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System resources monitoring in Voyager for IPSO 3.8NET

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1 Overview of monitoring

The monitoring features in Voyager give you the ability to better maintain system performance and security. You can also customize certain types of data collection to better help you manage and maintain system availability.

By default, the monitoring of the physical as well as logical interfaces is enabled and configured with the Collection Interval timer of 60 seconds. You may selectively turn off monitoring of throughput and linkstate for physical and logical interfaces and change the Collection Interval Timer, by using the CLI monitor commands or from the Voyager Monitoring Report Configuration page.

If you notice performance degradation, disable monitoring of throughput and linkstate for the logical interfaces or increase the Collection Interval timer to reduce the frequency of monitoring, by using the CLI monitor commands or from the Voyager Monitoring Report configuration page.

The following are some of the key features available to you:

- Displaying rate-shaping bandwidth, throughput and linkstate data for each interface
- Ability to monitor core values associated with different protocols
- Easy access to system logs, forwarding tables, and other interface information

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Displaying system utilization statistics

Purpose

Use this procedure to display statistical information for the following:

- CPU and Memory
- Disk and Swap Space
- Processes Utilization



Steps

1. **Click Monitor on the home page.**
2. **Click the *Link* under *System Utilization* for which you want to obtain statistics.**

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Configuring data collection events



Steps

1. **Click Monitor on the home page.**
2. **Click *Monitor Report Configuration* link.**
3. **(Optional) Click the On radio button to enable a particular data collection event. The default is set to on.**
4. **(Optional) Click the Off radio button to disable a particular data collection event.**
5. **(Optional) Enter the collection interval, in seconds, in the Collection Interval edit box for each data collection event.**

The default is 60 seconds.

6. **Click Apply.**
7. **Click Save**

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Displaying rate shaping bandwidth statistics



Steps

1. Click **Monitor** on the home page.
2. Click the **Rate Shaping Bandwidth** link.
3. If you want a standard report

Then

In the Select Report Type field, click the button next to Hourly, Daily, Weekly, or Monthly.

4. If you want statistics from a certain period of time

Then

Click the Detailed search button in the Select Report Type field and then enter a value for the date and time in the Start Date and End Date edit Boxes.

Expected outcome

The Start Date defaults to the current date and time minus 10 minutes. The End Date defaults to the current date and time.

Further information

Note

Data for the previous 7 days is available.

5. **In the Select Aggregates field, click on the name of the Aggregation class for which you want to display a report or click on All Aggregates to display data for all configured aggregation classes.**
-

Note

You must configure an aggregation class and associate it with an access control list for the name to appear as a choice in the Aggregation Class list. See *Creating aggregation classes* and *Creating access control lists* in *Traffic management in Voyager*.

6. **In the Type Of Rateshaping Data field, click the check box either next to Packets Delayed or Bytes Delayed.**
7. **Select a format type for displaying the report.**

In the **Select Format** field, click the button next to **Graphical View** or **Delimited Text**.

Note

The Graphical View displays information at the bottom of the page in a table. Delimited Text format displays the report in a new page from which you can download the information.

8. *If you selected **Delimited Text**,*
Then
click on the Delimiterdrop-down window and select either SEMI-COLON(;),COMMA(,) or TAB.
9. **Click View Report or Apply to view current rate shaping bandwidth data.**

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Displaying interface throughput statistics



Steps

1. **Click Monitor on the home page.**
2. **Click the *Interface Throughput* link.**
3. *If you want a standard report*

Then

In the Select Report Type field, click the button next to Hourly, Daily, Weekly, or Monthly.

The default is set to Daily.

4. *If you want statistics from a certain period of time*

Then

Click the Detailed search button in the Select Report Type field and then enter a value for the date and time in the Start Date and End Date edit Boxes.

Expected outcome

The Start Date defaults to the current date and time minus 10 minutes. The End Date defaults to the current date and time.

Further information

Note

Data for the previous 7 days is available.

5. **Select an interface name from the Select Interface list or select All Logical to display throughput data for all logical interfaces.**
 6. **In the Type of Throughput field, click the check box next to Packet Throughput,Byte Throughput,Broadcast Throughput,or Multicast Throughput to select the type of throughput data you want to view.**
 7. **To select a format type for displaying the report, in the Select Format field, click the button next to Graphical View or Delimited Text.**
-

Note

The Graphical View displays information at the bottom of the page in a table. Delimited Text format displays the report in a new page from which you can download the information.

8. *If* you select **Delimited Text**,
Then
click on the Delimiter drop-down window and select either SEMI-COLON(;),COMMA(,) or TAB.
9. **Click View Report or Apply to view rate shaping bandwidth data for the period of time selected.**

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Displaying interface linkstate statistics



Steps

1. **Click Monitor on the home page.**
2. **Click the *Interface Linkstate* link.**
3. *If you want a standard report*

Then

In the Select Report Type field, click the button next to Hourly, Daily, Weekly, or Monthly.

The default is set to Daily.

4. *If you want statistics from a certain period of time*

Then

Click the Detailed search button in the Select Report Type field and the enter a value for the date and time in the Start Date and End Date edit Boxes.

Expected outcome

The Start Date defaults to the current date and time minus 10 minutes. The End Date defaults to the current date and time.

Further information

Note

Data for the previous 7 days is available.

5. **Select an interface name from the Select Interfaces For Query list or select All Logical to display linkstate data for all logical interfaces.**
 6. **To select a format type for displaying the report, in the Select Format field, click the button next to Graphical View or Delimited Text.**
-

Note

The Graphical View displays information at the bottom of the page in a table and graph. Delimited Text format displays the report as text in a new page from which you can download the information.

7. *If you select **Delimited Text**,*
Then
click on the Delimiter drop-down window and select either SEMI-COLON(;), COMMA(,) or TAB.
8. **Click View Report or Apply to view rate shaping bandwidth data for the period of time selected.**

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Monitoring system health

Purpose

This procedure describes how to display statistics to help you monitor the health of your system.

- Useful System Statistics
- Interface Traffic Statistics
- Interface Queue Statistics
- VRRP Service Statistics



Steps

1. **Click Monitor on the home page.**
2. **Click the *Link* under *System Health* for which you want to obtain statistics.**

8

Monitoring system logs

Purpose

User login/logout activity

The user login/logout activity log lets you view login and logout activity for users. The default is to display activity for all users.

Management activity log

The management activity log lets you view configuration changes. The log includes a timestamp, which provides the date and time when a configuration change occurred; the hostname or IP address from which the user logged in; and the config entry, which displays the entry changed in the configuration database.

The following pages allow you to display updated system logs:

- System Message Log
- Web Server access Log
- Web Server error Log
- User Login/Logout Activity
- Management Activity Log

To display the statistical information, follow these instructions:



Steps

1. **Click Monitor on the home page.**
2. **Click the link under *System Logs* for which you want to obtain log activity.**

Reload the web page when you want to refresh the information in a log.

If you want to view the activity of a particular user, click the **Login/ Logout Info For User** drop-down window and select the user for whom you want to view login and logout activity and click **Apply**.

If you want to view the management activity log, click the *System Logging* link in the **System Configuration** section.

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Displaying performance management

Purpose

The performance management provides an NE3S interface for statistics collection and retrieval that includes platform as well as application counters. A schedule file in XML format controls the collection. This file specifies counter collection parameters. Voyager or SNMP can be used to start or stop the collection process once the schedule file has been uploaded using ftp. A special user, ne3suser, is created for this purpose. The results are stored as XML files and they are generated at the configured interval. Then the results are ftped and analyzed on the network management system.

A result table is maintained to provide information about what results files have been created. It can be queried using SNMP or Voyager. The result files are deleted after a configured period.

To display the performance management configuration and monitor collection status, follow these instructions:



Steps

1. **Click Monitor on the home page.**
2. **Click the *Performance Management* link.**
3. **Enter a value for the status of measurement job in the Job Status edit box.**

Use Job Status value 1 (idle) for stopping the collection, and 2 for activating the collection.

Note

The Job Status value 3 is displayed for activation failed, and 4 represents active collection with no errors. Values 3 and 4 are automatically generated only after you have enabled collection.

- 4. Enter a value (in minutes) specifying how long to keep the result files after they have been generated in the Result File Store Period edit box.**

The Result File Store Period defaults to 1440 minutes.

- If you want to disable the Compress Result Files feature,*

Then

click the Compress Results Files Off radio button

The **Compress Results Files** radio button is selected by default to enable gzip compression of the generated result files.

- 6. Click Apply.**
- 7. To make your changes permanent, click Save.**
- 8. Enter the Result Id to view information for a specific result file in the Result ID edit box.**

Note

The Result Id is a value between StartId and (StartId + Count -1). The Result ID wraps after reaching the Maxcount (configured to 65535). When wrapped, the Result ID is a value less than the wrapped Result Id or greater than the Start Id, but it must always be less than the Maxcount.

- 9. Click Apply to get the information for the *Result Id*.**

10 Displaying routing protocol information

Purpose

This procedure describes how to display statistical information on the following routing protocols:

- OSPF
- BGP
- RIP
- IGRP
- VRRP
- PIM
- DVMRP
- IGMP

It also presents the routing daemon's information regarding the routing table (via the *Route* link) and interfaces (via the *Interfaces* link).



Steps

1. Click **Monitor** on the home page.
2. Click the ***Routing Protocol*** link for which you want to obtain statistics.

11

Displaying resource settings



Steps

1. Click **Monitor** on the home page.
2. Click the *Resource Statistics* link to display system resource statistics.

12 Displaying the kernel forwarding table



Steps

1. Click **Monitor** on the home page.
2. Click the *Forwarding Table* link.

Expected outcome

This displays the IP forwarding table that the kernel is using to make its forwarding decisions.

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Displaying system security



Steps

1. Click **Monitor** on the home page.
2. Click ***IKE statistics*** link or ***IPsec statistics*** link

14 Monitoring hardware

Purpose

These procedures describe how to display system status information, slot statistics, and cryptographic acceleration states.



Steps

1. Displaying system status information

- a. Click **Monitor** on the home page.
- b. Click the *System Status* link.

2. Displaying slot statistics

- a. Click **Monitor** on the home page.
- b. Click the *Slot Status* link.

3. Displaying cryptographic acceleration states

- a. Click **Monitor** on the home page.
- b. Click the *Cryptographic Accelerator Statistics* link in the *Hardware Monitoring* section.

15 Displaying IPv6 running states

Purpose

This procedure describes how to monitor the IPv6 running state.



Steps

1. Click **Monitor** on the home page.
2. Click the *IPv6 Monitor* link to display IPv6 running state.