CISCO ™

Managing Server Resources in Cisco Vision Director

Before an event, validate the system readiness for CPU, memory (RAM), and disk utilization to be sure that you have enough resources.

Note: Measurement units for storage in Cisco Vision Director are based on a KB equivalent of 1024 bytes [known as a kibibyte (KiB)], not 1000 bytes.

Therefore, a notation of MB actually means 1,048,576 (1024 x 1024) bytes in Cisco Vision Director.

This section includes the following topics:

Information About Monitoring System Utilization

This section includes the following topics:

Server Utilization Information

The Cisco Vision Director Server monitoring service (named Director Service OS) polls system status every 600 seconds for the CPU, memory (RAM), and storage utilization.

Utilization status is reported based on the server alert thresholds configured in the **System Status** (Figure 1 on page 260).

The gauges in the **Server Utilization** panel in the **Overview** interface provide an at-a-glance view of the percentage of CPU, memory, and disk space usage for the Cisco Vision Director Server (Figure 1 on page 260).

Figure 1   Cisco Vision Director Server Utilization and DMP Summary
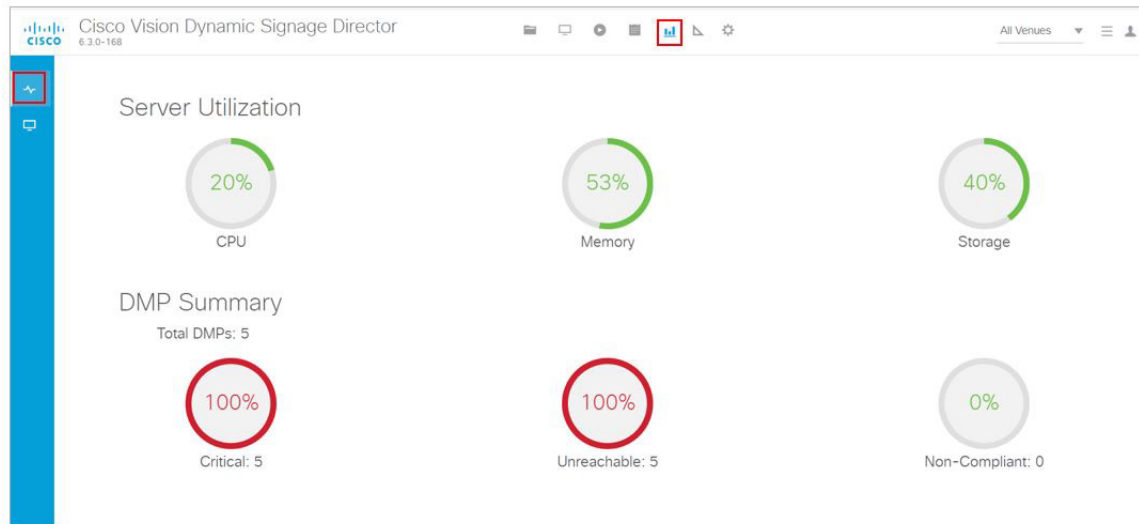
IMPORTANT: The **System Status** shows a critical alert when the CPU or Disk utilization goes above 90%, or if the Memory utilization goes above 95%. To find these thresholds, click **Configuration > System Configuration > Management Dashboard > Server Alert Thresholds**.

TIP: You can also find the current CPU, memory, and disk utilization percentages in the daily Vision Health Report, if configured.

lists the server utilization information for each server profile.

Table 1   Server Utilization per Deployment Profile

Profile	Memory	Clock Speed (GHz) per Core	vCPU
Mini	8 GB (8192 MB)	19. GHz	6
Small	8 GB (8192 MB)	2.53 GHz	6
Standard	32 GB (32,768 MB)	2.53 GHz	24
Large	60 GB (61,440 MB)	3.6 GHz	32

Server Alert Thresholds

Utilization status and alerts are reported based on the server alert thresholds configured in the **System Configuration**.

Two alert thresholds are defined for CPU, free memory, and disk space:

- **Warning**—Warning thresholds define the yellow area of the server utilization gauges.

- **Error**—Error thresholds define the red area of the server utilization gauges and correspond to critical alerts.

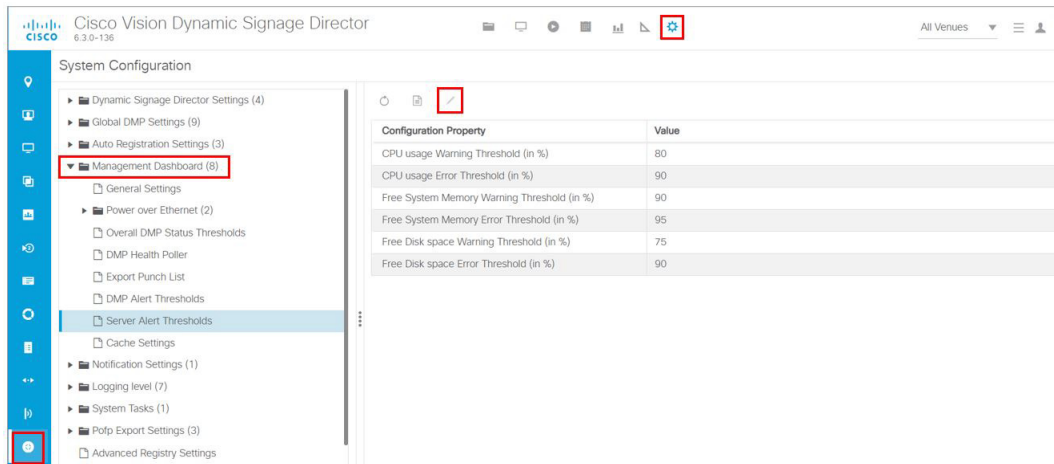**To check the default values of server alert thresholds:**

1. Click **Configuration > System Configuration > Management Dashboard > Server Alert Thresholds.**

2. Select the **Value** from the **Configuration Property** panel.

3. Click **Edit** to make changes. The **Edit – Configuration Setting** dialog box appears.

4. Type in a new **Value** and click **Save**.

5. Click **Refresh**.

shows the default threshold values for the different system areas.

**Figure 2   Default Values for Server Alert Thresholds**

DMP Alert Thresholds

Utilization status and alerts are reported based on the DMP alert thresholds configured in the **System Configuration**.

To check the default values of DMP alert thresholds:

1. Click **Configuration > System Configuration > Management Dashboard > DMP Alert Thresholds.**

2. Select the **Value** from the **Configuration Property** panel.

3. Click **Edit** to make changes. The **Edit – Configuration Setting** Dialog box appears.

4. Type in a new **Value** and click **Save**.

5. Click **Refresh**.

shows the default threshold values for the different system areas.

Figure 3   DMP Alert Thresholds
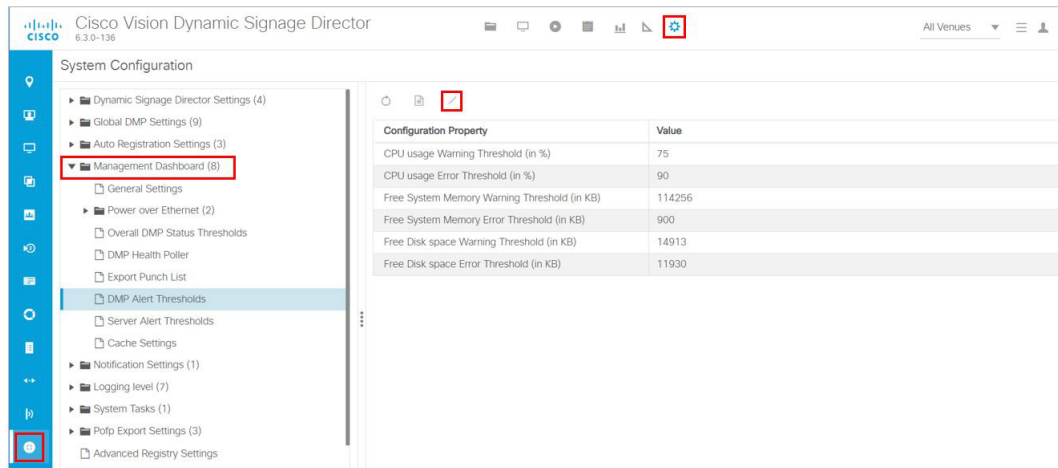
CPU Utilization

If CPU utilization is above the 90% alarm threshold for a short period of time, it is probably acceptable. However, if CPU utilization remains elevated, there is a problem with a runaway process or task that is consuming all of the available CPU, which can result in reduced responsiveness in the system.

Look at the system to determine how to resolve the problem. The **Management Dashboard** caches the last executed report. Always make a new request / refresh to get the most up-to-date information. Run a System State Report to see specific information about the system. Click **More > System State Report.** For details on how to use and retrieve the data, see the System State Reports module of the *Cisco Vision Administration Guide, Dynamic Signage Director*.

To edit any of the cache values:

1. Click **Configuration > System Configuration > Management Dashboard > Cache Settings** (Figure 4 on page 263).

2. Select a Configuration Property from the panel.

3. Click **Edit**. The **Edit – Configuration Setting** Dialog box appears.

4. Type in a new **Value** and click **Save**.

5. Click **Refresh**.

Note: Perform initial troubleshooting (if applicable), of both the network and VM cluster infrastructure. If necessary, open a case with Cisco Technical Support and provide a thread dump taken from the System State Report tool.

Figure 4   Management Dashboard Server Utilization and Monitored Services
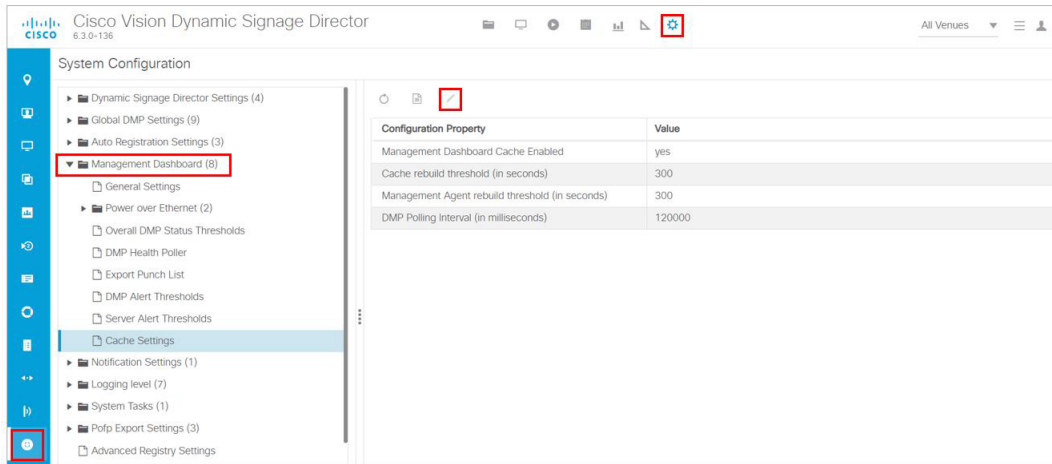
Memory Utilization

If memory utilization is above the 90% alarm threshold for over a long period of time, there could be something running in the system which is using more memory than it should.

Table 2 on page 263 shows the total memory on a Cisco Vision Director server.

IMPORTANT: If memory utilization is above 90%, open a case with Cisco Technical Support.

Table 2   Memory Utilization and Threshold Values3.6 GHz

Configuration	RAM	Clock Speed	vCPU Count
Mini	8 GB	1.9 GHz	6
Small	8 GB	2.5 GHz	6
Standard	32 GB	2.5 GHz	24
Large	60 GB	3.6 GHz	32

Disk Utilization

If disk utilization is above the threshold, the disk space is filling up. The disk might fill up from having a lot of backup files, proof-of-play files, or log files, in addition to your content.

Table 3 on page 264 shows the total hard disk size and recommended minimum free space.

Table 3   Hard Disk Values

Disk Size	Size
Total Disk Size	320 GB
Minimum Free Space	15 GB

IMPORTANT: The Daily Backup task might consume the hard disk space limit, which can cause the system to fail in unexpected ways.

How to Manage Disk Utilization

This section includes the following topics:

- Modifying File Retention Periods on the Cisco Vision Director Server, page 264

- Deleting System Files, page 264

Modifying File Retention Periods on the Cisco Vision Director Server

User Role: Installer (Administrator)

Cisco Vision Director allows you to define retention periods for backup and log files in the Text Utility Interface (TUI).

The default settings are:

- Backup files–One file. The backup retention policy can be modified to 2, 5, 7, or 10 files.

- Log files–15 days. The log retention policy can be modified to 5 or 10 days.

CAUTION: Track your overall disk utilization and the size of your backup content so the number of files that you want to keep can be supported by your system resources.

For more information about using the TUI, see the Cisco Vision Director Text Utility Interface module of the Cisco Vision Director Server Administration Guide.

To modify the file retention periods:

Note: The retention policy must be changed on both the primary and secondary servers.

1. Log into the TUI.

2. Go to **Cisco Vision Server Administration > Retention Policy**.

3. Select the **Backup/restore Files** menu or the **Log Files** menu and type the letter for the retention period.

Deleting System Files

User Role: Installer (Administrator)

You can use the TUI to remove the following types of system files:

- Log files

- System state reports

- ISO upgrade files

- Backup files

IMPORTANT: The TUI clean file options remove all instances of the selected file type.

For more information about using the TUI, see the Cisco Vision Dynamic Signage Director Server Text Utility Interface module of the Cisco Vision Administration Guide: Dynamic Signage Director.

To delete system files:

1. Log into the TUI.

2. Go to **Troubleshooting > Disk Monitoring > Delete Files.**

3. From the Delete Files menu, type the letter option for the file type that you want to delete.

4. At the prompt, confirm the removal.

Running Database Maintenance

User Role: Installer (Administrator)

One way to see if you might need to run database maintenance is to look at the backup log (/var/log/svd-config/backup-**YYYMMddHHMMSSz**.log). If you see that the table updates are other than "OK" or not up-to-date, then run database maintenance.

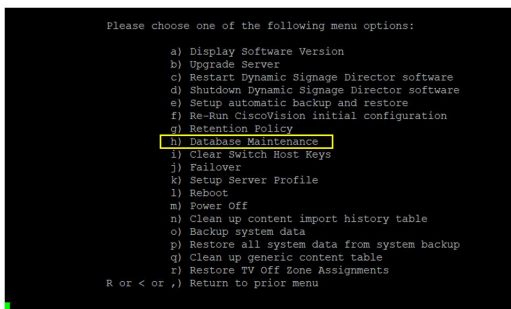**Note:** Slow performance is another possible sign that database maintenance is needed.

For more information about using the TUI, see the" Cisco Vision Director Text Utility Interface" module of the Cisco Vision Administration Guide: Dynamic Signage Director.

IMPORTANT: You must be sure to restart Cisco Vision Director software after maintenance is complete. The best practice is to shut down the Cisco Vision Director software **before** running database maintenance and then restart it after maintenance is complete. However, even if you did not shut down prior to running maintenance, you still must restart the Cisco Vision Director software.

To run database maintenance:

1. Log into the TUI.

2. (Recommended) Shut down the Cisco Vision Director software. From the Main Menu, go to: **Cisco Vision Server Administration > Database Maintenance** (Figure 5 on page 265).

Figure 5   TUI Database Maintenance Option


```
          Please choose one of the following menu options:

               a) Display Software Version
               b) Upgrade Server
               c) Restart Dynamic Signage Director software
               d) Shutdown Dynamic Signage Director software
               e) Setup automatic backup and restore
               f) Re-Run CiscoVision initial configuration
               g) Retention Policy
               h) Database Maintenance
               i) Clear Switch Host Keys
               j) Failover
               k) Setup Server Profile
               l) Reboot
               m) Power Off
               n) Clean up content import history table
               o) Backup system data
               p) Restore all system data from system backup
               q) Clean up generic content table
               r) Restore TV Off Zone Assignments
  R or < or ,) Return to prior menu
```

3. At the confirmation prompt, press Y to start the process (Figure 6 on page 266).

Running Database Maintenance

Figure 6   Database Maintenance Confirmation Prompt

4. As the maintenance runs, the status of each table updates.

5. When database maintenance is complete, restart the Cisco Vision Director software.

6. From the TUI Main Menu, go to: **Cisco Vision Server Administration > Restart Dynamic Signage Director Software.**