IBM Tivoli OMEGAMON XE on z/OS

Troubleshooting No-data Conditions on the Enhanced 3270 User Interface

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Troubleshooting

Review the troubleshooting topics for a description of a problem you might experience with rendering OMEGAMON monitoring agent data on the enhanced 3270UI.

No data condition on the OMEGAMON enhanced 3270 user interface

The OMEGAMON enhanced 3270 user interface is installed and configured. The OMEGAMON enhanced 3270 user interface address space is started and you are able to log on. However, your enhanced 3270 user interface is showing an empty workspace.

OMEGAMON Enhanced 3270 user interface component summary

The following OMEGAMON components facilitate the display of data in the OMEGAMON enhanced 3270 user interface:

Tivoli OMEGAMON XE Agents
> The OMEGAMON XE V5.1.0 and V5.1.1 agents (for example, OMEGAMON XE for CICS on z/OS or OMEGAMON XE on z/OS, among others) deliver capability that builds on the OMEGAMON enhanced 3270 user interface infrastructure to provide OMEGAMON capability on the OMEGAMON enhanced 3270 user interface.

Hub Tivoli Enterprise Monitoring Server
> Monitoring servers are part of the Tivoli Management Services infrastructure that is shared by OMEGAMON XE agents. The OMEGAMON enhanced 3270 user interface requires Tivoli Management Services V6.2.3 or higher.
>
> The master monitoring server is called the *hub monitoring server*. The hub monitoring server acts as the focal point for data collection and distribution; it communicates with monitoring agents, with the OMEGAMON enhanced 3270 user interface, and with other Tivoli Management Services components.
>
> Monitoring servers that communicate only with the monitoring agents that report to them and with the hub monitoring server are referred to as *remote monitoring servers*. The hub monitoring server receives data requests from the OMEGAMON enhanced 3270 user interface through the data retrieval agent (KOBAGENT) and drives OMEGAMON agents for data collection and retrieval. The hub monitoring must be seeded with OMEGAMON XE V5.1.0 agent data.

OMEGAMON Enhanced 3270 User Interface address space
> The OMEGAMON enhanced 3270 user interface address space provides data retrieval and user interface 3270 interaction functions. One or more OMEGAMON enhanced 3270 user interfaces can be deployed in a specific z/OS Sysplex.

OMEGAMON Enhanced 3270 user interface data retrieval agent (KOBAGENT)
> This component runs in any z/OS monitoring server or Tivoli OMEGAMON XE Agent address space. The OMEGAMON Enhanced 3270 user interface data retrieval agent receives data requests from the OMEGAMON Enhanced 3270 user interface and connects to the hub monitoring server to drive data collection by OMEGAMON V5.1.0 monitoring agents.
>
> There must be at least one OMEGAMON Enhanced 3270 user interface data retrieval agent that is deployed and running in the Sysplex where components of a specific configuration (hub or remote monitoring servers and agents) are running to enable OMEGAMON Enhanced 3270 user interface data retrieval and display. The OMEGAMON Enhanced 3270 user interface must also run in the same Sysplex as the OMEGAMON Enhanced 3270 user interface data retrieval agent.

The components that are mentioned earlier must be installed, configured, started, and running to enable successful rendering of OMEGAMON agent data on the OMEGAMON Enhanced 3270 user interface. The OMEGAMON agent configuration step that adds support for the V5.1.0 monitoring agent to the hub monitoring server must be performed to enable successful rendering of OMEGAMON agent data on the OMEGAMON Enhanced 3270 user interface.

Communications and data retrieval

The OMEGAMON Enhanced 3270 user interface uses WLM Services to discover Data Retrieval Agents that are running in its Sysplex. The interface uses TCP/IP services to communicate with Data Retrieval Agents.

The Data Retrieval Agent uses TCP/IP services to communicate with the hub monitoring server. The Data Retrieval Agent uses WLM Services to register or publish their existence within the Sysplex.

The OMEGAMON XE monitoring agents use TCP/IP or SNA services to communicate with the monitoring servers. The monitoring agents register with the hub monitoring server as part of the startup process.

The OMEGAMON Enhanced 3270 user interface uses VTAM services when you log on and communicate with the interface. You log on to the OMEGAMON Enhanced 3270 user interface through a VTAM APPLID that is opened during startup of the interface.

The following figure shows the OMEGAMON configuration that includes deployment of these enhanced 3270 interface components:
* OMEGAMON Enhanced 3270 user interface address space
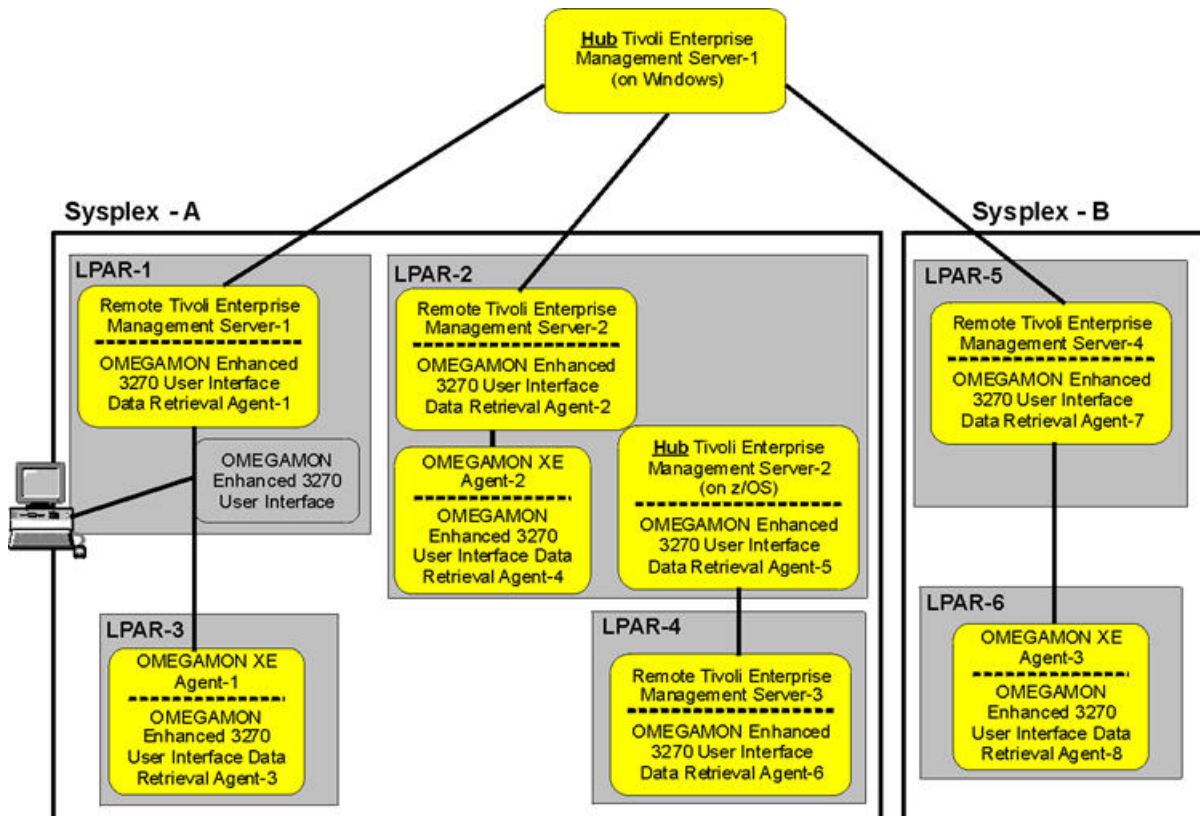* OMEGAMON Enhanced 3270 user interface Data Retrieval Agent (KOBAGENT)

Figure 1. OMEGAMON configuration that includes deployment of the enhanced 3270 interface components

Minimal configuration

The following minimal configuration must be addressed to enable the OMEGAMON Enhanced 3270 user interface to select and connect to a hub monitoring server:

OMEGAMON Enhanced 3270 user interface logon profile

You must create one or more custom logon profiles. These profiles specify the settings for the hub monitoring server from which data is collected. The `RKOBPROF DD` statement in the OMEGAMON Enhanced 3270 user interface started task JCL procedure specifies the data set that contains the site and user logon profile settings. The customized site or user profiles are stored as members of the `rte.UKOBDATF` data set. When you log on, the OMEGAMON Enhanced 3270 user interface looks for a profile member named `user_id` (the ID of the logged on user) or CUASITE (a site-customized profile) to establish profile settings for the session.

You can establish a site or `user_id` named logon profile member by copying (and renaming) the KOBCUA product provided profile member from the target `thilev.TKOBDATF` library or the runtime `rte.TKOBDATF` data set to the runtime `rte.UKOBDATF` data set.

From Tivoli Management Services Version 6.3.1 (APAR OA42127), you can use the User Profile Member workspace to customize user profiles. For more information, see the *OMEGAMON XE and Tivoli Management Services Version 6 Release 3 Fix Pack 1, Enhanced 3270 User Interface Guide*

Hub monitoring server settings

Tivoli Management Services V6.3.1 (APAR OA42127) or later.

The settings for the hub monitoring server settings are specified in the logon profile member. By default, the following setting statements are provided:

```
HUBNAME=HUBNAME
HUBIPADDRESS=::ffff:HUBADDRESS
HUBPORTNUMBER=HUBPORTNUMBER
```

Edit the profile member copy to specify the wanted hub settings; locate and update the statements.

For example:

```
HUBNAME=HUB1:CMS
HUBIPADDRESS=::ffff:9.44.44.22
HUBPORTNUMBER=55555
```

Tivoli Management Services V6.3 or earlier (pre-APAR OA42127).

The settings for the hub monitoring server settings are specified in the logon profile member. By default, the settings are provided as commented statements:

```
/* HUBNAME=HUBNAME
/* HUBIPADDRESS=::ffff:HUBADDRESS
/* HUBPORTNUMBER=HUBPORTNUMBER
```

Edit the profile member copy to specify the wanted hub settings; locate, uncomment, and update the statements; for example, remove the leading /* and move the setting statements to begin in column one.

For example:

```
HUBNAME=HUB1:CMS
HUBIPADDRESS=::ffff:9.44.44.22
HUBPORTNUMBER=55555
```

HUBNAME

The configured name of the hub monitoring server. The monitoring server might be configured to run on the z/OS or distributed system; for example, Linux. Often a hub monitoring server is configured to run on distributed systems that employs a mixed-case or all lowercase naming convention. The value that is specified in your profile setting statements *must* match the case of the configured value.

HUBIPADDRESS
> The TCP/IP address of the host system where the hub monitoring server runs. The setting *must* be an TCP/IP address as shown in the preceding example; do not specify a TCP/IP host name.

HUBPORTNUMBER
> The TCP/IP port number of the configured hub monitoring server. The default port number is 1918.

Component startup and operation

The following components comprise the startup and operation environment for the OMEGAMON Enhanced 3270 user interface and the OMEGAMON agents:

OMEGAMON Enhanced 3270 user interface address space
> Although startup of the OMEGAMON Enhanced 3270 user interface address space is relatively fast, it is ideally the last component in the startup sequence; because the interface requires that all other components in its environment (the OMEGAMON monitoring agents, the Data Retrieval Agent, and the hub and or remote monitoring servers) be initialized and running before it is able to retrieve data.

OMEGAMON Enhanced 3270 user interface local registry
> The OMEGAMON Enhanced 3270 user interface startup process discovers registered Data Retrieval Agents and connects to related hub monitoring servers to establish a local registry of data source information; that is, managed systems names and managed system lists. After startup, by default, the registry is refreshed on a 5-minute interval.

OMEGAMON agent and OMEGAMON Enhanced 3270 user interface Data Retrieval Agent
> The OMEGAMON XE V5.1.0 agent address spaces run both an instance of the product agent and also an instance of an OMEGAMON Enhanced 3270 user interface Data Retrieval Agent. The Data Retrieval Agent uses WLM services to publish or register its existence. The product agent registers with the hub monitoring server; these registration processes facilitate OMEGAMON Enhanced 3270 user interface discovery of OMEGAMON agents. Some OMEGAMON agents, such as OMEGAMON XE on z/OS, run under a remote z/OS monitoring server; the OMEGAMON Enhanced 3270 user interface; the Data Retrieval Agent also runs under remote z/OS monitoring servers.

OMEGAMON agent startup process
> There might be cases where an OMEGAMON agent startup process requires up to 10 minutes to complete startup and registration. As a result, the OMEGAMON Enhanced 3270 user interface cannot retrieve data for that agent during this period.

OMEGAMON agent recycle
> There might be cases where an OMEGAMON agent address space is terminated (for example, LPAR shutdown, goes offline) and, in some cases, the agent is performing the role of a *proxy agent*. As a result, the OMEGAMON Enhanced 3270 user interface cannot retrieve data for that agent until the offline agent condition is resolved; for example, in a multi-LPAR configuration another agent assumes the *proxy-agent* role.

Hub Tivoli Enterprise Monitoring Server
> To enable the OMEGAMON Enhanced 3270 user interface data retrieval, the hub Tivoli Enterprise Monitoring Server must be:
> - Running Tivoli Management Services V6.2.3 or higher
> - Seeded with OMEGAMON for *xxx* on z/OS V5.1.0 or higher agent data
> - Started and connectable through TCP/IP; listening on the configured TCP/IP port
> - Be connected or online OMEGAMON for *xxx* on z/OS V5.1.0 or higher agents

Possible causes for the no data condition

There are a few causes for the no data condition after the initial log on to the OMEGAMON Enhanced 3270 user interface.

The following figure provides an example of the OMEGAMON Enhanced 3270 user interface initial workspace, KOBSTART, depicting a case of no data after the initial log on:
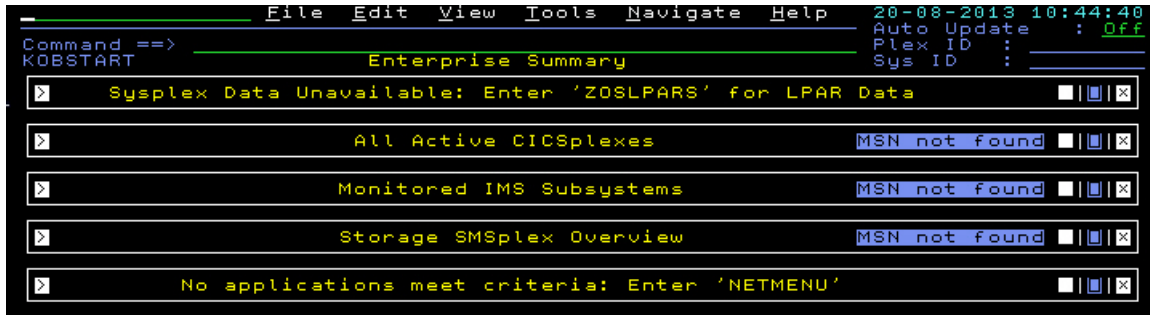

Figure 2. OMEGAMON Enhanced 3270 user interface workspace depicting a case of no data after the initial log on

Note: The initial workspace parameter setting is specified in the log on profile with the `FIRSTWS` parameter.

You can use the capability in the OMEGAMON Enhanced 3270 user interface for investigating the root cause of the no data condition.

Custom log on profiles have not been created or the hub monitoring server settings have not been configured

Depending on the version of the enhanced 3270UI that you are using there are different procedures that you can use to troubleshoot this issue.

Tivoli Management Services V6.3.1 (APAR OA42127) or later

Hub Connectivity Administration assists you to specify and save a hub Tivoli Enterprise Monitoring Server connection.

About this task

When you log on to the enhanced 3270 user interface for the first time, Hub Connectivity Administration can assist you to specify a hub Tivoli Enterprise Monitoring Server connection.

Procedure

1. Log on to the user interface in the standard way. If a hub monitoring server is specified in your profile, and that hub is available, a connection is made to the hub and your initial workspace is displayed. By default, the initial workspace is the Enterprise Summary (KOBSTART) workspace. If a hub monitoring server is not specified in your profile, the Hub Connectivity Administration workspace is displayed.
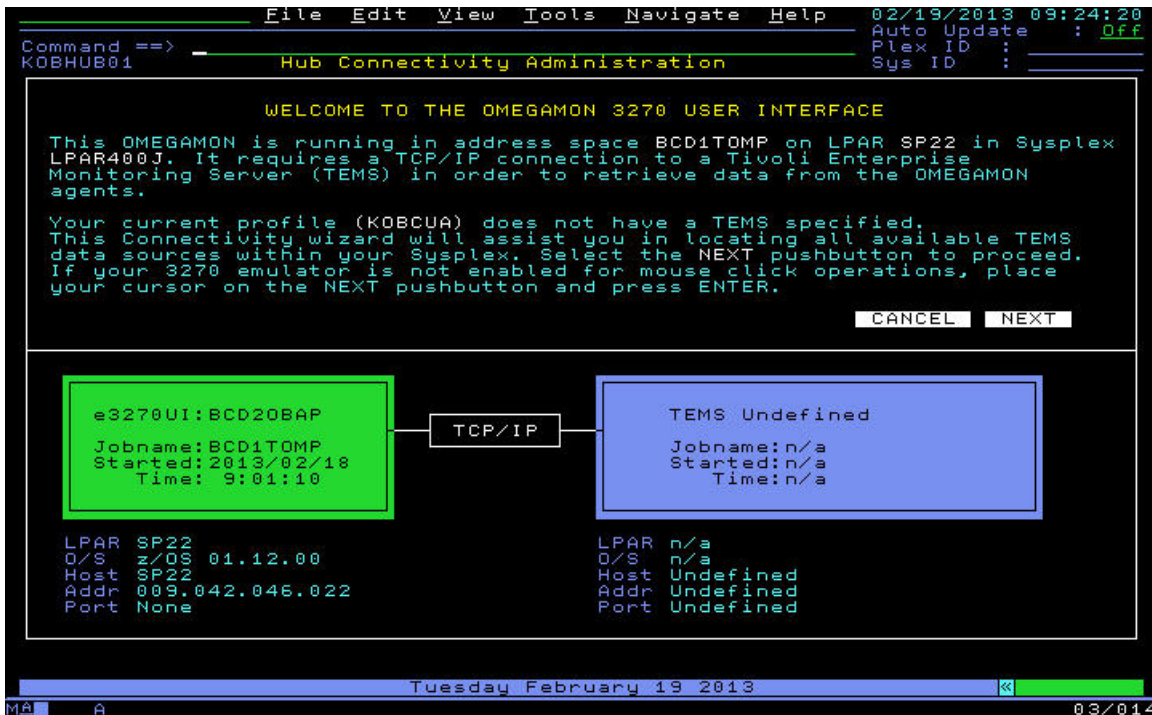
Figure 3. Hub Connectivity Administration workspace that shows a hub connection is not specified for the current profile

2. To select the **NEXT** icon on the Hub Connectivity Administration workspace, move your cursor to the icon and press **Enter** or double-click the icon. The All Known Hubs (KOBHUBS) workspace is displayed showing all of the available hubs that are known to the enhanced 3270 user interface.

Figure 4. Hub Connectivity Administration All Known Hubs (KOBHUBS) workspace

Tip: You can browse overview status information about each hub from this workspace. For more information about the All Known Hubs (KOBHUBS) workspace, see the *OMEGAMON XE and Tivoli Management Services Version 6 Release 3 Fix Pack 1, Enhanced 3270 User Interface Guide*.

3. On the All Known Hubs (KOBHUBS) workspace, place your cursor next to a hub monitoring server name and press **Enter**. The Action Confirmation panel is displayed. The panel lists information about the hub monitoring server to be used for your workspace queries. On the Action Confirmation panel, you can enter Y to confirm the action or N to cancel the action.

4. Enter Y to confirm the action. The Hub Verification Complete (KOBHUB04) workspace is displayed and shows two green information boxes that indicate a successful TCP/IP connection.
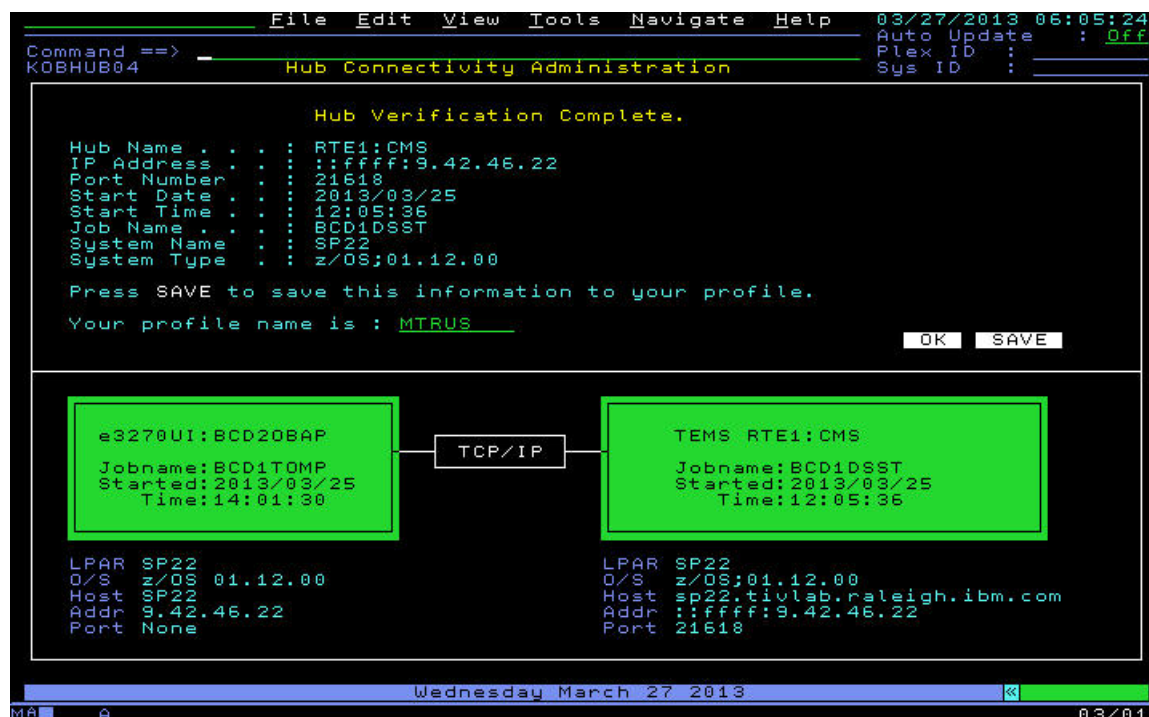

Figure 5. Hub Verification Complete (KOBHUB04) workspace that shows a successful hub connection

   a. To save the hub monitoring server name to your user profile, select **SAVE**.
   b. To use the selection for your current enhanced 3270 user interface session, select **OK**.

Results

Your session goes to the first workspace name specified in your logon profile, by default the Enterprise Summary (KOBSTART) workspace.

Tivoli Management Services V6.3 or earlier (pre-APAR OA42127)

Verify that you created your site and or user_ID named logon profile members.

About this task

Use the OMEGAMON Enhanced 3270 user interface to assign values for your site and or user ID named logon profile.

Procedure

1. From the OMEGAMON Enhanced 3270 user interface, select **View** > **2. Hub Information**. The Current Hub TEMS Information panel is displayed. If you see a panel similar to the following panel that

indicates no values are assigned, either no site and or user ID-named logon profile is created, or the profile for this session is not customized to specify hub monitoring server settings.
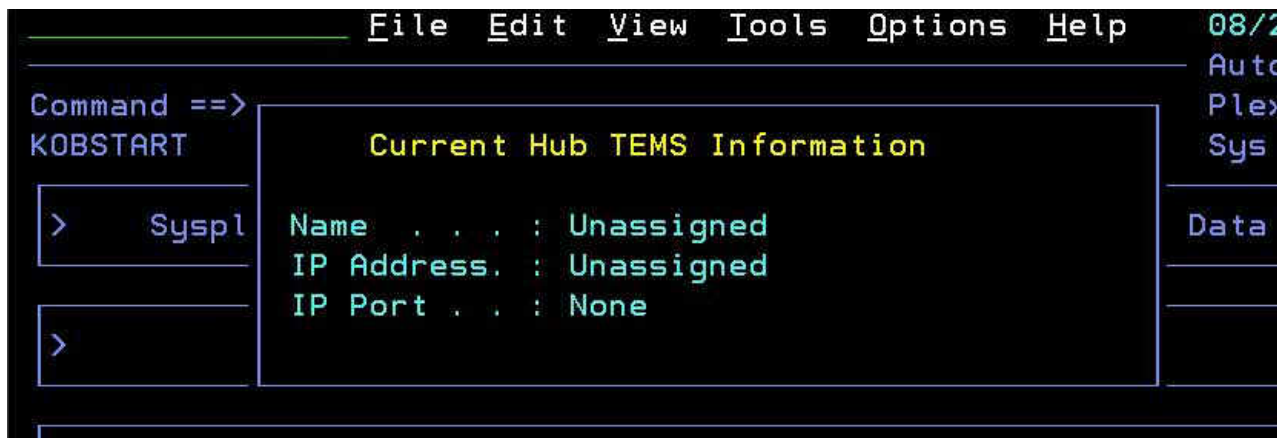

Figure 6. Tivoli Enterprise Monitoring Server information with no settings specified

    a. Verify that a site (CUASITE) or user_ID named data set member exists in `rte.UKOBDATF`.

    b. Verify that the hub monitoring server settings in the profile for the current session is customized to specify the hub monitoring server configured values. For example, see Figure 7.

2. After you customize the logon profile member, log off the OMEGAMON Enhanced 3270 user interface and log on to pick up the profile changes.

Results

If you repeat Step 1, you see the hub settings that you specified as shown in the following panel.
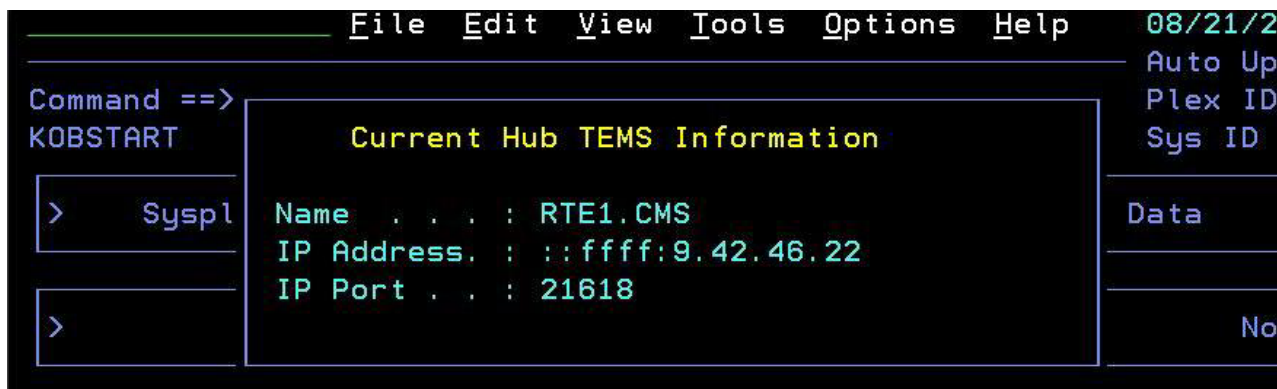
Figure 7. Current hub Tivoli Enterprise Monitoring Server settings

The hub monitoring server settings in the log on profile do not match the hub monitoring server configured values

Depending on the version of the enhanced 3270UI that you are using there are different procedures that you can use to troubleshoot this issue.

Tivoli Management Services V6.3.1 (APAR OA42127) or later

Hub Connectivity Administration helps you to correct any failed connection situations that prevent you from accessing the OMEGAMON enhanced 3270 user interface and your subsequent product workspaces.

About this task

When you log on to the user interface, if the hub monitoring server connection attempt fails, the Hub Connectivity Administration workspace is displayed and notifies you that a failure occurred and the possible reason for the connection failure. The workspace helps you to correct the connection failure and to save a corrected profile to prevent future failures.

Figure 8. Hub Connectivity Administration workspace that shows a connectivity failure

Tip: If this is your first time logging on to the user interface and a hub monitoring server is not specified in your profile, you see the Hub Connectivity Administration workspace but with a different message that states the reason for the failure. If the message indicates that your current profile does not have a hub specified, see "The hub monitoring server settings in the log on profile do not match the hub monitoring server configured values" on page 8.

Procedure

1. On the Hub Connectivity Administration workspace that shows the connectivity failure, select the **NEXT** icon by moving your cursor to the icon and pressing **Enter** or moving your mouse to the icon and selecting it. The All Known Hubs (KOBHUBS) workspace is displayed showing all of the available hubs that are known to the user interface.

Figure 9. Hub Connectivity Administration All Known Hubs (KOBHUBS) workspace

> **Tip:** You can browse overview status information about each hub from this workspace. For more information about the All Known Hubs (KOBHUBS) workspace, see the *OMEGAMON XE and Tivoli Management Services Version 6 Release 3 Fix Pack 1, Enhanced 3270 User Interface Guide*.

2. On the All Known Hubs (KOBHUBS) workspace, place your cursor next to a hub monitoring server name and press **Enter**. The Action Confirmation panel is displayed. The panel lists information about the hub monitoring server to be used for your workspace queries. On the Action Confirmation panel, you can enter Y to confirm the action or N to cancel the action.

3. Enter Y to confirm the action. The Hub Verification Complete (KOBHUB04) workspace is displayed and shows two green information boxes that indicate a successful TCP/IP connection.
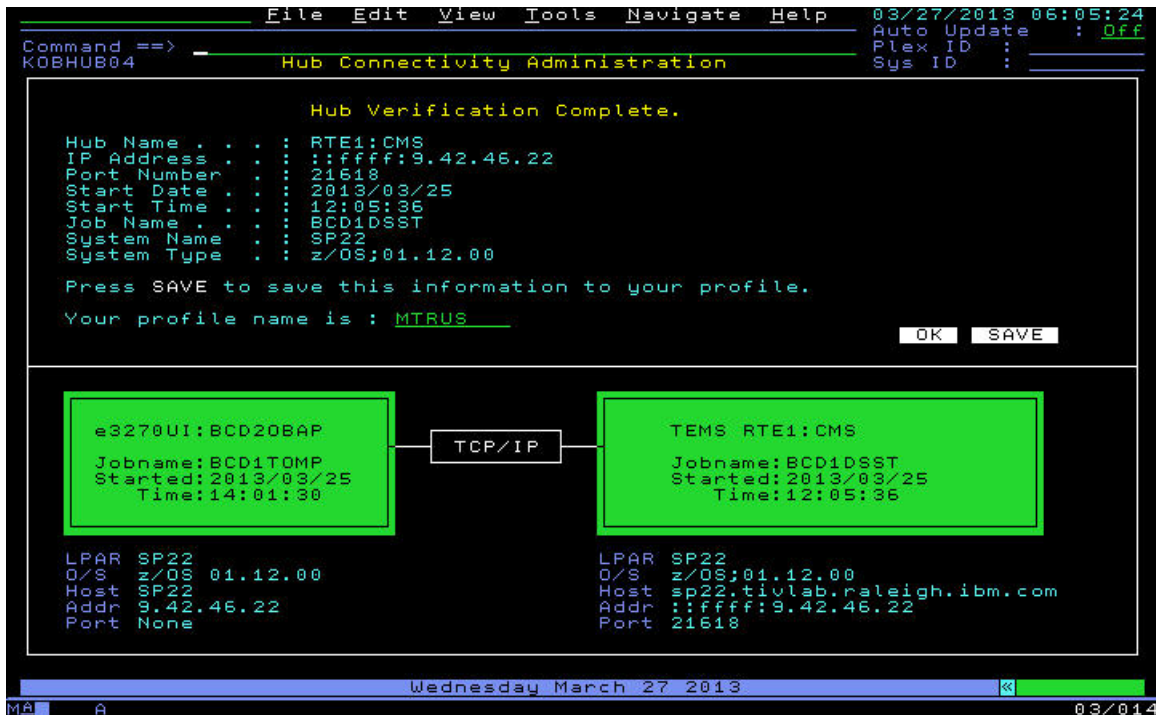
Figure 10. Hub Verification Complete (KOBHUB04) workspace that shows a successful hub connection

   a. To save the hub monitoring server name to your user profile, select the **SAVE** icon.
   b. To use the selection for your current user interface session, select the **OK** icon.

Results

Your session goes to the first workspace name specified in your logon profile, by default the Enterprise Summary (KOBSTART) workspace.

Tivoli Management Services V6.3 or earlier (pre-APAR OA42127)

Verify that the rte.UKOBDATF profile members specify the configured hub monitoring server settings and that these settings match the hub monitoring server configured values.

The settings that are shown in the Current Hub TEMS Information panel in Figure 7 on page 8 indicate that a custom profile member is created and customized; however, the no data condition persists. Inspect the profile for the current session to determine if the specified settings match the configured hub monitoring server settings.

For example, Figure 7 on page 8 shows that the server name is set to RTE1.CMS , with a period. However, the actual configured hub monitoring server name is RTE1:CMS , with a colon.

Correct the settings in the rte.UKOBDATF profile member, then log off and log on to the OMEGAMON Enhanced 3270 user interface to pick up the profile changes.

The Current Hub TEMS Information panel displays the correct settings as shown in the following example:
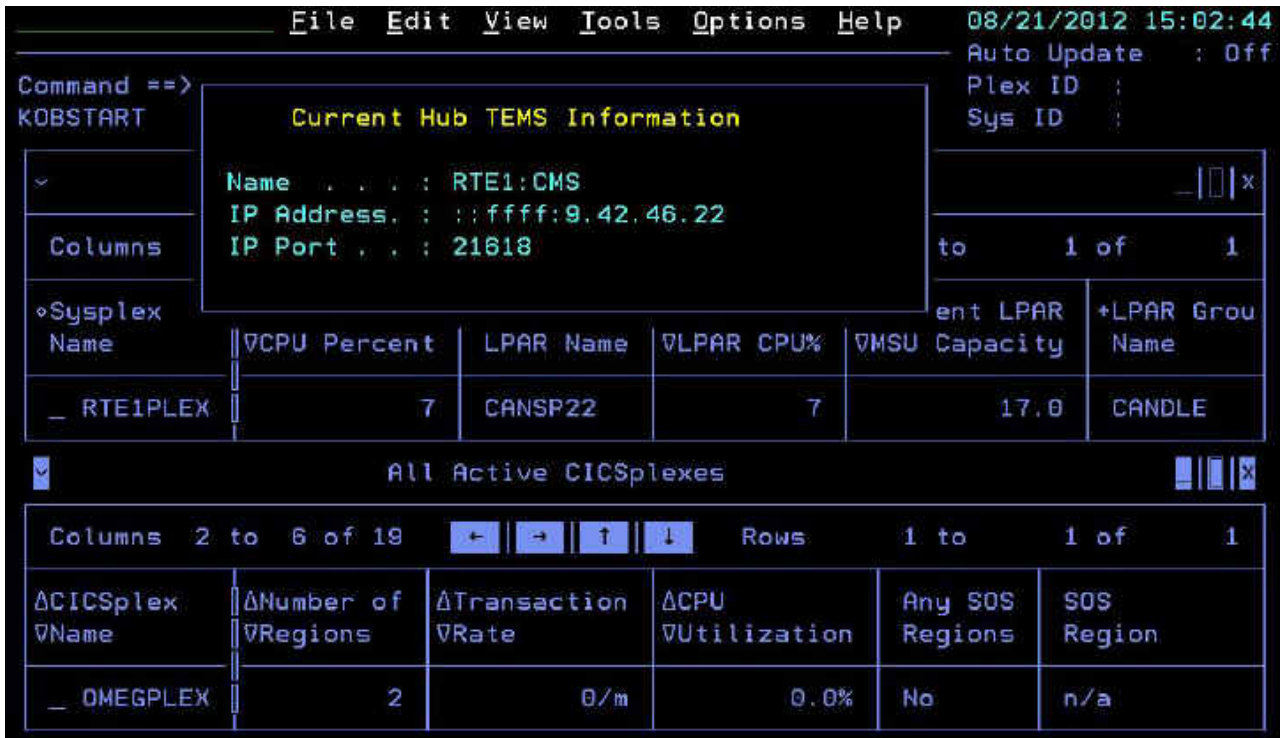
Figure 11. The current hub Tivoli Enterprise Monitoring Server information with the correct server name

There are no OMEGAMON Enhanced 3270 user interface data retrieval agents registered

Verify that there are registered OMEGAMON Enhanced 3270 user interface data retrieval agents online.

The OMEGAMON Enhanced 3270 user interface startup process discovers WLM-registered data retrieval agents and connects to the data retrieval agents to retrieve hub monitoring server information about OMEGAMON agent data sources. This information is stored in the OMEGAMON Enhanced 3270 user interface local registry. By default, the registry information is refreshed every 5 minutes.

If you verified the existence of a custom profile, in which the hub monitoring server settings are correctly specified, but the no data condition persists, you need to verify that there are registered data retrieval agents.

From the OMEGAMON Enhanced 3270 user interface,

Tivoli Management Services 6.3.1 (APAR OA42127) or later

> From the All Known Hubs (KOBHUBS) workspace, place your cursor next to the hub monitoring server name that you are interested in, type A and press **Enter**.
>
> The Data Retrieval Agents (DRA) workspace is displayed.
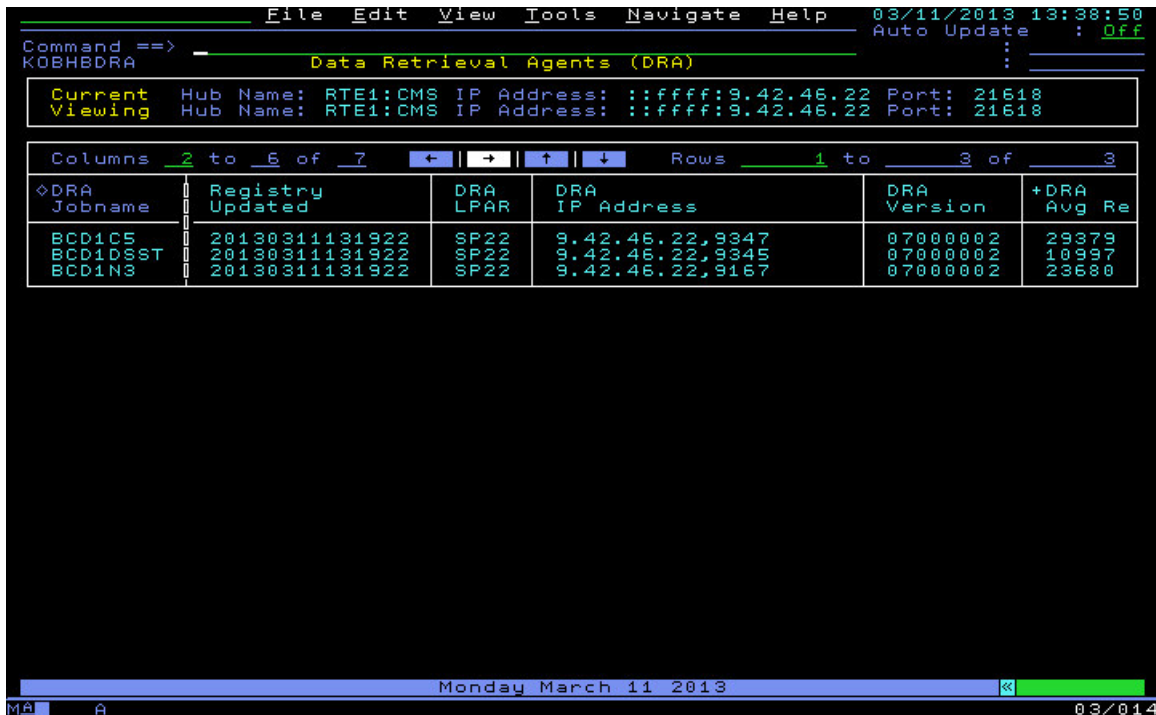
Figure 12. Data Retrieval Agents (KOBHBDRA) workspace.

The three rows that are shown in the Data Retrieval Agents (DRA) workspace indicate that there are three registered data retrieval agents for the hub monitoring server as RTE1:CMS running in the *same* Sysplex as the OMEGAMON Enhanced 3270 user interface address space. Assuming that there are no problems with agent data collection, the OMEGAMON Enhanced 3270 user interface is able to connect to any one of these data retrieval agents to retrieve OMEGAMON data from a V5.1.0 or later monitoring agent that is connected to the RTE1:CMS hub monitoring server.

If data retrieval agents are not registered for a specific hub monitoring server, the KOBHBDRA workspace is empty.

If the All Known Hubs (KOBHUBS) workspace list does *not* contain the hub monitoring server that is specified in the OMEGAMON Enhanced 3270 user interface logon profile, a high probability exists that the OMEGAMON XE on z/OS agents and or related monitoring server address space are offline.

Tivoli Management Services 6.3 or earlier (pre-APAR OA42127)

Select **View** > **3. Data Retrieval Agents**. The KOBLOGON workspace, and, in particular the List of available ITM/TEMS Data Sources panel, is opened and lists all the available data retrieval agents and their associated hub server as shown in the following panel.

Figure 13. Sample display of local registry with available data sources.

The three rows that are shown in Figure 13 list the hub monitoring server as omeghahub14; this listing is an indication that three registered data retrieval agents are running in the *same* Sysplex

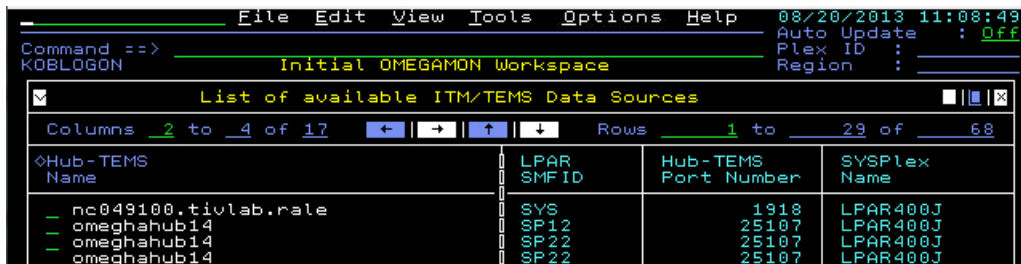as the OMEGAMON Enhanced 3270 user interface address space. Assuming that there are no problems with agent data collection, the OMEGAMON Enhanced 3270 user interface is able to connect to any one of these data retrieval agents to retrieve OMEGAMON data from a V5.1.0 or later monitoring agent that is connected to the RTE1:CMS hub monitoring server.

If data retrieval agents are not registered for a specific hub monitoring server, the KOBLOGON workspace is either empty or, if multiple hub monitoring servers are configured, it might contain data retrieval agent rows for other monitoring servers that are running in the Sysplex.

If the KOBLOGON workspace list does *not* contain the hub monitoring server that is specified in the OMEGAMON Enhanced 3270 user interface logon profile, a high probability exists that the OMEGAMON XE on z/OS agents and or related monitoring server address space are offline.

The hub monitoring server is off line; verify initialization and data request reception

Verify the hub monitoring server is started, initialized, and prepared to receive data requests; listening on the configured TCP/IP port.

Your hub monitoring server might be running on either a z/OS LPAR or on a distributed system. Verify that the monitoring server has been started and has successfully completed initialization.

The following monitoring server log messages are a good indication regarding the health of hub monitoring server operations:

```
..
KDSMA001 Tivoli Enterprise Monitoring Server (TEMS) data collection server started
...
KO4SRV032 Tivoli Enterprise Monitoring Server (TEMS) startup complete
..
```

If you cannot find these messages in the hub monitoring server log, examine the log for indications of potential problems. For example:
- The monitoring server startup is in progress and initialization has not completed
- The monitoring server initialization failed; for example, the monitoring server was not able to bind to its configured TCP/IP port
- The monitoring server is not properly configured
- Unexpected messages in the monitoring server log

See the "Monitoring server troubleshooting" section of this book for more information.

Application product support (seed data) has not been added to the hub monitoring server

Verify the hub monitoring server has the product version (for example, V5.1.0) application support (seed data) loaded.

If you did not complete this configuration step, your OMEGAMON Enhanced 3270 user interface might be missing data for one or more OMEGAMON products.

For a hub monitoring server on a z/OS system, see the "Adding application support to a monitor server on z/OS" section in the *IBM Tivoli Monitoring Installation and Setup Guide*.

For a hub monitoring server on a distributed system, see the "Installing application support on monitoring server" section in the *IBM Tivoli Monitoring Installation and Setup Guide*.

Note: The following message, which shows an example of the OMEGAMON XE for CICS on z/OS log, might appear in the OMEGAMON Enhanced 3270 user interface when the add application support configuration step has not been completed; this might also be true when the add application support step was completed after the initial startup of the product agent. For the later case, the hub Tivoli Enterprise Monitoring Server and agent should be recycled after performing the add application support step.

```
...
RRUIA-DMSL: MSL "KCP_CICSplex_CICSPLXS" does not exist or contains no online
accessible MSNs.
...
```

Note: The V5.1.0 product application support files must also be loaded in the run time environment libraries that are associated with the OMEGAMON Enhanced 3270 user interface started task. For a new or upgraded run time environment, the run time environment load configuration step updates the application support.

You will see the following messages in the OMEGAMON Enhanced 3270 user interface log file when the application support files are back-leveled or missing:

```
...
KOBUIGP1I Source ODI does not contain table Kppxxxxx ...
KOBUIGP9I ERROR: No ODI will cause an erroneous display ...
KOBUIGP1W ODI Failure ignoring SORTCOLS='...
...
```

Also, see "The OMEGAMON Enhanced 3270 user interface local registry does not contain required agent information" on page 17.

The OMEGAMON monitoring agent is offline or is not started

You can employ multiple methods to investigate the online status of an OMEGAMON agent.

One method is to examine the content of the local registry.

Tivoli Management Services 6.3.1 (APAR OA42127) or later

> From the All Known Hubs (KOBHUBS) workspace, place your cursor next to the hub monitoring server name that you are interested in, type N and press **Enter**. The Managed Systems workspace is displayed and lists the available names of the local registry managed systems. The information that is displayed is similar to that shown in Figure 14 on page 16.

Tivoli Management Services 6.3 or earlier (pre-APAR OA42127)

> From the OMEGAMON Enhanced 3270 user interface, select **View** > **4. Managed Systems**. The Only Managed Systems panel is displayed and lists the available names of the local registry managed systems.

Figure 14. Only Managed Systems panel that lists the available names of the local registry.

The various OMEGAMON monitoring agents employ unique conventions to identify agents and managed systems. For example, in the previous figure, the rows that display names that end in :MVSSYS and :SYSPLEX along with a Y in the **MS Online Status** column are an indication that OMEGAMON XE on z/OS agents are online, which means the interface can retrieve data for the product.

The following table lists the conventions that are used by individual OMEGAMON products to compose managed system names.

Product name	Managed System naming convention
OMEGAMON XE on z/OS	• SYSPLEX:SYSPLEX:PLEXVIEW • sysplex_name:MVS:SYSPLEX • sysplex_name:lpar_smfID:MVSSYS
OMEGAMON XE for CICS on z/OS	• cics_region_name:lpar_smfID:CPIRA • cics_region_name:lpar_smfID:CEIRA • cics_tg_ID:lpar_smfID:CICSTG
OMEGAMON XE for DB2 PE	• DB2plex:DB2plex:Plexview • db2_ID:lpar_smfid:DB2 • XEDB2:lpar_smfid
OMEGAMON XE for IMS on z/OS	• IMSplex:IMSplex:Plexview • ims_ID:lpar_smfid:CONNECT • ims_ID:sysplex_name:SQGROUP • ims_ID:lpar_smfid:IMS • XEIMS:lpar_smfid:MVS
OMEGAMON XE for Mainframe Networks	• agent_jobname:lpar_smfid:KN3AGENT • tcpip_ID:lpar_smfid • vtam_ID:lpar_smfid
OMEGAMON XE for Messaging	• mq_ID:lpar_smfid:MQESA
OMEGAMON XE for Storage on z/OS	• agent_jobname:lpar_smfid:STORAGE

When you examine the Managed Systems (KOBHBMSN) workspace or the Only Managed Systems

(KOBMSNS) workspace content and it indicates that there are no online agents for a specific product, examine the agent address space to verify that it is started and it is successfully initialized online. In some cases, it might be necessary to verify that the corresponding monitored systems or subsystems (for example, CICS regions) are also running.

The OMEGAMON Enhanced 3270 user interface local registry does not contain required agent information

The OMEGAMON Enhanced 3270 user interface local registry must have accurate information about the configuration of the environment to enable the composition and routing of data queries to appropriate OMEGAMON agent managed systems.

The registry is initially populated during the address space initialization process and thereafter, by default, at 5-minute intervals.

Given the startup considerations for OMEGAMON monitoring components and monitored systems and or subsystem, it is possible for the local registry content to take up to 10 minutes to stabilize; assuming you have fairly stable configuration.

Use the **Options** menu of the enhanced 3270UI to examine the local registry.

Examine the following items:
- Verify the existence of online registered enhanced 3270UI data retrieval agents:

   Tivoli Management services 6.3.1 (APAR OA42127) or later

   From the All Known Hubs (KOBHUBS) workspace, place your cursor next to the hub monitoring server name that you are interested in, type A and press **Enter**. The Data Retrieval Agents workspace must contain a minimum of one data retrieval agent row to enable data retrieval.

   Tivoli Management services 6.3 or earlier (pre-APAR OA42127)

   Select **View** > **3. Data Retrieval Agents**. The Initial OMEGAMON workspace (KOBLOGON) panel must contain a minimum of one data retrieval agent row to enable data retrieval.
- Verify the existence of the OMEGAMON agent list for managed systems:

   Tivoli Management services 6.3.1 (APAR OA42127) or later

   From the All Known Hubs (KOBHUBS) workspace, place your cursor next to the hub monitoring server name that you are interested in, type L and press **Enter**. The Managed System Lists workspace lists the rows with managed system list names. The information that is displayed is similar to that shown in Figure 15 on page 18

   Tivoli Management services 6.3 or earlier (pre-APAR OA42127)

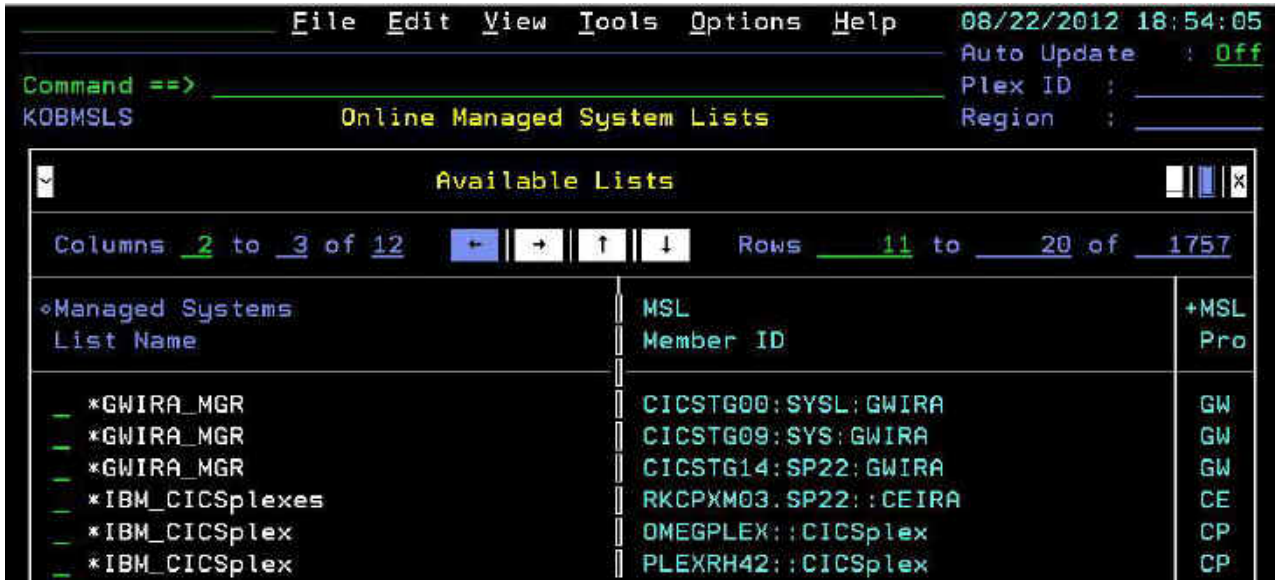   Select **View** > **5. Managed Systems Lists**. For example:

Figure 15. Online Managed Systems Lists panel of the local registry

The Online Managed Systems Lists workspace lists the rows with managed system list names.

The following table lists the naming conventions for the OMEGAMON products of the managed systems list names:

Product	Managed System List naming convention
OMEGAMON XE on z/OS	• *MVS_SYSPLEX • *MVS_SYSTEM
OMEGAMON XE for CICS on z/OS	• *CPIRA_MGR *GWIRA_MGR • *IBM_CICSplexes • *IBM_CICSplex • *MVS_CICSTG • *MVS_CICS • KCP_CICSplex_plex_name
OMEGAMON XE for DB2 PE	*MVS_DB2
OMEGAMON XE for IMS on z/OS	• *MVS_IMSPLEX • KIP_ims_system_IMS
OMEGAMON XE for Mainframe Networks	• *OMEGAMONXE_MAINFRAME_NTWK_TCP • *OMEGAMONXE_MAINFRAME_NTWK_VTAM • *OMEGAMONXE_MAINFRAME_NTWK
OMEGAMON XE for Messaging	mq_ID:lpar_smfid:MQESA
OMEGAMON XE for Storage on z/OS	agent_jobname:lpar_smfid:STORAGE

• Verify the existence of online OMEGAMON agents managed systems:

Tivoli Management services 6.3.1 (APAR OA42127) or later

From the All Known Hubs (KOBHUBS) workspace, place your cursor next to the hub monitoring server name that you are interested in, type N and press **Enter**. The Managed Systems workspace is displayed and lists the available names of the local registry managed systems.

Tivoli Management services 6.3 or earlier (pre-APAR OA42127)

Select **View > 4. Managed Systems**. The Only Managed Systems workspace (KOBMSNS) shows rows with managed system names.

See "The OMEGAMON monitoring agent is offline or is not started" on page 15.

Note: In a case where the configuration is running multiple versions of the OMEGAMON XE on z/OS agents (V4.2.0 and V5.1.0), only remote server address spaces that are upgraded to the latest version can be configured as Sysplex-proxy-eligible. You might get a workspace notice that says, `Sysplex Data Unavailable: Enter 'ZOSLPARS' for LAPR Data` for the case where the Sysplex proxy is started in a back-leveled remote server address space. The result is that the OMEGAMON Enhanced 3270 user interface is unable to render Sysplex data.

Note: In the case where multiple instances of IBM Tivoli Monitoring configurations are running in a common Sysplex, the configurations must be configured with unique names; at least one of the configurations must provide an override Sysplex name (pseudo name) so that both configurations are able to start a Sysplex proxy (and agent). The workspace notice, `Sysplex Data Unavailable: Enter 'ZOSLPARS' for LAPR Data` can depict the case where these conditions are not satisfied and the Sysplex proxy is unable to start in one of the configurations; the result is that the OMEGAMON Enhanced 3270 user interface is unable to render Sysplex data for that Sysplex.

Data retrieval delays/time-outs causing no data conditions

OMEGAMON Enhanced 3270 user interface logs are written to the address space SYSPRINT DD statement.

By default, the OMEGAMON Enhanced 3270 user interface is configured with the request time out parameters shown in the following table:

Parameter name	Description	Defaults and overrides
QUERYTIMEOUT=	User interface workspace query time out	Default is 10 seconds. **Note:** Some workspace queries are delivered with an time out override; where the composition of data requests anticipates an elongated response.
PNG_TIMEOUT	DRA ping health check (endpoint ping) time out	Two seconds
SO_TIMEOUT	DRA data request (socket) time out	15 seconds
DIS_TIMEOUT	Registry refresh (discovery data request time out	Two seconds

These parameter defaults have been established for reasonable or normal operational conditions. There might be unique operational conditions in your environment where the defaults are not optimal. In that case, you can modify the defaults by creating customized OMEGAMON Enhanced 3270 user interface workspaces and or specifying parameter overrides in the OMEGAMON Enhanced 3270 user interface environment parameters file (*rte.RKANPARU(KOBENV)*) that is referenced by the address space RKANPAR DD statement.

Elongated response times when interacting with the OMEGAMON Enhanced 3270 user interface might be a symptom of time out conditions. For example, during log on, the initial Enterprise Summary (KOBSTART) workspace might take a significant amount of time (more than a few seconds) to render and or the workspace is rendered with partial or no data.

Note: The following message is written to the SYSPRINT log files when request time-outs occur:

```
KOBCM0010E: conduit manager Recv Error, rc = -1, microseconds = nnnnnnnn
```

The following items identify the common causes for delay and or time out conditions. Investigation of these conditions might be complex, this information provides you with some hints for further investigation:

- The hub monitoring server is running under degraded system conditions (heavy system workload or an under-capacity system) and is being delayed when attempting to service OMEGAMON Enhanced 3270 user interface data requests. In this example, examine the availability and priority of the system resources provided to the hub monitoring server.

- The OMEGAMON agent is running under degraded system conditions (heavy system workload or an under-capacity system) and is being delayed when attempting to service OMEGAMON Enhanced 3270 user interface data requests. In this example, examine the availability and priority of the system resources provided to the OMEGAMON agent.

- Data requests submitted from the OMEGAMON Enhanced 3270 user interface to a given Data Retrieval Agent, thorough a TCP/IP conduit, are being impacted by degraded network conditions. In this case, the availability, priority, and configuration of network resources and paths associated with communications between the OMEGAMON Enhanced 3270 user interface and the hub monitoring server and OMEGAMON agents should be examined.

- An OMEGAMON component (monitoring server or agent) that played a role in a given data request path has gone off-line; the LPAR was terminated, or the address space was terminated. In this case, "The OMEGAMON Enhanced 3270 user interface local registry does not contain required agent information" on page 17 to investigate the status of OMEGAMON components, (Managed Systems: on line or off line).

- The hub and or a remote monitoring server is experiencing operational issues and is being delayed when attempting to service OMEGAMON Enhanced 3270 user interface data requests. A misconfiguration or a special site or environmental configuration requirements might lead to operational issues.

  For example:

  – Operational issues might arise if a monitoring server running on a z/OS operating system is experiencing problems writing to its' Historical Persistent Datastore files.

  – Operational issues might occur if a monitoring server is unable to bind to its configured TCP/IP port number.

- The IP domain name resolution is not fully configured on the z/OS operating system where the OMEGAMON Enhanced 3270 user interface, Tivoli Enterprise Monitoring Server and or agent address spaces are running. Also, there might be more than one TCP/IP task running on the z/OS operating system; for these cases, the OMEGAMON address spaces, the OMEGAMON Enhanced 3270 user interface, Tivoli Enterprise Monitoring Server and or agent started task JCL procedures must specify the IP name resolution configuration data set to be specified through the SYSTCPD DDNAME statement.

- The hub Tivoli Enterprise Monitoring Server is running on a system that has multiple network interfaces and perhaps the preferred and or universally known interface is not being employed; this results in IP connection issues that manifest on the interface as a possible sporadic, no data condition. Refer to the following tech note for more information related to this type of configuration; the use of the **KDEB_INTERFACELIST** parameter. See http://www-01.ibm.com/support/docview.wss?uid=swg21282474.

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