CA SOLVE:Operations® Automation

User Guide

Release 11.9

CA Technologies Product References

This document references the following CA Technologies products:

- CA ACF2™ for z/OS (CA ACF2)
- CA SYSVIEW® Performance Management (CA SYSVIEW)
- CA Top Secret® for z/OS (CA Top Secret)

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Contents

Chapter 1: Getting Started

These topics explain how to access and navigate the product's 3270 interface, and the major components of that interface.

This section contains the following topics:

Log On

To access your product, you must log on to it through a region. The logon procedure is the same whether you are logging on in a single system or a multisystem environment. Before you can log on to a region, you need a user ID and password. Ensure that your system administrator has defined your user ID to the region and has allocated the relevant level of authority.

Note: You may have access to one or more regions. This depends on whether your organization has set up a single system or a multisystem environment.

To log on to your product

1. Use your installation defined method for establishing SNA sessions to connect to the ACB name of the region.

   For example, enter **LOGON APPLID(***acb-name***)**, using the ACB name of the region.

2. Enter your user ID and password on the displayed logon panel.

   The Primary Menu appears.

Note: When you first log on to a region, the region uses a default profile for your primary menu. You can update the profile to change the format of the menu. To update the profile, enter **PROFILE** at the command prompt.

If Region Initialization Is Still in Progress

If the Initialization in Progress panel appears on your screen instead of the primary menu, the initialization of the region is still in progress. Press F3 (Exit) to exit to the primary menu.

Note: For information about the initialization process, see the *Installation Guide*.

If the System Image Is Still Being Loaded

If the local system image is still being loaded, the primary menu contains the **LS** option. You can select this option to monitor the loading process. You can also perform functions that do not depend on an active local image.

Note: For information about system image loading, see the *Administration Guide*.

Log Off

To log off from the region, enter **=X** at the prompt. This terminates your current window.

If you are at the primary menu, enter **X** at the prompt to terminate your current window.

Note: You can have two windows for each logon to a region. If you have two windows, repeat the procedure to terminate the remaining window to log off from the region.

More information:

Work in Two Windows (see page 21)

Access the Region from a Local Terminal

When VTAM is not active and you have a local terminal that can access the region, you can log on to the region from the local terminal and have full use of the user interface.

Note: For information about how to implement this type of terminal, see the *Reference Guide*.

Access the Region by Telnet

When VTAM is not active and the region is set up for Telnet access, you can log on to the region from a terminal.

To access a region that supports Telnet connections, use the IP address and port number that have been set up.

Note: For information about how to implement Telnet access, see the *Reference Guide*.

Your Password

Your password is verified by the User Access Maintenance Subsystem (UAMS).

The subsystem lets you change your password, or prompts you to change your password when it has expired after a period of time. You can change your password at any time after you log on to a region. The change becomes effective the next time you log on to the region.

Note: Your installation might have linked UAMS with an external security system, such as CA ACF2, CA Top Secret, and Resource Access Control Facility (RACF). If this is the case, your system administrator will tell you of any special considerations that apply when changing your password.

In a multisystem environment, the administrator might have set up the environment for the synchronization of UAMS user definitions and passwords. Changed passwords are then synchronized across connected regions.

Change Your Password

To change your password

1. Enter **/CHGPWD** at the prompt.

   The User Password Maintenance panel appears.

2. Complete the following fields:

   Current Password

   Specifies your current password.

   New Password

   Specifies your new password.

   Retype your new password, and press F3 (File).

   The system changes your password.

   Note: If UAMS synchronization is enabled, a Linked Regions UAMS Update Report panel appears when you save your changed password. The panel reports the success or failure of the password change in the connected regions.

Access Functions

To access functions through the user interface menus, do *one* of the following:

- Select an option from each menu that leads to the function.
- Specify a path.
- Specify a shortcut.

Select an Option

You select an option by entering the option code at the prompt. For example, entering **M** at the prompt on the primary menu takes you to the Monitors primary menu.

If you specify a collapsed or expanded menu format in your profile, you can expand or collapse the displayed menu hierarchy. In these formats, you can also place your cursor beside a required option and press Enter to select it.

Note: For more information, press F1 (help) from the primary menu.

Specify a Path

You can jump to the panel of a function directly by specifying the exact path to that panel. Construct the path by linking the options you need with periods. Depending on which panel you start from, you can display a panel that:

- Is lower in the panel hierarchy
- Is higher in the panel hierarchy
- Requires input data

Lower in the Panel Hierarchy

If you start from a menu and want to access a panel lower in the panel hierarchy, specify the path as it is. For example, if you are at the primary menu and want to change your password, type **U.P** at the prompt and press Enter.

Higher in the Panel Hierarchy

If you want to access a panel that requires you to pass through a panel higher up in the panel hierarchy, you must precede the path specification with the equals sign (=). The = character brings you back to the primary menu and then to the required panel. You can specify such a path at any prompt. For example, if you are at the Alert Monitor and want to change your password, enter **=U.P** at the prompt and press Enter.

To return to the primary menu, enter **==**.

Input Data

If you want to access a panel that requires you to enter data, you can enter the data by separating them from the path by a semicolon (;).

For example, if you are at the primary menu and want to access the alert history for the linked region PROD2, type **H.A;PROD2** at the prompt and press Enter.

Some panels have more than one input field for entering data. You should use the correct number of semicolons to identify the field.

For example, you must use two semicolons if you want to enter *data_2* in the second field:

option_1.*option_2*;;*data_2*

Specify a Shortcut

Note: The PMENUCONTROL parameter group controls the shortcuts. Your administrator can disable shortcuts or change the shortcut character.

You can jump to the panel of a function directly by using shortcuts. You can specify the shortcut at a prompt in one of the following ways:

- Specify */shortcut-name* to retain the current panel on return.
- Specify *=/shortcut-name* to close the current panel and return to the primary menu on exit.

An entry on a menu can have an associated shortcut, displayed in turquoise.

Note: If you do not remember a shortcut, enter / or =/ to list the shortcuts and then select one.

/shortcut-name

Important! If the current panel provides automatic updates and you no longer need this information, use =/shortcut-name rather than a nested shortcut. This saves storage and resources because the region does not need to maintain a display that you no longer need.

To select the function you want, enter its corresponding shortcut, preceded by the slash (/) character, at a prompt.

When you access a function by using its shortcut, your current panel is retained. When you press F3 to exit out of the function, this panel, with any updates, is restored. By using shortcuts, panels can be nested to a maximum of 64 levels.

For example, to access the Alert Monitor History Menu, enter **/ALHIST** at the prompt on your current panel. When you are finished with the menu, press F3 to redisplay your previous panel.

=/shortcut-name

When you have finished with your current panel, you can access the next function by prefixing the shortcut call with the equals (=) sign. This goes directly to the function without retaining the current panel and closes all other nested panels in this window.

For example, to access the Alert Monitor History Menu without retaining the current panel, enter **=/ALHIST** at the prompt on your current panel. When you are finished with the menu, press F3 to display the primary menu.

Access a Function That Does Not Have a Shortcut

You can combine a shortcut with option codes to form a path to access a function that does not have a shortcut itself.

For example, to access the alert history, you can enter the **/ALHIST.B** path.

Lists

Lists comprise a series of items that you can select or against which you can perform actions. The panel shows the actions that you can perform on the listed items.

There are four types of list:

Action Lists

Let you apply *actions* to one or more listed items. Enter the required action code beside the appropriate records.

Single Selection Lists

Let you select one item from a list (for example, the list of valid values for a data entry field) by doing *one* of the following:

- Entering the **S** (Select) action code beside the item
- Moving the cursor to a position anywhere in the line containing the item you want to select and pressing Enter

Multiple Selections Lists

Let you select one or more items in a list (for example, the list of panels used to customize your user profile).

Numbered Lists

Let you select a single item from the list by entering the appropriate number at the prompt (for example, the list of valid values for a data entry field).

Scrolling

If the listed information cannot fit onto the screen, use scrolling to access the off-screen information. You can scroll vertically and horizontally.

Scroll Vertically

Use the F8 (Forward) or F7 (Backward) function key to scroll the displayed information by the amount displayed at the Scroll prompt.

The following table shows valid scroll amounts.

Scroll Amount	Action
C (or CSR)	If scrolling forward, the line on which the cursor is currently positioned is moved to the top of the screen. If scrolling backward, the line on which the cursor is currently positioned is moved to the bottom of the screen.
D (or DATA)	The display is scrolled one full page, less one row, in the specified direction. If scrolling forward, the last line of the current page appears as the first line on the next page. If scrolling backward, the first line on the current page appears as the last line on the next page.
H (or HALF)	The display is moved half a page in the specified direction.
M (or MAX)	The display is moved to the beginning or the end of the displayed information, depending on the function key (Forward or Backward) used.
P (or PAGE)	The display is moved one full page in the specified direction.
n	The display is moved *n* lines in the specified direction. If you enter a temporary scroll amount at the command prompt (for example, Command ===> 5), then when you press the F7 (Backward) or F8 (Forward) function key, the displayed information is scrolled by the specified value once only.

Scroll Horizontally

Use the F11 (Right) or F10 (Left) function key to scroll the displayed information to the right or to the left.

Search for an Item

You can search for specific items in the retrieved information by using the F5 (Find) function key or the LOCATE command.

F5 (Find) Function Key

The F5 (Find) function key lets you find text in the retrieved information. Enter the text you want to find, and press F5. If the text contains more than one word, enclose the text in quotation marks.

You can press F5 again to find the next instance of the text.

For some lists, you can enhance the Find function in the following ways:

- Expand the search beyond the columns currently displayed by using the FMODE command
- Change the number of records searched between prompts by using the FPROMPT command

Note: For information about the FMODE and FPROMPT commands, see the online help.

LOCATE Command

The LOCATE command enables you to locate a particular record in a list. Enter **LOCATE** or **L** followed by a text string mask. The command locates the first record name that matches the mask.

Online Help

Online help is provided for panels and messages.

Context-sensitive help is available at different levels. When you are viewing a help panel, pressing F1 (Help) takes you to the next level of help available. Pressing F3 (Exit) takes you back to the previous level, or exits from help and returns you to the application. Pressing F4 (Return) exits help and returns you to the application immediately.

Tip of the Day

The region displays a tip about using the product at the bottom of the primary menu.

To display the detailed tip, place the cursor on the tip and press F1 (Help).

Help About a Panel

Panel-based online help includes information about what each panel is used for, how to complete the fields, the actions you can perform, and the use of available function keys. Use this online help to supplement the information in this guide while you are working in the region.

Press F1 (Help) to retrieve the online help for a given panel. When you are viewing a help panel, you can press F6 (HelpHelp) to find out how to use the help facility.

If the block of help text you require splits across two panels, use the arrow keys to move the cursor to the top or the bottom of the block and press F8 (Forward) or F7 (Backward) to bring the block into view.

Help About Fields on a Panel

Many panels provide field-level online help.

To retrieve the online help for an input field, move your cursor to the field and press F1 (Help).

Help for a Message

While you are working in the region, you receive messages that advise you of various events. These messages might be providing information only (for example, informing you that an update was successful). They might also alert you to errors (for example, if you try to enter an action that is not valid for a resource).

Each message has detailed online help text associated with it. Access the help text for a particular message in *one* of the following ways:

- If you are at a panel and a message appears in red on the third line of that panel, move the cursor to that line and press F1 (Help).
- If you receive a message referring you to the activity log for more detail, enter **/LOG** at the prompt to display the activity log.
- If you are using the activity log, a Command Entry panel, or Operator Console Services (OCS), you can do *one* of the following:
  - Move the cursor to the line displaying the message, and press F1 (Help).
  - Type the message ID at the prompt, and press F1 (Help).
- If you are viewing a transient log, enter **H** beside the message.
- You can also enter **/CODES** to display the Messages and Codes Menu that enables you to obtain help on messages and on miscellaneous error codes.

Customize Your User Profile

You can customize your user profile to suit your own requirements. Your user profile sets up your view of the region. In a multisystem environment, your profiles in the connected regions are synchronized.

Enter the **=U.UP** path to access your user profile.

Note: For a description of the profile parameters, see the online help.

Work in Two Windows

You can divide your physical screen into two logical windows. Each window operates independently of the other, enabling you to perform multiple functions concurrently.

To open a second window in the region, press the F2 (Split) or F9 (Swap) function key.

When one window takes up the entire screen, the other window is considered *closed*.

Split Screens

Using the SPLIT command, you can perform the following actions:

- Split your screen horizontally and have one window above the other. Move the cursor to a row where you want to split screens, and press F2 (Split).
- Split your screen vertically and have two windows side by side. Move the cursor to any column on the bottom row, and press F2 (Split).
- Return a split screen to single window display in one of the following ways:
  - Move the cursor to the first line on your screen, and press F2 (Split) to minimize the window. The window containing the cursor disappears, and the other window expands to full size.
  - Enter **=X** to exit one of the windows. Your session with that window ends.

Swap Screens

Using the SWAP command, you can perform the following actions:

- Reverse the dimensions of the active window if you have two windows open and both are visible on the screen, and switch between them.
- Open a second full-screen window if you are currently operating with a single window open, and then switch between them.

To swap two full-screen windows

1. Display one of the panels.
2. Press F9 (Swap).

   The primary menu appears.
3. Proceed to the second panel you require and press F9 (Swap).

   The first of your swap-panels appears.
4. Press F9 (Swap) to switch between the two swap-panels.

Chapter 2: Managing Alerts

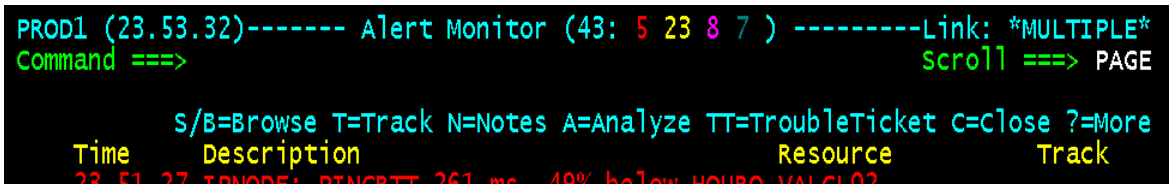
This section contains the following topics:

Alert Monitor

The Alert Monitor provides an integrated, correlated event notification system that indicates to operators that a problem has occurred and that some action needs to be taken. Such alerts, known as active alerts, are displayed on the Alert Monitor.

The Alert Monitor refreshes your screen each time an alert arrives. The clock in the title line indicates when the screen was refreshed last.

The title line of the Alert Monitor includes a total indicator, which shows the total number of alerts and the total number of alerts of each severity level. For example, (43: 5 23 8 7) means that there are a total of 43 alerts, comprising 5 severity one, 23 severity two, 8 severity three, and 7 severity four. Each severity level appears in a different color. The following illustration shows an example:



The Alert Monitor can initiate actions such as starting recovery procedures and creating trouble tickets, either automatically or manually.

In a multisystem environment, you can monitor active alerts from all linked regions in a focal point region. You can monitor only local active alerts in a subordinate region.

Alerts that were raised before the region was shut down are not displayed on the Alert Monitor when the region restarts, but are displayed on the Alert History panel. The alert history contains information about all alerts.

Access the Alert Monitor

The Alert Monitor lets you know of problems that have occurred in your environment. You can then take appropriate action based on the alert information.

To access the Alert Monitor

1. Enter **/ALERTS** at the prompt.

   The monitor appears displaying any alerts.

You can also access the Alert Monitor by issuing the AL command against a resource from a resource monitor. The monitor displays the alerts for that resource.

Sort Alerts

Alerts are color coded by severity. They are sorted in order of severity, then time—the most severe alerts are listed first, then, in each category of severity, the most recent of the alerts are listed first.

To change the sort order, use the **SORT** command.

To list the column fields by which you can sort, enter **SORT ?**.

Filter Alerts

You can restrict the alerts displayed by using filters. When you apply a filter, the filter name appears on the right of the Alert Monitor and the totals in the title line reflect the number of alerts displayed under the filter.

To filter alerts, enter the following command at the command prompt:

`FILTER` *`filter_name`*

To remove the applied filter, enter **FILTER NONE**.

Note: To display a selection list of filters, enter **FILTER**.

Change the Display Format

Display format determines what and in what order information columns are displayed.

To change the alert monitor format, enter the following command at the command prompt:

`FORMAT` *`format_name`*

To return to the default format, enter **FORMAT DEFAULT**.

Note: To display a selection list of formats, enter **FORMAT.**

Change the Alert Monitor Profile Using the User Profile Menu

To change your alert monitor profile using the User Profile Menu

1. Enter **=U.UP** from any panel.

   The Panel Display List appears.

2. Enter **S** beside Alert Monitor Profile.

   The Alert Monitor Profile panel appears.

3. Complete the following fields:

   Monitor List Filter

   Specifies the name of the default filter.

   Monitor List Format

   Specifies how and what is displayed.

   Alert Sort Criteria

   Specifies the order in which the alerts are displayed.

   Press F3 (File).

   The changes to your user profile are saved.

How to Work with Alerts

The Alert Monitor displays the alert when it arrives. An alert can be closed automatically by the region (when it recognizes that the problem that caused the alert no longer exists) or manually by the operator. When an alert is closed, it is removed from the active alert monitor. However, it is still accessible from the Alert History panel.

Typically, when an alert arrives, do this:

1. Enter **B** (Browse) beside the alert to find out whether any suggested recommended actions are provided.
2. Enter **A** (Analyze) beside the alert to diagnose it. Diagnosis displays additional information for some alerts.
3. Enter **T** (Track) beside the alert to indicate to other users that you will be working on it. Your user ID is displayed in the Track column.
4. Perform any necessary actions to remove the alert condition. For information about actions, press F1 (Help).
5. Enter **N** (Notes) beside the alert to view or record notes that provide future reference information about this alert in the alert definition.
6. Enter **C** (Close) beside the alert after the alert condition is resolved.

Display Alert Details

The Alert Display describes an active alert and provides information about its generation time and its identity. An alert comes with the following information:

- General information such as severity level, the source of the alert, update history, and number of occurrences
- Possible causes of the alert and any recommended actions

To display the Alert Display

1. Enter **B** or **S** beside an alert on the Alert Monitor panel.

   The Alert Display appears.

   Note: For information about the fields, press F1 (Help).

Print Alert Details

To print details about the displayed alert

1. Enter **PRINT** at the command prompt.

   The Confirm Printer panel appears.

2. Specify your printing requirements, and then press F6 (Confirm).

   The details are sent to the printer.

Access the Status Monitor from the Alert Monitor

If an alert is generated by the region on behalf of a defined service or resource, you can access the status monitor to work on that service or resource.

To access the status monitor, enter **A** beside the alert.

The status monitor appears. (You may need to wait for a short time.)

Access the Transient Log from the Alert Monitor

If a monitored resource generates an alert, you can access the corresponding transient log for the affected resource from the Alert Monitor.

To access the transient log

1. Enter **TL** beside the alert.

   The transient log appears.

Raise a Trouble Ticket for an Alert

If your system administrator has implemented the interface for raising a trouble ticket, you can request a trouble ticket as defined to your region.

Note: For information about how to implement the trouble ticket interface, see the *Administration Guide*.

To raise a trouble ticket

1. Enter **TT** next to the alert.

   The Alert Monitor : Trouble Ticket Details panel appears.

2. Enter the details of the trouble ticket and press F6 (Confirm).

   The trouble ticket is raised.

Add Operator Notes to an Alert

You can add notes to an alert for future reference. For example, you may want to leave the next operator some notes about an alert that has not been closed. Notes are also added automatically to provide a history of the actions performed on the alerts.

When an alert is closed, the severity and description of the alert are added to the notes so that you can easily identify which alert has been closed. When an alert severity changes, the description is added to the alert notes.

To add notes to an alert

1. Enter **N** beside the alert.

   The Alert Notes panel appears.

2. Press F4 (Add).

   The panel becomes editable.

3. Enter your notes about the alert, and press F3 (File) when you have finished.

   The notes are saved with the alert.

   Note: For information about how to use the editor, see the online help.

Close Alerts

Alerts can be closed automatically by the region or manually.

For example, an alert might be generated because a monitoring threshold is exceeded. When the condition is corrected, the alert is closed automatically. Another alert might be a reminder alert and needs to be closed manually.

To close an alert

1. Enter **C** beside the alert.

   The alert is closed.

To close multiple alerts

1. Enter **CLOSE** at the Command prompt.

   The Valid Value List panel appears.

2. Select ALL to close all displayed alerts or a severity level to close alerts with that level.

   The Command Confirm panel appears.

3. Press F6 (Confirm).

   The targeted alerts are closed and removed from the monitor.

Display Alert History

The alert history lists all alerts, both active and closed, that occurred during a predefined period.

To view the alert history

1. Press F4 (History) from the alert monitor.

   The alerts for the current date appear. If you want to display the alerts for the other dates, use the DATE command (for example, DATE *yymmdd*).

   Note: For more information about the command, see the online help.

2. (Optional) Enter **N** beside an alert to view the history of actions performed on it.

   The Alert Notes panel appears.

Note: The length of time an alert is kept in the alert history log is set by your administrator.

Chapter 3: Monitoring and Controlling Resources

This chapter describes how to monitor and control services and resources on a day-to-day basis. It assumes that the operations environment has been established with an active system image and the system is operating normally.

Access Status and Graphical Monitors

The status and graphical monitors let you monitor at the resource and service levels within your systems environment rather than only by events (messages). This reduces the amount of information displayed on the monitor screen, letting you focus on the overall picture of your environment.

The product provides the following status monitors: service monitor, resource monitor, tape drive monitor, and printer monitor.

Access the status and graphical monitors from any panel as follows:

- To access the service monitor, enter **/SMON**.
- To access the resource monitor, enter **/RMON**.
- To access the tape drive monitor, enter **/TAPEMON**.
- To access the printer monitor, enter **/PRTMON**.
- To access the graphical monitor, enter **/GMON**.

Note: The product also provides the LPAR Display Facility. To access it, enter **/LPARMON**.

More information:

Monitor Services and Resources (see page 59)
Use the Status Monitor (see page 64)
Graphical Monitor (see page 61)
Display Information About Logical Partitions (LPARs) (see page 34)

Example: Respond to a Service Problem

This example shows how you can respond to a service problem.

You have created a number of service definitions, which your region is now managing. You want to ensure that the managed services are operating normally. You enter **/SMON** to access the service monitor to view their status.

The services have been behaving normally for some time. Suddenly, you notice that one of them turns yellow, indicating that it has degraded. One of its resources might have failed.

To investigate the problem

1. Enter **Z** beside the service to list its resources.

   You notice that one of the resources is displayed in red and is not blinking, indicating that it has failed.

2. Enter **D** beside the resource.

   The displayed information confirms that the resource has failed.

3. Enter **MM** beside the resource.

   The operation mode of the resource is set to MANUAL, indicating to the other operators that the resource is being attended to.

4. Enter **S** beside the resource to find out what caused it to acquire the FAILED state.

   The message is displayed next to the Actual State field on the Modes and States panel.

   If you require more information, enter **L** beside the resource to view its transient log for further hints about the cause of the problem. Enter **S** beside the message that indicates the FAILED state change. You can also jump from the transient log to the activity log to find out what was happening at the time the resource failed.

5. Review all the information available to you, and correct the problem. After you have corrected the problem, ensure that the resource can be safely restarted.

   The resource can be restarted.

6. Enter **RES** beside the resource to return its control to the region.

   If the problem is resolved, both the resource and service will turn green, indicating normal operation.

Containment Resources

A *containment resource* represents a group of similar resources (for example, DASDs, or JES lines). By defining the operations methods of the group in a containment resource definition instead of in individual resource definitions, your site reduces the CPU usage by the region during startup and shutdown.

A containment resource enables you to monitor the health of the group as a whole, not the individual resources. You cannot apply commands to individual resources. If the status of a containment resource indicates a problem, use the logs to determine the health of the individual resources.

Actual States of a Containment Resource

The actual state of a containment resource is displayed on your monitor as follows:

- If all contained resources are in the same actual state, that actual state is displayed.
- If the contained resources are in different actual states with at least one resource in the DEGRADED, FAILED, or UNKNOWN state, the worst state is displayed with a percentage of the resources in that state. For example, a DEGRADED 33% state indicates that one third of the resources are degraded and that no resources have failed or are unknown.
- If the contained resources are in different actual states with none of the resources in the DEGRADED, FAILED, and UNKNOWN states, the worst state is displayed with a percentage of the resources in that state. For example, a STARTING 33% state indicates that one third of the resources are starting, and that no resources are stopping or inactive.

The ranking of the actual states are, from best to worst: ACTIVE, STARTING, STOPPING, INACTIVE, DEGRADED, FAILED, and UNKNOWN.

Resources Registered to Automatic Restart Manager (ARM)

If a resource is registered to ARM, its displayed mode of operation is suffixed with -ARM (for example, AUTO-ARM). The region delegates any restart processes to ARM. The region takes control only if ARM cannot complete the restart process successfully.

Reset Couple Data Sets

Some sysplex resources use couple data sets. If, for some reason, a resource switches from using the primary data set to an alternate data set, you can, after corrective measures have been taken, reset the data set usage back to that specified in the resource definition. You can do this only from a focal point region and only if the resource definition allows it.

To reset the couple data set usage, enter **CDC** beside the sysplex resource.

If you cannot issue the CDC command, it is because the selected resource does not allow it.

To review the resource definition, enter **DB** beside the resource and select the Couple Dataset Control panel.

Display Information About Logical Partitions (LPARs)

You can display information about the systems (LPARs) managed by linked regions.

To display information about the LPARS

1. Enter **=M.L** from any panel.

   The LPAR Display Facility panel appears, listing the systems in the managed sysplexes. From this panel, you can issue commands to get additional information about the systems.

   Note: For information about the facility and commands, press F1 (Help).

2. (Optional) Use the FILTER command to select the systems you want to display:

   FILTER

   Displays all the managed systems.

   FILTER *sysplex-name*

   Displays the managed systems in the specified sysplex only.

   You can also display the managed systems in a particular sysplex from the resource monitor by entering LDF next to a resource for that sysplex.

Resource Control

You can issue commands to perform various actions from the status and graphical monitors, depending on your authority level.

You have available to you all the common commands registered in a region, such as activate, terminate, and override commands. In addition, you can issue started task commands, and establish sessions with jobs and started tasks defined in the knowledge base. Also, if a tape drive, printer, or JES3 job class group is defined using the supplied template, you have access to extended functions in the control of that device.

You can enter ? beside a service or resource to find out which commands are available for it.

More information:

Control Services and Resources (see page 60)
Use Commands in the Status and Graphical Monitors (see page 70)

Issue Started Task Commands

From the monitor, you can issue commands to perform started task functions. For example, if you enter CMD beside a CICS task, you can perform CEMT transactions with the task. The CMD command uses the MODIFY system command.

To issue commands to a started task

1. Enter **CMD** beside the started task.

   The Started Task Commands panel appears.

2. Issue a started task command.

   The function requested by the command is performed.

Note: You can switch between the MODIFY and native command mode by pressing F12 (Mode).

Establish a Session with a Region

The MTO command lets you establish an LU 1 session with a displayed resource that satisfies the following conditions:

- Resource class of either JOB or STC
- Resource support for LU 1 (for example, CICS region)
- ACB name defined in resource

By using the MTO command, you can bring up an interface that lets you establish a session with the region managed by the selected resource, perform the necessary actions, and then disconnect from the region.

To establish a session with a region

1. Enter **MTO** beside the job or started task.

   The following panel shows an example of a CICS session interface, from which you can issue CICS transaction commands:

```
SOLVPROD-------------- Automation Services : MTO -CICSA ------------LINE 1 OF 1
Command ===>
        ===>

Status Connected     Limit 1000   Wrap OFF   Edit OFF   Scroll OFF
1---+----10---+----20---+----30---+----40---+----50---+----60---+----70---+----
N20E10 ENTER USERID
*** END ***

 F1=Help      F2=Split     F3=Exit      F4=Function  F5=Hide      F6=Retrieve
 F7=Backward  F8=Forward   F9=Swap      F10=Left     F11=Right    F12=Disconnect
```

2. Converse with the region by entering data at the Command prompt.

   The conversation appears on the panel.

Note: As you converse with the connected region, the returned data is stored in a buffer. The total number of lines in the buffer appears at the top right corner of the panel. You can increase the size of the buffer by modifying the Limit field. You can scroll through the buffer by pressing the F7 (Backward), F8 (Forward), F10 (Left), and F11 (Right) function keys.

Hide Input Data

You can hide the data you enter on the MTO panel (for example, your password).

To hide the data, press F5 (Hide) and enter the data.

You must press F5 for each hidden data string you want to enter.

Retrieve Input Data

This function makes it unnecessary to reenter a previously entered string.

To retrieve a data string you entered previously on the MTO panel, press F6 (Retrieve). Press F6 several times to retrieve the required string.

The data is retrieved starting with the last entered string. If you press F6 more than three times, a list of previously entered data strings is displayed. You can then select the required string from the list.

Access Additional Functions

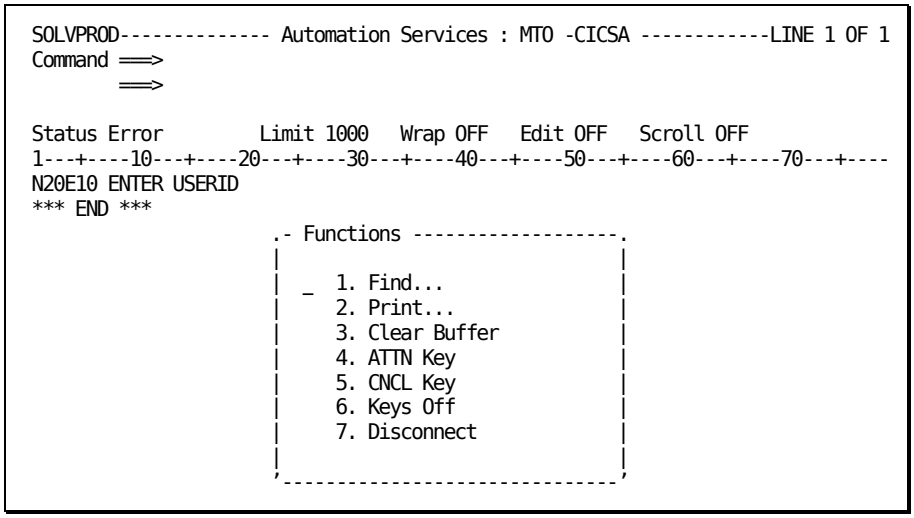
You can perform the following functions in addition to those provided by the function keys:

- Find a text string in the buffer.
- Print a copy of the data in the buffer.
- Clear the buffer.
- Send an ATTN keystroke to the connected region.
- Terminate the receipt of data from the last request.
- Switch the function key display at the bottom of your screen off or on.
- Disconnect or reconnect the region.

To access additional functions from the MTO panel

1. Press F4 (Functions).

   The Functions window opens:



2. Enter the function number in the input field to select a function.

   The dialog for the selected function opens.

Example: Converse with a CICS Region

The following steps show a session that inquires about the transient data queues in a CICSA region:

1. Enter **MTO** beside the CICSA started task on the monitor as shown on the following panel:

```
SOLVPROD--------------------- Resource Monitor -----------------------CO11-0001
Command ===>                                                  Scroll ===> HALF

                  S=Status L=Log D=Display A=Act T=Term DB=Database ?=List Cmds
    System   Class Resource          Desired  Actual    Mode      Logical  Ovr
MTO SOLV     STC   CICSA             ACTIVE   ACTIVE    AUTOMATED OK
    SOLV     STC   CICSB             ACTIVE   ACTIVE    AUTOMATED OK
    SOLV     STC   CICSC             ACTIVE   ACTIVE    AUTOMATED OK
```

   The MTO panel appears.

2. Enter **CEMT INQUIRE TDQUEUE** at the Command prompt to inquire about the transient data queues as shown on the following panel:

```
SOLVPROD-------------- Automation Services : MTO -CICSA -----------------------
Command ===> CEMT INQUIRE TDQUEUE
        ===>

Status Connected     Limit 1000   Wrap OFF   Edit OFF   Scroll OFF
1---+----10---+----20---+----30---+----40---+----50---+----60---+----70---+----
```

   The transient data queues are listed:

```
SOLVPROD-------------- Automation Services : MTO -CICSA -----------LINE 1 OF 29
Command ===>
        ===>

Status Connected     Limit 1000   Wrap OFF   Edit OFF   Scroll OFF
1---+----10---+----20---+----30---+----40---+----50---+----60---+----70---+----
CEMT INQUIRE TDQUEUE

 Tdq(CADL)              Ind Nam(CSSL)
 Tdq(CAIL)              Ind Nam(CSSL)
 Tdq(CCPI)              Ind Nam(CSSL)
 Tdq(CCSE)              Ind Nam(CCSO)
 Tdq(CCSO)              Ext           Ena Clo
 Tdq(CDBC)              Ind Nam(CSSL)
 Tdq(CDUL)              Ind Nam(CSSL)
 Tdq(CESE)              Ext           Ena Clo
 Tdq(CESO)              Ext           Ena Clo
 Tdq(CMIG)              Ind Nam(CSSL)
 Tdq(CPLD)              Ind Nam(CPLI)
 Tdq(CPLI)              Ext           Ena Ope
 Tdq(CRDI)              Ind Nam(CSSL)
 Tdq(CSCS)              Ind Nam(CSSL)
 F1=Help      F2=Split     F3=Exit      F4=Function  F5=Hide      F6=Retrieve
 F7=Backward  F8=Forward   F9=Swap      F10=Left     F11=Right
```

Session Cannot Be Established

Symptom:

I cannot establish a session because the LU 1 APPL definitions are not available or because the logon modes are not compatible.

Solution:

1. Ensure that the region to which you are trying to connect is set up for LU 1 sessions.
2. Enter **/PARMS** from any panel to access the list of parameter groups.
3. Review the LU1 Terminal Prefix or the LU1 Logmode field for the EXTAPPLS parameter group to ensure that the correct prefix or logon mode is specified.

   The specified prefix applies to all LU 1 sessions. The specified mode applies to MTO LU 1 sessions only.

Control Tape and Cartridge Drives

Tape and cartridge drive templates provide extended functions that let you control those devices.

To control tape and cartridge drives through extended functions

1. Enter **XF** beside an active tape drive (TAPE class) that is defined based on the supplied template.

   The TAPE Extended Function panel appears. The following panel is an example:

```
SOLVPROD---------- ResourceView : TAPE 381 Extended Function ---------SOLV-0001
Command ===>

+ General Details  ------------------------------------------------------------+
|                                                                              |
|  Unit  Type   Description                                                    |
|  380   3420   Reel                                                           |
|                                                                              |
+------------------------------------------------------------------------------+

+ Status Information  ---------------------------------------------------------+
|                                                                              |
|                                          M=Mount C=Cancel U=Unload           |
|       Volser      Time        Job         Step                               |
|  ___  JPTAPE__    14.28.00    AUJPK1T     COPYTD                             |
|                                                                              |
+------------------------------------------------------------------------------+




 F1=Help      F2=Split     F3=Exit      F4=Return                F6=Refresh
                           F9=Swap
```

   The panel contains two windows. The General Details window identifies the tape unit, and the Status Information window identifies the current tape on the tape unit.

2. Use the action codes to control the operation of the tape unit.

Control Printers

Printer templates provide extended functions that let you control those devices.

To control printers through extended functions

1. Enter **XF** beside an active printer (PRT class) that is defined based on the supplied template.

   The PRT Extended Function panel appears. The following panel is an example:

```
SOLVPROD---------- ResourceView : PRT PRT1 Extended Function ---------SOLV-0001
Command ===>

+ General Details  ------------------------------------------------------------+
|                                                                               |
|  Unit  Type   Description                                                     |
|  C0E   JES2L  Main Printer                                                    |
|                                                                               |
+-------------------------------------------------------------------------------+

+ Status Information  ---------------------------------------------------------+
|                                                                               |
|     C=Cancel REP=Repeat I=Interrupt DF=Display Forms B=Backspace F=Advance    |
|       Pages   Classes     Form      FCB      UCS     Jobname                  |
|  ___  ____    AX_____     STD___    6___     TN__    AUJMI1V                  |
|                                                                               |
+-------------------------------------------------------------------------------+




 F1=Help      F2=Split     F3=Exit      F4=Return                F6=Refresh
                           F9=Swap
```

   The panel contains two windows. The General Details window identifies the printer, and the Status Information window identifies the current job on the printer.

2. (Optional) Change the printer characteristics by using the Classes, Form, FCB, and UCS fields in the Status Information window. When you finish updating the fields, press Enter.

   The changes are applied.

3. Use the action codes to control the printing of the current job.

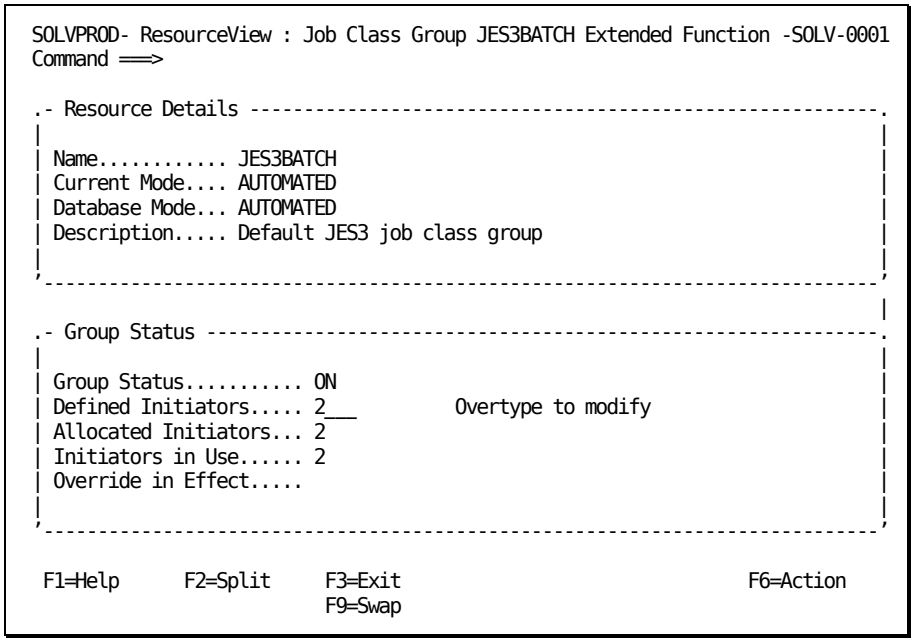
Change the Number of Initiators in a JES3 Job Class Group

The JES3 job class group template provides extended functions that let you control the number of initiators in the group.

To change the number of initiators in a JES3 job class group through extended functions

1. Enter **XF** beside a JES3 job class group (STC class) that is defined based on the supplied template.

   The Job Class Group Extended Function panel appears. The following panel is an example:



   The panel contains two windows. The Resource Details window identifies the group resource definition and the operation mode, and the Group Status window displays the current status of the group.

2. Change the number of initiators assigned to the group, and press F6 (Action).

   The number of initiators assigned to the group is changed.

Move the Control of a Resource from One Region to Another

In a sysplex environment, you might want to balance the load on the systems by moving the control of certain resources from one system to another. Those resources should have been defined to shared system images, together with the relevant resource relationships, availability map, and processes.

From a region, you can move a resource in a shared system image between systems to which the resource has affinity.

To move the control of a resource from the region on one system to the region on another system

1. Enter **MV** beside the resource you want to move from the resource monitor.

   The Execute MV Command panel appears.

2. Enter **S** beside the image of the system to which you want to move the resource.

   The Confirm Move panel appears.

3. Review the expected status of the resource after the operation, and update as required. Press F6 (Confirm) to confirm the settings for the operation.

   You are returned to the resource monitor, and the resource is moved.

Note: If the resource has children, you can move the resource together with its children. Use the MVT command.

Chapter 4: Controlling the System Image

This section contains the following topics:

System Image Control

During initialization, the region loads the following types of system images:

- Local
- Shared
- Sysplex
- z/VM (when connected with CA Mainframe Connector for Linux on System z)

Control the Local System Images

During initialization, the region loads a user-specified local system image. The image is identified in the AUTOIDS parameter group.

To control a system image during operation, use the following commands:

SHUTSYS or **SHUTFORCE**

Shuts down the resources in the image.

STARTSYS

Restarts the resources in the image.

Shut Down Resources in a Loaded System Image

You can use the following commands to shut down the resources defined to a loaded system image:

SHUTSYS

Shuts down all resources with an operation mode of AUTOMATED.

SHUTFORCE

Shuts down all resources.

Shut Down Automated Resources

Note: This procedure is valid only if the global operation mode is set to AUTOMATED.

To shut down resources that are in an operation mode of AUTOMATED

1. Enter **SHUTSYS** at the prompt on the status monitor.

   If the region is linked to other regions, the Execute SHUTSYS Command panel appears listing the loaded system images in all linked regions. Go to Step 2.

   If the region is a standalone region, the Command Confirmation panel appears. Go to Step 3.

2. Enter **S** next to the system image you want to shut down.

   The Command Confirmation panel appears.

   Important! Issuing the SHUTSYS command shuts down all resources that are in the AUTOMATED mode.

3. Enter **CONFIRM** in the Response field.

   All automated resources defined to the system image are shut down.

Shut Down a Manual Resource

To shut down resources that are in the MANUAL operation mode, do *one* of the following:

- Enter **MA** beside the resource to change its operation mode from MANUAL to AUTOMATED before issuing the SHUTSYS command.
- Enter **T** beside the resource to stop it manually.

Shut Down All Resources

To shut down all resources in a system image

1. Enter **SHUTFORCE** at the prompt on the status monitor.

   If the region is linked to other regions, the Execute SHUTFORCE Command panel appears listing the loaded system images in all linked regions. Go to Step 2.

   If the region is standalone region, the Command Confirmation panel appears. Go to Step 3.

2. Enter **S** next to the system image you want to shut down.

   The Command Confirmation panel appears.

3. Enter **CONFIRM** in the Response field.

   The resources defined to the system image are shut down.

Restart Resources in a Loaded System Image

You can restart resources defined to a loaded system image that were shut down using the SHUTSYS or SHUTFORCE commands:

To restart the resources in a loaded system image:

1. Enter **STARTSYS** at the prompt on the status monitor.

   If the region is linked to other regions, the Execute STARTSYS Command panel appears listing the loaded system images in all linked regions. Go to Step 2.

   If the region is standalone, the Command Confirmation panel appears. Go to Step 3.

2. Enter **S** beside the system image that you want to restart.

   The Command Confirmation panel appears.

3. Enter **CONFIRM** in the Response field.

   The resources in the loaded system image start.

Shared and Sysplex System Images

During initialization, the region loads the following system images in addition to the local image:

- Defined shared system images that have an ACTIVE status and to which the local system has affinity.
- Version 0001 of the system image that has the name of the sysplex that contains the local system.

Note: For information about how to control shared and sysplex system images, see the *Administration Guide*.

z/VM System Images

If a region is configured to manage Linux resources on z/VM systems, the region loads the defined z/VM system images during initialization. These images contain the definitions for the Linux resources being managed.

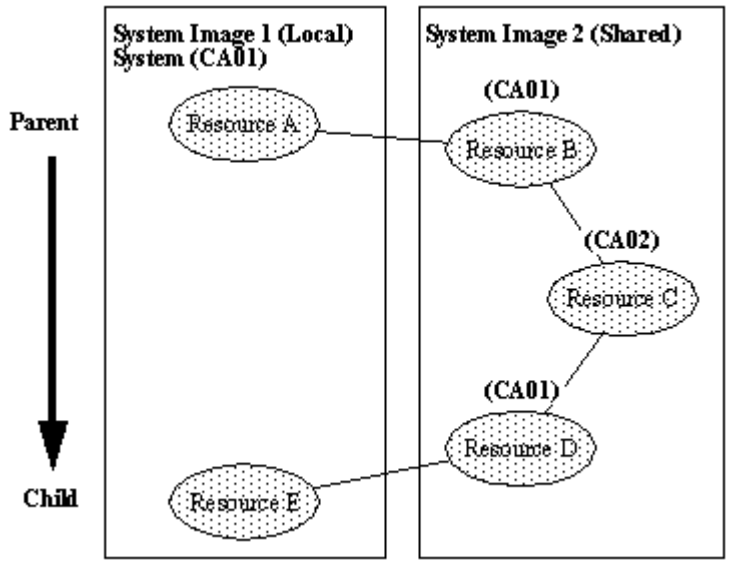
Note: For information about z/VM system images, see the *Linux Management Guide*.

You can use the SHUTFORCE, SHUTSYS, and STARSYS commands to control a z/VM system image during operation the same way as you control a local system image.

Effect of Cross-System Relationships on Resource Shutdown and Startup

During resource shutdown or startup, a resource may have a relationship with a resource on a different system.

The following illustration shows an example consisting of five related resources that are being managed in the AUTOMATED operation mode. Resources A, B, D, and E are active on the CA01 system, while resource C is active on the CA02 system, as indicated by the system ID in parentheses. The home system of resources A, B, D, and E is CA01, and the home system of resource C is CA03.



During shutdown, related resources on remote systems are ignored. Therefore, in the example, resource C remains active after the shutdown.

During startup, inactive local resources are started. Startup begins with resource A and continues down the relationship. Because resource C is already active, startup continues as normal to resource D. At the end of startup, the resources are returned to their pre-shutdown status.

However, if resource C has become inactive before startup occurs, the resource is restarted on CA03. The starting process waits for the resource to become active before restarting resources D and E.

Chapter 5: Using Logs

You can access various logs to assist in solving problems.

This section contains the following topics:

Log Types

Typically, a region keeps two types of logs: transient logs and activity logs.

Each resource has its own transient log. The transient log provides a real-time view of the activity associated with a particular resource. Transient logs are not kept between region restarts. However, depending on the log details defined for a resource, the transient log information may be written to the permanent activity log.

The activity log provides a historical view of the system activities associated with all resources monitored by the region. A region can have more than one activity log, of which only one is open for logging. The activity log is stored on DASD, so that you can access the activity log (see page 52) if necessary. You can also access the activity log from the transient log (see page 53).

The information that is logged is determined by the log parameters specified in the resource definition. The region logs the information to the transient log, as well as to any other destinations specified in the definition.

Display an Activity Log

The activity log provides a historical view of the system activities associated with all resources monitored by the region. It records all commands, responses to commands, and messages that occur in your regions. You can display an activity log from the Historical Data : Primary Menu or OCS. By accessing the activity log, you can browse through recent activity to assist you in locating information and analyzing problems.

To display the activity log in the current region

1. Enter **H** at the command prompt on the primary menu.

   The Historical Data : Primary Menu appears.

2. Enter **L**.

   The activity log appears with the last logged activities. A message also displays the day, date, and time when the region was last initialized.

3. Press the F8 (Forward) and F7 (Backward) function keys to scroll through the log for the current day and for previous days.

Note: You can also enter the /**LOG** shortcut at the command prompt to display the current activity log

If you want to access the log in a linked region, identify the region in the Link Name field on the Historical Data : Primary Menu.

Browse the Activity Log Online

The following aids are available to help you use the activity log:

- Forward and backward scroll
- Various display formats
- Highlighting log records
- Log filter to restrict the records displayed
- Positioning by date or time, either absolute or relative
- Positioning by labels set in the log
- Searching forward or backward for text
- Selective printing of log records

Note: For detailed information about these aids, see the online help.

Record Additional Information in the Activity Log

You can use the LOG command to record additional information in the log that is outside the scope of that recorded by default. For example, enter the following at the prompt:

```
LOG PRODUCTION LINK TO LOS ANGELES DOWN FOR MAINTENANCE
```

This produces the following entry in the log for the time the command was issued:

```
LOG ENTRY : PRODUCTION LINK TO LOS ANGELES DOWN FOR MAINTENANCE
```

You can record a message up to 256 characters long.

Display a Transient Log

The transient log provides a real-time view of the activity associated with a particular resource. You can display the transient log from your monitor. This log and the activity log contain messages and other information associated with a resource. The logs help you diagnose problems (for example, resource failure).

To display the transient log

1. Enter **L** beside a resource on the monitor.

   The Transient Log Browse panel appears for the selected resource. The panel displays messages in chronological order.

2. (Optional) Enter **L** beside a message in the transient log to access the activity log to see what was happening in the system at that time.

Set Criteria to Display Logged Messages Selectively

When you access the transient log of a resource, you are profiled to view all messages logged for that resource. You can limit the number of messages you see in the current session by profiling for certain criteria.

To set profile values

1. Enter the **PROFILE** command at the prompt.

   A panel appears displaying the current profile setting.

2. Change the settings, as required.

   Note: For information about the settings, see the online help.

You can also supply the profile values directly by using the command operands. The syntax of the PROFILE command is:

```
PROFILE [[SEV={1|2|3|4|5|6}]
         [NCLID=ncl-process-identifier]
         [PROC=ncl-procedure-name]] |
        [RESET=YES]
```

You can profile messages according to the following:

SEV

Determines how critical the messages are. For example, specify **SEV=1** to see only the most critical messages or **SEV=4** to see the messages of severity levels 1 through 4.

NCLID

Specifies the ID of the NCL process that issued the messages you want to see. The NCL processes are created when NCL procedures are executed. The region creates NCL processes when performing automation tasks.

Each NCL process has a unique ID, so you can use the NCLID operand to differentiate between executing copies of the same NCL procedure if, for example, the same NCL procedure was run more than once in a given period.

The region processes resources asynchronously, and a number of NCL processes for the resource may be active at the same time. Messages raised by these NCL processes intermingle in the transient log. You can use the NCLID operand to view the messages raised by a particular NCL process (that is, to view the messages for a particular task).

PROC

Specifies the name of the executing NCL procedure that issued the messages you want to see.

You can use the asterisk (*) wildcard character to include more than one NCL procedure. The wild card represents any single character except at the end of a string when the wild card represents one or more characters.

RESET

Specify **RESET=YES** to reset the profile to view all available messages.

Display User-defined Log Messages

A user-defined log message can be specified for a resource on the Define Event Related Actions panel when the resource is defined.

If you want to see only these messages in the transient logs, enter **UL** beside the resource.

Obtain Help on a Logged Message

You can obtain more information about product messages in a transient log through help.

To display the detailed help text associated with a message in the transient log

1. Enter **H** beside the message.

   The help text appears.

Print a Transient Log

To print a transient log

1. Enter **P** beside a resource to print its transient log.

   The Generate a Report panel appears, which lets you print a default report or an extended report of the resource's transient log.

2. Specify your printing requirements.

   - To print the default report (TRANSIENTLOG), ensure that the displayed information is satisfactory.
   - The extended report contains additional fields that display the S (severity), Nclid (NCL ID), and Proc (procedure) for each item in the transient log. To print the extended report, enter **?** in the Report Name field, and then select TRANSX.

   Press F6 (Action).

   The log report is printed.

Reset a Transient Log

When you do not need the messages in the transient log anymore, you can clear the messages by resetting the log.

To reset the transient log of a resource

1. Enter **LR** beside the resource.

   Its transient log is cleared of all messages.

Change Logging Options

Logging options for a resource are specified on the Automation Log Details panel when the resource is defined. These options determine how and what information is logged.

Note: For more information about resource logging, see the *Administration Guide* and the *Reference Guide*.

Merge Transient Logs

For a resource, instead of displaying only the messages logged for that resource, you can display a merged transient log that also includes the messages logged for the resources belonging to it. To identify the owner of a message, the merged log contains the following additional information: the system image name and version, the class name, and the resource name.

Important! This command may take some time to execute and consume many system resources.

To display a merged transient log

1. Enter **LC** beside the resource.

   The merged transient log appears.

   Note: The log display may extend over several screens. Use the F7 (Backward) and F8 (Forward) function keys to scroll through the screens. To refresh the log, press F6 (Refresh).

To print a merged transient log

1. Enter **PC** beside the resource.

   The PSM : Confirm Printer panel appears.

2. Specify your printing requirements, and press F6 (Confirm).

   The log report is printed.

Transient Logs From Different Time Zones

When transient logs from different time zones are merged, all dates and times refer to the local time zone.

Size of a Merged Transient Log

The size of the merged transient log is limited by the size of the transient log of the selected resource. The size of the transient log is specified in the Automation Log Details panel of the definition. When the merged log becomes full, the oldest messages are replaced by the new messages.

Chapter 6: Using Monitors

Various monitors let you keep track of defined resources. General usage of these monitors is described here.

This section contains the following topics:

Monitor Services and Resources

The status monitor and graphical monitor enable you to monitor at the service and resource levels in your environment in real time.

You can monitor the services and resources from any of the connected focal point regions. From subordinate regions, you can monitor locally-managed resources only. Logs can be used to display the messages associated with a service or resource and therefore with system activity, and authorized users can define filters and profiles that enable the viewing of information about specific services and resources.

The two monitors enable you to monitor the service and resource activities from two different viewpoints. Use the status monitor to view the status of *individual* services and resources, and the graphical monitor to view the status of *groups* of services and resources.

Control Services and Resources

A monitored service or resource can operate in the AUTOMATED operation mode, the MANUAL operation mode, or the IGNORED operation mode. In the AUTOMATED operation mode, the region has control of the service or resource but you can still indirectly influence the operation of that service or resource. In the MANUAL operation mode, you have direct control of the service or resource. The IGNORED operation mode is the same as the MANUAL operation mode except that the logical state of the affected service or resource is always set to OK (used typically when the state of the service or resource is of no interest).

From the monitors, you can perform the following:

- You can override the operation mode or the desired state of a service or resource, thus indirectly influencing its behavior.
- You can, if authorized, change the active knowledge base information dynamically without having to shut down the region. For example, a service level agreement might have changed and you need to update the resource availability to reflect the change.
- You can start or stop a service or resource that is in the MANUAL operation mode.

Graphical Monitor

The graphical monitor displays groups of resources as graphical images called *icons*. This monitor uses display attributes to alert you to changes in the status of the represented groups. Changes in an icon are caused by changes in the members in the group. Thus, if an icon changes color, you can look at its members to see what is causing the change.

The display attributes of an icon reflect the status of the represented member that is in the worst state. The attributes are controlled by the display attribute tables, except that icons do not use the highlighting attribute, as all icons appear in reverse video. The display attributes can be customized by a user with the appropriate authority.

Note: For information about the default display attributes and how to change them, see the *Administration Guide*.

An icon is associated with a group of resources, or a panel, as follows:

Group of Resources

A group, when represented by an icon, enables items managed by the region to be presented with a service-driven operations perspective.

When you issue the Z (Zoom) command against an icon associated with a group, the members in the group are listed. You can then monitor the individual resources.

When you issue an operations command against an icon associated with a group, the command acts on all the members.

Important! Issuing commands that return responses against a group with many resources results in many panels that you have to scroll through.

Panel

When you issue the Z (Zoom) command against an icon associated with a panel, a panel of component icons is displayed. For example, an icon may represent all the resources in the system EASTTEST. When you select the icon, a panel of icons is displayed. The component icons may contain specific types of resources. Each of these icons may be associated with another panel or with a group of resources. You can follow a very specific path leading directly to any resource that is causing the problem.

You cannot issue operations commands against an icon associated with a panel.

Access the Graphical Monitor

To access the graphical monitor

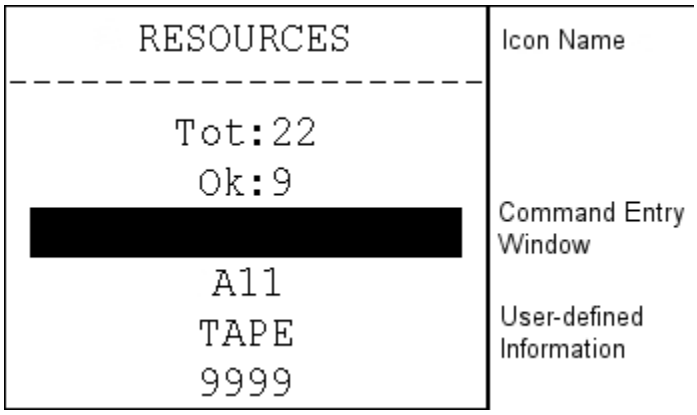
1. Enter **/GMON** at the prompt.

   The Graphical Monitor appears.

Interpret the Graphical Monitor Display

Icons on the graphical monitor group resources together. Icons can group different types of resources, and can group resources from different systems.

Typically, each icon is identified by a name. You can enter commands in the command entry window. The following shows an icon and the information it contains.



An icon may display other information (for example, the resource states).

Operations From the Graphical Monitor

From the graphical monitor, you can do the following:

- Use the Z (Zoom) command to view the status of the resources attached to an icon
- Issue commands to solicit information about, or to modify the behavior of, all the resources attached to an icon

Use the Z (Zoom) Command

Use the graphical monitor to get a high level view of the monitored resources. If an icon indicates a failure, issue the **Z** command from the icon command entry window to access the icon components and find the problem.

Zooming to the Status Monitor

If the icon is associated directly with a list of resources, the Monitor panel is displayed. This panel contains only those resources defined to the selected icon.

Use the Monitor panel to check the status of resources to see which resources are causing the problem. You can then perform status monitor actions, access the logs, or issue line commands to locate the source of the problem.

Zooming to an Icon Panel

If the icon is associated with a panel, the panel is displayed. This panel contains icons that are subsets of the main icon. For example, the icon containing all resources in EASTTEST may change to red, indicating a problem. You can zoom to the next panel of icons to see which icon has caused the main icon to change color. Select any icons that have changed state to see which resources are causing the problem. When you display the monitor, the status of the individual resources appears.

Use Other Commands

You can enter line commands in the command entry field of an icon that directly represents a group of resources (that is, an icon that is *not* pointing to another icon panel). To list commonly used commands, enter **?**; to list all available commands, enter **??**.

A command acts on all the members of the group.

When you use a command on a group, a Confirm Command panel may appear (depending on a setting in the DISPLAYS region parameter group).

The panel advises you of the number of members in the group. You can:

- Press F6 (Action) to confirm the command.
- Press F5 (Zoom) to list the members if you decide that you do not want to issue the command against all the members. The list enables you to issue the command against individual members.
- Press F12 (Cancel) if you change your mind and do not want to issue the command.

Change to a Different Default Icon Panel

When you access the graphical monitor, the type of information available is determined by your default icon panel.

To change the panel

1. Enter **PROFILE** at the prompt.

   A Profile panel appears. This panel contains a field that enables you to change your default icon panel for the monitor.

2. To select a new default, enter **?** in the Panel Name field.

   A list of available panels appears.

3. Select the required panel by entering **S** beside the panel name.

4. Do one of the following:

   - Press F3 (File) to save the new default and return to the graphical monitor.
   - Press F4 (Save) to save the new default and remain on the panel.
   - If you change your mind and do *not* want to change the default, press F12 (Cancel) to return to the graphical monitor without saving the changes.

Note: If you want to view a different icon panel temporarily, use the F5 (Panel) function key or the PANEL command.

Use the Status Monitor

The status monitor displays services and resources line by line, and uses color and highlighting to notify you of changes in their states. The display attributes and the display format can be customized by a user with the appropriate authority.

Note: For information about the default display attributes and the display formats, and how to customize them, see the *Administration Guide*.

If a state change occurs for a service or resource that is off the display area, a message is displayed to alert you of the change.

From the status monitor you can enter commands against resources and services. The commands vary depending on your product and the class of the resource.

Interpret the Status Monitor Display

The default status monitor display format provides the following information:

- The name of the system image that contains the service or resource.
- The name of the service or resource and its class.

  Note: Resources of the INTNL class with names in the form *xx*(*) are dynamic resources that provide communications between regions.
- The operation mode, desired state, actual state, and logical state (as applicable).
- The override flag that indicates whether normal operation is overridden.

  Note: For information about override flags, see the online help.

A blinking service or resource indicates that the region is performing an automated action on it.

You are notified of changes in the status of monitored items that are not in view.

Organize the Information on the Status Monitor

You can enter the following commands at the prompt to organize the information on the status monitor.

COLS {1|2|3|4|5}

Use this command to display the services and resources in up to five columns across your screen. For example, enter **COLS 5** to display in the 5-column format. This command is useful if there is more than one panel of services and resources.

EXTDISP {OFF|ON}

Use this command to control the display of user-defined extended displays. User-defined extended displays, if they exist, overwrite the last four columns of the normal status monitor display.

For example, the status line for a tape unit contains a text string that provides information about a tape mounting operation.

FORMAT {?|*format-name*}

Use this command to change the way information is displayed on your screen for a particular columns setting. If you do not know the name of a format, enter **FORMAT** and select it from the displayed list of format definitions.

Notes:

- The product supplies a number of predefined formats. If authorized, you can define your own formats from the List Definition List panel. To access the list, enter **/ASADMIN.L** at the prompt. For information about how to define status monitor formats, see the *Administration Guide.*
- If you updated the current format, enter the REFORMAT command to make the updates effective in the current session.

SORT *operand*

Use this command to sort the services and resources displayed on your screen in a particular order. *operand* can be one of the following:

?

Displays a list of available operands to use with the SORT command. Enter the number of the operand. The sort is in the order you specified. See the following SORT operands for a description of the types of sorts.

ACTSTAT

Enables you to sort the services or resources by the actual state according to the following in descending order of ranking: UNKNOWN, FAILED, INACTIVE, DEGRADED, STOPPING, STARTING, and ACTIVE.

CLASS

Enables you to sort the services and resources by the class number in numeric order.

CLSNAME

Enables you to sort the services and resources by the class name in alphabetic order.

DSTACUR

Enables you to sort the services and resources by the desired state according to the following in descending order of ranking: ACTIVE, INACTIVE, and UNKNOWN.

LOGSTAT

Enables you to sort the services and resources by the logical state according to the ranking in the logical state attributes table.

MODECUR

Enables you to sort the services and resources by the operation mode according to the following in descending order of ranking: IGNORED, MANUAL, and AUTOMATED.

NAME

Enables you to sort the services and resources by the name in alphanumeric order.

OBJID

Enables you to sort the services and resources by the object ID that comprises (in order) the system image name, the system image version, the class number, and the name.

SYSNAME

Enables you to sort the services and resources by the system image name in alphabetic order.

TYPE

Enables you to sort the resources by the resource type in alphabetic order. Services, which do not have the TYPE parameter, are listed at the beginning.

USRKEYW

Enables you to sort the resources by user-defined filter keywords. Services and resources for which filter keywords are currently not applicable are listed at the end.

Filter keywords are defined in the resource definitions. The keywords are message related. That is, a keyword becomes active only if certain messages are received for a resource.

For example, a keyword is specified in the rule for the IEC501A message that requests a tape mounting operation. You can use the USRKEYW operand to group tape units that request tape mounting operations together on the status monitor.

Note: Services and resources that rank the same by *operand* are further sorted by the object IDs.

Change to a Different Status Monitor Filter

Authorized users can create filters to define which services and resources are displayed on the status monitor. Filters are sets of rules stored in the knowledge base that enable you to display a subset of the monitored services and resources. For example, a tape operator may only want to see the tape units in each system, or in a combination of systems. Another operator might want to see only the batch jobs in the production system during his or her shift. A third operator may want to see all the hardware resources for a particular system.

The services and resources you see the first time you access the status monitor depend on the filter specified in your user profile. If no filter is specified, you see all the services and resources for the selected monitor.

You can change your view of displayed services and resources by using a temporary status monitor filter. The filter that you select remains valid for the current monitor session only.

Note: You can also filter the resources on the monitor by using the PREFIX command. The command lets you display only those resources with names that match a specified mask (for example, **NM or REGION*1).

To select a status monitor filter and change the view of displayed resources

1. Enter one of the following commands at the command prompt of the status monitor:

   FILTER

   Enter this command to display a list of the available filters. Enter the number that identifies the filter you want to use. Only the services and resources that match the filter are displayed on the status monitor.

   FILTER *filter-name*

   Enter the name of the filter that you want to use. Only the services and resources that match the filter are displayed on the status monitor.

   FILTER NONE

   This command removes any filtering. You now see every service and resource for the systems to which you are connected.

   The resources, as specified in the filter, appear.

Notes:

- If authorized, you can enter **F** on the Automation Services Administration Menu panel to select the Status Monitor Filters option to create and maintain status monitor filters. You can also use the /ASADMIN.F path to select the Status Monitor Filters option.
- If you updated the current filter, you need to enter the REFILTER command to make the updates effective in the current session.

Change Your Default Status Monitor Profile

When you access the status monitor, the type of information available is determined by your default status monitor profile. The profile specifies the following:

- Filter to use when you first enter each type of status monitor.
- Number of monitored entities to display across the screen and the corresponding display format (if applicable).
- Criteria that determine how the monitored entities are sorted for display.
- Flag that indicates whether to see extended displays.

To change the defaults

1. Enter **PROFILE** at the prompt.

   A Profile panel for your current status monitor type appears.

   This panel contains fields that enable you to change your default profile for this type of monitor.

2. To select a new default, enter **?** in the appropriate field.

   A list of available values appears.

3. Select a value, and press Enter.
4. Do *one* of the following:
   - Press F3 (File) to save the new defaults and return to the status monitor.
   - Press F4 (Save) to save the new defaults and remain on the panel.
   - If you change your mind and do *not* want to change the defaults, press F12 (Cancel) to return to the status monitor without saving the changes.

Use Commands in the Status and Graphical Monitors

You can issue commands to perform various actions from the monitors, depending on your authority level.

Use the **?** command to find a short list of commands (ShortLst) available for the selected resource. For descriptions of the commands, press F1 (Help).

Use the **??** command to find a full list of commands (FullList) available for the selected resource. For descriptions of the commands, press F1 (Help).

Note: While displaying a list of commands, you can press F4 to toggle between the full list and the short list.

Find Out More About Monitored Services and Resources

Use the **D** command to display information about the selected services or resources.

Use the **B** or **S** command to display information about the current and defined states, and the operation mode of selected services and resources. If necessary, you can override the current operation mode and state.

Note: You can also use commands to override the operation mode and the states.

Remove the User-defined Extended Display

If the last columns of a display are overwritten by an extended display and you want to view the original information in those columns, use the **EDR** command. The command removes the extended display temporarily. The extended display re-appears on the next update of the status.

Notes:

- Enter the EXTDISP {OFF|ON} command at the prompt to turn the extended display on or off for all the resources. The setting stays for the duration of the session.
- If you want to retain the setting across sessions, specify the setting in your monitor profile.

Access Extended Functions

Use the **XF** command to access any extended functions provided.

Browse or Update the Definition of Monitored Services and Resources

Use the **DB** command to browse selected service and resource definitions. Users with the appropriate authority can also update the definitions. The update is effective immediately. For example, you may need to add a new status monitor message.

Important: Resources of the INTNL class with names in the forms DT(*), ET(*), SE(*), and ST(*) are dynamic APPC resources that provide communications between regions. These resources are defined only for the duration of the APPC link. Some products also use dynamic resources of the form xx(*). Do not change these resource definitions.

Note: You can use the F4 (Add) function key or the ADD primary command to add definitions to and the DEL command to delete definitions from the knowledge base. For more information, see help.

Override the Operation Mode

The following commands enable you to modify the operation mode of selected services and resources:

- Use the **MA** command to set the operation mode to AUTOMATED. The region takes control of the affected service or resource.

  Note: If the global operation mode is MANUAL, the mode cannot change even though the AUTOMATED override is applied. A G in the Ovr column indicates this condition.

- Use the **MS** command to set the operation mode to AUTOMATED. When the affected service or resource achieves desired state, the mode is set to MANUAL.
- Use the **MI** command to set the operation mode to IGNORED. This mode is the same as the MANUAL mode except that the logical state of the affected service or resource is always set to OK. Use this mode if you are not interested in the state of the service or resource.
- Use the **MM** command to set the operation mode to MANUAL. The region relinquishes control of but continues to monitor the affected service or resource.
- Use the **MR** command to remove the override.

On the status monitor, an M in the Ovr column identifies a service or resource as having an operation mode override.

Override the Service and Resource States

You can override the actual state and the desired state of selected services and resources.

Override the Actual State

Override the actual state only if you believe that the displayed state is wrong. The following commands enable you to modify the actual state of selected services and resources:

- Use the **ASA** command to set the actual state to ACTIVE.
- Use the **ASD** command to set the actual state to DEGRADED.
- Use the **ASF** command to set the actual state to FAILED.
- Use the **ASI** command to set the actual state to INACTIVE.
- Use the **ASU** command to set the actual state to UNKNOWN to recheck the status.

Override the Desired State

The following commands enable you to modify the desired state of selected services and resources:

- Use the **DSA** command to set the desired state to ACTIVE.
- Use the **DSI** command to set the desired state to INACTIVE. If you enter DSI beside a resource or service that has the SVC override flag, a panel is displayed listing the services that might be affected by the action.
- Use the **DSR** command to remove the override.

On the status monitor, a DSA, DSI, G/D, or M/D, in the Ovr column identifies a service or resource as having a desired state override.

If you set the desired state of a service to ACTIVE, then when the service is started (either through automation or by you manually), the service places an ACTIVE desired state override on its members. On the status monitor, an SVC in the Ovr column identifies a service or resource as having a desired state override imposed on it by a service. Similarly, if you set the desired state of a service to INACTIVE, then when the service is stopped, the service removes the ACTIVE desired state override from its members.

Modify the Scheduled Operations Changes for a Monitored Item

Scheduled changes in the operation of a service or resource are defined in an availability map. An availability map defines the desired service or resource status at specific times. If a service or resource is attached to the map and is in the AUTOMATED operation mode, the region will try to ensure that the actual status of the service or resource matches the desired status defined in the map. More than one service or resource can use the same map.

You can modify those changes in one of the following ways:

- Create a map to override any existing requirements.
- Update the attached map. This action, however, also modifies the behavior of other services and resources attached to the map.

Override the Scheduled Operations Changes

Use an overriding map when you want to modify the behavior of a service or resource for a defined period of time only.

Enter **MPO** to create an overriding map that specifies your new requirements. You must specify the map expiry date and time, and the map is deleted automatically at the specified date and time. The scheduled operations changes then revert back to what were specified originally.

You can revert the scheduled operations changes back to what were specified originally, at any time. To do this, enter **MPR**. The command replaces the overriding map by the original map. The command does not, however, delete the overriding map.

Once the map is created, it is available for use by other services and resources. (To attach an overriding map to another service or resource, specify the name of the map in the appropriate definition. You can update the definition by using the DB command from your monitor or through the Definition menus.)

Browse or Update Maps

Important! Updating a map affects the operation of all services or resources attached to the map.

Use the **MAP** command to browse the map for selected service and resource definitions. Users with the appropriate authority can use the **MAP** command to update maps to which selected services and resources are attached. The update is effective immediately.

Control Manual Services and Resources

You have direct control over services and resources that are in the MANUAL or IGNORED operation mode. That is, you can start and stop manual services and resources. You can use these modes of operation when automatic error recovery fails.

Note: For a resource, these operations use the methods specified in the definition for that resource, provided that you have not registered commands that override the supplied commands.

Start Manual Services and Resources

You can start selected services and resources manually. For example, you may want to restart a resource after recovering it from a failure. Ensure that the operation mode of the service or resource you want to start is MANUAL or IGNORED. Use the **A** command to start the services and resources. A message appears prompting you for confirmation. Press Enter to confirm the action. The actual state changes to ACTIVE if the service or resource starts successfully.

Stop Manual Services and Resources Normally

You can stop selected services and resources manually. For example, you might want to stop a resource because its status is degrading and you want to take it out of service. Ensure that the operation mode of the service or resource you want to stop is MANUAL or IGNORED. Use the **T** command to stop the services and resources. A message appears prompting you for confirmation. Press Enter to confirm the action. The actual state changes to INACTIVE if the service or resource stops successfully.

Stop Manual Resources by Force

You can stop selected resources manually by force. For example, in an emergency, you want to stop a resource quickly. The normal stop process can take some time to complete. Ensure that the operation mode of the resource you want to stop is MANUAL or IGNORED. Use the **TF** command to stop the resources. A message appears prompting you for confirmation. Press Enter to confirm the action. The actual state changes to INACTIVE when the resource has stopped.

Acknowledge a Link Failure

When a link between connected regions fails, the resources being monitored through the failed link appear in the UNKNOWN state. A failed link can affect a large number of resources and fill your monitor with link failure error states. Use the **ACKLNKFAIL** command to acknowledge that you note the failure and to clear your monitor of the affected resources so that you can better monitor the other resources. The affected resources reappear when the link recovers.

To acknowledge a link failure

1. On your Monitor panel, type **ACKLNKFAIL** at the prompt and press Enter.

   The Execute ACKLNKFAIL Command panel appears.

   The panel displays the list of regions connected to your region. The panel identifies the access method control block (ACB) name of each region and the system image that is active in that region.

2. Type **S** beside the regions affected by the failed link, and press Enter.

   A confirmation panel appears.

3. Enter **CONFIRM** in the Response field to execute the command.

   The Monitor panel appears with the resources under the control of the selected regions removed from the list of monitored resources.

Respond to the Initialization Status Panel

If the loading of a system image starts in your region while you are using the monitor, your monitor session ends and the Initialization Status panel is displayed. Similarly, if you attempt to access the monitor while the system image is being loaded, the Initialization Status panel is displayed. You can take *one* of the following actions:

- Press F6 (Action) to monitor the loading process.
- Press Enter to refresh the information in the status window.
- Press F3 (Exit) to exit the panel.

You can return to the monitor when the loading process completes.

Respond to the Database Synchronization Panel

If knowledge base synchronization is started for your region while you are using the monitor, your monitor session ends and the Database Synchronization panel is displayed. Similarly, if you attempt to access the monitor while the knowledge base is being synchronized, the Database Synchronization panel is displayed. You can take *one* of the following actions:

- Press F6 (Action) to monitor the synchronization process.
- Press Enter to refresh the information in the status window.
- Press F3 (Exit) to exit the panel.

You can return to the monitor when the synchronization process completes.

Recover a Failed Resource

If a resource fails and no automated recovery action is performed, the resource remains in the FAILED actual state, and you need to recover the resource manually.

To recover a failed resource

1. Ensure that the resource is in the MANUAL operation mode. If the mode is AUTOMATED, enter **MM** beside the resource to set its operation mode to MANUAL. This indicates to other operators that the resource is being attended to.
2. Enter **L** beside the resource to access its transient log. The log provides information about the cause of the problem, which helps you determine the actions to take.
3. Correct the problem, and ensure that the resource can be safely restarted.

   Note: You can use the Command Entry facility to issue system commands. Enter **CMD** at the prompt, and issue the SYSCMD command from the Command Entry panel.
4. Enter **CHK** or **RES** beside the resource to reset the status of the resource. If the resource is in the AUTOMATED operation mode, automation restarts for the resource. If the resource is in the MANUAL operation mode, enter **A** beside the resource to start it.

   Note: For the differences between the CHK and RES commands, see the online help.

Recover From Failed Automation

Automation fails for a resource in the AUTOMATED operation mode when the region cannot maintain the desired state of the resource. The status monitor displays the resource as having an INERROR logical state.

To recover from failed automation

1. Enter **MM** beside the resource to set its operation mode to MANUAL. This indicates to other operators that the resource is being attended to.
2. To confirm that automation has actually failed, enter **S** beside the resource to access the Modes and States panel. The panel displays the automation status, which should be FAILED.
3. Press F12 (Cancel) to return to the status monitor. Enter **L** beside the resource to access its transient log. The log provides information about the cause of the problem, which helps you determine the actions to take. A likely cause is that the recovery action specified in the resource definition is inappropriate.
4. Correct the problem, and ensure that the resource can be safely restarted.
5. Enter **RES** beside the resource to reset the status of the resource.

   Automation restarts for the resource.

Obtain Operations Statistics

You can obtain operations statistics of a service or resource in your region or a connected region on your screen.

Obtain the Operations Statistics of a Monitored Service or Resource

The operations statistics of a service or resource provide information about the message and command traffic in relation to the service or resource, and its actual availability. Use the ST command to display the statistics. You can display the statistics from the status monitor or the graphical monitor.

To display the statistics from the status monitor

1. Access a status monitor.

   The Monitor panel appears.
2. Enter **ST** beside the service or resource for which you want to display the statistics.

   The Statistics panel appears.
3. Press F6 (Refresh) to refresh the statistics.
4. Press F3 (Exit) to exit the panel when you finish browsing the statistics.

Interpret the Statistics

The Statistics panel contains the operations statistics of a service or resource.

It displays the time at which the statistics collection starts. There are two windows. The windows contain statistics on messages and commands, and on the availability of the selected item.

Interpreting the Messages and Commands Statistics

The Messages and Commands window contains the following statistics:

- Messages Processed provides a count of the messages processed by the region on behalf of the service or resource.
- Automation Commands Issued provides a count of the start and stop commands issued by the region on behalf of the service or resource.

Interpreting the Availability Statistics

If the service or resource is available, the Availability window displays the time at which the service or resource became available; if the service or resource is *not* available, the window displays the time at which the service or resource became unavailable.

The window contains the following statistics:

- Availability Percentage indicates the portion of time when the service or resource is available as a percentage.
- Total Time Available gives the number of time units over which the service or resource is available.
- Total Time Unavailable gives the number of time units over which the service or resource is unavailable.
- Number of Times Available gives the number of times the status of the service or resource goes from unavailable to available.
- Number of Times Unavailable gives the number of times the status of the service or resource goes from available to unavailable.

Chapter 7: Using Operator Console Services

This section contains the following topics:

Operator Console Services

Operator Console Services (OCS) lets you enter commands to control and monitor your resources.

OCS uses a formatted display panel called an OCS window to provide an environment for executing commands or NCL procedures. Your command results are returned to the window, with other system information, to provide a console function.

The level of authority granted in your user ID definition limits the actions you can perform in OCS. You control the way your OCS window looks and the way you use it. This set of attributes, privileges, and options is called your *operator profile*.

Certain attributes of your operator profile are controlled by UAMS. Other attributes can be changed using the PROFILE command.

Access OCS

To access OCS

1. Enter **O** at the prompt at the main Primary Menu.

   The OCS window appears.

OCS Panel

The OCS panel has two distinct activity areas: a one-line command input area at the bottom of the window, and an output message display area called the roll delete area, which occupies the remaining space above the command line.

Command Line

The command line is the bottom line of the OCS window. The command line is the only display field where input is permitted. The cursor is automatically positioned to the right of the command line prompt when the panel is first displayed. To enter a command, position the cursor in the command line and press Enter.

Operating Mode Indicators

A mode indicator may appear to the left of your command entry area to indicate how the OCS window is currently operating. Values of the operating mode indicators and their meanings are as follows:

M (Monitor)

Terminal has monitor status and receives monitor messages.

P (Paused)

An NCL procedure has paused awaiting the entry of a GO, END, or FLUSH command. The SHOW NCL command gives you further details.

W (Waiting)

An NCL procedure is waiting for specific text to arrive. The SHOW NCL command gives you further details.

Roll Delete Area

When you receive messages as the result of commands entered on the command line, they are reported in the roll delete area with any unsolicited information you are profiled to receive.

Output to the roll delete area is written line-by-line from top to bottom of the screen. When the display area is full, new output messages wrap back to the top of the screen, overwriting the oldest displayed messages first.

Non-roll Delete Area

Any messages requiring a reply are delivered as non-roll delete messages. This means that the messages stay on your screen until you respond. These messages are displayed at the top of an OCS window above the roll delete area. The non-roll delete area is created only when a non-roll delete message is delivered to your OCS window.

Roll-delimiter Line

Messages are written from top to bottom of the screen. The next line for use is filled by a line of underscore (_) characters. This line is called the roll-delimiter line. It separates the oldest and newest output displayed. Output below this line is the oldest display information; output above the line is the most recent.

Note: The underscore characters used for this line can be changed using the PROFILE DELCHAR command.

Title Line

The top of the roll delete display area is reserved for a title that can be set or reset by using the TITLE command.

Time Display

The top left of the title line includes the present system time in *hh*.*mm* format and is automatically updated each time anything is written to the OCS window.

Run Multiple OCS Panels

You can use the screen-splitting function (see page 21) to run two OCS windows in parallel on the same screen.

You can have one screen window operating in OCS with the other part-screen or window in full-screen mode (for example, as a menu).

Set Window IDs

When two OCS windows are running simultaneously, it helps if you can distinguish each window while executing NCL procedures.

To set a name for each OCS window, enter the OCSID command followed by a 1- to 8-character name at the command prompt on an OCS window and press Enter. The name for each window appears to the right of the line, immediately above the command line.

Example: Set Window ID

To set a window ID of NET01, enter the following command:

```
OCSID NET01
```

After pressing Enter, NET01 appears to the right of the line immediately above the command line.

Note: You can set profile attributes for each OCS window, so that two OCS windows on the same terminal can have different profiles and appearances.

Function Keys

OCS windows have full support for 24 function keys. You can set function keys for each OCS window to suit your requirements. If you are running two OCS windows, each window can have a separate set of function key definitions.

A variety of function keys are available:

- Default (system-wide) function keys
- Immediate function keys
- Conversational function keys
- Prefix function keys
- Suffix function keys
- NCL controlled function keys

The OCS function keys are set to system default values when you enter OCS.

When you redefine a function key, its defined value applies only to the function key settings for your current window, and remains in effect only while your current window is active.

When you press an immediate function key, its assigned value is immediately entered into the system, without the need for further action by you.

Note: To discover the assignment of each function key, use the PF LIST command.

Conversational Function Keys

A conversational function key lets you modify its action before you release it for processing. When you press a conversational function key, its assigned value is displayed in the command line, so you can add to or modify the text. Press Enter to run the command after you modify it.

Prefix and Suffix Function Keys

A prefix function key assigns a set value as a prefix to the line of text where the cursor is located when that function key is pressed (that is, the command line or any other line in the OCS window display area).

Example: Prefix and Suffix Function Keys

The F6 function key is defined using the following command:

```
PF6 PREF,MSG USER1+
```

When you enter a message in the command line saying: SYSTEM DOWN AT 17.00, and press F6, the following command is generated and entered:

```
MSG USER1 SYSTEM DOWN AT 17.00
```

Note: The plus sign (+) leaves a blank after the text before concatenating it with the entered string.

A suffix function key acts like a prefix key, but adds its value to the end of the line of text where your cursor is positioned (that is, the command line or any other line in the OCS window display area).

Assign Your Own Values to Function Keys

You can assign your own values to function keys so that they invoke an NCL procedure or act as the Enter key. If a function key is being used as the Enter key, you can redefine the Enter key to perform an OCS function.

Specify Commands to Function Keys

To redefine function keys, use the PF command. You can specify the new function key value as *one* of the following:

Conversational

The value of the function key appears in the command line so that it can be edited before being issued.

Immediate

The function key performs an immediate function such as Enter.

Suffix

The function key value is placed at the end of an entry in the command line.

Prefix

The function key value is placed at the beginning of an entry in the command line.

Example: Assign a Conversational Function Key

To assign the SHOW NCL command as a conversational function key to the F4 key, enter the following command:

```
PF4 CONV,SHOW NCL=
```

When you press F4 from now on, SHOW NCL= is displayed at the command prompt so that you can add to it before executing it.

Example: Define Multiple Commands

You can use a semicolon as a command separator in the function key value to define multiple commands. When entering the PF command, specify two semicolons.

To define F20 to clear the screen and display users, enter the following:

```
PF20 CLEAR;;SHOW USERS
```

Set Function Keys as Enter Keys

The PF command can set a function key to act as the Enter key. The Enter key is defined as an immediate function key with no associated value.

Example: Define Enter Key

To define PF12 as the Enter key, enter the following:

```
PF12 IMM
```

PF12 acts as the Enter key because there is no entry after IMM. When you press F12, text is executed from the command line as if the Enter key is pressed.

Redefine the Enter Key

You can use the ENTER command to redefine the action of the Enter key.

Important! You must define at least one function key to act as Enter *before* you redefine the Enter key.

Example: Redefine Enter Key to Act as CLEAR Command

To redefine the value of the Enter key to act as the CLEAR command, type the following:

```
ENTER CLEAR
```

The Enter key no longer acts in its standard manner.

Example: Reset Enter Key

To reset the Enter key, type the following text and then press the function key that is defined as Enter:

```
ENTER IMM
```

Specify Function Keys Using NCL Procedures

You can also assign values to a function key from an NCL procedure. By setting the appropriate function keys in an NCL procedure and setting your initial command to execute the NCL procedure on entry to OCS, you can set the function keys for your OCS window.

Use Commands in OCS

OCS windows can be used to enter product commands and monitor the results. Commands are entered on the command line and take effect when you press the Enter key.

You can access a list of all product commands from online help.

To access the list of commands from any OCS window

1. Press F1 (Help).

   The OCS Overview panel appears.

2. Enter **S** beside the List of Commands topic.

   The commands are listed. You can select any of the commands displayed to get more information about its use and syntax.

Command Authority Levels

All commands are assigned an authority level within the range 0 to 255, zero being the lowest and 255 the highest authority level. The operands on some commands might require a higher authority than the base command itself.

You are allocated a command authority level in your user ID definition, corresponding to the scope of system control you require. Whenever you enter a command, your user ID authority level must be equal to or higher than the authority level of the command entered, otherwise the command is rejected.

This authority level checking also applies to commands executed from NCL processes invoked under your user ID.

Abbreviate Commands

All commands consist of a single command, which can be followed by one or more operands. Most commands can be abbreviated to the smallest number of characters consistent with their being distinguishable from any other product command. For example, the SHOW command can be abbreviated to SH.

Concatenate Commands

Several commands can be entered simultaneously by concatenating them into the same OCS command line and separating each command with a semicolon (;). The concatenated commands are processed from left to right in the order they are entered.

Example: Concatenate Commands

The command string D LU10;D LU11 is treated by the system as two independent commands:

```
D LU10
D LU11
```

You can use the CLEAR command in this manner to clear the display area before the results of the next command are displayed. For example:

```
CLEAR;D BFRUSE
```

If you need to enter a semicolon as part of a command (that is, to use it as part of the command text), you must enter two semicolons instead of one.

To enter the command a;b, you must enter a;;b. The second semicolon is stripped from the text and the a;b string passed to the system as a single command. The remaining semicolon is not regarded as a command separator character.

Command separators are specified by using the PROFILE CMDSEP command.

Prevent Command Concatenation

You can prevent command concatenation by using the CMDSEP operand of the PROFILE command. When CMDSEP is set to NO, semicolons are not regarded as command separators and are always treated as part of the command string.

You can assign concatenated commands to function keys because the value of the CMDSEP operand is overridden by the value that the operand contained when the function key was defined.

Reuse Commands

If you enter a command regularly, you do not need to retype it every time you want to issue the command. There are facilities provided with OCS that let you reuse commands you have previously entered.

More information:

Use the Command Stack (see page 89)
Retain Commands on the Command Line (see page 89)
Copy Display Lines into the Command Line (see page 89)

Use the Command Stack

Each OCS window keeps a stack of the commands most recently entered from its command line. The stack does not include immediate function key entries. The number of entries kept in this stack can be changed by using the PROFILE CMDSTACK command.

You can use the command stack to retrieve previous commands entered and redisplay them on the command line so that they can be modified for re-entry.

Commands are retrieved from the stack using the CS+ or CS- commands. The default system function key series includes settings for the CS+ and CS- commands. These are F10 and F11 respectively. We recommend that you retain these.

Retain Commands on the Command Line

When you execute a command, the command can be retained on the command line so that you can execute it again, or edit the command before executing it again. This facility lets you increment and enter command sequences with minimal effort.

This feature can be turned on or off using the PROFILE CMDKEEP command. When turned off, the command line is cleared as soon as the Enter key is pressed and a command must be retrieved from the command stack if it is required again. When turned on, the command you enter is retained on the command line so that you can enter it again.

Copy Display Lines into the Command Line

To copy a command (or some other message) from an OCS window display area to the command line, put the cursor on the line you want to copy, and enter CS+ or CS- (or press F10 or F11).

The command or message appears in the command line.

Rename Commands

EQUATE commands can be included in initialization procedures to do the following:

- Override or rename standard commands
- Define a series of 1- to 8-character strings for use in place of lengthy command strings

Monitor and Control in OCS

OCS allows you to monitor and control your regions by receiving messages and allowing you to issue commands. Events from your network are sent to your OCS window. You can issue commands to take control of any problems that might occur.

As you receive messages and output from commands, you can control, reorder, or clear output on the screen so that it can be read more easily.

Control Message Presentation Speed

When the bottom line of the display area is filled, the system pauses before wrapping back to the top of the display area to write the next message.

Sometimes, a large number of messages might be sent to the screen within a very short period of time. This causes the display to roll messages faster than you can read them. There are two options you can use to temporarily suspend message delivery or change the way the messages display:

- The HOLD option
- The AUTOHOLD option

Stop Message Flow Manually

To stop the flow of output to the screen at any time, press the Enter key while nothing is in the command line. This freezes the display and no further messages appear until you enter data.

While the screen is frozen, the word HOLDING appears immediately above the command line.

Stop Message Flow Automatically

The default value for automatic hold supplied with your system automatically freezes an OCS window when a message fills the last line and there are messages queued to wrap back to the top of the screen. This is specified by the AUTOHOLD command.

When AUTOHOLD freezes your screen, the caption AUTOHOLD is displayed above the command line. No further messages appear until you input something.

The AUTOHOLD command option is part of your operator profile.

Note: If more unsolicited messages arrive while the screen is in HOLDING or AUTOHOLD mode, the caption above the command line changes to MSG QUED, and the terminal alarm sounds.

Message Queue Holding Limit

Your system queues a limited number of messages for an OCS window while in the HOLDING or AUTOHOLD mode. The queue limit default before any OCS window messages are discarded is 200 messages.

The HOLDING or AUTOHOLD caption above the command line changes to 75% LIMIT, HOLD LIMIT, and then MSGS LOST, as this limit is approached, reached, and then exceeded. Each caption change also sounds the terminal alarm. These conditions vary and update while you actively monitor and release system messages in the OCS window.

You can define the queue limit for each OCS user window by using the PROFILE command.

Contention Delay Interval

One of the characteristics of an OCS window is that your system can send messages to your window at the same time as you are entering a command. These messages are displayed differently depending on the type of terminal you are using:

A Non-SNA Terminal

Any data you have just entered is immediately frozen and any new data entered is ignored while the message writes to the screen. You can then continue to type in your command text when message delivery has finished.

An SNA 3270 Terminal

A contention condition arises. The terminal is seen as being in a send state (because you have started typing on the keyboard), and refuses to accept any output from your system until your input has been sent. However, rather than defer your system, the system interrupts you after a set period and forces the output of a message.

The default contention delay interval is 15 seconds. This is usually long enough to let you complete a standard command input operation.

Unwrap Messages

To resequence or unwrap messages displayed in your OCS window, enter the **ORDER** command.

The OCS messages are redisplayed in the window in chronological order, with the oldest messages at the top of the window.

The ORDER command is assigned to F12 by default.

Note: This command does not affect the HOLDING or AUTOHOLD condition.

Clear the OCS Window

After many messages have appeared in your OCS window, you may want to clear the window before any new messages arrive.

To clear your OCS window, enter the **CLEAR** or **K** command.

Receive Unsolicited Messages in OCS

Events occur in a network or within your system, which do not result directly from any operator action you have taken, yet need to be reported. The various kinds of messages resulting from these events are termed unsolicited messages.

Receive Network Warning Messages

VTAM generates messages for events taking place within the network, called Primary Program Operator (PPO) messages. VTAM can route these messages to the system console (to notify the system operator), and to any suitably authorized programs.

When your system receives any PPO messages from VTAM, it filters out messages, by message number, through the DEFMSG table, and passes them to PPOPROC, if active. It then checks to see if any OCS operators logged on have the authority to receive such messages.

By default, a PPO message for a particular resource is sent out to ALL operators authorized to receive it. If a message cannot be delivered to any operator, it is sent to the system console.

A PPO message which does not concern a particular resource and cannot be delivered to an appropriate operator is tagged as undeliverable. These messages are sent to all operators that are profiled to receive undeliverable messages. These messages are prefixed by U when displayed on your terminal. If there are no such operators, it is sent to the system console.

If you are authorized to receive VTAM PPO messages, they appear in your OCS window. All VTAM messages are displayed in high-intensity, and are time-stamped. Your terminal alarm sounds to notify you whenever an unsolicited event has been reported.

In addition, your VTAM message access can be prescribed for receiving only those messages above a given severity level.

Reply to PPO Messages

Some VTAM messages sent to you through the PPO interface require a reply. These messages are delivered to appropriate operators in the same way as standard non-reply PPO messages.

PPO messages that require a reply are delivered as non-roll delete messages that remain on your screen unchanged, until answered. Replying to a VTAM message automatically changes the NRD status of the message and places it on the roll delete area list.

To reply to these messages, use the **REPLY** command.

Receive Non-roll Delete Messages

Most messages displayed on an OCS window are classified as roll delete messages. This means they are displayed once and eventually roll off the top of the screen as subsequent messages arrive and overwrite them.

When a non-roll delete (NRD) message is delivered to an OCS window, it remains in your OCS window until deleted. The NRD messages are in two categories:

- Those that are remembered by the system and are retained until explicitly deleted by the issuing process
- Those that are only displayed at individual OCS windows until deleted and are not remembered by the system

The non-roll delete area is separated from the roll delete area by a delimiter line. This line is usually a series of dash (-) characters. To change the character, use the PROFILE NRDELCH command.

NRD messages are managed centrally and held in a queue. Your system administrator determines the size of this queue. If there are more NRD messages than this limit, the oldest outstanding NRD message is deleted to remove copies of the message from all affected OCS windows.

However, NRD messages from &WRITE NCL statements are never deleted automatically. It is therefore only possible to exceed the NRDLIM queue depth if large numbers of &WRITE-generated NRD messages exist at the same time.

A warning message is sent to all OCS users with monitor status to notify them when the NRD message queue reaches 75 percent full.

You can hide these messages to allow other message flows to continue in your OCS window, and then reveal them again when you are able to deal with them.

Hide NRD Messages

To remove an NRD message from the OCS display, move your cursor to the line on the screen with the NRD message you want to remove and then press Enter.

The NRD message disappears and the screen is reformatted. Removing NRD messages in this way provides more room for pending NRD messages or a larger roll delete area.

Note: System NRD messages are not deleted from the NRD message queue, only from your OCS window. NRD messages specific to your OCS window are deleted, and cannot be recalled.

Restore Hidden NRD Messages

Hidden NRD messages can be restored by entering the NRDRET command. The oldest hidden NRD messages are returned to the non-roll delete area first, until the area has expanded to its maximum size.

The NRDRET command displays all hidden NRD messages that you are entitled to view, including those that occurred before you entered OCS and any that are still outstanding.

NRDRET can be issued from any environment capable of receiving NRD messages, including NCL &INTCMD environments.

Delete NRD Messages

An NRD message is automatically deleted when *one* of the following conditions is satisfied:

- The condition to which an NRD message refers is satisfied
- An NCL process issues an &NRDDEL NCL statement to delete a specific NRD message
- The NCL process that generated the NRD is terminated

You can only delete NRD messages that are remembered by the system by using the PURGE command.

Use NRD Messages with ROF Sessions

Messages that originate from a remote system carry the NRD message attribute and appear as NRD messages, in the same way as locally-produced messages.

When an INMC link fails and breaks any ROF sessions traveling across it, all NRD messages from that remote system are automatically deleted.

When you close a ROF session to a particular remote system by using the SIGNOFF command, any NRD messages you have received across the ROF session are deleted from your window. Other users displaying the same NRD messages are not affected.

Use the Activity Log to Help Monitor Your Regions

The activity log records all commands, responses to commands, and messages that occur in your regions. By accessing the activity log when you are in OCS you can browse through recent activity on the system to assist you in locating information and analyzing problems.

To access the activity log browse function from OCS, enter **/LOG** at the prompt.

On initial entry to the activity log, you are positioned at the end of the log for the current day. You can use the F8 (Forward) and F7 (Backward) function keys to scroll through the log for the current day as well as for previous days.

Note: For more information about locating information in the activity log, press F1 (Help) from the activity log panel.

Issue Commands

Being able to issue commands from OCS is an important part of controlling your regions. From OCS you can issue commands to the background processes of your product, and you can set commands to issue automatically, based on a specified time.

Issue Commands in Background Environments

Background environments are internal to your system and services. They process commands submitted to them by users and support system level procedures such as LOGPROC. Each background process has a user ID, but is not associated with any physical terminal.

The following background environments are available:

BSYS

Background system environment

BMON

Background monitor environment

BSVR

Background server environment

BLOG

Background logger environment

You can send commands to these environments for them to execute, as if they were real OCS users by using the SUBMIT command. You can submit commands or NCL procedures. For example, if you want the background system environment to start the procedure MONPROC, enter the following command:

```
SUBMIT BSYS START MONPROC
```

After a command is submitted, its processing is managed by that environment. It is not affected if you log off or leave OCS, and its command authority remains the same as the user ID of the submitter.

Background environment processing is ideal for monitoring an NCL procedure that regularly checks the status of network components. Commands directed to the Background Monitor route the command and its results to all monitor status terminals logged on to the system, and to the activity log. Commands directed to the Background Logger for execution log the command and its results only.

Timer commands (see page 97) can also be routed to background environments by the SUBMIT command or by the ROUTE operand for the timer command being issued.

Issue Commands at Specified Times

You can issue commands at specified times and at specified intervals. These commands are known as timer-initiated commands. The following timer-initiated commands are available:

AT

Executes commands at a specified time of day. Timer commands use a 24-hour clock with the format *hh*.*mm*.*ss*.

Limits: 24.00.00 (midnight)

EVERY

Repeats commands at a given time frequency.

Default: 10 seconds

Timer commands can be entered in OCS, or included in NCL procedures.

A maximum of 9999 concurrent timer commands is supported, and this maximum is the default.

If you log off after issuing a timer command, that command is not executed. However, you can use the ROUTE or KEEP operand when you enter an AT command to specify another user to issue the command in your place. This feature allows you to sign off and have the results of the command returned to you when you sign on again.

The ROUTE and KEEP options are ideal if you are including timer commands for specific operators in the system initialization procedures that are executed automatically during startup.

Timer commands can also be specified with a limit to the number of times they can execute before being automatically purged.

Example: Monitor Users at a Specified Interval

To monitor the users that are logged on to the system every half hour, enter the following command:

```
EVERY .30 CMD=SHOW USERS
```

Also, if you want to remind users of a three o'clock meeting one hour before it starts, enter the following command:

```
AT 14.00 MSG ALL DON'T FORGET MEETING AT 15.00
```

When a timer command executes, the command text is echoed on all applicable terminals as if the command had been entered from those terminals. A unique timer ID prefixes the command text echo and has the following format:

#nnnn command_text

Display Active Timer Commands

You can display pending timer commands by using the SHOW TIMER command. By default, this command lets you display any timer commands initiated by your user ID. However, by specifying the ALL operand you can display all outstanding timer commands on your system.

Example: Display Active Timer Commands

To find out what timer commands you have initiated, enter the following command:

```
SHOW TIMER
```

Using the example given above, the following is displayed:

```
 ID BY INTERVAL -USERID-R LIM CNT K/P ENV P/M TID  NEXT
  4 EV 00:30:00 USER01      0   0  NO PRI YES -    12:29:48
    CMD=SHOW USERS
  5 AT 14:00:00 USER01      0   0  NO PRI YES -    14:00:00
    CMD=MSG ALL DON'T FORGET MEETING AT 15.00
NUMBER OF TIMER COMMANDS DISPLAYED WAS 2.
```

Delete Timer Commands Manually

When you initiate a timer command, the system allocates a unique four-digit number known as the timer ID, or purge ID. This number prefixes all displays resulting from that command, and must be used when manually deleting a timer command.

To delete a timer command manually, use the **PURGE** command.

To delete a timer command created by another user, you require a command authority level of 2 or higher.

Example: Delete Command

To delete an AT timer command, enter the following command:

```
PURGE TIMER=5
```

The value 5 is the purge ID assigned to the AT command.

Delete Timer Commands Automatically

By default, your timer commands remain active only while you are logged onto the system. Before each attempt to execute the command, the system checks that you are still logged on.

If you are no longer logged on to your system, the timer command is automatically deleted, without further execution.

Redirect Timer Commands

If you want your timer-initiated commands to continue to execute after you log off, you can redirect the command results to the background logger, background monitor, or the system background environment.

To redirect the timer command, specify an AT or EVERY command with the KEEP operand.

By default, the KEEP operand requires a command authority level of 2 or higher.

Example: Redirect Timer Commands

To redirect the SHOW USERS command for execution by the background system environment, enter the following command:

```
EVERY .30 KEEP=SYS CMD=SHOW USERS
```

If the KEEP operand is in use, the execution of timer commands continues irrespective of whether you are logged on to the region.

Limit Timer Command Executions

When defining a timer command, you can use the LIMIT operand to specify a limit on the number of times the command is executed. When this limit is reached, the command is automatically purged.

The limit you assign and the number of times a command has already executed are displayed by the SHOW TIMER command.

Example: Limit Timer Command Execution

To limit the number of times the SHOW USERS command is executed to 5, enter the following command:

```
EVERY .30 LIMIT=5 CMD=SHOW USERS
```

When the SHOW USERS command has been executed five times, the timer command is deleted.

Execute a Timer Command Under Another User ID

The ROUTE operand lets you direct a command for execution under another user ID—the target user ID. The operand requires a command authority level of at least 2.

With this option, the timer command is retained even if the target user ID is not logged on. Command execution is bypassed and the time interval reset. The command is attempted again only after the time interval has again elapsed.

Example: Execute Timer Command Under Another User ID

If you want USER02 to execute the SHOW USERS command, enter the following command:

```
EVERY .30 ROUTE=USER02 CMD=SHOW USERS
```

Specify Concatenated Commands in Timer Commands

Concatenated commands can be specified in the command text for a timer command. Separate each command in the concatenation with a colon (:). These are internally translated into normal concatenation characters, that is, semicolons (;), before execution.

Execute or Start NCL Processes from OCS

There is an NCL processing environment for each window of your terminal that allows commands and NCL processes to execute on behalf of that window.

When you use an EXEC or START command to invoke an NCL process, the NCL process executes in the NCL processing environment for the OCS window.

Note: If you enter the EXEC or START command incorrectly, the system attempts to execute the command as if it were an NCL process.

Any NCL process can have a dependent processing environment that lets it issue commands or execute other NCL processes independently using the &INTCMD statement. NCL procedures can also use ROF sessions to collect information from other systems.

Execute NCL Processes Serially

An OCS window can execute a serial stream of NCL processes so that they are invoked one after the other. Serial execution is suitable for processes with a short duration.

To execute NCL processes serially, use the **EXEC** command.

Processes invoked by the EXEC command can issue the &PAUSE statement to wait for further input from the OCS window. The GO, END, FLUSH, and INTQ commands, together with the process's unique identifier, let you communicate with the process.

Example: Execute Processes in Sequence

To execute PROC1 and PROC2 in sequence, enter the following commands:

```
EXEC  PROC1
EXEC  PROC2
```

Your OCS window places the two processes in an EXEC queue, which are executed on a first-come, first-served basis. Process PROC1 is scheduled for immediate execution and process PROC2 is queued to execute after PROC1 ends.

Execute NCL Processes Concurrently

An OCS window can execute NCL processes in parallel at the same time.

To execute NCL processes concurrently, use the **START** command. If you enter the name of an NCL procedure by itself, the START command is implied.

Any started procedure can issue an &PAUSE statement to wait for further input from GO, END, and FLUSH commands from the OCS window. These commands, together with the unique identifier for the process, let you communicate with the process explicitly.

Example: Execute NCL Processes Concurrently

To execute PROC1 and PROC2 at the same time, enter the following commands:

```
START PROC1
START PROC2
```

NCL Identifiers

Each NCL process is allocated a unique identifier that links it to the issuing OCS window. This ensures any &WRITE or &PANEL statements issued by the NCL process (or any other processes it starts or executes), are returned to that window only. If the window is terminated, any queued process is deleted.

Execute an NCL Process from a Serial or Concurrent Process

An NCL process executed from an OCS window (or any process it invokes) can itself issue EXEC or START commands.

If an EXEC command is used to execute an NCL process, the process issuing the command is suspended when the new process starts executing. Only when the new process ends does the issuing process resume processing.

Invoking a process from another process in this way is called nesting. Nesting is an easy way to structure a series of processes.

Note: The &CALL PROC NCL statement is the recommended method for nesting procedure calls.

If a START command is used to execute an NCL process, the new process starts executing immediately. The new process runs concurrently with the invoking process and independently of it. Each process is unaffected by the termination of the other process.

Advantages of Started Procedures

Using the START command to invoke NCL processes has the following advantages:

- You can perform relatively complex, long-term tasks from your OCS window. This does not prevent other operations from performing concurrently.
- You can perform periodic checking of the network status without operator involvement.
- You can operate a large number of independent, slave procedures on behalf of one OCS window. This lets you monitor many different aspects of the same operation, and various procedures need only communicate with you if errors are detected.

Start REXX Programs from OCS

Your region supports the REXX language. A processing environment for each OCS window lets REXX processes execute on behalf of that window.

To start a REXX program from OCS, enter the following command:

REXX *program_name*

Note: For information about how your product supports REXX, see the *NetMaster REXX Guide*.

Monitor and Control in a Restricted Environment

The Network Partitioning Facility (NPF) is used to limit the range of resources that you receive messages from and can control.

Your user ID can be defined so that commands and messages can be accepted for some network resources, but you are not authorized to issue commands for others.

If you are restricted in your ability to control only particular resources, your user ID is said to be *command partitioned*. If you are restricted to receiving messages from only specific resources, your user ID is said to be *message partitioned*.

The resources available to you are defined within a series of NPF resource tables that reside on the system NPF data set. The set of resources you can influence is set by your systems administrator and cannot be changed from the OCS window. However, you can list the NPF tables for your user ID or list the resources within each table to see which network resources are available to you.

Display Network Partition Tables

Two commands allow you to display the command and message table details that apply to your user ID. They are the SHOW NP and SHOW NPTAB commands.

The SHOW NP command first displays your current NPF environment, including the status of any message tables. Tables that apply to commands only cannot have their status changed and are always classified as ACTIVE. Message tables can have a status of ACTIVE or INACTIVE.

The SHOW NP command returns a list of table names (showing any that are in error) which you then use in the SHOW NPTAB command to display the resources defined within those tables.

Note: Resources named in a table can be specified using a generic form containing wildcard characters. The wildcard character, usually an asterisk (*), lets your system accept any character for that position in the name for the item. For example, L5*8, targets any resource name that is four characters long and starts with the characters L5, and ends with an 8. Any character in the third position is accepted (for example L5B8 or L598).

Enter Commands in a Restricted Environment

If your user ID has a command table specified, any attempt you make to issue a VTAM command for a resource not defined in this table is rejected. As an option, your organization might let you see any resource in the network, but restrict the issuing of commands.

Receive Messages in a Restricted Environment

Where message partitioning has been specified for your user ID, you only receive unsolicited VTAM messages for those resources defined within your message resource tables.

Message tables are allocated an initial status of ACTIVE or INACTIVE when they are defined. An INACTIVE message table is not used when determining whether you should receive messages about a particular resource. This lets operators have overlapping spheres of control and allows for time zones or geographical boundary requirements in a network.

Change the Status of Message Tables

You can change the status of your message resource tables so that you can control the sections of the network about which you want to be kept informed.

Changes to the status of message tables apply immediately to all OCS windows where you are operating, and continue to apply if you exit from OCS. Once you log off, they reset to their previous status for when you log on again.

To change the status of message resource tables, use the **NPTAB** command.

Example: Change the Status of Message Tables

To inactivate the message table ZONE1 and activate the message table ZONE2, enter the following command:

```
NPTAB ACT=ZONE1 INACT=ZONE2
```

Change the Severity Level of Messages You Receive

NPF allows you to change the severity level of the unsolicited messages you receive, so that you see only SEVERE messages, for example. A severity selection is first set when your user ID is defined and can be changed for the duration of an OCS session, by using the PROFILE PPO command.

As an option, you can be profiled to receive undeliverable messages, which are displayed on your terminal prefixed by U.

Detect Errors in Your Restricted OCS Environment

Your NPF environment can contain syntax errors, or errors can occur when the environment is created during logon.

This situation causes one or more error messages to be displayed identifying the types of error that have occurred when you enter OCS. You must then determine if these errors significantly affect your use of the region.

Use a Restricted Monitoring Environment with the Remote Operator Facility

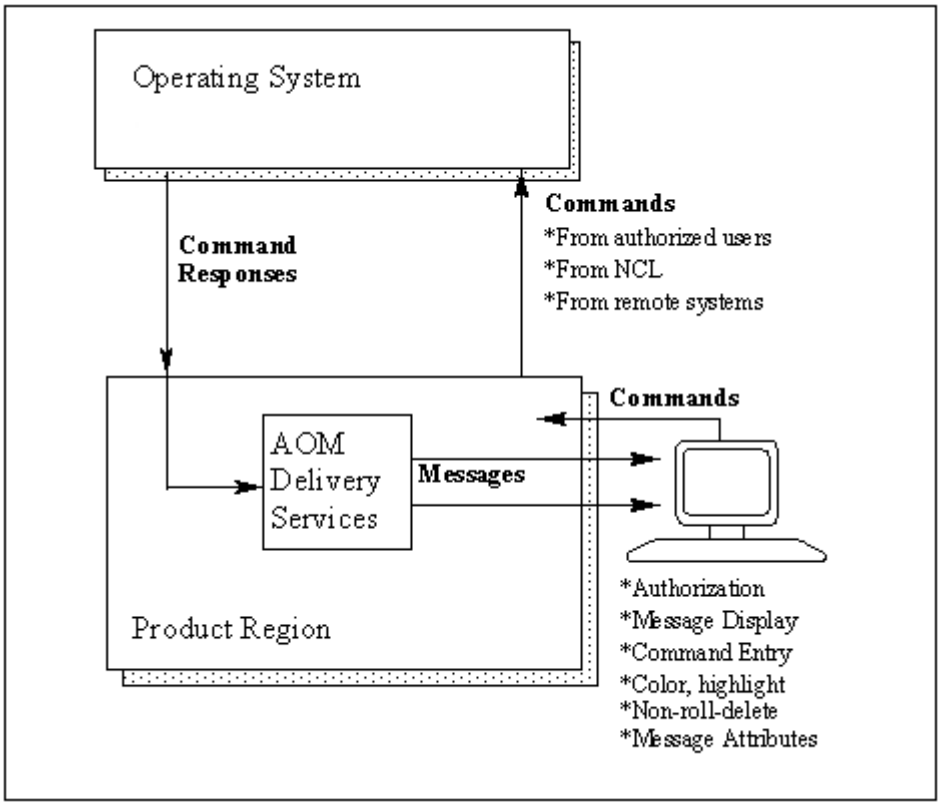
If you use Remote Operator Facility (ROF) to connect to a remote region, then the authority and privileges assigned to your user ID for the remote region apply, including any network partitioning defined for your user ID in the remote region.

To display your NPF environment in the remote region, use the **ROUTE** command to direct the SHOW NP command to the remote region for execution.

The results are returned to your terminal.

Issue System Commands from Your Console

The SYSCMD facility gives you the ability to issue operating system commands and receive responses without having to use a *real* operating system console; for example, to display the channel path or unit status of a local non-SNA terminal.



Use the SYSCMD Facility

The SYSCMD command has several operands that you can use to enter master console commands, lock a console, or issue a command as if it came from a specific console.

In its most basic form, the SYSCMD command is:

SYSCMD *command-text*

command-text

The command to be entered.

Note: You are restricted in your use of the SYSCMD facility by both your command authority and your user security profile. These are set by your systems administrator.

Enter Master Console Commands

If the command to be entered is usually restricted to the master console, the CON=MASTER operand must be used with the SYSCMD command.

Example

```
SYSCMD CON=MASTER DATA=VARY CPU(0) OFFLINE
```

You must have MASTER authority for this.

Note: This is not necessary if you are using Extended Multiple Console Support (EXTMCS) consoles.

Lock a Console

To ensure that you can issue commands when you need to, you can lock a console to a specific environment using the following operand:

```
OPT=LOCK
```

When you no longer require the console, you should release it, using the following operand, so that it is made available to other SYSCMD users:

```
OPT=REL
```

Simulate Command Issue from a Specific Console

If you want to simulate issuing a command from a specific console that you are not using, enter the following form of the SYSCMD command (where *n* is the console number):

```
SYSCMD CON=n DATA=command-text
```

This can be done from anywhere in the system.

As no console authority checks are made by the SYSCMD facility, the existing authority for the specified console is used.

Note: The form of the SYSCMD command described in the example above is not supported if you are using EXTMCS consoles.

Issue Shell Commands to USS from Your Console

Note: The USS command is secured through resource-level security. For information about resource-level security, see the *Security Guide*.

If authorized, you can use the USS command to issue shell commands to UNIX System Services (USS).

To issue a shell command to USS from your console, enter the following command:

```
USS shell_command
```

Example: Report How Long USS Has Been Running

This example finds out how long USS has been running:

```
USS uptime
```

The command returns the following information:

```
USS 11:18PM  up 3 day(s), 02:15,  2 users,  load average: 0.00, 0.00, 0.00
```

Chapter 8: Monitoring Messages

Monitor Messages Using Consolidated Console

The console message consolidation facility enables authorized users to view console message traffic from multiple systems on a single console (referred to as a *consolidated console*). An authorized user can create *message profiles* that contain criteria to identify and classify messages. When you use a consolidated console, you use message profiles to select the messages for viewing. All messages that match the criteria of the profiles are displayed on your consolidated console.

Note: The facility is fully functional in focal point regions only. In subordinate regions, only local console message traffic is visible.

Message Monitor

The message monitor is based on Operator Console Services (OCS).

Prefix Messages with the System Name

Use the following command to specify whether you want your messages prefixed with the originating system name:

```
PROFILE AOMPRFSN={NO | YES}
```

For example, to prefix the displayed messages with the system name, enter PROFILE AOMPRFSN=YES.

The changed value is valid for the current session only. If you want to specify a value to use whenever you access the message monitor as a consolidated console, specify the value at the Message Monitor Message Formatting panel of your user profile.

Consolidated Console Setup Requirements

To use the consolidated console, you must be authorized to use OCS and AOM, and authorized to receive AOM messages. This information is specified in your user ID definition.

In addition, your user profile must be set up to receive the relevant messages.

Authorization Requirements

Your authority for using the consolidated console should be set up by the administrator.

If the User Access Maintenance Subsystem (UAMS) is used to manage authorization, enter the **/UAMS.B** path to browse your user ID definition.

The authorization requirements are as follows:

UAMS Panel (Page Number)	Field	Value
Access Authorities (3)	Operations Management	Y
	Operator Console Services	Y
OCS Details (5)	Initial OCS Command	-$RMCCOCS
AOM General Details (10)	AOM Message Receipt	Y
	Console Routing Codes	ALL
	Message Level Screening	ALL

Profile Requirements

To enable you to receive messages on a consolidated console, ensure that the following fields on the Message Monitor Message Receipt panel of your user profile have the values Y:

- Receive Unsolicited Messages
- Receive System Messages

To access your user profile, enter the **=U.UP** path.

Access the Consolidated Console

From the primary menu, enter **O** to access OCS. If the lower right of your screen is not displaying CC ON or CC PND, enter **CCON** to change the monitor to a consolidated console. If an RMCCOC07 message is displayed or if the status is CC PND, your console is unable to receive system messages because your profile is not suitable for the consolidated console.

The console starts displaying the messages that match the message profiles available to you. You must have at least one message profile enabled to view any message.

Notes:

- If console consolidation is disabled, you can monitor local messages only. (Message consolidation is enabled or disabled in the CCONSOLIDATN parameter group. For information about parameter groups, see the *Reference Guide*.
- You can also use the Command Entry facility as a consolidated console. To access the Command Entry panel, type **CMD** at a prompt, or press F5 from OCS. Enter **CCON** to turn on console message consolidation. The Command Entry facility keeps the messages that scroll off the panel, that is, you can bring those messages back onto the panel by pressing the F7 or F8 scroll function keys.

If the Console Does Not Display System Messages

If the console does not display system messages, use the following procedure to investigate the cause and correct the problem. You may not need to complete all of the steps if the problem is corrected before the end of the procedure.

1. Enter **PROFILE CC** and ensure that at least one of your message profiles is enabled.

   If a defined message profile is not accessible, check its status. When you load the profiles, only those with an ACTIVE status are loaded.

2. Enter **PROFILE** to display your console profile. Ensure that the values of the following profile parameters are as indicated:

   UNSOL

   Set to YES.

   AOMMSG

   Set to YES.

   AOMMSGLV

   Set to other than NONE.

   You can correct the value by issuing the following command for each relevant parameter:

   PROFILE *profile-parameter=parameter-value*

   The changed value is valid for the current session only. If you want to change a value permanently, change it in your user profile.

   If the AOMMSG and AOMMSGLV parameters are not displayed or if the AOMMSGLV parameters cannot be changed, you need to update your user ID definition according to the guidelines in the next step; otherwise, proceed to Step 4.

   Note: If you are not authorized to correct errors found in the following steps, report the errors to the administrator.

3. Enter the **/UAMS.B** path to browse your user ID definition. Ensure that your AOM General Details panel displays the following values:

   AOM Message Receipt

   Set to Y.

   Console Routing Codes

   Set to ALL.

   Message Level Screening

   Set to ALL.

   When these values are correct, you can then update the corresponding profile parameters as indicated in the previous step.

   You should also ensure that the Initial OCS Command field on your OCS Details panel has the value $RMCCOCS. This command ensures that the message monitor is always presented to you as a consolidated console.

   Ensure that console consolidation is activated by the CCONSOLIDATN region parameter group.

Use Message Profiles to Select the Messages to Monitor

In a consolidated console, you can use predefined message profiles to select the messages you want to monitor.

To access your list of message profiles, issue the **PROFILE CC** command. The Private Message Profile Control panel displays the list of message profiles that you can use to profile your consolidated console.

The initial status of the message profiles are as follows:

- If you disabled the message profile in your user profiles, the profile appears with a status of DISABLED.
- If you enabled the message profile in your user profiles, the profile appears with a status of ENABLED or PENDING.

Use the **D** or **E** action codes to disable or enable selected profiles for this session with your consolidated console. Enabled profiles have a status of PENDING if your monitoring environment cannot receive the requested messages (for example, if the UNSOL profile parameter has a value of NO indicating that you cannot receive unsolicited messages).

You can use the F10 (MsgFlow) function key to switch the value of the AOMMSG profile parameter between NO and YES. This parameter indicates whether you can receive AOM messages. The value must be YES for you to receive messages at your consolidated console.

Use the F11 (LstSort) function key to sort the list of message profiles by name or by ID. The initial sort is by name.

Reply to a WTOR Message From the Consolidated Console

Note: You can reply to resource or service related WTOR messages from the status or graphical monitor by using the W command.

Use the following command to reply to a local WTOR message:

```
SYSCMD REPLY wtor-id,reply-text
```

Use the following command to reply to a remote WTOR message:

```
ROUTE DOMAIN=domain-id SYSCMD REPLY wtor-id,reply-text
```

The value of *domain-id* is the domain ID of the region that sends the remote WTOR message. The ID appears as a prefix to the message if the value of your PREFSYS profile parameter is YES.

For information about the SYSCMD and ROUTE commands, see the online help.

Note: You can use the EQUATE command to reduce the typing required when issuing a command. For example, you can equate text as follows:

```
EQUATE / SYSCMD REPLY+
EQUATE domain-id ROUTE DOMAIN=domain-id SYSCMD REPLY+
```

You can then use the following commands to reply respectively to a local or a remote WTOR message:

```
/ wtor-id,reply-text
domain-id wtor-id,reply-text
```

For information about the EQUATE command, see the online help.

To ensure that the required text strings are always equated in the region, specify the EQUATE commands in the EQUATES parameter group.

Exit the Consolidated Console

Exit your consolidated console in one of the following ways:

- To exit the consolidated console and remain in OCS or your Command Entry panel, issue the **CCOFF** command. You can use the CCON command to return to the consolidated console.
- To exit the consolidated console and return to the previous panel, press F3.

Chapter 9: Using WebCenter

This section contains the following topics:

WebCenter Features

WebCenter is a web browser interface that lets you access operations functions such as monitoring and history.

When enabled, your systems administrator can get you the URL needed to access WebCenter, which is also displayed on the primary menu in the corresponding region.

WebCenter is completely hosted. The WebCenter web server runs in the region and requires no third-party components.

Problem resolution time is decreased and ease of use increased. Users who are not comfortable accessing mainframe products can diagnose problems with their standard web browser.

Each WebCenter page has a help link in the upper-right corner that you can click for context-sensitive online help.

Set Up Your Web Browser

You can access WebCenter by using Internet Explorer or Firefox.

The WebCenter interface requires the Java Runtime Environment (JRE).

If your organization prevents you from downloading software through the Internet, arrange to have the JRE installed. The JRE is available from http://www.java.com.

The JRE is required to be downloaded once only, not once per WebCenter release.

Note: For software requirements on your PC to support WebCenter, see the *Installation Guide*.

Set Up Internet Explorer

If your PC does not have JRE installed, a download dialog prompt appears when you enter web pages containing Java applets.

For IPv6 support, WebCenter requires at least JRE Version 1.5.0_12. If your site has implemented IPv6 and you do not have the required version of JRE, you receive an error dialog instead. The dialog tells you to download Version 1.5.0_12 or later directly from the website.

Important! WebCenter does not work with JRE Version 1.6.0_13 through Version 1.6.0_20.

If your organization permits you to download software from the Internet, you can download and install the Java runtime library. However, this download requires your security settings to permit you to access the website for a once only ActiveX control download.

You can configure the settings through Internet Options from the Tools menu of your browser. On the Security tab, for the web content zone associated with access to the website (usually the Internet), click Custom Level. On the Security Setting dialog that appears, the Download signed ActiveX controls option must not be disabled.

For you to access WebCenter correctly, specify the correct options in Internet Explorer.

To set up Internet Explorer

1. Click Tools, Internet Options.

   The Internet Options dialog appears.

2. Click the Security tab.

3. Click the web content zone to which your WebCenter belongs, and then click Custom Level.

   The Security Settings dialog appears.

4. Enable the following options:

   ActiveX controls and plug-ins

   Initialize and script ActiveX controls not marked as safe

   Run ActiveX controls and plug-ins

   Microsoft VM

   Java permissions: High safety

   Scripting

   Scripting of Java applets

5. Disable the following option:

   Miscellaneous

   Use Pop-up Blocker

   Click OK

6. Click the Privacy Tab, and then click the Sites button.

   The Per Site Privacy Actions dialog appears.

7. Complete the following field:

   Address Of Web Site

   Enter the WebCenter URL.

   Click Allow, and then click OK.

8. Click the Advanced Tab.

9. Enable the following option:

   Multimedia

   Show pictures

   If you do not require Sun JRE as your default virtual machine, clear the following option:

   Java (Sun)

   Use Java 2 *version_number* for <applet>

   Click OK.

   The options are saved.

Set Up Firefox

If your PC does not have JRE installed, the following alert appears when you access WebCenter:

```
Java is not enabled in this browser. The Web Interface requires a Java-enabled browser.
```

Go to the website to download and install the JRE.

For IPv6 support, WebCenter requires JRE Version 1.5.0_12. If your site has implemented IPv6, download Version 1.5.0_12 or later.

Important! WebCenter does not work with JRE Version 1.6.0_13 through Version 1.6.0_20.

For you to access WebCenter correctly, enable the correct options in Firefox.

To set up Firefox

1. Click Tools, Options.

   The Options dialog appears.

2. Click Content, and review the following options:

   Block pop-up windows

   Clear the check box, or click Exceptions to add the WebCenter URL to the allowed sites.

   Load images automatically

   Select the check box.

   Enable JavaScript

   Select the check box; click Advanced, and select all the check boxes.

   Enable Java

   Select the check box.

3. Click Privacy, and review the following option:

   Cookies

   Accept third-party cookies

4. Click OK.

   The options are saved.

Log On to WebCenter

A standard user ID and password are used to access WebCenter.

To log on to WebCenter:

1. Start your web browser and enter the access URL for WebCenter in the Address text box.

   The WebCenter login page appears.

   Notes:

   - The access URL is defined when your product is installed. You can find the value on the primary menu of the mainframe region.

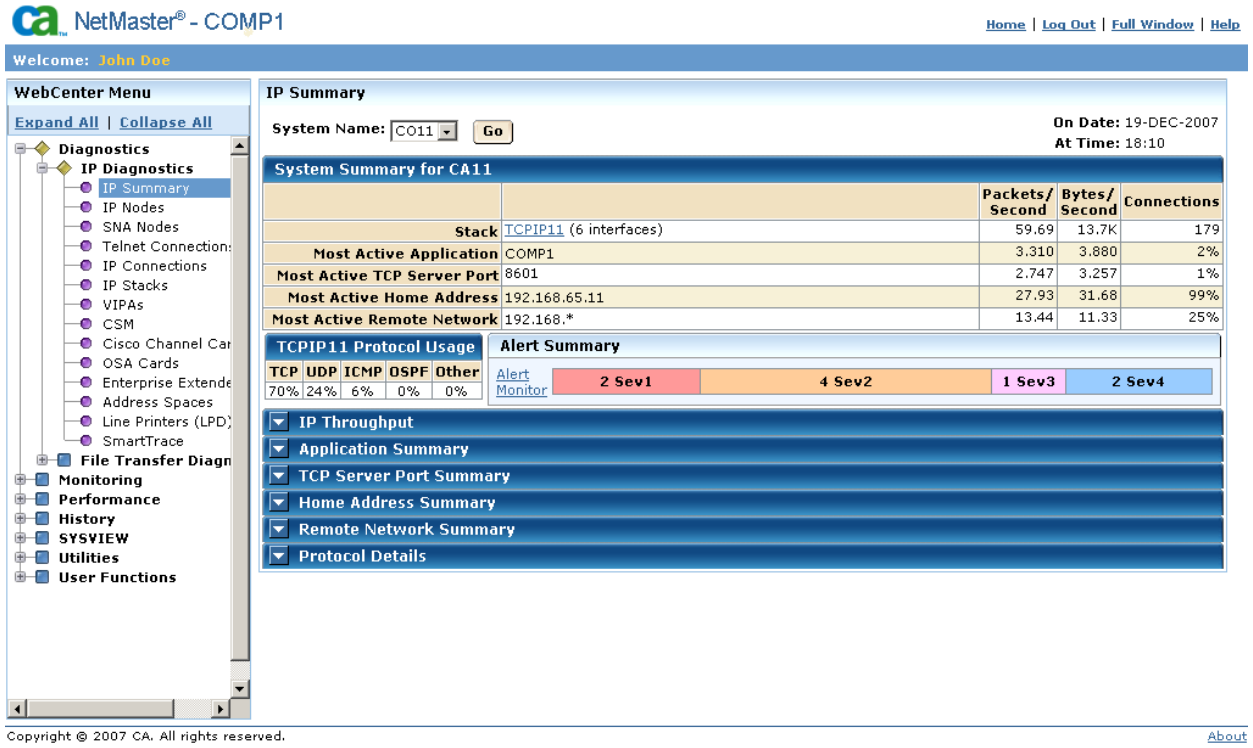
     Note: For more information, see the *Installation Guide*.

   - To access WebCenter easily and quickly in the future, create a bookmark for WebCenter web access URL in your web browser.

2. Enter your User ID and Password, and click the Log In button.

   The initial WebCenter page appears, showing a menu on the left pane.

   Note: If your Security Administrator has installed a digital certificate, a dialog appears. Click OK to accept the certificate and continue.



CA SYSVIEW Integration

When the CA SYSVIEW interface is enabled (through the WEBCENTER parameter group), it appears in the WebCenter interface, providing a persistent command interface to CA SYSVIEW.

Any command entered into the Command Text field can be executed, or more specifically, passed to CA SYSVIEW to be executed. CA SYSVIEW in turn passes results back in the form of output that is restricted to the Maximum Lines Returned specified in the Execute a SYSVIEW Command Criteria field.

To improve performance and to cut down on network traffic, the CA SYSVIEW interface restricts the maximum number of lines returned to WebCenter for each command to 2000 lines.

For security reasons, CA SYSVIEW limits execution of certain commands to administrators or users with superuser authority. Because of the nature of the web interface to CA SYSVIEW, it is not possible to identify who is issuing the commands.

This is particularly apparent in the UNIX System Services displays, therefore:

- The output of certain commands such as UDIRTREE or UPROCESS, which rely on a particular user's profile, will vary a little.
- The output of other commands, such as USUPER, which toggles the current user authority to superuser mode, will not work at all.

One additional limitation in the CA SYSVIEW interface is that line commands, or commands that are entered against a particular line of CA SYSVIEW output, are not implemented in WebCenter. However, in many cases, there is a direct CA SYSVIEW command that will produce the desired output. Use the MENU command to navigate through the CA SYSVIEW menus and the HELP command to request help for specific CA SYSVIEW commands.

Chapter 10: Using Print Services

This section contains the following topics:

Print Services Manager

Print Services Manager (PSM) lets you control the physical printing of the reports your organization generates on JES or network printers. Output can be viewed online before or after printing and can be redirected to another destination.

PSM provides the following facilities:

Print Spooling

Writes output to a print spool providing more control over output. This facility lets you redirect output to another printer if one is not available.

Centralized Printer Definition Facilities

Supports VTAM (LU1) and JES (SYSOUT) devices and lets you assign printer aliases. This facility also allows the output destination to be a printer exit.

Print Request Control

Lets you hold, release, browse and delete print requests, redirect print requests to another printer, change priorities and numbers of copies, and display the status of requests.

Notes:

- For information about defining and maintaining printers, see the *Administration Guide*.
- References to JES also apply to VOS3's JES3 and JES4 subsystems.

Access PSM

To access PSM

1. Enter **/PSM** at the prompt.

   The PSM : Primary Menu appears.

List Entries in the Print Queue

You can list all of the entries that are queued to print, and on which printer they are to print.

To display the entries in the print queue

1. Enter **Q** at the prompt on the PSM : Primary Menu.

   The PSM : Output Queue appears.

   Note: You can limit the display to the print queue for a specific printer by specifying a printer in the Printer field on the PSM : Primary Menu before entering the Q option.

Display the Output of a Print Request

The information provided lets you discover exactly how the print request looks when printed.

Note: Only data lines, not heading lines, are displayed.

To browse the output of a print request

1. Enter **B**, **/**, or **S** next to the required print request in the PSM : Output Queue.

   The details appear.

Example: Browse Output

```
PROD------------------------ PSM : Browse Output --------------------REQ# 0265
Command ===>                                                 Scroll ===> PAGE


S A B U Data
       --+----10---+----20---+----30---+----40---+----50---+----60---+----70
N  N ================================================================
1  N   COMMAND ENTRY CAPTURE PRINT
1  N ================================================================
2  N   USERID : USER01               NAME : USER NUMBER 1            LO
2  N   DATE   : MON 26-APR-2010
2  N   TIME   : 11.16.39
2  N  ================================================================
2  N   pr
1  N   N10601 USERID: USER01 TERMINAL-ID: TERM02
1  N   N10602 NCL PROCEDURE LIBRARY ID: COMMANDS
1  N   N13450 PANEL SERVICES PATH NAME: PANELS
1  N   N10603 AUTHORITY LEVEL IS 82
1  N   N13451 NO EDS PROFILES ACTIVE IN ENVIRONMENT.
1  N   N13433 USER SERVICES PROCEDURE: $USERSER
1  N   N10624 NO NPF COMMAND RESTRICTIONS.
1  N   N10627 PPO MESSAGE DELIVERY DETAILS:
1  N   N10628 ..NO NPF MESSAGE RESTRICTIONS.
F1=Help      F2=Split     F3=Exit     F4=Return    F5=Find     F6=Refresh
F7=Backward  F8=Forward   F9=Swap                F11=Right
```

Modify a Printer Entry

You can modify a print request to change where and how it is to be printed.

To modify a print request

1. Enter **M** next to the required print request in the PSM: Output Queue.

   The PSM : Print Request panel appears.

The PSM : Print Request Panel provides all details about the print request. You can alter some of the fields on the panel.

Confirm Printing

When you send a print request to a printer, the PSM : Confirm Printer panel appears. This panel is used to confirm the printer name, the number of copies, and the hold and keep settings that you require for your print request. The fields displayed on the panel are set to the values you used last.

To change any of these fields, overwrite them with the required information, and press F6 (Confirm).

The new information is used to print your request.

Note: For more information about the fields displayed on this panel, press F1 (Help).

Select the Printer

If you do not know what printers are available to send your print request to, you can display a list of active printers.

To select the printer

1. Enter a question mark (?) in the Printer Name field on the PSM: Print Request panel.

   The list of active printers appears.

   Note: If the list is longer than a full page, use F8 (Forward) and F7 (Backward) to scroll through the list.

2. Enter the selection code at the prompt.

   The printer is selected.

Appendix A: System Control Interface

If VTAM fails or is not active, with only the system console available for communicating with the system, you can still issue commands to the region from the system console by using the $RMCONS NCL procedure. You can also view the transient log of a resource on your system console by using the $RMCLOG NCL procedure.

This appendix describes the $RMCONS and the $RMCLOG NCL procedures.

$RMCONS NCL Procedure—Issue Command to Region

The $RMCONS NCL procedure lets you issue commands to the region from a system console.

The command to issue the procedure has the following format:

F *started_task_name*, $RMCONS *parameter_1 … parameter_n*

started_task_name

Specifies the name of the started task that establishes the region.

parameter_1 … parameter_n

Defines the issued command. The two types of commands are line commands and primary commands:

- Line commands are resource specific and are identified by the LCMD parameter.
- Primary commands are *not* resource specific and are identified by the PCMD parameter.

Line Commands

You can issue line commands by using the $RMCONS NCL procedure.

The procedure has the following format for issuing a line command:

```
$RMCONS LCMD=line_command NAME=name
                           CLASS=class_number
                          [SYSNAME=system_image_name
                           VERSION=system_image_version]
```

LCMD=*line_command*

Specifies the line command to issue. The following line commands are supported: A, ASA, ASD, ASF, ASI, ASU, CHK, DEL, DSA, DSI, DSR, EDR, EDS, LR, MA, MI, MM, MR, MS, RES, S, T, TF, TRA, TRF, TRI, and TRR.

NAME=*name*

Specifies the name of the service or resource for which you want to issue the command.

CLASS=*class_number*

Specifies the class of the service (Class 61) or resource.

Note: For information about class numbers, see the *Reference Guide*.

SYSNAME=*system_image_name*
VERSION=*system_image_version*

Specify the name and version of the system image that owns the service (the $SERVICE 0001 image) or resource.

Default: System image loaded in the local region

Primary Commands

You can issue the following primary commands by using the $RMCONS NCL procedure:

CHECKALL

Sets the actual state of all resources to UNKNOWN and uses the display method defined for each resource to check the status of that resource.

The procedure has the following format for issuing CHECKALL:

```
$RMCONS PCMD=CHECKALL
```

GLOBAL

Sets the global operation mode.

The procedure has the following format for issuing GLOBAL:

```
$RMCONS PCMD=GLOBAL
        PARMS="MODE={AUTOMATED | MANUAL}"
```

LOAD

Loads a system image.

The procedure has the following format for issuing LOAD:

```
$RMCONS PCMD=LOAD
        PARMS="NEWSYS=new_system_image_name
               NEWVERS=new_system_image_version
               MODE={AUTOMATED | MANUAL}"
```

QLOAD

Retrieves information about the active local system image and miscellaneous statuses.

The procedure has the following format for issuing QLOAD:

```
$RMCONS PCMD=QLOAD
```

SHUTFORCE

Forces all resources into the AUTOMATED operation mode and shuts down the resources.

The procedure has the following format for issuing SHUTFORCE:

```
$RMCONS PCMD=SHUTFORCE
```

SHUTSYS

Shuts down only the resources that are in the AUTOMATED operation mode.

The procedure has the following format for issuing SHUTSYS:

```
$RMCONS PCMD=SHUTSYS
```

STARTSYS

Restarts the resources that are shut down.

The procedure has the following format for issuing STARTSYS:

```
$RMCONS PCMD=STARTSYS
```

$RMCLOG NCL Procedure—View Transient Log

The $RMCLOG NCL procedure lets you view the transient log of a service or resource from a system console.

The command to issue the procedure has the following format:

```
F started_task_name, $RMCLOG NAME=name
                             [CLASS={02 | class_number}]
                             [START=list_from_time]
                             [MESSAGES={20 | number_of_messages}]
                             [LOGDATA={TEXT | ALL}]
                             [LOG={NO | YES}]
```

started_task_name

Specifies the name of the started task that establishes the region.

NAME=*name*

Specifies the service or resource for which you want to view the transient log.

CLASS={02 | *class_number*

Specifies the class of the service (Class 61) or resource.

Default: 02 (started task class)

Note: For information about class numbers, see the *Reference Guide*.

START=*list_from_time*

Specifies the time from which to begin displaying the logged messages.

Default: From the beginning of the transient log

MESSAGES={20 | *number_of_messages*}

Specifies the number of the most recent messages to display.

Default: 20

LOGDATA={TEXT | ALL}

Specifies whether to display message text only (TEXT) or to display message text and attributes (ALL).

Default: TEXT

LOG={NO | YES}

Specifies whether to send the displayed messages to the activity log.

Default: NO

Index

S

T

U

V

W