

Radius AAA, Server Cannot Connect to DB IPWorks

OPERATING INSTRUCTIONS

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Radius AAA, Server Cannot Connect to DB



1 Introduction

This instruction concerns alarm handling.

1.1 Alarm Description

The alarm is issued when the connection between AAA server and MySQL NDB cluster is lost.

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
MySQL information configuration for AAA server is incorrect.	The alarm is raised because of the incorrect configuration of MySQL information.	The attribute <code>ndbConnectString</code> in the <code>MO MySQLInfo</code> is configured incorrectly.	AAA server	AAA server cannot provide service.	Section 2.1 on page 3
NDB cluster is under abnormal condition.	All Data Nodes are down.	All the NDB connections are lost.	NDB cluster		Section 2.2 on page 4

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	868354
Managed Object Class	IpworksRadiusAAA
Source	ManagedElement=<Node Name>, SystemFunctions=1, Fm=1, FmAlarmModel=ipworksRadiusAAA, FmAlarmType=ipworksRadiusAAADBFailure



Attribute Name	Attribute Value
Specific Problem	Radius AAA, Server Cannot Connect to DB
Event Type	processingErrorAlarm(10)
Probable Cause	x733ApplicationSubsystemFailure(302)
Additional Text	NDB Cluster or Data Nodes are down when AAA tries to connect to NDB.;uuid:<Product_UUID> ⁽¹⁾
Perceived Severity	Critical

(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

Not 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 MySQL Information in ECLI

To clear the alarm, do the following:

1. Log on to the ECLI interface.

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

2. Check the configuration of *MySQLInfo*.

For example:

```
>ManagedElement=<Node Name>,IpworksFunction=1,IpworksCommonRoot=1,DataBaseInfo=1,MySQLInfo=1
(MySQLInfo=1)>show -v -r
MySQLInfo=1
  mySQLInfoId="1"
  ndbConnectString <default>
    "SC-2:1186"
    "SC-1:1186"
  SQLNodeInfo=1
    host="ipw_sql"
    password="1:cRmtreL28X8="
    port=3307 <default>
    sqlNodeInfoId="1"
    user="root" <default>
  SQLNodeInfo=2
    host="ipw_sql"
    password="1:cRmtreL28X8="
    port=3307 <default>
    sqlNodeInfoId="2"
    user="root" <default>
```

3. Check the configuration parameters of MySQL. The configuration files are located at `/etc/ipworks/mysql/confs` on SC node.

File Name	Parameter
ipworks_datanode_my.conf	ndb-connectstring
ipworks_mgm.conf	HostName
	PortNumber
ipworks_sqlnode.conf	ndb-connectstring
	port



Verify whether the configuration shown in Step 2 matches with parameters values in these configuration files. If not, proceed with Step 4.

4. Configure the MO *MySQLInfo*.

```
>ManagedElement=<Node Name>,IpworksFunction=1,IpworksCommonRo
ot=1,DataBaseInfo=1,MySQLInfo=1
(MySQLInfo=1)>configure
(config-MySQLInfo=1)>ndbConnectString=["SC-1:1186","SC-2:1186"]
(config-MySQLInfo=1)>commit
(config-MySQLInfo=1)>exit
```

5. Restart the AAA service on Payload (PL) to make the change take effect.

```
PL-X:~ # ipw-ctr restart aaa_radius_backend
```

6. Confirm that the alarm has ceased, if this alarm still exists, consult the next level of maintenance support. Further actions are outside the scope of this instruction.

2.2 Starting Management Node and Data Node

To clear the alarm, do the following:

1. Log on to the SC-1.

```
# ssh <Username>@<SC-1 IP Address>
```

2. Check NDB status.

```
SC-1:~ # ndb_mgm
-- NDB Cluster -- Management Client --
ndb_mgm> show
Connected to Management Server at: localhost:1186
Cluster Configuration
-----
[ndbd(NDB)] 2 node(s)
id=27 @169.254.100.1 (mysql-5.6.31 ndb-7.4.12, Nodegroup: 0, *)
id=28 @169.254.100.2 (mysql-5.6.31 ndb-7.4.12, Nodegroup: 0)

[ndb_mgmd(MGM)] 2 node(s)
id=1 @169.254.100.1 (mysql-5.6.31 ndb-7.4.12)
id=2 @169.254.100.2 (mysql-5.6.31 ndb-7.4.12)

[mysqld(API)] 24 node(s)
id=3 @169.254.100.1 (mysql-5.6.31 ndb-7.4.12)
id=4 (not connected, accepting connect from SC-2)
id=5 @169.254.100.3 (mysql-5.6.31 ndb-7.4.12)
id=6 (not connected, accepting connect from any host)
id=7 (not connected, accepting connect from any host)
id=8 (not connected, accepting connect from any host)
id=9 (not connected, accepting connect from any host)
id=10 (not connected, accepting connect from any host)
```




```

id=11 (not connected, accepting connect from any host)
id=12 (not connected, accepting connect from any host)
id=13 (not connected, accepting connect from any host)
id=14 (not connected, accepting connect from any host)
id=15 (not connected, accepting connect from any host)
id=16 (not connected, accepting connect from any host)
id=17 (not connected, accepting connect from any host)
id=18 (not connected, accepting connect from any host)
id=19 (not connected, accepting connect from any host)
id=20 (not connected, accepting connect from any host)
id=21 (not connected, accepting connect from any host)
id=22 (not connected, accepting connect from any host)
id=23 (not connected, accepting connect from any host)
id=24 (not connected, accepting connect from any host)
id=25 (not connected, accepting connect from any host)
id=26 (not connected, accepting connect from any host)

```

```
ndb_mgm> exit
```

Above output shows that all the NDB Cluster nodes are started. If result shows that certain nodes are not started, proceed with Step 3.

3. Start the Management Node, Data Node, and SQL Node.

```
SC-1:~ # /etc/init.d/ipworks.mysql start-mgmd
```

```
SC-1:~ # /etc/init.d/ipworks.mysql start-ndbd
```

```
SC-1:~ # /etc/init.d/ipworks.mysql start-sqlnode
```

For more information on how to manage MySQL NDB Cluster, refer to *Configure MySQL NDB Cluster*.

4. Log on to the SC-2, then start the Management Node, Data Node, and SQL Node. Ensure that the NDB status is identical to the output of Step 2.

If all NDB nodes are down, you can start all the nodes by executing the following command :

```
SC-X:~ # /etc/init.d/ipworks.mysql start-ndbcluster
```

5. Restart AAA server:

```
SC-X:~ # ipw-ctr restart aaa_radius_backend PL-3
```

```
SC-X:~ # ipw-ctr restart aaa_radius_backend PL-4
```

6. Confirm that the alarm has ceased. If the alarm remains, consult the next level of maintenance support. Further actions are outside the scope of this instruction.