

DNS, Server Failed to Start

IPWorks

OPERATING INSTRUCTIONS

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DNS, Server Failed to Start



1 Introduction

This instruction concerns alarm handling.

1.1 Alarm Description

The alarm is issued when DNS server fails to start.

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 |
|---------------------|--|--|--------------------|--|---------------------------|
| Memory error | The alarm is raised due to memory error. | Memory exhausted | DNS server machine | DNS server fails to start. | See Section 2.2 on page 3 |
| Configuration error | There is an error in configuration file. | Syntax error or data error in configuration file | DNS server | DNS server fails to start, and gets into infinite restart error. | 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 | 851971 |
| Managed Object Class | ipworksDns |
| Source | ManagedElement=<Node Name>,SystemFunctions=1,Fm=1,FmAlarmModel=ipworksDns,FmAlarmType=ipworksDnsServFatalError,HostName=<PL hostname> |
| Specific Problem | DNS, Server Failed to Start |
| Event Type | processingErrorAlarm(10) |
| Probable Cause | x733ConfigurationOrCustomizationError(307) |



| Attribute Name | Attribute Value |
|--------------------|---|
| Additional Text | <p>Additional Text is one of the following texts:</p> <ul style="list-style-type: none">• Fatal Error in early phase, the root cause may be configuration file issue, operation system issue, memory issue, license issue or software issue.);uuid:<Product_UUID>⁽¹⁾• Fatal error caused by DNS internal failure.;uuid:<Product_UUID>• Fatal Error in DNS library.;uuid:<Product_UUID>• Fatal Error, the root cause may be configuration file issue, operation system issue, memory issue, license issue or software issue.;uuid:<Product_UUID> |
| 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 you have read the following documents:

- System Safety Information
- Personal Health and Safety Information

1.2.2 Tools

No tools are required.

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 machine status.
2. Check configuration file.

2.2 Checking Machine Status

To clear the alarm, do the following:

1. Check the machine status on which DNS server is deployed.

Ensure that the utilization rate of CPU is normal and memory has enough free space. For example:

```
# top
top - 09:17:46 up 9 days, 28 min,  1 user,  load average:
0.39, 0.32, 0.32
Tasks: 135 total,  1 running, 134 sleeping,  0 stopped,
0 zombie
Cpu(s):  0.8%us,  1.3%sy,  0.0%ni, 97.9%id,  0.0%wa,
0.0%hi,  0.0%si,  0.0%st
Mem:   2054796k total, 1584124k used,   470672k free,
98876k buffers
Swap:  4194300k total,      0k used,  4194300k free,
1321040k cached
```

2. Ensure that the hard disk has enough free space. For example:

```
PL-3:~ # df
Filesystem      1K-blocks    Used Available Use% Mounted on
rootfs          2097152  490184   1606968  24% /
root            2097152  490184   1606968  24% /
tmpfs           1027396     688    1026708   1% /dev/shm
shm             1027396     688    1026708   1% /dev/shm
<ip>:/.cluster 10385664 4329472   5528640  44% /cluster
```

3. If abnormal memory is occupied, check if related processor runs normally or if it can be terminated.
4. After the memory issue is solved, restart DNS server. For example:



```
# ipw-ctr stop dns <PL hostname>
# ipw-ctr start dns <PL hostname>
```

5. Check whether DNS server is started. For example:

```
# ipw-ctr status dns <PL hostname>
```

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.

2.3 Checking Configuration File

To clear this alarm, perform the following steps:

1. Check the DNS configuration file named `.conf` to ensure that there is no syntax or data error.

```
# cd /etc/ipworks/<PL hostname>/dns
# /opt/ipworks/dns/usr/bin/named-checkconf named.conf
```

Note: If there is any syntax or data error in this file, make sure that the file is updated correctly. Otherwise, DNS server will get into infinite restart.

Warning!

It is not recommended to update the configuration file manually.

2. Start DNS service.

```
# ipw-ctr start dns <PL hostname>
```

If the alarm is cleared, the job is completed. Otherwise, proceed with Step 3.

3. Rebuild the DNS server.

- a. Ensure that the DNS service is stopped.

```
# ipw-ctr stop dns <PL hostname>
```

- b. Restart the DNS Server Manager. If it already starts, skip the step.

```
# ipw-ctr stop dnssm <PL hostname>
# ipw-ctr start dnssm <PL hostname>
```

- c. Start the DNS service.



```
# ipw-ctr start dns <PL hostname>
```

- d. Rebuild the DNS server by using IPWorks CLI.

```
IPWorks> select dnsserver <server name>  
Selected 1 object(s).  
IPWorks> update dnsserver -rebuild=true
```

4. 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.