

ENUM, Query Failure Error

IPWorks

OPERATING INSTRUCTIONS

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1 Introduction

This instruction concerns alarm handling.

1.1 Alarm Description

This alarm is issued when the failure rate of ENUM queries exceeds the given threshold (defined by the attribute `thresholdHigh`).

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
ENUM request is incorrect or contains a syntax error	The ENUM server returns an error response while receiving a NAPTR request with format error or name error.	The NAPTR request (excluding the EMUN request for Number Portability) has format error or name error. For example, if the query is below an equipped ENUM zone, however the specific domain name is not provisioned in the database, the name error occurs.	ENUM server	ENUM queries fail.	See Section 2.2 on page 3
NAPTR request with server failure	The ENUM server cannot connect to the MySQL NDB Cluster.	The MySQL NDB Cluster is down.	MySQL NDB Cluster		See Section 2.3 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	856066
Managed Object Class	ipworksEnumPm
Source	ManagedElement=<Node Name>,SystemFunctions=1,Pm=1,PmJob=<PM job name, the default job is EnumTPSAlarmDefaultJob>,MeasurementReader=<Name>:<hostname>
Specific Problem	ENUM, Query Failure Error
Event Type	qualityOfServiceAlarm(11)
Probable Cause	x733ThresholdCrossed(351)
Additional Text	The alarm is raised when query failures exceed a configured limit (threshold) on expiration of a configured time interval.;uuid:<Product_UUID> ⁽¹⁾
Perceived Severity	Warning

(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

This instruction references the following document:

1.2.2 Tools

Not applicable.

1.2.3 Conditions

No conditions.



2 Procedure

This section describes the procedure to follow when this alarm is received.

2.1 Analyzing the Alarm

Do the following at the maintenance center:

1. Check ENUM server
2. Check MySQL NDB Cluster

2.2 Actions for Checking ENUM Server

To check the ENUM server, do the following:

1. Check whether the ENUM functionality is working properly.

For more information, refer to the section [Checking ENUM Process Status in IPWorks Manual Health Check](#).

2. In IPWorks CLI, check the whether the associated enumzone exists, for example:

```
IPWorks> list enumzone
[EnumZone 11]
  enumZoneId: 11
  enumZoneName: e164.arpa
  InDefaultView: true
  DefaultTTL: 0
```

The output shows that the ENUM zone exists, continue to check the ENUM log file.

3. Open the ENUM log file, and check whether dnrange can be found.

Note: The log files are stored in the directory `/cluster/storage/no-backup/ipworks/logs/<hostname>`.

```
2015/06/17 08:05:41|enum|Debug|ENUM|user 139703781525248 - /vobs/ims/ipworks/src/enum/enum_eu/src/EnumQuery.cpp:2
2015/06/17 08:05:41|enum|Debug|ENUM|user 139703781525248 - /vobs/ims/ipworks/src/enum/enum_eu/src/EnumQuery.cpp:2
2015/06/17 08:05:41|enum|Debug|ENUM|user 139703781525248 - /vobs/ims/ipworks/src/enum/enum_eu/src/EnumQuery.cpp:3
2015/06/17 08:05:41|enum|Debug|ENUM|user 139703781525248 - /vobs/ims/ipworks/src/enum/enum_eu/src/EnumQuery.cpp:4
2015/06/17 08:05:41|enum|Debug|ENUM|user 139703781525248 - /vobs/ims/ipworks/src/enum/enum_eu/src/UdpDualStackSer
```

As the output shows, the dnrange cannot be found, continue to check it in IPWorks CLI.



4. In IPWorks CLI, check whether the enumdnrange object exists.

```
IPWorks> list enumdnrange  
No matching object(s) found.
```

If the enumdnrange does not exist, create the enumdnrange object.

For more information about how to configure EnumDnRange, refer to the section Configuring EnumDnRange in [Configure DNS and ENUM](#).

For more information about the EnumDnRange object, refer to [IPWorks DNS, ASDNS, ENUM Parameter Description](#).

5. 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.

2.3 Actions for Checking MySQL NDB Cluster

To check the MySQL NDB Cluster, do the following:

1. Show the status of MySQL NDB Cluster.

```
SC-1:~# /etc/init.d/ipworks.mysql show-status
```

The following output shows that all the Management Nodes, Data Nodes, and SQL Nodes are running.



```

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 (not connected, accepting connect from any host)
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)

```

If certain node is not running, start the node. For details on how to start NDB Cluster Node, refer to [Configure MySQL NDB Cluster](#).

2. 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.