



Monitoring and Reporting

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About Monitoring and Reporting

Cisco UCS Director Express for Big Data can monitor the virtual infrastructure and system resources, and provide a wide array of reports.

Cisco UCS Director Express for Big Data monitors a wide range of cluster events:

- High CPU usage
- Memory usage
- Disk capacity
- Disk IO utilization

Cisco UCS Director Express for Big Data displays statistics from the respective pages for the selected Big Data Account and Hosts. You can also generate reports and these reports help you to understand system details and provide an insight into how the system is performing.

Cisco UCS Director Express for Big Data Dashboard

The Cisco UCS Director Express for Big Data provides complete system visibility through real-time and historical monitoring. See [Reports](#)



Note

The **Dashboard** tab shows up in the menu bar only after a summary report is added to the dashboard.

The customizable dashboard displays key processing, memory, storage, and network utilization metrics.

- Per node statistics: CPU, memory, and disk
- Health of Hadoop cluster components: HDFS, MapReduce jobs
- Graphs based on historical data

You can:



Note Drag and Drop summary report icons from the **Customize** drawer to the **Summary** and **Hosts** tabs where you can expand and close reports.

- 1 Add summary reports to the dashboard from the Big Data Account **Summary** tab and customize these summary reports to display the statistics for a specific duration in the dashboard, or export these reports from the dashboard.
- 2 Add summary reports to the dashboard from the Big Data Account **Hosts** tab and customize these summary reports to display the statistics for a specific duration in the dashboard, or export these reports from the dashboard.



Note Not all summary reports apply to MapR.

- 3 Add UCSM Accounts summary reports to the dashboard from **Physical > Compute**.
- 4 Add Data Center summary reports to the dashboard from **Physical > Compute**.

Viewing Deployed Cluster Report

You can generate the **Big Data Account Summary Report** with or without credentials to view the details of the deployed clusters.

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- Step 1** On the menu bar, choose **Solutions > Big Data > Containers**.
 - Step 2** Click the **Deployed Clusters** tab.
 - Step 3** Choose the deployed cluster, and click **View Report**.
 - Step 4** In the **View Report** dialog box, choose the report type that you want to generate.
 - Step 5** Click **Submit**.
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Reports

UCSM Account Summary Reports

- Overview
- UCS Chassis Inventory
- UCS Server Inventory
- UCS Fabric Interconnect Inventory
- UCS Servers Associated vs Unassociated
- Rack Server Discovery Policy
- Power Policy
- Global Power Allocation Policy

Big Data Account Summary Reports

- Overview

Cluster Specific Metrics Supported per Hadoop Distribution

Metrics	Cloudera Distribution	Hortonworks Distribution	MapR Distribution	Remarks
Average CPU IO Wait (%)	Yes	Yes	Yes	
Average CPU idle (%)	Yes	Yes	Yes	
Average CPU Nice (%)	Yes	Yes	Yes	
Average CPU System (%)	Yes	Yes	Yes	
Average CPU User	Yes	Yes	Yes	
CPU Percentage Across Hosts	Yes			Metrics for Host CPU usage across hosts
Cluster Disk IO	Yes			Metrics for Total Disk Write/Read Bytes Across Disks

Metrics	Cloudera Distribution	Hortonworks Distribution	MapR Distribution	Remarks
Cluster Network IO	Yes			Metrics for Total Bytes Transmitted/Received Across Network Interfaces
HDFS IO	Yes			Metrics for Total Bytes written/Read Across Data Nodes
Total Space Utilization		Yes		
CPU		Yes		
Load		Yes		
Memory		Yes		
Network		Yes		
Process		Yes		

Host Specific Metrics Supported per Hadoop Distribution

Metrics	Cloudera Distribution	Hortonworks Distribution	MapR Distribution
Average CPU IO Wait (%)	Yes	Yes	Yes
Average CPU idle (%)	Yes	Yes	Yes
Average CPU Nice (%)	Yes	Yes	Yes
Average CPU System (%)	Yes	Yes	Yes
Average CPU User	Yes	Yes	Yes
Load Average(%)	Yes		
Host CPU Usage	Yes		
Host Memory Usage	Yes		

Metrics	Cloudera Distribution	Hortonworks Distribution	MapR Distribution
Host Network Throughput	Yes		
Disk Latency	Yes		
Aggregate Disk Throughput	Yes		
Role-CPU Usage	Yes		
HOST CPU		Yes	
DISK Usage		Yes	
LOAD Usage		Yes	
Memory-CPU Usage		Yes	
Network Usage		Yes	
Process Usage		Yes	

