

# Adjust WaterMark in RTMT of Call Manager Procedure

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## Introduction

This document describes the procedure to create additional disk space in logging partition of Cisco Call Manager with High and Low WaterMark settings.

## Prerequisites

### Requirements

There are no specific requirements for this document.

### Components Used

The information in this document is based on these software and hardware versions:

- Cisco Call Manager version 10.0.1-10000-24
- Cisco Real-Time Monitoring Tool (RTMT) version 10.0(001)

The information in this document was created from the devices in a specific lab environment. All of the devices used in this document started with a cleared (default) configuration. If your network is live, ensure that you understand the potential impact of any command.

## Background Information



**Tip:** The information in this tech document also applies to adjust the watermark in RTMT for the Cisco IM and Presence Service Server.

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Low WaterMark is a percentage value of the total logging disk space post which when you receive an alert, indicates the disk space is full by the configured percentage of Low WaterMark.

High WaterMark is a percentage value of the total logging disk space post which the older log files are purged.

High WaterMark Exceeded and Low WaterMark Exceeded are events that indicate the percentage of used disk space in the logging partition.

## **LogPartitionHighWaterMarkExceeded**

This event indicates that the percentage of used disk space in the log partition has exceeded the configured High Watermark.

## **LogPartitionLowWaterMarkExceeded**

This event indicates that the percentage of used disk space in the log partition has exceeded the configured Low WaterMark.

The threshold percentage value of both events could be configured in RTMT based on the requirement. By default, High WaterMark is set to 95% of the total logging partition and Low WaterMark is set to 90% of the total logging partition.

At times, a need arises for certain activities in the call manager to take place when there is insufficient space in the Logging Partition and additional space needs to be created. During such events, additional space could be created in the Logging Partition by adjusting the threshold values of High WaterMark and LowWaterMark, respectively.

When the threshold value of High WaterMark is lowered, it purges older log files, thereby creating additional disk space in the logging partition.

## **Procedure**

### **Adjust Low WaterMark**

Launch RTMT, and log in to the desired **cluster**. On the left pane, navigate to **System > Tool > Alert Central**.

On the right pane, under **System Right**, click **LogPartitionLowWaterMarkExceeded > Set Alert/Properties**.

System

System Summary

- System Summary

Server

- CPU and Memory
- Process
- Disk Usage
- Critical Services

Performance

- Performance
- Performance Log Viewer

Tools

- Alert Central
- Trace & Log Central
- Job Status
- SysLog Viewer
- VLT
- AuditLog Viewer

Alert Central

System

Voice/Video

Custom

Alert Name	Enabled
AuthenticationFailed	Enabled
CiscoDRFFailure	Enabled
CoreDumpFileFound	Enabled
CpuPegging	Enabled
CriticalServiceDown	Enabled
DBChangeNotifyFailure	Enabled
DBReplicationFailure	Enabled
DBReplicationTableOutOfSync	Enabled
HardwareFailure	Enabled
LogFileSearchStringFound	Enabled
LogPartitionHighWaterMarkExceeded	Enabled
LogPartitionLowWaterMarkExceeded	Enabled
LowActivePartitionAvailable	<div> Clear Alert </div> Enabled
LowAvailableVirtualMemory	<div> Clear All Alerts </div> Enabled
LowInactivePartitionAvailable	<div> Disable Alert </div> Enabled
LowSwapPartitionAvailable	<div> Remove Alert </div> Enabled
ServerDown	<div> Alert Detail </div> Enabled
SparePartitionHighWaterMa	<div> Set Alert/Properties... </div> Enabled
SparePartitionLowWaterMar	<div> Reset Alert to Default Config </div> Enabled
SyslogSeverityMatchFound	Enabled
SyslogStringMatchFound	Enabled
SystemVersionMismatched	Enabled
TotalProcessesAndThreadsExceededThreshold	Enabled

Click Next.

Alert Properties: General

Name: LogPartitionLowWaterMarkExceeded

☒ Enable Alert

Severity: Critical

Enable/Disable this alert on following server(s):

Server	Enable
10.10.1.99	<input checked="" type="checkbox"/>

Description:

This alert occurs when the LogPartitionLowWaterMarkExceeded event is generated. This indicates that the percentage of used disk space in the log partition has exceeded the configured low water mark.

Recommended Action:

Check if the configured low water mark for used disk space in the log partition is too low. And also please examine each application trace log files and clean up those that are too old and too big before the used disk space exceeds the high water mark.

< Back

Next >

Cancel

By default, Low WaterMark is set to 90%.

Alert Properties: Threshold

**Threshold:**

Trigger alert when following condition is met:

**Log Partition Used Disk Space Exceeds Low Water Mark. (90 %)**

10 20 30 40 50 60 70 80 90


< Back Next > Cancel

Set the **Low WaterMark** to a lower value, based on your requirement, and then click **Next**.

Alert Properties: Threshold

**Threshold:**

Trigger alert when following condition is met:  
**Log Partition Used Disk Space Exceeds Low Water Mark. (10 %)**



10 20 30 40 50 60 70 80 90

< Back    Next >    Cancel

Click Next.

Alert Properties: Frequency & Schedule

Frequency

When value exceed/below configured threshold:

☒ Trigger alert on every poll

☐ Trigger up to  (3) alerts within  (30) minutes

Schedule

Alert will be triggered in following period:

☒ Trigger Alert when it occurs. (Non-Stop Monitoring)

☐ Trigger Alert everyday (Scheduled Monitoring) between:

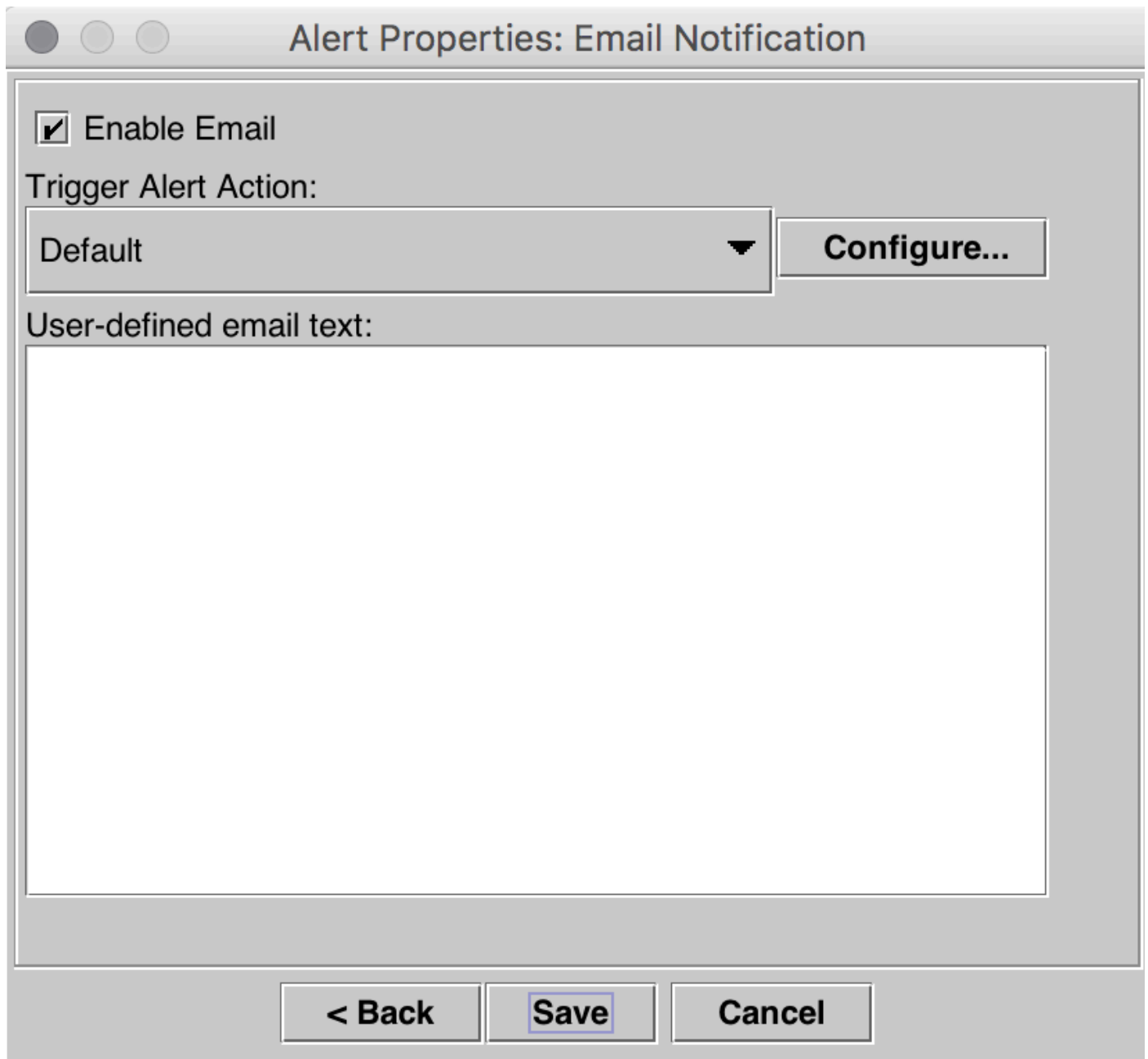
Start Time:  and End Time:

< Back

Next >

Cancel

Click **Save**.



The image shows a dialog box titled "Alert Properties: Email Notification". It has a standard macOS-style title bar with three window control buttons (red, yellow, green) on the left. The main content area contains a checked checkbox labeled "Enable Email". Below this is the label "Trigger Alert Action:" followed by a dropdown menu currently showing "Default" and a small downward arrow. To the right of the dropdown is a button labeled "Configure...". Below these elements is a large, empty rectangular text area labeled "User-defined email text:". At the bottom of the dialog, there are three buttons: "< Back", "Save" (which is highlighted with a blue border), and "Cancel".

## Adjust High WaterMark

When on the right pane, under **System Right**, click **LogPartitionHighWaterMarkExceeded > Set Alert/Properties**.



System

System Summary

- System Summary

Server

- CPU and Memory
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- Disk Usage
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Alert Central

System
Voice/Video
Custom

Alert Name	Enabled
AuthenticationFailed	Enabled
CiscoDRFFailure	Enabled
CoreDumpFileFound	Enabled
CpuPegging	Enabled
CriticalServiceDown	Enabled
DBChangeNotifyFailure	Enabled
DBReplicationFailure	Enabled
DBReplicationTableOutOfSync	Enabled
HardwareFailure	Enabled
LogFileSearchStringFound	Enabled
LogPartitionHighWaterMarkExceeded	Enabled
LogPartitionLowWaterMarkExceeded	Enabled
LowActivePartitionAvailableDiskSpace	Enabled
LowAvailableVirtualMemory	Enabled
LowInactivePartitionAvailableDiskSpace	Enabled
LowSwapPartitionAvailableDiskSpace	Enabled
ServerDown	Enabled
SparePartitionHighWaterMarkExceeded	Enabled
SparePartitionLowWaterMarkExceeded	Enabled
SyslogSeverityMatchFound	Enabled
SyslogStringMatchFound	Enabled
SystemVersionMismatched	Enabled
TotalProcessesAndThreadsExceededThreshold	Enabled

Clear Alert
Clear All Alerts
Disable Alert
Remove Alert
Alert Detail
Set Alert/Properties...
Reset Alert to Default Config

Click Next.

Alert Properties: General

Name: LogPartitionLowWaterMarkExceeded

☒ Enable Alert

Severity: Critical

Enable/Disable this alert on following server(s):

Server	Enable
10.10.1.99	<input checked="" type="checkbox"/>

Description:

This alert occurs when the LogPartitionLowWaterMarkExceeded event is generated. This indicates that the percentage of used disk space in the log partition has exceeded the configured low water mark.

Recommended Action:

Check if the configured low water mark for used disk space in the log partition is too low. And also please examine each application trace log files and clean up those that are too old and too big before the used disk space exceeds the high water mark.

< Back

Next >

Cancel

By default, High WaterMark is set to 95%.

Alert Properties: Threshold

**Threshold:**

Trigger alert when following condition is met:  
**Log Partition Used Disk Space Exceeds High Water Mark. (95 %)**

15 25 35 45 55 65 75 85 95


< Back Next > Cancel

Set the **High WaterMark** to a lower value, based on your requirement, and then click **Next**.

Alert Properties: Threshold

**Threshold:**

Trigger alert when following condition is met:  
**Log Partition Used Disk Space Exceeds High Water Mark. (15 %)**



15 25 35 45 55 65 75 85 95

< Back   Next >   Cancel

Click **Next**.

Alert Properties: Frequency & Schedule

Frequency

When value exceed/below configured threshold:

☒ Trigger alert on every poll

☐ Trigger up to  (3) alerts within  (30) minutes

Schedule

Alert will be triggered in following period:

☒ Trigger Alert when it occurs. (Non-Stop Monitoring)

☐ Trigger Alert everyday (Scheduled Monitoring) between:

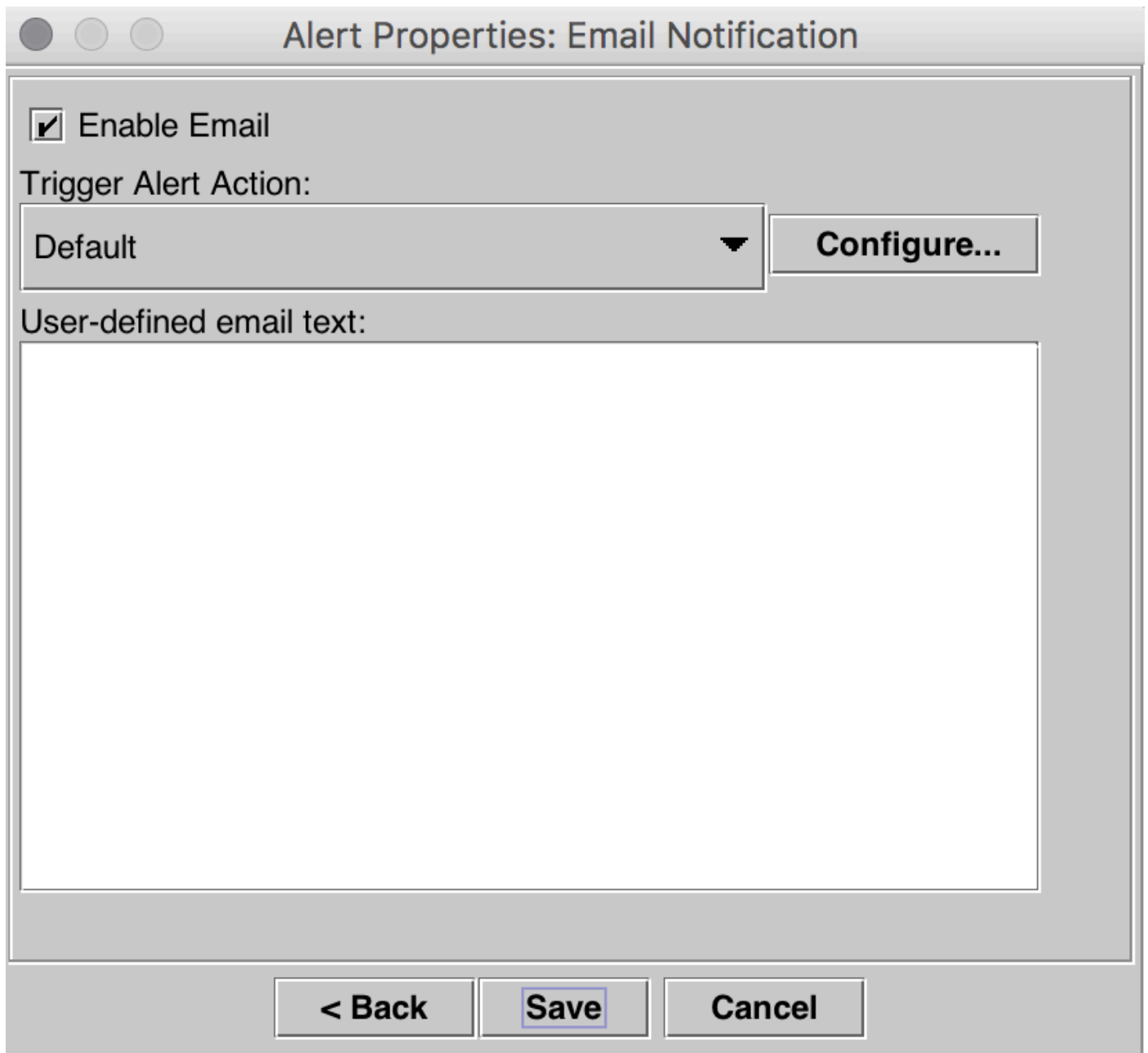
Start Time:  and End Time:

< Back

Next >

Cancel

Click **Save**.



The image shows a dialog box titled "Alert Properties: Email Notification". It has a standard macOS-style title bar with three buttons (red, yellow, green). The dialog contains a checkbox labeled "Enable Email" which is checked. Below this is a section labeled "Trigger Alert Action:" containing a dropdown menu with "Default" selected and a "Configure..." button to its right. Below the dropdown is a large text area labeled "User-defined email text:". At the bottom of the dialog are three buttons: "< Back", "Save" (which is highlighted with a blue border), and "Cancel".

## Verify

The additional disk space is created in the logging partition. After you adjust the High and Low WaterMarks, it can be verified through the **Show Status** command on the CLI on the Call Manager.

Before the WaterMark was adjusted.

```
<#root>
```

```
admin:show status
```

```
Host Name       : publisher
Date            : Thu Jul 21, 2016 16:07:16
Time Zone       : India Standard Time (Asia/Kolkata)
Locale          : en_US.UTF-8
Product Ver     : 10.0.1.10000-24
Unified OS Version : 10.0.0.0-2
```

Uptime:  
16:07:17 up 72 days, 21:01, 1 user, load average: 0.21, 0.16, 0.11

CPU Idle: 93.06% System: 02.40% User: 04.29%  
IOWAIT: 00.25% IRQ: 00.00% Soft: 00.00%

Memory Total: 8062096K  
Free: 133808K  
Used: 7928288K  
Cached: 3312040K  
Shared: 0K  
Buffers: 342228K

	Total	Free	Used
Disk/active	22187548K	9256672K	12705464K (58%)
Disk/inactive	22187548K	20884420K	176064K (1%)
Disk/logging	77201424K	47443520K	25836240K (36%)

After the WaterMark was adjusted.

<#root>

admin:show status

Host Name : publisher  
Date : Thu Jul 21, 2016 16:35:48  
Time Zone : India Standard Time (Asia/Kolkata)  
Locale : en\_US.UTF-8  
Product Ver : 10.0.1.10000-24  
Unified OS Version : 10.0.0.0-2

Uptime:  
16:35:49 up 72 days, 21:29, 1 user, load average: 0.09, 0.12, 0.16

CPU Idle: 98.61% System: 00.88% User: 00.51%  
IOWAIT: 00.00% IRQ: 00.00% Soft: 00.00%

Memory Total: 8062096K  
Free: 1957460K  
Used: 6104636K  
Cached: 1477332K  
Shared: 0K  
Buffers: 360100K

	Total	Free	Used
Disk/active	22187548K	9256660K	12705476K (58%)
Disk/inactive	22187548K	20884420K	176064K (1%)
Disk/logging	77201424K	54805132K	18474628K (26%)

As seen in the **Show Status** output, the percentage value of the Used Disk/Logging partition has changed from 36% to 26%.

## Troubleshoot

There is currently no specific information available to troubleshoot this configuration.