

DHCPv4, Server Fatal Shutdown

Operating Instructions



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1 Introduction

This instruction concerns alarm handling.

1.1 Alarm Description

The alarm is issued when DHCPv4 server fails to start.

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

Table 1 Alarm Causes

Alarm Cause	Description	Fault Reason	Fault Location	Impact	Solution
Lack of memory or disk space.	The DHCPv4 server is running out of memory, or with no sufficient disk space.	Memory or disk space exhausted	DHCPv4 server	DHCPv4 server fails to start and gets into infinite restart error.	See Section 2.1 Checking Machine Status on page 3

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

The alarm attributes are listed and explained in Page 1.

Table 2 Alarm Attributes

Attribute Name	Attribute Value
Major Type	193
Minor Type	872454
Managed Object Class	IpworksDhcpv4
Source	ManagedElement=<Node Name>,SystemFunctions=1,Fm=1,FmAlarmModel=ipworksDHCPv4,FmAlarmType=ipworksDhcpv4FatalShutdown,HostName=<PL hostname>
Specific Problem	DHCPv4, Server Fatal Shutdown
Event Type	processingErrorAlarm(10)
Probable Cause	x733SoftwareProgramAbnormallyTerminated(347)



Attribute Name	Attribute Value
Additional Text	This alarm is raised when a DHCP server shutdowns due to a fatal error that would prevent DHCPv4 server to correctly continue executing. Fatal errors can be due to memory allocation problems, unexpected error conditions, incorrectly configured server, etc.;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 you have read the following documents:

- System Safety Information
- Personal Health and Safety Information
- Fault Management

1.2.2 Tools

No tools are required.

1.2.3 Conditions

No conditions.



2 Procedure

This section describes the procedure to clear this alarm.

2.1 Checking Machine Status

Do the following:

1. Check the machine status on which DHCPV4 server is deployed.

Ensure that the CPU usage is normal and memory has enough free space (5 million leases need about 5.5G memory). For example:

```
PL-3:~ # free -m
```

	total	used	free	shared	buffers	cached
Mem:	50419	10271	40147	2280	0	3979
-/+ buffers/cache:		6292	44127			
Swap:	0	0	0			

2. Ensure that the hard disk has 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. Restart DHCPV4 server. For example:

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

4. Check whether DHCPV4 server is started successfully. For example:

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

5. If the DHCPv4 server can be restarted successfully, the alarm is cleared automatically
6. If the alarm remains, consult the next level of maintenance support. Further actions are outside the scope of this instruction.