID 3

Alarm level   WRN

Cause

Successful Linux login.

Login Event ID 5

Alarm level   MAJ

Alarm text   `Probation interval for login ends – lockout interval begins`

Cause

This alarm may indicate a security threat. Notify the customer.

Proposed Solution

Using a services login, enter the command `userlock -s` on the Linux command line. This will display all active logins in the system, the number of failed logins, and whether the incorrect login attempt that raised the alarm is currently locked out.

Login Event ID 6

Alarm level   WRN

Cause

Lacfile missing.

Login Event ID 7

Alarm level   MAJ

Cause

Lacfile error - corrupt or expired authentication data.

Login Event ID 8

Alarm level   MAJ

Cause

Access denied. Linux login failure. Access through illegal port.

Login Event IDs 10, 11, 12, and 13

Alarm level   MIN

Alarm text   `Login for [linux] – failed – password check`

Cause

A login attempt to access the Linux command line of a server failed.

Proposed Solution

1. Verify the alarm:

    a. From SMI, select **Current Alarms**.

    b. From the Linux command line, enter `almdisplay -v`.

2. Incorrectly typing the login sequence causes this alarm. Enter `almclear -n #id` to clear the alarm.

3. If this occurs frequently, it may indicate a security threat. Notify the customer.

S8300D and S8300E Server login alarms

The following table lists the S8300D and S8300E Server login alarms and their troubleshooting procedures.

Table 10: S8300D and S8300E Server Login Alarms

Event ID	Link to description
1	See Event ID 1 on page 45.
2	See Event ID 2 on page 45.
3	See Event ID 3 on page 45.
4	See Event ID 4 on page 46.
5	See Event ID 5 on page 46.

Event ID 1

Alarm level   WRN

Proposed Solution

1. Using the web interface, select **View Current Alarms**.

2. Notify the customer.

Event ID 2

Alarm level   WRN

Proposed Solution

1. Using the Web Interface, select **View Current Alarms**.

2. Notify the customer.

Event ID 3

Alarm level   MIN

Cause

Security violation.

Proposed Solution

1. Using the web interface, select **View Current Alarms**.

2. Notify the customer.

Event ID 4

Alarm level	MIN

Cause

Security violation.

Proposed Solution

1. Using the Web Interface, select **View Current Alarms**.

2. Notify the customer.

Event ID 5

Alarm level	MIN

Cause

Security violation.

Proposed Solution

1. Using the web interface, select **View Current Alarms**.

2. Notify the customer.

_PE (Processor Ethernet) alarms

The _PE Processor Ethernet alarms are raised on servers running the duplex OVA.

The following table lists Processor Ethernet alarms and the related troubleshooting procedures.

Table 11: PE alarms

Event ID	Link to description
_PE 1	See _PE 1 Minor alarm: PE Health Check device is not responding on page 47.
_PE 2	See _PE 2 Minor alarm: PE on the other server is not responding on page 47.
_PE 3	See _PE 3 Major alarm: Processor Ethernet service is down on page 48.
_PE 4	See _PE 4 Minor alarm: PE Priority configuration mismatch between servers on page 48.

_PE 1 Minor alarm: PE Health Check device is not responding

MO name in log	_PE 1
Alarm level	MIN
Alarm text	`Can't ping the PE Health Check device.`

Cause

Processor Ethernet (PE) Health Check device is not responding. Cannot ping the PE Health Check device.

Proposed Solution

1. Log on to Communication Manager SMI.
2. From the Installation menu, click **Configure Server**. The Configure Server wizard opens.
3. On the Configure Interfaces screen, verify if **IP address for PE Health Check** is set to the gateway address.

   Execute the Ping diagnostics test to verify that the endpoint used for the PE Health Check device (the gateway) responds to a ping request. For more information about the Ping diagnostics test, see the SMI Help.

_PE 2 Minor alarm: PE on the other server is not responding

MO name in log	_PE 2
Alarm level	MIN
Alarm text	`Can't ping the other server over the network used by the PE Interface.`

Cause

Processor Ethernet (PE) on the other server is not responding. Cannot ping the other server over the network used by the Processor Ethernet interface.

Proposed Solution

1. Log on to Communication Manager SMI.
2. Click the **Administration** tab and select **Server (Maintenance)**.
3. On the left navigation menu, click **Status Summary**. The system displays Status Summary screen.
4. Verify that the other server in the duplicated server pair is running and that the Processor Ethernet status is not Down.

   a. If the other server in the duplicated server pair is not running, the status of Mode is Not Ready and the display of items such as Alarms are blank.

   b. If he Processor Ethernet status is not Down, run the troubleshooting procedures for the alarms on the other server.

Execute the Ping diagnostic test to verify that the other server responds to a ping test. If it does not, execute the Ping diagnostics test from the other server to verify that it is connected to the corporate LAN.

_PE 3 Major alarm: Processor Ethernet service is down

MO name in log	_PE 3
Alarm level	MAJ
Alarm text	`Can't ping the device used for the PE Health Check or the IP interface used for the PE on the other server.`

Cause

Processor Ethernet service is down. Cannot ping the PE Health Check device and the IP interface used for the PE on the other server.

Proposed Solution

1. Run the tests listed for the alarms associated with _PE 1 and _PE 2.

2. Verify if the server is connected to the corporate LAN.

3. If NIC alarms are present, follow the troubleshooting procedures for those alarms. For more information, see Verify NIC Options Test (#1511) in *Maintenance Alarms for Avaya Aura® Communication Manager, Branch Gateways Servers*, 03-300430.

4. Verify that the corporate LAN is working.

_PE 4 Minor alarm: PE Priority configuration mismatch between servers

MO name in log	_PE 4
Alarm level	MIN

Cause

The **PE Interchange Priority** setting on the Configure Interfaces page of the SMI of one of the servers of a duplicated pair of server does not match the **PE Interchange Priority** setting on the Configure Interfaces page of the SMI of the other server.

Proposed Solution

1. On the Status Summary screen of SMI, verify that the **PE Interchange Priority** setting on the active server is the same as the **PE Interchange Priority** setting on the standby server.

2. On the Configure Interface screen of SMI that displays the incorrect value, change the incorrect value of the **PE Interchange Priority** setting.

   ✱ **Note:**

   Make sure that the server on which you are changing the settings on the Configure Interface screen is on the standby server.

SME (Server Maintenance Engine)

The Server Maintenance Engine (SME) is a Linux process which provides error analysis, periodic testing, and demand testing for the server.

The following table lists the Service Maintenance Engine alarms and the related troubleshooting procedures.

Table 12: SME Alarms

Event ID	Link to description
1	See SME Event ID 1 on page 49.
2	See SME Event ID 2 on page 50.

SME Event ID 1

Alarm level   MAJ

Alarm text   `Far end alarm service is down`

Cause

No remote alarm service is available. The other server is unable to report alarms due to a failure of either the GMM or its administered reporting mechanisms (SNMP).

Proposed Solution

1. Look for any GMM failures on the other server, either using the:

    a. From the Web interface, select **Diagnostics** > **View System Logs** > **Watchdog Logs**.

    b. From the Linux command line, enter `logv -w` or by examining the `/var/log/ecs/wdlog` log file.

2. If a GMM failure was found:

    a. Check if the GMM application is active:

    • From the Web interface, select **View Process Status**.

    • From the Linux command line, enter `statapp`.

    b. If the GMM application is active, continue with Step 3.

    If the GMM application is not active, try to restart this application by entering `start -s GMM` on the Linux command line.

    c. If the GMM application restarts successfully, continue with Step 4.

    If the GMM application fails to restart, go to the Avaya Support website at http://support.avaya.com to open a service request.

3. If a GMM failure was not found, check if alarm reporting failed by searching for the string snd2Inads in the trace log:

   a. From the Web interface:

      a. Select **View System Logs** diagnostic and **Logmanager Debug** trace.

      b. Specify the event range for the appropriate time frame.

      c. Match the snd2Inads pattern.

   b. From the Linux command line, enter `logv -t ts`.

4. Test the administered reporting mechanisms by entering `testinads` on the Linux command line.

5. Once the alarm is resolved, manually clear the alarm:

   a. From the Web interface, select **Alarms and Notification** and the appropriate alarm, and click **Clear**.

   b. From the Linux command line, enter `almclear -n #id`.

SME Event ID 2

Alarm level   WRN

Cause

For security only. If the IP address in the trap does not match UPS translations, this server is receiving a trap from an illegal source.

No action is needed.

STD (Standard SNMP Traps)

The following table lists STD traps and the related troubleshooting procedures.

Table 13: STD Alarms

Event ID	Description
1	See STD Event ID 1 on page 54 on page 50.
2	See STD Event ID 2 on page 54 on page 51.
3	See STD Event ID 3 Alarm type ACT on page 55 on page 51.
3	See STD Event ID 3 Alarm type RES on page 55 on page 51.

STD Event ID 1

Alarm level   MIN

Alarm type   ACT

| **Alarm text** | `"coldStart" - Agent Up with Possible Changes` |

Cause

A coldStart trap indicates that the entity sending the protocol (SNMPv2) is reinitializing itself and this reinitialization process can either alter the agent configuration or entity implementation.

STD Event ID 2

Alarm level	MIN
Alarm type	ACT
Alarm text	`"warmStart" - Agent Up with No Changes`

Cause

A warmStart trap indicates that the entity sending the protocol (SNMPv2) is reinitializing itself and this reinitialization process keeps both the agent configuration and the entity implementation intact.

STD Event ID 3 Alarm type ACT

Alarm level	MIN
Alarm type	ACT
Alarm text	`"linkDown" - Agent Interface Down`

Cause

A linkDown trap indicates that the entity sending the protocol (SNMPv2) recognizes a failure in one of the communication links represented in the agent configuration. The data passed within the event is:

- The name and value of the ifIndex instance for the affected interface.
- The name of the interface can be retrieved via an snmpget of .1.3.6.1.2.1.2.2.1.2.INST, where INST is the instance returned with the trap. The state is indicated by the included value of ifOperStatus.

STD Event ID 3 Alarm type RES

Alarm level	MIN
Alarm type	RES
Alarm text	`"linkUP" - Agent Interface Up`

Cause

A linkUp trap indicates that the entity sending the protocol (SNMPv2) recognizes that one of the communication links represented in the agent configuration has come up. The data passed within the event is:

- The name and value of the ifIndex instance for the affected interface.
- The name of the interface can be retrieved via an snmpget of .1.3.6.1.2.1.2.2.1.2.INST, where INST is the instance returned with the trap. The state is indicated by the included value of ifOperStatus.

SVC_MON (Service Monitor)

SVC_MON is a server process, started by Watchdog, that monitors Linux services and processes. It also starts up threads to communicate with a hardware-sanity device.

The following table lists SVC_MON alarms and the related troubleshooting procedures.

Table 14: SVC_MON Alarms

Event ID	Link to description
2	See SVC MON Event ID 2 on page 52.
3	See SVC MON Event ID 3 on page 53.
4	See SVC MON Event ID 4 on page 53.
6	See SVC MON Event ID 6 service rsyslog on page 53.
5	See SVC MON Event ID 5 on page 53.
6	See SVC MON Event ID 6 service dbgserv on page 54.
7	See SVC MON Event ID 7 on page 54.
8	See SVC MON Event ID 8 on page 54.

SVC MON Event ID 2

Alarm level	MIN
Alarm text	`service atd could not be restarted`

Cause

The Linux at daemon is down. Scheduled services such as session cleanup or daily filesync will not work.

Proposed Solution

Enter `service atd restart` from the `/sbin` directory to restart the at daemon, and see Resolving SVC MON Event.

SVC MON Event ID 3

Alarm level	MIN
Alarm text	`service crond could not be restarted`

Cause

The Linux cron daemon is down. Periodic services such as session cleanup or daily filesync will not work.

Proposed Solution

Enter `/sbin/service cron restart` from the `/sbin` directory to restart the cron daemon, and see Resolving SVC MON Event.

SVC MON Event ID 4

Alarm level	MIN
Alarm text	`service xinetd could not be restarted`

Cause

The Linux internet server daemon is down. Networking services will not work.

Proposed Solution

Enter `/sbin/service inet restart` from the `/sbin` directory to restart the inet daemon, and see Resolving SVC MON Event.

SVC MON Event ID 6 service rsyslog

Alarm level	MIN
Alarm text	`service rsyslog could not be restarted`

Cause

Linux syslog service is down. Event logging to syslog and alarm generation fails.

Proposed Solution

Enter `/sbin/service rsyslog restart` from the `/sbin` directory to restart the syslog service, and see Resolving SVC MON Event.

SVC MON Event ID 5

Alarm level	MIN
Alarm text	`service xintetd could not be restarted`

Cause

The Linux network time protocol daemon is down. The server clock and recently logged time stamps may be inaccurate.

Proposed Solution

Enter `/sbin/service xntpd restart` from the `/sbin` directory to restart the xntpd daemon, and see Resolving SVC MON Event.

SVC MON Event ID 6 service dbgserv

Alarm level	MIN
Alarm text	`service dbgserv could not be restarted`

Cause

Debug server is down, and the Gemini debugger may not work. If this service stops running, debugging of a currently functional server is prevented, but the normal operations of a server are not affected.

Proposed Solution

Enter `/sbin/service dbgserv restart` from the `/sbin` directory to restart the dbgserv service, and see Resolving SVC MON Event.

SVC MON Event ID 7

Alarm level	MIN
Alarm text	`service prune could not be restarted`

Cause

The prune service is not running. The partition usage of the hard disk is not being monitored or cleaned.

Proposed Solution

Enter `/sbin/service prune restart` from the `/sbin` directory to restart the prune service, and see Resolving SVC MON Event.

SVC MON Event ID 8

Alarm level	MIN
Alarm text	`service ntpd could not be restarted`

Cause

The hypertext transfer protocol daemon is down. The web interface will not work.

Proposed Solution

Enter `/sbin/service httpd restart` from the `/sbin` directory to restart the http daemon, and see Resolving SVC MON Event.

Resolving SVC MON Event

Procedure

1. If the daemon or the service restarts successfully, manually clear the alarm:

   • From the Web interface, select **Alarms and Notification** and the appropriate alarm, and click **Clear**.

   • From the Linux command line, enter **almclear -n #id**.

   If the daemon or the service fails to restart, go to the Avaya Support website at http://support.avaya.com to open a service request.

   a. Enter **grep svc_mon /var/log/messages** to determine why the daemon failed to restart.

      ⚠ **Caution:**

      The following procedure causes a brief service outage and must be executed only at the convenience of the customer.

   b. If the output of the **grep** command does not help:

      • For duplicated servers, enter **server** to verify that the suspected server is the standby. If necessary and at the convenience of the customer, enter **server -if** to force a server interchange.

      • For non-duplicated servers, proceed to Step d.

   c. For duplicated servers, reboot the standby server:

      • From the Web interface, select **Shutdown This Server**.

      • From the Linux command line, enter **/sbin/shutdown -r now**.

   d. For non-duplicated servers, reboot the server:

      • From the web interface, select **Shutdown This Server**.

      • From the Linux command line, enter **/sbin/shutdown -r now**.

2. If rebooting the standby does not help or if the problem recurs, go to the Avaya Support website at http://support.avaya.com to open a service request.

TGP-USG (Trunk Group Usage)

The Trunk Group Usage alarm is observed on SIP type trunk groups when the administered threshold value for incoming or outgoing calls has been reached.

> **✱ Note:**
>
> You can view the administered threshold value on the SIP trunk group screens only when MLPP and ASAC are enabled on the system.

The following table lists the TGP-USG alarms and the related troubleshooting procedures.

Table 15: TGP-USG alarms

Event ID	Link to description
1	See TGP-USG Event ID 1 on page 56.
2	See TGP-USG Event ID 2 on page 56.

TGP-USG Event ID 1

Alarm level   WRN

Cause

The administered threshold value for incoming calls has been reached.

Proposed Solution

Ensure that the number of incoming calls is less than the administered threshold value.

TGP-USG Event ID 2

Alarm level   WRN

Cause

The administered threshold value for outgoing calls has been reached.

Proposed Solution

Ensure that the number of outgoing calls is less than the administered threshold value.

TM (Translation Manager)

The Translation Manager monitors the ability of the server to read Communication Manager translations. The following table lists the TM alarms and the related troubleshooting procedures.

Table 16: TM Alarm

Event ID	Link to description
1	See TM Event ID 1 on page 56.

TM Event ID 1

Alarm level   MAJ

Alarm text   `Cannot read translations`

Cause

Server could not read translations. Usually, indicates a failure loading translations, but can also infrequently occur on a running system.

Duplicated servers: The servers spontaneously interchanged.

S8300: The server rebooted.

Proposed Solution

1. Check the integrity of the translation files xln1 and xln2 in `/etc/opt/defty`, and verify that they are of non-zero length.

2. From the `/etc/opt/defty directory`, enter the Linux command **cksum xln1 xln2** to verify that the checksums of the files are identical.

3. Duplicated servers: Copy the translation files from the backup or the other server.

4. S8300D | S8300E: Copy the translation files from the backup.

5. If Steps 1 to 3 do not help, load the system with null translations.

6. If the system does not start, go to the Avaya Support website at http://support.avaya.com to open a service request.

7. After the error is resolved, manually clear the alarm:

    a. From the Web interface, select **Alarms and Notification** and the appropriate alarm, and click **Clear**.

    b. From the Linux command line, enter **almclear -n #id**.

UPG (Upgrade)

The UPG raises an alarm if the upgrade was not made permanent within a certain amount of time after the upgrade.

Table 17: UPG Alarms

Event ID	Link to description
1	See UPG Event ID 1 on page 57.

UPG Event ID 1

Alarm level   MAJ

Cause

The upgrade was not made permanent within two hours. No commit error.

Proposed Solution

Make the upgrade permanent by using the web interface. Select **Server Upgrade** > **Make Upgrade Permanent**.

WD (Watchdog)

Watchdog is a server process that performs the following:

- Creates other Communication Manager processes
- Monitors process status
- Recover process failures

Watchdog also communicates with a hardware-status check device. For alarm-related information about these services, see SVC_MON (Service Monitor).

The following table lists the Watchdog alarms and the related troubleshooting procedures.

Table 18: _WD Alarms

Event ID	Link to Description
4 S8300D	See WD Event ID 4 S8300D on page 58.
5	See WD Event ID 5 on page 60.
6 S8300D	See WD Event ID 6 S8300D on page 61.
7 S8300D	See WD Event ID 7 S8300D on page 61.
13 (Except S8500)	See WD Event ID 13 (Except S8500) on page 62.
14 (Except S8500)	See WD Event ID 14 (Except S8500) on page 63.
15 S8300D	See WD Event ID 15 S8300D on page 64.
18 S8300D	See WD Event ID 18 S8300D on page 65.
19 S8300D	See WD Event ID 19 S8300D on page 65.
20 S8300D	See WD Event ID 20 S8300D on page 66.
22 S8300D	See WD Event ID 22 S8300D on page 67.
23 S8300D	See WD Event ID 23 S8300D on page 68.
24 S8300D	See WD Event ID 24 S8300D on page 69.
26	See WD Event ID 26 on page 69.
27	See WD Event ID 27 on page 70.

WD Event ID 4 S8300D

Alarm level	MAJ
Alarm text	`Application <name> (pid) TOTALLY FAILED`

Cause

The application is present but cannot start. The application cannot start the maximum allowed number of times. This alarm occurs with Event ID #20.

Proposed Solution

1. To verify the alarm, locate the application name or process ID (PID):

   a. From the Web interface, select **Diagnostics** > **View System Logs** > **Watchdog Logs**.

   b. From the Linux command line, enter `logv -w` or by examining the /var/log/ecs/wdlog log file.

2. If the application is not running, enter `start -s application` to start the application.

3. If the application starts successfully, continue with Step 7.

   If the application fails to start, check the trace log to determine the reason why the application fails to start:

   a. From the Web interface:

      a. Select **View System Logs** diagnostic, and **Logmanager Debug** trace.

      b. Specify the Event Range for the appropriate time frame.

      c. Match the application PID as the pattern.

   b. From the Linux command line, enter `logv -t ts`.

   Locate a related core-dump file in /var/crash directly, and go to the Avaya Support website at http://support.avaya.com to open a service request.

4. Check if the file named in the log exists and is executable.

   To locate the executable file of the application, enter the Linux command:

   `ls -l /opt/ecs/sbin/appl`

   If the file is present, Linux returns a symbolic link to its location.

5. If the file is present:

   a. Enter `ls -l` on the address of the symbolic link.

   b. Check if the file has execute permissions. If the file does not have execute permission, enter `chmod +x` to enable execution permission for the application.

      If the file is not present, Linux has returned a null link.

   c. Acquire the executable from the CD.

6. Enter `start -s application` to start the application.

7. Manually clear the alarm:

   a. From the Web interface, select **Alarms and Notification** and the appropriate alarm, and click **Clear**.

   b. From the Linux command line, enter `almclear -n #id`.

8. If the problem persists, go to the Avaya Support website at http://support.avaya.com to open a service request.

WD Event ID 5

Alarm level   MIN

Alarm text   `WARNING: timeout waiting for reqsvr to initialize`

Cause

During the boot process of each, the Watchd process of the server waits for up to two minutes for its reqsvr (request server) thread to initialize. If the two-minute waiting interval elapses, this server logs this alarm, and its boot process hangs. Meanwhile, if the other server boots subsequently, it becomes the active server.

If a server hangs during boot process when this alarm occurs, the external symptoms of this alarm resemble those of two other _WD alarms, #13 (Except S8500) and #14 (Except S8500). Therefore, you must carefully discriminate between these three events.

Proposed Solution

1. To determine the cause of this problem:

    a. Check if the Linux OS and the web interface are running, including the commands: **telnet**, **statapp**, **server**, **logv**, **cat**, **grep**, **tail**, **vi**.

    b. Check if the Watchdog application is active, but no other Communication Manager software is running.

    c. The **almdisplay** command displays no alarms, instead, the command returns the message:

    `almdisplay: 4: Unable to connect to MultiVantage`

    ⚠️ **Caution:**

    The following procedure causes a brief service outage and must executed only at the convenience of the customer.

2. Go to the Avaya Support website at http://support.avaya.com to open a service request.

3. Enter **server** to check if the suspected server is the standby.

    If necessary and at the customer convenience, enter **server -if** to force a server interchange.

4. Reboot the standby server:

    a. From the Web interface, select **Shutdown This Server**.

    b. From the Linux command line, enter **/sbin/shutdown -r now**.

5. Once the standby server restarts, check if the Event ID #5 was logged:

    a. From the Web interface, select **Diagnostics** > **View System Logs** > **Watchdog Logs**.

    b. From the Linux command line, enter **logv -w** or by examining `/var/log/ecs/wdlog` log file.

6. If rebooting the server does not help or if the problem persists, go to the Avaya Support website at http://support.avaya.com to open a service request.

WD Event ID 6 S8300D

Alarm level   MAJ

Alarm text   `Application <name> (pid) not started, config parm errors`

Cause

Watchdog cannot read its configuration file, `/etc/opt/ecs/watchd.conf`.

Proposed Solution

1. To verify the alarm, locate the name of the application process ID (PID):

   a. From the Web interface, select **Diagnostics** > **View System Logs** > **Watchdog Logs**.

   b. From the Linux command line, enter **`logv -w`** or by examining the `/var/log/ecs/wdlog` log file.

2. Retrieve a fresh copy of watchd.conf from the distribution.

3. Check if all the files listed in watchd.conf exists and are executable.

4. Enter **`start -s application`** to start the application.

5. Manually clear the alarm:

   a. From the web interface, select **Alarms and Notification** and the appropriate alarm, and click **Clear**.

   b. From the Linux command line, enter **`almclear -n #id`**.

WD Event ID 7 S8300D

Alarm level   MAJ

Alarm text   `Application <name> not started, parm file errors`

Cause

Since an application's specified location in watchd.conf is incorrect, Watchdog cannot start the application.

Proposed Solution

1. To verify the alarm, locate the application name or process ID (PID):

   a. From the web interface, select **Diagnostics** > **View System Logs** > **Watchdog Logs**.

   b. From the Linux command line, enter **`logv -w`** or by examining the `/var/log/ecs/wdlog` log file.

2. Check if the file named in the log exists and is executable.

   To locate the executable file of the application, enter the Linux command:

   `ls -l /opt/ecs/sbin/appl`

   If the executable is present, Linux returns a symbolic link to its location.

3. If the file is present:

   a. Enter `ls -l` on the symbolic link address.

   b. Check if the file has execute permissions. If the file does not have execute permissions, enter `chmod +x` to enable execution of the application.

      If the file is not present, Linux has returned a null link.

   c. Acquire the executable from the distribution.

4. Check if the string in watchd.conf is correct.

5. Enter `start -s application` to start the application.

6. Manually clear the alarm:

   a. From the Web interface, select **Alarms and Notification** and the appropriate alarm, and click **Clear**.

   b. From the Linux command line, enter `almclear -n #id`.

WD Event ID 13 (Except S8500)

Alarm level   MIN

Alarm text   ERROR: could not dup socket fd in reqsvr.c, heartbeat thread not created, errno=<x>

Cause

Booting application initiates.

Restarting application re-initiates heartbeating with Watchdog (see Event ID #5), the reqsvr (request server) thread tries to create a duplicate socket for the heartbeating thread. This alarm indicates that reqsvr canot create the socket. Meanwhile, if the other server is started, it becomes the active server.

If the server hangs when this alarm occurs, the external symptoms of this alarm resemble those of two other _WD alarms, #5 and #14 (Except S8500). Therefore, carefully discriminate between these three events.

Proposed Solution

1. To determine the cause of this:

   a. Check if Linux OS and the Web interface are running, including the commands: `telnet`, `statapp`, `server`, `logv`, `cat`, `grep`, `tail`, `vi`.

   b. Check if the Watchdog application and some other Communication Manager processes are up:

      • From the Web interface, select **View Process Status**.

      • From the Linux command line, enter `statapp`.

   c. If the GMM process is active, the `almdisplay -v` command shows the message string of Event #13.

If the GMM process is not active, check if the Watchdog log shows the message string:

- From the Web interface, select **Diagnostics** > **View System Logs** > **Watchdog Logs**.
- From the Linux command line, enter `logv -w` or directly examine the `/var/log/ecs/wdlog` log file.

⚠️ **Caution:**

The following procedure causes a brief service outage and must executed only at the convenience of the customer.

2. Go to the Avaya Support website at http://support.avaya.com to open a service request.

3. Enter `server` to check if the suspected server is the standby.

   If necessary and at the convenience of the customer, enter `server -if` to force a server interchange.

4. Reboot the standby server:

   a. From the Web interface, select **Shutdown This Server**.

   b. From the Linux command line, enter `/sbin/shutdown -r now`.

5. If rebooting the server does not help or if the problem persists, go to the Avaya Support website at http://support.avaya.com to open a service request.

WD Event ID 14 (Except S8500)

Alarm level   MIN

Alarm text   `ERROR in req2svr.p trying to create heartbeat thread, errno=<x>`

Cause

After the reqsvr (request server) creates a duplicate socket (see Event ID #13 (Except S8500), it tries to create a heartbeating thread. This alarm indicates that reqsvr cannot create the thread. Meanwhile, if the other server is started, it becomes the active server.

If the server hangs when this alarm occurs, the external symptoms of this alarm resemble those of two other _WD alarms, #5 and #13 (Except S8500). Therefore, carefully discriminate between these three events.

Proposed Solution

1. To determine the cause of this problem:

   a. Check if Linux OS and the Web interface are active including the commands: `telnet`, `statapp`, `server`, `logv`, `cat`, `grep`, `tail`, `vi`.

   b. Check if the Watchdog application is partially active and other Communication Manager processes are active:

      - From the Web interface, select **View Process Status**.
      - From the Linux command line, enter `statapp`.

   c. The `almdisplay -v` command shows the message string of Event #14.

> ⚠️ **Caution:**
>
> The following procedure causes a brief service outage and must executed only at the convenience of the customer.

2. Go to the Avaya Support website at http://support.avaya.com to open a service request.

3. Enter **server** to check if the suspected server is the standby.

   If necessary and at the convenience of the customer, enter **server -if** to force a server interchange.

4. Reboot the standby server:

   From the Web interface, select **Shutdown This Server**.

5. If rebooting the server does not help or if the problem persists, go to the Avaya Support website at http://support.avaya.com to open a service request.

WD Event ID 15 S8300D

Alarm level	MAJ
Alarm text	`Detected a rolling reboot`

Cause

Watchdog has detected x number of Linux reboots within y minutes. The x and y parameters configurable in `/etc/opt/ecs/watchd.conf`. Rolling reboots have a many possible causes.

Proposed Solution

1. To verify the alarm, locate the message, `WARNING: Rolling reboot detected!!`:

   a. From the Web interface, select **Diagnostics** > **View System Logs** > **Watchdog Logs**.

   b. From the Linux command line, enter **logv -w** or directly examine the `/var/log/ecs/wdlog` log file.

2. Go to the Avaya Support website at http://support.avaya.com to open a service request.

3. Giving priority to Communication Manager errors, examine the Watchdog log from Step 1, and determine which application failed.

4. Check if all the files listed in `watchd.conf` exists and are executable. Rolling reboots are often caused by executables in unexpected locations.

5. If the files and their locations are valid, examine the trace log to determine the cause:

   a. From the Web interface:

      a. Select the **View System Logs** diagnostic and **Logmanager Debug** trace.

      b. Specify the Event Range for the appropriate time frame.

      c. Match the rolling reboot pattern.

   b. On the Linux command line, type `logv -t ts`.

WD Event ID 18 S8300D

Alarm level   WRN

Alarm text   `Application <name> restarted. Retry <retry count>, New Pid: <pid>`

Cause

An application has failed, and Watchdog successfully restarted it.

Proposed Solution

1. To verify the alarm, locate the application name or process ID (PID):

    a. From the Web interface, by select **Diagnostics** > **View System Logs** > **Watchdog Logs**.

    b. From the Linux command line, enter `logv -w` or directly examine the `/var/log/ecs/wdlog`.

2. No corrective action necessary. Manually clear the alarm:

    a. From the Web interface, select **Alarms and Notification** and the appropriate alarm, and click **Clear**.

    b. From the Linux command line, enter `almclear -n #id`.

WD Event ID 19 S8300D

Alarm level   MIN

Alarm text   `Application failed unintentionally`

Cause

Watchdog is shutting down the system down because an application failed to start correctly. The application failed to start because of the following:

The file did not exist, similar to Event ID #7.

Required application parameters were missing or invalid in watchd.conf.

Proposed Solution

1. To verify the alarm, locate the message, `Application num <#> (<application path>) not started. Watchdog exiting NOW`:

    a. From the Web interface, select **Diagnostics** > **View System Logs** > **Watchdog**.

    b. From the Linux command line, enter `logv -w` or directly examine the `/var/log/ecs/wdlog` log file.

2. Check if the file named in the log exists and is executable.

3. Check if the string in watchd.conf is correct.

4. If Step 2 and Step 3 are okay, investigate the trace log to see why the application fails, either from the:

    a. From the Web interface:

        a. Select the **View System Logs** diagnostic and **Logmanager Debug** trace.

        b. Specify the Event Range for the appropriate time frame.

        c. Match the application number as the pattern.

    b. On the Linux command line, type `logv -t ts`

5. Once resolved, manually clear the alarm:

    a. From the Web interface, select **Alarms and Notification** and the appropriate alarm, and click **Clear**.

    b. From the Linux command line, enter `almclear -n #id`.

WD Event ID 20 S8300D

Alarm level	MAJ
Alarm text	`Application <name> (pid) TOTALLY FAILED`

Cause

Application failed the maximum allowed number of times. This alarm usually occurs with Event ID #4.

Proposed Solution

1. To verify the alarm, locate the application name or process ID (PID):

    a. From the Web interface, select **Diagnostics** > **View System Logs** > **Watchdog Logs**.

    b. From the Linux command line, enter `logv -w` or directly examine the `/var/log/ecs/wdlog` log file.

    c. Check if the application is running:

      • From the Web interface, select **View Process Status**.

      • From the Linux command line, enter `statapp.`

2. If the application is not running down, type `start -s application` to start the application.

3. If the application starts, continue with Step 7.

If the application does not start, check the trace log to determine why the application failed to start:

    a. From the Web interface:

        a. Select the **View System Logs** diagnostic and **Logmanager Debug** trace.

        b. Specify the Event Range for the appropriate time frame.

        c. Match the application's PID as the pattern.

    b. From the Linux command line, enter `logv -t ts`

4. To locate the executable file of the application, enter the command:

   `ls -l /opt/ecs/sbin/appl`

   If the executable is present, Linux returns a symbolic link to its location.

5. If the file is present:

   a. Enter `ls -l` on the symbolic link's address.

   b. Verify that the file has execute permissions. If not, enter `chmod +x` to enable execution of the application.

      If the file is not present, Linux has returned a null link:

   c. Acquire the executable from the CD.

6. Enter `start -s application` to start the application.

7. Manually clear the alarm:

   a. From the Web interface, select **Alarms and Notification** and the appropriate alarm, and click **Clear**.

   b. From the Linux command line, enter `almclear -n #id`.

8. If the problem persists, go to the Avaya Support website at http://support.avaya.com to open a service request.

WD Event ID 22 S8300D

Alarm level   MIN

Alarm text   `Application <name> (<pid>) terminated`

Cause

Watchdog successfully shut down the named application, and if necessary, watchdog will restart the application.

Proposed Solution

1. To verify the alarm, locate the application name or process ID (PID):

   a. From the Web interface, select **Diagnostics** > **View System Logs** > **Watchdog Logs**.

   b. From the Linux command line, enter `logv -w`.

2. On the standby server, look for occurrences of the `stop` command:

   a. From the Web interface:

      a. Select **View System Logs**.
      b. Select **Platform command history log**.
      c. Specify the Event Range for the appropriate time frame.
      d. Match the Stop pattern.

   b. From the Linux command line, enter `listhistory.`

3. If a `stop` command was inappropriately executed, prevent any future misuse of the `stop` command.

> ⊛ **Note:**
>
> From the system's perspective, this is normal behavior. However, in terms of potential service outage due to human error, this is irregular. Shutting down a server effectively downgrades a duplex, high or critical-reliability system to an unsupported standard-reliability system.

4. If `listhistory` shows no `stop` commands, Watchdog responded to abnormal internal processes by shutting down the application.

    Check the trace log for information about this application:

    a. From the Web interface:

        a. Select the **View System Logs** diagnostic and **Logmanager Debug** trace.

        b. Specify the Event Range for the appropriate time frame.

        c. Match the application PID as the pattern.

    b. From the Linux command line, enter `logv -t ts`

5. Manually clear the alarm:

    a. From the Web interface, select **Alarms and Notification** and the appropriate alarm, and click **Clear**.

    b. From the Linux command line, enter `almclear -n #id`.

6. Check if the alarm persists. If the alarm persists, go to the Avaya Support website at http://support.avaya.com to open a service request.

WD Event ID 23 S8300D

Alarm level	MAJ
Alarm text	`Watchd high-monitor thread is rebooting the system`

Cause

The Lo-monitor thread is missing heartbeats (cannot get CPU time). The Hi-monitor thread has tried 3 times to recover the system by killing any infinitely looping processes. If the lo-monitor thread does not heartbeat even after three CPU-occupancy profiles and recoveries, the Watchd reboots the server.

Proposed Solution

1. To verify the alarm, look for messages containing the CPU profiling results and attempted recoveries and messages stating that Watchd is rebooting the server:

    a. From the Web interface, select **Diagnostics** > **View System Logs** > **Watchdog Logs**.

    b. From the Linux command line, enter `logv -w` or directly examine the `/var/log/ecs/wdlog` log file.

    No corrective action is necessary. The server restarts by the time a technician analyzes the system. A reboot clears the alarm and fixes problems with unresponsive software.

2. Check if the alarm persists. If the alarm persists, go to the Avaya Support website at http://support.avaya.com to open a service request.

WD Event ID 24 S8300D

Alarm level   MAJ

Alarm text   `Watchd's high-monitor thread is stopping tickling of hw`

Cause

The call of Event ID #23 to reboot the server was unsuccessfully invoked. A semaphore of the Linux kernel is stuck. Once this alarm is raised, Watchd stops the HW sanity timer prompting HW sanity watchdog to execute a hard reboot of the processor.

Proposed Solution

1. To check if the alarm occurred, look for messages that indicate stopping stopping the tickling of the HW sanity timer and CPU occupancy profiling:

   a. From the Web interface, select **Diagnostics** > **View System Logs** > **Watchdog Logs**.

   b. From the Linux command line, enter `logv -w` or directly examine the `/var/log/ecs/wdlog` log file.

      • If the HW sanity watchdog successfully executes a hard reboot, the alarm clears. This reboot fixes problems caused by unresponsive software.

      If the HW sanity watchdog fails to execute a hard reboot, disengage and reengage the power source of the server to release it from this condition and to clear the alarm.

2. If the alarm persists, go to the Avaya Support website at http://support.avaya.com to open a service request.

WD Event ID 26

Alarm level   MIN

Alarm text   `Watchd handshake error`

Cause

If USB alarms are also present, this strongly points to a global SAMP or networking problem. This error implies:

• The SAMP is missing.

• The SAMP is malfunctioning.

• The SAMP is not configured properly.

• The firewall on the server is not configured.

• The SAMP firmware is not correct for the Communication Manager version.

• The server Ethernet port is misconfigured.

Proposed Solution

1. Refer to the SAMP user guide for troubleshooting procedures (03-300322).

2. Go to the Avaya Support website at http://support.avaya.com to open a service request.

WD Event ID 27

Alarm level   MAJ

Alarm text   `Free memory on the system is low`

Proposed Solution

To check if the alarm occurred, look for messages that indicate stopping the tickling of the HW sanity timer and messages that indicate CPU occupancy profiling:

a. From the Web interface, select **Diagnostics** > **View System Logs** > **Watchdog Logs**.

b. From the Linux command line, enter `logv -w` or directly examine the `/var/log/ecs/wdlog` log file.

Appendix A: PCN and PSN notifications

PCN and PSN notifications

Avaya issues a product-change notice (PCN) if any software update. For example, a PCN must accompany a service pack or a update that must be applied universally.Avaya issues product-support notice (PSN) when there is no update, service pack, or release fix, but the business unit or services need to alert Avaya Direct, BusinessPartners, and customers of a problem or a change in a product. A PSN can also be used to provide a work around for a known problem, steps to recover logs, or steps to recover software. Both these notices alert you to important issues that directly impact Avaya products.

Viewing PCNs and PSNs

About this task

To view PCNs and PSNs, perform the following steps:

Procedure

1. Go to the Avaya Support website at http://support.avaya.com.

   ✳ **Note:**

   If the Avaya Support website displays the login page, enter your SSO login credentials.

2. On the top of the page, click **DOCUMENTS**.

3. On the Documents page, in the **Enter Your Product Here** field, enter the name of the product.

4. In the **Choose Release** field, select the specific release from the drop-down list.

5. Select the appropriate filters as per your search requirement. For example, if you select Product Support Notices, the system displays only PSNs in the documents list.

   ✳ **Note:**

   You can apply multiple filters to search for the required documents.

Signing up for PCNs and PSNs

About this task

Manually viewing PCNs and PSNs is helpful, but you can also sign up for receiving notifications of new PCNs and PSNs. Signing up for notifications alerts you to specific issues you must be aware of. These notifications also alert you when new product documentation, new product patches, or new services packs are available. The Avaya Notifications process manages this proactive notification system.

To sign up for notifications:

Procedure

1. Go to the Avaya Support Web Tips and Troubleshooting: E-Notifications Management page at https://support.avaya.com/ext/index?page=content&id=PRCS100274#.

2. Set up e-notifications.

   For detailed information, see the **How to set up your E-Notifications** procedure.

Glossary

Alarm   A trap that is determined to be an alarm is sent to an appropriate alarm
                     management site, such as INADS.

INADS   The Initialization and Administration System is a software tool used by
                     Avaya services personnel to initialize, administer, and troubleshoot
                     customer communications systems remotely.

ISM

RTCP   Real Time Control Protocol, contained in IETF RFC 1889.

SNMP   Simple Network Management Protocol, the industry standard protocol
                     governing network management and the monitoring of network devices and
                     their functions.

Trap   An event notification that is sent to the SNMP trap manager and received
                     from the Media Gateway Processor, Layer 2 Switching Processor, or RTCP
                     Monitor (Avaya VisAbility).

VPN

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Special Characters

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