Monitoring the Cisco Unified SIP Proxy System

Number of Calls Per Second

The number of calls per second (CPS) that the system processes is one way to determine the capacity of the system. Capacity is a measurement of the volume of traffic that a network is engineered to handle. Voice networks are typically engineered to handle a target peak-load capacity, commonly measured in CPS.

You need to monitor the number of CPS for licensing purposes. In the releases before vCUSP 9.1.5, if you exceed the number of CPS, and thus the number of licenses, the system rejects calls. In vCUSP 9.1.5 and later releases, the calls continue to connect. You can also monitor the CPS to determine traffic patterns.

The system provides two graphs that display the number of CPS including the following:

- Number of incoming CPS for the last hour

- Number of incoming CPS for the last 72 hours

Monitoring the Number of Calls Per Second

Procedure

Step 1   Choose **Monitor** > **Calls-Per-Second**.

The system displays a page that contains two sets of two graphs each. One set shows the number of incoming CPS for the last hour and the other set shows the number of incoming CPS for the last 72 hours.

Tip   If you cannot see both sets of graphs, scroll down.

Step 2   On the top right of the Calls-per-Second (last 60 minutes) set of data, click **Series Selector** and check which data you want to see:

- 5-minute CPS

- Incoming CPS

- License Limit CPS

Step 3   After you have made your choices, click **Series Selector** again to see the data.

The system displays the data that you requested in two graphs. The top graph shows the CPS on the vertical scale and the last hour across the horizontal scale.

The bottom graph shows the actual number of calls on the vertical scale and the last hour across the horizontal scale.

Step 4   On the top right of the Calls-per-Second (last 72 hours) set of data, click **Series Selector** and check which data you want to see:

- Incoming Peak

- Incoming Average

- 5-Minute Peak

- 5-Minute Average

- License Limit CPS

Step 5   After you have made your choices, click **Series Selector** again to see the data.

The system displays the data that you requested in two graphs. The top graph shows the CPS on the vertical scale and the last 72 hours across the horizontal scale.

The bottom graph shows the actual number of calls on the vertical scale and the last 72 hours across the horizontal scale.

Step 6   To see more information about any point in time on any of the four graphs, hover over any line of data. The system displays one ore more popup boxes with information. The information displayed depends on which data have you checked from the Series Selector menus.

For example, if you hover over the any point on the green "routed" line on the bottom graph, you will see a box that says the exact date and time that you are hovering over, followed by the number of routed calls and the number of rejected calls at that second.

Monitoring the Call Statistics

Restriction   The system only displays the Active Calls data if call admission control is enabled.

Procedure

Step 1   Choose **Monitor** > **Calls Statistics**.

The system displays the Call Statistics page with two sections:

- The Total Calls section lists the total number of calls into the server and the number of failed calls.

- The Active Calls section lists the number of active calls and the number of calls that timed out.

Step 2   To reset the number of call to zeros, check either Total Calls or Active Calls (or both) and click **Reset**.

Related Topics

Configuring Call Admission Control

Monitoring the Server Group Status

Monitor the status of the server groups and elements to ensure that they do not stop working.

Tip   If a server group or element goes down, check that SIP pinging is set up so that the proxy will know when the server group or element comes back up.

Procedure

Step 1   Choose **Monitor** > **Server Group Status**. See Server Group Status Page, on page 4.

Step 2   To expand the lists, click **Expand All**. To condense the lists, click **Collapse All**.

Step 3   To see statistics about a particular endpoint, click the underlined value under either Active Calls/Allowed Limit or Total Calls/Failures (% success). The system displays the Call Statistics page for that endpoint with the following information:

- IP address

- Port

- Transport type

- Network

- Number of total calls

- Number of failed calls

- Success percentage

- Number of active calls (only if call admission control is enabled)

You can reset some of these values by checking the check box and clicking **Reset**.

Server Group Status Page

The Server Group Status page that lists the following information:

Table 1: Status Page Information

Field	Description
Server Group/Element	Displays the name of the SIP server group.
Status	Displays the operational status of the SIP server group.
Q-Value	Displays a real number that indicates the priority of the server group element with respect to others in the server group. The Q-value provides the priority of each member (element) which varies from 0.0 to 1.0, where 1.0 is the highest priority. **Note** These values will be blank if there are multiple elements for the server group and the display is not expanded to show all elements.
Weight	Displays the percentage assigned to the request-URI or route-URI element in the route group if implementing weight-based routing. **Note** These values will be blank if there are multiple elements for the server group and the display is not expanded to show all elements.
Active Calls/Allowed Limit	Displays the following: • number of active sessions • allowed limit **Note** Only displays a value if the following criteria are met: • call admission control is enabled; otherwise, it displays "N/A" • row contains an actual endpoint (as opposed to a top-level or nested server group; otherwise, the area is blank

Field	Description
Total Calls/Failures (success %)	Displays the following: • total number of sessions handled • total number of failed sessions • success rate

Note   The system does not refresh the information on this page. If you want to see updated values, refresh your browser.

Monitoring the System Resources: CPU

The following graphs display the percentage of CPU resources that your system uses. Use this information to help diagnose and prevent system problems. In general, the CPU should not use more than 80 percent of your system resources.

Tip   If your system is using too much CPU, you can turn down or turn off the trace log (see Configuring Trace Settings), or you can go into the CLI to turn down or turn off the SIP message log or the peg count log.

Before you begin

Your system must have Adobe Flash Player Release 9 or later installed to see the graphs.

Procedure

Choose **Monitor** > **System Resources** > **CPU**.

The system displays the System Resource Utilizations page that contains three graphs showing the following:

   • CPU use by percentage per second for the past 60 seconds

   • CPU use by percentage per minute for the past 60 minutes

   • CPU use by percentage per hour for the past 72 hours

   Tip   If you cannot see all graphs, scroll down.

For each graph, the system displays the percentage of CPU use on the vertical scale and the time across the horizontal scale.

For the second and third graphs, the system also displays the average CPU use.

Related Topics

Monitoring the System Resources: Memory

These graphs display the amount of memory that your system uses.

Before you begin

Your system must have Adobe Flash Player Release 9 or later installed to see the graphs.

Procedure

Choose **Monitor** > **System Resources** > **Memory**.

The system displays the System Memory Utilizations page that contains three graphs showing the following:

- Memory utilization for the past 60 seconds

- Memory utilization for the past 60 minutes

- Memory utilization for the past 72 hours

Tip   If you cannot see all graphs, scroll down.

For each graph, the system displays the amount of memory used, measure in kilobytes, on the vertical scale and the time across the horizontal scale.