CPU Resource Thresholds

CPU Resource Thresholds

Threshold monitoring can be enabled for the CPU resource values described in the following table.

Value	Description
10 second average of total processing card CPU utilization	Enables the generation of alerts or alarms based on a 10 second average of processing card CPU utilization.
Processing card CPU available memory	Enables the generation of alerts or alarms based on the amount of available memory for each processing card CPU during the polling interval.
Processing card CPU load	Enables the generation of alerts or alarms based on processing card CPU load using a 5 minute average measurement.
Processing card CPU memory usage	Enables the generation of alerts or alarms based on the percentage of total processing card CPU memory used during the polling interval.

Value	Description
Processing card CPU session throughput	Enables the generation of alerts or alarms based on the total throughput for all Session Manager tasks running on each processing card CPU during the polling interval.
Processing card CPU utilization	Enables the generation of alerts or alarms based on the utilization percentage for each processing card CPU during the polling interval.
System management card CPU memory usage	Enables the generation of alerts or alarms based on the percentage of total system management card CPU memory used during the polling interval.
System management card CPU utilization	Enables the generation of alerts or alarms based on the utilization percentage for each active system management card CPU during the polling interval.
ORBS task CPU utilization warning	Enables the generation of warning-level alerts or alarms based on the percentage CPU resources utilized by the Object Request Broker (ORB) software task.
ORBS task CPU utilization critical	Enables the generation of critical-level alerts or alarms based on the percentage CPU resources utilized by the Object Request Broker (ORB) software task.

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*.

10-second Average of Total Processing Card CPU Utilization Thresholds

10-second average of total CPU utilization thresholds generate alerts or alarms based on a 10 second average of cpu utilization for all processing card CPUs during the specified polling interval.

Alerts or alarms are triggered for 10-second average of total CPU utilization based on the following rules:

- **Enter condition:** Average measured amount of total CPU utilization for the last 10 seconds > or = High Threshold

- **Clear condition:** Average measured amount of total CPU utilization for the last 10 seconds < 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 10-second Average of Processing Card CPU Thresholds

Use the following example for configuring 10-second average of total CPU utilization thresholding.

```
configure
 threshold 10sec-cpu-utilization <high_thresh> [ clear <low_thresh> ]
 threshold poll 10sec-cpu-utilization interval <time>
 threshold monitoring cpu-resource
 end
```

Processing Card CPU Available Memory Thresholds

CPU available memory thresholds generate alerts or alarms based on the amount of available memory for each processing card CPU during the specified polling interval. Although, a single threshold is configured for all processing card CPUs, separate alerts or alarms can be generated for each CPU. Both active and standby processing card CPUs are monitored.

Alerts or alarms are triggered for available processing card CPU memory based on the following rules:

- **Enter condition:** Average measured amount of memory/CPU for last 5 minutes = or < Low Threshold

- **Clear condition:** Average measured amount of memory/CPU for last 5 minutes > High 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 Processing Card CPU Available Memory Thresholds

Use the following example for configuring processing card CPU available memory thresholding.

```
configure
 threshold cpu-available-memory <low_thresh> [ clear <high_thresh> ]
 threshold poll cpu-available-memory interval <time>
 threshold monitoring cpu-resource
     end
```

Processing Card CPU Load Thresholds

CPU load thresholds generate alerts or alarms based on a five-minute average of processing card CPU load during the polling interval. Although, a single threshold is configured for all processing card CPUs, separate alerts or alarms can be generated for each CPU.

Alerts or alarms are triggered for CPU load based on the following rules:

- **Enter condition:** 5 minute average CPU load > or = High Threshold

- **Clear condition:** 5 minute average CPU load < 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 Processing Card CPU Load Thresholds

Use the following example for configuring processing card CPU load thresholding.

```
configure
 threshold cpu-load <high_thresh> [ clear <low_thresh> ]
 threshold poll cpu-load interval <time>
 threshold monitoring cpu-resource
       end
```

Processing Card CPU Memory Usage Thresholds

CPU memory usage thresholds generate alerts or alarms based on memory usage for each processing card CPU during the polling interval. Although, a single threshold is configured for all processing card CPUs, separate alerts or alarms can be generated for each CPU.

Alerts or alarms are triggered for CPU memory usage based on the following rules:

- **Enter condition:** Actual CPU memory usage > or = High Threshold

- **Clear condition:** Actual CPU memory usage < 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 Processing Card CPU Memory Usage Thresholds

Use the following example for configuring processing card CPU memory usage thresholding.

```
configure
 threshold cpu-memory-usage <high_thresh> [ clear <low_thresh> ]
 threshold poll cpu-memory-usage interval <time>
 threshold monitoring cpu-resource
       end
```

Processing Card CPU Session Throughput Thresholds

CPU session throughput thresholds generate alerts or alarms based on total throughput for all Session Manager tasks running on each processing card CPU during the polling interval. Although, a single threshold is configured for all processing card CPUs, separate alerts or alarms can be generated for each CPU.

Alerts or alarms are triggered for processing card CPU session throughput based on the following rules:

- **Enter condition:** Actual CPU session throughput > or = High Threshold

- **Clear condition:** Actual CPU session throughput < 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 Processing Card CPU Session Throughput Thresholds

Use the following example for configuring processing card CPU session throughput thresholding.

```
configure
 threshold cpu-session-throughput <high_thresh> [ clear <low_thresh> ]
 threshold poll cpu-session-throughput interval <time>
 threshold monitoring cpu-session-throughput
     end
```

Processing Card CPU Utilization Thresholds

CPU utilization thresholds generate alerts or alarms based on the utilization percentage of each processing card CPU during the specified polling interval. Although, a single threshold is configured for all processing card CPUs, separate alerts or alarms can be generated for each CPU.

Alerts or alarms are triggered for processing card CPU utilization based on the following rules:

- **Enter condition:** Average measured CPU utilization for last 5 minutes > or = High Threshold

- **Clear condition:** Average measured CPU utilization for last 5 minutes < 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 Processing Card CPU Utilization Thresholds

Use the following example for configuring processing card CPU utilization thresholding.

```
configure
 threshold cpu-utilization <high_thresh> [ clear <low_thresh> ]
 threshold poll cpu-utilization interval <time>
 threshold monitoring cpu-resource
     end
```

System Management Card CPU Memory Usage Thresholds

CPU memory usage thresholds generate alerts or alarms based on memory usage for the system management card CPU during the polling interval. A single threshold enables CPU monitoring for both the active and standby system management cards allowing for alerts or alarms to be generated for each CPU.

Alerts or alarms are triggered for system management card CPU memory usage based on the following rules:

- **Enter condition:** Actual CPU memory usage > or = High Threshold

- **Clear condition:** Actual CPU memory usage < 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 System Management Card CPU Memory Usage Thresholds

Use the following example for configuring system management card CPU memory usage thresholding.

```
configure
 threshold mgmt-cpu-memory-usage <high_thresh> [ clear <low_thresh> ]
 threshold poll mgmt-cpu-memory-usage interval <time>
 threshold monitoring cpu-resource
     end
```

System Management Card CPU Utilization Thresholds

CPU utilization thresholds generate alerts or alarms based on the utilization percentage of each system management card CPU during the specified polling interval. Although, a single threshold is configured for both system management card CPUs, separate alerts or alarms can be generated for each CPU.

Alerts or alarms are triggered for system management card CPU utilization based on the following rules:

- **Enter condition:** Average measured CPU utilization for last 5 minutes > or = High Threshold

- **Clear condition:** Average measured CPU utilization for last 5 minutes < 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 System Management Card CPU Utilization Thresholds

Use the following example for configuring system management card CPU utilization thresholding.

```
configure
 threshold mgmt-cpu-utilization <high_thresh> [ clear <low_thresh> ]
 threshold poll mgmt-cpu-utilization interval <time>
 threshold monitoring cpu-resource
     end
```

ORBS Software Task CPU Usage Warning-Level Thresholds

Object Request Broker (ORB) software task CPU utilization thresholds generate warning-level alerts or alarms based on the percentage of system management card CPU resources it is consuming at the time of polling.

Warning-level alerts or alarms are triggered for CPU usage by the ORBs software task based on the following rules:

- **Enter condition:** Actual CPU usage percentage > High Threshold

- **Clear condition:** Actual CPU usage percentage = or < Low Threshold

Configuring ORBS Software Task CPU Usage Warning-Level Thresholds

Use the following example for configuring warning-level ORB software task CPU usage thresholding.

```
configure
 threshold cpu-orbs-warn <high_thresh> [ clear <low_thresh> ]
 threshold poll cpu-orbs-warn interval <time>
 threshold monitoring cpu-resource
     end
```

ORBS Software Task CPU Usage Critical-Level Thresholds

Object Request Broker (ORB) software task CPU utilization thresholds generate critical-level alerts or alarms based on the percentage of system management card CPU resources it is consuming at the time of polling.

Critical-level alerts or alarms are triggered for CPU usage by the ORBs software task based on the following rules:

- **Enter condition:** Actual CPU usage percentage > High Threshold

- **Clear condition:** Actual CPU usage percentage = or < Low Threshold

Configuring ORBS Software Task CPU Usage Critical-Level Thresholds

Use the following example for configuring critical-level ORB software task CPU usage thresholding.

```
configure
 threshold cpu-orbs-crit <high_thresh> [ clear <low_thresh> ]
 threshold poll cpu-orbs-crit interval <time>
 threshold monitoring cpu-resource
     end
```