z/OS

Managed System Infrastructure for Setup User's Guide

Version 1 Release 4

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> **Note!**
>
> Before using this information and the product it supports, be sure to read the general information under "Notices" on page 191.

Contents

About this document

This document provides information you need to use Managed System Infrastructure for Setup (msys for Setup) to set up products on a z/OS system.

This edition applies to:
- Version 1 Release 4 of z/OS
- Version 1 Release 4 of z/OS.e
- Version 1 Release 1, Version 1 Release 2, and Version 1 Release 3 of z/OS if FMID JMSI743 has been installed

After reading this document, you will understand how to:
- Make your system environment known to msys for Setup
- Set up products with msys for Setup
- Manage msys for Setup users

For information on installing and setting up msys for Setup itself refer to *z/OS Managed System Infrastructure for Setup Installation*.

This document assumes that you are familiar with, or have access to a person who is familiar with:
- z/OS
- RACF®, a component of the Security Server for z/OS™
- DB2®
- Communication Server IP (TCP/IP) and its FTP Server
- CustomPac (ServerPac, SystemPac®, FunctionPac®, and ProductPac®)
- Windows NT®, Windows® 2000, or Windows XP

This document further assumes that you have some conceptual knowledge of the Lightweight Directory Access Protocol (LDAP) although you by no means need to be an expert.

Note: References to z/OS apply to all available versions and releases of z/OS, unless the reference states a specific version or release.

Who should read this document

This document is intended for z/OS system *administrators* who set up and administer a product that is enabled to be set up with msys for Setup.

For convenience, in this document an administrator is any person using msys for Setup to *set up* software. For example, system programmers, database administrators, and security administrators are administrators.

How to use this document

Use the parts of this document that correspond to the job that you will do:
- "Introducing z/OS Managed System Infrastructure for Setup" on page xi gives an overview of msys for Setup.

- Part 1, "Setting up a product with msys for Setup", on page 1 describes how to use msys for Setup to customize a product.
- Part 2, "Administrating msys for Setup", on page 49 describes how to make your system environment known to msys for Setup. Note that the msys for Setup specific administrative tasks described there need to be completed by an msys for Setup administrator *before* a specific product can be set up as described in Part 1, "Setting up a product with msys for Setup", on page 1.
- Part 3, "Diagnostics and recovery", on page 121 describes how to solve problems if you encounter any problems.

See the "Glossary" on page 193 for definitions of msys for Setup specific terms.

Summary of Changes

A number of chapters of this document have been changed or extended to reflect the functionality added to msys for Setup by the small product enhancement (SPE) shipped in June 2003. This User's Guide is applicable only if the following msys for Setup SPE PTFs have been installed:

- For Version 1 Release 4 of z/OS: PTF UA90013 (OA02582), PTF UA90015 (OA02586)
- For Version 1 Release 4 of z/OS.e: PTF UA90013 (OA02582), PTF UA90015 (OA02586)

Note: While you can use msys for Setup to manage systems running z/OS V1R1 to z/OS V1R3 if FMID JMSI743 is installed, you cannot exploit the functionality introduced by these SPE PTFs on such systems. The restrictions are described in the relevant chapters of this document.

New Information

Information has been added to this document about the following functionality:

- msys for Setup can now be used to set up services that have cross-scope dependencies. The customization of such a service affects not only the service itself and, possibly, other supporting services running on the same z/OS system but also affects one or more sysplex-wide services on the sysplex driving system. The following chapters now contain information on how you must proceed to accomodate such a service:
  - Chapter 3, "Refreshing the management directory", on page 19
  - Chapter 5, "Updating a system configuration", on page 31
  - Chapter 10, "Undo all updates", on page 129
- It is now possible to use a job scheduling system on the z/OS system to process the jobs for the "Commit updates" task and the "Commit undone updates" task. Information on how to proceed when you are using job scheduling for "Commit updates" is described in these chapters:
  - Chapter 5, "Updating a system configuration", on page 31
  - Chapter 10, "Undo all updates", on page 129
  - Chapter 9, "Job handling", on page 123
- You can now change the sysplex driving system and the system profile of a sysplex driving system more easily. Information on how to proceed and on the restrictions that still apply is provided in Chapter 8, "Managing sysplexes and systems", on page 91.
- msys for Setup now supports SSL and Secure File Transfer between the msys for Setup workplace, the LDAP server, and z/OS systems. You may hardly notice the change when working with msys for Setup except when an unknown certificate is received. See "Logging on to Setup" on page xv for information on how to react in such a case.
- You can now define a prefix that will be used to allocate temporary data sets on the host (see "General policy - TempDataSetPrefix" on page 13).

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- msys for Setup no longer supports the parmlib members IEAAPFxx and LNKLSTxx and the lists they used to control are now handled exclusively by PROGxx. If you have not yet converted the parmlib members to PROGxx, you use the new policy PROGxxConversion to specify if the parmlib members should be converted by msys for Setup automatically or how you want msys for Setup to proceed if you do not want to perform the conversion immediately (see "Parmlib policy - PROGxx conversion" on page 12).

The changes and additions to the text are indicated by a vertical line to the left of the change.

Changed Information

Information on minor technical changes has been added to some sections of this document. Theses changes also are indicated by a vertical line to the left of the change.

This document contains terminology, maintenance, and editorial changes.

Introducing z/OS Managed System Infrastructure for Setup

A z/OS system is controlled using a multitude of settings, in various configuration resources, such as parmlib members, /etc files for z/OS UNIX® System Services, or the RACF database. The configuration resources, are governed by different access methods, for example editors, command interfaces or special utilities. Sometimes it is possible to set the same parameter in multiple locations within a system. Additionally, it is possible to configure several system modes in complex parmlib concatenations that use different LOADxx members or IPL volumes.

This renders z/OS systems highly flexible and allows administrators to highly optimize them for a particular purpose. At the same time, it makes z/OS systems complex and laborious to maintain.

z/OS does not provide a consistent representation of the configuration data. Instead it relies on people to keep track of the configurations and to tie loose ends together. In the world of growing systems and sysplexes this is a challenge to the expert and might overwhelm the novice administrator.

Currently, to install a product on z/OS, you need in-depth knowledge of:

- z/OS and how you customized z/OS for your application environment
- The product that you want to install
- The particular system on which the product is to be installed

The product owner provides written instructions on how to integrate the product into a system, which defaults to set, which system resources to edit, and so forth. Administrators have to carry out these instructions in what can amount to a lengthy, tedious, and error-prone procedure.

Managed System Infrastructure for Setup (msys for Setup) addresses these difficulties by establishing a central repository for product configuration data and a single interface to this directory. This makes the system configuration more transparent to the administrator. Automated updating of configuration resources, for example, of a configuration data set, significantly reduces the complexity of system management.

Figure 1 on page xii shows a schematic overview of msys for Setup with the management directory. The management directory is msys for Setup's central repository for configuration data of msys for Setup enabled systems and, thus, an interface where management applications can access system configuration data.

z/OS

msys for Setup workplace or other management applications

Workstation part of msys for Setup running on Windows NT or Windows 2000

msys for Setup workplace

LDAP-based management directory

z/OS configuration data:
- parmlib
- RACF

Host part of msys for Setup running on z/OS
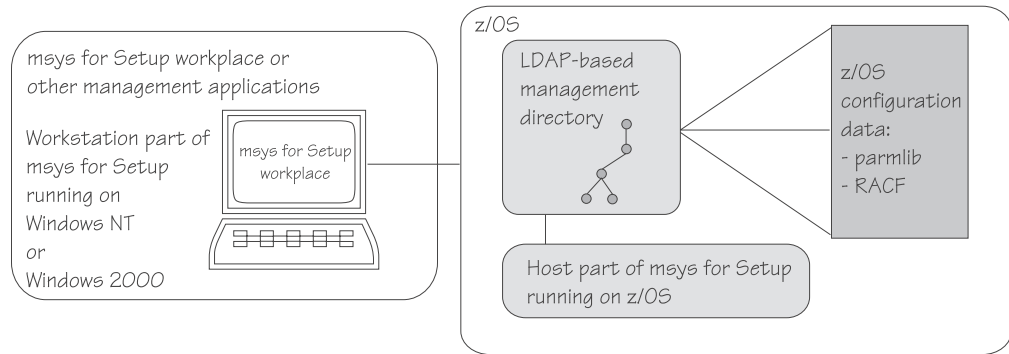
Figure 1. Overview of msys for Setup

What msys for Setup can do for you

In an ideal world, *setup* of a software product (the process of installing it and making it available for use), would consist of a single Setup button on a GUI, with no further human intervention. msys for Setup tries to get as close as possible to this ideal by automating all setup processes that do not require decisions by a human operator and by defining defaults when decisions by a human operator are required.

msys for Setup offers a framework that z/OS elements and products that run on z/OS can use to simplify their setup. Visit the msys for Setup Web site for the latest information on products that are enabled to be set up through msys for Setup: `http://www.ibm.com/servers/eserver/zseries/msys/exploit.html`.

Instead of entering a large amount of customization data by editing data sets, submitting jobs, and using different types of 3270 screen dialogs on the z/OS system where the product is being set up, you enter only a small subset of the data at a single interface, the *msys for Setup workplace*, on a workstation. Using this minimal input, the msys for Setup host program accesses and updates the configuration resources of the z/OS system on your behalf, while ensuring that the settings do not interfere with the configuration demands of other products running on the same system.

In msys for Setup products are broken down into product components that it calls services. Services are separately customizable parts of a product. You perform all setup steps at the granularity of services.

What is the scope of msys for Setup?

Currently, msys for Setup aims to simplify the customization of z/OS including setting up a basic or parallel sysplex. You can also customize products running under z/OS. The target of msys for Setup are the product components running under z/OS on the host. Workstation components are not included.

msys for Setup automates tasks such as defining user IDs or ports that are required by a product to run. msys for Setup does not, however, provide means to automate or simplify system or product administration functions. (In msys for Setup, setting up products is not considered administration.)

For example, for ftpd, msys for Setup could help to create the user ID needed to run the FTP daemon, but leave it to the administrator to define all users who need to work with FTP outside msys for Setup. What exactly is considered a setup task, as opposed to an administration task, is a matter of judgement and at the discretion of the individual service.

msys for Setup improves the manageability of systems by managing system configurations.

What are the components of msys for Setup?

The msys for Setup program code is delivered as a base element of z/OS and installed on z/OS system volumes. The msys for Setup framework includes the following:
- msys for Setup host program
- msys for Setup workplace code
- The management directory configuration files

msys for Setup interactions with system resources are performed on the host but triggered from the msys for Setup workplace on a workstation.

The following sections briefly describe the components of the framework.

The msys for Setup host program

The msys for Setup host program resides in the file system provided by z/OS UNIX System Services, called the hierarchical file system (HFS), in the directory **/usr/lpp/cim**. The msys for Setup workplace works together with the msys for Setup host program to change options and parameters in the system you are configuring. These changes are made in the form of batch programs that run on the host.

The msys for Setup workplace

The administrator works with the z/OS system through the workplace. All interactions that change system resources are started from the workplace by the administrator. There is no need to directly log on to any z/OS system, other than in a recovery situation. The workplace runs on a workstation. For details on installing, see Appendix A, "Setting up the msys for Setup workplace", on page 157.

With the workplace, you can use a guided path through system setup that provides sensible defaults and hides the complexity of z/OS.

The management directory

The management directory is msys for Setup's central repository for configuration data of msys for Setup enabled systems. It is based on the Lightweight Directory Access Protocol (LDAP) directory support available as a part of z/OS and on the Common Information Model (CIM) data schema.

> **Note:**
>
> msys for Setup also supports IBM Directory Server, Version 5 Release 1, FixPak 1, which can be used instead of the z/OS LDAP server. For more information, see *z/OS Managed System Infrastructure for Setup Installation* (SC33-7997)

Logging on to Setup

Before you begin:

- You must have the msys for Setup workplace installed on your workstation (see Appendix A, "Setting up the msys for Setup workplace", on page 157).
- You require an msys for Setup user ID (see "What you must know about msys for Setup users" on page 51).

When you start the workplace, you are prompted to log on to Setup. To bring up the logon panel manually click **File —> Log on...** on the workplace menu.
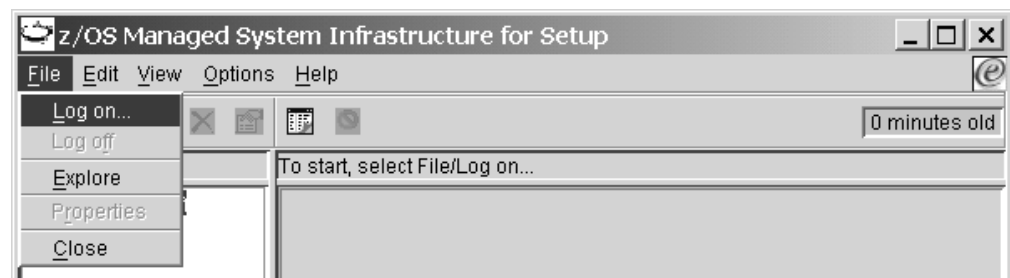
Figure 2. Displaying the Log on to Setup panel

Logon connects the workplace to a management directory. On default, the workplace uses the management directory that it was last connected to. The host name of the system with the LDAP server that provides access to this management directory is shown in the **LDAP host name** field on the "Log on to Setup" panel.
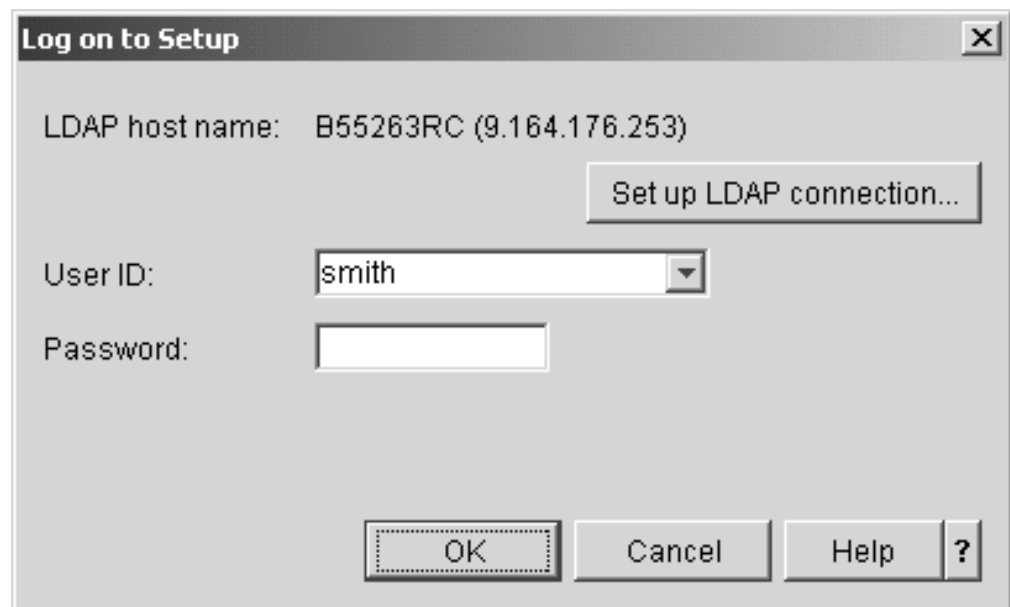
Figure 3. Log on to Setup panel

If you want to connect to a different management directory, click **Set up LDAP connection...** to launch the "LDAP connection" wizard. The wizard queries the

information msys for Setup needs to find the management directory. Ask your LDAP administrator about the values you must provide.
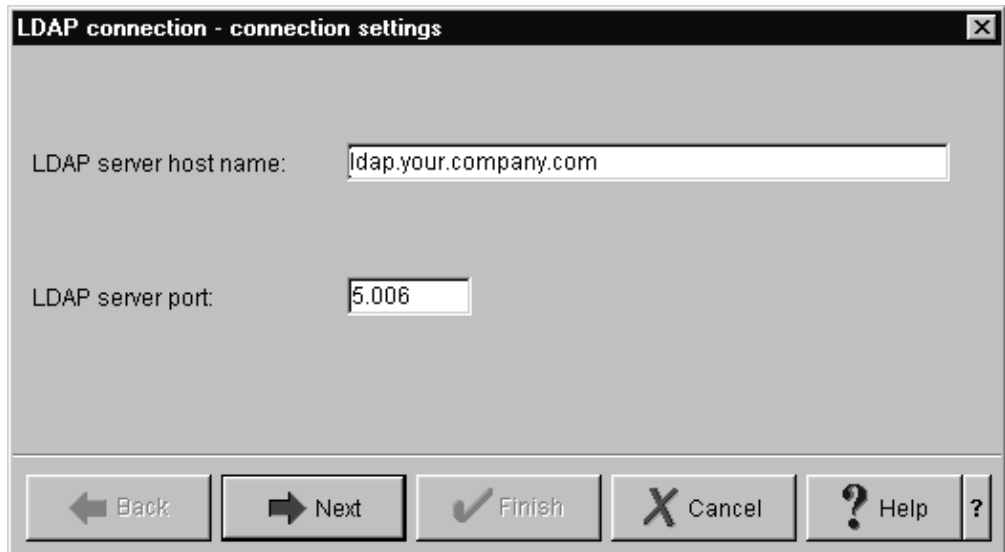
Figure 4. LDAP connection wizard

When a particular workplace is used for the first time, it has no previous management directory to connect to. msys for Setup then launches the wizard automatically.

When you attempt to log on to an z/OS system or LDAP server for which an SSL connection needs to be established, the "Certificate confirmation" panel is displayed if:
- the received certificate is not known to msys for Setup.
- the host name in the certificate and the name of the LDAP server or z/OS system that sent the certificate do not match.

Use the information provided in the panel to decide if:
- you want to accept the new certificate and store it as trusted.
- you want to reject the certificate. In this case, you will not be able to log on.

After logon the resource tree in the left hand navigation area of the workplace shows objects and folders instead of the symbol.
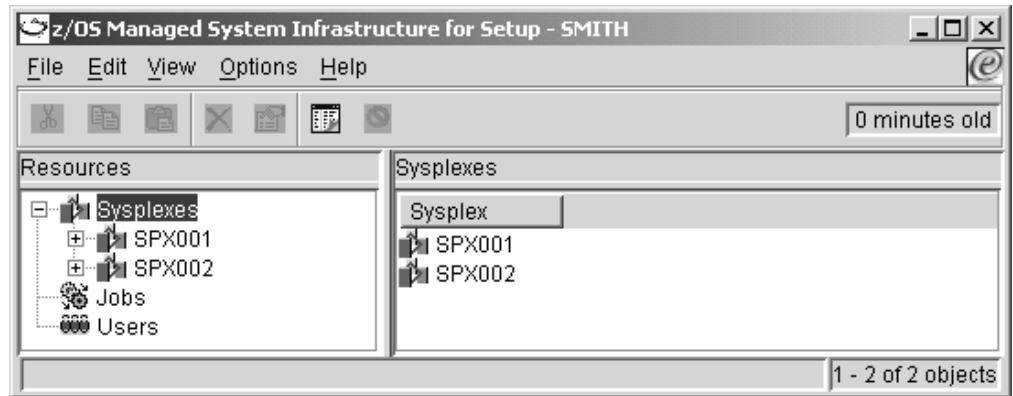
Figure 5. Workplace after successful logon

See Appendix B, "Finding your way on the workplace", on page 163 for some general information on how to interact with the workplace.

Part 1. Setting up a product with msys for Setup

This part describes how to use msys for Setup to set up products for your sysplexes and systems.

Before you begin to set up products:

- msys for Setup must have been installed and prepared for use (see *z/OS Managed System Infrastructure for Setup Installation*)
- If you are not familiar with the msys for Setup workplace, see Appendix B, "Finding your way on the workplace", on page 163
- The products you want to set up must be known to msys for Setup (see Chapter 7, "Managing product sets", on page 75)
- The sysplexes and systems that you want to set up products on must be known to msys for Setup (see Chapter 8, "Managing sysplexes and systems", on page 91)
- Be sure that you have set the available policies to suitable values (see Chapter 2, "Setting policies", on page 11)
- You must be authorized for setting up the services of a product (see "Steps for changing a user's service authorizations" on page 64)

Chapter 1, "Working with services", on page 3 introduces you to services, the parts of products against which the setup tasks are performed.

Chapter 2, "Setting policies", on page 11 tells you how to find out about the policies that are provided by msys for Setup and about individual services and how you can access the policies to set them according to your needs.

The sections that follow describe the steps for setting up a service. You must perform them for each service instance you want to set up in the order shown in the table. For some services you might first have to create a service instance (see Chapter 1, "Working with services", on page 3).

Step	What it does
Chapter 3, "Refreshing the management directory", on page 19	Gathers configuration data already present in the z/OS system
Chapter 4, "Customizing a service", on page 25	Queries product specific settings
Chapter 5, "Updating a system configuration", on page 31	Two steps, Prepare updates, and Commit updates; updates configuration resources on the z/OS system

> **Rules**
>
> To avoid inconsistencies in the management directory follow these rules:
>
> - Do not make any manual changes to the management directory.
> - Do not log off the workplace or close it down while the "Work in progress" panel is displayed, or while a job status is "Performing post upgrade actions".
> - Do not refresh the management directory for a service instance with status "Required: Commit updates".
> - Do not change any policies (see Chapter 2, "Setting policies", on page 11) while a job submitted by msys for Setup from your workplace is still running (the job has not been cancelled on the host and you have not yet received job notification for it).
> - Make sure you have a good *backup* of your key configuration data. See "Making a backup copy of key configuration data" on page 147.
> - *Avoid* manual changes to the msys for Setup parmlib or to other configuration resources that are updated through msys for Setup. If changes to the parmlib are unavoidable, see "Recommended parmlib handling" on page 178 for further information.

Chapter 1. Working with services

Orderable products can be extensive and contain a number of separate functional components. You might not always want to customize and use all software in a product or customize different components at different times. Therefore, msys for Setup breaks down all products into separately customizable parts. You perform all setup tasks at the granularity of these parts. msys for Setup calls these parts *services*. For example, RACF is a service of the product "Security Server".

This section provides some basic information on services and describes the steps for performing the following tasks:

Task	Associated procedures	Required authorization
Learning about a service	• "Steps for viewing information for a service or service instance" on page 6 • "Steps for viewing a service information file" on page 7	None
Managing service instances (optional and multiple instance services only)	• "Steps for creating a new service instance" on page 8 • "Steps for renaming a service instance" on page 9 • "Steps for deleting a service instance" on page 10	Authorization for the respective service

What you must know about services and service instances

There are sysplex-wide services and services with a scope of individual systems. You can display the available service instances in the list view of the workplace by selecting a control panel in the resource tree. Each sysplex has a nested control panel for the sysplex-wide services and each system for the services with system scope (see Figure 6 on page 4).

3

Click here to list sysplex-wide services
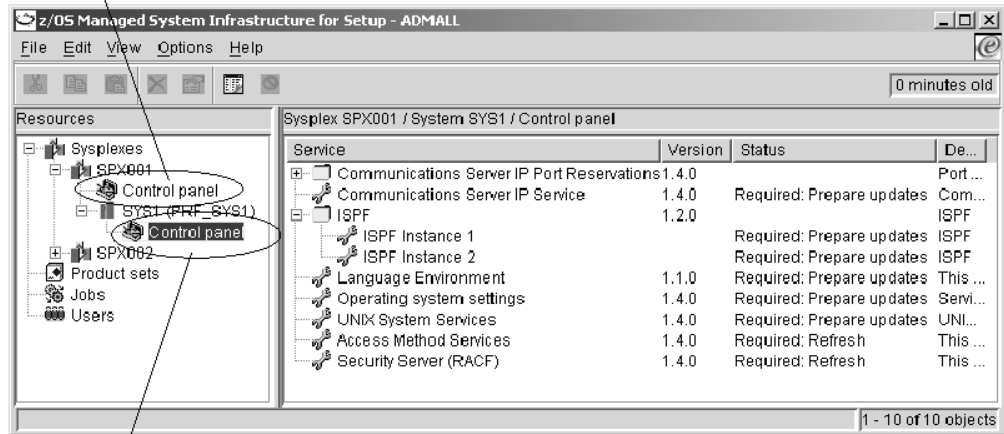
Click here to list services at system level

Figure 6. Control panel for sysplex-wide services and for services with system scope

Service instances can be thought of as customizable copies of a service. There are different types of services with respect to how many instances of the service can be configured for a particular z/OS system:

Single instance service
> There is exactly one instance of each single instance service configured for each system. Sysplex-wide services are always single instance services.

Optional service
> There can but need not be one instance of an optional service configured on a system.

Multiple instance service
> There can but need not be one or more instances of a multiple instance service configured on a system.

Optional and multiple instance services are listed below a service template. Figure 7 on page 5 shows a service template of a multiple instance service for which two instances have been created. It also shows single instance services. Single instance services do not have a template.

Figure 7. List view with service instances and service template

For an optional or a multiple instance service, you must first create the required instances of the service before you can perform any setup tasks for them. You can rename and delete service instances for optional and multiple instance services but not the single instance of a single instance service.

To perform a task for a service instance, select the instance in the list view and then click the **File** menu. The **File** menu contains the actions that you can perform against the instance.
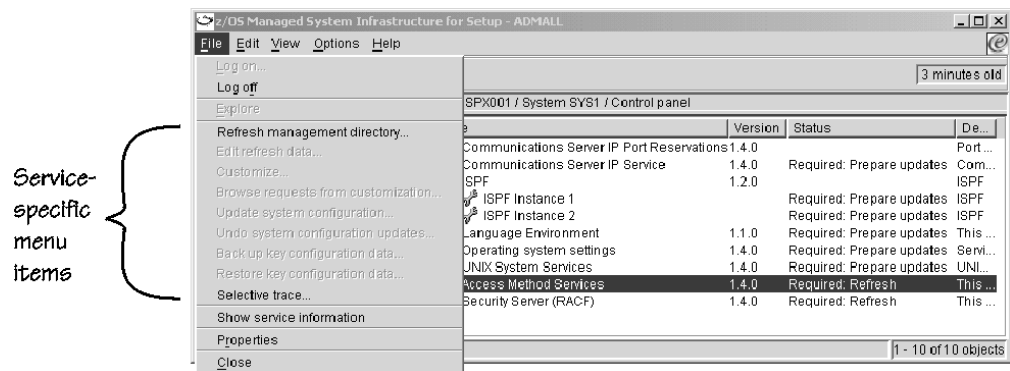
Which tasks you can perform depends on the particular service, your authorizations, and on how far you have progressed with setting up the particular service instance. See "Steps for viewing information for a service or service instance" on page 6 about how to find out who is authorized for a particular service.

Steps for viewing information for a service or service instance

Use the service property sheet to find out:

- How far setting up a service instance has progressed
- Who is authorized for the service
- Which services must be refreshed before this service can be customized

Perform the following steps to view information for a service or service instance:

1. In the resource tree, expand the sysplexes folder and the folder for the sysplex you want to work with.

   _____

2. If you want to work with sysplex-wide services, click the control panel in the sysplex folder, otherwise expand the folder for the system you want to work with and click the control panel in the system folder. A list of available service instances is displayed in the list view.

   _____

3. In the list view, select the service instance for which you want to view the properties. You can also select the service template if you want to view general information on a multiple instance or optional service.

   _____

4. Click **File —> Properties** on the menu. The property sheet for the service or service instance is displayed.

```
profile-1 Properties                                                    [×]

 General | Status | Authorized users | Refresh dependencies |

    Name:              ISPF

    Instance name:   profile-1

    Instance ID:     2

    Version:         1.2.0

    Max. instances:  unlimited

    Product set:     Z-OS-V1R4

    Description:     ISPF Defaults Customization using msys
                    ┌──────────────────────────────────────┐
                    │                                      │
                    │                                      │
                    │                                      │
                    │                                      │
                    └──────────────────────────────────────┘



                                          [   OK   ]  [ Cancel ]  [ Help ]  [?]
```
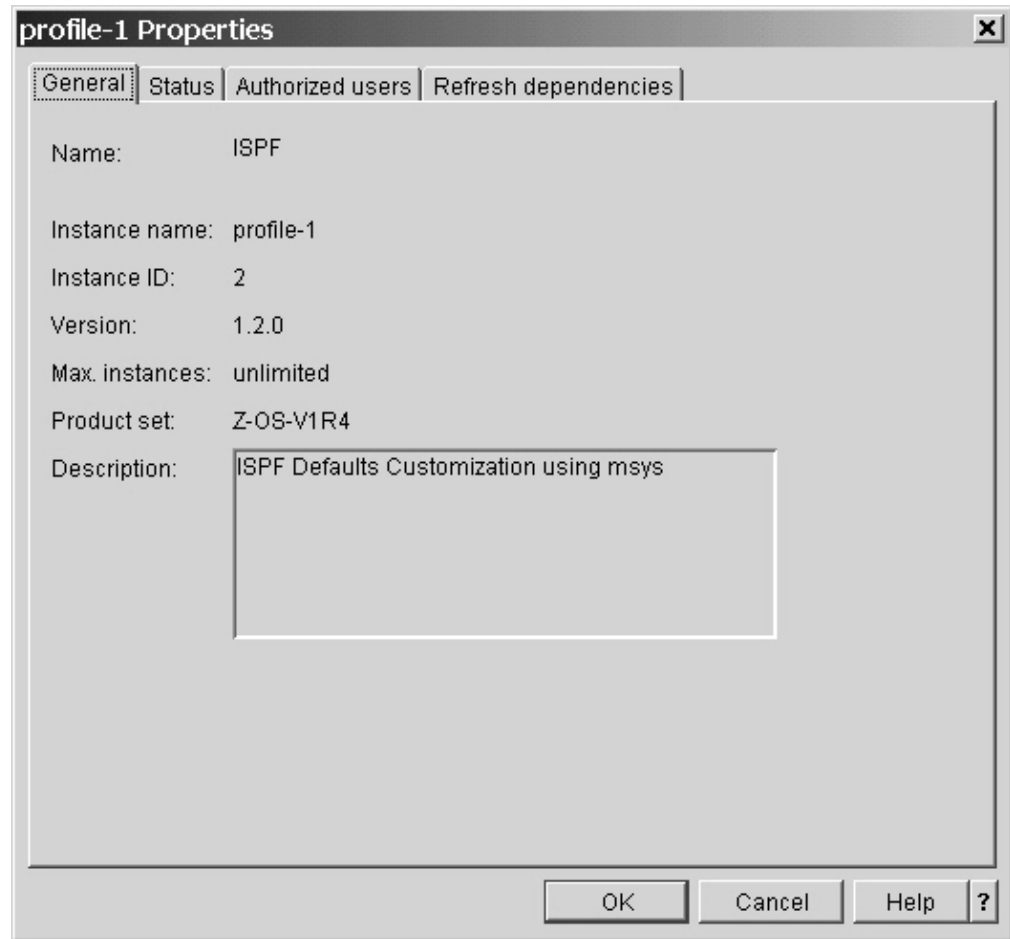
Property sheets for service templates do not have a **Status** tab.

5. Use the tabs to navigate between the property sheet pages.

- Click the **Authorized users** tab to find out who is authorized for the service.
- Click the **Refresh dependencies** tab to find out for which services the "Refresh the management directory" task must be performed before the service for which you are displaying the property sheet can be customized.

  Note: When you display the service properties for a system level service that has dependencies on sysplex-wide services, these services will be listed in the panel "Sysplex-level refresh dependencies".

Steps for viewing a service information file

View a service information file to find out:

- What the service provides to its users
- Which policies the service provides
- The scope of configuration resource updates and how the scope can be influenced
- Which configuration resources are updated by product instantiation, if any

- Which configuration resources are updated by update requests, if any
- Which configuration resources of other services are updated on request of the services, if any
- Which configuration resources the service reads (refresh) to obtain existing configuration data, if any
- Details on refresh dialogs, if the service provides any
- Which other services must or can be refreshed to be able to work with the service, and the conditions under which an optional refresh can be omitted
- Which authorizations a user needs on a z/OS system to be able to successfully perform tasks for the service

Perform the following steps to view a service information file:

1. In the resource tree, expand the sysplexes folder and the folder for a sysplex where the service is available.

   _____

2. If you want to view the information file for a sysplex-wide service, click the control panel in the sysplex folder, otherwise expand the folder for the system where the service is available and click the control panel in the system folder. A list of available services is displayed in the list view.

   _____

3. Select the service or service template of the service for which you want to view the information file.

   _____

4. Click **File —> Show service information** on the menu.

   _____

Result: Your Web browser is invoked with the service description file in HTML format.

Steps for creating a new service instance

Services for which you can create instances have a service template when the services are displayed in the list view of the workplace. The service template looks like a folder symbol and has the existing service instances nested below it (see Figure 7 on page 5).

Before you begin:
- You can only create instances of services for which you are authorized.
- You can only create service instances for optional and multiple instance services.

Perform the following steps to create a service instance:

1. In the resource tree, expand the sysplexes folder, the folder for the sysplex you want to work with, and the folder for the system you want to work with.

   _____

2. Click the control panel in the system folder. A list of available service instances and service templates is displayed in the list view.

   _____

3. Select the service template of the service for which you want to create a new instance.

4. Click **File —> New —> Instance...** on the menu. The "Create new service instance" panel is displayed.

_____

5. Type a name for the new service instance into the **Enter a name for the instance** entry field.

_____

6. Click **OK**.

If the service for which you have just created a service instance provides pre-refresh dialogs, you are prompted to provide the required input.

_____

Result: The new service instance is created. You might have to expand the tree below below the corresponding service template in the list view to see it.

Steps for renaming a service instance

Before you begin:
- You can only change the name of service instances of services for which you are authorized.
- You can only rename instances of optional and multiple instance services.

Perform the following steps to rename a service instance:

1. In the resource tree, expand the sysplexes folder, the folder for the sysplex you want to work with, and the folder for the system you want to work with.

_____

2. Click the control panel in the system folder. A list of available service instances and service templates is displayed in the list view.

_____

3. If it is not expanded yet, expand the service template of the service for which you want to rename an instance.

_____

4. Select the service instance that you want to rename.

_____

5. Click **File —> Rename** on the menu. The "Rename service instance" panel is displayed.

_____

6. Overwrite the old name in the **Enter a name for the instance** entry field with the new name.

_____

7. Click **OK**.

_____

Result: In the list view of the workplace the instance is shown with the new name.

Deleting a service instance

Delete a service instance if it is no longer used, in particular as a preparation for removing the program code that corresponds to the service.

Before you delete a service, undo all updates that you have made to accomodate the service instance (see Chapter 10, "Undo all updates", on page 129). Otherwise these updates are preserved beyond the existence of the service and can, therefore, lead to an inconsistent system configuration.

msys for Setup permits a forced deletion of service instances for which updates, including updates for other, dependent services, have not been undone. Only resort to a forced deletion if:

- The service has already been physically deleted on the z/OS system. In this case the corresponding updates can no longer be undone with msys for Setup. You might then have to undo updates for the service instance outside msys for Setup to ensure that the system configuration is in a consistent state.
- You do not want to undo the updates for a dependend service, especially if the service instance to be deleted is optional for the dependent service. After deleting the service instance by force, you have to re-customization of the dependend service which that had update requests against the deleted service.

Steps for deleting a service instance

Before you begin:

- You must be authorized for a service to be able to delete service instances.
- You can only delete a service instance of optional and multiple instance services.

Perform the following steps to delete a service instance:

1. In the resource tree, expand the sysplexes folder, the folder for the sysplex you want to work with, and the folder for the system you want to work with.

   _____

2. Click the control panel in the system folder. A list of available service instances and service templates is displayed in the list view.

   _____

3. Expand the service template of the service for which you want to delete an instance.

   _____

4. Select the instance that you want to delete.

   _____

5. Click **File —> Delete** on the menu. Confirm the deletion when you are promted to do so.

   _____

Result: The service instance is deleted and no longer shown in the list view.

Chapter 2. Setting policies

This section provides some basic information on policies and describes the steps for performing the following tasks:

Task	Associated procedures	Required authorization
Working with policies	"Steps for viewing or changing policy settings" on page 13 "Steps for removing a policy" on page 15	All users can access and set general policies; service specific policies can be accessed and set by users that are authorized for the respective service

What you must know about policies

Policies allow you to set options for the behavior of the msys for Setup host code and the service provided host code that runs under it. Because the service settings can affect the results of the setup tasks, it is important that you ensure that all policies are set to values that are suitable for your environment.

Note: The policy defaults assume that you are using RACF. Be sure that you have set the RACFSecurity authorization policy correctly especially if you are *not* using RACF for security.

Who provides policies?

There are two types of policies:

General policies
are provided by msys for Setup. These are always available to all users.

Service specific properties
become available to users that are authorized for the respective service when a product set with the service is created and added to a system.

What is the scope of a policy?

Policies can be set at different scopes:

1. The global, or sysplexes, scope covers all systems in the entire resource tree
2. The sysplex scope covers all systems in a sysplex
3. The system scope covers a single system

   If there are different system profiles defined for the same system, policy settings always apply to the active system profile only. You have to set a policy at the system level separately for each system profile.

You access the policies differently for the different scopes. See "Steps for viewing or changing policy settings" on page 13 for details.

A policy at system scope overrides the same policy at the sysplex and global scopes. A policy at sysplex scope overrides the same policy at global scope. Every policy has a default at the global scope.

Policies you must be aware of

Before you start setting up services you should always check if the settings for the following policies are suited to your environment, and where necessary, change the policies accordingly.

- RACFSecurity - authorization
- Parmlib - PROGxx conversion
- Parmlib - ParmlibAllocation
- General - ProclibAllocation
- General - TempDataSetPrefix

Suppressing automatic security updates - RACFSecurity - authorization

msys for Setup assumes that you are using RACF as the security product that protects your systems. In response to security related configuration requirements by service customizations it generates update requests against RACF. For example the requirement that a particular user must exist results in a request that RACF checks for and, if necessary, creates the user.

If you do not use RACF or your organization's regulations do not permit security related updates to be made through msys for Setup, you must prevent msys for Setup from performing configuration changes in response to RACF update requests. Instead you can make msys for Setup report on the necessary changes and perform them outside msys for Setup. You do this by setting the "RACFSecurity - authorization" policy accordingly.

If you do use RACF you can also use this policy to limit the scope of what msys for Setup can do. You can allow it to create but not delete objects, such as users.

See "Steps for viewing or changing policy settings" on page 13 for details on how to set policies.

Parmlib policy - PROGxx conversion

You must define this policy if you have not yet converted the parmlib members IEAAPFxx and LNKLSTxx to PROGxx. msys for Setup no longer supports these parmlib members and the lists they used to control are now handled exclusively by PROGxx.

In this policy you define if msys for Setup should perform the conversion to PROGxx automatically or if you want to do the conversion manually using standard MVS utilities. If you decide to perform the conversion at a later time, you also need to decide and specify how the members are to be handled until they are converted. You can direct msys for Setup:

- to either ignore these members or
- to suspend processing the Parallel Sysplex service until the conversion is complete.

This policy is provided at the "All sysplexes" scope and at the scope of an individual sysplex but not at the system scope.

Parmlib policy - ParmlibAllocation

In the parmlib policy ParmlibAllocation, you specify the HLQ and allocation characteristic for the shared parmlib data set that msys for Setup creates for each sysplex. Ensure that the default HLQ is suited for your environment and change it if necessary.

This policy is provided at the "All sysplexes" scope and at the scope of an individual sysplex but not at the system scope.

General policy - ProclibAllocation

In the general policy ProclibAllocation, you specify the HLQ and allocation characteristic for the shared proclib data set that msys for Setup creates for each sysplex. Ensure that the default HLQ is suited for your environment and change it if necessary.

The HLQ must be such that the msys for Setup proclib is cataloged in the master catalog and not in a user catalog. Otherwise msys for Setup cannot allocate the proclib.

This policy is provided at the "All sysplexes" scope and at the scope of an individual sysplex but not at the system scope.

General policy - TempDataSetPrefix

In the general policy TempDataSetPrefix you specify the prefix that will be used to allocate temporary data sets on the host.

Any system symbol may be used as prefix, but the length of the prefix after the symbols are resolved must not exceed 17 characters. &SYSUID; is the default.

This policy is provided at all scopes.

Note: This policy will only have an effect on z/OS systems on which the msys for Setup SPE PTFs UA90013 and UA90015 have been installed.

Steps for viewing or changing policy settings

Before you begin:
- To be able to access a service-specific policy you must be authorized for that service

Perform these steps to view or change policy settings:

1. Depending on the scope for which you want to view or change the settings of a policy:

To access the settings of a policy for	Do this
the global scope	Select the Sysplexes folder in the resource tree.
a sysplex	Expand the Sysplexes folder and select the sysplex for which you want to access the policy setting.

To access the settings of a policy for	Do this
a system	Expand the Sysplexes folder and the folder for the sysplex you want to work with. Then select the system for which you want to access the policy settings. Be sure that the system profile to which you want the policy to apply is the active system profile (see "Steps for changing the active system profile" on page 113).

---

2. Click **File —> Set Policies...** on the menu.

   The "Policies" panel is displayed. The policies are shown in a tree structure. The policy tree contains a category "General" for the policies that are supplied by msys for Setup. Depending on which product sets are available there can be additional categories that contain policies for individual services. Consult the service information file of a service to find out which policies it provides (see "Steps for viewing a service information file" on page 7).

---

3. Expand the category for the policy you want to access. To expand the category click on the '+' symbol adjacent to it in the policy tree.

   Note:

   - Not every policy is available at all three scopes.
   - Service-specific policies are only present if you are authorized for the respective service.

---

4. Select the policy you want to access.

   If you have accessed the policy for a particular sysplex or system, the policy might not have been set at that scope so that the nearest wider scope applies. The **Defined for** field tells at which scope the policy that applies has been set.
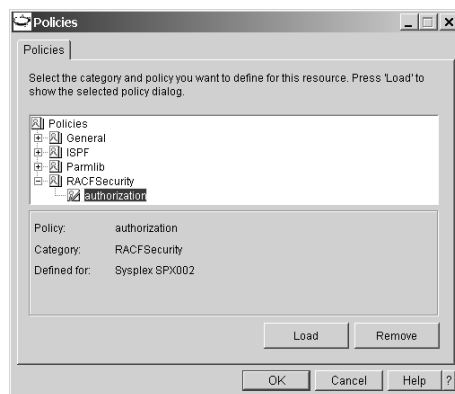
Figure 8. RACFSecurity authorization policy at the scope of sysplex SPX002

   Example: Assume that the policy panel in Figure 8 has been displayed for a sysplex SPX002. The **Defined for** field states that the policy setting for scope "All sysplexes" applies. This means that the policy has not been set for sysplex SPX002, and the setting for the wider "All sysplexes" scope applies.

5. To view or change the policy settings, click **Load**.

   This downloads the panel for the selected policy from one of your z/OS systems. You might have to log on to a system before the panels can be downloaded.

   Note: This button is only available if you have selected a policy.

   A policy-specific panel is displayed.

Figure 9. RACFSecurity authorization policy panel

6. Change the settings as appropriate, and click **Set** to close the panel and save your changes. If you want to change the settings back to their defaults, click **Default**.

Results: The policy is set for the selected scope. A check mark in the policy icon indicates this.

Steps for removing a policy

Before you begin:
- To be able to remove a service-specific policy you must be authorized for that service
- To be able to remove a general policy you must be authorized at least for one service
- You can only remove policies for a scope for which it has previously been set
- You can only remove policies at the "Sysplex" or "System" scope, but not at the "All sysplexes" scope

Perform these steps to remove a policy:

1. Proceed as follows, depending on the scope for which you want to remove the policy:

To remove a policy at	Do this
the sysplex scope	Expand the Sysplexes folder and select the sysplex for which you want to remove the policy.
the system scope	Expand the Sysplexes folder and the folder for the sysplex you want to work with. Then select the system for which you want to remove the policy. Be sure that the system profile to which you want the policy to apply is the active system profile (see "Steps for changing the active system profile" on page 113).

2. Click **File —> Set Policies...** on the menu.

3. Expand the category for the policy you want to remove. To expand the category click on the '+' symbol adjacent to it in the policy tree.

4. Select the policy you want to remove. The **Defined for** field tells you at which scope the policy is set at present.
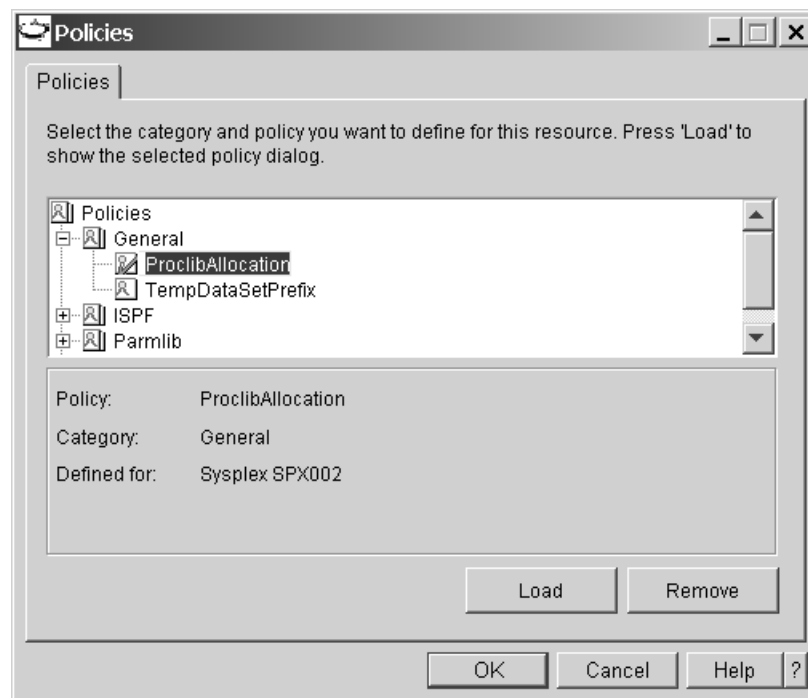
Figure 10. ProclibAllocation policy for sysplex SPX002

You can only remove a policy at the scope for which you have accessed it. If the policy is set at the scope for which you have accessed it, there is a check mark in the policy icon.

_____

5. Click **Remove**.

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6. When you are done, click **OK** to close the panel.

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Result: The policy has been removed for the scope for which you have accessed it and the setting for the next wider scope applies.

Chapter 3. Refreshing the management directory

This section provides some basic information on refresh and describes the steps for performing the following tasks:

Task	Associated procedures	Required authorization
Gathering refresh data for a service instance	• "Steps for refreshing the management directory" on page 21 • "Steps to view or edit a service instance's refresh data" on page 23	Authorization for the respective service

What you must know about refresh

Refreshing populates the management directory with existing configuration data related to a service instance on a particular system.
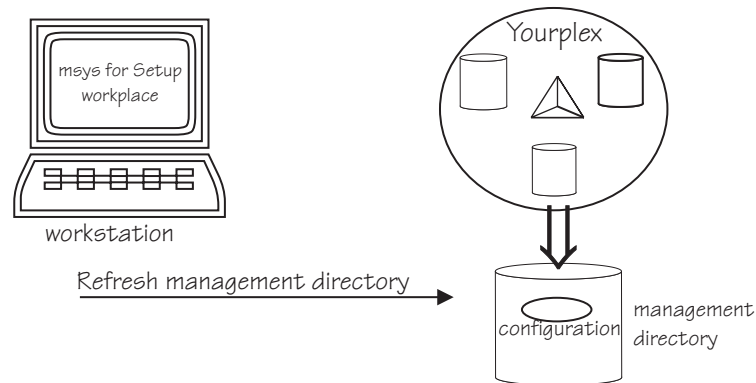
Figure 11. Refreshing gathers data present in the system

Refresh data of a service might be required for the service's own customization or for other services' customizations. If a service provides both a customization dialog and refresh capabilities, the configuration data covered by each does not necessarily comprise the same items.

Note: Do not confuse refreshing the management directory with refreshing the console (see "Refreshing the console" on page 164).

When to refresh the management directory?

Generally, you refresh the management directory:

• As a preparation for customizing services
• When configuration changes have been made outside msys for Setup

Refresh as a prerequisite for customization
For some services you must perform refresh before you can customize it. Other services require that refresh be performed for one or more other services. If you attempt to customize a service for which one or more of the requisite services have not been refreshed, you are prompted to perform the refresh.

Services that support refresh but have never been refreshed have status "Required: Refresh" when the services are displayed in the list view of the workplace. Not all services can be refreshed. The initial status of services that cannot be refreshed is "Required: Customization".

A service may have cross-scope dependencies. In this case, required and optional data may be provided by system level as well as syplex-wide services, which may reside on a different z/OS system.
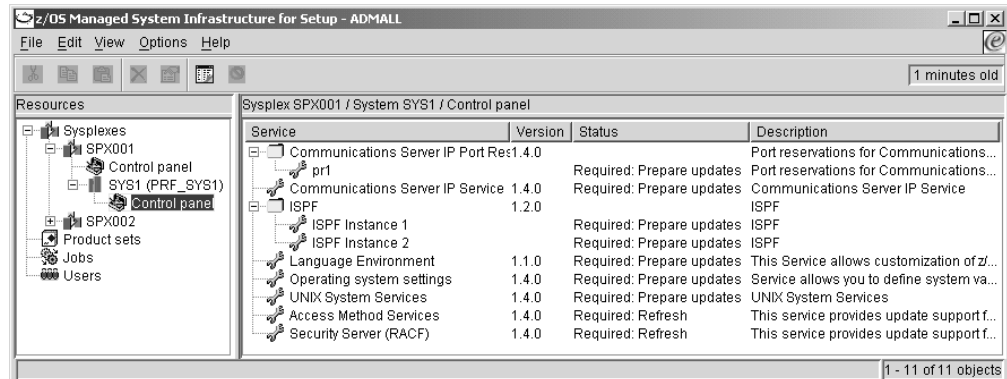
Figure 12. Service instances in the list view

Refresh to make msys for Setup aware of changes on the z/OS system

You might have to make configuration changes outside msys for Setup, for example in a recovery situation or to customize a product that cannot be set up with msys for Setup. This could mean that the configuration data that a previous refresh has written to the management directory no longer corresponds to the actual data on your z/OS system. A consecutive customization or re-customization of a service might now build on incorrect refresh data.

To ensure that the management directory is always up to date, always perform a refresh for a service after changing its configuration resources outside msys for Setup. To find out which configuration resources are updated by a service, refer to its service information file (see "Steps for viewing a service information file" on page 7).

The following table shows some special conditions that warrant refresh for particular services:

Condition	Refresh service
If another couple data set has been activated through an IPL after the previous refresh was performed.	"Sysplex-wide settings", "Operating system settings"
After restoring the couple data set as part of error recovery (see "Restoring the couple data sets" on page 187)	"Sysplex-wide settings", "Operating system settings"
After restoring the parmlib as part of error recovery (see "Restoring parmlib" on page 182)	"Sysplex-wide settings", "Operating system settings" and all other services that update parmlib members, for example, z/OS UNIX System Services.

Note: Refresh finds only permanent settings, but not dynamically activated settings.

Before you perform the first refresh

Be sure that the settings for the following policies are suitable for your environment, before you perform refresh for service "Sysplex-wide settings" or "Operation system settings" for the first time:

- "RACFSecurity - authorization"
- "Parmlib - ParmlibAllocation"
- "Parmlib - PROGxxConversion"
- "General - ProclibAllocation"
- "General - TempDataSetPrefix"

See "Policies you must be aware of" on page 12 for details.

When not to refresh

Do not perform refresh for a service instance with status "Required: Commit updates".

Service instances of a service that supports "Commit updates" assume that status when you have performed "Prepare updates" but not the subsequent "Commit updates".

Steps for refreshing the management directory

Perform the following steps to refresh the management directory for a service instance:

1. In the resource tree, expand the sysplexes folder and the folder for the sysplex you want to work with.

   _____

2. If you want to work with a sysplex-wide service, click the "Control" panel in the sysplex folder. Otherwise expand the folder for the system you want to work with and click the "Control" panel in the system folder. A list of available services is displayed in the list view.

   _____

3. Select the service instance or service instances for which you want to refresh the management directory.

   _____

4. Click **File —> Refresh management directory...** on the menu. The "Refresh Management Directory" panel is displayed.
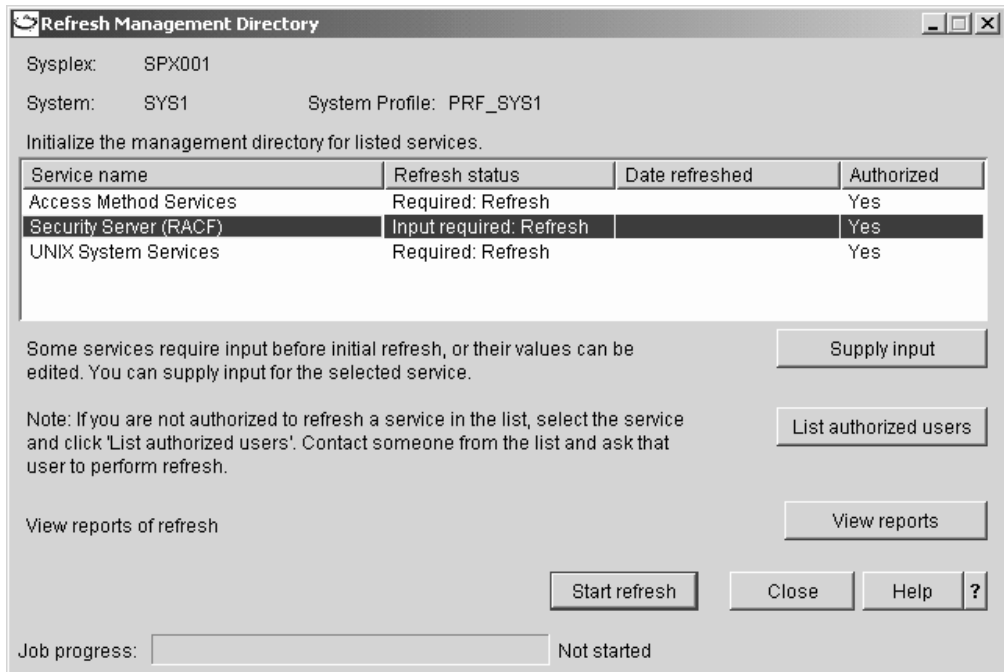
Figure 13. Refresh Management Directory panel

> **Note:** The menu item **File —> Refresh management directory...** is only available for services that support refresh.

> If the service for which you are refreshing the management directory has cross-scope dependencies, refresh data may be provided by system level as well as syplex level services. In such a case, two instances of the "Refresh Management Directory" panel will appear and you must perform the steps described below in both panels to complete a management directory refresh for the service.

_____

5. Check if you are authorized to refresh the management directory for all of the listed services. Services for which you are not authorized have a "No" in the **Authorized** column of the list of services.

   Select each service that you are not authorized for in the list and click **List authorized users**. Inform one of the authorized users that refresh is pending for the respective service.

   _____

6. Check if any of the listed services that you are authorized for require input, before you can start the refresh. Some services require information, for example on the location of its configuration resources, before the first refresh can be performed. If a service requires input, the status in the **Refresh status** column of the list of services is "Input required: Refresh".

   To provide the required input select the respective service and click **Supply input**. A service-specific dialog is displayed where you can provide the information.

   _____

7. If the "Refresh the management directory" task has been run before, you can, optionally, view job reports of these previous runs. In this case **View reports** is available. Click **View reports** to display reports on previous runs.

   _____

8. Click **Start refresh** to start refreshing the management directory.

   If the list of services contains services for which you are not authorized, these services were not included in the refresh.

   This job can take a long time. The job progress can be seen in the progress bar at the bottom of the panel. The job status is displayed next to the progress bar.

   You do not have to keep the "Refresh Management Directory" panel displayed during the entire time that the job is running. You can close it and optionally reopen it later to check the job progress. When the job finishes, you receive a job completion notification even if the "Refresh Management Directory" panel is closed. To reopen the "Refresh Management Directory" panel, click **File —> Refresh management directory...** on the menu.

   You can even log off from the workplace as soon as the job has been submitted. You receive the job completion notification when you next log on if the job has finished by then.

   _____

9. If the job finishes with an error, select **View reports** in the task navigation area to find out what went wrong. See "Job reports" on page 139 for details. You can rerun "Refresh Management Directory" after you have resolved the cause of the error.

   _____

Steps to view or edit a service instance's refresh data

Some services that can be refreshed also provide dialogs that allow you to view, complement, or in rare cases, edit the configuration data found by the refresh tasks. The edit function is also used, by some services, as an alternative way to display the dialoges for supplying information that msys for Setup requires to be able to perform the refresh (see "Steps for refreshing the management directory" on page 21, step6 on page 22)

Before you begin:
- You must be authorized for the service
- The service must have been refreshed
- The service must provide dialogs for viewing and editing the refresh data

Perform these steps to view or edit a service instance's refresh data:

1. In the resource tree, expand the sysplexes folder and the folder for the sysplex you want to work with.

   _____

2. If you want to work with a sysplex-wide service, click the Control panel in the sysplex folder. Otherwise expand the folder for the system you want to work with and click the Control panel in the system folder. A list of available services is displayed in the list view.

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3. In the list view, select the service instance for which you want to edit the refresh data.

_____

4. Click **File —> Edit refresh data...** A service-specific dialog for viewing and editing refresh data is displayed.

   Note: This menu item is present only if you are authorized for the service. It is only available if the service provides dialogs for editing the data and if the service instance has been refreshed.

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Chapter 4. Customizing a service

This section provides some basic information on customization and describes the steps for performing the following tasks:

Task	Associated procedures	Required authorization
Customizing a service instance	• "Steps for displaying a customization dialog" on page 27 • "Steps for copying the customization values from a prior customization of a service" on page 28	Authorization for the respective service
Finding out which services must be refreshed	"Finding out which services to refresh before you can customize"	None

What you must know about customization

Setting up a service instance usually requires some decisions on service-specific options that you must supply as customization data. Services that can be set up with msys for Setup gather this information in service-specific customization dialogs. The customization dialogs often provide wizards and best practice defaults, and they always provide help information to assist you in providing the customization data.

Some services cannot be customized themselves with msys for Setup but offer functions to take care of dependencies by services that can be customized. Refer to the service information file to find out more about an individual service (see "Steps for viewing a service information file" on page 7).

Some services require that before the customization, a refresh is performed against the service instance to be customized or against one or more other services (see "Finding out which services to refresh before you can customize").

Finding out which services to refresh before you can customize

A service instance that must be refreshed before it can be customized has "Required: Refresh" as its status when it is first displayed in the list view of the workplace (see Figure 12 on page 20).

Use a service's property sheet to find out about its refresh dependencies on other services. See "Steps for viewing information for a service or service instance" on page 6 for information on how to display the property sheet. On the property sheet select the "Refresh dependencies" tab.

Operating system settings Properties

General | Status | Authorized users | Refresh dependencies

The customization of 'Operating system settings' depends on refresh data of the following services:

Required services

These services must be refreshed at least once to be able to customize 'Operating system settings'.

Service name	Refresh status	Date refreshed
Access Method Services	Required: Refresh	
Security Server (RACF)	Input required: Refresh	
Storage Management Subsystem	Required: Refresh	

Optional services

These services are not essential for the customization of 'Operating system settings', but should be refreshed to provide full functionality.

Service name	Refresh status	Date refreshed

OK | Cancel | Help | ?

All services that provide refresh data for the customization are listed. Services that must always be refreshed are listed in the upper list of services and services that can optionally be refreshed are listed in the lower list of services.

If you are displaying the "Refresh dependencies" for a system level service that has dependencies on sysplex-wide services, the relevant sysplex-wide services will be listed in a separate "Sysplex-level refresh dependencies" panel.

If you attempt to customize a service for which one or more of the requisite services have not been refreshed, you are prompted to perform the refresh. The prompt differs, depending on whether all these services must be refreshed, all can optionally be refreshed or whether there are both services that must and that can optionally be refreshed. For example, the following panel is displayed if there are only services that you must refresh:
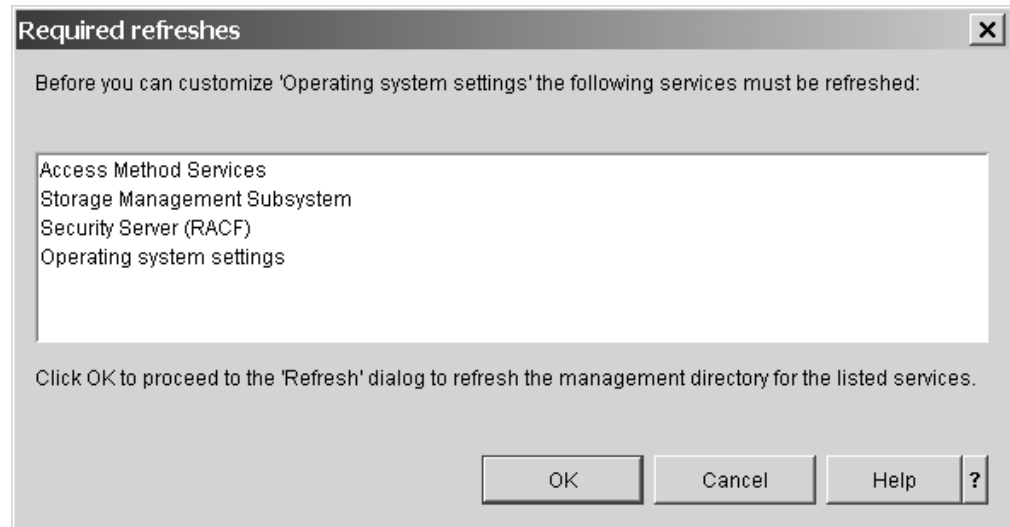
Figure 14. Prompt to perform refresh

You can click **Cancel** and postpone the customization; or click **OK** to first perform the refresh and then resume the customization. **OK** gets you to the refresh panel for the services that were listed in the "Required refresh" panel (see Figure 13 on page 22).

For more details on refreshing the management directory see Chapter 3, "Refreshing the management directory", on page 19.

Steps for displaying a customization dialog

Before you begin:

- For some services you must first create a service instance before you can start customization. See "Steps for creating a new service instance" on page 8.
- You can only use the customization dialogs for a service that you are authorized for.
- Most services require a management directory refresh before they can be customized. See "Finding out which services to refresh before you can customize" on page 25.
- Be sure that the "RACFSecurity - authorization" policy has been set according to your needs. See "Suppressing automatic security updates - RACFSecurity - authorization" on page 12.

Tip: If you have already customized another instance of the service you want to customize, you can use the data of that earlier customization as default for the new customization. See "Steps for copying the customization values from a prior customization of a service" on page 28 for details.

Perform these steps to display a customization dialog:

1. In the resource tree, expand the sysplexes folder and the folder for the sysplex you want to work with.

2. If you want to work with sysplex-wide services, click the control panel in the sysplex folder, otherwise expand the folder for the system you want to work with and click the control panel in the system folder. A list of available service instances is displayed in the list view.

   _____

3. Select the service instance you want to customize.

   _____

4. Click **File —> Customize...** on the menu.

   Note: This menu item is only present if you are authorized for the service.

   Results:
   - If you are customizing this service instance for the first time, the service supports the copy function, and suitable customization data of another instance is available, a confirmation message asks if you want to copy data from an existing customization (see "Steps for copying the customization values from a prior customization of a service").
   - If you are not logged on to the z/OS system, you might be prompted to log on now.
   - If the service you want to customize has dependencies on the configuration data of other services, you are prompted to do the refresh now (see Figure 14 on page 27), unless refresh has already been done for them. When all required refresh data is available, the service's customization dialog is downloaded and displayed.

   _____

5. Use the dialog helps for details on the required customization data.

   _____

Steps for copying the customization values from a prior customization of a service

When you invoke the customization dialogs for a particular service instance for the first time and there is already at least one customized instance of the same service in the management directory, msys for Setup asks you if you want to copy existing customization data.

The copy function helps you to efficiently set up multiple instances of the same service in a similar way. Instead of repeatedly entering the same customization values, you can copy the data from a prior customization of the service.

You can copy from any known service instance in the management directory subtree, across system profiles, systems, and sysplexes. The copy function is not restricted to multiple instance services but can also be provided by single instance and optional services.

Before you begin:
- Not all services support copying customization data.
- The copy function is available only for the first time customization of a particular service instance.

- The copy function is not available until suitable customization data of another instance is available. That is, for at least one instance of the service all customization data must have been provided.
- You can only use the copy function if you are authorized for the respective service.
- The version of the service instance you want to customize must be the same or higher than the version of the source service that you want to copy from.

Perform these steps to copy the customization values from a prior customization of a service:

1. In the resource tree, expand the sysplexes folder and the folder for the sysplex you want to work with.

   _____

2. If you want to customize a sysplex-wide service, click the control panel in the sysplex folder. Otherwise expand the folder for the system you want to work with and click the control panel in the system folder. A list of available services is displayed in the list view.

   _____

3. In the list view, select the service or service instance you want to customize.

   _____

4. Click **File —> Customize...** on the menu. If you are customizing this service instance for the first time, and the service supports the copy function, and suitable customization data of another service is available, a confirmation message asks if you want to copy data from an existing customization.

   Note: This menu item is only present if you are authorized for the service.

   _____

5. Click **Yes**. The "Copy customization values" panel is displayed. The panel shows a table with available source service instances to copy from.

   _____

6. Select the instance from which you want to copy and click **OK**.

   _____

Result: The customization dialogs for the service are displayed, with the values of the source customization as default. Depending on the implementation of the copy function by the particular service, alternative values might be suggested where adaptions are required or you might have to provide input where the source customization did not provide suitable values.

Chapter 5. Updating a system configuration

This section provides some basic information on Updating system configurations with msys for Setup and describes the steps for performing the following tasks:

Task	Associated topics and procedures	Required authorization
Predicting the changes that are applied to your system during update	• "Running a simulation" on page 33 • "Browsing requests" on page 34	Authorization for the respective service
Updating a system configuration	• "Performing prepare updates" on page 37 • "Performing commit updates" on page 41	Authorization for the respective service
Correcting errors in failed tasks	"What you need to do if an update step fails" on page 37	Depends on the error

What you must know about update

Updating the system configuration results in changes to configuration resources on the z/OS system. Updating the system configuration is performed in two steps, "Prepare updates" and "Commit updates".

What are update requests?

When you perform the "Update system configuration" task for a service instance, msys for Setup analyses the customization data for the service instance and, possibly relevant refresh data, to determine requirements against:

- The service instance's own configuration resources
- Configuration resources of other system level services
- Configuration resources of sysplex-wide services

Requirements generally result in update requests. Update requests are configuration requirements at the granularity of a particular configuration item.

Examples:

- An update request can require a minimum value for a particular parameter value.
- Another update request can require the existence of a particular user ID

msys for Setup keeps track of all update requests from all customizations. This allows msys for Setup to:

- Find a suitable setting where customizations of different service instances result in requirements against the same configuration item.
- Allow changes to configuration resources to be undone. See Chapter 10, "Undo all updates", on page 129.

You can view the update requests that result from the customization of a service (see "Browsing requests from customization" on page 34).

If a service requires changes to configuration resources that it owns and that no other service has requirements against it can circumvent update requests. Instead, it can make the changes directly to satisfy its own customization only.

This shortcut is called "Product instantiation".

To you as a user, it is transparent whether a service uses update requests or "Product instantiation" during the update task. However, you might see the term "Product instantiation" in statuses or messages. Refer to a services' service information file to find out which actions it performs as product instantiation, if any.

The update steps: Prepare updates and Commit updates

The update process has two steps namely:

1. Prepare updates.

   "Prepare updates" processes the update requests that result from the customization of a service instance. It can result in other requests that are processed in a subsequent "Commit updates". You can view the requests that are processed during "Prepare updates" (see "Browsing requests from customization" on page 34).

   "Prepare updates" can:

   • Make configuration changes in temporary configuration resources that are copied to the actual configuration resources during the subsequent "Commit updates".

   • Generate commands that are issued during the subsequent "Commit updates".

   • Make configuration changes directly in actual configuration resources. "Commit updates" is not required for these changes to take effect. msys for Setup informs you and asks for confirmation before making changes to actual configuration resources during "Prepare updates".

2. Commit updates.

   "Commit updates" processes the requests that are generated during "Prepare updates". You can view the requests that are processed during "Commit updates" (see "Browsing requests from update" on page 35).

   "Commit updates" can:

   • Copy temporary copies of configuration resources, where changes were made during the preceding "Prepare updates", to the actual configuration resources.

   • Issue commands that were generated during the preceding "Prepare updates".

   If you are using a job scheduling system on the z/OS system and msys for Setup has been set up accordingly, you have the following options for "Commit updates":

   • You can process the update requests on the host immediately (see "Steps for performing commit updates immediately" on page 41).

   • You can generate the jobs that are needed to change the configuration resources, transfer the complete set of jobs to the host, and use the job scheduling system to process them at a defined point in time (see "Steps for performing commit updates scheduled" on page 44).

Updating services with cross-scope dependencies

A service instance that you customize may have cross-scope dependencies. In this case, the customization not only affects the configuration resources of the service itself and, possibly, that of other system level services on the same z/OS system, but those of sysplex-wide services as well. This means that "Prepare updates" and "Commit updates" must be performed on the z/OS system where the service to be set up is running, and on the sysplex driving system.

When you open the "Update center" panel for such a service instance, the panel is subdivided into two tabbed panels:

- the system level services for which the update task needs to be performed are listed in the "System" panel.
- the sysplex-wide services that are affected by the customization of the service to be set up are listed in the "Sysplex" panel.

To complete an update task for the service to be set up you need to perform the steps described in "Performing prepare updates" on page 37 and "Performing commit updates" on page 41 for all of the services listed in these panels.

Note: Services that have cross-scope dependencies can only be updated if the msys for Setup SPE PTFs UA90013 and UA90015 have been installed. Otherwise you will receive an error message when you attempt to update the service and the "Update center" will not be displayed.

Running a simulation

Simulation is a function that does all the processing of an update task including processing requests, but stops short of making changes to your system configuration. You can simulate both steps of the update task, "Prepare updates" and "Commit updates".

Note:

- If you want to know what changes are going to be applied to your system configuration during "Prepare updates", simulate this step before you perform it for real. You can also click **Browse requests** to see the requests that are going to be processed. Depending on the service, browsing the requests or simulation can be more conclusive.
- Simulation is not possible if you have selected the **Commit updates (scheduled)** radio button in the navigation area of the "Update center". To simulate the "Commit updates" task although you will be using a job scheduling system to process the jobs for the "Commit updates" task, select the **Commit updates** radio button in the task navigation area, run the simulation, and click **Commit updates (scheduled)** only when you are satisfied with the results of the simulation.

Recommendation: Simulation is a means to predict if an update task will run error-free. Before you run a task in real mode, you are advised to simulate it and correct any errors that occur.

Instead of making configuration changes, simulation writes the changes that would have been made to the task report. Simulation, therefore, is also a means of finding out what changes to your configuration an update task will result in. You can print out the simulation report and obtain permission to perform the changes if needed.

To simulate a task click **Simulate** on the panel for the respective task. Simulation is always available when the same task in real mode is available.

Tip: If the report does not show clearly which configuration changes the task is going to result in, browse the requests that are going to be processed. For some services the request browser is more conclusive than the simulation. See "Browsing requests" for details.

Browsing requests

You can use the request browser to view:
- Requests from customization
- Requests from update

Look at requests before processing them to find out what is going to happen to your z/OS system when you perform the update step.

Tip: If the requests descriptions do not show clearly which configuration changes the task is going to result in, simulate the task. For some services simulation is more conclusive than the request browser. See "Running a simulation" on page 33 for details.

Browsing requests from customization

The requests from customization are generated from the data you enter into the customization dialogs. They are processed during "Prepare updates". Requests from customization are also called update requests.

You can browse requests from customization of a service instance at any time after customization.

To display these requests, click **Browse requests from customization...** on the context menu of the service instance.
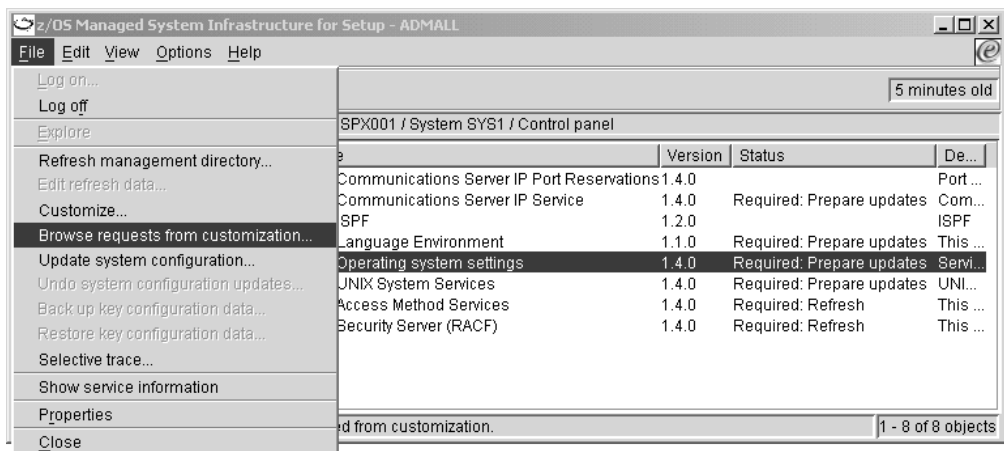
Figure 15. Context menu of a service instance with "Browse requests from customization..."

The list of requests displayed in the "Browse requests from customization" panel always shows the requests against one particular service. If the service you have customized has dependencies on other services, use the **Show requests against** list to see the requests for other services that are affected by the customization.

You can also display the "Browse requests" panel by clicking the **Browse requests** button in the "Update center". From the "Update center", you always display the requests to be processed in the selected task. If the task is "Prepare updates", then the requests that are displayed in the "Browse requests" panel are the requests from customization.

Browsing requests from update

"Prepare updates" processes the requests from customization. It can generate new requests that make the changes from "Prepare updates" take effect. These new requests are called "requests from update". Requests from update are processed during "Commit updates".

You can browse the requests from update of a service instance at any time after you have performed "Prepare updates".

To display the "Browse requests" panel click the **Browse requests** button in the "Update center". From the "Update center", you always display the requests to be processed in the selected task. If the task is "Commit updates", then the requests that are displayed in the "Browse requests" panel are the requests from update.

If the service to be set up has cross-scope dependencies, click **Browse requests** on both the "System" panel and the "Sysplex" panel of the "Update center" to view the complete set of requests that will be processed.

Interpreting request information

There can be requests against the service being customized. According to mutual dependencies, there can also be requests against one or more other services. The request table in the centre of the "Browse requests from" panel always shows the requests against one service.
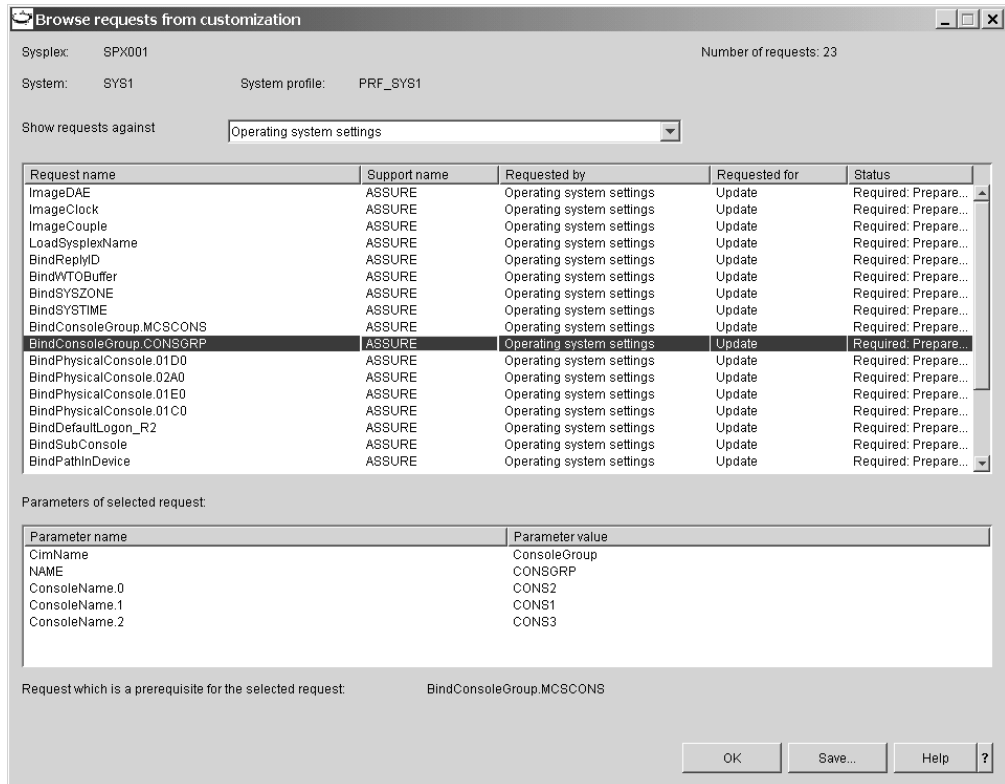
Figure 16. Browsing requests from customization

To view the details for a particular request, first select the service against which the request of interest is in the **Show requests against** list. Then select the request of interest in the request table.

View the parameters of the request in the **Parameters of selected request** table. Most, but not all requests have parameters.

Identifying requests with problems

Look out for any requests that have an attention sign next to them. An attention sign indicates a problem or a potential problem with the request.

There are two attention signs.

Yellow triangle
> A yellow attention sign indicates that not all request parameters have values assigned to them. Usually, this is not a problem. Not all parameters of each request are required and some parameters only apply conditionally.
>
> **Example:** Some requests have parameters that define the load filter. If there is no load filter, they have no values.
>
> The yellow attention sign is suppressed if you are using the default trace level, 2, or lower.
>
> If you see a yellow attention sign, examine the request to determine if the missing value or values signify a problem. If you cannot determine if it is a problem, you are advised to run the next step in simulate mode to see if errors result from the missing values.

Red octagon
> A red attention sign indicates a severe problem with a request.

Try to resolve the problem by refreshing the management directory. If the problem persists, contact the support team of the service that generated the request.

What you need to do if an update step fails

You can repeat update steps or simulations that have failed. If a step failed:

1. View the job report to determine the cause of the error (refer to "Steps for finding the cause of a problem in a job report" on page 141).

2. Depending on the error, make the appropriate changes in the system environment or re-customize the service instance with the failing update request.

3. If you have resolved the error in the system environment, rerun the update step that has failed. If you have re-customized a service instance, start again with the first update step, "Prepare updates".

If a step results in an error you cannot resolve, you can use "Undo all updates" to return to the system configuration you had before you performed the first update. See Chapter 10, "Undo all updates", on page 129 for details.

Performing prepare updates

Before you begin:

- You can only perform this task for a service for which you are authorized.
- You require an ID with sufficient authorization on the z/OS system where the service instance is to be set up
- The service instance must have been customized (see Chapter 4, "Customizing a service", on page 25).
- If your service has dependencies on other system level or sysplex-wide services you might need the cooperation of other users that are authorized for these services
- Services that have cross-scope dependencies can only be updated if the msys for Setup SPE PTFs UA90013 and UA90015 have been installed. Otherwise you will receive an error message when you attempt to update the service and the "Update center" will not be displayed.

Steps for performing prepare updates

Perform these steps to run the prepare updates task:

1. In the resource tree, expand the sysplexes folder and the folder for the sysplex you want to work with.

   _____

2. If you want to work with a sysplex-wide service, click the Control panel in the sysplex folder. Otherwise expand the folder for the system you want to work with and click the Control panel in the system folder. A list of available services is displayed in the list view.

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3. In the list view, select the service instance for which you want to update the system configuration.

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4. Click **File —> Update system configuration...**

Note:

- This menu item is present only if you are authorized for the service and available only if the service instance has been customized.
- If you are not logged on to the z/OS system, you might be prompted to log on now. If the service instance you have selected has cross-scope dependencies, you may have to log on to both z/OS systems affected by the customization of the service.

The "Update center" is displayed.

If the service you had selected has no dependencies on other services or dependencies only on other system level services, the update center consists of a single panel showing the complete list of services to be processed.

Figure 17. Update center for prepare update

If the service you had selected has cross-scope dependencies, the update center is subdivided into two tabbed panels, "System" and "Sysplex". To complete the **Prepare updates** task for the selected service, you need to perform the steps described below in both panels.
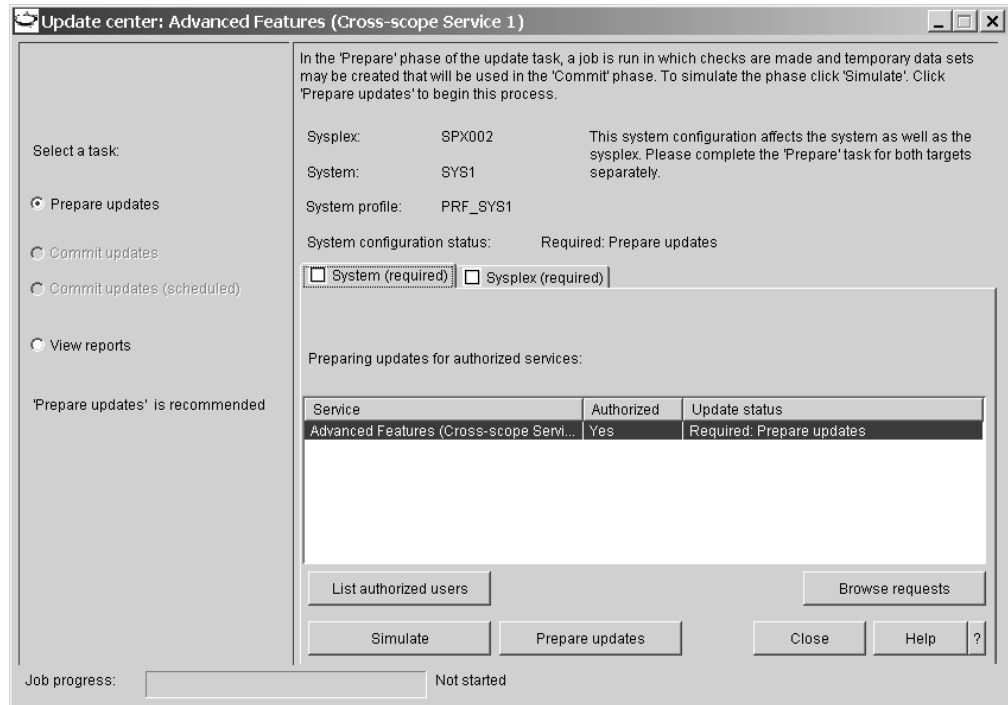
Figure 18. Update center for prepare cross-scope updates

> You might not be authorized for all of the services that are listed in the "Update center". In turn, select each service you are not authorized for and click **List authorized users**. Inform one of the authorized users that **Prepare updates** is pending for the respective service.

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5. If it is not selected, select **Prepare updates** in the task navigation area. This is only possible if there is customization data that has not been processed yet.

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6. Optionally, click **Simulate** to find out what exactly is going to happen to your system configuration during **Prepare updates**. See "Running a simulation" on page 33 for details.

   Tip: You can also click **Browse requests** to see the requests that are going to be processed. Depending on the service, browsing the requests or simulation can be more conclusive.

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7. Optionally, click **Simulate** to find out what exactly is going to happen to your system configuration during **Prepare updates**. See "Running a simulation" on page 33 for details.

   Tip: You can also click **Browse requests** to see the requests that are going to be processed. Depending on the service, browsing the requests or simulation can be more conclusive.

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8. Optionally, click **Simulate** to find out what exactly is going to happen to your system configuration during **Prepare updates**. See "Running a simulation" on page 33 for details.

Tip: You can also click **Browse requests** to see the requests that are going to be processed. Depending on the service, browsing the requests or simulation can be more conclusive.

_____

9. Click **Prepare updates** to submit a job that performs "Prepare updates" on your system.

   This job can take a long time. The job progress can be seen in the progress bar at the bottom of the panel. The job status is displayed next to the progress bar.

   You do not have to keep the "Update center" displayed during the entire time that the job is running. You can close it and optionally reopen it later to check the job progress. When the job finishes, you receive a job completion notification even if the "Update center" is closed. To reopen the "Update center", click **File —> Update system configuration...** on the menu.

   You can even log off from the workplace as soon as the job has been submitted. You receive the job completion notification when you next log on if the job has finished by then.

   _____

10. Examine the job notification.
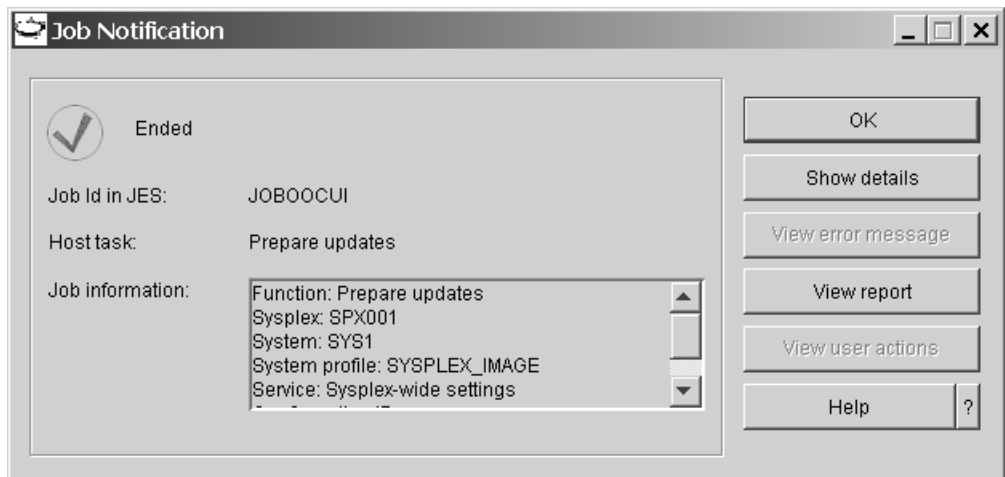
Figure 19. Job notification

   If the job finishes with an error, select **View reports** in the task navigation area to find out what went wrong. See "Job reports" on page 139 for details. You can rerun "Prepare updates" after you have resolved the cause of the error.

   Check if there are manual actions to be performed to complete the task. If there are manual actions, there is an envelope symbol in the lower left corner of the job notification panel and the **View user actions** button is available. If applicable, click **View user actions** and perform the actions before you proceed with **Commit updates**.

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11. Ensure that **Prepare updates** has been performed for all services.

If the selected service has dependencies on both system level and sysplex-wide services, ensure that **Prepare updates** has been performed for all affected services.

If a list of services contains services for which you are not authorized, these services were not included in the **Prepare updates**. Select each service in the list and click **List authorized users**. Inform one of the authorized users that **Prepare updates** is pending for the respective service.

When **Prepare updates** has been performed successfully for all services that are affected by the customization of the service, **Commit updates** becomes available in the task navigation area.

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Performing commit updates

Before you begin:

- You can only perform this task for a service for which you are authorized.
- You require an ID with sufficient authorization on the z/OS system where the service instance is to be set up.
- "Prepare updates" must have been performed successfully (see "Performing prepare updates" on page 37).
- Your service may have dependencies on other system level or sysplex-wide services. In such a case, you might need the cooperation of other users that are authorized for these services.
- If you are using a job scheduling system on the host and msys for Setup has been set up accordingly, you have the following options:
  - You can process the update requests on the host immediately (see "Steps for performing commit updates immediately").
  - You can generate the jobs that are needed to change the configuration resources, transfer the complete set of jobs to the host, and use the job scheduling system to process them at a defined point in time (see "Steps for performing commit updates scheduled" on page 44).

  You can combine these options when committing updates for a service:
  - If some update requests have already been committed and were processed on the host immediately, you can still decide to use job scheduling for those jobs that have not yet been committed, for example, because the user was not authorized for all services.
  - The decision to commit jobs for scheduling, however, is final: If you have already started to generate jobs that are to be processed by a job scheduling system, an immediate commit for any remaining requests is not possible.

    Note: Immediate commit becomes available again when a job set is canceled.
- Not every service provides commit updates, because "Prepare updates" can make changes directly in actual configuration resources and "Commit updates" is not required for these changes to take effect.

Steps for performing commit updates immediately

Perform these steps to run the commit updates task if the update jobs are to be processed on the host immediately:

1. In the resource tree, expand the sysplexes folder and the folder for the sysplex you want to work with.

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2. If you want to work with a sysplex-wide service, click the Control panel in the sysplex folder. Otherwise expand the folder for the system you want to work with and click the Control panel in the system folder. A list of available services is displayed in the list view.

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3. In the list view, select the service instance for which you want to update the system configuration.

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4. Click **File —> Update system configuration....**

   Note:
   - This menu item is present only if you are authorized for the service and available only if the service instance has been customized.
   - If you are not logged on to the z/OS system, you might be prompted to log on now. If the service instance you have selected has cross-scope dependencies, you may have to log on to both z/OS systems affected by the customization of the service.

   The "Update center" is displayed.

   If the service you had selected has no dependencies on other services or dependencies only on other system level services, the update center consists of a single panel showing the complete list of services to be processed.

Figure 20. Update center for commit updates immediately

   If the service you had selected has cross-scope dependencies, the update center is subdivided into two tabbed panels, "System" and "Sysplex". To complete

the **Commit updates** task for the selected service, you need to perform the steps described below in both panels.
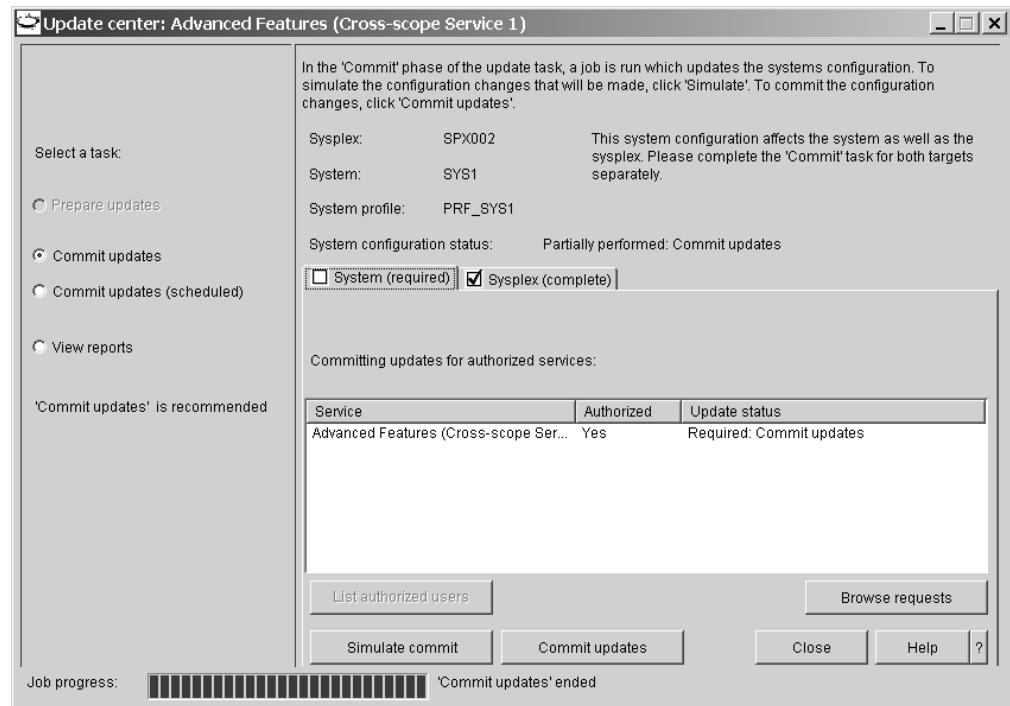
Figure 21. Update center for commit cross-scope updates immediately

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5. If it is not selected, select **Commit updates** in the task navigation area.

   If the service you had selected has dependencies on other services, these services might also be included in the list of services to be processed. You might not be authorized for all of these services. In turn, select each service you are not authorized for and click **List authorized users**. Inform one of the authorized users that **Commit updates** is pending for the respective service.

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6. Optionally, click **Simulate** to find out what exactly is going to happen to your system configuration during **Commit updates**. See "Running a simulation" on page 33 for details.

   Tip: You can also click **Browse requests** to see the requests that are going to be processed. Depending on the service, browsing the requests or simulation can be more conclusive.

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7. Click **Commit updates** to submit a job that performs "Commit updates" on your system.

   This job can take a long time. The job progress can be seen in the progress bar at the bottom of the panel. The job status is displayed next to the progress bar.

   You do not have to keep the "Update center" displayed during the entire time that the job is running. You can close it and optionally reopen it later to check the job progress. When the job finishes, you receive a job completion notification even if the "Update center" is closed. To reopen the "Update center", click **File —> Update system configuration...** on the menu.

You can even log off from the workplace as soon as the job has been submitted. You receive the job completion notification when you next log on if the job has finished by then.

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8. Examine the job notification.

   If the job finishes with an error, select **View reports** in the task navigation area to find out what went wrong. See "Job reports" on page 139 for details. You can rerun "Commit updates" after you have resolved the cause of the error.

   Check if there are manual actions to be performed to complete the task. If there are manual actions, there is an envelope symbol in the lower left corner of the job notification panel and the **View user actions** button is available (see Figure 19 on page 40). If applicable, click **View user actions** and perform the actions to make all changes active.

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9. Ensure that **Commit updates** has been performed for all services.

   If the selected service has dependencies on both system level and sysplex-wide services, ensure that **Commit updates** has been performed for all affected services.

   If the list of services contains services for which you are not authorized, these services were not included in the **Commit updates**. Select each service in the list and click **List authorized users**. Inform one of the authorized users that **Commit updates** is pending for the respective service.

_____

Steps for performing commit updates scheduled

Before you begin:
- You can perform this task only if the system properties that allow job scheduling for commit jobs have been set (see "Steps for viewing and editing FTP and job specifications" on page 103).
- The msys for Setup SPE PTFs UA90013 and UA90015 must be installed on the z/OS system. If the service has cross-scope dependencies, the PTFs must be installed on both z/OS systems affected by the changes.
- When you select the radio button **Commit updates (scheduled)**, you cannot simulate what is going to happen to your system configuration when the updates are processed. If you want to see the results of a simulation before you start generating jobs, select **Commit updates** and run the simulation by clicking **Simulate**. When you are satisfied with the results, select **Commit updates (scheduled)** and perform the steps described below.
- The jobs can be generated in any order.
- The jobs may need to be processed in a specific order on the z/OS system or systems affected by the changes. To enable you to provide the necessary information to the administrator of the job scheduling system, a Job set information file is generated when the jobs are transferred to the z/OS system. Make this file available to the administrator of the job scheduling system.
- The jobs that are generated for this task must be transferred to the z/OS system by a user who is authorized for the service to be set up.
- As soon as a job has been generated, a job set appears in the Jobs folder in the msys for Setup resource tree. The job set is merely a container for information about the jobs that have been generated for the task. You can use the information gathered there to monitor the status and progress of job generation and processing.

Perform these steps to run the commit updates task if the update jobs are to be processed by a job scheduling system on the host:

1. In the resource tree, expand the sysplexes folder and the folder for the sysplex you want to work with.

   _____

2. If you want to work with a sysplex-wide service, click the Control panel in the sysplex folder. Otherwise expand the folder for the system you want to work with and click the Control panel in the system folder. A list of available services is displayed in the list view.

   _____

3. In the list view, select the service instance for which you want to update the system configuration.

   _____

4. Click **File —> Update system configuration....**

   Note:
   - This menu item is present only if you are authorized for the service and available only if the service instance has been customized.
   - If you are not logged on to the z/OS system, you might be prompted to log on now. If the service instance you have selected has cross-scope dependencies, you may have to log on to both z/OS systems affected by the customization of the service.

   The "Update center" is displayed.

   If the service you had selected has no dependencies on other services or dependencies only on other system level services, the "Update center" consists of a single panel showing the complete list of services to be processed.

Figure 22. Update center for commit updates scheduled

> If the service you had selected has cross-scope dependencies, the "Update center" is subdivided into two tabbed panels, "System" and "Sysplex". To complete the **Commit updates (scheduled)** task for the selected service, you need to perform the steps described below in both panels.

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5. If it is not selected, select **Commit updates (scheduled)** in the task navigation area.

_____

6. Click **Generate jobs** to generate a job that will be used to change the configuration resources on your system.

_____

7. Ensure that **Generate jobs** has been performed for all services.

   If the list of services contains services for which you are not authorized, jobs for these services have not been generated. Select each service in the list and click **List authorized users**. Inform one of the authorized users that **Generate jobs** must be performed for the respective service.

_____

8. When **Generate jobs** has been performed for all services, click **Transfer jobs** to transfer the complete set of jobs to the host where they can be processed by a job scheduling system.

   If the service to be set up has cross-scope dependencies, you can click **Transfer jobs** either in the "System" panel or the "Sysplex " panel in the "Update center".

   Note: You can also transfer the jobs to the host from the Jobs folder in the resource tree by selecting the job set that was created for the jobs and clicking **Transfer** in the File menu.

9. Print the Job set information file that is displayed when the jobs have been transferred to the z/OS system and make it available to the administrator of the job scheduling system.

The HTML file contains all the information the administrator needs to schedule the jobs, for example, the system to which the jobs have been transferred, the JES job IDs, and the sequence in which the jobs must run on the system.

Note: You can also print the information file from the Jobs folder in the resource tree by selecting the job set that was created for the jobs and clicking **Print job set information** in the File menu.

Part 2. Administrating msys for Setup

msys for Setup helps you to set up products and their component services, for your systems and sysplexes. Before it can do that it must know about your system environment. For example, msys for Setup must know which systems there are, and how they are or are to be organized into sysplexes. It also must know how to communicate with the systems and sysplexes and which services are available to which systems.

msys for Setup administration comprises keeping msys for Setup up to date on your environment and managing msys for Setup users. This part describes the three areas of responsibility:

- Chapter 6, "Managing users", on page 51
- Chapter 7, "Managing product sets", on page 75
- Chapter 8, "Managing sysplexes and systems", on page 91

The user administrator assigns the rights to perform these administration tasks.

The user administrator can assign combined msys for Setup administrator rights. For example, the same user can be authorized to administrate users, product sets, and sysplexes. Often this is preferred by smaller installations. msys for Setup offers the option, typically favoured by large installations, to separate the areas of responsibilities.

Chapter 6. Managing users

Most of the user administration tasks require msys for Setup user administrator rights. There is always at least one user administrator in an msys for Setup environment.

This section provides some basic information on msys for Setup users and describes the steps for performing the following tasks:

Task	Associated procedures	Required authorization
Creating a new user	• "Steps for creating a new msys for Setup user with RACF authentication" on page 54 • "Steps for creating a new msys for Setup user with LDAP authentication" on page 57	User administrators only
Changing a user	• "Steps for changing user information" on page 59 • "Steps for changing the password" on page 61 • "Steps for resetting a password" on page 62 • "Steps for changing a user's workplace authorization" on page 63 • "Steps for changing a user's service authorizations" on page 64 • "Steps for changing a user's job authorizations" on page 66	All users can change their own user information, and • For RACF-protected management directories, the logon behavior for logons to z/OS systems • For management directories without RACF protection, their msys for Setup password All other tasks require user administrator rights
Deleting a user	• "Steps for deleting a user" on page 67	User administrators only
Assigning users to administrator rights or to a service **Note:** These tasks provide a fast path to authorize multiple users for the same service or administrator task.	• "Steps for editing the service authorizations" on page 68 • "Steps for editing administrator lists" on page 70 • "Steps for viewing lists of authorized users" on page 72	All users can view the lists of authorized users; only user administrators can edit the lists

What you must know about msys for Setup users

This topic explains how msys for Setup users are related to the users on the z/OS systems that are customized with msys for Setup.

A single msys for Setup environment can access multiple z/OS systems on different sysplexes. Some systems or even sysplexes might share a security setup. Others, however, might have different setups, possibly with different users IDs and even using different security products. To avoid complex dependencies resulting from varying user setups, msys for Setup maintains its own users. Only msys for Setup users can access the msys for Setup workplace.

Who creates msys for Setup users?

msys for Setup stores the information on msys for Setup users as user profiles in the LDAP management directory. When msys for Setup is installed, the LDAP

administrator creates an initial msys for Setup user with msys for Setup user administrator rights (see *z/OS Managed System Infrastructure for Setup Installation*).

All other msys for Setup users descend from this initial user. The initial user can create new users, including additional user administrators.

Which authorizations can an msys for Setup user have?

msys for Setup users can have rights for administrating msys for Setup and for updating services that use msys for Setup.

msys for Setup administration is subdivided into three areas of responsibility:

- User administration
- Product set administration (see Chapter 7, "Managing product sets", on page 75)
- Sysplex administration (see Chapter 8, "Managing sysplexes and systems", on page 91)

The tasks that users with these rights can perform are described in Part 2, "Administrating msys for Setup", on page 49.

msys for Setup users with rights for updating individual services can perform all msys for Setup tasks that these services support.

Which authorizations are required outside msys for Setup?

Most msys for Setup tasks involve running jobs on a z/OS system. A user who wants to perform such a task must have a user ID on that system with sufficient authorization to run the respective job.

The following table summarizes which msys for Setup user requires a counterpart z/OS system user and which authorizations this counterpart must have on the z/OS system.

msys for Setup user	z/OS system user
User administrator	None
Product set administrator	Must be authorized to run jobs
Sysplex and systems administrator	Authorizations as required by the Parallel Sysplex plug-in
User who updates a specific service	Authorizations as required by the plug-in of the service

A suitable z/OS system user must exist on each z/OS system that the msys for Setup user wants to work with. It can be advantageous but is not necessary that the user IDs of the msys for Setup user and all its counterparts on z/OS systems match.

An LDAP server can be protected by RACF. If the LDAP server that provides access to your management directory is RACF-protected, each msys for Setup user also requires a user with matching ID in that RACF.

Who logs on where?

Logging on to the msys for Setup workplace requires an msys for Setup user ID and password. The user can then access the management directory and perform all

tasks that do not access other host systems. For example, user administration only needs access to the management directory.

If the LDAP server that provides access to your management directory is RACF-protected, two matching user IDs are required, one in msys for Setup and the other in RACF. Then the password is maintained and verified by RACF.

If the z/OS or OS/390® system that runs the management directory is without RACF protection, the password is maintained through msys for Setup and authenticated by LDAP.
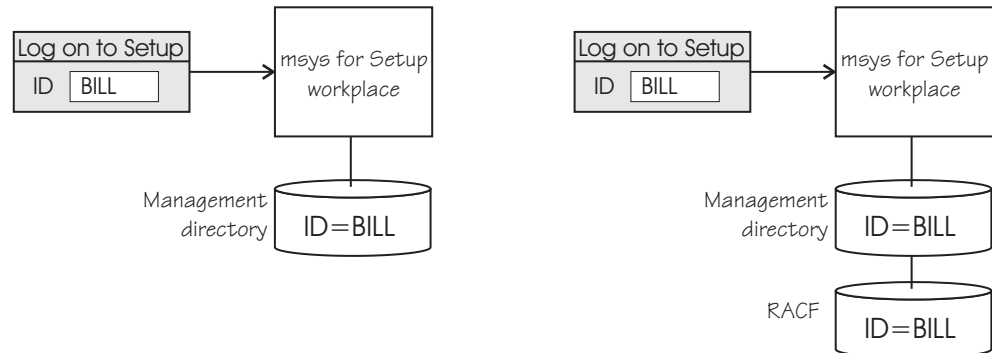
Figure 23. Logon to msys for Setup without and with a RACF-protected management directory

Before a host job can be started, a further logon is required to the z/OS system where the job is to run. The ID used for this logon must be defined in the security system that protects the z/OS system.
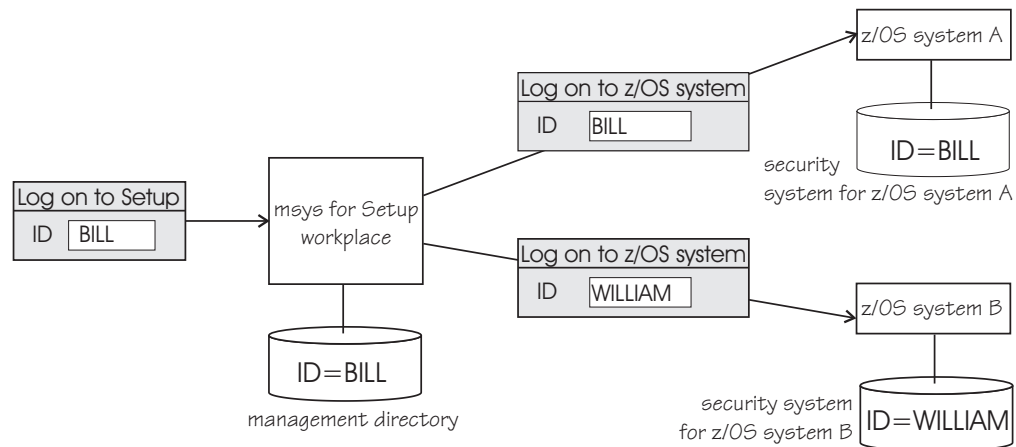
If your management directory is RACF-protected, you can instruct msys for Setup to perform these logons on behalf of the user (see "Steps for changing user information" on page 59). msys for Setup then automatically logs on to each z/OS system whenever a logon is required. It uses the user ID and password that were supplied for the logon to msys for Setup.

This means that automatic logon can only be successful for z/OS systems where a user ID with a password exists that matches its counterpart msys for Setup user ID and password.
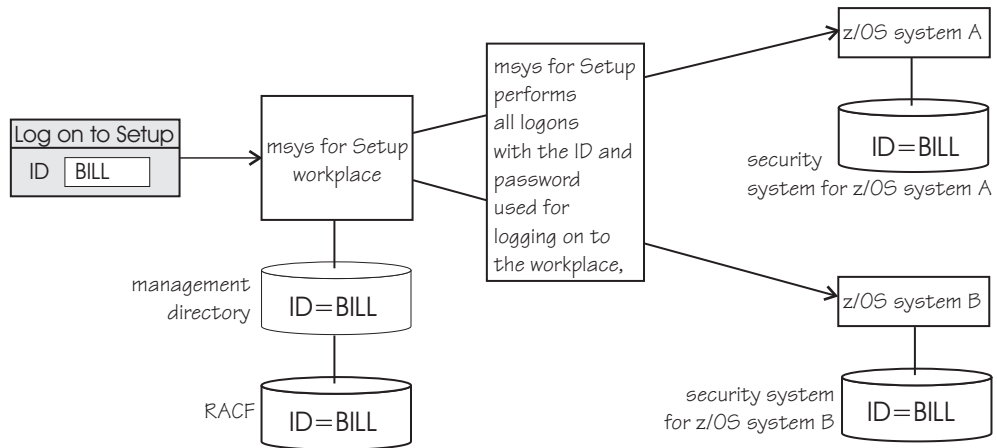
Maintaining identical user IDs and passwords on a variety of systems can mean an overhead that outweighs the benefits of automatic logons. Whether this option is advantageous must, therefore, be assessed individually for each system environment.

Typically, automatic logon is beneficial if most or all z/OS systems are protected by a single shared security system. Often, this shared security system is identical with the RACF system that also protects the management directory. This means that, for many environments, an msys for Setup user ID only needs a single matching RACF user ID with suitable authorizations.

Summary

The following table summarizes the differences between RACF-protected management directories and management directories without RACF protection:

management directory RACF-protected	no	yes
msys for Setup user	user only defined in msys for Setup	identical user ID defined in RACF and in msys for Setup
password maintained by	msys for Setup	RACF
password stored in	management directory	RACF database
logon to msys for Setup authenticated by	LDAP	RACF
automatic logon to z/OS systems	not possible	optional

Steps for creating a new msys for Setup user with RACF authentication

This section only applies to msys for Setup with a RACF-protected management directory. If your management directory is not RACF-protected follow the instructions in "Steps for creating a new msys for Setup user with LDAP authentication" on page 57 to create a user.

Before you begin:

Ask this information from the person that requires an msys for Setup user ID:

- Requested ID

Note: An identical user ID must also exist or be created in the RACF system that protects the management directory.

- Full name of the user
- e-mail address
- Required authorizations in msys for Setup
- Should automatic logon be enabled?
- Does the user need to view or delete all msys for Setup jobs?

Tip: You can use the worksheet in Appendix D, "Worksheet for creating a new msys for Setup user", on page 169 to gather this information.

Perform the following steps to create a new msys for Setup user:

1. Click the **Users** icon in the resource tree.

   _____

2. Click **File —> New —> User...** on the menu to bring up the wizard for creating new users.

Users	Full name	e-Mail	Logged on	Additional info
ADMALL	Administrator	admin@ibm.com	Yes	Adminstrator
BURNS	Bob Burns	bob.burns@ibm.com	No	Update all model products
CARNELL	Jane Carnell	jane.carnell@ibm.com	No	Create sysplex/system
KING	Peggy King	peggy.king@ibm.com	No	Update parallel sysplex
MILLER	Frank Miller	frank.miller@ibm.com	No	Administrator
RAY	Thomas Ray	thomas.ray@ibm.com	No	Update RACF, Ext. 4714
SMITH	Carrie Smith	carrie.smith@ibm.com	No	Create Packages

Create a new msys user.   1 - 7 of 7 objects

   Note: This menu item is only available to msys for Setup user administrators.

   _____
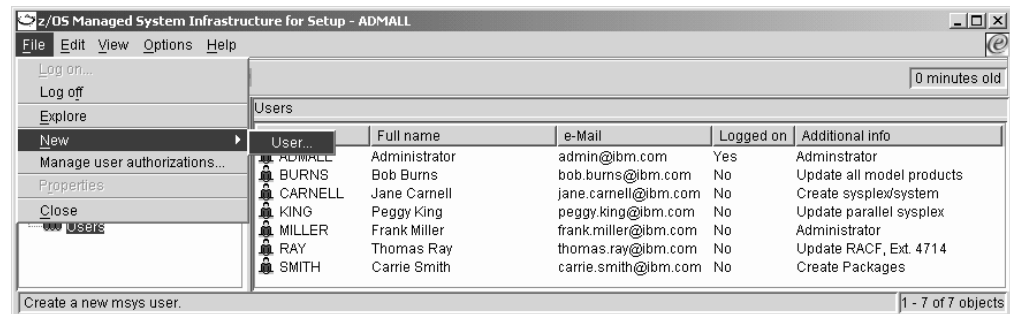
3. The "Create new msys for Setup user" wizard appears.
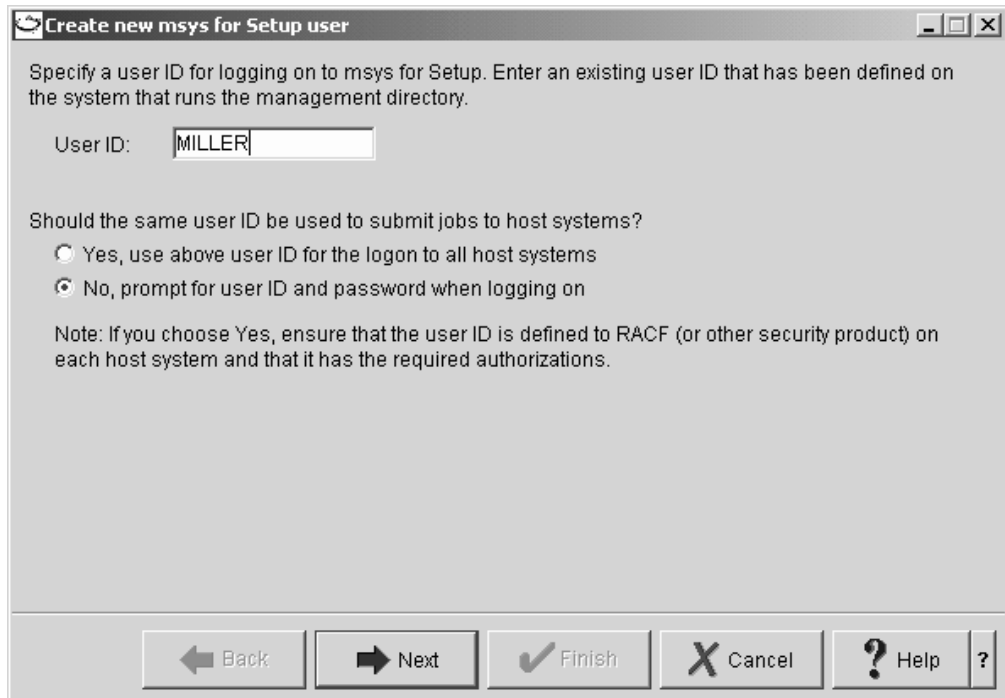
Figure 24. Create new msys for Setup user wizard for RACF-protected management directories

> If the first wizard panel looks different, your management directory might not be RACF-protected (see "Steps for creating a new msys for Setup user with LDAP authentication" on page 57).

> Type the user ID into the **User ID** entry field.

> Only select the **Yes, use above user ID for the logon to all host systems** radio button if you are sure that the user has the required matching user IDs and passwords on all z/OS system the user needs to access (see "Who logs on where?" on page 52 for more information). If in doubt, accept the default radio button. The user can change this setting later if required.

> _____

4. Follow the instructions in the wizard to complete creating the new user.

> _____

Result: A user profile for the new user is created in the management directory.

You should see the list of users with an entry for the user you have just created.
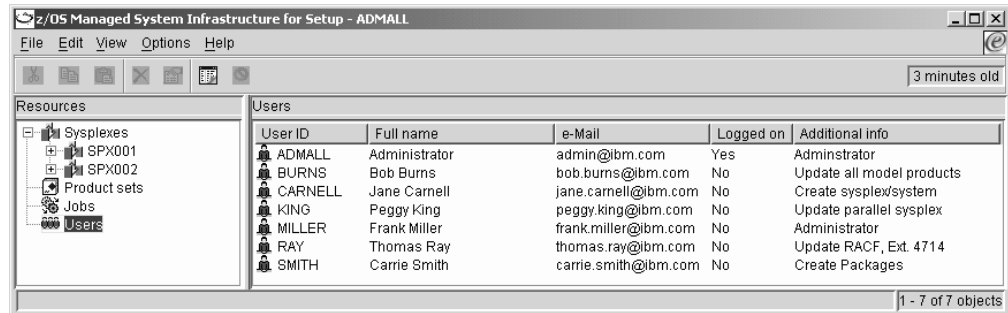
Confirm with the security administrator on the LDAP server that the user ID you created also exists in RACF.

If you have selected the **No, prompt for user ID and password when logging on** radio button, remind the user that the passwords for the msys for Setup user ID and the matching IDs on the z/OS systems must all be kept the same.

Steps for creating a new msys for Setup user with LDAP authentication

This section only applies to msys for Setup with a management directory that is not RACF-protected. If your management directory is RACF-protected follow the instructions in "Steps for creating a new msys for Setup user with RACF authentication" on page 54 to create a user.

Before you begin:

Ask this information from the person that requires an msys for Setup user ID:
- Required ID
- Full name of the user
- e-mail address
- Required authorizations
- Does the user need to view or delete all msys for Setup jobs?

Tip: You can use the worksheet in Appendix D, "Worksheet for creating a new msys for Setup user", on page 169 to gather this information.

Perform the following steps to create a new msys for Setup user:

1. Click the **Users** icon in the resource tree.

   _____

2. Click **File —> New —> User...** on the menu to bring up the wizard for creating new users.

> **Note:** This menu item is only available to msys for Setup user administrators.

_____
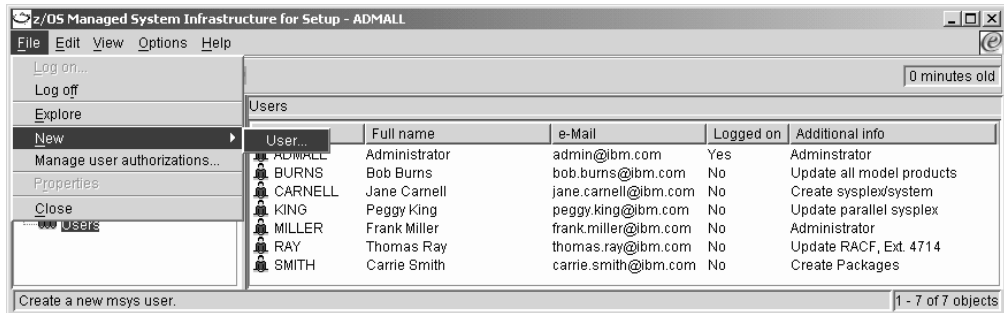
3. The "Create new msys for Setup user" wizard appears.
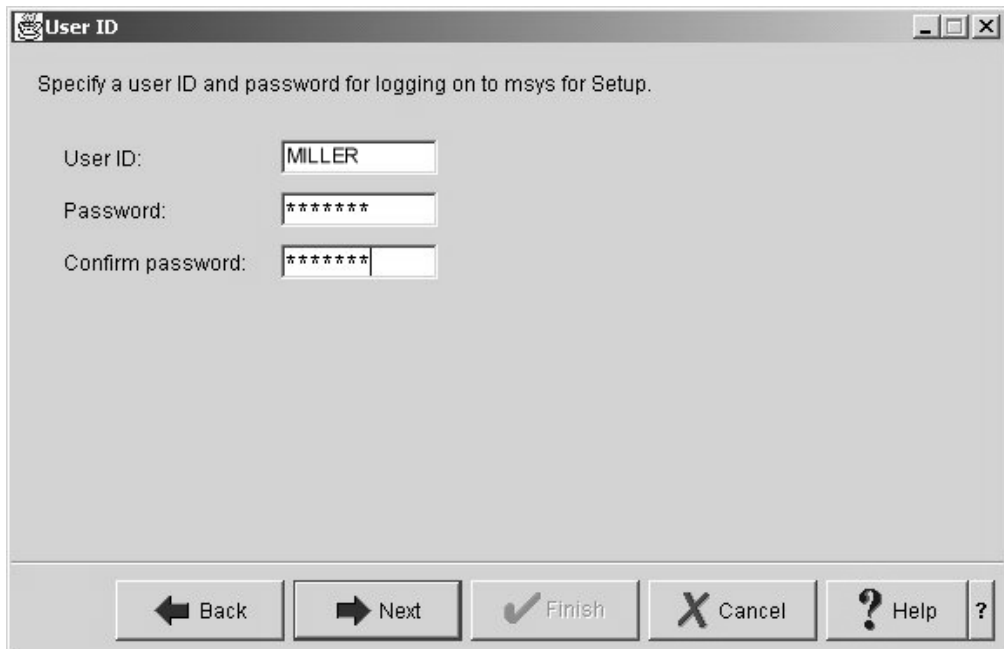
> If the first wizard panel panel looks different, your management directory might be RACF-protected (see "Steps for creating a new msys for Setup user with RACF authentication" on page 54).

_____

4. Follow the instructions in the wizard to complete creating the new user. Click **Next** after completing each panel and **Finish** on the last panel to complete creating the user.

_____

Result: A user profile for the new user is created in the management directory.

You should now see the list of users with an entry for the user you have just created.
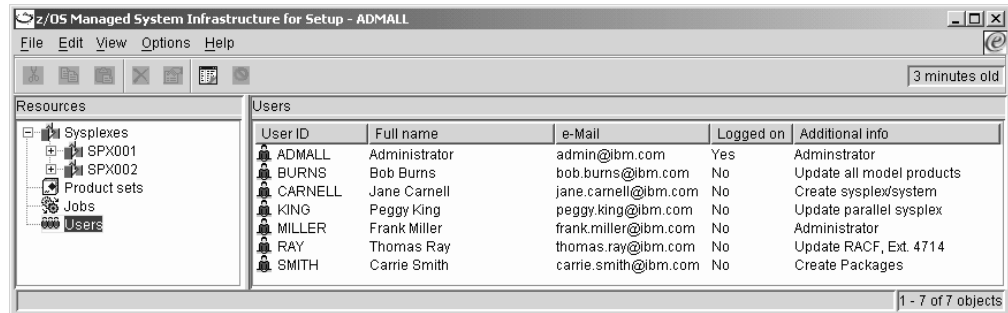
You will have assigned an initial password for the new user. Inform the user of the new ID and the initial password you have assigned.

Steps for changing user information

All users can change their own user information. User administrators can change the user information for all users.

Perform these steps to change user information:

1. Click the **Users** icon in the resource tree to display the list of users in the list view.

   _____

2. In the list view select the user that you want to change.

   _____

3. Click **File —> Properties** on the menu.

   _____
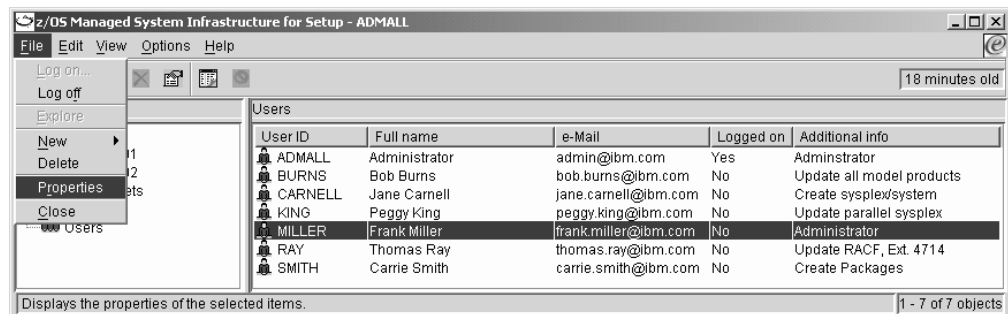
4. The property sheet for the selected user appears. If the "General" panel is not already displayed, click the **General** tab. There are two possible appearances of the panel.

   If the management directory is _not_ protected by RACF, there is a User ID section with a **Change password...** button.
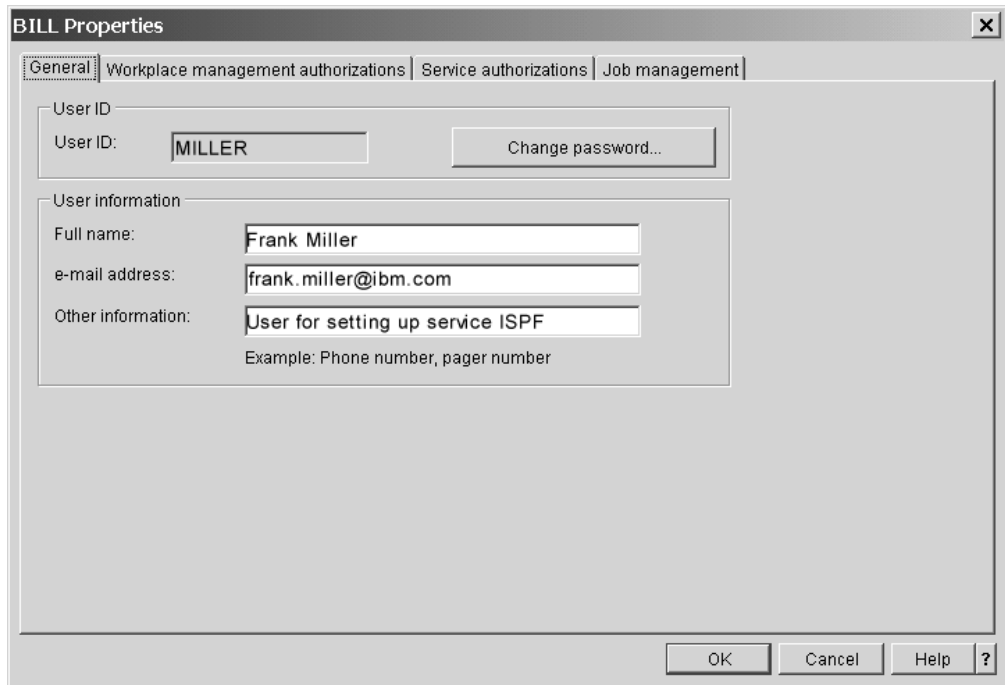
Figure 25. General panel for a management directory without RACF protection

See "Steps for changing the password" on page 61 for instructions on changing the password.

If the management directory is RACF-protected, you cannot manage passwords from the workplace. Instead of the button, the User ID section has an option for handling logons to the z/OS systems to be configured.
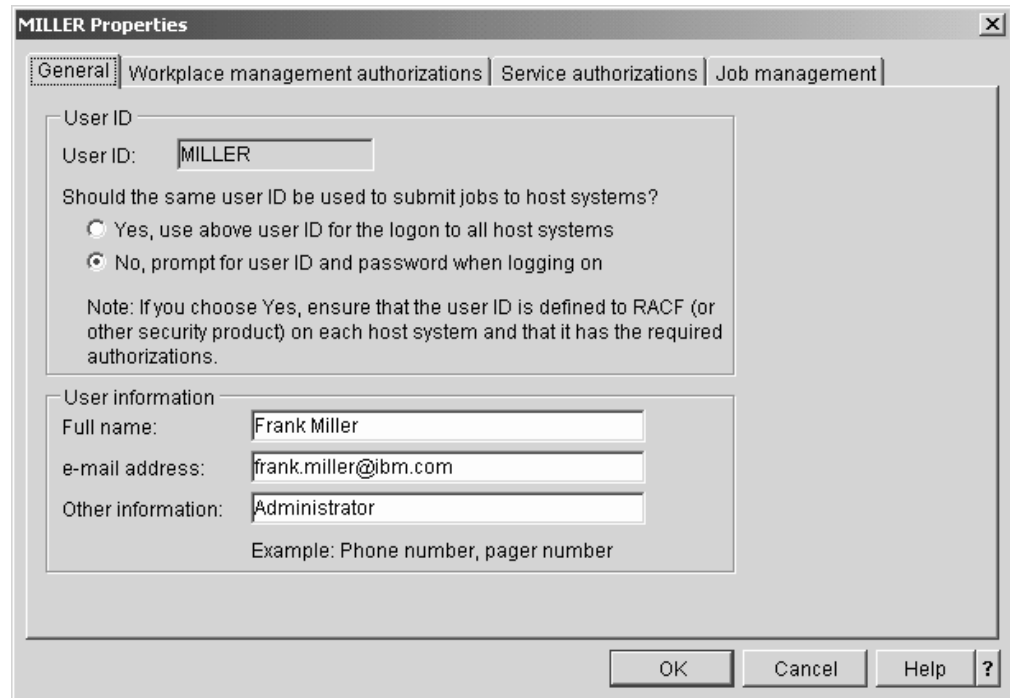
Figure 26. General panel for a RACF-protected management directory

Only select **Yes, use above user ID for the logon to all host systems**, if the ID you use to log on to the workplace is also defined to the RACF security systems of all z/OS systems you want to work with. In addition, the password for all systems must be the same as the password you use to log on to the workplace.

_____

5. Make the required changes to the entry fields.

_____

6. Click **OK** to save the changes.

_____

The changed information should be reflected in the user list.

Steps for changing the password

Users can change their password from their user property sheet if the management directory is RACF-protected.

Perform these steps to change your password:

1. Display the the "General" panel of your user property sheet (see "Steps for changing user information" on page 59).

   The panel should have a **Change password...** button as shown in Figure 25 on page 60.

   If the button is present but not available to you, you are probably displaying the property sheet for another user.

If the panel looks like Figure 26 on page 61, your management directory is RACF-protected. In this case these steps for changing the password do not apply to you. You must change your password in RACF.

2. Click **Change password...** The "Change password" panel is displayed.

Figure 27. Change password panel

3. Follow the instructions on the panel to define a new password.

4. Close the panel with **OK** to save the new password.

A message informs you that you have changed the password successfully. Use the new password the next time you log on to Setup. The change of password does not affect the passwords you use to log on to the z/OS systems you want to customize.

Steps for resetting a password

Before you begin: You require user administrator rights to reset another user's password. For instructions on how to change your own password see "Steps for changing the password" on page 61.

Perform these steps to reset a password:

1. Display the the "General" panel of the property sheet for the user who's password you want to reset (see "Steps for changing user information" on page 59).

   The panel should have a **Change password...** button as shown in Figure 25 on page 60.

   If the panel looks like Figure 26 on page 61, your management directory is RACF-protected. In this case these steps for resetting the password do not apply to you. You must manage the user passwords from RACF.

2. Click **Change password...** The "Reset user password" panel is displayed.

Figure 28. Reset password panel

_____

3. Follow the instructions on the panel to define a new password.

_____

4. Close the panel with **OK** to save the new password.

_____

A message informs you that you have changed the password successfully. Communicate the new password to the user.

Steps for changing a user's workplace authorization

Before you begin:

- You require user administrator rights to change a user's workplace authorization.
- Do not change a user's authorization while one of the user's jobs is running.

Perform the following steps to change a user's workplace authorization:

1. Click the **Users** icon in the resource tree to display the list of users in the list view.

_____

2. In the list view select the user that you want to change.

_____

3. Click **File —> Properties** on the menu.

_____

4. The property sheet for the selected user appears. Click the **Workplace management authorizations** tab.

_____
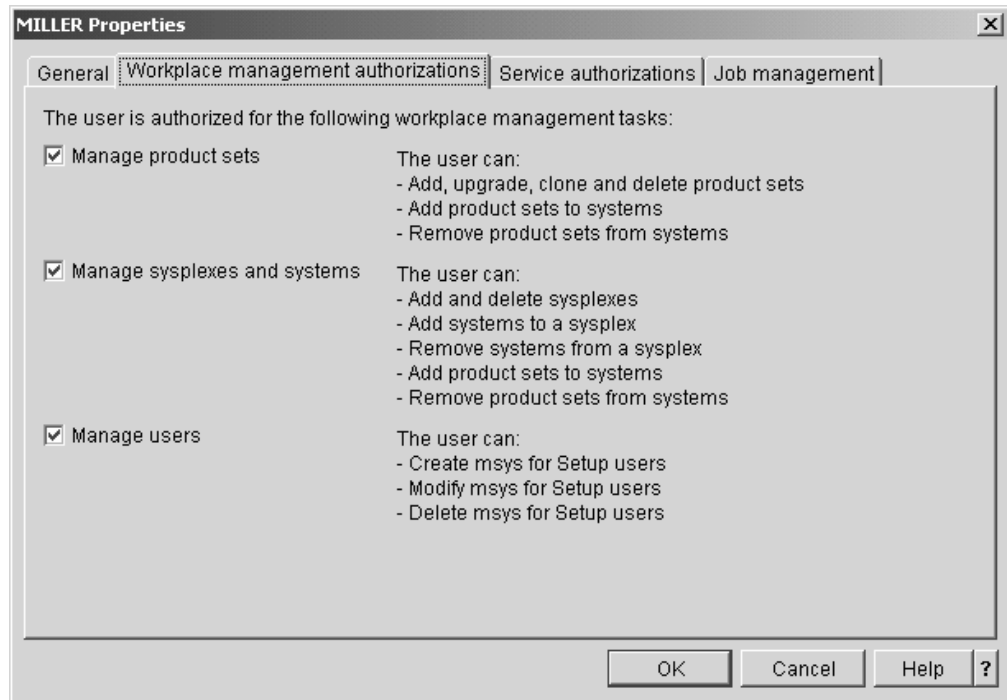
5. Select and clear the check boxes as required.

_____

6. Close the property sheet with **OK** to save the changes.

_____

Steps for changing a user's service authorizations

Before you begin:
- You require user administrator rights to perform this task.
- Granting rights in msys for Setup does not assign the corresponding rights on the z/OS system. You must authorize the user on the z/OS system outside msys for Setup. Refer to the service information file to find out which rights are needed (see "Steps for viewing a service information file" on page 7).

Perform these steps to change a user's service authorizations:

1. Click the **Users** icon in the resource tree to display the list of users in the list view.

_____

2. In the list view select the user that you want to change.

_____

3. Click **File —> Properties** on the menu.
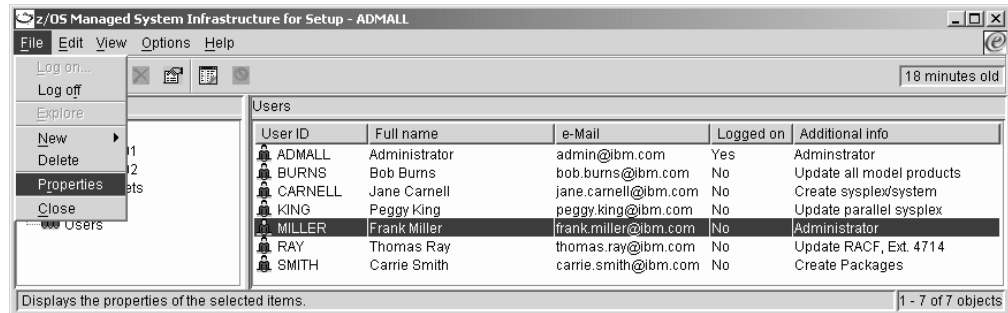
4. The property sheet for the selected user appears. Click the **Service authorizations** tab.
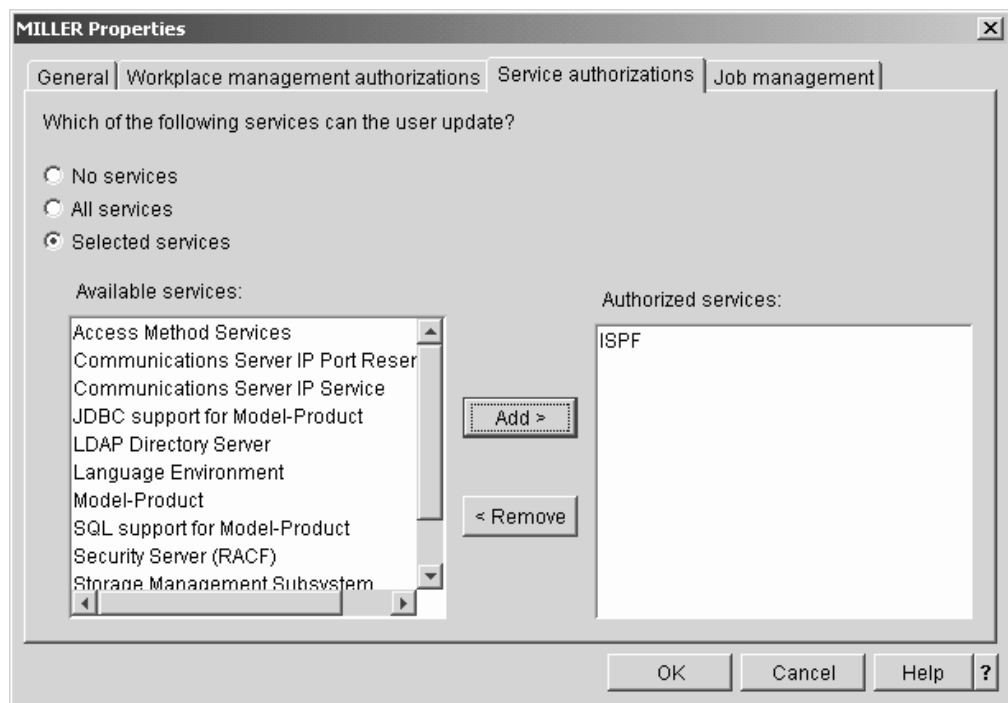
If the **No services** or the **All services** radio button is selected the authorization is according to the radio button for all or none of the services, regardless of what is shown in the lists below the radio buttons.

If the **Selected services** radio button is selected, the services for which the user is currently authorized are shown in the **Authorized services** list box. The remaining available services for which the user is not authorized are shown in the **Available services** list box.

5. Select a radio button.

Select	to ...
No services	To revoke the right to work with any service

Select	to ...
All services	To grant the right to work with all available services
Selected services	To grant the right to work with specific services only

6. If you have selected the Selected services radio button, you can change the services for which the user is currently authorized.

   To authorize the user for an additional service, select the service in the **Available services** list box and then click **Add >**.

   To revoke the user's authorization for a service, select the service in the **Authorized services** list box and then click **< Remove**.

7. Close the property sheet with **OK** to save the changes.

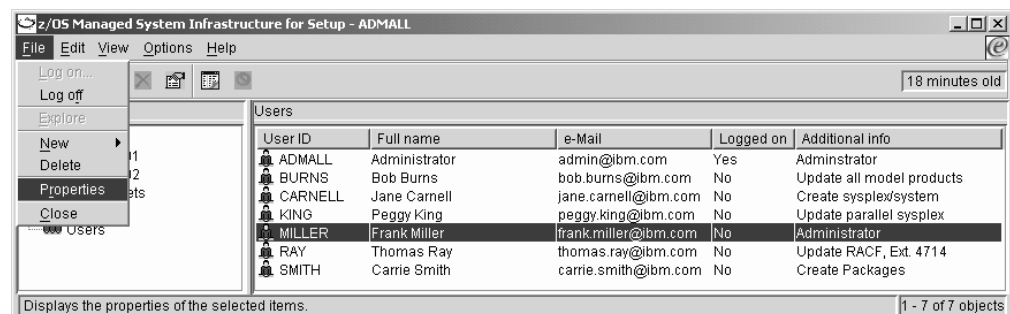## Steps for changing a user's job authorizations

Before you begin: You require user administrator rights to change a user's job authorization.

Perform these steps to change a user's job authorization:

1. Click the **Users** icon in the resource tree to display the list of users in the list view.

2. In the list view select the user that you want to change.

3. Click **File —> Properties** on the menu.

```
z/OS Managed System Infrastructure for Setup - ADMALL                      _ □ X
File  Edit  View  Options  Help                                              @
 Log on...      X  🖬  🔳  🔲                              [18 minutes old]
 Log off
                    Users
 Explore
 New        ▶   │ User ID  │ Full name   │ e-Mail              │ Logged on │ Additional info
 Delete     1,2 │ ADMALL   │ Administrator │ admin@ibm.com       │ Yes  │ Adminstrator
                │ BURNS    │ Bob Burns    │ bob.burns@ibm.com   │ No   │ Update all model products
 Properties  ts │ CARNELL  │ Jane Carnell │ jane.carnell@ibm.com│ No   │ Create sysplex/system
 Close          │ KING     │ Peggy King   │ peggy.king@ibm.com  │ No   │ Update parallel sysplex
   Users        │ MILLER   │ Frank Miller │ frank.miller@ibm.com│ No   │ Administrator
                │ RAY      │ Thomas Ray   │ thomas.ray@ibm.com  │ No   │ Update RACF, Ext. 4714
                │ SMITH    │ Carrie Smith │ carrie.smith@ibm.com│ No   │ Create Packages
Displays the properties of the selected items.                    1 - 7 of 7 objects
```


4. The property sheet for the selected user appears. Click the **Job management** tab.

MILLER Properties

General | Workplace management authorizations | Service authorizations | Job management

By default, users can view and delete only the msys for Setup jobs they own. The user has the following additional rights with respect to jobs:

☑ View all jobs
☑ Delete all jobs

OK   Cancel   Help   ?

_____
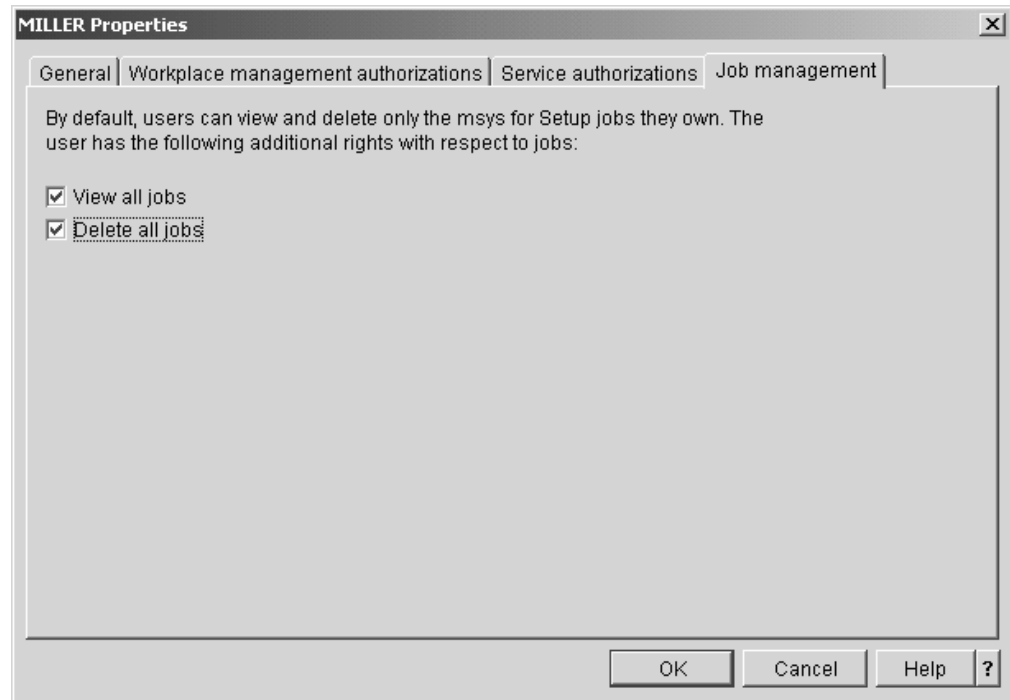
5. Select or clear the check boxes to determine whether the user can view or delete other user's jobs.

   If you grant the right to delete all jobs you automatically grant the right to view all jobs. If you revoke the right to view all jobs, you automatically revoke the right to delete all jobs.

_____

6. Close the property sheet with **OK** to save the changes.

_____

Steps for deleting a user

Before you begin: You require user administrator rights to delete a user.

Perform the following steps to delete a user:

1. Click the **Users** icon in the resource tree.

_____

2. Select the user you want to delete in the user list.

_____

3. Click **File —> Delete** on the menu to delete the user.
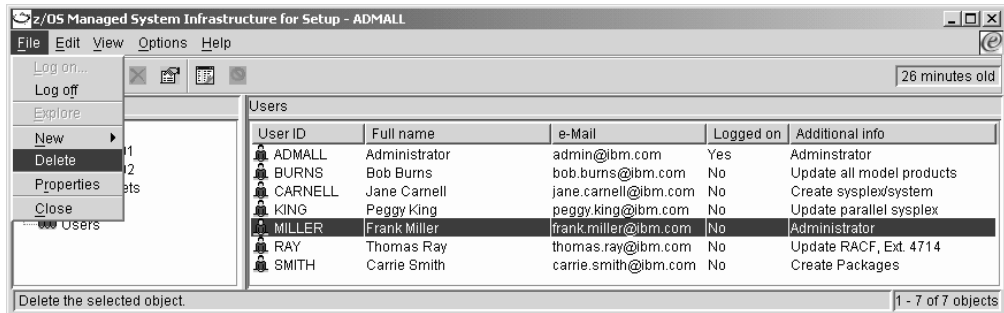
>**Note:** This menu item is only available to msys for Setup user administrators.

_____

>**Result:** The deleted user is no longer shown in the user list in the list view. For RACF-protected management directories, this does not remove the user definition from RACF.

Steps for editing the service authorizations

This task provides a fast path to authorize multiple users for a particular service. This is useful, for example, when a new service has become available.

Before you begin:
- You require user administrator rights to perform this task.
- Granting rights in msys for Setup does not assign the corresponding rights on the z/OS system. You must authorize the user on the z/OS system outside msys for Setup. Refer to the service information file to find out which rights are needed (see "Steps for viewing a service information file" on page 7).

Perform the following steps to edit a list of users that can work with each service:

1. Click the **Users** icon in the resource tree.

_____

2. Click **File —> Manage user authorizations...** on the menu.
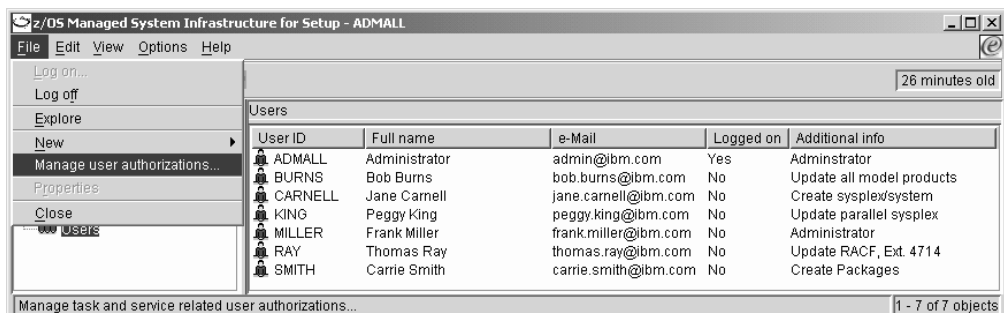
>**Note:** This menu item is only available to msys for Setup user administrators.

_____

3. On the "msys for Setup user authorizations" property sheet, click the "Service authorizations" tab. The service table shows the available services and the respective lists of already authorized users.

_____

4. Select the service for which you want to edit the list of authorized users.

```
┌──────────────────────────────────────────────────────────────────────┐
│ ⬙ msys for Setup user authorizations                        _ □ ✕     │
├──────────────────────────────────────────────────────────────────────┤
│ ┌─────────────────────────────────┬─────────────────────┐            │
│ │ Workplace management authorizations │ Service authorizations │        │
│                                                                        │
│  Select a service, then click 'Edit authorizations' to add or remove users.│
│  ┌──────────────────────────────────────┬───────────────────────────┐ │
│  │ Service                              │ Authorized Users          │ │
│  ├──────────────────────────────────────┼───────────────────────────┤ │
│  │ Access Method Services               │ ADMIN, KING               │ │
│  │ Communications Server IP Service     │ ADMIN                     │ │
│  │ ISPF                                 │ ADMIN                     │ │
│  │ JDBC support for Model-Product       │ ADMIN, BURNS              │ │
│  │ Language Environment                 │ ADMIN                     │ │
│  │ Model-Product                        │ ADMIN, BURNS              │ │
│  │ SQL support for Model-Product        │ ADMIN, BURNS              │ │
│  │ Security Server (RACF)               │ ADMIN, MULER, RAY         │ │
│  │ Storage Management Subsystem         │ ADMIN, KING               │ │
│  │ Sysplex-wide and operating system settings │ ADMIN, KING         │ │
│  │ UNIX System Services                 │ ADMIN                     │ │
│  │                                      │                           │ │
│  └──────────────────────────────────────┴───────────────────────────┘ │
│   ┌───────────────────────┐                                           │
│   │ Edit authorizations... │                                          │
│   └───────────────────────┘                                           │
│                            ┌────────┐  ┌────────┐  ┌──────┐ ┌──┐      │
│                            │   OK   │  │ Cancel │  │ Help │ │ ?│      │
│                            └────────┘  └────────┘  └──────┘ └──┘      │
└──────────────────────────────────────────────────────────────────────┘
```

When you have selected a service, the **Edit authorizations...** button becomes available.

_____

5. Click **Edit authorizations...** to display the "Edit authorizations" panel.

_____

6. Select the users that you want to authorize for the service in the **Available users** list.
Tip: You can select multiple users at a time.

_____
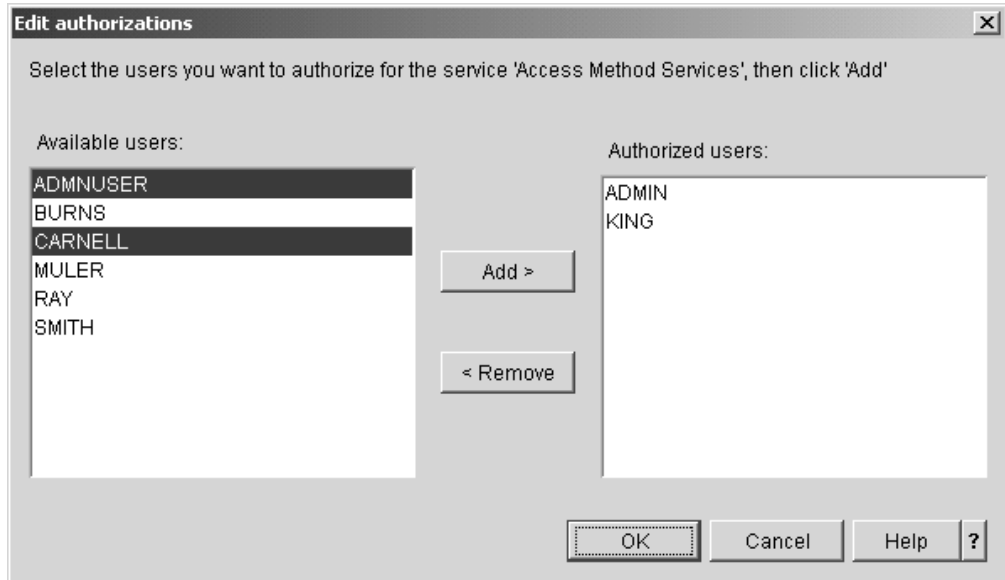
7. Click **Add >** to add the selected users to the **Authorized users** list.

_____

8. Select the users for which you want to revoke the authorization in the **Authorized users** list and click **< Remove**.

_____

9. Click **OK** to return to the "Service authorizations" panel. You should now see your edited list of authorized users in the service table.

   Tip: you can repeat step 4 on page 69 to this step for other services.

_____

10. Click **OK** to save your changes.

_____

Steps for editing administrator lists

This task provides a fast path to authorize multiple users for administration task.

Before you begin:
- You require user administrator rights to perform this task.
- Do not change a user's authorization while one of the user's jobs is running.

Perform the following steps to edit the lists of users that can perform the administration tasks:
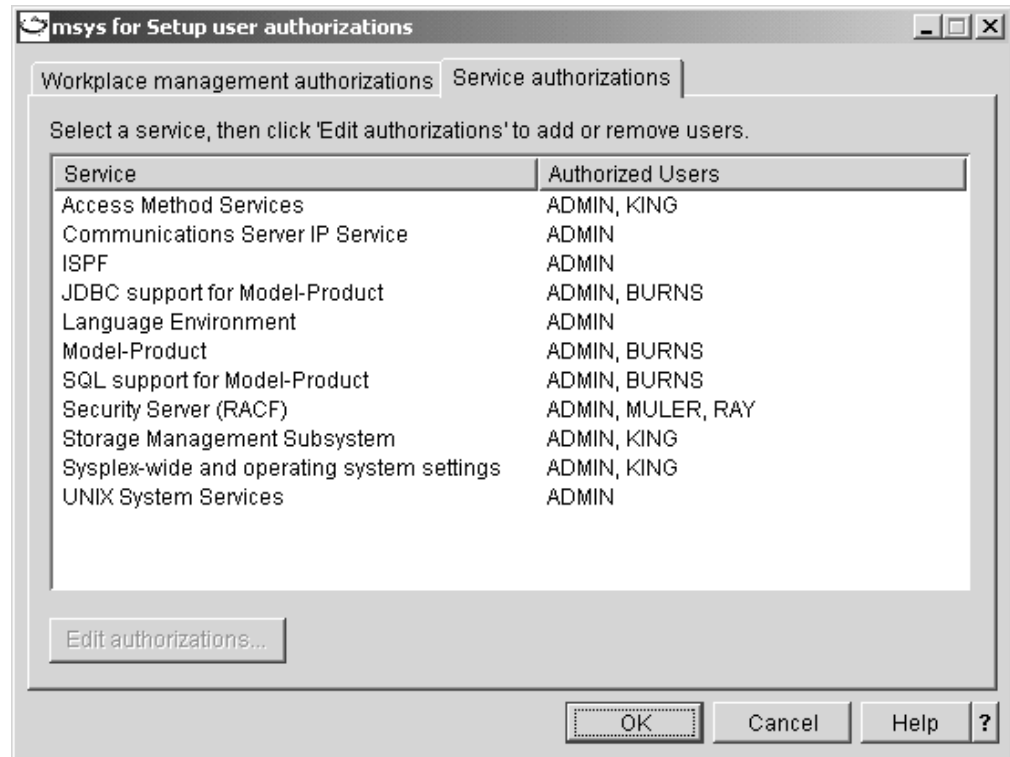
1. Click the **Users** icon in the resource tree.

_____

2. Click **File —> Manage user authorizations...** on the menu.
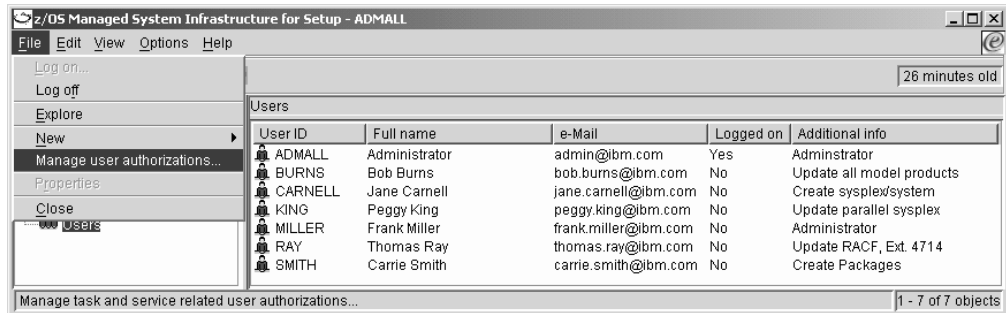
Note: This menu item is only available to msys for Setup user administrators.

The "msys for Setup user authorizations" property sheet that is displayed should come up with the "Workplace management authorizations" panel in the foreground. The task table shows the tasks and a list of already authorized users.

_____

3. Select the administration task for which you want to edit the list of authorized users.
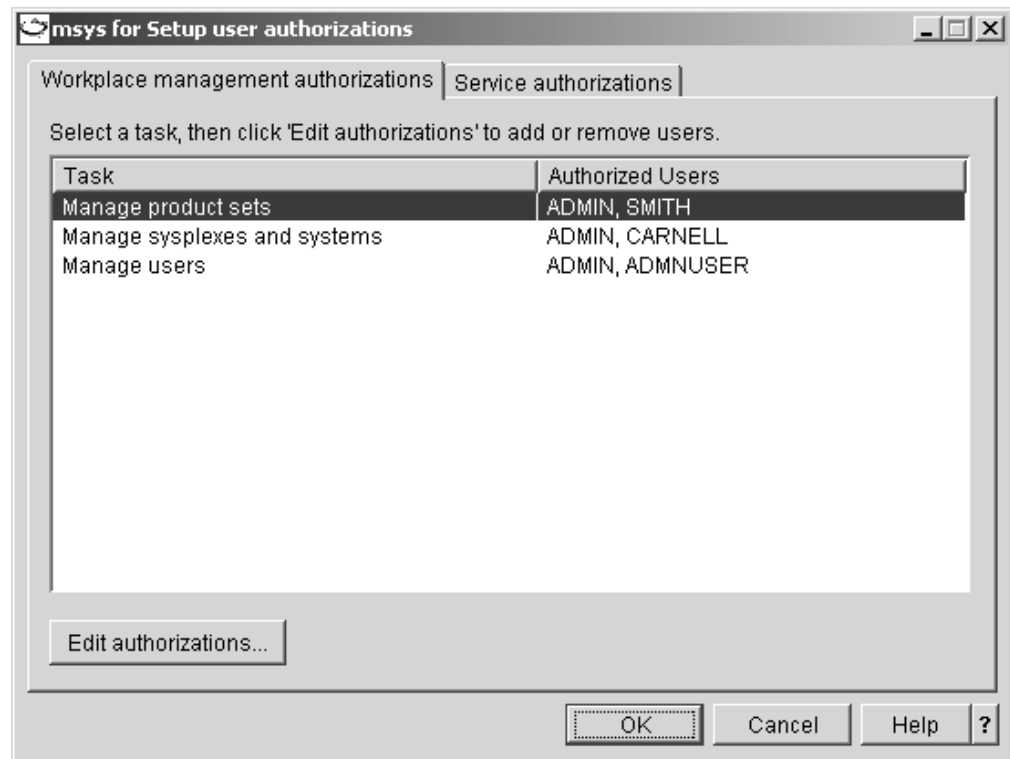
When you have selected a task, the **Edit authorizations...** button becomes available.

_____

4. Click **Edit authorizations...** to display the "Edit authorizations" panel.

_____

5. Select the users that you want to authorize for the administration task in the **Available users** list.

   Tip: You can select multiple users at a time.

_____
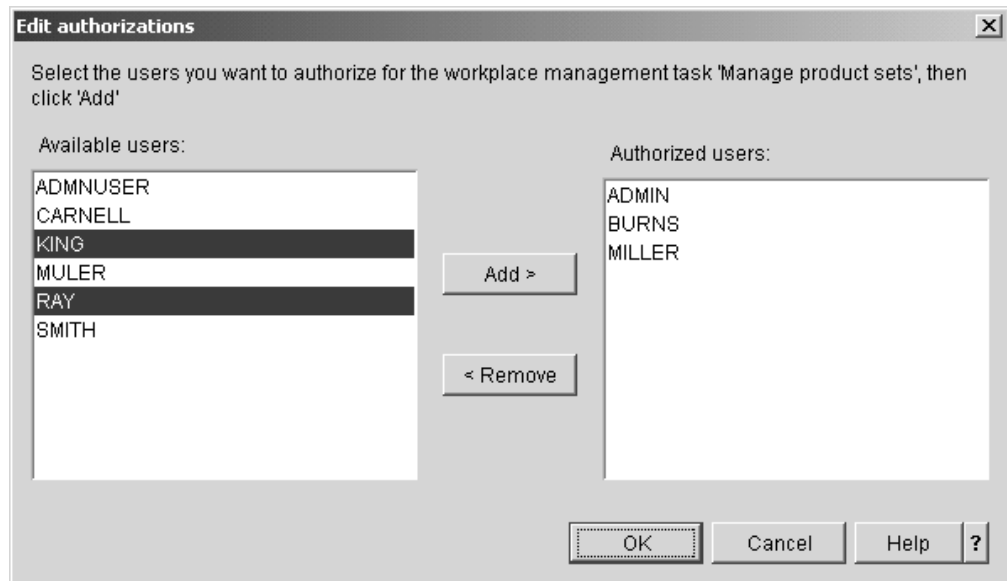
6. Click **Add >** to add the selected users to the **Authorized users** list.

_____

7. Select the users for which you want to revoke the authorization in the **Authorized users** list and click **< Remove**.

_____

8. Click **OK** to return to the "Workplace management authorizations" panel. You should now see your edited list of authorized users in the task table.

   Tip: you can repeat step 3 on page 71 to this step for other tasks.

_____

9. Click **OK** to save your changes.

_____

Steps for viewing lists of authorized users

Perform the following steps to view the lists of users that are authorized for the administration tasks and for updating the available services:

1. Click the **Users** icon in the resource tree.

_____

2. Click **File —> View user authorizations...** on the menu.

z/OS Managed System Infrastructure for Setup - SMITH

File | Edit | View | Options | Help

Log on...
Log off

View user authorizations...

Export as HTML

Properties

Close

Jobs

Users

0 minutes old

Users

User ID	Full name	e-Mail	Logged on	Additional info
ADMIN	Administrator	admin@ibm.com	No	System Administration
ADMNUSER	Admin	useradministrator@ibm.com	No	User Administration
BURNS	Bob Burns	bob.burns@ibm.com	No	Update all model Products
CARNELL	Jane Carnell	jane.carnell@ibm.com	No	Create sysplex/systems
KING	Peggy King	peggy.king@ibm.com	No	Update Parallel Syslex
MILLER	Frank Miller	frank.miller@ibm.com	No	Administration
MULER	Chris Muler	chris.muler@ibm.com	No	Update RACF, Ext 4714
RAY	Thomas Ray	thomas.ray@ibm.com	No	Update RACF, Ext 4714
SMITH	Carrie Smith	carrie.smith@ibm.com	Yes	create packages

View task and service related user authorizations...

1 - 9 of 9 objects

Note: User administrators do not have this menu item they have **Manage user authorizations...** instead.

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3. Use the tabs to navigate between the lists of users that are authorized for the administration tasks and the lists of users that are authorized for the available services.

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Chapter 7. Managing product sets

This section is intended for product set administrators. The product set folder and the tasks for product sets are only visible to you if you have product set administrator rights.

msys for Setup is for customizing products that have already been installed on a system. It is not intended to drive product installation. Product set administration is the task of keeping msys for Setup up-to-date on the products that have been installed on your systems.

This section provides some basic information on product sets and describes these tasks:

Task	Associated procedures
Managing product sets	• "Steps for adding a new product set to the management directory" on page 79 • "Steps for viewing product set information" on page 82 • "Steps for editing a product set" on page 83 • "Steps for upgrading a product set" on page 84 • "Steps for deleting a product set" on page 89
Managing product set associations with systems	• "Steps for adding a product set to a system" on page 85 • "Steps for removing a product set from a system" on page 87

What you must know about product sets

A product set in the resource tree represents an actual set of products that has been installed on a system. The products in a product set are installed and maintained as a group. If a product is handled individually, the corresponding product set consists of only one product. z/OS is an example of a product set with multiple products.

A product set is broken down into separately customizable units. In msys for Setup, these customizable units are called *services*. For example, RACF is a service of Security Server. All setup steps are at the granularity of individual services (see Part 1, "Setting up a product with msys for Setup", on page 1).

Making a product set known to msys for Setup

msys for Setup needs:
- Information on the volumes where the product set has been installed
- A list of all services that are provided by the product set
- Details on the data sets, partitioned data set members, and HFS files, that make up each service

msys for Setup can accept this information from different sources:
- From SMP/E data
- From an XML document
- From an existing product set

If you have not installed the product set yourself, you will have to contact the person or team that has installed it to find out if there is an XML document you can use, or alternatively, SMP/E data or information on the changes that were made when cloning an existing product set. See Appendix F, "Worksheet for product set installation data", on page 173 for details on the information you require.

Using SMP/E data

The information that msys for Setup requires is a subset of the information that SMP/E maintains for SMP/E installed products. To be able to obtain this information from SMP/E, msys for Setup needs to know the SMP/E CSI and SMP/E zones that describe the product set.

The job that reads the information and adds the product set to the resource tree must run on a system that has access to the corresponding SMP/E environment.

To read the data, msys for Setup runs a special program that it can only locate if it knows the HLQs for the:
- SMP/E product
- ISPF product
  Note: For z/OS systems on which the msys for Setup SPE PTFs UA90013 and UA90015 have been installed, you have the option to specify the ISPF data set names if an HLQ cannot be used.

For z/OS systems on which the msys for Setup SPE PTFs UA90013 and UA90015 have not been installed, you also need to provide HLQs for the:
- CustomPac master dialog data sets
- CustomPac order dialog data sets

When you add a product set using SMP/E information the "Add a product set" wizard prompts you for these HLQs.

There are some restrictions with regard to what can be in an SMP/E zone.

Restrictions:
- A product set can correspond to one or more SMP/E zones.
- The set of zones must not contain different releases of the same product, or a product and another product that replaces it functionally.
- The set of zones must not contain the same service multiple times.

Using an XML document

msys for Setup can read the required information from a special XML document that accurately describes the product set and its services. For some product sets such an XML document is provided to you. For a CustomPac based product set a suitable XML document is generated as part of the CustomPac installation.

Using information from an existing product set

If you have installed a product home by cloning, you might or might not have cloned SMP/E information that describes the product set. If the clone includes SMP/E information, proceed as for any product set for which an SMP/E environment is available (see "Using SMP/E data").

If no SMP/E data is available but you have cloned from a product set that has already been added to the resource tree, you can use that product set as the source for the information that is required by msys for Setup. If you add a product set

with an existing product set as source, the "Add a product set" wizard includes panels where you can provide information on volumes, path information, and HLQs that you might have changed during the cloning process.

Telling msys for Setup where a product set is installed

After making a product set known to msys for Setup, you must tell msys for Setup which system it has been installed on. You do this by *adding* the product set to the system. The system as a management directory object is created by the sysplex and system administrator (see Chapter 8, "Managing sysplexes and systems", on page 91).

You can add the same product set to all systems that share the installed code. Just as creating a product set does not install code, adding the product set to a system does not make the code available to that system. By adding a product set to a system you are telling msys for Setup that the product code is *already* available to the system.

Be sure not to add a product set to a system that does not share the installation. msys for Setup has no means to detect the mismatch and will establish a connection between the product set and the system in the management directory. However, later attempts to customize the services in that product set *will fail*.

Telling msys for Setup that a product set has changed

You tell msys for Setup that a product set has changed by upgrading the product set. You must upgrade a product set:

- If you have installed a PTF for the product set. PTFs are installed outside msys for Setup.
- If you had to remove a PTF for which you have already performed upgrade.
- If you have installed a new product into an SMP/E zone that belongs to the product set.
- If you have deleted a product from an SMP/E zone that belongs to the product set.

During upgrade, msys for Setup changes the information that it obtained when the product set was added to the resource tree. Like making a product set known to msys for Setup, upgrading a product set can use an XML, SMP/E data, or in the case of a cloned system, the original product set as the source of the required information. In most cases msys for Setup does not give you a choice for which source to use but uses what is available. This is usually SMP/E data even if the product set has been added with information from an XML document.

With SMP/E data as source, the "Upgrade a Product Set" wizard allows you to edit the specifications you had made when you added the product set to the resource tree. Unless you have made changes to your environment, do not make any changes on the panels.

What to do after an upgrade?

If an upgrade task ends with an error, you can no longer work with the product set until you have resolved the error and successfully rerun the upgrade task. Check for user actions for what you need to do (see "Displaying user actions" on page 125).

An upgrade always ends with an error if it would result in deleting a service by force (see "Deleting a service instance" on page 10). If you want the upgrade task

to delete services by force, select the **Force service deletion during upgrade** check box on the "Run Product Set Job" panel and then rerun the job by clicking **Start**.

After completing the upgrade task successfully, you will be prompted to log on to each system to which the product set has been added. This enables msys for Setup to ensure that the correct policies are in place, according to the upgraded product set. You are advised to check for new policies (see "Steps for viewing or changing policy settings" on page 13).

Check the status of each service on every system that the upgraded product set has been added to. Some services might require refresh or recustomization or both, before you can continue to work with them.

Summary

Figure 29 summarizes what must be done to make the services in a product set available for customization in msys for Setup.
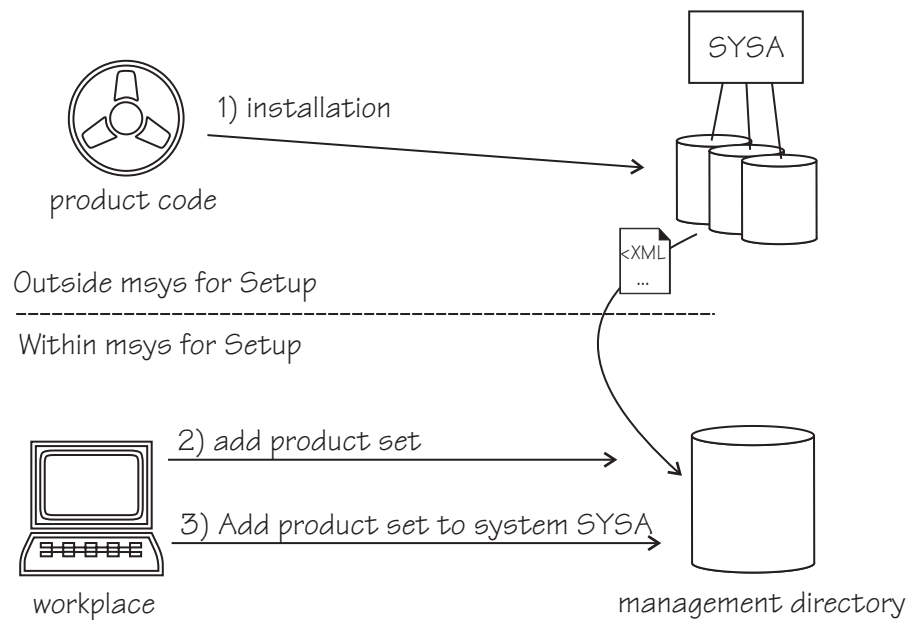

Figure 29. Handling product sets

1. First the products must be installed on the z/OS system. This task is performed outside msys for Setup.
2. Next you must create a corresponding product set in the management directory. This usually involves transferring a product set description from the z/OS system to the management directory. This task is driven by the msys for Setup workplace.
3. Finally, the product set is added to a system. This creates an association in the management directory, between the product set description and the description of the z/OS system where the product set is installed. This task is driven by the msys for Setup workplace.

Steps for adding a new product set to the management directory

Adding a product set creates an object in the management directory that describes a set of products. This set of products must already have been installed on a z/OS system. Use the "Add a product set" wizard to create a product set.

Before you start:
- You require product set administrator rights
- The information as summarized in the worksheet for installing product sets Appendix F, "Worksheet for product set installation data", on page 173

Perform these steps to add a product set:

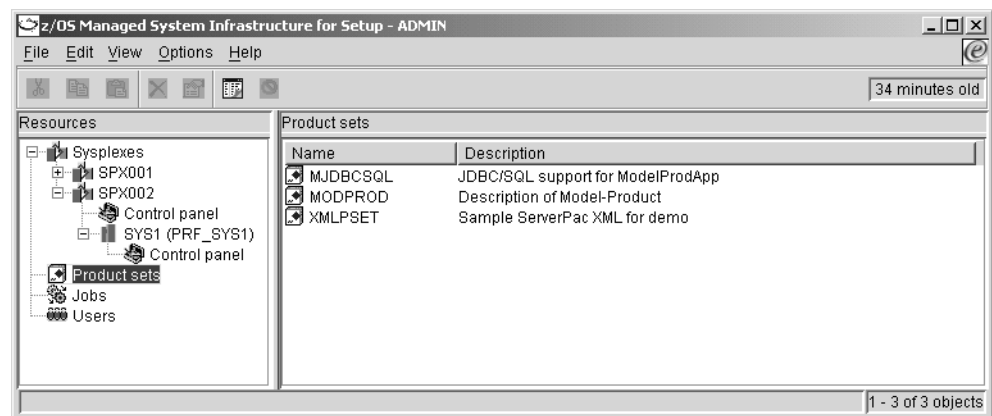1. Click the Product sets folder in the resource tree.

Figure 30. Selecting the Product sets folder

> **Note:** The Product sets folder is only available to msys for Setup product set administrators.

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2. Click **File —> New —> Product set...** on the menu. This launches the "Add a product set" wizard.

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3. Click **Next** to proceed to the next wizard panel. The following wizard panel is displayed:
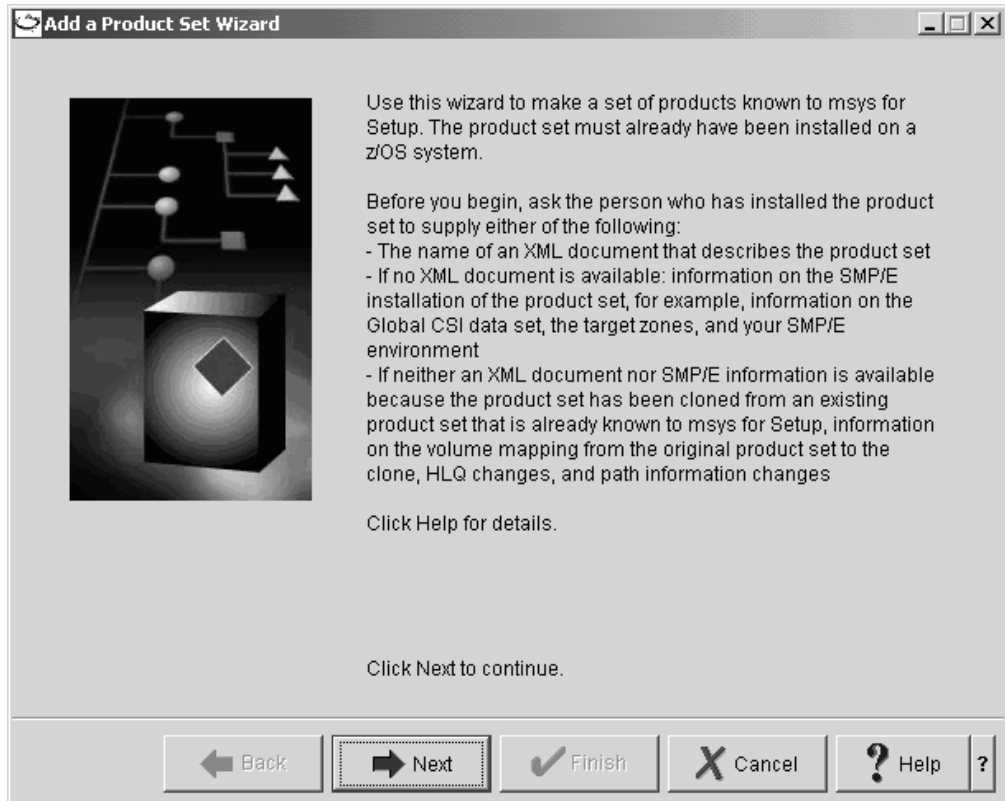
Figure 31. Selecting the source for adding a new product set

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4. Select the desired source for the product set description and click **Next**.

If your product set is . . .	Then select . . .	Related reference information
a CustomPac installation that has not been altered, for example by moving or installing additional products, and where an SMP/E environment is available	the option that uses an XML document	"Using an XML document" on page 76
other products, where no SMP/E data is available but an XML document is provided		
a CustomPac installation that has been altered, for example by moving or installing additional products, and where an SMP/E environment is available	the option that uses SMP/E data	"Using SMP/E data" on page 76
other products, where an SMP/E environment is available		
a cloned product set where the original product set has already been added to the resource tree, and the SMP/E data has also been cloned		
a cloned product set where the original product set has already been added to the resource tree, and no SMP/E data is available for the clone	the option that copies and adapts the information on the original product set	"Using information from an existing product set" on page 76

5. Follow the instructions in the "Add a product set" wizard.

_____

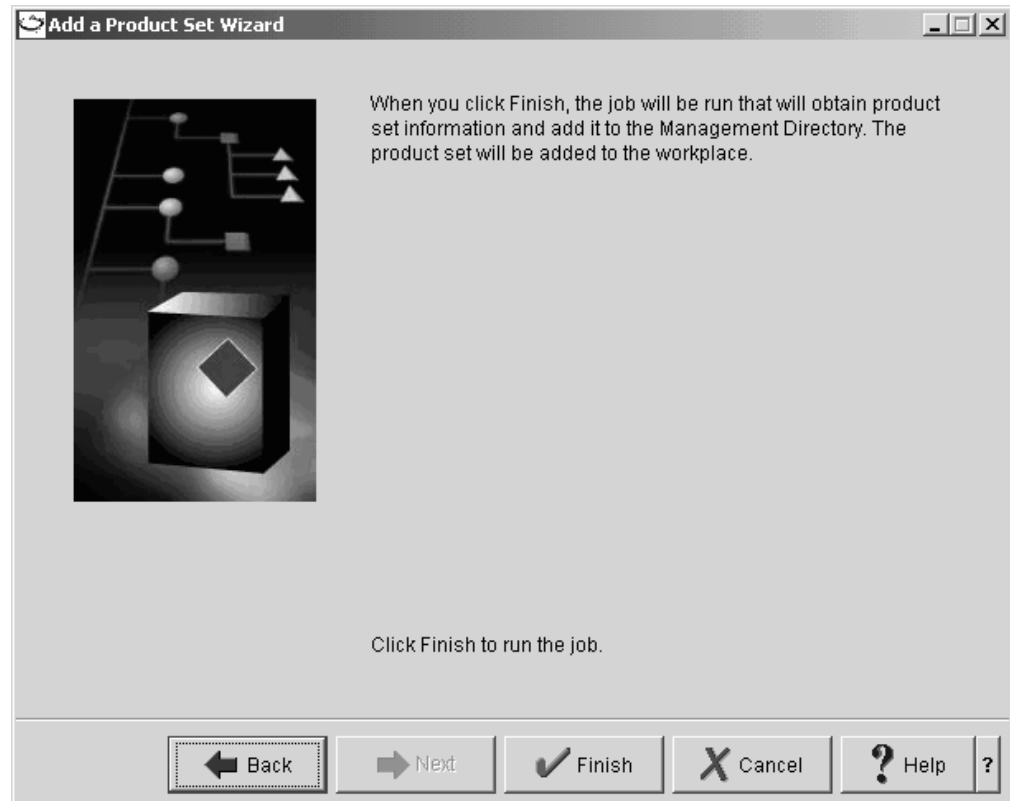6. When you have completed the wizard, click **Finish**.

Figure 32. Finishing the Add a product set wizard

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7. You are prompted to select a z/OS system for running the job that adds the product set. If you are not logged on to the system yet, you will be prompted for your user ID and password.

> Note: When you create your very first product set, before the first sysplex and system have been added to the workplace, the "Add a Product Set Wizard - Wizard Divider" panel is displayed instead of this panel and you proceed to specify data for a z/OS system where the job can be submitted that makes the new product set available to msys for Setup.

If the source of the product set description is an XML document or an SMP/E environment, the job can only run successfully on a system where the product set is installed.

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Result: The job is started automatically. When it has completed successfully, the new product set is listed in the list view.

Steps for viewing product set information

Before you begin: The product set property sheet is only available to product set administrators.

Perform these steps to view product set information:

1. Select the product set folder in the resource tree. A list of all available product sets is displayed in the list view.

   Note: The product set folder is only present if you have product set administrator rights.

   _____

2. In the list view, select the product set for which you want to display the property sheet.

   _____

3. Click **File —> Properties** on the menu.

   You should now see the property sheet for the selected product set. The title bar of the property sheet shows the name of the selected product set.

Figure 33. Product sets property sheet

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4. Use the tabs to navigate among the panels of the property sheet.

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5. When you are done, close the property sheet with **OK** to save any changes.

Steps for editing a product set

Edit a product set to make msys for Setup aware of changes that you have made to a product set outside msys for Setup, or to make corrections to data that you have supplied when you added the product set.

Before you begin: Only product set administrators can edit a product set.

Perform these steps to edit a product set:

1. Click the **Product Sets** folder in the resource tree. A list of all available product sets is displayed in the list view of the workplace.

   Note: The product sets folder is only available to msys for Setup product set administrators.

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2. Select the product set you want to edit.

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3. Click **File —> Edit...** on the menu.

   You should now see the first panel in the wizard sequence.

   _____

4. Click **Next** to proceed to the next wizard panel. The panels the wizard comprises of varies, depending on the source of the product set description that was selected when the product set was added to the resource tree. Follow the instructions in the wizard.

   _____

5. When you have completed the wizard, click **Finish**.

   _____

6. You are prompted to select a z/OS system for running the job. The job can run on any system. If you are not logged on to a z/OS system for running the job you are prompted to log on.

   _____

Result: The job is started automatically.

Steps for upgrading a product set

Upgrade a product set to make msys for Setup aware that a product set has changed because, for example, a PTF has been applied outside msys for Setup. See "Telling msys for Setup that a product set has changed" on page 77 for more details on when to upgrade a product set.

Before you begin:
* Only product set administrators can use this wizard
* You require a description of the changed product set. This can be:
  – SMP/E data
  – An XML document
  – For a cloned product set, the upgraded original product set

Perform these steps to upgrade a product set:

1. Click the **Product Sets** folder in the resource tree. A list of all available product sets is displayed in the list view of the workplace.

   Note: The product sets folder is only available to msys for Setup product set administrators.

   _____

2. Select the product set you want to upgrade.

3. Click **File —> Upgrade...** on the menu.

   You should now see the first panel in the "Upgrade a Product Set" wizard sequence.

4. Click **Next** to proceed to the next wizard panel. The panels the wizard comprises of varies, depending on the source of the product set description that was selected when the product set was added to the resource tree. Follow the instructions in the wizard.

5. When you have completed the wizard, click **Finish**.

6. You are prompted to select a z/OS system for running the job that changes the product set description.

   If the source of the upgrade is an XML document or an SMP/E environment, the job can only run successfully if you select a system where the product set is installed.

7. After you have selected a system, the job is started automatically.

See "What to do after an upgrade?" on page 77 for how to proceed after the upgrade task has ended.

Steps for adding a product set to a system

Before you can set up a service on a system, you must add a product set that contains the service to the system. This associates the product set with the system's active system profile and, thus, makes the services it contains available for the setup tasks. Adding a product set to a system only affects the system's active system profile. If you want to set up the services for another system profile of the same system, you must first make that system profile the active system profile (see "Steps for changing the active system profile" on page 113) of the system and then add the product set again.

To see which system profile is the active system profile go to the "System Profiles" panel of the System property sheet.

Before you begin:
- This panel is only available to product set administrators.
- Product sets can also be added to a system by sysplex and system administrators (see "Steps for adding a product set to a system profile" on page 117).

Perform these steps to add a product set to a system:

1. Open the property sheet for the product set for which you want to view or change information (see "Steps for viewing product set information" on page 82).

2. Click the "Added to systems" tab.

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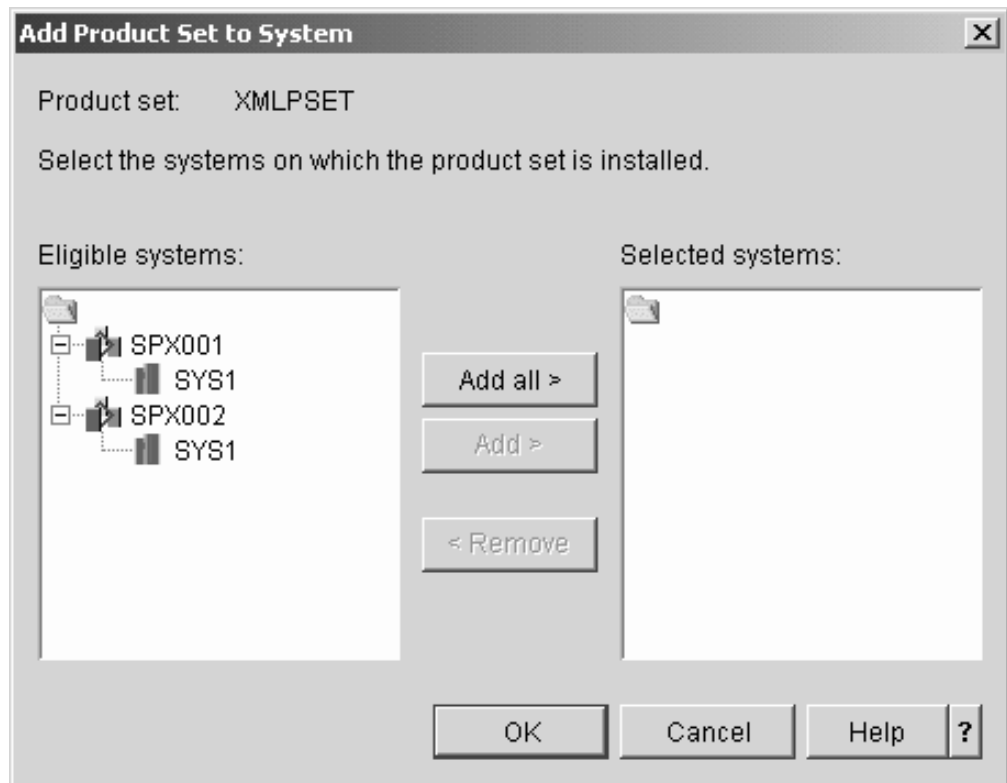3. Click **Add to system**. The "Add Product Set to System" panel is displayed.

Figure 34. Add Product Set to System panel

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4. In the **Eligible systems** field, select the system or systems you want to add the product set to. These are systems for which:
   - The product set to be added has not already been added
   - No product set has been added that has one or more single instance services in common with the product set to be added
   - No product set has been added that has one or more optional services or multiple instance services of the same version in common with the product set to be added
   - If the product set to be added is a z/OS product set, no other z/OS product set (as identified by the z/OS product number) has been added

   Tip: You can select all systems in a sysplex by selecting the sysplex. To select all systems in all sysplexes click **Add all >**.

   Note: Be sure to only add the product set to systems that it has been installed on. Installing is done outside msys for Setup. If you add a product set to a system that it has not been installed on, msys for Setup might not detect the mismatch, but all attempts to set up the services in it for this system will *fail*.

_____

5. Click **Add >**. The selected system or systems are moved from the **Eligible systems** field to the **Selected systems** field.

_____

6. Click **OK**. The product set is added to each system in the **Selected systems** field.

_____

Steps for removing a product set from a system

Removing a product set from a system detaches the product set from the system's active system profile. Removing a product set from a system only affects the system's active system profile. If you want to remove the product set from another system profile of the same system, you must first make that system profile the active system profile (see "Steps for changing the active system profile" on page 113) of the system and then remove the product set again.

To see which system profile is the active system profile go to the "System Profiles" panel of the System property sheet.

Before you begin:
- This panel is only available to product set administrators.
- Product sets can also be removed from a system by sysplex and system administrators (see "Steps for removing a product set from a system").

Perform these steps to remove a product set from a system:

1. Open the property sheet for the product set you want to remove from a system (see "Steps for viewing product set information" on page 82).

_____

2. Click the "Added to systems" tab.

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3. In the list of systems to which the product set has already been added, select the system from which you want to remove the product set.
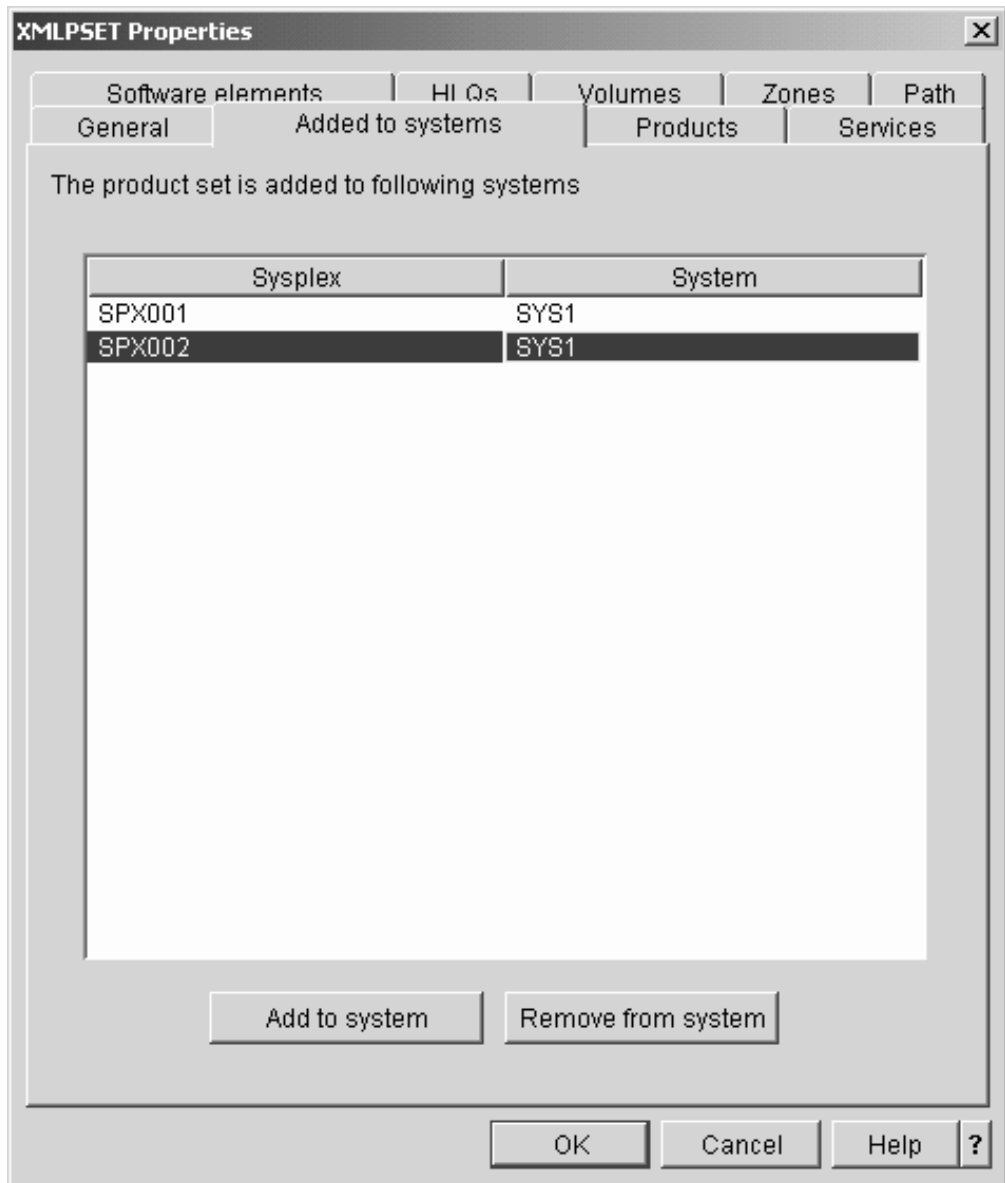
Figure 35. Add Product Set to System panel

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4. Click **Remove from system**.

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Deleting a product set

Delete a product set if its services are no longer used, in particular as a preparation for removing the program code that corresponds to the product set. Removing a product set also removes all information on configuration updates that have been performed to accommodate the services in the product set. In particular these changes can no longer be undone with msys for Setup once the product set has been deleted.

Before you delete a product set, undo all updates for all z/OS systems that you have made to accommodate its services (see Chapter 10, "Undo all updates", on page 129

page 129). Otherwise these updates are preserved beyond the existence of the product set and can, therefore, lead to an inconsistent system configurations. Then remove the product sets from all systems (see "Steps for removing a product set from a system" on page 87).

msys for Setup permits a forced deletion of product sets for which updates have not been undone and that have not been removed from all z/OS systems. Only resort to a forced deletion if the product set code has already been removed and the updates can no longer be undone with msys for Setup. You might then have to undo updates for the services of the product set outside msys for Setup to ensure that the system configuration is in a consistent state.

Steps for deleting a product set

Before you begin:

You require product set administration rights to delete a product set. You can only delete a product set if it has been removed from all systems it has been added to, for all system profiles.

Perform these steps to delete a product set:

1. In the resource tree, click the **Product sets** folder. A list of all available product sets is displayed in the list view.

   Note: The product sets folder is only present if you have product set administration rights.

   _____

2. In the list view, select the product set that you want to delete.

   _____

3. Click **File —>Delete ...** on the menu.

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4. You are prompted to confirm the deletion of the product set. Click **Yes** to delete the product set.

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Chapter 8. Managing sysplexes and systems

Before msys for Setup can access the configuration data of a z/OS system you must provide it with some information on that system. For example, msys for Setup needs to know how to communicate with the system and how to submit jobs on it. Sysplex and system administration is the task of keeping msys for Setup up-to-date on the systems in your environment.

This section tells you how the terms sysplex, system and system profile are used in msys for Setup, and describes these tasks:

Task	Associated procedures
Managing sysplexes	• "Steps for adding a sysplex" on page 94 • "Steps for viewing sysplex information" on page 96 • "Steps for changing the sysplex driving system" on page 97 • "Steps for deleting a sysplex" on page 99
Managing systems	• "Steps for adding a system" on page 100 • "Steps for changing the system description" on page 102 • "Steps for viewing and editing FTP and job specifications" on page 103 • "Steps for viewing and changing Java™ and language environment settings" on page 105 • "Steps for viewing and changing the host log directory" on page 107 • "Steps for deleting a system from a sysplex" on page 108
Managing system profiles	• "Steps for adding an additional system profile" on page 109 • "Steps for viewing system profile information" on page 111 • "Steps for changing the active system profile" on page 113 • "Steps for removing a system profile from a system" on page 116 • "Steps for adding a product set to a system profile" on page 117 • "Steps for removing a product set from a system profile" on page 119

All users can view sysplex, system, and system profile information. All other tasks require sysplexes and systems administrator rights (see "Steps for changing a user's workplace authorization" on page 63).

What you must know about sysplexes, systems, and system profiles

A system in the resource tree represents the combination of the hardware and the software that runs on it, as delimited by the scope of a SYSNAME specification in IEASYS.

In msys for Setup, systems are always organized in sysplexes, even stand-alone systems. A systems' IPL modes are described as its system profiles.

Be aware that by adding a system to the resource tree you are not creating it. Adding a system means making it known to msys for Setup. msys for Setup can only work with systems that have already been set up to the point where they can be IPLed (see *z/OS Managed System Infrastructure for Setup Installation*).

What is a sysplex?

msys for Setup always groups the systems to be customized into sysplexes. A sysplex in the resource tree may contain one or more systems. If multiple systems are contained then these systems need to share at least one volume where msys for Setup can maintain a common msys for Setup parmlib and proclib.

If the required hardware, communications, and possibly coupling facilities are in place you can use msys for Setup to configure the systems into a real base sysplex or a parallel sysplex.

What is a sysplex driving system?

One of the systems of each sysplex is the sysplex driving system. The sysplex driving system is the system where the msys for Setup host code runs to set up sysplex-wide services. For example, the sysplex driving system is used to create or update a Parallel Sysplex configuration.

If sysplex-wide services require refresh data, they use the sysplex driving system as the source of the data. This data can then be used in sysplex-wide customization that applies to all systems in the sysplex.

The sysplex driving system is of significance only within msys for Setup. Do not confuse it with the CustomPac driving system that is used to install your z/OS system.

The first system in a sysplex to which a product set with a sysplex-wide service is added becomes the sysplex driving system. If such a product set is added to multiple systems at the same time, you can select one of these systems as the sysplex driving system.

You can later make a different system the sysplex driving system. However, a system can become the sysplex driving system only if:
- Product sets with the same sysplex-wide services have been added to its active system profile as to the active system profile of the current sysplex driving system.
- It is running under z/OS, Version 1 Release 4 or higher.
- The versions of the product sets containing sysplex-wide services that have been added to its active system profile are equal to or higher than those that were added to the active system profile of the current sysplex driving system.
- "Prepare updates" has not been started for a sysplex-wide service.
- All updates that change the configuration of sysplex-wide services have been committed.

The sysplex driving system cannot be deleted from the sysplex unless the sysplex configuration is undone first.

What is a system profile?

A system profile is a set of system parameters used to IPL a system with modifications made by msys for Setup. A system profile is uniquely identified by the LOADxx member it uses, and, optionally, filter information (see "Using filters" on page 93 for more information on filters).

One of the main sources of IPL-time parameters is the parmlib concatenation. It is quite common to maintain several parmlib concatenations for the same system.

The parmlib concatenation to be used is determined from the suffix of the LOADxx member. If a system can be IPLed with alternate configurations using alternate LOADxx or filters, you must define a system profile for each IPL mode for which you want to set up services.

msys for Setup looks for the LOADxx in the first library found according to normal search order that is used by z/OS:
- SYS0.IPLPARM through SYS9.IPLPARM on the IODF volume
- SYS1.PARMLIB on the IODF volume
- SYS1.PARMLIB on the IPL volume

If multiple system profiles have been defined for a system, only one of them can be the active system profile at any one time. All setup tasks you perform for a system apply to the active system profile only. For example, all tasks you perform for a service are performed with respect to the active system profile. To perform a setup task for a particular system profile you have to make that system profile the active system profile.

You can change a system's active system profile, but the system profile information cannot be changed once it is defined. This applies to the LOAD suffix and the filter information and also to the IODF volser that is associated with the system profile.

System profiles are not represented in the resource tree. They are considered parts of the system they belong to and can be seen in a systems property sheet. Each system has at least one system profile that is defined when the system is added to a sysplex.

Using filters

The LOADxx member specifies (among many other things):
- Information about the parmlib concatenation.
- Filtering keywords for hardware name, LPAR name, or VM user ID, so you can use a single LOADxx member to define IPL parameters for multiple systems.

Depending on the parmlib concatenation determined at IPL time, that is, the LOADxx used and the filters, the IPLed system can run in different modes.

You can use filters to restrict the scope of specific configuration information to specific resources. Filters in msys for Setup work as described in the *z/OS MVS Initialization and Tuning Reference*. By using a filter, you can define configuration information to apply to:
- A single piece of hardware. Specify a hardware name to restrict the scope to certain hardware.
- A logical partition. Specify an LPAR name if your system runs in an LPAR.
- A virtual machine under VM. Specify the user ID of a VM/ESA® or a z/VM™ system under which your system is running as a guest.

Rules for using filters:
- If you use filters in LOADxx or IEASYMxx or both, you must specify matching filters when providing the system profile information for your system. Otherwise changes made by msys for Setup in unfiltered sections might conflict with settings in the existing filtered sections, with unpredictable results.
- If you do not use filters in LOADxx or IEASYMxx, you can but need not specify filter information when providing the system profile information for your

system. If you do, msys for Setup inserts the filter in both LOADxx and IEASYMxx to make all configuration changes for the system profile applicable to that filter only.

- Once a system profile with no filter information has been established, further definitions of system profiles bearing the same load suffix, with or without filter, is not possible.
- Once a system profile with filter information has been established, further definitions of system profiles bearing the same load suffix must provide a filter at the same level. You must not provide one filter that constitutes a subset of another.

Steps for adding a sysplex

Use the "Add sysplex" wizard to add a new sysplex to the resource tree. The wizard enforces adding at least one system to the sysplex. It then allows you to optionally call the "Add a system" wizard multiple times to add further systems.

Before you begin:
- You require sysplexes and systems administrator rights (see "Steps for changing a user's workplace authorization" on page 63)
- You need to know which name to assign to the sysplex

  For an existing sysplex use the name that you are using in existing definitions, for example for the Couple Data Set and the system variable &SYSPLEX in COUPLExx. For a new sysplex use the name that you want to be used for &SYSPLEX. For sysplexes that are mere logical containers to group stand-alone systems the name is of no consequence.

- For the information you need for each system you want to add see Appendix E, "Worksheet for adding a system to a sysplex", on page 171.
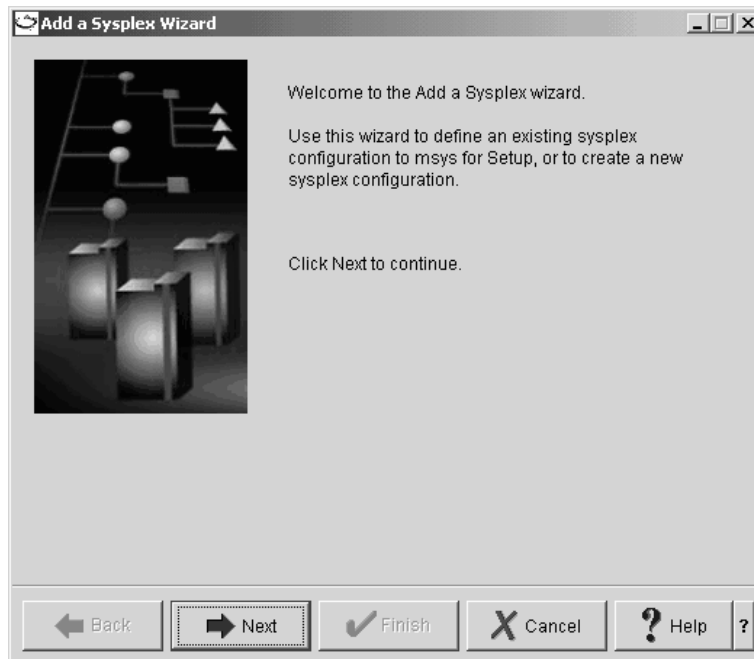
Perform these steps to add a new sysplex:

1. Click the sysplexes folder in the resource tree.
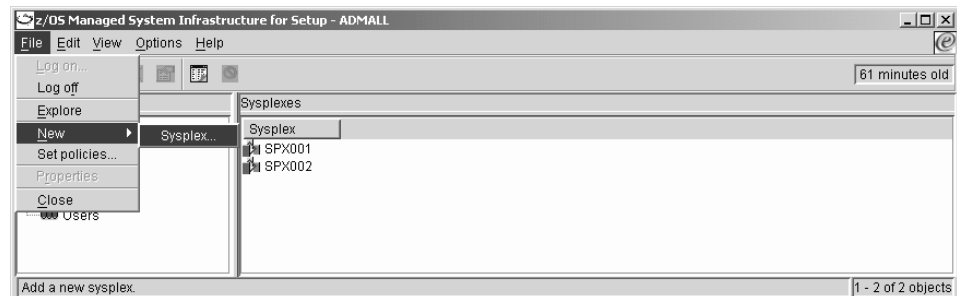
2. Click **File —> New —> Sysplex...** on the menu.

Note: This menu item is only present if you have sysplex administrator rights. The "Add a Sysplex" wizard is launched.


_____

3. Follow the instructions in the wizard to specify a name and description for the new sysplex.

_____

4. Follow the instructions in the wizard to add the first system to the sysplex. The panels that gather the system information are similar to the panels of the "Add a system" wizard (see "Steps for adding a system" on page 100).

_____

5. When you have reached the "Add additional systems" panel, you can click **Add...** to add further systems. **Add...** launches the "Add a system" wizard (see "Steps for adding a system" on page 100). When you have completed the "Add a system" wizard you are returned to the "Add additional systems"
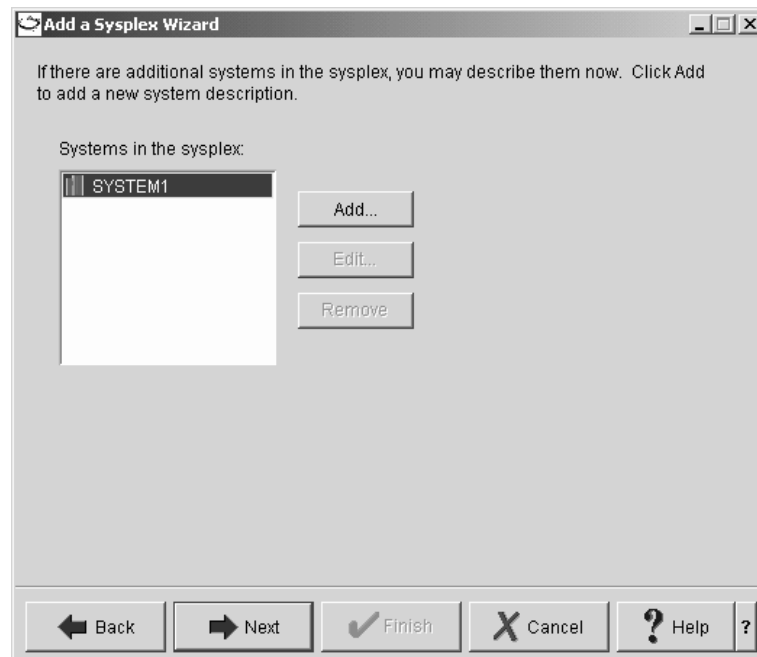
panel.

Click **Add...** for each additional system you want to add to the sysplex.

---

6. When you have progressed to the last wizard panel click **Finish** to complete adding the sysplex to the management direcory.

Results:
- The new sysplex and the systems that you have specified are added to the resource tree.
- You are prompted to set policies for the new sysplex (see "What you must know about policies" on page 11).

To configure the newly added sysplex into a configured operative sysplex you must set up service "Sysplex-wide settings" for the sysplex, and an instance of service "Operating system settings" for each system in the sysplex. You do not need to do this if you already have an operative sysplex and you do not want to make any changes to it, or if you intend to use the sysplex as a container for a stand-alone system. To set up "Sysplex-wide settings" or "Operating system settings" you have to perform these tasks:
- Chapter 3, "Refreshing the management directory", on page 19
- Chapter 4, "Customizing a service", on page 25
- Chapter 5, "Updating a system configuration", on page 31

Steps for viewing sysplex information

Use the sysplex property sheet to view sysplex information.

Perform these steps to display a sysplex property sheet:

1. Click the **Sysplexes** folder in the resource tree. A table of all sysplexes is displayed in the list view.

2. In the list view, select the sysplex for which you want to view information.

_____

3. Click **File —> Properties** on the menu.
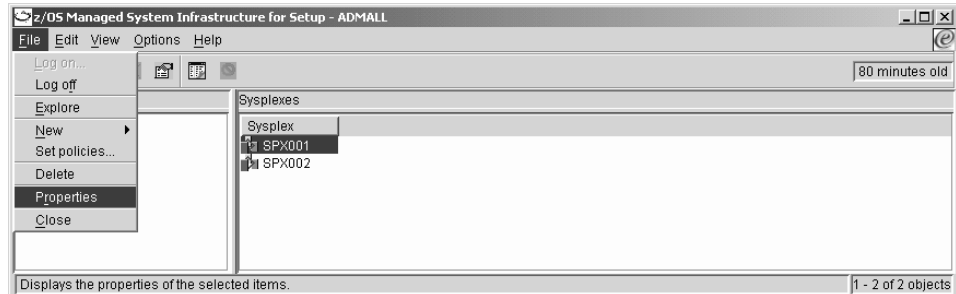
You should now see the property sheet for the selected sysplex. The title bar of the property sheet shows the name of the selected sysplex.
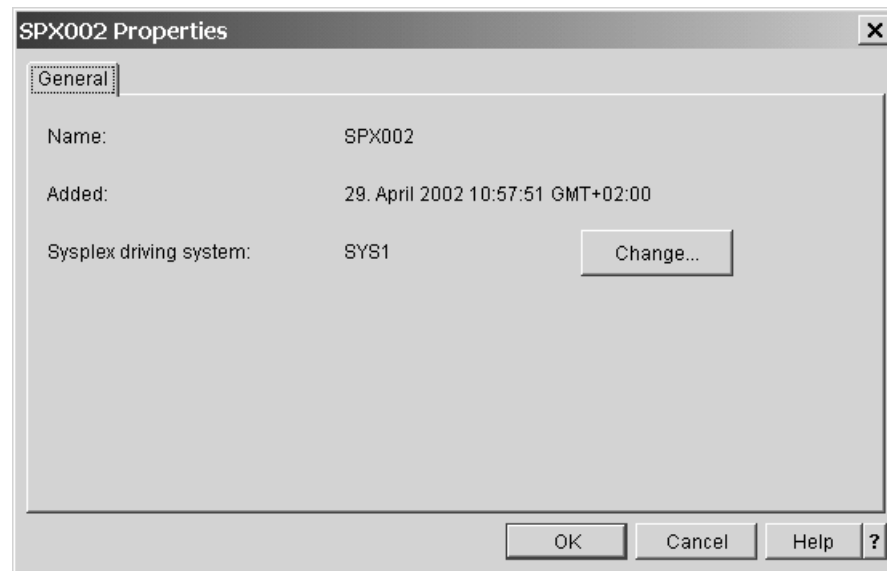

Figure 36. Sysplex property sheet

_____

Steps for changing the sysplex driving system

Use the "Change sysplex driving system" panel to change the system where the jobs for setting up sysplex-wide services run. See "What is a sysplex driving system?" on page 92 for more information on sysplex driving systems.

Before you begin:

You can only change the sysplex driving system if:
- You have sysplex and system administrator rights.
- There is an another system in the sysplex that has product sets with the same sysplex-wide services in its active system profile as the current sysplex driving system.

In addition, the new sysplex driving system must meet the following requirements:

- The system must be running under z/OS, Version 1 Release 4 or higher.
- The versions of the product sets containing sysplex-wide services that have been added to the active system profile of the new sysplex driving system must be equal to or higher than those that have been added to the active system profile of the current sysplex driving system.
- "Prepare updates" has not been started for a sysplex-wide service.
- All updates that change the configuration of sysplex-wide services must have been committed.

If you select a system that does not meet these requirements, you will receive an error message indicating why the system is not eligible when you commit the change.

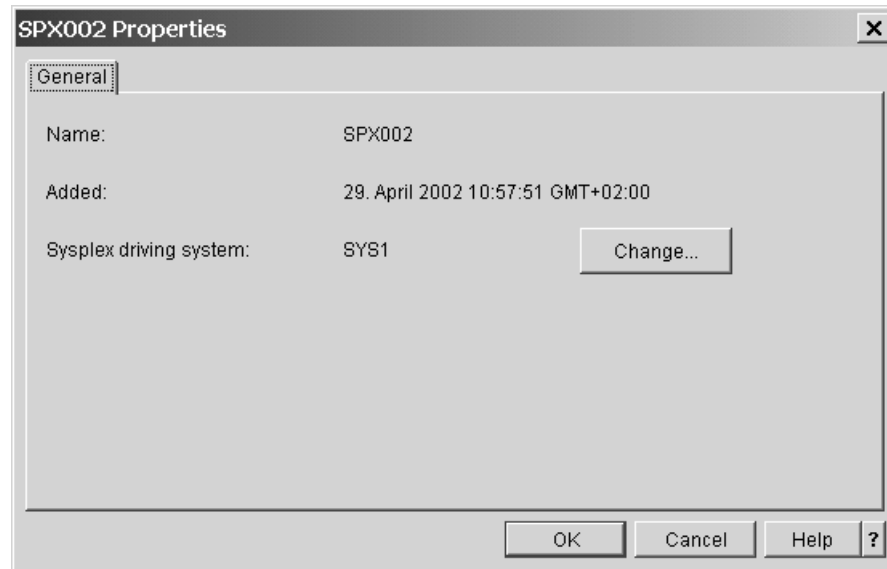Perform these steps to change the sysplex driving system:

1. Click the **Sysplexes** folder in the resource tree. A table of all sysplexes is displayed in the list view.

   _____

2. In the list view, select the sysplex for which you want to change the sysplex driving system.

   _____

3. Click **File —> Properties** on the menu.
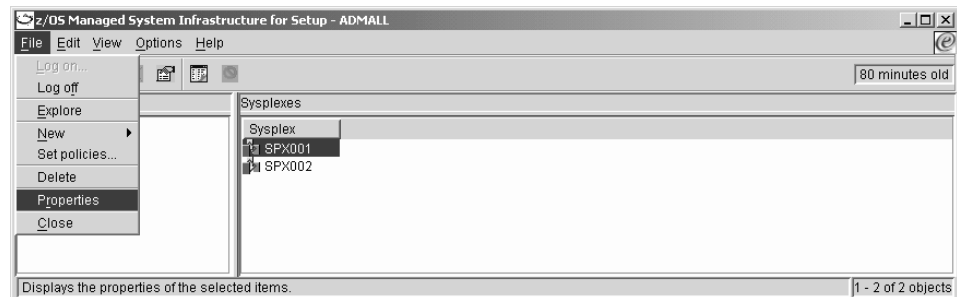
You should now see the property sheet for the selected sysplex. The title bar of the property sheet shows the name of the selected sysplex.

```
SPX002 Properties                                              ✕

 General

   Name:                     SPX002

   Added:                    29. April 2002 10:57:51 GMT+02:00

   Sysplex driving system:   SYS1              Change...




                                        OK      Cancel     Help   ?
```

The **Sysplex driving system** field shows the current sysplex driving system.

_____

4. Click **Change...**

   Note: This button is only available to sysplex and system administrators and
   only if there is an another system in the sysplex that has product sets
   with the same sysplex-wide services in its active system profile as the
   current sysplex driving system.

   _____

5. In the **List of systems** on the "Change sysplex driving system" panel, select
   the system you want to use as a sysplex driving system. If the system does not
   meet all the requirements, you will receive an error message indicating why
   the system is not eligible when you commit the change.

   _____

6. Click **OK** to return to the sysplex property sheet and to confirm the changes.
   The **Sysplex driving system** field now shows the new sysplex driving system.

   _____

7. Close the sysplex property sheet with **OK**.

   _____

Steps for deleting a sysplex
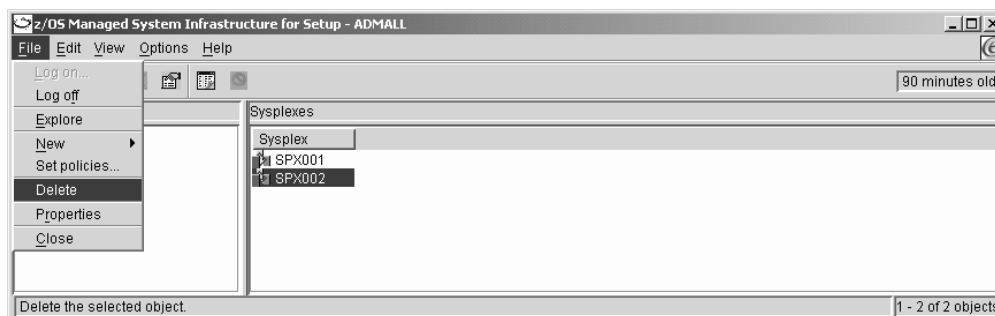
Before you begin:
- You require sysplexes and systems administrator rights to delete a sysplex.
- Deleting a sysplex means that all information on the sysplex, its contained
  systems, and their configuration data is lost. In particular, you can no longer use
  msys for Setup to undo any configuration changes that you have already made
  with msys for Setup.

Perform these steps to delete a sysplex:

1. Select the sysplexes folder in the resource tree. This displays all sysplexes in the list view.

   _____

2. In the list view, Select the sysplex you want to delete.

   _____

3. Click **File —> Delete** on the menu.

   Note: This menu item is only present if you have sysplex administrator rights.

   _____

Steps for adding a system

Before you begin: You require:

- Sysplexes and systems administrator rights
- The information that is summarized in Appendix E, "Worksheet for adding a system to a sysplex", on page 171.
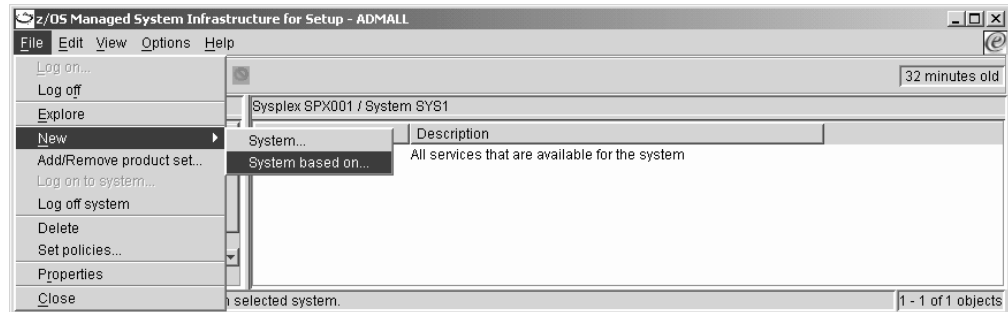
Use the "Add a system" wizard to add a system to a sysplex. In msys for Setup, systems are always organized in sysplexes, even stand-alone systems. You can launch this wizard:

- From the "Add a sysplex" wizard when you are adding a new sysplex (see "Steps for adding a sysplex" on page 94).
- From the context menu of the sysplex to which you want to add the system.

 Select the sysplex in the resource tree and click **File —> New —> System**.
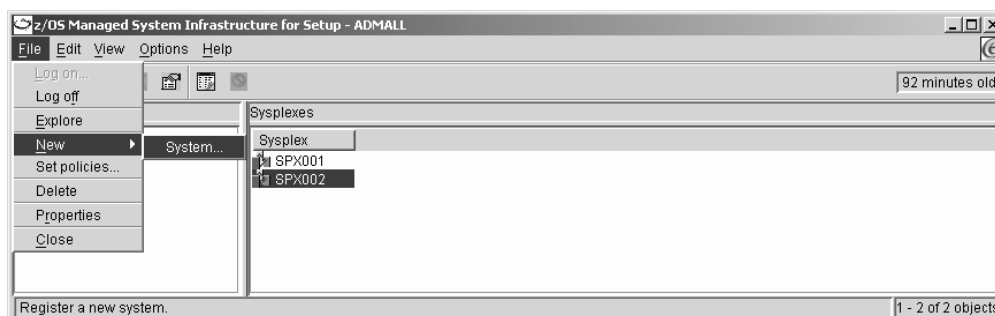
- From the context menu of a system with properties that are similar to the system you want to add.

Select that system in the resource tree and click **File —> New —> System based on…**.

The "Add a system" wizard then comes up with the properties of the selected system as a basis for defaults.

Follow the instructions in the wizard to add the system.
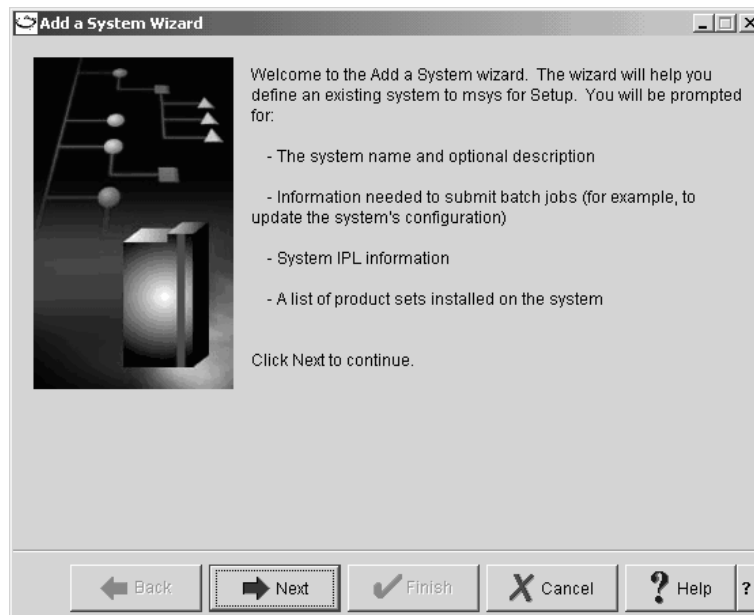
Note: As part of the wizard you will have to provide information for a system profile (see "What is a system profile?" on page 92). It is essential that you specify the correct, existing LOADxx member, where applicable, the correct filter information, and the corresponding IODF volser. msys for Setup cannot work with the system if this information is incorrect and you cannot make changes to this data after you have completed the wizard (see also Chapter 11, "Troubleshooting", on page 137).

When you have completed the wizard, the resource tree will contain the new system below the sysplex.

To make a newly defined system an actual member of an existing sysplex you must proceed to set up service "Operating system settings" for it.

Steps for changing the system description

Use the system property sheet to change the system description. This is the description that is displayed with the system name when the system is displayed in the list view.

Before you begin: To change the system description you require sysplexes and systems administrator rights.

Perform these steps to change the system description:

1. In the resource tree, expand the Sysplexes folder and select the sysplex you want to work with. All systems in the sysplex are listed in the list view.
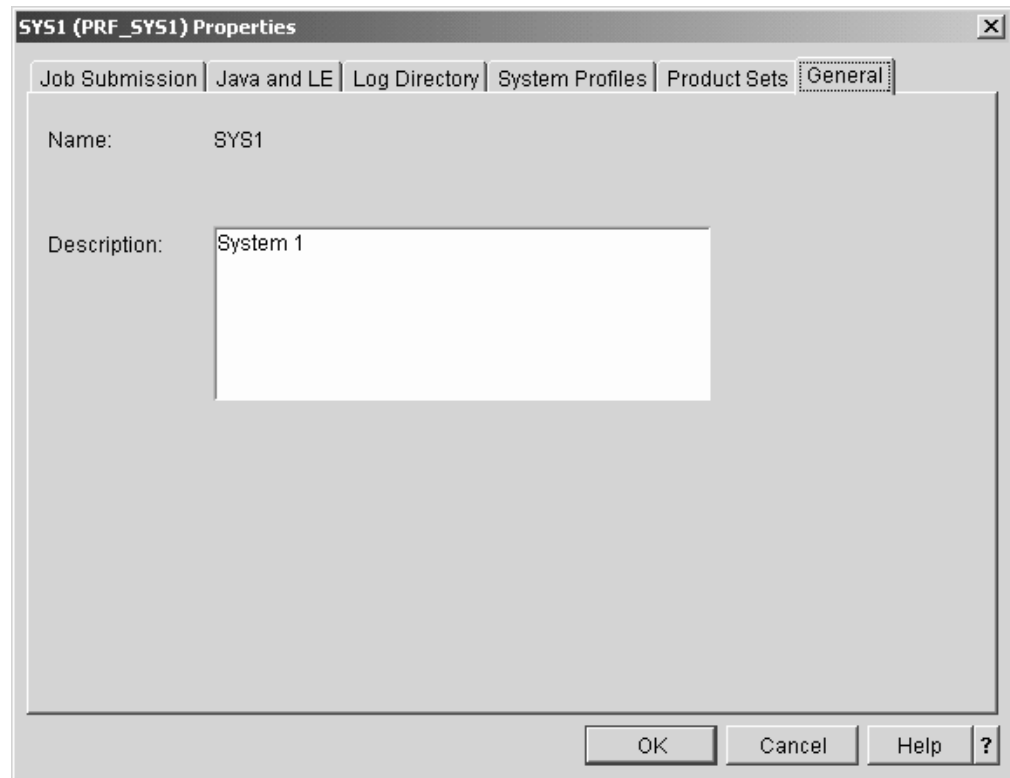
   _____

2. In the list view, select the system for which you want to change the description.

   _____

3. Click **File —> Properties** on the menu.
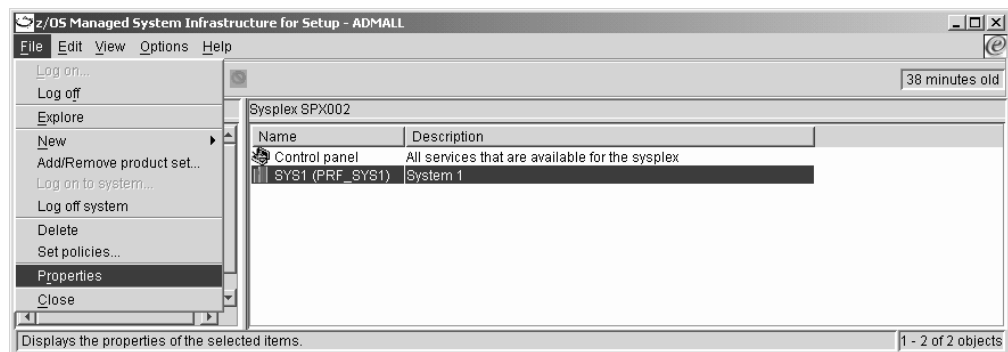
You should now see the property sheet for the selected system. The title bar of the property sheet shows the name of the selected system.

   _____

4. Click the "General" tab to display the "General" panel.

_____

5. Overwrite the value in the **Description** entry field with the new description.

_____

6. Close the property sheet with **OK** to save your changes.

Result: The new description can be seen in the list view.

Steps for viewing and editing FTP and job specifications

Use the system property sheet to view and change FTP and job specifications.

Before you begin:
- To change FTP and job specifications you require sysplexes and systems administrator rights.
- IP address and port are required only. All other settings are optional.
- If you want to use a job scheduling system to process jobs that are created for the "Commit updates" task:
  - ensure that the check box **Allow scheduled commit jobs** is selected.
  - ensure that the jobs are not released immediately once they are transferred to the host system. To achieve this goal you have these options:
    - You can specify the same job class for scheduled jobs as for immediate jobs. In this case, msys for Setup adds TYPRUN=HOLD to the job card for scheduled jobs.
    - You can specify a job class for scheduled jobs whose configuration guarantees that the jobs are not released immediately.

Perform these steps to view and change FTP and job specifications:

1. In the resource tree, expand the Sysplexes folder and select the sysplex you want to work with. All systems in the sysplex are listed in the list view.
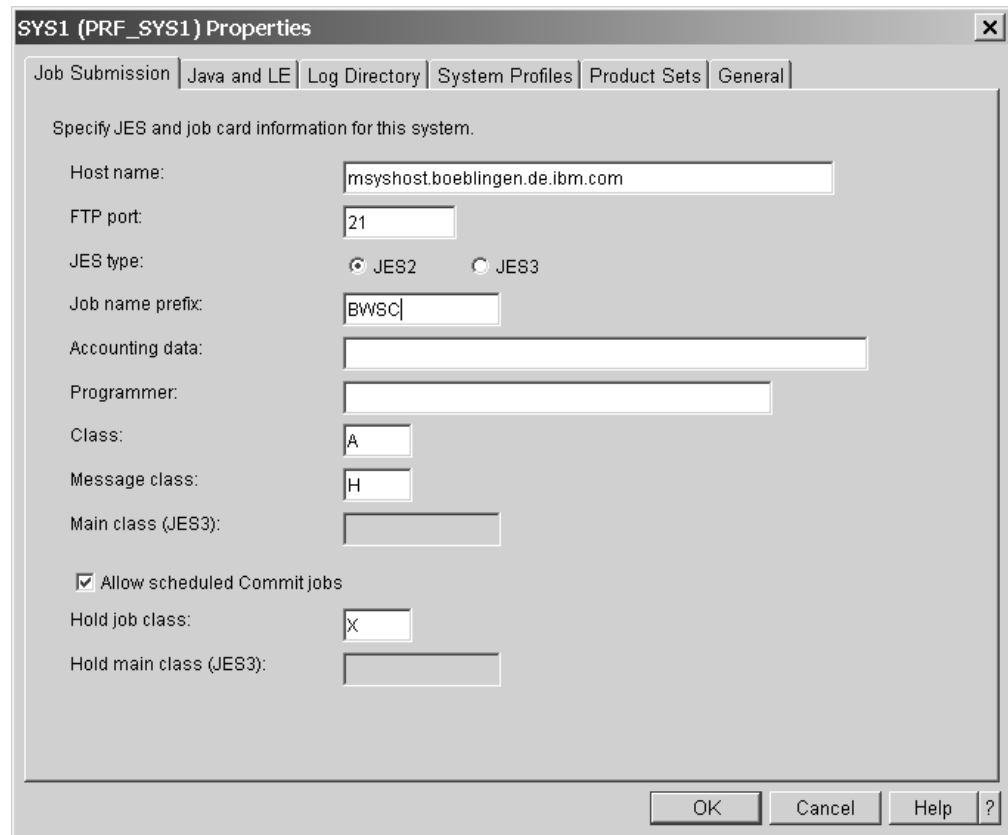
   _____

2. In the list view, select the system for which you want to display the property sheet.

   _____

3. Click **File —> Properties** on the menu.
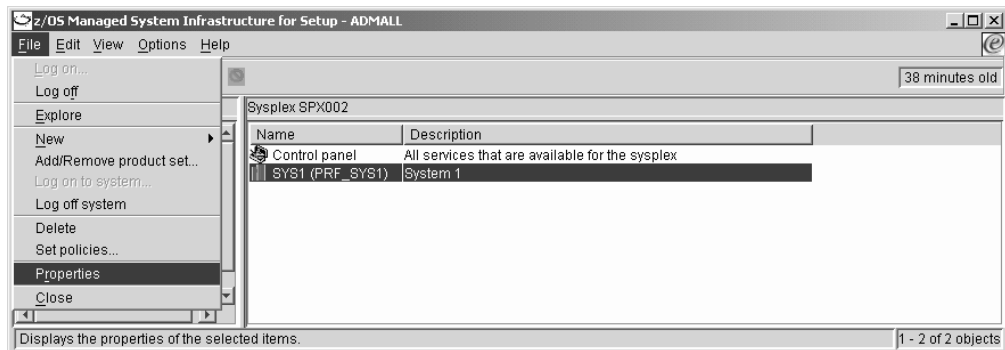
   You should now see the property sheet for the selected system. The title bar of the property sheet shows the name of the selected system.

   _____

4. If it is not already displayed, click the "Job Submission" tab to display the "Job Submission " panel.

_____

5. If you have sysplexes and systems administration rights you can make changes to the controls on the panel. For details on each control refer to the online help.

_____

6. When you are done, close the property sheet with **OK** to save your changes.

## Steps for viewing and changing Java™ and language environment settings

Use the system property sheet to view and change the Java and language environment settings for the system.

Before you begin: To change the Java and language environment settings you require sysplexes and systems administrator rights.

Perform these steps to view or change the Java and language environment settings:

1. In the resource tree, expand the Sysplexes folder and select the sysplex you want to work with. All systems in the sysplex are listed in the list view.

_____

2. In the list view, select the system for which you want to view or change Java and language environment settings.

_____

3. Click **File —> Properties** on the menu.
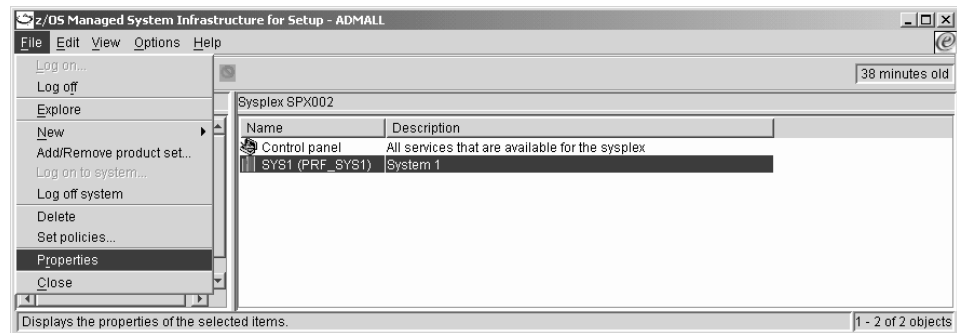
You should now see the property sheet for the selected system. The title bar of the property sheet shows the name of the selected system.

4. Click the "Java and LE" tab to display the "Java and LE" panel.
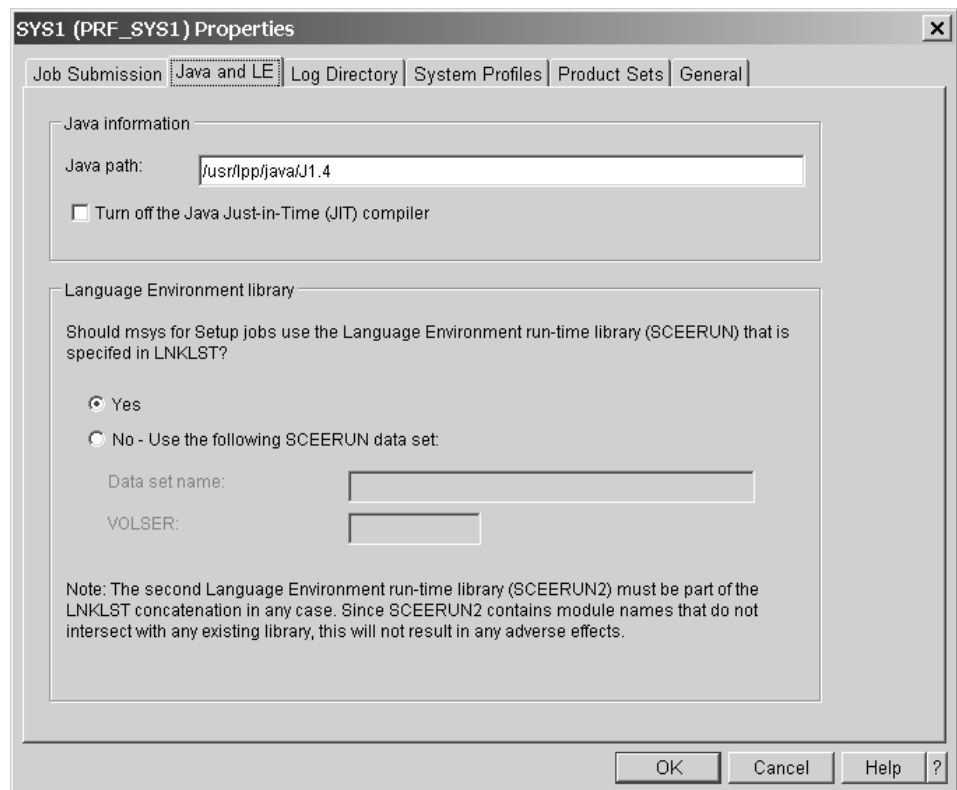
5. If you have sysplexes and systems administration rights, you can make changes to these controls:

Java path
>   The path to enter Java on the host.

Turn off Java JIT compiler
>   Clear this check box to use the Java JIT (Just in Time) compiler on the host. This normally gives you maximum performance. Select the check box to turn of the JIT compiler, for example if there is a problem with it. msys for Setup can but need not run with the JIT compiler.

Language environment library

Select the **Yes** radio button in this section to use the SCEERUN library that is specified in LNKLIST.

To use a different SCEERUN library select **No** and type the data set name of the alternative library into the **Data set name** entry field. If the data set is not cataloged, also type the volser into the **VOLSER** entry field. If the data set is cataloged leave this entry field blank.

As the note on the panel informs you, the second Language Environment run-time library (SCEERUN2) must be part of the LNKLST concatenation in any case.

_____

6. Close the property sheet with **OK** to save your changes.

## Steps for viewing and changing the host log directory

Use the system property sheet to view and change the host log directory.

The log file contains results of running jobs on the z/OS system, for example, for refreshing the management directory with current configuration data or for updating the system configuration. The log file is stored in the log directory. The log directory is also used by msys for Setup to store trace files. The log file is downloaded to the workplace and displayed in the "Reports" panel when you click **View reports** for tasks that run a job on the host.

Before you begin: To change the host log directory you require sysplexes and systems administrator rights.

Perform these steps to view or change the host log directory:

1. In the resource tree, expand the Sysplexes folder and select the sysplex you want to work with. All systems in the sysplex are listed in the list view.

_____

2. In the list view, select the system for which you want to change the host log directory.

_____

3. Click **File —> Properties** on the menu.
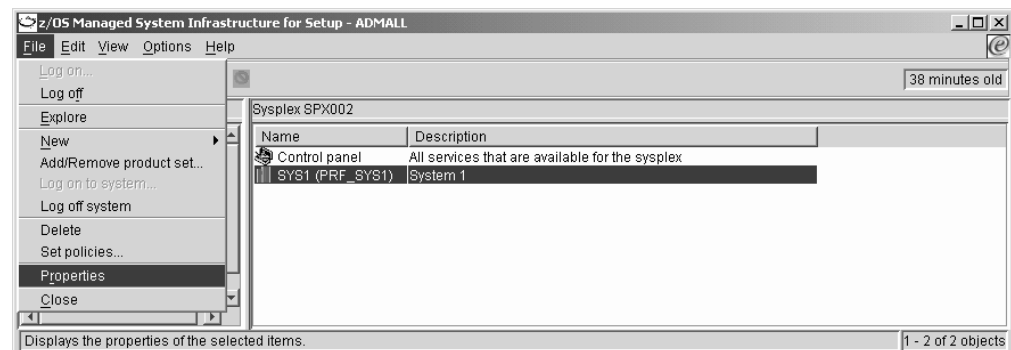
You should now see the property sheet for the selected system. The title bar of the property sheet shows the name of the selected system.

4. Click the "Log Directory" tab to display the "Log Directory" panel.
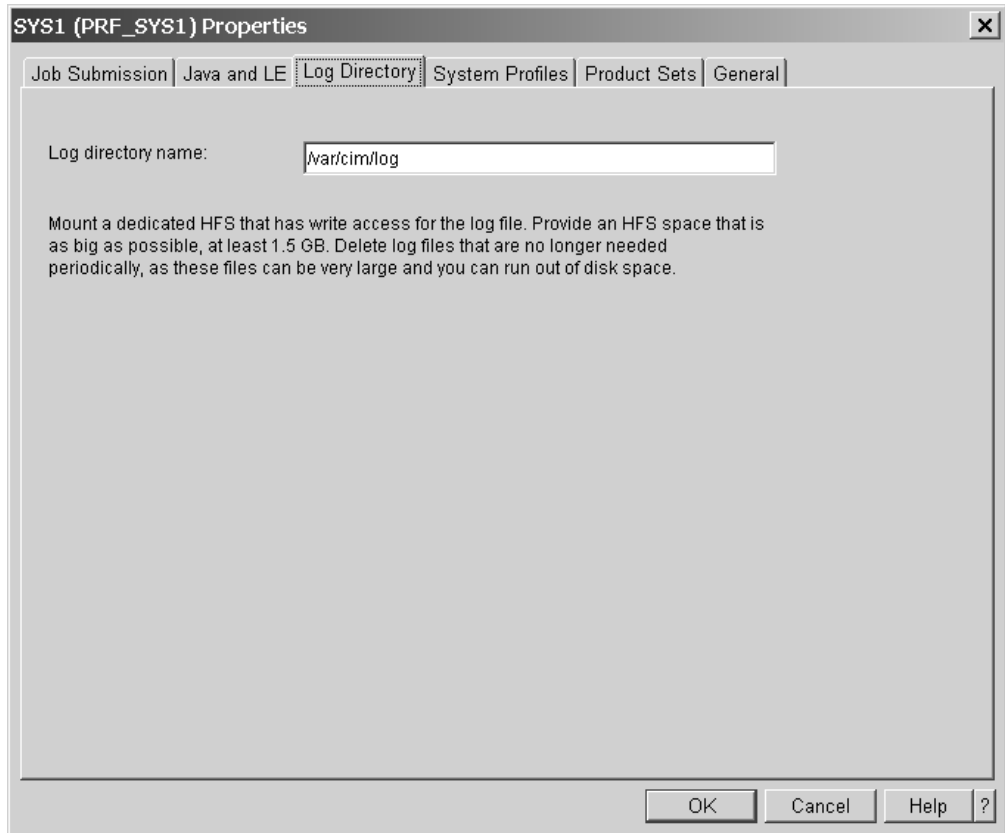
5. If you want to change the directory, overwrite the value in the **Log directory name** entry field with the path for the new log directory.

   Be sure that all msys for Setup users who submit jobs on the system have write access to the directory you specify.

   Recommendation: Because the log files can be extensive, use a dedicated z/OS UNIX System Services file system, for example HFS, with at least 1.5 GB space.

   Note: msys for Setup does not clear up old log files automatically. You need to monitor the space in this directory and clear up obsolete files at intervals.

   Note: Only sysplexes and systems administrators can change the log directory.

6. Close the property sheet with **OK** to save your changes.

Steps for deleting a system from a sysplex

Before you begin:
- You require sysplexes and systems administrator rights to delete a system from a sysplex
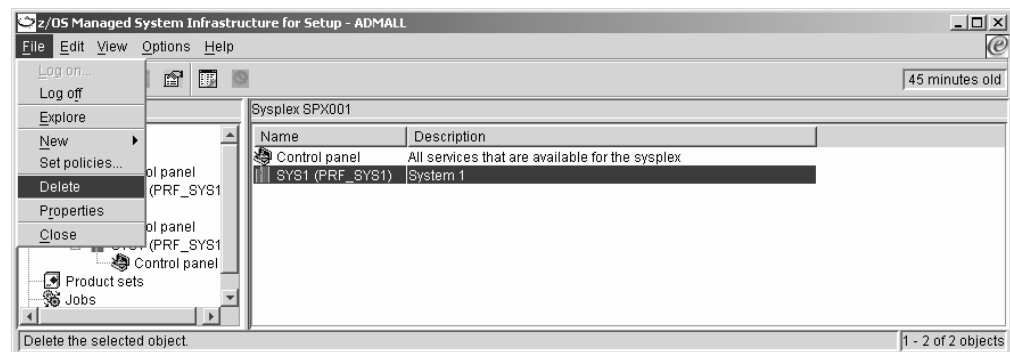
- A system can only be deleted if all updates have been reversed for all system profiles.

Perform these steps to delete a system from a sysplex:

1. In the resource tree, expand the Sysplexes folder and select the sysplex you want to work with. All systems in the sysplex are listed in the list view.

   _____

2. In the list view, select the system you want to delete.

   _____

3. Click **File —> Delete** on the menu.

Note: This menu item is only present if you have sysplex administrator rights.

_____

Steps for adding an additional system profile

**Before you begin:** Only sysplexes and systems administrators can add a system profile.

Perform these steps to add a system profile:

1. In the resource tree, expand the Sysplexes folder and select the sysplex you want to work with. All systems in the sysplex are listed in the list view.

   _____

2. In the list view, select the system to which you want to add a system profile.

   _____

3. Click **File —> Properties** on the menu.
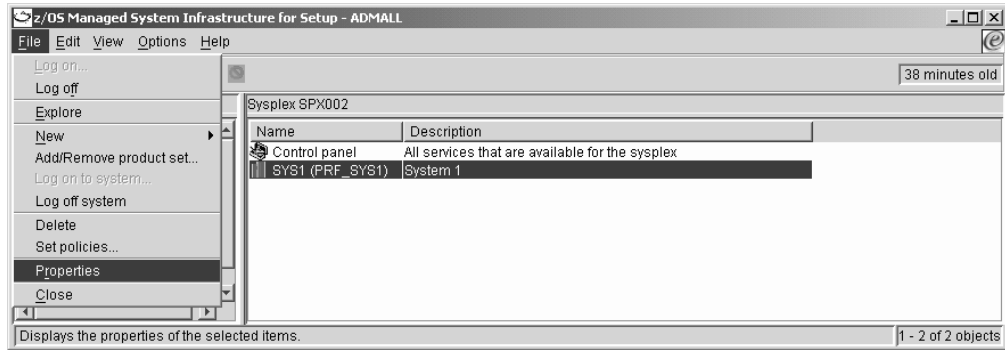
You should now see the property sheet for the selected system.

_____

4. Click the "System Profiles" tab.
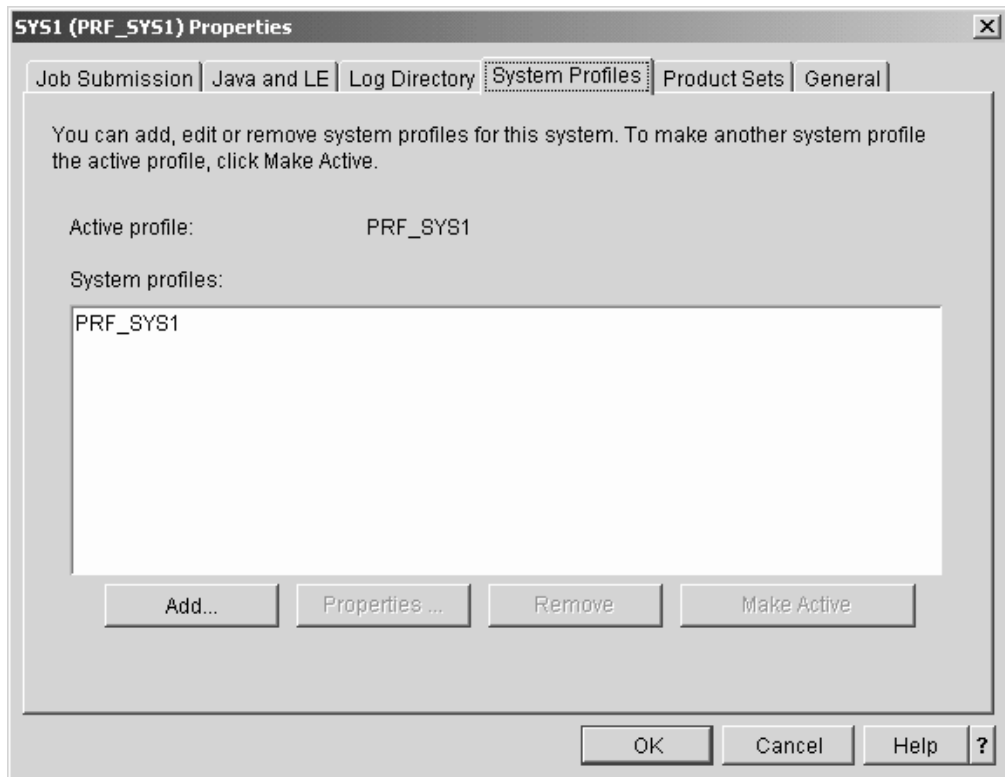
The **System profiles** list box shows the system profiles that have already been added to the system.

_____

5. Click **Add...** The "Add System Profile - IPL Information" panel is displayed.

Add System Profile - IPL Information

Specify IPL information for this system. This information will be stored in msys for Setup under a system profile name.

System profile name: PRF_SYS1_ALT

LOAD member suffix: A1

IODF volser: 01

Specify LOADxx filter keywords, if they are used.

Hardware name:

LPAR name:

VM user ID:

OK   Cancel   Help   ?

6. Type a name for the new system profile, a load member suffix, and the IODF volser into the respective entry fields.

7. Optionally, type filter information into the remaining entry fields. See "Using filters" on page 93 for details.

8. Click **OK** twice to close first the "Add System Profile - IPL Information" panel and then the system property sheet to save the new system profile.

Note: Be sure that all entries you make are correct. You cannot change a system profile once you have saved it. The only way to recover from an erroneous definition is to delete the faulty system profile and add a new, correct one. In this case, any work you might have done with respect to the faulty system profile is lost.

Steps for viewing system profile information

Perform these steps to view information for a system profile:

1. In the resource tree, expand the Sysplexes folder and select the sysplex you want to work with. All systems in the sysplex are listed in the list view.
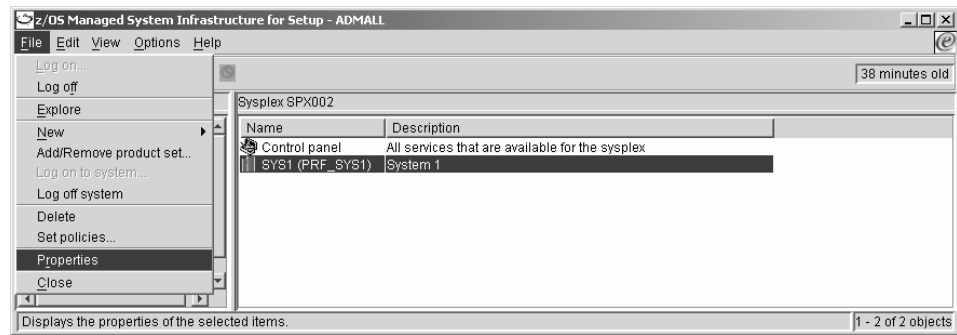
2. Select the system for which you want to view system profile information in the list view.

3. Click **File** —> **Properties** on the menu.

You should now see the property sheet for the selected system. The title bar of the property sheet shows the name of the selected system.

___

4. Click the "System Profiles" tab. The **System profiles** list box shows the system profiles that have already been added to the system.

___

5. Select the system profile for which you want to view information in the **System profiles** list.

___
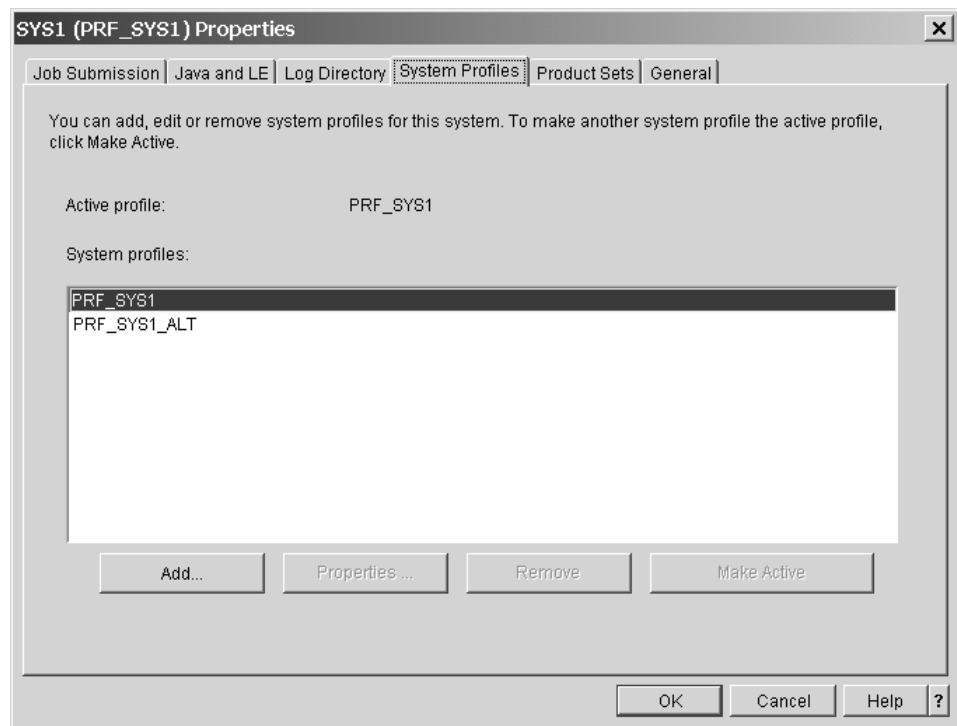
6. Click **Properties...** The IPL Information panel for the selected system profile is displayed.

All information on this panel is read-only for system profiles that have already been saved to the management directory.

IPL Information

IPL information for this system profile:

LOAD member suffix: 01

IODF volser: IODF01

IPL volser:

LOADxx filter keywords (optional):

Hardware name:

LPAR name:

VM user ID:

OK   Cancel   Help   ?

If you are a sysplexes and systems administrator and have just created the system profile, without saving it, intermittently, by closing the systems property sheet, you can make changes to the values.

_____

Steps for changing the active system profile

Before you begin:

- Only sysplex and system administrators can change the active system profile.
- You can only change the the active system profile if all job sets that were created for the z/OS system have the status "Failed", "Canceled", or "Ended".
- You can only change the active system profile of a sysplex driving system successfully if the new system profile meets the following requirements:
  - The system is running under z/OS, Version 1 Release 4 or higher.
  - Product sets containing the same sysplex-wide services must have been added to the new active system profile as to the currently active system profile.
  - The versions of the product sets containing sysplex-wide services that have been added to the currently active system profile must be equal to or higher than those that have been added to the new active system profile.
  - "Prepare updates" has not been started for a sysplex-wide service.
  - All updates that change the configuration of sysplex-wide services must have been committed.

If you select a system profile that does not meet these requirements, you will receive an error message indicating why the system profile is not eligible when you commit the change.

Perform these steps to change the active system profile:

1. In the resource tree, expand the Sysplexes folder and select the sysplex you want to work with. All systems in the sysplex are listed in the list view.

   _____

2. Select the system for which you want to change the active system profile in the list view.

   _____

3. Click **File —> Properties** on the menu.
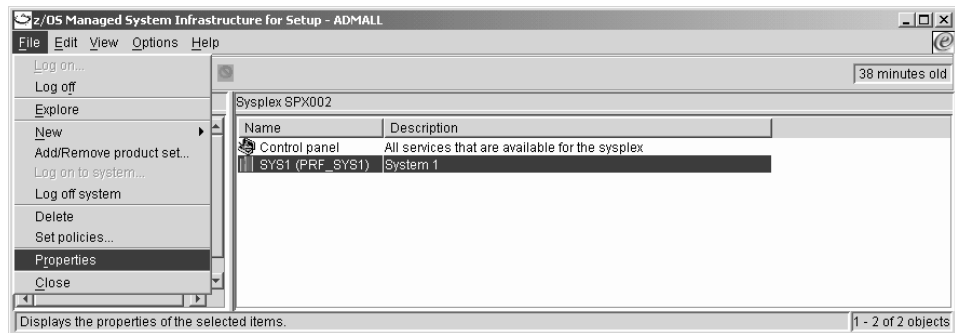
You should now see the property sheet for the selected system. The title bar of the property sheet shows the name of the selected system.

   _____

4. Click the "System Profiles" tab. The **System profiles** list box shows all available system profiles of the system.

   _____

5. In the **System profiles** list, select the system profile you want to make the active system profile .

_____
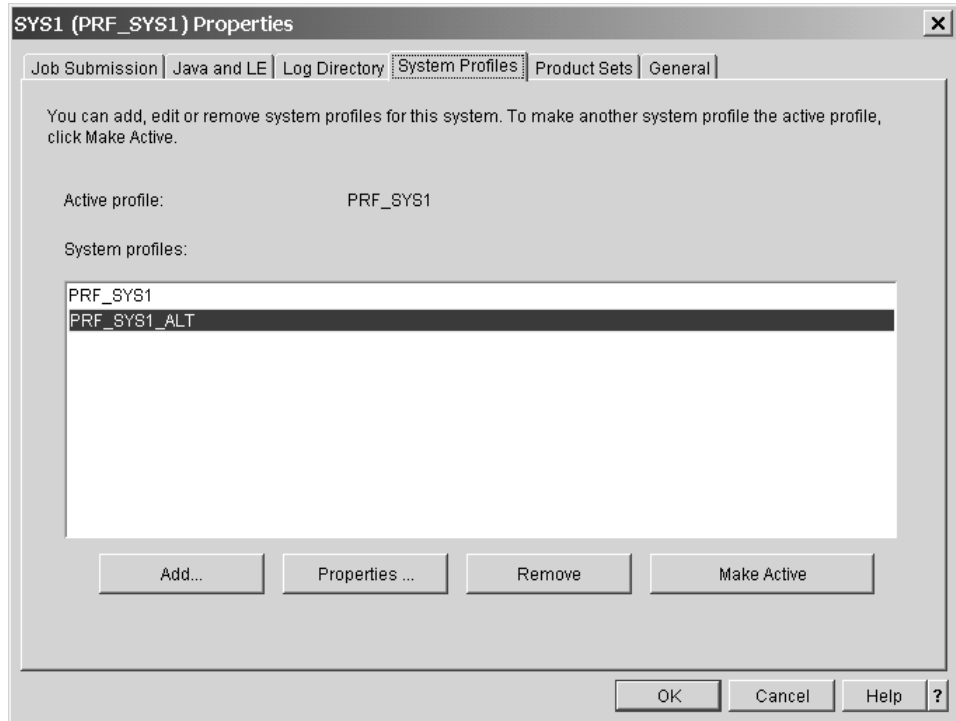
6. Click **Make Active**. The selected system profile is now displayed in the **Active profile** field.
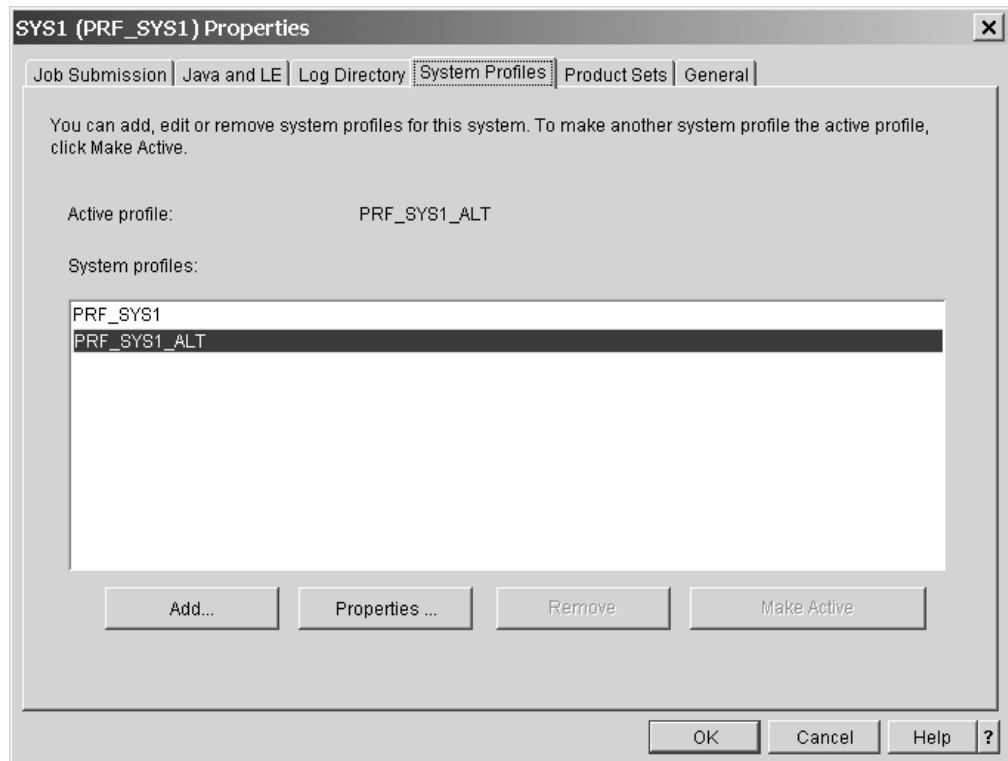
7. Click **OK** to confirm the change and close the property sheet.

_____

Note: The active system profile must always be the system profile with which the
system has been IPLed.

Steps for removing a system profile from a system

Before you begin:
- Only sysplexes and systems administrators can remove a system profile from a
system.
- You cannot remove the active system profile

Perform these steps to remove a system profile:

1. In the resource tree, expand the Sysplexes folder and select the sysplex you
want to work with. All systems in the sysplex are listed in the list view.

_____

2. In the list view, select the system from which you want to remove a system
profile.

_____

3. Click **File —> Properties** on the menu.
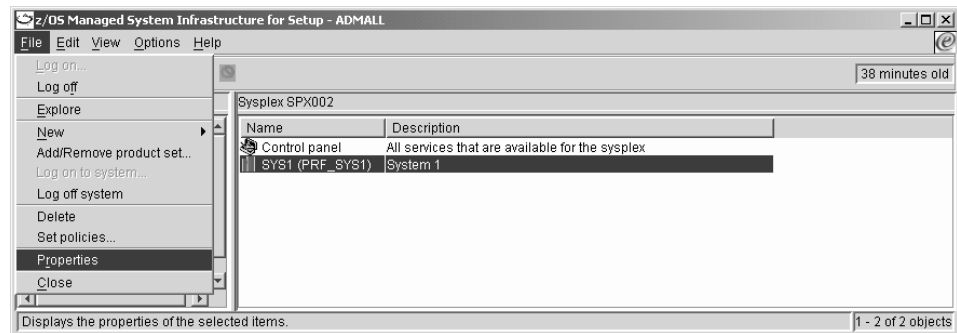

You should now see the property sheet for the selected system. The title bar of
the property sheet shows the name of the selected system.

_____

4. Click the "System Profiles" tab. The **System profiles** list box shows all system
profiles that have been added to the system.

_____

5. Select the system profile you want to remove in the **System profiles** list.

_____

6. Click **Remove**. The system profile is no longer displayed in the **System profiles** list.

_____

7. Click **OK** to confirm the deletion and to close the property sheet.

_____

Steps for adding a product set to a system profile

Before you begin: Only sysplexes and systems administrators or product set administrators can add a product set to a system profile.

Perform these steps to add a product set to a system profile:
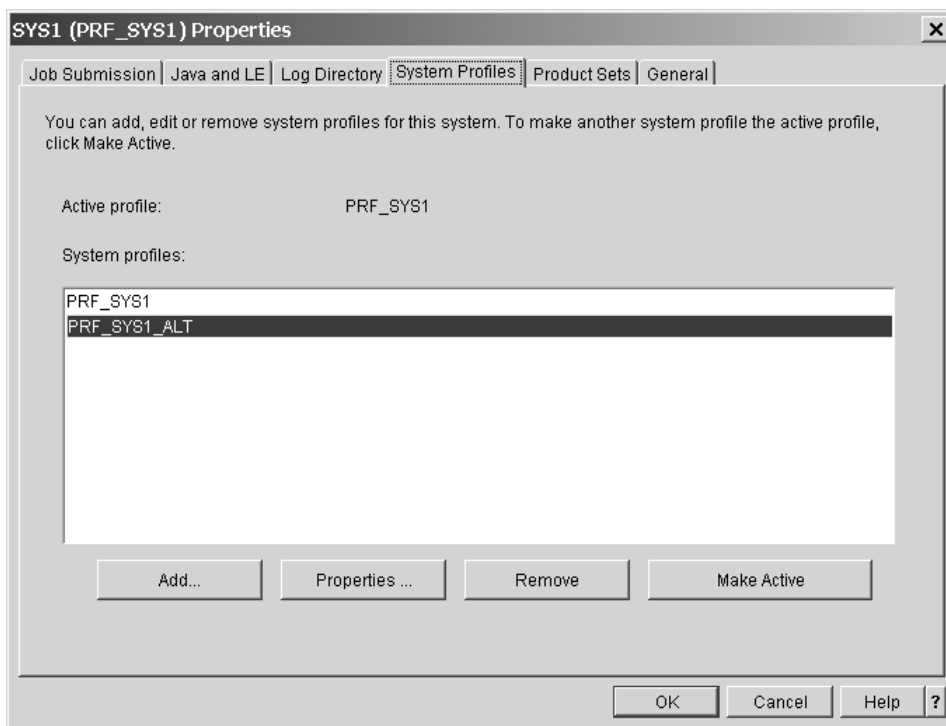
1. In the resource tree, expand the Sysplexes folder and select the sysplex you want to work with. All systems in the sysplex are listed in the list view.

_____

2. In the list view, select the system to which you want to add a product set.

_____

3. Click **File** —> **Properties** on the menu.
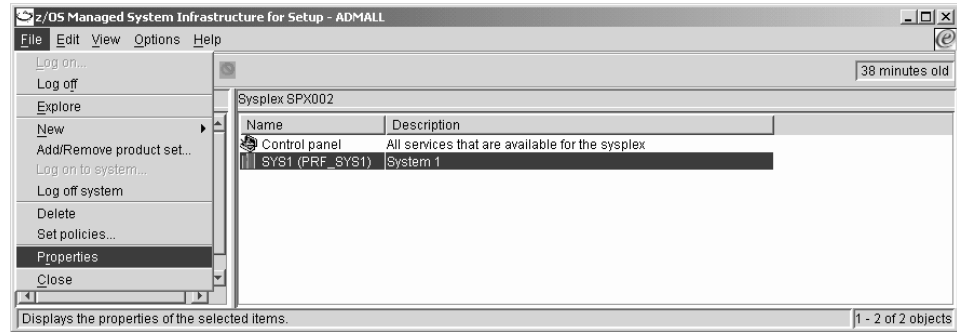
You should now see the property sheet for the selected system. The title bar of the property sheet shows the name of the selected system.

Be sure that the correct system profile is the active system profile. You can confirm this by clicking the "System profiles" tab and checking the **Active profile** field.

_____

4. Click the "Product Sets" tab. On the "Product Sets" panel the product sets that have already been added to the active system profile are shown in the **Selected** list box. All other product sets that are known to msys for Setup are shown in the **Available** list box.
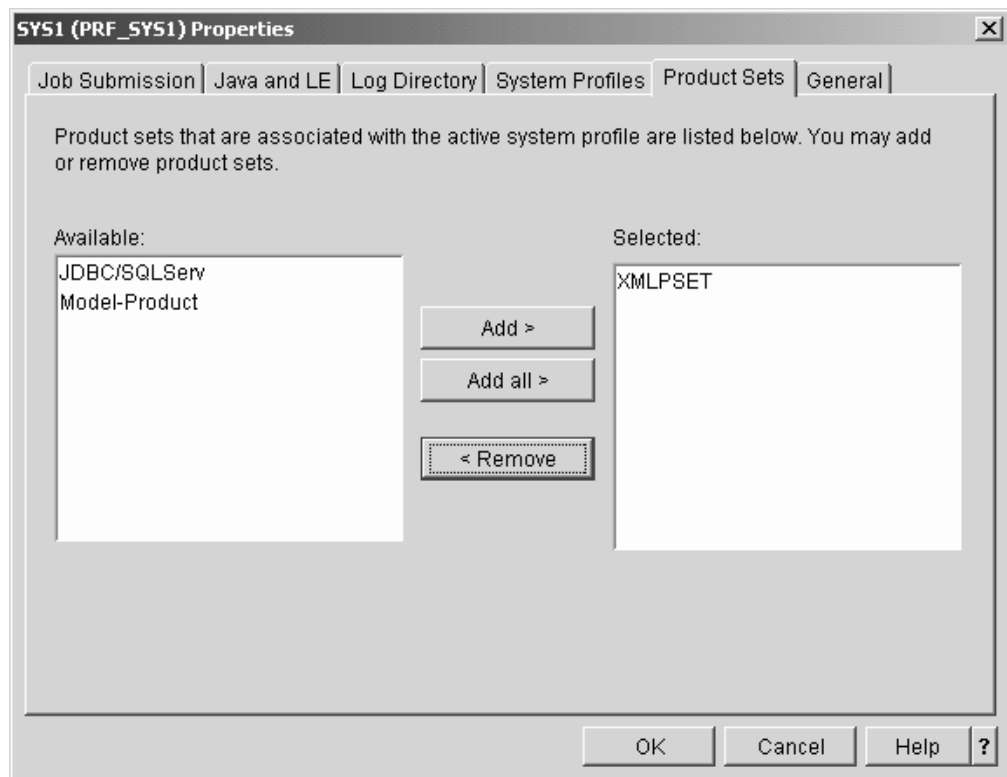

Figure 37. System property sheet - Product set panel

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5. To add a product set to the active system profile select it in the **Available** list box and click **Add >.** To add all available product sets in one step click **Add all >.**

   Note: Be sure to only add product sets that have been installed on the system and that can be accessed by the active system profile. Installing is done outside msys for Setup. If you add a product set that has not been installed on the system, msys for Setup does not detect the mismatch, but all attempts to customize the services in it for this system will *fail*.

   _____

6. Click **OK** to close the property sheet.

   _____

Steps for removing a product set from a system profile

Before you begin: Only sysplexes and systems administrators or product set administrators can remove a product set to a system profile.

Perform these steps to remove a product set from a system profile:

1. In the resource tree, expand the Sysplexes folder and select the sysplex you want to work with. All systems in the sysplex are listed in the list view.

   _____

2. In the list view, select the system from which you want to remove a product set.

   _____

3. Click **File —> Properties** on the menu.
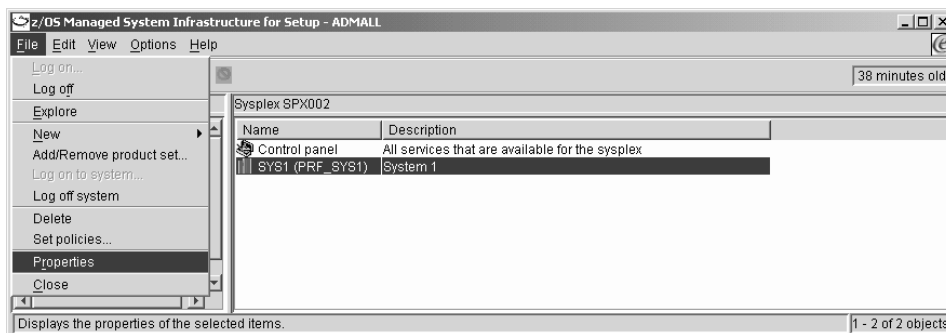
   You should now see the property sheet for the selected system. The title bar of the property sheet shows the name of the selected system.

   Be sure that the correct system profile is the active system profile. You can confirm this by clicking the "System profiles" tab and checking the **Active profile** field.

   _____

4. Click the "Product Sets" tab. On the "Product Sets" panel all product sets that have been added to the active system profile are shown in the **Selected** list box (see Figure 37 on page 118).

   _____

5. Select the product set you want to remove in the **Selected** list box and click
   < Remove.

   _____

6. Click **OK** to close the property sheet.

   msys for Setup now processes your information and detaches the product set
   from your system profile in the management directory.

   _____

Part 3. Diagnostics and recovery

This part describes how to get more information on what msys for Setup does while setting up services and how to solve problems that can occur when you are working with msys for Setup.

- Chapter 9, "Job handling", on page 123 describes how to work with jobs.
- Chapter 10, "Undo all updates", on page 129 describes how you can undo configuration resource changes that have been made to accomodate a service instance.
- Chapter 11, "Troubleshooting", on page 137 gives advice on how to deal with some common error situations.
- Chapter 12, "Where msys for Setup provides problem analysis information", on page 139 describes how msys for Setup provides diagnostic information for you.
- Chapter 13, "Backup and restore", on page 147 describes how you can recover from faulty configurations.
- Chapter 14, "Recovery", on page 153 describes how you can IPL a system in an emergency situation.

Chapter 9. Job handling

The msys for Setup workplace works together with the msys for Setup host program to change options and parameters in the system you are configuring. These changes are made in the form of batch programs that run on the z/OS system. The following tasks use batch jobs to initiate the corresponding host programs:

- Refresh the management directory
- Update system configuration steps (and simulations)
- Undo system configuration updates steps (and simulations)
- Product set tasks (add, upgrade, edit)
- Backup and restore of key configuration data

When a job or job set has completed, a job notification is displayed. From the job notification panels you can:

- Determine if the job has run successfully.
- Download and display the job report for the job that has just ended.
- Display a list of any user actions that you might have to perform to complete the task.
- Find out the job ID. If you note down the job ID, you will be able to locate the job later in the Jobs folder.
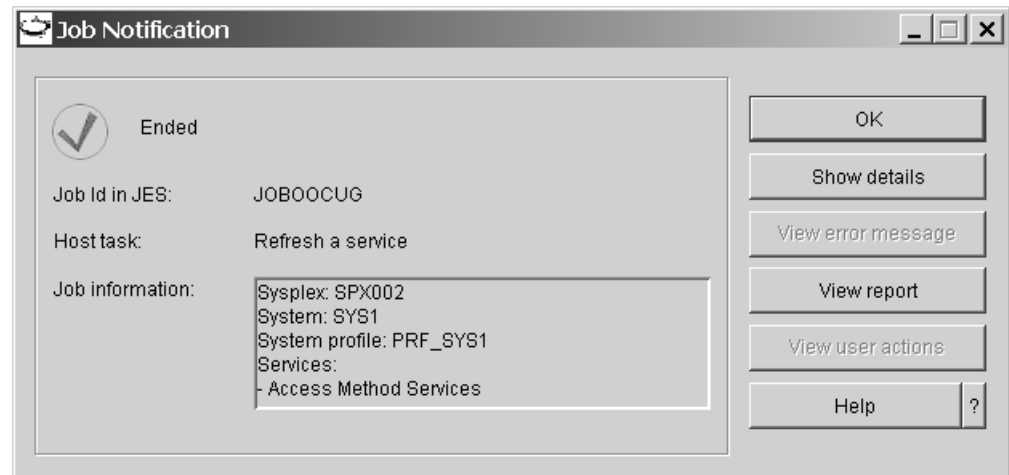

Figure 38. Job notification panel

If you closed the workplace or logged off from Setup while a job was running, the notification is displayed the next time you log on to Setup, provided that the job has ended by then.

Displaying job details

You can display job details:

- By clicking **Job details** on the job notification panel.

- By locating the respective job in the Jobs folder and clicking **File —> Show details...** on the context menu.

  For jobs that were generated for a "Commit updates (scheduled)" task, locate the job set the job belongs to in the Jobs folder and click **File —> Show details...** on the menu. On the "Job set details" panel, select the respective job and click **Job details**.
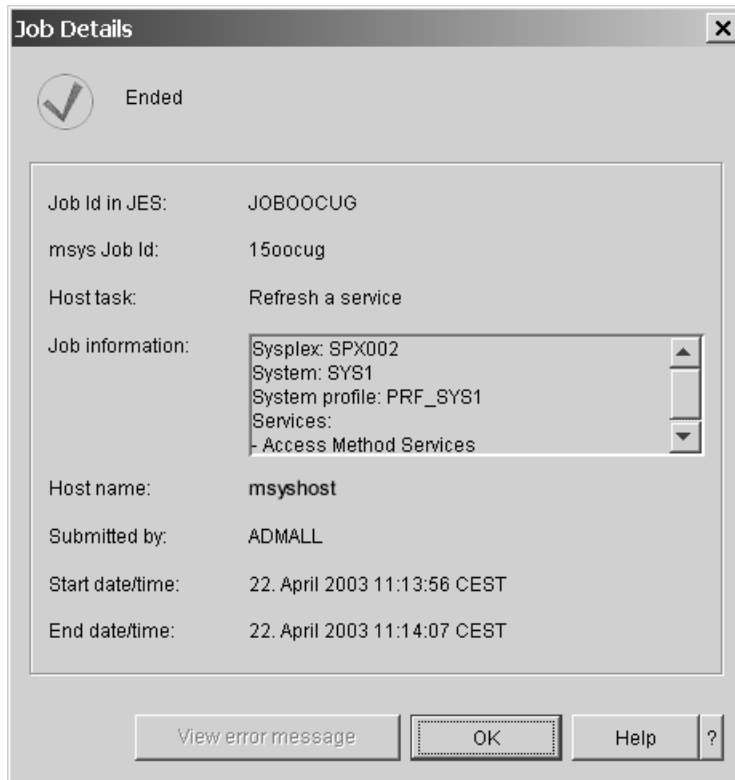
Figure 39. Job details

Displaying job set details

Job sets are containers for information on jobs that are generated for the "Commit updates (scheduled)" task. You can use the information gathered in the job set to monitor the status and progress of the jobs that belong to the job set. You can display job set details by locating the respective job set in the Jobs folder and clicking **File —> Show details...** on the context menu.
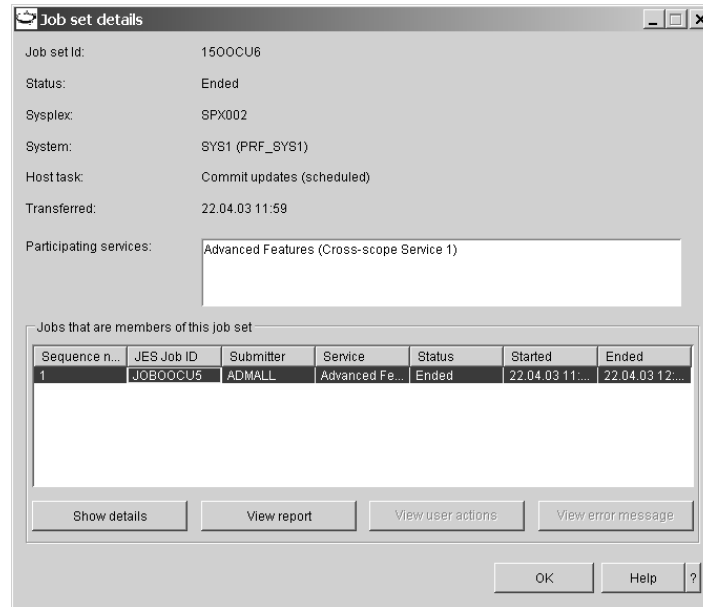
Figure 40. Job set details

Displaying user actions

When an update step is completed, you might have to perform some actions outside msys for Setup, before you can proceed to the next step. Such user actions might be necessary because you have restricted the capabilities of msys for Setup, for example by not permitting it to make security related updates. Other actions might be outside the scope of msys for Setup, for example an IPL.

If there are actions that you must perform outside msys for Setup, the "Job notification" panel for the respective job has a blue envelope symbol labelled "User actions required". The **View user actions** button is then available.
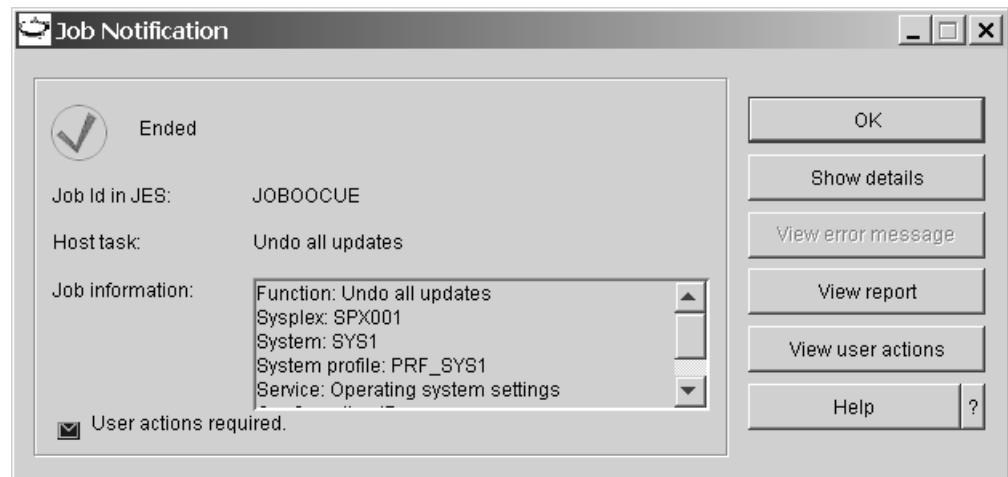
You can list the user actions:
* By clicking **View user actions** on the "Job notification" panel.

- By clicking **View user actions** on the "Report" panel (see "Viewing a job report").
- By locating the respective job in the Jobs folder and clicking
  File —> View user actions... on the menu.

  For jobs that were generated for a "Commit updates (scheduled)" task, locate the job set the job belongs to in the Jobs folder and click
 **File —> Show details...** on the menu. On the "Job set details" panel , select the respective job and click **View user actions**.

These buttons and the menu item are only available if there are user actions.

Viewing a job report

This section is not applicable to the tasks Add product set and Edit product set.

You can display a job report:
- By clicking **View report** on the "Job notification" panel.
- By clicking **View reports** on the panel from where you started the job.
- By locating the respective job in the Jobs folder and clicking
  File —> View report on the menu.

  For jobs that were generated for a "Commit updates (scheduled)" task, locate the job set the job belongs to in the Jobs folder and click
  File —> Show details... on the menu. On the "Job set details" panel, select the respective job and click **View report**.

Displaying an error message

When a job completes with an error you can display the associated error message from the job notification panel. You can display the error message:
- By clicking **View error message** on the "Job notification" panel.
- By clicking **View error message** on the "Job details" panel.

  For jobs that were generated for a "Commit updates (scheduled)" task, locate the job set the job belongs to in the Jobs folder and click
  File —> Show details... on the menu. On the "Job set details" panel , select the respective job and click **View error message**.

These buttons are only available if the job has completed with an error.

Canceling a job or job set

By canceling a job or job set in the list view of the Jobs folder you prevent the job or the jobs in the job set from running on the host:
- Jobs can be canceled if they have been submitted to the host but have not been started yet. If a job is canceled, the job will not run on the host even if it has been transferred successfully into a JES queue and is currently waiting to be processed.

  Note that canceling a job may have no effect if the job is just about to start on the host.

  Note:
  - A job that is running, has ended or failed cannot be canceled.

– If you need to stop a running job, you must cancel it on the host. In this case, the job status will change to "Failed" as soon as msys for Setup detects that the job is no longer active.

- Job sets can be canceled in the msys for Setup Jobs folder if :
  – the job set has not finished yet, that is, the job set does not have the status "Ended", "Failed", or "Canceled".
  – the status of the job set is "In Progress". In this case, only those jobs in the job set will be canceled that have not been processed yet.

To cancel a job or job set in the Jobs folder, select the Jobs folder in the resource tree to display all jobs and job sets in the list view. Then select the job or job set in the list view and click **File —> Cancel** on the menu.

Deleting a job or job set

By deleting a job or job set from the resource tree you only delete the job object or job set object that holds the job information, from the management directory. You do not delete the host jobs from the JES queue.

A job can only be deleted if:
- it completed successfully or failed
- it was canceled

A job set can be deleted if:
- all jobs of the job set were processed successfully on the host
- the status of the job set in the Jobs folder is "Failed"
- the job set was canceled and none of the jobs in the job set is still active

Jobs and job sets occupy storage in the management directory. In accordance with your organizations regulations, clear up old jobs from time to time.

To delete a job or job set in the Jobs folder, select the Jobs folder in the resource tree to display all jobs and job sets in the list view. Then select the job or job set in the list view and click **File —> Delete** on the menu.

Chapter 10. Undo all updates

You can reverse all updates to a system configuration that have been made according to the customization data of a service instance. Like "Update system configuration" the reversal has two steps:

1. Undo all updates
2. Commit undone updates

   If you are using a job scheduling system on the host and msys for Setup has been set up accordingly, you have the following options for committing undone updates:

   - You can process the undo requests on the host immediately (see "Steps to commit undone updates immediately" on page 132).
   - You can generate the jobs needed to change the configuration resources, transfer the complete set of jobs to the host, and use the job scheduling system to process them at a defined point in time (see "Steps to commit undone updates scheduled" on page 133).

Note that this task not only reverses the most recent update but returns to a state before the very first "Prepare updates" had been done for the service instance. Do "Undo updates" in preparation to removing a product set from a system, for example because you want to remove the product code.

Undo all updates for a service instance

Before you begin:
- You can only undo updates for services that you are authorized for.
- You must already have run "Prepare updates" successfully for the service instance.
- If your service has dependencies on other system level or sysplex-wide services you might need the cooperation of other users that are authorized for these services.

Steps to undo all updates for a service instance

Perform these steps to perform "Undo all updates" for a service instance:

1. In the resource tree, expand the sysplexes folder and the folder for the sysplex you want to work with.

   _____

2. If you want to work with a sysplex-wide service, click the Control panel in the sysplex folder. Otherwise expand the folder for the system you want to work with and click the Control panel in the system folder. A list of available services is displayed in the list view.

   _____

3. In the list view, select the service instance for which you want to undo the updates to the system configuration.

   _____

4. Click **File —> Undo system configuration updates...**.

Note:

- This menu item is available only if "Prepare updates" has been run successfully for the service instance.
- If you are not logged on to the z/OS system, you might be prompted to log on now. If the service instance you have selected has cross-scope dependencies, you may have to log on to both z/OS systems affected by changes.

The "Undo updates center" is displayed.

If the service you had selected has no dependencies on other services or dependencies only on other system level services, the"Undo updates center" consists of a single panel showing the complete list of services to be processed.
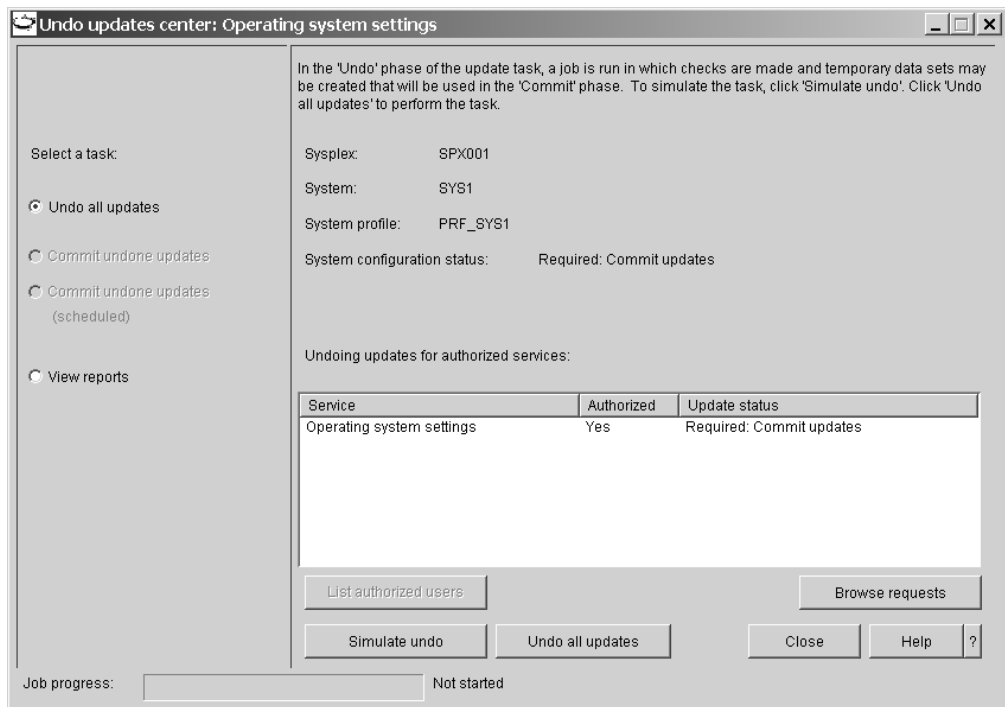
Figure 41. Undo updates center

If the service you had selected has cross-scope dependencies, the update center is subdivided into two tabbed panels, "System" and "Sysplex". To complete the **Undo all updates** task for the selected service, you need to perform the steps described below in both panels.

---

5. If it is not selected, select **Undo all updates** in the task navigation area.

---

6. Optionally, click **Simulate** to find out what exactly is going to happen to your system configuration during "Undo all updates". See "Running a simulation" on page 33 for details.

   Tip: You can also click **Browse requests** to see the requests that are going to be processed. Depending on the service, browsing the requests or simulation can be more conclusive.

---

7. Click **Undo all updates** to submit a job that performs "Undo all updates" on your system.

This job can take a long time. The job progress can be seen in the progress bar at the bottom of the panel. The job status is displayed next to the progress bar.

You do not have to keep the "Undo updates center" displayed during the entire time that the job is running. When the job finishes, you receive a job completion notification even if the "Undo updates center" is closed. To reopen the "Undo updates center", click **File —> Undo system configuration updates...** on the menu.

You can even log off from the workplace as soon as the job has been submitted. You receive the job completion notification when you next log on if the job has finished by then.

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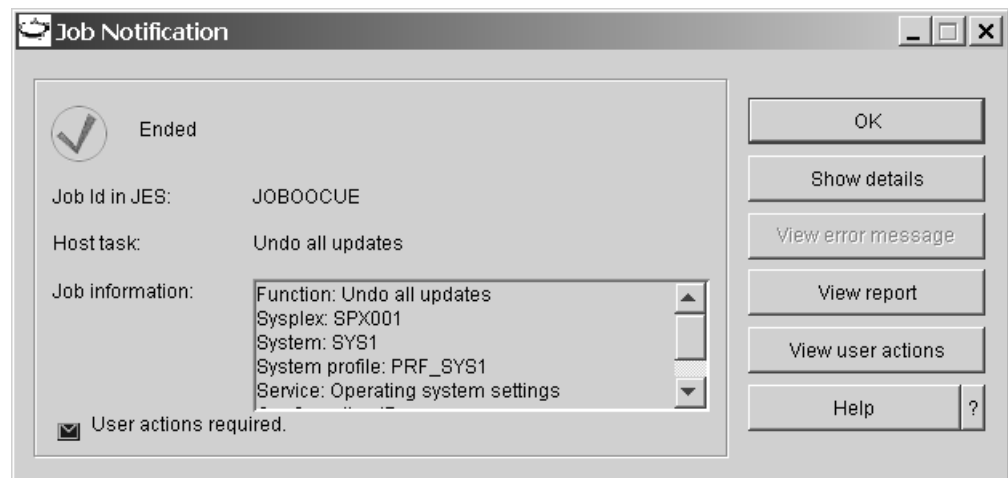
8. Examine the job notification.

Figure 42. Job notification with user actions

If the job finishes with an error, select **View reports** in the task navigation area to find out what went wrong. See "Job reports" on page 139 for details. You can rerun "Undo all updates" after you have resolved the cause of the error.

Check if there are manual actions to be performed to complete the task. If there are manual actions, there is an envelope symbol in the lower left corner of the job notification panel and the **View user actions** button is available. If applicable, click **View user actions** and perform the actions before you proceed with **Commit undone updates**.

_____

9. Ensure that **Undo all updates** has been performed for all services.

If the service you had selected has cross-scope dependencies, ensure that **Undo all updates** has been performed for all system level and sysplex-wide services listed in the panels of the "Undo updates center".

If a list of services contains services for which you are not authorized, these services were not included in the **Undo all updates**. Select each service in the list and click **List authorized users**. Inform one of the authorized users that **Undo all updates** is pending for the respective service.

When **Undo all updates** has been performed successfully for all services that are affected, you can proceed with **Commit undone updates**.

Committing undone updates

Before you begin:

- You can only perform this task for a service for which you are authorized.
- This is the second step in a two-step procedure; you must carry out the steps in "Undo all updates for a service instance" on page 129 first.
- Your service may have dependencies on other system level or sysplex-wide services. In such a case, you might need the cooperation of other users that are authorized for these services.
- If you are using a job scheduling system on the host and msys for Setup has been set up accordingly, you have the following options:
    - You can process the undo updates requests on the host immediately (see "Steps to commit undone updates immediately").
    - You can generate the jobs needed to change the configuration resources, transfer the complete set of jobs to the host, and use the job scheduling system to process them at a defined point in time (see "Steps to commit undone updates scheduled" on page 133).

  You can combine these options when committing undone updates for a service:
    - If some undo update requests have already been committed and were processed on the host immediately, you can still decide to use job scheduling for those jobs that have not yet been committed, for example, because the user was not authorized for all services.
    - The decision to commit jobs for scheduling, however, is final: If you have already started to generate jobs that are to be processed by a job scheduling system, an immediate commit for any remaining requests is not possible.

      Note: Immediate commit becomes available again when a job set is canceled.

Steps to commit undone updates immediately

Perform these steps to run the "Commit undone updates" task:

1. If you are not already on the "Undo updates center" open it as described in "Undo all updates for a service instance" on page 129).

   If the service you had selected has cross-scope dependencies, the "Update center" is subdivided into two tabbed panels, "System" and "Sysplex". To complete the **Commit undone updates** task for the selected service, you need to perform the steps described below in both panels.

   _____

2. If it is not selected, select **Commit undone updates** in the task navigation area.

   Note: This radio button is only available if configuration changes have been successfully undone.

   _____

3. Optionally, click **Simulate** to find out what exactly is going to happen to your system configuration during "Commit undone updates". See "Running a simulation" on page 33 for details.

Tip: You can also click **Browse requests** to see the requests that are going to be processed. Depending on the service, browsing the requests or simulation can be more conclusive.

_____

4. Click **Commit undone updates** to submit a job that performs "Commit undone updates" on your system.

   This job can take a long time. The job progress can be seen in the progress bar at the bottom of the panel. The job status is displayed next to the progress bar.

   You do not have to keep the "Undo updates center" displayed during the entire time that the job is running. You can close it and optionally reopen it later to check the job progress. When the job finishes, you receive a job completion notification even if the "Undo updates center" is closed. To reopen the "Undo updates center", click
   File —> Undo system configuration updates... on the menu.

   You can even log off from the workplace as soon as the job has been submitted. You receive the job completion notification when you next log on if the job has finished by then.

_____

5. Examine the job notification.

   If the job finishes with an error, select **View reports** in the task navigation area to find out what went wrong. See "Job reports" on page 139 for details. You can rerun "Commit undone updates" after you have resolved the cause of the error.

   Check if there are manual actions to be performed to complete the task. If there are manual actions, there is an envelope symbol in the lower left corner of the job notification panel and the **View user actions** button is available (see Figure 42 on page 131). If applicable, click **View user actions** and perform the actions to make all undone changes active.

_____

6. Ensure that **Commit undone updates** has been performed for all services.

   If the selected service has dependencies on both system level and sysplex-wide services, ensure that **Commit undone updates** has been performed for all affected services.

   If the list of services contains services for which you are not authorized, these services were not included in the **Commit undone updates**. Select each service in the list and click **List authorized users**. Inform one of the authorized users that **Commit undone updates** is pending for the respective service.

_____

Steps to commit undone updates scheduled

Before you begin:

- You can perform this task only if the system properties that allow job scheduling for commit jobs have been set (see "Steps for viewing and editing FTP and job specifications" on page 103).
- The msys for Setup SPE PTFs UA90013 and UA90015 must be installed on the z/OS system. If the service has cross-scope dependencies, the PTFs must be installed on both z/OS systems affected by the changes.
- When you select the radio button **Commit undone updates (scheduled)**, you cannot simulate what is going to happen to your system configuration when the updates are processed. If you want to see the results of a simulation before you

start generating jobs, select **Commit undone updates** and run the simulation by clicking **Simulate**. When you are satisfied with the results, select **Commit undone updates (scheduled)** and perform the steps described below.

- The jobs can be generated in any order.
- The jobs may need to be processed in a specific order on the z/OS system or systems affected by the changes. To enable you to provide the necessary information to the administrator of the job scheduling system, a Job set information file is generated when the jobs are transferred to the z/OS system. Make this file available to the administrator of the job scheduling system.
- The jobs that are generated for this task must be transferred to the z/OS system by a user who is authorized for the service to be set up.
- As soon as a job has been generated, a job set appears in the Jobs folder in the msys for Setup resource tree. The job set is merely a container for information about the jobs that have been generated for the "Commit updates (scheduled)" task. You can use the information gathered there to monitor the status and progress of job generation and processing.

Perform these steps to run the "Commit undone updates (scheduled)" task:

1. If you are not already on the "Undo updates center", open it as described in "Undo all updates for a service instance" on page 129).

   If the service you had selected has no dependencies on other services or dependencies only on other system level services, the"Undo updates center" consists of a single panel showing the complete list of services to be processed.

   If the service you had selected has cross-scope dependencies, the "Update center" is subdivided into two tabbed panels, "System" and "Sysplex". To complete the "Commit updates (scheduled)" task for the selected service, you need to perform the steps described below in both panels.

   _____

2. If it is not selected, select **Commit undone updates (scheduled)** in the task navigation area.

   Note: This radio button is only available if configuration changes have been successfully undone.

   _____

3. Click **Generate jobs** to generate a job that will be used to change the configuration resources on your system.

   _____

4. Ensure that **Generate jobs** has been performed for all services.

   If the list of services contains services for which you are not authorized, these services were not included in the **Generate jobs**. Select each service in the list and click **List authorized users**. Inform one of the authorized users that **Generate jobs** must be performed for the respective service.

   _____

5. When **Generate jobs** has been performed for all services, click **Transfer jobs** to transfer the complete set of jobs to the host where they can be processed by a job scheduling system.

   If the service to be set up has cross-scope dependencies, you can click **Transfer jobs** either in the "System" panel or the "Sysplex " panel of the "Undo updates center".

Note: You can also transfer the jobs to the host from the Jobs folder in the resource tree by selecting the job set that was created for the jobs and clicking **Transfer** in the File menu.

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6. Print the job set information file that is displayed when the jobs have been transferred to the host and make it available to the administrator of the job scheduling system.

   The HTML file contains all the information the administrator needs to schedule the jobs, for example, the system to which the jobs have been transferred, the JES job IDs, and the sequence in which the jobs must run on the system.

   Note: You can also print the information file from the Jobs folder in the resource tree by selecting the job set that was created for the jobs and clicking **Print job set information** in the File menu.

   _____

Chapter 11. Troubleshooting

The following table describes some known error situations and what to do about it:

Symptom/ Failure	Possible causes	Solution
The status of list entries (for example, jobs or job sets) appears to be inconsistent or has not changed for a long time.	The workplace needs to be refreshed.	Click the **Refresh console** icon to refresh the workplace.
The graphical user interface (GUI) seems to be blocked or shows an unexpected behavior, for example, it does not react to mouse clicks or keyboard entries.		Click the **Refresh console** icon to refresh the workplace.
The job shows status **In progress** for a long time and no progress can be seen on the progress bar.	The connection to the LDAP server was lost while a job was running on the host.	1. Check on the host if the job has already completed. 2. Log off Setup or close the msys for Setup workplace. 3. Start the msys for Setup workplace and log on to Setup. During this step the workplace will try to clean up any incomplete LDAP data that remains as a result of the disappearance of the LDAP server. 4. Click the Jobs folder in the resource tree to display a list of all jobs in the list view. 5. Start the LDAP server again if it is not running. 6. Submit the host job again.
A job completes on the z/OS system but no job notification is received.	A firewall prevents the z/OS system from sending messages to the workplace.	Perform the task from a workstation within the firewall of the z/OS system.
The status and progress bar of a job are not updated after the job has been submitted	Because of incorrect IP settings, a firewall, or other network problems, the job notifications from the host cannot be sent to the workplace.	Open the Jobs folder and refresh the console (see "Refreshing the console" on page 164). If the host job was able to access the management directory, the job displayed in the Jobs folder now shows the correct status. If the job has completed, a notification window is displayed.

Symptom/ Failure	Possible causes	Solution
A job fails with message CIMS0144 or a job fails with an indication that a nested job timed out.	The original job starts one or more nested jobs. At least one of these nested jobs timed out. The problem might be: • The specified job class does not allow sufficient time • There are not enough initiators for the specified job class to allow the original and the nested jobs to run concurrently • The nested job does not start due to a JCL error	Check on the host if the nested job that apparently timed out has run. If the job has run, check the properties of the z/OS system on the workplace and ensure that the specified job class allows sufficient CPU time and a sufficient number of initiators. If necessary, change the job class or start more initiators for the job class. If this does not solve the problem, consult MVS™ literature for more information on job classes. If the job has not run, examine the job output of the nested job for possible errors. If it is a JCL error, contact IBM support or the support team of the product who's plug-in has started the nested job.
CIMS0109. The version of the workplace is not compatible with the version of the msys for Setup host code on the z/OS system.	A PTF has been applied or a new release has been installed but the workplace has not been upgraded.	Download the latest workplace. See "Downloading the workplace" on page 159.
Performance slowdown or com.ibm.asn1.ASN1Exception: Read timed out.	Performance problem in LDAP on z/OS.	DB2 Administrator must run RUNSTATS and REORG TABLESPACE. After that msys for Setup task must be repeated, if necessary.

Chapter 12. Where msys for Setup provides problem analysis information

This chapter describes how you can solve various problem situations involving msys for Setup. The sources of information that you can use when trying to correct a problem include:

- Job reports (logs) (see "Job reports")
- Trace files (see "Tracing a task" on page 141)
- Console output on the z/OS system
- Workplace messages

Messages can be issued on the workplace for all tasks you perform. Messages are displayed on a special message panel that usually provides a **Details** button or a **Reason** button for displaying further information.

Unless the trace is switched off, there is also a workplace trace file for all tasks.

For tasks that submit jobs on a z/OS system, there is also a host trace file and a job report. These tasks are:

- Refresh the management directory
- Update system configuration steps (and simulations)
- Undo system configuration updates steps (and simulations)
- Product set tasks (Exception: job report does not apply to Add product set and Edit product set.)
- Backup and restore of key configuration data

Job reports

msys for Setup writes a job report for each job it runs on a z/OS system.

Job reports are available:

- From the Job notification panel that is displayed when an msys for Setup job has ended on a z/OS system (see Figure 38 on page 123).
- From the panel from where you start the respective host task, for example the "Update center".
- From the context menu of the corresponding job in the Jobs folder if the job is not a member of a job set.
- From the "Job set details" panel if the job is a member of a job set. To display the "Job set details" panel use the context menu of the job set in the Jobs folder.

View job reports:

- To examine details on related tasks that have previously been performed against the same service instance.
- To find out the results of a simulated task.
- If a task failed to find out where an error occurred.
- To find out which actions you have to perform outside msys for Setup, if any, to complete a task.

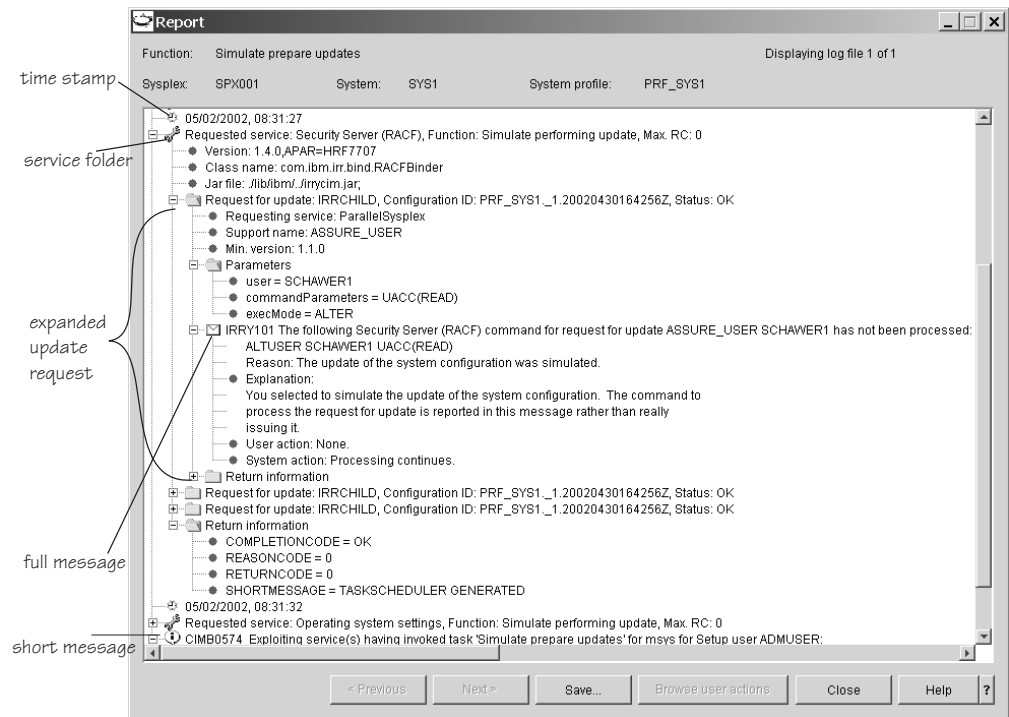Figure 43 shows a job report for a simulated "Prepare updates".

Figure 43. Report panel displaying a job report for a simulated prepare updates

The report is displayed in a tree structure. You can collapse and expand branches by clicking the '+' and '-' symbols next to the folder nodes. The report contains:

Service folders
with the same spanner symbol that is also used in the list view of the workplace. The service folder encloses all processing information for a particular service. At the end of the service folder there is a return information folder that tells you whether processing for that service has been successful.

Requests
For the "Update system configuration" and "Undo system configuration updates" tasks, and their simulations, the report contains a folder for each request from customization or from update that has been processed. A request is shown with a folder symbol. You can expand it to see more details. If there were parameters associated with the request it contains a nested parameter folder. At the end of the request there is a return information folder, similar to the folder at the end of a service section. It tells you whether processing for the request has been successful.

Full messages
The message is shown following the envelope symbol. If you expand the branch below it you can also see the message explanation, system action, and user response. In particular, messages can contain:

• For simulated tasks: Information on what would have been done if the task had been run for real.

• Information on actions that you must perform outside msys for Setup to complete the task. Messages that describe required user actions are identified by a blue envelope symbol.

- Error information. Error messages are identified by a red envelope symbol

Short messages

Are simple informational messages without further details. Short messages use the bubble symbol.

Time stamps

that allow you to follow the job progress

Steps for finding the cause of a problem in a job report

Perform these steps to find the cause of a problem:

1. On the "Report" panel, scroll down to the end of the report.

   _____

2. From the bottom, find the last entry that says **Requested service:** and has a red icon in front of it, indicating that there is a problem.

   _____

3. Expand the requested service entry by clicking on the '+' symbol.

   _____

4. If the job processed requests, find the last processed request that failed and expanded it by clicking on the '+' symbol.

   _____

5. Find the last message in the list of messages. The last message gives you the original error and information on how to proceed.

   _____

Where to locate a job report

If you contact IBM support for assistance with solving a problem, you might be asked to provide a job report.

The job reports are downloaded from the z/OS system by msys for Setup when you request them from the workplace. They are displayed in the "Report" panel. The report panel has a **Save...** button that allows you to save the report to a directory of your choice on your workstation.

You can also locate a report in the HFS of the z/OS systems (see "Steps for viewing and changing the host log directory" on page 107) and download it with `ftp` in binary mode.

The report file name is generated out of a task name, the system profile name, the product set name, the user ID that started the job, and a timestamp (GMT).

Example: `LOG.UPDATE.target1.SVPAC1.BILL.20020515113459GMT`

Tracing a task

Tracing can adversely impact the performance of msys for Setup. Use the tracing function only as instructed by a support team.

You can set the trace level separately for the host and for the workplace. The selective tracing facility allows you to narrow the scope of a trace.

Where to find the workplace trace files

If you contact IBM support for assistance with solving a problem, you might be asked to provide a workplace trace.

The workplace trace files are written to the workstation directory where the workplace has been installed. There are separate trace files for the msys for Setup framework and for each service. The msys for Setup framework trace file is called `CimWorkplace.trc`. The trace file `msysWorkplace.trc` may also provide important information. The service trace files are called `Service<service_name>.trc`.

Service specific workplace trace files from a prior workplace session are overwritten when the workplace is started. Therefore, if you want to preserve an existing trace file, manually save it to another file name or directory before you start the workplace. For the msys for Setup framework trace file, the latest prior file is kept as `CimWorkplace.old`.

Where to find the host trace files

If you contact IBM support for assistance with solving a problem, you might be asked to provide a host trace.

The host trace files are written to the HFS directory that you specified in the system property sheet (see "Steps for viewing and changing the host log directory" on page 107). This is the same HFS directory to which the job reports are written. The default is `/var/cim/log`.

The host trace file names are of the form `TRC.<other_information>.<timestamp>.TXT`. There are no separate service traces. You can use the time stamps to see which traces are recent and correspond to job reports.

Steps for setting the trace levels

Tracing provides more detailed information on the msys for Setup processing than the reports do. There are separate traces for the workstation and the host processing on each z/OS system. You set the trace level for the workstation and for the z/OS systems separately.

Before you begin:
- Traces with high trace levels can be extensive and can adversely affect the performance. Only change the trace levels from the default, level 2, if advised to do so by IBM support.
- You can use selective tracing to narrow the scope of a trace to individual service instances and individual requests (see "Selective tracing" on page 144).

Perform these steps to set a trace level:

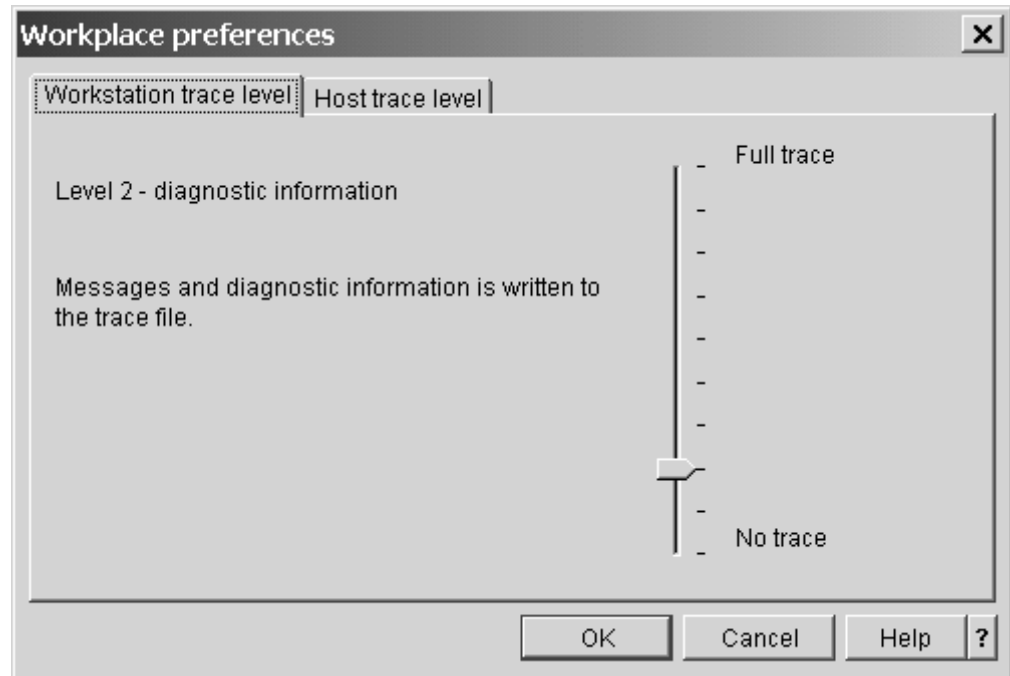1. Click **Options —> Preferences...** on the menu. The "Workplace preferences" panel is displayed.

Figure 44. Setting the trace levels

_____

2. Depending on the trace level you want to set, click the "Host trace level" tab or the "Workstation trace level" tab.

_____

3. To set the trace level drag the slider to the desired position between "No trace" (level 0) and "Full trace" (level 9). While you move the slider, the current level and an explanation of what is traced at that level are displayed to the left of the slider scale.

You can choose from the following levels of tracing:

0. No trace	No tracing is done.
1. Exceptions	Messages, including explanation and user action, and Java exceptions are written to the trace file.
2. Diagnostic information (default level)	
	Messages and diagnostic information is written to the trace file.
3. Informational	Messages, diagnostic information, and other high-level information is written to the trace file.
4. External calls	Messages, diagnostic information and any calls to external procedure including any parameter values are written to the trace file.
5. Trace LDAP access	Additionally, access to LDAP is written to the trace file.
6. Internal calls	Additionally, all calls to internal procedures are written to the trace file.

7. Access to supporter resources

Additionally, any requests for access to resources are written to the trace file.

8. Control flow

Additionally, code branching information is written to the trace file.

9. Low-level information

Very detailed information is written to the trace file.

A higher level contains all the data in the lower levels. Note that turning on tracing will slow down processing.

_____

4. Click **OK** or click the other tab to set both trace levels.

_____

Selective tracing

Use the "Selective trace" panel to narrow the scope of the host trace to one or more services or to individual requests.

Before you begin:
- Only use selective tracing at the request of IBM Support.
- Selective tracing is done at the trace level that you have set for the host trace. Be sure that you have set a suitable trace level (see "Steps for setting the trace levels" on page 142).

Perform these steps to narrow the scope of the host trace:

1. In the resource tree, expand the sysplexes folder and the folder for the sysplex you want to work with.

_____

2. If you want to trace sysplex-wide services, click the control panel in the sysplex folder, otherwise expand the folder for the system you want to work with and click the control panel in the system folder. A list of available services is displayed in the list view.

_____

3. In the list view, select the service or service instance you want to trace.

   Tip: To obtain a selective trace that spans multiple service instances press and hold down the Ctrl key while clicking each service instance that you want to include in the selective trace.

_____

4. Click **File —> Selective trace...** on the menu. The "Selective trace" panel is displayed. The center of the panel shows a tree structure of services with nested requests.

_____

5. Select the check boxes next to the services that you want to trace at the service level. This does not include the nested requests in the trace.

_____

6. If you want to trace individual requests, expand the containing service folders and select the check box of each request that you want to trace.
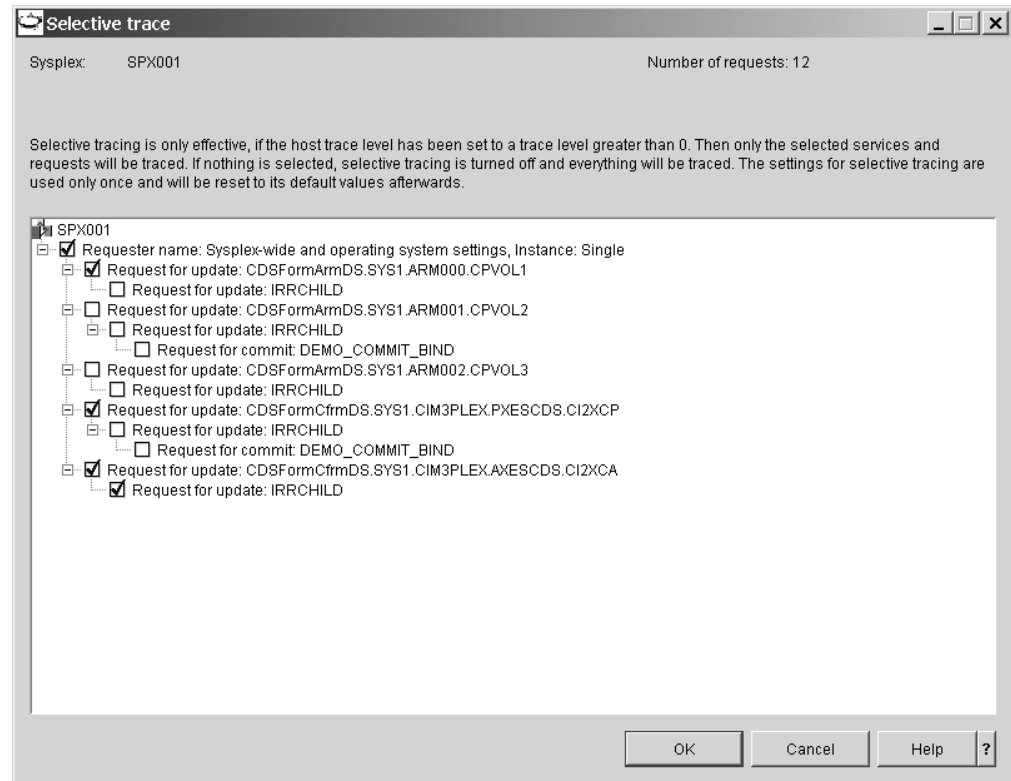

Figure 45. Selective trace panel

With the selection in Figure 45, a trace is taken for processing at the service level and for the four selected requests. Requests that are nested under selected items but not themselves selected are not traced.

_____

7. Click **OK** to save your selection.

_____

Result: The next time you perform a task a selective trace will be taken, according to your selections on the "Selective trace" panel and the setting for the host trace level. If you have not selected anything the trace defaults to a full trace. The setting is effective for one task only. After that it is reset to a full trace.

Console output on the z/OS system

msys for Setup writes messages to the console. Normally, messages are written to a job report and sent on to the workplace, but in some error situations it can be useful to check the console messages directly.

The console might be waiting for input (Reply) - Here a query from a supporting service was not answered during a "Refresh management directory" or "Update system configuration" task. The console will wait for input and nothing happens until it gets it.

Job output on the z/OS system

Any msys for Setup job produces JES output as for any other job. This output can be used for problem determination. In particular, if there is no job notification to the workplace for an unusually long time for a specific task (job), then you should first ascertain if the job is still running. If it is not, then the job output can be useful. A job can end without notification if the LE Runtime or Java environment is damaged and the msys for Setup host code is not run.

To find out the JES job ID of a job, click on the Jobs folder in the resource tree to display the jobs and job sets in the list view:

- For jobs that are not members of job sets, the job information in the list view includes the JES job ID.
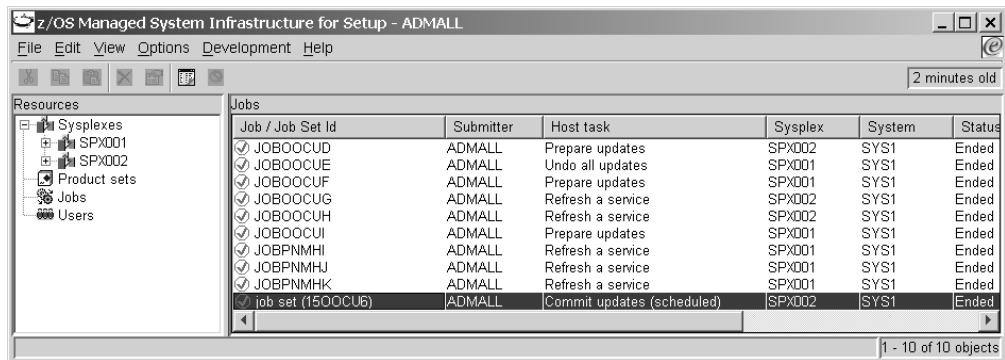
Figure 46. Jobs and job sets in the list view

- For jobs that were generated for a "Commit updates (scheduled)" task, use the context menu of the job set to display the "Job set details" panel. The JES job IDs for all jobs in the job set are listed in the panel.
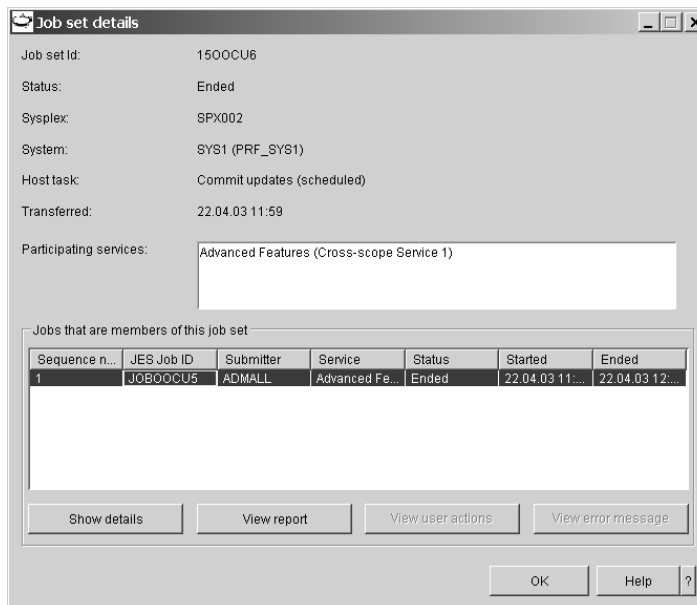

Figure 47. Job set details

Chapter 13. Backup and restore

This section describes how to use the msys for Setup backup and restore functions that are provided by some services. These functions can help to recover from failures due to an erroneous configuration of your z/OS.

Backup and restore for the msys for Setup parmlib and couple data sets are currently provided by the sysplex-wide service "Sysplex-wide settings" and on each system of your sysplex by the service "Operating system settings". To find out if other services provide backup and restore refer to the respective service information file (see "Steps for viewing a service information file" on page 7).

Note: Only resort to restoring a service if you cannot solve the problem by returning to the customization and repeating the update task with corrected customization data.

Making a backup copy of key configuration data

When you make a backup copy of key configuration data, modifications that were made by msys for Setup to your working configuration are saved. This enables you to revert to this configuration if you have problems with your new configuration.

Refer to "How the backup function handles the parmlib members" on page 180 and "How the backup function handles couple data sets" on page 187 for further information on backup and restore for the couple and parmlib data sets.

Note: To make a backup for a Parallel Sysplex® configuration, you make a backup for service "Sysplex-wide settings" at the sysplex level, and for "Operating system settings" for each system in the sysplex. Be sure that the correct system profile is the active system profile when you perform the backup.

Steps for backing up key configuration data

Use the "Back up configuration data" panel to run a job that creates a backup of key configuration data of the service that you selected.

Before you begin:
- You can only create a backup for a service that you are authorized for.
- You can only create a backup if you have successfully committed configuration data for the service.
- Only perform backup when the z/OS system is IPL-able and works to your satisfaction. msys for Setup only maintains a single backup. Each backup overwrites the previous one.
- After restoring a backup, msys for Setup treats the backed up key configuration data as the new initial data beyond which you cannot reverse changes with "Undo all updates".

Perform these steps to back up key configuration data:

1. In the resource tree, expand the sysplexes folder and the folder for the sysplex you want to work with.

2. If you want to work with a sysplex-wide service, click the Control panel in the sysplex folder. Otherwise expand the folder for the system you want to work with and click the Control panel in the system folder. A list of available services is displayed in the list view.

3. Select the service for which you want to back up configuration data in the list view and click **File —> Back up key configuration data...**. The "Back up configuration data" panel is displayed.
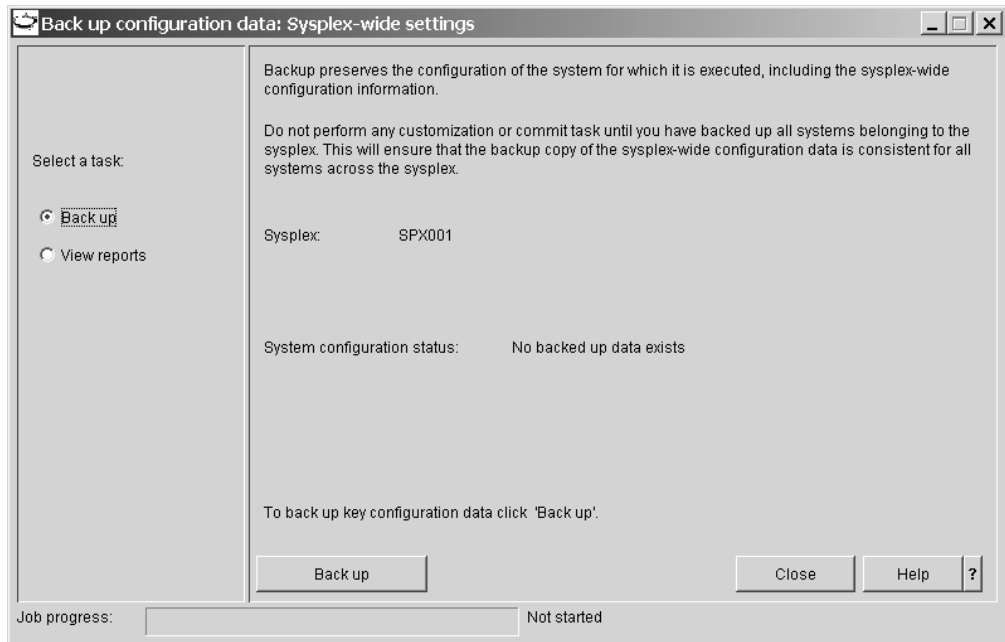

Figure 48. Back up configuration data panel

4. If it is not selected, select **Back up** in the task navigation area.

5. Click **Back up** to submit a job that performs the backup task on your system.

The backup job can take a long time. The job progress can be seen in the progress bar at the bottom of the panel. The job status is displayed next to the progress bar.

You do not have to keep the "Back up configuration data" panel displayed during the entire time that the job is running. You can close it and optionally reopen it later to check the job progress. When the job finishes, you receive a job completion notification even if the "Back up configuration data" panel is closed. To reopen the "Back up configuration data" panel, click **File —> Back up key configuration data...** on the menu.

You can even log off from the workplace as soon as the job has been submitted. You receive the job completion notification when you next log on if the job has finished by then.

6. If the job finishes with an error, select **View reports** in the task navigation area to find out what went wrong. See "Job reports" on page 139 for details. You can rerun the backup task after you have resolved the cause of the error.

Restoring configuration data

Use the restore function if you cannot IPL your system because of a failing critical resource. If you cannot IPL because of a damaged msys for Setup parmlib, IPL your system with the emergency LOADxx member (Chapter 14, "Recovery", on page 153) and then run the restore task for the affected service.

After the restore, you must refresh the management directory for the affected services and then correct the configuration.

After restoring a backup, msys for Setup treats the backed up key configuration data as the new initial data beyond which you cannot reverse changes with "Undo all updates".

Restoring key configuration data for a Parallel Sysplex configuration amounts to performing restore for service "Sysplex-wide settings" at the sysplex level and for service "Operating system settings" for each system in the sysplex. This restores both the couple data sets and the parmlib. See "Recovering the parmlib" on page 179 and "Recovering couple data sets" on page 184 for what you need to do for each configuration resource after performing the restore.

Steps for restoring configuration data

Use the "Restore configuration data" panel to run a job that restores key configuration data of the service that you selected.

Before you begin:
- You can only restore configuration data if you have created a backup.
- You can only restore configuration data from your last backup.
- You can only restore configuration data for services that you are authorized for.

Perform these steps to restore configuration data:

1. In the resource tree, expand the sysplexes folder and the folder for the sysplex you want to work with.

2. If you want to work with a sysplex-wide service, click the Control panel in the sysplex folder. Otherwise expand the folder for the system you want to work with and click the Control panel in the system folder. A list of available services is displayed in the list view.

3. Select the service for which you want to restore backed up configuration data in the list view and click **File —> Restore key configuration data...**. The "Restore configuration data" panel is displayed.
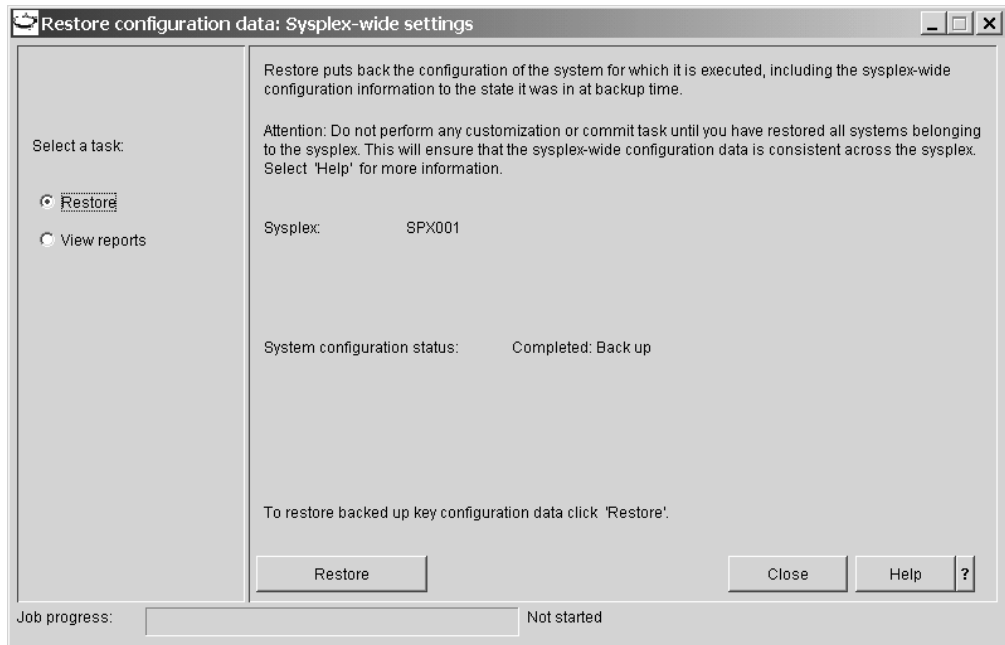
Figure 49. Restore configuration data panel

---

4. If it is not selected, select **Restore** in the task navigation area.

   Note: This radio button is only available if prior configuration changes have been successfully backed up.

---

5. Click **Restore** to submit a job that performs the restore task on your system.

   The restore job can take a long time. The job progress can be seen in the progress bar at the bottom of the panel. The job status is displayed next to the progress bar.

   You do not have to keep the "Restore configuration data" panel displayed during the entire time that the job is running. You can close it and optionally reopen it later to check the job progress. When the job finishes, you receive a job completion notification even if the "Restore configuration data" panel is closed. To reopen the "Restore configuration data" panel, click **File —> Restore key configuration data...** on the menu.

   You can even log off from the workplace as soon as the job has been submitted. You receive the job completion notification when you next log on if the job has finished by then.

---

6. If the job finishes with an error, select **View reports** in the task navigation area to find out what went wrong. See "Viewing a job report" on page 126 for details. You can rerun the restore task after you have resolved the cause of the error.

After performing restore, refresh the management directory for the affected services. You can then:

- Customize again and perform the update tasks with the new customization data
- Undo all updates and commit the undone updates

Chapter 14. Recovery

Additionally, in order to allow you to IPL the old configuration without having to go through the restore procedure, msys for Setup builds a special copy of the LOAD member in the original load library. The suffix of the copy is recorded in the job report of the backup job. Make a note of the suffix so you have it ready if you need it. This way the original version can be IPLed if the new configuration fails. (See 2. in Figure 54 on page 181). If IPL of a z/OS system fails after commit updates, then the emergency load member is the only way to IPL that z/OS system.

Notes:

1. You can determine the suffix of the LOAD member from messages that are written to the job report of the first refresh of "Operating system settings" or "Sysplex-wide settings". These contain the names of the copies. To determine this suffix, you have to view the job report. Look for message **IEACIM0005**.

2. If you use the emergency copy of LOADxx to IPL, it is possible that the IEACMD00 member is not in the correct state. There is only one IEACMD00 and no other suffixes can be used. If IEACMD00 is changed during the commit, it will remain in that state.

3. After IPL with this emergency copy of LOADxx, you must:

   - Either perform a restore and the follow on steps. Refer to "Steps for restoring configuration data" on page 149

   - Or refresh and then either recustomize or undo all updates.

Part 4. Appendixes

Appendix A. Setting up the msys for Setup workplace

This section describes the tasks for setting up the msys for Setup workplace on your workstation. Perform the subtasks in this order:

1. "Ensuring that the workstation is defined to TCP/IP"
2. "Verifying the TCP/IP connection to the LDAP server" on page 159
3. "Downloading the workplace" on page 159
4. "Installing the workplace on your workstation" on page 160
5. "Starting the workplace" on page 161

Ensuring that the workstation is defined to TCP/IP

The workstation you use for running the workplace needs a host name in addition to an IP address.

To display your workstation's host name type

```
hostname
```

at a command prompt and press Enter. If the command returns a host name you are done. If not, follow the instructions in this section to assign one.

Before you begin:

- You must have administrator rights on the workstation you are using to make the necessary changes to the system settings.
- Consult your network administrator about which host name and domain you should use.

Steps for assigning a host name to a Windows NT workstation

Perform these steps to assign a host name to a Windows NT workstation:

1. On the desktop, click **Start —> Settings —> Control Panel**.

   _____

2. Double click **Network**.

   _____

3. In the Network property pages, click the **Protocols** tab.

   _____

4. Select TCP/IP from network protocols, then click **Properties**.

   _____

5. Click the **DNS** tab.

   _____

6. On the DNS panel, type a host name into the **Host Name** field.

   _____

7. Ensure that the domain name is correct.

   _____

8. Click **OK —> OK**.

Steps for assigning a host name to a Windows 2000 workstation

Perform these steps to assign a host name to a Windows 2000 workstation:

1. On the desktop, click **Start —> Settings —> Control Panel**.

2. Double click **System**.

3. In the System Properties, select the **Network Identification** tab.

4. Click **Properties** to display the "Identification Changes" panel.

5. Type the host name into the **Computer name** entry field.

6. Click **More** to display the "DNS Suffix and NetBIOS Computer Name" panel.

7. Ensure that the domain name is correct. If you have made changes on this panel, close it with **OK**; if you have not made any changes, close it with **Cancel**.

8. Click **OK —> OK**.

Steps for assigning a host name to a Windows XP workstation

Perform these steps to assign a host name to a Windows XP workstation:

1. On the desktop, click **Start —> Control Panel —> Performance and Maintenance**.

2. Click **System**.

3. In the System Properties, select the **Computer Name** tab.

4. Click **Change** to display the "Computer Name Changes" panel.

5. Type the host name into the **Computer name** entry field.

6. Click **More** to display the "DNS Suffix and NetBIOS Computer Name" panel.

7. Ensure that the domain name is correct. If you have made changes on this panel, close it with **OK**.

8. Click **OK —> OK**.

_____

Verifying the TCP/IP connection to the LDAP server

At a command prompt on the workstation, enter:

```
ping hostname
```

where *hostname* is the host name or IP address of the system where the LDAP server runs.

You can use either of these means to verify that the LDAP server is running:
- Access the LDAP server with an LDAP client, for example an LDAP browser (not delivered with msys for Setup).
- Check the LDAP server log file
- Use the ldapsearch facility on z/OS. Refer to *z/OS Security Server LDAP Server Administration and Use* for details.

Downloading the workplace

The workplace installation program cimsetup.exe resides in the hierarchical file system (HFS), in directory /usr/lpp/cim on the z/OS system volumes.

Download cimsetup.exe to a temporary directory on the workstation where you want to install the workplace. You can use:
- FTP
- A Web browser

The following sections provide detailed steps for downloading the file.

Before you begin: You require an ID on the z/OS system with at least read access to the HFS.

Steps for downloading the workplace code with FTP

Perform these steps to download the workplace code with FTP:

1. Open a command prompt on your workstation.

_____

2. Create a temporary directory, for example:

```
c:
md cimsetup
cd cimsetup
```

_____

3. Open an FTP session with a z/OS system.

```
ftp hostname
```

where *hostname* is the host name or the IP address of the z/OS system.

_____

4. Enter your user ID and password for the z/OS system when prompted. You user ID must have read access to /usr/lpp/cim.

5. Change to the HFS directory where the workstation code resides:

   ```
   cd /usr/lpp/cim
   ```

6. Change to binary mode, get the file, and exit FTP:

   ```
   binary
   get cimsetup.exe
   quit
   ```

Steps for downloading the workplace code with your Web browser

Before you begin: Using a Web browser might require some preparation on the z/OS system from where you want to download the code. If either:

- Your network setup uses a proxy
- You use Microsoft Internet Explorer 5.0 (with or without proxy)

you might need to configure your FTP-server to go to the HFS by default. To do this, set STARTDIR HFS in FTPSDATA (see *z/OS Communications Server: IP Configuration Guide* for details).

Perform these steps to download the workplace code with a web browser:

1. Direct your browser at this URL:

   ```
   ftp://<your userID>@<hostname>/usr/lpp/cim/cimsetup.exe
   ```

   where:

   <hostname>
       is the host name or the IP address of the z/OS system.

   <your userID>
       is your ID on the z/OS system.

2. Enter your password when prompted.

3. Save the file to your workstation.
   Example: If you are using Netscape Communicator, select **File —> Save as...**.

Installing the workplace on your workstation

Before you begin: You must have administrator rights on the workstation.

The workplace installation is performed with the workplace installation program. To install the workplace run cimsetup.exe and follow the instructions on the screen.

If you are installing the workplace for the first time on your workstation, you will be prompted to specify an install directory. Subsequent installations of newer levels

of workstation code will automatically install over and replace the previous installation. Settings like, for example, the LDAP connection are preserved.

If you have installed a new version of the workplace over a prior one, check that the installation resulted in the correct version. To do this, start the workplace, log on, and click **Help —> Product information...** on the menu. If the information shows that you still have the old version of the workplace, use the Windows control panel to deinstall the old version and then rerun the installation program.

Tip: Delete cimsetup.exe when you have completed the installation. This releases about 30 MB of storage on your workstation

Starting the workplace

During installation the InstallShield creates a program group with a start entry for the msys for Setup workplace. Use the start menu to start the workplace.

If you have accepted the InstallShield defaults for the group and entry name, start the workplace
- on Windows NT and Windows 2000 by clicking **Start —> Programs —> IBM msys for Setup —> IBM msys for Setup Workplace**
- on Windows XP by clicking **Start —> All Programs —> IBM msys for Setup —> IBM msys for Setup Workplace**

Appendix B. Finding your way on the workplace

The workplace is split into a navigation area with a resource tree and a list view area. When you select a resource in the resource tree, the resources in the next level below it get listed in the list view.
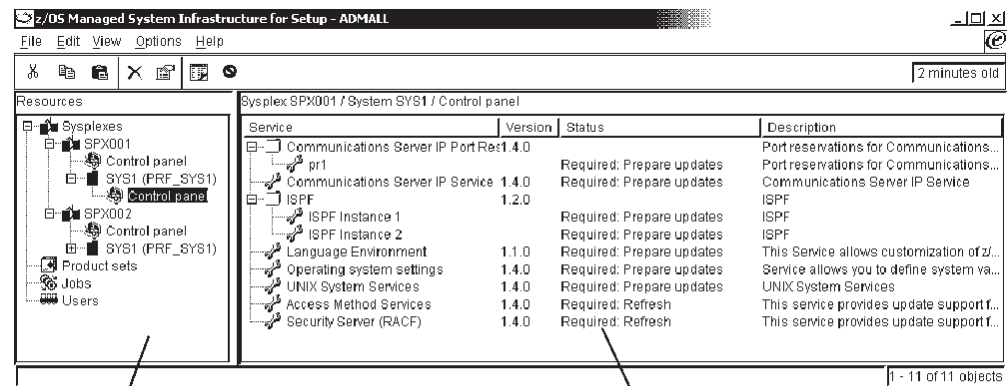
Figure 50. Resource tree and list view

You are advised to use the resource tree for easy navigation, but work with resources from the list view where useful status information is available. To display a resource in the list view click its parent in the resource tree. Note that leaf nodes are not represented in the resource tree but can be displayed in the list view.

Navigating the resource tree

Click on the '+' symbol adjacent to a resource to expand the contained branch of the resource tree. You can also expand the resource tree by double clicking the resource.

Click on the '-' symbol adjacent to a resource to collapse the contained branch of the resource tree.

Finding the actions you can perform against a resource

To find the actions you can perform against a resource use the context menu of a resource. There are two ways to display the context menu for a resource

- Use the File menu:
  1. Select the resource by clicking it, either in the resource tree or in the list view.
  2. Click **File** on the menu bar. The actions shown in the file menu change depending on the item selected in the resource tree or the list view.
- Click the resource with the right mouse button.

What the resource tree contains

At the top level, the resource tree has four resources:

Sysplexes
contains all sysplexes that have been added to msys for Setup (see "Steps for adding a sysplex" on page 94). See "The branch below an individual sysplex" for details.

Product sets
contains all product sets that have been added to msys for Setup (see "Steps for adding a new product set to the management directory" on page 79). Individual product sets are listed in the list view when "Product sets" is selected in the resource tree.

Jobs contains all msys for Setup related host jobs. Individual jobs are listed in the list view when "Jobs" is selected in the resource tree.

Users contains all users that have been defined (see Chapter 6, "Managing users", on page 51). Individual users are listed in the list view when "Users" is selected in the resource tree.

The resource tree is only available while you are logged on to Setup (see "Logging on to Setup" on page xv). Otherwise, you see this sign instead of the resource tree:

The branch below an individual sysplex

Each sysplex in the sysplex folder directly contains the systems that belong to the sysplex and a control panel. The control panel is a container for sysplex-wide services. The example in Figure 50 on page 163 shows three systems below the expanded sysplex branch. Each system also contains a control panel. The control panels contain the services that are available on the respective systems. If you select a control panel in the resource tree the contained services are shown in the list view.

A service becomes available on a system, when a product set that contains it is added to the systems (see "Steps for adding a product set to a system" on page 85).

Refreshing the console

There is an icon **Refresh console** and a menu item **View —> Refresh console F5**. This merely refreshes the workplace view. Do not confuse it with refreshing the management directory with data from a z/OS system (see Chapter 3, "Refreshing the management directory", on page 19).

There is a field in the right top corner of the workplace that indicates how old the information that is displayed in the list view of the workplace is. That time goes to zero when you refresh the console.

With jobs displayed in the list view, you can refresh the console to query the status of a job for which, due to communication problems with the z/OS system, no job notification is received on the workplace. In all other cases msys for Setup refreshes the workplace view automatically, when the displayed information changes.

Appendix C. Migrating your data to V1R4 or later

Who should read this: This section only applies to you if you have been using msys for Setup to customize services for z/OS releases prior to V1R4.

With z/OS V1R4, or prior z/OS systems with FMID JMSI743, msys for Setup uses an enhanced data structure for the management directory. msys for Setup can only work with z/OS V1R4 systems after the LDAP administrator has migrated the management directory to this new structure (see *z/OS Managed System Infrastructure for Setup Installation*). The new management directory structure requires that you install the V1R4 workplace (see Appendix A, "Setting up the msys for Setup workplace", on page 157).

Section "Where are my resources? – the new resource tree" summarizes the differences you will see on the workplace.

Section "Migrating your configuration data" on page 167 tells you what you must do if you have already customized services on a prior z/OS release system, you have now installed z/OS V1R4 or FMID JMSI743 on that system, and you want to reuse the customization data of the prior release.

Where are my resources? – the new resource tree

The new workplace shows a different view of your data in the resource tree.
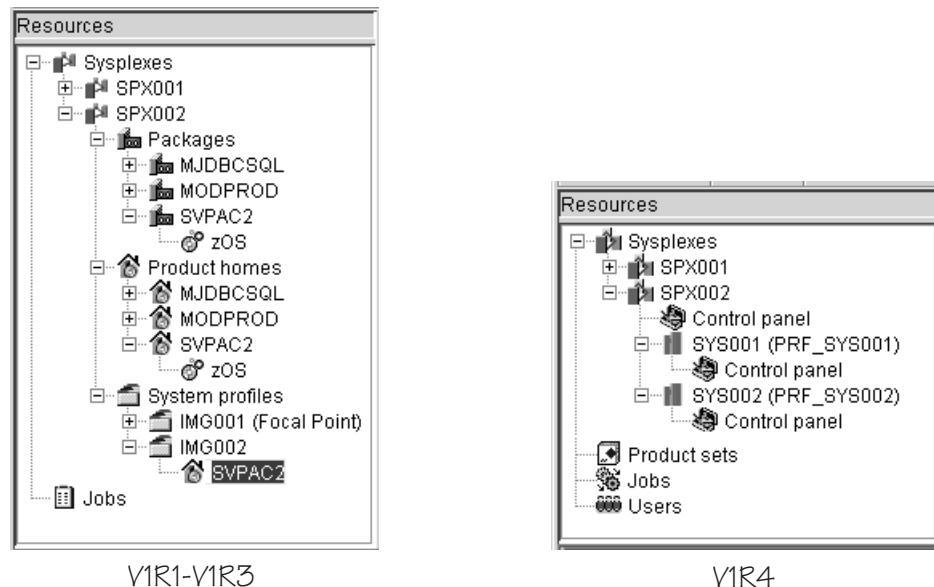
V1R1-V1R3   V1R4

Figure 51. V1R1–V1R3 versus V1R4 resource tree

The major differences are:

Product homes
> Because in V1R4 you do not need to perform any actions on product

homes, they are no longer shown on the resource tree. As of V1R4, the setup steps are performed at the granularity of and from individual services or service instances.

Packages
Instead of sysplex specific packages there is now a separate folder for available product sets. Only product set administrators can see this folder.

Systems
The sysplex folder no longer contains system profiles but systems. Each system is associated with one or more system profiles of which only one can be in active use at any time. The system profiles are not visible in the resource tree but in the properties of the corresponding system.

Because in V1R4 you cannot configure a target system from a separate driving system, you must provide extra information for each system that had not been defined as a driving system in a prior release. This is done by the LDAP administrator who performs the management directory migration and described in *z/OS Managed System Infrastructure for Setup Installation*.

There is no longer a focal point system profile for each sysplex. Instead there is a sysplex driving system where the jobs for sysplex wide customization run. The resource tree does not tell you which system this is, but it is shown in the property sheet of the sysplex.

Control panels
Control panels are new folders in the resource tree. They represent folders for services. The contained services are shown in the list view when the control panel is selected.

Below each sysplex there is a control panel for working with sysplex wide configuration data. There is also a control panel below each system for customizing system specific services.

Users folder
Users is a new top level folder in the V1R4 resource tree. The user administrator performs all user administration tasks from the Users folder. See also "Migrating msys for Setup users".

Parallel Sysplex
The service "Parallel Sysplex" has been split into two services that are handled separately. There is now a sysplex-wide service "Sysplex-wide settings" and a system level service "Operating system settings".

Migrating msys for Setup users

For V1R4 all msys for Setup users must be created from scratch. The LDAP administrator defines the first user, the user administrator, when setting up the LDAP server.

The user administrator creates all other users from the workplace (see Chapter 6, "Managing users", on page 51).

Migrating your configuration data

This section provides information on how you can use the configuration data that you have committed for prior releases of services as a basis for customizing these services in the new V1R4 release. This relieves you from typing in customization data for a V1R4 service that you have already customized with msys for Setup for a previous release.

Depending on the division of responsibilities at your organization, this might involve different persons. The following table summarizes the tasks that must be performed and the authorizations that are required:

Stage	Description
Upgrade your product sets	After z/OS V1R4 has been installed on your systems, your product sets are no longer described correctly and you cannot work with the services in the product sets until you have corrected the description.
	You do this by upgrading the product sets (see "Steps for upgrading a product set" on page 84).
Refresh the management directory	After a package has been upgraded some of the services in it might require additional customization data. Services that also support refresh must then be refreshed before the customization dialogs can be opened.
	This refresh is treated as an initial refresh, that is, input data that must be supplied before an initial refresh can be performed must be provided again.
	If a service has dependencies on the refresh data of other services, this step might involve the cooperation of several users that are authorized for the respective services.
	See Chapter 3, "Refreshing the management directory", on page 19.
Customize	All services for which the customization data is no longer sufficient for the new level of code must be customized again. Existing customization data from the previous level of code is used as default.
	See Chapter 4, "Customizing a service", on page 25.
Update the system configuration	Perform the update steps, including commit, to update the system configuration with the new customization data.
	If your service has dependencies on other services, this step might involve the cooperation of several users that are authorized for the respective services.
	See Chapter 5, "Updating a system configuration", on page 31.

Upgrading a product set from a z/OS V1R1 system

Upgrading product sets requires functions that were shipped with z/OS V1R2 or later. This section describes a workaround for upgrading product set on a z/OS V1R1 system.

The product set to be upgraded corresponds to a R1 product home that had been received using a product definition XML. To upgrade a V1R1 product set follow the steps in "Steps to upgrade a product set from a z/OS V1R1 system". You need a suitable XML document to perform these steps. You have three options:

If you have	Then
kept the original product definition XML	use this XML document.
discarded the original product definition XML but have kept job XMLGNR8 that was used to generate the product definition XML	rerun job XMLGNR8 and use the newly generated XML document.
discarded both the original product definition XML and job XMLGNR8	get the XML document template that is provided at `http://www.ibm.com/servers/eserver/zseries/msys/downloads.html` and edit the template according to the inline comments.

Steps to upgrade a product set from a z/OS V1R1 system

Perform these steps to run an upgrade job for a V1R1 product set on a z/OS V1R1 system:

1. Click the product set folder in the resource tree to display all available product sets in the list view of the workplace.

   _____

2. Select the product set to be upgraded.

   _____

3. Click **File —> Upgrade...** on the menu. The "Upgrade Product Set" wizard is launched.

   _____

4. Follow the instructions in the wizard. You will be prompted to specify the product definition XML document as the source of the upgrade information.

   _____

5. After you have completed the wizard you will be prompted to select a system for running the upgrade job. This system must have access to your product definition XML document.

   _____

Appendix D. Worksheet for creating a new msys for Setup user

This worksheet is for the user administrator.

Use this worksheet to summarize information that you might need to obtain from persons who apply for an msys for Setup user ID. For conceptual information on users refer to "What you must know about msys for Setup users" on page 51.

Creating a new msys for Setup user	
Full name of the applicant	
e-mail address of the applicant	
For RACF-protected management directories, existing user ID in RACF.	
Existing user IDs on z/OS systems	
Requested user ID If the management directory is RACF-protected this must match a user ID in RACF. **Recommendation:** Should match the IDs on the z/OS systems, if possible.	
Required authorizations for administration tasks	• User administration (yes ∣ no) • Product set administration (yes ∣ no) • Sysplex administration (yes ∣ no)
List of all services for which the user needs update rights	
Required authorization for other user's msys for Setup jobs	(None ∣ View ∣ Delete)

Appendix E. Worksheet for adding a system to a sysplex

This worksheet is for the sysplex and systems administrator who wants to add a z/OS system to a sysplex.

Use this worksheet to summarize information that you might need to get from the system programmer who has installed the z/OS system.

System name		Value for &SYSNAME
Communications		
Host name or IP address		
FTP port		default is 21
Java		
Java path		
Job submission		
Which job entry substem is used?	(JES2 ∣ JES3)	
If JES3, JES3 processor name		Required only if JES3 is used and only for the first system that is specified as part of adding a z/OS product set
If JES3, Main Class		optional
Job name prefix		optional if no entry is made, the user ID is used as prefix
Programmers name		optional
Accounting Information		optional Reference: *z/OS MVS JCL Reference*
Job class		optional
Message class		optional
Allow job scheduling for "Commit updates" task?	(Yes ∣ No)	

If yes, Hold job class		Optional when no entry is made for JES2, the "Job class" is used and TYPRUN=HOLD is added to the job card.
If yes, Hold main class (JES3)		Optional when no entry is made for JES3, the "Main class" is used and TYPRUN=HOLD is added to the job card.
System profile information		
LOADxx suffix		
IODF volser		
Hardware name		optional
LPAR name		optional
VM user ID		optional

If you want to configure the same system for different modes that correspond to different LOADxx, IODF volser, and filter information, provide the system profile information for each mode.

Appendix F. Worksheet for product set installation data

This worksheet is for the product set administrator who makes installed products or sets of products known to msys for Setup.

Fill in this worksheet as you are:

- Installing a CustomPac order (required only if the msys for Setup SPE PTFs UA90013 and UA90015 have not been installed)
- Installing a product or product set with SMP/E
- Installing a product or product set that includes an XML document with a description, using any install mechanism
- Cloning a product set

Table 1. Worksheet for providing install information to the product set administrator

Description of the installed product set	
System on which the product set has been installed or systems that share the installation (SYSNAME)	
If an up-to-date product definition XML document with a product set description exists	
Data set or member that contains the XML document	
Volser where the data set with the XML document resides (only if not cataloged or catalogs are not shared)	
For SMP/E installed product sets for which there is no product definition XML	
Global CSI data set	
Target zones	

Table 1. Worksheet for providing install information to the product set administrator (continued)

HLQs for • SMP/E product • ISPF product **Note:** For z/OS systems on which the msys for Setup SPE PTFs UA90013 and UA90015 have been installed, you can specify ISPF data set names instead. For systems on which the msys for Setup SPE PTFs UA90013 and UA90015 have not been installed, HLQs for: • CustomPac master dialog data sets • CustomPac order dialog data sets	
For cloned product sets	
Mapping of source to target volumes	
Mapping of source to target HLQs	
Path information changes	

Appendix G. Using national languages

This level of code of msys for Setup provides national language support for Japanese. The workplace installation program and the workplace automatically come up in Japanese if run on a workstation with a Japanese operating system.
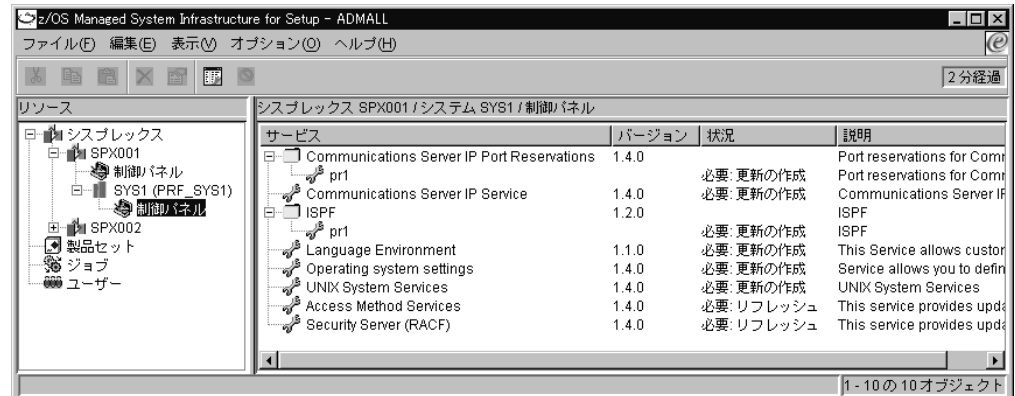
Figure 52. Workplace with Japanese national language

Figure 52 shows a workplace in Japanese. Note that there is some product specific information that remains English. This information is obtained from descriptions that are shipped with the products.

Appendix H. How msys for Setup handles the parmlib

Read this chapter to find out:

- How msys for Setup handles sysplex-wide values.
- How msys for Setup handles system specific settings needed in a sysplex-wide member.

The anchor for the configuration information in parmlib is the LOADxx member. The suffix for this member is submitted at IPL time. For every system that is added to the resource tree a suffix is specified; and for every additional system profile that is added to a system a suffix is specified. msys for Setup looks for LOADxx in the first library found according to the normal z/OS IPL search order:

1. SYS0.IPLPARM through SYS9.IPLPARM on the IODF volume
2. SYS1.PARMLIB on the IODF volume
3. SYS1.PARMLIB on the IPL volser

The msys for Setup parmlib data set

For each sysplex that is added to the resource tree, msys for Setup creates a special parmlib data set. msys for Setup only changes parameters in parmlib members that it allocates in this parmlib, except for IEACMD00 and LOADxx. There is only one msys for Setup parmlib data set per sysplex in use and it is shared by all systems. This keeps the number of generated data sets to a minimum.

If a member of the msys for Setup parmlib is chained, it is placed in the concatenation chain so that the settings are observed. The members are empty when allocated and contain only the parameters that msys for Setup changed.

If only one member is allowed per configuration, msys for Setup creates a copy, changes the parameter in the copy, and the suffix pointer is changed to point to the new member.

The msys for Setup parmlib contains:

- IEASYMxx members for all system profiles that have been included in a system configuration update for the sysplex, one per LOADxx suffix used, containing filters for each system profile covered
- All other members with individual suffix per system profile

msys for Setup creates the parmlib data set for a sysplex when when refresh is performed for service "Sysplex-wide settings" or "Operating system settings" for the very first time on that sysplex.

If you are using RACF as your security product, msys for Setup creates a RACF data set profile with universal access UACC READ for the msys for Setup parmlib (and proclib) as part of the refresh. If the data set profile already exists, it is altered by the RACF console to set universal access UACC READ. If you have set the" RACFSecurity - authorization" policy as to prohibit security updates by msys for Setup (see "Suppressing automatic security updates - RACFSecurity - authorization" on page 12), you must create the security profile manually after you have performed the refresh.

If you are not using RACF, you must make the equivalent definitions for the security product that is in use.

Naming conventions

The naming convention used by msys for Setup for parmlib data sets is:

```
<hlq>.MSYS.<sysplexname>.<PARMLIB | TEMPLIB | BKUPLIB>
```

where:
- `<hlq>` is the high level qualifier you can set using policy ParmlibAllocation. The default is SYS1.
- `<sysplexname>` is the name you specified for the sysplex when added it to the resource tree (see "Steps for adding a sysplex" on page 94).

Note: Be sure that you set the ParmlibAllocation policy to the desired values before you perform your first refresh of any service (see "Parmlib policy - ParmlibAllocation" on page 13).

If the sysplex name begins with a numeric, the above scheme of naming data sets would fail because a numeric is not permitted as a first character of a data set qualifier name. To overcome this problem, the following naming convention is adopted:

Rule:
- If sysplexname is less than 8 characters, it is prefixed with an M to form a valid name.
- If the sysplexname has 8 characters, the start digit is replaced by an M and the string MSYS is extended with the start digit.

Examples:
- For the sysplex name 78HUGO, the resulting templibname is `<hlq>.MSYS.M78HUGO.TEMPLIB`
- For sysplex name 78HUGOLE, the resulting templibname is `<hlq>.MSYS7.M8HUGOLE.TEMPLIB`

Which parmlib members are supported?

Refer to a service's service information file for details on which parmlib members it supports, if any (see "Steps for viewing a service information file" on page 7).

Recommended parmlib handling

> **Reference**
>
> *z/OS MVS Initialization and Tuning Reference*, SA22-7592

If you want to make a change to a resource, for example a parmlib, that is shared between several systems and their system profiles, msys for Setup can change it only in such a way that the changes apply to all members of the group that share the resources. Changes to a parmlib that is shared between several systems apply to all systems and no system will get isolated because no separate parmlib is created for it.

Table 2. Rules for using parmlib members

Parmlib member	msys for Setup handling	Recommendation
IEASYSxx	References to IEASYSxx in LOADxx are interpreted by msys for Setup, however, msys for Setup only inserts its changes in IEASYM.	Refer to IEASYSxx from IEASYMxx only
LOADxx	msys for Setup provides an overriding COUPLExx member that sets the sysplex statement to SYSPLEX(&SYSPLEX.)	Specify the static system symbol for the sysplex name, &SYSPLEX., in LOADxx and do not change it in IEASYMxx or COUPLExx.

Making manual changes to the parmlib

Note: As a general rule, you should never make manual changes in the msys for Setup library before all uncommitted changes have been committed and then perform "Refresh management directory" before any further changes are done. This ensures that your modifications are not lost.

It is advisable not to make manual changes to the msys for Setup parmlib. If changes are unavoidable, make them in the permanent msys for Setup library (`<hlq>.MSYS.<sysplexname>.PARMLIB`) only. Don't make changes in the original libraries, because they will not be used by msys for Setup for a refresh once a first refresh has been done.

After making changes, you must perform "Refresh management directory" for the corresponding services in order to make msys for Setup aware of your changes. Refresh also copies the changed contents from the msys for Setup permanent parmlib into the msys for Setup temporary library (`<hlq>.MSYS.<sysplexname>.TEMPLIB`) so that changes will be included in further updates with msys for Setup. However, the changed contents are copied only if there are no uncommitted updates in the TEMPLIB. If uncommitted changes do exist, a message is written into the refresh job log instead. In such a case, the changes must be redone after the updates have been committed.

Note: These rules do not apply if changes are made in the LOADxx member. If you need to make changes to the LOADxx member, you have to make them in both the permanent msys for Setup library and in the temporary msys for Setup library.

Recovering the parmlib

This section describes:
- How commit handles the parmlib
- How the backup function handles the parmlib

How commit handles the parmlib

Commit handles changes to the parmlib as follows:
- All members contained in the temporary parmlib owned by msys for Setup for this system profile are copied into the msys-permanent-library, except LOADxx and IEACMD00.

Commit handling of LOADxx and IEACMD00

If msys for Setup makes a change to parmlib member LOADxx or IEACMD00 msys for Setup creates a copy of the member under another suffix in the same library, and initializes the copy with the contents of the current member. When the changes to the system configuration are committed:

- All members for this system profile except LOADxx and IEACMD00 are copied. (1 in Figure 53).
- The LOADxx member is first copied with another suffix for example BK, into the same library, then the LOADxx member modified by msys for Setup is copied to the load library. (2 and 3 in Figure 53). The changes take place in the library where the original user's LOADxx was found (e.g. in SYS1.IPLPARM).
- The IEACMD00 (if it exists) is first copied with another suffix, for example BK, into the same library, then the IEACMD00 modified by msys for Setup is copied to the original library (4 and 5 in Figure 53). The changes take place in the library where the original user's IEACMD00 was found (e.g. in SYS1.PARMLIB).

You can either make your own copies of IEACMD00 and LOADxx or use the copies made by msys for Setup in a recovery situation. See Chapter 14, "Recovery", on page 153.
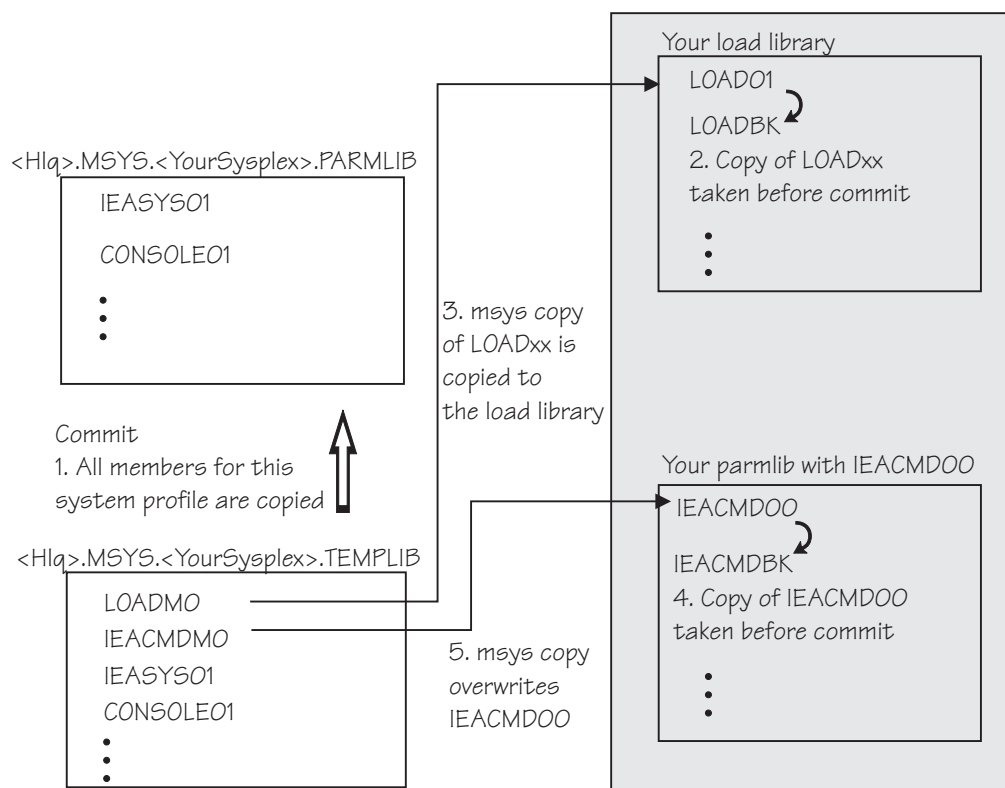
Figure 53. Commit handling of parmlib members

How the backup function handles the parmlib members

During backup, the names and locations of the backed up members are communicated to you through messages. The following members are backed up, as shown in Figure 54 on page 181:

- All members contained in the parmlib owned by msys for Setup for this system profile (including shared members), are copied into the msys-backup-library with the same suffix. The name of the msys for Setup-backup-library is <hlq>.MSYS.<YourSysplex>.BKUPLIB, where <hlq> is the high-level qualifier you specified in the ParmlibAllocation policy. The default is SYS1. (1. in Figure 54. Note that shared members are kept only once in the backup library.)
- The LOADxx member of the system profile (your original or one modified by msys for Setup) is copied from the original load library into the msys for Setup-backup-library with an msys for Setup-suffix. Note that an IPL directly out of an msys for Setup library is not possible. (3 in Figure 54)
- The IEACMD00 (if it exists) of the system profile (user's original or modified by msys) is copied from the original library (in the parmlib concatenation) into the msys for Setup-backup-library with an msys for Setup-suffix. (4. in Figure 54)
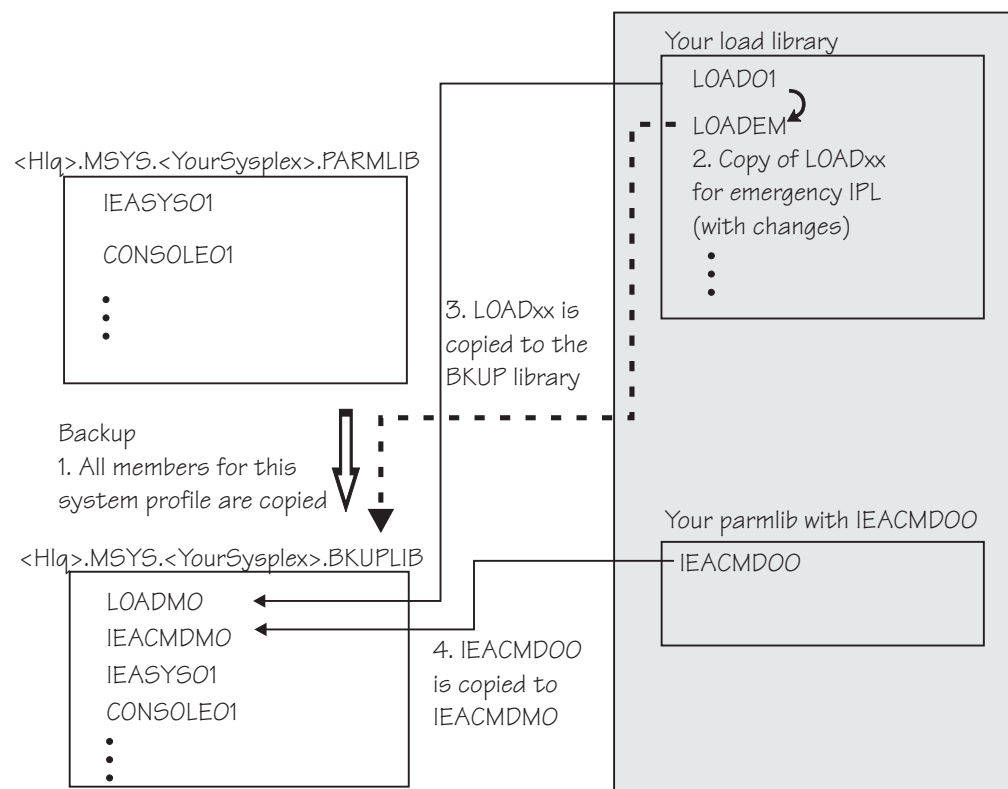
Figure 54. Backup handling of parmlib members

Naming conventions of copies that msys for Setup makes

Messages will alert you to when msys for Setup makes copies of parmlib members and what they are called. The naming conventions are:

- Temporary LOADxx suffix: M0 if not yet used, otherwise the first free after M0.
- Backup of your original LOADxx: B0 if not yet used, otherwise first free after B0.
- IEASYMxx: M0 if not yet used, otherwise first free after M0. One IEASYMxx per used LOADxx suffix is necessary because system profiles with identical filters but different LOADxx suffix can exist and must be distinguishable.

- IEASYS and other system profile specific members: First free starting from M0 (M0..M9,MA..MZ, N0......ZZ).

Restoring parmlib

Restore copies the backup back to the actual configuration resources.
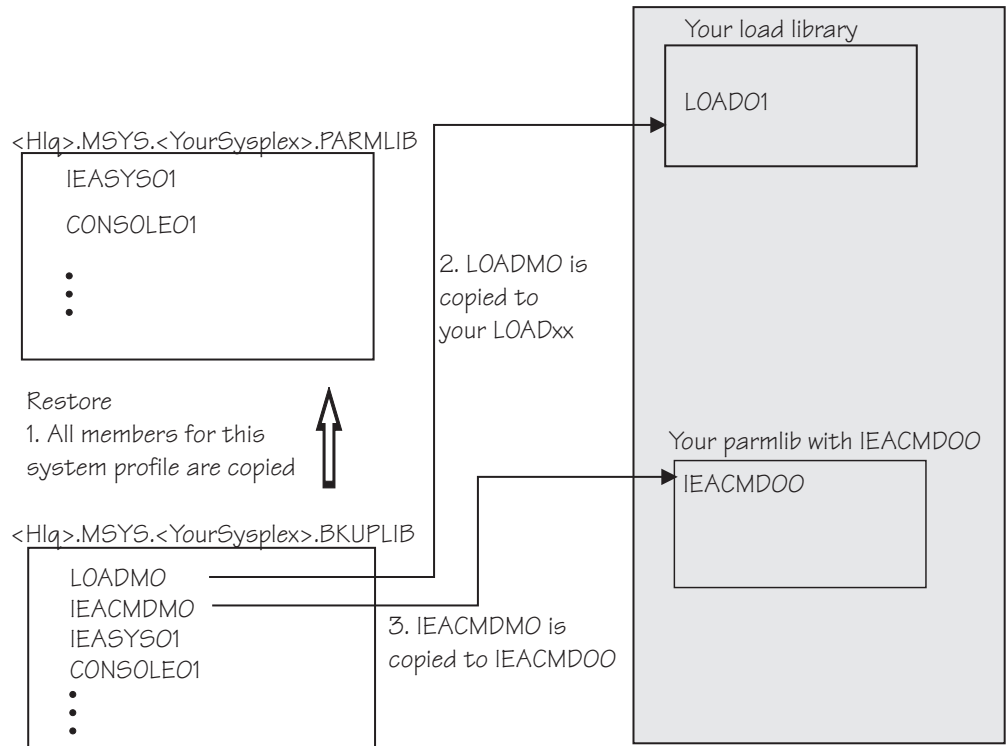
Figure 55. Restoring the msys for Setup parmlib

After performing a restore refresh the management directory. Then you can either:
- Recustomize
- Undo all updates

Appendix I. Couple data set support

Couple data set support is a basic service for support of Parallel Sysplex. Couple data set information is shared between all the systems in a sysplex. If identical requests for update of a couple data set are issued against several systems in a sysplex, msys for Setup will ensure that such requests are performed once only. If requests are not identical, then the last request issued will prevail.

In order to be accessible by all systems in a sysplex, couple data sets need to be in a catalog that is shared among the systems in the sysplex.

Couple data set support relies on MVS utilities that are used for allocating, modifying and reporting on couple data set policies. The utilities are invoked implicitly with input and output redirected to or from temporary partitioned data set members.

Couple data set allocation and formatting

This support is provided for all couple data sets. Refer to Table 3. The support uses the couple data set Format utility IXCL1DSU. Refer to *z/OS MVS Setting Up a Sysplex*, SA22-7625.

msys for Setup supports the couple data sets shown in Table 3.

Table 3. Couple data sets supported

Couple data set	Description	Level of support
Sysplex	Sysplex Couple Data Set	Formatting support only. Does not need any information to be written to the data set through an administrative utility.
ARM	Automatic Restart Manager couple data set	Formatting support only.
CFRM	Coupling Facility Resource Manager couple data set	Full support (writing commands, statements and parameters).
LOGR	System Logger couple data set	Full support (writing structures and streams).
SFM	Sysplex Failure Management couple data set	Full support (writing commands, statements and parameters).
WLM	Workload Manager	Formatting support only.

Managing policies

Policies can be defined for two of the couple data sets, CFRM and SFM.

The policy definition uses the Administrative Data Utility IXCMIAPU. The utility is used for both modification and reporting. Refresh information is retrieved from the couple data sets and is made available to the workplace and its dialogs. This utility is also used for update of couple data sets.

Running on a back level release

msys for Setup can run on OS/390 R8 or higher. Coupling policies are specified through a set of keywords and parameters that are required by the IXCMIAPU utility. Some of these were introduced after OS/390 R8. All necessary actions are performed to ensure that the utility functions correctly irrespective of the release level of the driving or the target system.

Recovering couple data sets

The backup and restoring of couple data sets works differently from the backup and restoring of the parmlib data sets. The reason for this is the way couple data sets are managed in msys for Setup.

Couple data sets already provide a backup and restore mechanism through their capabilities to have several policies in one couple data set and to switch these as needed. Thus, a new policy that was introduced and activated, can be deactivated using the XCF command and the previous policy can be reactivated.

msys for Setup offers an additional backup and restore capability that allows you to revert to an earlier, well-defined status that is known to be correct. This allows you to start over and redo an erroneous or otherwise undesired couple data set configuration. This section describes:

- How Prepare updates and Commit updates handle couple data sets
- How the backup function handles couple data sets

How update and commit handles couple data sets

This section describes how couple data sets are handled regardless of whether you have chosen to take a backup copy.

Refresh
Extracts the actual data from the active couple data sets and stores the data in the msys for Setup temporary library (TEMPLIB). As a consequence, only information about active couple data sets is available at the workstation. You can also issue update requests against non-active couple data sets. However, no information about their contents is conveyed to the workplace. Thus, in the following scenarios it is assumed that we work with the active couple data sets. This member is called the refresh member, as shown in Figure 56 on page 185.

The members in the temporary library have names that start with the policy type (e.g. CFRM) and end with either CD (describing the couple data set) or PL (describing policies). Also members ending with X may be built during refresh. They will be used for Prepare updates and Commit updates.
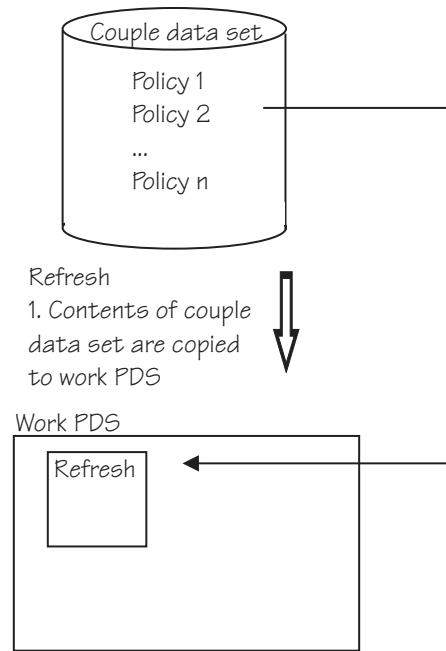
Figure 56. Refresh saves the content of a couple data set

Prepare updates

Generates new sysin members for the Formatting and Administrative utilities in accordance with requests received from the workplace. Changes to the policies result from update requests. During update processing, any changes are saved in an update member in the work PDS.

These members are located in the msys for Setup temporary library and end with CX if they are for input to the formatting utility and with PX if they are for input to the administrative utility. The contents of these members will be used for committing the changes in the Commit updates step. You should note that SimulateUpdate and SimulateUndo may generate members ending with PX and CX, however, no actual changes are made to these members relative to the existing contents of the couple data sets.
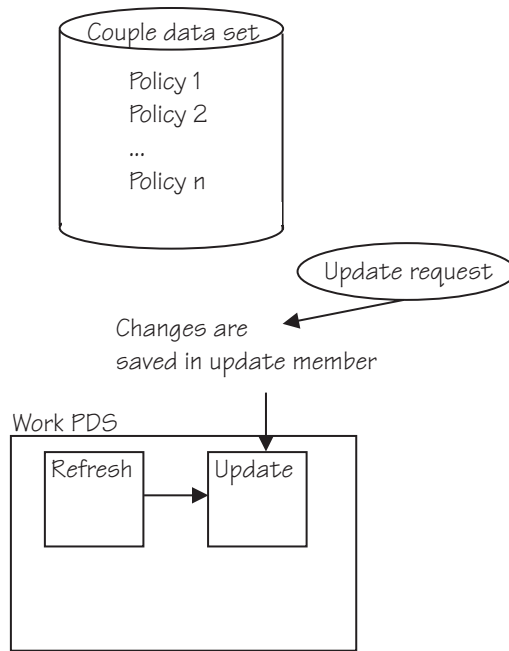
Figure 57. Changes are saved to an update member

Commit updates

Commits the changes to the selected couple data sets by running the Format or the Administrative utility, as necessary.

Commit updates step supplies the utilities with input derived from members in the msys for Setup temporary library built during the Refresh, Prepare updates and Undo all updates steps. The contents of these members may be modified, in order to observe utility input rules, prior to being used as utility input. After a successful Commit updates, the members are removed from the msys for Setup temporary library.

The refresh member is then loaded from couple data set, so it is now in sync with the couple data set. For active couple data sets, this information will also be available at the workstation.

Note:

> Activate: You have to activate manually using XCF (Cross-System Coupling Facility) commands and information that has been written into the job report during Prepare updates.
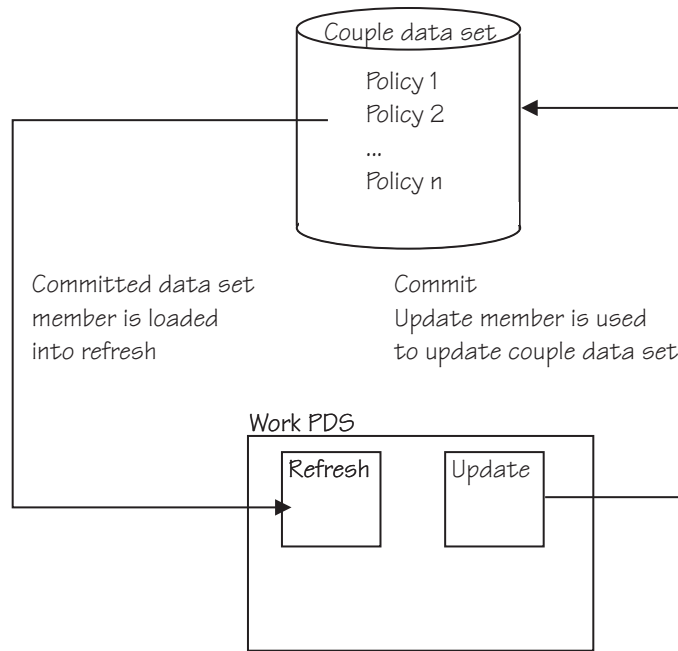
Figure 58. The update member is used to update the couple data set

How the backup function handles couple data sets

When you use the backup of key configuration data as described in "Making a backup copy of key configuration data" on page 147, the couple data sets are also backed up. The backup function copies all refresh members, each refresh member representing a couple data set, from the work PDS to a backup PDS.
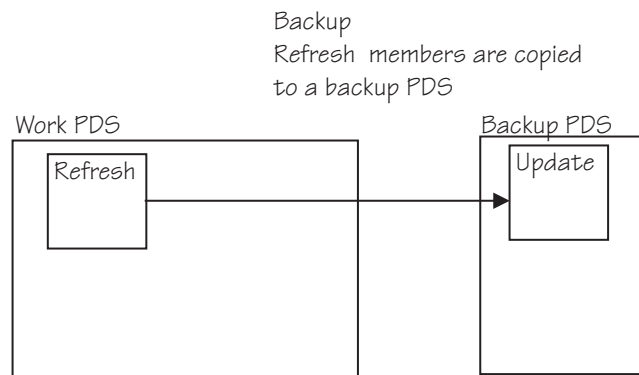
Figure 59. Refresh members are backed up

Restoring the couple data sets

When you perform a restore as specified in "Steps for restoring configuration data" on page 149, the restore step deletes all update members in the work PDS and copies the members in the backup PDS to the corresponding update members in the work PDS. Therefore all updates since the backup are lost.

The restore also overwrites the msys for Setup maintained Administrative Utility (IXCMIAPU) input that is being used to regenerate the couple date sets. All

uncommitted updates are lost by this overwrite. Then the utility is run and updates the affected couple data sets. Subsequent steps should be:

1. Refresh
2. Possibly, either customize again or undo update
3. Possibly, commit updates
4. Activation steps necessary or a new IPL

Through steps 2. and 3. above, you can make corrections and start a new update task. The new and corrected changes will be committed.
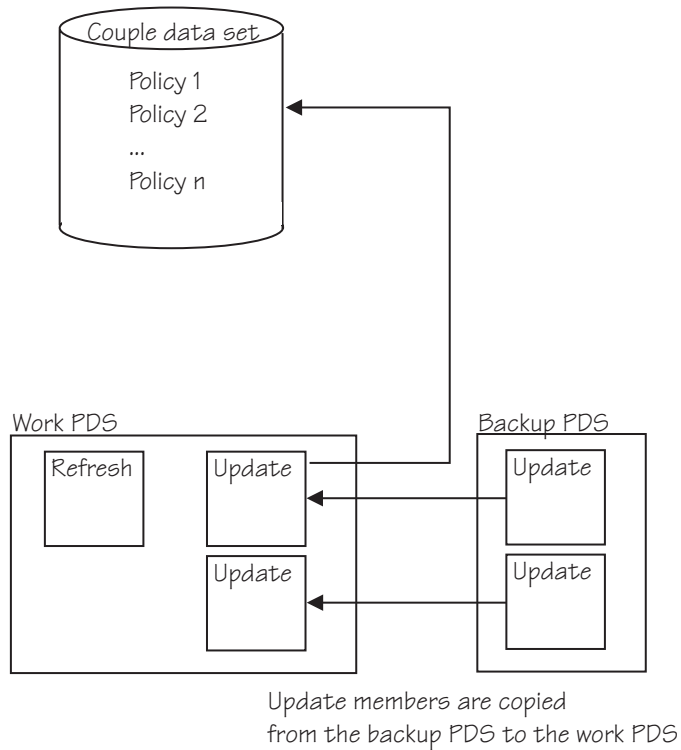
Figure 60. Corrected data has to be committed

Appendix J. Accessibility

Accessibility features help a user who has a physical disability, such as restricted mobility or limited vision, to use software products successfully. The major accessibility features in z/OS enable users to:

- Use assistive technologies such as screen-readers and screen magnifier software
- Operate specific or equivalent features using only the keyboard

Using assistive technologies

Assistive technology products, such as screen-readers, function with the user interfaces found in z/OS. Consult the assistive technology documentation for specific information when using it to access z/OS interfaces.

msys for Setup workplace accessibility features

The msys for Setup workplace supports commonly used keyboard shortcuts for accessing the menu bar, navigating between panel and list items, and editing text fields.

Accessing the menu:
You can use accelerator keys to select menu items. The accelerator keys are displayed as an underlined letter on the screen; for example, F is the accelerator for the **File** menu. Press the Alt key, then the accelerator key to select a menu item; for example, Alt+F shows the **File** menu. The **File** menu always contains the context specific menu items for the resource that has been selected in the resource tree or in the list view.

You can also use F10 to go to the **File** menu and then use the curser keys to navigate among the menu items.

Press the Enter key to perform the selected function.

Navigating among controls:
Use the Tab key to navigate to the next control on a panel; use Shift+Tab to return to the previous control.
Note: In **Description** fields use Ctrl+Tab to go to the next control on a panel.

Navigating the resource tree and the list view:
Use the Tab key to move between the resource tree and the list view of the workplace.

Use the up and down arrow keys to move up and down among the resources in the resource tree or in the list view. If no resource is selected, use either the up or down key to select an initial one.

To expand or collapse a subtree below a resource in the resource tree navigate to the resource and then press Enter.

Press F5 to update the contents of the displayed workplace.

Editing text fields:
Within an editable text field, you can select characters using Shift plus an arrow key. You can copy a selected text to the clipboard by pressing Ctrl+C and paste it into another field with Ctrl+V. Use the Home key to move to the beginning of a text and the End key to move to the end of a text.

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Glossary

This glossary defines technical terms and abbreviations used in Managed System Infrastructure for Setup documentation. If you do not find the term you are looking for, refer to the index of the appropriate Managed System Infrastructure for Setup manual or view *IBM Dictionary of Computing Terms*, located at :

http://www.ibm.com/networking/nsg/nsgmain.htm

In this glossary, glossary items are shown in *italics* where they are used in definitions for other items.

A

administrator. In msys for Setup, the person using msys for Setup to *set up* software. For example, system programmers, database administrators, and security administrators are administrators.

B

Back up key configuration data. The task of backing up a service's critical configuration data. In msys for Setup, a single backup version is kept. This task is always provided in conjunction with *Restore key configuration* data.

C

commit updates. The task that copies all temporary configuration files and data sets used during the *Prepare update* step to the actual configuration files and data sets that are used by the system being customized. For configuration resources that are accessed through a command interface commands can be issued that are determined during *Prepare update*.

Currently, part of the updates already take effect during prepare update.

commit undone updates. The task that copies all temporary configuration files and data sets used during the *Undo update* step to the actual configuration files and data sets that are used by the system for which configuration changes are reversed. For configuration resources that are accessed through a command interface commands can be issued that are determined during *Undo update*.

Currently, part of the reversals already take effect during prepare update.

customize. The task of specifying all *service* specific settings in msys for Setup dialogs.

E

exploiting product. A product that uses msys for Setup to simplify its *setup* procedure.

Extensible Markup Language. A meta-language for defining specialized markup languages. An *XML* (Extensible Markup Language) document has a hierarchical structure of tags and attributes according to a specific syntax. XML documents are plain text documents and thus platform and language independent.

L

LDAP. See *Lightweight Directory Access Protocol*.

Lightweight Directory Access Protocol. A directory service protocol that runs over TCP/IP.

LOADxx. A *parmlib* member that constitutes the anchor for the configuration of a z/OS system.

M

management directory. The central repository where msys for Setup keeps data on the resources it manages. In particular, system configuration data is stored in the management directory.

workplace. The workstation component of msys for Setup.

multiple instance service. A *service* of which one or more instances can but need not be set up on a system.

O

optional service. A *service* of which a single instance can but need not be set up on a system.

P

parameter. A data item that represents a system setting. In the context of msys for Setup this can be, for example, a statement in a *parmlib* member, a RACF user definition, or a data set name.

parmlib. A z/OS partitioned data set with members that contain specifications of system settings.

policy. In msys for Setup, an option for the behavior of the msys for Setup code or for a *plug-in*. An msys for Setup user sets the policies on the *workplace*.

prepare update. The step within the *Update system configuration* task in which the changes to the configuration of the z/OS system being customized are determined. Some services make the changes in temporary configuration resources that are then copied to the actual resources in the *commit updates* step that follows. Other services determine commands that are issued against command interfaces in the subsequent *commit updates* step.

Currently, part of the updates already take effect during prepare update while other updates take effect during the subsequent *commit updates*.

proclib. A z/OS partitioned data set with members that contain procedures. Procedures are written in JCL and describe one or more job steps.

product set. A collection of products that are installed, maintained, and upgraded as a group. The information that msys for Setup stores on a product set includes information on the services that its products provide and on the location of the code that makes up the products.

R

refresh management directory. The task of exploring the z/OS system to be configured and updating the *management directory* with information on existing configuration data of a service, in particular also information on configuration data changes that have taken place outside of msys for Setup. The purpose of refresh management directory is to make existing configuration data available to a service's own customization or to other services' customizations. If a service provides both a customization dialog and refresh management directory, the configuration data covered by each does not necessarily comprise the same items.

Restore key configuration data. The task of restoring a formerly backed up version of a critical *configuration resource*. This task is always provided in conjunction with *Back up key configuration data*.

S

services. The functional aspects of a product. A separately customizable or refreshable part of a product. For example, RACF is a service of the Security Server.

service configuration. A complete set of options and *parameter* values for a service. Service configurations reside in the *management directory*.

service instance. A customizable copy of a *service*. See also *service template*.

service template. An object that groups all instances of an *optional service* or a *multiple instance service* when services are displayed in the workplace list view.

setup. The cycle of tasks that are required to create or change a *service configuration*.

simulate. A mode for running *prepare update*, *commit updates*, *undo all updates*, and *commit undone updates*. Simulation runs most of the host code of the task being simulated but stops short from making changes to any configuration resources. Instead the changes that would have been made are written to a job report.

support function. A function for modifying options and *parameters* in files and data sets owned by the *supporting product* in response to a request by an *exploiting product*. Support functions are provided by the *supporting product* but run under msys for Setup. Processing of update requests is based on support functions.

supporting product. A product with *services* providing *support functions*.

sysplex. A set of z/OS systems communicating and cooperating with each other through certain multisystem hardware components and software services to process customer workloads.

msys for Setup groups all systems into sysplexes even if they do not constitute a real sysplex. Systems that are grouped into a sysplex need to share at least one volume where msys for Setup can maintain a common msys for Setup *parmlib* and proclib.

sysplex driving system. A system that has access to a sysplexe's sysplex-wide shared configuration resources and is used for processing sysplex-wide configuration settings.

system. (1) The active software on a hardware system. (2) The combination of a hardware and the software running on it. (3) An IPL-ed *system profile*.

system profile. A system profile in the context of msys for Setup is a set of system *parameters* used to start a system with modifications made by msys for Setup. A system profile is uniquely identified by its name, the LOADxx member it uses, and filter information. It contains as an unchangeable property the volume serial of the IODF volume used for starting a system with this system profile.

system volume. A storage unit containing code that is part of an operating system or *service* installed under that operating system.

U

update system configuration. The task of applying changes to a z/OS system. The changes are defined by

the configuration data of *services*. Update system configuration has the steps *Prepare update* and *Commit updates*.

undo all updates. The task in which commit requests are generated that reverse changes to a system configuration. "Undo all updates" is at the granularity of all changes that msys for Setup has made for the customization of a particular service, for a specific *system profile*.

Currently, part of the reversal takes effect during "undo all updates" while other reversals take effect during a subsequent *commit undone updates*.

upgrade. The task that associates a *product set* with a changed product set description. A product set description can change because of modifications that are applied, outside msys for Setup, to the SMP/E zone that corresponds to the product set. For example, applying a PTF or installing an FMID can change the product set description. After upgrading a product set, service customization data might need to be adapted to the new level.

X

XML. See *Extensible markup language*.

Where to find more information

This section lists books that can be of help to you. For the most recent information on msys for Setup, see the msys for Setup home page:

http://www.ibm.com/servers/eserver/zseries/msys/setup.html

On the Web site you can also download the latest msys for Setup workplace demonstration that you can run stand-alone on a Windows NT, Windows 2000 Professional, or Windows XP workstation. The demonstration includes all functionality available in the latest version of msys for Setup. All host interaction is simulated.

Other useful home pages include:

- http://www.ibm.com/servers/eserver/zseries/zos - z/OS home page
- http://www.ibm.com/s390/products/pso/ - Parallel Sysplex home page
- http://www.ibm.com/software/network/directory/server/download/ - IBM Directory Server for Windows download site

Managed System Infrastructure for Setup publications

Title	Order Number
z/OS Managed System Infrastructure for Setup User's Guide	SC33-7985
z/OS Managed System Infrastructure for Setup Installation	SC33-7997
z/OS Managed System Infrastructure for Setup Messages	SC33-7996

Related z/OS publications

This section lists books that can be useful when planning for installation and after installation.

Table 4. Books for installation

Title	Order Number
z/OS UNIX System Services Planning	GA22-7800
z/OS MVS Initialization and Tuning Reference	SA22-7592
z/OS MVS Migration	GA22-7580

Table 5. LDAP books

z/OS Security Server LDAP Server Administration and Use	SC24-5923
Understanding LDAP	SG24-4986
LDAP Implementation Cookbook	SG24-5110

Table 6. DB2 books

DB2 Installation Guide	GC26-9936
DB2 Administration Guide	SC26-9931

Accessing Books on the Internet

In addition to making softcopy books available on CD-ROM and tape, IBM provides access to z/OS softcopy books on the Internet.

Refer to the z/OS home page (`http://www.ibm.com/servers/eserver/zseries/zos/`) from which softcopy books can be accesssed The library pages include PDF (Portable Document Format) versions of the current books which you can download.

IBM Systems Center publications (redbooks) are available in softcopy at this website: `http://www.redbooks.ibm.com/`.

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Using LookAt to look up message explanations

LookAt is an online facility that lets you look up explanations for most messages you encounter, as well as for some system abends and codes. Using LookAt to find information is faster than a conventional search because in most cases LookAt goes directly to the message explanation.

You can access LookAt from the Internet at: http://www.ibm.com/eserver/zseries/zos/bkserv/lookat/ or from anywhere in z/OS or z/OS.e where you can access a TSO/E command line (for example, TSO/E prompt, ISPF, z/OS UNIX System Services running OMVS).

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1. z/OS.e™ customers received a Memo to Licensees, (GI10-0684) that includes this key code.

The LookAt Web site also features a mobile edition of LookAt for devices such as Pocket PCs, Palm OS, or Linux-based handhelds. So, if you have a handheld device with wireless access and an Internet browser, you can now access LookAt message information from almost anywhere.

To use LookAt as a TSO/E command, you must have LookAt installed on your host system. You can obtain the LookAt code for TSO/E from a disk on your *z/OS Collection* (SK3T-4269) or from the LookAt Web site's **Download** link.

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z/OS
Managed System Infrastructure for Setup
User's Guide
Version 1 Release 4

Publication No. SC33-7985-03

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