IT Analytics Inventory Reports

Release 11.8

COHESITY

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Chapter 1

Storage Array Overview

This chapter includes the following topics:

- Storage Array overview
- Interacting with reports on the Overview page
- Working with the Action menu in the Inventory view
- Total Raw Capacity
- Total Usable Capacity
- Total LUN Capacity
- Array Capacity Over Time
- Port Throughput IOs per second
- Port Throughput Data Transferred
- Array Utilization Summary

Storage Array overview

The Inventory provides an accurate picture of objects discovered by IT Analytics within your enterprise. This interface displays asset counts from collected data, and provides access to multiple targeted reports that you can select to display. This summary page shows overview information for all collected **Storage Arrays** in your datacenter visualized through the following reports. The top three donut charts represent the normalized aggregate of capacities for all arrays in the group.

Note: The user credentials are validated to display the reports. If reports are not displayed to the users, verify the user's credentials.

See “Total Raw Capacity” on page 7.

See “Total Usable Capacity” on page 8.

See “Total LUN Capacity” on page 8.

See “Array Capacity Over Time” on page 8.

See “Port Throughput IOs per second” on page 8.

See “Port Throughput Data Transferred” on page 8.

See “Array Utilization Summary” on page 8.

Interacting with reports on the Overview page

Many interactive features are available depending on the report type:

- Time series - zoom and reset zoom: On a series of time-based data points, using the mouse, drag select a section of the chart to zoom. Click the **Reset zoom** button to return to your original settings.
- Time series - zoom and pan: Once you’ve zoomed on a series of time-based data points, you can scroll left and right through the chart. Hold down the shift key when panning.
- Expand to full screen: Charts displayed as components of a dashboard may be hard to read. Click the **Expand** icon to pop the chart out of the dashboard and have it displayed in the full browser window.
- Configure Portlets: Choose custom attributes for filters and switch positions for portlets on dashboard style displays.
- Show/hide data series: The legend displays the data series in a chart with a symbol and the name of the series. Click a value in the legend to add or remove the data point from the chart. The chart automatically updates based on the addition or removal.
- Column sorting: Click any column header on a tabular chart to sort the table by that column.
- Hyperlink drill downs: Drill down to a more granular level by clinking links in the report. This feature is available for all chart types.
- Time Period Quick Filters: Change the time period represented in the chart without formally editing the scope. Choose from 5 days, 2 days, 1 day, 12 hours, 4 hours or 1 hour.
- Expanding sectors: Click parts of a pie and donut charts to have sections emphasized without changing the data.

Table 1-1 Interacting with reports on the Overview page

Report Type	Interactive Feature
Tabular	■ Hyperlink drill downs ■ Column sorting ■ Expand to full screen
Bar (all types)	■ Time series - zoom and reset zoom ■ Time series - zoom and pan ■ Expand to full screen ■ Show/hide data series ■ Hyperlink drill downs
Line	■ Time series - zoom and reset zoom ■ Time series - zoom and pan ■ Expand to full screen ■ Show/hide data series ■ Hyperlink drill downs
Area	■ Time series - zoom and reset zoom ■ Time series - zoom and pan ■ Expand to full screen ■ Show/hide data series ■ Hyperlink drill downs
Pie/Donut	■ Expand to full screen ■ Show/hide data series ■ Hyperlink drill downs ■ Expand sectors
Gauge	■ Expand to full screen

Working with the Action menu in the Inventory view

Many functions available to standard reports and templates are available to the reports in the **Inventory Navigator**.

- Inventory Reports: Edit Scope - Your selection in the Hierarchy Panel sets the objects which are part of the scope. For some objects and object groups, you can edit additional parameters. **Edit Scope** is only shown when there are parameters available to change. A default time period is also set for those reports

that require one. Use the Hierarchy Panel to revise the scope when the menu item is not displayed.

- Inventory Reports: Save As - When you save a report, you are saving a copy of the report into the **Reports** tab, not the report output. You can save a version in your Reports. Scope selections are saved with the report.

Note: Some reports provided by the Inventory are specialized and not available from the **Reports** tab. Due to the nature of these reports, they function like Detail reports and cannot be customized or saved, as they are specific to the report from which they were derived. **Save As** is not displayed for these reports.

- Inventory Reports: Email - After you generate a report and it renders, you can choose to instantly email the report. Emailed reports are not derived from the cache. These events are run in real time, so current data is always used. You can email a report to yourself, other individuals, or a distribution list. Scheduling reports to be regularly emailed is not available from the **Inventory** tab.
- Inventory Reports: Export - You can export reports to make them available to external applications, such as Microsoft Excel or if you'd like to generate a hardcopy, you can export them to a file, such as a PDF. Exported reports are not derived from the cache. These events are run in real-time, so current data is always used.
- Inventory Reports: Filter - In addition to the filtering that happens with your hierarchy selection, table-formatted reports can be further filtered on Rows and/or Columns, using advanced filtering. You can define the criteria for the data rows displayed in a report. Drop-down lists enable selections from the available columns. Next, you supply the operator--such as equals or does not contain--and a value for that column. Up to 16 selections can be joined to form the filter.

Total Raw Capacity

- Hyper link drill downs: Drill down to a more granular level by clinking links in the report. This feature is available for all chart types.
- Expanding sectors: Click parts of a pie and donut charts to have sections emphasized without changing the data.
- Show/hide data series: The legend displays the data series in a chart with a symbol and the name of the series. Click a value in the legend to add or remove the data point from the chart. The chart automatically updates based on the addition or removal.

Total Usable Capacity

Displays the total raw capacity of the array that has not been carved into a RAID group.

Total LUN Capacity

Use this report to view total raw capacity of the LUNs in the array that have been mapped to a host. These LUNs are typically configured as volumes on the host and dedicated to an application. Unallocated storage is storage that is not part of an Array Group.

Array Capacity Over Time

Use this chart to view the total capacity for the selected array over a specified time period. Click the Show Table icon to display the data in a tabular format.

Port Throughput IOs per second

For every record in the reporting interval, this is the sum of every data collection interval's IOs divided by the reporting interval in seconds by port.

Port Throughput Data Transferred

For every record in the reporting interval, this is the sum of every data collection interval's MB transferred by port.

Array Utilization Summary

This report can be used to identify the percentage of raw storage that has been allocated to RAID groups and, more importantly, the percentage of raw capacity that is available.

Chapter 2

Backup primary server overview

This chapter includes the following topics:

- Backup Primary Server overview
- Backup Status SLA
- Job Type Count
- Backup Executive Summary

Backup Primary Server overview

The **Inventory** provides an accurate picture of objects discovered by IT Analytics within your enterprise. This interface displays asset counts from collected data, and provides access to multiple targeted reports that you can select to display.

This Overview page shows overview information for all collected **Backup Primary Servers** in your data center. Backup Primary Server's information is visualized through the following reports:

Note: The user credentials are validated to display the reports. If reports are not displayed to the users, verify the user's credentials.

See "Backup Status SLA" on page 10.

See "Job Type Count" on page 10.

See "Backup Executive Summary" on page 10.

Backup Status SLA

Use the Backup Status SLA report to determine backup success performance and to identify backup failures. A typical backup success percentage might be 85%, as indicated by the Successful Backups Goal line shown in the bar chart. This time-based series chart that visualizes the capacity, average usage and maximum usage size for datastores. You can roll-over the data points to display specific sizes and the related date, plus toggle values using the legend.

On a series of time-based data points, using the mouse, you can drag select a section of the chart to zoom. Click the **Reset zoom** button to return to your original settings. Once you've zoomed on a series of time-based data points, you can scroll left and right through the chart. Click the Show Table icons to display the data in a tabular format.

Job Type Count

The Job Type Count report displays a donut chart that aggregates job types. Use this chart for a high-level view of backup jobs, with access to the relevant details. This high-level summary provides drill down access to the Job Summary report, where you'll find specific status messages and scheduling information.

The legend for the donut chart has the following format: Color Backup Product: Job Type.

- Click a legend item to remove that sector from the rendered chart. The legend items can be toggled to display/remove a sector.
- When you click the donut sector, additional details display the job type and the number of occurrences of that type.

Backup Executive Summary

This report provides an Executive Summary overview of the status of backup jobs within defined backup windows. In the Report Designer, a backup window can be selected to narrow the scope of the report. If no specific backup windows are defined in IT Analytics, this report defaults to: 4:00 p.m. to 4:00 p.m.

Chapter 3

VM Datastore Overview

This chapter includes the following topics:

- VM Datastore Overview
- Working with topology
- VM Datastore Group Overview

VM Datastore Overview

The **Inventory** provides an accurate picture of objects discovered by IT Analytics within your enterprise. This interface displays asset counts from collected data, and provides access to multiple targeted reports that you can select to display. This overview page shows overview information for all collected **Datastores** in your datacenter. Datastore information is visualized with the following dashboard:

Note: The user credentials are validated to display the reports. If reports are not displayed to the users, verify the user's credentials.

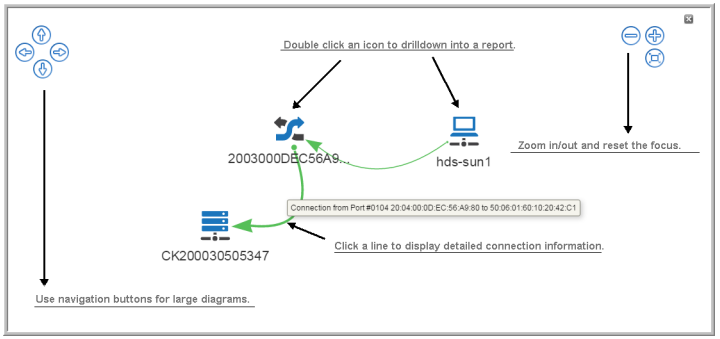
See "VM Datastore Group Overview" on page 12.

Working with topology

Connectivity between objects is shown in a topology diagram. Each object displays the type and the count.

- Mouse-over each device (host, switch, storage array) and paths to view details
- Single click a connection to view the details
- Double click a device to display detailed reports

- Expand the topology window to zoom and navigate through larger diagrams.



VM Datastore Group Overview

The datastore is the container for the VMs and their configuration files, virtual disks, and other files, such as the ISO files that are used for installing a virtual machine. A datastore provides the virtual storage resources via mapping to physical storage on DAS SCSI, FC SAN arrays, iSCSI, or NAS drives. The datastore is the storage provisioning source for one or more VMs on one or more hosts.

Datastore Usage Breakdown

The Datastore Usage Breakdown provides an interactive pie chart of the file types comprising each datastore. The usage value for Non-VM Files includes metadata--system files that comprise system overhead. The legend displays the data series in a chart with a symbol and the name of the series. Click a value in the legend to add or remove the data point from the chart. The chart automatically updates based on the addition or removal. Click parts of the pie chart to have sections emphasized without changing the data.

Datastore Usage History

The Datastore Usage History shows a time-based series chart that visualizes the capacity, average usage and maximum usage size for datastores. You can roll-over the data points to display specific sizes and the related date.

On a series of time-based data points, using the mouse, you can drag-select a section of the chart to zoom. Click the **Reset zoom** button to return to your original settings. Once you've zoomed on a series of time-based data points, you can scroll left and right through the chart. Click the Show Table icon to display the data in a tabular format.

Datastores Utilization Summary

The Datastore Utilization Summary gives you the ability to identify what storage is in use and where it is located. Click any column header on a tabular chart to sort the table by that column. You can drill down to a more granular level by clinking links in the report.

Click the datastore **Name** link to view the Datastore Detail where you can view the Extents and then link to the corresponding Physical Disk Detail. In addition, the Datastore Detail provides a link to the array from which the storage has been provisioned.

Topology Path

Click an icon in the topology path to drilldown into a related report.

Datastore Disk Read/Write Performance

A line chart represents disk read/write performance metrics for VM Datastores. It is displayed as datastore size in GiB over time.

Datastore Disk Latency Performance

A line chart represents disk total latency performance metrics in Ms for VM Datastores. It is displayed as datastore size in GiB over time.

Chapter 4

Hosts and Host Group Overview

This chapter includes the following topics:

- Hosts
- Host Group Overview

Hosts

The **Inventory** provides an accurate picture of objects discovered by IT Analytics within your enterprise. This interface displays asset counts from collected data, and provides access to multiple targeted reports that you can select to display. This summary page shows overview information for all collected **Hosts** in your datacenter.

Hosts can be collected via a number of different data collection methods. For example, a host may be collected by a Backup Manager collector or by a Capacity Manager Data Collector, where collected data indicates the storage that has been allocated to a host. A host will be listed in the Inventory only if a Data Collector was able to retrieve a host name.

For Virtualization Manager data collection, VMware Tools (VM Tools) must be installed to enable collection of key properties of a VM Guest, such as the IP address, host name, mount points, disk path, available space on VM guest volumes, and guest operating system of the VM. Whenever data collection cannot retrieve a host name, a VM Guest will not be treated as a host in the Inventory and Virtualization Manager reports will not be populated with host details. For example, a host name may not be available in the following situations: the VM may be down, VM Tools may not be installed on the VM Guest, or a VM template may have been collected.

Note: The user credentials are validated to display the reports. If reports are not displayed to the users, verify the user's credentials.

Host Overview information is visualized through the following default report:

See “Host Group Overview” on page 15.

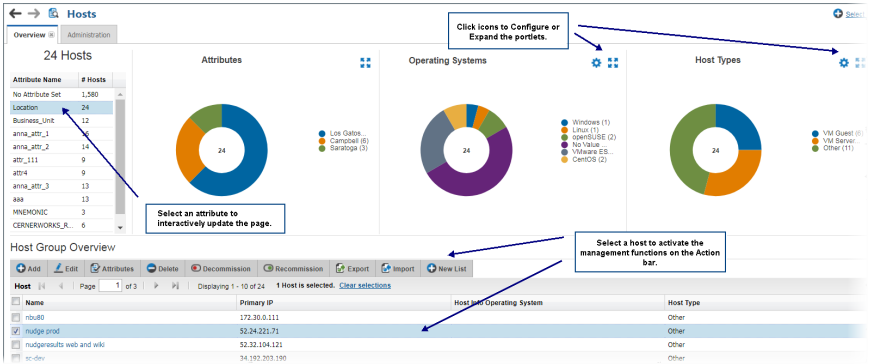
You can also customize reports by configuring the portlets with an attribute selection.

Host Group Overview

This overview page shows overview information for all collected **Hosts** in your data center visualized through the following default reports:

- See “Attributes” on page 15.
- See “Operating Systems” on page 16.
- See “Host Types” on page 16.
- See “Host Group Overview” on page 16.

Values displayed in the following reports are controlled by the navigation table selection. When attributes are selected, pie charts and the corresponding tabular report are dynamically updated. You can also interactively configure the center and right pie charts by selecting available attributes using the **Configure Portlets** icon.



Attributes

Displays an interactive pie chart that visually depicts the attribute selection. For example, if you select **Location** and there are 21 hosts with that attribute, the pie chart shows the breakdown of the Locations by percentage. Click a sector to show

the percentage and count for the attribute value. The **Host Group Overview** grid is also updated.

Operating Systems

Displays an interactive pie chart that visually depicts the Operating Systems for your attribute selection. For example, if you select **Location** and there are 21 hosts with that attribute, the pie chart shows the breakdown of the operating systems for the Locations by percentage and count. Click a sector to show the percentage for the attribute value. The **Host Group Overview** grid is also updated.

Host Types

Displays an interactive pie chart that visually depicts the Host Type for your attribute selection. For example, if you select **Location** and there are 21 hosts with that attribute, the pie chart shows the breakdown of the host type, such as VM Guests for the Locations by percentage and count. Click a sector to show the percentage for the attribute value. The **Host Group Overview** grid is also updated.

Host Group Overview

Displays a tabular report that visually depicts the attribute selection, and updates based on selections in the interactive pie charts. Management operations are also available from the grid. Select a host or backup server to activate the management functions on the action bar. For complete details about available operations,

Chapter 5

VM Guests Overview

This chapter includes the following topics:

- VM Guests Overview

VM Guests Overview

The **Inventory** provides an accurate picture of objects discovered within your enterprise. This interface displays asset counts from collected data, and provides access to multiple targeted reports that you can select to display. This overview page shows overview information for all collected **VM Guests** in your data center.

Note: The user credentials are validated to display the reports. If reports are not displayed to the users, verify the user's credentials.

Chapter 6

VM Servers Overview

This chapter includes the following topics:

- VM Servers Overview
- Interacting with Reports on the Overview Page
- Working with the Action Menu in the Inventory View

VM Servers Overview

The **Inventory** provides an accurate picture of objects discovered within your enterprise. This interface displays asset counts from collected data, and provides access to multiple targeted reports that you can select to display. This overview page shows overview information for all collected **VM Servers** in your data center.

VM Server Overview information is visualized through the following reports:

Note: The user credentials are validated to display the reports. If reports are not displayed to the users, verify the user's credentials.

-
-

for general information and functionality.

Interacting with Reports on the Overview Page

Many interactive features are available depending on the report type:

- Time series - zoom and reset zoom: On a series of time-based data points, using the mouse, drag select a section of the chart to zoom. Click the **Reset zoom** button to return to your original settings.
- Time series - zoom and pan: Once you've zoomed on a series of time-based data points, you can scroll left and right through the chart. Hold down the shift key when panning.
- Expand to full screen: Charts displayed as components of a dashboard may be hard to read. Click the **Expand** icon to pop the chart out of the dashboard and have it displayed in the full browser window.
- Configure Portlets: Choose custom attributes for filters and switch positions for portlets on dashboard style displays.
- Show/hide data series: The legend displays the data series in a chart with a symbol and the name of the series. Click a value in the legend to add or remove the data point from the chart. The chart automatically updates based on the addition or removal.
- Column sorting: Click any column header on a tabular chart to sort the table by that column.
- Hyperlink drill downs: Drill down to a more granular level by clinking links in the report. This feature is available for all chart types.
- Time Period Quick Filters: Change the time period represented in the chart without formally editing the scope. Choose from 5 days, 2 days, 1 day, 12 hours, 4 hours or 1 hour.
- Expanding sectors: Click parts of a pie and donut charts to have sections emphasized without changing the data.

Report Type	Interactive Feature
Tabular	■ Hyperlink drill downs ■ Column sorting ■ Expand to full screen
Bar (all types)	■ Time series - zoom and reset zoom ■ Time series - zoom and pan ■ Expand to full screen ■ Show/hide data series ■ Hyperlink drill downs

Report Type	Interactive Feature
Line	■ Time series - zoom and reset zoom ■ Time series - zoom and pan ■ Expand to full screen ■ Show/hide data series ■ Hyperlink drill downs
Area	■ Time series - zoom and reset zoom ■ Time series - zoom and pan ■ Expand to full screen ■ Show/hide data series ■ Hyperlink drill downs
Pie/Donut	■ Expand to full screen ■ Show/hide data series ■ Hyperlink drill downs ■ Expand sectors
Gauge	■ Expand to full screen

Working with the Action Menu in the Inventory View

Many functions available to standard reports and templates are available to the reports in the **Inventory Navigator**.

- Inventory Reports: Edit Scope - Your selection in the Hierarchy Panel sets the objects which are part of the scope. For some objects and object groups, you can edit additional parameters. **Edit Scope** is only shown when there are parameters available to change. A default time period is also set for those reports that require one. Use the Hierarchy Panel to revise the scope when the menu item is not displayed.
- Inventory Reports: Save As - When you save a report, you are saving a copy of the report into the **Reports** tab, not the report output. You can save a version in your Reports. Scope selections are saved with the report.

Note: Some reports provided by the Inventory are specialized and not available from the **Reports** tab. Due to the nature of these reports, they function like Detail reports and cannot be customized or saved, as they are specific to the report from which they were derived. **Save As** is not displayed for these reports.

- Inventory Reports: Email - After you generate a report and it renders, you can choose to instantly email the report. Emailed reports are not derived from the cache. These events are run in real time, so current data is always used. You can email a report to yourself, other individuals, or a distribution list. Scheduling reports to be regularly emailed is not available from the **Inventory** tab.
- Inventory Reports: Export - You can export reports to make them available to external applications, such as Microsoft Excel or if you'd like to generate a hardcopy, you can export them to a file, such as a PDF. Exported reports are not derived from the cache. These events are run in real-time, so current data is always used.
- Inventory Reports: Filter - In addition to the filtering that happens with your hierarchy selection, table-formatted reports can be further filtered on Rows and/or Columns, using advanced filtering. You can define the criteria for the data rows displayed in a report. Drop-down lists enable selections from the available columns. Next, you supply the operator--such as equals or does not contain--and a value for that column. Up to 16 selections can be joined to form the filter.

Chapter 7

Reports and Dashboards

This chapter includes the following topics:

- Reports and Dashboards

Reports and Dashboards

IT Analytics provides storage reporting solutions for consolidated visibility into complex, multi-vendor, storage environments, enabling you to increase data reliability and reduce costs with unified reporting and automated alerts.

IT Analytics allows you to drill down and identify the root cause of performance issues, identify re-tiering opportunities, and effectively implement chargebacks so business units understand their overall storage environment.

Q: How do I find a particular report or just browse to see what's available?

A: You can use Quick Search to find a template, a report or a dashboard. If you are unsure of the name, Search is case insensitive, supports partial entries, and will display a list of potential string matches. If the Cloud is enabled, search results will also include reports available from the cloud. You can also browse through the IT Analytics library of analytics.

Q: How does using the Inventory view differ from browsing through the reports?

A: The **Inventory** provides a customizable view of your collected data center assets. Once discovery and data collection has occurred, the **Inventory** is populated and you can examine it starting from a logical entry point. Each inventory object category is associated with relevant reports for the selected object. These reports can help to provide insights and then be leveraged to make strategic decisions. IT Analytics offers more than 200 standard report templates. The **Inventory** narrows the selection by object and allows you to immediately familiarize yourself with only the information you need.

Q: How do I generate a report?

A: Each time you generate a report, the scope selector presents you with report parameters to tailor your output. You can run a report directly from your search results or from the browser view.

Q: Once I've generate a report, can I email a version to a distribution list?

A: After you've generated a report, you can email a version to yourself, other individuals, or a distribution list. You can also choose a format for the report such as HTML, CSV or a PDF. If this is something you need to do frequently, you can schedule reports to be run and emailed at a set interval.

Q: Can I email or export the report without executing it?

A: Yes, IT Analytics allows you to export or email the report even before executing it. Select the report and click Email or Export button.

Q: How does scheduling reports work?

A: When you schedule a report, you actually are configuring it to run and be emailed at regular intervals. To schedule a report, you must first save it. Then, after you generate the saved report, you can configure it to run and be emailed on a regular basis.

Q: Can I export reports?

A: If you need to make the report data available to an external application or just save it as a hardcopy report, you can export a report to a file. The date for the report will be the date and time that the report was generated.

Q: Can I share a report with other IT Analytics users?

A:You can share saved reports with any number of users or user groups.These shared instances will be located in the main navigation pane, under a **My Shared Reports** folder.

Q: I like to see the same set of reports each time I log in. Is there a way to organize them into one page?

A: Dashboards can provide consolidated access to your reports. You can create a dashboard, drag and drop the reports you want to see and then set the dashboard as your home page. Dashboards are also useful to view multiple scenarios simultaneously.

Q: How do I customize a report?

A: IT Analytics comes with a number of default report templates. You can use these reports as templates and narrow the report scope to specific host groups or modify parameters, such as the time period or event type.

In addition to customizing default report templates, you can create your own by defining the types of data to collect. In this way, the results can serve your unique reporting needs.

Q: After building and saving custom reports, how do I keep them organized?

A: If you need to access specific and unrelated reports regularly and quickly, you can add these saved report to your My Reports folder. Both custom reports and saved report can be placed into this folder.

Q: User is not able to view the reports.

A: Reports which are displayed based on permissions. If reports are not displayed to the users, verify the user's credentials.