



## Querying assets

### OnCommand Insight

NetApp  
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# Querying assets

Queries enable you to monitor and troubleshoot your network by searching the assets in your environment at a granular level based on user-selected criteria (annotations and performance metrics). Additionally, annotation rules, which automatically assign annotations to assets, require a query.

## Assets used in queries and dashboards

Insight queries and dashboard widgets can be used with a wide range of asset types

The following asset types can be used in queries, dashboard widgets, and custom asset pages. The fields and counters available for filters, expressions, and display will vary among asset types. Not all assets can be used in all widget types.

- Application
- Datastore
- Disk
- Fabric
- Generic Device
- Host
- Internal Volume
- iSCSI Session
- iSCSI Network Portal
- Path
- Port
- Qtree
- Quota
- Share
- Storage
- Storage Node
- Storage Pool
- Switch
- Tape
- VMDK
- Virtual Machine
- Volume
- Zone
- Zone Member

# Creating a query

You can create a query to enable you to search the assets in your environment at a granular level. Queries enable you to slice data by adding filters and then sorting the results to view inventory and performance data in one view.

## About this task

For example, you can create a query for volumes, add a filter to find particular storages associated with the selected volume, add a filter to find a particular annotation, such as Tier 1, on the selected storages, and finally add another filter to find all storages with IOPS - Read (IO/s) greater than 25. When the results are displayed, you can then sort the columns of information associated with the query in ascending or descending order.

When a new data source is added which acquires assets or any annotation or application assignments are made, you can query for those assets, annotations, or applications after the queries are indexed, which occurs at a regularly scheduled interval.

## Steps

1. Log in to the OnCommand Insight web UI.
2. Click **Queries** and select **+ New Query**.
3. Click **Select Resource Type** and select a type of asset.

When a resource is selected for a query, a number of default columns are automatically displayed; you can remove these columns or add new ones at any time.


4. In the **Name** text box, type the name of the asset or type a portion of text to filter through the asset names.

You can use any of the following alone or combined to refine your search in any text box on the New Query page:


- An asterisk enables you to search for everything. For example, `vol*rhel` displays all resources that start with “vol” and end with “rhel”.
- The question mark enables you to search for a specific number of characters. For example, `BOS-PRD??-S12` displays BOS-PRD12-S12, BOS-PRD13-S12, and so on.
- The OR operator enables you to specify multiple entities. For example, `FAS2240 OR CX600 OR FAS3270` finds multiple storage models.
- The NOT operator allows you to exclude text from the search results. For example, `NOT EMC*` finds everything that does not start with “EMC”. You can use `NOT *` to display fields that contain no value.

5. Click  to display the assets.

6. To add a criteria, click , and do either of the following:

- Type to search for a specific criteria and then select it.
- Scroll down the list and select a criteria.
- Enter a range of values if you choose a performance metric like IOPS - Read (IO/s). Default annotations provided by Insight are indicated by ; it is possible to have annotations with duplicate names.

A column is added to the Query results list for the criteria and the results of the query in the list updates.

7. Optionally, you can click  to remove an annotation or performance metric from the query results.

For example, if your query shows maximum latency and maximum throughput for datastores and you want to show only maximum latency in the query results list, click this button, and clear the **Throughput - Max** check box. The Throughput - Max (MB/s) column is removed from the Query results list.



Depending on the number of columns displayed in the query results table, you may not be able to view additional added columns. You can remove one or more columns until your desired columns become visible.

8. Click **Save**, enter a name for the query, and click **Save** again.

If you have an account with an administrator role, you can create custom dashboards. A custom dashboard can comprise any of the widgets from Widget Library, several of which, let you represent query results in a custom dashboard. For more information about custom dashboards, see the *OnCommand Insight Getting Started Guide*.

## Related information

[Importing and Exporting user data](#)

# Viewing queries

You can view your queries to monitor your assets and change how your queries display the data related to your assets.

## Steps

1. Log in to the OnCommand Insight web UI.
2. Click **Queries** and select **Show all queries**.
3. You can change how queries display by doing any of the following:
  - You can enter text in the **filter** box to search to display specific queries.
  - You can change the sort order of the columns in the table of queries to either ascending (up arrow) or descending (down arrow) by clicking the arrow in the column header.
  - To resize a column, hover the mouse over the column header until a blue bar appears. Place the mouse over the bar and drag it right or left.
  - To move a column, click on the column header and drag it right or left.
  - When scrolling through the query results, be aware that the results may change as Insight automatically polls your data sources. This may result in some items being missing, or some items appearing out of order depending on how they are sorted.


# Exporting query results to a .CSV file

You might want to export the results of a query into a .CSV file to import the data into another application.

## Steps

1. Log in to the OnCommand Insight web UI.
2. Click **Queries** and select **Show all queries**.

The Queries page is displayed.

3. Click a query.
4. Click  to export query results to a .CSV file.
5. Do one of the following:
  - Click **Open with** and then **OK** to open the file with Microsoft Excel and save the file to a specific location.
  - Click **Save file** and then **OK** to save the file to your Downloads folder. Only the attributes for the displayed columns will be exported. Some displayed columns, particularly those that are part of complex nested relationships, are not exported.



When a comma appears in an asset name, the export encloses the name in quotes, preserving the asset name and the proper .csv format.

+ When exporting query results, be aware that **all** rows in the results table will be exported, not just those selected or displayed on the screen, up to a maximum of 10,000 rows.

+

When opening an exported .CSV file with Excel, if you have an object name or other field that is in the format NN:NN (two digits followed by a colon followed by two more digits), Excel will sometimes interpret that name as a Time format, instead of Text format. This can result in Excel displaying incorrect values in those columns. For example, an object named "81:45" would show in Excel as "81:45:00". To work around this, import the .CSV into Excel using the following steps:

+



- Open a new sheet in Excel.
- On the "Data" tab, choose "From Text".
- Locate the desired .CSV file and click "Import".
- In the Import wizard, choose "Delimited" and click Next.
- Choose "Comma" for the delimiter and click Next.
- Select the desired columns and choose "Text" for the column data format.
- Click Finish.

Your objects should show in Excel in the proper format.

+



# Modifying queries

You can change the criteria that are associated with a query when you want to change the search criteria for the assets that you are querying.

## Steps

1. Log in to the Insightweb UI.
2. Click **Queries** and select **Show all queries**.

The Queries page is displayed.

3. Click the query name.
4. To remove a criterion from the query, click .
5. To add a criteria to the query, click , and select a criteria from the list.
6. Do one of the following:
  - Click **Save** to save the query with the name that was used initially.
  - Click **Save as** to save the query with another name.
  - Click **Rename** to change the query name that you had used initially.
  - Click **Revert** to change the query name back to the one that you had used initially.

# Deleting queries

You can delete queries when they no longer gather useful information about your assets. You cannot delete a query if it is used in an annotation rule.

## Steps

1. Log in to the Insightweb UI.
2. Click **Queries** and select **Show all queries**.

The Queries page displays.

3. Position your cursor over the query you want to delete and click .

A confirmation message displays, asking if you want to delete the query.

4. Click **OK**.

# Assigning multiple applications to or removing multiple applications from assets

You can assign multiple applications to or remove multiple application from assets by using a query instead of having to manually assign or remove them.

## Before you begin

You must have already created a query that finds all the assets that you to edit.

### Steps

1. Click **Queries** and select **Show all queries**.

The Queries page displays.

2. Click the name of the query that finds the assets.

The list of assets associated with the query displays.

3. Select the desired assets in the list or click ☐ ▼ to select **All**.

The **Actions** button displays.

4. To add an application to the selected assets, click Actions ▼, and select **Edit Application**.

- a. Click **Application** and select one or more applications.

You can select multiple applications for hosts, internal volumes, and virtual machines; however, you can select only one application for a volume.

- b. Click **Save**.

5. To remove an application assigned to the assets, click Actions ▼ and select **Remove Application**.

- a. Select the application or applications you want to remove.

- b. Click **Delete**.

Any new applications you assign override any applications on the asset that were derived from another asset. For example, volumes inherit applications from hosts, and when new applications are assigned to a volume, the new application takes precedence over the derived application.

## Editing or removing multiple annotations from assets

You can edit multiple annotations for assets or remove multiple annotations from assets by using a query instead of having to manually edit or remove them.

### Before you begin

You must have already created a query that finds all the assets that you want to edit.

### Steps

1. Click **Queries** and select **Show all queries**.

The Queries page displays.

2. Click the name of the query that find the assets.



The list of assets associated with the query displays.

3. Select the desired assets in the list or click ☐ ▼ to select **All**.

The **Actions** button displays.

4. To add an annotation to the assets or edit the value of an annotation assigned to the assets, click

**Actions** ▼

, and select **Edit Annotation**.

- a. Click **Annotation** and select an annotation you want to change the value for, or select a new annotation to assign it to all the assets.
- b. Click **Value** and select a value for the annotation.
- c. Click **Save**.

5. To remove an annotation assigned to the assets, click **Actions** ▼, and select **Remove Annotation**.

- a. Click **Annotation** and select the annotation you want to remove from the assets.
- b. Click **Delete**.

## Copying table values

You can copy values in tables for use in search boxes or other applications.

### About this task

There are two methods you can use to copy values from tables or query results.

### Steps

1. Method 1: Highlight the desired text with the mouse, copy it, and paste it into search fields or other applications.
2. Method 2: For single-value fields whose length exceeds the width of the table column, indicated by ellipses (...), hover over the field and click the clipboard icon. The value is copied to the clipboard for use in search fields or other applications.

Note that only values that are links to assets can be copied. Note also that only fields that include single values (i.e. non-lists) have the copy icon.

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