

DHCPv4, DHCPv4 Pool 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 pool level exceeds the pool threshold. It is raised from one of PL nodes, because all PL nodes share the pools.

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
Inappropriate DHCPv4 configuration.	The value of pool 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	If most of pools exceed threshold, DHCP client cannot get IP address.	See Section 2.1 Changing Lease Threshold Configuration on page 5
Allocated number of IP addresses exceeds the pool threshold.	The percentage of allocated addresses of a pool exceeds the configured pool threshold.	The planning number of IP addresses for a pool is less than the actual requirement. This issue occurs when excessive users related to a specific pool are online.	DHCPv4 server		See Section 2.2 Adding More Leases on page 5



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	872458
Managed Object Class	IpworksDhcpv4
Source	ManagedElement=<Node Name>,SystemFunctions=1,Fm=1,FmAlarmModel=ipworksDHCPv4,FmAlarmType=ipworksDhcpv4PoolActiveLeaseCrossThreshold
Specific Problem	DHCPv4, DHCPv4 Pool Active Lease Cross Threshold
Event Type	qualityOfServiceAlarm(11)
Probable Cause	x733ThresholdCrossed(351)
Additional Text	The alarm is raised when the percentage of the pool active leases exceeds the pool threshold.;uuid:<Product_UUID> ⁽¹⁾
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 Leases

Do the following steps:

1. Add more leases for 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.