

Radius AAA, Server Allocated IP Address Exceeded Server Threshold IPWorks

OPERATING INSTRUCTIONS

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Radius AAA, Server Allocated IP Address Exceeded Server Threshold



1 Introduction

This instruction concerns alarm handling.

1.1 Alarm Description

This alarm is raised when the percentage of a total allocated addresses of all pools exceeds the configured server threshold (`threshold4UsedIpInServer`).

This alarm is raised from one of PL nodes, this is because pools are shared among all PL nodes.

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
Inappropriate AAA configuration.	The value of server threshold is too low.	The attribute threshold4UsedIpInServer in the MO IPAllocationService is configured inappropriately (for example, 10).	AAA Server	This alarm requests the operators to add more IP addresses. Otherwise, when all the IP pools are used up, AAA server cannot provide IP allocation service.	See Section 2.1 on page 4
Allocated IP addresses exceed server threshold.	The percentage of total allocated addresses exceeds the configured threshold.	The planning total number of IP addresses for AAA server is less than the actual requirement. This issue typically occurs when excessive users are online.	AAA Server		See Section 2.2 on page 4

The alarm attributes are listed and explained in Table 2.

Table 2 Alarm Attributes

Attribute Name	Attribute Value
Major Type	193
Minor Type	868357
Managed Object Class	IpworksRadiusAAA
Source	ManagedElement=<Node Name>, SystemFunctions=1,Fm=1,FmAlarmModel=ipworksRadiusAAA, FmAlarmType=ipworksRadiusAAAAllocationAddressSvrExceedThreshold



Attribute Name	Attribute Value
Specific Problem	Radius AAA, Server Allocated IP Address Exceeded Server Threshold
Event Type	qualityOfServiceAlarm(11)
Probable Cause	x733ThresholdCrossed(351)
Additional Text	The percentage of total allocated addresses exceeds the configured server 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 the following document has been read:

- *Fault Management*
- *Configure Radius AAA*
- *IPWorks AAA Parameter Description*
- *Managed Object Model (MOM)*

1.2.2 Tools

Not available.

1.2.3 Conditions

Not applicable.



1.3 Related Information

Trademark information, typographic conventions, and definition and explanation of abbreviations and terminology can be found in the following documents:

- *Trademark Information*
- *Typographic Conventions*
- *Glossary of Terms and Acronyms*

2 Procedure

This section describes the procedure to follow to clear this alarm.

2.1 Updating Server Threshold

1. Log on to the ECLI interface.

```
# ssh <username>@<OAM IP Address> -t -s cli
```

2. Configure the server threshold.

```
>dn ManagedElement=<Node Name>,IpworksFunction=1,IPWorksAAARoot=1,⇒  
IPWorksRadiusAAARoot=1,RadiusAAAService=1,IPAllocationService=1  
(IPAllocationService=1)> configure  
(config-IPAllocationService=1)> threshold4UsedIpInServer=<server threshold>  
(config-IPAllocationService=1)> commit  
(IPAllocationService=1)> exit
```

Note: Update value of <server threshold> according to the actual requirement.

3. Restart Radius Backend for all PLs.

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

2.2 Adjusting IP Allocation Plan

Use the one of the following methods:

- Section 2.2.1 Adding New Pool on page 5
- Section 2.2.2 Adding New Subnet and Pool on page 5



2.2.1 Adding New Pool

If there are remaining IP addresses in the configured subnet, you can add a new pool.

For example:

1. Log on to IPWorks CLI on the Storage Server (SS).

```
# ipwcli
IPWorks> Login: <Username>
IPWorks> Password: <Password>
```

2. Create a new pool for subnet.

```
IPWorks> create aaaippool <pool_name> -set subnet=<subnet_name>;⇒
range=10.0.0.50-100;clientip=10.170.15.41
```

2.2.2 Adding New Subnet and Pool

If there are not enough IP to create a new pool in the configured subnet, you can add a subnet and create some new pools.

1. Log on to IPWorks CLI on the Storage Server (SS).

```
# ipwcli
IPWorks> Login: <Username>
IPWorks> Password: <Password>
```

2. Create a new subnet and create a new pool.

For example:

```
IPWorks> create aaasubnet <subnet_name> -set ⇒
address=10.0.10.0;masklength=8
IPWorks> create aaaippool <pool_name> -set ⇒
subnet=<subnet_name>;range=10.0.10.1-100;clientip=10.170.15.41
```

3. Migrate the offline users to other pools.

For more information about how to configure the IP allocation function, refer to the section *Configuring IP Allocation* in *Configure Radius AAA*.