

Diameter AAA, Server Entered CUDB Overload Protection IPWorks

OPERATING INSTRUCTIONS

Copyright

© Ericsson AB 2017, 2018. All rights reserved. No part of this document may be reproduced in any form without the written permission of the copyright owner.

Disclaimer

The contents of this document are subject to revision without notice due to continued progress in methodology, design and manufacturing. Ericsson shall have no liability for any error or damage of any kind resulting from the use of this document.

Trademark List

All trademarks mentioned herein are the property of their respective owners. These are shown in the document Trademark Information.



Contents

1	Introduction	1
1.1	Alarm Description	1
1.2	Prerequisites	2
1.3	Related Information	2
2	Procedure	3
2.1	Configuring BusyRateThreshold	3
2.2	Increasing CUDB Capacity	3





1 Introduction

This instruction concerns alarm handling.

1.1 Alarm Description

The alarm is issued when a CUDB node is overloaded.

The possible alarm causes and the corresponding fault reasons, fault locations and impacts are described in Table 1.

Table 1 Alarm Causes

Alarm Cause	Description	Fault Reason	Fault Location	Impact	Solution
AAA configuration is inappropriate.	The value of <code>busyRateThreshold</code> is set too low.	The attribute <code>busyRateThreshold</code> in the <code>MO CudbF</code> function is configured inappropriately.	Diameter AAA	AAA will enter cooperative load regulation status and discard part of incoming traffics.	Section 2.1 on page 3
CUDB node is overloaded.	This alarm is raised when the CUDB node is overloaded.	The incoming messages exceed the capacity of CUDB.	AAA Server		Section 2.2 on page 3

Note: An alarm can appear as a result of the maintenance activity.

The alarm attributes are listed and explained in Table 2.

Table 2 Alarm Attributes

Attribute Name	Attribute Value
Major Type	193
Minor Type	864268
Managed Object Class	IpworksDiameterAAA



Attribute Name	Attribute Value
Source	ManagedElement=<Node Name>, SystemFunctions=1,Fm=1,FmAl armModel=ipworksDiameterAAA, FmAlarmType=ipworksDiameterAAA FEEnterOverloadProtection
Specific Problem	Diameter AAA, Server Entered CUDB Overload Protection
Event Type	qualityOfServiceAlarm(11)
Probable Cause	x733ThresholdCrossed(351)
Additional Text	This alarm is issued when the CUDB Node %s Traffic is overloaded.;uuid:<Product_UUID> ⁽¹⁾
Perceived Severity	Major

(1) <Product_UUID> is the universally unique identifier (UUID) of machine that generates the alarm. The value can be fetched from /sys/devices/virtual/dmi/id/product_uuid on the PL node.

1.2 Prerequisites

This section provides information on the documents, tools, and conditions that apply to the procedure.

1.2.1 Documents

Before starting this procedure, ensure that the following document has been read:

- *Fault Management*

1.2.2 Tools

Before starting this procedure, ensure that the following tools are available:

1.2.3 Conditions

Not applicable.

1.3 Related Information

Trademark information, typographic conventions, and definition and explanation of abbreviations and terminology can be found in the following documents:

- *Trademark Information*



- *Typographic Conventions*
- *Glossary of Terms and Acronyms*

2 Procedure

This section describes the procedure to follow to clear this alarm.

2.1 Configuring BusyRateThreshold

1. Log on to the ECLI interface.

```
# ssh <username>@<OAM IP Address> -t -s cli
```

2. Configure the busyRateThreshold.

```
>dn ManagedElement=<Node Name>,IpworksFunction=1,IpworksCommonRoot=1,DataBaseInfo=1,⇒
CudbManager=1,CudbFunction=1
(CudbFunction=1)> configure
(config-CudbFunction=1)> busyRateThreshold=<busyRate threshold>
(config-CudbFunction=1)> commit
(CudbFunction=1)> exit
```

Note: Set an appropriate value of *<busyRate threshold>* to satisfy your actual requirement. For more information about the attribute, refer to *busyRateThreshold* in *Managed Object Model (MOM)*.

3. Restart Radius Backend.

```
# ipw-ctr restart aaa_radius_backend <PL hostname>
```

2.2 Increasing CUDB Capacity

1. Check the error log. The CUDB traffic overload related message logged in the following file:

```
/cluster/storage/no-backup/ipworks/logs/<PL
hostname>/aaa_diameter_server.log
```

Example:

```
2017/07/20 04:55:28|ipwa3d|Debug|Plugins|System 139957842716416 -
/localdisk/scratch/ipw_dev/ipworks/src/aaa/diameter/stack/
ldapstack/stack_ldapstack_scc/src/LDAPEventHandler.cpp:52
LDAPEventHandler::handlerEvent sendEnterAlarm FE enters overload protection status.
```



2. To clear the alarm, increase the CUDB capacity.
3. This alarm will be cleared automatically after the issue is fixed. Check the log to see whether the alarm is cleared.

Example:

```
2017/07/20 04:56:22|ipwa3d|Debug|Plugins|System 139957842716416 -  
/localdisk/scratch/ipw_dev/ipworks/src/aaa/diameter/stack/ldapstack/  
stack_ldapstack_scc/src/LDAPEventHandler.cpp:58  
LDAPEventHandler::handlerEvent sendClearAlarm FE leaves overload protection status.
```

Note: The alarm status refreshes every 2 minutes.

4. If the alarm is still not cleared, consult the next level of maintenance support. Further actions are outside the scope of this instruction.