

OMEGAMON XE Shared Documentation  
6.3.0 Fix Pack 2 and above

*Multi-tenancy Guide*



**Note**

Before using this information and the product it supports, read the information in [“Notices” on page 25.](#)

This edition applies to IBM OMEGAMON products that use OMNIMON Base version 7.5.0 and above and to all subsequent releases and modifications until otherwise indicated in new editions.

Last updated: 2024-04-19

© **Copyright International Business Machines Corporation 2019, 2021.**

US Government Users Restricted Rights – Use, duplication or disclosure restricted by GSA ADP Schedule Contract with IBM Corp.

---

# Contents

- Overview of OMEGAMON multi-tenancy..... 1**
  - OMEGAMON multi-tenancy concepts and architecture..... 1
  - OMEGAMON multi-tenancy user types..... 2
  - OMEGAMON multi-tenancy terminology.....3
  
- Installation..... 5**
  
- Configuration..... 7**
  - Defining a Managed Systems List (MSL).....7
    - Creating an MSL using TEP..... 8
  - Creating tenant definitions..... 9
    - Creating tenant definitions in PDS members..... 10
    - Creating tenant definitions in RACF..... 12
    - Setting the location of the tenant definitions..... 15
  - Enabling multi-tenancy mode..... 16
  
- Working in multi-tenancy mode..... 19**
  - Tenant workspaces..... 19
  
- Troubleshooting.....21**
  - First workspace does not load..... 21
  - No data condition..... 22
  
- Notices.....25**
  - Trademarks..... 26
  - Privacy policy considerations ..... 26
  
- Index..... 27**



---

# Overview of OMEGAMON multi-tenancy

The OMEGAMON multi-tenancy solution allows the monitoring of distinctly separate sets of resources. With OMEGAMON multi-tenancy, general users can access information for resources assigned to their tenant only and cannot access information about the resources of another tenant. For example, an IT service provider or data center might provide services to multiple, unrelated customers and the services might need to be tracked separately by customer. In the OMEGAMON multi-tenancy solution, each customer would be considered a tenant. The OMEGAMON administrator or system programmer would configure the multi-tenancy feature, and the general end user would have access to only those OMEGAMON products and resources that are assigned to the customer with which the user is associated.

---

## OMEGAMON multi-tenancy concepts and architecture

Use this topic to familiarize yourself with the concepts and architecture upon which the OMEGAMON multi-tenancy feature is based.

### Monitoring environment

The monitoring environment for an OMEGAMON multi-tenancy scenario has the following components:

- Tivoli Enterprise Monitoring Server (TEMS). The OMEGAMON multi-tenancy solution allows data collection from multiple LPARs using a single TEMS.
- Tivoli Enterprise Monitoring Agents (TEMA)
- Enhanced 3270 user interface (enhanced 3270UI)
- Tivoli Enterprise Portal (TEP). The TEP is used for configuration.
- User-defined Managed Systems Lists (MSLs)
- User-defined tenant (customer) definitions

### Managed systems lists (MSLs)

The OMEGAMON multi-tenancy feature uses *Managed Systems Lists (MSLs)*, which are defined sets of resources, to restrict access to resources by tenant. The following explanation describes how the MSLs are used.

In general, for data collection, an OMEGAMON client issues an SQL query to a TEMS, which in turn is passed to one or more agents. The SQL query requests one or more columns from one or more tables. The key element in the query is the information that tells the TEMS which agent to invoke. This element is called an *origin node* and is a unique token that the agent registers with the TEMS when the agent starts up.

The following example requests information for a CICS region on an LPAR:

```
SELECT COLUMN1, COLUMN2, COLUMN3, FROM PRODUCT.CICSTABLE,  
WHERE (ORIGINNODE = 'LPAR.CICSNAME' )
```

The origin node is referred to as a *Managed System Name (MSN)* and identifies one agent monitoring one system or subsystem. However, many requests need to target multiple agents monitoring multiple systems, and so instead of an origin node, a *Managed Systems List (MSL)* is used. An MSL is a list of MSNs, or origin nodes.

The following example requests information using an MSL:

```
SELECT COLUMN1, COLUMN2, COLUMN3, FROM PRODUCT.PLEXTABLE,  
WHERE SYSTEM.PARMA=('NODELIST','OMEGAMON-CICS-LIST',18)
```

In this example, the OMEGAMON-CICS-LIST is an MSL that contains one MSN for every CICS region that belongs in the same CICSplex.

Each OMEGAMON product provides an out-of-the-box MSL that is used to contain all discovered systems or subsystems that belong to it. In an OMEGAMON single-tenant configuration, the product-provided MSLs are used for data collection, allowing inclusion of all discovered resources. In an OMEGAMON multi-tenancy configuration, for each tenant, you must define one or more MSLs (one MSL for each *managed system type*) and include only those systems that belong to that tenant. The user-defined MSLs are then used in the system-generated SQL queries for data collection and limit the scope of collection to only those resources that have been included.

OMEGAMON products that generate queries using the following format are supported in multi-tenancy mode:

```
SYSTEM.PARMA=( 'NODELIST' , "msl" , nn)
```

Where *msl* is the product-provided MSL name and *nn* is the length of the name in characters.

**Note:** A *managed systems list* is also referred to as a *managed system list* and a *managed system group*.

## Silent first workspace

The OMEGAMON multi-tenancy solution uses a silent workspace (KOBLOGON) as the first workspace. The silent first workspace retrieves the multi-tenancy information for the user ID that is logging on, and then calls the designated first workspace to display.

## OMEGAMON multi-tenancy user types

---

This topic describes the available multi-tenancy user roles and the differences between them.

In a multi-tenancy environment, there are three types of users: a regular user, a power user and a super user. Each user type has a different level of access to resources and features. The regular user and the power user have access only to the tenant (customer) to which the user is defined, whereas the super user has access to all tenants in the environment. Additionally, the regular user and the power user have limited access to some of the enhanced 3270 user interface features, whereas the super user has access to all features. The following list describes access by user type.

### user

The regular tenant user has access to resources only for the tenant (customer) to which the user is defined, with limited access to some enhanced 3270 user interface features. The following list describes the available access for the regular tenant user:

- Access to data for the customer to which user ID is defined
- Access to products (product tabs) to which user ID is defined
- **Note:** The PF9 key, used for lateral navigation between products, is disabled.
- Access to a subset of menu options
- All icons are disabled
- Access to a subset of commands
- The **=panelid** navigation command is disabled
- The Plex ID (NAV1) field is read-only
- The Sys ID (NAV2) field is unlocked, or is as set by the individual OMEGAMON product
- The name of the customer is displayed in the footer

### power user

The power user has access to resources only for the tenant (customer) to which the user is defined, with access to more enhanced 3270 user interface features than the regular tenant user. The following list describes the available access for the power user:

- Access to data for the customer to which user ID is defined

- Access to all products for the customer
  - Note:** The PF9 key, used for lateral navigation between products, is enabled.
- Access to all menu options
- Access to all icons
- Access to all commands
- The **=panelid** navigation command is enabled.
- The Plex ID (NAV1) field is read-only
- The Sys ID (NAV2) field is unlocked, or is as set by the individual OMEGAMON product
- The name of the customer is displayed in the footer

#### **super user**

The super user has access to all resources for all customers and can access all enhanced 3270 user interface features. The super user has the same abilities as an OMEGAMON user in an environment without multi-tenancy enabled. A super user designation allows the user ID to log on to the enhanced 3270 user interface address space, running in multi-tenancy mode, and not be restricted by any multi-tenancy rules. This capability allows an OMEGAMON system programmer to log on to a multi-tenancy address space and access data from all sources, while regular users are restricted to their own customer views. The following list describes the access for the super user:

- Access to data for all customers
- Access to all products for all customers
  - Note:** The PF9 key, used for lateral navigation between products, is enabled.
- Access to all menu options
- Access to all icons
- Access to all commands
- The **=panelid** navigation command is enabled.
- The Plex ID (NAV1) field is unlocked
- The Sys ID (NAV2) field is unlocked, or is as set by the individual OMEGAMON product
- The name of the HUB to which the user is connected is displayed in the footer

For more information about some of the enhanced 3270 user interface features that are unique to operating in multi-tenancy mode, see [“Tenant workspaces” on page 19](#).

## **OMEGAMON multi-tenancy terminology**

---

This topic describes terms as they apply to the OMEGAMON multi-tenancy feature.

#### **customer**

A tenant in an OMEGAMON multi-tenancy configuration. For each customer, a distinct set of resources (defined with MSLs), users, and groups are defined. A user for a particular customer can only access the resources defined to that customer. Multiple customers can exist in multi-tenancy mode.

#### **group**

A tenant definition that logically associates one or more users with the same logon experience and working environment. A group defines the first workspace and the product tabs to display when a user logs on.

#### **managed system group**

See *Managed Systems List*.

#### **Managed Systems List (MSL)**

A defined set of resources. Specifically, an MSL is a list of *Managed Systems Nodes (MSNs)*. The MSL is used to control the scope of data collection. Each OMEGAMON product provides an out-of-the-box MSL that contains all discovered systems or subsystems that belong to it. In a multi-tenancy

configuration, one or more MSLs are defined for each tenant to limit the scope of collection. Also referred to as a *managed system list* and a *managed system group*.

**Managed System Node (MSN)**

A unique token used for agent identification. An MSN is used in data collection to identify one agent monitoring one system or subsystem. Also referred to as an *origin node*.

**multi-tenancy mode**

A feature in the OMEGAMON enhanced 3270 user interface that allows the monitoring of distinctly separate sets of resources.

**managed system type**

In OMEGAMON multi-tenancy, the managed system type is a pre-defined value used to identify the OMEGAMON agent or type of managed system when specifying user-defined MSLs in customer definitions. For more information, see [“Creating tenant definitions” on page 9](#).

**Origin node**

See *Managed System Name (MSN)*.

**power user**

A designation for a user ID that allows the user access to resources only for the tenant (customer) to which the user is defined, with access to more enhanced 3270 user interface features than the regular tenant user, such as access to all menu options, icons and commands.

**super user**

A designation for a user ID that allows the user to log on to the enhanced 3270 user interface address space, running in multi-tenancy mode, and not be restricted by any multi-tenancy rules. This setting allows an OMEGAMON System Programmer to log on to a multi-tenancy address space and access data from all sources while tenants are restricted to their own customer views.

**tenant**

A monitoring environment consisting of a distinct set of resources for data collection. See also *customer*.

**tenant user**

A defined user in a multi-tenancy environment. The regular tenant user has access to resources only for the tenant (customer) to which the user is defined and has limited access to some enhanced 3270 user interface features.

**user**

A tenant definition that establishes the group and customer to which a user ID belongs and indicates if the user ID is designated as a *power user* or a *super user*. Unless the user is designated as a super user, a user can access only those resources that are assigned to the customer to which the user ID belongs.



# Installation

Review information about installing OMEGAMON multi-tenancy support.

OMEGAMON multi-tenancy support is installed as part of OMNIMON Base V7.5.0. For information about installing the framework, see the *Program Directory*.

## APARs for multi-tenancy support

The following table lists the APARs that provide multi-tenancy support in OMEGAMON:

Product	APAR (PTF if available)	Description
OMNIMON Base V7.5.0	OA57511 (PTF UJ00549)	Introduces multi-tenancy support in the OMEGAMON framework. This maintenance is required to operate any OMEGAMON product in multi-tenancy mode.
OMNIMON Base V7.5.0	OA58270 (PTF UJ00873)	Provides updated multi-tenancy support in the OMEGAMON framework for OMEGAMON for Messaging on z/OS.
OMNIMON Base V7.5.0	OA58324 (PTF UJ01503)	Provides updated multi-tenancy support in the OMEGAMON framework.
OMNIMON Base V7.5.0	OA59694 (PTF UJ03331)	Introduces managed system types TCP, VTAM, and MFAD for IBM OMEGAMON for Networks for z/OS. These new types replace managed system type MFN.
OMNIMON Base V7.5.0	OA61210 (PTF UJ05726)	Introduces the <i>power user</i> , a multi-tenancy user type that has access to resources only for the tenant (customer) to which the user is defined, with access to more enhanced 3270 user interface features than the regular tenant user.
OMNIMON Base V7.5.0	OA61889 (PTF UJ06628)	Adds wildcard support for multi-tenancy user ID definitions.
OMEGAMON for CICS	OA58058 (PTF UJ00691)	Provides a usability improvement in OMEGAMON for CICS that simplifies the multi-tenancy configuration process.
OMEGAMON for Db2 Performance Expert on z/OS	PH16515 (PTF UI67209)	Provides multi-tenancy support in OMEGAMON for Db2 Performance Expert on z/OS. This maintenance is required to operate OMEGAMON for Db2 Performance Expert on z/OS in multi-tenancy mode.
OMEGAMON for IMS on z/OS	OA58195 (PTF UJ00721)	Provides multi-tenancy support in OMEGAMON for IMS on z/OS. This maintenance is required to operate OMEGAMON for IMS on z/OS in multi-tenancy mode.
OMEGAMON for Messaging on z/OS	OA58339 (PTF UJ01518)	Provides multi-tenancy support in OMEGAMON for Messaging on z/OS. This maintenance is required to operate OMEGAMON for Messaging on z/OS in multi-tenancy mode for the IBM MQ Monitoring agent.

<b>Product</b>	<b>APAR (PTF if available)</b>	<b>Description</b>
OMEGAMON for Messaging on z/OS	OA58340 (PTF UJ01519)	Provides multi-tenancy support in OMEGAMON for Messaging on z/OS. This maintenance is required to operate OMEGAMON for Messaging on z/OS in multi-tenancy mode for the IBM Integration Bus Monitoring agent.
OMEGAMON for z/OS	OA56925 (PTF UA99795)	Provides multi-tenancy support in OMEGAMON for z/OS. This maintenance is required to operate OMEGAMON for z/OS in multi-tenancy mode.

---

# Configuration

Perform the necessary steps to configure the OMEGAMON enhanced 3270 user interface to operate in multi-tenancy mode.

## About this task

To configure the OMEGAMON enhanced 3270 user interface for operation in multi-tenancy mode, you must define information about the tenant and the systems to be managed, and you must enable the feature.

Perform the following procedure for each tenant.

## Procedure

1. Define the Managed Systems Lists. See [“Defining a Managed Systems List \(MSL\)”](#) on page 7.
2. Define the customer (tenant) and the relationships between the customer and the MSLs. The required definitions can be made in PDS members or in RACF. See [“Creating tenant definitions”](#) on page 9.
3. Enable multi-tenancy mode. See [“Enabling multi-tenancy mode”](#) on page 16.

---

## Defining a Managed Systems List (MSL)

Define the MSLs for a tenant.

The Managed Systems List (MSL) is a list of Managed System Name (MSN) entries (or, origin nodes).

Each OMEGAMON provides an out-of-the-box MSL that contains all discovered systems or subsystems that belong to it. This MSL is all that is needed for an environment consisting of only a single tenant.

For an environment that has multiple tenants, one or more MSLs must be defined for each tenant to limit the scope of collection to that of the tenant.

It is recommended that you use the TEP to create your MSLs.

### Notes:

- A *managed systems list* is also referred to as a *managed system list* and a *managed system group*.
- The TEP **Object Group Editor** stores MSL and MSN data in the Hub TEMS to which it is connected. If the enhanced 3270 user interface is connected to the same Hub TEMS, it has access to that same stored data. Equally true, if the enhanced 3270 user interface **Object Editor** stores data into the TEMS, the TEP will have access to that same stored data.

Before you create your MSLs for your multi-tenant implementation, review the following considerations:

- Naming convention. See [“Naming convention”](#) on page 7.
- Scope of resources to include in the MSL. See [“Scope of resources”](#) on page 8.

## Naming convention

When creating managed systems lists, it is important to choose a naming convention that is meaningful. Although there are not any requirements or validation for the name, the following suggested format is recommended:

```
env_OMcode_customer
```

Where:

- *env* is the environment, such as T for Test, P for Production, or D for Development
- *OMcode* is the OMEGAMON product code, such as C5 for CICS or I5 for IMS

- *customer* is the customer ID (up to 10 characters)

Additionally, the use of uppercase letters is recommended.

For example, T\_C5\_ACMECORP would be the MSL for CICS test regions for the ACME Corporation.

**Note:** A benefit of using this naming convention is that in the required Customer definition (described in [“Creating tenant definitions”](#) on page 9), if the MSL name ends with ?, then the customer ID will be substituted.

## Scope of resources

Before you create your MSL, plan what managed system nodes to include; for example, you can create an MSL containing a single CICS region. One MSL must be created for each managed system type.

The following conditions apply when creating your MSL:

- In IBM Z OMEGAMON for CICS, if you want to have a CICSplex per LPAR, you must define each one.
- The IBM OMEGAMON for Networks on z/OS agent and the IBM Z OMEGAMON Network Monitor agent each require an MSL containing three types of managed systems. Each managed system name will include an LPAR name. The three managed systems can be described as follows:
  - *AgentID:LPAR:KN3AGENT*
  - *TCPIP:LPAR*
  - *VTAM:LPAR*

## Procedure

To create your MSL in TEP, see [“Creating an MSL using TEP”](#) on page 8.

## Creating an MSL using TEP

Use the Tivoli Enterprise Portal (TEP) to create a managed systems list (MSL) for the tenant.

### Before you begin

Review the content in [“Defining a Managed Systems List \(MSL\)”](#) on page 7.

### About this task

Use the **Object Group Editor** in the Tivoli Enterprise Portal (TEP) to create one or more MSLs for each tenant. One MSL must be created for each managed system type.

Perform the following steps for each MSL to create.

#### Notes:

- A *managed systems list* is referred to as a *managed system group* in the TEP.
- For more information about using the **Object Group Editor**, see the [IBM Tivoli Monitoring: Tivoli Enterprise Portal User's Guide](#).

## Procedure

1. Click the **Object Group Editor** icon in the Tivoli Enterprise Portal.
2. Under **Groups**, if the **Managed system** node is collapsed, expand it.
3. Click one of the available managed system types, then click **Create new group**.
4. Type a descriptive name for the managed system group and click **OK**.  
The new managed system group is displayed in the managed system folder.
5. Select a managed system from the **Available Managed Systems** list and move it to the **Assigned** list. You can select multiple managed systems by holding down Ctrl while clicking each managed

system. You can also, after selecting a managed system, use Shift+click to select all managed systems between this selection and the first selection.

6. Save your changes and either keep the editor open with **Apply** or exit with **OK**. The managed system group is now available.

### What to do next

Create customer, group, and user definitions for the tenant. See [“Creating tenant definitions” on page 9](#).

## Creating tenant definitions

---

Create the customer, group, and user definitions for an OMEGAMON multi-tenancy environment.

### About this task

For each tenant, you must define the customer and the relationships between the customer and the MSLs. This process requires the definition of the following components:

- **Customer.** A customer definition contains a customer ID (up to 10 characters), a descriptive customer name (up to 50 characters), and the list of MSLs for the customer. Each managed system type requires a unique MSL. One customer definition is created for each tenant.
- **Group.** A group definition defines the group to which a user will belong. For each group, you also specify the first workspace to display at logon and the OMEGAMON tabs to display in the workspace. Multiple groups can be defined and can be used by multiple tenants.
- **User.** A user definition specifies information for an individual z/OS TSO user ID. This information includes the group and the customer to which the user belongs; a user can belong to one group and one customer only. A user can also be defined as a *power user* or a *super user*. The differences between the multi-tenancy user types are as follows:
  - A regular tenant user has access to resources only for the tenant (customer) to which the user is defined and has limited access to some enhanced 3270 user interface features.
  - A *power user* has access to resources only for the tenant (customer) to which the user is defined, with access to more enhanced 3270 user interface features than the regular tenant user, such as access to all menu options, icons and commands.
  - A *super user* has access to all resources for all customers and can access all enhanced 3270 user interface features.

For more information, see [“OMEGAMON multi-tenancy user types” on page 2](#).

You can create the tenant definitions in PDS members or in RACF, which can provide greater security. Because the RACF implementation typically requires the involvement of your RACF administrator, it is recommended that you test your tenant definitions using PDS members and then, when satisfied, transfer the definitions to RACF.

### Procedure

1. Use one of the following procedures to create your tenant definitions:
  - [“Creating tenant definitions in PDS members” on page 10](#)
  - [“Creating tenant definitions in RACF” on page 12](#)
2. Indicate if the tenant definitions are to be used in the PDS members or in RACF. See [“Setting the location of the tenant definitions” on page 15](#).

## Creating tenant definitions in PDS members

Define the customer and the relationships between the customer and the MSLs using PDS members.

### About this task

For each tenant, you must define the customer and the relationships between the customer and the MSLs. This process requires the definition of the following components: customer, group, users. Each of these components is defined in a PDS member in the UKOBDATF data set that is allocated to the enhanced 3270 user interface address space (allocated to the RKOBPROF DD name). Template members are provided in data set RKOBDATF and must be copied to data set UKOBDATF for customization.

The following list describes the definitions to be made.

**Note:** The definitions described in this topic can also be made in RACF for greater security. See [“Creating tenant definitions in RACF”](#) on page 12.

- **Customer.** Customers are defined in member KOBCEUST. Each customer entry defines the customer ID, title, and associated MSLs for the customer. The following example shows the format for the customer definition:

```
CUSTOMER:customerID,  
CUSTNAME:"customerTitle",  
msType="msl",  
msType="msl",  
msType="msl"
```

Where:

- *customerID* is the customer ID, which can be up to 10 characters.
- *customerTitle* is the unique customer descriptive title, which can be up to 50 characters.
- *msType* is the managed system type. A separate definition is made for each type. Valid values: ZOS, CICS, IMS, DB2, CTG, MQ, QSG, IIB, STOR, MFN, TCP, VTAM, MFAD, JAVA.

**Note:** With APAR OA59694, managed system type MFN has been replaced with the following managed system types for IBM OMEGAMON for Networks for z/OS: TCP, VTAM, and MFAD (Administration). It is recommended that you use TCP, VTAM, and MFAD instead of MFN.

- *msl* is the name of the managed system list (group) for the respective managed system type. A unique MSL must be specified for each managed system type. If the MSL name ends with ?, then the customer ID will be substituted. See [“Naming convention”](#) on page 7 for the recommended MSL name format.

The following example shows a customer definition. For each MSL name ending with ?, the ? is replaced by ACMECORP. For example, CICS="T\_C5\_?" is converted to CICS="T\_C5\_ACMECORP".

```
CUSTOMER:ACMECORP,  
CUSTNAME:"UNIQUE CUSTOMER TITLE",  
ZOS="T_M5_ACMECORP",  
CICS="T_C5_?",  
IMS="T_I5_ACMECORP",  
DB2="T_D5_?",  
CTG="T_GW_?",  
MQ="T_MQ_ACMECORP",  
QSG="T_QSG_ACMECORP",  
IIB="T_IIB_ACMECORP",  
STOR="T_S3_?",  
MFN="T_N3_ACMECORP",  
TCP="T_N3_TCP_ACMECORP",  
VTAM="T_N3_VTAM_ACMECORP",  
MFAD="T_N3_ADMIN_ACMECORP",  
JAVA="T_JJ_?"
```

- **Group.** Groups are defined in member KOBGROUP. This member defines the groups to which a user will belong. In each group entry, you also specify the first workspace to be displayed at logon and the

OMEGAMON tabs to be displayed in the workspace for the group. The following example shows the format for a group definition:

```
GROUP:group,FIRSTWS=workspace,
SHOWEVT=n,SHOWZOS=n,SHOWCICS=n,SHOWCTG=n,SHOWIMS=n,
SHOWDB2=n,SHOWMQ=n,SHOWIIB=n,SHOWMFN=n,SHOWSTOR=n,SHOWJAVA=n
```

Where:

- *group* is the group name, which can be up to 10 characters.
  - *workspace* is the workspace to display at logon, which is an 8-character panel ID.
  - *n* specifies whether the respective tab is displayed in the first workspace. Valid values are Y and N.
- The variables and corresponding tabs are as follows:

Option	Tab
SHOWEVT	<b>Events</b> <b>Note:</b> Multi-tenancy mode is not supported for the Events tab. The user will see all available resources and will not be restricted to only those resources in the user-defined MSLs for the tenant.
SHOWZOS	<b>z/OS</b>
SHOWCICS	<b>CICS</b>
SHOWCTG	<b>C/TG</b>
SHOWIMS	<b>IMS</b>
SHOWDB2	<b>DB2</b>
SHOWMQ	<b>MQ</b> <b>Note:</b> The MQ tab displays the queue-sharing group (QSG) information. To include QSG information, you must define an MSL for the QSG managed system type for the customer.
SHOWIIB	n/a <b>Note:</b> There is not a corresponding tab for the Integration Bus (IIB) agent. To view IIB information, use the <b>Integration Bus</b> option on the <b>Navigate</b> menu.
SHOWMFN	<b>MFN</b> (Mainframe Networks)
SHOWSTOR	<b>STOR</b> (Storage)
SHOWJAVA	<b>JVM</b>

The following example shows a group definition.

```
GROUP:OMEGCICS,FIRSTWS=KOBSCICS,
SHOWEVT=N,SHOWZOS=Y,SHOWCICS=Y,SHOWCTG=Y,SHOWIMS=N,
SHOWDB2=N,SHOWMQ=Y,SHOWIIB=Y,SHOWMFN=N,SHOWSTOR=N,SHOWJAVA=Y
```

- **User.** Users are defined in member KOBUSER. This member defines information about individual user IDs. A user can also be defined as a *power user* or a *super user*.

**Note:** For more information, see [“OMEGAMON multi-tenancy user types” on page 2](#).

The following example shows the format for the definition of a user:

```
USERID:user GROUP:group POWER:Y|N SUPER:Y|N CUSTOMER=customerID
```

Where:

- *user* is the z/OS TSO user ID, which can be up to 8 characters. A trailing asterisk wildcard is supported (for example, TD\*).
- *group* is the associated group name, which can be up to 10 characters.
- *customerID* is the associated customer ID, which can be up to 10 characters. This parameter is omitted for super users.

The following example shows definitions for the different types of users:

```

USERID:TSUSERA GROUP:OMEGALL SUPER:Y
USERID:TSUSERB GROUP:OMEGCICS POWER:Y CUSTOMER=ACMECORP
USERID:TSUSERC GROUP:OMEGCICS CUSTOMER=ACMECORP
USERID:TD*      GROUP:OMEGCICS CUSTOMER=ACMECORP

```

Use the following procedure to create the customer, group and user definitions in PDS members.

## Procedure

1. Locate and copy the KOBUCST, KOBUSER and KOBGROUP members from the RKOBDATF dataset to the UKOBDATF data set.
2. Edit the new KOBUCST, KOBGROUP, and KOBUSER members in the UKOBDATF data set to define information about the customer, groups and users. Use a file editor such as the ISPF editor to do this. For details about the definitions, see [About this task](#).

## What to do next

In the KOBLOGON workspace, make sure the MODE value is set to PDS, as described in [“Setting the location of the tenant definitions”](#) on page 15.

## Creating tenant definitions in RACF

Define the customer and the relationships between the customer and the MSLs using RACF.

### Before you begin

Because of the authority that is required, some of the steps in this task must be performed by the RACF administrator. It is recommended that you test your tenant definitions using PDS members and then, when satisfied, transfer the definitions to RACF.

Additionally, if RACF is used, the OMEGAMON started task needs to be authorized to issue RACROUTE EXTRACT requests for CSDATA fields for any user ID logging to the enhanced 3270 user interface.

### About this task

You can optionally create the customer, group and user definitions for the tenant in RACF.

**Note:** The definitions described in this topic can also be made in PDS members in the UKOBDATF data set. See [“Creating tenant definitions in PDS members”](#) on page 10.

RACF User Profiles are used to create user definitions, and General Resource Profiles are used to create groups and customer definitions.

The following list describes the definitions to be made.

- **Customer.** A resource is created for each customer. The customer ID is defined as the resource name within RACF security class \$KOBSEC, and the customer details are defined as installation data for the resource. The following example shows a customer definition:



```

CLASS      NAME
-----
$KOBSEC    customerID

LEVEL  OWNER      UNIVERSAL ACCESS  YOUR ACCESS  WARNING
-----
  00   TSUSER          NONE              NONE          NO

INSTALLATION DATA
-----
msType="msl" CUSTNAME="customerTitle"

APPLICATION DATA
-----
NONE

AUDITING
-----
FAILURES(READ)

NOTIFY
-----
NO USER TO BE NOTIFIED

```

Where:

- *customerID* is the customer ID, which can be up to 10 characters.
- *customerTitle* is the unique customer descriptive title, which can be up to 50 characters.
- *msType* is the managed system type. A separate definition is made for each type. Valid values: ZOS, CICS, IMS, DB2, CTG, MQ, QSG, IIB, STOR, MFN, TCP, VTAM, MFAD, JAVA.

**Note:** With APAR OA59694, managed system type MFN has been replaced with the following managed system types for IBM OMEGAMON for Networks for z/OS: TCP, VTAM, and MFAD (Administration). It is recommended that you use TCP, VTAM, and MFAD instead of MFN.

- *msl* is the name of the managed system list (group) for the respective managed system type. A unique MSL must be specified for each managed system type. If the MSL name ends with ?, then the customer ID will be substituted. See [“Naming convention” on page 7](#) for the recommended MSL name format.
- **Group.** A resource is created for each group. The group name is defined as the resource name within RACF security class \$KOBSEC, and the group details are defined as installation data for the resource. The following example shows a group definition:

```

CLASS      NAME
-----
$KOBSEC    group

LEVEL  OWNER      UNIVERSAL ACCESS  YOUR ACCESS  WARNING
-----
  00   TSUSER          READ              READ          YES

INSTALLATION DATA
-----
FIRSTWS=workspace,SHOWEVT=n,SHOWZOS=n,SHOWCICS=n,SHOWCTG=n,SHOWIMS=n,SHOWDB2=n,
SHOWMQ=n,SHOWIIB=n,SHOWMFN=n,SHOWSTOR=n,SHOWJAVA=n

APPLICATION DATA
-----
NONE

AUDITING
-----
FAILURES(READ)

NOTIFY
-----
NO USER TO BE NOTIFIED

```

Where:

- *group* is the group name, which can be up to 10 characters.

- *workspace* is the workspace to display at logon, which is an 8-character panel ID.
- *n* specifies whether the respective tab is displayed in the first workspace. Valid values are Y and N. The variables and corresponding tabs are as follows:

Option	Tab
SHOWEVT	<b>Events</b> <b>Note:</b> Multi-tenancy mode is not supported for the Events tab. The user will see all available resources and will not be restricted to only those resources in the user-defined MSLs for the tenant.
SHOWZOS	<b>z/OS</b>
SHOWCICS	<b>CICS</b>
SHOWCTG	<b>C/TG</b>
SHOWIMS	<b>IMS</b>
SHOWDB2	<b>DB2</b>
SHOWMQ	<b>MQ</b> <b>Note:</b> The MQ tab displays the queue-sharing group (QSG) information. To include QSG information, you must define an MSL for the QSG managed system type for the customer.
SHOWIIB	n/a <b>Note:</b> There is not a corresponding tab for the Integration Bus (IIB) agent. To view IIB information, use the <b>Integration Bus</b> option on the <b>Navigate</b> menu.
SHOWMFN	<b>MFN</b> (Mainframe Networks)
SHOWSTOR	<b>STOR</b> (Storage)
SHOWJAVA	<b>JVM</b>

- **Users.** Definitions for user IDs are contained within RACF custom data fields, which are contained in a CSDATA segment. For each user ID, the following RACF CSDATA fields are used:
  - OMGROUP. This field has a maximum length of 10 and typically contains an 8-character value like OMEGCICS.
  - OMPOWER. This field has a maximum length of 8. Valid values are YES and NO.
  - OMSUPER. This field has a maximum length of 8. Valid values are YES and NO.
  - OMCUST. This field has a maximum length of 10 and typically contains a 6 to 8-character value like CUSTID.

The following example shows the CSDATA fields for a user:

```
SECURITY-LEVEL=NONE SPECIFIED
CATEGORY-AUTHORIZATION
  NONE SPECIFIED
SECURITY-LABEL=NONE SPECIFIED

CSDATA INFORMATION
-----
OMEG GROUP group
OMEG POWER Y|N
OMEG SUPER Y|N
OMEG CUSTOMER customerID
```

Where:

- *group* is the associated group name, which can be up to 10 characters.

- *customerID* is the associated customer ID, which can be up to 10 characters. This parameter is omitted for super users.

For more information about CSDATA fields, see the *z/OS Security Server RACF Security Administrator's Guide*.

**Note:** To display, add, or modify information in the CSDATA segment, you must have the appropriate authorization. These tasks are typically performed by the RACF administrator. Additionally, the OMEGAMON started task needs to be authorized to issue RACROUTE EXTRACT requests for CSDATA fields for any user ID logging to the enhanced 3270 user interface.

In addition to creating the tenant definitions, you need to indicate that RACF will be used. See [“Setting the location of the tenant definitions”](#) on page 15.

Use the following procedure to create the customer, group and user definitions in RACF. Refer to the *z/OS Security Server RACF* documentation for details.

## Procedure

1. Create your customer definitions using RACF General Resource Profiles (Option 2 on the RACF - Services Option Menu).
2. Create your group definitions using RACF General Resource Profiles (Option 2 on the RACF - Services Option Menu).
3. Create your user definitions using RACF User Profiles (Option 4 on the RACF - Services Option Menu).
4. Authorize the OMEGAMON started task to issue RACROUTE EXTRACT requests for CSDATA fields for any user ID logging to the enhanced 3270 user interface.

## What to do next

In the KOBLOGON workspace member, set the MODE value to SAF, as described in [“Setting the location of the tenant definitions”](#) on page 15.

## Setting the location of the tenant definitions

Set the location of the tenant definitions.

### About this task

The customer, group, and user definitions for the tenant can exist in either PDS members or RACF. You must indicate which of these locations to use.

This setting is controlled by the MODE parameter in the silent logon workspace (KOBLOGON), which is used when operating in multi-tenancy mode. The following figure shows the MODE parameter:

```

/*****/
/*      PDS or SAF - Where are your Multi-Tenancy Definitions      */
/*****/

SET MODE=PDS                /* Value is either PDS or SAF      */

```

### MODE

Specifies the location of the tenant definitions. The following are valid values:

- **PDS** - (Default) Definitions are made in PDS members in the UKOBDATF data set that is allocated to the enhanced 3270 user interface address space.
- **SAF** - Definitions are made in RACF.

It is recommended that you test your tenant definitions using PDS members and then, when satisfied, transfer the definitions to RACF.

Use the following steps to update the MODE parameter.

**Note:** The default value for the MODE parameter is PDS. If you use only PDS members for your tenant definitions, you can skip this step.

## Procedure

1. Locate the KOBLOGON workspace panel definition member.
2. Edit the member to set the MODE parameter to PDS for PDS members or SAF for RACF. Use a file editor such as the ISPF editor to do this.

## What to do next

Enable multi-tenancy mode. See [“Enabling multi-tenancy mode”](#) on page 16.

# Enabling multi-tenancy mode

---

Enable multi-tenancy mode in the enhanced 3270 user interface.

## About this task

To operate the enhanced 3270 user interface in multi-tenancy mode, you must enable the feature using the **KOB\_MT\_ENABLE** parameter. By setting the **KOB\_MT\_ENABLE** parameter to Y, the **MULTI** parameter is changed from the default value of N to Y in the job step of the started task JCL for the enhanced 3270 user interface, as shown in the following example:

```
//*  
//E3270UI EXEC PGM=KOBGATW0,  
//          REGION=&RGN, TIME=&TIM, MEMLIMIT=&MEMLIM,  
//          PARM=( ' MODE=&MODE, APPL=&APPL, FOLD=&FOLD, UMAX=&UMAX ',  
//          ' TIMEOUT=&TIMEOUT ',  
//          ' MULTI=Y',  
//          ' PROD=&PROD, FSCR=&FSCR, OM=&OM' )
```

After you start or restart the address space, the following message in the JES system log indicates that multi-tenancy mode is enabled:

```
OMV020I e3270UI is running in Multi-Tenancy Mode
```

Use the following procedure to enable multi-tenancy mode in the enhanced 3270 user interface.

## Procedure

1. Perform the following steps using either of the following methods:
  - Using PARMGEN:
    - a. Set parameter **KOB\_MT\_ENABLE** to Y.
    - b. Run \$PARSE.
  - Using Configuration Manager:
    - a. Add parameter **KOB\_MT\_ENABLE** set to Y to the RTEDEF (KOB\$PARM) or RTEDEF (KOB\$lpar) member. (Create the member if it is not present.)
    - b. Run the **GENERATE** action.
2. Refresh your PROCLIB entries.
3. Start or restart the address space. When the enhanced 3270 user interface address space is up, verify that the following message appears in the JES system log:

```
OMV020I e3270UI is running in Multi-Tenancy Mode
```

**What to do next**

Log on to the OMEGAMON enhanced 3270 user interface, running in multi-tenancy mode. See [“Working in multi-tenancy mode”](#) on page 19.



---

## Working in multi-tenancy mode

Operate your enhanced 3270 user interface in multi-tenancy mode.

After you have completed the necessary configuration steps to operate in multi-tenancy mode, log on to your enhanced 3270 user interface.

**Note:** If you have issues when logging on, see [“Troubleshooting” on page 21](#).

---

## Tenant workspaces

Review characteristics of the enhanced 3270 user interface that are unique to operating in multi-tenancy mode.

The following list describes characteristics of the workspace that are unique to operating in multi-tenancy mode:

- **Menus.** The workspace action bar provides a set of menus: File, Edit, View, Tools Navigate, and Help. For a regular user operating in multi-tenancy mode, only a subset of the menu options is enabled. All options are enabled for users defined as power users or super users.
- **Commands.** Regular tenant users have access to only a subset of commands. The `=panelid` command, which is used for out-of-context navigation, is not functional for regular tenant users. All commands are available to power users and super users.
- **Plex ID, Sys ID.** The following characteristics apply for regular tenant users and power users:
  - The Plex ID (NAV1) field is read-only. You cannot switch to a different system outside the scope of your multi-tenancy definition. Instead, you must go back to the home workspace (PF3 or the HOME command) to select a different plex.
  - The Sys ID (NAV2) field is unlocked, or is as set by the individual OMEGAMON product. Many OMEGAMON products use validation of the Plex ID and Sys ID values together to ensure that an overwritten Sys ID value is within the scope of the Plex ID value. This validation is a registry lookup, and if not found an error message is displayed explaining that the combination of the Plex ID value (locked or not) and the Sys ID value is invalid.

These restrictions do not apply for users defined as super users.

- **Icons.** For regular tenant users, icons are disabled. All icons are available to power users and super users.
- **Tabs.** For regular tenant users, only those tabs that have been designated for inclusion are displayed in the workspace. This setting is made in the group definition, which is described in [“Creating tenant definitions” on page 9](#).
- **Footer.** For regular tenant users and power users, the name of the customer associated with the logged-on user is displayed in the minimize bar. This value is set in the customer definition, which is described in [“Creating tenant definitions” on page 9](#). For super users, the name of the HUB to which the user is connected is displayed.

The following figure highlights items described in the list:

**Menus**

File Edit View Tools Navigate Help
04/24/2019 12:53:07  
Auto Update : OFF

Command ==>  
KOBSCICS\*
OMEGAMON Products

Plex ID : \_\_\_\_\_  
 Sys ID : \_\_\_\_\_

**Tabs** →

Z/OS

CICS

C/TG

MQ

JUM

All Active CICSplexes

Columns 2 to 6 of 19    Rows 1 to 2 of 2

ΔCICSplex vName	ΔNumber of vRegions	ΔTransaction vRate	ΔCPU vUtilization	Any SOS Regions	SOS Region
_ OMEGPLEX	1	0/m	0.0%	No	n/a
_ SB3	1	0/m	0.0%	No	n/a

**Footer** →

BACK
Unique Customer Title

M 02R
SR1TCP02
01/002

Figure 1. Workspace in multi-tenancy mode



# Troubleshooting

The troubleshooting section provides problem determination and resolution for the issues that are most commonly encountered with the OMEGAMON multi-tenancy feature.

## First workspace does not load

When you log on in multi-tenancy mode, the first workspace does not load.

### Symptom

The following error message is displayed:

```
First Workspace Error
The Initial workspace KOBLOGON is invalid. It is marked as a silent
workspace, but it did not set the ZDESTID variable. All silent
workspaces must set ZDESTID to enable forward navigation.

You should alter KOBLOGON to include the following statement:

SET ZDESTID=panelid

where panelid is your desired displayable first workspace.
```

### Explanation

The OMEGAMON multi-tenancy solution uses a silent workspace, KOBLOGON, as the first workspace.

When you log on in multi-tenancy mode, the KOBLOGON workspace is invoked. This workspace retrieves multi-tenancy-related information for the user ID that is logging on, and then calls the first workspace to display, as defined for the group to which the user belongs.

In the silent KOBLOGON workspace, the first workspace to display is specified in the ZDESTID parameter, as shown in the following figure:

```
/*
/* NAVIGATE FORWARD TO FIRST WORKSPACE */
/*
<SUBPANEL>

<EPILOG>
SET ZDESTID=&FIRSTWS
<EPILOGEND>

<SUBPANELEND>
```

The ZDESTID parameter by default should be set to the value in the FIRSTWS variable.

The FIRSTWS variable is defined in the group definition, which is shown in the following example:

```
GROUP:group,FIRSTWS=workspace,
SHOWEVT=value,SHOWZOS=value,SHOWCICS=value,SHOWCTG=value,SHOWIMS=value,
SHOWDB2=value,SHOWMQ=value,SHOWIIB=value,SHOWMFN=value,SHOWSTOR=value,SHOWJAVA=value
```

### Procedure

1. In the KOBLOGON workspace definition, check that the ZDESTID variable is defined correctly.
2. In the group definition in the KOBGROUP member or in RACF, as appropriate for your setup, check that the FIRSTWS variable is set correctly.

## No data condition

When you log on in multi-tenancy mode, the workspace loads but does not display any data.

### Symptom

Multi-tenancy mode has been configured for the OMEGAMON enhanced 3270 user interface. The enhanced 3270 user interface address space has been started and you are able to log on, but your enhanced 3270 user interface is displaying an empty workspace.

### Explanation

As described in [“OMEGAMON multi-tenancy concepts and architecture”](#) on page 1, in a single-tenant configuration, product-provided MSLs are used in the system-generated SQL queries for data collection while in a multi-tenancy configuration, user-defined MSLs are used, limiting the scope of collection to only those resources assigned to the tenant. If the user-defined MSLs are not set up correctly, it is possible that unexpected or no results will display.

To resolve the problem, you can analyze the system-generated SQL using trace. The following examples show how the queries appear in trace for single and multi-tenant configurations.

#### Single-tenant configuration

In a single-tenant configuration, a product-provided MSL name is used in the system-generated SQL query. The following example is of a standard trace of the enhanced 3270 user interface in a single-tenant configuration. The user is logging on to the CICS first workspace KOBSCICS. This example shows a typical workspace query that displays the CICS plexes defined to OMEGAMON:

```
KOBUIFD1I SQL1 Query Length : 00284
..SELECT CICSplex, NREGIONS, TRANRATE, CPUUTIL, AN+
YSOS, CBUFFW, CSTRINGW, ENQWAIT, IORATE, PAGERATE,+
STGVIOL, AIDS, ICES, HIMAXTP, HIMAXTR, ALLACB, WP+
ERFINDX, WSERVCLAS, SOSREGION, ORIGINNODE FROM OM+
CICS.KCPPLX WHERE SYSTEM.PARMA('NODELIST', '*IBM_C+
ICSplex',13) ORDER BY CICSplex ASC
```

In this example, the query specifies a SYSTEM.PARMA value of NODELIST and "\*IBM\_CICSplex". "\*IBM\_CICSplex" is the product-provided MSL for the OMEGAMON for CICS product and will retrieve data from all Managed System Nodes (MSNs) defined within that MSL.

#### Multi-tenancy configuration

In multi-tenancy mode, the user-defined MSL name is substituted into the system-generated query. The substitution is reflected in the trace, as shown in the following standard trace excerpt:

```
===== MULTI-TENANCY MODIFY SQL =====
SYSTEM.PARMA('NODELIST', '*IBM_CICSplex',13) ORDER+
SYSTEM.PARMA('NODELIST', '&CICSMSL',nn) ORDER+
SYSTEM.PARMA('NODELIST', 'T_C5_TENANT_MSL',nn) +
SYSTEM.PARMA('NODELIST', 'T_C5_TENANT_MSL',15) +
=====
-----
KOBUIGD1I SQL1 Query Length : 00291
SELECT CICSplex, NREGIONS, TRANRATE, CPUUTIL, ANYS+
OS, CBUFFW, CSTRINGW, ENQWAIT, IORATE, PAGERATE, S+
TGVIOL, AIDS, ICES, HIMAXTP, HIMAXTR, ALLACB, WPER+
FINDX, WSERVCLAS, SOSREGION, ORIGINNODE FROM OMCI+
CS.KCPPLX WHERE SYSTEM.PARMA('NODELIST', 'T_C5_TEN+
ANT_MSL',15) ORDER BY CICSplex ASC <ENDSQL><+>
```

In this example, the multi-tenant customer was defined as having a CICS MSL of "T\_C5\_TENANT\_MSL". The trace shows the step-by-step substitution process and the final SQL that will be sent to the TEMS.

**Note:** Only the OMEGAMON products that generate queries that use the following format are supported in multi-tenancy mode:

```
SYSTEM.PARMA=( 'NODELIST' , "msl" , nn)
```

Where *msl* is the product-provided MSL name and *nn* is the length of the name in characters.

## Procedure

1. Initiate a trace.
2. Locate the following text: MULTI-TENANCY MODIFY SQL
3. Examine the details of the MSL substitution process and correct any errors.



## Notices

---

This information was developed for products and services offered in the U.S.A. IBM® may not offer the products, services, or features discussed in this document in other countries. Consult your local IBM representative for information on the products and services currently available in your area. Any reference to an IBM product, program, or service is not intended to state or imply that only that IBM product, program, or service may be used. Any functionally equivalent product, program, or service that does not infringe any IBM intellectual property right may be used instead. However, it is the user's responsibility to evaluate and verify the operation of any non-IBM product, program, or service.

IBM may have patents or pending patent applications covering subject matter described in this document. The furnishing of this document does not give you any license to these patents. You can send license inquiries, in writing, to:

IBM Director of Licensing  
IBM Corporation  
North Castle Drive  
Armonk, NY 10504-1785 U.S.A.

For license inquiries regarding double-byte (DBCS) information, contact the IBM Intellectual Property Department in your country or send inquiries, in writing, to:

Intellectual Property Licensing  
Legal and Intellectual Property Law  
IBM Japan, Ltd.  
19-21, Nihonbashi-Hakozakicho, Chuo-ku  
Tokyo 103-8510, Japan

**The following paragraph does not apply to the United Kingdom or any other country where such provisions are inconsistent with local law:**

INTERNATIONAL BUSINESS MACHINES CORPORATION PROVIDES THIS PUBLICATION "AS IS" WITHOUT WARRANTY OF ANY KIND, EITHER EXPRESS OR IMPLIED, INCLUDING, BUT NOT LIMITED TO, THE IMPLIED WARRANTIES OF NON-INFRINGEMENT, MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE.

Some states do not allow disclaimer of express or implied warranties in certain transactions, therefore, this statement might not apply to you.

This information could include technical inaccuracies or typographical errors. Changes are periodically made to the information herein; these changes will be incorporated in new editions of the publication. IBM may make improvements and/or changes in the product(s) and/or the program(s) described in this publication at any time without notice.

Any references in this information to non-IBM websites are provided for convenience only and do not in any manner serve as an endorsement of those websites. The materials at those websites are not part of the materials for this IBM product and use of those websites is at your own risk.

IBM may use or distribute any of the information you supply in any way it believes appropriate without incurring any obligation to you.

Licensees of this program who wish to have information about it for the purpose of enabling: (i) the exchange of information between independently created programs and other programs (including this one) and (ii) the mutual use of the information which has been exchanged, should contact:

IBM Corporation  
224A/101  
11400 Burnet Road  
Austin, TX 78758 U.S.A.

Such information may be available, subject to appropriate terms and conditions, including in some cases payment of a fee.

The licensed program described in this document and all licensed material available for it are provided by IBM under terms of the IBM Customer Agreement, IBM International Program License Agreement or any equivalent agreement between us.

If you are viewing this information in softcopy form, the photographs and color illustrations might not be displayed.

## Trademarks

---

IBM, the IBM logo, and [ibm.com](https://www.ibm.com)<sup>®</sup> are trademarks or registered trademarks of International Business Machines Corporation in the United States, other countries, or both. If these and other IBM trademarked terms are marked on their first occurrence in this information with a trademark symbol (<sup>®</sup> or <sup>™</sup>), these symbols indicate U.S. registered or common law trademarks owned by IBM at the time this information was published. Such trademarks may also be registered or common law trademarks in other countries. A current list of IBM trademarks is available on the Web at “Copyright and trademark information” (<https://www.ibm.com/legal/us/en/copytrade.shtml>).

Linux<sup>®</sup> is a trademark of Linus Torvalds in the United States, other countries, or both.

UNIX is a registered trademark of The Open Group in the United States and other countries.

Windows is a trademark of Microsoft Corporation in the United States, other countries, or both.

Other company, product, and service names may be trademarks or service marks of others.

## Privacy policy considerations

---

IBM Software products, including software as a service solutions, (“Software Offerings”) may use cookies or other technologies to collect product usage information, to help improve the end user experience, to tailor interactions with the end user or for other purposes. In many cases no personally identifiable information is collected by the Software Offerings. Some of our Software Offerings can help enable you to collect personally identifiable information. If this Software Offering uses cookies to collect personally identifiable information, specific information about this offering’s use of cookies is set forth below.

Depending upon the configurations deployed, this Software Offering may use session cookies that collect each user’s user name for purposes of session management, authentication, and single sign-on configuration. These cookies can be disabled, but disabling them will also likely eliminate the functionality they enable.

If the configurations deployed for this Software Offering provide you as customer the ability to collect personally identifiable information from end users via cookies and other technologies, you should seek your own legal advice about any laws applicable to such data collection, including any requirements for notice and consent.

For more information about the use of various technologies, including cookies, for these purposes, see IBM Privacy Statement (<https://www.ibm.com/privacy>).

---

# Index

## A

APARs [5](#)

## C

configuration [7](#)  
cookies [26](#)  
creating MSLs [7](#), [8](#)  
customer  
  defining [9](#), [10](#), [12](#)

## D

defining MSLs [7](#), [8](#)

## E

Enhanced 3270 user interface [1](#)

## F

First Workspace Error [21](#)

## G

group  
  defining [9](#), [10](#), [12](#)

## I

installation [5](#)

## K

KOB\_MT\_ENABLE parameter [16](#)  
KOBLOGON [1](#), [21](#)

## M

managed system group [3](#)  
Managed System Node (MSN) [1](#), [3](#)  
Managed Systems List (MSL)  
  creating using TEP [8](#)  
  naming convention [7](#)  
MODE parameter [15](#)  
MSL, *See* Managed Systems List  
MULTI parameter [16](#)  
multi-tenancy  
  APARs [5](#)  
  architecture [1](#)  
  concepts [1](#)  
  configuration [7](#)  
  customer [3](#)  
  enabling [16](#)

multi-tenancy (*continued*)

  group [3](#)  
  installation [5](#)  
  mode [15](#), [16](#), [19](#)  
  overview [1](#)  
  power user [2](#), [3](#)  
  super user [2](#), [3](#)  
  tenant user [2](#), [3](#)  
  troubleshooting [21](#), [22](#)  
  user [2](#), [3](#)  
  workspaces [19](#)

## N

no data condition [22](#)

## O

Object Group Editor [7](#), [8](#)  
OMEGAMON for CICS [5](#)  
OMEGAMON for IMS [5](#)  
OMEGAMON for z/OS [5](#)  
OMEGAMON multi-tenancy [1](#)  
origin node [1](#), [3](#)

## P

PDS mode [10](#), [15](#)  
power user [2](#), [3](#), [9](#)  
privacy policy [26](#)

## R

RACF [12](#)

## S

SAF mode [12](#), [15](#)  
silent first workspace [1](#)  
super user [2](#), [3](#), [9](#)

## T

tenant  
  defining [9](#), [10](#), [12](#)  
tenant user [2](#), [3](#)  
Tivoli Enterprise Monitoring Agents (TEMA) [1](#)  
Tivoli Enterprise Monitoring Server (TEMS) [1](#)  
trace [22](#)  
troubleshooting  
  first workspace does not load [21](#)  
  no data condition [22](#)

## U

user

defining [9](#), [10](#), [12](#)

definition [3](#)

user type, multi-tenancy [2](#)

## W

workspaces [19](#)

## Z

ZDESTID parameter [21](#)





