IBM Z OMEGAMON Network Monitor
Version 5 Release 6

Troubleshooting Guide

Note

Before using this information and the product it supports, read the information in “Notices” on page 115.

Edition notice

July 2020 Edition

This edition applies to V5.6 of IBM Z OMEGAMON Network Monitor and to all subsequent releases and modifications until otherwise indicated in new editions.

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Chapter 1. Troubleshooting

Use this information to understand how troubleshooting is defined.

The troubleshooting part of this information unit helps you to decide where to begin looking for causes when you have a problem with IBM Z OMEGAMON Network Monitor.

Typically, you start with a symptom, or set of symptoms, and trace them back to their cause. This process is called troubleshooting. Troubleshooting is not the same as problem solving, although during the process of troubleshooting, you can obtain enough information to solve a problem. Examples of situations where this can happen include:

- End-user errors
- Application programming errors
- System programming errors, such as in resource definitions

However, you might not always be able to solve a problem yourself after determining its cause. For example, a performance problem might be caused by a limitation of your hardware. If you are unable to solve a problem on your own, contact IBM® Software Support for a solution.

Sources of troubleshooting information

The information displayed in the Tivoli® Enterprise Portal Agent Status and Enterprise IBM Z OMEGAMON Network Monitor Health workspaces, and enhanced 3270 user interface Enterprise Mainframe Networks Health workspace, can help you determine why data is not being displayed in the TCP/IP and VTAM® workspaces.

Using these workspaces, you can verify your current configuration settings and review information about the IBM Z OMEGAMON Network Monitor agent, VTAM, and the TCP/IP address spaces being monitored. See the *IBM Z OMEGAMON Network Monitor: Tivoli Enterprise Portal User's Guide* or the *IBM Z OMEGAMON Network Monitor: Enhanced 3270 User Interface Guide* for a description of the workspaces and the attributes. Descriptions of the attributes in this workspace provide information about configuration steps and resources that affect the values displayed and assist you in figuring out how to best identify the cause of a problem.

The primary troubleshooting feature is *logging*. Logging refers to the text messages and trace data generated by the software. Messages and trace data are sent to an output destination, such as a console screen or a file.

Typically, text messages relay information about the state and performance of a system or application. Messages also alert the system administrator to exceptional conditions when they occur. Consult the explanation and operator response associated with the displayed messages to determine the cause of the failure.

Traces capture transient information about the current operating environment when a component or application fails to operate as designed. IBM Software Support personnel use the captured trace information to determine the source of an error or unexpected condition. See the chapter on diagnostic tools in the *IBM Tivoli Monitoring: Troubleshooting Guide* for more information about trace tools.

Collecting data

If you have a problem that you are unable to solve using the information in this guide, gather the following information that relates to the problem and contact IBM Software Support for further assistance.

- Description of the operation scenario that led to the problem.
- Incorrect output, such as Tivoli Enterprise Portal screen prints or a description of what you observed, if applicable.
- Messages and other information displayed on the screen

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- Two screen captures of the Agent Status workspace: one with the Agent Status and the TCP Collector Status views scrolled all the way to the left and one with the same two views scrolled all the way to the right.
- Version information for the IBM Z OMEGAMON Network Monitor application support files installed on the Tivoli Enterprise Portal Server, Tivoli Enterprise Portal, the Tivoli Enterprise Portal Server, and the Tivoli Enterprise Monitoring Server if it is running on Windows or UNIX.
  - You can obtain this information on Windows by opening a command window and entering this command: `kincinfo -i > versionInfo.txt.`
  - You can obtain this information on UNIX by entering this command: `cinfo -i > versionInfo.txt`
  - The various monitoring components are identified in the first of two lines written for each component in `versionInfo.txt`. Here is an example of the output on Windows:

```
N3        TEPS App Support/IBM Z OMEGAMON Network Monitor
          WINNT Version: 05.10.01.00 Build: 201305061910

N3        TEPB App Support/IBM Z OMEGAMON Network Monitor
          WINNT Version: 05.10.01.00 Build: 201305061910

N3        TEPD App Support/IBM Z OMEGAMON Network Monitor
          WINNT Version: 05.10.01.00 Build: 201306101032
```

- Verification that the self-describing agent deployed correctly. This can be accomplished by checking the contents of the KN3MSMAN manifest file. The manifest file contains build and self-describing agent information. For the IBM Z OMEGAMON Network Monitor monitoring agent, the KN3MSMAN manifest file is located in TKANDATV for IBM Z OMEGAMON Network Monitor and contains build and SDA info. A manifest files looks similar to this:

```
manifest_version=100
date_generated=20130610113254514
product=N3
product_vrmf=05100100
tms_package_name=KN3JSTMS.jar
tms_package_vrmf=05100100
tps_package_name=KN3JSTPS.jar
tps_package_vrmf=05100100
tpw_package_name=KN3JSTPW.jar
tpw_package_vrmf=05100100
tms_jar_size=168
tms_expanded_jar_size=1760
tps_jar_size=5040
tps_expanded_jar_size=12648
tpw_jar_size=992
tpw_expanded_jar_size=3560
```

  The other entries in this file are for self-describing agent deployment to other components: the monitoring server (KN3JSTMS.jar), the portal server (KN3JSTPS.jar), and the browser client (KN3JSTPW.jar).

- Also provide the output of the `tacmd listappinstallrecs` command. The output will look similar to the following:

```
C:\IBM\ITM\BIN>tacmd listappinstallrecs
HUB/RTEMS    PRODUCT VERSION  GRPID ID       IDVER    SEEDSTATE  STATE STATUS
NMPIPL61:CMS HD      06230300 5655  TMS      06230300 Y          IC    0
NMPIPL61:CMS HD      06230300 5655  TPS      06230300            IC    0
NMPIPL61:CMS HD      06230300 5655  TPW      06230300            IC    0
NMPIPL61:CMS NT      06230100 5655  TMS      06230100 Y          IC    0
NMPIPL61:CMS NT      06230100 5655  TPS      06230100            IC    0
NMPIPL61:CMS NT      06230100 5655  TPW      06230100            IC    0
NMPIPL61:CMS N3      05100100 5655  TPS      05100100            IC    0
NMPIPL61:CMS N3      05100100 5655  TMS      05100100 Y          IC    0
NMPIPL61:CMS N3      05100100 5655  TPW      05100100            IC    0
NMPIPL61:CMS SY      06230300 5655  TPW      06230300            IC    0
NMPIPL61:CMS SY      06230300 5655  TMS      06230300 Y          IC    0
NMPIPL61:CMS SY      06230300 5655  TPS      06230300            IC    0
NMPIPL61:CMS TEMS             5530  SDA_STAT                           0
```

Note: You must issue the `tacmd login` command before issuing the `listappinstallrecs` command. See the *IBM Tivoli Monitoring Command Reference* for the syntax of `tacmd` commands.

- Operating system and version of the systems where the monitoring components are running. For example, you should record that Tivoli Enterprise Portal and the Tivoli Enterprise Portal Server are running on Windows XP Version 2.04 and the Tivoli Enterprise Monitoring Server and the IBM Z OMEGAMON Network Monitor monitoring agent are running on z/OS® 1.13.
- Whether the monitoring agent is running in its own address space or running in the monitoring server address space.
- The logs for the Tivoli Enterprise Portal, Tivoli Enterprise Portal Server, Tivoli OMEGAMON® Manager (or the enhanced 3270 user interface) and Tivoli Enterprise Monitoring Server. See the *IBM Tivoli Monitoring: Troubleshooting Guide* for information about these logs.
- The monitoring agent joblogs.
- If an ABEND is resulting in a dump of the agent address space or the monitoring server address space, the dump dataset.
- If the problem is related to historical data collection, you will need to get version information for the Warehouse Proxy agent and the system it is running on and provide the Warehouse Proxy agent log. The version information for the Warehouse Proxy agent may be obtained using the `kincinfo` command on Windows or the `cinfo` command on UNIX as described in the previous bullet for the other monitoring components. Information on how to find the Warehouse Proxy agent log is found in the *IBM Tivoli Monitoring: Troubleshooting Guide*. If the problem is related to summarization and pruning of historical data, collect version information for the Summarization and Pruning agent and the system it is running on and provide the Summarization and Pruning agent log. The version information for the Summarization and Pruning agent may be obtained using the `kincinfo` command on Windows or the `cinfo` command on UNIX as described in the previous bullet for the other monitoring components. Information on how to find the Summarization and Pruning agent log is found in the *IBM Tivoli Monitoring: Troubleshooting Guide*.

Log files

The information about log files for the distributed components is found in the *IBM Tivoli Monitoring Troubleshooting Guide.*

The pdcollect tool allows you to collect the most commonly-used information from a system to troubleshoot on your own or to allow for IBM service to investigate a problem. It gathers log files, configuration information, version information, and the like. This tool also provides the ability to manage the size of trace data repositories.

This tool is available for Windows, UNIX, Linux®, and z/OS systems. It is located in the ITM_Install/bin directory on Windows, UNIX, and Linux systems. It is supplied as the KMSPDCOL member of the RKANSAM dataset on z/OS systems. It is also included in IBM Support Assistant. For more information on using pdcollect, see the *IBM Tivoli Monitoring Troubleshooting Guide.*.

Common problems and solutions

This section assists you in finding solutions to problems you may be experiencing.

Each part in this section identifies a problem. For each problem, symptoms that identify the cause of the problem are identified. Solutions are provided for each symptom. To find a solution to your problem, search this section for the problem and symptoms that match the ones you are experiencing.

This section includes symptoms for the following problems:

- “Problem 6: Problems with Take Action commands” on page 30
- “Problem 7: No historical data” on page 32
- “Problem 8: Problems with the self-describing agent feature” on page 35
- “Problem 9: Problems that result in abends” on page 39
- “Problem 10: Cross-product linking issues” on page 41
- “Problem 11: Performance issues” on page 42

Most of the troubleshooting issues in this section apply to both the Tivoli Enterprise Portal interface and the enhanced 3270 user interface, unless otherwise indicated. Some scenarios are confirmed or diagnosed using the Tivoli Enterprise Portal Agent Status workspace, shown in Figure 1 on page 4.

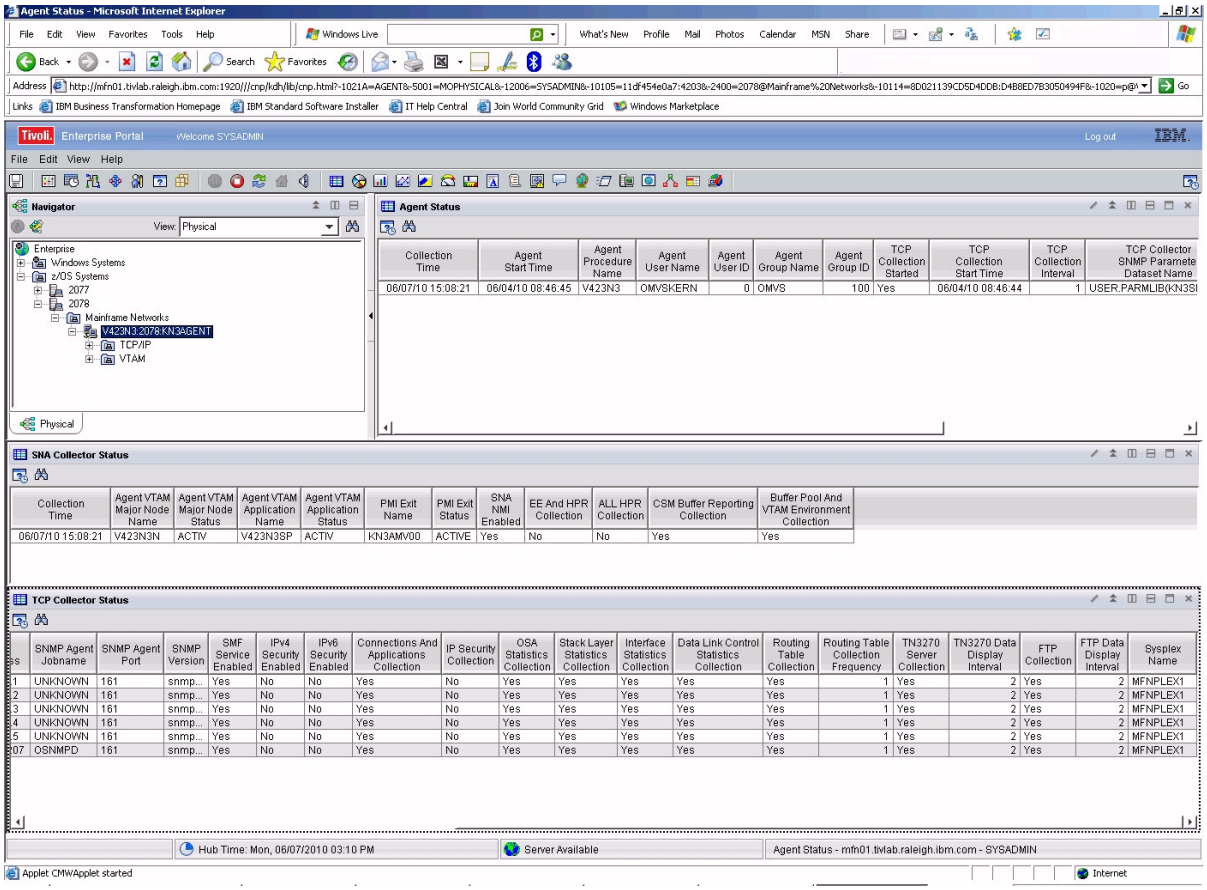

Figure 1. The Agent Status workspace

Use this workspace to verify configuration of the selected IBM Z OMEGAMON Network Monitor monitoring agent and to find information about the agent, VTAM, and the TCP/IP address spaces on your system that you might need to troubleshoot data collection problems. Some troubleshooting procedures in this section require that you use this workspace to confirm a problem diagnosis.

Problem 1: Monitoring agent is offline

In Tivoli Enterprise Portal, when you navigate to the Managed System Status workspace from the Enterprise node of the navigation tree, you cannot find the IBM Z OMEGAMON Network Monitor agent (agentProcName:systemSMFID:KN3AGENT), or you find it marked with a status of *OFFLINE. If you expand the navigation tree under IBM Z OMEGAMON Network Monitor for a z/OS® system, the agent node is not there or is gray.

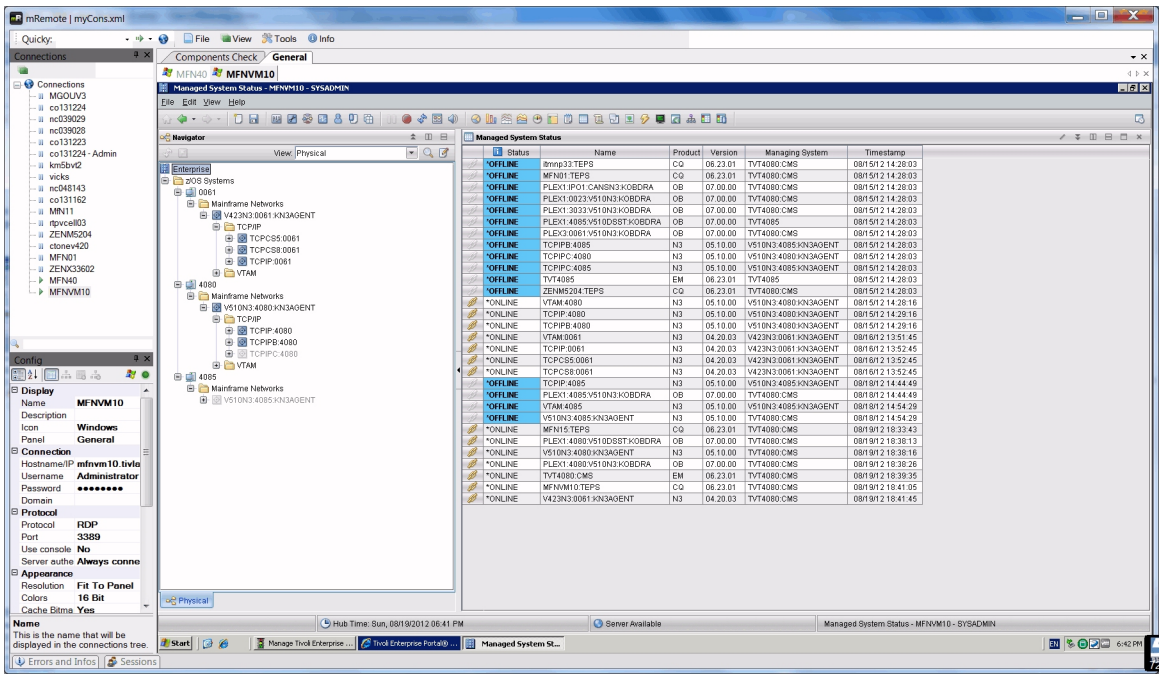

Figure 2. Tivoli Enterprise Portal OFFLINE indicators

In the enhanced 3270 user interface, after you log on to the 3270 interface and drill down to the IBM Z OMEGAMON Network Monitor workspaces, the subpanels in the workspaces contain no data, and the status of the Mainframe Networks node indicates that the agent is OFFLINE.

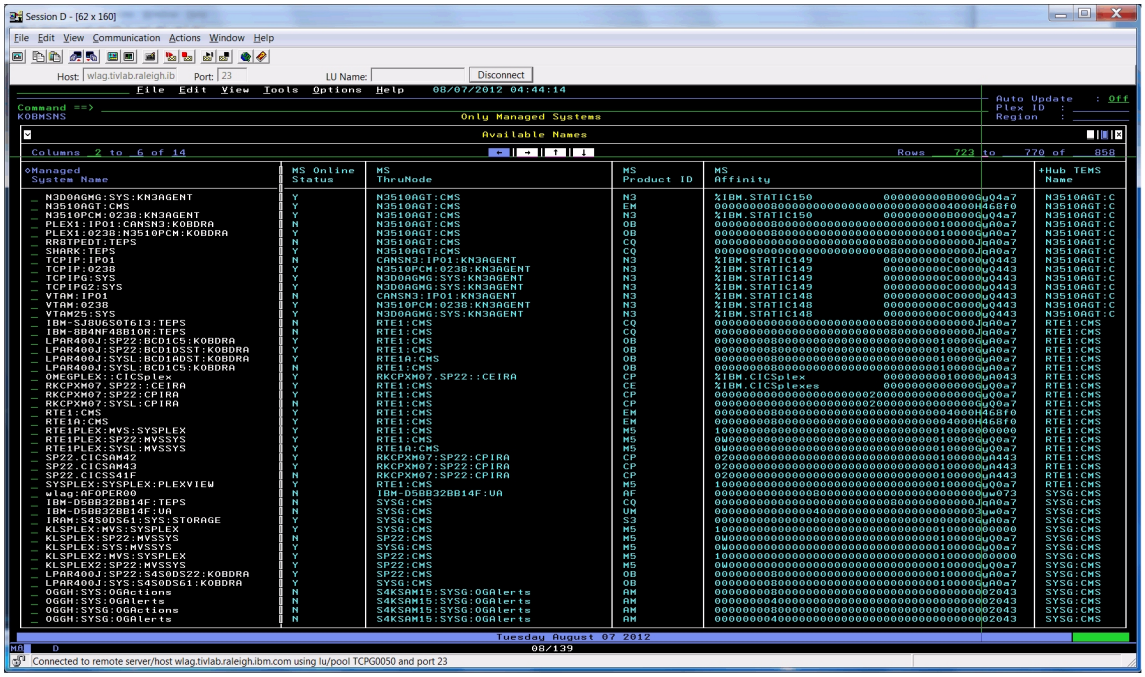

Figure 3. Enhanced 3270 user interface OFFLINE indicators

The **Hub TEMS Name** column contains the name of the hubs monitoring servers. Locate all instances of the IBM Z OMEGAMON Network Monitor agent (agentProcName:systemSMFID:KN3AGENT) for the hub monitoring server that you are interested in. Check the value of the **MS Online Status** (managed system online status) column to determine whether the IBM Z OMEGAMON Network Monitor monitoring agent is currently registered with the hub monitoring server.

When the IBM Z OMEGAMON Network Monitor agent address space is active but shows the **MS Online Status** value as **N** (meaning it is offline), this usually means that a configuration error is preventing the

monitoring services components from communicating with each other. It might also be that the IBM Z OMEGAMON Network Monitor agent address space had experienced an abend.

The symptoms in this section help you identify common causes of this problem.

Unable to connect to location server or to find running CMS on CT_CMSLIST
You look in RKLVLOG and you see messages similar to these:

```
(0000-F0B9832B:kdcc1sr.c,460,"rpc__sar") Connection failure: "ip.pipe:#ip_address:1918",
1C010001:1DE00045,186, 5(2), FFFF/1, d65200:1.1.1.10, tms_ctbs621:d8289a
(0001-F0B9832B:kdcl0cl.c,142,"KDCL0_ClientLookup") status=1c020006, "location server
unavailable",
ncs/KDC1_STC_SERVER_UNAVAILABLE (0002-F0B9832B:kraarreg.cpp,1543,"LookupProxy") Unable to
connect
to broker at ip.pipe:dyn9027132193.raleigh.ibm.com: status=0, "success", ncs/KDC1_STC_OK
(0000-F0B9832B:kdcc1sr.c,566,"rpc__sar") Endpoint unresponsive: "ip:#ip_address:1918",
1C010001:1DE0000F, 33, 5(2), FFFF/2, d65200:1.1.1.10, tms_ctbs621:d8289a
(0000-F0B9832B:kdcl0cl.c,142,"KDCL0_ClientLookup") status=1c020006, "location server
unavailable",
ncs/KDC1_STC_SERVER_UNAVAILABLE
(0001-F0B9832B:kraarreg.cpp,1543,"LookupProxy") Unable to connect to broker at ip:dyn9027132193.
raleigh.ibm.com: status=0, "success", ncs/KDC1_STC_OK
(0002-F0B9832B:kdcc1sb.c,94,"rpc__set_binding") status=1dc0000c, "KDE1 API call failed",
ncs/KDC1_STC_KDE1APIFAILURE
(0003-F0B9832B:kdcl0al.c,95,"KDCL0_AgentLookup") status=1c020006, "location server
unavailable",
ncs/KDC1_STC_SERVER_UNAVAILABLE
(0004-F0B9832B:kraarreg.cpp,1543,"LookupProxy") Unable to connect to broker at sna:#*.*.*.*:
status=0, "success", ncs/KDC1_STC_OK
(0005-F0B9832B:kraarreg.cpp,1785,"FindProxyUsingLocalLookup") Unable to find running CMS on
CT_CMSLIST <IP.PIPE:9.27.132.193;IP.UDP:9.27.132.193;>
```

These messages indicate that the IBM Z OMEGAMON Network Monitor agent is unable to communicate with the Tivoli Enterprise Monitoring Server. To address these issues, verify that the information you provided about the hub monitoring server is specified correctly.

To perform the corrective action using the Configuration Tool, complete the following steps:

1. Start the Configuration Tool, select **3 Configure products > 1 Select product to configure > IBM Z OMEGAMON Network Monitor** from the Product Selection menu.
2. Locate the IBM Z OMEGAMON Network Monitor RTE that produced the error.
3. Next to the RTE. specify, **C** (Configure).
4. Select **3 Specify Agent address space parameters**.
5. In the Specify Agent Address Space Parameters panel of the Configuration Tool, verify that the name of the hub monitoring server (TEMS) is correct and that the priority of the communications protocols is correct.
6. To display the Communication Selection for *agentProc* panel, select, the key labeled **CMS List**.
7. To see the Specify Agent Primary TEMS Values panel, select the key labeled **Advanced**.
8. Verify that the Primary TEMS Name, the network address or hostname, and port numbers for the hub monitoring server (TEMS) are correct.

If you make any changes to the values on these panels, select **4 Create runtime members** from the CONFIGURE IBM Z OMEGAMON Network Monitor / RTE" panel. This action generates updates to KN3ENV member in the *&hilev.&midlev.&rtename.*RKANPARU dataset based on your changes. Restart the agent after you change KN3ENV.

To perform the corrective action using PARMGEN, complete the following steps:

1. Locate the configuration profile for this instance of the monitoring agent by doing the following steps:
   a. Run the *&hilev.&midlev.*TKANCUS data set. The "Welcome to the z/OS Installation and Configuration Tool for IBM Tivoli Management Services (TMS)" dependent products panel is displayed.

b. Select option **5 Configuration z/OS product with Parameter Generator Workflow (PARMGEN)** and press **Enter**. The Parameter Generator Workflow - Welcome panel is displayed. The **RTE_NAME** field shows the RTE whose values you are viewing.

c. Select option **8 Customize PARMGEN Configuration Profile** for the specified RTE and press **Enter**. The CUSTOMIZE PARMGEN CONFIGURATION PROFILE MEMBERS panel to be displayed.

d. Select option **1 RTE LPAR CONFIG profile in WCONFIG** for the specified RTE. The PARMGEN configuration profile opens.

2. In the configuration profile, locate the RTE_TEMS_NAME_NODEID parameter if your hub monitoring server is local. If it is remote, locate the KDS_HUB_TEMS_NAME_NODEID parameter. This value indicates the unique name that identifies the monitoring server for internal processing. Verify that this name is correct.
3. Locate the following parameters and verify that the values specified for them are correct for this system:
   - RTE_TCP_HOST contains the TCP/IP host name or dotted decimal IPV4 address of the z/OS system where the runtime environment is being defined.
   - RTE_TCP_STC identifies the TCP/IP stack (started task name) that is being used.
   - RTE_TCP_PORT_NUM contains the number of the well-known port to be used for IP communications.

   For more information about these parameters, see the *IBM Tivoli OMEGAMON XE and IBM Tivoli Management Services on z/OS Common Parameter Reference*.
4. If you change any of these values, update the configuration values in the RTE:

   a. Return to the **Parameter Generator Workflow - Welcome** panel.

   b. Choose **10 $PARSE Create the RTE members and jobs**. The SUBMIT $PARSE BATCH JOBS TO COMPLETE PARMGEN SETUP panel is displayed.

   c. Choose option **1 Composite $PARSE JOB**.

   d. Submit the JCL presented to you.

   e. Press **PF3** twice to return to the Parameter Generator Workflow - Welcome panel.

   f. Choose option **11 Submit batch jobs to complete PARMGEN setup**. The SUBMIT BATCH JOBS TO COMPLETE PARMGEN SETUP panel is displayed.

   g. Choose Option **11 KCIJPW2R WK* -> RK* deployment**.

   h. Submit the JCL presented to you. All return codes should be zero.

   i. Exit PARMGEN.

If you have verified that the monitoring server information is correct and the problem persists, refer to the *IBM Tivoli Monitoring: Troubleshooting Guide*, looking at such topics as "Installation and configuration troubleshooting," "Troubleshooting z/OS-based installations," and the "IBM Tivoli Monitoring z/OS initialization checklist."

To understand other connectivity issues with Tivoli Management Services components, see the "Connectivity issues" section in the *IBM Tivoli Monitoring: Troubleshooting Guide*.

Tivoli Enterprise Portal on z/OS starts normally in a system without the Integrated Cryptographic Service Facility but the Tivoli Enterprise Portal Server cannot connect to the Tivoli Enterprise Portal
If the monitoring server is configured to use cryptographic services, but the ICSF address space is not running in the same LPAR as the monitoring server, the portal server might not be able to connect to the HUB monitoring server. This issue can be resolved in one of two ways: by starting the ICSF address space on the same LPAR as the HUB monitoring server or by reconfiguring the monitoring server to not use ICSF services.

The following messages are displayed when the portal server cannot connect to the monitoring server:

```
Call to KLE_CryptoGetFP failed with exit code 8. Cannot get CSNBXAE function pointer
Logon validation did not complete - system error. User:username
keyfile:key ip:ip_address
```

If you see these failed connection messages, take corrective action to enable the Tivoli Enterprise Portal Server to connect to the Tivoli Enterprise Portal.

You can take this action in one of two ways:

- By starting the ICSF address space manually. This action fixes the problem temporarily until you restart IBM Tivoli Monitoring.
- If you do not want to run the ICSF address space, you can reconfigure, by using either the Configuration Tool or PARMGEN.

To reconfigure using the Configuration Tool, perform the following steps:

1. From the Configuration Tool **Configure the Tivoli Enterprise Monitoring Server** step, select **Specify configuration values > Integrated Cryptographic Service Facility (ICSF) installed**.
2. Specify **N** in the **Integrated Cryptographic Service Facility (ICSF) installed?** field.
3. Complete the configuration.

To reconfigure using PARMGEN, do the following:

1. Locate the configuration profile for this instance of the monitoring agent. See Step 1 under "Unable to connect to location server or to find running CMS on CT_CMSLIST" on page 6 to determine how to locate the configuration profile.
2. In the configuration profile, locate the following KDS_TEMS_SECURITY_KDS_VALIDATE parameter and set the value to **N**. Save the configuration profile.
3. If you change any of these values, you must update the configuration values in the RTE. See PARMGEN **Step 4** under"Unable to connect to location server or to find running CMS on CT_CMSLIST" on page 6.

After the Tivoli Enterprise Monitoring Server configuration is complete and the server is running, you must modify the portal server configuration to use an older, less robust encoding algorithm by performing the following steps:

1. Edit the kfwenv file in *install_dir*\CNPS (where *install_dir* is C:\IBM\ITM by default) with a text editor.
2. Uncomment the following text:

```
USE_EGG1_FLAG=1
```

3. Save the file and exit.
4. Stop the Tivoli Enterprise Portal Server, if it is running, and then start it.

U200 Port in use message found in RKLVLOG, indicating an incorrect default port for TCP/IP profile
After you have completed all installation and configuration of a monitoring agent and try to start the agent, you might find a "U200 Port in use" abend message in RKLVLOG, indicating a connection failure.

One possible cause of this problem is that the port that is defined for communication among the Tivoli Management Services components was reserved for a different application in the PORT statement of your TCP/IP profile.

If this is the case, perform the following steps:

1. Verify that the existing port reservation is no longer needed or choose a different port for communication among the Tivoli Management Services components.
2. Edit your TCP/IP profile to reserve the port for the Tivoli Enterprise Portal started procedure or change your configuration (Tivoli Enterprise Portal Server, Tivoli Enterprise Portal, and monitoring agent) to communicate with the Tivoli Enterprise Portal on a different port.
3. Stop and then start the started procedures affected by your configuration change.

Monitoring agent fails to start with message KN3I008E
The monitoring agents fails to start or fails to return data to a specific table in a workspaces, and you find this message in the RKLVLOG:

```
KN3I008E CALL TO ADDDATA FUNCTION FAILED, RETURN CODE=retcode, FOR TABLE=table
```

An error has occurred when the monitoring agent tried to return data for the table specified by the table variable and failed. The most common cause of this error is a query that returns a large number of rows of data, causing an out-of-memory condition. This problem also occurs when you upgrade from an environment unless you specifically update these values to the new defaults.

IBM Tivoli Management Services: Engine (TMS:Engine) is a common component for both the Tivoli Enterprise Monitoring Server and for IBM Z OMEGAMON Network Monitor Monitoring. It has startup parameters that are defined with appropriate defaults for many customer environments, and these parameters are defined in the data set pointed to by the RKLVIN DD statement in the started task procedure.

Options are to either modify the query so that it returns fewer rows of data or change the LIMIT and MINIMUM values in *&rhilev..&midlev.*RKANPARU.

The current recommendation for the IBM Z OMEGAMON Network Monitor Agent is MINIMUM(768000,X) and LIMIT(24,X) as specified in member (KN3SYSIN). The current recommendation for the Tivoli Enterprise Monitoring Server in (KDSSYSIN) is MINIMUM(768000,X) and LIMIT(24,X) or higher. Note that these values may change. As the number of queries and items monitored increases so does the need for storage. Both agent and monitoring server require LIMIT(24,X) for the larger self-describing agent (SDA) files to be transferred successfully.

If the hub monitoring server and the remote monitoring server reside on z/OS, they must also be modified to use LIMIT(24,X) Follow process outlined in the *Configuring the Tivoli Enterprise Monitoring Server on z/OS* book and ensure that the `Maximum storage request size (Extended)` value is set to greater than or equal to 24.

The LIMIT parameter can be used to specify the largest block of primary storage or extended storage that can be allocated. The syntax for setting the largest block of extended storage is shown in the example (note that setting the limit for primary storage is not recommended): LIMIT(n,X)

This value is specified in bytes, as a power of 2. For example, if n is 22, the largest block that can be allocated is 4 MB. If the LIMIT value is too small and a process in ITMS:Engine attempts to allocate a block of storage larger allowed by LIMIT, a program interruption U0100 or U0200 results When managing a large number of connections or TN3270 sessions, use a value of LIMIT (25,X) or greater.

Problem 2: No data or missing data in one or more workspaces

If you navigate to a workspace and see no data, check for one of the following common causes before further investigating the problem:

Filter settings are preventing or delaying data display
In this scenario, you clicked on a navigation item or you clicked on a link and the workspace either displays no data or does not show all the data that you are expecting.

Many of the product-provided workspaces in the IBM Z OMEGAMON Network Monitor product are defined with filters. Each view in the workspace can have filters defined. These filters restrict the data that is displayed to the rows that are interesting to the user.

To check these filters in Tivoli Enterprise Portal, perform the following steps:

1. To view the filters that are defined to a workspace, right-click in the view and select **Properties**. There are two kinds of filters to check: view filters and query filters.
2. To check the view filters, select the **Filters** tab. The view filters determine which attributes are displayed in the views and filter out rows of data returned by queries.
3. If modifying the view filters does not produce the results you want, click on the **Select a Query** button to view or change the filters that are defined in the Specifications view of the query editor. Adjust the filters to meet the needs of your enterprise. Some queries are used by multiple views and workspaces. Changing the query filter changes the behavior of all views and workspaces that use the query.

See the *IBM Z OMEGAMON Network Monitor: Tivoli Enterprise Portal User's Guide* or the *IBM Z OMEGAMON Network Monitor: Enhanced 3270 User Interface Guide* for information on the filters that are defined for

the product-provided workspaces. See the *IBM Tivoli Monitoring: User's Guide* for information on defining and customizing workspaces and views.

To check these filters in the enhanced 3270 user interface, perform the following steps:

1. From the **View** menu at the top of any 3270 workspace, select **Filters** to displays the filters that are defined for the current workspace or use the assigned PF key (the default setting is PF4).
2. See the "Filtering" topic in the *IBM Tivoli OMEGAMON XE and Tivoli Management Services Enhanced 3270 Interface Guide* for information about setting and changing filter values.

Data collectors are not started
To check the status of data collectors, use the Agent Status workspace and check the values that are shown for the TCP Collection Started and SNA Collection Started attributes.

One or both of these attributes must have a value of **Yes**.

- If the SNA Collection Started attribute has a value of **No** and you want to see VTAM environment and Buffer Pool data, then some aspect of the VTAM configuration was not performed correctly. See Chapters 4, 5, and 6 of the *IBM Z OMEGAMON Network Monitor: Planning and Configuration Guide*.
- If the TCP Collection Started attribute has a value of **No**, use the z/OS MODIFY command to stop TCP data collection and restart it. See the Commands appendix of the *IBM Tivoli IBM Z OMEGAMON Network Monitor: Planning and Configuration Guide* for information about issuing the `KN3FCCMD START TCPC` command.

If you are using only the enhanced 3270 user snterface, the agent collector status can be determined by examining the RKLVLOG of the monitoring agent address space. Perform the following steps:

1. Scroll to the end of the RKLVLOG output from the monitoring agent address space.
2. Issue the following command to find the latest occurrence of the Agent status report:

   ```
   FIND KN3FC095 PREV
   ```

   You will see a series of KN3FC095 messages produced periodically. These messages report the data collection status for all collector components.
3. Review the KN3FC095 messages to determine whether data collection is enabled for the component for which you are not seeing data displayed.
4. Use the `KN3FCCMD` commands to modify the state of each data collection component. These commands are documented in an appendix of the *IBM Z OMEGAMON Network Monitor: Planning and Configuration Guide*.

Data collection options are incorrect
In addition to verifying that data collection has started, also verify which data collection options are enabled by looking at the attributes in the TCP Collector Status and SNA Collector Status tables of the Agent Status workspace.

These attributes show the data collection options that you specified when you set up this instance of the monitoring agent:

Table 1. Parameters that affect data collection options

Configuration Tool	**PARMGEN**
ALL HPR Collection	KN3_TCP_ALLHPR
Buffer Pool And VTAM Environment Collection	KN3_SNA_VTAM_COLLECT_DATA
CSM Buffer Reporting Collection	KN3_TCP_CSM
EE And HPR Collection	KN3_TCP_EEHPR
Connections and Applications Collection	KN3_TCP_CONN
FTP Collection	KN3_TCP_FTP

Table 1. Parameters that affect data collection options (continued)	
Configuration Tool	**PARMGEN**
IP Security Collection	KN3_TCP_IPSEC
TN3270 Server Collection	KN3_TCP_TN3270

If the collection option associated with the data you want to see has a value of **No**, use the Configuration Tool or PARMGEN to enable it. See Chapter 5 of the *IBM Z OMEGAMON Network Monitor: Planning and Configuration Guide* for information on how to enable data collection using the Configuration Tool and Chapter 6 to enable data collection using PARMGEN.

Data collectors are started, but not enough time has elapsed for data to be available
You can verify that data collection has been running long enough for data to be displayed.

For some of the workspaces, data is not available for display until three collection intervals have passed. To verify that the three collection intervals have passed, go to the Agent Status workspace and do the following:

1. Multiply by 3 the value shown for the TCP Collection Interval attribute of the Agent Status table. The result is the number of minutes required for three TCP data collection intervals to elapse.
2. Add the results of this operation to the value shown for the TCP Collection Start Time attribute and compare it to the current time.
3. Multiply by 3 the value shown in the SNA Collection Interval column of the Agent Status table. The result is the number of minutes required for three SNA data collection intervals to elapse.
4. Add the result to the value shown for the SNA Collection Start Time attribute and compare it to the current time of this operation.

You can also look in the PARMGEN configuration profile to determine the values for the following parameters, which show collection intervals:

- `KN3_SNA_VTAM_SNAC_SNACINTV` (VTAM)
- `KN3_TCP_SAMPLE_INTERVAL` (TCP/IP)
- `KN3_TCP_FTP_DSPINTV` (FTP)
- `KN3_TCP_TN3270_DSPINTV` (TN3270)

See Step 1 under“Unable to connect to location server or to find running CMS on CT_CMSLIST” on page 6 to determine how to locate the configuration profile.

Administrator has not given a user permission to view certain data
Administrators control which users can access workspaces on a per-workspace basis

If an operator does not see data for a particular workspace, this operator might not have permission to view this type of data. See the *IBM Tivoli Monitoring: Administrator's Guide* for more information about permitting and restricting operator access to workspaces for Tivoli Enterprise Portal. See the SAF information in the *IBM Tivoli IBM Z OMEGAMON Network Monitor: Planning and Configuration Guide* for information about permitting and restricting 3270 users access, defined as who can use which systems and see what data, for the enhanced 3270 user interface. See also the "Configuring OMEGAMON Enhanced 3270 User interface security" technote, found at http://www-01.ibm.com/support/docview.wss?uid=swg21606218&myns=swgtiv&mynp=OCSS2JNN&mync=R.

"MSN not found" message displayed for the enhanced 3270 user interface
When you display a panel in the Enhanced 3270 User Interface, you might see an "MSN not found" message. The managed system that you are attempting to view is not known at this time. The managed system may have recently gone offline, or if your monitoring environment was recently started, the monitoring agents might not have registered with the hub monitoring server and might not have been discovered by the enhanced 3270 user interface.

See “Problem 1: Monitoring agent is offline” on page 4 for information about how to determine when an agent if offline.

Also check the status of the data retrieval agent (DRA). Search the RKLVLOG for instances of KOBDR. If you see a message similar to the following messages:

```
KOBDRAG not found
```

Check the E3270 load libraries are in the RKANMODL load library concatenations for the monitoring agent and that the KDSLLIST member in RKANPAR (not RKANPARU) to ensure that these load libraries have an entry for KOBAGENT.

The "MSN not found" message may also be displayed when the monitoring agent has recently started and the enhanced 3270 user interface has not discovered the newly started monitoring agent. Look in the RKLVLOG if your hub or remote monitoring server is running on z/OS, or the MS log if your hub monitoring server is running on a distributed platform, for following message:

```
Remote node <stcname:sysid:KN3AGENT> is ON-LINE.
```

If any instances of this message are written after the last registry refresh occurs (message KOBCM0058I in the SYSPRINT log of the enhanced 3270 user interface started task), you must refresh the DRA Registry. The database resource adapter (DRA) registry tracks the connections and disconnections from database control, telling the enhanced 3270 user interface when a shutdown of DBCTL has been requested or if DBCTL has failed. This facility manages threads, establishing contact with the DBCTL address space and loading the DRA startup parameter table.

The DRA registry is refreshed when the enhanced OMEGAMON 3270 user interface (CANSTOM) is started. A refresh is also done internally every five minutes, by default (see message KOBCM0054I for your registry refresh interval).

To refresh this registry, either restart your enhanced OMEGAMON 3270 user interface started task, wait for the default refresh, or issue the following command:

```
/F canstom,REGREFRESH
```

You can also refresh the registry by opening the Enhanced OMEGAMON 3270 User Interface Tools pull-down and selecting **Option 3. Registry Refresh**. The following messages found in the SYSPRINT log indicate that registry refresh has completed:

```
KOBCM0058I: Registry Refresh statistics:
+           Refresh completed in      = 162 millisec
+           Hubs Currently active     = 1
+           Hubs No longer active     = 0
+           Hubs Just added           = 1
+           DRAs Currently active     = 1
+           DRAs Newly discovered     = 1
+           DRAs Removed              = 0
+           DRAs Registration errors  = 0
+           MSNs Currently registered = 26
+           MSNs Newly discovered     = 26
+           MSNs Removed              = 0
+           MSNs With TEMS errors     = 0
+           MSNs Registration errors  = 0
+           MSLs Currently registered = 26
+           MSLs Newly discovered     = 26
+           MSLs Removed              = 0
+           MSLs With TEMS errors     = 0
+           MSLs Registration errors  = 0
```

Problem 3: No data in a particular type of workspace

This category covers lack of data in the workspace types in the IBM Z OMEGAMON Network Monitor monitoring agent. These include:

- “No data in Enterprise workspaces” on page 13
- “No data in OSA workspaces” on page 14

- “No data in IPSec workspaces” on page 18
- “No data in FTP and TN3270 workspaces” on page 19
- “No data in EE, HPR, and CSM workspaces” on page 20
- “No data in the VTAM Address Space and VTAM Buffer Pool Summary workspaces” on page 22
- “No data in TCP/IP workspaces” on page 23

No data in Enterprise workspaces
In version 5.1.0, enterprise views were introduced to IBM Tivoli IBM Z OMEGAMON Network Monitor users in the new enhanced 3270 user interface. In version 5.1.1, these enterprise views are made available to users who prefer Tivoli Enterprise Portal using the new set of Enterprise Networks workspaces, an addition to the existing Navigator view.

The problems in this section concern issues that might resulting in seeing no data in Enterprise workspaces:

- “Enterprise workspaces do not display data from monitoring agents previous to v5.1.0” on page 13
- “Enterprise Networks workspaces that include views with "Top 5" in the title might display more than five items in a "Top 5" view when multiple LPARs are being monitored” on page 14
- “No data in Enterprise Networks workspaces” on page 14

For other troubleshooting scenarios involving Enterprise Networks workspaces, see the following:

- “Enterprise_Networks Navigator view is not available in Tivoli Enterprise Portal” on page 30
- “No data in Enterprise Networks workspaces” on page 14
- “OMVS segment errors found in system log on z/OS v2.1 systems” on page 29
- “Symptom 3: No TCP Connection data in FTP workspaces” on page 20
- “Unexpected data or no data returned with you specify a historical timespan for any Enterprise Networks workspace and some physical Navigator workspaces” on page 34

Enterprise workspaces do not display data from monitoring agents previous to v5.1.0
Enterprise workspaces do not contain data from pre v5.1.0 and v5.1.1 instances of the IBM Z OMEGAMON Network Monitor monitoring agents.

This is not an error. The product is working as designed.

In Tivoli Enterprise Portal, the Enterprise_Networks logical Navigator view workspaces were designed to query v5.1.0 and v5.1.1 monitoring agents only. These Enterprise Networks workspaces also display new attributes introduced in v5.1.0 and v5.1.1.

The enhanced 3270 user interface was introduced in v5.1.0. They were designed to query v5.1.0 and v5.1.1 monitoring agents only and display new attributes introduced in v5.1.0 and v5.1.1.

The only exception to this rule is the Enterprise OMEGAMON for Mainframe Networks Health workspace, which displays information about all supported versions of the Mainframe Networks monitoring agent in a managed system.

These workspaces were designed to work with IBM Z OMEGAMON Network Monitor V5.1.0 agents and later:

- Enterprise Application Health
- Enterprise HiperSockets Interfaces Overview
- Enterprise Interfaces Overview
- Enterprise OSA Interfaces Overview
- Enterprise OSA-Express Channels Overview
- Enterprise OSA-Express Ports Overview
- Enterprise TN3270 Find
- Enterprise TN3270 Server Overview

These workspaces were designed to work with IBM Z OMEGAMON Network Monitor:

- Enterprise Connections Find
- Enterprise Connections Health
- Enterprise EE Connections Overview
- Enterprise FTP Sessions Find
- Enterprise FTP Sessions Overview
- Enterprise FTP Transfers Find
- Enterprise HPR Connections Overview

Enterprise Networks workspaces that include views with "Top 5" in the title might display more than five items in a "Top 5" view when multiple LPARs are being monitored

Enterprise Networks workspaces that include views with "Top 5" in the title might contain more than five items when multiple LPARs are being monitored.

The Enterprise_Networks workspaces affected are as follows:

- Enterprise Application Health
- Enterprise FTP Sessions Overview
- Enterprise OSA-Express Channels Overview

This is not an error. This situation occurs because the queries for these views use the FIRST SQL function to return the top five rows for a given table attribute per system. This query is distributed to all monitored systems, so there could be up to five rows of data returned per system across the enterprise.

No data in Enterprise Networks workspaces

You start Tivoli Enterprise Portal and immediately open the Enterprise_Networks logical Navigator view, but these workspace might contain no data.

This situation can occur because you have accessed this logical view before any managed systems are available. The systems running the Mainframe Networks monitoring agent are not yet connected.

If you encounter this situation, you may need to recycle Tivoli Enterprise Portal Server before you can see data.

No data in OSA workspaces

OSA workspaces could be empty for several reasons. The following symptoms help you identify your problem and tell you how to address it.

If you are not experiencing one of the symptoms discussed in the section that follows, you could also be experiencing an SNMP error.

For more information about configuring and starting the OSA subagent, see the following sources:

- The "Preparing your z/OS environment" chapter in the *IBM Tivoli IBM Z OMEGAMON Network Monitor: Planning and Configuration Guide*.
- The section on configuring the Open System Adapter in *IBM z/OS Communications Server: IP Configuration Guide Open Systems Adapter-Express Customer's Guide and Reference* (SA22-7476).
- *IBM Open Systems Adapter-Express Customer's Guide and Reference* (SA22-7935).
- The OSA Redbook *IBM OSA-Express Implementation Guide*.

Symptom 1: Message KN3CT052 is found in the RKLVLOG with return code 205

The monitoring agent reports a packet error when it attempts to collect TCP/IP data, and you find this error intermittently in the RKLVLOG:

```
KN3CT052 SNMP MANAGER ERROR: RC(205)
```

If DBUG is enabled for SNMP, packet errors are reported in the KN3ACTCS log.

This error is an SNMP packet error.

These errors indicate that the OSA-Express SNMP subagent (IOBSNMP) is receiving timeout errors while it is waiting for responses from the OSA adapters. This problem results in the IBM Z OMEGAMON Network Monitor monitoring agent receiving a packet error from the SNMP agent to which the data request was sent. This causes message KN3CT052 to be generated.

The `RC(205)` in the KN3CT052 message indicates that the problem is an SNMP packet error. The monitoring agent is simply reporting that it received an invalid packet.

This error is not an OMEGAMON problem, but is instead a TCP/IP or SNMP issue.

Symptom 2: Message KN3CT057 is found in the RKLVLOG

OSA workspaces contain no data and the RKLVLOG contains this message:

```
KN3CT057 OSA SNMP DATA COLLECTION TYPE=UNAVAILABLE, TCPIP=stack_name
```

This error is a data collector issue.

The z/OS SNMP agent gets data about the OSA adapters on your system from either the OSA-Express Direct SNMP subagent (IOBSNMP), or the TCP/IP SNMP subagent that uses the OSA/SF application (IOAOSASF) and the OSA/SF sockets application (IOASNMP). If you see message KN3CT057 with a TYPE value of UNAVAILABLE, then the OSA SNMP subagent might not be started or might be configured incorrectly. See the IBM Z OMEGAMON Network Monitor: Planning and Configuration Guide, section “Starting the OSA adapter SNMP subagent,” for information on starting and configuring the OSA subagents.

The IOASNMP or the IOBSNMP OSA data collector must be running in every address space about which you want to collect OSA data.

1. Issue this command from OMVS to determine what OSA agents and subagents are running:

   ```
   osnmp -h hhhhhhh -c ccccccc walk sysordescr
   ```

   where *hhhhhhh* is the TCP/IP hostname or IP address and *ccccccc* is the community name. The sample command response that follows indicates that the IOBSNMP procedure was started and the OSA subagent is available:

   ```
   1.3.6.1.2.1.1.9.1.3.1=z/OS SNMP Agent
   1.3.6.1.2.1.1.9.1.3.2=OSA subagent
   1.3.6.1.2.1.1.9.1.3.3=z/OS TCP/IP SNMP Subagent
   1.3.6.1.2.1.1.9.1.3.4=z/OS OSPF SNMP Subagent
   ```

2. Check the subagent status through the MIB by using either the Open Edition `osnmp` command or by using the IBM Tivoli NetView® on z/OS MIB browser and issuing this command to see which subagents are defined in the MIB:

   ```
   osnmp walk saDescription
   ```

   The output should look something like this:

   ```
   1.3.6.1.4.1.2.4.12.7.1.3.1
   1.3.6.1.4.1.2.4.12.7.1.3.3
   ```

   Where line 1 is the output for the z/OS TCP/IP SNMP subagent and line 2 is the output for the OSA subagent.

3. Check the status of these subagents by issuing this command:

   ```
   osnmp walk saStatus
   ```

   The output of this command should look something like this:

   ```
   saStatus.1 = 1
   saStatus.3 = 1
   ```

   Valid subagent status values are the values that follow:

- 1 = valid
- 2 = invalid
- 3 = connecting
- 4 = disconnecting
- 5 = closedByManager
- 6 = closedByAgent
- 7 = closedBySubagent
- 8 = closedBySubAgentTimeout
- 9 = closedBySubAgentError

Symptom 3: TCP/IP error messages appear on the console when connecting to and disconnecting from OSA/SF

This errors most likely indicates a security issue.

If you use the OSA/SF SNMP sub-agent (IOASNMP), ensure that the appropriate RACF® definitions for this resource have been defined.

Symptom 4: SNMP Agent Port and SNMP Version attributes in the TCP Collector table are blank for all ACTIVE stacks

This symptom indicates that there is a syntax error in the SNMP parameter dataset or that none of the entries in the SNMP parameter dataset has an IP address that matches an address displayed in the IP Address column of the address of a monitored TCP/IP stack.

To correct this problem, edit the TCP Collector SNMP Parameter Dataset and restart the IBM Z OMEGAMON Network Monitor agent. A sample of the SNMP parameter dataset named KN3SNMP is stored in *&rhilev.&midlev.&rtename.*RKANSAMU. Edit this file and copy it to the location that you specified during configuration. For more information about the format of this file, see the SNMP appendix of the *IBM Z OMEGAMON Network Monitor: Planning and Configuration Guide*.

The KN3SNMP file must contain one line for each monitored stack. The IP address specified in each of the lines of the file must be the default home address for the stack. The default home address for a stack is the first address specified in the TCP/IP profile using the HOME statement. The `PRIMARYINTERFACE` statement can also be used to specify the home address for the stack. See the *IBM z/OS Communications Server: IP Configuration Reference* for more information about these statements.

You can also issue this z/OS console command to determine the home address for a stack:

```
D TCPIP,tcpipProcName,NETSTAT,HOME
```

The first address on the home address list displayed with the command is the default home address for the stack.

For more information about the format of the SNMP parameter dataset refer to "Format of the SNMP configuration file" appendix of the *IBM Tivoli IBM Z OMEGAMON Network Monitor: Planning and Configuration Guide*.

Symptom 5: SNMP Agent Jobname in TCP Collector Status table has value of Unknown and message KN3CT053 in RKLVLOG

When you look at the TCP Collector Status table in the Agent Status workspace, you see a value of **Unknown** for the SNMP Agent Jobname attribute of a stack. You also find this message in the RKLVLOG:

```
KN3CT053 SNMP MANAGER REQUEST TIMED OUT. HOST(host_ipaddress)
```

This message indicates that SNMP requests from the IBM Z OMEGAMON Network Monitor SNMP manager to the z/OS SNMP agent are timing out.

If the SNMP Agent Port and SNMP Version attributes in the TCP Collector Status table are not blank, either the SNMP agent for that stack is not started, or the port you specified in the SNMP parameter dataset is incorrect.

If everything is correct, the problem is probably caused by a configuration error. Perform the following steps to locate the error.

1. To verify that the z/OS SNMP agent for a monitored stack is started issue this z/OS console command to determine which address spaces are active:

   ```
   D A,L
   ```

   The z/OS SNMP agent daemon usually has a name that contains the letters *OSNMPD*. If your system has multiple stacks, you must have one for each stack that you are monitoring and for which you want to collect SNMP data. Verify that you see an active z/OS SNMP agent for each monitored stack. If your system has multiple stacks, you must have one for each stack that you are monitoring and would like to collect SNMP data for.

2. To verify that the port number you specified in the TCP collector SNMP parameter dataset for the monitored stack is correct, issue the following command:

   ```
   D TCPIP,tcpProcName,NETSTAT,SOCKETS
   ```

   Compare the port that the SNMP agent daemon (OSNMPD by default) is bound to with the port displayed in the TCP Collector Status table for the stack experiencing the problem. Here is an example of the output from the NETSTAT, SOCKETS command:

   ```
   NAME: OSNMPD SUBTASK: 006FF028
   TYPE: DGRAM STATUS: UDP CONN: 00001FCD
   BOUNDTO: ::..161
   CONNTO: *..*
   ```

   To correct the problem, edit the IBM Z OMEGAMON Network Monitor SNMP parameter dataset so that the line for the stack experiencing the problem has a port number that matches the port that the z/OS SNMP agent is bound to. The line in the SNMP parameter dataset that needs to be edited is identified by the default home address of the stack. This value is displayed in the IP Address column of the TCP Collector Status table.

3. The community name you specified in the TCP collector SNMP parameter dataset (KN3SNMP) for the monitored stack does not match the community name found in the z/OS SNMP agent security and notification destinations configuration file (snmpd.conf). Locate the snmpd.conf file and find the correct community name to specify for the stack that is experiencing the problem. To correct the problem, you might need to edit the snmpd.conf file or the KN3SNMP file or both. Make sure that the community names match in the two files for the stacks you want to monitor. Once the files have been edited to include the correct information, you might need to restart the IBM Z OMEGAMON Network Monitor monitoring agent, the z/OS SNMP agent, or both.

4. The loopback address needs to be granted access to the community you specified for the stack that is experiencing the problem. The agent SNMP manager was modified so that the loopback address is used as the source IP address of requests sent to the z/OS SNMP agents. In prior releases the stack's default home address was used.

   When the z/OS SNMP agent receives a request, the community name in the request is compared to the list of known community names. If a match is found, then the source IP address of the request is compared to the range of IP addresses that is allowed for the community name. Since the loopback address is now the source IP address for the SNMP requests, this address must be given access by the community names that you specified for the monitored stacks in the IBM Z OMEGAMON Network Monitor SNMP parameter dataset.

   For each community name in the IBM Z OMEGAMON Network Monitor SNMP parameter dataset (KN3SNMP), locate the same community name in the z/OS SNMP security and notification destinations configuration file (snmpd.conf), and verify that the loopback address is permitted for that community. If the loopback address is not permitted, modify the definitions in the file. See the *IBM z/OS Communications Server: IP Configuration Reference* for more information about the OSNMP.CONF file and the statements used to configure access to the SNMP agents.

Symptom 6: Displayed name of an LPAR in the OSA LPARs workspace does not map to the correct data

This problem has two dimensions: conflicting recommendations and how Mainframe Networks calculates the OSA LPAR value.

Contradictory recommendations

When users set up their OSA LPARs, they commonly rely on two sources of information:

- *zSeries Partition Identification in an MCSS Processor*, written by John Hughes of the Advanced Technical Support IBM Washington Systems Center and available at this Web address: http://www-03.ibm.com/support/techdocs/atsmastr.nsf/5cb5ed706d254a8186256c71006d2e0a/034714811332437286256e770064f628/$FILE/MCSSPartitions.pdf
- The *IBM zEnterprise® 196 Technical Guide* redbook (SG24-7833), available at http://www.redbooks.ibm.com/redbooks/pdfs/sg247833.pdf

However, the recommendations in these guides are inconsistent.

How the Mainframe Networks monitoring agent calculates OSA LPAR assignments

The Mainframe Networks product relies on two sources of information to calculate the values that appear in the OSA LPARs workspace:

- Data that is returned from a `DIAGNOSE 204` command return the LPAR name and online status of each LPAR. Data for user-defined OSA LPARs are returned with UPID in the range of x'00' to x'3F' , resulting in 64 valid possible designations for OSA LPARS.
- Data that is received from z/OS SNMP Agent returns LPAR performance data along with two values which are used to correlate the data that is returned from the DIAGNOSE command.
  - Logical Channel Subsystem ID value between x'00' - X'03'
  - Multiple image facility (MIF) in the range of x'01' - x'0F'

How to resolve the issue

To properly report LPAR performance metrics in the OMEGAMON for Mainframe Networks product, follow the guidelines outlined in the OSA LPAR designations recommended in the *zSeries Partition Identification in an MCSS Processor*. Specifically this document states the following when defining a UPID:

```
The first digit of the Logical Partition Identifier should be the CSSID and the
  second digit of the Logical Partition Identifier be the MIF Image ID.
```

Do not use these four designations because they do not map correctly to SNMP data when that data is returned:

- x'00'
- x'10'
- x'20'
- x'30'

No data in IPSec workspaces

If no data is displayed in your IPSec workspaces, do the following steps:

1. Navigate to the Agent Status workspace and verify the following information:
   a. Examine the TCP Collector Status Table to verify that the following information for the TCP/IP stack for which data is not available:
      - IPSec collection is configured. The value in the IP Security Collection attribute is **Yes**.
      - IPSec is enabled for the TCP/IP stack. The value in the IPv4 Security Enabled attribute is **Yes**. Additionally, if IP security is enabled for IPv6, the value for the IPv6 Security Enabled attribute is also **Yes**.

b. Look at the Agent Status Table and verify the following information:

- The PAGENT Daemon is started. The value in the PAGENT Daemon Started attribute is **Yes**.
- The IKE Daemon is started. The value in the IKE Daemon Started attribute is **Yes**.

If, in your environment, the jobname, identifier, or step name for the PAGENT and IKE Daemons does not contain the substrings **PAGENT** and **IKED** respectively, verify that these daemons are started by issuing the following command:

```
D A,L
```

Review the output of this command by looking for the jobnames of the daemons. If the daemons are not started, you may also find one of the following messages in the network monitoring interface (NMI) collector log, KN3ANMON:

```
KN3N024E THE IPSEC INTERFACE IN THE interface_path PATH CANNOT BE INITIALIZED.
ERRNO=errno AND ERRNOJR=0xerrnoJr. LOCATION: location_code

OR

KN3N031E AN UNEXPECTED MESSAGE TYPE WAS RECEIVED, msgTypeReceived. LOCATION:
location_code.

OR

KN3N033W KN3N033W THE Z/OS COMMUNICATIONS SERVER STOPPED THE IPSEC INTERFACE WITH
ERRNO=errno AND REASON_CODE=reason_code

OR

KN3N035W INVALID STATE FOR DYNAMIC TUNNEL IN GET_IPTUNDYNSTACK RESPONSE. LOCATION:
location_code.
```

2. Check the NMI collector log, KN3ANMON, for the following message:

```
KN3N023E A RESPONSE WAS RECEIVED FOR IP security DATA FROM TCPIP
WITH ERRNO=111 AND ERRNOJR=0x00000000. LOCATION: 210d102e
```

If you see this message, the agent is not authorized to access the local IPSec NMI. See the "Defining monitoring agent access to the network monitoring interface and commands" section of the *IBM Tivoli IBM Z OMEGAMON Network Monitor Planning and Configuration Guide* for information about how to grant the agent access to this NMI.

No data in FTP and TN3270 workspaces

No data in an FTP or TN3270 workspace might means that the z/OS Communications Server real-time SMF data network management interface is not enabled or the monitoring agent does not have read access to this interface.

To determine whether the real-time SMF data network management interface is enabled for the TCP/IP stack for which you are not seeing data, navigate to the Agent Status workspace and look at the value of the SMF Service Enabled attribute in the TCP Collector Status Table entry for that stack. A value of **Yes** indicates that the service is enabled. A value of **No** indicates that the service is not enabled. A value of **Unknown** indicates that the agent was unable to determine the status of the service due to an error. In that case, you can issue the following command to determine the status of the service:

```
D TCPIP,tcpipprocname,NETSTAT,CONFIG
```

Check the output of the command for the string **SMFSRV** to determine whether the real-time SMF NMI is enabled. In the following example, SMFSRV is not enabled:

```
NETWORK MONITOR CONFIGURATION INFORMATION:
PKTTRCSRV: NO SMFSRV: NO
```

To correct this problem, enable the real-time SMF NMI. For more information about this issue, see the "Enabling FTP and TN3270 monitoring" and "Verifying your z/OS environment setup" sections of the

Preparing your z/OS environment chapter in the *IBM Tivoli IBM Z OMEGAMON Network Monitor: Planning and Configuration Guide*.

Symptom 1: Message KN3N024E is found in the NMI collector log, KN3ANMON

No data is displayed in FTP or TN3270 workspaces, and message KN3N024E is found in the NMI collector log, KN3ANMON:

```
KN3N024E THE SMFService INTERFACE IN THE /var/sock/SYSTCPSM.tcpStackName PATH CANNOT BE
  INITIALIZED. ERRNO=129 AND ERRNOJR=0x053b006c. LOCATION: 2101102c.
```

This message indicates that the real-time SMF data network management interface has not been enabled. See the instructions for determining the status of the interface and correcting the problem under "No data in FTP and TN3270 workspaces" on page 19.

Symptom 2: Message KN3N008E is found in the RKLVLOG

If you find message KN3N008E in the RKLVLOG:

```
KN3N008E THE SMFService INTERFACE CANNOT BE INITIALIZED WITH THE tcpStackName
  JOB NAME. LOCATION: 2101102a
```

Then the monitoring agent user name has not been authorized to access the EZB.NETMGMT.*systemname.tcpipprocname*.SYSTCPSM profile of the SERVAUTH class. Check the Agent User Name and Agent User Group attributes in the Agent Status workspace. You can use your SAF product to verify these values.

The most likely cause of this problem is that you have not run the KN3UAUTH procedure that is provided in the *&rhilev.&midlev.&rtename*.RKANSAMU dataset or might have an error in the procedure. See the "Define monitoring agent access to the network monitoring interface" section of the *IBM Tivoli IBM Z OMEGAMON Network Monitor: Planning and Configuration Guide* for more information.

Symptom 3: No TCP Connection data in FTP workspaces

FTP details workspaces display no TCP Connection data where polled TCP connection data matching an FTP session or transfer is not available.

This is a temporary situation that affects the following workspaces:

- FTP Session Details
- FTP Transfer Details

In these workspaces, if a matching TCP Connection record was collected in the most recent polling interval, then its information will be displayed with the detailed FTP Session or FTP Transfer data. If the FTP Session or FTP Transfer began since the last polling interval, then the data will not be displayed. Also, if the FTP Session or FTP Transfer completed prior to the most recent polling interval, no data will be displayed.

Symptom 4: No sliding window and bucket count data are available for a TN3270 server

If no sliding window or bucket count data is being displayed in your TN3270 workspaces, ensure that you defined the required buckets and monitoring group in your Telnet profile.

See *IBM z/OS Communications Server : IP Configuration Guide* (SC31-8775) for more information about defining buckets and monitoring groups. The Telnet sessions should also use a SNA logmode that supports definite response mode.

No data in EE, HPR, and CSM workspaces

If you navigate to the EE, HPR, or CSM workspaces and do not see any data, then either the z/OS Communications Server SNA network management interface (NMI) is not enabled, an OMVS segment was not created for VTAM, or the IBM Z OMEGAMON Network Monitor agent is not authorized to communicate with the SNA management interface. The symptoms in this section can help you identify the problem.

To verify whether the SNA management interface is enabled, navigate to the Agent Status workspace and look at the value of attribute SNA NMI Enabled in the SNA Collector Status table. A value of **Yes** indicates it is enabled. A value of **No** indicates it is not enabled. A value of **Unknown** indicates the agent was unable

to determine the value due to an error. You can determine whether the SNA management interface is enabled by issuing the following command:

```
d net,vtamopts,option=snamgmt
```

The output from the command looks similar to this:

```
IST097I DISPLAY ACCEPTED
IST1188I VTAM CSV1R13 STARTED AT 13:55:41 ON 08/01/12 581
IST1349I COMPONENT ID IS 5695-11701-1D0
IST1348I VTAM STARTED AS INTERCHANGE NODE
IST1189I SNAMGMT  = NO
IST314I END
```

If, as in the preceding example, you see **SNAMGMT = NO** in the output, then the SNA NMI is not enabled. To correct this situation, enable the SNA NMI by modifying the VTAM start list (ATCSTRxx) with the following statement:

```
SNAMGMT=YES
```

After you modify the VTAM start list, you must stop and start VTAM for the changes to take effect. You might temporarily enable the SNA NMI by using this command:

```
F NET,VTAMOPTS,SNAMGMT=YES
```

For more information, see "Enabling SNA monitoring" in the *IBM Tivoli IBM Z OMEGAMON Network Monitor: Planning and Configuration Guide*.

Symptom 1: Message KN3N024E for the SNAMGMT interface is found in the KN3ANMON log

When you look in the NMI collector log, KN3ANMON, you see the following message:

```
THE netmgmt_interface INTERFACE IN THE interface_path PATH CANNOT BE INITIALIZED. ERRNO=errno
  AND ERRNOJR=0xerrnoJr. LOCATION: location_code.
```

This message indicates that the z/OS Communications Server SNA network management interface (NMI) might not be enabled or an OMVS segment was not created for VTAM. You can verify whether the SNA NMI is enabled or not and correct the problem by following the instructions under section “No data in EE, HPR, and CSM workspaces” on page 20.

If the SNA NMI is enabled, then verify that the administrator has defined an OMVS segment for VTAM. The VTAM OMVS user ID must have write access to the /var directory. See "Authorizing the IBM Z OMEGAMON Network Monitor started tasks for TCP/IP privileges" in the *IBM Tivoli IBM Z OMEGAMON Network Monitor: Planning and Configuration Guide* for more information.

Symptom 2: Message KN3N007E in KN3ANMON log

When you look in the KN3ANMON NMI collector log and see the following message, the IBM Z OMEGAMON Network Monitor monitoring agent user name does not have READ access to resource IST.NETMGMT.sysname.SNAMGMT of the SERVAUTH class:

```
KN3N007E THE SNAMGMT INTERFACE CANNOT BE INITIALIZED. LOCATION: 21011027 [433,init_cs390_SNA]
Failed to initialize SNA management interface on socket
```

The Agent User Name and OMVS Group attributes, displayed in the Agent Status workspace, might be useful in further investigating this problem. You might not have run RACF job KN3UAUTH to give the monitoring agent access to the network monitoring interfaces (NMIs). Review and modify the sample job KN3UAUTH in your *&rhilev.&midlev.&rtename.*RKANSAMU dataset. Information about running the KN3UAUTH job can be found under the topic "Defining Monitoring Agent Access to the network monitoring interface" in the *IBM Tivoli IBM Z OMEGAMON Network Monitor: Planning and Configuration Guide*.

Symptom 3: Message KN3N011E in the KN3ANMON log

When you look in the NMI collector log, KN3ANMON, you see the following message:

```
KN3N011E THE REQUEST FOR EE DATA FAILED WITH RETURN CODE 121 AND REASON CODE 0000711b.
LOCATION: 2103102e
```

The reason code in this message indicates that VTAM is running in a pure subarea environment and that IBM Z OMEGAMON Network Monitor is requesting EE or HPR data, which requires VTAM to be APPN capable.

To resolve the problem, modify the VTAM start list so that VTAM is APPN-capable, or modify the Mainframe Networks agent configuration to indicate that EE and HPR data are not to be collected. See the *IBM z/OS Communications Server SNA Network Implementation Guide* for information about how to make VTAM APPN-capable.

If none of these procedures uncover the problem, contact IBM Software Support.

Problems when the Tivoli OMEGAMON Manager address space is running in a different CSI or RTE

These SQL errors in the RKLVLOG indicate query failures:

```
SQL1_CreateRequest with return code of '202'
```

This return indicates a TEMS Catalog error (RC=202 is named "SQL1_CatalogError").

Problems occur if you have a Tivoli OMEGAMON Manager (TOM) address space running in a SMP/E CSI or Run Time Environment (RTE) other than the one where the IBM Z OMEGAMON Network Monitor V511 agent is installed.

When the TOM address space executes in a different CSI or even a different RTE than where the OMEGAMON for Mainframe Networks agent is running, make sure the TOM has access to the latest product provided queries. A SQL failure, such as `SQL1_CreateRequest with return code of '202'` can occur if the TOM is not aware of new attributes.

The KN3DOC file from the latest V5.1.1 deliverable must be available to all TOM address spaces capable of discovering V5.1.1 agents. To address this problem, make this file available by copying the KN3DOC file to the hlq.RKANDATV concatenation for the TOM started task.

No data in the VTAM Address Space and VTAM Buffer Pool Summary workspaces

Your VTAM Address Space and VTAM Buffer Pool Summary workspaces are not displaying data.

If you navigate to Agent Status workspace, the SNA Collector Status attribute in the Agent Status table has a value of **No**, the Buffer Pool and VTAM Environment Collection attribute in the SNA Collector Status table has a value of **No**, and the Agent VTAM Application Name and PMI Exit Name attributes in the SNA Collector Status table are **blank**.

If you configured the IBM Z OMEGAMON Network Monitor agent to collect Buffer Pool and VTAM environment data in the Configuration Tool on the SPECIFY COMPONENT CONFIGURATION (Page 3) panel, then the symptoms described in this section might help you identify the problem and possible solutions. If you did this same configuration in PARMGEN, you would have specified **Y** as the value for the `KN3_SNA_VTAM_COLLECT_DATA` parameter.

Symptom 1: Message KN3PN011 with RC(112) and KN3PN022 in RKLVLOG

When you look in RKLVLOG you see these messages:

```
KN3PN011 ERROR IN DIALOG KN3DPINI - MODULE(KN3AFOMN) RC(112) SENSE(E3025A02)
LU() APPL() USERID() INIT ERROR
KN3PN022 IBM Z OMEGAMON Network Monitor INITIALIZATION FAILURE -
UNABLE TO OPEN CNM ACB. ACBERFLG(5A)
KN3PN007 IBM Z OMEGAMON Network Monitor INITIALIZATION ERROR
```

If you find these messages, verify that the major node you identified in the Configuration Tool is in VTAMLST and is active. If the IBM Z OMEGAMON Network Monitor monitoring agent is running in the Tivoli Enterprise Monitoring Server address space, the CNM application used to collect the data is defined in VTAM major node **CTDDSN**. If the IBM Z OMEGAMON Network Monitor monitoring agent is configured

to run in its own address space, the CNM application used to collect the data is defined in VTAM major node **CTDN3N**. These major nodes are generated by the Configuration Tool and stored in *&rhilev.&midlev.&rtename.*RKANSAMU. See the *IBM Tivoli IBM Z OMEGAMON Network Monitor: Planning and Configuration Guide* for more information.

To verify if a VTAM major node is active, enter this z/OS command:

```
D NET,ID=major_node_name,E
```

Symptom 2: Message KN3PN011 with RC(116) and KN3PN023 in RKLVLOG

When you look in RKLVLOG, you see these messages:

```
KN3PN011 ERROR IN DIALOG KN3DPINI - MODULE(KN3AFOMN) RC(116) SENSE(D5159908)
LU() APPL() USERID() INIT ERROR
KN3PN023 IBM Z OMEGAMON Network Monitor INITIALIZATION FAILURE -
UNABLE TO ACTIVATE PMI EXIT. ERROR(99)
KN3PN007 IBM Z OMEGAMON Network Monitor INITIALIZATION ERROR
```

These messages indicate that you need to make the IBM Z OMEGAMON Network Monitor agent PMI exit and its aliases accessible to VTAM. See the "Making the performance monitor interface (PMI) exit available to VTAM" section of the *IBM Z OMEGAMON Network Monitor: Planning and Configuration Guide* for information on how to do this. You can verify that you have corrected the problem by issuing the following command after you have started the monitoring agent:

```
D NET,EXIT
```

If the problem is corrected, you see a line in the output that shows one of the agent PMI exit aliases in the *IBM Tivoli IBM Z OMEGAMON Network Monitor: Planning and Configuration Guide* column for the **ISTEXCPM EXIT** and its status is **ACTIVE**, as shown in this example:

```
IST1251I ISTEXCPM 00000510 KN3AMV00 ACTIVE
```

Symptom 3: Monitoring agent initialization fails with message KN3PN003 found in the RKLVLOG

Initialization of the IBM Z OMEGAMON Network Monitor monitoring agent fails with message KN3PN003 found in the RKLVLOG.

```
ACT TERMINATED WITH ERROR -- RC(132) SC(D1040001)
```

To resolve this problem, check with your system administrator to determine if a VTAM Message Flooding Prevention Table is being used, and in particular if the IST097I message is included in that table. To display the table that is being used, issue this command:

```
D NET,VTAMOPTS,OPT=FLDTAB
```

OMEGAMON internally issues a `D NET,PATHTAB` command, and expects to have the IST097I message returned as part of the command response. If the IST097I message is included in the VTAM Message Flooding Prevention Table, that message suppression is preventing the message from being routed back to OMEGAMON. This table is used in situations where a large number of messages are repeated frequently or are issued following an underlying event or condition. The table is a list of messages identified as potential sources of message flooding.

To prevent further instances of the KN3PN003 error, remove the IST097I message from the VTAM Message Flooding Prevention Table.

No data in TCP/IP workspaces

When you look in RKLVLOG, you see these messages, where *pp* is **N3** for IBM Z OMEGAMON Network Monitor.

```
KppCT104 TCP/IP SERVICE THREAD IS TERMINATING KppFCCMD
KppCT011 $ALOC FAILED: RC(4) ERROR(021C) INFO(0000) ROUTINE=routine
```

Here is a sample of the full RKLVLOG entry:

```
KppFC000 KppFCCMD PROCESSING COMPLETE
KLVOP001 OPERATOR(*MASTER*) RKANCMD(KppSTKON)
LINE(9) 'KppFCCMD INSTALL TCPC TCPCVIOU(Kpp)
TCPCINTV(5)'
KppFC000 KppFCCMD PROCESSING COMPLETE
KLVOP001 OPERATOR(*MASTER*) RKANCMD(KppSTKON)
LINE(10) 'KppFCCMD START
TCPC'KppCT011 $ALOC FAILED: RC(4) ERROR(021C) INFO(0000)
ROUTINE=KppACTC5
KppCT104 TCP/IP SERVICE THREAD IS TERMINATING
KppCT107 TCP/IP SERVICE THREAD COMPLETED TERMINATION
```

This problem is the result of an incorrect value specified for the TCPCVIOU parameter on the KppFCCMD commands. You have not specified the TCP/IP virtual input/output (VIO) unit name for your site. Change the value for the TCPCVIOU to VIO or some other acceptable value.

You can change this value temporarily (for the current sessions) by using the KppFCCMD command. For more information about this command, see the Commands appendix in the *IBM Z OMEGAMON Network Monitor: Planning and Configuration Guide*.

To fix this problem permanently by changing the configuration of this RTE, do one of the following reconfiguration tasks:

- To change this parameter in the Configuration Tool:
  1. Start the Configuration Tool.
  2. Navigate to the **Specify Component Configuration Panel** (panel ID KN341P2).
  3. Change the value for the **Specify your site's VIO unit** name field.
  4. Complete the configuration.
- To change the parameter in PARMGEN:
  1. Locate the configuration profile for this instance of the monitoring agent. See Step 1 under "Unable to connect to location server or to find running CMS on CT_CMSLIST" on page 6 to determine how to locate the configuration profile.
  2. In the configuration profile, locate the following KN3_TCP_VIO_UNIT parameter and provide a valid value (a string of up to 8 characters).
  3. Save the configuration profile.
  4. Create the runtime members and restart the PROC. See PARMGEN **Step 4** under "Unable to connect to location server or to find running CMS on CT_CMSLIST" on page 6 about rerunning the $PARSE and deployment step. Then restart the proc.

Problem 4: Incorrect or unexpected data in a workspace

In some instances, the data that you are seeing in a workspace is not what you expected.

If you are unsure about the meaning of an attribute, look it up.

FTP session continues to be displayed after the client user ID is canceled
An FTP session where the z/OS Communications Server TCP/IP stack is acting as the client is displayed as an active session even though it has ended.

The session is displayed in the FTP Session Summary Table view and in the FTP Client Session Count bar chart in the Active FTP Sessions workspace.

This can happen if the user ID that started the FTP session is canceled. In this situation, the FTP client just terminates and no session end record is written. The FTP session seems active even though it has ended.

The session is no longer be displayed when the FTP display interval expires.

Incorrect or unexpected stacks are being monitored
When you configured the IBM Z OMEGAMON Network Monitor monitoring agent, you specified what data you wanted collected for each TCP/IP stack to be monitored, but after the agent is initialized, you find that the agent is monitoring all stacks.

By default, the IBM Z OMEGAMON Network Monitor monitor agent monitors all TCP/IP stacks discovered for an LPAR. If you do not provide data collection options for a specific stack, the global options you specified are used. The list of stacks in *&hilev.&midlev.&rtename.*RKANPARU member KN3TCPMO does not identify the stacks to be monitored. Instead it identifies monitoring overrides for the stacks listed.

When you use the Configuration Tool to configure the IBM Z OMEGAMON Network Monitor agent, you provide global monitoring options by navigating to the SPECIFY CONFIGURATION PARAMETERS panel and then navigating to the SPECIFY COMPONENT CONFIGURATION panel and selecting option 1, Specify component configuration. These options are used to monitor all TCP/IP stacks discovered unless you provide overrides for specific stacks.

To update global values using the Configuration Tool, perform the following steps:

1. Start the Configuration Tool and go to the **CONFIGURE IBM Z OMEGAMON Network Monitor/RTE: *rtename*** panel.
2. From the **CONFIGURE IBM Z OMEGAMON Network Monitor/RTE: *rtename***, choose **2 SPECIFY CONFIGURATION PARAMETERS**.
3. From the **SPECIFY CONFIGURATION PARAMETERS/RTE: *rtename*** panel, choose **2 SPECIFY TCP/IP MONITORED SYSTEMS INFORMATION**. This panel is where global values are set.
4. Specify an **A** or a **U** to display the **ADD/UPDATE TCP/IP MONITORED SYSTEMS INFO** panels.
5. Check whether the value for **Do you wish to monitor this stack** is **No**. If it is, change it to **Yes**. All stacks defined in the RTE are then monitored.
6. Choose **3 Create monitoring agent runtime members**.
7. Submit the JCL that is presented.
8. Exit the Configuration Tool.

To provide overrides for a specific stack, navigate to the SPECIFY CONFIGURATION PARAMETERS panel and then navigate to the SPECIFY TCP/IP MONITORED SYSTEMS INFORMATION panel. On this panel you can specify an **A** or a **U** to display the ADD/UPDATE TCP/IP MONITORED SYSTEMS INFO panels. You use the panels to specify monitoring options that are saved in *&hilev.&midlev.&rtename.*RKANPARU member KN3TCPMO and run the create runtime.

When you use PARMGEN, to configure the IBM Z OMEGAMON Network Monitor agent, perform the following steps:

1. Locate the configuration profile for this instance of the monitoring agent. See Step 1 under “Unable to connect to location server or to find running CMS on CT_CMSLIST” on page 6 to determine how to locate the configuration profile.
2. Open the configuration profile and look for the following parameters to identify which TCP/IP stack is being monitored. Two sets of values are found: default values for all TCP/IP stacks, which are used unless other values are explicitly configures, and the override values. These parameters define the name of the address space and the global values:

```
** Values that describe the address space:
KN3_AGT_CONFIGURATION_MODE        STANDALONE
KN3_AGT_STC                       CANSN3

** IBM Z OMEGAMON Network Monitor Agent parameters:
** TCP/IP Information:
KN3_TCP_VIO_UNIT                  VIO
KN3_TCP_SAMPLE_INTERVAL           5
KN3_TCP_COLLECT_STACK             Y
KN3_TCP_CONN                      Y
KN3_TCP_IPSEC                     N
KN3_TCP_ROUTE_TBL                 Y
KN3_TCP_ROUTE_TBL_FREQ            10
KN3_TCP_FTP                       Y
KN3_TCP_FTP_DSPINTV               2
```

```
KN3_TCP_TN3270                    Y
KN3_TCP_TN3270_DSPINTV            2
KN3_SNMP_CONFIG_FILE "MFN.N3510BAS.NEW510.RKANSAMU(KN3SNMP)"
KN3_TCP_EEHPR                     Y
KN3_TCP_ALLHPR                    N
KN3_TCP_CSM                       Y
KN3_TCP_OSA                       Y
KN3_TCP_INTS                      Y
KN3_TCP_INTE                      Y
KN3_TCP_GLBS                      Y
KN3_SNA_VTAM_COLLECT_DATA         Y
KN3_SNA_VTAM_SNAC_SNACINTV        5
```

These parameters are used to specify the override values:

```
** Define TCP monitoring systems member:
** Specify KN3_TCPXnn_* row for each TCP/IP monitored system:
** Global default is $$$$ (monitored all TCP/IP stack):
** Note: Each KN3_TCPXnn_ROW and KN3_TCPXnn_* set equates to a table
**       row.  Increment the nn value accordingly.
KN3_TCPX                          BEGIN                * Table begin  *
KN3_TCPX01_ROW                    01
KN3_TCPX01_SYS_NAME               $$$$
KN3_TCPX01_TCP_STC                $$$$$$$$
KN3_TCPX01_TCPIP_PROFILES_DSN     TCPIP.PROFILE.TCPIP
KN3_TCPX01_OVRD_GLOBAL_FLAG       N
KN3_TCPX01_OVRD_COLLECT_STACK     Y
KN3_TCPX01_OVRD_CONN              Y
KN3_TCPX01_OVRD_IPSEC             N
KN3_TCPX01_OVRD_ROUTE_TBL         Y
KN3_TCPX01_OVRD_ROUTE_TBL_FREQ    10
KN3_TCPX01_OVRD_FTP               Y
KN3_TCPX01_OVRD_FTP_DSPINTV       2
KN3_TCPX01_OVRD_TN3270            Y
KN3_TCPX01_OVRD_TN3270_DSPINTV    2
KN3_TCPX01_OVRD_OSA               Y
KN3_TCPX01_OVRD_INTS              Y
KN3_TCPX01_OVRD_INTE              Y
KN3_TCPX01_OVRD_GLBS              Y
KN3_TCPX01_TCPIP_PROFILES_MBR     ""
**** KN3_TCPX02_* is a sample row for a second instance.
**KN3_TCPX02_ROW                   02
**KN3_TCPX02_SYS_NAME              0128
**KN3_TCPX02_TCP_STC               &CNMTCPN.
**KN3_TCPX02_TCPIP_PROFILES_DSN    SYS1.TCPIP.PROFILES
**KN3_TCPX02_OVRD_GLOBAL_FLAG      N
**KN3_TCPX02_OVRD_COLLECT_STACK    Y
**KN3_TCPX02_OVRD_CONN             Y
**KN3_TCPX02_OVRD_IPSEC            N
**KN3_TCPX02_OVRD_ROUTE_TBL        Y
**KN3_TCPX02_OVRD_ROUTE_TBL_FREQ   10
**KN3_TCPX02_OVRD_FTP              Y
**KN3_TCPX02_OVRD_FTP_DSPINTV      2
**KN3_TCPX02_OVRD_TN3270           Y
**KN3_TCPX02_OVRD_TN3270_DSPINTV   2
**KN3_TCPX02_OVRD_OSA              Y
**KN3_TCPX02_OVRD_INTS             Y
**KN3_TCPX02_OVRD_INTE             Y
**KN3_TCPX02_OVRD_GLBS             Y
**KN3_TCPX02_TCPIP_PROFILES_MBR    "NMP128"
KN3_TCPX                          END
```

The name of the system to be monitored is represented as four dollar signs ($$$$). Whenever there is not a specific entry in the table for a detected TCP/IP address space, the configuration options provided in the $$$$ entry are used. The configuration options provided in the $$$$ entry are used whenever a specific entry in not included in the table for a detected TCP/IP address space. The $$$$ entry is referred to as the *global default*.

3. Examine the values for KN3_AGT_STC for the global values and KN3_TCPX01_SYS_NAME and KN3_TCPX01_TCP_STC for the override values. If these are not the systems you wanted to monitor, change these values.
4. If you change any values, you must update the configuration values in the RTE. See PARMGEN **Step 4** under"Unable to connect to location server or to find running CMS on CT_CMSLIST" on page 6.

Beginning in V4.2 or later, you can eliminate a TCP/IP stack from the set of stacks to be monitored by responding **N** to the question "Do you wish to monitor this stack" on the ADD/UPDATE TCP/IP

MONITORED SYSTEMS INFO panels or specifying **N** for the values of the KN3_TCP_COLLECT_STACK PARMGEN parameter.

The IBM Z OMEGAMON Network Monitor monitoring agent discovers all active stacks when it initializes. By default, the monitoring agent attempts to monitor all stacks that have been discovered. Every minute, the monitoring agent checks to see whether the stacks that are present in the previous monitoring interval are still active. If a stack has gone from active to inactive, the monitoring agent restarts the registration process for that stack. If the stack cannot be monitored, it is deregistered and checked again after a minute. This results in messages KN3I002I through KN3IR006 being written to the RKLVLOG repeatedly:

```
KN3I002I TCP SUBNODE MONITOR STARTING FOR ORIGINNODE TCPIP5:SYS1
KN3I003I TCP SUBNODE MONITOR STARTED FOR ORIGINNODE TCPIP5:SYS1
KN3IR004 TCP SUBNODE REGISTRATION SUCCESSFUL FOR ORIGINNODE TCPIP5:SYS1
KN3IR005 TCP SUBNODE DEREGISTERED FOR ORIGINNODE TCPIP5:SYS1
KN3IR006 TCP SUBNODE MONITOR STOPPED FOR ORIGINNODE TCPIP5:SYS
```

The product is working as designed and the messages can be ignored. To avoid repeated attempts to register a stack that is not active most of the time, you can indicate that it not be monitored using the Configuration Tool or PARMGEN.

Value for the Telnet Pool Size attribute is displayed as zero (incorrect data)
If the values for the Telnet Pool Size attribute in the TN3270 Server Sessions workspace or the TN3270 Server Session Availability workspace are displayed as zero, modify the value you specified for the TCP/IP profile data set name to match the name of your TN3270 server profile.

When you configure the IBM Z OMEGAMON Network Monitor monitoring agent, the Configuration Tool provides a field for you to specify the name of the TCP/IP profile data set. This data set is read by the agents to obtain TN3270 server configuration parameters.

Verify the name of the data set provided for the TCP/IP profile data set by looking at the value displayed for column TCPIP Profile Dataset Name in the TCP Collector status table in the Agent Status workspace. You can also run the Configuration Tool to verify this information.

You must provide the correct name of the TN3270 server profile data set. This parameter specifies the name of the TCP/IP profile data set, either a partitioned data set or a sequential data set. The default is TCPIP.PROFILE.TCPIP. If you specify a partitioned data set, then you must also supply a member name. To correct the problem, modify the value you specified for the TCP/IP profile data set name to be the name of your TN3270 server profile.

To correct this problem using the Configuration Tool, perform the following steps:

1. Start the Configuration Tool.
2. Navigate to the Panel name ***action* TCP/IP MONITORED SYSTEMS INFO / RTE: *rtename***, where *action* is ADD, COPY, UPDATE, DELETE, or VIEW (panel ID KN341PPI or KN341PPJ) and correct the value in the **TCP/IP profile dataset name** field.
3. Run the "Create runtime members" step on the CONFIGURE IBM Z OMEGAMON Network Monitor panel.
4. Stop and restart the agent.

To correct this problem using the PARMGEN configuration method, perform the following steps:

1. Locate the configuration profile for this instance of the monitoring agent. See Step 1 under"Unable to connect to location server or to find running CMS on CT_CMSLIST" on page 6 to determine how to locate the configuration profile.
2. Two PARMGEN values are related to the TCP/IP profile data set: KN3_TCPXnn_TCPIP_PROFILES_DSN specifies the name of the TCP/IP profile data set, and KN3_TCPXnn_TCPIP_PROFILES_MBR specifies the member name of the TCP/IP profiles in the TCP/IP profile data set.
3. If you change any of these values, you must update the configuration values in the RTE. See PARMGEN **Step 4** under"Unable to connect to location server or to find running CMS on CT_CMSLIST" on page 6.

If you provided the name of the TN3270 server profile data set in the Configuration Tool and you are still seeing a value of zero (0) for the Telnet Pool Size, you might have one of these other problems:

- BEGINVTAM and ENDVTAM markers are required in both the TCP/IP profile data set and in the TN3270 server profile data set for the agent to correctly read the files.
- If you have multiple TN3270 servers running in their own address spaces for a single stack and you have multiple TN3270 server profile data sets that need to be read, OMEGAMON agents are not able to support the configuration.

Workstation Administrator Mode lists all workspaces associated with a Navigator item
When a user logs on to Tivoli Enterprise Portal with Workstation Administrator Mode permissions, then the menu displays lists all workspaces that are associated with the navigator item, including linked-to workspaces.

If a user who does not have Workstation Administrator Mode permissions logs on to the Tivoli Enterprise Portal, right-clicks on a Navigator item, and selects **Workspaces**, a menu is displayed with a list of additional workspaces that the user can navigate to. However, if the user has Workstation Administrator Mode permissions, the menu lists all workspaces that are associated with the navigator item. This display includes workspaces that are selectable from the Navigator item as well as linked workspaces

This characteristic is not an error. All workspaces are displayed in ADMIN MODE for maintenance purposes only. The workspaces that are linked to do not present accurate data when they are accessed from the navigator item because data used for filters is not available from this view. From this view, the administrator can see all workspaces and create new workspaces, or apply maintenance to ensure that the latest enhancements are available.

For example, a user without Workstation Administrator Mode permissions who right-clicks on the OSA Navigator item sees these workspaces:

- OSA Ports
- OSA LPARs
- OSA-Express2 10 Gigabit Ports Summary
- OSA-Express3 Ports Summary

But a user with Workstation Administrator Mode permissions sees these workspaces:

- OSA Ports
- OSA LPARs
- OSA-Express2 10 Gigabit Ports Summary
- OSA-Express2 10 Gigabit Port Throughput Detail
- OSA-Express2 10 Gigabit Port Errors
- OSA-Express2 10 Gigabit Port Control
- OSA-Express3 Ports Summary
- OSA-Express3 Port Throughput Detail
- OSA-Express3 Port Errors
- OSA-Express3 Port Control

VTAM Address Space and Buffer Pools workspaces have old time stamps for the Collection Time attribute
When you look at the VTAM Address Space or Buffer Pools workspaces, the time stamps for the data that is displayed are older than your data collection interval.

This situation can occur if the agent VTAM application or PMI exit is not active.

To correct this situation, navigate to the Agent Status workspace and check the values that are displayed for these attributes in the SNA Collector Status table:

- Agent VTAM Major Node Status

- Agent VTAM Application Status
- PMI Exit Status

These attributes should all show a value of ACTIV. If they do not, refer to the descriptions of the attributes in the online help or the user's guide for information about the meaning the values you see for the attributes and possible corrective actions.

Application support is not upgraded to new version
After you used the Application Support DVD to update the application support files for products that were previously installed during an upgrade, you found that the application support was not upgraded to the new version.

The reason for this error might be that you accepted the default setting of **None** when prompted to add application support.

When you installed the product image using the graphical user interface and added application support for products that were previously installed, you were prompted to choose whether you want to add the default managed system list when you process the application support files. The default is **None**. If you accepted this default, then application support was not upgraded to the new version.

To correct the problem, add application support again and this time, select the "All" option, which adds the default managed system groups to all the applicable situations.

This problem also occurs when you are installing application support to upgrade previously installed monitoring agents or a monitoring server running on Linux or UNIX using the command line interface. To correct the problem, specify the ALL option as shown in the command string that follows:

```
cd &installHome/bin
./itmcmd support -f upgrade -s ALL -t tems_name pc
```

Problem 5: Enterprise Networks problems

In version 5.1.0, enterprise views were introduced to IBM Z OMEGAMON Network Monitor users in the new enhanced 3270 user interface. In version 5.1.1, these enterprise views are made available to users who prefer Tivoli Enterprise Portal using the new set of Enterprise Networks workspaces, an addition to the existing Navigator view.

The problems in this section concern issues you might have when implementing the new Enterprise Networks workspaces:

- “OMVS segment errors found in system log on z/OS v2.1 systems” on page 29
- “Enterprise_Networks Navigator view is not available in Tivoli Enterprise Portal” on page 30

For other troubleshooting scenarios involving Enterprise Networks workspaces, see the following:

- “Enterprise workspaces do not display data from monitoring agents previous to v5.1.0” on page 13
- “Enterprise Networks workspaces that include views with "Top 5" in the title might display more than five items in a "Top 5" view when multiple LPARs are being monitored” on page 14
- “No data in Enterprise Networks workspaces” on page 14
- “Symptom 3: No TCP Connection data in FTP workspaces” on page 20
- “Unexpected data or no data returned with you specify a historical timespan for any Enterprise Networks workspace and some physical Navigator workspaces” on page 34

OMVS segment errors found in system log on z/OS v2.1 systems
You recently migrated to z/OS v2.1 and find errors similar to these in the system log when you launch the IBM Z OMEGAMON Network Monitor monitoring agent:

```
ICH408I messages indicating OMVS SEGMENT INCOMPLETELY DEFINED
IST1926I SNAMGMT SERVER IS UNABLE TO ACCEPT CONNECTION REQUESTS
IST1927I SOCKET SELECT CALL FAILED - RC = 156 RSN = 0B0C00FA
```

As of z/OS V2R1, the ability to use default OMVS segments has been removed.

All z/OS UNIX users or groups must now have OMVS segments defined for user and group profiles with unique user IDs (UIDs) and group IDs (GIDs). One solution is to use RACF support to automatically generate unique UIDs and GIDs on demand for users and groups that do not have OMVS segments defined. Support for automatic unique UID and GID generation has been available since z/OS V1R11.

Verify your security definitions for the Communication Server Network Monitoring Interfaces (NMIs) and ensure that these interfaces initialize properly for both TCP/IP and VTAM when running z/OS 2.1 and later.

To correct the RACF security definitions pertaining to these z/OS Communications Server network management interfaces(NMIs), use the RACF and z/OS Communications Server documentation to update old values for the following NMIs.

- EZBNMIFR
- SNAMGMT
- SYSTCPSM

Enterprise_Networks Navigator view is not available in Tivoli Enterprise Portal
A Tivoli Enterprise Portal user cannot access the Enterprise_Networks logical Navigator view.

Enterprise Networks is a logical Navigator view delivered as part of IBM Z OMEGAMON Network Monitor V5.1.1. This logical Navigator view is available for the administrator to assign to users, but view is not assigned by default.

Assign access to the Enterprise Networks logical navigator view using the **Administer Users** dialog for the selected user ID or Group. For information about performing this action, see the "Enterprise Networks workspaces" topic in the *IBM Tivoli IBM Z OMEGAMON Network Monitor Tivoli Enterprise Portal User Guide*.

If the administrator performs this action and the Tivoli Enterprise Portal user still cannot access Enterprise_Networks logical Navigator view, clear the Java™ cache and the browser cache. Performing these actions differs by operating system and browser type. Refer to operating system and browser documentation to perform this action.

Problem 6: Problems with Take Action commands

A set of Take Action commands was included with IBM Z OMEGAMON Network Monitor added a set of Take Action commands. These commands were available from Tivoli Enterprise Portal and were executed with the prefix N3. You can issue these commands from the enhanced 3270 interface with improved security.

These commands are:

- Drop
- Ping
- Nslookup
- Tracerte

See the appendix on product-specific Take Action commands in the *IBM Tivoli IBM Z OMEGAMON Network Monitor: Tivoli Enterprise Portal User's Guide* for more information about the parameters associated with these commands when run in Tivoli Enterprise Portal. See the section on Take Action commands in the *IBM Z OMEGAMON Network Monitor: Enhanced 3270 User Interface Guide* for more information about the parameters associated with these commands when run in the enhanced 3270 user interface. See the completing the configuration section of the *IBM Z OMEGAMON Network Monitor: Planning and Configuration Guide* for information about restricting access to the 3270 Command Log and Response workspace.

Security for these agent Take Action commands is implemented through direct SAF (System Authorization Facility) calls and is based on resource profiles. Both user ID and command are validated. See the *IBM Tivoli OMEGAMON XE and Tivoli Management Services on z/OS: Common Planning and Configuration Guide* for information about implementing resource profiles.

You can use the SAF security class that is defined for the runtime environment to control access to the IBM Z OMEGAMON Network Monitor commands, or you can use a separate security class. These commands fail RACF authorization unless SAF security is configured. See the completing the configuration information in the *IBM Z OMEGAMON Network Monitor: Planning and Configuration Guide* for information about configuring SAF security for Take Action commands.

The problems in this section concern issues you might have when implementing the SAF security that defines authorization for Take Action commands.

Take Action commands fail on SAF authorization
IBM Z OMEGAMON Network Monitor adopts a common security model that is used by other products in the OMEGAMON suite.

Take Action commands issued from Tivoli Enterprise Portal fail with one of the following messages:

```
KN3A006E RACF AUTHORIZATION ERROR
```

The newly adopted security model requires that all Take Action commands be validated against the RTE's security class or the product specific override.

If a security class is not specified, Take Action commands will not be permitted under this security model.

After the SMP/E installation, use the Configuration Tool or the PARMGEN tool to specify a SAF security class that is used to implement the new Take Action validation.

The new Take Action implementation requires values from the following parameters:

- The RTE_SECURITY_CLASS parameter, which validates the user identity using the SAF interface. The parameter specifies a valid SAF class name.
  - You set this parameter in the Configuration Tool using the in the **Global SAF class name** field on panel KCIPRTA1 "Add Runtime Environment (1 of 3)." This parameter sets values for everything running on this RTE when you first create the RTE. To update an existing RTE you need to set the **Global SAF class name** field on panel on panel KCIPRTEU "Update Runtime Environment (1 of 3)."
  - You set this parameter in PARMGEN by specifying a value for the RTE_SECURITY_CLASS and completing the PARMGEN configuration.
- The KN3_SECURITY_ACTION_CLASS parameter can be optionally used to override the RTE_SECURITY_CLASS value specified for the runtime environment. You can use this parameter to define a separate security class to control command-level security for IBM Z OMEGAMON Network Monitor monitoring agent.
  - You set this parameter in the Configuration Tool using the **SAF class name override** field on panel KN341P2 "Specify Configuration Parameters (Page 1)."
  - You set this parameter in PARMGEN by specifying a value for the KN3_SECURITY_ACTION_CLASS and completing the PARMGEN configuration.

To correct this problem, configure the monitoring agent using with the Configuration Tool or PARMGEN and the procedures described in the *IBM Tivoli IBM Z OMEGAMON Network Monitor: Planning and Configuration Guide*. Pay special attention to the "Authorize users to access IBM Z OMEGAMON Network Monitor managed systems on the enhanced 3270 user interface" section where the instructions for setting up command authorizations are documented.

Tivoli Enterprise Portal cannot open a Mainframe Networks-specific Take Action dialog box

When you try to open a product-specific Take Action dialog box, you might discover that the dialog box cannot be opened. If this happens, clear the Java cache and retry the operation.

If this action does not alleviate the problem, contact IBM Software Support.

Insufficient access authority from KN3..TAKEACTION.ADMIN messages in the system log**
A security enhancement in V5.1.0 implemented direct SAF calls to verify both the user ID and command for Take Action commands.

The user views results from Take Action commands in the Command and Response Log 3270 workspace (KN3CRTS) or in the Command Log workspace in Tivoli Enterprise Portal. A separate SAF call is performed to determine whether the user is allowed to view results from commands that are issued by any user or only by the current user ID.

When a user who is not granted READ permission to KN3.**.TAKEACTION.ADMIN views Take Action command results, two instances of the ICH408I messages (in the case of RACF) are written to the system log.

```
ICH408I USER(USER2   ) GROUP(OMVS    ) NAME(####################) 548
  KN3.V510N3:0061:KN3AGENT.TAKEACTION.ADMIN CL(TAKESAF2)
  INSUFFICIENT ACCESS AUTHORITY
  FROM KN3.**.TAKEACTION.ADMIN (G)
  ACCESS INTENT(READ   )  ACCESS ALLOWED(NONE   )
```

This is not an error. The SAF program has correctly determined that the user does not have authority to view other users' Take Action commands and responses. If the system administrator wants a user to see commands issued by all users, then the administrator must give the user READ access to the KN3.**.TAKEACTION.ADMIN profile of your RTE's Global SAF class, or the IBM Z OMEGAMON Network Monitor monitoring agent's SAF Action class name override.

Problem 7: No historical data

A number of problems can affect the display of historical data.

These problems are associated with incorrect configuration of historical data collection.

Note: The problems described in this section apply to the Tivoli Enterprise Portal interface only.

Historical workspaces contain no data
If you are attempting to view historical data in one of these three workspaces:

- Interfaces History Workspace (Interfaces attribute group, KN3TIF)
- TCP/IP Stack Layer History Workspace (TCPIP Stack Layer attribute group, KN3TSL)
- TCP/IP Summary History Workspace (TCPIP Address Space attribute group, KN3TAS)

And historical collection is not enabled, operators will see message KFWITM220E Request failed during execution. displayed in the Tivoli Enterprise Console® message area.

Use the information found in *IBM Tivoli Monitoring: Installation and Setup Guide* to configure historical data collection and retry the operation. Ensure that the attribute groups listed above are configured to collect historical data.

Monitoring agent cannot insert all requested data rows into the persistent data store
The failure to write data to the persistent data store can indicate a number of problems that sometimes manifest themselves as tuning problems.

See “Problem 11: Performance issues” on page 42 for other possible causes. If the cause seems to be a performance issue, address that problem.

This problem also occurs if the persistent data store is full. If this is the problem, then log messages are displayed that show problems with components prefixed by KPD or KPX in the RKPDLOG sysout data set. These prefixes indicate problems with the persistent data store.

Do the following to determine if the persistent data store files (Short Term History) are full:

1. From TSO SDSF log (=S.LOG) enter the following commands against your IBM Z OMEGAMON Network Monitor TEMA job:

   ```
   /F stcname,KPDCMD QUERY CONNECT
   /F stcname,KPDCMD QUERY DATASTORE
   ```

Where *stcname* is the name of the started agent task name. The output from these commands will be in the RKPDLOG of the agent.

2. Examine the RKPDLOG.
   a. To view the RKPDLOG from the TSO SDSF Status panel (=S.ST), enter a **?** next to the name of the agent job. This action causes the RKPDLOG to be presented.
   b. Enter an **S** next to the RKPDLOG entry to open it.
   c. Scroll the RKPDLOG to see the output of the QUERY command and determine if the RKN3HIS* files are full.
3. Locate the KPCPROC1 member, which resides in *&hilev.&midlev*.RKANSAMU dataset of your RTE. Copy this procedure to your procedure library, and update it in your procedure library. Run it to back up and prune your persistent data Store data sets.
4. Monitor CPU usage in the z/OS address space where the persistent data store resides. Also monitor memory usage in that address space.

Monitoring agent is not connecting to Tivoli Data Warehouse with a warehouse proxy error in the RKLVLOG

Review the log from the Warehouse Proxy Agent (hostname_hd_timestamp-01.log) to diagnose problems with the monitoring agent connection to Tivoli Data Warehouse.

A number of Tivoli Management Services configuration errors can produce problems with a monitoring agent connecting to Tivoli Data Warehouse. You might find the following errors in the RKLVLOG:

```
(0000-E892C8BB:khdxdacl.cpp,704,"resolveServerAddress")
Warehouse proxy not registered
(0001-E892C8BB:khdxdacl.cpp,519,"routeExportRequest")
Export for object FTP_Sessions failed in createRouteRequest, Status = 8
```

These errors indicate that the warehouse proxy is not registered.

This warehouse error message occurs because the monitoring agent did a lookup on the Tivoli Enterprise Monitoring Server for the Data Warehouse, and no warehouse proxy agent was connected (proxy not registered). This error is not a monitoring agent error, but rather a Warehouse Proxy Agent setup and configuration issue.

To resolve this error, review the log from the Warehouse Proxy Agent (hostname_hd_timestamp-01.log) to determine why it is not connecting to the monitoring server that IBM Z OMEGAMON Network Monitor monitoring agent is accessing.

SQL queries to Tivoli Data Warehouse fail because of invalid column name

When you write a Structured Query Language (SQL) query against Tivoli Data Warehouse without using the Tivoli Enterprise Portal, and your database manager is DB2® or Oracle, the query sometimes fails, indicating that the column name is invalid.

Your column name might be greater than 30 characters in length, and DB2 before V9.5 and Oracle did not support column names that were greater than 30 characters.

The warehouse proxy creates the table with the abbreviated column names. These abbreviations are shown in the WAREHOUSEID database table.

Additionally, column names that seem to meet the fewer than 30 characters rule might also fail when the summarization and pruning agent is used, because this agent adds a four-character prefix to the column name (for example, AVG_).

To avoid this problem, revise your SQL queries to match the abbreviated column names in the WAREHOUSEID table.

Summarization and pruning agent fails to run as scheduled
You use the Summarization and Pruning agent to control the amount of disk space that is required to maintain data that you have decided to warehouse.

This agent runs at a scheduled time to summarize and prune (delete) data. Once the data is summarized and pruned, compression is performed to optimize disk space. For more information about this process, see the *IBM Tivoli Monitoring: Administrator's Guide*.

If the summarization and pruning agent fails to run on schedule, it is possible that the UADVISOR_KSY_ENABLE situation never started on the Tivoli Enterprise Portal. If you search the RKLVLOG for the Tivoli Enterprise Portal on z/OS, and fail to find UADVISOR_KSY_ENABLE, refer to the *IBM Tivoli Monitoring: Installation and Setup Guide* for information about installing application support.

Summarization and pruning does not function as described
If the hub Tivoli Enterprise Monitoring Server on z/OS is located on a different computer than the Tivoli Enterprise Portal Server or if the IBM Z OMEGAMON Network Monitor monitoring agent is not configured in the same consolidated software inventory (CSI) as the hub Tivoli Enterprise Monitoring Server, you must prepare the hub monitoring server to support summarization and pruning

To enable the Summarization and Pruning Agent to run against IBM Z OMEGAMON Network Monitor tables in the Tivoli Data Warehouse, you must install the catalog and attribute data files on the hub Tivoli Enterprise Monitoring Server on z/OS. These files are not automatically installed on a hub Tivoli Enterprise Monitoring Server if that component is located on a different computer than the Tivoli Enterprise Portal Server unless you use the self-describing agent feature.

To enable this agent, do the following task:

Copy the following members from a CSI where the IBM Z OMEGAMON Network Monitor monitoring agent is installed and configured to the CSI on which the hub Tivoli Enterprise Monitoring Server is installed:

- TKANDATV (KN3ATR)
- TKANDATV (KN3CAT)
- TKANPAR (KN3PDICT)

When you complete these steps, restart your hub Tivoli Enterprise Monitoring Server. See the *IBM Z OMEGAMON Network Monitor: Planning and Configuration Guide* for more information.

Unexpected data or no data returned with you specify a historical timespan for any Enterprise Networks workspace and some physical Navigator workspaces
When you specify a historical time span for any Enterprise Networks workspace and some physical Navigator workspaces, the returned data is sorted incorrectly or might not include the desired rows of data.

The workspaces affected by this issue are as follows:

- All Enterprise Networks workspaces (those accessed by the Enterprise_Networks logical Navigator view)
- Active TN3270 Server Session for Select Port
- EE Connection Summary
- FTP Transfer for Session

This error is evident in the following components:

- Long-term history in Tivoli Data Warehouse (the relational database management system)
- Summarized data from the Summarization and Pruning Agent

This situation occurs because the SQL queries used to fetch data for realtime workspaces are reused to fetch short-term and long-term historical data in Tivoli Enterprise Portal. While this mechanism enables a seamless transition from live data to historical data, the historical datastores do not currently support ORDER BY, GROUP BY, standard SQL column functions such as COUNT() and AVERAGE(), and proprietary SQL1 enhancements such as LAST() and FIRST().

To eliminate SQL query failures during historical data retrieval, Tivoli Enterprise Portal currently removes any invalid SQL clauses before submitting the queries to historical datastores

These query types are considered sufficiently important to outweigh the limitations in presenting historical data.

As a workaround use a supported physical Navigator workspace to see long-term historical data for the same attribute group. For example, use the physical TCP Connections workspace instead of the new Enterprise Connections Health workspace, or the HPR Connections workspace instead of the Enterprise HPR Connections Overview workspace.

Problem 8: Problems with the self-describing agent feature

This section describes problems that might result for use of the self-describing agent feature enabled in V6.2.3 Fix Pack 1 of IBM Tivoli Monitoring.

At this code level, monitoring agents were enhanced to add self-description capability that automatically distributes each agent's operating configuration directly to the local monitoring server, which then distributes those agent configuration files first to the hub monitoring server, if necessary, and then to the various IBM Tivoli Monitoring components that require it.

Before IBM Tivoli Monitoring V6.2.3, before an agent could connect to a Tivoli Enterprise Monitoring Server, you were required to manually update the monitoring server, as well as other Tivoli Management Services components such as the Tivoli Enterprise Portal Server and the Tivoli Data Warehouse, with information necessary for it to recognize and process data sent by that agent. As of V6.2.3, this "seeding" step becomes unnecessary.

By default, the self-describing capability is disabled on z/OS hub monitoring servers. Enabling the self-describing capability of monitoring agents ensures that the proper level of application data is installed on monitoring servers and the Tivoli Enterprise Portal. If the self-description feature is activated, runtime verification checks for updated application data. If inconsistent conditions are detected, application data is propagated from the agent to the various monitoring servers, which are automatically updated without requiring recycling of the hub monitoring server.

If you enabled the self-describing features on a z/OS hub monitoring server, configure a high availability hub. For more information, see *IBM Tivoli Monitoring: Configuring the Tivoli Enterprise Monitoring Server on z/OS*.

When you run your hub server on a distributed platform before connecting your IBM Z OMEGAMON Network Monitor agent and before you install your IBM Z OMEGAMON Network Monitor agent, you must ensure that IBM Tivoli Monitoring V6.2.3 Fix Pack 1 is installed as a prerequisite requirement.

The IBM Z OMEGAMON Network Monitor agent is installed with self-describing support enabled. Once self-description is enabled at the hub Tivoli Enterprise Monitoring Server that the agent is reporting to, the application support file updates are automatically synchronized, and, if relevant, the updates are deployed to the Tivoli Enterprise Monitoring Server and the connected Tivoli Enterprise Portal Server.

Self-describing agent installation of the IBM Z OMEGAMON Network Monitor application support files fails in an IBM Tivoli Monitoring v6.3.0 environment

SDA installation of application support files can fail when you apply the APARs that upgrade your IBM Z OMEGAMON Network Monitor in an IBM Tivoli Monitoring v6.3.0 environment.

If you open the RKLVLOG, you will see a message similar to this one:

```
2013.073 17:44:35.78 (00A1-E0E4BEC3:kraaulog.cpp,755,"IRA_OutputLogMsg") Self-Describing Agent
  Register/Install failed with STATUS
2013.073 17:44:35.78 (1024/0x400) for PRODUCT "N3", with TEMS "HUB_nc049109", VERSION_INFO
  "product_vrmf=05100100;tms_package
2013.073 17:44:35.78 _vrmf=05100100;tps_package_vrmf=05100100;tpw_package_vrmf=05100100;".
2013.073 17:44:35.78 (00A2-E18C1973:kscaudlog.cpp,434,"logMessageThreaded") SMF Recording
  disabled. To record audit messages locall
2013.073 17:44:35.78 y, please enable SMF recording for record type 112. See the ITM
  Administrator's guide for more informati
2013.073 17:44:35.78 on about ITM Audit SMF.
2013.073 17:44:35.78 (00A3-E0E4BEC3:kraaulog.cpp,543,"ctira_insert_log") KRAA0003, Self-
  Describing Agent Register/Install failed wi
2013.073 17:44:35.78 th STATUS (1024/0x400) for PRODUCT "N3", with TEMS "HUB_nc049109",
```

```
  VERSION_INFO "product_vrmf=05100100;t
2013.073 17:44:35.78 ms_package_vrmf=05100100;tps_package_vrmf=05100100;tpw_package_
  vrmf=05100100;"., Producer(SDA_Install)
```

In this example, the monitoring server rejected SDA installation of the IBM Z OMEGAMON Network Monitor application support files. The failure status of **1024** means that SDA installation is blocked.

Typically, SDA distributes agent configuration files through the IBM Tivoli Monitoring infrastructure automatically, first to the hub monitoring server (if necessary) and then to the various IBM Tivoli Monitoring components that require it.

In Version 6.3, IBM Tivoli Monitoring has implemented more granular controls on the self-describing agent (SDA) feature. In Version 6.3 of IBM Tivoli Monitoring, the `tacmd listsdastatus` command can be used to report SDA status for the hub and remote monitoring servers. The default SDA behavior is for the IBM Tivoli Monitoring v6.3.0 hub monitoring server to block SDA installation unless a product is explicitly configured for SDA or SDA behavior is set to work as it did in IBM Tivoli Monitoring v6.2.3.

To address this issue, do the following:

1. Use the following command to determine SDA configuration.

   ```
   tacmd listSdaInstallOptions
   ```

   If no configuration records exist, this means that all SDA seeding is blocked.
2. Do one of the following:
   - Configure your specific product to be allowed to install by issuing the following command. In this sample, the version/release/modification level for IBM Z OMEGAMON Network Monitor V5,6 is used:

     ```
     tacmd addsdainstalloptions -t N3 -v 05600100
     ```
   - Issue the following command to revert to 6.2.3 behavior where all products are allowed to install:

     ```
     tacmd editsdainstalloptions -t default -i on
     ```

     If you see Message KRAA0003 returned, this indicates that the product or version is blocked from SDA installation.

Self-describing agent deployment does not function as described
If you are having difficulty getting the self-describing agent feature to work as described, ensure that you performed all the activities described on the planning checklist for OMEGAMON monitoring agents on z/OS.

See **Planning your deployment > Decision 2: Where to install your hub and remote monitoring servers > Self-describing agents** in the *IBM Tivoli OMEGAMON XE and Tivoli Management Services on z/OS: Common Planning and Configuration Guide*.

Self-describing agent deployment fails because TME: Engine LIMIT or MINIMUM values are set too low
You install your monitoring agent with the Mainframe Networks self-describing support enabled, but no application files are found on your hub Tivoli Enterprise Monitoring Server.

When you check the RKLVLOG for this monitoring agent, you find a message similar to this:

```
ED70CD53:kdcr1ma.c,96,"rpc__malloc") status=1c01001a, "main storage exhausted", ncs/
KDC1_STC_CANT_MALLOC
```

This message indicates that the `LIMIT` or `MINIMUM` or both values are set too low for either the monitoring server or this monitoring agent or both.

If you are migrating from a version of Tivoli Management Services or IBM Tivoli Monitoring that did not support the self-describing agent feature (any version before V6.2.3 Fix Pack 1), check your values for the following PARMGEN parameters in the PARMGEN configuration profile.

- KDS_TEMS_STORAGE_LIMIT_PRIMARY, used to specify the maximum size for the TMS:Engine primary storage request on the monitoring server. This value should be at least LIMIT(24,X).
- KDS_TEMS_STORAGE_LIMIT_EXTEND, used to specify the maximum size for the TMS:Engine primary storage (above-the-line) request on the monitoring server. This value should be at least LIMIT(20,X).
- KDS_TEMS_STORAGE_MINIMUM_EXTEND, used to specify the amount of virtual storage the monitoring agent must acquire to run at your site. This value should be at least MINIMUM (768000,X).

The parameters are stored in the KDSSYSIN member of the RKANPARU library.

The following IBM Z OMEGAMON Network Monitor on z/OS agent TMS:Engine parameter values were increased to support self-describing processing:

- KN3_X_AGT_STORAGE_LIMIT_PRIMARY, used to specify the maximum size for the TMS:Engine primary storage request. This value should be at least LIMIT(24,X) (This value was set to 22 in V420).
- KN3_X_AGT_STORAGE_LIMIT_EXTEND, used to specify the maximum size for the TMS:Engine primary storage (above-the-line) request. This value should be at least LIMIT(20,X).
- KN3_AGT_STORAGE_MINIMUM_EXTEND, used to specify the amount of virtual storage the monitoring agent must acquire to run at your site. This value should be at least MINIMUM(768000,X) (This value was set to 256000 in V420.)

The IBM Z OMEGAMON Network Monitor parameters are generated in the KN3SYSIN member of the RKANPARU library. To understand how to find and change the values in PARMGEN, see the *IBM Z OMEGAMON Network Monitor: Parameter Reference.*.

1. Locate the configuration profile for this instance of the monitoring agent. See Step 1 under"Unable to connect to location server or to find running CMS on CT_CMSLIST" on page 6 to determine how to locate the configuration profile.
2. Update the configuration profile values for these parameters.
3. If you change any of these values, you must update the configuration values in the RTE. See PARMGEN **Step 4** under"Unable to connect to location server or to find running CMS on CT_CMSLIST" on page 6.

If the hub monitoring server and the remote monitoring server reside on z/OS, they must also be modified to use LIMIT(24,X) Follow process outlined in the *Configuring the Tivoli Enterprise Monitoring Server on z/OS* book and ensure that the Maximum storage request size (Extended) value is set to greater than or equal to 24.

Self-describing agent deployment fails with messages in RKLVLOG

You install your monitoring agent with the Mainframe Networks self-describing support enabled, but no application files are found on your hub Tivoli Enterprise Monitoring Server and you cannot log on to the SOAP server.

When you open the RKLVLOG, you see these messages:

```
(0002-EC346623:kt1ctrl.cpp,841,"kt1_fwd_get_chunks_v4") kt1_do_read_chunks( RKANDATV:KN3JSTPS )
for
  node CANSN3:0110:KN3AGENT thrunode MIG420:CMS error: status 0x1c01001a
(0003-EC72701B:kt1clnt2.cpp,715,"do_getfile_v4") download_file_v4 failed with return code
<0x1c01001a>
(0004-EC72701B:kfasdgmf.c,288,"KFASDM_GetFile") Unable to retrieve file
  <@ITM_MANIFEST_PATH@/KN3JSTPS.jar> from managed system <CANSN3:0110:KN3AGENT>
  thrunode <MIG420:CMS> kt1 status <0x1C01001A><Error: 0x1C01001A> retryable <0xC0000000>.
(0005-EC72701B:kfasdpmf.c,701,"KFASDM_GetSDpackage") Get file failed. Agent file
  <@ITM_MANIFEST_PATH@/KN3JSTPSl.jar> from managed system <CANSN3:0110:KN3AGENT>
  thrunode <MIG420:CMS> local file </tmp/sda/N3510/MIG420/kds/support/TEMS/KN3JSTPS.jar>
  status <1007> retryable <0xC0000000>
(0006-EC72701B:kfasdpmf.c,708,"KFASDM_GetSDpackage") RetrievePackFiles failed. status <1007>
(0007-EC72701B:kfasdwlm.c,2698,"KFASDM_DownloadPerRequest") KFASDM_GetSDpackage failed. product
code <N3>
  managed system <CANSN3:0110:KN3AGENT> thrunode <MIG420:CMS> manifest file
  </tmp/sda/N3510/MIG420/kds/support/TEMS/KN3MSMAN.txt> status <1007>, retryable <0XC0000000>
(0008-EC72701B:kfasdwlm.c,915,"KFASDM_RequestMgr") KFASDM_DownloadPerRequest failed status
<1007>.
  product code <N3> product version <05100000> managed system <CANSN3:0110:KN3AGENT> thrunode
  <MIG420:CMS> retryable <0xC0000000>
KFASD102   Self-Describing Install Failed with STATUS <1007> for PRODUCT <N3>, VER <05100000>,
  ID <TMS>, IDVER <05100000>.
```

This message indicates that the self-describing agent deployment failed.

To further understand this problem, check your *&hilev.&midlev.&rtename*.RKANDATV library to see if you can find the following four members:

- KN3JSTMS
- KN3JSTPS
- KN3JSTPW
- KN3MSMAN

If they are missing, either the RTE was not loaded or something happened to these members during the load operations.

You can remedy this situation in one of these ways:

- Copy these four members from *&hilev.&midlev*.TKANDATV to *&hilev.&midlev*.RKANDATV.
- From the Configuration Tool, run the N3#2xxx job from your installation INSTLIB or go to from the RTE main menu in the Configuration Tool to rerun and reload the job.
- Use PARMGEN (for example, execute *&hilev.&midlev*.TKANCUS) to run the KCIJPLOD job (**Option 5** to start PARMGEN > **Option 11** for submit the job > **Option 3** to run the KCIJPLOD job).

After you complete one of these actions, check the *&hilev.&midlev.&rtename.*RKANDATV library to confirm that these four members are found. Then recycle the Agent proc (CANSN3) and Tivoli Enterprise Portal Server. The self-describing agent deployment restarts automatically.

If these four members are found in *&hilev.&midlev.&rtename.*RKANDATV, you can use the tacmd commands to gather more information and debug. See the "Self-describing agent" topics in the *IBM Tivoli Monitoring: Troubleshooting Guide* for information about using specific tacmd comnmands to debug the self-describing agent issues.

Self-describing agent function fails after application of APARs OA42339 and OA42422
After you upgrade from v5.1.0 to v5.1.1 by applying APAR OA42339 and OA42422, if your hub monitoring server and the Mainframe Networks agent are enabled for Self Describing Agent (SDA) features, the Enterprise Networks workspaces are not available.

When you open the RKLVLOG, you will find messages similar to these:

```
♦ (00A8-D95F003B:kraaulog.cpp,755,"IRA_OutputLogMsg") Self-Describing Agent
Register/Install failed with STATUS (1014/UnKnown Error) for PRODUCT "N3", with
TEMS "M5D0RMTG:CMS", VERSION_INFO "product_vrmf=05100100;tms
_package_vrmf=05100100;tps_package_vrmf=05100100;tpw_package_vrmf=0510010
0;"
```

or

```
(00AA-D95F003B:kraaulog.cpp,543,"ctira_insert_log") KRAA0003, Self-Describing
Agent Register/Install failed with STATUS (1014/UnKnown Error) for PRODUCT "N3",
with TEMS "M5D0RMTG:CMS", VERSION_INFO "product_vrmf=05
100100;tms_package_vrmf=05100100;tps_package_vrmf=05100100;tpw_package_vr
mf=05100100;"., Producer(SDA_Install)
```

If you set up tracing with KBB_RAS1=ERROR (UNIT:dfasd ALL), you would see this error:

```
kt1_alloc_xfer_buff") Unable to allocate 9570528 bytes for transfer buffer ,
"do_getfile_v4")download_file_v4 failed with return code <0xf11e000b>
KFASDM_GetFile") Unable to retrieve file <@ITM_MANIFEST_PATH@/KN3JSTPS.jar>
froN3AGENT> thrunode <IPL16:CMS> kt1 status <0xF11E000B> <KT1_ERR_OUT_OF_MEMORY>
```

This error occurs because the additional workspaces created during the v5.1.1 release caused the size of the Tivoli Enterprise Portal Server bundle file to grow. SDA fails because the FTP facility cannot process the bundle file unless the value for the ITMS:Engine LIMIT parameter is increased.

If you reconfigured after you applied this APAR using PARMGEN, this problem was addressed automatically, but you must run the PARMGEN KCIJPCFG job to set up the PARMGEN work environment for the RTE and pick up the new LIMIT value.

If you reconfigured using the Configuration Tool, upgrade requires manual changes to RTE during upgrade. Follow these steps to correct the problem:

1. Start the Configuration Tool.
2. From Main Menu (KCIPRIM), select option 3 **Configure products**.
3. From the Configure products panel (KCIPRCM) select option 1 **Select product to configure**.
4. From PRODUCT SELECTION MENU (KCIPPLST), type an **S** in front of IBM Tivoli IBM Z OMEGAMON Network Monitor V5.1.0 and press Enter.
5. From the RUNTIME ENVIRONMENTS (RTEs) (KCIPRTE), type a **C** in front of the RTE you want to configure. This action causes the PRODUCT COMPONENT SELECTION MENU (KCIPMCU) to be displayed.
6. From the PRODUCT COMPONENT SELECTION MENU (KCIPMCU), select option 4 **IBM Z OMEGAMON Network Monitor**.
7. From this panel, select option 3 **Specify Agent address space parameters** (KN341MCU).
8. Press **F5=Advanced** to see advanced functions (KAG62P2). Press **F5=Advanced** to see more advanced functions (KAG62P5).
9. Select **SPECIFY NONSTANDARD PARAMETERS** (KAGPNST1) and create the following definition:

```
Parameter: LIMIT
New Value: (24,X)
Old Value (if replacing): (23,X)
Low-level dataset qualifier: RKANPARU Member: KN3SYSIN
```

Problem 9: Problems that result in abends

This section describes problems that might result in abends.

Monitoring agent runs out of "below the line" storage with a S878 or U4093 abend
When you start the IBM Z OMEGAMON Network Monitor agent, it fails to initialize and a U4093 ABEND occurs in the KN3ANMON task, or the agent initializes and runs for a short amount of time before various storage-related S878 ABENDs occur.

This problem can occur if you have customized the C runtime options for your installation in a way that overrides the options that are specified in the IBM Z OMEGAMON Network Monitor agent source code. The agent source code uses #pragma runopts statements to specify that the HEAP and STACK storage be allocated from “above the line” storage. If you primarily run older applications that require “below the line” storage and have customized your environment in a way that forces HEAP and STACK storage for all applications to be allocated "below the line", the IBM Z OMEGAMON Network Monitor agent might not be able to allocate all the storage it needs to perform its functions.

Some of the ways that #pragma runopts statements in source code can be overridden are as follows:

- You have a storage tuning user exit.
- You modified the agent procedure to provide C runtime options using environment variable _CEE_RUNOPTS.
- You have modified the agent procedure to provide a CEEOPTS DD statement that identifies a dataset with options that don't work for the agent.

Consult the *IBM z/OS Language Environment Programming Guide* section “Specifying Run-Time Options,” for more information about different ways to specify C run-time options and their precedence relative to each other. You may also find the *IBM z/OS Language Environment Customization* manual helpful.

To correct this problem ensure that the IBM Z OMEGAMON Network Monitor agent runs with options that allow it to allocate HEAP and STACK storage "above the line." The preferred method to change the Language Environment® runtime options is by using the Language Environment CEEPRMxx support.

z/OS provides PARMLIB members for specifying defaults for many system options. The CEEPRMxx parmlib member can be used to specify system-level default runtime options that control various aspects

of z/OS Language Environment. CEEPRMxx is identified during IPL by a CEE=xx statement, either in the IEASYSyy parmlib member or in the IPL PARMS.

Since runtime options can now be designated as overrideable or nonoverrideable in a CEEPRMxx parmlib member, and with a SETCEE command, you do not need to use assembler language USERMODs to specify installation-wide runtime options. For additional information regarding CEEPRMxx support and its use, consult the IBM z/OS Language Environment Customization documentation.

Initializing the monitoring agent results in a U4039 abend plus a CEEDUMP
When you initialize the IBM Z OMEGAMON Network Monitor monitoring agent, you receive this message:

```
USER COMPLETION CODE=4039 REASON CODE=00000000
```

A SYMPTOM DUMP OUTPUT marker was generated that included the following system dump output plus a CEEDUMP:

```
13.48.xx STC06457 IEA995I SYMPTOM DUMP OUTPUT   283
283       USER COMPLETION CODE=4039 REASON CODE=00000000
283      TIME=13.48.XX SEQ=40266 CPU=0000 ASID=00D2
283    PSW AT TIME OF ERROR 078D1400  8B145FA ILC2 INTC 0D
283    NO ACTIVE MODULE FOUND
283    NAME=UNKNOWN
== Register values for SYMPTOM DUMP OUTPUT not included here ==
```

At the END OF SYMPTOM DUMP mark, the following log entry for the CEEDUMP was found:

```
CEE3204S The system detected a protection exception (System Completion Code=0C4).
From entry point KN3ACTMD at compile unit offset +00000096 at entry offset +000000
96 at address 20263A66. CEE3DMP V1 R11.0: Condition processing resulted in the
unhandled condition.
ASID: 00D2 Job ID: STC07457 Job name: OMXEN3
Step name: OMXEN3 UserID: KN3USER
====== End of log entry message for CEEDUMP =======
```

Analysis of the CEEDUMP for these entries indicates that either the KN3ACTCS or the KN3ANMON load module was in control when the abend occurred. The failing CSECT varies and the SYMPTOM DUMP shows NO ACTIVE MODULE FOUND and NAME=UNKNOWN.

The problem is the result of an incorrectly linked load module. This could happen if you installed and maintained new code on a test environment and then copied or broadcasted it to other LPARs.

Proper execution of KN3ANMON and KN3ACTCS depends on the level of z/OS used when the SMP/E APPLY step performs the original LINKEDIT of these modules. Typically, the system on which the code is installed, maintained, and executed is the same. When product installation, maintenance, and execution all occur on the same system, the libraries used to link and run the load modules are identical. As such, there is no need to re-link the KN3ACTCS and KN3ANMON load modules.

Problems can occur, however, if the level of the required link libraries differs from where the load modules were originally linked compared to where the load modules will execute.

To resolve the problem, run the KN3LINK job to re-link the load modules on the system in the environment where KN3ACTCS and KN3ANMON load modules will execute, especially if the level of the required link libraries where the modules execute might be at a different level from where the load modules were originally linked.

If the problem persists, re-link the modules in the environment in which they are to run.

To facilitate the re-link of KN3ACTCS and KN3ANMON, IBM Z OMEGAMON Network Monitor ships sample job KN3LINK. The sample KN3LINK job is found in the *&rhilev.&midlev.*RKANSAMU dataset. The following examples demonstrate when KN3LINK might need to be run to produce properly linked KN3ACTCS and KN3ANMON load modules.

- In Example 1. KN3ACTCS/KN3ANMON are SMP/E installed, SMP/E maintained on LPAR_A.

  The modules execute on LPAR_A. There is no need to run KN3LINK to re-link the load modules.
- In Example 2, KN3ACTCS/KN3ANMON are SMP/E installed and SMP/E maintained on LPAR_A.

The load modules are then copied to LPAR_B where they will execute. KN3LINK must be run on LPAR_B to produce newly linked copies of the load modules.

To confirm the build date and time for KN3ACTCS, consult message “KN3CT051” on page 64, found in the KN3ACTCS log. To confirm the build date and time for KN3ANMON, consult message “KN3N015I” on page 90, found in the KN3ANMON log.

Problem 10: Cross-product linking issues

You can use dynamic workspace linking among workspaces (cross-product linking) to easily navigate between workspaces that are provided by multiple products. You can use the feature for problem determination and to improve integration across the monitoring products, and you can quickly determine the root cause of a problem.

You can use the predefined cross-product links provided by the OMEGAMON XE products to obtain additional information about systems, subsystems, resources, or network components that are being monitored by other monitoring agents. For more information about the cross-product links available with the IBM Z OMEGAMON Network Monitor monitoring agent, see the cross-product linking section in the *IBM Z OMEGAMON Network Monitor: Tivoli Enterprise Portal User's Guide*.

The following problems have been reported in cross-product linking.

Cross-product links are missing from the link list

Cross-product workspace links are displayed in the link list if the product workspace you are linking to has been installed and your Tivoli Enterprise Portal user ID is authorized to access the target product. If a cross-product link is missing from the link list, contact your system administrator to verify that:

- Your user ID is authorized to access the target product.
- Product help files, workspaces, and situations are installed using the *IBM Tivoli OMEGAMON Data Files for z/OS* CD or installed automatically if you used the self-describing agent feature.

You will not see this problem if you used the self-describing agent feature.

Message "KFWITM081E The link target can not be found" is displayed when attempting to link to another product's workspace

Many of the OMEGAMON XE products include predefined links to workspaces that are provided by other products. Message KFWITM081E is displayed whenever you try to link to a workspace that does not exist.

You receive this message if the target product's workspaces are installed but the monitoring agent responsible for retrieving data for the target workspace is not running.

Product workspaces are installed using the *IBM Tivoli OMEGAMON Data Files for z/OS* CD or are installed automatically if you used the self-describing agent feature. After the workspaces are installed, all predefined links to the workspaces become enabled, meaning that links to the target workspaces are included in the link list when an operator right-clicks on a link icon.

If you installed the workspaces for products that are not installed in your environment, links to these products will appear as valid destinations for dynamic cross-product links. To prevent the inclusion of misleading links, install only the help files, workspaces, and situations for products that you have installed.

Note: It is not likely that all OMEGAMON XE monitoring agents are running on all z/OS systems being monitored. In such cases, the KFWITM081E message does not necessarily indicate a problem. For example, if you are monitoring two z/OS systems and only one of the z/OS systems is running DB2, you will most likely have the IBM Z OMEGAMON Network Monitor monitoring agent running on both systems, but the OMEGAMON XE for DB2 monitoring agent will be running only on the system where DB2 is installed. Because you are running both OMEGAMON XE products, you will install help files, workspaces, and situations for both products, which enables the links to both products. As a result, if you try to perform a cross-product link to the OMEGAMON XE for DB2 workspace on the system where the OMEGAMON XE for DB2 product is not running, you will receive message KFWITM081E.

Problem 11: Performance issues

This section describes problems that might be associated with tuning of the IBM Z OMEGAMON Network Monitor monitoring agent.

Long response times or no results returned when specifying historical collection time spans for some workspaces

When a time span of several hours (for example, 24 hours) is selected for a workspace where a large number (tens of thousands) of rows of data is stored in the persistent data store, the resulting query may take 60 seconds or longer to complete, and the monitoring agent may use a very high percentage of available CPU while the query is processed.

The situation is exacerbated if you are displaying a workspace that has automatic refresh enabled. When a historical time span is selected, set the refresh interval be set to "on demand", as shown in Figure 4 on page 42.

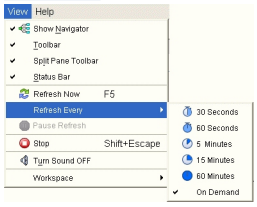

Figure 4. Setting the refresh interval

The monitoring agent processing that is required to complete the request might not complete within the refresh interval, causing subsequent requests to be queued. The monitoring agent then works continuously to process the query, sustaining the high CPU utilization until the user has navigated to another workspace or closed the Tivoli Enterprise Portal.

Perform the following tasks to mitigate this problem:

1. Specify longer historical collection intervals of 30 minutes or one hour, instead of the 15 minute defaults, for the attribute groups that you are experiencing this problem with. Doing so reduces the number of rows per hour stored in the persistent data store, while still making historical data available to your users.
2. Do not collect historical data for attribute groups that you are experiencing this problem with.
3. Modify the KFW_REPORT_TERM_BREAK_POINT parameter in the Tivoli Enterprise Portal ENV file. This parameter controls how many hours of historical data, counting back from the present time, are to be retrieved from the persistent data store (short term history) datasets. The default is 86400 seconds, or 24 hours. Reducing this value shortens the search of the persistent data store by the Tivoli Enterprise Portal. Older data, that is, data excluded by changing this parameter, might be accessed if you populate historical data in the Tivoli Data Warehouse.

   The Tivoli Enterprise Portal queries the Tivoli Data Warehouse for data that is older than the value of KFW_REPORT_TERM_BREAK_POINT. Configure a one-hour warehousing interval to ensure that older data is available in the Tivoli Data Warehouse.

Monitoring agent is running out of storage

If response time is slow on the monitoring agent, check the RKLVLOG for messages about a possible storage problem. A storage usage event is generated every hour and is written to the RKLVLOG.

Typically the STORAGE command is used in conjunction with the EVERY command to schedule period issuance of the STORAGE command. The KN3AGST member of RKANCMD has the following line by default.

```
EVERY 00:60:00 STORAGE D     * LOG STORAGE USE
```

Where:

EVERY
Is a command that is used to schedule another command for periodic execution.

00:60:00
Shows the hours, minutes, and seconds. A value of 00:60:00 indicates that the command is to be run every 60 minutes.

STORAGE
Displays statistics of ITMS:Engine storage usage.

D
Stands for Detail. STORAGE provides both primary and extended storage statistics. This information is helpful in tuning ITMS:Engine memory management.

The default entry causes the STORAGE D command to be issued every 60 minutes. The interval at which the command is automatically issued is defined during the Tivoli Enterprise Portal configuration with the **Enable storage detail logging** parameter on the **Specify Advanced Configuration Options** panel, where the values are Y or N. Two other settings are associated with the **Enable storage detail logging** parameter:

- Set the **Storage detail logging** interval to monitor storage. The interval values are written as part of the second EVERY command in *&rhilev.&midlev*.RKANCMDU(KDSSTART). The default is 60 minutes.
- Set the **Flush VSAM buffers** interval to force all deferred VSAM writes to DASD. The interval values are written as part of the third EVERY command in *&rhilev.&midlev.&rtename*.RKANCMDU(KDSSTART). The default is 30 minutes.

  This modify command is useful if the monitoring server is already running with storage detail logging initially disabled. Issuing the modify command activates storage detail logging without having to recycle the monitoring server. The default is **Y**.
- To disable storage detail logging, set this parameter to **N**, which then generates the second EVERY command as a comment.

To control storage detail logging dynamically, issue the following modify command for the z/OS console to either the monitoring server or the monitoring agent started task to enable storage detail logging:

```
MODIFY procname,STORAGE D
```

Where:

MODIFY
Is the z/OS command.

procname
Is the name of the monitoring server or monitoring agent started task. The default name of monitoring server started task is CANSHUB. The default name of the monitoring agent started task is CANSN3.

STORAGE
Displays statistics of ITMS:Engine storage usage.

D
Stands for Detail. STORAGE provides both primary and extended storage statistics. This information is helpful in tuning ITMS:Engine memory management.

After you issue this command, look in the RKLVLOG for the output. The typical output of this command and an explanation are found below.

```
01 KLVSD001 PRIMARY MAIN STORAGE INFORMATION:
02 KLVSD003 ALLOCATION DETAIL:
03 KLVSD004 SIZE(1-16) USE(1629) TOTAL(1652) ACCESSED(2122)
04 KLVSD004 SIZE(17-32) USE(1222) TOTAL(1256) ACCESSED(1804)
05 KLVSD004 SIZE(33-48) USE(43) TOTAL(51) ACCESSED(989)
06 KLVSD004 SIZE(49-64) USE(30) TOTAL(321) ACCESSED(789)
07 KLVSD004 SIZE(65-80) USE(190) TOTAL(299) ACCESSED(474)
08 KLVSD004 SIZE(81-96) USE(277) TOTAL(432) ACCESSED(492)
09 KLVSD004 SIZE(97-112) USE(27) TOTAL(43) ACCESSED(412)
10 KLVSD004 SIZE(113-128) USE(39) TOTAL(43) ACCESSED(311)
11 KLVSD004 SIZE(129-160) USE(79) TOTAL(374) ACCESSED(222)
12 KLVSD004 SIZE(161-192) USE(84) TOTAL(111) ACCESSED(205)
13 KLVSD004 SIZE(193-224) USE(96) TOTAL(127) ACCESSED(177)
14 KLVSD004 SIZE(225-256) USE(148) TOTAL(259) ACCESSED(192)
15 KLVSD004 SIZE(257-320) USE(342) TOTAL(365) ACCESSED(144)
16 KLVSD004 SIZE(321-384) USE(40) TOTAL(54) ACCESSED(98)
```

```
17 KLVSD004 SIZE(385-512) USE(5) TOTAL(35) ACCESSED(80)
18 KLVSD004 SIZE(513-768) USE(21) TOTAL(26) ACCESSED(92)
19 KLVSD004 SIZE(769-1024) USE(14) TOTAL(17) ACCESSED(12)
20 KLVSD004 SIZE(1025-2048) USE(28) TOTAL(35) ACCESSED(8)
21 KLVSD004 SIZE(2049-4096) USE(81) TOTAL(97) ACCESSED(2)
22 KLVSD004 SIZE(4097-8192) USE(8) TOTAL(9) ACCESSED(1)
23 KLVSD004 SIZE(8193-16384) USE(1) TOTAL(1) ACCESSED(1)
24 KLVSD005 LIMIT(65536) SLOPE(9) SIZES(23) TOTAL(2916K) FREE(2055K)
25 OVERHEAD(44936)
27 KLVSD031 BUFFER POOL INFORMATION
28 KLVSD032 POOL BUFSIZE(3564) SEGSIZE(65536) MASK(3FFFF) SIDEQ(0)
29 KLVSD033 BUFFERS INUSE(0) MAX(0) GETS(0) FREES(0)
30 KLVSD033 SEGMENTS INUSE(0) MAX(0) GETS(0) FREES(0) Q(0) QMAX(0)
31 KLVSD032 POOL BUFSIZE(3440) SEGSIZE(65536) MASK(7FFFF) SIDEQ(0)
32 KLVSD033 BUFFERS INUSE(3) MAX(9) GETS(245) FREES(242)
33 KLVSD033 SEGMENTS INUSE(1) MAX(1) GETS(1) FREES(0) Q(1) QMAX(1)
34 KLVSD032 POOL BUFSIZE(2560) SEGSIZE(65536) MASK(1FFFFFF) SIDEQ(0)
35 KLVSD033 BUFFERS INUSE(53) MAX(57) GETS(340) FREES(287)
36 KLVSD033 SEGMENTS INUSE(3) MAX(3) GETS(13) FREES(10) Q(1) QMAX(2)
37 KLVSD032 POOL BUFSIZE(1920) SEGSIZE(65536) MASK(FFFFFFFF) SIDEQ(0)
38 KLVSD033 BUFFERS INUSE(1) MAX(2) GETS(60) FREES(59)
39 KLVSD033 SEGMENTS INUSE(1) MAX(1) GETS(36) FREES(35) Q(1) QMAX(1)
40 KLVSD039 END OF BUFFER POOL INFORMATION
41 ------------------------------------------------------------
```

Where:

01
Is a ITMS:Engine header message.

02
Is an ITMS:Engine header message.

03 - 23
Is an ITMS:Engine message specifying the following values:

- **SIZE**: The range (m-n, in bytes) of the sizes of data blocks in the storage area. For example, SIZE(1-16) indicates that this area contains all of the blocks that are from 1 to 16 bytes long.
- **USE**: The number of blocks in use.
- **TOTAL**: The total number of storage blocks allocated.

  Note: If the values of both USE and TOTAL are zero, the message does not appear
- **ACCESSED**: The total number of times the storage block size was accessed.

24
Is an ITMS:Engine message specifying the following values:

- **OVERHEAD**: The amount of storage (in bytes) used for storage control.
- **LIMIT**: The size (in bytes) of the largest block that can be allocated.
- **SLOPE**: An IBM-internal parameter.
- **SIZES**: Specifies the number of storage areas.
- **TOTAL**: Specifies (in kilobytes) the total amount of storage.
- **FREE**: Specifies (in kilobytes) the amount of storage available.

25
Is a continuation of the previous ITMS:Engine message specifying the following value:

- **OVERHEAD**: The amount of storage (in bytes) used for storage control.

26
Is an ITMS:Engine message specifying the following values:

- **TMS** : The amount (in bytes) of temporary storage allocated. ITMS:Engine uses this storage, for example, to resolve a string expression. In general, this value should be zero.
- **PREFIX**: The length (in bytes) of the storage block prefix.
- **CUSHION**: The overhead (in bytes) for each storage block. This value is equal to the value of PREFIX plus the debug overhead, if any.

27 - 40
Is buffer pool usage information.

41
Is a line of dashes indicating the final line of the display.

Message reference

This reference provides an overview of messages and trace information for IBM Z OMEGAMON Network Monitor. The messages are listed in ascending alphanumeric order. The message descriptions include the message source, message formats, and web application message help.

Locations of message logs

Use this information to learn about the locations of message logs and other support information.

The IBM Z OMEGAMON Network Monitor monitoring agent generates log files that contain messages and trace information. The log files contain message and trace information about the events and processing being performed. OMEGAMON log files provide a complete record of system activity, not just of problems. The log files are created when you start the OMEGAMON components. These files are available to help you resolve problems encountered while using the products. IBM Software Support might request some or all of these files while investigating a problem you have reported.

When you encounter a problem, first check the messages in the log files to determine if the source is a problem in your environment or with an OMEGAMON product. IBM Software Support might request that you activate tracing so that the log files collect additional information needed to resolve the problem. Some of the tracing options produce large amounts of trace information. Therefore, monitor the disk or spool space when activating tracing to prevent your disk or spool from reaching capacity. Return the trace settings to the default settings after the desired trace information has been collected.

For more information about message logs for OMEGAMON platform components, see *IBM Tivoli Monitoring: Troubleshooting Guide*.

Enhanced 3270 user interface logging

Messages from the enhanced 3270 user interfaces are logged to the location that is specified in the SYSPRINT, SYSTRACE, and RKANRXLG DD statements in its started task procedure.

Most messages and trace go to SYSPRINT, some trace and error messages go to SYSTRACE, and REXX messages go to RKANRXLG.

The default procedure is

```
//SYSPRINT DD SYSOUT=&SOUT
//SYSTRACE DD SYSOUT=&DOUT
//RKANRXLG DD SYSOUT=&DOUT
```

(where &SOUT and &DOUT typically equals X).

You can set the DD statements to direct output to a data set, instead of the default (spool). For example:

```
//SYSPRINT DD DISP=SHR,DSN=TDZOST.OB700DMV.CANSTOM.LOGP
```

Generating and viewing log files

Use this information to find the names of z/OS log files generated by this monitoring agent.

The log files for the IBM Z OMEGAMON Network Monitor monitoring agent are defined in the agent JCL procedure. They are created when you start the monitoring agent. These common log files are created by all OMEGAMON monitoring agents on z/OS:

- RKLVLOG
- RKLVSNAP
- RKPDLOG

Additionally, these IBM Z OMEGAMON Network Monitor-specific logs are created:

- KN3ANMON, the network management interface (NMI) sub-collector log
- KN3ACTCS, the SNMP (Simple Network Management Protocol) sub-collector log

Note: Two serviceability messages have been added that make it easy for you to provide build level and dates of the data collection server when talking with IBM Software Support. These messages are **KN3N015I** for KN3ANMON and **KN3CT051** for KN3ACTCS.

To investigate problems with the IBM Z OMEGAMON Network Monitor monitoring agent, look at messages and trace information written to the log files and look at the z/OS system log for messages that might be related to the problem. These files can be viewed by using the TSO SDSF option to locate the agent joblogs and the system log.

The log files for the IBM Z OMEGAMON Network Monitor monitoring agent are created as defined in the started procedure when you start the monitoring agent. You can view the log files with any text editor.

When you investigate problems with the IBM Z OMEGAMON Network Monitor monitoring agent, view the sysout data sets or spool files in the job output and view the z/OS system log for any messages that might pertain to the problem.

Message format

Use this information to understand the meaning of the characters in a message ID for this monitoring agent.

The messages for this product are in two formats. One format includes a single-digit component identifier with a message type and the other includes a double-digit component identifier with no message type. Both formats have the following common elements:

KN3
is the IBM Z OMEGAMON Network Monitor message identifier.

yyy
Message number.

The messages are in the following formats:

- wwwccyyy

  Where:

  cc
  Component identifier.

  KN3 messages have the following identifiers:

  A
  Take Action command handler

  CT
  TCP collector

  FC
  Command processor

  IR
  Intelligent Remote Agent

  V
  Take Action dialog validation

- wwwcyyyz

  Where:

  c
  Component identifier.

  KN3 messages have the following identifiers:

C
Command

I
Intelligent Remote Agent

N
z/OS Communications Server network management interface (NMI) collector

T
TCP collector

z
One-letter message type. Some messages have this message type indicator. It can be one of the following:

- **I** for informational messages, which typically do not require administrator or operator actions.
- **W** for warning messages, which typically require actions.
- **E** for error messages, which indicate a problem that you must resolve before normal operation can continue.

KN3A Messages

The following IBM Z OMEGAMON Network Monitor messages begin with the KN3A prefix.

KN3A001I PROCESSING COMMAND: *command*

Explanation

IBM Z OMEGAMON Network Monitor has received a product-centric command from the Tivoli Management Services infrastructure, and the command is being processed by the IBM Z OMEGAMON Network Monitor command handler. This message is displayed in the message area of Tivoli Enterprise Portal, or in a pop-up window on the enhanced 3270 user interface.

System action

None.

Programmer response

None.

Message type

Informational

KN3A002E THE COMMAND STRING CONTAINS NO COMMAND NAME OR PARAMETERS

Explanation

The IBM Z OMEGAMON Network Monitor command handler has received a request to process a command. However, the request contains no command or parameters. This message is displayed in the message area of Tivoli Enterprise Portal, or in a pop-up window on the enhanced 3270 user interface.

System action

None.

Programmer response

If the command was issued from the Take Action dialog on Tivoli Enterprise Portal or the command pop-up window on the enhanced 3270 user interface and directed to the IBM Z OMEGAMON Network Monitor monitoring agent for execution, ensure that the command being issued is formatted correctly. See the commands section in the *IBM Tivoli IBM Z OMEGAMON Network Monitor: Tivoli Enterprise Portal User's Guide* or the *IBM Tivoli IBM Z OMEGAMON Network Monitor: Enhanced 3270 User Interface Guide* for information about the correct format of this command.

Message type

Error

KN3A003E THE COMMAND SPECIFIED IS NOT A VALID ACTION COMMAND: *command*

Explanation

The IBM Z OMEGAMON Network Monitor command handler received a request to process a command. However, the command received is not supported by the IBM Z OMEGAMON Network Monitor command handler. This message is displayed in the message area of Tivoli Enterprise Portal, or in a pop-up window on the enhanced 3270 user interface.

System action

None.

Programmer response

If the command was issued from the Take Action dialog on Tivoli Enterprise Portal or the command pop-up window on the enhanced 3270 user interface and directed to the IBM Z OMEGAMON Network Monitor monitoring agent for execution, ensure that the command is listed as a supported command in the *IBM Tivoli IBM Z OMEGAMON Network Monitor: Tivoli Enterprise Portal User's Guide* or the *IBM Tivoli IBM Z OMEGAMON Network Monitor: Enhanced 3270 User Interface Guide*.

Message type

Error

KN3A004E THE NUMBER OF COMMAND PARAMETERS IS INCORRECT

Explanation

The IBM Z OMEGAMON Network Monitor command handler received a request to process a command. However, the command might not be processed correctly because the number of command parameters is incorrect. This message is displayed in the message area of Tivoli Enterprise Portal, or in a pop-up window on the enhanced 3270 user interface.

System action

None.

Programmer response

If the command was issued from the Take Action dialog on Tivoli Enterprise Portal or the command pop-up window on the enhanced 3270 user interface and directed to the IBM Z OMEGAMON Network Monitor monitoring agent for execution, ensure that the command is formatted correctly and contains a valid number of parameters. See the commands section of the *IBM Tivoli IBM Z OMEGAMON Network Monitor: Tivoli Enterprise Portal User's Guide* or the *IBM Tivoli IBM Z OMEGAMON Network Monitor: Enhanced 3270 User Interface Guide* for information about the correct format of this command.

Message type

Error

KN3A005E THE COMMAND EXCEEDED THE MAX LENGTH AND WAS TRUNCATED

Explanation

The IBM Z OMEGAMON Network Monitor command handler received a request to process a command. However, the length of the command exceeded the maximum allowable length. The command was executed, but was truncated. This message is displayed in the message area of Tivoli Enterprise Portal, or in a pop-up window on the enhanced 3270 user interface.

System action

The truncated command was executed.

Programmer response

If the command was issued from the Take Action dialog on Tivoli Enterprise Portal or the command pop-up window on the enhanced 3270 user interface and directed to the IBM Z OMEGAMON Network Monitor monitoring agent for execution, ensure that the command is correctly formatted and does not exceed 256 characters. See the commands section in the *IBM Tivoli IBM Z OMEGAMON Network Monitor: Tivoli Enterprise Portal User's Guide* or the *IBM Tivoli IBM Z OMEGAMON Network Monitor: Enhanced 3270 User Interface Guide* for information about the correct format of this command.

Message type

Error

KN3A006E RACF AUTHORIZATION ERROR

Explanation

This message is displayed if a user who is not authorized to issue a Take Action command tries to issue that command. This message is displayed in the message area of Tivoli Enterprise Portal, or in a pop-up window on the enhanced 3270 user interface. Other messages that provide details about the underlying problem can be found in the RKLVLOG.

System action

The command is denied.

Programmer response

Define a SAF security class and resource profiles to restrict access to Take Action commands. See the "Complete the configuration" section of the *IBM Tivoli IBM Z OMEGAMON Network Monitor: Planning and Configuration Guide* for information about defining SAF security classes and resource profiles. Or contact your system administrator.

Message type

Error

KN3A007W The current active SAF security class is OMEGDEMO. This product is running unsecured.

Explanation

The current active SAF Security class is OMEGDEMO. The OMEGDEMO SAF security class is a pseudo security class that is used to implement Demo mode. In Demo mode, no authorization checks are performed. Use this mode only if instructed by IBM Software Support. This message is displayed in the message area of Tivoli Enterprise Portal, or in a pop-up window on the enhanced 3270 user interface.

System action

The command is processed with warning messages.

Programmer response

Use this SAF security class only if instructed by IBM Software Support. See the *IBM Tivoli OMEGAMON XE and IBM Tivoli Management Services on z/OS: Common Planning and Configuration Guide* for information about setting up SAF security. Then perform the SAF security configuration described in the "Loading the runtime libraries and completing the configuration" section of the *IBM Tivoli IBM Z OMEGAMON Network Monitor: Planning and Configuration Guide* before running additional commands.

Message type

Warning

KN3A008E SECURITY CLASS NOT SPECIFIED

Explanation

No SAF class was specified during the configuration of the OMEGAMON for Mainframe Networks product. A valid SAF security class must be specified for the RTE_SECURITY_CLASS or optionally in the KN3_SECURITY_ACTION_CLASS during the configuration process.

The message is written to the RKLVLOG.

System action

The command is denied.

Programmer response

Verify that you configured the product to use a valid SAF security class. See the "Complete the configuration" section of the *IBM Tivoli IBM Z OMEGAMON Network Monitor: Planning and Configuration Guide* for information about defining SAF security classes and resource profiles.

Message type

Error

KN3A901E TAKE ACTION HAS ABENDED. ROUTINE=*routine*

Explanation

An abend occurred during the processing of a Take Action command in the monitoring agent routine that is listed in the message.

System action

Depending on where the abend occurred, the command may or may not have been executed on the system. It is possible that the monitoring agent service task will end.

Programmer response

Check the Tivoli Enterprise Portal message dialog, the 3270 message pop-up, or the RKLVLOG for additional messages that might indicate why the monitoring agent service task abended. If problems persist, contact IBM Software Support.

Message type

Error

KN3A902E TAKE ACTION ENVIRONMENT ERROR. ROUTINE=*routine* REASON=*reason*

Explanation

The product environment for the Tivoli IBM Z OMEGAMON Network Monitor product was not correctly installed. The following variables appear in this message:

routine
The name of the routine where the error occurred.

reason
The reason given for the error.

System action

Take Action requests directed to the monitoring agent where the error occurred were not executed.

Programmer response

Check the Tivoli Enterprise Portal message dialog, the 3270 message pop-up, or the RKLVLOG for additional messages that might indicate why the IBM Z

OMEGAMON Network Monitor product environment was not correctly installed. If problems persist, contact IBM Software Support.

Message type

Error

KN3A903W	**TAKE ACTION RACROUTE AUTH RC(*xxxxxxxx*). COMMAND=*command xxxxxxxx* – NO DECISION**

Explanation

A RACROUTE request for security validation returned NO DECISION for the specified command.

System action

The Take Action request was processed by the service task of the monitoring agent.

Programmer response

Verify that the user should be allowed access to execute the specified command and define additional Security Authorization Facility (SAF) rules as needed. For more information about configuring user IDs to access secure resources, see the "Loading the runtime libraries and completing the configuration" section of the *IBM Tivoli IBM Z OMEGAMON Network Monitor: Planning and Configuration Guide*.

Message type

Warning

KN3A904E	**KN3A904E TAKE ACTION RACROUTE AUTH RC(FAILURE). CLASS=*class*, COMMAND=*command*, USER=*user***

Explanation

A RACROUTE request for security validation returned FAILURE for the specified command. *class* is the RACF class to which the command belongs, and *user* is the user ID that is issuing the command without the correct authority. All commands validate the user against the security class specified during configuration. The user is also validated against the OPERCMDS class for the DROP command.

System action

The Take Action request was not processed by the service task of the monitoring agent.

Programmer response

Define the Tivoli Enterprise Portal or Enhanced 3270 User Interface user to the appropriate Security Authorization Facility (SAF) resource profile to enable the user to execute this command in the future. For more information about configuring Tivoli Enterprise Portal User IDs to access secure resources, see "Loading the runtime libraries and completing the configuration" section of the *IBM Tivoli IBM Z OMEGAMON Network Monitor: Planning and Configuration Guide*.

Message type

Error

KN3A905E	**TAKE ACTION RACROUTE ERROR. ROUTINE=*routine* RC(*return_code*) REASON(*reason_code*)**

Explanation

A RACROUTE request for security validation failed with *reason_code* and *return_code* in module *routine*.

System action

The Take Action request is not processed by the service task of the monitoring agent.

Programmer response

Responses to this message vary, based on the *return code* and *reason code*. For more information about configuring Tivoli Enterprise Portal User IDs or users IDs for the enhanced 3270 user interface (3270) to access secure resources, see the "Loading the runtime libraries and completing the configuration" section of the *IBM Tivoli IBM Z OMEGAMON Network Monitor: Planning and Configuration Guide*.

Message type

Error

KN3A906E	**KN3A906E TAKE ACTION RACROUTE VERIFY RC(FAILURE). CLASS=*class_name*, COMMAND=*command*, USER=*user_name***

Explanation

A RACROUTE request for security validation returned FAILURE for the command specified by *command*. RACF was unable to verify whether the user specified by *user_name* has authority to access a resource that is defining the command in the CLASS identified as *class_name* in the message.

System action

The Take Action request was not processed by the service task of the monitoring agent.

Programmer response

Define the Tivoli Enterprise Portal or Enhanced 3270 User Interface user to the appropriate Security Authorization Facility (SAF) rule to enable the user to execute this command in the future. For more information about configuring User IDs to access secure resources, see the “Loading the runtime libraries and completing the configuration” section of the *IBM Z OMEGAMON Network Monitor: Planning and Configuration Guide*.

Message type

Error

KN3A907I **USER=*<user_name>*, CLASS=*<class>*, RESOURCE=*<resource_name>***

Explanation

This message displays the input to the command validation. *<user_name>* is the user ID for logging onto Tivoli Enterprise Portal or the enhanced 3270 user interface. *<class>* is the SAF security class that is being used for the validation. The variable *<resource_name>* is in the following format:

```
KN3.managed_system.function.value
```

System action

None.

Programmer response

None.

Message type

Informational

KN3A908I **RACROUTE *<request>* REG15=*<r15>* SAFPRRET=*<prret>* SAFPRREA=*<prrea>* SAFPSFRC=*<psfrc>* SAFPSFRS=*<psfrs>***

Explanation

This message displays the response from the last RACROUTE request, where the *<request>* variable is STAT, VERIFY, or AUTH.

System action

The security decision is made based upon this response.

Programmer response

If you are diagnosing a validation error, refer to the *IBM z/OS Security Server RACROUTE Macro Reference* manual to understand the return codes from the RACROUTE request.

Message type

Informational

KN3A909I **USER= *<user_name>* RESULT: *<text>***

Explanation

This message displays the security decision. The *<text>* variable can be one of the following messages:

```
USER IS AUTHORIZED FOR THIS ACTION
VALIDATION NOT REQUESTED
USER IS NOT AUTHORIZED FOR THIS ACTION
NO SECURITY DECISION COULD BE MADE
INVALID USER NAME PASSED
INVALID RESOURCE NAME PASSED
RESOURCE NAME IS TOO LONG FOR THIS CLASS
INVALID CLASS SPECIFIED IN KN3ENV FILE
AGENT NOT APF AUTHORIZED
ESM OR SPECIFIED CLASS INACTIVE
SPECIFIED CLASS INACTIVE
USER NOT DEFINED TO ESM
REJECTED BY INSTALLATION AUTHORIZATION EXIT
UNEXPECTED SAF/ESM RETURN CODE
```

System action

None

User response

If you are diagnosing a validation error, this message indicates either the decision based upon the RACROUTE request or an error unrelated to RACROUTE.

Message type

Informational

KN3AF Messages

The following IBM Z OMEGAMON Network Monitor messages begin with the KN3AF prefix.

KN3AF001 TIVOLI IBM Z OMEGAMON Network Monitor SHUTDOWN INITIATED – VTAM IS NOT ACTIVE

Explanation

IBM Z OMEGAMON Network Monitor detected that VTAM was inactive and initiated shutdown.

System action

None.

User response

Investigate the reason for the VTAM outage.

Message type

Warning.

KN3AF002 COLLECTOR ERROR DURING SAMPLING OR RECORDING INTERVAL PROCESSING -- MODULE(*error_module*) RC=(*return_code*) SC=(*sense_code*)

Explanation

A collector called during sample or recording interval processing abended. If recovery routines are unable to handle this condition diagnostics data may be written to the RKLVSNAP dump data set and to the program check or snap table in the product work area extension.

System action

IBM Z OMEGAMON Network Monitor continues to run if possible.

User response

If data is written to RKLVSNAP data set, gather the preceding 30 minutes of the RKLVLOG and any dumps that were produced or taken, and contact IBM Software Support.

Message type

Error.

KN3AF004 ACT TERMINATED ABNORMALLY

Explanation

The automatic collection task (ACT) terminated abnormally.

System action

The automatic collection task is unavailable.

User response

Log the information displayed for problem diagnosis and contact IBM Software Support.

Message type

Error.

KN3AF006 MEMBER KN3CNMAP CONTAINS INVALID ACB NAME

Explanation

The communication network management (CNM) access control block (ACB) name found exceeds eight alphanumeric characters.

System action

None.

User response

The ACB is opened for communication with the PMI exit. If there is an error opening the ACB for that specified APPLID, you see this error.

Correct the ACB name and restart IBM Z OMEGAMON Network Monitor.

Message type

Error.

KN3AF007 MEMBER KN3CNMAP IS EMPTY OR NOT FOUND

Explanation

The member KN3CNMAP does not exist in data set RKANPAR(U), or this member does not contain the access control block (ACB) name to be used for the communication network management (CNM) interface.

System action

None.

Programmer response

See the *IBM Z OMEGAMON Network Monitor: Planning and Configuration Guide* for information about member KN3CNMAP, which in located in data set RKANPAR(U).

Message type

Error.

KN3AH Messages

The following IBM Z OMEGAMON Network Monitor messages begin with the KN3AH prefix.

KN3AH001 CREATE USER FAILED - MODULE(*error_module*) - RC(*return_code*) SC=(*sense_code*)

Explanation

An automatic collection task create user request failed during product termination. The product attempts to create this user to perform certain shutdown clean-up tasks. The conditions which existed when the termination routine was invoked prevented creation of the automatic collection task user. The message reports the return code and sense code which led to this failure.

System action

Product termination continues.

Programmer response

None.

Message type

Error

KN3AH002 CRB CREATION FAILED - MODULE(*error_module*) RC=(*return_code*) SC=(*sense_code*)

Explanation

A collector request block cannot be created during product termination. The product attempts to create this collector request block to perform certain shutdown clean-up tasks. The conditions which existed when the termination routine was invoked prevented creation of the collector request block. The message reports the return code and sense code which led to this failure.

System action

Product termination continues.

Programmer response

None.

Message type

Error.

KN3AH003 TERMINATION COLLECTOR ERROR - MODULE(*error_module*) RC=(*return_code*) SC=(*sense_code*)

Explanation

A termination collector invoked by the termination routine encountered an error in processing. The message reports the return code and sense code which led to this failure.

System action

Product termination continues.

Programmer response

None.

Message type

Error.

KN3AH005 TRACE $CAPTURE REMOVE FAILED - MODULE(*error_module*) RC=(*return_code*) SC=(*sense_code*)

Explanation

Attempts to deallocate resources which might have been allocated during communication with the End-to-End product have failed. The message reports the return code and sense code which led to this failure.

System action

Product termination continues.

Programmer response

None.

Message type

Error.

KN3AH006 KONAXNET REMOVE FAILED - MODULE(*error_module*) RC=(*return_code*) SC=(*sense_code*)

Explanation

Attempts to deallocate global resources structures allocated during initialization have failed. The message reports the return code and sense code which led to this failure.

System action

Product termination continues.

Programmer response

None.

Message type

Error.

KN3C Messages

The following IBM Z OMEGAMON Network Monitor messages begin with the KN3C prefix.

KN3C006E ***parameter* INTERVAL VALUE WAS NOT VALID ON COMMAND: *command***

Explanation

The value of the *parameter* interval parameter in *command* is not valid. The *parameter* can be one of the following:

DISPLAY

Specifies the number of hours of data that is displayed. This must be a valid number in the 1-24 range.

FREQUENCY

Specifies how often the routing information (for the Gateways table) is collected. By default, routing information is collected every tenth collection interval; with a default collection interval of 5 minutes, routing information would be collected every 50 minutes. This must be a valid number in the 1-99 range.

Data collection continues.

Programmer response

Correct the value and issue the command again.

KN3C070I **DBUG EXTENDED DIAGNOSTICS MODE STARTED**

Explanation

Extended diagnostics mode is active.

System action

None.

User response

None.

Message type

Informational.

KN3C071E **DBUG EXTENDED DIAGNOSTICS MODE START FAILED ROUTINE=KN3AHFD1 REASON=*reason_code* RETURN=*return_code***

Explanation

An error was detected while the feature control command (KN3FCCMD) was starting extended diagnostic mode (DBUG).

System action

The command request fails.

User response

Log the information and contact IBM Software Support.

Message type

Error.

KN3C072I **DBUG EXTENDED DIAGNOSTICS MODE STOPPED**

Explanation

Extended diagnostics mode is inactive.

System action

None.

User response

None.

Message type

Informational.

KN3C073E **DBUG EXTENDED DIAGNOSTICS MODE STOP FAILED ROUTINE=KN3AHFD2 REASON=*reason_code* RETURN=*return_code***

Explanation

An error was detected while the feature control command (KN3FCCMD) was stopping extended diagnostic mode (DBUG).

System action

The command request fails.

User response

Execute the command again. If you are not successful at stopping extended diagnostic mode, especially when MAX debug level is active, stop and restart the monitoring agent, log the information, and contact IBM Software Support.

Message type

Error.

KN3C074I **DBUG EXTENDED DIAGNOSTICS MODE IS *<status>***

Explanation

This is a prefix for feature control command (KN3FCCMD) STATUS DBUG output. *<status>* can be active or inactive.

System action

None.

User response

None.

Message type

Informational.

KN3C075E **DBUG EXTENDED DIAGNOSTICS MODE STATUS FAILED ROUTINE=KN3AHFD3 REASON=*reason_code* RETURN=*return_code***

Explanation

An error was detected while the feature control command (KN3FCCMD) was displaying extended diagnostic mode (DBUG).

System action

The command request fails.

User response

Log the information and contact IBM Software Support.

Message type

Error.

KN3C110I **START FOR COMPONENT *component* ACCEPTED. TCPNAME: *tcpip_stc_name* DSPINTV: *display_interval***

Explanation

A START command for *component* was accepted. Data collection for *component* starts in the next collection interval. The *display_interval* takes effect immediately.

KN3C111I **START FOR COMPONENT *component* ACCEPTED. TCPNAME: *tcpip_stc_name***

Explanation

A START command for *component* was accepted. Data collection for *component* starts in the next collection interval.

KN3C112I **START FOR COMPONENT *component* ACCEPTED.**

Explanation

A START command for *component* was accepted. Data collection for *component* starts in the next collection interval.

KN3C113E **START FOR COMPONENT *component* FAILED. TCPNAME: *tcpip_stc_name* REASON: *reason* RETURN CODE: *return_code* ROUTINE: *program_name***

Explanation

A START command for *component* was rejected. Data collection continues.

Programmer response

Issue a STATUS command to verify the status of data collection. Correct the command and issue the command again.

KN3C114E **START FOR COMPONENT *component* FAILED. REASON: *reason* RETURN CODE: *return_code* ROUTINE: *program_name***

Explanation

A START command for *component* was rejected. Data collection continues.

Programmer response

Issue a STATUS command to verify the status of data collection. Correct the command syntax, and issue the command again. If the component is SNAC and the reason is PWKAFAIL this indicates that data collection was not configured for the Buffer Pool/VTAM Environment Data Collection parameter. See the chapter on configuring the monitoring agent in the *IBM Z OMEGAMON Network Monitor: Planning and Configuration Guide* for more information.

Message type

Error.

KN3C115I **STOP FOR COMPONENT *component* ACCEPTED. TCPNAME: *tcpip_stc_name***

Explanation

A STOP command for *component* was accepted. Data collection for *component* stops in the next collection interval.

KN3C116I **STOP FOR COMPONENT *component* ACCEPTED.**

Explanation

A STOP command for *component* was accepted. Data collection for *component* stops in the next collection interval.

KN3C117E **STOP FOR COMPONENT *component* FAILED. TCPNAME: *tcpip_stc_name* REASON: *reason* RETURN CODE: *return_code* ROUTINE: *program_name***

Explanation

A STOP command for *component* was rejected. Data collection continues.

Programmer response

Issue a STATUS command to verify the status of data collection. Correct the command and attempt the command again.

KN3C118E **SNA COLLECTION INTERVAL VALUE WAS NOT VALID ON COMMAND: *command***

Explanation

A START command was processed. The *command* specified a value for collection interval that was not valid. Data collection continues.

The SNA data collection interval for a monitoring agent is a value set during configuration using the Configuration Tool. This value determines how often SNA data will be collected. A value of “1” means that SNA data is collected every minute. This value is expressed as a whole number from 1 to 60, indicating the collection interval in minutes. The default is 5 minutes.

Programmer response

Issue a STATUS command to verify the status of data collection. Correct the command and attempt the command again. Valid values for collection interval are whole number from 1 to 60.

Message type

Error.

KN3C120I **START FOR COMPONENT *component* ACCEPTED. TCPNAME: *tcpip_stc_name* FREQ: *frequency***

Explanation

A START command for *component* was accepted. Data collection for *component* starts in the next collection interval. The *frequency* determines how frequently this data collection occurs.

KN3C130I **SNA COLLECTOR STATUS IS *status***

Explanation

This is one of several messages written when the `MODIFY procname,KN3FCCMD STATUS SNAC` command is issued. This message returns the status of the SNAC collector. Status can be one of the following:

- Active
- Inactive
- Not installed

System action

None.

User response

From an z/OS console, issue a START SNAC or STOP SNAC command to change the SNAC collector status as required. If the SNAC collector component is not installed, use the Configuration Tool to reconfigure the monitoring agent. From the **SPECIFY COMPONENT**

CONFIGURATION panel (KN341P5), specify **Y** as the value for **Buffer Pool/VTAM Environment Data Collection**.

Message type

Error.

KN3C131I **KONAYPWK ADDRESS IS *konaypwk_address*, KONAYACT ADDRESS IS *konayact_address***

Explanation

This is one of several messages written when the `MODIFY procname,KN3FCCMD STATUS SNAC` command is issued. This message returns the address of two of the main control blocks used by the SNAC collector component. This information is used to debug SNA data collection problems.

System action

None.

User response

None.

Message type

Informational.

KN3C132I **MONITORING VTAM ADDRESS SPACE NAMED *VTAM_started_task***

Explanation

This is one of several messages written when the `MODIFY procname,KN3FCCMD STATUS SNAC` command is issued. This message returns the name of the VTAM started task being monitored. This information is used to debug SNA data collection problems.

System action

None.

User response

None

Message type

Informational.

KN3C133I **SNA COLLECTION INTERVAL IS *SNA_collection_interval***

Explanation

The SNA data collection interval for a monitoring agent is a value set during configuration using the Configuration Tool. This value determines how often SNA data will be collected. A value of “1” means that SNA data is collected every minute. This value is expressed as a whole number from 1 to 60, indicating the collection interval in minutes. The default is 5 minutes.

This is one of several messages written when the `MODIFY procname,KN3FCCMD STATUS SNAC` command is issued. This message returns collection interval controlling the polling of SNAC collected data.

System action

None.

User response

You can modify the SNAC data collection interval in one of two ways:

- Temporarily using a KN3FCCMD MODIFY command, such as:

  ```
  MODIFY procname,KN3FCCMD START SNAC
  SNACINTV(<5 | SNA_collection_interval>
  ```

  For more information about MODIFY commands, see the KN3FCCMD command reference appendix of*IBM Z OMEGAMON Network Monitor: Planning and Configuration Guide*. Values set using the MODIFY command are in effect until the IBM Z OMEGAMON Network Monitor monitoring agent is restarted or the value is changed with another MODIFY command.
- Globally by setting or resetting the default value using the Configuration Tool. SNA data collection interval is specified globally on the **SPECIFY VTAM APPLID VALUES** panel (KN341P6).

Message type

Informational.

KN3C134I **ACB PREFIX IS *PMI_ACB_prefix*, PMI ACB NAME IS *PMI_ACB_name***

Explanation

This is one of several messages written when the `MODIFY procname,KN3FCCMD STATUS SNAC` command is issued. This message returns the access control block (ACB) name used for communication with the VTAM performance monitor interface. This information is used to debug SNA data collection problems.

System action

None.

User response

The ACB name is determined through the configuration of IBM Z OMEGAMON Network Monitor. If this name is incorrect, it might be modified using the Configuration Tool.

Message type

Informational.

KN3C136I **SAMPLE INTERVAL IS *sample_interval* HUNDREDTH SECONDS**

Explanation

This is one of several messages written when the `MODIFY procname,KN3FCCMD STATUS SNAC` command is issued. This message returns the data sampling interval in use by the SNAC data collector.

System action

None.

User response

None.

Message type

Informational.

KN3C138I **CYCLE COUNT IS *cycle_count***

Explanation

This is one of several messages written when the `MODIFY procname,KN3FCCMD STATUS SNAC` command is issued. This message returns the count of the number of times the SNAC data collector has been invoked.

System action

None.

User response

None.

Message type

Informational.

KN3C140I **SNAC STATUS COMMAND FAILED ROUTINE=*routine* REASON=ABEND RETURN=*return_code*.**

Explanation

An ABEND has been encountered processing a `MODIFY procname,KN3FCCMD STATUS SNAC` command.

This message is generated by the recovery routine (FRR), which is set in KN3ACTV3. The value for *routine* will almost certainly be KN3ACTV3. The *return_code* is the abend code value that was current when the module abended.

System action

The `MODIFY procname,KN3FCCMD STATUS SNAC` command fails.

User response

Verify the format of the `MODIFY procname,KN3FCCMD STATUS SNAC` command. If the command format is correct, gather the preceding 30 minutes of the RKLVLOG and any dumps that were produced, and contact IBM Software Support.

Message type

Error.

KN3C141I **SNA COLLECTOR STATUS DISPLAY COMPLETE**

Explanation

This is one of several messages written when the `MODIFY procname,KN3FCCMD STATUS SNAC` command is issued. This message denotes the end of the output from the issued command.

System action

None.

User response

None.

Message type

Informational.

KN3C142I **SNAC CALL TO KN3ACTMO, RC=*return_code***

Explanation

A call is being made to process member KN3AGOPS of the *&rhilev.&midlev.&rtename*.RKANPAR(U) library. This member contains the SNAC monitoring options defined in The Configuration Tool.

System action

The SNAC data collector is initialized based on the parameters defined in member KN3AGOPS.

User response

If more information is required, verify SNAC data collector status using the `MODIFY procname,KN3FCCMD STATUS SNAC` command.

Message type

Informational.

KN3C143W MAX DEBUG LEVEL SET FOR COMPONENT *component*

Explanation

The debug level for component *component* is set to MAX. Debug levels can be set to MAX, MID, or MIN. Enabling the `KN3FCCMD START DBUG` command with *debug_level* of MAX may result in the filling of all spool volumes and cause system failure. Use a debug level of MAX for only as long as required to capture the trace data your need.

component is **TCPC** for TCP/IP traces.

System action

Over time, the spool volumes will fill, causing system failure.

Programmer response

Once the required traces have been gathered, stop the trace activity using the `KN3FCCMD STOP DBUG` command.

Message type

Warning.

KN3C200I FOR [*component*] COMPONENT, [*debug-level*] TRACING IS ENABLED FOR SUBCOMPONENTS:

Explanation

Tracing was enabled for the named components and subcomponents at the indicated debug level.

component is **TCPC** for TCP/IP traces.

debug-level is one of the following;

Debug level identifier	Meaning
MIN	Trace data is captured only when an error is detected.
MID	"Medium-detail" debugging messages are captured. These messages are used by IBM Software Support to diagnose software problems.
MAX	All trace data is captured. These messages are used by IBM Software Support to diagnose software problems.

The list of subcomponents is defined in Message KN3C201I

System action

None.

Programmer response

None.

Message type

Informational.

KN3C201I *subcomponents*

Explanation

The list of subcomponents for which tracing was enabled in Message KN3C200I.

subcomponent can include any of the following:

Component	Description
APP	TCP/IP Application table
BASE	Base data collection in the KN3ACTC4 task
COMM	Common functions
CSM	CSM Storage table
EEHPR	Enterprise Extender and High Performance Routing tables
FTP	FTP sessions and transfers tables
GIF	Trace Interface
GGS	Stack Layer
HASH	Hash functions
INIT	Initialization and control
IPSEC	IP filters and IP security tables
SNA	VTAM Summary Statistics table

Component	Description
SNMP	SNMP data collection
SYSTCP	Functions that access the real-time TCP/IP network management interface (NMI) and pass the retrieved data to the FTP and TN3270 data collection routines. For more information about the real-time interface, see the *IBM z/OS Communications Server: IP Programmer's Guide and Reference*.
TCON	TCPIP Details table and TCP Connections data stored in the TCPIP Connections table
TLIS	TCP Listener table and TCP Listener data stored in the TCPIP Connections table
TSTO	TCPIP Memory Statistics table
TN32	TN3270 Server Sessions Avail and TN3270 Response Time Buckets tables
UDP	UDP Connections table and UDP Connections data stored in the TCPIP Connections table

System action

None.

Programmer response

None.

Message type

Informational.

KN3C202I **[*debug-level*] TRACING FOR [*component*] COMPONENT IS ENABLED.**

Explanation

This message indicates that tracing at the level defined by *debug-level* has been enabled for one of the product components defined by *component* using a KN3FCCMD command. To see a listing of the text that can be displayed in the <*component*> field, see the Command Reference appendix in the *IBM Z OMEGAMON Network Monitor: Planning and Configuration Guide*.

debug-level is one of the following:

Debug level identifier	Meaning
MIN	Trace data is captured only when an error is detected.
MID	"Medium-detail" debugging messages are captured. These messages are used by IBM Software Support to diagnose software problems.
MAX	All trace data is captured. These messages are used by IBM Software Support to diagnose software problems.

System action

None.

Programmer response

None.

Message type

Informational.

KN3C203I **DBUG ACTIVE FOR COMPONENTS [*subcomponents*]**

Explanation

This information message displays a list of components for which some level of tracing other than the default MIN level is enabled

subcomponents can include any of the following:

Component	Description
APP	TCP/IP Application table
BASE	Base data collection in the KN3ACTC4 task
COMM	Common functions
CSM	CSM Storage table
EEHPR	Enterprise Extender and High Performance Routing tables
FTP	FTP sessions and transfers tables
GIF	Trace Interface data
GGS	Stack Layer data
HASH	Hash functions
INIT	Initialization and control
IPSEC	IP filters and IP security tables

Component	Description
SNA	VTAM Summary Statistics table
SNMP	SNMP data collection
SYSTCP	Functions that access the real-time TCP/IP network management interface (NMI) and pass the retrieved data to the FTP and TN3270 data collection routines. For more information about the real-time interface, see the *IBM z/OS Communications Server: IP Programmer's Guide and Reference*.
TCON	TCPIP Details table and TCP Connections data stored in the TCPIP Connections table
TLIS	TCP Listener table and TCP Listener data stored in the TCPIP Connections table
TSTO	TCPIP Memory Statistics table
TN32	TN3270 Server Sessions Avail and TN3270 Response Time Buckets tables
UDP	UDP Connections table and UDP Connections data stored in the TCPIP Connections table

System action

None.

Programmer response

None.

Message type

Informational.

KN3CT Messages

The messages in this section begin with the KN3CT prefix.

The following IBM Z OMEGAMON Network Monitor messages begin with the KN3CT prefix.

KN3CT000 TCP/IP STATISTICS COLLECTOR INITIALIZATION COMPLETE

Explanation

The TCP/IP collector successfully initialized.

System action

None.

Programmer response

None

Message type

Informational.

KN3CT001 $INIT FAILED FOR MAIN THREAD LRN

Explanation

A logical resource cannot be acquired for the TCP/IP collector task.

System action

The TCP/IP collector task terminates.

Programmer response

Log the information for problem diagnosis and contact IBM Software Support.

Message type

Error.

KN3CT002 TCP/IP STATISTICS COLLECTOR ABENDED, CODE=*abend_code*, PSW=*program_status_word*, ROUTINE=program_name

Explanation

The TCP/IP collector task abended. The abend code, program status word (PSW), and program name are displayed in the message.

System action

The TCP/IP collector task terminates.

Programmer response

Log the information for problem diagnosis and contact IBM Software Support. See message KN3CT003 which follows.

Message type

Error.

KN3CT003 **Rregister_number - Rregister_number register_value**

Explanation

This is diagnostic information following message KN3CT002.

System action

None.

Programmer response

Log the information for problem diagnosis and contact IBM Software Support.

Message type

Error.

KN3CT004 **TCP/IP STATISTICS COLLECTOR IS TERMINATING**

Explanation

The TCP/IP collector is terminating.

System action

None.

Programmer response

None

Message type

Informational.

KN3CT007 **TCP/IP STATISTICS COLLECTOR COMPLETED TERMINATION**

Explanation

The TCP/IP collector successfully completed termination.

System action

None.

Programmer response

None

Message type

Informational.

KN3CT008 **ERROR PROCESSING NETSTAT *command_name* COMMAND**

Explanation

An error occurred while processing the output of the named NETSTAT command.

System action

The TCP/IP collector task terminates.

Programmer response

Log the information for problem diagnosis and contact IBM Software Support.

Message type

Error.

KN3CT009 **{TCP/IP COLLECTOR | MIB BROWSER} MEMORY ALLOCATION FAILED**

Explanation

A memory allocation failed in the specified function.

System action

The function terminates.

Programmer response

Log the information for problem diagnosis and contact IBM Software Support.

Message type

Error.

KN3CT010 **$ALOCQ FAILED: RC(*return_code*), ERROR(*reason_code*), INFO(*information_code*), ROUTINE(*routine*), DDNAME(*DDName*)**

Explanation

An SVC 99 query failed. The ROUTINE and DDNAME fields are optional.

System action

The TCP/IP collector task terminates.

Programmer response

Log the information for problem diagnosis and contact IBM Software Support.

Message type

Error.

KN3CT011 **$ALOC FAILED: RC(*return_code*), ERROR(*reason_code*), INFO(*information_code*), ROUTINE(*routine*), DDNAME(*DDName*)**

Explanation

An SVC 99 dynamic allocation failed. The ROUTINE and DDNAME fields are optional.

System action

The TCP/IP collector task terminates.

Programmer response

Log the information for problem diagnosis and contact IBM Software Support.

Message type

Error.

KN3CT014 **NAME/TOKEN CREATE FAILED: RC(*return_code*)**

Explanation

The create of a name/token pair failed.

System action

The TCP/IP collector task terminates.

Programmer response

Log the information for problem diagnosis and contact IBM Software Support.

Message type

Error.

KN3CT019 **TCP/IP SERVICE TASK INITIALIZATION ERROR. IKJTSOEV RC(*return_code*), ROUTINE=*program_name***

Explanation

The specified program failed to establish a REXX language processor environment using the IKJTSOEV service. The return code from the service call is displayed in the message.

System action

Command processing exploiting the REXX language processor environment is not available.

Programmer response

Log the information for problem diagnosis and contact IBM Software Support.

Message type

Error.

KN3CT020 **CALL REXX EXEC ERROR. register_R1 register_R15**

Explanation

Either the load of the REXX EXEC processing routine failed or the call to the REXX EXEC processing routine failed. The contents of general registers R1 and R15 are returned to aid in diagnosing the problem.

System action

Command processing using the REXX EXEC processing routine fails.

Programmer response

Log the information for problem diagnosis and contact IBM Software Support.

Message type

Error.

KN3CT040 **KN3SNMP CONFIG ERROR. RC=INVALID_IP_ADDR:*ip_address***

Explanation

The specified invalid IP address *ip_address* was detected in the TCP collector SNMP parameter dataset (KN3SNMP).

System action

SNMP data collection does not function correctly for the OMEGAMON for Mainframe Networks agent with the invalid IP address.

Programmer response

Edit the data set specified by either the KN3_SNMP_CONFIG_FILE PARMGEN profile parameter or the SNMP Configuration file specified in the Configuration Tool and correct the error.

Message type

Error.

KN3CT050 **SNMP MANAGER HAS TERMINATED**

Explanation

The SNMP manager task terminated.

System action

The TCP/IP collector task terminates.

Programmer response

Log the information for problem diagnosis and contact IBM Software Support.

Message type

Error.

KN3CT051 SNMP MANAGER INITIALIZED. RC=<*return_code*>, BUILD: KN3ACTCS <*date*> <*time*>

Explanation

The SNMP manager was started with the return code specified by <*return_code*> using build KN3ACTCS at <*date*> and <*time*>, where date and time are in the following format: `month day year hours minutes seconds`, as in `Jun 7 2012 08:44:30`, where:

return_code
Is the return code from the SNMP Manager task initialization request.

date
Is the date that the C preprocessor compiled the SNMP Manager task source code, displayed in the format `mm dd yyyy`.

time
Is the time that the C preprocessor compiled the SNMP Manager task source code, displayed in the format `hh:mm:ss`.

This message is written to the KN3ACTCS log.

System action

The SNMP manager starts.

Programmer response

This is an informational message. If you received an RC=0 return code, no action is required. If you receive a different return code, try to determine the reason for the error. If you cannot, log the information for problem diagnosis and contact IBM Software Support.

Message type

Information.

KN3CT052 SNMP MANAGER ERROR: RC(*return_code*)

Explanation

An SNMP manager request failed.

System action

The TCP/IP collector task terminates.

Programmer response

Log the information for problem diagnosis and contact IBM Software Support.

Message type

Error.

KN3CT053 SNMP MANAGER REQUEST TIMED OUT. host(*host_ipaddress*)

Explanation

An SNMP manager request timed out before a response was received.

System action

The TCP/IP collector continues.

Programmer response

Ensure that the IBM-supplied TCP/IP SNMP agent address space is running and is receiving adequate service from the operating system.

Message type

Informational.

KN3CT054 DATA SPACE BUFFER ALLOCATION ERROR.

Explanation

The SNMP request processor has received data from the SNMP Manager which exceeds the storage limit allocated in the IBM Z OMEGAMON Network Monitor dataspace.

System action

Data for the failing SNMP request is not available in the product.

Programmer response

Log the information for problem diagnosis and contact IBM Software Support.

Message type

Error.

KN3CT055 OSA UNSUPPORTED OSA ADAPTOR DETECTED. SUBTYPE=*xxxxxxxx*

Explanation

An installed OSA Adapter has been detected whose channel subtype is not recognized by IBM Z OMEGAMON Network Monitor.

System action

Data for the unsupported OSA adapter will not be collected.

Programmer response

Log the information for problem diagnosis and contact IBM Software Support.

Message type

Error.

KN3CT056 TCP/IP COLLECTOR ERROR, ROUTINE=*xxxxxxxx*, TYPE=*yyyyyyyy*, ERROR=*zzzzzzzz*

Explanation

IBM Z OMEGAMON Network Monitor has encountered an error during data collection. The module, data collection type and error type are reported in the message.

System action

System action will vary depending on the error that is encountered.

Programmer response

Log the information for problem diagnosis and contact IBM Software Support.

Message type

Error.

KN3CT057 OSA SNMP DATA COLLECTION TYPE=*xxxxxxxx*, TCPIP=*yyyyyyyy*

Explanation

IBM Z OMEGAMON Network Monitor will determine and report the type of OSA data collection configured for the named TCP/IP stack.

System action

Action will depend on the reported type.

- If TYPE= Z/CS SNMP TCP/IP SUBAGENT then the z/CS MVSTCPIP MIB will be queried to retrieve OSA performance metrics.
- If TYPE=OSA-EXPRESS DIRECT SNMP then the OSA-Express Direct SNMP MIB will be queried to retrieve OSA performance metrics.
- If TYPE= UNAVAILABLE then no OSA performance metrics will be collected.

Programmer response

If TYPE=UNAVAILABLE follow the steps outlined in the *IBM Tivoli IBM Z OMEGAMON Network Monitor: Planning and Configuration Guide* in section Starting the OSA adapter SNMP subagent.

Message type

Informational.

KN3CT058 PORT TABLES=*xxxxxxxx*

Explanation

IBM Z OMEGAMON Network Monitor will determine and report the type of OSA Port tables whose performance metrics will be collected for the TCP/IP stack identified in the prior KN3CT057 message.

System action

Action will depend on the reported type.

- If TABLES= OSAEXPETH and data collection is using the z/CS MVSTCPIP MIB, then OSA performance metrics from the osaexpEthPortTable will be reported.
- If TABLES= OSAEXPETH and data collection is using the OSA-Express Direct SNMP MIB, then OSA performance metrics from the ibmOSAExpEthPortTable will be reported.
- If TABLES= OSAEXP10GIG then OSA performance metrics from the ibmOSAExp10GigEthPortTable will be reported.
- If TABLES= OSAEXP3 then OSA performance metrics from the ibmOSAExp3PortTable will be reported.

Programmer response

None.

Message type

Informational.

KN3CT059 **SNMP INTERFACE DATA NOT FOUND FOR TCPIP=*stackname* ROUTINE=*routine***

Explanation

The SNMP request did not return interface index data for the stack *stackname*, where:

stackname
Is the name of the TCP/IP stack being monitored.

routine
Is the name of the program that detected the problem.

System action

The monitoring agent fails to populate the OSA Ports workspace with information.

Programmer response

Ensure that the SNMP Agent is configured correctly, confirming that the TCP/IP subagent is connected to the SNMP Agent. Refer to information about the SACONFIG statement in the TCP/IP profile in the *IBM z/OS Communications Server IP Configuration Reference*.

Message type

Informational.

KN3CT070 **ROUTE MONITORING FAILED IN *wwwwwwwwww* COLLECTION TYPE=*error_type* RC=*return_code* RSN=*reason_code* ROUTINE=KN3ACTCR**

Explanation

IBM Z OMEGAMON Network Monitor has encountered an error during the collection processing of route table information reported in the Devices and Gateways workspace. The text of the message identifies the error, where *wwwwwwwwww* = INITIALIZING, SIOCGRTTABLE, or SIOCGRT6TABLE.

System action

System action varies depending on the error that is encountered.

Programmer response

Log the information for problem diagnosis and contact IBM Software Support.

Message type

Error.

KN3CT100 **{TCP/IP SERVICE THREAD | MIB BROWSER SERVICES | XMCS SERVICES} THREAD INITIALIZATION COMPLETE**

Explanation

The specified function successfully initialized.

System action

None.

Programmer response

None.

Message type

Informational.

KN3CT102 **{TCP/IP SERVICE THREAD | MIB BROWSER | XMCS} ABENDED, CODE=*abend_code*, PSW=*program_status_word*, ROUTINE=*program_name***

Explanation

The specified function abended. The abend code, Program Status Word (PSW), and program name are displayed in the message.

System action

The function terminates.

Programmer response

Log the information for problem diagnosis and contact IBM Software Support. See message KN3CT103.

Message type

Error.

KN3CT103 **Rregister_number - Rregister_number register_value**

Explanation

This is diagnostic information following message KN3CT102.

System action

None.

Programmer response

Log the information for problem diagnosis and contact IBM Software Support.

Message type

Error.

KN3CT104 {TCP/IP SERVICE THREAD | MIB BROWSER | XMCS} IS TERMINATING

Explanation

The function is terminating.

System action

None.

Programmer response

None.

Message type

Informational.

KN3CT107 {TCP/IP SERVICE THREAD | MIB BROWSER | XMCS} COMPLETED TERMINATION

Explanation

The function successfully completed termination.

System action

None.

Programmer response

None.

Message type

Informational.

KN3CT110 I/O FAILED FOR COMMAND OUTPUT DD. FUNCTION: *function_name*, REASON *reason_code*

Explanation

An I/O request for the named function failed.

System action

The TCP/IP collector task terminates.

Programmer response

Log the information for problem diagnosis and contact IBM Software Support.

Message type

Error.

KN3CT111 COMMAND ATTACH FAILED: Return Code: *return_code*

Explanation

The attach task for a TCP/IP command processor failed.

System action

The TCP/IP collector task terminates.

Programmer response

Log the information for problem diagnosis and contact IBM Software Support.

Message type

Error.

KN3CT112 $GMEM FAILED FOR COMMAND OUTPUT RECORD

Explanation

A memory allocation failed in the TCP/IP service task.

System action

The TCP/IP collector task terminates.

Programmer response

Log the information for problem diagnosis and contact IBM Software Support.

Message type

Error.

KN3CT113 $GMEM FAILED FOR COMMAND PARAM STRUCTURE

Explanation

A memory allocation failed in the TCP/IP service task.

System action

The TCP/IP collector task terminates.

Programmer response

Log the information for problem diagnosis and contact IBM Software Support.

Message type

Error.

KN3CT121 **tcpip_or_vtam ADDRESS SPACE COLLECTOR FAILED. ROUTINE=*program_name*, REASON=*failure_reason*, RETURN=*return_code***

Explanation

TCP/IP or VTAM address space data collection failed.

System action

The TCP/IP collector task terminates.

Programmer response

Log the information for problem diagnosis and contact IBM Software Support.

Message type

Error.

KN3CT122 **TCP/IP *function_name* FAILED. tcpip image=*image_name* ERRNO=*error_code***

Explanation

The named TCP/IP function failed in the TCP/IP collector.

System action

The TCP/IP collector task terminates.

Programmer response

Log the information for problem diagnosis and contact IBM Software Support.

Message type

Error.

KN3CT123 **TCP/IP API LOAD FAILED**

Explanation

The load of the TCP/IP API support module failed.

System action

The TCP/IP collector task terminates.

Programmer response

Log the information for problem diagnosis and contact IBM Software Support.

Message type

Error.

KN3CT124 **TCP/IP IMAGES**

Explanation

This is a message header. It is the first message of a multiple message group. Multiple KN3CT125 messages might follow KN3CT124.

System action

None.

Programmer response

None

Message type

Informational.

KN3CT125 **NAME=*name* STATUS=*status* HOST=*host* IPADDR=xxx.xxx.xxx.xxx**

Explanation

One KN3CT125 message per TCP/IP image follows message KN3CT124, where:

NAME
TCP/IP procedure name.

STATUS
Active, Terminating, Down, Stopped, or Stopping.

HOST
TCP/IP host name.

IPADDR
Host primary IP address.

System action

None.

Programmer response

None.

Message type

Informational.

KN3CT126 ***program_name*** **INVALID PARAMETER SUPPLIED, PARM=*parameter_type***

Explanation

The named program has received an invalid pointer to the parameter list. The type of data pointed to by the parameter list is reported in the message.

System action

The called program terminates processing. This likely results in data loss within the product.

Programmer response

Log the information for problem diagnosis and contact IBM Software Support.

Message type

Error.

KN3CT131 **MIB BROWSER INITIALIZATION FAILED: RC(*return_code*)**

Explanation

Initialization of the MIB browser task failed with the return code indicated.

System action

The MIB browser terminates.

Programmer response

Log the information for problem diagnosis and contact IBM Software Support.

Message type

Error.

KN3CT132 **MIB BROWSER IS NOT ACTIVE RC=*return_code* MODULE(*module*)**

Explanation

An attempt was made to use the MIB browser function of the TCP/IP console, but the browser is not active.

System action

The MIB browser function does not complete.

Programmer response

Examine the RKLVLOG for messages KN3CT131, KN3CT050, KN3CT051, KN3CT052, KN3CT053, or KN3CT009. If the messages indicate a problem with SNMP, this might be a problem with the SNMP agent. Check the status of the SNMP agent and examine the SNMP log for possible problems. A restart of the SNMP agent and OMEGAMON might be necessary. If this fails to resolve the problem, log the information for problem diagnosis and contact IBM Software Support.

Message type

Error.

KN3CT201 ***program_name*** **- UNABLE TO LOAD MODULE *module***

Explanation

TCP/IP component start-up was unable to load the specified module.

System action

The IBM Z OMEGAMON Network Monitor TCP/IP component is terminated.

Programmer response

Ensure that all installation and maintenance jobs ran correctly. Then contact IBM Software Support.

Message type

Error.

KN3CT202 ***program_name*** **- STORAGE ALLOCATION FAILURE SIZE = bytes**

Explanation

The specified module was unable to allocate the specified number of bytes of virtual storage.

System action

The function requiring the process is not successful.

Programmer response

Ensure that the configuration values have not been modified. Then contact IBM Software Support.

Message type

Error.

KN3CT203 ***program_name*** **- EXCEPTION GROUP *group* NOT DEFINED**

Explanation

The specified module was unable to find a definition for the specified exception group.

System action

The request is terminated.

Programmer response

Contact IBM Software Support.

Message type

Error.

KN3CT204 ***program_name*** **- EXCEPTION** ***excp*** **NOT DEFINED**

Explanation

The specified module was unable to find a definition for the specified exception.

System action

The request is terminated.

Programmer response

Contact IBM Software Support

Message type

Error.

KN3CT205 ***program_name*** **- REQUIRED PARAMETER NOT SUPPLIED FOR EXCEPTION:** ***group excp***

Explanation

Module KN3AITXB was passed an exception threshold for the specified exception and group. The threshold was missing a required parameter.

System action

The request is terminated.

Programmer response

Contact IBM Software Support.

Message type

Error.

KN3CT206 ***program_name*** **- INVALID HOST NAME** ***dnsname***

Explanation

Module KN3AITXB was passed the specified DNS name as part of a high-priority connection definition. The name cannot be resolved to an IP address.

System action

The request is terminated.

Programmer response

Ensure that the DNS name is valid. Then contact IBM Software Support.

Message type

Error.

KN3CT207 ***program_name*** **- EZASMI INITIALIZATION FAILURE, RC =** ***rc***

Explanation

Module KN3AITXB was unable to initialize the EZASMI interface.

System action

The process was terminated.

Programmer response

Check the return codes for the EZASMI INITAPI call and contact IBM Software Support.

Message type

Error.

KN3CT208 ***program_name*** **- EZASMI GETHOSTNAME FAILURE**

Explanation

Module KN3AITXB cannot perform a GETHOSTBYNAME function using the EZASMI interface.

System action

The request is terminated.

Programmer response

Contact IBM Software Support.

Message type

Error.

KN3CT209 ***program_name* - INVALID RETURN CODE FROM KN3APTXE**

Explanation

Module KN3AITXB received an invalid return code from module KN3APTXE.

System action

The request is terminated.

Programmer response

Contact IBM Software Support.

Message type

Error.

KN3CT210 ***program_name* - INVALID ELEMENT INPUT: *type***

Explanation

Module KN3AITDE received a request for data with the specified type which is invalid.

System action

The request is terminated.

Programmer response

Contact IBM Software Support.

Message type

Error.

KN3CT211 ***program_name* - UNABLE TO INITIALIZE EZASMI, RETURN CODE = *rc*, REASON CODE = *reason***

Explanation

Module KN3AITXI was unable to initialize the EZASMI interface The return code and reason code are displayed in the message.

System action

The TCP/IP component is terminated.

Programmer response

Consult Appendix B in the *z/OS Communications Server IP Sockets Application Programming Interface Guide and Reference* for meanings of the return codes and errnos (reason codes) for the EZASMI macro. If unable to determine the cause of the error, gather the complete JOBLOG for the IBM Z OMEGAMON Network Monitor started task and contact IBM Software Support.

Message type

Error.

KN3CT301 ***program_name* - UNABLE TO LOAD MODULE *module***

Explanation

TCP/IP component start-up was unable to load the specified module.

System action

The IBM Z OMEGAMON Network Monitor TCP/IP component is terminated.

Programmer response

Ensure that all installation and maintenance jobs ran correctly. Then contact IBM Software Support.

Message type

Error.

KN3CT302 ***program_name* - REQUIRED SUB-ELEMENT PARAMETER MISSING**

Explanation

Module KN3AITDE received a request with a required sub-element missing.

System action

The request is terminated.

Programmer response

Contact IBM Software Support.

Message type

Error.

KN3CT303 ***program_name* - INVALID ELEMENT PARAMETER *parm***

Explanation

Module KN3AITDD received a request with the specified element parameter which is invalid.

System action

The request is terminated.

Programmer response

Contact IBM Software Support.

Message type

Error.

KN3FC Messages

The following IBM Z OMEGAMON Network Monitor messages begin with the KN3FC prefix.

KN3FC000 KN3FCCMD PROCESSING COMPLETE

Explanation

The feature control command, KN3FCCMD, completed processing.

System action

None.

Programmer response

None.

Message type

Informational.

KN3FC001 KN3FCCMD COMMAND REQUEST FAILED ROUTINE=*routine_name* REASON=*reason_code* RETURN=*return_code*

Explanation

An error was detected during feature control command (KN3FCCMD) processing.

System action

The command request fails.

Programmer response

Log the entire error message for problem diagnosis, and contact IBM Software Support.

Message type

Error.

KN3FC002 KN3FCCMD COMMAND SYNTAX ERROR COMMAND(*command_name*)

Explanation

A syntax error was detected while processing feature control command (KN3FCCMD) arguments.

System action

The command request fails.

Programmer response

Enter KN3FCCMD HELP to list supported arguments. Re-enter the command specifying valid KN3FCCMD arguments.

Message type

Error.

KN3FC003 KN3AYFCV NOT AVAILABLE. INSTALL OPTION REQUIRED.

Explanation

The KN3AYFCV resource was not found while processing one of the following feature control command (KN3FCCMD) options: START STOP STATUS

System action

The command request fails. The feature was not installed.

Programmer response

Enter a KN3FCCMD INSTALL request specifying the features requiring installation. Then you can use KN3FCCMD to start, stop, or obtain the status of a feature. See the appendix in the *IBM Tivoli IBM Z OMEGAMON Network Monitor: Planning and Configuration Guide* for more information about the KN3FCCMD command.

Message type

Error.

KN3FC004 KN3FCCMD INVALID OPTION(*option_name*) FOR COMMAND (*command_name*)

Explanation

An invalid command option was detected while processing the feature control command (KN3FCCMD) arguments.

This message might indicate that you specified one or more subcomponents on the `MODIFY proc_name,KN3FCCMD START DBUG` command

without specifying the TCPC component. A component is now required; previously, when no component was specified, DEBUG was activated for ALL components.

System action

The command request fails.

Programmer response

Enter KN3FCCMD HELP to list supported command options. Reenter KN3FCCMD specifying valid command options. See the appendix in the *IBM Z OMEGAMON Network Monitor: Planning and Configuration Guide* for more information about the KN3FCCMD command.

Message type

Error.

KN3FC005 ***<help text>***

Explanation

This is a prefix for feature control command (KN3FCCMD) HELP output. To see a listing of the text that can be displayed in the *<help text>* field, see the Command Reference appendix in the *IBM Z OMEGAMON Network Monitor: Planning and Configuration Guide*.

System action

None.

Programmer response

None.

Message type

Informational.

KN3FC010 **FPON COMPONENT FUNCTIONS INSTALLATION COMPLETE**

Explanation

The feature control command (KN3FCCMD) installed FPON features successfully.

System action

None.

Programmer response

None.

Message type

Informational.

KN3FC015 **FPCT COMPONENT FUNCTIONS INSTALLATION COMPLETE**

Explanation

The feature control command (KN3FCCMD) installed FPCT features successfully.

System action

None.

Programmer response

None.

Message type

Informational.

KN3FC016 **FPCT COMPONENT FUNCTIONS INSTALLATION FAILED ROUTINE=KN3AHCF0 REASON=*reason_code* RETURN=*return_code***

Explanation

An error was detected while the feature control command (KN3FCCMD) was installing FPCT features.

System action

The command request fails.

Programmer response

Log the entire error message for problem diagnosis, and contact IBM Software Support.

Message type

Error.

KN3FC017 ***<status text>***

Explanation

This is a prefix for feature control command (KN3FCCMD) STATUS SEVT output.

System action

None.

Programmer response

None.

Message type

Informational.

KN3FC020 SEVT VTAM ENVIRONMENT INSTALLATION COMPLETE

Explanation

The feature control command (KN3FCCMD) installed SEVT features successfully.

System action

None.

Programmer response

None.

Message type

Informational.

KN3FC024 SEVT z/OS COMMUNICATION SERVER ENVIRONMENT STATUS FAILED ROUTINE=KN3AHEV3 REASON=*abend* RETURN=*abend_code*

Explanation

An error was detected while the feature control command (KN3FCCMD) was checking the status of z/OS Communication Server environment features (SEVT).

System action

The command request fails.

Programmer response

Log the entire error message for problem diagnosis, and contact IBM Software Support.

Message type

Error.

KN3FC025 SEMV MVS™ ENVIRONMENT INSTALLATION COMPLETE

Explanation

The feature control command (KN3FCCMD) installed z/OS environment features (SEMV) successfully.

System action

None.

Programmer response

None.

Message type

Informational.

KN3FC026 SEMV MVS ENVIRONMENT INSTALLATION FAILED ROUTINE=KN3AHMF0 REASON=*reason_code* RETURN=*return_code*

Explanation

An error was detected while the feature control command (KN3FCCMD) was installing z/OS environment features (SEMV).

System action

The command request fails.

Programmer response

Log the entire error message for problem diagnosis, and contact IBM Software Support.

Message type

Error.

KN3FC027 *<status text>*

Explanation

This is a prefix for feature control command (KN3FCCMD) STATUS NCPC output.

System action

None.

Programmer response

None.

Message type

Informational.

KN3FC050 NDMT NCP DATA MANAGER TASK INSTALLATION COMPLETE

Explanation

The feature control command (KN3FCCMD) installed the NCP data manager feature (NDMT) successfully.

System action

None.

Programmer response

None.

Message type

Informational.

KN3FC051 **NDMT NCP DATA MANAGER TASK INSTALLATION FAILED ROUTINE=KN3AHNT0 REASON=*reason_code* RETURN=*return_code***

Explanation

An error was detected while the feature control command (KN3FCCMD) was installing the NCP data manager environment features (NDMT).

System action

The command request fails.

Programmer response

Log the entire error message for problem diagnosis, and contact IBM Software Support.

Message type

Error.

KN3FC052 ***option_name* OPTION REQUIRED FOR NDMT INSTALLATION**

Explanation

Because a required component was unavailable, the feature control command (KN3FCCMD) was unable to install the NCP data manager environment features (NDMT).

System action

The command request fails.

Programmer response

Check the following:

- Was KN3FCCMD INSTALL FPON successful? See message KN3FC010.
- Was NDMTPATH specification for the KN3FCCMD correct?
- Was NDMTSRVR specification for the KN3FCCMD correct?
- Was NDMTUSER specification for the KN3FCCMD correct?

If the problem persists, contact IBM Software Support.

Message type

Error.

KN3FC055 **NDMT NCP DATA MANAGER TASK START FAILED ROUTINE=KN3AHNT1 REASON=*rreason_code* RETURN=*return_code***

Explanation

An error was detected while the feature control command (KN3FCCMD) was starting the NCP data manager environment features (NDMT).

System action

The command request fails.

Programmer response

Check to determine if KN3FCCMD INSTALL NDMT was successful. See message KN3FC050. If the problem persists, log the information and contact IBM Software Support.

Message type

Error.

KN3FC060 **NDMT NCP DATA MANAGER TASK STOP FAILED ROUTINE=KN3AHNT2 REASON=*reason_code* RETURN=*return_code***

Explanation

An error was detected while the feature control command (KN3FCCMD) was stopping the NCP data manager environment features (NCPC).

System action

The command request fails.

Programmer response

Check to determine if KN3FCCMD START NDMT was successful. See message KN3FC050. If the problem persists, log the information and contact IBM Software Support.

Message type

Error.

KN3FC065 ***<status text>***

Explanation

This is a prefix for feature control command (KN3FCCMD) STATUS NDMT output.

System action

None.

Programmer response

None.

Message type

Informational.

KN3FC075 **DBUG EXTENDED DIAGNOSTICS MODE STATUS FAILED ROUTINE=KN3AHFD3 REASON=*reason_code* RETURN=*return_code***

Explanation

An error was detected while the feature control command (KN3FCCMD) was displaying extended diagnostic mode (DBUG).

System action

The command request fails.

Programmer response

Log the information and contact IBM Software Support.

Message type

Error.

KN3FC081 **TCPC TCP/IP COLLECTOR INSTALLATION FAILED ROUTINE=*program_name* REASON=*reason_code* RETURN=*return_code* DSN=*profile_dataset_name***

Explanation

An error was detected while the feature control command (KN3FCCMD) was installing the TCP/IP collector feature (TCPC). The DSN parameter (indicating the TCP/IP profile dataset) is optional.

System action

The command request fails.

Programmer response

Log the entire error message for problem diagnosis and contact IBM Software Support.

Message type

Error.

KN3FC082 ***option_name* OPTION REQUIRED FOR TCPC INSTALLATION**

Explanation

Because a required component was not available, the feature control command (KN3FCCMD) cannot install the TCP/IP collector feature (TCPC).

System action

The command request fails.

Programmer response

Check the following:

- Was KN3FCCMD INSTALL SEMV successful?
- Was KN3FCCMD INSTALL FPON successful?

If the problem persists, contact IBM Software Support.

Message type

Error.

KN3FC083 **TCPC TCP/IP COLLECTOR LOAD FAILED FOR MODULE *module_name***

Explanation

The specified TCP/IP collector module cannot be loaded into storage during installation of the TCP/IP collector feature (TCPC).

System action

TCP/IP collector installation fails.

Programmer response

Log the information for problem diagnosis and contact IBM Software Support.

Message type

Error.

KN3FC084 **TCP/IP PROFILE ALLOCATION FAILED. RC(*return_code*), ERROR(*reason_code*), INFO(*information_code*)**

Explanation

Dynamic allocation of a TCP/IP profile dataset failed during the addition of a target TCP/IP to the address space list.

System action

The target TCP/IP is not added to the address space list and cannot be monitored.

Programmer response

Log the information for problem diagnosis and contact IBM Software Support.

Message type

Error.

KN3FC085 **I/O FAILED FOR TCP/IP PROFILE DATASET. FUNCTION: *function_name* REASON: *reason_code* MBR:*member_name* DSN:*dataset_name***

Explanation

An open or read I/O of a TCP/IP profile data set failed during the addition of a target TCP/IP to the address space list.

System action

Continue. Telnet pool size cannot be determined.

Programmer response

Correct the name of the data set and recycle the agent. The name of the data set that the Telnet pool size is obtained from is specified using the Configuration Tool. Refer to the *IBM Z OMEGAMON Network Monitor: Planning and Configuration Guide* for more information about how to set the TCP/IP profile name.

Message type

Error.

KN3FC086 **ASASYMBM RESOLUTION ERROR. RC(xxxxxxxx), DSN(yyyyyyyyyyyyyyyyyyyyyyyy), PATTERN(yyyyyyyy)**

Explanation

This message indicates an error was encountered while processing a z/OS symbolic symbol. The fields specify the following information:

DSN
The data set in which the error was encountered.

RC
The return code from the call to the z/OS symbolic symbol resolver service.

PATTERN
The pattern that was passed to the service when the call was made.

System action

Processing Continues.

Programmer response

The original PROFILE.TCPIP record is replaced by a dummy record due to the error resolving the z/OS symbolic symbol. The impact on the product depends on the statement that encountered the error. Use the RC and PATTERN output to determine the cause of the problem. If the problem is not apparent, contact IBM Software Support.

Message type

Error.

KN3FC089 **TCPC TCP/IP COLLECTOR START FAILED ROUTINE=KN3ACTC1 REASON=*reason_code* RETURN=*return_code***

Explanation

An error was detected while the feature control command (KN3FCCMD) was starting the TCP/IP collector feature (TCPC).

System action

The command request fails.

Programmer response

Check to determine if KN3FCCMD INSTALL TCPC was successful. If the problem persists, contact IBM Software Support.

Message type

Error.

KN3FC090 **TCPC TCP/IP COLLECTOR STOP FAILED ROUTINE=KN3ACTC2 REASON=*reason_code* RETURN=*return_code***

Explanation

An error was detected while the feature control command (KN3FCCMD) was stopping the TCP/IP collector feature (TCPC).

System action

The command request fails.

Programmer response

Check to determine if KN3FCCMD INSTALL TCPC was successful. If the problem persists, contact IBM Software Support.

Message type

Error.

KN3FC095 <status text>

Explanation

This is a prefix for feature control command (KN3FCCMD) STATUS TCPC output. To see a listing of the text that can be displayed in the <*status text*> field, see the Command Reference appendix in *IBM Z OMEGAMON Network Monitor: Planning and Configuration Guide*. This message may now also include IPSec status.

System action

None.

Programmer response

None.

Message type

Informational.

KN3FC096 TCPC STATUS COMMAND FAILED ROUTINE=KN3ACTC3 REASON=*reason_code* RETURN=*return_code*

Explanation

An error was detected while the feature control command (KN3FCCMD) was executing the status function for the TCP/IP collector feature (TCPC).

System action

The command request fails.

Programmer response

Check to determine if KN3FCCMD INSTALL TCPC was successful. If the problem persists, contact IBM Software Support.

Message type

Error.

KN3FC100 IBM Z OMEGAMON Network Monitor DIAGNOSTIC *feature* MODE ACTIVATED

Explanation

The internal diagnostic trace or trap facility was started in response to a KN3FCCMD START feature command.

System action

Processing continues.

Programmer response

None.

Message type

Informational.

KN3FC101 IBM Z OMEGAMON Network Monitor DIAGNOSTIC *feature* ACTIVATION FAILED ROUTINE=KN3AHFT1 REASON=*reason_code* RETURN=*return_code*

Explanation

An error was detected during the processing of a KN3FCCMD START TRACE or TRAP command.

System action

Processing continues. The facility is not activated.

Programmer response

Log the diagnostic information and contact IBM Software Support.

Message type

Error.

KN3FC102 IBM Z OMEGAMON Network Monitor DIAGNOSTIC *feature* MODE DEACTIVATED

Explanation

The internal diagnostic trace or trap facility was stopped in response to a KN3FCCMD STOP feature command.

System action

Processing continues.

Programmer response

None.

Message type

Informational.

KN3FC103 **IBM Z OMEGAMON Network Monitor DIAGNOSTIC *feature* MODE DEACTIVATION FAILED ROUTINE=KN3AHFT2 REASON=*reason_code* RETURN=*return_code***

Explanation

An error was detected during the processing of a KN3FCCMD STOP TRACE or TRAP command.

System action

Processing continues.

Programmer response

Log the diagnostic information and contact IBM Software Support.

Message type

Error.

KN3FC104 **IBM Z OMEGAMON Network Monitor DIAGNOSTIC *feature* IS *status***

Explanation

This message reports the status of the diagnostic trace or trap facility in response to a KN3FCCMD STATUS feature command, where *feature* can be TRACE or TRAP and *status* can be DEACTIVATED, ACTIVATED, INACTIVE or ACTIVE.

System action

Processing continues.

Programmer response

None.

Message type

Informational.

KN3FC105 **IBM Z OMEGAMON Network Monitor DIAGNOSTIC *feature* STATUS FAILED ROUTINE=KN3AHFT3 REASON=*reason_code* RETURN=*return_code***

Explanation

An error was detected during the processing of a KN3FCCMD STATUS TRACE or TRAP command.

System action

Processing continues.

Programmer response

Log the diagnostic information and contact IBM Software Support.

Message type

Error.

KN3I Messages

The following IBM Z OMEGAMON Network Monitor messages begin with the KN3I prefix.

KN3I001I **IBM Z OMEGAMON Network Monitor INSTALLATION OF BASE COMPONENTS COMPLETE**

Explanation

The base components of IBM Z OMEGAMON Network Monitor have been installed without error.

System action

None.

Programmer response

None.

Message type

Informational.

KN3I002I **TCP|VTAM SUBNODE MONITOR STARTING|INITIALIZING FOR ORIGINNODE *originnode***

Explanation

The monitoring agent is preparing to monitor the named *originnode*. *INITIALIZING* indicates that the monitoring agent will not collect data from the *originnode*, as specified in the configuration options.

System action

None.

Programmer response

None.

KN3I003I **TCP|VTAM SUBNODE MONITOR STARTED|INITIALIZED FOR ORIGINNODE *originnode***

Explanation

The monitoring agent has started to monitor the named *originnode*. *INITIALIZED* indicates that the monitoring agent will not collect data from the *originnode* and the *originnode* will not be registered, as specified in the configuration options.

System action

None.

Programmer response

None.

KN3I007I **KN3AGENT BUILD DATE=*date* TIME=*time***

Explanation

This message identifies the date and time when the program was compiled.

KN3I008E **CALL TO ADDDATA FUNCTION FAILED, RETURN CODE=*retcode*, FOR TABLE=*table*.**

Explanation

An error occurred (return code = *retcode*) while trying to return data to the Tivoli Enterprise Monitoring Server for table *table*. The most common cause of this error is a query that returns too many rows of data, causing an out-of-memory condition.

Programmer response

Modify the query so that it returns fewer rows of data. Changing the ITMS:Engine LIMIT and MAXIMUM parameters, based on expected workload, can eliminate this error message. For more information on the values for these parameters, see the tuning components chapter in the *IBM Z OMEGAMON Network Monitor: Planning and Configuration Guide* .

KN3I009E **ENCOUNTERED FILTERS THAT ARE NOT SUPPORTED FOR TABLE=*table*.**

Explanation

A filter was found while trying to return data to the Tivoli Enterprise Monitoring Server for table *table*. This filter is not supported for this table.

For the KN3TNB table, a Connection Number must be specified in each row of the query.

Programmer response

Modify the query so that it specifies valid filters.

KN3I917I **TCP SUBNODE PROFILE INFORMATION NOT FOUND IN *member* FOR ORIGINNODE *originnode* DEFAULTS USED PROFILE_DSN=*profile_dataset* PROFILE_MEMBER=*profile_member* COLLECT=*tcp_stack***

Explanation

The monitoring agent registration detected that there is no configuration information for the TCP/IP address space identified by *originnode*

System action

The monitoring agent subnode manager uses the defaults displayed in the message to start the TCP/IP collection monitor for the *originnode*.

Programmer response

Add configuration information for this TCP/IP address space using the Configuration Tool. Select the "Specify monitored systems information" option on the "Specify Configuration Parameters" panel.

Message type

Error.

KN3I919E **TCP SUBNODE MONITOR START FAILED FOR ORIGINNODE *originnode***

PROFILE_DSN=*profile_dataset* PROFILE_MEMBER=*profile_member* COLLECT=*tcp_stack*

Explanation

An error occurred while starting the TCP/IP collection monitor for the *originnode*.

System action

The monitoring agent does not collect data for the TCP/IP address space identified by the *originnode*.

Programmer response

Check RKLVLOG for additional messages that might indicate why the start monitoring request failed. Resolve any errors that are reported in RKLVLOG and restart the monitoring agent. If problems persist, contact IBM Software Support.

Message type

Error.

KN3IR001 **IRA SUBNODE REGISTRATION THREAD IS ACTIVE HOSTNAME=*hostname* SUBSYSTEMID=*subsystemid* NODETYPE=*nodetype* PRODUCT=*product* VERSION=*version***

Explanation

IBM Z OMEGAMON Network Monitor monitoring agent registration service is available.

System action

None.

Programmer response

None.

Message type

Informational.

KN3IR004 **TCP|VTAM SUBNODE REGISTRATION SUCCESSFUL FOR ORIGINNODE *originnode***

Explanation

The monitoring agent manager has registered to monitor the named *originnode*.

System action

None.

Programmer response

None.

Message type

Informational.

KN3IR005 **TCP|VTAM SUBNODE DEREGISTERED FOR ORIGINNODE *originnode***

Explanation

The monitoring agent manager is no longer registered to monitor the named *originnode*.

System action

None.

Programmer response

Information only.

Message type

Informational.

KN3IR006 **TCP|VTAM SUBNODE MONITOR STOPPED FOR ORIGINNODE *originnode***

Explanation

The monitoring agent manager has stopped monitoring the named *originnode*.

System action

None.

Programmer response

Information only.

Message type

Informational.

KN3IR900 **IRA *type* REGISTRATION TOKEN MISSING OR INVALID ROUTINE=*routine***

Explanation

The registration token to register the IBM Z OMEGAMON Network Monitor product was not located.

System action

The monitoring agent on which the error occurred does not participate in any distributed queries.

Programmer response

Check RKLVLOG for additional messages that might indicate why the N3 product registration failed. If problems persist, contact IBM Software Support.

Message type

Error.

KN3IR901 ***type*** **HAS ABENDED|FAILED ROUTINE=program_name, [options]**

Explanation

A monitoring agent detected an error. The value for *type* can be any of the following:

- IRA COLLECTION
- IRA SUBNODE REGISTRATION
- IRA SUBSYSTEM REGISTRATION
- SUBNODE VALIDATION
- TCP SUBNODE DEREGISTRATION
- TCP SUBNODE REGISTRATION
- VTAM® SUBNODE REGISTRATION

The value for `program_name` identifies where the error was detected. The format is either module or module entrypoint.

Options:

- `REASON`: `NO_NODE, NO_TYPE, INV_TYPE, SCAN_ERR`
- `CODE`: ABEND completion code
- `PSW`: program status work at the time of error.

System action

The monitoring agent on which the error occurred does not participate in any distributed queries.

Programmer response

Gather the complete started task output (RKLVLOG, JES messages, etc.) for the monitoring agent address space and contact IBM Software Support.

Message type

Error

KN3IR902 **IRA SUBSYSTEM REGISTRATION ENVIRONMENT ERROR ROUTINE=*program_name* REASON=*reason***

Explanation

The product environment for the IBM Z OMEGAMON Network Monitor product was not correctly installed. The following variables appear in this message:

program_name
The name of the routine where the error occurred.

reason
The reason given for the error.

System action

The monitoring agent on which the error occurred does not participate in any distributed queries.

Programmer response

Check RKLVLOG for additional messages that might indicate why the IBM Z OMEGAMON Network Monitor product environment was not correctly installed. If problems persist, gather the complete started task output (RKLVLOG, JES messages, etc.) for the monitoring agent address space and contact IBM Software Support.

Message type

Error

KN3IR903 **pthread_create ()error = `errno`**

Explanation

The IBM Z OMEGAMON Network Monitor monitoring agent Registration Thread cannot be started. The `errno` was set by `pthread_create()`.

System action

The monitoring agent on which the error occurred does not participate in any distributed queries.

Programmer response

Check RKLVLOG for additional messages that might indicate why the monitoring agent Registration Thread cannot be started. If problems persist, gather the complete started task output (RKLVLOG, JES messages, etc.) for the monitoring agent address space and contact IBM® Software Support.

Message type

Error.

KN3IR904 pthread_detach() error = errno

Explanation

The IBM Z OMEGAMON Network Monitor monitoring agent Registration Thread cannot be detached. The errno was set by pthread_detach().

System action

The monitoring agent on which the error occurred does not participate in any distributed queries.

Programmer response

Check RKLVLOG for additional messages that might indicate why the monitoring agent Registration Thread cannot be started. If problems persist, gather the complete started task output (RKLVLOG, JES messages, etc.) for the monitoring agent address space and contact IBM® Software Support.

Message type

Error

KN3IR905 IRA Manager command unknown: command

Explanation

The IBM Z OMEGAMON Network Monitor monitoring agent Registration Thread received an unsupported command.

System action

The command is ignored.

Programmer response

Check RKLVLOG for additional messages that might indicate why the monitoring agent Registration Thread cannot be started. If problems persist, gather the complete started task output (RKLVLOG, JES messages, etc.) for the monitoring agent address space and contact IBM® Software Support.

Message type

Error

KN3IR906 IRA Manager command operand missing

Explanation

The IBM Z OMEGAMON Network Monitor monitoring agent Registration Thread received a command that did not have all required operands.

System action

The command is ignored.

Programmer response

Check RKLVLOG for additional messages that might indicate why the monitoring agent Registration Thread cannot be started. If problems persist, gather the complete started task output (RKLVLOG, JES messages, etc.) for the monitoring agent address space and contact IBM® Software Support.

Message type

Error

KN3IR907 Unknown component for subnode registration *component_name*

Explanation

The IBM Z OMEGAMON Network Monitor monitoring agent Registration Thread received a request to register an unknown component. The component_name variable identifies the component.

System action

The unknown component is not registered.

Programmer response

Check RKLVLOG for additional messages that might indicate why the monitoring agent Registration Thread cannot be started. If problems persist, gather the complete started task output (RKLVLOG, JES messages, etc.) for the monitoring agent address space and contact IBM® Software Support.

Message type

Error

KN3IR908 IRA_Subnode_Register error: RC=*return_code* Node=*subnode*

Explanation

The IBM Z OMEGAMON Network Monitor monitoring agent Registration Thread received a non-zero return code from the CT IRA Registration functions when attempting to register subnode.

System action

The component subnode is not registered

Programmer response

Check RKLVLOG for additional messages that might indicate why the monitoring agent Registration Thread cannot be started. If problems persist, gather the complete started task output (RKLVLOG, JES messages, etc.) for the monitoring agent address space and contact IBM® Software Support.

Message type

Error

KN3IR909 **IRA_Subnode_Deregister error: RC=*return_code* Node=*subnode***

Explanation

The IBM Z OMEGAMON Network Monitor monitoring agent Registration Thread received a non-zero return code from the CT monitoring agent Registration functions when attempting to deregister subnode.

System action

The component subnode is not deregistered

Programmer response

Check RKLVLOG for additional messages that might indicate why the monitoring agent Registration Thread cannot be started. If problems persist, gather the complete started task output (RKLVLOG, JES messages, etc.) for the monitoring agent address space and contact IBM® Software Support.

Message type

Error

KN3IR910 **IRA SUBNODE REGISTRATION THREAD IS NOT ACTIVE HOSTNAME=*hostname* SUBSYSTEMID=*subsystemid* NODETYPE=*nodetype* PRODUCT=*product* VERSION=*version***

Explanation

An attempt was made to post a request to the N3 product Subnode registration service and the thread was found to be not active.

System action

The subnode registration request fails.

Programmer response

Check RKLVLOG for additional messages that might indicate why the N3 product Subnode registration service failed. If problems persist, contact IBM Software Support.

Message type

Error.

KN3IR911 **IRA SUBNODE REGISTRATION THREAD IS NOT RESPONDING HOSTNAME=*hostname* SUBSYSTEMID=*subsystemid* NODETYPE=*nodetype* PRODUCT=*product* VERSION=*version***

Explanation

An attempt was made to post a request to the IBM Z OMEGAMON Network Monitor product Subnode registration service and the thread was found not responding to the request.

System action

The subnode registration request fails.

Programmer response

Check RKLVLOG for additional messages that might indicate why the N3 product Subnode registration service failed. If problems persist, contact IBM Software Support.

Message type

Error.

KN3IR912 **IRA SUBNODE REGISTRATION THREAD CURRENTLY ACTIVE HOSTNAME=*hostname* SUBSYSTEMID=*subsystemid* NODETYPE=*nodetype* PRODUCT=*product* VERSION=*version***

Explanation

An attempt was made to start the IBM Z OMEGAMON Network Monitor product Subnode registration service and the thread was found currently active.

System action

The subnode registration request fails.

Programmer response

Check RKLVLOG for additional messages that might indicate why the IBM Z OMEGAMON Network Monitor product Subnode registration service failed. If problems persist, contact IBM Software Support.

Message type

Error.

KN3IR913 **IRA *type* REGISTRATION THREAD HAS ABENDED ROUTINE=*program_name***

Explanation

The monitoring agent Management registration thread for the IBM Z OMEGAMON Network Monitor Product has abended.

System action

The monitoring agent on which the error occurred will not participate in any distributed queries.

Programmer response

Gather RKLVLOG, JES messages and LOG for the monitoring agent address space and contact IBM Software Support.

Message type

Error.

KN3IR914 **INVALID REQUEST CODE (*hhhhhhhh*) ROUTINE=*routine***

Explanation

The monitoring agent Management registration thread for the IBM Z OMEGAMON Network Monitor product incurred an error.

System action

The monitoring agent subnode for which the error occurred does not participate in any distributed queries.

Programmer response

Gather RKLVLOG, JES messages and LOG for the monitoring agent address space and contact IBM Software Support.

Message type

Error.

KN3IR915 **STORAGE ALLOCATION FAILED FOR ELEMENT(*element*) ROUTINE=*routine***

Explanation

The monitoring agent Management registration function for the IBM Z OMEGAMON Network Monitor product cannot allocate virtual storage.

System action

The current registration request fails.

Programmer response

Determine insufficient storage problem.

Message type

Error.

KN3IR916 **$SCAN ERROR PARSING *tcp_dataset_profile_member* ROUTINE=*routine***

Explanation

An error occurred parsing data from the RKANPAR(U) member.

System action

The current registration request fails.

Programmer response

Determine the $SCAN error.

Message type

Error.

KN3IR918 **$PAM ERROR REQUEST=*request* MEMBER=*member* R15=*hhhhhhhh* R0=*hhhhhhhh* R1=*hhhhhhhh* ROUTINE=*routine***

Explanation

A error occurred reading the RKANPAR(U) for the member.

System action

The monitoring agent subnode for which the error occurred does not participate in any distributed queries.

Programmer response

Determine the $PAM error.

Message type

Error.

KN3IR920 **TCP|VTAM SUBNODE REGISTRATION FAILED RC=*return_code* FOR ORIGINNODE *originnode***

Explanation

Subnode registration failed for the TCP/IP image for the *originnode*.

System action

The monitoring agent subnode for which the error occurred does not participate in any distributed queries.

Programmer response

Check RKLVLOG for additional messages that might indicate why the registration request failed. If problems persist, contact IBM Software Support.

Message type

Error.

KN3IR921 **TCP|VTAM SUBNODE REGISTRATION REQUEST FAILED ROUTINE=*program_name***

Explanation

Subnode registration failed.

System action

The monitoring agent subnode for which the error occurred does not participate in any distributed queries.

Programmer response

Check RKLVLOG for additional messages that might indicate why the registration request failed. If problems persist, contact IBM Software Support.

Message type

Error.

KN3IR922 **TCP MONITOR STOP FAILED FOR ORIGINNODE *originnode***

Explanation

An error occurred starting the TCP/IP collection monitor for the *originnode*.

System action

The monitoring agent subnode for which the error occurred does not participate in any distributed queries.

Programmer response

Check RKLVLOG for additional messages that might indicate why the stop monitoring request failed. If problems persist, contact IBM Software Support.

Message type

Error.

KN3IR923 **TCP|VTAM SUBNODE DEREGISTRATION FAILED RC=*return_code* FOR ORIGINNODE *originnode***

Explanation

Subnode deregistration failed for the TCP/IP image for the *originnode*.

System action

The monitoring agent subnode for which the error occurred does not participate in any distributed queries.

Programmer response

Check RKLVLOG for additional messages that might indicate why the deregistration request failed. If problems persist, contact IBM Software Support.

Message type

Error.

KN3IR924 **IRA SUBNODE DEREGISTRATION FAILED ROUTINE=*routine***

Explanation

Subnode registration failed.

System action

The monitoring agent subnode for which the error occurred does not participate in any distributed queries.

Programmer response

Check RKLVLOG for additional messages that might indicate why the deregistration request failed. If problems persist, contact IBM Software Support.

Message type

Error.

KN3IR925 UNABLE TO OBTAIN WORK AREA STORAGE ROUTINE=*routine*

Explanation

There was insufficient storage to satisfy the request.

System action

The monitoring agent subnode for which the error occurred does not participate in any distributed queries.

Programmer response

Check RKLVLOG for additional messages that might indicate why the storage request failed. If problems persist, contact IBM Software Support.

Message type

Error.

KN3IR926 TCP|VTAM MONITOR COLLECTION FAILED {MACRO(*macro_name*) *macro parameters* | NMI API COLLECTION | SNAC API TABLE=*table_name* TYPE=*nmi_type* | *snac_type*} RC=*return_code* ROUTINE=*program_name* ORIGINNODE *originnode*

Explanation

Monitoring agent collection failed.

System action

The monitoring agent subnode for which the error occurred does not participate in any distributed queries.

Programmer response

Check the JOBLOG for the IBM Z OMEGAMON Network Monitor started task for additional messages that might indicate why the collection request failed. If problems persist, gather the complete JOBLOG for the IBM Z OMEGAMON Network Monitor started task and contact IBM Software Support.

A common message is KN3IR926...TYPE=DATA LEN. The TYPE=DATA LEN text means that the length of data records that OMEGAMON has written to its dataspace is not the expected length. This could occur if there are backlevel modules in the RKANMODU load library.

There is a link edit job, KN3LINK, that is found in the RKANSAMU library. When applying maintenance, this job must be run if the system that was used for the SMP/E installation of the IBM Z OMEGAMON Network Monitor monitoring agent is at a different z/OS release level than the system on which the monitoring agent is running. You will find ++HOLD instructions in the PTFs when this needs to be done.

The KN3LINK job puts members into the RKANMODU load library. If maintenance has been applied and that KN3LINK step was not redone, back level modules will remain in RKANMODU and could cause problems.

It is important to always rerun the KN3LINK job according to the ++HOLD instructions.

If you no longer need to run KN3LINK (because the z/OS levels are now the same), then you should manually delete the old copies of KN3ACTCS and KN3ANMON from RKANMODU.

Message type

Error.

KN3IR927 TCP MONITOR COLLECTION FAILED ROUTINE=*routine* UNABLE TO LOCATE ORIGINNODE *originnode*

Explanation

The monitoring agent collection failed.

System action

The monitoring agent subnode for which the error occurred does not participate in any distributed queries.

Programmer response

Check RKLVLOG for additional messages that might indicate why the collection request failed. If problems persist, contact IBM Software Support.

Message type

Error.

KN3N Messages

The following IBM Z OMEGAMON Network Monitor messages begin with the KN3N prefix.

KN3N001E MEMORY CANNOT BE ALLOCATED.

Explanation

The monitor attempted to allocate memory but was not successful. The current data collection request cannot be completed. The monitor attempts to perform the data collection request at the next time interval.

Programmer response

Increase the region size of the started procedure.

KN3N002E DATA CANNOT BE RECEIVED ON A SOCKET. ERRNO=*errno* ERRNOJR=0x*errnoJr* LOCATION: *location_code*

Explanation

The monitor attempted to read data on a socket but was not successful.

The *location_code* identifies the location within the monitor code where this message is issued. It is used by IBM Software Support.

Operator response

Verify that the TCP/IP stack is running.

Programmer response

See *IBM z/OS UNIX System Services Messages and Codes* for a description of errno (displayed in decimal) and errnoJr codes.

KN3N003E DATA CANNOT BE SENT ON A SOCKET. ERRNO=*errno* ERRNOJR=0x*errnoJr*. LOCATION: *location_code*

Explanation

The monitor failed to send data on a socket.

The *location_code* identifies the location within the monitor code where this message is issued. It is used by IBM Software Support.

Operator response

Verify that the TCP/IP stack is running.

Programmer response

See *IBM z/OS UNIX System Services Messages and Codes* for a description of errno (displayed in decimal) and errnoJr codes.

KN3N004E A DUMP IS BEING REQUESTED FOR *name* COMPONENT. COMPLETION CODE = X'*completion_code*' REASON CODE = X'*reason_code*'

Explanation

The monitor encountered an error. The SVC dump was requested. The first digits of the hexadecimal completion code are the system completion code and the last three are the user completion code.

Operator response

Notify your System Programmer.

Programmer response

Investigate the reason for the ABEND that caused the SVC dump.

KN3N005E THE SVC DUMP FOR THE *name* COMPONENT HAS COMPLETED. RETURN CODE = X'*return_code*', REASON CODE = X'*reason_code*'

Explanation

The SVC dump has completed and is expected to be written to a dump data set. The *return_code* and *reason_code* codes are from the SDUMP macro. The SDUMP macro return and reason codes are documented in the *IBM z/OS MVS Programming: Authorized Assembler Services Reference* guide.

Operator response

Notify your System Programmer.

Programmer response

Investigate the reason for the ABEND that caused the SVC dump.

KN3N006E MEMORY CANNOT BE ALLOCATED.

Explanation

The monitor attempted to allocate memory but was not successful.

Programmer response

Increase the region size of the started procedure.

KN3N007E **THE SNAMGMT INTERFACE CANNOT BE INITIALIZED. LOCATION: *location_code***

Explanation

The monitor attempted to initialize the SNAMGMT network management interface in preparation for collecting CSM, EE or HPR data. The initialization was not successful.

The *location_code* identifies the location within the monitor code where this message is issued. It is used by IBM Software Support.

Operator response

Verify that the SNAMGMT network management interface is active.

Issue the `DISPLAY NET,VTAMOPTS,OPTION=SNAMGMT` command to determine if the SNAMGMT interface is active.

Programmer response

Verify that the user ID running the monitor is authorized to use the SNAMGMT network management interface.

KN3N008E **THE *netmgmt_interface* INTERFACE CANNOT BE INITIALIZED WITH THE *tcpip_job_name* JOB NAME. LOCATION: *location_code***

Explanation

The program attempted to initialize a z/OS Communications Server network management interface for a TCP/IP stack to prepare for collecting z/OS Communications Server data. The initialization was not successful. The network management interfaces that can be initialized are as follows:

SMFService
Collects TN3270 data or FTP data, or both.

TCPCONNService
Collects FTP data.

The *location_code* identifies the location within the monitor code where this message is issued. It is used by IBM Software Support.

Operator response

Verify that the network management interface is active for the TCP/IP stack.

Issue the `DISPLAY TCPIP,tcpipproc,NETSTAT,CONFIG` command to determine which network management interfaces are active.

Programmer response

Verify that the user ID running the program is authorized to use the network management interface on the TCP/IP stack.

KN3N009W **THE Z/OS COMMUNICATIONS SERVER STOPPED THE SNAMGMT INTERFACE. LOCATION: *location_code***

Explanation

The monitor attempted to communicate using the SNAMGMT network management interface, but the z/OS Communications Server ended the connection.

The *location_code* value identifies the location within the monitor code where this message is issued. It is used by IBM Software Support.

Operator response

Activate the SNAMGMT interface, using the `MODIFY` *`vtamproc`*`,VTAMOPTS,SNAMGMT=YES` command.

Programmer response

Verify that the user ID running the monitor is authorized to use the SNAMGMT network management interface.

KN3N010W **THE Z/OS COMMUNICATIONS SERVER STOPPED THE *netmgmt_interface* NETWORK MANAGEMENT INTERFACE WITH *tcpip_job_name*. LOCATION: *location_code***

Explanation

The monitor attempted to communicate using the z/OS Communications Server network management interface, but the z/OS Communications Server ended the connection.

The monitor attempted to initialize a z/OS Communications Server network management interface for a TCP/IP stack in preparation for collecting z/OS Communications Server data. The initialization was not successful. The network management interfaces that might have been stopped are as follows:

SMFService
Collects TN3270 data or FTP data, or both.

TCPCONNService
Collects FTP data.

The *location_code* identifies the location within the monitor code where this message is issued. It is used by IBM Software Support.

Operator response

Verify that the network management interface is active for the TCP/IP stack.

Programmer response

Verify that the user ID running the monitor is authorized to use the network management interface on the TCP/IP stack.

KN3N011E **THE REQUEST FOR *data_type* DATA FAILED WITH RETURN CODE *return_code* AND REASON CODE *reason_code*. LOCATION: *location_code***

Explanation

The z/OS Communications Server reported a request that was not valid for the Communication Storage Manager (CSM), Enterprise Extender (EE), or High-Performance Routing (HPR) data on the SNAMGMT NIM (network management interface). The requested data cannot be collected.

The expected *return_code* is:

121 (EINVAL)
A request for z/OS Communications Server data was not valid.

For more information about the reason codes generated by this message, see the "NMI request errors" topic in the "SNA network monitoring NMI" section in the network management interface (NMI) chapter of the *IBM z/OS Communications Server: IP Programmer's Guide and Reference*. See also “Symptom 3: Message KN3N011E in the KN3ANMON log” on page 22.

The *location_code* identifies the location within the monitor code where this message is issued. It is used by IBM Software Support.

Programmer response

Verify that the installed versions of IBM Z OMEGAMON Network Monitor and z/OS Communications Server are compatible.

KN3N012E **A RECORD IS MISSING IN THE RESPONSE RECEIVED FROM THE Z/OS COMMUNICATIONS SERVER INTERFACE**

Explanation

The monitor received a response from the z/OS Communications Server network management interface. The response is missing a required record. The Enterprise Extender connection data or IPSec data was received and stored, but some Enterprise Extender connection details or IPSec data characteristics cannot be stored. The monitor continues processing.

Programmer response

Verify that the installed versions of IBM Z OMEGAMON Network Monitor and z/OS Communications Server are compatible.

KN3N015I **THE DATA COLLECTION SERVER IS INITIALIZED AND READY TO COLLECT DATA. BUILD: KN3ANMON <*date*><*time*>**

Explanation

The program that collects data from z/OS Communications Server network management interfaces has been initialized successfully using build: KN3ANMON at <*date*> and <*time*> (for example, `BUILD: KN3ANMON Jul 10 2012 18:26:45`), where:

date
Is the date that the C preprocessor compiled the task source code, displayed in the format `mm dd yyyy`.

time
Is the time that the C preprocessor compiled the task source code, displayed in the format `hh:mm:ss`.

The process is ready to collect z/OS Communications Server data. This message is written to the KN3ANMON log.

System action

None.

Programmer response

This is an informational message. No action is required

KN3N016I **THE DATA COLLECTION SERVER HAS COMPLETED PROCESSING**

Explanation

The program that collects data from z/OS Communications Server network management interfaces has completed processing and ended normally.

KN3N017E **THE DATA COLLECTION SERVER INITIALIZATION WAS NOT SUCCESSFUL. LOCATION: *location_code***

Explanation

The monitor that collects data from z/OS Communications Server network management interfaces was not initialized successfully. The monitor failed to bind to the CSAPIport port or to initialize internal control blocks. The process exits.

The *location_code* identifies the location within the monitor code where this message is issued. It is used by IBM Software Support.

Operator response

The problem might be temporary. Stop and start the monitor again.

Programmer response

Verify that the CSAPIport port is not being used by another application or that it is not reserved. The port can be reserved in the TCP/IP profile or one of the BPXPRMxx members.

Verify that the region size for the monitor is large enough.

KN3N018E **THE DATA COLLECTION SERVER CANNOT JOIN A CHILD THREAD. THE SERVER CONTINUES COLLECTING DATA.**

Explanation

The monitor that collects data from Communications Server for z/OS network management interfaces received an error while attempting to join a child thread. Data collection continues.

Programmer response

Investigate the reason for the join failure. View the trace logs for additional information.

KN3N019I **THE DATA COLLECTION SERVER RECEIVED A REQUEST TO STOP**

Explanation

The data collection server frees the resources and exits.

KN3N020E **THE INTERNAL CONNECTIONS TO THE DATA COLLECTION SERVER HAVE EXCEEDED THE MAXIMUM NUMBER. THE NEW CONNECTION WAS CLOSED.**

Explanation

The data collection server received a request for a new internal connection when it already had the maximum number of open internal connections. The process continues collecting the z/OS Communications Server data for the existing clients. The new connection was closed.

Programmer response

Contact IBM Software Support.

KN3N021E **THE DATA RECEIVED ON *netmgmt_interface* INTERFACE FROM *tcpip_job_name* WAS NOT COMPLETE. LOCATION: *location_code***

Explanation

The data collection server received data that was not complete. The File Transfer Protocol (FTP) or TN3270 data cannot be collected. The interface to the z/OS Communications Server network management data was closed, and resources were released. The data collection server attempts to establish this data collection again.

The *location_code* identifies the location within the monitor code where this message is issued. It is used by IBM Software Support.

Operator response

Notify the System Programmer if the problem persists.

Programmer response

Verify that the installed versions of IBM Z OMEGAMON Network Monitor and z/OS Communications Server are compatible.

KN3N022E **THE DATA RECEIVED ON *netmgmt_interface* INTERFACE FROM *tcpip_job_name* WAS NOT VALID. LOCATION: *location_code*.**

Explanation

The monitor that collects data from z/OS Communications Server network management interfaces received data that is not valid. The data cannot be collected. The interface to z/OS Communications Server network management data was closed, and resources were released. The monitor continues to collect data at the next interval.

The *location_code* identifies the location within the monitor code where this message is issued. It is used by IBM Software Support.

Programmer response

Verify that the installed versions of IBM Z OMEGAMON Network Monitor and z/OS Communications Server are compatible.

KN3N023E **A RESPONSE WAS RECEIVED FOR *data_type* DATA FROM *tcpip_job_nm* WITH ERRNO=*errno* AND ERRNOJR=0x*errnoJr*. LOCATION: *location_code***

Explanation

The z/OS Communications Server network management interface rejected a request for data with the indicated *errno* and *errnoJr* codes. The monitor currently cannot collect this data. The monitor continues attempting to collect data based on the monitor definition.

The expected *errno* codes may vary depending on the *data_type* identified in the message.

- If the *data_type* has a value of "IP security", the *errno* and *errnoJr* values are documented in the "IPSec NMI return and reason codes" section of the *IBM z/OS Communications Server: IP Programmer's Guide and Reference*.
- If the *data_type* has one of the following values:
  - TCP/IP private memory
  - TCP application
  - TCP connection
  - UDP endpoint

  then the expected *errno* codes are as follows:

  111 (EACCES)
  The caller is not authorized.

  112 (EAGAIN)
  The target TCP/IP stack was not active.

  118 (EFAULT)
  Storage provided as part of the data request cannot be accessed.

  121 (EINVAL)
  A request for z/OS Communications Server data was not valid.

  1158 (ETCPERR)
  An unexpected error occurred while z/OS Communications Server was attempting to retrieve the requested data.

The *location_code* identifies the location within the monitor code where this message is issued. It is used by IBM Software Support.

Operator response

Verify that the TCP/IP stack is active.

Programmer response

Errno EACCESS may be returned for any of the *data_type* values.

- If the *data_type* value is "IP security," verify that the monitoring agent is authorized to access the z/OS Communications Server local IPSec network monitoring interface (NMI). See the "Define monitoring agent access to the network monitoring agent and commands" section of the *IBM Z OMEGAMON Network Monitor Planning and Configuration Guide* for information about granting the monitoring agent access to the z/OS Communications Server NMIs.
- If the *data_type* value is one of the following values, verify that the monitoring agent is authorized program facility (APF) authorized:
  - TCP/IP private memory
  - TCP application
  - TCP connection
  - UDP endpoint

  For more information about APF authorizing the monitoring agents, see the section on APF authorizing your libraries in the *IBM Z OMEGAMON Network Monitor Planning and Configuration Guide*

For the EFAULT, EINVAL or ETCPERR codes, contact IBM Software Support.

See the *z/OS UNIX System Services Messages and Codes* for *errno* (displayed in decimal) and *errnoJr* codes.

KN3N024E **THE *netmgmt_interface* INTERFACE IN THE *interface_path* PATH CANNOT BE INITIALIZED. ERRNO=*errno* AND ERRNOJR=0x*errnoJr*. LOCATION: *location_code*.**

Explanation

An attempt to initialize the z/OS Communications Server network management interface was not successful for the identified reason.

The *location_code* identifies the location within the monitor code where this message is issued. It is used by IBM Software Support.

Operator response

Verify that the TCP/IP stack is active. Verify that the z/OS Communications Server network management interface is active. Issue the `DISPLAY NET,VTAMOPTS,OPTION=SNAMGMT` command for the SNAMGMT interface. Issue the `DISPLAY TCPIP,tcpip_procname,NETSTAT,CONFIG` command for the network monitoring interfaces.

If you have enabled IPSec data collection, confirm that the IKE daemon and Policy Agent daemon have been started by issuing this command: `D A,L`. If the daemons have not started, start them. See the *z/OS Communications Server IP Configuration Guide* (SC31-8775) for more information about the IKE daemon and Policy Agent daemon.

Programmer response

Verify that the user ID running the monitor is authorized to access the z/OS Communications Server network management interface.

See *z/OS UNIX System Services Messages and Codes* for *errno* (displayed in decimal) and *errnoJr* codes.

KN3N025E AN ERROR OCCURRED IN RETRIEVING DATA ON THE *netmgmt_interface* INTERFACE, WITH ERRNO=*errno* AND ERRNOJR=0x*errnoJr*. LOCATION: *location_code*.

Explanation

An attempt to retrieve data from a z/OS Communications Server network management interface failed. The expected *errno* codes are as follows:

111 (EACCES)
The data collection server is not APF authorized.

113 (EBADF)
The token provided to locate a buffer is not a valid token.

118 (EFAULT)
Storage provided as part of the data request cannot be accessed.

121 (EINVAL)
The token provided to locate a buffer does not specify a valid data buffer.

147 (EILSEQ)
The data buffer described by token has been overwritten and is no longer available.

The *location_code* identifies the location within the monitor code where this message is issued. It is used by IBM Software Support.

Programmer response

For the EACCES code, verify that the data collection server is authorized program facility (APF) authorized.

For the EILSEQ code, verify that the data collection server is allocated sufficient resources and assigned a high enough dispatching priority to collect the data requested.

For the EBADF, EFAULT and EINVAL codes, contact IBM Software Support.

See the *IBM z/OS UNIX System Services Messages and Codes* for *errno* (displayed in decimal) and *errnoJr* codes.

KN3N026E THE HIGH-PERFORMANCE ROUTING CONNECTION DATA CANNOT BE STORED.

Explanation

The monitor received a response from the SNAMGMT network management interface. The response is missing required information such that the High-Performance Routing (HPR) connection data cannot be stored. The monitor continues attempting to collect data as specified in the monitor definition.

Programmer response

Verify that the installed versions of IBM Z OMEGAMON Network Monitor and z/OS Communications Server are compatible.

KN3N027E A REQUEST FOR *data_type* DATA RECEIVED AN UNKNOWN RECORD ON THE SNAMGMT INTERFACE. LOCATION: *location_code*

Explanation

In the response to a request for Communication Storage Manager (CSM), Enterprise Extender (EE), or High-Performance Routing (HPR) data, the monitor received a data record of an unknown type on the SNAMGMT network management interface. The unknown record in this request has been ignored. Any data preceding the unknown record has been stored.

The *location_code* identifies the location within the monitor code where this message is issued. It is used by IBM Software Support.

Programmer response

Verify that the installed versions of IBM Z OMEGAMON Network Monitor and z/OS Communications Server are compatible.

KN3N028E **AN UNKNOWN RECORD TYPE WAS RECEIVED FROM A *netmgmt_interface* INTERFACE FROM *tcpip_job_name*. LOCATION: *location_code***

Explanation

The monitor received an unknown type data record while waiting for FTP or TN3270 data. The record is discarded and the monitor continues to process.

The *location_code* identifies the location within the monitor code where this message is issued. It is used by IBM Software Support.

Programmer response

Verify that the installed versions of IBM Z OMEGAMON Network Monitor and z/OS Communications Server are compatible.

KN3N029E **THE SNAMGMT INTERFACE ON THIS LPAR DOES NOT SUPPORT THE COLLECTION SPECIFIED DURING CONFIGURATION OF THE MONITORING AGENT.**

Explanation

You specified **Yes** as the value for the **All High Performance Routing Connections** parameter either during configuration or on KN3FCCMD START EEHPR command for an LPAR that does not support the z/OS V1.8 z/OS Communications Server network management interface enhancements. Data is being collected as if the parameter were set to **No**.

System action

The HPR connection data is collected only for data that flows over Enterprise Extender connections.

Programmer response

If you specified this value incorrectly when you configured the Tivoli IBM Z OMEGAMON Network Monitor monitoring agent in this LPAR using the Configuration Tool, then run the Configuration Tool and associated JCL jobs again to correct the problem. If you specified this value on the KN3FCCMD START EEHPR command for an LPAR not running z/OS V1.8, this function is not supported.

KN3N031E **AN UNEXPECTED MESSAGE TYPE WAS RECEIVED, *msgTypeReceived*. LOCATION: *location_code*.**

Explanation

The data collection server received data that was not expected. Some IPSec data cannot be collected. The interface to the z/OS Communications Server network management data was closed, and resources were released. The data collection server attempts to establish this data collection again. The *location_code* identifies the location within the monitor code where this message is issued. It is used by IBM Software Support.

Programmer response

Verify that the installed versions of IBM Z OMEGAMON Network Monitor and z/OS Communications Server are compatible. See also "No data in IPSec workspaces" on page 18.

Notify the System Programmer if the problem persists.

KN3N032E **THE IPSEC INTERFACE CANNOT BE INITIALIZED. LOCATION: *location_code*.**

Explanation

The program attempted to initialize a z/OS Communications Server network management interface to prepare for collecting z/OS Communications Server IPSEC data. The initialization was not successful.

Programmer response

Verify that the installed versions of IBM Z OMEGAMON Network Monitor and z/OS Communications Server are compatible. Verify that the user ID running the monitor is authorized to access the z/OS Communications Server network management interface.

Confirm that the IKE daemon and Policy Agent daemon have been started by issuing this command:

```
D A,L
```

If the daemons have not started, start them. See the *z/OS Communications Server IP Configuration Guide* (SC31-8775) for more information about the IKE daemon and Policy Agent daemon.

KN3N033W **KN3N033W THE Z/OS COMMUNICATIONS SERVER STOPPED THE IPSEC INTERFACE WITH ERRNO=*errno* AND REASON_CODE=*reasonCode*. LOCATION: *location_code***

Explanation

The monitor attempted to communicate using the z/OS Communications Server IPSec network management interface, but the z/OS Communications Server ended the connection. The monitor attempted to collect IPSEC data. The collection was not successful. The values for *errno* and *reasonCode* are Local IPSec NMI return and reason codes, documented in the network management interfaces (NMIs) chapter of the *z/OS V1R9.0 Communications Server, IP Programmer's Guide and Reference*, The *location_code* identifies the location within the monitor code where this message is issued. It is used by IBM Software Support.

Programmer response

Determine why the IKE daemon (IKED) and Policy Agent daemon (PAGENT) are not running. Correct the problem and start the daemons.

If IKED, PAGENT, and syslog daemons (syslogd) are running, error messages may have been written to the syslogd logs. These logs are usually found in the default `/tmp/syslogd` directory, but this location might be different for your environment. Check these logs for messages related to this error. See also "No data in IPSec workspaces" on page 18.

Determine if the IKE daemon and Policy Agent daemon are running by issuing this command:

```
D A,L
```

If the daemons are not running, start them. See the *IBM z/OS Communications Server IP Configuration Guide* (SC31-8775) for more information about the IKE daemon and Policy Agent daemon. Notify the System Programmer if the problem persists.

KN3N035W INVALID STATE FOR DYNAMIC TUNNEL IN GET_IPTUNDYNSTACK RESPONSE. LOCATION: *location_code*

Explanation

The data collection server received data that was not expected. A record for a dynamic tunnel in the pending or incomplete state was received among record from a TCP/IP stack. All dynamic tunnels known to a TCP/IP stack are expected to be in active state. This record is ignored. Data collection continues.

Programmer response

Verify that the installed versions of IBM Z OMEGAMON Network Monitor and z/OS Communications Server are compatible. See also "No data in IPSec workspaces" on page 18.

Notify the System Programmer if the problem persists.

KN3PN Messages

The following IBM Z OMEGAMON Network Monitor messages begin with the KN3PN prefix.

KN3PN001 IBM Z OMEGAMON Network Monitor INITIALIZATION COMPLETED

Explanation

IBM Z OMEGAMON Network Monitor initialization has completed.

System action

None.

User response

None.

Message type

Confirmation.

KN3PN002 ACT STARTED SUCCESSFULLY

Explanation

ACT (Automatic Collector Task) has successfully started. ACT is required for trending and exception analysis. It is started automatically during start-up time of Tivoli IBM Z OMEGAMON Network Monitor.

System action

None.

User response

None.

Message type

Confirmation.

KN3PN003 ACT TERMINATED WITH ERROR -- RC(*return_code*) SC(*sense_code*)

Explanation

ACT (Automatic Collector Task) terminated with error.

System action

IBM Z OMEGAMON Network Monitor continues to run without the ACT.

User response

Check the JOBLOG for the Tivoli IBM Z OMEGAMON Network Monitor started task for additional messages that might indicate why the ACT has terminated. If problems persist, gather the complete JOBLOG for the IBM Z OMEGAMON Network Monitor started task and contact IBM Software Support.

The problem could be the number of response messages coming back to the DISPLAY command. During initialization IBM Z OMEGAMON Network Monitor issues the "D NET,PATHTAB,MAX=*" command to get Virtual Route information. It expects a specific response back to the command. If it does not receive the response, the KN3PN003 message is generated.

The POA message queue limit (POAQLIM) is specific on the APPL definition statement. It currently defaults to 5000. If the response to the "D NET,PATHTAB,MAX=*" command is more than 5000 lines, then you may need to add the POAQLIM parameter to the OMEGAMON CNM APLLID statement.

POAQLIM must be set high enough to account for all response messages.

An internal trace shows that the message "IST983E MESSAGE QUEUE LIMIT EXCEEDED" is being issued. Please refer to that message for more information regarding the POA message queue.

Message type

Error.

KN3PN007 **IBM Z OMEGAMON Network Monitor (*product_version*) - INITIALIZATION ERROR**

Explanation

IBM Z OMEGAMON Network Monitor encountered an error during start-up.

System action

IBM Z OMEGAMON Network Monitor fails to initialize and shuts down.

User response

Search the RKLVLOG data set for one of the following messages:

- KN3PN020
- KN3PN021
- KN3PN022
- KN3PN024

These messages provide more detailed information about the nature of the error.

Message type

Error.

KN3PN011 **ERROR IN DIALOG KN3DPINI - MODULE(*error_module*) RC(*return_code*) SENSE(*sense_code*) LU(*LU_name*) APPL(*applid*) USERID(*userid*) INIT ERROR**

Explanation

A generalized message providing diagnostics information when a call from a dialog to a dialog function fails.

System action

IBM Z OMEGAMON Network Monitor bypasses the function and continues, if possible.

Programmer response

This message typically indicates a problem performing the requested function. For example KN3PN011 ERROR IN DIALOG KN3DPINI - MODULE(KN3AFOMN) RC(112) SENSE(E3025A02) LU() APPL() USERID() INIT ERROR

Note that the KN3PNO11 message is often accompanied by message KN3PN022 which may further describe the error detected: KN3PN022 IBM Z OMEGAMON Network Monitor INITIALIZATION FAILURE - UNABLE TO OPEN CNM ACB. ACBERFLG(5A)

In this instance, the CNM ACB cannot be opened which prevents IBM Z OMEGAMON Network Monitor from collecting metrics relating to the CNM interface.

If unable to determine the cause of the error, gather the complete JOBLOG for the IBM Z OMEGAMON Network Monitor started task and call IBM Software Support.

Message type

Error.

KN3PN020 **TIVOLI IBM Z OMEGAMON Network Monitor INITIALIZATION FAILURE - APF AUTHORIZATION FAILED**

Explanation

IBM Z OMEGAMON Network Monitor is not running with APF-authorization.

System action

IBM Z OMEGAMON Network Monitor fails to initialize and shuts down.

User response

Verify that each library in the STEPLIB concatenation for IBM Z OMEGAMON Network Monitor is APF-authorized.

Message type

Error.

KN3PN021 TIVOLI IBM Z OMEGAMON Network Monitor INITIALIZATION FAILURE - INVALID VTAM LEVEL DETECTED

Explanation

IBM Z OMEGAMON Network Monitor was started under an unsupported release of VTAM.

System action

IBM Z OMEGAMON Network Monitor fails to initialize and shuts down.

User response

Contact IBM Software Support to order the required maintenance for your VTAM release.

Message type

Error.

KN3PN022 IBM Z OMEGAMON Network Monitor INITIALIZATION FAILURE - UNABLE TO OPEN CNM ACB. ACBERFLG(*acberr_name*)

Explanation

IBM Z OMEGAMON Network Monitor was unable to open the ACB used for communication network management (CNM) communication with VTAM. *acberr_name* contains the contents of the ACBERFLG field of the ACB, in hexadecimal.

System action

IBM Z OMEGAMON Network Monitor fails to initialize and shuts down.

User response

Look up the meaning of *acberr_name* in *IBM z/OS Communications Server: SNA Programming* t. The following are some common values for *acberr_name*:

58
APPLID is already opened by another ACB.

5A
APPLID is not defined to VTAM. Verify that the major node containing the APPL statement referenced in RKANPAR(U)(KONCNMAP) has been varied active to VTAM.

Correct the problem as indicated or contact IBM Software Support.

Message type

Error.

KN3PN023 IBM Z OMEGAMON Network Monitor INITIALIZATION FAILURE - UNABLE TO ACTIVATE PMI EXIT. ERROR(*pmi_error*)

Explanation

IBM Z OMEGAMON Network Monitor was unable to activate the Performance Monitor Interface exit . *pmi_error* contains the error code as indicated by VTAM in the IST985I message.

System action

IBM Z OMEGAMON Network Monitor fails to initialize and shuts down.

User response

Look up the meaning of pmi_error in *IBM z/OS Communications Server: SNA Messages*. A common value for pmi_error is:

20
Unable to load the exit module. Verify that the Tivoli IBM Z OMEGAMON Network Monitor load library is part of the VTAMLIB concatenation within the VTAM start-up JCL.

For other values of pmi_error, contact IBM Software Support.

Message type

Error.

KN3T Messages

The following IBM Z OMEGAMON Network Monitor messages begin with the KN3T prefix.

KN3T002E ***collector*** **COLLECTOR ABENDED CODE=*abend_code* PSW=*program_status_word* ROUTINE=*program_name* E**

Explanation

The collector task abended. The task ended and data collection does not continue. The collector is one of the following:

TCP/IP STATISTICS
The main collector task.

NMI DATA
The task that collects data from the z/OS Communications Server network management interfaces.

Programmer response

Capture the information for problem diagnosis. Contact IBM Software Support.

Issue the stop command to stop the address space. Issue the start command to start a new address space.

KN3T003I **ATTEMPTING OMEGAMON FOR MAINFRAME NETWORKS DIAGNOSTIC DUMP**

Explanation

IBM Z OMEGAMON Network Monitor has detected a condition that should not occur. The product will attempt capture diagnostic information about the problem by requesting a dump of the Mainframe Networks address space and its data spaces.

Programmer response

Contact IBM Software Support.

KN3T004E **DIAGNOSTIC DUMP HAS COMPLETED. RETURN CODE = X'*return_code*', REASON CODE = X'*reason_code*'**

Explanation

The SVC dump has completed and is expected to be written to a dump data set. The *return_code* and *reason_code* fields are from the SDUMPX macro. The SDUMPX macro return and reason codes are documented in the *IBM z/OS MVS Programming: Authorized Assembler Services Reference Guide*.

Operator response

Contact IBM Software Support.

KN3T005I **ATTEMPTING TCP/IP STATISTICS COLLECTOR RESTART**

Explanation

An attempt is being made to restart the collector responsible for OSA and Routing information. The collector restart is being attempted due to either an abend or an SNMP manager error in a previous data collection attempt. The preceding messages should provide additional context as to why this collector is being restarted.

Programmer response

Review messages just prior to the occurrence of the KN3T005I. If there is an indication of an SNMP manager error, review the "Enabling SNMP manager functions" and "Starting the OSA adapter SNMP subagent" sections of the *IBM Tivoli IBM Z OMEGAMON Network Monitor: Planning and Configuration Guide*. If the log indicates that an abend has occurred, contact IBM Software Support.

KN3T006E **TCP/IP STATISTICS COLLECTOR RESTART FAILED.**

Explanation

Initialization of the TCP/IP Statistics collector encountered an error. Data collection does not continue.

Programmer response

Capture information for problem diagnosis. Contact IBM Software Support.

Issue a stop command to stop the address space. Issue a start command to start a new address space.

KN3T012E **DSPSERV CREATE FAILED: RC(*return_code*)**

Explanation

Initialization of the TCP/IP Statistics collector encountered an error creating a dataspace. Data collection does not continue.

Programmer response

Capture information for problem diagnosis. Contact IBM Software Support.

Issue a stop command to stop the address space. Issue a start command to start a new address space.

KN3T013E ALESERV ADD FAILED: RC(*return_code*)

Explanation

Initialization of the TCP/IP Statistics collector encountered an error accessing a dataspace. Data collection does not continue.

Programmer response

Capture information for problem diagnosis. Contact IBM Software Support.

Issue a stop command to stop the address space. Issue a start command to start a new address space.

KN3T014E NAME/TOKEN *function* FAILED: RC(*return_code*)

Explanation

The IBM Name/Token service call has failed during initialization or termination of the SNAC data collector. The values of *function* can be either CREATE or RETRIEVE.

System action

Data passed using IBM Name/Token services is not available for processing.

User response

Collect the preceding 30 minutes of RKLVLOG messages and contact IBM Software Support.

Message type

Error.

KN3T015E *collector* ATTACH FAILED: RC(*return_code*)

Explanation

Encountered an error while attempting to create a task. The task was not created. Data collection does not continue.

The *collector* is one of the following:

IP CONSOLE
The extended MCS console task.

NMI COLLECTOR
The task that collects data from the z/OS Communications Server network management interfaces.

SNMP MANAGER
The task that collects data from the z/OS Communications Server SNMP daemon.

TCP/IP CONSOLE
The MCS console task.

Programmer response

Capture information for problem diagnosis. Contact IBM Software Support.

Issue a stop command to stop the address space. Issue a start command to start a new address space.

KN3T016E NAME/TOKEN DELETE FAILED: RC(*return_code*)

Explanation

An error was encountered while attempting to delete a name/token pair. Data collection does not continue.

Programmer response

Capture information for problem diagnosis. Contact IBM Software Support.

Issue a stop command to stop the address space. Issue a start command to start a new address space.

KN3T017E ALESERV DELETE FAILED: RC(*return_code*)

Explanation

Termination of the TCP/IP Statistics collector encountered an error removing access to a dataspace. Termination continues.

Programmer response

Capture information for problem diagnosis. Contact IBM Software Support.

Issue a stop command to stop the address space. Issue a start command to start a new address space.

KN3T018E DSPSERV DELETE FAILED: RC(*return_code*)

Explanation

Termination of the TCP/IP Statistics collector encountered an error deleting a dataspace. Termination continues.

Programmer response

Capture information for problem diagnosis. Contact IBM Software Support.

Issue a stop command to stop the address space. Issue a start command to start a new address space.

KN3T021E **ERROR ALLOCATING STORAGE. BLOCK: *internal_name* ROUTINE=*program_name***

Explanation

An error was encountered when the TCP/IP Statistics collector attempted to allocate storage. The collector task terminates.

The *internal_name* is used by IBM Software Support.

Programmer response

Capture information for problem diagnosis. Contact IBM Software Support.

Issue a stop command to stop the address space. Issue a start command to start a new address space.

KN3T022E **AN INTERNAL ERROR OCCURRED. LOCATION: *location_code***

Explanation

The program detected a condition that should not occur.

The *location_code* identifies the location where this message is issued. It is used by IBM Software Support.

Programmer response

Contact IBM Software Support.

KN3T023E **DSPSERV CREATE ERROR. NAME: *data_space_name* RETURN CODE: *return_code* ROUTINE *location_code***

Explanation

Initialization of the TCP/IP Statistics collector encountered an error creating a dataspace. Data collection does not continue.

Programmer response

Capture information for problem diagnosis. Contact IBM Software Support.

Issue a stop command to stop the address space. Issue a start command to start a new address space.

KN3T024E **DATA SPACE *initialization_or_termination* ABENDED. ABEND CODE=*abend_code* PSW=*program_status_word* ROUTINE=*program_name***

Explanation

During *initialization_or_termination* of data spaces, a task abended. The task ended and data collection does not continue.

initialization_or_termination is one of the following:

INITIALIZATION
The address space is initializing.

TERMINATION
The address space is terminating.

Programmer response

Capture the information for problem diagnosis. Contact IBM Software Support.

Issue the stop command to stop the address space. Issue the start command to start a new address space.

KN3T025E **ERROR INITIALIZING UNIX SYSTEM SERVICES ENVIRONMENT. RETURN VALUE = *return_value* RETURN CODE = *return_code* REASON CODE = *reason_code* ROUTINE=*program_name***

Explanation

An error was encountered when the TCP/IP Statistics collector attempted to initialize the UNIX System Services environment. The collector task terminates.

Programmer response

The return codes (errno) and reason codes (errnojr) for z/OS UNIX System Services requests such as z/OS UNIX C/C++ sockets or the z/OS UNIX System Services callable assembler services are primarily found in *z/OS UNIX System Services Messages and Codes*. Consult this manual for explanations of the return codes (errno) and reason codes (errnojr).Capture information for problem diagnosis.

If unable to determine the cause of the error, gather the complete JOBLOG for the Tivoli IBM Z OMEGAMON Network Monitor started task and contact IBM Software Support.

KN3T026E **ERROR LOADING UNIX SYSTEM SERVICES PROGRAM. RETURN CODE = *return_code* ROUTINE=*program_name***

Explanation

An error was encountered when the TCP/IP Statistics collector attempted to load a UNIX System Services program. The collector task terminates.

Programmer response

Capture information for problem diagnosis. Contact IBM Software Support.

Issue a stop command to stop the address space. Issue a start command to start a new address space.

KN3T027I NMI DATA COLLECTOR HAS TERMINATED.

Explanation

The task that collects data from the z/OS Communications Server network management interfaces has ended.

KN3T028E *interface_collector* ERROR: RC(*return_code*))

Explanation

An attempt to collect data was not successful.

Programmer response

Capture the information for problem diagnosis. Contact IBM Software Support.

Issue the stop command to stop the address space. Issue the start command to start a new address space.

KN3T031E COLLECTOR FAILED TO FREE RESOURCES: RC(*return_code*)

Explanation

The collector attempted to free resources. An error was encountered. Resources might not have been freed.

Programmer response

Capture the information for problem diagnosis. Contact IBM Software Support.

Issue the stop command to stop the address space. Issue the start command to start a new address space.

KN3T032E ATTEMPT TO COLLECT DATA WAS NOT SUCCESSFUL. RETURN CODE: *return_code* TYPE: *type* ROUTINE: *program_name*

Explanation

The collector attempted to collect data. An error was encountered. Data collection is attempted at the next sampling interval.

type is one of the following:

SNA
SNA performance statistics.

TCP
TCP/IP performance statistics.

Programmer response

Capture the information for problem diagnosis. Contact IBM Software Support.

Issue the stop command to stop the address space. Issue the start command to start a new address space.

KN3T051E ATTEMPT TO ADD RESOURCE MANAGER WAS NOT SUCCESSFUL. RETURN CODE: *return_code* ROUTINE: *program_name*

Explanation

The collector attempted to add a resource manager. An error was encountered. Data collection is attempted at the next sampling interval.

Programmer response

Capture the information for problem diagnosis. Contact IBM Software Support.

Issue the stop command to stop the address space. Issue the start command to start a new address space.

KN3T055E ATTEMPT TO ISSUE DIAGNOSE WAS NOT SUCCESSFUL. RETURN CODE: *return_code* ROUTINE: *program_name*

Explanation

The data retrieved exceeds the allocated buffer. A subset of the data was collected. Data collection continues.

Programmer response

Capture the information for problem diagnosis. Contact IBM Software Support.

KN3T056E OSA LPAR TABLE MEMORY ALLOCATION FAILED.

Explanation

The storage allocation for the OSA LPAR table was not successful. A subset of the data was collected. Data collection continues.

Programmer response

Capture the information for problem diagnosis. Contact IBM Software Support.

KN3T057E **COMPONENT MONITORING OPTIONS NOT FOUND IN MEMBER *member_name*. DATA COLLECTION WILL BE DEFAULT COLLECTION.**

Explanation

The *member_name* variable did not contain options to use for data collection. Data is collected according to the default settings. Data collection continues.

Programmer response

Verify that the data collection settings were specified using the Configuration Tool and that the *member_name* was created.

KN3T058E **ERROR READING COMPONENT MONITORING OPTIONS. REQUEST: *request* MEMBER: *member_name* R15: *register_15* R0: *register_0* R1: *register_1* ROUTINE: *program_name***

Explanation

An error was encountered when the collector attempted to read the component monitoring options. Data collection continues.

Programmer response

Capture the information for problem diagnosis. Contact IBM Software Support.

KN3T059I **COMMON STORAGE TRACKING NOT ACTIVE. FLAGS: X'*flags*'**

Explanation

z/OS virtual storage manager is not tracking CSA or SQA storage. Data collection continues.

KN3T060E **ALESERV DELETE FAILED FOR *dataspace_name* RC(*return_code*)**

Explanation

Termination of the TCP/IP Statistics collector encountered an error removing access to the named dataspace. Termination continues.

Programmer response

Capture information for problem diagnosis. Contact IBM Software Support.

Issue a stop command to stop the address space. Issue a start command to start a new address space.

KN3T061E **DSPSERV DELETE FAILED FOR *dataspace_name* RC(*return_code*)**

Explanation

Termination of the TCP/IP Statistics collector encountered an error deleting a dataspace. Termination continues.

Programmer response

Capture information for problem diagnosis. Contact IBM Software Support.

Issue a stop command to stop the address space. Issue a start command to start a new address space.

KN3T062E **ATTEMPT TO ALLOCATE FIXED STORAGE WAS NOT SUCCESSFUL. RETURN CODE: *return_code* ROUTINE: *program_name***

Explanation

The program attempted to allocate and page fix storage. A subset of the data was collected. Data collection continues.

Programmer response

Capture the information for problem diagnosis. Contact IBM Software Support.

KN3T063I **PROCESSING A LINE FROM MEMBER *member*: *command***

Explanation

The program read the *command* from the *member* member of the RKANCMD configuration data set. *member* is one of KN3AGOPS or KN3AGOPT. The command is processed and initialization continues.

KN3T064E **COMMAND IN *member_name* IS NOT ALLOWED. TYPE: *command_type* COMMAND: *command* COMPONENT: *component* ROUTINE: *program_name***

Explanation

A command was encountered in the *member_name* of member the RKANPAR(U) data set that is not allowed in that member. The *command* was not processed. Initialization continues.

Programmer response

Capture the information for problem diagnosis. Contact IBM Software Support.

KN3T121E **VTAM ADDRESS SPACE COLLECTOR FAILED. ROUTINE: *program_name***

Explanation

The VTAM data collector was not successful in collecting data. A subset of the data was collected. Data collection continues.

Programmer response

Capture the information for problem diagnosis. Contact IBM Software Support.

KN3TE100E **Logon to NetView failed. APPLID=*applid*, RC=*return_code*, SC=*sense_code***

Explanation

Logon to the IBM Tivoli NetView for z/OS program failed.

Programmer response

Verify that you are using the correct APPLID on the LOGON command for the VTAM application that you are logging on to. The IBM Tivoli NetView for z/OS APPLID is specified during Configuration Tool configuration of the IBM Z OMEGAMON Network Monitor monitoring agent. This message is also displayed if the IBM Tivoli NetView for z/OS application is not running.

KN3TE101E **Dynamic linking to NetView for z/OS configuration error. RC=*applid***

Explanation

An error exists in the configuration of the IBM Tivoli NetView for z/OS APPLID value specified in the Configuration Tool.

Programmer response

Verify that the APPLID on the LOGON command for the VTAM application that you are logging on to is correct. The IBM Tivoli NetView for z/OS APPLID is specified during Configuration Tool configuration of the IBM Z OMEGAMON Network Monitor monitoring agent. This message is also displayed if a null value was specified for the IBM Tivoli NetView for z/OS APPLID.

KN3TE102E **Unsupported NetView release.**

Explanation

The configured IBM Tivoli NetView for z/OS APPLID does not specify an IBM Tivoli NetView for z/OS V5.4 or later release.

Programmer response

Support for this feature is available only when logging onto a IBM Tivoli NetView for z/OS V5.4 or later release. Upgrade your IBM Tivoli NetView for z/OS release if necessary.

KN3TE200E **Signon to NetView failed.**

Explanation

Sign on to the IBM Tivoli NetView for z/OS application has failed.

Programmer response

Verify that the logon information provided in the terminal session user credentials dialog is correct.

KN3TE201E **Error processing panel FKXK2A01. RC = *return_code***

Explanation

An unexpected error was encountered while processing IBM Tivoli NetView for z/OS panel FKXK2A01. The script terminates at the point of error.

Programmer response

The terminal view scripts may have been affected by mouse or keyboard activity during script execution. If this error was not the result of mouse or keyboard activity during script execution, contact IBM Software Support.

KN3TE202E **Error processing panel FKXK2A22. RC = *return_code***

Explanation

An unexpected error was encountered while processing IBM Tivoli NetView for z/OS panel FKXK2A22. The script terminates at the point of error.

Programmer response

The terminal view scripts may have been affected by mouse or keyboard activity during script execution. If this error was not the result of mouse or keyboard activity during script execution, contact IBM Software Support.

KN3TE203E **Error processing panel FKXK2A23. RC = *return_code***

Explanation

An unexpected error was encountered while processing IBM Tivoli NetView for z/OS panel FKXK2A23. The script terminates at the point of error.

Programmer response

The terminal view scripts may have been affected by mouse or keyboard activity during script execution. If this error was not the result of mouse or keyboard activity during script execution, contact IBM Software Support.

KN3TE209E Error processing panel FKXK2A29, RC = *return_code*

Explanation

An unexpected error was encountered while processing IBM Tivoli NetView for z/OS panel FKXK2A29. The script terminates at the point of error.

Programmer response

The terminal view scripts may have been affected by mouse or keyboard activity during script execution. If this error was not the result of mouse or keyboard activity during script execution, contact IBM Software Support.

KN3TE300E Timeout received from SNMP.

Explanation

An SNMP request was issued and no data was received except this SNMP Timeout response. This timeout indicates that the IP resource from which the data was requested does not have SNMP support active.

Programmer response

Retry the command, and verify that the resource has SNMP support active. If the problem persists, contact IBM Software Support.

KN3TE301E Processing failed for 'START of PKTS-TCPIP' command.

Explanation

The command processing did not complete successfully. Additional IBM Tivoli NetView for z/OS messages might further describe the failure. The problem might be that the z/OS Communications Server is not at a high enough release level, or else is not configured to support these functions.

Programmer response

Ensure that the TCP/IP stack has been configured to enable the packet trace service (SYSTCPDA). The PKTTRCSERVICE keyword of the NETMONITOR statement in the TCPIP.PROFILE dataset enables this service.

KN3V Messages

The following IBM Z OMEGAMON Network Monitor messages begin with the KN3V prefix.

KN3V001E The text length has been exceeded. The maximum length is *maxnum*.

Explanation

The user input does not meet the requirements for this field.

User response

Ensure that the value you entered does not exceed *maxnum* . Correct the problem and retry the operation.

KN3V002E Invalid character *character* found in the text.

Explanation

The user input contains a *character* that is not allowed for this input field.

User response

Correct the text that you entered and retry the operation.

KN3V003E The value of this field is not between *minnum* and *maxnum*.

Explanation

The user input is out of range. The number that you enter must be between *minnum* and *maxnum* inclusively.

User response

Correct the text that you entered and retry the operation.

KN3V004E The field should contain only numerical characters within the specified range.

Explanation

The value provided for the specified field is either not numeric or does not fall within the defined range.

User response

Correct the text that you entered and retry the operation.

KN3V005E The field content is not valid.

Explanation

The user input contains a character that is not valid in the context in which it is used. For example, the user inputs a numeric value in the first position of a name field.

User response

Correct the text that you entered and retry the operation.

KN3V011E The Addrtype is invalid for the Hostname specified.

Explanation

The user made one of these mistakes in the Ping IP Address or Tracerte IP Address dialog:

- The user entered an IPv4 address or a hostname which resolved to an IPv4 address for the **Hostname or IP Address** field but specified IPv6 with the **Addrtype** radio button.
- The user entered an IPv6 address or a hostname which resolved to an IPv6 address for the **Hostname or IP Address** field but specified IPv4 with the **Addrtype** radio button.

User response

Ensure that the values for the **Hostname or IP Address** and **Addrtype** fields in the Ping IP Address dialog or Tracerte IP Address dialog match, that is they are both IPv4 or both IPv6.

KN3V012E The Source IP Address must be an IP address.

Explanation

The format of the Source IP Address field is an IP address. The value in this field is not formatted like a recognizable IPv4 or IPv6 address. You cannot specify a hostname for this field. Scoped IP addresses are not allowed in this field.

User response

Correct the information in the Source IP Address field and retry the operation.

KN3V013E The Interface name is invalid.

Explanation

The value you specified in the Interface field in the ping dialog is incorrect.

The Interface field specifies the local interface, interface, over which the packets will be sent. The interface is either a maximum 16-byte name from a LINK or INTERFACE profile statement, or the IP address of a local interface. IPv4-mapped IPv6 addresses are not supported. Local VIPA or LOOPBACK interfaces are not valid.

If the destination host is specified as a host name and the Addrtype option is not specified, the address type of the interface value is used to determine whether the host name should be resolved to an IPv4 or IPv6 IP address. When this parameter is specified, Ping establishes affinity to either the default TCP/IP stack or the stack specified on the TCP parameter. The specified interface must be defined to the stack to which Ping establishes affinity.

You must also ensure that a route exists to the destination using the specified interface. This can be any kind of route, including a default route. This parameter is independent of the SRCIP parameter used as the source IP address in the outbound packets.

Note:

1. As a diagnostics aid in analyzing response times and path availability using a particular route, this parameter routes packets over specified interfaces regardless of the multipath settings in the IPCONFIG MULTIPATH or IPCONFIG6 MULTIPATH profile statement by bypassing the outbound path selection algorithm for the packets.
2. You cannot specify scope information for the interface value.

User response

Determine why the value you provided for the Interface field is invalid and correct the problem. For

more information, see *IBM z/OS Communications Server: IP System Administrator's Commands*.

KN3V023E **The text length is too short. The minimum length is *mininum*.**

Explanation

The user input does not meet the requirements for this field.

User response

Ensure that the value you entered is at least as long as the *mininum* value. Correct the problem and retry the operation.

KN3V024E **The field *fieldname* is a required field.**

Explanation

The user input does not meet the requirements for this field. The field defined by *fieldname* is required by the Take Action dialog.

User response

Provide a value for the required field and retry the operation. See the *IBM Z OMEGAMON Network Monitor: Tivoli Enterprise Portal User's Guide* or the *IBM Z OMEGAMON Network Monitor: Enhanced 3270 User Interface Guide* for explanations of these fields.

KN3V025E **The field *fieldname* contains invalid character *character*.**

Explanation

The user input does not meet the requirements for this field. The field defined by *fieldname* in the Take Action dialog contains an invalid character defined by *character*.

User response

Correct the character in error and retry the operation. See the *IBM Z OMEGAMON Network Monitor: Tivoli Enterprise Portal User's Guide* or the *IBM Z OMEGAMON Network Monitor: Enhanced 3270 User Interface Guide* for explanations of Take Action dialog fields.

KN3V026E **The field *fieldname* contains invalid content.**

Explanation

The user input does not meet the requirements for this field. The field defined by *fieldname* in the Take Action dialog contains content that does not meet the requirements of the field.

User response

Correct the invalid content and retry the operation. See the *IBM Tivoli IBM Z OMEGAMON Network Monitor: Tivoli Enterprise Portal User's Guide* or the *IBM Z OMEGAMON Network Monitor: Enhanced 3270 User Interface Guide* for explanations of Take Action dialog fields.

KN3V027E **The field *fieldname* should contain only numerical characters within the specified range**

Explanation

The user input does not meet the requirements for this field. The field defined by *fieldname* in Take Action dialog contains numerical input that is out of range for this field.

User response

Correct the invalid numerical content and retry the operation. See the *IBM Z OMEGAMON Network Monitor: Tivoli Enterprise Portal User's Guide* or the *IBM Z OMEGAMON Network Monitor: Enhanced 3270 User Interface Guide* for explanations of Take Action dialog fields.

KN3V028E **The field *fieldname* must have a value in the range of *min* and *max*.**

Explanation

The user input does not meet the requirements for this field. The value for the field defined by *fieldname* in take action dialog must fall between *min* (the minimum value) and *max* (the maximum value) inclusion.

User response

Provide a value between *min* and *max* and retry the operation. See the *IBM Z OMEGAMON Network Monitor: Tivoli Enterprise Portal User's Guide* or the *IBM Z OMEGAMON Network Monitor: Enhanced 3270 User Interface Guide* for explanations of Take Action dialog fields.

KN3V029E **Invalid selection character *character* specified for field *fieldname*.**

Explanation

The user input does not meet the requirements for this field. The selection character defined by *character* for fieldname *fieldname* in Take Action dialog is invalid.

User response

Correct the incorrect selection character and retry the operation. See the *IBM Z OMEGAMON Network Monitor: Tivoli Enterprise Portal User's Guide* or the *IBM Z OMEGAMON Network Monitor: Enhanced 3270 User Interface Guide* for explanations of Take Action dialog fields.

KN3V030W **Connection information for connection number *<conn_num>* is not available.**

Explanation

The TCP connection identified by *<conn_num>* was not found. The user selected a connection to drop. Either the connection number does not identify a current connection or the data collection has not run.

User response

Correct the connection number or continue and issue the command. When a drop command is issued against a non-existent connection number, the command fails.

KN3X Messages

The following IBM Z OMEGAMON Network Monitor messages begin with the KN3X prefix.

KN3XO010E **XE TO NETVIEW FOR Z/OS LINKING IS NOT CONFIGURED RKANPARU(KN3ENV) PARAMETER KN3_DXL_APPLID IS MISSING OR NULL.**

Explanation

The XE to NetView for z/OS dynamic linking feature requires the VTAM Application ID(APPLID) of the IBM Tivoli NetView for z/OS address space. This APPLID is specified in the Configuration Tool.

User response

Use the Configuration Tool to define the NetView for z/OS APPLID to the product.

KN3XO020E **CANNOT DISCOVER HOST IP NAME: ROUTINE(*routine*),RC(*return_code*) {EZASMI TYPE=GETHOSTNAME - RC = *xx*, Errno = *yy*, Noload = *zz*} {EZASMI TYPE=GETADDRINFO - RC = *xx*, Errno = *yy*, Noload = *zz*} {EZASMI TYPE=FREEADDRINFO - RC = *xx*, Errno = *yy*, Noload = *zz*}**

Explanation

Module KN3XOAS1 failed to find the host IP name.

User response

The agent request stops without returning data required for connection and logon to the IBM Tivoli NetView for z/OS program.

Documentation library

This appendix contains information about the publications in the IBM Z OMEGAMON Network Monitor library and about other publications related to IBM Z OMEGAMON Network Monitor.

For information about accessing and using the publications is available on the IBM Tivoli Monitoring and IBM Z Monitoring Suite Knowledge Center at http://www-01.ibm.com/support/knowledgecenter/SSRLTD_1.1.0/welcome.

IBM Z OMEGAMON Network Monitor library

The following documents are available for IBM Z OMEGAMON Network Monitor:

- *Program Directory GI13-5209-00*

  Contains information about the material and procedures associated with the installation of IBM Z Monitoring Suite. The Program Directory is intended for the system programmer responsible for program installation and maintenance.

- *Planning and Configuration Guide*

  Provides information that helps plan the deployment and configuration of IBM Z OMEGAMON Network Monitor and the required common services component. It also provides detailed instructions for configuring product components. This document is intended for system administrators and others who are responsible for configuring IBM Z OMEGAMON Network Monitor.

- *User's Guide*

  Introduces the features, workspaces, attributes, and predefined situations for the IBM Z OMEGAMON Network Monitor product and supplements the user assistance provided with this product. This document is written for data center operators and analysts responsible for monitoring and troubleshooting system performance and availability or performing trend analysis for resource planning.

- *Parameter Reference*

  Provides names and descriptions for all IBM Z OMEGAMON Network Monitor configuration parameters.

- *Troubleshooting Guide*

  Provides explanations for the messages issued by the IBM Z OMEGAMON Network Monitor product and common agent components. This book also provides troubleshooting advice for installation and configuration, security, and usage problems, and instructions for setting up tracing on z/OS.

- *OMEGAMON for MVS User's Guide*

  Describes the features and commands used in OMEGAMON for MVS. Reference information for OMEGAMON major and minor commands is included by functional area, along with a description of the following features: User Profile Facility, Exception Analysis, CSA Analyzer, End-to-End Response Time Feature, Bottleneck Analysis, DEXAN, Impact Analysis, Workload Profile Facility.

- *OMEGAMON for MVS Command Reference*

  Contains complete descriptions of OMEGAMON for MVS commands, organized alphabetically by command name. Includes a chapter on “Command Groupings” that is an introduction organized by topic (exception analysis, hiperspace, paging, and so on) where you can refresh your memory as to the proper spelling of a command or keyword.

- *EPILOG User's Guide*

  Describes the basic reporting features of EPILOG for MVS. The introduction provides a product overview and a discussion of the EPILOG approach to performance management. The rest of the manual explains how to use the reporter, including the various types of reports and the use of the DISPLAY command. Topics such as advanced reporting options, the Workload Profile Facility, exception filtering, and exporting historical data are also documented.

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- *EPILOG Command Reference*

  Contains complete descriptions of EPILOG for MVS commands, organized alphabetically by command name.

IBM Z OMEGAMON Network Monitor and Tivoli Management Services on z/OS common library

The shared documentation covers installing, planning, and configuration topics common to all the OMEGAMON products. The documentation is available on the IBM Knowledge Center at http://www.ibm.com/support/knowledgecenter/SSAUBV/welcome.

IBM Tivoli Monitoring library

The publications in this library provide information about the components of Tivoli Management Services (IBM Tivoli Monitoring) that are installed on distributed platforms.

- *Quick Start Guide*

  Introduces the components of IBM Tivoli Monitoring.

- *Installation and Setup Guide*, SC22-5445

  Provides instructions for installing and configuring IBM Tivoli Monitoring components on Windows, Linux, and UNIX systems.

- *High Availability Guide for Distributed Systems*, SC22-5455

  Gives instructions for several methods of ensuring the availability of the IBM Tivoli Monitoring components.

- *Administrator's Guide*, SC22-5446

  Describes the support tasks and functions required for the Tivoli Enterprise Portal Server and clients, including Tivoli Enterprise Portal user administration.

- *Command Reference*, SC22-5448

  Provides detailed syntax and parameter information, as well as examples, for the commands you can use in IBM Tivoli Monitoring.

- *Messages*, SC22-5450

  Lists and explains messages generated by all IBM Tivoli Monitoring components and by z/OS-based Tivoli Management Services components (such as Tivoli Enterprise Monitoring Server on z/OS, the OMEGAMON enhanced 3270 user interface, and TMS:Engine).

- *Troubleshooting Guide*, GC22-5449

  Provides information to help you troubleshoot problems with the software, including Tivoli Management Services on z/OS components.

- Tivoli Enterprise Portal online help

  Provides context-sensitive reference information about all features and customization options of the Tivoli Enterprise Portal. Also gives instructions for using and administering the Tivoli Enterprise Portal.

- *Tivoli Enterprise Portal User's Guide*, SC22-5447

  Complements the Tivoli Enterprise Portal online help. The guide provides hands-on lessons and detailed instructions for all Tivoli Enterprise Portal features.

- *Agent Builder User's Guide*, SC32-1921

  Explains how to use the Agent Builder for creating monitoring agents and their installation packages, and for adding functions to existing agents.

- *Tivoli Universal Agent User's Guide*, SC32-9459

Introduces you to the IBM Tivoli Universal Agent, an agent of IBM Tivoli Monitoring. The IBM Tivoli Universal Agent enables you to use the monitoring and automation capabilities of IBM Tivoli Monitoring to monitor any type of data you collect.

- *Performance Analyzer User's Guide*, SC27-4004

  Explains how to use the Performance Analyzer to understand resource consumption trends, identify problems, resolve problems more quickly, and predict and avoid future problems.

- *IBM Tivoli Universal Agent API and Command Programming Reference Guide*, SC32-9461

  Explains the procedures for implementing the IBM Tivoli Universal Agent APIs and provides descriptions, syntax, and return status codes for the API calls and command-line interface commands.

Other sources of documentation

You can also obtain technical documentation about Tivoli Monitoring and OMEGAMON products from the following sources:

- IBM Tivoli Integrated Service Management Library

  The Integrated Service Management Library is an online catalog that contains integration documentation as well as other downloadable product extensions. This library is updated daily.

- Technotes

  You can find Technotes through the IBM Software Support Web site, or more directly through your product Web site, which contains a link to Technotes (under **Solve a problem**).

  Technotes provide the latest information about known product limitations and workarounds.

Support information

If you have a problem with your IBM software, you want to resolve it quickly. IBM provides the following ways for you to obtain the support you need:

IBM Support Assistant
The IBM Support Assistant (ISA) is a free local software serviceability workbench that helps you resolve questions and problems with IBM software products. The ISA provides quick access to support-related information and serviceability tools for problem determination.

Troubleshooting Guide
For more information about resolving problems, see the product's Troubleshooting Guide.

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