



# CHAPTER 10

## Configuring Thresholds

The following topics provide information about configuring thresholds in Cisco Prime Performance Manager:

- [Creating Thresholds in Prime Performance Manager, page 10-1](#)
- [Managing Thresholds, page 10-4](#)

## Creating Thresholds in Prime Performance Manager

Prime Performance Manager allows you to create thresholds to generate alarms when a given report key performance indicator (KPI) rises or falls to a specified point. Threshold-eligible report KPIs are identified by Add Threshold tools in the report KPI column header. [Figure 10-1](#) shows an example.

**Figure 10-1** Add Threshold Tools

Add Threshold tool

Device	Timestamp EST	Segments	Segments/Sec	Segments	Segments/Sec	Errors/Sec
CNR-ems-linx197	Dec-02-11 14:00	265.81K	73.84	225.80K	62.72	0.00
ANALab-metro1-agg1-252	Dec-02-11 14:00	225.55K	62.65	128.37K	35.66	0.00
pran-c-7606c	Dec-02-11 14:00	155.53K	43.20	80.66K	22.40	0.00
pran-c-7609f	Dec-02-11 14:00	137.21K	38.11	71.13K	19.76	0.24
msefo-7613l	Dec-02-11 14:00	131.13K	36.42	70.31K	19.53	0.15
ems7606d	Dec-02-11 14:00	112.15K	31.15	65.49K	18.19	0.19
com-cls-rm02	Dec-02-11 14:00	91.73K	25.48	97.75K	27.15	0.00
mte-o-3400me-b	Dec-02-11 14:00	82.99K	23.05	43.47K	12.07	0.10

To create a threshold, you provide the KPI onset and abate points. Onset is the rising or falling KPI value that, when reached, generates an alarm. Abate is the rising or falling KPI value that, when reached, clears the alarm. Additionally, you can specify the type of alarm you want raised, the days and times you want the threshold to run, and the number of required threshold-crossing occurrences before the alarm is raised or cleared.

As you prepare to create thresholds in Prime Performance Manager, keep the following in mind:

- Prime Performance Manager validates your threshold entries based on the KPI type, either rising or falling. For a rising threshold, for example interface availability up percentage, the higher alarm threshold value must be greater than the lower alarm. For a falling threshold, for example, interface availability up percentage, the higher alarm threshold must be lower than the one entered for the lower alarm.

- To avoid flooding the system with alarms, testing thresholds on a small group of devices before rolling them out to the full network is recommended.
- To avoid alarm flapping, set the abate value at a reasonable distance from the onset value. The distance depends on the expected KPI fluctuation. KPIs with larger fluctuations should have a wider onset-to-abate gap than KPIs with smaller fluctuations.
- Prime Performance Manager displays Add Threshold tools for any threshold-capable KPI, and excludes report data that cannot have thresholds created, such as name and description.

To create a Prime Performance Manager threshold.

- Step 1** Log into Prime Performance Manager GUI as an administrator (Level 5) user.
- Step 2** In the Reports navigation area, display the report containing the KPI for which you want to create a threshold.
- Step 3** After the report is displayed, click the Add Threshold tool in the KPI column header.
- The Add Threshold dialog box appears (Figure 10-2).

**Figure 10-2 Add Threshold Dialog Box**

Add Threshold				
<b>General Information</b>				
Name			Enabled	<input checked="" type="checkbox"/>
KPI Name	Up Percentage		Scope	default
KPI Report	Interface Availability		Description	
KPI Type	Falling			
Interval	15 Minute			
<b>Applicable</b>				
<input checked="" type="checkbox"/> Monday	<input checked="" type="checkbox"/> Tuesday	<input checked="" type="checkbox"/> Wednesday	<input checked="" type="checkbox"/> Thursday	Begin Time 12 : 00 AM
<input checked="" type="checkbox"/> Friday	<input checked="" type="checkbox"/> Saturday	<input checked="" type="checkbox"/> Sunday		End Time 12 : 00 AM
<b>Threshold Values</b>				
Level	Onset	Abate	Onset Occurrences	Abate Occurrences
Critical			1	1
Major			1	1
Minor			1	1
OK Cancel Help				

- Step 4** Enter the threshold parameters:
- Name—Enter a unique name for the threshold.
  - KPI Name—Is automatically generated from the report attribute name. It cannot be edited.
  - KPI Report—Is automatically generated from the report name. It cannot be edited.
  - KPI Type—Indicates the KPI type, either rising or falling. It cannot be edited. For a rising threshold, the critical alarm threshold must be higher than the major alarm threshold, and the major alarm threshold must be higher than the minor alarm. For falling KPI thresholds, the critical alarm entry must be lower than the major alarm, and the major alarm must be lower than the minor alarm.
  - Interval—Choose the time interval. The time interval is the frequency at which Prime Performance Manager will check the data point value identified by the threshold. Threshold intervals include:
    - 5 Minute
    - 15 Minute (default)
    - Hourly

- Daily
- Weekly
- Monthly



**Note** Verify that the report has these intervals enabled. By default, Prime Performance Manager 15-minute, hourly, daily, weekly, and monthly intervals are enabled. To run a threshold every 5 minutes, you must enable 5-minute report interval. For information about configuring reports, see [Chapter 7, “Working With Reports and Dashboards.”](#)

- **Enabled**—The threshold is enabled by default. If you want to create the threshold but do not want to enable it, uncheck this box. You can enable the threshold later on the Threshold Editor window. For example, you might want to create all the thresholds first, review them in the Thresholds Editor window, then enable them at one time. For information about Thresholds Editor, see [Managing Thresholds, page 10-4](#).
- **Scope**—Set the threshold scope. The scope indicates the devices for which you want the threshold reported. The “default” value means report the threshold for any reportable device. You can set the scope for a subset of devices, for example, you can choose Cisco7606s to report the threshold only for Cisco 7606 routers, and so on. The device groups that appear come from the Polling Groups tab. Device groups are based on the device types that are found during device discovery.
- **Description**—Add any notes, as needed, to help describe the threshold. The field accepts any alphanumeric text.
- **Days**—Enter the days for which you want the threshold applied. For example, you might only want to check some thresholds once a week, in which case, you would pick the day of the week when you want the threshold to apply.
- **Hours**—Enter the time period (hours and minutes) for which you want the threshold applied. If you enter the same value, the threshold is always applied.
- **Threshold Values**—Enter the threshold onset, abate, and number of occurrence values for the alarms you want raised: minor, major, critical:
  - **Onset**—Enter the onset threshold value(s) in the alarm box(es) that you want raised. You can set values for any or all alarm types. However, alarm entries must match the KPI type. For a rising KPI, the critical alarm threshold entry must be higher than the major alarm, and the major alarm threshold must be higher than the minor alarm. For a falling KPI type, the critical alarm threshold must be lower than the major alarm, and the major alarm must be lower than the minor alarm.
  - **Abate**—Enter the threshold value in the box of the alarm(s) when you want the alarm cleared. For a rising KPI type, the abate value must always be lower than the onset value. For a falling KPI type, the abate value must be lower than the onset.
  - **Onset Occurrences**—Enter the number of onset threshold crossings that must occur before the alarm is raised.
  - **Abate Occurrences**—Enter the number of abate occurrences that must occur before the alarm is cleared.

**Step 5** Click **OK**.

The TCA is added to the gateway thresholds. To view and edit the thresholds, click **Administrative > Threshold Editor**. For more information, see [Chapter 10, “Managing Thresholds.”](#)

# Managing Thresholds

Prime Performance Manager thresholds can be viewed, edited, disabled, enabled, and deleted from the Administrative > Thresholds Editor tab, shown in [Figure 10-3](#). The editor displays thresholds added from the Prime Performance Manager reports GUI (see [To create a Prime Performance Manager threshold](#), page 10-2), and ones created using an XML editor and added directly to the gateway.

**Figure 10-3** *Edit Thresholds Tab*

Name	Interval	Scope	KPI Name	KPI Report	Days	Begin Time	End Time	Critical Onset (Occurs) Abate (Occurs)	Major Onset (Occurs) Abate (Occurs)	Minor Onset (Occurs) Abate (Occurs)	Action
rising1	15 Minute	default	Down Percentage	Interface Availability	Sun, Mon, Tues, Wed, Thur, Fri, Sat	12:00 AM	12:00 AM	5 (1)	4 (1)	3 (1)	[Enable/Disable] [Delete] [Edit]
testOneCheckin	15 Minute	default	Up Percentage	Interface Availability	Sun, Mon, Tues, Wed, Thur, Fri, Sat	12:00 AM	12:00 AM	1 (1)	1 (1)	1 (1)	[Enable/Disable] [Delete] [Edit]
test	15 Minute	default	Up Percentage	Interface Availability	Sun, Mon, Tues, Wed, Thur, Fri, Sat	12:00 AM	12:00 AM	2 (1)	2 (1)	4 (1)	[Enable/Disable] [Delete] [Edit]
falling1	15 Minute	default	Up Percentage	Interface Availability	Sun, Mon, Tues, Wed, Thur, Fri, Sat	12:00 AM	12:00 AM	1 (1)	5 (1)		[Enable/Disable] [Delete] [Edit]

1	Threshold values	2	Threshold actions: Enable/Disable, Delete, Edit
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## Related Topics

[Editing Thresholds, page 10-4](#)

[Enabling and Disabling Thresholds, page 10-5](#)

[Deleting Thresholds, page 10-5](#)

[Viewing Thresholds Parameters and Reports from the Alarms Window, page 10-6](#)

[Viewing Threshold Events, page 10-7](#)

## Editing Thresholds

To edit a threshold.

- Step 1** Log into Prime Performance Manager GUI as an administrator (Level 5) user.
- Step 2** In the navigation area, click **Administrative**.
- Step 3** In the Administrative window, click **Threshold Editor**.
- Step 4** In the Actions column of the threshold you want to edit, click **Edit This [Rising/Falling] Threshold**.
- Step 5** In the Edit Thresholds dialog box, edit any of the following values. For detailed descriptions, see [Creating Thresholds in Prime Performance Manager, page 10-1](#).
  - Name—The threshold name.
  - KPI Name—Cannot be edited.
  - KPI Report—Cannot be edited.
  - KPI Type—Cannot be edited.

- Interval—The threshold time interval:
- Scope—The threshold scope.
- Enabled—Enables the threshold.
- Description—Threshold text description.
- Days—The days when the threshold is applied.
- Hours—The time period (hours and minutes) when the threshold is applied.
- Threshold Values—The threshold onset, abate, and number of occurrence values for the alarms that are raised.

**Step 6** When finished, click **OK**.  
The edits are displayed in the Thresholds Editor.

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## Enabling and Disabling Thresholds

To enable or disable a threshold:

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- Step 1** Log into Prime Performance Manager GUI as an administrator (Level 5) user.
- Step 2** In the navigation area, click **Administrative**.
- Step 3** In the Administrative window, click **Threshold Editor**.
- Step 4** In the Actions column of the threshold you want to enable or disable, check (enable) or uncheck (disable) the **Enable This Threshold** check box.

Prime Performance Manager will update the threshold information.



**Note** You can also enable and disable thresholds using the [“Editing Thresholds” procedure on page 10-4](#).

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## Deleting Thresholds

To delete a threshold:

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- Step 1** Log into Prime Performance Manager GUI as an administrator (Level 5) user.
- Step 2** In the navigation area, click **Administrative**.
- Step 3** In the Administrative window, click **Threshold Editor**.
- Step 4** In the Actions column of the threshold you want to delete, click the **Delete This Threshold** tool.
- Step 5** On the confirmation, click **OK**.

Prime Performance Manager will remove the threshold from the table.

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## Viewing Thresholds Parameters and Reports from the Alarms Window

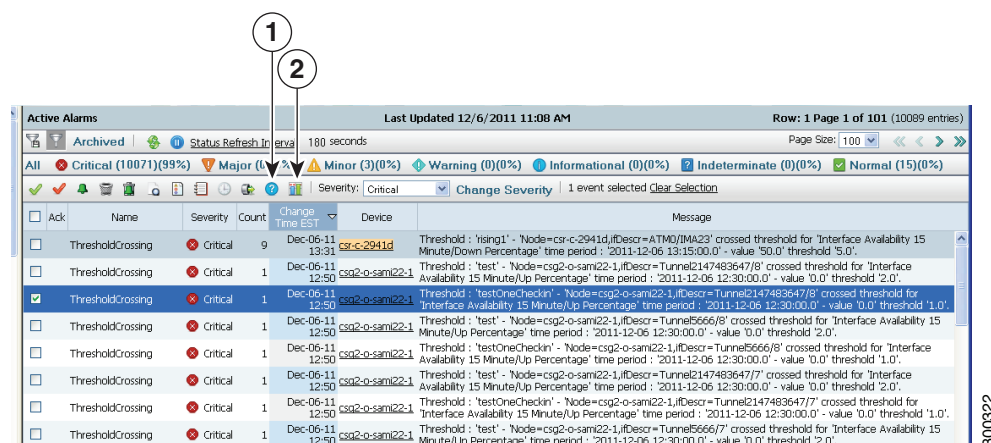
From the Prime Performance Manager Alarms window can perform the following perform the following actions from a threshold crossing alarm:

- View threshold parameters (all users).
- Edit threshold parameters (administrator users only).
- View a report for the threshold crossing (all users).

When threshold crossing alarms occur, you can view the threshold parameters from the Alarms window:

- Step 1** Log into the Prime Performance Manager GUI.
- Step 2** Click **Active Alarms**.
- Step 3** Select a Threshold Crossing alarm.
- Step 4** In the Alarms window toolbar, click **Help for Event**.

**Figure 10-4** Displaying Threshold Parameters from the Alarms Window



**1** Help for Event tool

**2** Report for Event tool

- Step 5** The View Thresholds dialog box or the Edit Threshold dialog box (administrator users) displays the following threshold values. For detailed descriptions, see [Creating Thresholds in Prime Performance Manager, page 10-1](#).

- Name—The threshold name.
- KPI Name—The key performance indicator name.
- KPI Type—The KPI type (not editable).
- KPI Report—The KPI report.
- Interval—The threshold time interval (not editable).
- Scope—The threshold scope.
- Enabled—Indicates whether the threshold is enabled (checked) or disabled (not checked).
- Description—Threshold text description.

- Days—The days when the threshold is applied.
- Hours—The time period (hours and minutes) when the threshold is applied.
- Threshold Values—The threshold onset, abate, and number of occurrence values for the alarms that are raised.

**Step 6** When finished, click **OK**.

**Step 7** To view a report for the threshold crossing, in the Alarms window toolbar, click **Report for Event**.  
The threshold crossing report window appears.

**Step 8** When finished, click **OK**.

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## Viewing Threshold Events

To view threshold events, in the navigation area, click the **Event History**. The types of threshold events that appear include:

- All threshold crossing events, for example:

```
Threshold : 'rising1' - 'Node=csr-c-2941d,ifDescr=ATM0/IMA23' crossed threshold for  
'Interface Availability 15 Minute/Down Percentage' time period : '2011-12-06  
10:30:00.0' - value '50.0' threshold '5.0'.
```

and

```
Threshold : 'rising1' - 'Node=csr-c-2941d,ifDescr=ATM0/IMA23' is below threshold for  
'Interface Availability 15 Minute/Down Percentage' time period : '2011-12-06  
10:15:00.0'
```

- All threshold user creation or edition activities, for example:

```
Gateway: node123- Threshold rising1 - Threshold2811 - 15 Minute was overwritten by  
user123.
```

