

Configure Performance Monitoring

This chapter describes the Cisco IOS XR commands to configure the performance monitoring for various controllers.

- Display the PM Parameters of a Controller, on page 1
- Clears the PM Parameters of a Controller, on page 2
- Configure the Time Interval for Optics Performance Monitoring (PM) Threshold, on page 2
- Configure the Time Interval for Optical Carrier (OC) Performance Monitoring (PM) Threshold, on page 3
- Configure the Time Interval for Synchronous Transport Signal (STS) PM Threshold, on page 3
- Configure the Time Interval for Synchronous Transport Module (STM) PM Threshold, on page 4
- Configure the Time Interval for Virtual Concatenation (VC) Performance Monitoring (PM) Threshold, on page 5
- Configure the Time Interval for ODU Performance Monitoring (PM) Threshold, on page 5
- Configure the Time Interval for Ethernet Performance Monitoring (PM) Threshold, on page 6
- Configure the Time Interval for OTU Performance Monitoring (PM) Threshold, on page 7

Display the PM Parameters of a Controller

Perform this task to view the PM parameters of a controller. Before viewing the PM parameters, a controller should be created.

Procedure

show controllers *name-of-the-controller R/S/I/P* **pm [current | history] [15-min | 24-hour] layer name {optics | ocn | ether | otn and gfp | otn and fec | otn and pathmonitor | otn and tcm}** *bucket number* **1-32**

Example:

```
RP/0/ # show controllers optics 0/0/0/2 pm current 15-min optics 12
RP/0/ # show controllers optics 0/0/0/2 pm current 24-hour optics 5
RP/0/ # show controllers optics 0/0/0/2 pm history 15-min optics1 1
RP/0/ # show controllers optics 0/0/0/2 pm history 24-hour optics 5
```

Displays the performance parameter of current values tab for 15-minutes and 24-hour intervals.

Clears the PM Parameters of a Controller

Perform this task to clear the PM parameters of a controller. Before clearing the PM parameters, a controller should be created.

Procedure

clear controllers *name-of-the-controller R/S/I/P* **pm [15-min | 24-hour] clear**

Example:

```
RP/0/ # clear controllers OTU1E 0/4/0/0 pm 15-min clear
RP/0/ # clear controllers optics 0/4/0/0 pm 24-hour clear
```

clears the performance parameter of current values tab for 15-minutes and 24-hour intervals.

Configure the Time Interval for Optics Performance Monitoring (PM) Threshold

Perform this task to configure the time interval for Optics PM threshold.

Procedure

Step 1 **configure**

Step 2 **controller optics** *R/S/I/P*

Example:

```
RP/0/ (config)# controller optics 0/0/0/2
```

Enters the Optics controller configuration mode.

Step 3 **pm [15-min | 24-hour] optics [report | threshold]** *{lbc | opr | opt} [max-tca | min-tca]* **enable**

Example:

```
RP/0/ (config-optics)# pm 15-min optics report lbc max-tca enable
```

Specifies the PM interval for the optics controller and set report value for the layer.

Step 4 **pm [15-min | 24-hour] optics [report | threshold]** *{lbc | opr | opt} [max | min] value*

Example:

```
RP/0/ (config-optics)# pm 15-min optics threshold opr max 15
```

Specifies the PM interval for the optics controller and set threshold value for the opr max. The value of opr max threshold ranges from 1 to 4294967295.

Step 5 **commit**

Configure the Time Interval for Optical Carrier (OC) Performance Monitoring (PM) Threshold

Perform this task to configure the time interval for Optical Carrier (OC) PM threshold.

Procedure

Step 1 **configure**

Step 2 **controller [oc48 | oc192]***R/S/I/P*

Example:

```
RP/0/ (config)# controller oc48 0/0/0/5
```

Enters the oc48 controller configuration mode.

Step 3 **pm [15-min | 24-hour] ocn [report | threshold]** *parameter name* **disable**

Example:

```
RP/0/ (config-oc48)# pm 15-min ocn report cv-l-fe disable
```

Specifies the PM interval for the oc controller and set report value for the layer.

Step 4 **pm [15-min | 24-hour] ocn [report | threshold]** *parameter name value*

Example:

```
RP/0/ (config-oc48)# pm 15-min ocn threshold cv-l-ne 8
```

Specifies the PM interval for the oc controller and set threshold value for the layer. The value of cv-l-ne layer ranges from 0 to 849657600.

Step 5 **commit**

Configure the Time Interval for Synchronous Transport Signal (STS) PM Threshold

Perform this task to configure the time interval for Synchronous Transport Signal (STS) PM threshold.

Procedure

Step 1 **configure**

Step 2 **controller sts48c** *R/S/I/P*

Example:

```
RP/0/ (config)# controller sts48c 0/0/0/4
```

Enters the sts48c controller configuration mode.

Step 3 **pm [15-min | 24-hour] sts [report | threshold]** *{cv-p | es-p | ses-p | uas-p}* **disable**

Example:

```
RP/0/ (config-sts48c)# pm 15-min sts report es-p disable
```

Specifies the PM interval for the sts controller and set report value for the layer.

Step 4 **pm [15-min | 24-hour] sts [report | threshold]** *{cv-p | es-p | ses-p | uas-p} value*

Example:

```
RP/0/ (config-sts48c)# pm 15-min sts threshold ses-p 8
```

Specifies the PM interval for the oc controller and set threshold value for the layer. The value of ses-p ranges from 0 to 86400.

Step 5 **commit**

Configure the Time Interval for Synchronous Transport Module (STM) PM Threshold

Perform this task to configure the time interval for Synchronous Transport Module (STM) PM threshold.

Procedure

Step 1 **configure**

Step 2 **controller {stm1 | stm4 | stm16 | stm64 | stm256}***R/S/I/P*

Example:

```
RP/0/ (config)# controller stm4 0/0/0/5
```

Enters the stm4 controller configuration mode.

Step 3 **pm [15-min | 24-hour] stm [report | threshold]** *parameter name* **disable**

Example:

```
RP/0/ (config-stm4)# pm 15-min stm report eb-l-fe disable
```

Specifies the PM interval for the stm controller and set report value for the layer.

Step 4 **pm [15-min | 24-hour] stm [report | threshold]** *parameter name value*

Example:

```
RP/0/ (config-stm4)# pm 24-hour stm threshold ses-l-fe 8
```

Specifies the PM interval for the stm controller and set threshold value for the layer. The ses-l-fe threshold value ranges from 0 to 86400.

Step 5 **commit**

Configure the Time Interval for Virtual Concatenation (VC) Performance Monitoring (PM) Threshold

Perform this task to configure the time interval for Virtual Concatenation (VC) PM threshold.

Procedure

Step 1 **configure**

Step 2 **controller** *name-of-the-controller R/S/I/P*

Example:

```
RP/0/ (config)# controller vc4-16c 0/2/0/0
```

Enters the vc4-16c controller configuration mode.

Step 3 **pm [15-min | 24-hour] ho-vc [report | threshold]** *parameter name* **disable**

Example:

```
RP/0/ (config-vc4-16c)# pm 15-min ho-vc report bbe-p disable
```

Specifies the PM interval for the vc controller and set report value for the layer.

Step 4 **pm [15-min | 24-hour] ho-vc [report | threshold]** *parameter name* **disable**

Example:

```
RP/0/ (config-vc4-16c)# pm 24-hour ho-vc threshold ses-p 22
```

Specifies the PM interval for the vc controller and set report value for the layer. The value of ses-p threshold ranges from 0 to 86400.

Step 5 **commit**

Configure the Time Interval for ODU Performance Monitoring (PM) Threshold

Perform this task to configure the time interval for ODU PM threshold.

Procedure

Step 1 **configure**

Step 2 **controller odu** *[HO | LO] R/S/I/P*

Example:

```
RP/0/ (config)# controller odu2 0/0/0/2
```

Enters the ODU2 controller configuration mode.

Step 3 **tcm id** *value* **perf-mon** *[Enable | Disable]*

Example:

```
RP/0/ (config-odu2) # tcm id 1 perf-mon enable
```

Enables the performance monitoring.

Step 4 **pm [15-min | 24-hour] [gfp | otn] [report | threshold]** *{rx-bit-err | rx-crc-err | rx-csf-stats | rx-inv-type | rx-lfd-stats}* **enable**

Example:

```
RP/0/ (config-odu2)# pm 15-min gfp report rx-crc-err enable
```

Specifies the PM interval for the odu controller and set report value for the gfp layer.

Step 5 **pm [15-min | 24-hour] [gfp | otn pathmonitor | otn tcm] [report | threshold]** *{rx-bit-err | rx-crc-err | rx-csf-stats | rx-inv-type |rx-lfd-stats}* **enable**

Example:

```
RP/0/ (config-odu2)# pm 15-min otn pathmonitor threshold uas-fe 8
```

Specifies the PM interval for the odu controller and set threshold value for the otn layer. Threshold value for uas-fe ranges from 0 to 900.

Step 6 **commit**

Configure the Time Interval for Ethernet Performance Monitoring (PM) Threshold

Perform this task to configure the time interval for ethernet PM threshold.

Procedure

Step 1 **configure**

Step 2 **controller ethernet** *R/S/I/P*

Example:

```
RP/0/ (config)# controller tenGigECtrlr 0/2/0/0
```

Enters the ethernet controller configuration mode.

Step 3 **pm {15-min | 24-hour} ether {report | threshold}** *value*

Example:

```
RP/0/ (config-tenGigECtrlr)# pm 24-hour ether report in-Mcast enable
RP/0/ (config-tenGigECtrlr)# pm 15-min ether threshold in-Bcast enable
```

Specifies the PM interval for the ethernet controller and set threshold value for the layer.

Step 4 **commit**

Configure the Time Interval for OTU Performance Monitoring (PM) Threshold

Perform this task to configure the time interval for OTU PM threshold.

Procedure

Step 1 **configure**

Step 2 **controller otu** *[HO | LO] R/S/I/P*

Example:

```
RP/0/ (config)# controller otu1 0/0/0/1
```

Enters the OTU1 controller configuration mode. Performance monitoring is enabled by-default for otu controllers.

Step 3 **pm [15-min | 24-hour] [fec | otn] [report | threshold]** *[ec-bits | uc-words]* **disable**

Example:

```
RP/0/ (config-otu1)# pm 15-min fec report ec-bits disable
```

Specifies the PM interval for the otu controller and set report value for the fec layer.

Step 4 **pm [15-min | 24-hour] [fec | otn] [report | threshold]** *threshold type value*

Example:

```
RP/0/ (config-otu1)# pm 15-min otn threshold bber-ne 55
```

Specifies the PM interval for the otu controller and set report value for the otn layer. Threshold value for bber-ne ranges from 0 to 100000.

Step 5 **commit**