

Slow Drain Analysis

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Analysis

The **Analysis** enables you to view slow drain statistics at the switch level and the port level. You can monitor the slow drain issue within any duration. You can display the data in a chart format and export the data for analysis. You can also view the topology that provides a high-level view of txwait, drops, credit loss recovery, over utilization, and port monitor events.

The statistics are stored in the cache memory. Therefore, the statistics are lost when the server is restarted or a new diagnostic request is placed.

To enable SAN Congestion to collect statistics on ports, navigate to **Server Settings** > **PM** and check **Slowdrain Collect on All Ports** check box.

Note The jobs run in the background, even after you log off.

Procedure

Step 1 Select a fabric from the **Fabric** drop-down list.

Step 2 From the **Duration** drop-down list, select **Once** or **Daily** for the scheduled job. **Once** includes intervals such as 10 minutes, 30 minutes, 1 hour, and custom hours and runs the job immediately. **Daily** allows you to select a start time, and run the job for the selected interval. Use the radio button to select the desired interval to collect data.

Step 3 Click **Start Analysis** to begin polling.

The server collects the slow drain statistics based on the scope defined by you. The **Time Remaining** is displayed on the right-side of the page.

Step 4 Click **Stop Analysis** to stop polling.

The server maintains the counters in the cache, until a new diagnostic request is placed. You can stop the polling before the time is up.

Step 5 The **Fabric**, **Status** of polling, **Start**, **End**, and **Duration** columns for each fabric is displayed.

Step 6 Select a fabric and click **Delete All** or **Stop** to delete or stop a job respectively.

A detailed view of the fabric will appear when you click a fabric name and displays details for the fabric. See Visualization, on page 2 for more information.

Step 7 Click a switch name in the **Switch Name** column of the **Device Interfaces** table to display the switch's health.

Step 8 Click an interface name in the **Interface** column of the **Device Interfaces** table to display the slow drain value for the switch port in a chart format.

Use the **Filter by attributes** option to display the details based on the defined value for each column.

Select the **Only Rows With Data** option to filter and display the nonzero entries in the statistics.

Visualization

A topology of the selected fabric appears when you click a fabric name and displays details for the fabric. The topology window shows color-encoded nodes and links that correspond to various network elements. For each of the elements, you can hover over to fetch more information. The links and switches are color-coded. Enable performance collections and SNMP traps to view the information on the topology.

The following table lists the color description that is associated with the links and switches.

Table 1: Color Description

Color	Name	Description
Blue (light)	High Utilization	High utilization tx-datarate >= 80%
Green	Normal	No found
Red	Level 3	Credit loss recovery
Orange	Level 2	Drops
Yellow (dark)	Level 1.5	txwait >= 30%
Yellow (light)	Level 1	txwait < 30%
Gray (light)	No Data	No Data

A switch color represents the highest level that is found on any link to switch. The maximum value is 3 and the minimum value is 1. A switch has two colors if overutilized. The right half of the switch is colored in light blue to represent the overutilization. A number on the switch represents the number of F ports with . The color around the number represents the highest level that is found on F ports of the switch. Click the switch to see more details.

Two parallel lines are used to represent the on links. Links are bidirectional, hence each direction has a color to represent the highest level of . Hover over a link to view the switch and interface name of the source and destination. Click a link to view the data that is related to that link alone.



Note The highest level a link can have is **Level 3**. Valid colors for a link are Green, Red, Orange, Yellow (dark), Yellow (light), and Gray (light).