



Troubleshoot Catalyst Center Using Data Platform

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About Data Platform

Data Platform provides tools that can help you monitor and troubleshoot Catalyst Center applications. **Data Platform** displays synthesized data from various inputs to help you identify patterns, trends, and problem areas in your network. For example, if something goes wrong in your network, you can quickly get answers to questions such as whether a pipeline is in an error state and what is the real-time traffic flow in a particular area. The main areas of Data Platform are:

- **Analytics Ops Center:** Provides a graphical representation of how data is streamed through collectors and pipelines and provides Grafana dashboards, which can help you identify patterns, trends, and problem areas in your network. See [Troubleshoot Using the Analytics Ops Center, on page 2](#).
- **Collectors:** Collects a variety of network telemetry and contextual data in real time. As data is ingested, Catalyst Center correlates and analysis the data. You can view the status of collectors and quickly identify any problem areas. See [View or Update Collector Configuration Information, on page 3](#).
- **Store Settings:** Allows you to view how long data is stored for an application. See [View Data Retention Settings, on page 4](#).
- **Pipelines:** Allows Catalyst Center applications to process streaming data. A data pipeline encapsulates an entire series of computations that accepts input data from external sources, transforms that data to provide useful intelligence, and produces output data. You can view the status of pipelines and quickly identify any problem areas. See [View Pipeline Status, on page 5](#).
- **Task Managers:** Allows you to view the list of Task Managers along with details such as Last Heart Beat, All Slots, and Free Slots. You can export the details as a CSV file.

Troubleshoot Using the Analytics Ops Center

The Analytics Ops Center provides a graphical representation of how data is streamed through collectors and pipelines, and provides Grafana dashboards, which can help you identify patterns, trends, and problem areas in your network, such as:

- Missing data in Assurance.
- An inaccurate health score.
- Devices that appear as monitored under Inventory but unmonitored under Assurance.

Step 1 From the top-left corner, click the menu icon and choose **System > Data Platform**.

Step 2 Click **Analytics Ops Center**.
A list of applications is displayed.

Step 3 Click the application name for which you want to view metrics; for example, **Assurance**.

A graphical representation of all existing collectors and pipelines in the application appears. CPU or throughput values corresponding to each pipeline are also provided.

The current health status of each component is indicated by its color:

- Red: error
- Yellow: warning
- Gray: normal operation

Step 4 To view historical data of pipelines, click **Timeline & Events**.

A timeline bar providing data for the time interval appears. You can also:

- Move the timeline slider to view data for a specific time.
- Hover your cursor over an event in the timeline bar to display additional details or a group of events that occurred at the same time.
- Click an event to display the Analytics Ops Center visualization at that particular time.

Step 5 To view additional details to help you troubleshoot an issue and determine the cause of an error or warning, click a collector name.

A slide-in pane appears with the following tabs:

- **Metrics:** Provides a selection of available metrics gathered during the last 30 minutes. It displays summary information indicating the component status, start and stop time, and error exceptions. You can also choose a different time interval.
- **Grafana:** Displays a dashboard associated with the respective component for deeper debugging.

Step 6 To view whether data is flowing through a specific pipeline, click a pipeline stream.

A slide-in pane appears with graphs. The graphs display whether the application is receiving data from the underlying pipelines. The graph information is based on the time interval you select from the drop-down list in the slide-in pane. Options are **Last 30 Min**, **Last Hour**, **Last 2 Hours**, and **Last 6 Hours**. The default is **Last 30 Min**.

Step 7 If a pipeline is not flowing at normal levels, hover your cursor over the stream to display the lag metrics.

Step 8 To view detailed information for a specific pipeline, click a pipeline name.

The appropriate *Pipeline* page displays with the following tabs:

Note Make sure to click the **Exceptions** tab to determine if any exceptions occurred in the pipeline. Under normal working conditions, this tab displays **null**.

- **Metrics**: Displays metrics, updated every 30 minutes in a graph.
- **Summary**: Displays summary information such as stats, run-time, and manifest.
- **Exceptions**: Displays any exceptions that occurred on the pipeline.
- **Stages**: Displays the pipeline stages.

Step 9 To change the metrics displayed on the Analytics Ops Center page, click **Key Metrics**, select up to two metrics, and then click **Apply**.

By default, Catalyst Center displays CPU and Throughput metrics.

Step 10 To view metrics for a particular flow, do the following:

- a) Click **View Flow Details**.
- b) Select three connected components (collector, pipeline, and store) by clicking the tilde (~) on the component's top-left corner.
- c) Click **View Flow**.
Catalyst Center displays the metrics associated with that specific flow.

View or Update Collector Configuration Information

Collectors collect a variety of network telemetry and contextual data in real time. As data is ingested, Catalyst Center correlates and analyzes the data. You can view the status of collectors and quickly identify any problem areas.

Step 1 From the top-left corner, click the menu icon and choose **System > Data Platform**.

Step 2 Click **Collectors**. The colored dot next to each collector indicates its overall status.

Step 3 To view additional details, click a collector name.

The appropriate *Collector* page appears. By default, Catalyst Center displays the **Configurations** tab which displays the list of current configurations.

Step 4 To view, update, or delete a configuration, click a specific configuration name.

Step 5 To add a new configuration, click + **Add** in the **Configurations** tab.

Step 6 In the slide-in pane, enter the required information for the configuration.

- Step 7** (Optional) For some collectors, such as the wireless collector, you can check the **Anonymize** check box to scramble the hostname and user ID in the **Client Health** window with a one-way hash that cannot be decrypted.
- Important** If you want to anonymize your data, make sure that you check the **Anonymize** check box before you discover devices with the **Discovery** tool. If you anonymize the data after you discover devices, the new data coming into the system is anonymized, but the existing data is not anonymized.
- Step 8** Click **Save Configuration**.
- Step 9** To view configured instances, click the **Instances** tab.
- Step 10** To view summary information and metrics, choose an instance from the list.
- Step 11** (Optional) If Catalyst Center integrates with Cisco Connected Mobile Experience (CMX), you have the option of anonymizing data on the CMX side. Do the following:
- Using an SSH client, log in to Cisco CMX as the `cmxadmin` CLI user.
 - Change to the root user.
 - Go to `/opt/cmx/etc/node.conf` and under `[location]`, add **user_options**. For example:


```
[location]
...
user_options=-Dhideusername=true
```
 - On the Cisco CMX CLI, enter the following commands:


```
cmxctl agent restart
cmxctl location restart
```
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View Data Retention Settings

You can view how long data is stored for an application.

- Step 1** From the top-left corner, click the menu icon and choose **System > Data Platform**.
- Step 2** Click **Store Settings**.
- Step 3** To view a list of historical purge jobs that have completed, click **Data Purge Schedule**. The **HISTORY** table lists the name of the purge job, the result, time, and other data. You can sort, filter, and export data in the table.
- Step 4** To view the current data retention and purge settings, click **Data Retention & Purge Configuration**. The following is displayed:
- Document Store:** Settings for all time-based data, such as the maximum size and the low and high watermark threshold.
 - Metric Graph Store:** Settings for all time-based graphical data, such as the maximum size and the low and high watermark threshold.
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View Pipeline Status

Data pipelines allow Catalyst Center applications to process streaming data. A data pipeline encapsulates an entire series of computations that accepts input data from external sources, transforms that data to provide useful intelligence, and produces output data. You can view the status of pipelines and quickly identify any problem areas.

Step 1 From the top-left corner, click the menu icon and choose **System > Data Platform**.

Step 2 Click **Pipelines**.

Step 3 To view whether the application is receiving data from the underlying pipelines, click a pipeline name.

The appropriate *Pipeline* page displays with the following tabs:

Note Make sure to click the **Exceptions** tab to determine if any exceptions have occurred in the pipeline. Under normal working conditions, this tab displays **null**.

- **Metrics:** Displays metrics, updated every 30 minutes in a graph.
 - **Summary:** Displays summary information such as stats, run-time, and manifest.
 - **Exceptions:** Displays any exceptions that have occurred on the pipeline.
 - **Stages:** Displays the pipeline stages.
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