

# DHCPv4, DHCPv4 Server Active Lease Cross Threshold

## Operating Instructions





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# 1 Introduction

This instruction concerns alarm handling.

## 1.1 Alarm Description

This alarm is issued when the percentage of the active leases on server level exceeds the server threshold. It is raised from one of the PL nodes, because all PL nodes share the lease pools.

The possible alarm causes and the corresponding fault reasons, fault locations, and impacts are described in Page 2.



Table 1 Alarm Causes

Alarm Cause	Description	Fault Reason	Fault Location	Impact	Solution
Inappropriate DHCPv4 configuration.	The value of server threshold is configured too low. And the percentage of the active leases is crossing the value.	The value of the option lease threshold is configured too low. (For example, 10.)	DHCPv4 server	This alarm requests the operators to add more IP addresses. Otherwise, when all the IP pools are used up, DHCP client cannot get IP address.	See Section 2.1 Changing Lease Threshold Configuration on page 5
Allocated number of IP addresses exceeds the server threshold.	The percentage of allocated addresses exceeds the configured threshold.	The planning total number of IP addresses for DHCPv4 server is less than the actual requirement. This issue occurs when excessive users related to a specific server are online.	DHCPv4 server		See Section 2.2 Adding More Pools on page 5 and Section 2.3 Adding More Leases on page 6

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

The alarm attributes are listed and explained in Page 2.

Table 2 Alarm Attributes

Attribute Name	Attribute Value
Major Type	193
Minor Type	872457
Managed Object Class	IpworksDhcpv4



Attribute Name	Attribute Value
Source	ManagedElement=<Node Name>,SystemFunctions=1,Fm=1,FmAlarmModel=ipworksDHCPv4,FmAlarmType=ipworksDhcpv4ServerActiveLeaseCrossThreshold
Specific Problem	DHCPv4, DHCPv4 Server Active Lease Cross Threshold
Event Type	qualityOfServiceAlarm(11)
Probable Cause	x733ThresholdCrossed(351)
Additional Text	The alarm is raised when the percentage of the server active leases exceeds the server threshold.;uuid:<Product_UUID> <sup>(1)</sup>
Perceived Severity	Minor

(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 Changing Lease Threshold Configuration

Do the following:

1. Change the configuration of Lease Threshold for DHCPv4 server. For example:

```
#ipwcli

#IPWorks> select dhcpv4server dhcp0

#IPWorks> modify -remove option="leasethreshold <Original
threshold>"

#IPWorks> modify -add option="leasethreshold <New threshold>"
```

2. Update DHCPv4 server.

```
#IPWorks> update dhcpv4server
```

3. Restart DHCPv4 server. For example:

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

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.

### 2.2 Adding More Pools

Do the following steps:

1. Add more pools for DHCPv4 server. For example:

```
# ipwcli

#IPWorks> create pool pool1 -set addressrange=10.170.11.200-10.
170.11.254 -set server=dhcp0
```

2. Update DHCPv4 server.

```
# IPWorks> update dhcpv4server
```

3. Restart DHCPv4 server. For example:

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



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.

## 2.3 Adding More Leases

Do the following steps:

1. Add more leases for the pool of DHCPv4 server. For example:

```
# ipwcli
```

```
#IPWorks> modify pool pool0 -set addressrange=10.170.15.101-140
```

2. Update DHCPv4 server.

```
# IPWorks> update dhcpv4server
```

3. Restart DHCPv4 server. For example:

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

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.