

AAA Thresholds

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AAA Thresholds

Threshold monitoring can be enabled for the AAA-related values described in the following table.

Value	Description
Archive size	Enables the generation of alerts or alarms based on the number of AAA (RADIUS and/or GTPP) accounting messages archived during the polling interval.
Archive Queue size	Enables the generation of alerts or alarms per Session Manager instance based on the queue size for AAA (RADIUS and/or GTPP) accounting messages being archived during the polling interval.
Accounting Failures	Enables the generation of alerts or alarms based on the number of failed AAA accounting requests that occur during the polling interval.
Accounting Failure Rate	Enables the generation of alerts or alarms based on the percentage of AAA accounting requests that failed during the polling interval.
Authentication Failures	Enables the generation of alerts or alarms based on the number of failed AAA authentication requests that occur during the polling interval.

Value	Description
Authentication Failure Rate	Enables the generation of alerts or alarms based on the percentage of AAA authentication requests that failed during the polling interval.
Retry Rate	Enables the generation of alerts or alarms based on the percentage of AAA requests (both accounting and authentication) that were re-tried during the polling interval.
AAA Manager Request Queue Usage	Enables the generation of alarms or alerts when the AAA Manager request queue usage reaches a specified percentage level.

Saving Your Configuration

When you configure thresholds they are not permanent unless you save the changes. When you have completed configuring thresholds, save your configuration to flash memory, an external memory device, and/or a network location using the Exec mode command **save configuration**. For additional information on how to verify and save configuration files, refer to the *System Administration Guide* and the *Command Line Interface Reference*.

AAA Accounting Message Archive Size Thresholds

In the event that the system cannot communicate with configured AAA accounting servers (RADIUS or CGFs), either due to the server being busy or loss of network connectivity, the system buffers, or archives, the accounting messages.

Accounting message archive size thresholds generate alerts or alarms based on the number of AAA accounting messages buffered in the archive during the specified polling interval. Accounting requests are counted for all AAA accounting servers that the system is configured to communicate with.

Alerts or alarms are triggered for accounting message archive size threshold based on the following rules:

- **Enter condition:** Actual number of archived messages > or = High Threshold
- **Clear condition:** Actual number of archived messages < Low Threshold

If a trigger condition occurs within the polling interval, the alert or alarm will not be generated until the end of the polling interval.

Configuring AAA Accounting Message Archive Size Threshold

Use the following example to configure the accounting message archive size threshold:

```
configure
 threshold aaa-acct-archive-size <high_thresh> [ clear <low_thresh> ]
 threshold poll aaa-acct-archive-size interval  <time>
 threshold monitoring aaa-acct-archive-size
 end
```

AAA Accounting Message Archive Queue Size Thresholds

The Session Manager can buffer around 26400 CDRs per Session Manager instance in ASR 5500. Once the above limit is breached the oldest CDRs will be purged to make room for the new CDRs. Since purging can happen as soon as the Session Manager queue size reaches the maximum allowed limit, there is a need for the alarms to be generated during this scenario.

Accounting message archive queue size thresholds generate alerts or alarms per Session Manager instance based on the queue percentage of accounting messages archived in the buffer. The alarm will typically be generated when the message archival begins, and as and when the buffer is filled up to say, 25, 50 and 90 during the specified polling interval.



Note AcctArchiveStarted trap will be generated if the queue size exceeds 15 of the maximum number of session manager items per instance. The queue size is indicative of the maximum of ACS manager queue size and session manager queue size.

Alerts or alarms are triggered for accounting message archive queue size thresholds based on the following rules:

- **Enter condition:** Actual queue percentage of archived messages > or = High Threshold
- **Clear condition:** Actual queue percentage of archived messages < Low Threshold

If a trigger condition occurs within the polling interval, the alert or alarm will not be generated until the end of the polling interval.

Configuring AAA Accounting Message Archive Queue Size Threshold

Use the following example to configure the accounting message archive queue size threshold:

```
configure
 threshold aaa-acct-archive-queue-size1 <high_thresh> [ clear <low_thresh> ]
 threshold aaa-acct-archive-queue-size2 <high_thresh> [ clear <low_thresh> ]
 threshold aaa-acct-archive-queue-size3 <high_thresh> [ clear <low_thresh> ]
 threshold monitoring aaa-acct-archive-queue
 threshold poll aaa-acct-archive-queue-size1 interval  <time>
 threshold poll aaa-acct-archive-queue-size2 interval  <time>
 threshold poll aaa-acct-archive-queue-size3 interval  <time>
 end
```

AAA Accounting Failure Thresholds

Accounting failure thresholds generate alerts or alarms based on the number of failed AAA accounting message requests that occur during the specified polling interval. Accounting requests are counted for all AAA accounting servers that the system is configured to communicate with.

Alerts or alarms are triggered for accounting failures based on the following rules:

- **Enter condition:** Actual number of failures > or = High Threshold

- **Clear condition:** Actual number of failures < Low Threshold

If a trigger condition occurs within the polling interval, the alert or alarm will not be generated until the end of the polling interval.

Configuring AAA Accounting Failure Threshold

Use the following example to configure AAA accounting failure threshold:

```
configure
 threshold aaa-acct-failure <high_thresh> [ clear <low_thresh> ]
 threshold poll aaa-acct-failure interval  <time>
 threshold monitoring aaa-acct-failure
 end
```

AAA Accounting Failure Rate Thresholds

Accounting failure rate thresholds generate alerts or alarms based on the percentage of AAA accounting message requests that failed during the specified polling interval. Accounting requests are counted for all AAA accounting servers that the system is configured to communicate with.

Alerts or alarms are triggered for accounting failure rates based on the following rules:

- **Enter condition:** Actual number of failures > or = High Threshold
- **Clear condition:** Actual number of failures < Low Threshold

If a trigger condition occurs within the polling interval, the alert or alarm will not be generated until the end of the polling interval.

Configuring AAA Accounting Failure Rate Threshold

Use the following example to configure AAA accounting failure rate threshold:

```
configure
 threshold aaa-acct-failure-rate <high_thresh>[ clear <low_thresh> ]
 threshold poll aaa-acct-failure-rate interval  <time>
 threshold monitoring aaa-acct-failure
 end
```

AAA Authentication Failure Thresholds

Authentication failure thresholds generate alerts or alarms based on the number of failed AAA authentication message requests that occur during the specified polling interval. Authentication requests are counted for all AAA authentication servers that the system is configured to communicate with.

Alerts or alarms are triggered for authentication failures based on the following rules:

- **Enter condition:** Actual number of failures > or = High Threshold
- **Clear condition:** Actual number of failures < Low Threshold

If a trigger condition occurs within the polling interval, the alert or alarm will not be generated until the end of the polling interval.

Configuring AAA Authentication Failure Threshold

Use the following example to configure AAA authentication failure threshold:

```
configure
 threshold aaa-auth-failure <high_thresh>[ clear <low_thresh> ]
 threshold poll aaa-auth-failure interval  <time>
 threshold monitoring aaa-auth-failure
 end
```

AAA Authentication Failure Rate Thresholds

Authentication failure rate thresholds generate alerts or alarms based on the percentage of AAA authentication message requests that failed during the specified polling interval. Authentication requests are counted for all AAA authentication servers that the system is configured to communicate with.

Alerts or alarms are triggered for authentication failure rates based on the following rules:

- **Enter condition:** Actual failure percentage > or = High Threshold
- **Clear condition:** Actual failure percentage < Low Threshold

If a trigger condition occurs within the polling interval, the alert or alarm will not be generated until the end of the polling interval.

Configuring AAA Authentication Failure Rate Threshold

Use the following example for configuring AAA authentication failure rate threshold:

```
configure
 threshold aaa-auth-failure-rate <high_thresh>[ clear <low_thresh> ]
 threshold poll aaa-auth-failure-rate interval  <time>
 threshold monitoring aaa-auth-failure
 end
```

AAA Request Message Retry Rate Thresholds

AAA request message retry rate thresholds generate alerts or alarms based on the percentage of request messages (both authentication and accounting) that were retried during the specified polling interval. The percentage is based on a message count taken for all AAA authentication and accounting servers that the system is configured to communicate with.

Alerts or alarms are triggered for request message retries based on the following rules:

- **Enter condition:** Actual failure percentage > or = High Threshold
- **Clear condition:** Actual failure percentage < Low Threshold

If a trigger condition occurs within the polling interval, the alert or alarm will not be generated until the end of the polling interval.

Configuring AAA Authentication Failure Rate Threshold

Use the following example for configuring AAA request message retry rate threshold:

```
configure
 threshold aaa-retry-rate <high_thresh>[ clear <low_thresh> ]
 threshold poll aaa-retry-rate interval  <time>
 threshold monitoring aaa-retry-rate
 end
```

AAA Manager Request Queue Threshold

The AAA Manager request queue threshold generates an alert or alarm based on the usage percentage of the AAA Manager request queue during the specified polling interval. The percentage is based on the total number of pending requests for the AAA Manager and the total size allowed for the queue. This is polled for each AAA Manager process.

Alerts or alarms are triggered for the AAA Manager request queue threshold based on the following rules:

- **Enter condition:** Actual AAA Manager request queue percentage used > or = High Threshold
- **Clear condition:** Actual AAA Manager request queue percentage used < Low Threshold

If a trigger condition occurs within the polling interval, the alert or alarm is not generated until the end of the polling interval.

Configuring AAA Manager Request Queue Threshold

Use the following example for configuring AAA Manager request queue threshold.

```
configure
 threshold aaamgr-request-queue <high_thresh>[ clear <low_thresh> ]
 threshold poll aaamgr-request-queue interval  <time>
 threshold monitoring aaamgr-request-queue
 end
```