Note

Before you use this information and the product it supports, be sure to read the general information under "Notices" on page 149.

Second Edition (January 2017)

This edition applies to Version 2 Release 1 of IBM CL/SuperSession for z/OS (program number 5601-B28) and to all subsequent releases and modifications until otherwise indicated in new editions.

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Read this first

About this document

This guide is a general introduction to IBM® CL/SuperSession for z/OS®. It is intended for users who have limited experience with mainframe computers, but can also help knowledgeable computer users who are becoming acquainted with the user interface.

Accessibility

Accessibility features help a user who has a physical disability, such as restricted mobility or limited vision, to use software products successfully. The major accessibility features in CL/SuperSession enable users to:

- Use assistive technologies such as screen readers and screen magnifier software. Consult the assistive technology documentation for specific information when using it to access z/OS interfaces.
- Customize display attributes such as color, contrast, and font size.
- Operate specific or equivalent features using only the keyboard.

You can perform most tasks that are required to set up and run CL/SuperSession by using a 3270 emulator that is logged on to TSO.

IBM Personal Communications for Windows provides 3270 emulation with accessibility features for people with disabilities. You can use this product to provide the accessibility features you need.

How to send your comments to IBM

Your feedback is important in helping us to provide accurate and high-quality information. If you have comments about this information or any other IBM CL/SuperSession for z/OS documentation, contact us in one of these ways:

- Send your comments to the following address: comments@us.ibm.com.

Be sure to include the name of the document, the publication number, the version of IBM CL/SuperSession for z/OS, and, if applicable, the specific location (for example, the page number or section heading) of the text that you are commenting on.

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Documentation conventions

Introduction

The following typographical conventions are used for command syntax in this documentation.
Panels and figures

The panels and figures in this document are representations. Actual product panels might differ.

Revision bars

Revision bars (|) might appear in the left margin to identify new or updated material.

Variables and literals

In examples of command syntax, uppercase letters are actual values (literals) that the user should type; lowercase letters are used for variables that represent data supplied by the user. Default values are underscored.

**LOGON APPLID(cccccccc)**

In the previous example, you type **LOGON APPLID** followed by an application identifier (represented by **cccccccc**) within parentheses. The application identifier can have at most 8 characters.

**Note:** In ordinary text, variable names appear in italics.

Symbols

The following symbols might appear in command syntax.

<table>
<thead>
<tr>
<th>Symbol</th>
<th>Usage</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>The 'or' symbol is used to denote a choice. Either the argument on the left or the argument on the right might be used. Example: YES</td>
</tr>
<tr>
<td></td>
<td>In this example, YES or NO may be specified.</td>
</tr>
<tr>
<td>[ ]</td>
<td>Denotes optional arguments. Those arguments that are not enclosed in square brackets are required. Example: APPLDEST DEST [ALTDEST]</td>
</tr>
<tr>
<td></td>
<td>In this example, DEST is a required argument and ALTDEST is optional.</td>
</tr>
<tr>
<td>{ }</td>
<td>Some documents use braces to denote required arguments, or to group arguments for clarity. Example: COMPARE {workload} = REPORT={SUMMARY</td>
</tr>
<tr>
<td></td>
<td>The workload variable is required. The REPORT keyword must be specified with a value of SUMMARY or HISTOGRAM.</td>
</tr>
<tr>
<td>_</td>
<td>Default values are underscored. Example: COPY infile outfile _ [COMPRESS={YES</td>
</tr>
<tr>
<td></td>
<td>In this example, the COMPRESS keyword is optional. If specified, the only valid values are YES or NO. If omitted, the default is YES.</td>
</tr>
<tr>
<td>b</td>
<td>The symbol b indicates a blank space, when needed for clarity.</td>
</tr>
</tbody>
</table>
Chapter 1. Introduction to IBM CL/SuperSession for z/OS

This manual assumes that you are the CL/SuperSession administrator who is responsible for setting up the security system and defining users. It also assumes that you completed the installation procedures that are described in the IBM CL/SuperSession for z/OS V2.1 Program Directory.

CL/SuperSession

CL/SuperSession is a multi-session terminal manager that gives a single 3270 terminal concurrent access to applications in an SNA network.

CL/SuperSession offers users almost instant access to a wide variety of applications.

The multi-session capabilities of CL/SuperSession include a window feature, which can be used to display several session windows on the terminal screen at once or zoom into a particular window for full screen editing.

CL/SuperSession maintains virtual sessions independently of physical sessions. As a result, virtual sessions can continue after the physical terminal session terminates. A user can move to another terminal and transfer virtual sessions to it by logging on to CL/SuperSession at the new terminal while the original virtual sessions are still active.

Find other features that are included with CL/SuperSession in the following list.

- **Cut and Paste**: This feature is used to copy screens or portions of screens between or within sessions.
- **Data compression**: CL/SuperSession supports inbound and outbound data compression for any or all VTAM® applications.
- **Dynamic session switching**: Network users can move easily between applications by using a trigger (hot key or hot phrase) that can include any combination of program attention keys, program function keys, the Enter key, or user-defined tokens.
- **Extended attribute support**: CL/SuperSession provides full support for 3270 extended attributes such as color, blinking, underlining, and program symbol graphics. A user can switch between basic data stream sessions and extended sessions, while CL/SuperSession handles the dynamic adaptation to the changing modes. For details, see the IBM CL/SuperSession for z/OS V2.1 Customization Guide.
- **Screen print**: CL/SuperSession supports directing a harcopy of any active application session screen to a printer.
- **Session viewing**: Help desk staff and other users with the appropriate authority can view the most recently displayed screen for one of a user's sessions to answer questions and solve problems.
VTAM network access manager

VTAM network access manager

CL/SuperSession provides a single entry point to an SNA network with improved security and enhanced control of the network. Users can be restricted to specific applications, or can be allowed unrestricted access to any application through RACF®, CA-ACF2, CA-TOP SECRET, or site-developed security systems.

CL/SuperSession allows full customization of presentation and processing logic. Screen customization is supported for logon, menu selection, broadcast information, network news, application help facilities, and error notification.

CL/SuperSession support for IMS

CL/SuperSession support for IMS™ provides access and control facilities for maintaining session integrity with IMS/DC ASSIGN and SEQUENCE session services. If a virtual session is intentionally or accidentally disconnected, CL/SuperSession prevents the next user of the virtual terminal from accessing residual data. For more information, refer to the IBM CL/SuperSession for z/OS V2.1 Customization Guide.

CL/SuperSession application control system

CL/SuperSession application control system provides the following functionality:

- The **Dialog Manager**, which enables customization of the user interface and provides CL processing logic. The Dialog Manager uses Structured Session Procedure Language (SSPL), a high-level language through which screen presentation formats are customized. SSPL can be used to tailor existing applications without having to modify any application code. Information to or from multiple applications can be integrated into a single screen or application.

- The **Network Access Manager (NAM)**, which controls network access through security systems and user profiles. NAM can serve as a stand-alone security system, or it can work with the security system of your choice (for example, RACF, CA-ACF2 or CA-TOP SECRET).

- The **Network Accounting Facility (NAF)**, which records all network and application access. NAF provides complete activity recording, including all network logons, session initiations, session terminations, and traffic volumes for each session. NAF records can optionally be recorded to the System Management Facility (SMF) dataset. For more information, refer to the IBM CL/SuperSession for z/OS V2.1 Customization Guide.

- The **operator facility**, which provides commands, command lists, terminal displays, and configuration aids. Commands for z/OS, IMS, and VTAM can also be issued and processed through this facility.

- The **virtual terminal pool facility**, which reduces system gens, saves virtual storage, and provides tools for enforcing session time-outs. Virtual terminal pools also eliminate the need to define all terminals when accessing value-added network services.

- The **virtual printer facility**, which enables shared use of a printer among users, regardless of the application in use. CL/SuperSession associates a virtual printer with the physical printer so that each application that requires access to a physical printer can gain access at any time. Multiple virtual sessions are maintained simultaneously by using simple bracket initiation control, which ensures complete integrity of outbound print streams in all stages. A constant flow of print streams from multiple applications in first-in-first-out order requires no intervention or session termination and restarts.
Product libraries

You can find the CL/SuperSession primary libraries, along with the common name of each library, and a brief description of each in the following table.

**Note:** Each library name has a high-level qualifier that is determined at installation time.

Table 1. CL/SuperSession Libraries

<table>
<thead>
<tr>
<th>Name</th>
<th>Common Name</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>SKLSCMDS</td>
<td>Command Library</td>
<td>Command lists that control initialization and operation.</td>
</tr>
<tr>
<td>SKLVCMDS</td>
<td></td>
<td></td>
</tr>
<tr>
<td>SKLSPARM</td>
<td>Initialization Library</td>
<td>Initialization and configuration parameters.</td>
</tr>
<tr>
<td>SKLVPARM</td>
<td></td>
<td></td>
</tr>
<tr>
<td>SKLSPNLS</td>
<td>Panel Library</td>
<td>Dialogs that control the user interface screens (or panels).</td>
</tr>
<tr>
<td>SKLVPNLS</td>
<td></td>
<td></td>
</tr>
<tr>
<td>SKLSHAOP</td>
<td>Sample Library</td>
<td>Dialogs that control the user interface screens (or panels).</td>
</tr>
<tr>
<td>SKLSSAMP</td>
<td></td>
<td></td>
</tr>
<tr>
<td>SKLVSAMP</td>
<td></td>
<td></td>
</tr>
<tr>
<td>SKLSLOAD</td>
<td>Load Library</td>
<td>Contains load modules and may also contain user exit routines if implemented SKLVLOAD.</td>
</tr>
<tr>
<td>SKLSLOAD</td>
<td></td>
<td></td>
</tr>
<tr>
<td>SKLSLOAD</td>
<td>Help Library</td>
<td>Dialogs that control the Help information panels.</td>
</tr>
<tr>
<td>SKLSLOAD</td>
<td></td>
<td></td>
</tr>
<tr>
<td>SKLSLOAD</td>
<td>Assembler Macro Library</td>
<td>Macros required for user exits compilation.</td>
</tr>
<tr>
<td>SKLSGMAC</td>
<td></td>
<td></td>
</tr>
<tr>
<td>SKLSINST</td>
<td>Installation JCL Library</td>
<td>Basic configuration sample JCL.</td>
</tr>
</tbody>
</table>

It is recommended that you change only the user libraries, with the -RHILEV-, -RUNPFX-cccc data set names, and keep the product libraries as shipped.

**Note:** In CL/SuperSession V2.1, all the user exits (except for those that are ACF2 based), supplied in the SKLSSAMP target library, are precompiled and pre-linked. These user exits are delivered in load-module form in the SKLSLOAD target library.

The procedures that are described in this manual use the members that are shown in Table 2. You can copy all members that are listed in Table 2 into your user libraries now, or you can add each member as you need it.

Review the user library members to be sure that you do not overlay members that were already copied and modified.

For more information on the libraries and members invoked during startup, see Chapter 7, “Starting and stopping CL/SuperSession,” on page 73.
Table 2. Members Commonly Customized During Basic Configuration.

<table>
<thead>
<tr>
<th>Library</th>
<th>Member</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>SKLSSAMP</td>
<td>KLGAPLT</td>
<td>Defines application lists.</td>
</tr>
<tr>
<td>SKLSCMDS</td>
<td>KLGAPLS</td>
<td>Defines PASS and SINGLE type applications.</td>
</tr>
<tr>
<td>SKLVCMDS</td>
<td>KLGAPLS</td>
<td>Defines MULTI type applications.</td>
</tr>
<tr>
<td></td>
<td>KLS$VSMS</td>
<td>Contains VSM commands that define virtual terminal pools.</td>
</tr>
<tr>
<td>SKLSPARM</td>
<td>KLGIAPL1</td>
<td>Lists SINGLE type applications.</td>
</tr>
<tr>
<td></td>
<td>KLGIAPL2</td>
<td>Lists MULTI and PASS type applications.</td>
</tr>
<tr>
<td></td>
<td>KLGICFGn</td>
<td>Defines a gateway configuration.</td>
</tr>
<tr>
<td>SKLVPARM</td>
<td>KLVINNAM</td>
<td>Contains security information.</td>
</tr>
<tr>
<td>SKLSINST</td>
<td>KLS0CUST</td>
<td>Basic configuration JCL.</td>
</tr>
</tbody>
</table>

Basic configuration updates

During the basic configuration process, you need to make the following updates after you complete the standard SMP/E product installation.

1. Modify the SKLSINST(KLS0CUST) JCL in the runtime INST library and specify your basic configuration parameters.
2. After you complete your updates, run the KLS0CUST job to update the remaining members of SKLSINST. KLS9CUST is one of the members that are modified.
3. Run the KLS9CUST job that updates the following members into their corresponding runtime libraries:

Table 3. Libraries and Members Updated by KLS9CUST

<table>
<thead>
<tr>
<th>Library</th>
<th>Member</th>
</tr>
</thead>
<tbody>
<tr>
<td>SKLSPARM</td>
<td>KLSYSIN</td>
</tr>
</tbody>
</table>
### Table 3. Libraries and Members Updated by KLS9CUST (continued)

<table>
<thead>
<tr>
<th>Library</th>
<th>Member</th>
</tr>
</thead>
<tbody>
<tr>
<td>SKLSCMDS</td>
<td>KLGCAPO</td>
</tr>
<tr>
<td></td>
<td>KLGCAPLS</td>
</tr>
<tr>
<td></td>
<td>KLGCAPLT</td>
</tr>
<tr>
<td></td>
<td>KLGCBCGP</td>
</tr>
<tr>
<td></td>
<td>KLGCHGGW</td>
</tr>
<tr>
<td></td>
<td>KLG CSTGW</td>
</tr>
<tr>
<td></td>
<td>KLHCDLG</td>
</tr>
<tr>
<td></td>
<td>KLHCDLGH</td>
</tr>
<tr>
<td></td>
<td>KLCIDF</td>
</tr>
<tr>
<td></td>
<td>KLCIMTO</td>
</tr>
<tr>
<td></td>
<td>KLS$VSMS</td>
</tr>
<tr>
<td>SKLSSAMP</td>
<td>KLS</td>
</tr>
<tr>
<td></td>
<td>KLS@ASM</td>
</tr>
<tr>
<td></td>
<td>KLSVTLST</td>
</tr>
<tr>
<td>SKLVPARM</td>
<td>KLVINNAF</td>
</tr>
<tr>
<td></td>
<td>KLVINNAM</td>
</tr>
<tr>
<td></td>
<td>KLVINTB</td>
</tr>
<tr>
<td></td>
<td>KLVINVLG</td>
</tr>
<tr>
<td></td>
<td>KLVINVPO</td>
</tr>
</tbody>
</table>

### Function keys

Function keys are used to perform many CL/SuperSession tasks. The keys and their uses are displayed at the bottom of each panel. Only the function keys that are available for a panel are displayed. For example, panels with data that may continue over several screens display the backward and forward function keys, **F7** and **F8**, while single-screen panels do not.

The following keys are available from most panels:

<table>
<thead>
<tr>
<th>Key</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Enter</td>
<td>Causes CL/SuperSession to process the current panel and save the data that is typed in all fields.</td>
</tr>
<tr>
<td>F1</td>
<td>Displays help for the current panel, window, or field.</td>
</tr>
<tr>
<td>F2</td>
<td>In help screens, gives in-depth information on a panel, field, or function.</td>
</tr>
<tr>
<td>F3</td>
<td>Exits the current panel.</td>
</tr>
<tr>
<td>F4</td>
<td>Displays a list of valid selections for an input field. If there are only two valid selections, <strong>F4</strong> toggles between the two.</td>
</tr>
</tbody>
</table>
### Function keys

<table>
<thead>
<tr>
<th>Key</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>F5</td>
<td>Refreshes the current panel by clearing and updating it.</td>
</tr>
<tr>
<td>F7</td>
<td>Scrolls backward if more lines exist than can be displayed on the current panel.</td>
</tr>
<tr>
<td>F8</td>
<td>Scrolls forward if more lines exist than can be displayed on the current panel.</td>
</tr>
<tr>
<td>F9</td>
<td>Retrieves the last command that is issued and re-enters it on the command line. By pressing F9 repeatedly, you can retrieve up to 10 previous commands. On panels where F9=Reset appears, the key resets the field’s profile type (user, group, or global) one level higher. If the field is already set at the highest level, global, pressing F9 will have no effect. <strong>Note:</strong> For session profiles, APPLDEF is the highest level.</td>
</tr>
<tr>
<td>F10</td>
<td>Moves the cursor to the home position on the action bar.</td>
</tr>
<tr>
<td>F12</td>
<td>Cancels the current panel and erases all changes and additions made in any of the fields since you last pressed Enter.</td>
</tr>
</tbody>
</table>
Chapter 2. Configuration planning and procedures

This chapter guides you through the configuration of CL/SuperSession.

Configuration checklist

The following table outlines the activities that are involved in the configuration process. The activities are listed in the sequence in which they are to be performed. A detailed description of each activity is provided in the following sections of this chapter. Use the ✓ column to check off steps as you complete them.

<table>
<thead>
<tr>
<th>✓</th>
<th>Configuration Activity</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Review the configuration planning information.</td>
</tr>
<tr>
<td></td>
<td>Modify the started task JCL(KLS0CUST) and authorize the runtime load libraries.</td>
</tr>
<tr>
<td></td>
<td>Add supplementary mode table (if required).</td>
</tr>
<tr>
<td></td>
<td>Include APPL definitions in SYS1.VTAMLST.</td>
</tr>
<tr>
<td></td>
<td>Set dispatching priority (if required).</td>
</tr>
<tr>
<td></td>
<td>Verify the installation.</td>
</tr>
</tbody>
</table>

Other considerations

Table database

The table database is designed to accommodate large tables with minimum resource contention. VSAM will automatically calculate a control interval size of 10240 for the Table Database. An LSRPOOL specifying (10240,32) is included in KLSSYSIN at product installation. This keeps CI contention at a low level, though it requires more DASD than a smaller block size does.

Configuration and installation

General assumptions

The "Product CBPDO" RELFILEs were previously copied into DASD with names that begin with the customized high-level qualifier - (-HILEVQ-).

The "Product CBPDO" SMPMCS was previously copied into DASD with a name that begins with the customized high-level qualifier - (-HILEVQ-).

The first RELFILE has been copied into the runtime installation library named -RHILEV-RLSINST, with -RHILEV- as the designated high-level qualifier of all runtime non- VSAM data sets.

Standard IBM ShopZ CBPDO product installation

After a standard CBPDO product installation, all SMP/E datasets have been created and fully installed accounting for all actions from phase 2 to phase 4 (see the following).
Standard IBM ShopZ CBPDO product installation

Note: If you start with a given set of target and distribution libraries, you need to run Phase 1 and Phase 5 only to complete the basic customization of CL/SuperSession.

JOB card conventions

*********************************************************************************
*<SSPROC>-<n><xxx>
*Job name. <n> - sequence number. <xxx>- action id.  *
*CLASS=A  Job execution class.  *
*MSGCLASS=H  Job output class.  *
*TYPRUN=HOLD  Job execution on hold by default (extra precaution).  *
*********************************************************************************

Note: You may need to modify some of the above JOB card parameters, such as accounting code, according to your local conventions.

Customize the installation JCL - Phase 1

1. Update member KLS0CUST in -RHILEV-.RLSINST with your selected values of the expected site-specific customization for the installation parameters. Review KLS0CUST for required customization and options.

Note: You may leave most of the default values unchanged.

Note: If your default national language is not ENG(English), replace -LANG- with:
  'DEU' (German), or
  'ITA' (Italian), or
  'FRA' (French), or
  'FRC' (Canadian French).

2. Run the modified job KLS0CUST from -RHILEV-.RLSINST.

Note: This will also customize all remaining installation jobs.

Create new SMP/E Environment - Phase 2

Run KLS1ALCZ, KLS2ALCS, KLS3ALCL, KLS4DEFZ, KLS5DEFL in that order.

Run SMP/E RECEIVE of RELFILEs and GA PTFs - Phase 3

Run KLS6RECV.

Load KLS target and distribution libraries - Phase 4

Run KLS7APL, KLS8ACPT.

Allocate and initialize all runtime datasets - Phase 5

Run KLS9CUST.

Installation results

When you have completed the installation of CL/SuperSession, you should have the following:

-HILEVQ-.AKL* is a complete set of CL/SuperSession distribution libraries.
-HILEVQ-.SKL* is a complete set of CL/SuperSession target libraries.
-RHILEV-RLS* is a complete set of CL/SuperSession runtime datasets.

-RHILEV-RLSSAMP(-SSPROC-) is your CL/SuperSession started task procedure.

-RHILEV-RLSSAMP(-VTNODE-) is your CL/SuperSession VTAM major node definition.

**Environment preparation**

Copy into the system’s PROCLIB dataset, the following JCL procedure member, from the -RHILEV-RLSSAMP runtime sample library:

-SSPROC- CL/SuperSession started task procedure (default is KLS)

Copy into the system’s VTAMLST dataset, the following VTAM resource definitions member, from the -RHILEV-RLSSAMP runtime sample library:

-VTNODE- CL/SuperSession VTAM major node (default KLSVTLST)

**Note:** The following z/OS operator commands are already included in the customized -SSPROC- member.

They are still required prior to submitting CL/SuperSession as a batch job instead of a started task. Use z/OS operator command "SETPROG APF,ADD" to declare the following libraries as APF AUTHORIZED:

-HILEVQ-.SKLSLOAD
-HILEVQ-.SKLVLOAD
-RHILEV-RLSLOAD

Activate the CL/SuperSession communication nodes by issuing the following VTAM command from the z/OS operator console:

/V NET,ACT,ID=-VTNODE-

**Installing multiple CL/SuperSession started tasks**

The following describes how to install multiple CL/SuperSession started tasks.

Create copies of the SMP/E installed target libraries following the same naming convention of a -HILEVQ-.<Lib_Type>.

Create a runtime installation library named -RHILEV- RUNPFX-INST and copy it into the SKLSINST target library.

**Note:** -RHILEV- is the selected run time high-level qualifier, -RUNPFX- is the selected run time type qualifier prefix.

Execute only Phase 1 and Phase 5 of the installation process, as described under “Configuration and installation” on page 7 earlier in this chapter.

Perform the necessary environment preparation steps, as described under “Environment preparation” earlier in this chapter.

Perform the installation verification steps, as described in Chapter 3, “Installation verification,” on page 13.
Installing HelpDesk High Availability Option Nodes

The following describes how to install HelpDesk High Availability Option Nodes.

The CL/SuperSession V2.1 HAO functionality can be implemented by following the procedure for installing multiple CL/SuperSession started tasks.

You have the option of installing up to 3 HAO nodes "out of the box" by following the CL/SuperSession standard naming convention for the libraries and defined element names.

The CL/SuperSession V2.1 HAO functionality can be implemented by following the procedures for installing multiple CL/SuperSession started tasks.

For more information regarding the High Availability Option, see Chapter 9, “High Availability Option,” on page 99.

For more information regarding the HelpDesk, see Chapter 10, “The HelpDesk,” on page 115.

Prepare to run multiple CL/SuperSession address spaces concurrently (optional)

If you do want to run Version 2.1 concurrent with Version 1.4.7, you must ensure that the VTAM ACBNAMEs are unique for each environment (Version 1.4.7 and Version 2.1).

The VTAM major node names in SYS1.VTAMLST must be different. Make sure that all datasets are unique to their respective environments.

You need to specify unique values for the following variables:
- `SSPROC`
- `VTNODE`
- `VTPREF`
- `VGENRES`
- `VMTOPREF`
- `HELPREF`

Add supplementary mode table

If you use 3270 extended datastream support and the appropriate logmodes are not available in the IBM default logmode table, ISTINCLM, you must perform the following.

Ensure that any logmodes assigned in dialog KLSLMOD or in the online logmode table are also contained within the MODETABs that you reference on your virtual devices. You can add your own MODETAB references to KLSVTLST member and corresponding changes to KLSLMOD, if you so choose. Otherwise, skip to “Include APPL definitions in SYS1.VTAMLST” on page 11.

Member -THILEV-.SKLSSAMP(KLSINCLM) contains a supplementary mode table to be used with the 3270 virtual terminal APPL definitions that may be used in SYS1.VTAMLST. If necessary, you can use the supplementary table with physical terminal definitions.
1. Copy the JCL contained in -THILEV.SKLSAMP(KLS@ASM) into a user library (for example, -RHILEV.RLSSAMP) to edit. Modify this JCL to assemble and link-edit -THILEV.SKLSAMP(KLSINCLM) into the SYS1.VTAMLIB dataset.

2. In -RHILEV.RLSSAMP(KLSVTILST), specify MODETAB=KLSINCLM in the APPL definition for virtual terminals.

**Include APPL definitions in SYS1.VTAMLST**

**Important**

| The member -RHILEV.RLSSAMP(KLSVTILST) contains VTAM APPL macro definitions with the corresponding ACBNAME parameters. Please ensure that the APPLIDs and ACBNAMEs do not conflict with any existing network names defined in your NCPGENs. Your VTAM system programmer should be able to identify names in member KLSVTILST that conflict with your installation's naming convention. |
| -RHILEV.RLSSAMP(KLSVTILST) contains the list of VTAM APPL definitions that are used in this installation. |

Copy member -RHILEV.RLSSAMP(KLSVTILST) into SYS1.VTAMLST(newname), where newname is a name that conforms with your installation's naming convention for major node names.

**Set dispatching priority**

To function efficiently, CL/SuperSession must have a high dispatching priority. Set its dispatching priority just below that of VTAM and JES. Make sure that no applications that will be accessed via CL/SuperSession have a dispatching priority higher than that of CL/SuperSession.
Chapter 3. Installation verification

Introduction

Complete the following procedures to verify that CL/SuperSession has been installed properly.

Note: If during the installation you specified the parm USEHAO=Y, three address spaces and corresponding runtime/configuration libraries were created for your High-Availability Option environment. And the installation validation procedure below needs to be completed for each address space.

If you decide to verify your CL/SuperSession V2.1 with a previously initialized NAM database, for instance, -RHILEV-RLSNAM as part of a migration from CL/SuperSession V147, update member RLSCMD5(KLSSTRIV) as follows:

Comment out (or delete) the line with "KLSINNAM"
Uncomment the line with "KLSINNA2"
1. Start the CL/SuperSession task by entering from the z/OS console:

   /S -SSPROC-

2. Log on via "LOGON APPLID(-VTPREF-1)" with -ADMINID- & Password (same as -ADMINID-). The default for -VTPREF-1 is STERM1.
3. Select the ADMIN pull-down menu and "A - Profile administration".
4. Select "View user profiles", where you should select -ADMINID-.
5. Select your "Common Profile Segment". This is where you set the "Administrator authority" to "Y", as well as other preferred authority settings.
6. Return to main menu and enter "RESET" in the command field.
7. Select the HELPDESK application from the main menu by pointing the cursor at the entry and pressing the ENTER key. You will be asked to repeat your details.
8. Select the HELPDESK ADMIN pull-down menu and then select "U - Set user authorities", where you set all the options for "HelpDesk User Authorities" to "Y".

Test the CUA Operator

1. Log on to APPLID xxxx5 as follows:
   a. From any VTAM terminal not currently in session with another application, enter LOGON APPLID(xxxx5).
   b. Enter the user ID and password.
   c. You will be prompted to enter a new password. Enter a new password for the user ID.
2. Issue the following command:

   OPERS
   You will see a list of active operator IDs.
3. To exit the operator facility, enter this command:

   LOGOFF
Test CL/SuperSession application selection

This demonstrates the application selection capabilities of CL/SuperSession.

1. To try out configuration KLGICFG1:
   a. From any VTAM terminal not currently in session with another application, enter
      \LOGON\ APPLID(ssterm1).
      where sterm is the value that is specified in RLSINST(KLS0CUST) for variable -VTPREF (specified or defaulted). The default is SSTERM1.
   b. Enter the User ID and Password that is used during installation.
      Enter the User ID (admin) where admin is the value specified –ADMIN-.
      The default is SSADMIN.

      Note: The password is the same as the User ID.

   The CL/SuperSession Main Menu appears.

2. Specify one of the TSO, CICS® or IMS applications defined in KLS0CUST that appear on the screen.

   -TSODEST- TSO LOCAL NETWORK NAME
     MAXIMUM 8 CHARACTERS
     DEFAULT: TSO1
   -CICSDEST- CICS LOCAL NETWORK NAME
     MAXIMUM 8 CHARACTERS
     DEFAULT: CICS1
   -IMSDEST- IMS LOCAL NETWORK NAME
     MAXIMUM 8 CHARACTERS
     DEFAULT: IMS1

      Note: Logon by using a User ID and password that is valid for these environments.

3. Log on to TSO.

4. Continue to the following "Test CL/SuperSession triggers".

Test CL/SuperSession triggers

At this point in the validation, you are logged on to a virtual session (for example, TSO) maintained by CL/SuperSession. Then you can execute a “trigger.”

1. To test the CL/SuperSession triggers, type \m in the first position of any input field in an application and press Enter.

   The CL/SuperSession Main Menu reappears. For a complete explanation of triggers, see the IBM CL/SuperSession for z/OS V2.1 User’s Guide.

2. Now that you’re back to the main menu you will observe your session’s "status" has changed to "Current®." You can return to this session or any other session that may be active by scrolling down to it and pressing Enter.

   Scroll down to an active session and press Enter.

3. Press F3 to exit CL/SuperSession.

Stop the installation verification test

1. Stop the CL/SuperSession address space by issuing the following command from the z/OS console:

   F kls,SHUTDOWN

   where kls is the name of the started task.
CL/SuperSession requires two consecutive SHUTDOWN commands. This is done to prevent accidental shutdown. You can change this during customization. After issuing the first SHUTDOWN command, the system will respond with the following message:

**KLVOP022** SHUTDOWN MUST BE CONFIRMED WITHIN 15 SECONDS

Reissue the SHUTDOWN command from the z/OS console within 15 seconds.

If you are a new user of CL/SuperSession, you may now proceed with customization of the product by referring to the remainder of this manual and to the IBM CL/SuperSession V2.1 Customization Guide.

If you are migrating from CL/SuperSession V1.4.7, you must first follow the appropriate procedure as detailed in Appendix A, “Migration from earlier...”
Installation verification cleanup

Then you may proceed with customization of the product by referring to the remainder of this manual and to the IBM CL/SuperSession V2.1 Customization Guide.

What's next

If you have followed the procedures in “Configuration checklist” on page 7, your system should consist of the following:

- Creation of an administrator user ID.
- A default set of applications.
- The Network Access Manager (NAM) security system.
- The Network Accounting Facility (NAF).
- The operator facility.
- An SAA / CUA interface to the operator facility.

You may want to perform some or all of the following configuration steps.

- Set up security.
  To use the CA-ACF2, RACF, or CA-TOP SECRET security system, read Chapter 4, “Setting up security,” on page 17.

- Configure CL products further by defining extra applications or modifying the GLOBAL Profile.
  - To define extra applications and set up authorization application lists, read Chapter 5, “Defining applications,” on page 21.
  - To modify the GLOBAL Profile and create group and user profiles, read Chapter 6, “Using administrator functions,” on page 37.

This manual assumes that you know how to start and stop CL/SuperSession. The last chapter, Chapter 7, “Starting and stopping CL/SuperSession,” on page 73 reviews these procedures.
Chapter 4. Setting up security

The Network Access Manager (NAM) can either serve as a stand-alone security system or provide an interface to the security system of your choice.

Member KLVINNAM in library -THILEV-.SKLPARM contains the security system information. KLVINNAM defines one or more control points, each of which selects a security system and names a VSAM file to store NAM information. When NAM is the chosen security system, the VSAM file also holds encrypted security information. By default, CL/SuperSession uses only one control point, so that all users access applications through the same security system.

The initial configuration you installed specifies the NAM database as the security system. The sections in this chapter describe interface procedures to NAM and to other security systems, including RACF, CA-ACF2, and CA-TOP SECRET.

Note: If you use PassPhrase support then you must use SAF.

Using RACF

Before you install the RACF interface, make sure -THILEV-.SKLSLOAD, -THILEV-.SKLLOAD, and, if allocated, -RHILEV-.RLSLOAD are APF-authorized. (For more information on APF authorization, see the IBM SPL: Initialization and Tuning manual.)

In addition, you must make sure that RACF gives CONTROL authority to the CL/SuperSession address space for all of the VSAM files it uses. These are the NAM, VIEWLOG, and TABLEDB datasets.

Make the following changes to member -RHILEV-.RLSPARM(KLVINNAM) in your initialization library.

1. Change NORACF to SAF.
2. Change DB to NODB.

The member should look like this when you finish:

```plaintext
DEFAULT DSNAME(-RHILEV-.RLSNAM) SAF NODB
```

You may need to change the current value assigned to the RESERVE parameter in -RHILEV-.RLSPARM(KLSSYSIN). For more information on the RESERVE parameter, see the IBM CL/SuperSession for z/OS V2.1 Customization Guide.

Restart CL/SuperSession to initialize the change.

Note: Although you may still specify RACF in the KLVINNAM member, SAF is preferable.

SAF utilizes the z/OS System Authorization Facility, and will automatically allocate certain control blocks above the 16M line. The SAF interface uses RACROUTE instead of RACINIT processing.
Using CA-ACF2

Before you install the CA-ACF2 interface, make sure -THILEV-SKLSLOAD, -THILEV-SKLVLOAD, and, if allocated, -RHIILEV-RLSLOAD are APF-authorized. (For more information on APF authorization, see IBM’s SPL: Initialization and Tuning manual.)

To install an exit for ACF2 security validation, follow these steps.

1. If KLS@ASM is not already in -RHIILEV-RLSSAMP, copy -THILEV-.SKLSSAMP(KLS@ASM) into -RHIILEV-RLSSAMP.

2. Member KLSA2NEV of -THILEV-.SKLSSAMP is the CL/SuperSession interface to ACF2. Assemble and link KLSA2NEV with AC=1 into the -RHIILEV-RLSSAMP library. Member KLS@ASM of -RHIILEV-RLSSAMP contains assembly JCL that you can modify according to instructions in the member.

3. Because CL/SuperSession uses a multiuser system access control point, it has all the characteristics of an ACF2 Multiple User Single Address Space System (MUSASS). That is, system access validations are initiated and enforced by the address space on behalf of the network user. Define the CL/SuperSession started task as a MUSASS to ACF2.
   a. At the READY prompt, type ACF and press Enter.
   b. At the ACF prompt, type SET LID and press Enter.
   c. At the LID prompt, type CH klv MUSASS (where -RVIILEV- is the name of the CL/SuperSession started task) and press Enter.
   d. At the LID prompt, type END and press Enter.

4. Change member KLVINNAM in -RHIILEV-RLSPARM.
   a. Add the EXIT=KLSA2NEV parameter. For example:
      
      ```
      DEFAULT DSNAM(&rvhilev.RLSNAM) EXIT=KLSA2NEV
      ```
   b. Change DB to NODB.

The member should look like this when you finish:

```
DEFAULT DSNAM(&rvhilev.RLSNAM) EXIT=KLSA2NEV NORACF NODB
```

Restart CL/SuperSession to initialize the change.

**Note:** You may need to change the current value assigned to the RESERVE parameter in -RHIILEV-RLSPARM(KLSSYSIN). For more information on the RESERVE parameter, see the IBM CL/SuperSession for z/OS V2.1 Customization Guide.

Using CA-TOP SECRET

Before you install the CA-TOP SECRET interface, make sure -THILEV-SKLSLOAD, -THILEV-SKLVLOAD, and, if allocated, -RHIILEV-RLSLOAD are APF-authorized. (For more information on APF authorization, see IBM’s SPL: Initialization and Tuning manual.)

To install an exit for CA-TOP SECRET security validation, do the following:

1. Copy -THILEV-.SKLSSAMP(KLSVSSEC) into -RHIILEV-RLSPNLS.
2. If KLS@ASM is not already in -RHILEV-.RLSSAMP, copy -THILEV-.SKLSSAMP(KLS@ASM) into -RHILEV-.RLSSAMP.

3. Assemble and link KLSTSNEV with AC=1 into the -RHILEV-.RLSLOAD library. (Member KLSTSNEV of -RHILEV-.SKLSSAMP is the supplied interface to CA-TOP SECRET.) Member KLS@ASM of -RHILEV-.RLSSAMP contains assembly JCL that you can modify according to instructions in the member.

4. Make the following changes in -RHILEV-.RLSPARM(KLVINNAM).
   a. Change NORACF to SAF.
   b. Change DB to NODB.

   The member should look like this when you finish:
   ```!
   DEFAULT DSNNAME(-RHILEV-.RLSNAM) -
   SAF -
   NODB -
   EXIT=KLSTSNEV
   ```

   c. Define the CL/SuperSession address space as a started task in the STC record, and relate it to a master facility accessor ID (ACID). For example, enter
   ```!
   TSS ADD(STC) PROC(task) ACID(master facility acid)
   ```
   where `task` represents the name of the started task. The task and the master facility ACID can be the same.

   d. Define `task` as a FACILITY to CA-TOP SECRET in the Facility Matrix Table, where `task` is the started task name.

   To use the same FACILITY name across multiple CL/SuperSession address spaces, the FACILITY name must match at least 1 of the started task names in each address space.

   The following example shows FACILITY statements from a production installation using CA-TOP SECRET as the security system. Some statements may not be relevant to your system, so you may need to modify them to fit your standards and configuration.

   ```!
   FACILITY(USER3=NAME=task)
   FACILITY(task=MODE=FAIL,ACTIVE,SHRPRF)
   FACILITY(task=PGM=KLV,NOASUBM,NOABEND,NOXDEF)
   FACILITY(task=ID=3,MULTIUSER,RES,LUMSG,STMGS,WARNPW,SIGN(M))
   FACILITY(task=NOINSTDATA,NORNDPW,AUTHINIT,NOPROMPT,NOAUDIT,NOMRO)
   FACILITY(task=NOTSOC,LOG(INIT,SMF,MSG,SEC9))
   ```

   **Note:** Make certain that the SIGN parameter on the FACILITY statement is specified as `SIGN(M)`. Otherwise, CA-TOP SECRET may produce a message stating that user access has been revoked. Also, verify that `MODE=FAIL` is set.

5. Restart CL/SuperSession to initialize the change.

### Using the NAM database

If you are using the NAM database, you do not need to change -RHILEV-.RLSPARM(KLVINNAM) because KLVINNAM selects NAM by default. However, you must define your users to NAM.

To add more user IDs to the NAM database, issue the following command through the CL/SuperSession Engine operator facility:
Using the NAM Database

NAM SET userid PASSWORD=password

You can access the operator facility from the Main Menu. For more information on the operator facility, see the CL/SuperSession Operator’s Guide.

Alternatively, you can issue the commands from the system console with the z/OS MODIFY command:

F kls,NAM SET userid PASSWORD=password

where kls is the name of the CL/SuperSession started task.

If you have many users to define to NAM, you can create a member in your command runtime library that contains the NAM SET commands for each user that you want defined to NAM. For example, if you create a member called USERIDS that contains the NAM SET commands, you can issue the command USERIDS to the operator facility, or you can issue the following command from the system console:

F kls,USERIDS

Note: The dollar sign ($) prefix is optional for member names.

Using another security system

If you want to use any other security system (for example, one that you developed in-house), you can develop your own interface and specify it using the EXIT parameter in member KLVINNAM. For further discussion of the EXIT parameter, see the IBM CL/SuperSession for z/OS V2.1 Customization Guide.
Chapter 5. Defining applications

This chapter describes the methods of defining applications to CL/SuperSession.

There are two ways to make sessions available to users: via Session Profiles and/or via the APPLDEF command. Unless you have a technical reason to do otherwise, IBM support recommends that administrators define sessions to the GLOBAL, GROUP, and USER session profiles to facilitate troubleshooting and user-modifications.

Session Profiles

A CL/SuperSession administrator can add sessions available to all users, a group of users, or a single user by defining the sessions to GLOBAL, GROUP, and USER session profiles respectively. Administrators can also prohibit a USER or GROUP from accessing sessions defined at the GLOBAL level. For more information, refer to Chapter 6, “Using administrator functions,” on page 37.

APPLDEFs

As with the functionality of the GLOBAL Session Profile, the APPLDEF command can define an application and make it available to all users. You can associate an authorized application list (APPLIST) to restrict application access.

IBM recommends you include a member in a command library for your APPLDEF commands that define production applications. Refer to the example in -RHILEV-RLSCMD$($KLSCAPLS). The session ID specified in the APPLDEF command creates a unique application definition. Therefore, any reference to the application in other commands must specify the session ID. Some of your customization needs may go beyond the procedures provided here. If so, refer to the IBM CL/SuperSession for z/OS V2.1 Customization Guide.

Session types

Before you can define an application, you need to decide how you want sessions with that application to be established. CL/SuperSession offers three methods for establishing sessions with applications.

PASS  A PASS (VTAM CLSDST PASS) type session transfers control to the selected session. This option does not use virtual terminals. After the target session is logged off, the user is returned to the main menu. Because CL/SuperSession does not maintain control of the session, as such, product features like triggers and messaging are not available to users of PASS(ed) applications.

SINGLE  A SINGLE type session uses a virtual terminal. CL/SuperSession remains in control of the session though product features like triggers and messaging are not available to users of this type of session. When you log off the session, you are returned to the Main Menu.

MULTI  As the name implies, you can run more than one MULTI type session at a time. In addition, CL/SuperSession features, such as triggers and messaging remain available always. This option uses virtual terminals.
Specifying session types with APPLDEFs

Copy KLSCAPLS and KLGCAPls into -RHILEV-.RLSCMDS from -THILEV-.TLSCMDS. CL/SuperSession gets application definitions from session profiles and/or -RHILEV-.RLSCMDS. Members KLSCAPLS and KLGCAPls in -RHILEV-.RLSCMDS contain the APPLDEF commands issued during product startup that define applications. KLGCAPls contains APPLDEF commands that define PASS and SINGLE type applications. KLSCAPLS contains APPLDEF commands the define CL/SuperSession-capable (MULTI) applications.

Defining PASS type applications
To add a PASS application, you can either modify an existing application definition or insert a new APPLDEF command. The basic command format to add a PASS session application is:

```
APPLDEF sessionid -
        DEST(destination) -
        DESC('description')
```

Note: Most application definitions provided in KLGCAPls contain more parameters than shown here. At this stage of configuration, you need not concern yourself with the additional parameters (for example, SIMLOGON and USERDATA). For more information on the APPLDEF command, refer to the IBM CL/SuperSession for z/OS V2.1 Customization Guide.

In -RHILEV-.RLSCMDS(KLGCAPls), specify the sessionid parameter to identify the application (for example, TSOA). The session ID parameter is required and can be up to 8 characters long. Specify the DEST parameter to designate the VTAM network destination (APPLID). This parameter is required. DESC contains the session description that appears on the menu display (for example, 'TSO SYSTEM A'). Add a DESC parameter to describe the session and clarify its use. This parameter is optional. Your application definition might look something like this:

```
APPLDEF TSOA -
        DEST('your_TSO_APPLID') -
        DESC('TSO SYSTEM A')
```

Defining SINGLE type applications
To add a SINGLE application, you can either modify an existing application definition or insert a new APPLDEF command. The basic command format for adding a SINGLE session application is:

```
APPLDEF sessionid -
        DEST(destination) -
        DESC('description')
        POOL(poolname)
        MULTSESS=NO
```

Note: Most application definitions provided in KLGCAPls contain more parameters than we show here. At this stage of configuration, you need not concern yourself with the additional parameters. In -RHILEV-.RLSCMDS(KLGCAPls), specify a sessionid parameter to identify the application (for example, TSOA). The session ID parameter is required and can be up to 8 characters long. Specify the DEST parameter to designate the VTAM network destination (APPLID). This parameter is required. DESC contains the session description that appears on the menu display (for example, 'TSO SYSTEM A'). Add a DESC parameter to describe the session and clarify its use. Add the POOL parameter to assign the application to a virtual terminal pool. SINGLE application definitions require the POOL parameter. For instructions, see "Selecting
Defining MULTI type applications

To add a MULTI application, you can either modify an existing application definition or insert a new APPLDEF command. The basic command format for a MULTI session application is:

```
APPLDEF sessionid -
DEST(destination) -
DESC(description) -
POOL(poolname) -
MULTSESS=YES
```

**Note:** Most application definitions provided in KLSCAPLS contain more parameters than previously listed. At this stage of configuration, you need not concern yourself with the additional parameters. In -RHILEV-.RLSCMDS(KLSCAPLS), specify a sessionid parameter to identify the application (for example, TSOA). The session ID parameter is required and can be up to 8 characters long. Specify the DEST parameter to designate the VTAM network destination (APPLID). This parameter is required. DESC contains the session description that appears on the menu display (for example, ‘TSO SYSTEM A’). Add the DESC parameter to describe the application and clarify its use. Add the POOL parameter to assign the application to a virtual terminal pool. Both SINGLE and MULTI application definitions require the POOL parameter. For instructions, see “Selecting a virtual terminal pool” on page 25. Set MULTSESS=YES to indicate that these are MULTI type sessions. This parameter is required.

Activating an APPLDEF

Any modifications made to member KLGCAPLS or KLSCAPLS in your commands library will not become effective until the next time that this CLIST is executed. To initialize your new application definitions, do one of the following:

- Recycle the CL/SuperSession address space.
- Log on to the CL/SuperSession CUA operator facility through the Main Menu and issue one the following commands:
  ```
  KLGCAPLS
  or
  KLSCAPLS
  ```
- Alternately, issue one of the following commands from the z/OS system console:
  ```
  F kls,KLGCAPLS
  or
  F kls,KLSCAPLS
  ```

where *kls* is the name of the CL/SuperSession started task.

**Note:** The command you issue depends on the member you modified. When you issue the KLGCAPLS or KLSCAPLS commands, the appropriate CLISTS are executed and the application definitions are updated. If you are modifying an APPLDEF using the same sessionid, the session must be removed and redefined.
Specifying session types with Session Profiles

When defining sessions with the profile administration function, the type is always MULTI. For more information, refer to Chapter 6, “Using administrator functions,” on page 37.

Managing GLOBAL and Group session profiles

Sessions can be defined in session profiles. Session that are defined by using the APPDLEF command can also be modified in session profiles. There is one GLOBAL Session Profile, optionally one or more Group session profiles, and as many USER session profiles as there are users who have modified their own session definitions.

Sessions that are defined in the GLOBAL Session Profile are available to all users. Sessions that are defined in a Group session profile are available to all users in a group.

GLOBAL sessions

To add, delete, or modify a session at the GLOBAL level, you need to complete the following steps.
1. From the Profile Selection Menu, type a slash (/) next to View GLOBAL profile and press Enter. The Profile Summary menu appears. For more information, see Chapter 6, “Using administrator functions,” on page 37.
2. Type s (Select for Detail) next to the GLOBAL profile and press Enter.
3. Type a slash (/) next to Sessions on the Update GLOBAL Profile menu and press Enter. The Update GLOBAL Session Profile menu appears.
4. Add sessions or delete, modify, block or unlock the existing sessions.

For more information, see Chapter 6, “Using administrator functions,” on page 37.

Group sessions

The process for managing a Group profile is similar to that of GLOBAL Session Profile.

To add, delete, or modify a session at a Group level, you need to complete the following steps.
1. From the Profile Selection Menu, type a slash (/) next to View group profile and press Enter. The Profile Summary menu appears. For more information, see Chapter 6, “Using administrator functions,” on page 37.
2. Type s (Select for Detail) next to the Group profile and press Enter.
3. Type a slash (/) next to Sessions on the Update Group Profile menu and press Enter. The Update Group Session Profile menu appears.
4. Add, delete, or modify a session at a Group level as you need.

Note: To access an existing Group profile, type s next to it. To create a new Group profile type a to create from scratch or c to clone an existing Group profile.

In order for a Group profile to have any relevance, users need to be assigned to them.
Selecting a virtual terminal pool

Because a physical terminal is allowed only one session at a time, CL/SuperSession creates virtual terminals. Virtual terminals simulate physical terminals for sessions between users and applications, but each virtual terminal can support many sessions on behalf of many users, and each user can have sessions on more than one virtual terminal.

A collection of virtual terminals (VTAM APPLs) is called a virtual terminal pool. With virtual terminal pools, you can:

- Specify session characteristics
- Support virtual terminal sharing to make the best possible use of system and network resources
- Select a virtual terminal defined to the application

You need to specify a virtual terminal pool in your APPLDEF command if you are defining a SINGLE or MULTI type session.

The POOL parameter of the APPLDEF command associates an application definition with a virtual terminal pool. If you do not specify the POOL parameter in the APPLDEF command, then the session is defined as a PASS type session. As a result, terminal control is passed directly to the destination application. The CL/SuperSession is no longer in control of the session.

The following table is an example of APPLDEF pool definitions as defined in member KLS$VSMS of -THILEV-.SKLSCMDS.

<table>
<thead>
<tr>
<th>Type of Application</th>
<th>Pool</th>
</tr>
</thead>
<tbody>
<tr>
<td>CUA operator facility</td>
<td>VIRTPARS</td>
</tr>
<tr>
<td>TSO</td>
<td>TSOLGNHR</td>
</tr>
<tr>
<td>TSO with CS V1.13 and above</td>
<td>TSOESA</td>
</tr>
<tr>
<td>CICS with Autoinstall</td>
<td>VIRT3270</td>
</tr>
<tr>
<td>CICS without Autoinstall</td>
<td>&amp;DEFFPOOL</td>
</tr>
<tr>
<td>NetView® or NCCF</td>
<td>VIRTPASS</td>
</tr>
<tr>
<td>IMS</td>
<td>&amp;DEFFPOOL</td>
</tr>
<tr>
<td>IIN</td>
<td>IINPOOL</td>
</tr>
<tr>
<td>OMEGAMON®</td>
<td>VIRT3270</td>
</tr>
<tr>
<td>HCF</td>
<td>HCFPOOL</td>
</tr>
<tr>
<td>VM</td>
<td>VIRT3270</td>
</tr>
<tr>
<td>VM/VSCS</td>
<td>VIRT3270</td>
</tr>
<tr>
<td>CA-IDMS/DC</td>
<td>VIRT3270</td>
</tr>
<tr>
<td>CA-ROSCOE</td>
<td>VIRT3270</td>
</tr>
<tr>
<td>Most other applications</td>
<td>VIRT3270</td>
</tr>
</tbody>
</table>
Selecting a virtual terminal pool

For example, to define a SINGLE TSO application named TSOA, you would use the pool named TSOLGNHR. Your APPLDEF command might look like this:

```
APPLDEF TSOA -
   DEST(your_network_name_for_TSO) -
   DESC('TSO SYSTEM A') -
   POOL(TSOLGNHR) -
   MULTSESS=NO
```

Virtual terminal pool sizes

The virtual terminal pools in CL/SuperSession by default may not contain enough virtual terminals for your needs. The following table lists the default pool sizes. You may need to increase the number of terminals to accommodate the users on your system. Be sure to add the corresponding virtual terminals to your VTAM definitions.

*Table 6. Virtual Terminal Pool Default Sizes.*

<table>
<thead>
<tr>
<th>Application</th>
<th>Pool</th>
<th>Size</th>
</tr>
</thead>
<tbody>
<tr>
<td>VTPOPER (CL/SuperSession Engine operator facility)</td>
<td>VIRTPARS</td>
<td>Contains 1 terminal, enough for any application that can handle parallel sessions.</td>
</tr>
<tr>
<td>TSO</td>
<td>TSOESA</td>
<td>Contains 10 terminals, enough to handle at least 200 TSO users. The number of terminals should be 3% to 5% of the active user base, or enough terminals to support concurrent session establishment in any 1-second period.</td>
</tr>
<tr>
<td>CICS with Autoinstall</td>
<td>VIRT3270</td>
<td>Contains 60 terminals and can support a maximum of 60 concurrent users in any one CICS region.</td>
</tr>
<tr>
<td>CICS without Autoinstall</td>
<td>&amp;DEFPOOL</td>
<td>Resolves to Model 2, 3, 4, 5, or 9 (according to the physical terminal characteristics) when the user logs on. Each pool contains 10 terminals. Each can support a maximum of 10 concurrent sessions for any CICS region. If you are not using specific node assignments, make each pool large enough to handle the maximum number of concurrent users per region. If you are using specific node assignments, assign a virtual terminal for each user.</td>
</tr>
<tr>
<td>NetView or NCCF</td>
<td>VIRTPASS</td>
<td>Contains 60 terminals and can support a maximum of 60 concurrent sessions.</td>
</tr>
<tr>
<td>IMS</td>
<td>&amp;DEFPOOL</td>
<td>Resolves to Model 2, 3, 4, 5, or 9 (according to the physical terminal characteristics) when the user logs on. Each pool contains 10 terminals and supports a maximum of 10 concurrent sessions for any IMS region. If you are not using specific node assignments, make each pool large enough to handle the maximum number of concurrent users per region. If you are using specific node assignments, assign a virtual terminal for each user.</td>
</tr>
</tbody>
</table>
### Table 6. Virtual Terminal Pool Default Sizes (continued).

<table>
<thead>
<tr>
<th>Application</th>
<th>Pool</th>
<th>Size</th>
</tr>
</thead>
<tbody>
<tr>
<td>IIN</td>
<td>IINPOOL</td>
<td>IINPOOL comes configured with 10 terminals and can support 10 sessions. You must make certain that it is large enough to handle the maximum number of concurrent active sessions. IINPOOL is used for any application that might pass the session more than once. Do not overlap this pool with any other pools. Because virtual terminals supporting a session from this pool cannot support other sessions during the IIN session.</td>
</tr>
<tr>
<td>OMEGAMON</td>
<td>VIRT3270</td>
<td>Contains 60 terminals and can support a maximum of 60 concurrent users in any one application.</td>
</tr>
<tr>
<td>HCF</td>
<td>HCFPOOL</td>
<td>Contains 60 terminals and can support a maximum of 60 concurrent users in any one application.</td>
</tr>
<tr>
<td>VM</td>
<td>VIRT3270</td>
<td>Contains 60 terminals and can support a maximum of 60 concurrent users in any one application.</td>
</tr>
<tr>
<td>VM/VSCS</td>
<td>VIRT3270</td>
<td>Contains 60 terminals and can support a maximum of 60 concurrent users in any one application.</td>
</tr>
<tr>
<td>CA-IDMS/DC</td>
<td>VIRT3270</td>
<td>Contains 60 terminals and can support a maximum of 60 concurrent users in any one application.</td>
</tr>
<tr>
<td>CA-ROSCOE</td>
<td>VIRT3270</td>
<td>Contains 60 terminals and can support a maximum of 60 concurrent users in any one application.</td>
</tr>
<tr>
<td>Other</td>
<td>Applications</td>
<td></td>
</tr>
<tr>
<td></td>
<td>VIRT3270</td>
<td>Contains 60 terminals and can support a maximum of 60 concurrent users in any one application.</td>
</tr>
</tbody>
</table>

For a more detailed discussion of virtual terminals and virtual terminal pools, refer to the IBM CL/SuperSession for z/OS V2.1 Customization Guide.

**Note:** A pool of dedicated terminals is required to take advantage of the TSO LOGONHERE functionality provided in z/OS.

### Increasing the size of a virtual terminal pool

Virtual terminal pools are defined to the following:
1. CL/SuperSession with the VSM command.
2. The network in SYS1.VTAMLST application major nodes.

**Note:** The virtual terminal in the pool is defined in SYS1.VTAMLST application major nodes.
3. CICS or IMS, if applicable, in their terminal gens. These definitions must be synchronized to avoid online operational problems.

To add to a virtual terminal pool, do the following:
1. Add the new terminals to the network definition in SYS1.VTAMLST(newname). For example:
   ```
   termname APPL AUTH=(ACQ,NVPACE), EAS=1, ACBNAME=termname
   ```
   For virtual terminal applications that support parallel sessions, specify `PARSESS=YES` instead of `EAS=1`. 

---

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2. To add terminals, you can either modify the VSM command in member KLS$VSMS of your commands library or issue the command through the operator facility.

   For example, if the terminal definitions for the pool TSOLGNHR are

   \textbf{VSM DEFINE TSOLGNHR KLST0001 THROUGH(10)}

   and you want to add 10 terminals, change the VSM DEFINE statement in KLS$VSMS to:

   \textbf{VSM DEFINE TSOLGNHR KLST0001 THROUGH(20)}

   Restart CL/SuperSession to initialize your new virtual terminal pool definitions.

   To add virtual terminals dynamically, issue this command through the operator facility:

   \textbf{VSM DEFINE poolname termname THROUGH(nnn)}

   When you dynamically define terminals to the same terminal pool, you are \textit{adding on} to the terminals defined by KLS$VSMS at startup, not replacing the existing definition.

   \textbf{Note:} When you issue the VSM DEFINE command dynamically, your new terminal definitions are temporary; they are not saved when you shut down and restart CL/SuperSession. If you want to save your new definitions, you must change the KLS$VSMS member in your commands library.

3. Add a definition for each virtual terminal to CICS and/or IMS. Examples of KLSCTCT and KLGIMSGN definitions are provided in -THILEV-.SKLSSAMP.

---

**Restricting user access to applications**

CL/SuperSession provides \textit{authorized application lists} (APPLISTS) to help you restrict user access to applications.

All APPLDEF defined selections are kept in the Master Application List. You can restrict users’ access to a subset of the master list by defining static APPLISTS (which are predefined sets of APPLDEF session IDs), and assigning them to users or groups of users. A user with no APPLIST assigned or an invalid APPLIST uses the Master Application List.

\textit{Static application lists} are created by issuing an APPLIST command that names a member or set of members in your initialization library that defines the contents of the list.

\textit{Dynamic application lists} are created by querying the security system for each entry in the user’s static list (or the Master Application List, if no static list is assigned) and removing selections to which the security system rejects access.

---

**Using static application lists**

When you use only the APPLDEF command to define applications or session profile tables, all applications appear on the Main Menu and are available to all users.

Optionally, you can associate an authorized application list with a user or group of users to create a subset of applications and restrict user access.
When you create an authorized application list, only those applications that are identified within the list display on the Main Menu and are available to the user. You can include any number of applications in an application list.

In addition, you can use application lists to associate a broadcast message group with a user or a group of users with common network notification requirements.

Creating a static application list

To create and invoke a static application list, perform the following steps. You can also find some examples as follows.

1. Create members that contain the lists of applications to include in or exclude from the actual application list.
2. Place the members in -RHILEV-.RLSPARM.
3. Define the APPLIST commands in -RHILEV-.RLSCMDS that point to the members you created in -RHILEV-.RLSPARM. For more information, refer to the APPLIST command in the IBM CL/SuperSession Operator’s Guide.
4. Assign application lists to users through the user profile screens, as discussed in “Assigning static application lists” on page 32.

Note: An application list definition created by procedures described in this subsection can be added dynamically. To add the application list definition dynamically, issue the APPLIST command through the operator facility.

For example:

**APPLIST LIST1 ID=PROGAPP**

However, if you issue the APPLIST command dynamically, your new application list definition is temporary; it is not saved when you shut down and restart CL/SuperSession. To save your new definition, you must change the KLGCAPLT member in your commands library and then initialize the change through the operator facility.

**Example 1: A simple application list**

The following example creates an application list (PROGAPP) that contains two applications, TSOA and VM, and assigns the application list to the application programmers.

1. You want to include the applications TSOA and VM in your application list. Check that these applications are defined by the APPLDEF command in member KLSCAPLS or KLGCAPLS of your runtime commands library. The command definitions look something like this:

   ```
   APPLDEF TSOA
   DEST(TSOA)
   DESC('TSO SYSTEM A')
   POOL(TSOLOGNHR)
   
   APPLDEF VM
   DEST(VM)
   DESC('VM SYSTEM A')
   POOL(VIRT3270)
   ```

2. Create a member in -RHILEV-.RLSPARM that lists the applications you want to include in the application list. The application names listed in the member are APPLDEF command session IDs. The member list for this example looks like this:
Creating a static application list

TSOA
VM
In this example, the member name is LIST1.

3. Add the following command to member KLGCAPLT in -RHILEV-.RLSCMDS.

APPLIST LIST1 ID=PROGAPP

The ID= parameter points to the APPLDEF entries in LIST1. Users with an application list ID of PROGAPP specified in their common profile would get the applications included in LIST1.

To initialize your new application list definition, issue the following command through the operator facility:

KLGCAPLT

4. Assign the application list to users. For more information, see “Assigning static application lists” on page 32.

Example 2: The wildcard character

The following example creates an application list (PROGSYS) that contains three members and assigns the application list to the systems programmers.

1. You want to include the VM application and all applications that begin with the characters TSO, CICS, and IMS. Check that these applications are defined by the APPLDEF command in member KLSCAPLS or KLGCAPLS of your commands library.

2. Create the members LIST1, LIST2, and LIST3 in -RHILEV-.RLSPARM. Each member will contain the applications you want to include in the APPLIST command. For example:

   LIST1
   'TSO*'
   VM
   LIST2
   'CICS*'
   LIST3
   'IMS*'

   The wildcard character (*) includes in the application list all definitions with session IDs beginning with TSO, CICS, and IMS.

3. Add the following command to member KLGCAPLT in -RHILEV-.RLSCMDS:

   APPLIST LIST1 LIST2 LIST3 ID=PROGSYS

   The ID= parameter points to the APPLDEF entries in LIST1, LIST2, and LIST3. Users with an application list ID of PROGSYS specified in their common profile would get the applications included in those three lists (that is, the APPLDEF VM and all APPLDEFs starting with the character strings TSO, CICS, and IMS).

   To initialize your new application list, issue the following command through the operator facility:

   KLGCAPLT

4. Assign the application list to users. For more information, see “Assigning static application lists” on page 32.

Example 3: The GROUP parameter for separate menu panels
Creating a static application list

You can also use the GROUP parameter to help you construct menus. All the authorized applications that share the same group number display together on each menu panel.

For example, if you have CL/SuperSession, you might want to list SINGLE applications on one menu panel, and MULTI applications on another.

1. You want TSO, IMS, and CICS to be SINGLE applications, and NetView and PROFS™ to be MULTI applications. That is:
   - Member KLSCAPLS of -THILEV-.SKLSCMDS includes APPLDEF commands that define TSO, IMS, and CICS as SINGLE applications with GROUP=100.
   - Member KLGCAPls of -THILEV-.SKLSCMDS includes APPLDEF commands that define NetView and PROFS as applications with GROUP=200 and MULTSESS=YES.

2. In -RHILEV-.RLSPARM, create a member named LIST1. In LIST1, list the authorized applications by group, as follows:

   ```
   GROUP=100
   TSO
   IMS
   CICS
   GROUP=200
   NETVIEW
   PROFS
   ```

3. Add the following command to -RHILEV-.RLSCMDS(KLGCAPlT):

   ```
   APPLIST LIST1
   ```

   To initialize your new application list definition, issue the following command through the operator facility:

   ```
   KLGCAPlT
   ```

4. Assign the application list to users. For more information, see “Assigning static application lists” on page 32.

Example 4: TYPE=EXCLUDE

You can create a member that contains only the applications you want to exclude from a group of users. This may be a more efficient way to use authorized application lists when you want to allow access to many applications and restrict access for only a few applications.

This example creates a list that contains only applications to which you do not want to give access.

1. Verify that the applications you want to exclude are defined with the APPLDEF command in member KLSCAPLS or KLGCAPls in -RHILEV-.RLSCMDS.

2. Create member LIST1 in -RHILEV-.RLSPARM. For this example, LIST1 contains the following:

   ```
   NETVIEW
   OMEGAMON
   VTPOPER
   ```

3. To define the application list, add the APPLIST command with the TYPE=EXCLUDE parameter to member KLGCAPlT in your commands library, as follows:

   ```
   APPLIST LIST1 ID=TECHDOC TYPE=EXCLUDE
   ```

   This list gives Technical Documentation (TECHDOC) access to all defined applications except NetView, OMEGAMON, and the operator facility (VTPOPER).
Creating a static application list

To initialize your new application list definition, issue the following command through the operator facility:

\texttt{KLGCAPLT}

4. Assign the application list to users. For more information, see “Assigning static application lists.”

Assigning static application lists

You can define a local application list for a specific user, define an application list for a group of users, or define a global default application list for all users. There are several ways to implement a static application list:

- Use the menu-driven administrator functions to assign an APPLIST to a specific user, a group of users, or as a default for all users. Summary step-by-step instructions for assigning applications are provided in “Assigning a default static application list.” For a more complete discussion of assigning applications to users through the administrator panels, see Chapter 6, “Using administrator functions,” on page 37.

- Specify APPLIST in the HOSTGATE configuration, -RHILEV- .RLSPARM(KLGICFG1). This will allow a hard coded APPLIST definition or a panel exit. You can then specify the dialog or exit routine to resolve the element name. For further information on assigning APPLISTS through dialogs or exits, see “Configuration” in the IBM CL/SuperSession for z/OS V2.1 Customization Guide.

Assigning a default static application list

After you build a static application list as discussed in “Assigning Static Application Lists,” assign the application list to the GLOBAL Profile as follows:

1. From the Main Menu, press F10. The cursor will move to the action bar.
2. Type m and press Enter. The Administrator Menu appears.
3. The cursor is next to Profile administration. Press Enter. The Profile Selection Menu appears.
4. Type s(Start) next to View GLOBAL profile, and press Enter. The Update GLOBAL Profile window appears.
5. Type a slash (/) next to Common and press Enter. The GLOBAL common Profile segment window appears.
6. Move to Application List ID input field, fill in the APPLIST name, and press Enter.
7. Press F12 repeatedly to return to the Main Menu.

Assigning application lists to specific users

To assign an application list to a specific user, do the following:

1. From the Main Menu, press F10. The cursor will move to the action bar.
2. Type m and press Enter. The Administrator Menu appears.
3. The cursor is next to Profile administration. Press Enter. The Profile Selection Menu appears.
4. The cursor is next to View user profiles. Type s(Start). The cursor moves to Mask:. Type the user ID and press Enter. The Update User Profile window appears.
5. Type a slash (/) next to Common and press Enter. The User Common Profile segment window appears.
6. Tab to the **Application List ID** field, fill in the user’s APPLIST name, and press **Enter**.

7. Press **F12** repeatedly to return to the Main Menu.

---

**Using dynamic application lists**

A dynamic application list uses your resident security system to retrieve and build an application list. As each user logs on, CL/SuperSession queries the security system, excludes all unauthorized applications, and builds the user’s menu.

The advantage of using dynamic application lists to restrict user access to applications is that these lists have little or no impact on existing security administration procedures. The security system continues to serve as the central definition point for all users of the system.

This section explains how to set up dynamic application lists through RACF, CA-ACF2, and CA-TOP SECRET.

**Notes**:  
1. The session ID is the one- to-eight-character session name used by CL/SuperSession to access the application.  
2. The applid is the VTAM network name for an application.  
3. The session IDs are either defined by APPLDEF commands or by session profiles.  
4. The resource validation performed by your External Security Manager can be against the session ID or the application ID or both. The GLOBAL.COMMON.PROFILE setting:  
   Resource validation....... S|A|B controls which resource is used.

**With RACF**

Modify your configuration as follows.

1. Add the following entry to `-RHILEV-.RLSPARM(KLVINNAM):
   
   ```
   CLASSES=dynaplst  
   where dynaplst is a member in -RHILEV-.RLSPARM.  
   ```

2. Define `dynaplst` in `-RHILEV.RLSPARM` to contain:
   
   ```
   VGWAPLST EXTERNAL=APPL  
   ```

   **Note:** Use the IBM supplied resource class of APPL, as in the previous example or modify your site's resource class with the same definition.

Your RACF administrator must also make the following changes to RACF:

1. Issue the RDEFINE command using APPL as the class. The resource names are applids and/or session IDs. For more information, see "Session types” on page 21. The session ID corresponds to the ENTITY parameter on the RACHECK (FRACHECK) macro.

   The following example gives universal access to the class APPL:

   ```
   READY  
   RDEFINE APPL sessionid UACC(READ)  
   ```

   **Note:** The `sessionid` value must be in uppercase.
With RACF

Issue the RDEFINE command for each application that is defined within CL/SuperSession.
The following RACF commands illustrate how to set up more restricted access to an application.

```
READY
RDEFINE APPL sessionid UACC(NONE)
PERMIT sessionid CLASS(APPL) ID(userid)
```

2. Issue the following command:

```
READY
SETROPTS CLASSACT(APPL)
```

If, at any time, definitions in RACF are modified, added, or deleted, they can be reflected immediately by issuing a NAM RACLIST command from the operator facility. For more information on the NAM RACLIST command, see the CL/SuperSession Operator’s Guide.

Note: Previous references to session ID can also include or be replaced by VTAM network name (APPLID). Refer to Chapter 6, “Using administrator functions,” on page 37.

Managing applications based on groups of users

You can use the RACF CONNECT command to manage applications based on user groups as follows:

1. Define the ICHERCDE macro as described in the chapter about Network Access Manager in the IBM CL/SuperSession for z/OS V2.1 Customization Guide. This example uses a class named $SESSMAN.
2. Define a group to RACF:

```
Addgroup GROUP1 SUPGROUP(SUPGRPNM)
```

3. Issue RACF PERMIT commands to permit the application to the group, rather than to the user:

```
PERmit TSO CLASS($SESSMAN) ID(GROUP1) ACC(READ)
PERmit HELPDESK CLASS($SESSMAN) ID(GROUP1) ACC(READ)
```

4. Connect the user to the group:

```
CONNECT userid GROUP(GROUP1)
```

Note: Be sure to issue the following commands to get a new copy of resource list:

```
SETROPTS RACLIST ($SESSMAN) REFRESH NAM RACLIST
```

With CA-ACF2

Modify your configuration as follows:

1. Add the following entry to -RHILEV-RLSPARM(KLVINNAM):

```
CLASSES=dynaplst
```

where dynaplst is a member in -RHILEV-RLSPARM.

2. Define dynaplst in -RHILEV-RLSPARM to contain

```
VGWAPLST EXTERNAL=APL
```

where EXTERNAL=APL refers to a resource class of R-APL.

Your ACF2 administrator must also make the following changes to ACF2:

1. Define R-APL in ACF2 and associate it with ACF2 resource names.
These ACF2 resource names are the session IDs that you defined in the APPLDEF command. For more information, see “Session types” on page 21.

2. Determine the access rights for each session ID by a generalized resource rule in ACF2.

Your ACF2 administrator can use the following example as a guide to setting the generalized resource rule with application names. The example uses TSOA as the application name.

a. From the TSO READY prompt type ACF, and press Enter.
b. At the ACF prompt, type SET RESOURCE(APL), and press Enter.
c. At RESOURCE, type COMPILE *, and press Enter.
d. At the ACF COMPILER ENTERED prompt, type:
   
   ```
   . $KEY(TSOA) TYPE(APL)
   . UID(your_userids) ALLOW
   . */
   ```
   
   Press Enter.

e. At the RESOURCE prompt, type STORE, and press Enter.

The rule shown here defines only one application, TSOA. To specify other applications, add more $KEY(sessionid) TYPE(APL) statements to this rule.

Note: Previous references to session ID can also include or be replaced by VTAM network name (APPLID). Refer to Chapter 6, “Using administrator functions,” on page 37.

With CA-TOP SECRET

For all versions of CA-TOP SECRET, member KLSTSNEV in SKLSSAMP provides enhanced messaging. This allows unedited CA-TOP SECRET messages to be displayed to the user.

1. Copy dialog KLSVSSEC from -THILEV-.SKLSSAMP to -RHILEV-.RLSPNLS.
2. Use the dialog to display the error messages.

The steps you take to set up a dynamic application list through CA-TOP SECRET will vary depending on the version of CA-TOP SECRET installed. For all versions, the first 2 steps are the same. Thereafter, one procedure is followed to set up dynamic application lists for CA-TOP SECRET Versions 4.1 and earlier. Another procedure is followed to set up dynamic application lists for CA-TOP SECRET Version 4.2 and later.

Version-Independent Configuration

The following two preliminary configuration steps should be taken by anyone setting up dynamic application lists through CA-TOP SECRET.

1. Add the following entry in -RHILEV-.RLSPARM(KLVINNAM)

   ```
   CLASSES=dynaplst
   ```

   where dynaplst is a member in -RHILEV-.RLSPARM.

2. Define dynaplst in -RHILEV-.RLSPARM to contain

   ```
   VGWAPLST  EXTERNAL=external_class
   ```

   where external_class is the CA-TOP SECRET FACILITY name.

CA-TOP SECRET Versions 4.1 and Earlier Configuration
With CA-TOP SECRET

The following steps are taken next for CA-TOP SECRET Version 4.1 and earlier:

1. In each user's CA-TOP SECRET access ID, specify access to the FACILITY named task.
2. Allow your users access to each session ID through the Limited Command Facility (LCF) under the FACILITY, as in the following example

   `TSS ADD(userid) CMD(task,(sessionid, ...))`

   where task is the name of the FACILITY. Be sure to set MODE=FAIL.

   **Note:** Previous references to session ID can also include or be replaced by VTAM network name (APPLID). Refer to Chapter 6, “Using administrator functions,” on page 37.

CA-TOP SECRET Versions 4.2 and Later Configuration

CA-TOP SECRET 4.2 modified the technique that CL/SuperSession uses for the Dynamic APPLIST Facility. A new Resource Definition Table (RDT) was introduced along with stricter checking of the CLASS parameter on FRACHECK macros.

Perform the following steps to use dynamic application lists with CA-TOP SECRET Version 4.2 or later.

1. Review the discussion of RDT in the CA-TOP SECRET Command Function Guide.
2. The following CA-TOP SECRET commands can be used to define an RDT class

   `TSS ADD(RDT) RESCLASS(external_class) RESCODE(id)`

   where `external_class` is the class you specified in the “EXTERNAL=ext_class” statement that is coded in the DYNAPLST member you created in -RHILEV-.RLSPARM. The RESCODE specification is a site-specific identifier for the RESCLASS defined in the RDT that provides a unique RDT entry identifier within that facility.

3. Set the violation threshold (VTHRESH) to NOTIFY.
4. Assuming KLV is specified as the `external_class`, specify definitions similar to the following example:

   `TSS ADD(RDT) RESCLASS(KLV) RESCODE(unique_id)`
   `TSS ADD(dept_acid) KLV(sess_id1,sess_id2,...,sess_idx)`
   `TSS ADD(userid) KLV(sess_id1,sess_id2,...,sess_idx)`
   `TSS PER(userid) KLV(sess_id1,sess_id2,...,sess_idx)`

   Optionally, a DEFPROT command can be issued to add additional security at other appropriate levels such as at the dataset, linklib, and terminal levels.

   **Note:** Previous references to session ID can also include or be replaced by VTAM network name (APPLID). Refer to Chapter 6, “Using administrator functions,” on page 37.
Chapter 6. Using administrator functions

The procedures that are described in this chapter can be performed only by a user with administrator authority.

Introduction

As the CL/SuperSession administrator, you will set system authorization and control parameters as part of product configuration. These system parameters are set through profiles. You can also assign triggers and applications through profiles. For information on using triggers, see the IBM CL/SuperSession for z/OS V2.1 User’s Guide.

Profile values are assigned and changed through administrator functions. You perform administrator functions through the Administrator Menu that displays when you select Admin on the Main Menu action bar. Administrator functions are used to:
• Set, update, and review profile parameters
• Maintain logmode definitions

This chapter explains how to use the administrator functions. All administrator functions require that you have administrator authority. If your Main Menu action bar does not include the keyword choice Admin, you cannot use the functions described here.

The following terms are essential to understanding the rest of this chapter:
• The action bar is the top line on a panel; it contains the keyword choices you can select.
• Selection of any action bar choice results in display of a pull-down menu.
• The home position is the first data input character position on the screen. When a panel displays, the cursor is in the home position.

For instructions on making menu selections and navigating through the other panels, see the IBM CL/SuperSession for z/OS V2.1 User’s Guide.

Assigning administrator authority

There are two ways to assign administrator (ADMIN) authority to a user.
• The first method that is described in the following can be used to assign ADMIN authority to any user.
• The other method can be used only for users who are not yet defined to CL/SuperSession.

Note: The user doing the assigning must have ADMIN authority in CL/SuperSession.

All users

To assign the ADMIN function to any user, do the following:
1. Select M from the action bar. The Administrator Menu appears.
2. Select option 1 (Profile administration). The Profile Selection Menu appears.
3. Select View user profiles (Mask:*____). In the Mask field, type the Userid you want to assign the ADMIN function to and press Enter. The Update User Profile panel appears.

4. Select Common from the profile segments. The User Common Profile Segment panel appears.

5. Change Administrator authority to Y and press Enter.

6. Press F12 repeatedly to exit the ADMIN function.

The next time the user logs on, the ADMIN action bar choice will appear on the user’s Main Menu.

**Undefined users only**

If the user to whom you are assigning ADMIN authority is not yet defined to CL/SuperSession, you can issue the following NAM commands from the operator facility panel:

```
NAM SET userid PASSWORD=password
NAM SET userid VSPADMIN:Y
```

where `userid` is the ID of the user to whom you are assigning authority, and `password` is that user's password.

These instructions can also be issued from the z/OS console as Modify commands:

```
F klx,NAM SET userid PASSWORD=password
F klx,NAM SET userid VSPADMIN:Y
```

When the user logs on to CL/SuperSession for the first time, the profile will be built first from the NAM, then from the global/group profiles. After the profile is built, the NAM is no longer used.

**About profiles**

CL/SuperSession implements three types of profiles: global, group, and user. The three types of profiles form a hierarchy.

The GLOBAL Profile is the highest level and provides the broadest authorization. There is only one GLOBAL Profile. When your system is installed, a default GLOBAL Profile is created. You can then update it. In general, the default GLOBAL Profile applies to all users at your installation unless overridden by group or user profiles. The examples in this chapter use GLOBAL Profile authorization.

You create group and user profiles so that you can grant authorities and set parameters that apply only to certain groups or individual users. You can create as many group and user profiles as you want. In general, system authorization and control parameters that are assigned in the GLOBAL Profile are overridden by those set in a group profile. Likewise, parameters set in a group profile can be overridden by settings in a user profile.

Be aware of the following system features when you use the administrator functions:

- Changes made to the GLOBAL Profile, or to group or user profiles, will not take effect until users issue the RESET command, or log off and log on again.
- The initial dialogs that are specified in the global, group, and user profiles are executed in that sequence when the user logs on to CL/SuperSession.
Creating and modifying profiles

This section explains how to invoke the administrator function, change the default GLOBAL Profile, and create group and user profiles.

Remember the following points:

- The GLOBAL Profile was assigned default values during installation. If those defaults are appropriate for all users, you do not need to change the values.
- You can use the Help (F1) key to get more information. Pressing the Help key while the cursor is in a data input field produces field-level help. Pressing the Help key while the cursor is not in a data input field produces general help information about the entire panel.

Before you begin, be sure that the Main Menu is displayed and that the cursor is positioned in the home position on the action bar. The home position is the first character position on the line marked by the first underscore character. Figure 2 illustrates a CL/SuperSession Main Menu. The session entries on your Main Menu will differ from those listed in the example. In the figure, an arrow points to the action bar home position.

![Figure 2. CL/SuperSession Main Menu](image)

The CL/SuperSession Main Menu displays if the user is not defined as a CL/SuperSession user.

**Invoking the administrator function**

With the cursor in the home position, type m and then press Enter. The Administrator Menu appears, as shown in Figure 3 on page 40.
Updating the GLOBAL Profile

While the Administrator Menu is displayed, select **Profile Administration**. The Profile Selection Menu displays, as shown in [Figure 4 on page 40](#).

With the cursor to the left of **View GLOBAL profile**, type **s** (Select) and press **Enter**. The Update GLOBAL Profile window displays, as shown in [Figure 5 on page 41](#).
The word GLOBAL appears as the profile name. This name cannot be changed.

The menu lists a number of profile segments. The information for a profile is contained in profile segments. Each profile segment contains access control parameters specific to its segment type, as follows:

- **Common**: Review and or update common values.
- **SupSess**: Sets CL/SuperSession values.
- **Sessions**: Sets the sessions defined through this profile.
- **Triggers**: Sets the triggers defined through this profile.
- **Window**: Sets the window control options for this profile.

Select the profile segments you want to update by entering / next to the segment name. From this point on, the activity you perform depends on the profile segments you choose.

The remainder of this subsection describes the pop-up windows that appear for each profile segment, and the way to complete each window. Each profile segment is described in a separate subsection in the order (from top left to right and down) of display in the Update Global Profile window.

To process each of the pop-up windows, do the following:
- Change existing values by typing over them.
- Fill in blank fields by typing values or by using the Prompt (F4) key.
- Save your changes by pressing Enter. The window for the next selected profile segment then displays.

If you have changed any selected segment, the following message displays after you process your last selected segment:

**Profile "GLOBAL" has been updated.**

If you make no changes, the message does not appear.
Updating the GLOBAL Profile

Updating common profile options
If you selected Common on the Update GLOBAL Profile window, the GLOBAL Common Profile Segment window displays.

```
+----------------------------------------------+
<table>
<thead>
<tr>
<th>m  Actions Options Commands Features Admin Help</th>
</tr>
</thead>
<tbody>
<tr>
<td>CL/S GLOBAL Common Profile Segment</td>
</tr>
<tr>
<td>Update profile &quot;GLOBAL&quot; then press Enter.</td>
</tr>
</tbody>
</table>
+----------------------------------------------+
Select sessions with a */" or                  |
<table>
<thead>
<tr>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Session ID Description</td>
</tr>
<tr>
<td>-------- -------- --------------------------</td>
</tr>
<tr>
<td>TSOA System A TSO</td>
</tr>
<tr>
<td>IMSA System A IMS</td>
</tr>
<tr>
<td>CICS8 System B CICS</td>
</tr>
<tr>
<td>IMSB System B IMS</td>
</tr>
<tr>
<td>VM VM/SP</td>
</tr>
<tr>
<td>ENGINE Operator</td>
</tr>
<tr>
<td>------------------------------------------------</td>
</tr>
<tr>
<td>(GBL) Administrator authority... N+ (Y or N)</td>
</tr>
<tr>
<td>(GBL) Maintain customized menu... N+ (Y or N)</td>
</tr>
<tr>
<td>(GBL) Add sessions to the menu... N+ (Y or N)</td>
</tr>
<tr>
<td>(GBL) Cursor selection... Y+ (Y or N)</td>
</tr>
<tr>
<td>(GBL) RTM interface... N+ (Y or N)</td>
</tr>
<tr>
<td>(GBL) Conditional EAB... Y+ (Y or N)</td>
</tr>
<tr>
<td>(GBL) No EAB... N+ (Y or N)</td>
</tr>
<tr>
<td>(GBL) Use default screen size... N+ (Y or N)</td>
</tr>
<tr>
<td>(GBL) Resource validation... S+</td>
</tr>
<tr>
<td>(GBL) Default language code... EN+</td>
</tr>
<tr>
<td>(GBL) Authorized features... Z+</td>
</tr>
<tr>
<td>(GBL) Timeout dialog... KLSLOCK</td>
</tr>
<tr>
<td>(GBL) Timeout interval... 01:00(HH:MM)</td>
</tr>
<tr>
<td>(GBL) Initial dialog...</td>
</tr>
<tr>
<td>(GBL) Application list ID...</td>
</tr>
<tr>
<td>(GBL) Group profile name...</td>
</tr>
<tr>
<td>(GBL) Description..._+</td>
</tr>
<tr>
<td>Command =====&gt;</td>
</tr>
<tr>
<td>Enter F1=Help F3=Exit F5=Reset F12=Cancel</td>
</tr>
</tbody>
</table>
```

Figure 6. GLOBAL Common Profile Segment Window

Figure 6 shows the initial global default values for the common profile segment. The 3-letter code appearing in parentheses to the left of each description field indicates the source of the definition. Because you are working on the GLOBAL Profile, GBL (for global) is the only code that appears.

The global common profile parameters have the following values:

**Administrator authority (Y or N)**

Y allows profile users to access and use the CL/SuperSession product administration interface. (Note: HelpDesk administration and operation is documented in Chapter 10, “The HelpDesk,” on page 115. If this authorization is not granted, the ADMIN keyword choice will not appear on the Main Menu action bar.

**Maintain customized menu (Y or N)**

Y allows users to maintain their own personalized menus. If this authorization is granted, users can do any of the following:

- Change the order of sessions on the menu.
- Delete sessions from the menu.
- Modify session parameters for sessions on the menu.
- Add sessions from the GLOBAL list.

The changes are saved during logoff, and the customized menu displays at the next logon.

**Add sessions to the menu (Y or N)**

This field specifies whether or not users can define new sessions to their menus. Users with this authority can add sessions that have not been defined in global or group profiles, or in authorized application lists.
Cursor selection (Y or N)

Cursor selection allows you to select a session from the Main Menu using the cursor or an action code. When this option is set to Y, you can select a session by putting the cursor beside the session ID and pressing Enter.

When this option is set to N, you must type S next to the session ID and press Enter.

RTM interface (Y or N)

Y specifies that the RTM interface will be invoked for users. For information on the RTM interface, see the IBM CL/SuperSession for z/OS V2.1 Customization Guide.

Conditional EAB (Y or N)

If you specify Y, the Dialog Manager extended attribute buffer (EAB) is allocated only if the physical terminal supports one. This reduces panel storage requirements for non-EAB devices. With the default setting of N, an EAB is allocated for every panel, even if the terminal does not support EAB.

Note: This option affects Dialog Manager panels only; it does not affect 3270 processing of applications.

A setting of Y for No EAB overrides the setting for Conditional EAB and prevents EAB allocation for all terminals.

No EAB (Y or N)

Y unconditionally suppresses allocation of a Dialog Manager extended attribute buffer (EAB) during panel construction.

This causes the Dialog Manager to avoid the use of extended datastream attributes (extended color, highlighting, and APL character set) in the panels it constructs. Panel storage requirements are reduced for all devices.

Note: This option affects Dialog Manager panels only; it does not affect 3270 processing of applications.

A setting of Y for No EAB overrides the setting for Conditional EAB and prevents EAB allocation for all terminals.

Use default screen size (Y or N)

Y causes panel construction to be guided by the default screen size parameters of the physical terminal. Set to N, panels are built for maximum screen size (normally the alternate screen size, rather than the default).

Resource validation (S, A, or B)

Resource validation comes into effect only when dynamic application lists are implemented. The available resource validation options are:

- **Session (S)**: Causes resource validation to use the session ID when calling the security exit.
- **Applid (A)**: Causes resource validation to use the application ID when calling the security exit.
- **Both (B)**: Causes resource validation to occur for both session and application IDs when calling the security exit.

Default language code
This field is assigned a 2-character value representing the national language in which panel text and messages display. The default is EN (English).

You can enter the code directly or make a selection on the Language Option window and have the value placed in this field. The Language Option window appears if you press the F4 (Prompt) key while the cursor is in the **Default language code** field.

All the languages available to you are listed on the Language Option window. In **Figure 7** English, French, German, French-Canadian, and Italian are available.

On the sample GLOBAL Common Profile Segment Window, EN (for English) was specified. Assume that you want to change the global default to French. Simply move the cursor to **French** and press **Enter**.

The GLOBAL Common Profile Segment Window will be displayed again, and the French national language code (FR) will be assigned to the **Default language code** field on the Common GLOBAL Profile window. The national language on the screen will change at the next logon or application selection.

You can use group and user profiles to assign specific languages to specific groups and users, and each user can also set a default language.

**Important:** Commands, command abbreviations, and action codes are translated to whatever default language you specify. For example, in English, you use the action code **s** to begin or resume a session from the main menu. However, in French, **s** signifies the action “Suppression de session,” which deletes the session.

---

**Authorized features**

Use this option to set the administrator-assigned features globally available to users. The number in the field indicates the number of features you have authorized for the GLOBAL Profile. The default is Cut and Paste and Send Message.
To select features, press the F4 (Prompt) key while the cursor is in the **Authorized features** field. The Update Features List window displays.

You can provide/prevent access to these features:

- Cut and Paste
- Send Message
- View Sessions

Refer to the *User’s Guide* for complete explanations of these features.

An asterisk (*) next to a feature indicates that the administrator has granted access to that feature. Figure 8 uses the defaults.

To add or delete access to a feature, type a or d next to the feature. The number shown on the GLOBAL Common Profile Segment window will change accordingly.

**Figure 8. Update Features List Window**

**Timeout dialog**

CL/SuperSession features an unattended terminal timeout capability, which prevents unauthorized access to computer resources. A timeout value determines the amount of time that a terminal may be idle before control is given to the dialog specified. A typical timeout dialog locks the terminal until the user enters a valid password. The dialog KLSLOCK (the default) is provided for this purpose.

You can also create or customize a dialog for handling timeouts. In that case, enter the name of your own timeout dialog in this field.

**Timeout interval (HH:MM)**

This field specifies the time interval (in the format *hh:mm*) that can pass before the timeout dialog identified in the previous control parameter (Timeout Dialog) takes control. If a timeout interval is not specified, no timeout occurs. The default is 00:15.

**Initial dialog**

This field identifies a customized dialog to be executed when users log on to CL/SuperSession. A separate panel permits the specification of an initial dialog for a subsequent virtual session logon. The named dialog performs additional initialization processing. There is no default.
Updating the GLOBAL Profile

Note: Customized dialogs are not supplied. You can create them by using the Structured Session Procedure Language (SSPL) described in the Dialog Language Reference Manual.

Application list ID
This parameter controls the assignment of static application lists. If you define applications with APPLDEF commands, you may want to restrict users to a subset of those applications through authorized application lists. To do this, enter the name of an authorized static application list defined in an APPLIST command in this field. There is no default.

Group profile name
This field is never assigned a value in the Global or Group common profile segments. It is used only when assigning user profile values (in the User Common Profile window).

Description
An alphanumeric text string that typically identifies the profile. To enter a description, press the F4 (Prompt) key while the cursor is in the Description field. A pop-up window displays, with space for you to enter an alphanumeric string up to 64 characters long. There is no default.

Updating CL/SuperSession Profile options
If you have selected SupSess on the Update GLOBAL Profile window, the CL/SuperSession GLOBAL Profile Segment window illustrated in Figure 9 displays.

Figure 9. CL/SuperSession GLOBAL Profile Segment Window

Figure 9 shows the initial global default values for the CL/SuperSession profile segment. Each profile parameter is described below.

SuperSession user (Y or N)
This field specifies whether or not users are authorized to maintain multiple concurrent virtual sessions. If this field is set to N, users will default to PASS and SINGLE type sessions only. To assign multi-session authority selectively to those who need it, use group or user profiles.

Maintain trigger profile (Y or N)
This field specifies whether users have authority to save their changes to the trigger profile when they log off.
Changes made to the trigger profile are permanent.

Changes made to the trigger profile are temporary. They are preserved until one of the following happens:

- The user logs off with no active sessions (when Preserve sessions upon exit is set to Y).
- The user's CL/SuperSession session is transferred, with no active sessions, from one terminal to another (via session portability).

Add triggers to profile (Y or N)
This field specifies whether users can create trigger definitions and add the new triggers to their profiles. To save additions, Maintain trigger profile must also be set to Y.

Modify triggers in profile (Y or N)
This field specifies whether users can modify existing trigger definitions. By default, users cannot modify the dialog name or any parameter field of any existing trigger definition. To save changes after log off, Maintain trigger profile must also be set to Y.

If you grant authority to modify triggers but not to add triggers, users can modify any field of a trigger definition except the dialog name. If you grant authority both to modify and to add triggers, users can modify all fields, including the dialog name. By changing the dialog name, a user could create a trigger that would execute a dialog you want to reserve for system administrators.

Data compression (Y or N)
Specifying Y allows data compression. Data compression can be turned off by specifying N in the session profile or the APPLDEF.

If data compression is performed, the system sends the minimum number of characters needed to update a screen. Character sequences that are the same as those already displayed are not sent. Consecutively repeated characters are sent in reduced format (3270 repeat to address order).

Data compression can affect input/output rates positively. It uses additional host resources to examine and compress the data stream.

Note: Specifying Y for compression may cause problems with PC file transfers. To mitigate this, a special trigger, ft, is provided.

For more detailed information concerning data compression, see the IBM CL/SuperSession for z/OS V2.1 Customization Guide.

Switch terminals (Y or N)
This field specifies session portability; whether or not users automatically have their sessions transferred to another terminal when they log on to CL/SuperSession from the other terminal.

Preserve sessions upon exit (Y or N)
This field specifies whether or not a user's virtual sessions will remain active after the user logs off. Because all sessions are virtual sessions, they can be saved as active sessions when the user logs off and even when the physical terminal is disconnected. If Y is specified, when the user logs back on, the virtual session will still be active and the user can resume the session(s).

Print screens (Y or N)
This field specifies whether or not a hard copy of the current screen image
Updating the GLOBAL Profile

can be directed to a printer by entering the p action code on the Main Menu or by executing the @p default trigger while viewing the screen.

Session limit (1-999)
This field specifies a maximum limit (1-999) on the number of virtual sessions that a user can have active at the same time. If this number is reached and the user attempts to establish another session, the attempt is denied and an error message displays. The default is 10.

Default printer name
This field specifies the name of a VTAM-defined printer to which any printed output generated by a user (such as a hard copy of the current screen) is routed. The value specified can also be the name of a VPRINTER ACB. See the discussion of virtual printers in the IBM CL/SuperSession for z/OS V2.1 Customization Guide. There is no default.

Updating Session Profile options
If you have selected the Sessions segment of the Update GLOBAL Profile window, the Update GLOBAL Session Profile window displays.

This panel allows you to:
1. Select an existing session by placing the cursor in the data entry field to the left of the session ID.
2. Type one of the following action codes, and press Enter:
   A  Add a session that is not already defined. When you press Enter, the Add a Session window displays.
   D  Delete a session. When you press Enter, the session is removed from your menu.
   M  Modify a session. When you press Enter, the Modify a Session Definition window displays.
   I  Display information. When you press Enter, the Additional Session Information window displays.
Add a session that is already defined. When you press Enter, the Add from GLOBAL Session List window displays (APPLEDEF’d).

Block a defined session from being available to lower-level profiles, for example, to prevent users from adding it to their own session menus. After you press Enter, the session description on the Update GLOBAL Session Profile window reads * BLOCKED *.

Unblock a blocked session, to make it available to lower-level profiles, for example, to prevent users from adding it to their own session menus. After you press Enter, the description * BLOCKED * on the Update GLOBAL Session Profile window is replaced with the normal session description.

Display the Action Code Menu (see Figure 11). You select the action by either entering the appropriate code in the screen home position (the_field) or positioning the cursor to the left of the action, and pressing Enter.

Figure 11. Action Code Menu

The succeeding paragraphs describe the windows used to perform each of the activities selected through an action code.

Adding a Session: If you specify a as the action code and press Enter, the window in Figure 12 on page 50 displays.
Data can be entered for all parameters listed on this screen. Data must be entered for the Session ID and VTAM Appl ID fields. Other fields either have defaults assigned to them or are optional. The fields have the following values:

### Session ID (Any 8 characters)
A 1- to 8-character session name that uniquely identifies the session on the Main Menu. Alphanumeric and special characters can be used. The session ID is always paired with an application ID, specified in the next screen field. A session starts when the session ID is selected from the menu or specified as an operand on a START or BACKGROUND command. There is no default.

### VTAM Appl ID
A 1- to 8-character VTAM application identifier. VTAM application IDs (APPLIDs) can contain alphanumeric and national characters. However, the first character must be alphabetic. There is no default.

### Display group (9999-0000)
A 1- to 4-digit number that organizes sessions into groups for display on the Main Menu. Groups are listed in high-to-low order. The default is the group number of the currently selected session.

### Display order (9999-0000)
A 1- to 4-digit number that specifies where to display the session on the Main Menu. Sessions are listed in high-to-low order within each display group. The default is the order number of the currently selected session.

### Description
A text description no more than 30 characters long; the description can contain alphanumeric and special characters. While not a required field, the description appears on the Main Menu, and could provide important information for new system users. There is no default.

### Initial dialog name
A 1- to 8-character dialog name that identifies a dialog to be executed when users log on to this session. The dialog named here will perform initialization processing. Frequently, the initialization performed includes supplying a session user ID and password. There is no default.

---

**Figure 12. Add a Session to a Profile Window**

Data can be entered for all parameters listed on this screen. Data must be entered for the **Session ID** and **VTAM Appl ID** fields. Other fields either have defaults assigned to them or are optional. The fields have the following values:

### Session ID (Any 8 characters)
A 1- to 8-character session name that uniquely identifies the session on the Main Menu. Alphanumeric and special characters can be used. The session ID is always paired with an application ID, specified in the next screen field. A session starts when the session ID is selected from the menu or specified as an operand on a START or BACKGROUND command. There is no default.

### VTAM Appl ID
A 1- to 8-character VTAM application identifier. VTAM application IDs (APPLIDs) can contain alphanumeric and national characters. However, the first character must be alphabetic. There is no default.

### Display group (9999-0000)
A 1- to 4-digit number that organizes sessions into groups for display on the Main Menu. Groups are listed in high-to-low order. The default is the group number of the currently selected session.

### Display order (9999-0000)
A 1- to 4-digit number that specifies where to display the session on the Main Menu. Sessions are listed in high-to-low order within each display group. The default is the order number of the currently selected session.

### Description
A text description no more than 30 characters long; the description can contain alphanumeric and special characters. While not a required field, the description appears on the Main Menu, and could provide important information for new system users. There is no default.

### Initial dialog name
A 1- to 8-character dialog name that identifies a dialog to be executed when users log on to this session. The dialog named here will perform initialization processing. Frequently, the initialization performed includes supplying a session user ID and password. There is no default.
Note: A number of sample initial dialogs are provided. Each of these dialogs enters the logon user ID and password for an application, as follows:

- **KLSONTSO**: Enters the user ID and password for TSO.
- **KLSONVM**: Enters the user ID and password for VM.
- **KLSONCIC**: Enters the CICS CSSN command.
- **KLSONCUA**: Enters the user ID and password for the CUA operator facility.

You can use one of these dialogs, or you can create your own initial dialog by using the Structured Session Procedure Language (SSPL) described in the *Dialog Language Reference Manual*. Dialogs must be copied from the sample library to the panels library.

**Termination dialog name**

A 1- to 8-character dialog name that identifies a dialog to take control after orderly termination of this session. Refer to the discussion of TERMDLG in the *IBM CL/SuperSession for z/OS V2.1 Customization Guide*. There is no default.

**Initial status (B, D, or F)**

Each session appearing on the Main Menu is assigned a status code that specifies if the session is to be started automatically when the user logs on to CL/SuperSession. The codes that can be assigned are:

- **B**: Background. The session is defined and activated. Its status is active, but it does not become the current session.
- **D**: Define. The session is defined but not activated. Its status is inactive.
- **F**: Foreground. The session is defined and activated. Its status is active and it becomes the current session. If more than one session is assigned the F status code, the last foreground session in the list becomes the current session.

Note: When you create a session, it is added to the Main Menu and its initial status is executed immediately.

**Terminal pool name**

The name specified must be a valid terminal pool name defined by a VSM command. There is no default.

During startup of a session, a virtual terminal is allocated from a virtual terminal pool. This mechanism enables many sessions to be active with one physical terminal.

Pools are sorted alphanumerically by pool name. If no virtual terminal pool is specified, the session is assigned to a pool in sort sequence. For more information on virtual terminals and virtual terminal pools, see "[Defining Applications](#)" and the *IBM CL/SuperSession for z/OS V2.1 Customization Guide*.

**VTAM logmode name**

The name specified must be a valid VTAM logmode name for your installation. There is no default.

The VTAM logmode identifies terminal characteristics such as screen size and device type, and establishes various rules and parameters for a session between an application and a terminal.
For more information on logmodes, see “Updating CL/SuperSession Logmode Tables” on page 67, and the IBM CL/SuperSession for z/OS V2.1 Customization Guide.

Userdata
Some applications allow or require that user-supplied data is passed as part of session establishment. For example, TSO accepts a logon ID, password, and other information. This field provides values for the application user-supplied parameters. This field accepts a text string no longer than 30 characters. Format of the text string is determined by the requirements of the application. There is no default.

See the discussion of APPLDEF in the IBM CL/SuperSession for z/OS V2.1 Customization Guide.

When you finish entering data, press F8 for a continuation panel. The window in Figure 13 displays.

```
+-----+-------------------------------------------------------------+
| m_ | Actions          | Add a Session to the Menu | More: -|
|     | Select s | Virtual terminal options |        |
|     | Sessi | Outbound data compression...... N | (Y or N)|
|     | TSOA | Inbound data compression...... N | (Y or N)|
|     | IMSA | CL/SuperSession reply mode..... N | (Y or N)|
|     | CICSB| Read-buffer mode................ N | (Y or N)|
|     | IMSB| Query passthru........................ N | (Y or N)|
|     | TSOB| Read-modified for PA keys...... Y | (Y or N)|
|     | VM | Read-modified for ATTN key..... Y | (Y or N)|
|     | ENGIN | Fullread mode.................... N | (Y or N)|
| Com | Command ===> | | |
| Ent | Enter F=Help F7=Bkwd F12=Cancel | | |
```

Figure 13. Add a Session to the Menu Window

This window shows the current virtual terminal options for the session and allows you to update them. These options control the flow of data between the virtual session and the physical session. The fields have the following values:

**Outbound data compression (Y or N)**
Outbound data compression reduces the amount of data sent to the physical terminal. Application data streams are modified to eliminate writing already-displayed data to the physical terminal. Repeating characters are also compressed.

If Y is specified, outbound data compression occurs. By default, data streams are passed through to the physical terminal uncompressed. This field should be set to N when performing file transfers.

**Inbound data compression (Y or N)**
Inbound data compression reduces the amount of data coming from a physical terminal. Application data streams sometimes contain field attributes that indicate they are modified fields. When an Enter or a PF key is pressed, the physical terminal sends the modified field data.
This field should be set to N when performing file transfers.

**CL/SuperSession reply mode (Y or N)**

CL/SuperSession reply mode can be used with specialized applications that rely on character attribute information being present in inbound data streams. By default, the reply mode established by the application (rather than by CL/SuperSession) is used.

**Read-buffer mode (Y or N)**

Read-buffer mode can be used with specialized applications that use an unformatted screen and rely on nulls (x’00’) being present in the inbound data streams. If Y is specified, a read-buffer command is issued when input is received from an unformatted screen. By default, the data stream is accepted as received from the physical device.

**Query passthru (Y or N)**

When a physical terminal logs on to CL/SuperSession, 3270 read partition query operations are used to collect all available query reply data from the terminal. The data is saved for the duration of the physical terminal session and can normally be used to satisfy any read partition query operation from an application without performing I/O to the device. In some instances, however, the device may dynamically change the query reply data. The dynamic addition of the DDM query reply by some PC file transfer programs is a notable example of how the device may change the query reply data.

When Y is specified, a read partition query from the application causes CL/SuperSession to collect all available query replies from the terminal before satisfying the application’s query request. Dynamically added or modified query replies are then made available to the application. For PC file transfer programs this should be set to Y.

**Read-modified for PA keys (Y or N)**

CL/SuperSession issues a read-modified when a PA key is pressed, saving any data that the user has typed since last pressing Enter or a PF key. This can cause problems at non-SNA physical terminals if the user presses another AID key too soon after pressing the PA key. CL/SuperSession detects that the inbound data stream is not in response to the read-modified and displays a terminal input error message.

If N is specified, CL/SuperSession does not issue a read-modified after the user presses a PA key.

**Read-modified for ATTN keys (Y or N)**

CL/SuperSession issues a read-modified when the ATTN key is pressed, saving any data that the user has typed since last pressing Enter or a PF key. This can cause problems at SNA physical terminals if the user presses another AID key too soon after pressing ATTN. CL/SuperSession detects that the inbound data stream is not in response to the read-modified and displays a terminal input error message.

If N is specified, CL/SuperSession does not issue a read-modified after the user presses ATTN.

**Fullread mode (Y or N)**

CL/SuperSession issues a read-buffer command whenever input is received from the physical terminal. This can cause significant network and processing overhead. Therefore, you should specify Y only for applications that must see the exact placement of null characters within the device buffer, such as VM/CMS XEDIT.
Updating the GLOBAL Profile

When you finish entering data, press Enter. The information you specified will be saved and the Update GLOBAL Session Profile screen redisplays.

**Updating the Session List:** To update the session list, specify L as the action code while the Update GLOBAL Session Profile window is displayed. When you press Enter, the window in Figure 14 displays.

![Figure 14. Add Sessions to Global Profile Window](image)

This window lists sessions already defined either in the GLOBAL Profile or from an APPLDEF command; the Source column indicates which. To add one of these sessions to the global session list, type A to the left of the session ID and press Enter. The session is added immediately.

**Modifying Session Definitions:** If you specify M as the action code while the Update GLOBAL Session Profile window is displayed, when you press Enter the window in Figure 15 displays.

![Figure 15. Modify a Session Definition Window](image)

Complete this screen as described in Adding a session.
Deleting a Session: To delete a session, specify d as the action code while the Update GLOBAL Session Profile window is displayed. A pop-up window appears asking you to confirm or cancel the deletion. If you confirm, the session is removed from lower-level profile menus.

Blocking a Session: Use the B action code to block a session defined in an APPLDEF or in a higher-level profile. When you block such a session, you make it unavailable to lower-level profiles. The description field for the session will read * BLOCKED *. A blocked session cannot be modified.

Unblocking a Session: Use the U action code to unblock a blocked session and restore its availability to lower-level profiles. The normal session description will replace the word * BLOCKED *.

Displaying Session Information: To display session information, specify i as the action code while the Update GLOBAL Session Profile window is displayed. When you press Enter, the window in Figure 16 displays.

![Session Information Window](image)

Figure 16. Session Information Window

This is an informational screen; data cannot be entered on it. Not all the information contained on this screen is entered through the administrator panels. The three-letter code appearing in parentheses to the left of each description field indicates the source of the definition:

- **APL** APPLDEF
- **GBL** GLOBAL Profile
- **GRP** Group profile
- **USR** User profile

If you press F8 from this panel, the virtual terminal options for the session display (see Figure 13 on page 52).
Updating trigger profile options

If you selected Trigger on the Update GLOBAL Profile window, the Update GLOBAL Trigger Profile window displays.

This window provides the following information about each trigger available to the GLOBAL Profiles:

- **Phrase**: The character string (no more than 8 characters) to be used along with a trigger key to invoke a trigger dialog. Use of a trigger phrase is optional.
- **Key**: The AID key that causes the trigger dialog to be executed.
- **Dialog**: The name of the dialog that is executed when the trigger is invoked.
- **Parameter**: The parameter whose value is passed to the trigger dialog when the dialog is executed.
- **Source**: The source of the trigger definition.

Specifying action codes

On the Update GLOBAL Trigger Profile window, you can:

- Add a trigger
- Delete a trigger
- Modify the trigger definition
- Block a trigger
- Unblock a trigger
- Display trigger information

To perform any of these activities:

1. Select an existing trigger by placing the cursor in the data entry field to the left of the trigger phrase.
2. Type one of the following action codes and press Enter:

   A  Add a trigger. When you press Enter, the Add a Trigger window will be displayed. The new trigger will be added to the global trigger profile.
D Delete a trigger. When you press Enter, the trigger will be deleted. The trigger will be removed from the global trigger profile.

M Modify a trigger. When you press Enter, the Modify A Trigger window displays.

B Block a trigger. The trigger will not be available to lower-level profiles.

U Unblock a trigger. The trigger will be available to lower-level profiles.

I Display information. When you press Enter, the Trigger Help window displays for IBM-supplied trigger dialogs.

/ Display the trigger Action Codes window. You select the action by either typing the appropriate code in the home position or positioning the cursor to the left of the code, and then pressing Enter.

Figure 18. Trigger Action Codes Window

Adding a Trigger: To add a trigger, specify a as the action code while the Update GLOBAL Trigger Profile window is displayed. When you press Enter, the window in Figure 19 on page 58 displays.
Data can be entered for all parameters listed on this screen. The Key value must be provided. Phrase, Dialog name, and Parameter values are optional.

**Phrase (any 8 characters)**

A trigger phrase is a string of 1 to 8 alphanumeric or special characters. This field is optional and there is no default.

The following conditions must be met to invoke a trigger:

- The current session must be a MULTI type session.
- One of the following:
  - A trigger phrase is entered in the first position of an input field and the trigger key is pressed (if the key is defined for the trigger). The cursor must still be in the input field.
  - The trigger key is pressed and there is no associated trigger phrase.

**Key**

This field identifies the key that, when pressed, causes a trigger dialog to be executed. There is no default.

Only certain keys can be selected as trigger keys (that is, PA1-3, F1-F24, ENTER, and CLEAR). You can type in the value or you can select it from the trigger Key Choices window illustrated in Figure 21. The trigger Key Choices window lists all valid trigger keys. To use this selection window, perform the following actions:

1. Press the Prompt (F4) key to display the window.
2. Position the cursor next to the key to be selected.
3. Press Enter.

There is no default.

**Note:** Both trigger phrase and trigger key are optional. However, one must be defined.
Dialog name

The name of the trigger dialog that will be executed when the trigger key is pressed. The value assigned must identify a dialog written in the Structured Session Procedure Language (SSPL). The name can include no more than 8 alphanumeric and special characters. There is no default.

If no dialog is associated with a trigger key-phrase combination and the trigger is invoked, the Main Menu displays.

Parameter (any 24)

This field can contain a string of no more than 24 alphanumeric and special characters. The parameter is passed to the trigger dialog in &sysparm when the trigger is executed. For more information on &sysparm, see the Dialog Language Reference Manual. The content and format of the parameter is determined by the requirements of the trigger dialog. There is no default.

When you finish entering data, press Enter. The information you specified will be saved and the Update GLOBAL Trigger Profile window redisplays.

Modifying Trigger Parameters: The procedure to modify trigger parameters is similar to that used to create a new trigger. To modify a trigger, specify m as the action code while the Update GLOBAL Trigger Profile window is displayed. When you press Enter, the window in Figure 21 on page 60 displays.
Data can be entered for all parameters listed on this screen.

Complete the fields on this screen as described previously in "Adding a Trigger". When you finish entering data, press **Enter**. The information you specified is saved, and the Update GLOBAL Trigger Profile window redisplays.

**Deleting a Trigger**: Specify **d** to delete a trigger definition. When you press **Enter**, the trigger will be deleted. The trigger will be removed from the global trigger profile.

**Displaying Trigger Definitions**: When you press **Enter**, the Trigger Help window is displayed for IBM-supplied trigger dialogs.

**Blocking Triggers**: Specify **b** to block a trigger. The trigger will not be available to lower-level profiles.

**Unblocking Triggers**: Specify **u** to unblock a trigger. The trigger will be available to lower-level profiles.

**Updating Window Profile options**

If you selected **Window** on the Update GLOBAL Profile window, the Window GLOBAL Profile Segment window displays.
You can use this panel to set keys and options for CL/SuperSession window control. The keys used for CL/SuperSession window control are separate from function keys used by other applications. The fields have the following values:

**Window control key**
This field sets the key that activates window control functions for users. Only certain keys are valid selections for this parameter (that is, F1 to F24, PA1 to PA3, or ATTN). Avoid setting the ATTN key as the window control key. By default, on SNA terminals the ATTN key returns the user to the Main Menu. The default is PA1.

**Display window (Y or N)**
By default, when a user presses the window control key, a pop-up window displays and allows selection of a window control function. If you set this field to N, the pop-up window does not appear, and window control waits for the user to press a second key to complete the function.

**Vertical split key**
This key splits the screen vertically at the cursor position. Only certain keys are valid for this parameter (that is, F1 to F24 or PA1 to PA3). The default is F4.

**Horizontal split key**
This key splits the screen horizontally at the cursor position. Only certain keys are valid for this parameter (that is, F1 to F24 or PA1 to PA3). The default is F2.

**Zoom/Unzoom key**
This key enlarges a window to full-screen display. Pressing the zoom/unzoom key a second time restores the multiple window display. Only certain keys are valid for this parameter (that is, F1 to F24 or PA1 to PA3). The default is F3.

**Next window key**
This key jumps to the next active window. Only certain keys are valid for this parameter (that is, F1 to F24 or PA1 to PA3). The default is F9.

**Scroll up key**
This key moves the cursor up in a window when the information available
for display exceeds the size of the window. Only certain keys are valid for this parameter (that is, F1 to F24 or PA1 to PA3). The default is F7.

Scroll down key
This key moves the cursor down in a window when the information available for display exceeds the size of the window. Only certain keys are valid for this parameter (that is, F1 to F24 or PA1 to PA3). The default is F8.

Scroll left key
This key moves the cursor left in a window when the information available for display exceeds the size of the window. Only certain keys are valid for this parameter (that is, F1 to F24 or PA1 to PA3). The default is F10.

Scroll right key
This key moves the cursor right in a window when the information available for display exceeds the size of the window. Only certain keys are valid for this parameter (that is, F1 to F24 or PA1 to PA3). The default is F11.

Delete key
This key deletes the window that contains the cursor. If the user deletes a zoomed window, the next window appears, and the screen resumes an unzoomed (multiple window) display. Only certain keys are valid for this parameter (that is, F1 to F24 or PA1 to PA3). The default is F5.

Creating a new group or user profile
To create a new group or user profile, do one of the following:
• Create the profile without using an existing profile.
• Copy an existing profile and modify the copy.

Creating a new profile without copying data
Perform these steps to create a new profile without using an existing profile:
1. While the Administrator Menu is displayed, select Profile Administration. The Profile Selection Menu displays.
Creating a new profile without copying data

2. With the cursor to the left of the profile level you want (group or user), type a (for Add profile). In the Mask field, type the name to be assigned to the new profile, and press Enter.

   The Add Profile window displays [Figure 24].

   ![Figure 24. Add Profile Window]

3. Depending on the type of profile you select, when you press Enter either the Update Group Profile window or the Update User Profile window displays. You can accept the defaults shown in the window, or select the segments for modification as described in “Updating the GLOBAL Profile” on page 40.
Copying a group or user profile

Rather than creating a new profile from scratch, in many cases you can start by copying an existing profile. Doing so will reduce the amount of data you need to enter. You need only change values that are not appropriate for the new profile. You can copy a user profile only to a user profile, and a group profile only to a group profile.

Perform these steps to create a new profile from an existing one:

1. While the Administrator Menu is displayed, select Profile Administration. The Profile Selection Menu displays.

2. With the cursor to the left of the profile level you want (group or user), type c (for Copy profile). In the Mask field, type the name of the profile you want to copy, and press Enter. The Copy/Create Profile window displays (Figure 25).

3. Type the name to be assigned to the new profile and press Enter. If the name you choose is already the name of an existing profile, a pop-up window will ask whether you want to replace the existing profile or cancel the request. Otherwise, the new profile will be created immediately. The values for all profile segments that exist will be copied to the new profile.

4. A message indicates successful completion of the profile copy. Press Enter, and control returns to the Profile Selection window. Update the copy as described in Updating a Group or User Profile.

---

Updating a group or user profile

The procedures for updating a group or user profile are almost the same as those for updating a GLOBAL Profile.

1. While the Administrator Menu is displayed, select Profile Administration. The Profile Selection Menu displays.
2. From the Profile Selection Menu, type s to the left of the level of profile (group or user) you want to update. In the Mask field, type the name of the profile you want to update, and press Enter.

The only major difference is that when you update a user profile, you can specify a group that the user profile will belong to. On the Common User Profile Segment window, specify the name of an existing group in the field Group profile name. The values for the user profile parameters will then be a combination of the global values and the values that are modified for the group profile. (You can override these values in the individual user profiles.)

Deleting a group or user profile

Perform these steps to delete a group or user profile:
1. While the Administrator Menu is displayed, select Profile Administration. The Profile Selection Menu displays.
2. With the cursor to the left of the level of the profile you want to delete (group or user), type d. In the Mask field, type the name of the profile you want to delete, and press Enter.

Viewing profile information

You can view information about your profiles and about the tables associated with each profile.

Perform these steps to view profile information:
1. On the Administrator Menu, select Profile administration. The Profile Selection Menu displays.
2. To view information about all profiles:
   a. Type i in all 3 input fields on the left side of the window.
   b. Enter an asterisk (*) in both Mask fields.
   c. Press Enter.
   To view information about one type of profile:
   a. Type i to the left of the profile line.
   b. Type the profile name in the adjacent Mask field.
   c. Press Enter.

You can limit the information display by using a mask; only profile names that match the mask will be selected. For example, to view only those group profiles that begin with the letters admin, type admin* in the Mask field to the right of View group profiles (as shown in Figure 26 on page 66). The default mask is *, or all profiles of a selected type.
After you enter the display criteria on the Profile Selection Menu, the Profile Summary window appears. The example shown in Figure 27 is the profile summary resulting from a request for all group profiles beginning with the letters admin.

The Profile Summary gives you a list of profile names to choose from. The profile names are sorted first by type (user, then group, then global), then by name.

For each profile listed, you see the following at a glance:

- What type the profile is (USR, GRP, or GBL).
• When the profile was created.
• When the associated tables were last modified. If a particular table does not exist, N/A appears on the summary.

3. To view further information about the tables associated with a specific profile, type i to the left of the profile name on the Profile Summary window. The Profile Information window appears.

![Figure 28. Profile Information Window](image)

The Profile Information window shows:
• The full names of the tables associated with the profile
• The date when each table was created
• The date when each table was last modified
• The amount of memory required for each table

When you press F12 to exit the Profile Information window, you return to the Profile Summary window.

4. To view detailed information about a profile, type s (Select) in the data entry field to the left of the profile name on the Profile Summary window. The Update Profile window appears and lets you select profile segments to view or update.

### Updating CL/SuperSession Logmode Tables

The VTAM logmode identifies terminal characteristics, such as screen size and device type, and establishes various rules and parameters for a session between an application and a terminal. To establish a session, VTAM must find in a logmode table the logmode entry name specified during the logon request.

CL/SuperSession maintains an internal table that contains the VTAM logmode definitions. This section explains how to update your CL/ SuperSession internal logmode table through the Administrator Menu. These modifications do not affect
the VTAM logmode table. For a more detailed explanation of logmodes, see the IBM CL/SuperSession for z/OS V2.1 Customization Guide and IBM's VTAM Customization.

Perform these steps to begin customizing your CL/SuperSession logmode table:
1. Select Admin from the Main Menu action bar. The Administrator menu will appear.
2. Select Update Logmode Table from the Administrator Menu. The Update Logmode Table window (Figure 29) displays.

The first time you display the Update Logmode Table window, it shows a default set of entries. You can accept the defaults or change the logmode table as desired.

The Update Logmode Table window gives three kinds of information about each entry:

PSERVIC The presentation services portion of the BIND established between the physical and virtual terminals at logon. Each logmode table entry must have a unique PSERVIC ID.

When a user logs on to CL/SuperSession, the physical terminal’s PSERVIC is compared with the PSERVIC IDs in this table. If a match is found, the virtual terminal is assigned the logmode that matches the logmode variable in your commands library member KLS$VSMS. If a match is not found, the DEFAULT table entry is used.

DEFLMODE The default logmode for the entry.
Description A short (under 30 characters) description of the logmode table entry.

From the Update Logmode Table window, you can use the following action codes:
A Add a new logmode table entry without basing it on an existing entry.
C Create a new logmode entry by copying an existing entry and modifying the copy.
M Modify an existing logmode table entry.
D Delete a logmode table entry.
Note: Use the F9 key to restore the logmode table to the default values. Any customization to the logmode table is deleted.

Adding a logmode table entry

To add to the Logmode Table a new entry not based on any existing entry, type a in an input field to the left of any PSERVIC on the Update Logmode Table window, and press Enter. The Add a New Logmode Entry window (Figure 30) appears.

Figure 30. Add a New Logmode Entry Window

You can now fill in the fields on this window to create a logmode table entry. Your new entry must have a unique PSERVIC. For detailed information on the default logmode, default virtual terminal pool, and logmode types (SNA or non-SNA, queriable or nonqueriable), see the IBM CL/SuperSession for z/OS V2.1 Customization Guide.

A description of the logmode table entry is optional. The description can be any string that does not exceed 30 characters.

After you fill in the fields on the Add a New Logmode Entry window, press Enter to save the new table entry. The new entry is immediately added to the logmode table, sorted in ascending PSERVIC order.
Copying a logmode table entry

To create a new logmode table entry based on an existing entry, type c on the Update Logmode Table window, in the input field to the left of the entry you want to copy, and press Enter. The Copy Logmode Table window (Figure 31) appears, showing the values of the entry you copied.

The only field you must change is the PSERVIC, which must be unique. You can then change other fields as desired. Make sure your description differentiates the new entry from the entry you copied. For detailed information on the default logmode, default virtual terminal pool, and logmode types (SNA or non-SNA, queriable or nonqueriable), see the IBM CL/SuperSession for z/OS V2.1 Customization Guide.

After you make all desired changes on the Copy Logmode Table window, press Enter to save the new table entry. The new entry is immediately added to the logmode table, sorted in ascending PSERVIC order.

Modifying a logmode table entry

To modify an existing logmode table entry, type m on the Update Logmode Table window, next to the entry you want to modify. Press Enter. The Modify Logmode Table window (Figure 32) will appear.

Figure 31. Copy Logmode Table Window

The only field you must change is the PSERVIC, which must be unique. You can then change other fields as desired. Make sure your description differentiates the new entry from the entry you copied. For detailed information on the default logmode, default virtual terminal pool, and logmode types (SNA or non-SNA, queriable or nonqueriable), see the IBM CL/SuperSession for z/OS V2.1 Customization Guide.

After you make all desired changes on the Copy Logmode Table window, press Enter to save the new table entry. The new entry is immediately added to the logmode table, sorted in ascending PSERVIC order.
The only field you cannot change is the PSERVIC field.

After you make all desired changes on the Copy Logmode Table window, press Enter to save the updated table entry.

Deleting a logmode table entry

To delete an existing logmode table entry, type \texttt{d} on the Update Logmode Table window next to the entry you want to delete. Press Enter.

You cannot delete the DEFAULT entry, which is used to set the default logmode if a physical terminal's PSERVIC does not match any entry in the table.

Viewing logmode table information

To view information about a logmode table entry, type \texttt{i} next to the entry's PSERVIC. Press Enter. The Information on Logmode Table window \texttt{Figure 33 on page 72} will show the current specifications for the entry you selected. This window is strictly informational; you cannot use it to update the logmode table.
Figure 33. Information on Logmode Table Window
Chapter 7. Starting and stopping CL/SuperSession

You have now configured CL/SuperSession.

This chapter provides instructions for starting and stopping CL/SuperSession.

Starting CL/SuperSession

Issue this command from the system console:

```
S kls
```

where kls is the started task procedure name in your system PROCLIB.

**Note:** Although not a recommended procedure, the address space can be started as a batch job. Refer to the comments in the KLS procedure in SKLSSAMP for information on how to create the member that runs the job.

Stopping CL/SuperSession

Issue this command from the system console:

```
P kls
```

The system displays this message:

```
+KLVOPO22 SHUTDOWN MUST BE CONFIRMED WITHIN 15 SECONDS
```

Reissue this command from the system console:

```
P kls
```

where kls is the started task procedure name in your system PROCLIB.

**Note:** By default, the second P kls command must be issued within 15 seconds to confirm shutdown. You can override the default by changing the CONFIRM parameter. Setting CONFIRM=0 will bypass confirmation.

Refer to the *IBM CL/SuperSession for z/OS V2.1 Customization Guide* for more information on changing the CONFIRM parameter.

The address space can also be stopped through the operator facility by issuing a SHUTDOWN command twice. Refer to the *IBM CL/SuperSession Operator’s Guide* for more information on the SHUTDOWN command.

What happens during initialization

The members of the following 3 libraries are used to perform initialization.

- **TLVPARM** Initialization library. Consists of configuration members that contain data sources and data types, and initialization parameter specifications.

- **TLVCMD** Command library. Consists of members containing command lists. Most are automatically invoked at start-up time to perform system initialization, and establish a standard execution and processing environment.
What happens during initialization

TLVPNLS  Panel library. Consists of members containing the dialogs that define the user interface.

The members, the libraries they belong to, and the flow of control between called members is shown in Figure 34. In the figure, I, C, and P refer to the initialization, command, and panel libraries respectively.

Following the figure are descriptions of each member, with examples of the commands and dialogs invoked.

**Note:** If changes were made to member names or content during installation and basic configuration, the descriptions provided here may not match those of your current setup. Product maintenance may also change the members' contents.

![Diagram](image-url)

**Figure 34. Default Startup of CL/SuperSession**

**KLSSYSIN**

Member in -THILEV-SKLSPARM. Contains the startup parameters for the CL/SuperSession address space.

- INITIAL(KLSSSTART)
- OPSTART(KLSOPSTR)
- LSRPOOL(32768,8)
- LSRPOOL(4096,32)
What happens during initialization

LSRPOLL(2048,8)
LSRPOLL(10240,32)
.
.
.

KLSTOPSTR

Member in -THILEV-SKLSCMDS. Provides initial commands for all operators. As provided with the product, folds commands to upper case and shows the time. This command list is executed automatically on behalf of each operator logging on.

PROFILE FOLD TIME

KLSTART

Member in -THILEV-SKLSCMDS. Starts the legacy operator facility (NODE) and the CUA Operator (KLVLOGON) then invokes command lists KL$VSMS, KLSCINSS, and KLHCDLGH.

NTD KLHSYNCH * INITIALIZE HELPDESK LOCAL & REMOTE ATTRIBUTES
NODE -VTPREF-0 * START CL/SUPERSESSION STANDARD OPERATOR FACILITY
DIALOG -VTPREF-5 KLVLOGON * START CL/SUPERSESSION CUA OPERATOR FACILITY

KL$VSMS
KLSCINSS
KLGCSTGW

NTD KLSSOPTS 'KLSTOPHA -USEHAO-' * SET HELPDESK HIGH AVAILABILITY OPTION
-HDSTART- * START HELPDESK
EVERY 2:00 * PREVENT S522 ABENDS
EVERY 30:00 STORAGE D * LOG STORAGE USE EVERY 30 MINUTES
EVERY 30:00 FLUSH * FLUSH VSAM LSR BUFFERS EVERY 30 MINUTES
EVERY 10:00 NTD KLSLOGDQ * DEQUEUE ACCESS MESSAGES EVERY 10 MINUTES

KL$SVSMS

Member in -THILEV-SKLSCMDS. Defines pools of VTAM logical units (virtual terminals) used to establish sessions for SINGLE or MULTI.

VSM DEF VIRTPARS -VTPREF-00 LOGMODE(DEFMODE) DEFER PARALLEL
VSM DEF VIRTDED -VTPREF-01 TH(10) LOGMODE(DEFMODE) DEFER DEDICATE
VSM DEF VIRTBPASS -VTPREF-11 TH(70) LOGMODE(DEFMODE) DEFER PASS
VSM DEF VIRT3270 -VTPREF-11 TH(70) LOGMODE(DEFMODE) DEFER
VSM DEF MODEL2 -VTPREF-11 TH(20) LOGMODE(DEFMODE) DEFER
VSM DEF MODEL3 -VTPREF-21 TH(30) LOGMODE(DEFMODE) DEFER
VSM DEF MODEL4 -VTPREF-31 TH(40) LOGMODE(DEFMODE) DEFER
VSM DEF MODEL5 -VTPREF-41 TH(50) LOGMODE(DEFMODE) DEFER
VSM DEF MODEL9 -VTPREF-51 TH(60) LOGMODE(DEFMODE) DEFER
VSM DEF TSOLGCAPLS -VTPREF-01 TH(99) LOGMODE(DEFMODE) DEFER DEDICATE

KLSCINSS

Member in -THILEV-SKLSCMDS. Issues the supplied CLIST that defines MULTI type applications.

KLGCAPLS

KLSCAPLS

Member in -THILEV-SKLSCMDS. Defines MULTI type applications accessible through CL/SuperSession including the TSO APPLDEF, which is shown below.
What happens during initialization

```plaintext
APPLDEF TSOSS
  DEST=-TSODEST-
  DESC='TSODEST- (PASSTHRU/MULTSESS)
  POOL=VIRTPASS
  INITDLG=KLSONTSO
  MULTSESS=YES
  GROUP=200
  HELP=KLSH1HLP
  * 
  *

KLGCSTGW

Member in -THILEV-SKLSCMDS. Additional CL/SuperSession initialization.
KLICIMTO  * DEFINE MTO VIRTUAL TERMINALS
KLGCAPLO  * DEFINE SINGLE AND PASS OPERATOR APPLICATIONS
KLGCAPLS  * DEFINE SINGLE AND PASS APPLICATIONS
KLICIDEF  * DEFINE IMS COMMANDS
KLGCAPLT  * DEFINE APPLIST COMMANDS
KLGBCGP   * DEFINE BCGROUP COMMANDS
KLGCCHGW   * DEFINE CL/SuperSession COMMANDS

KLICIMTO

Member in -THILEV-SKLSCMDS. Defines virtual terminal pools for virtual MTOs for IMS operator sessions used by CL/SuperSession support for IMS.
VSM DEF IMSOP  -VMTOPREF- TH(2) LOGMODE(SCS)
VSM DEF IMSOP1 -VMTOPREF- TH(4) LOGMODE(SCS)

KLGCAPLS

Member in -THILEV-SKLSCMDS. Defines PASS and SINGLE type applications accessible through CL/SuperSession including the TSO APPLDEF, which is shown below.
APPLDEF TSO
  DEST(-TSODEST-)
  SIMLOGON('&VIGUSER &VIPSWD')
  ORDER(5)
  DESC('-TSODEST-(CLSDST PASS)"
  userdata('LOGON &VIGUSER')
  HELP(KLSH1HLP)
  *

APPLDEF IMS
  DEST(-IMSDEST-)
  SIMLOGON('&VIGUSER &VIPSWD')
  ORDER(4)
  DESC('-IMSDEST-(CLSDST PASS)"
  HELP(KLIHIMS)
  *

KLICIDEF

Member in -THILEV-SKLSCMDS. Provides IMS/DC definitions used by CL/SuperSession support for IMS.
IMS
  IAASSIGN -
  APPLID(IMS1) -
  POOL(IMSOP) -
  DUMMY(FAKENODE) -
  MIN(1) -
```

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What happens during initialization

**KLGCAPLT**

Member in -THILEV-.SKLSCMDS. Defines the static application lists. Associates a broadcast group with a particular application list.

```
APPLIST KLGIAPL1 BCGROUP(GROUP1)
APPLIST KLGIAPL2 BCGROUP(GROUP2)
```

**KLGBCGP**

Member in -THILEV-.SKLSCMDS. Defines the messages for each broadcast group.

```
BCGROUP GROUP1 1
BCGROUP GROUP1 2
BCGROUP GROUP1 3
BCGROUP GROUP1 4
BCGROUP GROUP1 5
BCGROUP GROUP1 6

*  
BCGROUP GROUP2 1
BCGROUP GROUP2 2
BCGROUP GROUP2 3
BCGROUP GROUP2 4
BCGROUP GROUP2 5
BCGROUP GROUP2 6
```

**KLGCHGGW**

Member in -THILEV-.SKLSCMDS. Defines gateways into the VTAM network. Opens each gateway’s ACB and establishes the gateway’s environment.

When a user logs on to the ACB defined by a HOSTGATE command, the dialog specified by the DIALOG parameter receives control. The interface then executes under the direction of the configuration specified by the CONFIG parameter. The BCGROUP parameter associates the user logging on to a gateway with a specific broadcast group. The ATTENTION parameter activates window control.

```
HOSTGATE -VTMPREF-1
  CONFIG=KLGICFG1
  BCGROUP=GROUP1
  DIALOG=KLGATEWY
  ATTENTION=KLGWATTN

HOSTGATE -VTMPREF-2
  CONFIG=KLGICFG2
```
What happens during initialization

BCGROUP=GROUP2 -
DIALOG=KLGATEWY -
ATTENTION=KLGWATTN
HOSTGATE -VTPREF-3 -
CONFIG=KLGICFG3 -
BCGROUP=GROUP3 -
DIALOG=KLGATEWY

KLHCDLGH

Member in -THILEV-.SKLSCMDS. Defines HelpDesk initialization command. For more information about the HelpDesk features, see Chapter 10, "The HelpDesk," on page 115.

KLGIAPL1

Member in -THILEV-.SKLSPARM. Lists static application definitions for PASS and MULTI type applications. These applications are available to users who have been assigned an APPLIST of KLGIAPL1. The example lists applications defined in -THILEV-.SKLSCMDS library members KLGCAPLS and KLGCAPLO.

GROUP=200
* SESSIONS DEFINED IN RLSCMDS(KLSCAPLO)
*
VPSS
VPSSCUA
* SESSIONS DEFINED IN RLSCMDS(KLSCAPLS)
*
TSOSS
IMSSS
IMSDSS
IMSASS
CICSSS
*
GROUP=0
* SESSIONS DEFINED IN RLSCMDS(KLGCAPLO)
*
VTPOPER
CUAOPER
* SESSIONS DEFINED IN RLSCMDS(KLGCAPLS)
*
TSO
IMS
IMSDEQ
* IMSASSGN
CICS

KLGIAPL2

Member in -THILEV-.SKLSPARM. Lists static application definitions for SINGLE type applications. These applications are available to users who have been assigned an APPLIST of KLGIAPL2. The numbers 1 - 7 in the example identify applications defined in -THILEV-.SKLSCMDS library member KLGCAPLS.

GROUP=100
* SESSIONS DEFINED IN RLSCMDS(KLGCAPLS)
* 2
 3
 4
 5
 6
KLGICFG1

Member in -THILEV-SKLSPARM. Defines a CL/SuperSession configuration by specifying each data element (USERID, PASSWORD, APPLIST, and so on) with its list of data sources. The KLGICFG1 configuration example requires user ID and password validation.

<table>
<thead>
<tr>
<th>USERID</th>
<th>REQUIRED</th>
<th>USERDATA(0)</th>
<th>PANEL(KLGLGON)</th>
<th>PROMPT('ENTER USERID')</th>
</tr>
</thead>
<tbody>
<tr>
<td>PASSWORD</td>
<td>REQUIRED</td>
<td>USERDATA(1)</td>
<td>PANEL(KLGLGON)</td>
<td>PROMPT('ENTER PASSWORD') LIMIT(3)</td>
</tr>
<tr>
<td>NEWPSWD</td>
<td>REQUIRED</td>
<td>USERDATA(NWPSWD)</td>
<td>PANEL(KLGLGON)</td>
<td>PROMPT('PASSWORD EXPIRED, ENTER NEW PASSWORD')</td>
</tr>
<tr>
<td>ACCOUNT</td>
<td>OPTIONAL</td>
<td>PANEL(KLGLGON)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>PROC</td>
<td>OPTIONAL</td>
<td>PANEL(KLGLGON)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>GROUP</td>
<td>OPTIONAL</td>
<td>PANEL(KLGLGON)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>APPLIST</td>
<td>OPTIONAL</td>
<td>DEFAULT(&amp;VSPAPLST)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>DEST</td>
<td>REQUIRED</td>
<td>USERDATA(APPLID)</td>
<td>PANEL(KLSVSEL)</td>
<td>PROMPT('')</td>
</tr>
<tr>
<td>LTERM</td>
<td>USERDATA(LTERM)</td>
<td>PANEL(KLIDIMS)</td>
<td>PROMPT('ENTER LTERM')</td>
<td>DEFAULT(&amp;VIGUSER)</td>
</tr>
<tr>
<td>LOGMODE</td>
<td>OPTIONAL</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>POOL</td>
<td>DEFAULT(&amp;DEFPOOL)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>PRTLTERM</td>
<td>PANEL(KLIDIMS)</td>
<td>PROMPT('ENTER PRINTER LTERM') PRTNODE NAM</td>
<td>. . .</td>
<td></td>
</tr>
</tbody>
</table>
Member in -THILEV-SKLSPARM. The KLGICFG2 configuration example bypasses user ID and password validation.

USERID
- DEFAULT(&SYSTERM)
- LIMIT(1)

DEST
- USERDATA(APPLID)
- PANEL(KLSVSEL)
- PROMPT(' '
- MENU

LTERM
- USERDATA(LTERM)
- PANEL(KLIDIMS)
- PROMPT('ENTER LTERM')
- DEFAULT(&VIGUSER)

POOL
- DEFAULT(&DEFPOOL)

USERDATA
- LOGMODE
  - OPTIONAL

PRTLTERM
- PANEL(KLIDIMS)
- PROMPT('ENTER PRINTER LTERM')

PRTNODE
PRTPOOL

KLGICFG3

Member in -THILEV-SKLSPARM. The KLGICFG3 configuration example requires user ID and password validation, and connects a user directly to the application specified in the DEFAULT parameter of the DEST data element.

USERID
- REQUIRED
- USERDATA(0)
- PANEL(KLGLOGON)
- PROMPT('ENTER USERID')

PASSWORD
- REQUIRED
- USERDATA(1)
- PANEL(KLGLOGON)
- PROMPT('ENTER PASSWORD')
- LIMIT(3)

NEWPSWD
- REQUIRED
- PANEL(KLGLOGON)
- PROMPT('ENTER NEW PASSWORD')

DEST
- DEFAULT(1)
- PANEL(KLGDEST)

LOGMODE
- POOL
- DEFAULT(&DEFPOOL)
  .
  .

KLGICFG3 connects the user directly to the operator facility. Because this gateway provides only single-session access (either SINGLE or CLSDLST PASS), the ATTENTION parameter (which specifies a workstation control dialog) is unnecessary in the KLGICFG3 HOSTGATE command.
No triggers or CL/SuperSession functions, such as ATTN, are available through KLGICFG3.

**KLGLGON**

Member in -THILEV-SKLSPNLS. This is the entry point dialog for the CL/SuperSession interface.
Chapter 8. Profile reporting

Introduction

Profile Reporting is an interactive panel-driven tool, written in SSPL, which allows an administrator to view many profiles on the same panel.

Use the Profile Reporting facility to report on:
- COMMON, SUPERSESSION, and WINDOW segments residing in the table database in table *.*.COMMON.PROFILE for all user, group, and GLOBAL Profiles
- NAM variables found on the CL/SuperSession Main Menu Options pulldown menu for the Update Personal Information panel
- The total of triggers and/or sessions defined for each user or group profile
- Last-access date, time, and terminal ID information for each user in the table database

Installation considerations

Profile Reporting reports only on the profiles of the CL/SuperSession region in which it is installed. If you are running multiple CL/SuperSession regions, you must define the extract process in each region on which a report is to be issued.

Invoking Profile Reporting

Introduction

This section describes accessing Profile Reporting, the Profile Reporting tables, and various panel indicators and attributes used by the Profile Reporting facility. You must have administrator authority to access Profile Reporting.
Procedures to access Profile Reporting

Step 1 - From the CL/SuperSession Main Menu action bar, select Admin(M).

<table>
<thead>
<tr>
<th>m</th>
<th>Actions</th>
<th>Options</th>
<th>Commands</th>
<th>Features</th>
<th>Admin(M)</th>
<th>Help</th>
</tr>
</thead>
<tbody>
<tr>
<td>CL/SuperSe</td>
<td>Administrator Menu</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Select sessions with a &quot;/&quot; or an ac</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Session ID</td>
<td>Description</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Help</td>
<td>TSO</td>
<td>CICS2</td>
<td>helpdesk</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>TSOSS</td>
<td>CICS (PASSTHRU/MULTS)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>IMSASS</td>
<td>IMS ASSIGN (PASSTHRU)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>IMSASS</td>
<td>IMS DEQUEUE (PASSTHRU)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>IMS</td>
<td>IMS (PASSTHRU/MULTSE)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>TSOSS</td>
<td>TSO (PASSTHRU)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
<td></td>
</tr>
<tr>
<td>TSO (PASSTHRU)</td>
<td>Single</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>IMS (PASSTHRU)</td>
<td>Single</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>IMS DEQUEUE (PASSTHRU)</td>
<td>Single</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>IMS ASSIGN (PASSTHRU)</td>
<td>Single</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>CICS (PASSTHRU)</td>
<td>Single</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Command ==> SYSG/ATERM387

Enter F1=Help F3=Exit F5=Refresh F8=Fwd F9=Retrieve F10=Action

Result: The Administrator Menu appears.
Step 2 - On the Administrator Menu, select Profile Reporting. (Ref #1.)

<table>
<thead>
<tr>
<th>Action</th>
<th>Locate</th>
<th>View</th>
<th>Mask</th>
<th>Sort</th>
<th>Print</th>
<th>Info</th>
<th>Help</th>
</tr>
</thead>
<tbody>
<tr>
<td>Profile Reporting - Users table</td>
<td>More: +</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Userid</th>
<th>VUPDFLT</th>
<th>VUPAPLST</th>
<th>VUPADMIN</th>
<th>VUPSESSN</th>
<th>VUPTRIGN</th>
<th>LASTDATE</th>
</tr>
</thead>
<tbody>
<tr>
<td>GLOBAL</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>ACAP17</td>
<td>32</td>
<td>0</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>ACAP18</td>
<td>GONLY</td>
<td>GMAPLST</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>ACAP24</td>
<td>0</td>
<td>0</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>ACGL16</td>
<td>1</td>
<td>0</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>ACGL17</td>
<td>1</td>
<td>0</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>ADCH01</td>
<td>26</td>
<td>18</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>ADCH02</td>
<td>26</td>
<td>18</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>ADGM02</td>
<td>0</td>
<td>0</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>ADGM06</td>
<td>26</td>
<td>24</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>ADNY12</td>
<td>26</td>
<td>24</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>ADNY13</td>
<td>26</td>
<td>25</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>ADOUA</td>
<td>0</td>
<td>0</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>ADPR02</td>
<td>27</td>
<td>26</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>ADVG01</td>
<td>26</td>
<td>24</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>AFERG</td>
<td>28</td>
<td>5</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>AKAN</td>
<td>9</td>
<td>0</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>ALORI</td>
<td>0</td>
<td>0</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>ASANC</td>
<td>0</td>
<td>0</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>ASTOY</td>
<td>0</td>
<td>0</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>ATERM379</td>
<td>0</td>
<td>0</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Command ===> Enter F1=Help F8=Fwd F11=Users/Groups F12=Cancel

**Result:** Profile Reporting is invoked and the Profile Reporting - Users Table appears.

When you invoke this panel from the Administrator Menu, the data displays by user ID in alphanumeric order. If you later change the presentation of the data by using the Sort action, that change remains in effect for the life of the session.

**Alternate method to access Profile Reporting**

You can also use the fast path method to access Profile Reporting. To save steps, type the mnemonic of a selection on the pull-down menu. For example, Profile Reporting is the third selection on the Administrator Menu. Its mnemonic is P. To select Profile Reporting directly from the CL/SuperSession Main Menu:

1. Type MP or M3 in the home position on the action bar.
   The M refers to Administrator and the P or 3 refers to Profile Reporting.
2. Press Enter.

**Result:** The Profile Reporting - Users table displays.

**Profile Reporting tables**

The GLOBAL Profile values always display on the top of the panel. Only the overriding values are shown for each of the user and group profiles. The variables displayed are the first 6 variables found in the user profiles extract control member SKLVPARM(KLSPREXU) and in the group profile extract control member SKLVPARM(KLSPREXG). You can modify the variables and their order by using the View pull-down menu (discussed in "Viewing variables" on page 90).
The following indicators may appear to the left of a profile:

**Asterisk (*)**
Indicates that the profile has been modified after the currently-displayed data was extracted.

**Hyphen (-)**
Indicates that the profile has been deleted after the currently-displayed data was extracted.

These indicators are removed after the next time you run the extract dialog KLSPREXT.

**Color coding**

Attributes such as color and the right caret (>) are used in Profile Reporting panels to identify the source level of a variable. On a color terminal, colors are used as follows:

- **Pink** Data entered at the user level. When a value is blank, reverse video is used to indicate that a delta exists in the profile.
- **Yellow** Data entered at the group level. When a value is blank, reverse video is used to indicate that a delta exists in the profile.

On a monochrome terminal:

- When viewing a users table, a right caret (>) displays to the left of values that are at the group level; an underscore (_) displays to the left of a blank value at the user level.
- When viewing a group table, a right caret (>) displays to the left of blank values only.

**Note:** If you are using 3270 emulation hardware and software on a personal computer, various panel attributes (such as color, highlight, underline, and reverse video) may appear significantly different from the way they appear on an actual 3279 terminal. You may have to change definitions in your 3270 emulator to achieve desired color mapping. Refer to the appropriate manuals or consult your system administrator.

**Function keys**

Only the function keys that are available for a panel are displayed. For example, panels with data that may continue over several screens display the backward and forward function keys, F7 and F8, while single-screen panels do not.

The CL/SuperSession function keys perform as described in the *CL/SuperSession Operator’s Guide* with the following exceptions:

- **F11** Users/Groups. Allows you to switch from the users table to the groups table and back (toggle).
- **F5** Repeat Locate. Allows you to repeat a locate to find the next occurrences of the selected criteria. F5 appears at the bottom of the Profile Reporting - Users table (or Group table) only if you have entered a value on the Locate pull-down menu.
**Ellipsis**

An ellipsis (...) following a selection indicates that further information is available after you make the selection. You can then make selections from another menu or add data to complete the task.

---

**Using the action bar**

**Introduction**

You can select any of the following choices from the table action bar.

- Action
- Locate
- View
- Mask
- Sort
- Print
- Info
- Help

These choices are described in the following sections.

**Taking actions**

To use an action code, place a slash (/) next to the profile name (Userid or Group) and press **Enter**, or directly select the action choice on the action bar.

```
Action Code Menu

Select an action for profile "ACAP17"
and then press ENTER.

S Admin functions for selected profile
M Send message
A View application list
U View users within group
D Delete Common/Trigger/Session/NAM

Command ===>
Enter F1=Help F12=Cancel

***************************************************************************
```

**Result:** The **Action Code Menu** displays.
## Action codes

Please find action codes and their descriptions in the following table.

**Table 7. Descriptions of action codes**

<table>
<thead>
<tr>
<th>Code</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>S</td>
<td>Admin functions for selected profile</td>
</tr>
<tr>
<td></td>
<td>Invokes the administration dialogs for the selected profile. If you modify a profile, an asterisk (*) appears to the left of that profile when you return to Profile Reporting.</td>
</tr>
<tr>
<td>M</td>
<td>Send message</td>
</tr>
<tr>
<td></td>
<td>Sends a message to a selected user. If the selected user is ready to receive messages, dialog KLSFRMS&amp;vsplang is called and the selected user's user ID is added to the Userid field.</td>
</tr>
<tr>
<td></td>
<td>This action is only available from the Profile Reporting - Users table.</td>
</tr>
<tr>
<td>A</td>
<td>View application list</td>
</tr>
<tr>
<td></td>
<td>Views application lists. This action is only available when a value is displayed in the VGPAPLST or VUPAPLST field (for example, GWONLY and GWAPLST, displayed for ACAP18 in the Profile Reporting - Users table on page reference #1). When an application is selected, the content of the corresponding SKLVSPARM member is displayed.</td>
</tr>
<tr>
<td></td>
<td><strong>Note:</strong> If you create an APPLIST name different from the actual member residing in SKLVSPARM by issuing the APPLIST command with the ID parameter, using the View action code produces message CS922. For more information, see the APPLIST command parameters in the CL/SuperSession Operator’s Guide.</td>
</tr>
<tr>
<td>U</td>
<td>View users within group</td>
</tr>
<tr>
<td></td>
<td>Switches from the groups table panel to the users table panel. The entries displayed are the user IDs that belong to the specified group.</td>
</tr>
<tr>
<td></td>
<td>This action is only available on the Profile Reporting - Groups table.</td>
</tr>
<tr>
<td>D</td>
<td>Delete Common/Trigger/Session/NAM</td>
</tr>
<tr>
<td></td>
<td>Deletes selected profiles.</td>
</tr>
<tr>
<td></td>
<td><strong>Note:</strong> The delete action also deletes the NAM entries for the selected profile.</td>
</tr>
</tbody>
</table>
Locating values

When you select **Locate** on the action bar, the Locate pull-down menu displays.

<table>
<thead>
<tr>
<th>Profile Reporting - Locate</th>
</tr>
</thead>
<tbody>
<tr>
<td>Type a value on one field and press ENTER</td>
</tr>
<tr>
<td>Userid :</td>
</tr>
<tr>
<td>VUPDFLT :</td>
</tr>
<tr>
<td>VUPAPLST :</td>
</tr>
<tr>
<td>VUPADMIN :</td>
</tr>
<tr>
<td>VUPTRIGN :</td>
</tr>
<tr>
<td>VUPSESSN :</td>
</tr>
<tr>
<td>LASTDATE :</td>
</tr>
<tr>
<td>Command ==&gt;</td>
</tr>
<tr>
<td>Enter F1=Help F12=Cancel</td>
</tr>
<tr>
<td>***************************************</td>
</tr>
</tbody>
</table>

Use the Locate menu to locate certain values on specific fields. If you select Locate on a user's table, **Userid** appears on this menu; if on a group table, **Group** appears. The other variables shown are those displayed on the table from which you selected Locate. If needed, you can use the View choice to select different variables on which Locate can operate.

Type your value next to the variable of your choice and press **Enter**.

**Result:** You are returned to the Profile Reporting table where a search begins for the selected variable only, starting from the top of the table.

When search criteria is established, F5 appears on the bottom of the table. A message informs you if the end of data is reached and the value has not been found. You can then press F5 to resume the search from the top of the table.

**Note:** You can use Locate to search for a single value in only one variable field at a time.
Viewing variables

When you select View on the action bar, the View pull-down menu displays.

<table>
<thead>
<tr>
<th>Profile Reporting - View Selection</th>
</tr>
</thead>
<tbody>
<tr>
<td>Select which variables you want to view by entering the order next to them. Valid values are from 1 to 6.</td>
</tr>
<tr>
<td>VUPDFLT :</td>
</tr>
<tr>
<td>1 VUPAPLST :</td>
</tr>
<tr>
<td>2 VUPUNAME :</td>
</tr>
<tr>
<td>3 VUPUDATA :</td>
</tr>
<tr>
<td>4 VSPULOC :</td>
</tr>
<tr>
<td>5 VSPUPHON :</td>
</tr>
<tr>
<td>6 VSPUNINFO : VUPADMIN : VUPTRIGN : VUPSESSN :</td>
</tr>
<tr>
<td>VUPRPT : VUPAUDT : VUPAUPHR : VUPAUTHS :</td>
</tr>
<tr>
<td>VUPAUTHTH : VUPAUTHT : VUPINITD : VUPTOINT : VUPWSSID :</td>
</tr>
<tr>
<td>VSPUNAME : VUPFETCP : VUPFETSM : VUPFETVS : VUPFETOT :</td>
</tr>
<tr>
<td>LASTDATE : LASTTIME : LASTTERM :</td>
</tr>
</tbody>
</table>

Command ===>
Enter F1=Help F12=Cancel

You can use the View menu to:

• Specify which variables appear on the table panel
• Control the order in which variables display
• Determine which variables will be available on other pull-down menus

All variables selected in SKLVPARM(KLSPREXU) and SKLVPARM(KLSPREXG) appear. The first six variable names default to position 1-6. You can select the variables that you want to display and the order in which they appear by typing numerals 1-6 in the variable name fields of your choice and pressing Enter.

Result: The table panel appears with the variable names presented in sequence, starting with the name you designated 1.

The variables you select on this menu will appear on all other action bar pull-down menus.

Note: The View menu does not control the key variables Userid and Groupid. Userid always appears on the top of the first column when Profile Reporting is displaying information for users' profiles; Groupid always appears when groups profile information is displayed.

You can obtain a description of any variable name by placing the cursor to the left of the variable and pressing F1. To obtain a description of all variable names displayed, place the cursor to the left of a blank line and press F1.
**Masking values**

When you select Mask on the action bar, the Mask pull-down menu displays.

```
Profile Reporting - Mask

Type a mask argument on one field and press ENTER
An asterisk can be used at the end of the mask argument

Userid : VUPDFLT :
VUPAPLST :
VUPUNAME :
VUPUDATA :
VSPULOC :
VSPUPHON :

Command ==> Enter F1=Help F12=Cancel
```

Use the Mask menu to display a table subset. You can perform masking on:

- A variable that has been previously selected on the View menu
- Only one variable at a time

Mask a variable by typing a mask argument in the variable name field and pressing Enter.

**Result:** All rows matching the mask argument appear.

If you append an asterisk (*) at the end of the mask argument, all values starting with the argument display; if not, only the values that are equal to the argument display.

**Sorting values**

When you select Sort on the action bar, the Sort pull-down menu displays.

```
Profile Reporting - Sort

Select the variable on which the sort is to be performed with a "/" and specify the sort parameters if required.

Userid : 
VUPDFLT :
VUPAPLST :
VUPUNAME :
VUPUDATA :
VSPULOC :
VSPUPHON :

Order : _ (Descending : D, Ascending : A)
(Default is A)
Type : _ (Binary : B, Character : C, Numeric : N)
(Default is C)

Command ==> Enter F1=Help F12=Cancel
```

Chapter 8. Profile reporting
Use the Sort menu to specify a sort order for:
- A variable that was previously selected on the View menu
- Only one variable at a time

Sort by:
1. Typing a slash (/) in the variable field on which the sort is to be performed
2. Specifying the order: ascending (the default) or descending
3. Specifying the type: character (the default), binary, or numeric

and pressing Enter.

Result: The current profile table appears in the sort order that was specified.

Note: If you specify LASTDATE as the sort criteria, LASTTIME is appended to the sort.

Printing the displayed table

When you select Print on the action bar, the Print pull-down menu displays.

<table>
<thead>
<tr>
<th>Profile Reporting - Print</th>
</tr>
</thead>
<tbody>
<tr>
<td>Variables Length Alignment</td>
</tr>
<tr>
<td>(L - C - R)</td>
</tr>
<tr>
<td>Userid       : 8 L</td>
</tr>
<tr>
<td>VUPDFLT      : 8 L</td>
</tr>
<tr>
<td>VUPAPLST     : 8 L</td>
</tr>
<tr>
<td>VUPUNAME     : 30 L</td>
</tr>
<tr>
<td>VUPUDATA     : 38 L</td>
</tr>
<tr>
<td>VSPULOC      : 34 L</td>
</tr>
<tr>
<td>VSPUPHON     : 19 L</td>
</tr>
</tbody>
</table>

Send report to : (Select with a "/"

_SYSOUT destination : (Def. : LOCAL) Class : (Def. : A)
_PDS : Member :
Replace Member : (Y/N)(Def.:N)
Logical record length (LRECL) : ___ (Usually 80 or 133)

Command ===>
Enter F1=Help F12=Cancel

Use the Print menu to print the content of the table being displayed to SYSOUT or a partitioned dataset.

Print the table by:
1. Specifying the length and alignment of each field. Alignment values are generated when you access the menu, but you can change them. To ensure proper placement of the variable name on the header of the report to be generated, you can modify only variables that have data values greater than 8. Similarly, you cannot enter values that are less than 8.
2. Typing a slash (/) in the appropriate field.
3. Adding the following information to the menu:

If you select SYSOUT:
a. Specify the class (the default is A)
b. Specify the destination (the default is LOCAL)

If you select PDS:
  a. Specify the dataset name
  b. Specify the member
  c. Specify whether or not you want to replace an existing member

4. Pressing Enter to print.

Result: The Print function builds a layout table and calls dialog KLVTKRPG. When the report is produced, a message indicates the number of written pages.

The resulting printed report reflects the mask, view, and sort parameters that you have previously selected.

Note: As with other menus in Profile Reporting, when you access the Print menu the table key (Userid or Groupid) is displayed. The rest of the variables are displayed according to your selections on the View menu.

Displaying extract information

When you select Info on the action bar, the Info pull-down menu displays.

Use the Info menu to display information about the extract process. The Info menu shows the date and time of the last full extract and the last incremental extract. (The last incremental extract is the same as the last full extract if no incremental extract has been performed since the last full extract.)

Displaying help

Panel and field level help is provided for Profile Reporting.

- To display help for a panel, move the cursor to a non-input field and press F1. A pop-up window displaying general panel help is displayed.
- To select field level help, position the cursor to the left of the selection and press Enter.

  To display help for an input field, move the cursor to the input field and press F1. A pop-up window displaying help for that field is displayed.

You can select help from any Profile Reporting panel with F1. Pressing F1 on an input field provides context-sensitive help for that specific field; pressing F1 anywhere else on the panel displays general panel help. Help information appears in a pop-up window. When you finish viewing help, press F12 to return to the previous panel, or press F3 to exit Help.
Capturing data

Introduction

The data displayed during Profile Reporting is derived from an extract program that runs as a non-terminal dialog (NTD). To generate and capture that data, you must issue the NTD command along with the extraction dialog name.

KLSPREXT dialog

To collect data, issue the following:

```
NTD KLSPREXT 'FULL'
```

where:

- **NTD**  Is the CL/SuperSession command
- **KLSPREXT**  Is the extraction dialog that collects data from the table database according to parameters found in SKLVPARM(KLSPREXU) and SKLVPARM(KLSPREXG). This dialog must run before you can use the Profile Reporting panels.
- **FULL**  Indicates that all common profiles will be extracted

Usage notes

1. By default, only common profiles that have been modified after the last execution of NTD KLSPREXT are extracted. However, if a group profile has been modified, all users profiles within that group are extracted even if the users profiles themselves have not been modified.

2. Do not include the NTD KLSPREXT command in SKLVCMDs(KLSSSTART) because this will cause its execution after a system outage.

   It is recommended that you schedule the extract dialog to run at non-peak hours through the use of System automation tools or through the use of the AT command.

   For example, you can have System automation tools issue the F kls,NTD KLSPREXT command once a day for an incremental extract and the F kls,NTD KLSPREXT FULL command once a week for a full extract. Likewise, you can have the AT command issue the NTD KLSPREXT or NTD KLSPREXT FULL commands.

3. When you specify FULL, the extract tables are deleted and then recreated using the parameters found in SKLVPARM members KLSPREXU or KLSPREXG.

4. You must specify FULL if SKLVPARM members KLSPREXU or KLSPREXG are modified.

5. FULL is the default if
   - You are running KLSPREXT for the first time
   - Extract tables do not exist

6. Examine TLVLOG messages for error and warning messages. (See "Extract messages" for examples of these messages.)
Specifying variables

KLSPREXU and KLSPREXG contain all of the variables that are supported by KLSPREXT, accompanied by a short description at the end of each variable's line. A basic set of variables set to Y are provided. Only those variables set to Y are extracted by KLSPREXT.

Dialog KLSPREXT extracts the data from the table database and the NAM database. Before running KLSPREXT, you can:

- Edit RLSPARM(KLSPREXU) to specify the variables that you want extracted from the *.USER.COMMON.PROFILE tables
- Edit RLSPARM(KLSPREXG) to specify the variables that you want extracted from the *.GROUP.COMMON.PROFILE tables

Additional variables follow.

<table>
<thead>
<tr>
<th>Control member</th>
<th>Variable</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>KLSPREXU</td>
<td>VSPUNAME, VSPUPHON, VSPUINFO, VSPULOC</td>
<td>NAM variables</td>
</tr>
<tr>
<td>KLSPREXU</td>
<td>LASTDATE, LASTTIME, LASTTERM</td>
<td>Variables reporting the last access to CL/SuperSession by any user ID</td>
</tr>
<tr>
<td>KLSPREXU and KLSPREXG</td>
<td>VxPFETCP, VxPFETSM, VxPFETVS, VxPFETDT</td>
<td>VxPFETR variables. The authorities for features CUT/PASTE, SEND MESSAGE, VIEW SESSION, and DIALOG TRACE are packed and saved in the VxPFETR variable. KLSPREXT unpacks this variable and updates 4 different variables in the extract table. You can then pinpoint the specific feature that you want to extract, sort, mask, or view.</td>
</tr>
</tbody>
</table>

Space requirements for the table database VSAM file

The extract table created by KLSPREXT will increase the in-use space of the table database by approximately 15% when the default extraction parameters are used; approximately 40% if all variables are specified. Make sure that your table database is large enough to accommodate this increase.

Storage overload protection

The Profile Reporting facility has a built-in protection mechanism that prevents storage overload. The estimated total extended storage (e) is computed before the extract tables are loaded and the value is compared to the value specified in KLVSYSIN for QUIESCE(nn,X,F). When usage approaches the maximum extended storage value, the following occurs:

- If e is greater than 70% of nn, a warning message displays. You can then either continue working in the Profile Reporting facility or exit the facility.
If e is greater than nn minus 5%, a message informs you that you must exit from the facility. You can then do either of the following:
- Review a storage display and re-access Profile Reporting when usage decreases
- Increase the storage value in KLVSYSIN and recycle

Table database and NAM cleanup

CL/SuperSession's last access process lets you identify the date and time of the last access for each user. When a user signs on to CL/SuperSession, this process gathers information as follows:
1. Dialog KLSUINIE performs an ATTACH to dialog KLSLOG.
2. KLSLOG writes a record on an IPC queue.
3. Dialog KLSLOGDQ, by the use of the EVERY command, executes every 10 minutes to read from the queue and then update a permanent table with the user ID, date, time, and terminal ID.

If you have specified LASTDATE and LASTTIME in SKLVPARM(KLSPREXU), you can view LASTDATE data and then perform a sort to identify the profiles that you want to delete.

**Note:** LASTTIME is appended to the sort if you specify LASTDATE as the sort criteria.

Usage examples

The following three examples show various uses of Profile Reporting.

- To display all users who belong to a certain group:
  1. Make sure that the VUPDFLT variable has been selected in SKLVPARM(KLSPREXU) before you execute extract dialog KLSPREXT.
  2. From the Profile Reporting - Users table, press **F11**.
  3. Type U to the left of the group of your choice and press **Enter**.

- To display the last access date in descending order:
  1. Make sure that LASTDATE and LASTTIME have been selected in SKLVPARM(KLSPREXU) before you execute extract dialog KLSPREXT.
  2. From the Profile Reporting - Users table, access the View pull-down menu.
  3. Select LASTDATE and LASTTIME so that they will appear on all other pull-down menus.
  4. Return to the Profile Reporting - User's table.
  5. Select the Sort pull-down menu.
  6. Type a slash (/) in the LASTTIME field and a D (for descending) in the order field, and press **Enter**.

**Note:** LASTTIME is appended to the sort.

- To display all users with View authority:
  1. Make sure VUPFETVS has been selected in SKLVPARM(KLSPREXU) before you execute extract dialog KLSPREXT.
  2. From the Profile Reporting - Users table, access the View pull-down menu.
  3. Select VUPFETVS so that it will appear on all other pull-down menus.
  4. Return to the Profile Reporting - User's table.
5. Select the Mask pull-down menu.
6. Type an asterisk (*) in the VUPFETVS field and press Enter.
Chapter 9. High Availability Option

Introduction

The CL/SuperSession High Availability Option provides two solutions to enhance the availability and manageability of IBM’s CL/SuperSession.

CL/SuperSession profile synchronization facility

This ability allows two or more copies of CL/SuperSession to maintain synchronized profile databases. Features include:

- A stand-alone facility that requires ‘no modification’ of standard CL/SuperSession code.
- Propagated updates to linked copies of CL/SuperSession at a user-specified interval (e.g. hourly).
- Automatic retry. If a remote CL/SuperSession is not available or an update does not complete successfully, it will be automatically retried until successful.
- Simplified configuration. Requires only a simple VTAM connection between CL/SuperSession address spaces.
- VTAM Generic Resource exploitation. In a SYSPlex environment, facilitates the use of VTAM Generic Resources for automatic load-balancing and enhanced availability.

CL/SuperSession MultiPoint HelpDesk

Provides a single point of control for multiple copies of CL/SuperSession with the following features:

- Users of all connected systems can be managed by the HelpDesk facility on any one system.
- Commands can be issued to all connected systems from any HelpDesk.
- Broadcast messages can be targeted at groups across all connected systems.
- The standard ‘Send Message’ facility can send a message to a user on any connected system.
- ‘View Session’ and ‘Transmit Screen’ facilities work across all connected systems.
- Changes to user details stored in the NAM file are propagated to all connected systems.
- The HelpDesk facility on each copy of CL/SuperSession operates autonomously for maximum availability.

A detailed Architecture between 2 Members (CL/SuperSession address spaces) of a HAO compound can look like this:

**HAO configuration with 3 instances in a GR**

![Diagram of HAO configuration with 3 instances in a GR]

Figure 36. Sample HAO configuration

From each HAO HelpDesk all users are available to be managed, regardless of which address space they are connected to.

The HAO application will update the related Tables Databases owned by each CL/SuperSession in the compound.

In this documentation Profile synchronization and the Multipoint HelpDesk are discussed separately though they are typically installed together.
Profile synchronization

Update RLSCMDS

The KLHCDLGH is the primary dataset member that needs to be reviewed for each CL/SuperSession STC.

The out-of-the-box installation scheme uses different run-time datasets for each HAO system (based on the HAO sequence number in KLS0CUST). For example, HAO1 would use RLS1CMDS, HAO2 would use RLS2CMDS and HAO3 would use RLS3CMDS. Utilizing separate datasets eliminates the need to modify the name of KLHCDLGH.

KLHCDLGH includes the dialog application and non-terminal dialog calls necessary to initialize the High Availability Option of HelpDesk.

Change HDACB1 to the ACB name chosen for the HelpDesk application. It should correspond to the name used in the HelpDesk APPLDEF. The name should also be defined in SYS1.VTAMLST with the other CL/SuperSession definitions.

Example:

```
HDACB1 APPL AUTH=(ACQ,NVPACE),ACBNAME=HDACB1,PARSess=YES
```

The entries that are commented out are not required for the HelpDesk installation, but are needed if HelpDesk is later configured with a remote system.

Customization is needed for the following parameters:

<table>
<thead>
<tr>
<th>Description</th>
<th>Value range</th>
</tr>
</thead>
<tbody>
<tr>
<td>-VTPREF-</td>
<td>Entry point VTAM ACB names prefix</td>
</tr>
<tr>
<td>-HAOPREF-</td>
<td>HAO identifiers common Global prefix</td>
</tr>
<tr>
<td>-HAOSEQN-</td>
<td>Local HelpDesk HAO node sequence number</td>
</tr>
<tr>
<td>-HAORXSN-</td>
<td>Remote HelpDesk HAO node sequence number</td>
</tr>
<tr>
<td>-HAORYSN-</td>
<td>Remote HelpDesk HAO node sequence number</td>
</tr>
</tbody>
</table>

| DIALOG -HAOPREF--HAOSEQN--PHD KLHDLACB | * Start HelpDesk application |
| DIALOG -HAOPREF--HAOSEQN--PPSR KPSRECv | * Start profile receiver |
| DIALOG -HAOPREF--HAOSEQN--PHXL KLHXRECv | * X-SYSTEM HelpDesk logon receiver |
| DIALOG -HAOPREF--HAOSEQN--PHXS KLHXCSVr | * X-SYSTEM HelpDesk command server |
| NTD KLHDLOGR /-HAOMODE- | * Set HD LOGGER mode AGENT/FOCAL |

For example, the KLS0CUST and KLS9CUST jobs would generate an application name of HAO1PHD for HAO1.

See KLHCDLGH for more customization parameters.
System names

By default, each CL/SuperSession instance is named after the started task name (system variable &SYSJOB). This default can be changed by editing the dialog KLHSYSID.

The KLHCDLGH is renamed in the start member into CH%CDLG where % is the 1, 2 or 3 for one of the STCs on the same LPAR.

For example, HAO1CLSS would be CH1CDLG, HAO2CLSS would be CH2CDLG, and HAO3CLSS would be CH3CDLG.

For the Profile synchronization the following has to be added to one of the members:

```
AT ADD ID=KPSSEND DELAY=00:60:00 EVERY=00:60:00 CMD='NTD KPSSEND'
```

- This example would run the synchronization task every 60 minutes; the frequency of execution depends on the specific requirements of your installation.
- Ensure that CH&CDLG is included in the RLSCMDS (CH&START) member.
- Add the VTAM ACB AT%SPPSR to the VTAM major nodes. No LOGMODE or MODETAB needs to defined, the default is ISTINCLM MODETAB.

Synchronization control table

The following steps show how to enable or modify Profile Synchronization:

- The table database (RLSTDB) for each of the member CL/SuperSession address spaces must be identical before enabling synchronization. This may be accomplished by copying a master database with IDCAMS REPRO.
- Dialog KPSADM (option S from the HelpDesk Admin action bar option) should be invoked on each CL/SuperSession to create an entry in the profile synchronization control table to define the connection between the local sender tasks and the remote receiver tasks.

The following screenshot is just an example each system (CL/SuperSession HelpDesk) will have at least 5 KPS.**.tables.

```
KPSADM Profile Synchronization Entry
System ID.................... HAO2
Helpdesk Mode............... FOCAL
Status....................... ENABLED

VTAM Applid on remote system
HOSTGATE........................ HAO2GTWY
Helpdesk Logon Receiver Applid.... HAO2PHXL (FOCAL only)
Helpdesk Command Server Applid..... HAO2PHXS
Profile Synch Receiver Applid..... HAO2PPSR

Local Hostgate Applid........ HAO1GTWY

Last Send/Synch Date........... 04/30/2016
Last Send/Synch Time........... 20:27

Last Receive Date............. 04/30/2016
Last Receive Time............. 19:37

PF12 return
```

*******************************************************************
- The example above shows a sample entry for HAO2 in HAO1’s control table. Note that the HelpDesk connections are also defined here. See the following section for details.

- Note that only updates after the specified synch time (that is, 20:27 on 04/30/2016 in the above example) will be sent to the remote CL/SuperSession.

- Once added, the entry for HAO1 will be displayed as shown below:

```plaintext
<table>
<thead>
<tr>
<th>Sysid</th>
<th>Status</th>
<th>HelpDesk Mode</th>
<th>HelpDesk Logger</th>
<th>HelpDesk Commands</th>
</tr>
</thead>
<tbody>
<tr>
<td>HAO2</td>
<td>ENABLED</td>
<td>FOCAL</td>
<td>ACTIVE</td>
<td>ACTIVE</td>
</tr>
<tr>
<td>HAO3</td>
<td>ENABLED</td>
<td>FOCAL</td>
<td>ACTIVE</td>
<td>ACTIVE</td>
</tr>
<tr>
<td>HAO4</td>
<td>ENABLED</td>
<td>FOCAL</td>
<td>ACTIVE</td>
<td>ACTIVE</td>
</tr>
</tbody>
</table>

*************************************************************************
A=Add  C=Change  D=Delete  E=Enable  N=NoPrSync  X=Disable
S=Show Details  T=Show Tasks

Enter F5=Add  F6=Show Log  F7=Back  F8=Forward  F12=Exit
*************************************************************************
```

- By default all tables in the table database except those specified in the exclude list will be candidates for synchronization. Select the Exclude action bar item to edit the synchronization exclude list.

```plaintext
<table>
<thead>
<tr>
<th>Mask</th>
<th>Added or Last Modified</th>
<th>Date</th>
<th>Time</th>
<th>Userid</th>
</tr>
</thead>
<tbody>
<tr>
<td>EXTRACT.*</td>
<td></td>
<td>04/21/16</td>
<td>17:23:29</td>
<td>DEFAULT</td>
</tr>
<tr>
<td>HD.*</td>
<td></td>
<td>04/21/16</td>
<td>17:23:29</td>
<td>DEFAULT</td>
</tr>
<tr>
<td>HDMON.*</td>
<td></td>
<td>04/21/16</td>
<td>17:23:29</td>
<td>DEFAULT</td>
</tr>
<tr>
<td>KLHXHBT.*</td>
<td></td>
<td>04/21/16</td>
<td>17:23:29</td>
<td>DEFAULT</td>
</tr>
<tr>
<td>KPS.*</td>
<td></td>
<td>04/21/16</td>
<td>17:23:29</td>
<td>DEFAULT</td>
</tr>
<tr>
<td>SYSTEM.*</td>
<td></td>
<td>04/21/16</td>
<td>17:23:29</td>
<td>DEFAULT</td>
</tr>
<tr>
<td>TIM.*</td>
<td></td>
<td>04/21/16</td>
<td>17:23:29</td>
<td>DEFAULT</td>
</tr>
<tr>
<td>TOOLKIT.*</td>
<td></td>
<td>04/21/16</td>
<td>17:23:29</td>
<td>DEFAULT</td>
</tr>
</tbody>
</table>

*************************************************************************
A=Add  D=Delete

Enter F5=Add  F7=Back  F8=Forward  F12=Exit
*************************************************************************
```

- The default entries in the exclude list are shown above.
- The wild card "*" is only valid as the last character in a mask. To exclude a user’s profile tables from synchronization, add an entry with a mask of userid.
- When initially added, the synchronization table entry will be DISABLED (that is, not available for profile synchronization).
- The entry must be ENABLED with the ‘E’ action code before profile synchronization can start.
- If the remote receiver is not available, the sender will try to reconnect five times at one minute intervals; if still unsuccessful, the sender task will abandon the attempt to synchronize with this target system for this execution.
• The **Last Receive Date** and **Time** fields will be set by the local receiver task when the sender task on SYS2 sends a batch of updates.

• A log table is updated with details of each profile table received. This can be displayed from the above panel with PF6 (F6=Show Log). Details are also written to the TLVLOG sysout file.

```
KPSLOGL Profile Synchronization Log Table for HA01

<table>
<thead>
<tr>
<th>Profile Table Received</th>
<th>From System</th>
<th>Date</th>
<th>Time</th>
</tr>
</thead>
<tbody>
<tr>
<td>GLOBAL.COMMON.PROFILE</td>
<td>HA02</td>
<td>04/30/2016</td>
<td>20:48</td>
</tr>
<tr>
<td>GLOBAL.SESSION.PROFILE</td>
<td>HA02</td>
<td>04/30/2016</td>
<td>20:48</td>
</tr>
<tr>
<td>CLSUSER1.USER.COMMON.PROFILE</td>
<td>HA02</td>
<td>04/30/2016</td>
<td>20:48</td>
</tr>
</tbody>
</table>

D=Delete
Enter F7=Back F8=Forward F12=Exit
```

• Entries over a month old are automatically deleted from this table when the KPSSEND task is started.

---

**MultiPoint HelpDesk**

**HelpDesk mode**

• A MultiPoint HelpDesk implementation consists of one or more FOCAL HelpDesk’s and optionally one or more AGENT HelpDesk’s.

• A FOCAL HelpDesk is connected to all other HelpDesk instances (FOCAL and AGENT) and provides all the functionality of the MultiPoint HelpDesk across all connected systems.

• An AGENT HelpDesk is connected to each FOCAL HelpDesk but does not provide any HelpDesk functions for other systems.

• It is recommended that at least two FOCAL HelpDesk’s be configured in order to avoid having a single point of failure.

• The use of AGENT HelpDesk’s reduces the number of VTAM connections required and reduces network traffic and system overheads.

**Synchronization control table**

• Remote HelpDesk’s must be defined in the Profile Synchronization table as described in the previous section, and must be ENABLED for synchronization to be initialized.
HelpDesk synchronization may be enabled without enabling profile synchronization; this is set by the ‘N=NoPrSync’ action code and is indicated by a status of NOPRSYNC.

The ‘D=Disable’ option will disable both Profile and HelpDesk synchronization.

The following features are available from each FOCAL HelpDesk for users on any connected system with either a FOCAL or AGENT HelpDesk:

- Show details of users and their virtual sessions
- Send messages to user
- Transmit screens to user
- Send Broadcast messages
- Cancel users and/or sessions
- Force users and/or sessions
- View sessions

**KLHTBCLN : HelpDesk Table Cleanup Routine**

- A user’s details are added to the HelpDesk table (HD.USERTAB) at logon by dialog KLHLOGON.
- If the user logs off in the standard manner with PF3 or a trigger that invokes KLSEXIT, and there are no ‘disconnected’ active sessions, then dialog KLHLOGFF is invoked to delete the user’s entry from the HelpDesk table.
- If the user quits CL/SuperSession in any other way, for example, by closing an emulation session or powering off a terminal or p.c., then the HelpDesk entry is not deleted.
- If a HelpDesk action is selected for a user who is no longer logged on, a HelpDesk popup will indicate this and the users’ entry will be deleted from the HelpDesk table.
- Dialog KLHTBCLN skips through the HelpDesk table and checks the status of each user on the local system in turn (using the VSSUSRST function) and deletes those who are no longer logged on. In a MultiPoint implementation, a LOGOFF notification is also sent to other FOCAL HelpDesk’s.
- In the standard HelpDesk this dialog is run automatically every 30 minutes.
- In the MultiPoint HelpDesk it is not started automatically, but must be started with a command which may be added to RLSCMD5(KLHCDLGH):
where \( nn \) is the interval in hours between clean-up cycles, the default being 4 hours and the minimum being 1 hour. The dialog will continue to run at the specified interval until CL/SuperSession is shut down.

- In order to minimize overheads, it is recommended that the clean-up cycle be run as infrequently as possible. One option is to run it once daily overnight, adding the following command to RLSCMDS(KLHCDLGH):
  
  ```
  AT ADD ID=KLHTBCLN TIME=02:00:00 CMD='NTD KLHTBCLN 24'
  ```
- Note that the above command will start KLHTBCLN at 02:00:00 but the first clean-up cycle will start at 02:00:00 a day later.
- Dialog KLHTBCHK can be invoked from the HelpDesk Admin panel by selecting the ‘Clean-up Local Users’ option, and performs the same function as KLHTBCLN but runs immediately for a single cycle and then terminates.

**Cross-System Monitor facility**

As part of HelpDesk synchronization, the Monitor facility is modified to display usage data for all connected systems.

```
S=Show Details  D=Delete
Enter PF3=Exit PF6=Console
```

The details display for each system includes usage statistics for each monitored virtual terminal pool.
Heartbeat monitor

Introduction

- The Heartbeat task (KLHXHBT) monitors the connections between a local HelpDesk and all connected remote HelpDesk’s.
- The Heartbeat task is optional and can be run only on a FOCAL HelpDesk system.
- It should be started by adding the following command to RLSCMD5(KLHCDLGH):

  AT ADD ID=KLHXHBT DELAY=00:05:00 CMD='NTD KLHXHBT'

- The five-minute delay is required to allow the KLHDLOGR task to initialize.
- By default it will start a ‘heartbeat cycle’ every 15 minutes, but this can be modified by passing a parameter with the NTD command, that is, NTD KLHXHBT nn where ‘nn’ is the interval in minutes.
- A ‘Connections’ item is added to the action bar on the main HelpDesk panel (KLHDISP1) and can be selected to display the status of monitored connections as shown below.
Heartbeat table

Table 8. KLHXHBT.TABLE- key hxsys : system id.

<table>
<thead>
<tr>
<th>Variable</th>
<th>Task</th>
<th>LOCAL FOCAL</th>
<th>REMOTE FOCAL</th>
<th>REMOTE AGENT</th>
<th>Meaning</th>
</tr>
</thead>
<tbody>
<tr>
<td>hxlstat</td>
<td>KLHXSEND</td>
<td>n/a</td>
<td>ACTIVE</td>
<td>ACTIVE</td>
<td>Logon Sender</td>
</tr>
<tr>
<td>hxsend</td>
<td>KLHXRECV</td>
<td>ACT/S</td>
<td>ACTIVE</td>
<td>(agent)</td>
<td>Logon Receiver</td>
</tr>
<tr>
<td>hxcstat</td>
<td>KLHXCREQ</td>
<td>n/a</td>
<td>ACTIVE</td>
<td>ACTIVE</td>
<td>Command Requester</td>
</tr>
<tr>
<td>hxreq</td>
<td>KLHXCSVNR</td>
<td>ACT/S</td>
<td>ACTIVE</td>
<td>ACTIVE</td>
<td>Command Server</td>
</tr>
<tr>
<td>hpSEND</td>
<td>KPSRECV</td>
<td>ACTIV</td>
<td>ACTIVE</td>
<td>ACTIVE</td>
<td>Profile Receiver</td>
</tr>
</tbody>
</table>

Logon sender

LOCAL: the status will always be ‘n/a’ because sender tasks are associated with the remote target systems.

Remotes: The Logon Sender (NTD KLHXSEND) on each remote system should have an active VTAM session with the Logon Receiver (KLHXRECV dialog ACB) on the local system. If this session is active the status is set to ACTIVE, otherwise it will be INACTIVE.

Logon receiver

LOCAL: the status is set to the VTAM status of the KLHXRECV dialog ACB, which should be ACT/S.

Remote FOCAL: the status is set to ACTIVE if there is an active instance of KLHXSEND on the local system for that target system - indicated by the existence of the IPC queue ‘KLHXSEND.&hxsys..TIMERQ’. It will otherwise be INACTIVE.
Remote AGENT: the status is set to '(agent)' to indicate that it is not relevant as Agent HelpDesks do not receive logon data from other systems.

**Command requester**

LOCAL: the status will always be 'n/a' because the requester tasks are associated with the remote target systems.

Remotes: the Command Requester (NTD KLHXCREQ) on each remote system should have an active VTAM session with the Command Server (KLHXCSVR dialog ACB) on the local system. If this session is active the status is set to **ACTIVE**, otherwise it will be **INACTIVE**.

**Command server**

LOCAL: the status is set to the VTAM status of the KLHXCSVR dialog ACB, which should be **ACT/S**.

Remotes: the status is set to **ACTIVE** if there is an active instance of KLHXCREQ on the local system for that target system - indicated by the existence of the IPC queue 'HX.&hxsys..CMDQ'. It will otherwise be **INACTIVE**.

**Profile receiver**

LOCAL: the status is set to the VTAM status of the KLHXCSVR dialog ACB, which should be **ACTIVE**, unless the Heartbeat check happens to coincide with a synchronization cycle, in which case it will be **ACT/S**.

Remote: This will be 'N/A'.

**Profile sender**

The status of the Profile Sender (NTD KPSSEND) is not included in the Heartbeat table. It cannot be monitored because it is active only during the execution of a synchronization cycle.

---

**NTD commands to start and stop activities**

The following table provides an overview of the commands available to manage the services around the ‘High Availability Option’. The sysid in the following table is used as an internal CLSS sysid name.

*Table 9. NTD Commands for Services of High Availability Option*

<table>
<thead>
<tr>
<th>Dialog</th>
<th>START/ STOP</th>
<th>CH%DCLG STARTUP</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>KLHDLOGR</td>
<td>START</td>
<td>Yes</td>
<td>Start of the HelpDesk Logger within the Start-up Deck</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td><strong>NTD KLHDLOGR <em>/FOCAL</em></strong> starts FOCAL</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td><strong>NTD KLHDLOGR <em>/RESTART/FOCAL</em></strong> warm start</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td><strong>NTD KLHDLOGR <em>/RESTART/</em></strong> warm start AGT</td>
</tr>
<tr>
<td>KLHXSTOP</td>
<td>Stop</td>
<td></td>
<td>Will stop the HelpDesk Logger</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td><strong>NTD KLHXLOGR</strong></td>
</tr>
</tbody>
</table>
## Table 9. NTD Commands for Services of High Availability Option (continued)

<table>
<thead>
<tr>
<th>Dialog</th>
<th>START/STOP</th>
<th>CH%DCLG STARTUP</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>KLHTBCLN</td>
<td>START</td>
<td>Yes</td>
<td>HelpDesk table clean-up</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>At Start-up with an AT ADD command every 24 h</td>
</tr>
<tr>
<td>KLHTBCHK</td>
<td>Between</td>
<td></td>
<td>This is a dialog to clean up local HD.USERTAB and can be called every reason and time.</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>NTD KLHTBCHK</td>
</tr>
<tr>
<td>KLHXCREQ</td>
<td>Start</td>
<td>yes</td>
<td>Start of the X-system command server</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>At Start with an AT ADD command with a delay of 2 Minutes local and 5 minutes remote</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>can be started after stop with KLHXCSTP with a modify command where sysid is each member of HAO compound</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>NTD KLHXCREQ sysid</td>
</tr>
<tr>
<td>KLHXCRST</td>
<td>Stop</td>
<td></td>
<td>Stopping the Command server with NTD KLHXCRST sysid</td>
</tr>
<tr>
<td>KLHXCSTP</td>
<td>Stop</td>
<td></td>
<td>Stopping the x-system command server with NTD KLHXCSTP sysid</td>
</tr>
<tr>
<td>KLHXCSVR</td>
<td>Start</td>
<td>Yes</td>
<td>Start of the X-system command server</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Normally started as an AT ADD command with a delay of 2 to locals and 5 to x-system STC’s.</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>can be started after stop with KLHXCSTP with a modify command where sysid is each member of HAO compound</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>DIALOG application KLHXCSVR</td>
</tr>
<tr>
<td>KLHDMON</td>
<td>Start</td>
<td>Yes</td>
<td>Monitor for resource Utilization and alerting</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Started with an AT ADD command and a delay of 5 minutes.</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>No known start options</td>
</tr>
<tr>
<td>KLHXHBT</td>
<td>Start</td>
<td>yes</td>
<td>Heartbeat facility to get what systems are up</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>With an AT ADD and a Delay of 5 at startup NTD KLHXHBT nn</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>When default interval should be changed from 15 minutes to nn.</td>
</tr>
<tr>
<td>KLHXHBTX</td>
<td>Stop</td>
<td></td>
<td>Stops the Heartbeat probe</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>NTD KLHXHBTX</td>
</tr>
<tr>
<td>KLHXSEND</td>
<td>Start</td>
<td></td>
<td>Log on sender to x-remote system when user logon</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Normally started as an AT ADD command with a delay of 2 to locals and 5 to x-system STC’s.</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>can be started after stop with KLHXSSTP with a modify command where sysid is each member of HAO compound</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>NTD KLHXSEND sysid</td>
</tr>
<tr>
<td>KLHXSSTP</td>
<td>Stop</td>
<td></td>
<td>To stop the x-remote system logon sender</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>NTD KLHXSSTP sysid</td>
</tr>
</tbody>
</table>
Table 9. NTD Commands for Services of High Availability Option (continued)

<table>
<thead>
<tr>
<th>Dialog</th>
<th>START/STOP</th>
<th>CH%DCLG STARTUP</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>KPSRSTRT</td>
<td>Start</td>
<td>STOP</td>
<td>Profile Synchronization. Stop and Restart KPSSEND Task at regular interval. <strong>NDT KPSRSTRT</strong> as every command.</td>
</tr>
<tr>
<td>KPSRUN</td>
<td>Between</td>
<td></td>
<td>Initiate a synch cycle. Start Profile Synch when KPSSEND already active. <strong>NDT KPSRUN</strong>.</td>
</tr>
<tr>
<td>KPSSEND</td>
<td>Start</td>
<td>Yes</td>
<td>Start of the Profile Synch. Normally started as an AT ADD command with Delay and Every.</td>
</tr>
</tbody>
</table>

### NAM update facility

**Introduction**

This is a facility to allow the simultaneous update of the NAM files on all connected systems when HelpDesk Synchronization has been implemented. The data stored in the NAM includes user details (name, location etc.) as used by the HelpDesk facility.

**Usage notes**

The NAM Update facility can be invoked from option N on the HelpDesk Admin menu:

```
+-------------------------------------------------------------------+      
| m | Actions | View | Goto | Broadcast | Admin | Connections |                                  |
+-------------------------------------------------------------------+      
| KLHDISP1 | CL/SuperSes | KLHXADM1 | Administration Menu |                                  |
+-------------------------------------------------------------------+      
| Mode:FOCAL | Select user with a '/' or an | Logging is currently..... ACTIVE |                                  |
+-------------------------------------------------------------------+      
| S=Show detail | KLHXNAM | Cross-System NAM Facility |                                  |
+-------------------------------------------------------------------+      
| Userid | Userid..... USER01 |                                  |
+-------------------------------------------------------------------+      
| CLSSUSR1 | Local System...... HA02 | Remote system(s)... HA01 HA03 HA04 HA05 HA06 |
+-------------------------------------------------------------------+      
| YZYCMZ | Displayed system.. TL62 | Name........ User Name | Location..... USA | Phone........ 1234 | Group......... | Other info... IT SPECIALIST |
+-------------------------------------------------------------------+      
| Enter F1=Help | Enter=Display PF5=Update Local PF6=Update All PF12=Quit |
+-------------------------------------------------------------------+      
```

- This calls dialog KLHXNAM which allows NAM values to be displayed for any user and any connected system (ENTER).
- Note that this also allows either just the local NAM to be updated (PF5) or all connected NAM files to be updated (PF6).
• The NAM Update Facility can also be invoked from the HelpDesk display with the 'U' action code.

<table>
<thead>
<tr>
<th>LHUNAM1 Update User Details for USER01</th>
</tr>
</thead>
<tbody>
<tr>
<td>Logged on to............ HA02</td>
</tr>
<tr>
<td>Connected system(s)... HA01 HA03 HA04 HA05 HA06 Connected system(s)...</td>
</tr>
<tr>
<td>Name............ User Name</td>
</tr>
<tr>
<td>Location...... USA</td>
</tr>
<tr>
<td>Phone......... 1234</td>
</tr>
<tr>
<td>Group............ IT SPECIALIST</td>
</tr>
<tr>
<td>Other info... IT SPECIALIST</td>
</tr>
<tr>
<td>PF6=Update PF12=Quit</td>
</tr>
</tbody>
</table>

• This calls dialog KHLUNAM1 which displays details for the selected user and allows them to be modified and written to all connected systems (PF6).

• When a user updates his/her personal information by selecting Options/Personal Information from the CL/SuperSession main menu action bar, or when prompted to do so by the HelpDesk logon dialog, dialog KLSUIINF1 is invoked. This will also propagate updates to all connected systems.

**CL/SuperSession send message facility**

**Introduction**

This standard 'Send Message' option invoked from the 'Features' choice on the CL/SuperSession action bar or with a trigger has been enhanced to detect which system the target user is on and sends the message to the appropriate system.

**Usage notes**

If the user is on a remote system, the message popup will not include the usual reply section, but will allow a reply popup to be invoked with PF5.

<table>
<thead>
<tr>
<th>KLGXMS21 Message Sent by USER02 07:02:29 02/19/16</th>
</tr>
</thead>
<tbody>
<tr>
<td>meeting moved to 4:30 - can you still attend?</td>
</tr>
</tbody>
</table>

F5=Reply F12=Cancel

**View screen facility**

A new authority level has been implemented for the Helpdesk View Screen facility as follows:

N Not authorized
P Requires user permission
Y No permission required
The 'V' action code on the HelpDesk user details display invokes the 'View Session' facility which is enabled only for users logged on to the same CL/SuperSession region.

Using the 'V' action code on the HelpDesk menu allows the HelpDesk user to view a user’s physical screen (that is, whatever is currently displayed on the user’s terminal or emulation session) if the user is logged on to the same region as the HelpDesk.

Authorized HelpDesk users will have the option to request the user’s permission or view without requesting permission.
Chapter 10. The HelpDesk

Introduction

This facility has three main features:
- **HelpDesk**: Provides you with a central point of control to monitor and perform actions against user and virtual sessions.
- **Monitor**: Enables you to monitor CL/SuperSession resources via color-coded status lights.
- **Cross-system Operator**: Enables you to issue commands and receive system responses.

Using the HelpDesk

Logging on to the HelpDesk feature

When you first log on to CL/SuperSession after you have installed the HelpDesk facility, an Update Personal Information panel appears. Enter the appropriate information in the fields provided on this panel and press Enter.

To log on to the HelpDesk feature, select the HelpDesk session from the CL/SuperSession main panel.

**Result:** A HelpDesk message appears, informing you that the HelpDesk tasks are being initialized.

Press any key to continue.

**Result:** The main HelpDesk panel appears.

<table>
<thead>
<tr>
<th>Actions</th>
<th>View</th>
<th>Goto</th>
<th>Broadcast</th>
<th>Admin</th>
</tr>
</thead>
<tbody>
<tr>
<td>KLMDISP1 CL/SuperSession HelpDesk Date:12/19/16 Time:13:30:20</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Select user with a '/' or an action code, or enter userid... or terminal... S=Show details V=View M=Message C=Cancel F=Force</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Userid</td>
<td>Terminal</td>
<td>Location</td>
<td>System</td>
<td>Group</td>
</tr>
<tr>
<td>USER01</td>
<td>L0048192 Santa Monica</td>
<td>SYSA</td>
<td>PROD</td>
<td>SMITH, John</td>
</tr>
<tr>
<td>USER02</td>
<td>L0048191 Santa Monica</td>
<td>SYSA DIST DOE, Jane</td>
<td></td>
<td></td>
</tr>
<tr>
<td>USER03</td>
<td>ATERM495 Westlake</td>
<td>SYSA PROG JONES, David</td>
<td></td>
<td></td>
</tr>
<tr>
<td>USER04</td>
<td>ATERM406 Santa Monica</td>
<td>SYSA OPER STEVENS, George</td>
<td></td>
<td></td>
</tr>
<tr>
<td>USER05</td>
<td>L0043500 Westlake</td>
<td>SYSB OPER LEE, Lisa</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Main HelpDesk panel

The main HelpDesk panel displays a scrollable list of all active CL/SuperSession users, sorted by user ID. You can use this panel to:
- Display user details
- View a user's terminal display
- Send a message to a user
- Cancel or force a user

For information about using the View pull-down menu to limit the list of active users on the main HelpDesk panel, see [Using the View Filter](#).

**Displaying user details**

**Introduction:**

The HelpDesk Details panel allows you to view detailed information about a specific user and a list of the user’s active sessions. You can use this panel to:

- View user virtual sessions
- Cancel user sessions
- View a summary of sessions for users logged on to virtual terminals, virtual terminal pools, or applications

**Accessing user details:**

To display details for a user, enter an S (Show details) in the input field provided on the main HelpDesk panel.

**Result:** The HelpDesk Details panel appears.

```
+----------------------------------------------------------------------------+
| KLHUDIS1 HelpDesk Details for USER02                                    |
| Name........ DOE, Jane System........ SYSA                             |
| Group....... DIST Terminal....... ATERM1Z3                             |
| Location.... Santa Monica Logmode....... R1234X                      |
| Phone........ x5555 Logon Time....... 10:54:20                       |
| Printer..... Logon Date..... 12/19/16                                |
| Status...... ACTIVE                                                  |
| Active Sessions                                                     |
| V=View Session C=Cancel Session T=Vterm P=Vpool A=Appl Sessions      |
| Session Applid Vterm Vpool Logmode Status Compress                   |
|====================================================================|
| HELPDESK RGSS316N RGSS3160 VIRT3270 SNX32702 CURRENT OFF             |
|************************************************************************|
```

**Viewing user virtual sessions:**

To view a user’s virtual session:

1. Enter the V (View) action code next to the virtual session you want to view.

**Result:** The Start Session View pop-up appears.
2. Press **Enter**.

**Result:** A message is sent to the user asking for permission to view the virtual session.
- If the user grants permission, the virtual session appears.
- If the user does not grant permission, a message appears informing you that your request has been denied.

3. To see a list of options from the virtual session, press **F4**.

**Result:** The Session View Options pop-up appears.

You can perform the following actions on the virtual session:
- Save or print the screen show
- User details
- Scroll up, down, right, and left

To stop viewing a virtual session, press **F3**.

**Result:** The HelpDesk facility notifies the user that you are no longer viewing the session.

**Saving viewed screens:**

To save a user session screen for future reference, press **F5** from the Session View Options panel.

**Result:** The HelpDesk notifies you that the screen is saved.

Screens are saved until you delete them.
Viewing and deleting saved screens:

To view saved screens:
1. Select the Goto pull-down from the action bar.
2. Enter a V (View) in the field provided.
   **Result:** The Saved Screen List appears.

   +----------------------------------------------------------------------------+
   | KLHSPDS1 Saved Screen List                                               |
   | S=Show Screen D=Delete                                                   |
   | Date Time Userid Terminal Session AID Key                                |
   +----------------------------------------------------------------------------+
   | 12/14/2016 16:16:12 USER03 ATERM484 HELPDESK ENTER                      |
   | *************************** BOTTOM OF DATA ***************************     |
   +----------------------------------------------------------------------------+

   Enter F1=Help F7=Back F8=Forward F12=Cancel

3. Enter an S (Show screen) next to the screen you want to view.
   **Result:** The saved screen appears.

   To delete saved screens, enter a D (Delete) in the field provided on the Saved Screen List panel next to the screen you want to delete.

   **Result:** The HelpDesk notifies you that the deletion was successful.

Printing viewed screens:

To print viewed screens:
1. Press **F6** from the Session View Options panel.
   **Result:** A HelpDesk message appears informing you that the screen was printed.

   **Note:** If you have not defined a default VTAM printer, the Printer Name pop-up panel appears.

2. Specify a printer name in the field provided.

   **Specifying a default printer:**

   To specify a default VTAM printer:
1. Select the Goto pull-down from the action bar.
2. Enter a P (Set default printer) in the field provided.
   **Result:** The Printer Name pop-up appears.
3. Enter the printer name in the VTAM Printer field. If you want to save the printer to your CL/SuperSession profile, enter Y in the field provided.

4. Press Enter.

   **Result:** The printer name is saved to your profile.

5. Press F12 to cancel the Printer Name pop-up.

For more information about specifying a VTAM printer name, see the *IBM CL/SuperSession for z/OS V2.1 Customization Guide*.

### Displaying user details from a viewed screen:

To display details for a session:

- Press F2 from the Session View Options panel.

   **Result:** The Session View User Details pop-up appears.

   ```
   +------------------------------------------+
   | Session View User Details               |
   | Userid....... USER03                    |
   | Terminal..... ATERM495                  |
   | Date......... 12/14/16                   |
   | Time......... 15:55:12                   |
   | AID Key..... ENTER                      |
   | Name....... Jim Jones                    |
   | Location.... Santa Monica               |
   | Phone......... x5555                     |
   +------------------------------------------+
   ```

You can use this panel to see detailed information about the user's screen you are viewing.

### Canceling sessions:

To cancel a user's session:

1. Enter a C (Cancel) next to the session you want to cancel on the HelpDesk Details panel.

   **Result:** The Confirm Command pop-up appears.

2. Enter a Y (Yes) to proceed, N (No) to cancel the action.

For more information on the cancel option, see the VCANCEL command in the *CL/SuperSession Operator’s Guide*. 
Viewing a summary of sessions:

The HelpDesk allows you to display the number of users and sessions for each:

- Virtual terminal
- Virtual terminal pool
- Application

Enter the appropriate action code next to a session on the HelpDesk Details panel:

- T - To view a virtual terminal session summary.
- P - To view a virtual terminal pool session summary.
- A - To view an application session summary.

**Result:** The Virtual Session Summary panel appears.

```
+------------------------------------------------------+
| KLHVTRS1 Virtual Session Summary                    |
| Virtual Sessions for Virtual Terminal CLS1234       |
| Number of Users... 1                                |
| Number of Sessions... 1                            |
| Do you want to list all sessions... (Y/N)           |
| Enter F1=Help F11=Print F12=Cancel                 |
+------------------------------------------------------+
```

To list all the sessions for each virtual terminal, virtual terminal pool, or application, enter a Y (Yes) in the field provided.

**Result:** The List of Sessions panel appears.

**Note:** You cannot view a summary of sessions for users logged on to the remote CL/SuperSession.

You can use this panel to cancel or view the sessions listed.

- To view a session, enter a V (View) next to the session you want to view.
  
  For more information about viewing sessions, see "Viewing a User's Terminal Display".

- To cancel a session, enter a C (Cancel) next to the session you want to cancel.
  
  For more information about canceling sessions, see "Canceling sessions".

Viewing a user's terminal display

Introduction:

The HelpDesk feature allows you to view a user's physical terminal display, or active session, from the main HelpDesk panel.

**Note:** You cannot view a user’s terminal display if the user is logged on to the remote CL/SuperSession.
Viewing a user's terminal display:

To view a user's terminal display:

1. Enter the V (View) action code next to the user's terminal you want to view.
   **Result:** The View User's Terminal Display pop-up appears.

   +----------------------------------------------------------+
   | KLHVIEW1 View User's Terminal Display                    |
   | Userid......................... USER03                   |
   | (When viewed screen displayed press PF4 to list options) |
   | Enter F5=Review F12=Cancel                              |
   +----------------------------------------------------------+

2. Press Enter.
   **Result:** A message is sent to the user asking for permission to view the terminal display.
   - If the user grants permission, the user's terminal display appears.
   - If the user does not grant permission, a message appears informing you that your request has been denied.

3. To see a list of options from the viewed terminal display, press F4.
   **Result:** The Session View Options pop-up appears.

   From the viewed session you can:
   - Save or print the screen
   - Show user details
   - Scroll up, down, right, and left

   To stop viewing a user session, press F3, or **Enter**.

   For information about saving and printing a viewed active session screen, see [Displaying User Details].

**Sending messages to users**

**Introduction:**

The HelpDesk facility enables you to send messages to users in two ways. You can send a message to an individual user, or you can send a message to a group of users.

**Sending a message to a user:**

To send a message to a user:

1. Enter the M (Message) action code next to the user you want to send a message to.
   **Result:** The HelpDesk Send Message panel appears.
2. Enter the message text in the lines provided.
3. Press **Enter** to send the message.

**Note:** If the recipient of the message is connected to the local CL/SuperSession, and you require a response to the message, enter a Y (Yes) in the Reply Required field.

**Sending a broadcast message:**

The broadcast message facility allows you to send a message to a group of users based on the following criteria:
- User ID
- Terminal ID
- Session ID
- Virtual terminal pool
- Application
- Group
- System

To send a broadcast message:
1. Select the Broadcast pull-down menu from the action bar.

**Result:** The Broadcast Message pull-down appears.
2. Select your target group by entering the criteria into the appropriate fields.

   **Note:** The broadcast facility allows you to send a broadcast message to only one target group at a time.

   **Result:** The HelpDesk notifies you how many users received the message.

3. Press **F12** to cancel the notification message.

**Canceling and forcing users**

**Canceling a user:**

To cancel a user:

1. Enter the C (Cancel) action code next to the user you want to cancel.
   **Result:** The Confirm Command pop-up appears.
2. Enter a **Y** (Yes) to proceed, **N** (No) to cancel the action.

For more information about the cancel option, see the VCANCEL command in the **CL/SuperSession Operator’s Guide**.

**Forcing a user:**

If you attempt to cancel a user and the cancel action code is unsuccessful, you can use the Faction code to force a user’s session by completing the following steps.

1. Enter the F (Force) action code next to the user’s session you want to force.
   **Result:** The Confirm Command pop-up appears.
2. Enter a **Y** (Yes) to proceed, **N** (No) to cancel the action.

For more information about the force option, see the VFORCE command in the **CL/SuperSession Operator’s Guide**.

**Using the view filter**

**Introduction:**

The HelpDesk feature allows you to filter the list of active users displayed on the main HelpDesk panel. You can use the view filter to limit the list of active users to a particular group or location. You can also include multiple parameters to build a filter argument.

**Accessing the view filter:**

To access the view filter on the main HelpDesk panel, select the View pull-down from the action bar.

**Result:** The View Criteria pull-down menu appears.
Specifying view criteria:

You can filter the list of users based on the following criteria:

- User ID
- Terminal ID
- CL/SuperSession group ID
- User name
- Location
- Log on date and time

To edit the view criteria argument:
1. Enter one or more parameters in the input fields provided.
2. Press Enter.

**Result:** A message notifies you that the view criteria has been updated.

Resetting the view criteria:

The selection criteria argument does not reset itself automatically until you log off the HelpDesk. If you edit the argument by including a new parameter, that parameter is incorporated into the argument. If you change an existing parameter, only that parameter is updated in the argument.

To reset the view criteria argument, enter a `/` in the Reset field on the View Criteria panel.

**Result:** The view criteria is reset.
Monitoring CL/SuperSession resources

The Monitor feature enables you to monitor CL/SuperSession resources from a single panel, and informs you with status lights whether your system is operating normally, or whether a threshold has been exceeded.

The Monitor panel displays status for:
- CL/SuperSession storage (primary and extended)
- User-defined virtual terminal pools
- Current total of active users
- Current total of active sessions

Note: The Monitor facility only displays data for the local CL/SuperSession.

Accessing the Monitor panel

To access the Monitor panel, select the Switch to Monitor option from the Goto pull-down menu.

Result: The Monitor panel appears.

To return to the HelpDesk main panel, press F3 or select the Switch to HelpDesk option from the Goto pull-down menu.

Exceptions

An exception is an event that meets or exceeds a pre-specified threshold. If an exception occurs, the HelpDesk facility:
- Sends a message to all HelpDesk users with authority to receive alerts
- Logs an exception in the exception history table
- Writes a message to the TLVLOG (CL/SuperSession log file)
Sends a WTO message to the MVS™ console

Note: WTO messages prefixed with CLAF001 are intended for recognition by an automated operation package, such as AF/OPERATOR. You can suppress these messages by commenting out the statement below the WTO: label in -RHILEV-RLSPNLS(KLHDMNTX).

For information about monitoring exceptions, see [Monitoring Exceptions].

Using the monitor feature

Status indicator line

The status indicator line provides you with the following information:
- Auto-refresh status and interval
- Date and time of the last refresh
- Monitor status

To modify auto-refresh status (turn it off or on), see [Setting Thresholds].

To modify monitor status, or to change the refresh interval, see [Setting Thresholds].

Status indicators

A status indicator is a color bar that displays performance data, making it possible for you to quickly view the status of your CL/SuperSession resources. Performance is measured against user-defined thresholds.

When a status indicator changes, the Monitor feature alerts you that a threshold has been met or exceeded. For example, when a status indicator changes from green to red, you know that a condition has changed from normal to critical.

The meaning of the status indicator colors are shown in this table.

<table>
<thead>
<tr>
<th>Color</th>
<th>Status</th>
</tr>
</thead>
<tbody>
<tr>
<td>Green</td>
<td>Normal.</td>
</tr>
<tr>
<td>Yellow</td>
<td>A potential problem exists. A warning threshold was met or exceeded.</td>
</tr>
<tr>
<td>Red</td>
<td>A critical problem exists. A critical threshold was met or exceeded.</td>
</tr>
<tr>
<td>Turquoise</td>
<td>This item is idle. The task is not currently running, or there is no data available to report.</td>
</tr>
</tbody>
</table>

Note: If your monitor does not have the capability to display extended attributes, status indicators (or color bars) do not display.

For information about setting thresholds, see [Setting Thresholds].
Monitoring storage

This portion of the Monitor panel displays the total amount of primary and extended storage allocated to the local CL/SuperSession. For both primary and extended storage, the panel includes the percentages of the storage which is used and carved.

For more information about CL/SuperSession storage, see the IBM CL/SuperSession for z/OS V2.1 Customization Guide.

Monitoring virtual terminal pools

This portion of the Monitor panel enables you to view data for six user-defined virtual terminal pools, sorted alphabetically.

For each virtual terminal displayed, the Monitor panel shows:
- Name of the virtual terminal pool
- Number of virtual terminals in the pool
- Number of sessions within the virtual terminal pool

**Note:** CL/SuperSession does not provide any default thresholds for virtual terminal pools.

For information about adding virtual terminal pools or modifying threshold values, see "[Setting Thresholds](#)".

Monitoring users

This portion of the Monitor panel monitors the total number of active users on the local CL/SuperSession.

**Note:** Each user logged on to the HelpDesk facility counts as an additional CL/SuperSession user and is included in the Current Total field shown on the main Monitor panel.

You can select logged-on users for display. Specify the users you want to see by entering a specific or generic user ID, physical terminal ID, or CL/SuperSession group in the appropriate field. Specify only one of the three criteria.

You can use the wildcard character (*) to specify a generic name. For example, if you specify TD* as the user ID, then a list of all the user IDs beginning with TD appears. If you specify L616* as the physical terminal ID, then a list of all the physical terminal IDs beginning with L616 appears.

You can perform the same functions on the Monitor panel that you can perform on the main HelpDesk panel. For information about these actions, and how to perform them, see "[Using the HelpDesk Feature](#)".

Monitoring sessions

This portion of the Monitor panel monitors the total number of sessions on the local CL/SuperSession.

To select sessions for display, specify a complete virtual terminal name, application name (ACB name), or terminal pool name in the field provided.
Note: Generic names are not accepted.

Result: The Session List panel appears.

For instructions on viewing sessions, and for more information about actions you can perform on this panel, see “Using the HelpDesk Feature”.

Monitoring exceptions

Introduction

The Monitor feature allows you to view a list of exceptions generated for each met or exceeded threshold that the HelpDesk facility monitors on an Exception History panel. This panel can help you view trends in CL/SuperSession resource usage and meet your service level objectives.

Accessing the Exception History panel

To access the Exceptions History panel:
• Select the Exceptions pull-down from the action bar on the Monitor panel.

Result: The Exception History panel appears.

<table>
<thead>
<tr>
<th>KLHMTDI Exception History</th>
</tr>
</thead>
<tbody>
<tr>
<td>A=Acknowledge D=Delete</td>
</tr>
<tr>
<td>Date Time Severity Description Owner</td>
</tr>
<tr>
<td>02/15/16 15:47:26 CRITICAL VPOOL VIRT3270 Sessions = 6 USER02</td>
</tr>
<tr>
<td>02/15/16 14:57:29 WARNING VPOOL VIRT3270 Sessions = 5 USER03</td>
</tr>
<tr>
<td>02/15/16 09:32:26 CRITICAL VPOOL VIRT3270 Sessions = 6 USER04</td>
</tr>
<tr>
<td>02/15/16 07:02:25 WARNING VPOOL VIRT3270 Sessions = 4 USER05</td>
</tr>
<tr>
<td>Enter F1=Help F7=Back F8=Forward F11=Print F12=Cancel</td>
</tr>
</tbody>
</table>

Exception messages

When a threshold has been met or exceeded, the HelpDesk facility issues an exception alert to each HelpDesk user with authority to receive alerts. Although you must be logged on to CL/SuperSession to receive an exception alert, you do not have to be logged on to the HelpDesk facility. If you are a HelpDesk Administrator, you can set alert authority for users on the HelpDesk User Authorities panel.

For more information about administrative functions, see Appendix A, “Administrative Functions”.

Note: You can disable alert notification for an exception by entering No in the Enable Alerts field on the Add VPOOL Monitoring panel.

Acknowledging and deleting exceptions

To acknowledge an exception:
1. Select the Exceptions pull-down from the action bar on the main Monitor panel.

Result: The Exception History panel appears.
2. Enter the A (Acknowledge) action code next to the exception you want to acknowledge.

3. Press Enter.

   **Result:** The exception is updated and acknowledged.

When you acknowledge an exception, you become the owner of it. When you log on to the HelpDesk facility, you are notified of any unowned exceptions. Exceptions remain in the list until you delete them on the Exception History panel.

To delete an exception, enter the D (Delete) action code next to the exception you want to delete.

   **Result:** The exception is deleted and removed from the Exception History panel.

---

**Using the cross-system operator**

The CL/SuperSession Cross-system Operator is a scrollable window that enables you to issue operator commands and receive responses. If your HelpDesk facility is connected to a remote system, you can also issue commands to that system from the local HelpDesk.

**Accessing the Cross-system Operator**

To access the Cross-system Operator, select C (Switch to operator console) from the Goto pull-down menu, or press **F6** from the main HelpDesk panel.

   **Result:** The Cross-system Operator console appears.

---

**Issuing commands**

To issue commands from the Cross-System Operator:

1. Enter the command on the Command prompt at the bottom of the console panel.
Note: To issue commands to a remote CL/SuperSession, prefix the command with the four-character MVS system ID you specified in -RHILEV-RLSPNL$(KLHSYSID)$ during installation. For example, to issue the STORAGE command to a remote CL/SuperSession on system SYSA, enter
SYSA STORAGE
If you do not specify a four-character MVS system ID, the command is processed on the local CL/SuperSession.
You cannot issue the VIEWLOG or NAM commands from the Cross-system operator console.

2. Press Enter.

Result: CL/SuperSession responses appear, indicating the status of the request.
Command responses display on the console and are accessible until you exit the Cross-System Operator. To scroll through responses, use F7 to scroll up, and F8 to scroll down.
For more information about operator commands, see the CL/SuperSession Operator’s Guide.

Printing screens
To print a screen from the Cross-System Operator, press F11.
If you do not have a default VTAM printer defined, you are prompted to enter a printer name. For information about specifying a VTAM printer name, see the IBM CL/SuperSession for z/OS V2.1 Customization Guide.

Administrative functions
This section describes the Administration pull-down menu available from the action bar in the HelpDesk feature. It also provides procedures for completing tasks such as:

• Setting, modifying, and deleting thresholds
• Setting or modifying user authorities
• Cleaning up the HelpDesk user table

Note: The Administration pull-down menu is only accessible by users defined as HelpDesk Administrators.

Accessing the Administration menu
To access the Administration menu, select Admin from the action bar.

Result: The HelpDesk Administration menu appears.
This panel shows the current status of HelpDesk tasks, including logging, monitoring, and the user server. You can use this panel to perform the following actions:

**STOP Logging Task**  Stop and start the HelpDesk logging task.

**STOP Monitoring Task**  Stop and start the Monitor feature task.

**STOP User Server Task**  Stop and start the user server task.

**Set Thresholds**  Set thresholds for CL/SuperSession resources.

**Set User Authorities**  Set or modify user authority to access the HelpDesk facility.

**Cleanup User Table**  Delete users who are no longer logged on to CL/SuperSession from the HelpDesk table.

---

**Starting and stopping tasks**

**Introduction**

The Administration menu enables you to start and stop the following background tasks:

- **Logging task**
  Records users logging on and off the local CL/SuperSession. If you stop this task, the HelpDesk facility stops recording logons to the local CL/SuperSession.

- **Monitor task**
  Obtains the status of local CL/SuperSession resources and displays the results on the Monitor panel. If you stop this task, real-time monitoring ceases.

- **User Server task**
  Obtains user and session information by issuing CL/SuperSession commands and receiving responses on the Cross-system Operator console panel. Each HelpDesk operator has a specific user server. If you stop this task, you cannot issue commands on the Cross-system Operator console.

The logging and monitor tasks are started automatically, as non-terminal dialogs (NTDs), when you initialize CL/SuperSession. These tasks remain active until you terminate CL/SuperSession. The user server task is initialized as you log on to the HelpDesk facility and runs until you log off the HelpDesk facility. The logging, monitor, and user server tasks should only be stopped to recover from abnormal conditions.
Stopping a task

To stop a HelpDesk task:

1. Enter the appropriate letter in the field provided on the Administration Menu.

   L  To stop HelpDesk logging. M To stop the Monitor feature.
   M  To stop the Monitor feature.
   U  To stop a user server.

   **Result:** A Confirm Command pop-up appears, asking you to confirm termination of the specified task.

2. Enter a Y (Yes) to proceed, N (No) to cancel the termination.

Starting a task

To start a HelpDesk task at any time during your session:

1. Enter the appropriate letter in the field provided on the Administration Menu.

   L  To start HelpDesk logging.
   M  To start the Monitor feature.
   U  To start a user server.

   **Result:** A Confirm Command pop-up appears, asking you to confirm initialization of the specified task.

2. Enter a Y (Yes) to proceed, N (No) to cancel the termination.

   **Note:** If you stop the user server task, you will not receive a Confirmation Command message. You will receive a HelpDesk message informing you the user server task has been started.

Setting thresholds

**Introduction**

IBM supplies a set of CL/SuperSession default thresholds for:

- % Primary Storage Carved
- % Primary Storage Used
- % Extended Storage Carved
- % Extended Storage Used
- Active Virtual Sessions
- Logged On Users

The HelpDesk feature enables you to set thresholds for an unlimited number of Virtual Terminal Pools (VPOOLS) using the Set Thresholds panel. Once you have set your VPOOL thresholds, you can view the first six pools you defined, sorted alphabetically, on the Monitor panel of the HelpDesk facility.

   **Note:** The HelpDesk facility alerts you to all exceeded threshold values, even though you can view only the first six pools you defined on the Monitor panel.
Accessing the Set Thresholds panel

To access the Set Thresholds panel, enter a T (Set Thresholds) in the input field provided on the HelpDesk Administration panel.

Result: The Set Thresholds panel appears.

This panel shows the current Monitor status and allows you to modify the interval at which CL/SuperSession thresholds are monitored.

Note: The supplied default interval is 15 minutes.

Adding thresholds

To add thresholds to the list of those currently monitored:

1. Enter the A (Add VPOOL) action code next to a threshold name.

   Result: The Add VPOOL Monitoring panel appears.

2. Enter the name and description of the threshold you want to monitor as well as the warning and critical values for the pool.

3. Enter ON in the Enable Alerts field to receive exception alerts when warning and critical values are met or exceeded.

4. Modifying threshold values

   To modify threshold values at any time during your session, enter the C (Change) action code next to a threshold name.
Result: The Change Thresholds panel appears.

You can use this panel to change the description of the threshold or warning and critical threshold values. You can also toggle exception notification on and off in the Enable Alerts field.

Deleting thresholds

to delete a threshold from the list of currently monitored thresholds:
1. Enter the D (Delete) action code next to the name of the threshold you want to delete.

    Note: You can delete only thresholds that you create. You cannot delete CL/SuperSession supplied default thresholds.

    Result: A Confirm Command pop-up panel appears.

2. Enter a Y (Yes) to proceed, N (No) to cancel the deletion.

Setting user authorities

Introduction

The first user to log on to the HelpDesk facility after initial installation is assigned Administrator authority. This user can then use the User Authorities option on the Administration pull-down menu to perform the following actions:

- Add authority for a new user
- Change the authority of any user
- Delete a user

Accessing user authorities

To access the HelpDesk User Authorities panel, enter a U (Set User Authorities) in the field provided on the HelpDesk Administration menu.

Result: The HelpDesk User Authorities panel appears.
Adding user authority

To add authority for a new user:

1. Enter the A (Add) action code next to the name of a user on the main HelpDesk panel.

   Result: The Add User Authority panel appears.

2. Enter the user ID of the user you want to add, and indicate Y (Yes), or N (No) in the following fields:

   Admin: Gives the user Administrator authority and allows use of the functions available on the Administration pull-down menu.

   View: Gives the user authority to view another user's screen.

   Save Screens: Gives the user authority to save another user's viewed screen.

   Cancel: Gives the user authority to cancel another user's session.

   Receive Alerts: Alerts the user when threshold values are met or exceeded.

   Operator Console: Gives the user authority to use the operator console panel for issuing CL/SuperSession commands.

Changing user authority

To change authority for a user, enter the C (Change) action code next to the name of the user you want to change.
**Result:** The HelpDesk User Authority panel appears, which allows you to change the authority of a user for any administrator functions on the Administration pull-down menu.

**Cleaning up the user table**

**Introduction**

The user table contains session information for each local and remote user logged on to the HelpDesk facility. If a CL/SuperSession user experiences terminal or session connection problems which result in abnormal disconnections, the HelpDesk facility continues to store session information for that user even if the user has disconnected from CL/SuperSession.

Although these users are automatically deleted from the user table every 30 minutes, you may not want to wait for this clean up interval. Instead, you can use the Administration pull-down menu to immediately clean up the user table. To do this:

* Enter a C (Clean up local user table) in the field provided on the Administration Menu.

**Result:** HelpDesk locates the local users who are no longer logged on to CL/SuperSession and deletes them from the user table.

**Remote users**

When you clean up the user table from the Administration menu, only local users are affected. Remote users who have experienced an abnormal disconnection from the remote system, are automatically deleted from the user table every 30 minutes. This is accomplished via a command issued by the HelpDesk remote system to the local system.

**Enabling cross-system functionality**

The HelpDesk facility can be installed on multiple CL/SuperSessions, and will have full functionality for each system on which it is installed.

The HelpDesk facility also provides the capability for a single HelpDesk to run dialogs on a second CL/SuperSession address space, either in the same MVS image or in different MVS images, and collect and report data on the secondary system. In this case, the HelpDesk dialogs run on one address space (called the local system), and collect data via standard VTAM connections from the other system in your network (called the remote system).

When you enable cross-system functionality, you can perform the following HelpDesk actions:

* Monitoring logons and logoffs on local and remote systems
* Issuing operator commands to the remote system, and receive command responses
* Issuing broadcast messages to the remote system

**Refreshing remote system user information**

If a remote user logs on or off, the remote system sends a message to the local system on the logging link notifying it of the change in status.
Additionally, the remote system automatically sends a message to the local system containing a list of all the remote users who have logged off in the last 30 minute period. The local system then refreshes the HelpDesk user table.

Installing the HelpDesk on a remote system

Installation procedures

**Step 1: Add ACB names to the local system**

To add the ACB names to the local system:

1. Uncomment the following statements in -RHIENV-.RLSCMDS(KLHCDLGH) for the local CL/SuperSession
   
   DIALOG <LCLACB1> KLHXUREQ
   DIALOG <LCLACB2> KLHXLOGR
   NTD KLHXINIT
   NTD KLHXLOGIN

   where LCLACB1 and LCLACB2 represent the appropriate local ACB names for your site.

2. Update SYS1.VTAMLST with the local ACB names. For example:

   LCLACB1 APPL EAS=1,AUTH=(ACQ,NVPACE),ACBNAME=LCLACB1, PARSess=YES

**Step 2: Define dialog ACB names to the remote system**

To define the dialog ACB names to the remote system:

1. Add the following statements to -RHIENV-.RLSCMDS(KLSSTART) on the remote system:

   DIALOG <RMTACB1> KLHXUSVX
   DIALOG <RMTACB2> KLHXLOGIN

   where RMTACB1 and RMTACB2 represent the appropriate remote ACB name for your site.

2. Update SYS1.VTAMLST with the remote ACB names. For example,

   RMTACB1 APPL EAS=1,AUTH=(ACQ,NVPACE),ACBNAME=RMTACB1, PARSess=YES

**Step 3: Provide a unique system ID for the remote system**

If the remote CL/SuperSession is running on the same MVS image as the local CL/SuperSession, the system ID for each defaults to the SMF system ID. For the HelpDesk facility to operate, the local and remote systems must have unique system IDs.

If the remote and local CL/SuperSessions are running on the same MVS image, provide a unique 4-character system ID for the remote system in -RHIENV-.RLSPNLS(KLHSYSID).

**Step 4: Add remote ACB names to the local system**

To add remote ACB names to the local system:

1. In the JINIT section of -RHIENV-.RLSPNLS(KLHXDCL), replace the local ACB names (LCLACB1 and LCLACB2) with the ACB names chosen in step 1.

2. In the JINIT section of -RHIENV-.RLSPNLS(KLHXDCL), replace the remote ACB names (RMTACB1 and RMTACB2) with the ACB names chosen in step 2.
3. Substitute the system ID (SYSX) with the remote system ID chosen in step 3.

**Step 5: Define a remote monitor control point and user exit**

The monitor facility uses the SSPL 'OPERATOR' function, which requires a valid user ID and password. Because the monitor task runs as an NTD (Non-Terminal Dialog) and is not associated with any user sessions, you must define a special user ID and password and make it available to this NTD.

To avoid the potential security exposure involved in storing a real password, the monitor task runs under a separate control point which does not use external security. This requires a special NAM exit, which is in member KLHDNAMX in the supplied library.

To assemble and link this exit into your -RHILEV-.RLSLOAD library, see member KLHDNAMJ for the appropriate JCL.

To define the additional control point: Add the following statements to -RHILEV-.RLSPARM(KLVINNAM):

```
MONITOR DSNNAME(<NAM dataset name>)
NORACF -
NODB -
EXIT=KLHDNAMX
```

where `NAM dataset name` represents the appropriate NAM dataset name for your site.

The control point will be defined at the next CL/SuperSession startup.

**Step 6: Install initial dialogs to the remote system**

Use the CL/SuperSession Profile Administration panels to modify the GLOBAL Profile Common Segment for the remote CL/SuperSession as follows:

```
Initial Dialog..................KLHLOGON
```

**Note:** If you have already defined a Global Initial Dialog, then add the following statement to the end of your dialog:

```
)term
select KLHLOGON
```

**Starting and stopping the remote server tasks**

**Introduction**

When the local CL/SuperSession is started, and a remote system is defined, it automatically attempts to establish a connection with the remote CL/SuperSession. If the local system is unable to establish the connection at startup, it will retry every 5 minutes until it is successful, or until it has attempted the connection 5 times.

If the local system is still unable to establish a connection after the fifth try, it no longer attempts to establish the connection. The remote link will then have to be started manually. Also, if either system goes down or is brought down, the link between the two systems is broken you must restart each system manually.
Starting the remote server tasks

This section explains how to start the command server and logging tasks for the remote server.

- To start the command server task, issue the following command from the local system:
  
  `NTD KLHXINIT`

- To start the logging task, issue the following command from the local system:
  
  `NTD KLHXLGIN`

Stopping the remote server tasks

This section explains how to stop the command server and logging tasks for the remote server.

- To stop the command server task, issue the following command from the local system:
  
  `NTD KLHXSTOP`

- To stop the logging task, issue the following command from the remote system:
  
  `NTD KLHDSSTOP`
Appendix A. Migration from earlier versions

This appendix tells you how to migrate from the previous releases of CL/SuperSession Version 1.4.7 to the current release, Version 2.1.

Migration tasks

The CL/SuperSession started task procedure includes 3 libraries that are meant to assist in the migration from CL/SuperSession v1.4.7:

-RHILEV-.RLSPARM.MIGRATE
-RHILEV-.RLSCMDS.MIGRATE
-RHILEV-.RLSPNLS.MIGRATE

Note: Any CL/SuperSession V1.4.7 configuration or modified panel member should be carefully examined before being copied into the corresponding CL/SuperSession V2.1 migration library.

Invoke -SSPROC- procedure to run CL/SuperSession V2.1.

Reassemble User Exits

Rename Group Profile Selection Dialogs Convert Profile Table format

Reinstall Customization from Previous Version Run the KLSNMPRG Dialog (optional)

Start CL/SuperSession

Important

Ensure that the steps described in "Installation verification cleanup" on page 15 have been executed before you continue.

Activate the VTAM major node by issuing the following VTAM command from the z/OS console:

\[ V \ NET,ACT,ID=newname \]

where newname is the VTAM major node name copied into SYS1.VTAMLST.

Then, enter this command from the z/OS console:

\[ S \ kls \]

where kls is the name of the started task.

As the CL/SuperSession address space initializes, startup messages appear on the SYSLOG.

IBM CL/SuperSession ENGINE VERSION 210 READY ON SYS(147B452817): GSA(B000)
Start CL/SuperSession

where *cpu* is the system ID, *sernum* is the CPU serial number, and *hexadd* is the hexadecimal address of the global storage area (GSA).

Stop CL/SuperSession

Issue the following command to the z/OS console:

`F kls,SHUTDOWN`

where *kls* is the name of your CL/SuperSession started task.

Issue the command a second time for confirmation.
Appendix B. Creating and/or cloning additional CL/SuperSession environments

Depending on your environment and business practices, an additional CL/SuperSession address space may be a strategic imperative for either load balancing or as a hot-standby.

If you originally installed CL/SuperSession with the USEHAO=Y option, three address spaces were created to manage profile changes and track disconnected users to later route them back to the image on which they and any of their virtual sessions were logged-on and may have been disconnected from.

If you need to create other CL/SuperSession topologies, for example, one with a separate test image or a standby address space, you can easily do so using one of the following techniques.

Clone a CL/SuperSession image (Separate runtime libraries and shared SMP/E target libraries)

You might want to clone a CL/SuperSession image if you did not initially install with USEHAO=Y and you have later decided to implement the High Availability Option and Multipoint Helpdesk OR, subsequently decide you need an additional address space to balance your workload or provide standby assurance in the event of an outage.

A cloned environment shares the same SMP/E target libraries so maintenance installed in one SMP/E environment would be available to all address space. Each address space, however, allocates its own set of RUNTIME libraries to specify parameters unique to that instance like the dataset name of its Tables Database (TDB) or the names of its virtual terminals.

1. Review your current CL/SuperSession started task and identify your custom runtime libraries, for example, -RUNPFX-.
2. Copy each of the libraries and their members into new runtimes and update the new started task JCL.
3. Create new VSAM datasets for NAM, NAF and Viewlog and update the new runtime PARMLIB members KLVINTB, KLVINNAM, and KLVINVVLG with these new dataset names.
4. Review the SYS1.VTAMLIST member for your current started task and create a corresponding member for the new address space specifying different APPLIDs.
5. Update the new address space's configuration members [xxx] to support the new HOSTGATE and Virtual Terminal ACBs (and for the CUA Operator, NODE, and the VPO, if used)
6. Review the TLVPARM and TLVCMDS members that specify dataset names, ACBs, command list names, and user exits updating them where needed.
7. Copy or reassemble any security exits you may have enabled.
8. REPRO the NAM and TDB from the current address space to the newly allocated files.
Create a new CL/SuperSession image (Separate SMP/E target libraries)

If you need to maintain different versions or different maintenance levels of CL/SuperSession, for example, to perform some level of user acceptance validation before rolling the maintenance out to your production system, you may want to consider creating an entirely new CL/SuperSession image.

Migration strategies

The technique for migrating from a prior release of CL/SuperSession is similar whether or not you expect to run both versions at the same time.

If you are NOT anticipating running both address spaces concurrently, most of the same runtime files and naming conventions can be used; be sure to specify these, for instance the APPLIDs, during installation.

If you *DO* plan on maintaining both versions for a period of time, you will have specified new initialization values at install that generate unique APPLIDs and files.

In either case:

1. Review your current CL/SuperSession started task and identify your custom runtime libraries, for example, -RUNPFX-.

2. 
   a. Review any customizations you may have made to product dialogs (those beginning with KL*), these changes may need to be refit to current versions of these same dialogs.
   b. Copy your other user dialogs ASIS, V2.1 is completely back-level compatible.

3. Copy or reassemble any security exits you may have enabled if applicable.

4. On the prior release, run the SAMPLIB dialog KLSTBCLN to check for old or unused profiles and optionally delete them.

5. REPRO the NAM and TDB from the current address space to the V2.1 files.
Appendix C. Checklist to set up HAO

Checklist to implement HAO into an existing environment

If HAO is installed after the implementation, the following checklist should give a direction to do a post implementation.

Based on the KLSINNA2 in the DS *.*.SKLSCMDS the variables need to be set manually for the HAO implementation. There are some other changes also needed like the Helpdesk start member, the STC where the Helpdesk Panels need to be concatenated in TLVPNLS DD Statement.

Some additional hints and pre-work before starting:

- You have to run through the checklist for each CL/SuperSession which is member of the HAO component. And the KLVINNA2 has to be created for each CL/SuperSession separately as the Local is the remote for others.
- HAO is the default qualifier for the system names. The fourth parameter is the numbering of each which is in HAO1, HAO2 etc.... will be shown in the Helpdesk afterwards and the systems and its connection are managed over this system names. Suggestions are names which are related to the LPAR where the CL/SuperSession is running.
- Each CL/SuperSession which are member of the HOA component needs its own Gateway definition (found in *.*.RLSCMDS(KLGHHGW)). When CL/SuperSession is customized without HAO there is the first Gateway named NOGTWY. It is a good idea to use the system name and to have a naming convention through the local and remotes system. But you can also use your own names if you want.
- Each Gateway which is a Generic Resource should get the ISTGENERIC parameter set, where CL/SuperSession is connecting to the Generic Resource. But this is not a must, the HAO can run without Generic Resource.
- A good idea but not a pre-work requirement, is to put the DISP(SHR) parameter for the NAM and TDB DB.

Table 10. Checklist to implement HAO into an existing environment

<table>
<thead>
<tr>
<th>Action</th>
<th>Description</th>
<th>Executes for each CLSS</th>
</tr>
</thead>
<tbody>
<tr>
<td>REPRO of RLSNAM and RLSTDB before start with next step</td>
<td>Need to be done before you start with the HAO definitions then you have a 1:1 copy of the Databases.</td>
<td></td>
</tr>
<tr>
<td>VTAM MAJOR node changes</td>
<td>Insert the HAO Gateway Name as there is a NOHAO appl name as the first gateway.</td>
<td></td>
</tr>
<tr>
<td>Action</td>
<td>Description</td>
<td>Executes for each CLSS</td>
</tr>
<tr>
<td>--------</td>
<td>-------------</td>
<td>-----------------------</td>
</tr>
<tr>
<td>KLSINNA2 is the Member which includes the variable names for HAO local as remote.</td>
<td>set HAO usage to 1 by changing the parm: NAM DECLARE USEHAO 1 *HIGH AVAILABILITY OPTION SUPPORT SWITCH</td>
<td></td>
</tr>
<tr>
<td>The fields HAOPREF are replaced by the own Qualifier if the default is not matching. The HAOSEQN is one for the local HAO. The red marked are samples:</td>
<td>NAM SET -HAOPREF--HAOSEQN-- (HA01) + HDGATE:-HAOPREF--HAOSEQN-GTWY (HA01GTWY)+ HDMODE:-HAOMODE- (F) + HDLR:A:-HAOPREF--HAOSEQN-PHXL (HA01PHXL)+ HDCSA:-HAOPREF--HAOSEQN-PHXS (HA01PHXS)+ HDPSRA:-HAOPREF--HAOSEQN-PPSR (HA01PPSR)</td>
<td></td>
</tr>
<tr>
<td>Run this in all instances after changing the HAO names for the local and remote HAO components.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Just to check that the correct variable names are in by calling the CUA Operator do in the Action bar a G82 to do a list/display of the Variables.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Change the KLSCDLGH which includes the whole Dialog starting flow. You need to change the HAO related variables. You will find this Member in *.**.SKLSCMDS.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>You have to insert the Generic Resource Name in the Hostgate statements. In the moment there is a Name in which is not existing.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Insert or change the following in that member which is stored in *.**.RLSCMDS:</td>
<td>The KLSCDLGH instead of KLSCDLG</td>
<td></td>
</tr>
<tr>
<td></td>
<td>NAM SET HELPDESK USEHAO:1</td>
<td></td>
</tr>
<tr>
<td></td>
<td>NTD KLSOPTS ‘KLSSOPTHA 1’</td>
<td></td>
</tr>
<tr>
<td>You have to change the STC that the Library SKLSHAOP is used in the Panel DD Statement.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Action</td>
<td>Description</td>
<td>Executes for each CLSS</td>
</tr>
<tr>
<td>-----------------</td>
<td>---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------</td>
<td>------------------------</td>
</tr>
<tr>
<td>Start STC1</td>
<td>Start the first one and have a look that all is set up correctly. In helpdesk you will see an additional Action bar point ‘CONNECTION’ which includes the Heart beat probe to know that the connections are set up. As the second system is not started you will see that no connections are established. In ADMIN you see additional points in the pop-up panel. Please review the HAO parameter. Next, check the Generic Resource by doing a logon applid(generic resource). It will automatically route you to the Gateway which is the member of the Generic Resource.</td>
<td></td>
</tr>
<tr>
<td>Start STC2</td>
<td>Do the same with STC2 and after a while – don’t forget the delays which are set in KLSCDLGH member – you see the connections are established. When you’re using the KLSSTART from ‘disaster and recovery’ the profile synch will start each hour.</td>
<td></td>
</tr>
<tr>
<td>Monitor is not started and looks inactive</td>
<td>Give the monitor time to start. There is a delay of 5 minutes.</td>
<td></td>
</tr>
</tbody>
</table>
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