SECURITY TECHNICAL IMPLEMENTATION GUIDE (STIG) ADDENDUM

30 September 2026

Developed by DISA for the DoW

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1. INTRODUCTION

1.1 Executive Summary

A core mission for the Defense Information Systems Agency (DISA) is to secure Department of War (DoW) Computing systems. The processes and procedures outlined in this Security Technical Information Guide (STIG) Checklist, when applied, will decrease the risk of unauthorized disclosure of sensitive information. Security is clearly still one of the biggest concerns for our DoW customers, for example, the war fighter.

This STIG Checklist was developed to enhance the confidentiality, integrity, and availability of sensitive DoW Automated Information Systems (AIS).

The requirements set forth in this document will assist Information System Security Managers (ISSMs), Information System Security Officers (ISSOs), Network Security Officers (NSOs), and System Administrators (SAs) in support of protecting DoW Virtual Computing systems.

The Information Operations Condition (INFOCON) for the DoW recommends actions during periods when a heightened defensive posture is required to protect DoW computer networks from attack. The ISSO will ensure compliance with the security requirements of the current INFOCON level and will modify security requirements to comply with this guidance. Password length and complexity given throughout this document must be adjusted as needed to comply with INFOCON guidance.

1.2 Authority

Department of Defense Instruction (DODI) 8500.01 requires that "all IT [information technology] that receives, processes, stores, displays, or transmits DoW information will be […] configured […] consistent with applicable DoW cybersecurity policies, standards, and architectures." The instruction tasks that DISA "develops and maintains control correlation identifiers (CCIs), security requirements guides (SRGs), security technical implementation guides (STIGs), and mobile code risk categories and usage guides that implement and are consistent with DoW cybersecurity policies, standards, architectures, security controls, and validation procedures, with the support of the NSA/CSS [National Security Agency/Central Security Service], using input from stakeholders, and using automation whenever possible." This document is provided under the authority of DODI 8500.01.

Although the use of the principles and guidelines in these SRGs/STIGs provides an environment that contributes to the security requirements of DoW systems, applicable NIST SP 800-53 cybersecurity controls must be applied to all systems and architectures based on the Committee on National Security Systems (CNSS) Instruction (CNSSI) 1253.

The use of the principles and guidelines in this STIG Checklist will provide an environment that meets or exceeds the security requirements of DoW systems operating at the Mission Assurance Category (MAC) II Sensitive level, containing sensitive information.

It should be noted that DISA support for the STIG Checklists and Tools is only available to DoW Customers.

1.3 Vulnerability Severity Category Code Definitions

Severity Category Codes (referred to as CAT) are a measure of vulnerabilities used to assess a facility or system security posture. Each security policy specified in this document is assigned a Severity Category Code of CAT I, II, or III.

Table 1-1: Vulnerability Severity Category Code Definitions

Category	DISA Category Code Guidelines
CAT I	Any vulnerability, the exploitation of which will **directly and immediately** result in loss of Confidentiality, Availability, or Integrity.
CAT II	Any vulnerability, the exploitation of which **has a potential** to result in loss of Confidentiality, Availability, or Integrity.
CAT III	Any vulnerability, the existence of which **degrades measures** to protect against loss of Confidentiality, Availability, or Integrity.

1.4 STIG Distribution

Parties within the DoW and federal government's computing environments can obtain the applicable STIG from the DoW Cyber Exchange website at https://cyber.mil/. This site contains the latest copies of STIGs, SRGs, and other related security information. Those without a Common Access Card (CAC) that has DoW Certificates can obtain the STIG from https://public.cyber.mil/.

1.5 Document Revisions

Comments or proposed revisions to this document should be sent via email to the following address: disa.stig_spt@mail.mil. DISA will coordinate all change requests with the relevant DoW organizations before inclusion in this document. Approved changes will be made in accordance with the DISA maintenance release schedule.

1.6 Other Considerations

DISA accepts no liability for the consequences of applying specific configuration settings made on the basis of the SRGs/STIGs. It must be noted that the configuration settings specified should be evaluated in a local, representative test environment before implementation in a production environment, especially within large user populations. The extensive variety of environments makes it impossible to test these configuration settings for all potential software configurations.

For some production environments, failure to test before implementation may lead to a loss of required functionality. Evaluating the risks and benefits to a system's particular circumstances and requirements is the system owner's responsibility. The evaluated risks resulting from not applying specified configuration settings must be approved by the responsible AO. Furthermore, DISA

implies no warranty that the application of all specified configurations will make a system 100 percent secure.

Security guidance is provided for the DoW. While other agencies and organizations are free to use it, care must be given to ensure that all applicable security guidance is applied at both the device hardening level and the architectural level due to the fact that some settings may not be configurable in environments outside the DoW architecture.

1.7 Product Approval Disclaimer

STIGs provide configurable operational security guidance for products being used by the DoW. STIGs, along with vendor confidential documentation, also provide a basis for assessing compliance with cybersecurity controls/control enhancements, which supports system assessment and authorization (A&A) under the DoW Risk Management Framework (RMF). Department of War AOs may request available vendor confidential documentation for a product that has a STIG for product evaluation and RMF purposes from disa.stig_spt@mail.mil. This documentation is not published for general access to protect the vendor's proprietary information.

AOs have the purview to determine product use/approval in accordance with (IAW) DoW policy and through RMF risk acceptance. Inputs into acquisition or pre-acquisition product selection include such processes as:

- National Information Assurance Partnership (NIAP) evaluation for National Security Systems (NSS) (https://www.niap-ccevs.org/) IAW CNSSP #11.
- National Institute of Standards and Technology (NIST) Cryptographic Module Validation Program (CMVP) (https://csrc.nist.gov/groups/STM/cmvp/) IAW Federal/DOD mandated standards.

2. INTRODUCTION TO Z/OS

Addendum for z/OS-related update information - The purpose of this is to contain tables, etc., that the STIGs cannot accommodate at the current time.

Cross Ref Section:

- Use spreadsheet "Cross Ref of SRRAUDIT" during development, copy into addendum when complete.

Common Tables

2.1 z/OS Background

Operating System Security Design for most mainframe information systems deployed throughout DoW use the International Business Machines (IBM) z/OS operating system. Controls within z/OS have been developed and documented in IBM references to ensure operating system integrity is maintained.

Security mechanisms that provide MAC II Sensitive level controls for the z/OS operating environments are implemented by External Security Managers (ESMs). Previously these ESMs were known in the industry as Access Control Products (ACPs). In this document as well as the STIGs that are supported by this document the terms ESMs and ACPs will be referenced interchangeably.

ESMs currently in use throughout DoW are listed below:

- Access Control Facility 2 (ACF2) - Computer Associates (CA)
- Resource Access Control Facility (RACF) - IBM Corporation.[1]
- TOP SECRET (TSS) - Computer Associates (CA)

To maintain the integrity of the site, the ESM must be properly installed and configured. Options specified during the installation and techniques involved in the administration of these products can reduce the assurance introduced into the individual operating environment. As a result, guidance is needed on how these products should be configured in the operational environment.

The System Authorization Facility (SAF) provides an installation with centralized control over system security processing through a system service called the MVS router. The MVS router provides a focal point for all products that provide resource management. Access to the MVS router is via the **RACROUTE** macro, which invokes the router program itself. The router in turn invokes the ESM to determine if authorization exists for the resource being tested.

[1] IBM has renamed RACF as the z/OS Security Server. In the interest of brevity, clarity, and continuity this document continues to refer to the product as RACF.

This concept provides a single interface that encourages the use of common functions across products and platforms. Products that interface via SAF calls can be protected with any of the three ESMs discussed in this document without modification of their interface code.

All new software acquired for or developed by DoW will fully utilize the SAF interface. Existing software that fails to utilize the SAF interface will be converted to do so where possible.

2.2 z/OS Dataset Types

z/OS operation data is held in many type of datasets that have a specific purpose in the system operation. Many of these dataset types require security protection to assure the confidentiality, integrity, and accessibility of the system. Major types are listed below:

Installation datasets primarily are system and product datasets that contain modules or data required to place a system/product into operation on the mainframe. The files are usually shipped with the operating system/product and for the most part are unmodified by the site. They are usually in one central location and are required for system/product maintenance. The datasets are generally the basis for the system/product.

Started Task (STC) datasets are read, controlled, created, and/or sustained by the STC. Since the system/application can require elevated access, it is important to protect these datasets from inappropriate use.

User datasets require some level of interaction with a user. Since there are differing levels of users in the z/OS arena, i.e., systems programmer users, production control users, end users, etc., security requirements should be defined according to those levels.

Program datasets are specific datasets necessary for application operation. These datasets can contain operation-sensitive information and should be appropriately protected.

2.3 z/OS Additional Access/Logging Restrictions

Data set and Resource access documented in the vulnerabilities establishes the basic access requirements. At the ISSO's discretion, additional control may be implemented to provide additional restrictions. An example of additional controls would be the use of program pathing to restrict access to a data set or resource when a specific program and/or program mask is used.

Data set and Resource logging requirements documented in the vulnerabilities specify where successful access logging starts. By default, all violations to access a data set and/or resource will require that logging be performed.

3. Z/OS PRIVILEGED USERS

Due to its architecture and its structure, the mainframe, definition of a Privileged user will refer to any users or tasks that require a level of access that provides for Control, monitoring, or administration of the Mainframe platform.

Roles commonly known as:

System Programmers
System Security Administrators
Operators
Tape Librarians
Storage Administrators
Automation Specialist
Schedulers
Application Support Teams (Domain level)
Any team member who has physical access to the data center and data storage

Members of these teams will be granted special privileges and special accesses that will be controlled by the Systems ESM. **For the purpose of references in the z/OS STIG Checklist, the individuals listed above will refer only to personal under the management and control of the Data Center.** These individuals will be assigned by and be the responsibility of the Site ISSM.

For example, references to System Programmers in the z/OS STIG Checklist will be as follows:

For the purpose of the z/OS STIG Checklist, a Systems Programmer will be defined as those individuals who are responsible for the z/OS systems software and z/OS systems products. They are the individuals who will have Level 1 responsibility to keep the z/OS Operating System software and its associated System Software Products functioning in a stable and well-maintained status and will be under management and control of the data center. These individuals will be assigned by the Site ISSM to perform these duties.

System programmers include such roles/functions as: OS System Programmer, DASD or Storage Administrators, CICS System Programmer, MQ Series System Programmer, Communications System Programmer, Database System Programmer (including not limited to IDMS, IMS, DB2, ADABAS, ORACLE, etc. - DBAs who install executive software on the Mainframe).

The following table identifies which users or types of users can be identified in the specified Authorized User group. These Authorized User groups are specified throughout this document.

Table 3-1: Authorized User Groups

User Group	Description
APPBAUDT	Application Production Batch Userids. Userids that maintain and develop application programs for the customer base through batch submissions.
APPDAUDT	Application Development Programmers. Users that maintain and develop application programs for the customer base.
APPSAUDT	Application Production Support Team members.
AUDTAUDT	Auditors, whether they are System, Security, or other. This can be any user that performs any type of auditing on the system. These users can be an actual person, batch user, or STC.
AUTOAUDT	Automated Operation STCs/Batch Jobs. STC and/or Batch users that perform any type of automated operations control on the system.
BMCADMIN	INCONTROL Admins/Owners of CONTROL-D/M/O. Installers and system administrators for Control-D/M/O.
BMCUSER	INCONTROL Users of CONTROL-D/M/O.
CHGOWNER	Users authorized to issue the chown in UNIX.
CICBAUDT	CICS Batch Programs.
CICDAUDT	CICS Developers. Users who create and maintain CICS programs and routines.
CICSAUDT	CICS Started Task.
CICSDEF	CICS regions default user ids (DFLTUSER).
CICUAUDT	CICS Utils (CONTROLO, BatIDs via CONTROLM, MAINVIEW).
CONSOLES	The System Console user ids.
DABAAUDT	Database Administrators. Users that maintain and administer the databases and the database product software on the system. These users also perform backup and recovery of the databases.
DAEMAUDT	UNIX Daemon user ids.
DASBAUDT	DASD batch, jobs that perform DASD Backups, Migrate. Batch and/or STC users that perform DASD maintenance functions.
DASDAUDT	DASD Administrators. Users that administers DASD functions on the entire operating system. These users can perform a complete backup and recovery of the DASD farm.
DPCSAUDT	Decentralized Prod Cntl and Sched personnel.
DUMPAUDT	STCs/Batch ids that perform Dump processing. STC and/or Batch users that generate system-level dumps.
EMERAUDT	Emergency TSO logon ids.
FTPUSERS	FTP only interactive users.
MCATBAT	System Programmer batch ids that perform elevated system and user catalog functions not granted to regular users.
IOABAUDT	Special IOA user IDs, such as long-running started tasks, or specific system jobs.
MICSADM	MICS Administrators.
MICSUSER	MICS End Users.

User Group	Description
MQSAAUDT	MQ Series Administrators. Users that define and administer the WebSphere MQ environment on the system.
MQSDAUDT	Decentralized MQ Series Administrators. Users that define and administer the WebSphere MQ environment on the system at customer site.
MVREAD	Mainview users that require read only mode.
MVUPDT	Mainview users that require some update functions.
OMVSAUDT	The OMVS started task kernel.
OPERAUDT	Operations personnel. Users that have direct access to the hardware components of the operating system.
PARMSTC	Users that have READ access justification via ISSO. These users are STCs and/or batch jobs that obtain their configuration settings from the Logical parmlib concatenation.
PCSPAUDT	Production Control and Scheduling personnel. Users that have domain-level control of all scheduling of batch processes on the system. Not users that schedule specific application batch jobs.
PRODAUDT	Production Started Tasks and batch logon ids.
ROSCAUTH	ROSCOE Master and Maintenance IDs.
SECAAUDT	Security Administrators. Domain Level I security administrators; these users have total control over the administration of the ESM.
SECBAUDT	Security batch, jobs that perform ESM maintenance. Batch and/or STC users that perform security maintenance.
SECDAUDT	Decentralized Security Administrators.
SERVAUDT	UNIX Server user ids.
SMFBAUDT	STCs/BATCH ids that perform SMF dump processing.
STCGAUDT	STCs ids that perform GTF processing.
SUPRAUDT	User ids that require BPX.SUPERUSER.
SYSCAUDT	CICS Systems Programmers.
SYSPAUDT	Systems Programmers or Systems Administrators. Users that perform installation and maintenance on the operating system and vendor software.
TAPEAUDT	Tape Librarians, CA1 Prod Batch Jobs, and CA1 STCs. Users that perform control, initialization, and maintenance of a systems tape library.
TSTCAUDT	Trusted Started Tasks users. See list in TRUSTED STARTED TASKS in the z/OS STIG Addendum.
WEBAAUDT	Web Server Administrators.

4. Z/OS UNIX SYSTEM SERVICES

4.1 z/OS UNIX System Services Background

z/OS UNIX System Services, abbreviated by IBM as z/OS UNIX, provides a UNIX environment to z/OS users. It is now a base component of the z/OS operating system, conforms to the XPG4 UNIX 1995 standard (with UNIX 98 elements), and offers services designed to support applications written to open systems standards. z/OS UNIX also provides z/OS users the traditional UNIX structure for data storage through the Hierarchical File System (HFS)/zSeries File System (zFS). Finally, z/OS UNIX supports the UNIX User Identifier (UID) and Group Identifier (GID) concepts that establish identity in the UNIX environment.

In z/OS UNIX, security is handled, in part, through the UID and GID constructs that identify users and groups. This security impacts file access and process (e.g., z/OS task) control. While it is possible in some environments for multiple users to be assigned the same UID, this does not provide a desirable level of security.

z/OS UNIX provides an operating environment that can host many services such as File Transfer Protocol (FTP) and z/OS UNIX Telnet servers. In addition, z/OS components such as Communications Server provide support to z/OS UNIX. This section of this document is intended to describe the security considerations for the z/OS UNIX environment and does not cover these supporting and supported components in appropriate detail. Please check other sections of this document and the pertinent vendor documentation for security considerations for these other components.

4.2 z/OS UNIX General Considerations

Because of the scope of z/OS UNIX and its difference from the traditional MVS environment, there are a number of considerations that must be addressed to understand the security implications. In this section, security considerations for the following areas are discussed:

- User Identity - UID and GID Assignment
- Data Storage - HFS/zFS Directories and Files
- Interactive Environment - The UNIX Shell
- Background Processes - Daemons and Servers
- Miscellaneous Considerations

These considerations are discussed in general to explain the z/OS UNIX environment. This background is used when discussing the specific controls that are used to implement security policy.

Table 4-1: General FACILITY Class BPX Resources

Referenced by: ZUSS0021

General FACILITY Class BPX Resources	
Resource Name	**Description/Notes**
BPX.DAEMON	Allows a daemon to use the seteuid, setuid, setreuid, and spawn services.
BPX.DEBUG	Allows a user to use ptrace (via dbx) to debug programs that run with APF authority or with BPX.SERVER authority.
BPX.FILEATTR.APF	Allows a user to set the APF-authorized attribute in an HFS file.
BPX.FILEATTR.PROGCTL	Allows a user to set the program-controlled attribute in a HFS file. This attribute is required, in most cases, for all programs executed by daemons or servers.
BPX.JOBNAME	Allows a user to set jobnames using the _BPX_JOBNAME environment variable or the inheritance structure on spawn.
BPX.SAFFASTPATH	Enables SAF fastpath support. This means that successful security checks are not audited. No access list is needed; the existence of the profile enables the function.
BPX.SERVER	READ: Allows the server to establish a thread-level security environment for its clients. Access control decisions are based on the server's userid and the client's userid unless the server specifies a password on the service invocation. UPDATE: Allows the server to establish a thread-level security environment for its clients. Access control decisions are based only on the client's userid. The pthread_security_np (create/delete security environment) and the auth_check_resource_np (resource authorization checking) services are used. Also see the BPX.SRV.*userid* profile description.

General FACILITY Class BPX Resources	
Resource Name	**Description/Notes**
BPX.SMF or BPX.SMF.*type.subtype*	Allows permitted user access to write an SMF record or to test if an SMF type or subtype is being recorded. • The BPX.SMF profile grants the permitted user the authority to write or test for any SMF record that is being recorded. The program-controlled attribute is not required if BPX.SMF is used • For more granular access to writing SMF records BPX.SMF.*type.subtype* allows a permitted user the authority to write or test only the SMF record of the specific type and subtype contained in the FACILITY class profile name. **Note**: BPX.SMF must not be permitted to regular interactive userids.
BPX.STOR.SWAP	Allows a user to make address spaces non-swappable or swappable.
BPX.SUPERUSER	Allows a user to switch to superuser authority (i.e., effective UID of "0").
BPX.WLMSERVER	Allows a user to access Work Load Manager (WLM) server functions and C language WLM interfaces. These functions and interfaces are commonly used by server applications. Also see the BPX.SERVER profile description.

Table 4-2: UNIXPRIV Class Resources

Referenced by: ZUSS0023

UNIXPRIV Class Resources	
Resource Name	**Description/Notes**
CHOWN.UNRESTRICTED [2]	Allows all z/OS UNIX users to transfer ownership for files they own to any UID or GID on the system. No access list is needed; the existence of the profile enables the function. Therefore, the resource will not be defined.

[2] The CHOWN.UNRESTRICTED profile defeats a basic file ownership protection, and must not be defined unless justified and documented to the ISSO.

UNIXPRIV Class Resources	
Resource Name	**Description/Notes**
SHARED.IDS (RACF only)	Allows users to assign UID and GID values that are not unique. To specify non-unique UID or GID users must specify the SHARED keyword in the RACF AG, AU, ALG, and ALU commands. These users must have the SPECIAL attribute or at least READ authority to the resource. Therefore, resource will be defined with no access given to users.
SUPERUSER.FILESYS	READ: Allows the user to read any HFS file and to read or search any HFS directory. UPDATE: Allows the user to write to any HFS file and includes *read* access. CONTROL: Allows user to write to any HFS directory and includes *update* access. **Note**: Allows access only to local HFS files, not to NFS files.
SUPERUSER.FILESYS.CHANGEPERMS	READ: Allows a user/group to do a CHMOD to any file.
SUPERUSER.FILESYS.CHOWN	READ: Allows the user to change the ownership of any file.
SUPERUSER.FILESYS.MOUNT	READ: Allows the user to mount a file system with the nosetuid option and to unmount a file system mounted with the nosetuid option. UPDATE: Allows the user to mount a file system with the setuid option and to unmount a file system mounted with the setuid option.
SUPERUSER.FILESYS.QUIESCE	READ: Allows the user to quiesce and unquiesce a file system mounted with the nosetuid option. UPDATE: Allows the user to quiesce and unquiesce a file system mounted with the setuid option.
SUPERUSER.FILESYS.PFSCTL	READ: Allows the user to use the pfsctl() (physical file system control) callable service.
SUPERUSER.FILESYS.VREGISTER	READ: Allows a server to use the v_reg() callable service to register as a virtual file system (VFS) file server.
SUPERUSER.IPC.RMID	READ: Allows the user to issue the ipcrm command to release IPC (Interprocess Communication) resources.
SUPERUSER.PROCESS.GETPSENT	READ: Allows the user to use the w_getpsent callable service to receive process status data for any process.

UNIXPRIV Class Resources	
Resource Name	**Description/Notes**
SUPERUSER.PROCESS.KILL	READ: Allows the user to use the kill() callable service to send signals to any process.
SUPERUSER.PROCESS.PTRACE	READ: Allows the user to use the ptrace() function through the dbx debugger to trace any process. Also allows users of the ps command to output information on all processes. **Note**: Authorization to FACILITY class resource BPX.DEBUG is required to trace processes that run with APF authority or BPX.SERVER authority.
SUPERUSER.SETPRIORITY	READ: Allows the user to increase that user's own priority.

Table 4-3: MVS Data Sets with z/OS UNIX Components

Referenced by: ZUSS0032

MVS Data Sets with z/OS UNIX Components		
Data Set Name/Mask	**Maintenance Type**	**Function**
SYS1.ABPX*	Distribution	IBM z/OS UNIX ISPF panels, messages, tables, clists
SYS1.AFOM*	Distribution	IBM z/OS UNIX Application Services
SYS1.BPA.ABPA*	Distribution	IBM z/OS UNIX Connection Scaling Process Mgr.
SYS1.CMX.ACMX*	Distribution	IBM z/OS UNIX Connection Scaling Connection Mgr.
SYS1.SBPX*	Target	IBM z/OS UNIX ISPF panels, messages, tables, clists
SYS1.SFOM*	Target	IBM z/OS UNIX Application Services
SYS1.CMX.SCMX*	Target	IBM z/OS UNIX Connection Scaling Connection Mgr.

4.3 z/OS UNIX User Identity

Within UNIX systems, users are assigned a user name and password that allow identification and authentication when the system is accessed. Each user is also assigned a numeric identifier that is known as the UID. Users are members of one or more groups; each of these groups has a name and a numeric identifier that is known as the GID. While it is possible in some environments to assign multiple users the same UID, this is not done where meaningful security is desired.

There are no software-specific UID or GID numbers, with one exception. If a user is assigned a UID value of 0 (zero), the user has *superuser* status and effectively bypasses all security checks. There are a limited number of instances where superuser status is actually needed, and z/OS UNIX provides some security resources that can be used to further limit the need to assign UID (0) to users.

During a UNIX shell session or during the execution of commands with certain attributes, it is possible for a user to temporarily use a different UID or GID value than what was assigned. The userid defined to the security system and used at system sign-on is referred to as the real ID. The temporary userid used for a specific period or process is referred to as the effective ID. For this reason, it is important to check the effective ID when researching access control issues.

4.4 z/OS UNIX User Identity

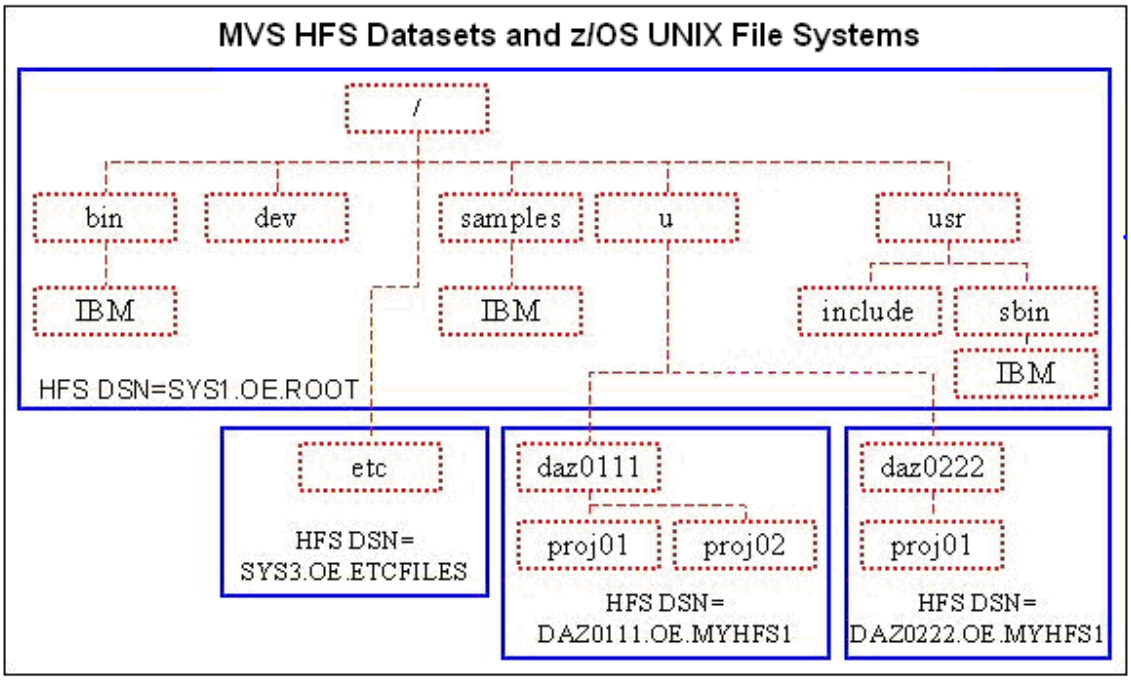
This section discusses the considerations related to data storage in the z/OS UNIX environment. These considerations include the logical and physical structures, file access permissions, extended attributes for executable files, and audit attributes. Understanding these considerations is important to setting and maintaining data and command security.

Hierarchical File System (HFS)/zSeries File System (zFS) is a tree structure consisting of multiple file systems. A file system is a logical collection of directories and files. The highest-level directory in the hierarchy is the root directory; it is often kept in a file system with only a few other directories. Each file system is made available by a process known as mounting the file system. It is mounted at a *mount point* that is actually just a directory in the higher-level file system.

The entire file hierarchy is made up of a collection of HFS/zFS data sets. Each physical HFS/zFS data set is actually a mountable file system. This means that it can be attached to the HFS/zFS tree at a mount point that is in the root directory or at a mount point further down in the hierarchy. Each HFS/zFS data set needs data set access rules defined to protect it.

The following diagram illustrates the relationship between MVS HFS/zFS data sets and z/OS UNIX File Systems. This is an example with four MVS data sets (SYS1.OE.ROOT, SYS3.OE.ETCFILES, DAZ0111.OE.MYHFS1, and DAZ0222.OE.MYHFS1) corresponding to four z/OS UNIX file systems (*root*, etc., daz0111, daz0222).

Figure 4-1: MVS HFS Datasets and Z/OS UNIX File Systems



To provide granularity in access control, there are three sets of permission bits to accommodate three categories of users whose access can be individually controlled:

Owner - The user whose UID matches the UID in the FSP
Group - A member of the group whose GID matches the GID in the FSP
Other - Anyone else

When permission bits are displayed in command output or used as command operands, they sometimes appear as a string of alphabetic characters and sometimes as a string of octal digits that correspond to these categories. For example, a file can have permissions set to "rwx r-- ---", where "rwx" applies to the owner, "r—" to the group, and "---" to other. This would be expressed digitally as 740 where 7 applies to the owner, 4 to the group, and 0 to other.

The following tables show the permission bits, their alphabetic symbolic notation, their octal values, and their meaning:

Table 4-4: Permission Bits

Permission Bits			
Permission	**Symbolic Notation**	**Octal Value**	**Meaning for File or Directory**
Read	r	4	Directory: Allows the user to read, but not search, contents. File: Allows the user to read or print contents. **Note**: Running shell scripts requires read and execute.
Write	w	2	Directory: Allows the user to change the directory, adding or deleting members. File: Allows the user to change the file, adding or deleting data.
Execute	x	1	Directory: Allows the user to search the directory. File: Allows the user to run the executable program. **Note**: Running shell scripts requires read and execute.
no access	-	0	No access allowed.

There are additional permission bits that are used for special purposes. When in use, these bits may be displayed alphabetically in the *execute* position, with lower case indicating that the execute bit and special bit are both on. When displayed or used in a command in digital form, the value for these bits appears as an additional first digit in the string.

Table 4-5: Special Permission Bits

Special Permission Bits			
Permission	**Symbolic Notation**	**Octal Value**	**Meaning for file or Directory**
set-user-ID set-group-ID	s/S	4 2	Used for an executable file, sets the effective userid and/or group ID of the user process executing the program to that of the file being executed. Allows a program to have temporary access to files (or potentially commands) that are not normally accessible.
sticky bit	t/T	1	Directory: Allows only the file owner, directory owner, or superuser to delete or rename files. File: Causes the search for an executable in the current STEPLIB, link pack area, or link list (the data in the HFS/zFS file is not loaded as the program).

These permissions are combined as required to allow the desired access.

The chown, chgrp, and chmod shell commands are provided. Refer to *z/OS UNIX Interactive Environment - The UNIX Shell*, for information on these commands.

Note: The ACF2 and TOP SECRET ESMs offer an option called CA SAF HFS/zFS security. If this option is enabled, file mode checking is bypassed in favor of access rules written for the ESM. However, because CA SAF HFS/zFS can be disabled, the standard UNIX file permissions must be maintained for system sensitive directories and files.

z/OS UNIX adds the feature of *extended attributes* that are meaningful for executable files. These extended attributes include the following:

Table 4-6: Extended Attributes

Extended Attributes		
Extended Attribute	**Symbolic Notation**	**Description**
APF-authorized	a	Executable program acts as if loaded from an APF-authorized MVS library.
Program-controlled	p	Executable program acts as if defined to program control in the ESM.
Shared	s	Executable foreground program runs in the same MVS address space as the user's z/OS shell. **Note**: This bit is on as the default for all executable files.

To maintain the extended attributes, the extattr shell command is provided. Refer to *Section z/OS UNIX Interactive Environment - The UNIX Shell*, in this document for information on this command.

z/OS UNIX adds a security extension in the form of audit attributes for files or directories. Audit attributes determine whether accesses to the object are audited by the System Authorization Facility (SAF) interface. The attributes can be set to audit successful access attempts (**s**), audit failed access attempts (**f**), audit all accesses (**a**), or do not audit access (**-**). To allow for both user and system auditing functions, there are two sets of audit attributes to accommodate two categories - user-requested and auditor-requested.

Within each category of audit attributes, the audit controls are as follows:

Table 4-7: Audit Bits

Audit Bits		
Audit Flag	**Alpha Notation**	**Description**
Read	s/f/a/-	Audit attempts for *read* access
Write	s/f/a/-	Audit attempts for *write* access
Execute	s/f/a/-	Audit attempts for *execute* access

To maintain the audit attributes, the **chaudit** shell command is provided. Refer to *z/OS UNIX Interactive Environment - The UNIX Shell,* in this document for information on this command.

Table 4-8: System Directory Security Settings

Note: Any Directory that uses AUTOMOUNT, does not require the specified settings.

Referenced by: ZUSS0016, ZUSS0034

System Directory Security Settings			
Directory	**Permission Bits**	**User Audit Bits**	**Function**
/ [root]	755	faf	Root level of all file systems. Holds critical mount points.
/bin	1755	fff	Shell scripts and executables for basic functions
/dev	1755	fff	Character-special files used when logging into the OMVS shell and during C language program compilation. Files are created during system IPL and on a per-demand basis.
/etc	1755	faf	Configuration programs and files (usually with locally customized data) used by z/OS UNIX and other product initialization processes
/lib	1755	fff	System libraries including dynamic link libraries and files for static linking
/samples	1755	fff	Sample configuration and other files
/tmp	1777	fff	Temporary data used by daemons, servers, and users. **Note**: /tmp must have the sticky bit on to restrict file renames and deletions.
/u	1755	fff	Mount point for user home directories and optionally for third-party software and other local site files
/usr	1755	fff	Shell scripts, executables, help (man) files and other data. Contains sub-directories (e.g., lpp) and mount points used by program products that may be in separate file systems.
/var	1775	fff	Dynamic data used internally by products and by elements and features of z/OS UNIX.

Note: The sticky bit is set on to restrict file renames and file deletions or subdirectory deletions.

In addition, the following guidelines must be followed:

All directories (such as /tmp) with the *write* permission set for the other group must also have the sticky bit set.

Any directory (such as /tmp) with the *write* permission set for the other group must not contain any files with the following bits set:

- set-user-ID permission
- set-group-ID permission
- APF-authorized extended attribute
- Program control extended attribute

Table 4-9: System File Security Settings

Referenced by: ZUSS0035, ZUSS0016

System File Security Settings			
File	**Permission Bits**	**User Audit Bits**	**Function**
/bin/sh	1755	faf	z/OS UNIX shell **Note**: /bin/sh has the sticky bit on to improve performance.
/dev/console	740	fff	The system console file receives messages that may require System Administrator (SA) attention.
/dev/null	666	fff	A null file; data written to it is discarded.
/etc/auto.master and any *mapname* files	740	faf	Configuration files for automount facility
/etc/inetd.conf	740	faf	Configuration file for network services
/etc/init.options	740	faf	Kernel initialization options file for z/OS UNIX environment
/etc/log	744	fff	Kernel initialization output file
/etc/profile	755	faf	Environment setup script executed for each user
/etc/rc	744	faf	Kernel initialization script for z/OS UNIX environment
/etc/steplib	740	faf	List of MVS data sets valid for set-user-ID and set-group-ID executables
/etc/tablename	740	faf	List of z/OS userids and group names with corresponding alias names

System File Security Settings			
File	**Permission Bits**	**User Audit Bits**	**Function**
/usr/lib/cron/at.allow /usr/lib/cron/at.deny	700	faf	Configuration files for the at and batch commands
/usr/lib/cron/cron.allow /usr/lib/cron/cron.deny	700	faf	Configuration files for the crontab command

Some of the files listed above (e.g., /etc/steplib) are not used in every configuration. While the absence of a file is generally not a security issue, the existence of a file that has not been properly customized can often be an issue. Therefore, all directories and files that do exist must have the specified permission and audit bit settings.

4.5 z/OS UNIX Interactive Environment – The UNIX Shell

The z/OS UNIX shell is a command processor that allows users to do the following:

- Invoke shell commands or utilities
- Write shell scripts using the shell programming language
- Run shell scripts and C-language programs in the foreground, in the background, or in batch

This section describes the security considerations for the z/OS UNIX shell, including shell commands, shell access, interoperability between the shell and TSO/E, and built-in shell variables.

As with other interactive environments, there are certain commands available in the z/OS shell that have security implications. Most of these commands impact data security by altering security attributes for a directory or file; others impact system operation and user privileges. The most important of these commands are as follows:

Table 4-10: Security Impact Shell Commands

Security Impact Shell Commands		
Command	**Description**	**User Restrictions**
at [3]	Allows a user to run a series of commands at a specified later time, under control of the cron daemon.	Can be used by the superuser or users listed in the /usr/lib/cron/at.allow file.
automount	Configures the automount facility that mounts file systems at time of access.	Can only be used by a superuser. Started from /etc/rc.

[3] The at, batch, and crontab commands are used to manipulate the functions of the cron daemon. The default specified environment disables cron. The information is included here for the sake of completeness.

Security Impact Shell Commands		
Command	**Description**	**User Restrictions**
batch	Allows a user to run a series of commands later when the system is not busy, under control of the cron daemon.	Same as at command.
chaudit	Changes the audit attributes of files or directories. Audit attributes determine whether accesses to a file are audited by SAF.	Can only be used by the file owner or a superuser for non-auditor-requested audit attributes.
chgrp	Changes the GID for the specified file or directory.	By default, can be used only by the file owner or a superuser. The file owner must be a member of the group the file or directory is being changed to.
chmod	Changes the file modes (permission bits) for the specified file or directory.	By default, can be used only by the file owner or a superuser.
chown	Changes the UID and optionally the GID for the specified file or directory.	By default, the UID can only be changed by a superuser. Changes to the GID follow the rules for the chgrp command.
chroot	Changes the root directory to that specified in the command.	Can only be used by a superuser or a user with access to the BPX.SUPERUSER resource.
crontab	Allows a user to schedule a series of commands to be run on a regular basis, under control of the cron daemon.	Can be used by the superuser or users listed in the /usr/lib/cron/cron.allow file.
extattr	Sets, resets, and displays the extended attributes of executable files. Extended attributes include APF authorization, program control, and shared address space use.	Can only be used by the file owner or a superuser. The APF attribute requires access to the BPX.FILEATTR.APF resource. The program control attribute requires access to the BPX.FILEATTR.PROGCTL resource.

Security Impact Shell Commands		
Command	**Description**	**User Restrictions**
su su userid	Starts a new shell with the security attributes of the superuser or a different user. When a different user is specified, the MVS identity is changed and MVS data set access is changed to that of the new MVS user. When issued as superuser (i.e., UID (0)) and BPX.DAEMON is defined, userid is switched to the value in BPXPRMxx SUPERUSER.	Access to superuser status requires access to the BPX.SUPERUSER resource. Access to a different user requires that user's password or access to the BPX.SRV.*userid* resource.
umask	Sets the file-creation permission mask. The mask specifies the default permissions that are not to be allowed when a file is created.	Not restricted

As indicated, security for each command depends on resource privileges that are accessible to the user. The default restrictions for these commands can change according to options available with the installed ESM. If CA SAF HFS/zFS security is enabled, commands that may have required superuser authority or access to UNIXPRIV class resources are controlled by BPX.CAHFS resources instead.

Access to the z/OS shell is possible from multiple origins:

TSO/E OMVS command - TSO/E users can enter the OMVS command to access the shell via a 3270 terminal interface.

rlogin - Users from another system can use the rlogin command to access the shell via an asynchronous terminal interface. The use of rlogin access is not permitted.

telnet - Users from another system can use the telnet command to access the shell via an asynchronous terminal interface.

z/OS Communication Server with an RS/6000 system - Users of terminals attached to serial ports on an RS/6000 that is connected to the host can log on directly via an asynchronous terminal interface.

While there are no implicit security implications to the access origin point, control of these facilities in their own environment may be desirable. There is a high degree of interoperability between MVS TSO/E and the z/OS shell. The following capabilities are provided:

Data can be moved between MVS data sets and files in a z/OS UNIX HFS/zFS file system.

Some TSO/E commands manipulate the HFS/zFS environment to perform tasks such as creating directories and mounting file systems.

TSO/E commands can be issued from the shell command line, from a shell script, or from a program.

MVS job control language (JCL) can include shell commands. The BPXBATCH utility provides this capability. For examples, refer to *The BPXBATCH Utility* in IBM's *z/OS UNIX System Services User's Guide* document, and *Appendix C. Running Shell Scripts or Executable Files under MVS Environments* in IBM's *z/OS UNIX System Services Command Reference*.

HFS/zFS files can be edited in TSO/E through ISPF/PDF or in the z/OS shell through editors such as ed, sed, and vi.

Extensions to the REXX language allow REXX programs to access callable services in the TSO/E, batch, shell, or C program environments.

The primary security implication resulting from these capabilities is that file and command access is based on the value of the z/OS userid and/or the z/OS UNIX UID and GID that are in effect at the time of file access or command execution.

Behavior within the z/OS shell can be altered by the values of data from built-in shell variables. Variables that have security implications are as follows:

Table 4-11: Security Impact Shell Variables

Security Impact Shell Variables		
Variable	**Description**	**Implication**
HOME	The user's home directory set from values specified by the security system.	The user's home directory contains that user's personal files and scripts that establish any unique environment settings.
LOGNAME	The user's logon name, set from values specified by the security system.	Child processes, by default, receive names based on LOGNAME.
SHELL	The full pathname of the shell program set from values specified by the security system.	An invalid shell program name would prevent system access. A compromised program could reduce system security.
PATH	The list of directories the system searches to find executable commands.	An improper sequence of directories could cause the wrong version of a program to be executed.

Security Impact Shell Variables		
Variable	**Description**	**Implication**
STEPLIB	For value = current: Currently, active TASKLIB, STEPLIB, or JOBLIB allocations are passed on. For value = none: No STEPLIB to be used in the search order. For value = *dsn1:dsn2:dsn3*: Use the specified, **cataloged**, user-accessible MVS load libraries. Default value = current.	Executables with the set-user-ID or set-group-ID bit set can only use STEPLIB data sets specified by the STEPLIBLIST parameter in BPXPRMxx.
_BPX_ACCT_DATA	The account data to be used for processes being created.	Could require additional access permissions if the use of account data is secured.
_BPX_JOBNAME	The MVS jobname to be used for processes being created.	Requires superuser authority or access to BPX.JOBNAME to be effective. Allows a user/process to start a child process that, by virtue of name, may have other security issues. **Note**: When the _BPX_JOBNAME variable is not set, processes created by fork or spawn are assigned jobnames consisting of the userid followed by a number (1-9).
_BPX_USERID	The z/OS user identity to be used for processes being created, effective only for users who have authority for the setuid() function.	Requires access to the BPX.DAEMON resource to be effective. Allows a user/process to start a child process using a different security context.

4.6 z/OS UNIX Background Processes - Daemons and Servers

z/OS UNIX supports the execution of processes in the background. Daemons and servers are distinguished from other background processes by the duration of execution and the privileges used. z/OS UNIX daemons and servers correspond in function to MVS started tasks.

Note: z/OS UNIX supports two levels of security - UNIX and z/OS UNIX. UNIX-level security exists where the userids for daemons and servers are defined with a UID of "0" (i.e., superuser status) and the BPX.DAEMON and BPX.SERVER security resources are not defined. z/OS UNIX-level security exists where the BPX.DAEMON or BPX.SERVER security resources are

defined. This level provides a higher degree of security. z/OS UNIX-level security must be configured so that the enhanced security is available.

A daemon is a background process that operates continuously or periodically to provide a system service. Daemons may be started at system initialization or in response to some event. Daemons must be assigned a userid with a UID of "0" (i.e., superuser authority) and have the appropriate permission to the BPX.DAEMON security resource. A daemon can use the seteuid, setuid, setreuid, or spawn (with change in userid requested) service to execute work using the security context of a user.

A server is a background process that operates continuously or periodically to provide an application service required by a client. Servers are typically started when the service they provide is required. Servers must have the appropriate permission to the BPX.SERVER security resource. A server can use the pthread-security-np service to create task-level security environments. If the server processes user requests without the client (e.g., user) password, the server acts as a surrogate and must have the appropriate permission to the BPX.SRV.*userid* (where *userid* is the z/OS userid) security resource.

The security setup requirements for daemons and servers are as follows:

The daemon or server must be assigned a userid. For daemons, the userid must be assigned a UID of "0".

The assigned userid must have the appropriate access to the BPX.DAEMON or BPX.SERVER security resource and to the BPX.SRV.*userid* resource(s) as required.

The ESM's Program Control feature must be active.

All programs to be loaded into the address space must be marked as controlled programs (i.e., defined to Program Control). Programs in HFS/zFS files must have the program-controlled extended attribute bit set.

Daemons are usually started in scripts executed at system initialization. These scripts contain commands that set up the environment and start the daemon. The commands used to start commonly used z/OS UNIX daemons include the following:

Table 4-12: Daemon Commands

Daemon Commands		
Command	**Description**	**Startup**
cron	Runs commands scheduled through at, batch, and crontab at specified dates and times.	At system initialization
inetd	Provides Internet service management for a network.	At system initialization

Daemon Commands		
Command	**Description**	**Startup**
lm	Starts the logon monitor daemon that starts the logon process for logons initiated by Outboard Communications Server (OCS).	At system initialization
rlogind	Validates remote logon (rlogin) requests.	By inetd
uucico	Processes uucp and uux file transfer requests.	By other processes including cron, uucpd, uucp, and uux
uucpd	Invokes uucico for TCP/IP connections from remote uucp systems.	By inetd
uuxqt	Runs commands from remote systems.	By uucico or cron

Unless justified and documented to the ISSO, all of the daemons on this list, except for the inetd daemon, must be disabled. This policy improves system security by reducing the number of common targets of system attacks.

There are daemons and servers that are specific to the zOS Communications Server. These daemon/servers require additional resource access to start and stop. Several of these are listed below with their functions:

ADNR - The automated domain name registration (ADNR) application is a function that dynamically updates name servers with information about sysplex resources in near real time. As resources in the sysplex become available, Domain Name System (DNS) resource records are added to one or more name servers. As those resources become unavailable, the corresponding DNS resource records are removed from the name server. Clients that connect to sysplex resources using DNS names have a greater likelihood of connecting to an available resource in the sysplex. ADNR also removes the administrative burden of manually configuring and updating a name server to represent sysplex resources.

DCAS - The Digital Certificate Access Server (DCAS) (opens new browser) is a TCP/IP server application that runs on OS/390 V2R10 and later (z/OS included). It interfaces with a Security Access Facility (SAF)-compliant server product to assist with express logon services such as Web Express Logon. In this scenario, this SAF-compliant server product is IBM Resource Access Control Facility (RACF) (opens new browser).

LBADV - The z/OS® Load Balancing Advisor communicates with external load balancers and one or more Load Balancing Agents. The main function of the Load Balancing Advisor is to provide external TCP/IP load balancing solutions, such as the Cisco Content Switching Module (CSM), with recommendations on which TCP/IP applications and target z/OS systems within a z/OS sysplex are best equipped to handle new TCP/IP workload requests.

LBAGENT - Load Balancing Agents gather data on its own z/OS system about the TCP/IP stacks and applications running on that system. The Agent is configured with the information it needs to contact the Load Balancing Advisor.

OMPROUTE - OMPROUTE is a z/OS® UNIX application and it requires a z/OS UNIX file system to operate. It can be started from an MVS™ started procedure, from the z/OS shell, or from AUTOLOG (see step 2 for restrictions on using AUTOLOG to start OMPROUTE). OMPROUTE must be started by a RACF-authorized user ID, and it must be in an APF authorized library.

PAGENT - The Policy Agent (PAGENT) interacts with the sysplex distributor to assist with workload balancing. There will be one Policy Agent running on an LPAR regardless of how many stacks are configured. First, the Policy Agent can be configured to collect network performance statistics for applications being distributed on target stacks. These network performance statistics are then used to modify the overall WLM weight assigned to a target server.

RSVPD - Daemon to start and stop Resource ReSerVation Protocol (RSVP) is a protocol that provides a mechanism to reserve resources in support of Integrated Services.

Table 4-13: zOS Communications Server Daemons and Servers

Reference by ACP00282

Daemon/Server	Resource Required to START/STOP	Authorization	Access
ADNR	MVS.SERVMGR.ADNR	DAEMAUDT	ALTER
		SERVAUDT	ALTER
		TSTCAUDT	ALTER
DCAS	MVS.SERVMGR.DCAS	DAEMAUDT	ALTER
		SERVAUDT	ALTER
		SYSPAUDT	ALTER
		TSTCAUDT	ALTER
LBADV	MVS.SERVMGR.LBADV	DAEMAUDT	ALTER
		SERVAUDT	ALTER
		SYSPAUDT	ALTER
		TSTCAUDT	ALTER
LBAGENT	MVS.SERVMGR.LBAGENT	DAEMAUDT	ALTER
		SERVAUDT	ALTER
		SYSPAUDT	ALTER

Daemon/Server	Resource Required to START/STOP	Authorization	Access
		TSTCAUDT	ALTER
PAGENT	MVS.SERVMGR.PAGENT	DAEMAUDT	ALTER
		SERVAUDT	ALTER
		SYSPAUDT	ALTER
		TSTCAUDT	ALTER
RSVPD	MVS.SERVMGR.RSVPD	DAEMAUDT	ALTER
		SERVAUDT	ALTER
		SYSPAUDT	ALTER
		TSTCAUDT	ALTER
OMPROUTE	MVS.ROUTEMGR.OROUTED	AUTOAUDT	ALTER
		DAEMAUDT	ALTER
		SERVAUDT	ALTER
		SYSPAUDT	ALTER
		TSTCAUDT	ALTER

4.7 z/OS UNIX Miscellaneous Considerations

This section discusses miscellaneous security considerations for the z/OS UNIX environment. These considerations include the following:

- SMF options
- Account data validation - IEFUJI
- Run-Time Library Services (RTLS)

Table 4-14: Restricted Network Services

Referenced by: ZUSS0014

Restricted Network Services					
Service	**Port**	**Service**	**Port**	**Service**	**Port**
Chargen	19	logon	513	systat	11
Daytime	13	nameserver	42	talk	517
Discard	9	netstat	15	tftp	69
Echo	7	qotd	17	time	37
Exec	512	shell	514	timed	525
finger	79	smtp	25	uucp	540

4.8 z/OS UNIX SMF Options

In the z/OS environment, SMF data is collected to identify access to the system and to measure the use of resources. This data can be critical to auditors investigating security incidents. SMF data can also be created by authorized applications; this function is controlled to preserve system integrity. The z/OS UNIX environment is not exempt from SMF data collection.

For processes under z/OS UNIX, SMF record type 30 contains data on user identity, program name, and file system activity. SMF record type 92 provides information on the I/O activity of a user or application against a specific file. SMF record types 30 and 92 must be recorded. Due to the potential for very high volumes, subtypes 10 and 11 of the type 92 record may be suppressed at the site's discretion. Refer to IBM's *z/OS MVS System Management Facilities (SMF)* documentation for details and descriptions for these records.

SMF record types 34 and 35 are used to record TSO/E activity but are also written by default when a new address space is created for a fork or spawn in the z/OS UNIX environment. To eliminate errors in TSO/E accounting, IBM recommends that SYS1.PARMLIB(SMFPRMxx) be updated to suppress those records for z/OS UNIX processes (e.g., the OMVS subsystem). Therefore, SMF record types 34 and 35 for z/OS UNIX processes may be suppressed at the site's discretion.

User applications and non-IBM products that run under z/OS UNIX can generate SMF records or check if SMF records are being generated. This is done by using the smf_record callable service. To be able to do this, an application must be running under a userid that has access to the BPX.SMF security resource. When the application or product is installed, the ESM must be updated to allow the access.

4.9 z/OS UNIX Account Data Validation - IEFUJI

IEFUJI is a z/OS exit that validates job names and/or accounting information. If IEFUJI is being used, there are special considerations for z/OS UNIX:

- OMVS should be defined as a subsystem in SYS1.PARMLIB(IEFSSNxx).
- IEFUJI should be set as an exit for subsystem OMVS in SYS1.PARMLIB(SMFPRMxx).
- The IEFUJI code should be adapted to exclude the names of some jobs and daemons started from /etc/rc.
- Refer to IBM's *z/OS UNIX System Services Planning* document for details.

The use of IEFUJI has security implications when ACP rules are in use to validate job names or accounting data. The correct function of IEFUJI and the appropriate ESM access rules must be verified to ensure proper system operation and security.

4.10 z/OS UNIX RTLS

Members of IBM's Language Environment (LE) run-time library are used by z/OS UNIX components (including the shell and utilities) and optionally by user applications running in the z/OS UNIX environment. Access to the LE members can be made available through the system link list (LNKLSTxx) and LPA list (LPALSTxx), through STEPLIBs, or through a z/OS feature known as Run-Time Library Services (RTLS).

If RTLS is used for z/OS UNIX, the following three steps must be completed:

- The RUNOPTS parameter must be coded in SYS1.PARMLIB(BPXPRMxx).
- The RTLS feature must be configured in SYS1.PARMLIB(CSVRTLxx).
- Security resource profiles must be defined to the ESM:

  CSVRTLS.LIBRARY.*library.version* for each logical RTLS library to enable security checking,

  OR,

  CSVRTLS.NOSECCONNECT.*library.version* for each logical RTLS library to disable checking

  OR,

  CSVRTLS.NOSECCONNECT.* to disable all RTLS security checking.

If the other methods of access (i.e., link list or STEPLIB) to the LE members are used, the CSVRTLS profiles are not needed.

5. EXTERNAL SECURITY MANAGER IMPLEMENTATION

5.1 ESM General Considerations

The ESM is the primary mechanism that controls access to data and resources in z/OS systems. Each ESM in use on the DoW platforms provides the flexibility to tailor the implementation to meet the needs of the local installation.

Many different implementations of various ESMs exist. These different implementations meet the needs of each local installation but make it difficult to coordinate and control the DoW Enterprise.

The installation and implementation of each ESM should be standardized across all DoW processing environments. z/OS STIG Checklist recommended implementation criteria are specified in the individual ESM installation sections of this document.

All deviations are to be specifically noted, with justification and approval documentation, in the system security plan and the accreditation package submitted to the Authorizing Official (AO).

To provide full compliance with the security support required by *DOD Directive 8500.1*, control all products within the operating system using the ESM. Use the following guidance in the acquisition of products to ensure that security-related issues are adequately addressed:

(1) Products are to be on the National Information Assurance Partnership (NIAP) - Common Criteria Evaluation and Validation Scheme (CCEVS) Validated Products List before procurement and implementation.
(2) At a minimum, evaluate products for sensitive functions and implement controls to protect these functions.
(3) Restrict all data sets associated with a product to the access levels necessary for support and operation based upon the requirements. Only those authorized personnel who require the authority to modify or maintain the product are to have *update* and *alter* access.

Many products require special security considerations. Enforce the following considerations relating to compatibility and interfacing with the IBM System Authorization Facility (SAF):

(1) Protect Commercial-Off-The-Shelf (COTS) products and associated data sets within the operating system using the ESM. Ensure that all COTS products being procured have, and utilize, the SAF interface to the ESM.C
(2) Secure Government-Off-The-Shelf (GOTS) products and newly developed applications, along with associated data sets, using the ESM. Whenever possible, develop applications using the SAF interface. Safeguards enforced by the ESM are not to be duplicated by security mechanisms implemented within an application. Limit developed internal security mechanisms to those functions that augment the safeguards present in the ESM.
(3) Internal Product Security Controls (IPSCs) are security mechanisms internal to COTS products and GOTS applications. Only use IPSCs when existing products or applications do not interface to the ESM through SAF, or to augment the protections provided by the existing interface. Reconfigure products using IPSCs, which are capable of taking advantage of the SAF interface, to take proper advantage of the SAF interface.

Whenever IPSCs are being used, develop and maintain security documentation. The documentation is to include descriptions of the IPSCs, the configuration, and the policy being enforced. The ISSO is to maintain the documentation and perform the administration of IPSCs where practical.

(4) Modify all GOTS products and applications (if using ESM-specific interfaces) to interface with the ESM via standard SAF calls.

All applications are to eventually migrate from IPSCs to using the ESM. If this is unreasonable for any given application, the application is to be eventually phased out.

5.1.1 ESM Standard Global Options

Each ESM provides the capability for customization using global ESM configuration and processing options. These global options provide the flexibility to tailor the configuration and processing of the ESM to the needs of the local operating environment. These options also can pose the danger of compromising the operational environment when misused or when not properly applied.

In an organization as large as the DoW, the additional complication of diversity exists. Many different applications of the global options exist. These different applications meet the needs of each local installation but make it difficult to manage the organizational computing base as a whole. The task of optimizing the processing load of the enterprise across the myriad platforms becomes virtually impossible.

For the above reasons, and to mitigate the above risks and difficulties, all DoW processing environments are to implement the z/OS STIG Checklist required global options for each ESM installed. The z/OS STIG Checklist required options are specified in the individual Access Control Product installation sections of this document. The options specified are z/OS STIG Checklist requirements and each site can choose to be more restrictive.

5.1.2 ESM Userid Controls

Requires that each system user is uniquely identified to the operating environment, and that access to resources is limited to those needed to perform the function. In this case, a user is defined as either an individual accessing a computer resource, or as a task executing on the system that requires access to a resource. On z/OS systems a user is identified by means of a unique userid. This z/OS STIG Checklist requires that audit data record the identity of the user, time of access, interaction with the system, and sensitive functions that might permit a user or program to modify, bypass, or negate security safeguards.

It then follows that any userid (user) on the system must be associated with only one individual. However, any given individual may be assigned responsibility for multiple userids on a given system, depending on functional responsibilities, to ensure task segregation.

Table 5-1: Interactive Users - ACF2

Referenced by:ACF0570

Interactive Users - ACF2		
Field	**Description**	**Required Value**
AUTHSUP1	User Authorization Flag 1	ON for highly privileged users controlled by NC-PASS. **Note**: Refer to Section 6.3.1, NC-PASS for ACF2, for further information.
GROUP(name)	This field is required for assigning *gids* to MVS OpenEdition users. **Note**: For sites running UNIX Systems Services, see Section 2.5.3.2, Defining Users and Groups, for GROUP(name) requirements.	Will be defined for OpenEdition users.
IDLE(time)	Specifies the maximum time permitted (in minutes) between terminal transactions for this user. If exceeded, ACF2 needs the logonid and password to be revalidated before another transaction is accepted. Zero (0) indicates no limit is enforced. This field is available for IMS and CICS on-line processing.	IDLE(15)
INTERCOM/ NOINTERCOM	Indicates this user is willing to accept messages from other users through the TSO SEND command.	INTERCOM
LGN-ACCT/ NOLGN-ACCT	Indicates permission to specify an account number at logon time. If a user has the PMT-ACCT field, ACF2 prompts the user for an account number unless an account number is specified before the prompt. If a user does not specify an account number at logon and PMT-ACCT is not specified in the user's logonid record, ACF2 uses the user's default account number (TSOACCT is the logonid field) or the system default account number. Specifies the default in the ACCOUNT field of the GSO TSO record.	LGN-ACCT
MAIL/NOMAIL	Indicates a user can receive mail messages from TSO at logon time.	MAIL

Interactive Users - ACF2		
Field	**Description**	**Required Value**
MAXDAYS(days)	Specifies the maximum number of days permitted between password changes before the password expires. Zero (0) indicates no limit.	MAXDAYS (60)
MINDAYS(days)	Specifies the minimum number of days that must elapse before a user can change a password. Zero (0) indicates no limit.	MINDAYS (1)
MSGID/NOMSGID	Indicates this user wants TSO messages to have message IDs prefixed.	MSGID
NO-STORE/ NONO-STORE	Specifies that a user cannot store or delete rule sets. This applies even if the value of the PREFIX field of the logonid record matches the $KEY of the rule of the data set, if the user has the SECURITY privilege, or if the user has change authority through a %CHANGE or %RCHANGE control statement in the rule set.	NONO-STORE **Note**: The GSO RULEOPTS record must specify CENTRAL.
NOTICES/ NONOTICES	Indicates a user can receive TSO notices at logon time.	NOTICES
PASSWORD	The logon password for the user.	Must be completed.
PHONE	Specifies the 1- to 12-character telephone number of a user.	Optional
PMT-ACCT/ NOPMT-ACCT	Indicates that ACF2 requires a user to specify an account at logon time and to specify the LGN-ACCT field. ACF2 does not prompt for an account number if the FSRETAIN field is also specified. FSRETAIN obtains account values from the last session.	May be required for Fee-for-Service support.
PREFIX	User access to the user's own data sets without rule validation.	PREFIX()
PROMPT/ NOPROMPT	Indicates that ACF2 prompts a user for missing or incorrect parameters.	PROMPT
TSOACCT	Specifies the user's default TSO logon account. Used for all billing.	May be required for Fee-for-Service support.
TSOPROC	Specifies the user's default TSO logon procedure.	Optional, may be completed for TSO users.
VLD-ACCT/ NOVLD-ACCT	Indicates that ACF2 validates the TSO account number of a user. Creates a resource rule with a type code TAC and a $KEY of the account number so that ACF2 will perform this validation.	VLD-ACCT May be required for Fee-for-Service support.

Interactive Users - ACF2		
Field	**Description**	**Required Value**
VLD-PROC/ NOVLD-PROC	Indicates that ACF2 validates the TSO logon procedure of a user. Creates a resource rule with a type code TPR and a $KEY of the logon procedure so that ACF2 will perform this validation.	VLD-PROC Will be completed for all TSO users.

5.1.3 Password Complexity

Password complexity is a measure to minimize guessing and brute-force attacks. The DoW has instituted the requirement that all passwords must be at least fifteen (15) characters in length. Currently the zOS operating system can only support a maximum password length of eight (8). As mitigation to this shortfall, each of the ESMs has introduced additional measures to assist in password complexity. One of these measures is a restriction of reserved words and prefixes. The following contains the default list of reserved words and prefixes for each ESM. For CA-ACF2 they are contained in RESWORD in the GSO record. In CA-TSS use the RPW control option to view and modify the restricted password list. For RACF the list is loaded in IRRPWREX.

Each site can make additions to this list to reflect regional common words and prefixes.

Table 5-2: Reserved Words and Prefixes

APPL	APR	ASDF	AUG	BASIC
CADAM	DEC	DEMO	FEB	FOCUS
GAME	IBM	JAN	JUL	JUN
LOG	MAR	MAY	NET	NEW
NOV	OCT	PASS	ROS	SEP
SIGN	SYS	TEST	TSO	VALID
VTAM	XXX	1234		

6. TRUSTED STARTED TASKS

Table 6-1: Trusted Started Tasks

Referenced by: RACF0660, TSS0810, ACF0640

Trusted Started Tasks		
ACF2	GSKSRVR	SMSRESTR
ACFBKUP	IEEVMPCR	SMSVSAM
APSWPROA	IOSAS	TCPIP
APSWPROB	IXGLOGR	TSS
APSWPROC	JES2	TSSB
APSWPROM	JESXCF	TSSBKUP
APSWPROT	LLA	TSSRESTN
CATALOG	NFS	VLF
CEA	OMVS/OMVSKERN***	VTAM
CONSOLE	RACF	XCFAS
DFHSM*	RMF	ZFS**
DFS	RMFGAT	
DUMPSRV	SMF	
GPMSERVE	SMSRESTN	

The primary source for this Trusted Started Task Table is the MVS Init & Tuning Guide.

*=The name of the DFHSM Proc may be "DFSMSHSM". Another consideration here is that IBM sometimes recommends that other Started Tasks be set up similar to DFHSM…reference SSO FIXDOC 1924. In this case, where IBM recommends either mapping a proc to the DFHSM userid or setting up additional DFHSM-like userids then the TRUSTED attribute would be justified.

**=This is not contained in the MVS Init & Tuning Guide. Reference Chapter 2 of z/OS V1R9.0 Distributed File Service zFS Administration z/OS V1R9.0 Distributed File Service zFS Administration.

*** = USS Planning Guide shows that the OMVS proc mapped to the OMVSKERN userid is OK to run as TRUSTED. This does not apply to the BPXOINIT proc.

Note: A Privileged user under ACF2 can have a logonid set up with Non Cancel attribute for special occasions. This logonid will not be used as an everyday logonid.

Note: Many of the Trusted Started tasks may be defined to the ESM with more stringent rules to restrict bypassing of security.

Note: "TRUSTED" Means any STC listed can have any level of access up to including complete bypassing of all security controls.

7. Z/OS SYSTEM AND JES2 COMMANDS

Table 7-1: Controls on z/OS System Commands

Referenced by: ACP00282, ZIOA0040

Controls on z/OS System Commands				
Command/Keyword	**Access**	**Resource-Name**	**Auth**	**Log**
ACTIVATE	UPDATE	MVS.ACTIVATE	a o s t	Y
CANCEL device	UPDATE	MVS.CANCEL.DEV.device	a o s t	Y
CANCEL jobname (others)	UPDATE	MVS.CANCEL.JOB.jobname	a o s t	Y
CANCEL jobname (own jobs)	UPDATE	MVS.CANCEL.JOB.jobname	*	Y
The previous commands are for jobs that are **not** started tasks.				
CANCEL jobname.id	UPDATE	MVS.CANCEL.STC.mbrname.id	a o s t	Y
CANCEL id	UPDATE	MVS.CANCEL.STC.mbrname.id	a o s t	Y
The previous command is for a started task for which an identifier is provided.				
CANCEL jobname	UPDATE	MVS.CANCEL.STC.mbrname.job name	a o s t	Y
The previous command is for a started task for which an identifier was **not** provided. mbrname is the name of the member containing the JCL source.				
CANCEL jobname	UPDATE	MVS.CANCEL.ATX.jobname	a o s t $	Y
The previous command is for APPC transaction programs.				
CANCEL U=userid	UPDATE	MVS.CANCEL.TSU.userid	a o s t $	Y
CHNGDUMP	UPDATE	MVS.CHNGDUMP	a o s t	Y
CMDS DISPLAY	READ	MVS.CMDS.DISPLAY	*	Y
CMDS SHOW	READ	MVS.CMDS.SHOW	*	Y
CMDS REMOVE	CONTROL	MVS.CMDS.REMOVE	a o s t	Y
CMDS ABEND	CONTROL	MVS.CMDS.ABEND	a o s t	Y
CONFIG	CONTROL	MVS.CONFIG	a o s t	Y
CONTROL	READ	MVS.CONTROL.A	*	
Note: The access authority for all CONTROL commands except CONTROL M is normally READ, but the *L=name* (console name) operand can change the access level. When *L=name* specifies a console that is not full-capability and is not the issuing console, the access authority is UPDATE. When *L=name* specifies a console that is full-capability and is not the issuing console, the access authority is CONTROL.				
CONTROL C	READ	MVS.CONTROL.C	*	
Note: See the note for the CONTROL A command for exceptions.				
CONTROL D	READ	MVS.CONTROL.D	*	
Note: See the note for the CONTROL A command for exceptions.				
CONTROL E	READ	MVS.CONTROL.E	*	
Note: See the note for the CONTROL A command for exceptions.				
CONTROL M	CONTROL	MVS.CONTROL.M	a c o s t	

Controls on z/OS System Commands				
Command/Keyword	**Access**	**Resource-Name**	**Auth**	**Log**
CONTROL N	READ	MVS.CONTROL.N	*	
Note: See the note for the CONTROL A command for exceptions.				
CONTROL Q	READ	MVS.CONTROL.Q	*	
Note: See the note for the CONTROL A command for exceptions.				
CONTROL S	READ	MVS.CONTROL.S	*	
Note: See the note for the CONTROL A command for exceptions.				
CONTROL V	READ	MVS.CONTROL.V	*	
Note: See the note for the CONTROL A command for exceptions.				
DEVSERV	READ	MVS.DEVSERV	*	
DISPLAY A	READ	MVS.DISPLAY.JOB	*	
DISPLAY ALLOC,GRPLOCKS	READ	MVS.DISPLAY.ALLOC	*	
DISPLAY ALLOC,OPTIONS	READ	MVS.DISPLAY.ALLOC	*	
DISPLAY APPC	READ	MVS.DISPLAY.APPC	*	
DISPLAY ASCH	READ	MVS.DISPLAY.ASCH	*	
DISPLAY ASM	READ	MVS.DISPLAY.ASM	*	
DISPLAY CEE	READ	MVS.DISPLAY.CEE	*	
DISPLAY CF	READ	MVS.DISPLAY.CF	*	
DISPLAY CNGRP	READ	MVS.DISPLAY.CNGRP	*	
DISPLAY CONSOLES	READ	MVS.DISPLAY.CONSOLES	*	
DISPLAY DIAG	READ	MVS.DISPLAY.DIAG	*	
DISPLAY DLF	READ	MVS.DISPLAY.DLF	*	
DISPLAY DMN	READ	MVS.DISPLAY.DMN	*	
DISPLAY DUMP	READ	MVS.DISPLAY.DUMP	*	
DISPLAY EMCS	READ	MVS.DISPLAY.EMCS	*	
DISPLAY ETR	READ	MVS.DISPLAY.ETR	*	
DISPLAY GRS	READ	MVS.DISPLAY.GRS	*	
DISPLAY GTZ	READ	MVS.DISPLAY.GTZ	*	
DISPLAY HIS	READ	MVS.DISPLAY.HIS	*	
DISPLAY HS	READ	MVS.DISPLAY.HS	*	
DISPLAY IEFOPZ	READ	MVS.DISPLAY.IEFOPZ	*	
DISPLAY IOS	READ	MVS.DISPLAY.IOS	*	
DISPLAY IPLINFO	READ	MVS.DISPLAY.IPLINFO	*	
DISPLAY IQP	READ	MVS.DISPLAY.IQP	*	
DISPLAY JOBS	READ	MVS.DISPLAY.JOB	*	
DISPLAY LOGGER	READ	MVS.DISPLAY.LOGGER	*	
DISPLAY LOGREC	READ	MVS.DISPLAY.LOGREC	*	
DISPLAY M	READ	MVS.DISPLAY.M	*	
DISPLAY MMS	READ	MVS.DISPLAY.MMS	*	
DISPLAY MPF	READ	MVS.DISPLAY.MPF	*	
DISPLAY MSGFLD	READ	MVS.DISPLAY.MSGFLD	*	
DISPLAY NET	READ	MVS.DISPLAY.NET	*	

Controls on z/OS System Commands				
Command/Keyword	**Access**	**Resource-Name**	**Auth**	**Log**
DISPLAY OMVS	READ	MVS.DISPLAY.OMVS	*	
DISPLAY OPDATA	READ	MV S.DISPLAY.OPDATA	*	
DISPLAY PARMLIB	READ	MVS.DISPLAY.PARMLIB	*	
DISPLAY PCIE	READ	MVS.DISPLAY.PCIE	*	
DISPLAY PFK	READ	MVS.DISPLAY.PFK	*	
DISPLAY PPT	READ	MVS.DISPLAY.PPT	*	
DISPLAY PROD	READ	MVS.DISPLAY.PROD	*	
DISPLAY PROG	READ	MVS.DISPLAY.PROG	*	
For DISPLAY PROG,EXIT, if resource CSVDYNEX.LIST exists in the FACILITY class, READ authorization to CSVDYNEX.LIST is required.				
DISPLAY R	READ	MVS.DISPLAY.R	*	
DISPLAY RRS	READ	MVS.DISPLAY.RRS	*	
DISPLAY RTLS	READ	MVS.DISPLAY.RTLS	*	
DISPLAY SLIP	READ	MVS.DISPLAY.SLIP	*	
DISPLAY SMF	READ	MVS.DISPLAY.SMF	*	
DISPLAY SMFLIM	READ	MVS.DISPLAY.SMFLIM	*	
DISPLAY SMS	READ	MVS.DISPLAY. SMS	*	
DISPLAY SSI	READ	MVS.DISPLAY.SSI	*	
DISPLAY SYMBOLS	READ	MVS.DISPLAY.SYMBOLS	*	
DISPLAY T	READ	MVS.DISPLAY.TIMEDATE	*	
DISPLAY TRACE	READ	MVS.DISPLAY.TRACE	*	
DISPLAY TS	READ	MVS.DISPLAY.JOB	*	
DISPLAY U	READ	MVS.DISPLAY.U	*	
DISPLAY WLM	READ	MVS.DISPLAY.WLM	*	
DISPLAY XCF	READ	MVS.DISPLAY.XCF	*	
DUMP	CONTROL	MVS.DUMP	a o s t	Y
DUMPDS	UPDATE	MVS.DUMPDS	a o s t	
FORCE device	CONTROL	MVS.FORCE.DEV.device	a o s t	Y
FORCE jobname	CONTROL	MVS.FORCE.JOB.jobname	a o s t	Y
The previous command is for a job that is **not** a started task.				
FORCE jobname.id	CONTROL	MVS.FORCE.STC.mbrname.id	a o s t	Y
FORCE id	CONTROL	MVS.FORCE.STC.mbrname.id	a o s t	Y
The previous command is for a started task for which an identifier was provided.				
FORCE jobname	CONTROL	MVS.FORCE.STC.mbrname.jobname	a o s t	Y
The previous command is for a started task for which an identifier was **not** provided. mbrname is the name of the member containing the JCL source.				
FORCE U=userid	CONTROL	MVS.FORCE.TSU.userid	a o s t	Y

Controls on z/OS System Commands				
Command/Keyword	**Access**	**Resource-Name**	**Auth**	**Log**
FORCE device,ARM	CONTROL	MVS.FORCEARM.DEV.device	a o s t	Y
FORCE jobname,ARM	CONTROL	MVS.FORCEARM.JOB.jobname	a o s t	Y
The previous command is for a job that is **not** a started task.				
FORCE [jobname.] identifier,ARM	CONTROL	MVS.FORCEARM.STC.mbrname.id	a o s t	Y
The previous command is for a started task for which an identifier was provided.				
FORCE jobname,ARM	CONTROL	MVS.FORCEARM.STC.mbrname.jobname	a o s t	Y
The previous command is for a started task for which an identifier was **not** provided. mbrname is the name of the member containing the JCL source.				
FORCE U=userid,ARM	CONTROL	MVS.FORCEARM.TSU.userid	a o s t	Y
FORCE device,TCB=tcbaddr	CONTROL	MVS.FORCETCB.DEV.device	aost	Y
FORCE jobname,TCB=tcbaddr	CONTROL	MVS.FORCETCB.JOB.jobname	aost	Y
The previous command is for a job that is not a started task.				
FORCE [jobname.]identifier.TCB=tcbaddr	CONTROL	MVS.FORCETCB.STC.mbrname.id	aost	Y
The previous command is for a started task for which an identifier was provided.				
FORCE jobname,TCB=tcbaddr	CONTROL	MVS.FORCETCB.STC.mbrname.jobname	aost	Y
The previous command is for a started task for which an identifier was not provided. mbrname is the name of the member containing the JCL source.				
FORCE U=userid.TCB=tcbaddr	CONTROL	MVS.FORCETCB.TSU.userid	aost	Y
HALT EOD	UPDATE	MVS.HALT.EOD	a o s t	Y
HALT NET	UPDATE	MVS.HALT.NET	a o s t	Y
IOACTION	CONTROL	MVS.IOACTION	a o s t	Y
LIBRARY	UPDATE	MVS.LIBRARY	a o s t	Y
LOG	READ	MVS.LOG	*	
MODE	UPDATE	MVS.MODE	a o s t	Y
MODIFY jobname	UPDATE	MVS.MODIFY.JOB.jobname	a o s t	Y
The previous command is for a job that is **not** a started task.				
MODIFY userid	UPDATE	MVS.MODIFY.JOB.userid	a o s t	Y

Controls on z/OS System Commands				
Command/Keyword	**Access**	**Resource-Name**	**Auth**	**Log**
MODIFY jobname	UPDATE	MVS.MODIFY.STC.mbrname.id	a o s t [4]	Y
MODIFY jobname.id	UPDATE	MVS.MODIFY.STC.mbrname.id	a o s t [4]	Y
MODIFY id	UPDATE	MVS.MODIFY.STC.mbrname.id	a o s t [4]	Y
The previous command is for a started task for which an identifier was provided.				
MODIFY jobname	UPDATE	MVS.MODIFY.STC.mbrname.jobname	a o s t [4]	Y
The previous command is for a started task for which an identifier was **not** provided. mbrname is the name of the member containing the JCL source. **Note:** MODIFY might actually affect more than one job. For example: If START ABC.DEF and START ABC.GHI are issued, MODIFY ABC.* affects both jobs, and one authorization request is issued for each. If the START ABC command is issued twice, two started tasks named ABC start running on the system. MODIFY ABC affects both jobs, and one authorization request is issued for each. **Note**: The target of the MODIFY command may allow or require additional authorizations. Please be sure to examine all documentation regarding the target of the command to insure that the proper security is in place.				
MONITOR	READ	MVS.MONITOR	*	
MOUNT	UPDATE	MVS.MOUNT	a o s t	
PAGEADD	UPDATE	MVS.PAGEADD	a o s t	Y
PAGEDEL	UPDATE	MVS.PAGEDEL	a o s t	Y
QUIESCE	CONTROL	MVS.QUIESCE	a o s t	Y
REPLY	READ	MVS.REPLY	* [4]	Y
RESET	UPDATE	MVS.RESET	a o s t	Y
RESET CN	CONTROL	MVS.RESET.CN	a o s t	Y
ROUTE system	READ	MVS.ROUTE.CMD.system	*	
Note: When a system name is specified on the ROUTE command, *system* is the name of the system that is the target of the command.				
ROUTE *ALL	READ	MVS.ROUTE.CMD.ALLSYSTEMS	*	
ROUTE *OTHER	READ	MVS.ROUTE.CMD.OTHERSYSTEMS	*	
ROUTE sysgrpname	READ	MVS.ROUTE.CMD.sysgrpname	*	
ROUTE (sys1,...,sysN)	READ	MVS.ROUTE.CMD.sys1 . MVS.ROUTE.CMD.sysN	*	
ROUTE (group1,...,groupN)	READ	MVS.ROUTE.CMD.group1 . MVS.ROUTE.CMD.groupN	*	
SEND	READ	MVS.SEND	*	
SET APPC	UPDATE	MVS.SET.APPC	a o s t	Y
SET ASCH	UPDATE	MVS.SET.ASCH	a o s t	Y

[4] For systems running TSS the Master SCA can have access to identified resources.

Controls on z/OS System Commands				
Command/Keyword	**Access**	**Resource-Name**	**Auth**	**Log**
SET CEE	UPDATE	MVS.SET.CEE	a o s t	Y
SET CLOCK	UPDATE	MVS.SET.TIMEDATE	a o s t	Y
SET CNGRP	UPDATE	MVS.SET.CNGRP	a o s t	Y
SET CNIDTR	UPDATE	MVS.SET.CNIDTR	a o s t	Y
SET CON	UPDATE	MVS.SET.CON	a o s t	Y
SET DAE	UPDATE	MVS.SET.DAE	a o s t	Y
SET DATE	UPDATE	MVS.SET.TIMEDATE	a o s t	Y
SET DEVSUP	UPDATE	MVS.SET.DEVSUP	a o s t	Y
SET GRSRNL	UPDATE	MVS.SET.GRSRNL	a o s t	Y
SET GTZ	UPDATE	MVS.SET.GTZ	a o s t	Y
SET IEFOPZ	UPDATE	MVS.SET.IEFOPZ	a o s t	Y
SET ICS	UPDATE	MVS.SET.ICS	a o s t	Y
SET IOS	UPDATE	MVS.SET.IOS	a o s t	Y
SET IQP	UPDATE	MVS.SET.IQP	a o s t	Y
SET IXGCNF	UPDATE	MVS.SET.IXGCNF	a o s t	Y
SET IPS	UPDATE	MVS.SET.IPS	a o s t	
SET MMS	UPDATE	MVS.SET.MMS	a o s t	Y
SET MPF	UPDATE	MVS.SET.MPF	a o s t	Y
SET MSGFLD	UPDATE	MVS.SET.MSGFLD	a o s t	Y
SET OPT	UPDATE	MVS.SET.OPT	a o s t	Y
SET PFK	UPDATE	MVS.SET.PFK	a o s t	Y
SET PROG	UPDATE	MVS.SET.PROG	a o s t	Y
SET RESET	UPDATE	MVS.SET.TIMEDATE	a o s t	
SET RTLS	UPDATE	MVS.SET.RTLS	a o s t	Y
SET SCH	UPDATE	MVS.SET.SCH	a o s t	Y
SET SLIP	UPDATE	MVS.SET.SLIP	a o s t	Y
SET SMF	UPDATE	MVS.SET.SMF	a o s t	Y
SET SMFLIM	UPDATE	MVS.SET.SMFLIM	a o s t	Y
SET SMS	UPDATE	MVS.SET.SMS	a o s t	Y
SET ALLOC	UPDATE	MVS.SETALLOC.ALLOC	d s t	Y
SETAPPC	UPDATE	MVS.SETAPPC.APPC	a o s t	Y
SETAUTOR	UPDATE	MVS.SETAUTOR.AUTOR		
SETCEE	UPDATE	MVS.SETCEE.CEE	a o s t	Y
SETCON DELETE	UPDATE	MVS.SETCON.DELETE	a o s t	Y
SETCON MODE	CONTROL	MVS.SETCON.MODE	a o s t	Y
SETCON MONITOR (MN)	CONTROL	MVS.SETCON.MONITOR	a o s t	Y
SETCON TRACKING (TR)	CONTROL	MVS.SETCON.TRACKING	a o s t	Y
SETDMN	UPDATE	MVS.SETDMN.DMN	a o s t	Y
SETETR	UPDATE	MVS.SETETR.ETR	a o s t	Y
SETGRS	UPDATE	MVS.SETGRS.AUTHQLVL	a o s t	Y

Controls on z/OS System Commands				
Command/Keyword	**Access**	**Resource-Name**	**Auth**	**Log**
SETGRS CNS	CONTROL	MVS.SETGRS.GRS	a o s t	Y
SETGRS MODE=STAR ENQMAXA ENQMAXU CNS MONITOR	UPDATE	MVS.SETGRS.TOLINT MVS.SETGRS.RESMIL MVS.SETGRS.MODE.STAR MVS.SETGRS.SYNCHRES MVS.SETGRS.GRSQ MVS.SETGRS.ENQMAXA MVS.SETGRS.ENQMAXU MVS.SETGRS.CNS MVS.SETGRS.MONITOR	a o s t a o s t	Y Y
SETGTZ	UPDATE	MVS.SETGTZ.GTZ	a o s t	Y
SETIOS	UPDATE	MVS.SETIOS.IOS	a o s t	Y
SETHS	UPDATE	MVS.SETHS	a o s t	Y
SETLOAD	UPDATE	MVS.SETLOAD.LOAD	a o s t	Y
SETLOAD xx,IEASYM	UPDATE	MVS.SETLOAD.IEASYM	a o s t	Y
SETLOAD xx,PARMLIB	UPDATE	MVS.SETLOAD.LOAD	a o s t	Y
SETLOGR	UPDATE	MVS.SETLOGR.LOGR	a o s t	Y
SETLOGRC	CONTROL	MVS.SETLOGRC.LOGRC	a o s t	Y
SETMF	UPDATE	MVS.SETMF.MF	a o s t	Y
SETPROG	UPDATE	MVS.SETPROG	s t	Y
SETRRS SHUTDOWN	UPDATE	MVS.SETRRS.SHUTDOWN	a o s t	Y
SETSMF	UPDATE	MVS.SETSMF.SMF	a o s t	Y
SETSMS	UPDATE	MVS.SETSMS.SMS	a o s t	Y
SETSSI ACTIVATE	CONTROL	MVS.SETSSI.ACTIVATE.subname	a o s t	Y
SETSSI ADD	CONTROL	MVS.SETSSI.ADD.subname	a o s t	Y
SETSSI DEACTIVATE	CONTROL	MVS.SETSSI.DEACTIVATE.subname	a o s t	Y
SETSSI DELETE	CONTROL	MVS.SETSSI.DELETE.subname	a o s t	Y

Note: The following rules apply to the subsystem name (subname) value in the SETSSI commands:

- Lower case characters in the subsystem name will be translated to upper case in the resource-name.
- The characters *, &, or % in the subsystem name will be translated to the _ character in the resource-name.

Controls on z/OS System Commands				
Command/Keyword	**Access**	**Resource-Name**	**Auth**	**Log**
• Embedded blanks in the subsystem name will be translated to the _ character in the resource-name. • Trailing blanks will not be translated. No other characters are translated. IBM recommends defining generic profiles to match subsystem names with characters that cannot be specified using the RACF command interface.				
SETUNI	UPDATE	MVS.SETUNI.UNI	a o s t	Y
SETXCF	UPDATE	MVS.SETXCF.XCF	a o s t	Y
SLIP	UPDATE	MVS.SLIP	a o s t	Y
Note: When the IEASLIP.REFRESH FACILITY class profile is defined, the SLIP command issuer must have UPDATE access to that profile to use the REFAFTER and REFBEFOR keywords.				
START mbrname[.identifier]	UPDATE	MVS.START.STC.mbrname[.id]	a o s t	Y
The previous command is for a started task for which an identifier was provided. mbrname is the name of the member containing the JCL source.				
START mbrname,JOBNAME =jobname	UPDATE	MVS.START.STC.mbrname.jobname	a o s t [5]	Y
The previous command is for a started task for which an identifier was **not** provided. mbrname is the name of the member containing the JCL source.				
START commands that use one or more of the following keywords: DSN or DSNAME DISP PROTECT	UPDATE	The resource name substitutes DDALERT for one or more of the keywords. MVS.START.jobname.qualifier.DDALER	a o s t	Y
An example of the previous MVS START command is as follows: START jobname.qualifier,DSN=dsname.qualifier,DISP=SHR				
STOP jobname	UPDATE	MVS.STOP.JOB.jobname	a o s t[5]	Y
The previous command is for a job that is **not** a started task.				
STOP userid	UPDATE	MVS.STOP.JOB.userid	a o s t	Y
STOP jobname STOP jobname.id STOP id	UPDATE	MVS.STOP.STC.mbrname.id	a o s t	Y
The previous command is for a started task for which an identifier was provided. mbrname is the name of the member containing the JCL source.				
STOP jobname	UPDATE	MVS.STOP.STC.mbrname.jobname	a o s t	Y
The previous command is for a started task for which an identifier was **not** provided. mbrname is the name of the member containing the JCL source.				

[5] The SDSF started task is authorized to Start and Stop the SDSF Aux server.

Controls on z/OS System Commands				
Command/Keyword	**Access**	**Resource-Name**	**Auth**	**Log**
Note: STOP might actually affect more than one started task if more than one unit of work with the same name is active at the same time. If so, there is one call to RACF for command authorization for each unit of work.				
STOPMN	READ	MVS.STOPMN	*	
SWAP	UPDATE	MVS.SWAP	a o s t	Y
SWITCH SMF	UPDATE	MVS.SWITCH.SMF	a o s t	Y
TRACE CT	UPDATE	MVS.TRACE.CT	a o s t	Y
TRACE MT	CONTROL	MVS.TRACE.MT	a o s t	Y
TRACE ST	UPDATE	MVS.TRACE.ST	a o s t	Y
TRACE STATUS	UPDATE	MVS.TRACE.STATUS	a o s t	Y
Unknown MVS commands	UPDATE	MVS.UNKNOWN	a o s t [4]	Y
UNLOAD	UPDATE	MVS.UNLOAD	a o s t	Y
VARY CN	UPDATE	MVS.VARY.CN	a o s t	Y
VARY CN,ACTIVATE	READ	MVS.VARY.CN	*	Y
Note: Issue VARY CN, ACTIVATE only from the system console.				
VARY CN,AUTH	UPDATE CONTROL	MVS.VARY.CN MVS.VARYAUTH.CN	a o s t a o s t	Y Y
Note: VARY CN, AUTH requires both profiles.				
VARY CN,DEACTIVATE	READ UPDATE	MVS.VARY.CN	* a o s t	Y Y
Note: For the VARY CN, DEACTIVATE command, READ applies only when that command is issued from the system console; otherwise, UPDATE applies.				
VARY CN,LOGON	UPDATE CONTROL	MVS.VARY.CN MVS.VARYLOGON.CN	a o s t a o s t	Y Y
Note: VARY CN, LOGON requires both profiles.				
VARY CN,LU	UPDATE CONTROL	MVS.VARY.CN MVS.VARYLU.CN	a o s t a o s t	Y Y
Note: VARY CN, LU requires both profiles.				
VARY CN,OFFLINE,FORCE	CONTROL	MVS.VARYFORCE.CN	a o s t	Y
VARY CN(...),STANDBY	CONTROL	MVS.VARYSTANDBY.CN	a o s t	Y
VARY CONSOLE	UPDATE	MVS.VARY.CONSOLE	a o s t	Y
VARY CONSOLE,AUTH	UPDATE CONTROL	MVS.VARY.CONSOLE MVS.VARYAUTH.CONSOLE	a o s t a o s t	Y Y

Controls on z/OS System Commands				
Command/Keyword	**Access**	**Resource-Name**	**Auth**	**Log**
Note: VARY CONSOLE, AUTH requires both profiles.				
VARY GRS	CONTROL	MVS.VARY.GRS	a o s t	Y
VARY HARDCPY	CONTROL	MVS.VARY.HARDCPY	a o s t	Y
VARY NET	UPDATE	MVS.VARY.NET	a o s t	Y
VARY OFFLINE	UPDATE	MVS.VARY.DEV	a o s t	Y
Note: If VARY CN, OFFLINE is specified, the rules for VARY CN apply (the system checks for UPDATE access to MVS.VARY.CN, not MVS.VARY.DEV).				
VARY OFFLINE,FORCE	CONTROL	MVS.VARYFORCE.DEV	a o s t	Y
VARY ONLINE	UPDATE	MVS.VARY.DEV	a o s t	Y
Note: If VARY CN, ONLINE is specified, the rules for VARY CN apply (the system checks for UPDATE access to MVS.VARY.CN, not MVS.VARY.DEV).				
VARY PATH	UPDATE	MVS.VARY.PATH	a o s t	Y
VARY SMS	UPDATE	MVS.VARY.SMS	a o s t	Y
VARY TCPIP	UPDATE	MVS.VARY.TCPIP	a o s t	Y
VARY TCPIP cmd	CONTROL	MVS.VARY.TCPIP.*	a o s t	Y
VARY WLM	CONTROL	MVS.VARY.WLM	a o s t	Y
VARY XCF	CONTROL	MVS.VARY.XCF	a o s t	Y
WRITELOG	READ	MVS.WRITELOG	*	Y

Auth column
a - AUTOAUDT, Automated operations.
c - CONSOLES, System consoles
d - DASDAUDT, Storage Management
o - OPERAUDT, Operations staff
s - SYSPAUDT, Systems Programming staff
t - TSTCAUDT, Trusted Started Tasks
* - All Users
$ - May be given to All Users using SDSF, CA Roscoe, and similar products that interface with a user's input/output requiring the issuing of console commands.

Log
Y

Note: ALTER authority on RACF profiles: For discrete profiles, ALTER allows some RACF Administrative functions such as use of the RDELETE Command. However, this is not the preferred method for granting access for resource administration. Alter access for resource administration may be permitted but only to Security Administrators justified by the ISSO.

Resource access requirements are based on IBM minimal access requirements. Users that are authorized to have access to the resource can have the access specified or greater. The exceptions are those stated with the resource, resources that specify different accesses to users and above note.

Where multiple users have different accesses, an example is one user has READ and another has UPDATE the "access specified or greater" will be to the user with UPDATE.

When granted resource access utilize the highest level of granularity possible. Access at the MVS.** level must not be granted.

Table 7-2: Controls on JES2 System Commands

Referenced by: ZJES0052

Controls on JES2 System Commands				
JES2 command	**Access**	**Resource-Name**	**Auth**	**Log**
$ACTIVATE	CONTROL	Jesx.ACTIVATE.FUNCTION	a o s t	Y
$ADD APPL	CONTROL	Jesx.ADD.APPL	a o s t	Y
$ADD CONNECT	CONTROL	Jesx.ADD.CONNECT	a o s t	Y
$ADD DESTID	CONTROL	jesx.ADD.DESTID	a o s t	Y
$ADD PRTnnnn	UPDATE	jesx.ADD.DEV	a o s t	Y
$ADD FSS	CONTROL	jesx.ADD.FSS	a o s t	Y
$ADD LINE	CONTROL	jesx.ADD.LINE	a o s t	Y
$ADD LOADMOD	CONTROL	jesx.ADD.LOADMOD	a o s t	Y
$ADD LOGON	CONTROL	jesx.ADD.LOGON	a o s t	Y
$ADD NETSRV	CONTROL	jesx.ADD.NETSRV	a o s t	Y
$ADD PROCLIB	CONTROL	jesx.ADD.PROCLIB	a o s t	Y
$ADD REDIRECT	CONTROL	jesx.ADD.REDIRECT	a o s t	Y
$ADD RMT	CONTROL	jesx.ADD.RMT	a o s t	Y
$ADD SOCKET	CONTROL	jesx.ADD.SOCKET	a o s t	Y
$ADD SRVCLASS	CONTROL	jesx.ADD.SRVCLASS	a o s t	Y
$B device	UPDATE	jesx.BACKSP.DEV	a o s t	Y
$C A**	CONTROL	jesx.CANCEL.AUTOCMD	a o s t	Y
$C J	UPDATE	jesx.CANCEL.BAT	a o s t $	Y
$C O J	UPDATE	jesx.CANCEL.BATOUT	a o s t $	Y
$C device	UPDATE	jesx.CANCEL.DEV	a o s t $	Y
$C Lx.yy	UPDATE	jesx.CANCEL.DEV	a o s t	Y
$C OFFn.JR	UPDATE	jesx.CANCEL.DEV	a o s t	Y
$C OFFn.JT	UPDATE	jesx.CANCEL.DEV	a o s t	Y
$C OFFn.SR	UPDATE	jesx.CANCEL.DEV	a o s t	Y
$C OFFn.ST	UPDATE	jesx.CANCEL.DEV	a o s t	Y
$C O JOBQ	UPDATE	jesx.CANCEL.JSTOUT	a o s t	Y
$C S	UPDATE	jesx.CANCEL.STC	a o s t $	Y
$C O S	UPDATE	jesx.CANCEL.STCOUT	a o s t	Y
$C T	UPDATE	jesx.CANCEL.TSU	*	
$C O T	UPDATE	jesx.CANCEL.TSUOUT	*	
$DEL CONNECT	CONTROL	jesx.DEL.CONNECT	a o s t	Y
$DEL DESTID	CONTROL	jesx.DEL.DESTID	a o s t	Y
$DEL LOADMOD	CONTROL	jesx.DEL.LOADMOD	a o s t	Y
$DEL PROCLIB	CONTROL	jesx.DEL.PROCLIB	a o s t	Y

Controls on JES2 System Commands				
JES2 command	**Access**	**Resource-Name**	**Auth**	**Log**
$D ACTIVATE	READ	jesx.DISPLAY.ACTIVATE	*	
$D ACTRMT	READ	jesx.DISPLAY.ACTRMT	*	
$D J	READ	jesx.DISPLAY.BAT	*	
$D O J	READ	jesx.DISPLAY.BATOUT	*	
$L J	READ	jesx.DISPLAY.BATOUT	*	
$D CKPTDEF	READ	jesx.DISPLAY.CKPTDEF	*	
$D CONDEF	READ	jesx.DISPLAY.CONDEF	*	
$D CONNECT	READ	jesx.DISPLAY.CONNECT	*	
$D DESTDEF	READ	jesx.DISPLAY.DESTDEF	*	
$D DEStid	READ	jesx.DISPLAY.DESTID	*	
$D PRT	READ	jesx.DISPLAY.DEV	*	
$D PRTnnnn	READ	jesx.DISPLAY.DEV	*	
$D PUNnn	READ	jesx.DISPLAY.DEV	*	
$D RDRnn	READ	jesx.DISPLAY.DEV	*	
$D U	READ	jesx.DISPLAY.DEV	*	
$D Rnnnnn.CON	READ	jesx.DISPLAY.DEV	*	
$D Rnnnnn.PRm	READ	jesx.DISPLAY.DEV	*	
$D Rnnnnn.PUm	READ	jesx.DISPLAY.DEV	*	
$D Rnnnnn.RDm	READ	jesx.DISPLAY.DEV	*	
$D I	READ	jesx.DISPLAY.INITIATOR	*	
$D init stmt	READ	jesx.DISPLAY.initstmt	*	
$D A	READ	jesx.DISPLAY.JOB	*	
$D N	READ	jesx.DISPLAY.JOB	*	
$D Q	READ	jesx.DISPLAY.JOB	*	
$D JOBCLASS	READ	jesx.DISPLAY.JOBCLASS	*	
$D JOBQ	READ	jesx.DISPLAY.JST	*	
$D O JOBQ	READ	jesx.DISPLAY.JSTOUT	*	
$L JOBQ	READ	jesx.DISPLAY.JSTOUT	*	
$D L(nnnn).JR(n)	READ	jesx.DISPLAY.L	*	
$D L(nnnn).JT(n)	READ	jesx.DISPLAY.L	*	
$D L(nnnn).SR(n)	READ	jesx.DISPLAY.L	*	
$D L(nnnn).ST(n)	READ	jesx.DISPLAY.L	*	
$D LINE	READ	jesx.DISPLAY.LINE	*	
$D LOADmod	READ	jesx.DISPLAY.LOADMOD	*	
$D MASDEF	READ	jesx.DISPLAY.MASDEF	*	
$D MODULE	READ	jesx.DISPLAY.MODULE	*	
$D NETSRV	READ	jesx.DISPLAY.NETSRV	*	
$D NJEDEF	READ	jesx.DISPLAY.NJEDEF	*	
$D NODE	READ	jesx.DISPLAY.NODE	*	
$D OPTSDEF	READ	jesx.DISPLAY.OPTSDEF	*	
$D PATH	READ	jesx.DISPLAY.PATH	*	
$D PCE	READ	jesx.DISPLAY.PCE	*	
$D F	READ	jesx.DISPLAY.QUE	*	

Controls on JES2 System Commands				
JES2 command	**Access**	**Resource-Name**	**Auth**	**Log**
$D RDI	READ	jesx.DISPLAY.RDI	*	
$D REBLD	READ	jesx.DISPLAY.REBLD	*	
$D REDIRect	READ	jesx.DISPLAY.REDIRECT	*	
$D SOCKET	READ	jesx.DISPLAY.SOCKET	*	
$D SPOOL	READ	jesx.DISPLAY.SPOOL	*	
$D SPOOLDEF	READ	jesx.DISPLAY.SPOOLDEF	*	
$D SRVCLASS	READ	jesx.display.SRVCLASS	*	
$D SSI	READ	jesx.DISPLAY.SSI	*	
$D S	READ	jesx.DISPLAY.STC	*	
$D O S	READ	jesx.DISPLAY.STCOUT	*	
$L S	READ	jesx.DISPLAY.STCOUT	*	
$D SUBNET	READ	jesx.DISPLAY.SUBNET	*	
$D JES2	READ	jesx.DISPLAY.SYS	*	
$D MEMBer	READ	jesx.DISPLAY.SYS	*	
$D TRACE(x)	READ	jesx.DISPLAY.TRACE	*	
$D T	READ	jesx.DISPLAY.TSU	*	
$D O T	READ	jesx.DISPLAY.TSUOUT	*	
$L T	READ	jesx.DISPLAY.TSUOUT	*	
$F device	UPDATE	jesx.FORWARD.DEV	a o s t	Y
$G C	UPDATE	jesx.GCANCEL.JOB	a o s t	Y
$G D	READ	jesx.GDISPLAY.JOB	*	
$G H	UPDATE	jesx.GMODIFYHOLD.JOB	a o s t	Y
$G A	UPDATE	jesx.GMODIFYRELEASE.JOB	a o s t	Y
$G R	UPDATE	jesx.GROUTE.JOBOUT	a o s t	Y
$G R (for execution)	UPDATE	jesx.GROUTE.JOBOUT	a o s t	Y
$Z A	CONTROL	jesx.HALT.AUTOCMD	a o s t	Y
$Z device	UPDATE	jesx.HALT.DEV	a o s t	Y
$Z OFFLOADn	UPDATE	jesx.HALT.DEV	a o s t	Y
$Z I	CONTROL	jesx.HALT.INITIATOR	a o s t	Y
$Z SPOOL	CONTROL	jesx.HALT.SPOOL	a o s t	Y
$I device	UPDATE	jesx.INTERRUPT.DEV	a o s t	Y
$MSPL	CONTROL	jesx.MIGRATE	a t	Y
$T APPL	CONTROL	jesx.MODIFY.APPL	a o s t	Y
$T A(CREATE)	READ	jesx.MODIFY.AUTOCMD	*	Y
$T A(NOT OWNER)	CONTROL	jesx.MODIFY.AUTOCMD	a o s t	Y
$T A(OWNER)	READ	jesx.MODIFY.AUTOCMD	*	Y
$T J	UPDATE	jesx.MODIFY.BAT	a o s t	Y
$T O J	UPDATE	jesx.MODIFY.BATOUT	a o s t $	Y
$T BUFDEF	CONTROL	jesx.MODIFY.BUFDEF	a o s t	Y
$T CKPTDEF	CONTROL	jesx.MODIFY.CKPTDEF	a o s t	Y
$T CONDEF	CONTROL	jesx.MODIFY.CONDEF	a o s t	Y
$T CONNECT	CONTROL	jesx.MODIFY.CONNECT	a o s t	Y
$T DEBUG	CONTROL	jesx.MODIFY.DEBUG	a o s t	Y

Controls on JES2 System Commands				
JES2 command	**Access**	**Resource-Name**	**Auth**	**Log**
$T DESTDEF	CONTROL	jesx.MODIFY.DESTDEF	a o s t	Y
$T DEStid	CONTROL	jesx.MODIFY.DESTID	a o s t	Y
$T device	UPDATE	jesx.MODIFY.DEV	a o s t	Y
$T ESTBYTE	CONTROL	jesx.MODIFY.ESTBYTE	a o s t	Y
$T ESTIME	CONTROL	jesx.MODIFY.ESTIME	a o s t	Y
$T ESTLNCT	CONTROL	jesx.MODIFY.ESTLNCT	a o s t	Y
$T ESTPAGE	CONTROL	jesx.MODIFY.ESTPAGE	a o s t	Y
$T ESTPUN	CONTROL	jesx.MODIFY.ESTPUN	a o s t	Y
$T EXIT	CONTROL	jesx.MODIFY.EXIT	a o s t	Y
$T FSS	CONTROL	jesx.MODIFY.FSS	a o s t	Y
$T I	CONTROL	jesx.MODIFY.INITIATOR	a o s t	Y
$T init stmt	CONTROL	jesx.MODIFY.initstmt	a o s t	Y
$T INTRDR	CONTROL	jesx.MODIFY.INTRDR	a o s t	Y
$T JOBCLASS	CONTROL	jesx.MODIFY.JOBCLASS	a o s t	Y
$T JOBDEF	CONTROL	jesx.MODIFY.JOBDEF	a o s t	Y
$T JOBPRTY	CONTROL	jesx.MODIFY.JOBPRTY	a o s t	Y
$T JOBQ	UPDATE	jesx.MODIFY.JST	a o s t	Y
$T O JOBQ	UPDATE	jesx.MODIFY.JSTOUT	a o s t	Y
$T LINE	CONTROL	jesx.MODIFY.LINE	a o s t	Y
$T LOADMOD	CONTROL	jesx.MODIFY.LOADMOD	a o s t	Y
$T LOGON	CONTROL	jesx.MODIFY.LOGON	a o s t	Y
$T MASDEF	CONTROL	jesx.MODIFY.MASDEF	a o s t	Y
$T NETSRV	CONTROL	jesx.MODIFY.NETSRV	a o s t	Y
$T NJEDEF	CONTROL	jesx.MODIFY.NJEDEF	a o s t	Y
$T NODE	CONTROL	jesx.MODIFY.NODE	a o s t	Y
$T NUM	CONTROL	jesx.MODIFY.NUM	a o s t	Y
$T OFFx.yy	CONTROL	jesx.MODIFY.OFF	a o s t	Y
$T OFFLOADx	CONTROL	jesx.MODIFY.OFFLOAD	a o s t	Y
$T OUTCLASS	CONTROL	jesx.MODIFY.OUTCLASS	a o s t	Y
$T OUTDEF	CONTROL	jesx.MODIFY.OUTDEF	a o s t	Y
$T OUTPRTY	CONTROL	jesx.MODIFY.OUTPRTY	a o s t	Y
$T PCE	CONTROL	jesx.MODIFY.PCE	a o s t	Y
$T PRINTDEF	CONTROL	jesx.MODIFY.PRINTDEF	a o s t	Y
$T RECVopts	CONTROL	jesx.MODIFY.RECVOPTS	a o s t	Y
$T REDIRect	CONTROL	jesx.MODIFY.REDIRECT	a o s t	Y
$T RMT	CONTROL	jesx.MODIFY.RMT	a o s t	Y
$T SMFDEF	CONTROL	jesx.MODIFY.SMFDEF	a o s t	Y
$T SOCKET	CONTROL	jesx.MODIFY.SOCKET	a o s t	Y
$T SPOOL	CONTROL	jesx.MODIFY.SPOOL	a o s t	Y
$T SPOOLDEF	CONTROL	jesx.MODIFY.SPOOLDEF	a o s t	Y
$T SRVCLASS	CONTROL	jesx.MODIFY.SRVCLASS	a o s t	Y
$T SSI	CONTROL	jesx.MODIFY.SSI	a o s t	Y
$T S	UPDATE	jesx.MODIFY.STC	a o s t	Y

Controls on JES2 System Commands				
JES2 command	**Access**	**Resource-Name**	**Auth**	**Log**
$T STCCLASS	CONTROL	jesx.MODIFY.STCCLASS	a o s t	Y
$T O S	UPDATE	jesx.MODIFY.STCOUT	a o s t $	Y
$T MEMBER(x)	CONTROL	jesx.MODIFY.SYS	a o s t	Y
$T TPDEF	CONTROL	jesx.MODIFY.TPDEF	a o s t	Y
$T TRACEDEF	CONTROL	jesx.MODIFY.TRACEDEF	a o s t	Y
$T	UPDATE	jesx.MODIFY.TSU	a o s t	Y
$T TSUCLASS	CONTROL	jesx.MODIFY.TSUCLASS	a o s t	Y
$T O T	UPDATE	jesx.MODIFY.TSUOUT	a o s t $	Y
$H J	UPDATE	jesx.MODIFYHOLD.BAT	a o s t $	Y
$H A	UPDATE	jesx.MODIFYHOLD.JOB	a o s t	Y
$H JOBQ	UPDATE	jesx.MODIFYHOLD.JST	a o s t	Y
$H S	UPDATE	jesx.MODIFYHOLD.STC	a o s t $	Y
$H T	UPDATE	jesx.MODIFYHOLD.TSU	a o s t $	Y
$A J	UPDATE	jesx.MODIFYRELEASE.BAT	a o s t $	Y
$A A	UPDATE	jesx.MODIFYRELEASE.JOB	a o s t	Y
$A JOBQ	UPDATE	jesx.MODIFYRELEASE.JST	a o s t	Y
$A S	UPDATE	jesx.MODIFYRELEASE.STC	a o s t	Y
$A T	UPDATE	jesx.MODIFYRELEASE.TSU	a o s t	Y
$M	READ	jesx.MSEND.CMD	a o s t $	Y
$N	READ	jesx.NSEND.CMD	a o s t	Y
$O J	UPDATE	jesx.RELEASE.BATOUT	a o s t $	Y
$O JOBQ	UPDATE	jesx.RELEASE.JSTOUT	a o s t	Y
$O S	UPDATE	jesx.RELEASE.STCOUT	a o s t $	Y
$O T	UPDATE	jesx.RELEASE.TSUOUT	a o s t $	Y
$N device	UPDATE	jesx.REPEAT.DEV	a o s t	Y
$E J	CONTROL	jesx.RESTART.BAT	a o s t $	Y
$E device	UPDATE	jesx.RESTART.DEV	a o s t	Y
$E OFFn.JT	UPDATE	jesx.RESTART.DEV	a o s t	Y
$E OFFn.ST	UPDATE	jesx.RESTART.DEV	a o s t	Y
$E LINE(x)	CONTROL	jesx.RESTART.LINE	a o s t	Y
$E LOGON(x)	CONTROL	jesx.RESTART.LOGON	a o s t	Y
$E NETSRV	CONTROL	jesx.RESTART.NETSRV	a o s t	Y
$E CKPTLOCK	CONTROL	jesx.RESTART.SYS	a o s t	Y
$E MEMBER()	CONTROL	jesx.RESTART.SYS	a o s t	Y
$R ALL	UPDATE	jesx.ROUTE.JOBOUT	a o s t $	Y
$R PRT	UPDATE	jesx.ROUTE.JOBOUT	a o s t $	Y
$R PUN	UPDATE	jesx.ROUTE.JOBOUT	a o s t $	Y
$R XEQ	UPDATE	jesx.ROUTE.JOBOUT	a o s t $	Y
$D M	READ	jesx.SEND.MESSAGE	a o s t	Y
$S A	CONTROL	jesx.START.AUTOCMD	a o s t	Y
$S J	UPDATE	jesx.START.BAT	a o s t	Y
$S device	UPDATE	jesx.START.DEV	a o s t	Y
$S OFFLOADn	UPDATE	jesx.START.DEV	a o s t	Y

Controls on JES2 System Commands				
JES2 command	**Access**	**Resource-Name**	**Auth**	**Log**
$S OFFn.JR	UPDATE	jesx.START.DEV	a o s t	Y
$S OFFn.JT	UPDATE	jesx.START.DEV	a o s t	Y
$S OFFn.SR	UPDATE	jesx.START.DEV	a o s t	Y
$S OFFn.ST	UPDATE	jesx.START.DEV	a o s t	Y
$S I	CONTROL	jesx.START.INITIATOR	a o s t	Y
$S LINE(x)	CONTROL	jesx.START.LINE	a o s t	Y
$S LOGON(x)	CONTROL	jesx.START.LOGON	a o s t	Y
$S N	CONTROL	jesx.START.NET	a o s t	Y
$S RMT(x)	CONTROL	jesx.START.RMT	a o s t	Y
$S SPOOL	CONTROL	jesx.START.SPOOL	a o s t	Y
$S SRVCLASS	CONTROL	jesx.START.SRVCLASS	a o s t	Y
$S	CONTROL	jesx.START.SYS	a o s t	Y
$S XEQ	CONTROL	jesx.START.SYS	a o s t	Y
$S TRACE(x)	CONTROL	jesx.START.TRACE	a o s t	Y
$P O J	UPDATE	jesx.STOP.BATOUT	a o s t	Y
$PO JOB	UPDATE	jesx.STOP.BATOUT	a o s t	Y
$P device	UPDATE	jesx.STOP.DEV	a o s t	Y
$P OFFLOADn	UPDATE	jesx.STOP.DEV	a o s t	Y
$P OFFn.JR	UPDATE	jesx.STOP.DEV	a o s t	Y
$P OFFn.JT	UPDATE	jesx.STOP.DEV	a o s t	Y
$P OFFn.SR	UPDATE	jesx.STOP.DEV	a o s t	Y
$P OFFn.ST	UPDATE	jesx.STOP.DEV	a o s t	Y
$P I	CONTROL	jesx.STOP.INITIATOR	a o s t	Y
$P JOBQ	UPDATE	jesx.STOP.JST	a o s t	Y
$P O JOBQ	UPDATE	jesx.STOP.JSTOUT	a o s t	Y
$PO JOBQ	UPDATE	jesx.STOP.JSTOUT	a o s t	Y
$P LINE(x)	CONTROL	jesx.STOP.LINE	a o s t	Y
$P LOGON(x)	CONTROL	jesx.STOP.LOGON	a o s t	Y
$P NETSRV	CONTROL	jesx.STOP.NETSRV	a o s t	Y
$P RMT(x)	CONTROL	jesx.STOP.RMT	a o s t	Y
$P SPOOL	CONTROL	jesx.STOP.SPOOL	a o s t	Y
$P SRVCLASS	CONTROL	jesx.STOP.SRVCLASS	a o s t	Y
$P S	UPDATE	jesx.STOP.STC	a o s t	Y
$P O S	UPDATE	jesx.STOP.STCOUT	a o s t	Y
$PO STC	UPDATE	jesx.STOP.STCOUT	a o s t	Y
$P	CONTROL	jesx.STOP.SYS	a o s t	Y
$P JES2	CONTROL	jesx.STOP.SYS	a o s t	Y
$P XEQ	CONTROL	jesx.STOP.SYS	a o s t	Y
$P TRACE(x)	CONTROL	jesx.STOP.TRACE	a o s t	Y
$P T	UPDATE	jesx.STOP.TSU	a o s t	Y
$P O T	UPDATE	jesx.STOP.TSUOUT	a o s t	Y
$PO TSU	UPDATE	jesx.STOP.TSUOUT	a o s t	Y
$VS*	CONTROL	jesx.VS	a o s t	Y

Controls on JES2 System Commands				
JES2 command	**Access**	**Resource-Name**	**Auth**	**Log**
$ZAPJOB	CONTROL	jesx.ZAP.JOB	a o s t	Y
$JD DETAILS	READ	jesxMON.DISPLAY.DETAIL	*	
$JD HISTORY	READ	jesxMON.DISPLAY.HISTORY	*	
$JD JES	READ	jesxMON.DISPLAY.JES	*	
$JD MONITOR	READ	jesxMON.DISPLAY.MONITOR	*	
$JD STATUS	READ	jesxMON.DISPLAY.STATUS	*	
$J STOP	CONTROL	jesxMON.STOP.MONITOR	a o s t	Y

Auth column
a - AUTOAUDT, Automated operations.
o - OPERAUDT, Operations staff
s - SYSPAUDT, Systems Programming staff
t - TSTCAUDT, Trusted Started Tasks
* - All Users
$ - May be given to All Users using SDSF, CA Roscoe, and similar products that interface with a user's input/output requiring the issuing of console commands.

Log
Y

Note: ALTER authority on RACF profiles: For discrete profiles, ALTER allows some RACF Administrative functions such as use of the RDELETE Command. For this reason, access should be permitted based on the table above. ALTER should be flagged for all but Security Administrators or where justified by the ISSO.

Resource access requirements are based on IBM minimal access requirements. Users that are authorized to have access to the resource can have the access specified or greater. The exceptions are those stated with the resource, resources that specify different accesses to users and above note. Where multiple users have different accesses, an example is one user has READ and another has UPDATE the "access specified or greater" will be to the user with UPDATE.

8. SENSITIVE UTILITY REQUIREMENT

Table 8-1: Sensitive Utility Controls

Referenced by: ACP00320, RACF0770, TSS1040, ACF0380, and ACF0870

Sensitive Utility Controls			
Program	**Product**	**Function**	**Auth**
AHLGTF HHLGTF IHLGTF	z/OS	System Activity Tracing	STCGAUDT (users can issue started task only)
ICPIOCP IOPIOCP IXPIOCP IYPIOCP IZPIOCP	z/OS	System Configuration	SYSPAUDT
BLSROPTR	z/OS	Data Management	DASBAUDT DASDAUDT SYSPAUDT
DEBE	OS/DEBE	Data Management	DASDAUDT TAPEAUDT
DITTO	OS/DITTO	Data Management	DASDAUDT TAPEAUDT
FDRZAPOP	FDR	Product Internal Modification	SYSPAUDT
GIMSMP	SMP/E	Change Management Product	AUDTAUDT DABAAUDT SYSPAUDT
ICKDSF	z/OS	DASD Management	DASDAUDT SYSPAUDT Userid assigned to DEVMAN STC
IDCSC01	z/OS	IDCAMS Set Cache Module	SYSPAUDT
IEHINITT	z/OS	Tape Management	TAPEAUDT
IFASMFDP	z/OS	SMF Data Dump Utility	AUDTAUDT PCSPAUDT SECAAUDT SMFBAUDT SYSPAUDT MICSADM*
IND$FILE	z/OS	PC to Mainframe File Transfer (Applicable only for classified systems)	
CSQJU003 CSQJU004 CSQUCVX CSQ1LOGP	IBM WebSphereMQ		MQSAAUDT
CSQUTIL	IBM WebSphereMQ		AUDTAUDT MQSAAUDT

Sensitive Utility Controls			
Program	**Product**	**Function**	**Auth**
WHOIS	z/OS	Share MOD to identify user name from USERID. Restricted to data center personnel only.	DASDAUDT OPERAUDT SYSPAUDT TAPEAUDT

The following Sensitive Utilities will be checked or not checked for the reason specified.

AMDIOCP - May be in use on Fujitsu 5990, 5995a, and 5995m processors.
AMZIOCP - May be in use on Fujitsu Millennium and Omniflex processors.
DEBE - Check only if DEBE is installed on system.
DITTO - Check only if DITTO/ESA is installed on system.
FDRZAPOP - Check only if FDR from Innovation Data Processing is installed on system.
IND$FILE - Check only on Classified systems.
CSQxxxx - Check only if WebSphere MQ is installed.

* This access is allowed at the discretion of the site ISSM/ISSO.

9. SMS PROGRAM REQUIREMENT

Items highlighted in yellow below should be authorized for User/Customer Community upon request.

DGTFMD01 module is the primary panel/initial entry into ISMF so that should be okay for all users.

Table 9-1: SMS Program Resources

Referenced by: ZSMS0012

SMS Program Resources	
SMS Program	**Authority**
ACBFUTO2	a d e s t
ACBFUTO3	a d e s t
ACBFUTO4	a d e s t
ACBFUTO6	a d e s t
ACBFUTO7	a d e s t
DFQFCND1	*
DFQFHA01	*
DFQFHB01	*
DFQFHBD1	*
DFQFHD01	*
DFQFHM01	*
DFQFHRC1	*
DFQFHRL1	*
DGTFACAT	d e s t
DGTFADAD	d e s t
DGTFAGAA	d e s t
DGTFAGCD	*
DGTFAGDA	d e s t
DGTFAGDI	*
DGTFAGLD	*
DGTFAL01	*
DGTFAL11	d e s t
DGTFALD1	d e s t
DGTFALG1	d e s t
DGTFALH1	d e s t
DGTFALL1	d e s t
DGTFALM1	d e s t
DGTFALP1	d e s t
DGTFALR1	d e s t
DGTFALS1	d e s t
DGTFALY1	d e s t
DGTFAU01	d e s t
DGTFAU02	d e s t
DGTFAU04	d e s t

SMS Program Resources	
SMS Program	**Authority**
DGTFAUL1	d e s t
DGTFAZ01	d e s t
DGTFBR01	*
DGTFBX01	d e s t
DGTFCAD1	d e s t
DGTFCAG1	d e s t
DGTFCAH1	d e s t
DGTFCAL1	d e s t
DGTFCAM1	d e s t
DGTFCAP1	d e s t
DGTFCAR1	d e s t
DGTFCAS1	d e s t
DGTFCAY1	d e s t
DGTFCB01	d e s t
DGTFCL01	*
DGTFCM01	*
DGTFCN01	d e s t
DGTFCO01	*
DGTFCP01	*
DGTFCPAA	d e s t
DGTFCPCD	d e s t
DGTFCPDA	d e s t
DGTFCPDI	d e s t
DGTFCPLD	d e s t
DGTFCR01	*
DGTFCS01	d e s t
DGTFCT01	d e s t
DGTFCV01	d e s t
DGTFCY01	*
DGTFDCAA	d e s t
DGTFDCCD	*
DGTFDCDA	d e s t
DGTFDCDI	*
DGTFDCLD	*
DGTFDF01	d e s t
DGTFDID1	*
DGTFDIH1	*
DGTFDIL1	d e s t
DGTFDIM1	*
DGTFDIP1	d e s t
DGTFDIR1	d e s t
DGTFDIS1	*
DGTFDIY1	d e s t
DGTFDL01	*

SMS Program Resources	
SMS Program	**Authority**
DGTFDM01	d e s t
DGTFDND1	d e s t
DGTFDNG1	d e s t
DGTFDNH1	d e s t
DGTFDNL1	d e s t
DGTFDNM1	*
DGTFDNP1	d e s t
DGTFDNR1	d e s t
DGTFDNS1	d e s t
DGTFDNY1	d e s t
DGTFDO01	*
DGTFDP01	*
DGTFDS00	*
DGTFDU01	*
DGTFED01	*
DGTFEF01	d e s t
DGTFEJ01	d e s t
DGTFEL01	d e s t
DGTFER02	d e s t
DGTFFI01	*
DGTFFLAD	d e s t
DGTFFN01	*
DGTFFU01	*
DGTFHI01	*
DGTFIL01	d e s t
DGTFIN01	d e s t
DGTFIV01	d e s t
DGTFJLCD	*
DGTFLCAL	d e s t
DGTFLCCD	d e s t
DGTFLCDE	d e s t
DGTFLCDI	d e s t
DGTFLCLD	d e s t
DGTFLE01	*
DGTFLIC1	d e s t
DGTFLL01	*
DGTFLMAL	d e s t
DGTFLMCD	d e s t
DGTFLMDE	d e s t
DGTFLMDI	d e s t
DGTFLMLD	d e s t
DGTFLVC1	p d e s t
DGTFLVL1	d e s t
DGTFMCAA	d e s t

SMS Program Resources	
SMS Program	**Authority**
DGTFMCCD	*
DGTFMCDA	d e s t
DGTFMCDI	*
DGTFMCLD	*
DGTFMD01	*
DGTFMS00	*
DGTFOVCD	d e s t
DGTFPF00	*
DGTFPF01	*
DGTFPF02	*
DGTFPF03	*
DGTFPF04	*
DGTFPF05	p d e s t
DGTFPF20	d e s t
DGTFPF21	*
DGTFPF22	*
DGTFPR01	*
DGTFRA01	d e s t
DGTFRB01	d e s t
DGTFRC01	*
DGTFRCAL	d e s t
DGTFRCCD	d e s t
DGTFRCDE	d e s t
DGTFRCDI	d e s t
DGTFRCLD	d e s t
DGTFRE01	*
DGTFRF01	d e s t
DGTFRI01	*
DGTFRL01	*
DGTFRML1	d e s t
DGTFRO01	d e s t
DGTFRR00	*
DGTFRT01	*
DGTFRV01	d e s t
DGTFRW01	*
DGTFSACD	d e s t
DGTFSCAA	d e s t
DGTFSCCD	*
DGTFSCDA	d e s t
DGTFSCDI	*
DGTFSCLD	*
DGTFSGAR	d e s t
DGTFSGDR	p b d e s t
DGTFSGFR	d e s t

SMS Program Resources	
SMS Program	**Authority**
DGTFSGLD	p b d e s t
DGTFSGVR	d e s t
DGTFSLDS	*
DGTFSO01	*
DGTFSRD1	*
DGTFTVCD	d e s t
DGTFUP01	*
DGTFUS01	*
DGTFVA00	p d e s t
DGTFVLVA	d e s t
DGTFVW01	*

a - AUDTAUDT
b - DASBAUDT
d - DASDAUDT
e - SECAAUDT
s - SYSPAUDT
t - TSTCAUDT
p - PCSPAUDT
* - All Users

10. Z/OS BASELINE REQUIREMENTS

Referenced by: ACP00340

DISA Requirement a. (SD) 527-1 dated 27 Jan 2006
b. INFOCON 3

Need to Baseline z/OS:

1. DISA has determined based upon references (a) and (b) that all 'servers' including z/OS Mainframes shall perform 'baseline' reporting.
2. DISA has acquired throughout the enterprise a product called CA-AUDITOR on z/OS Mainframes. The old and commonly known name of this product is CA-Examine. CA-Auditor provides a new feature available starting with R12 - called "baseline" which uses a started task called EXAMMON. Currently there are 15 functional areas that can be "baselined" and shall be implemented to meet the DoW requirement for "baseline" of "servers" (z/OS Mainframes). For ACP00340, we will only use **two** of these reports.

Basic process required per reference (a):

1. For INFOCON 5 - EXAMMON Policy control statements shall ensure the process run minimally every 180 days with responsible team members validating baseline analysis results (the delta as reported).
2. For INFOCON 4 - EXAMMON Policy control statements shall ensure the process run minimally every 90 days with responsible team members validating baseline analysis results (the delta as reported).
3. For INFOCON 3 - EXAMMON Policy control statements shall ensure the process run minimally every 60 days with responsible team members validating baseline analysis results (the delta as reported).
4. For INFOCON 2 - EXAMMON Policy control statements shall ensure the process run minimally every 30 days with responsible team members validating baseline analysis results (the delta as reported).

CA-Auditor Baseline Functions for ACP00340:

Note: These function codes (the numeric codes below) directly correspond to the CA-Auditor panels in such much that "221" is panel "2.2.1" and "243" would then be "2.4.3", just insert a "." between the numbers.

221 APF library stats (# of libraries in APF list, # duplicate libraries in APF list, # accessible of libraries in APF list, # of members in APF libraries, # of members linked with AC=1, # of APF libraries in LINKLIST/LPA, # duplicate of APF libraries in LINKLIST/APF, # of accessible APF libraries in LINKLIST/LPA, # of members in authorized LINKLIST/LPA, # of members links AC=1 in LINKLIST/LPA, total # of APF libraries, total # of unique APF libraries , total # of members with AC=1, total % of

members with AC=1, APF datasets. This functional name will correspond to the dataset report file name that ends in "CS221C".

243 LPA library display (LPA libraries added/removed, last accessed date for LPA libraries). This functional name will correspond to the dataset report file name that ends in "CS243C".

Basic Procedures to get started:

1. Procedures required to fully implement Baseline Functions on z/OS Mainframe domains that are licensed for CA-AUDITOR:

   Software CA-Auditor R12SP00 or most current version must be installed. Validate that the EXAMMON policy control statements are set to run the baseline per the required schedule (weekly, monthly, every 60 days, etc.) Details as to the format of the policy control statements/records are found in the technical reference guide for CA-Auditor - Chapter 13. Ensure local procedures are in place to have the responsible team members' review the output of the Baseline reports (as stored in the specific GDG Datasets) and review/process of the online Alerts per each Mainframe domain.

Datasets that contain the actual baseline reports:

Note: These are merely examples, the actual dataset names depend upon the DISA Site and domain implementation and definition of the GDG bases. Regardless, all report dataset last qualifier will indicate the "report name" such as "2.2.1." CA-Auditor panel corresponds to the Policy Control Function name of "221" and corresponds to the report dataset that ends in "CS221C" as documented above. CA-Auditor dynamically builds the "mem" as part of the automated process which is used as input for the actual report dataset name. **The output data sets must be GDG data sets.**

SYSID = 'SYSID' of System Baseline is running on
ESM = 'ESM' running on Baseline System ex. (ACF2, RACF, TSS)

SYSID ESM.BASELINE.FUNCTION.CS221C
SYSID.ESM.BASELINE.FUNCTION.CS221C.G0001V00
SYSID ESM.BASELINE.FUNCTION.CS243C
SYSID ESM.BASELINE.FUNCTION.CS243C.G0001V00

See Sample output below:

Report CS221C:

PAGE

ETRUST CA EXAMINE BASELINE ANALYSIS INFORMATION

BASELINE ANALYSIS DATA

==========

BASELINE CHANGE DELTA DETAIL

FUNCTION: 2.2.1 APF STATS SUMMARY

BASELINE DATE: TUESDAY, 16 DECEMBER 2008 TIME: 11:10:46

CURRENT DATE: SUNDAY, 26 APRIL 2009 TIME: 05:23:01

SYSTEM SMFID: XXX

==========

- BASELINE: NUMBER OF LIBS IN APF LIST: 180
- CURRENT : NUMBER OF LIBS IN APF LIST: 181
- THE NUMBER OF APF LIBRARIES DIFFERS FROM THE SAVED BASELINE
- A CHANGE WAS MADE TO THE APF LIST
- IDENTIFY HOW CHANGE WAS MADE, WHETHER IT IS PROPER

- BASELINE: NUMBER OF ACCESSIBLE LIBS IN APF LIST: 180
- CURRENT : NUMBER OF ACCESSIBLE LIBS IN APF LIST: 180
- THE NUMBER OF ACCESSIBLE APF LIBS DIFFERS FROM SAVED BASELINE
- DATA SETS ARCHIVED/DELETED/MOVED/UNCATALOGED/RECATALOGED
- IDENTIFY WHY CHANGE OCCURRED, VERIFY IF IT IS PROPER

- BASELINE: NUMBER OF MEMBERS IN ACCESSIBLE APF LIBS: 56,679
- CURRENT : NUMBER OF MEMBERS IN ACCESSIBLE APF LIBS: 56,679
- THE # OF MEMBERS IN ACCESSIBLE APF LIBS DIFFERS FROM SAVED BASELINE
- NUMEROUS METHODS
- VALIDATE SPECIFIC CHANGE(S), VERIFY IF PROPER

- BASELINE: NUMBER OF MEMBERS LINKED AC=1 IN APF LIST: 4,295
- CURRENT : NUMBER OF MEMBERS LINKED AC=1 IN APF LIST: 4,320
- THE NUMBER OF AC=1 APF MEMBERS DIFFERS FROM SAVED BASELINE
- NUMEROUS METHODS
- VALIDATE SPECIFIC CHANGE(S), VERIFY IF PROPER

- BASELINE: NUMBER OF MEMBERS IN AUTHORIZED LINKLIST: 30,499
- CURRENT : NUMBER OF MEMBERS IN AUTHORIZED LINKLIST: 30,499
- NUMBER OF AUTHORIZED LINKLIST LIB MEMBERS DIFFERS FROM BASELINE
- NUMEROUS METHODS
- VALIDATE SPECIFIC CHANGE(S), VERIFY IF PROPER

- BASELINE: NUMBER LINKED WITH AC=1 IN LINKLIST: 1,876
- CURRENT : NUMBER LINKED WITH AC=1 IN LINKLIST: 1,876
- NUMBER AC=1 LINKLIST MEMBERS DIFFERS FROM BASELINE
- NUMEROUS METHODS
- VALIDATE SPECIFIC CHANGE(S), VERIFY IF PROPER

- BASELINE: TOTAL NUMBER OF APF LIBS: 266
- CURRENT : TOTAL NUMBER OF APF LIBS: 266
- NUMBER OF APF LIBRARIES DIFFERS FROM BASELINE
- NUMEROUS METHODS
- VALIDATE SPECIFIC CHANGE(S), VERIFY IF PROPER

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ETRUST CA EXAMINE BASELINE ANALYSIS INFORMATION

- BASELINE: TOTAL OF UNIQUE APF LIBS: 181

- CURRENT : TOTAL OF UNIQUE APF LIBS: 181
- NUMBER OF UNIQUE APF LIBS DIFFERS FROM BASELINE
- NUMEROUS METHODS
- VALIDATE SPECIFIC CHANGE(S), VERIFY IF PROPER

- BASELINE: TOTAL OF ACCESSIBLE APF LIBS: 181
- CURRENT : TOTAL OF ACCESSIBLE APF LIBS: 181
- NUMBER ACCESSIBLE APF LIBS DIFFERS FROM BASELINE
- NUMEROUS METHODS
- VALIDATE SPECIFIC CHANGE(S), VERIFY IF PROPER

- BASELINE: TOTAL OF UNIQUE MEMBERS IN APF LIBS: 56,825
- CURRENT : TOTAL OF UNIQUE MEMBERS IN APF LIBS: 56,825
- NUMBER UNIQUE APF MEMBERS DIFFERS FROM BASELINE
- NUMEROUS METHODS
- VALIDATE SPECIFIC CHANGE(S), VERIFY IF PROPER

- BASELINE: TOTAL MEMBERS WITH AC=1: 4,295
- CURRENT : TOTAL MEMBERS WITH AC=1: 4,295
- NUMBER AC=1 MEMBERS DIFFERS FROM BASELINE
- NUMEROUS METHODS

- VALIDATE SPECIFIC CHANGE(S), VERIFY IF PROPER

- BASELINE: PERCENTAGE OF AC=1: 7.56

- CURRENT : PERCENTAGE OF AC=1: 7.56

- AC=1 PERCENTAGE DIFFERS FROM BASELINE

- NUMEROUS METHODS

- USE AS GUIDE - AUDIT SPECIFIC MEMBERS IF IS OF CONCERN

==========

BASELINE CHANGE DELTA DETAIL

FUNCTION: 2.2.1 APF DATASETS

BASELINE DATE: TUESDAY, 16 DECEMBER 2008 TIME: 11:10:46

CURRENT DATE: SUNDAY, 26 APRIL 2009 TIME: 05:23:01

SYSTEM SMFID: XXX

==========

- BASELINE: APF DSN HAD THE FOLLOWING STATS:

- DSN: SYS2A.CADELIVE.V110701.CAILIB VOL: MYASS3

- NUMBER OF MEMBERS WITH AC=1: 124 TOTAL MEMBERS: 326

- CURRENT : APF DSN HAS THE FOLLOWING STATS:

- DSN: SYS2A.CADELIVE.V110701.CAILIB VOL: MYASS3

- NUMBER OF MEMBERS WITH AC=1: 124 TOTAL MEMBERS: 327

- BASELINE: APF DSN HAD THE FOLLOWING STATS:

- DSN: SYS2A.TSS.V12SP01.CAILIB VOL: MYASS1

- NUMBER OF MEMBERS WITH AC=1: 89 TOTAL MEMBERS: 382

- CURRENT : APF DSN HAS THE FOLLOWING STATS:

- DSN: SYS2A.TSS.V12SP01.CAILIB VOL: MYASS1

- NUMBER OF MEMBERS WITH AC=1: 90 TOTAL MEMBERS: 382

XXX PAGE
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ETRUST CA EXAMINE BASELINE ANALYSIS INFORMATION

- BASELINE: APF DSN HAD THE FOLLOWING STATS:

- DSN: SYS2A.VIEW.V110603.CAILIB VOL: MYASS3

- NUMBER OF MEMBERS WITH AC=1: 35 TOTAL MEMBERS: 281

- CURRENT : APF DSN HAS THE FOLLOWING STATS:

- DSN: SYS2A.VIEW.V110603.CAILIB VOL: MYASS3

- NUMBER OF MEMBERS WITH AC=1: 35 TOTAL MEMBERS: 282

xxx
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ETRUST CA EXAMINE AUDITING APF LIBRARY STATISTICS SUMMARY

```
 PRESS ENTER FOR DETAILED DISPLAY.


+------- APF LIST INFORMATION ---------+-------  LINK LIST INFORMATION
+-------+
|                                |
|
|   LIBRARY NAMES SPECIFIED:  181      |   APF LIBRARIES SPECIFIED:  86
|
|   DUPLICATE LIBRARY NAMES:  0        |   DUPLICATE LIBRARY NAMES:  0
|
|   ACCESSIBLE LIBRARIES:     181      |   ACCESSIBLE LIBRARIES:     86
|
|   ACCESSED LIBRARY MEMBERS: 55,242   |   ACCESSED LIBRARY MEMBERS:
30,505   |
|   JOBSTEP APF AUTH MEMBERS: 4,320    |   JOBSTEP APF AUTH MEMBERS:
1,877    |
|                                |
|
|--- CONSOLIDATED LIST INFORMATION ----+---------  LINK PACK AREA
-----------|
|                                |
|
|   LIBRARY NAMES SPECIFIED:  267      |   NUMBER OF UNIQUE MODULES:
2,362    |
|   NET UNIQUE LIBRARY NAMES: 182      |   JOBSTEP APF AUTH MODULES: 327
|
|   NET ACCESSIBLE LIBRARIES: 182      |   PERCENT AUTHORIZED:
13.84    |
|   ACCESSED LIBRARY MEMBERS: 55,388   |
|
|   JOBSTEP APF AUTH MEMBERS: 4,320    |   MEMORY-BASED LPA IS AN
ADDITIONAL  |
|   PERCENT AUTHORIZED:       7.80     |   SOURCE OF APF-AUTHORIZED
MODULES   |
|                                |
|
+-----------------------------------+------------------------------
------+
```

Report: CS243C:

```
xxx                                        PAGE
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   ETRUST CA EXAMINE   BASELINE ANALYSIS INFORMATION


                    BASELINE ANALYSIS DATA
```


==========

BASELINE CHANGE DELTA DETAIL

FUNCTION: 2.4.1 KEY APF LIBRARIES

BASELINE DATE: TUESDAY, 16 DECEMBER 2008 TIME: 11:11:26

CURRENT DATE: SUNDAY, 26 APRIL 2009 TIME: 05:23:12

SYSTEM SMFID: xxx

==========

...

- THE FOLLOWING APF LIBS WERE ADDED:
- DSN: SYS2.CICSTS.V320807.CPSM.SEYUAUTH VOL: MYAS26
- DSN: SYS2.CICSTS.V320807.SDFHAUTH VOL: MYAS44
- DSN: SYS2.CICSTS.V320807.SDFJAUTH VOL: MYAS49
- DSN: SYS2.CICSTS.V320807.SDFJLPA VOL: MYAS2K
- DSN: SYS2.MICS.V120804.LOADLIB VOL: xxxxxx
- DSN: SYS2.MIMGR.V116SP02.APFLOAD VOL: xxxxxx
- DSN: SYS2.QUICKREF.V690.QWILINK VOL: xxxxxx
- DSN: SYS2.SYMUPDTE.V05325.LOAD VOL: xxxxxx
- DSN: SYS2A.CICSTS.V320807.CPSM.SEYULINK VOL: xxxxxx
- DSN: SYS2A.CICSTS.V320807.CPSM.SEYULPA VOL: xxxxxx
- DSN: SYS2A.CICSTS.V320807.SDFHEXCI VOL: xxxxxx
- DSN: SYS2A.CICSTS.V320807.SDFHLINK VOL: xxxxxx
- DSN: SYS2A.CICSTS.V320807.SDFHLPA VOL: xxxxxx

- THE FOLLOWING APF LIBS WERE REMOVED:

- DSN: SYS2.CICSTS.V310601.CPSM.SEYUAUTH VOL: xxxxxx

- DSN: SYS2.CICSTS.V310601.SDFHAUTH VOL: xxxxxx

- DSN: SYS2.CICSTS.V310601.SDFJLPA VOL: xxxxxx
- DSN: SYS2.CICSTS.V310611.SDFJAUTH VOL: xxxxxx
- DSN: SYS2.MIMGR.V116.APFLOAD VOL: xxxxxx
- DSN: SYS2.QUICKREF.V680.QWILINK VOL: xxxxxx
- DSN: SYS2.SYMUPDTE.V01271.LOAD VOL: xxxxxx
- DSN: SYS2A.CICSTS.V310601.CPSM.SEYULINK VOL: xxxxxx
- DSN: SYS2A.CICSTS.V310601.SDFHEXCI VOL: xxxxxx
- DSN: SYS2A.CICSTS.V310601.SDFHLINK VOL: xxxxxx
- DSN: SYS2A.CICSTS.V310611.CPSM.SEYULPA VOL: xxxxxx
- DSN: SYS2A.CICSTS.V310611.SDFHLPA VOL: xxxxxx

********** Bottom of Data **********

11. PRODUCT REQUIREMENTS

11.1 General Installed Product Information

Installed product will have checks for the protection of the installation datasets; privileged function datasets; datasets used by the product or product configuration datasets. To assist in the review, certain examples maybe identified for clarity of explanation of certain installation, STC, JCL, and user dataset categories.

Please note that the data sets and/or data set prefixes identified are only examples of a possible installation. The actual data sets and/or prefixes are determined when the product is actually installed on a system through the product's installation guide and can be site specific. The site's Product System programmer will have the specific information for each installation.

11.2 BMC INCONTROL Resource Requirements

Table 11-1: BMC IOA Resources

Referenced by: ZIOA0020

Resource Names	Logging	User Group	Access
$$ADDCND	None	AUTOAUDT OPERAUDT PCSPAUDT PRODAUDT SYSPAUDT	Read
$$ADDCTL	Read	OPERAUDT PCSPAUDT PRODAUDT SYSPAUDT	Read
$$ADDRES	Read	OPERAUDT PCSPAUDT PRODAUDT SYSPAUDT	Read
$$CHARES	Read	OPERAUDT PCSPAUDT PRODAUDT SYSPAUDT	Read
$$CHKCND	None	OPERAUDT PCSPAUDT SYSPAUDT	Read
$$CHKCTL	None	OPERAUDT PCSPAUDT PRODAUDT SYSPAUDT	Read
$$CHKRES	None	OPERAUDT PCSPAUDT SYSPAUDT	Read
$$DELCND	None	AUTOAUDT	Read

Resource Names	Logging	User Group	Access
		OPERAUDT PCSPAUDT PRODAUDT SYSPAUDT	
$$DELCTL	Read	OPERAUDT PCSPAUDT SYSPAUDT	Read
$$DELRES	Read	OPERAUDT PCSPAUDT SYSPAUDT	Read
$$ERACND	Read	OPERAUDT PCSPAUDT SYSPAUDT	Read
$$IOAAS	Read	OPERAUDT PCSPAUDT SYSPAUDT	Read
$$IOACMD	Read	AUTOAUDT OPERAUDT PCSPAUDT SYSPAUDT	Read
$$IOADEL	None	DPCSAUDT OPERAUDT PCSPAUDT SYSPAUDT	Read
$$IOADIR	None	*	Read
$$IOAEDM	None	*	Read
$$IOAEDT	None	DPCSAUDT OPERAUDT PCSPAUDT SYSPAUDT	Read
$$IOAGL	Read	OPERAUDT PCSPAUDT SYSPAUDT	Read
$$IOAONLINE	None	OPERAUDT PCSPAUDT SYSPAUDT	Read
$$IOARES	Read	OPERAUDT PCSPAUDT SYSPAUDT	Read
$$IOASAV	None	DPCSAUDT OPERAUDT PCSPAUDT SYSPAUDT	Read
$$IOAUTL	Read	AUTOAUDT OPERAUDT PCSPAUDT	Read

Resource Names	Logging	User Group	Access
		SYSPAUDT	
$$IOAVD	Read	OPERAUDT PCSPAUDT SYSPAUDT	Read
$$IOAVP	Read	OPERAUDT PCSPAUDT SYSPAUDT	Read
$$IOAVIW	None	DPCSAUDT OPERAUDT PCSPAUDT SYSPAUDT IOABAUDT	Read
$$NEWCND	None	OPERAUDT PCSPAUDT SYSPAUDT	Read
$$SECIOA.qname	None	*	ReadRead

Table 11-2: BMC Control-D Resources

Referenced by: ZCTD0020

Resource Names	Logging	User Group	Access
$$ADDNOT	None	APPSAUDT OPERAUDT PCSPAUDT SYSPAUDT	Alter
$$ADNASR	None	APPSAUDT OPERAUDT PCSPAUDT SYSPAUDT	Read
$$BKPORD	None	APPSAUDT BMC STCs OPERAUDT PCSPAUDT SYSPAUDT	Read
$$CDDSEL	None	APPSAUDT SYSPAUDT	Read
$$CHKRCL	Read	APPSAUDT OPERAUDT PCSPAUDT SYSPAUDT	Read
$$CTDACT	Read	APPSAUDT OPERAUDT PCSPAUDT SYSPAUDT	Read
$$CTDASR	Read	APPSAUDT	Read

Resource Names	Logging	User Group	Access
		OPERAUDT PCSPAUDT SYSPAUDT	
$$CTDCDD	Read	APPSAUDT OPERAUDT PCSPAUDT SYSPAUDT	Read
$$CTDEDM	None	APPSAUDT OPERAUDT PCSPAUDT SYSPAUDT	Read
$$CTDJOB	None	APPSAUDT OPERAUDT PCSPAUDT SYSPAUDT	Read
$$CTDOBJ	Read	APPSAUDT OPERAUDT PCSPAUDT SYSPAUDT	Read
$$CTDPNLA	None	APPSAUDT OPERAUDT PCSPAUDT SYSPAUDT	Read
$$CTDPNLF	Read	APPSAUDT OPERAUDT PCSPAUDT SYSPAUDT	Read
$$CTDPREFIX	None	APPSAUDT OPERAUDT PCSPAUDT SYSPAUDT	Read
$$CTDPRF	None	APPSAUDT OPERAUDT PCSPAUDT SYSPAUDT	Read
$$CTDRRST	None	APPSAUDT OPERAUDT PCSPAUDT SYSPAUDT	Read
$$DELNOT	None	APPSAUDT OPERAUDT PCSPAUDT SYSPAUDT	Read
$$DLNASR	None	APPSAUDT OPERAUDT PCSPAUDT	Read

Resource Names	Logging	User Group	Access
		SYSPAUDT	
$$DPC1VIE	Read	APPSAUDT OPERAUDT PCSPAUDT SYSPAUDT	Read
$$DPC2FRE	Read	APPSAUDT OPERAUDT PCSPAUDT SYSPAUDT	Read
$$DPC2HLD	None	APPSAUDT OPERAUDT PCSPAUDT SYSPAUDT	Read
$$DPC3DEL	Read	APPSAUDT OPERAUDT PCSPAUDT SYSPAUDT	Read
$$DPC3PRN	Read	APPSAUDT OPERAUDT PCSPAUDT SYSPAUDT	Read
$$DPC4TRN	Read	APPSAUDT OPERAUDT PCSPAUDT SYSPAUDT	Read
$$EDITNO	None	APPSAUDT OPERAUDT PCSPAUDT SYSPAUDT	Read
$$EDNASR	None	APPSAUDT OPERAUDT PCSPAUDT SYSPAUDT	Read
$$EXTENT	None	APPSAUDT OPERAUDT PCSPAUDT SYSPAUDT	Read
$$GIPASR	Read	APPSAUDT OPERAUDT PCSPAUDT SYSPAUDT	Read
$$GIVETO	Read	APPSAUDT SYSPAUDT	Read
$$IPRASR	Read	APPSAUDT OPERAUDT PCSPAUDT	Read

Resource Names	Logging	User Group	Access
		SYSPAUDT	
$$MIS1ZOO	Read	APPSAUDT OPERAUDT PCSPAUDT SYSPAUDT	Read
$$MIS1LOG	Read	APPSAUDT OPERAUDT PCSPAUDT SYSPAUDT	Read
$$MIS2FRE	None	APPSAUDT OPERAUDT PCSPAUDT SYSPAUDT	Read
$$MIS2HLD	None	APPSAUDT OPERAUDT PCSPAUDT SYSPAUDT	Read
$$MIS2RRN	None	APPSAUDT OPERAUDT PCSPAUDT SYSPAUDT	Read
$$MIS3CHA	Read	APPSAUDT OPERAUDT PCSPAUDT SYSPAUDT	Read
$$MIS3DEL	Read	APPSAUDT OPERAUDT PCSPAUDT SYSPAUDT	Alter
$$MIS3PPL	Read	APPSAUDT OPERAUDT PCSPAUDT SYSPAUDT	AlterRead
$$MIS3UPD	Read	APPSAUDT OPERAUDT PCSPAUDT SYSPAUDT	Read
$$PAGI	None	APPSAUDT OPERAUDT PCSPAUDT SYSPAUDT	Read
$$PAGII	None	APPSAUDT OPERAUDT PCSPAUDT SYSPAUDT	Read
$$PAGIII	None	APPSAUDT	Read

Resource Names	Logging	User Group	Access
		OPERAUDT PCSPAUDT SYSPAUDT	
$$PGASRI	None	APPSAUDT OPERAUDT PCSPAUDT SYSPAUDT	Read
$$PGASRII	None	APPSAUDT OPERAUDT PCSPAUDT SYSPAUDT	Read
$$PGASRIII	None	APPSAUDT OPERAUDT PCSPAUDT SYSPAUDT	Read
$$PRTORD	Read	APPSAUDT OPERAUDT PCSPAUDT SYSPAUDT	Read
$$RCPASR	Read	APPSAUDT OPERAUDT PCSPAUDT SYSPAUDT	Read
$$RDLASR	Read	APPSAUDT OPERAUDT PCSPAUDT SYSPAUDT	Read
$$RECALL	Read	APPSAUDT OPERAUDT PCSPAUDT SYSPAUDT	Read
$$RECDEL	Read	APPSAUDT SYSPAUDT	Read
$$RECHEX	None	APPSAUDT OPERAUDT PCSPAUDT SYSPAUDT	Read
$$RECINS	Read	APPSAUDT SYSPAUDT	Read
$$RECIPR	None	APPSAUDT OPERAUDT PCSPAUDT SYSPAUDT	Read
$$RECRPR	None	APPSAUDT OPERAUDT PCSPAUDT	Read

Resource Names	Logging	User Group	Access
		SYSPAUDT	
$$RECRST	None	APPSAUDT OPERAUDT PCSPAUDT SYSPAUDT	Read
$$RECUPD	None	APPSAUDT OPERAUDT PCSPAUDT SYSPAUDT	Read
$$REPLST	Read	APPSAUDT OPERAUDT PCSPAUDT SYSPAUDT	Read
$$REPORD	None	APPSAUDT OPERAUDT PCSPAUDT SYSPAUDT	Read
$$RMVASR	Read	APPSAUDT OPERAUDT PCSPAUDT SYSPAUDT	Read
$$RPRASR	None	APPSAUDT OPERAUDT PCSPAUDT SYSPAUDT	Read
$$RSTASR	Read	APPSAUDT OPERAUDT PCSPAUDT SYSPAUDT	Read
$$RSTORD	None	APPSAUDT BMC STCs OPERAUDT PCSPAUDT SYSPAUDT	Read
$$RULONF	None	APPSAUDT OPERAUDT PCSPAUDT SYSPAUDT	Read
$$RULSAV	None	APPSAUDT OPERAUDT PCSPAUDT SYSPAUDT	Read
$$SECCTD.qname	None	*	Read
$$SHNASR	None	APPSAUDT OPERAUDT PCSPAUDT	Read

Resource Names	Logging	User Group	Access
		SYSPAUDT	
$$TREE	None	APPSAUDT OPERAUDT PCSPAUDT SYSPAUDT	Read
$$UNRSTR	Read	APPSAUDT OPERAUDT PCSPAUDT SYSPAUDT	Read
$$UPDASR	Read	APPSAUDT OPERAUDT PCSPAUDT SYSPAUDT	Read
$$UPDNOT	Read	APPSAUDT OPERAUDT PCSPAUDT SYSPAUDT	Read
$$UPNASR	Read	APPSAUDT OPERAUDT PCSPAUDT SYSPAUDT	Read
$$UPRASR	Read	APPSAUDT OPERAUDT PCSPAUDT SYSPAUDT	Read
$$VEWUPD	None	APPSAUDT OPERAUDT PCSPAUDT SYSPAUDT	Read
$$VIEASR	None	APPSAUDT OPERAUDT PCSPAUDT SYSPAUDT	Read
$$VIEWCO	None	APPSAUDT OPERAUDT PCSPAUDT SYSPAUDT	Read
$$VIEWNO	None	APPSAUDT OPERAUDT PCSPAUDT SYSPAUDT	Read
$$VWNASR	None	APPSAUDT OPERAUDT PCSPAUDT SYSPAUDT	Read

Table 11-3: BMC Control-M Resources

Referenced by: ZCTM0020

Resource Names	Logging	User Group	Access
$$CTMEDM	None	*	Read
$$CTMPNL3	None	BMC STCs OPERAUDT PCSPAUDT SYSPAUDT	Read
$$CTMSTC	Read	BMC STCs PCSPAUDT SYSPAUDT	Read READ READ
$$JOB1ACT	None	OPERAUDT PCSPAUDT PRODAUDT SYSPAUDT	Read
$$JOB1AES	None	OPERAUDT PCSPAUDT PRODAUDT SYSPAUDT	Read
$$JOB1LOG	None	OPERAUDT PCSPAUDT PRODAUDT SYSPAUDT	Read
$$JOB1STA	None	OPERAUDT PCSPAUDT PRODAUDT SYSPAUDT	Read
$$JOB1SYS	None	OPERAUDT PCSPAUDT PRODAUDT SYSPAUDT	Read
$$JOB1ZOO	None	OPERAUDT PCSPAUDT PRODAUDT SYSPAUDT	Read
$$JOB2CHA	None	OPERAUDT PCSPAUDT PRODAUDT SYSPAUDT	Read
$$JOB2CNF	None	OPERAUDT PCSPAUDT PRODAUDT SYSPAUDT	Read
$$JOB2FOK	None	OPERAUDT PCSPAUDT PRODAUDT	Read

Resource Names	Logging	User Group	Access
		SYSPAUDT	
$$JOB2FRE	None	OPERAUDT PCSPAUDT PRODAUDT SYSPAUDT	Read
$$JOB2HLD	None	OPERAUDT PCSPAUDT PRODAUDT SYSPAUDT	Read
$$JOB2RRN	None	OPERAUDT PCSPAUDT PRODAUDT SYSPAUDT	Read
$$JOB3CHA	None	OPERAUDT PCSPAUDT PRODAUDT SYSPAUDT	Read
$$JOB3DEL	None	OPERAUDT PCSPAUDT PRODAUDT SYSPAUDT	Read
$$JOB3EDI	None	OPERAUDT PCSPAUDT PRODAUDT SYSPAUDT	Read
$$JOB3KIL	None	OPERAUDT PCSPAUDT PRODAUDT SYSPAUDT	Read
$$JOB3PRI.	None	OPERAUDT PCSPAUDT PRODAUDT SYSPAUDT	Read
$$JOBORD	None	OPERAUDT PCSPAUDT PRODAUDT SYSPAUDT	Read
$$JOBORD.*qname.userid*	None	APPBAUDT	Read
$$REFALL	None	OPERAUDT PCSPAUDT PRODAUDT SYSPAUDT	Read
$$REFDEAD	None	OPERAUDT PCSPAUDT PRODAUDT SYSPAUDT	Read

Resource Names	Logging	User Group	Access
$$REFNET	None	OPERAUDT PCSPAUDT PRODAUDT SYSPAUDT DPCSAUDT	Read
$$REFPROP	None	OPERAUDT PCSPAUDT PRODAUDT SYSPAUDT	Read
$$REGSTR	Read	OPERAUDT PCSPAUDT PRODAUDT SYSPAUDT	Read
$$SECCTM.qname	None	*	Read
$$STCORD	None	OPERAUDT PCSPAUDT PRODAUDT SYSPAUDT	Read
$$STRSTC	None	OPERAUDT PCSPAUDT PRODAUDT SYSPAUDT	Read

Table 11-4: BMC Control-O Resources

Referenced by: ZCTO0020

Resource Names	Logging	User Group	Access
$$CTOAOP	Read	OPERAUDT PCSPAUDT PRODAUDT SYSPAUDT	Read
$$CTOASK	None	OPERAUDT PCSPAUDT PRODAUDT SYSPAUDT	Read
$$CTOCMD	Read	OPERAUDT PCSPAUDT PRODAUDT SYSPAUDT	Read
$$CTOCMO	None	OPERAUDT PCSPAUDT PRODAUDT SYSPAUDT	Read
$$CTODOM	None	OPERAUDT PCSPAUDT PRODAUDT	Read

Resource Names	Logging	User Group	Access
		SYSPAUDT	
$$CTODRL	None	OPERAUDT PCSPAUDT PRODAUDT SYSPAUDT	Read
$$CTODSN	None	OPERAUDT PCSPAUDT PRODAUDT SYSPAUDT	Read
$$CTODSP	None	OPERAUDT PCSPAUDT PRODAUDT SYSPAUDT	Read
$$CTOEDM	None	OPERAUDT PCSPAUDT PRODAUDT SYSPAUDT	Read
$$CTOENV	None	OPERAUDT PCSPAUDT PRODAUDT SYSPAUDT	Read
$$CTOJAR	None	OPERAUDT PCSPAUDT PRODAUDT SYSPAUDT	Read
$$CTOJED	None	OPERAUDT PCSPAUDT PRODAUDT SYSPAUDT	Read
$$CTOJSO	None	OPERAUDT PCSPAUDT PRODAUDT SYSPAUDT	Read
$$CTOJST	None	OPERAUDT PCSPAUDT PRODAUDT SYSPAUDT	Read
$$CTOKSL	None	OPERAUDT PCSPAUDT PRODAUDT SYSPAUDT	Read
$$CTOMSG	None	OPERAUDT PCSPAUDT PRODAUDT SYSPAUDT	Read
$$CTOONC	None	OPERAUDT	Read

Resource Names	Logging	User Group	Access
		PCSPAUDT PRODAUDT SYSPAUDT	
$$CTOONM	None	OPERAUDT PCSPAUDT PRODAUDT SYSPAUDT	Read
$$CTOONP	None	OPERAUDT PCSPAUDT PRODAUDT SYSPAUDT	Read
$$CTOORD	Read	OPERAUDT PCSPAUDT PRODAUDT SYSPAUDT	Read
$$CTOORL	None	OPERAUDT PCSPAUDT PRODAUDT SYSPAUDT	Read
$$CTOPCM	None	OPERAUDT PCSPAUDT PRODAUDT SYSPAUDT	Read
$$CTOPKS	None	OPERAUDT PCSPAUDT PRODAUDT SYSPAUDT	Read
$$CTOPNLOS	None	OPERAUDT PCSPAUDT SYSPAUDT	Read
$$CTOPRC	Read	OPERAUDT PCSPAUDT PRODAUDT SYSPAUDT	Read
$$CTOPTS	Read	OPERAUDT PCSPAUDT PRODAUDT SYSPAUDT	Read
$$CTORES	None	OPERAUDT PCSPAUDT PRODAUDT SYSPAUDT	Read
$$CTORTS	Read	OPERAUDT PCSPAUDT PRODAUDT SYSPAUDT	Read

Resource Names	Logging	User Group	Access
$$CTORUL	None	OPERAUDT PCSPAUDT PRODAUDT SYSPAUDT	Read
$$CTOSET	None	OPERAUDT PCSPAUDT PRODAUDT SYSPAUDT	Read
$$CTOSRL	None	OPERAUDT PCSPAUDT PRODAUDT SYSPAUDT	Read
$$CTOSRQ	None	OPERAUDT PCSPAUDT PRODAUDT SYSPAUDT	Read
$$CTOSTP	None	OPERAUDT PCSPAUDT PRODAUDT SYSPAUDT	Read
$$CTOSUP	None	OPERAUDT PCSPAUDT PRODAUDT SYSPAUDT	Read
$$CTOTSO	Read	OPERAUDT PCSPAUDT PRODAUDT SYSPAUDT	Read
$$CTOXAM	Read	OPERAUDT PCSPAUDT PRODAUDT SYSPAUDT	Read
$$CTOXAM.qname.TYPE1INI	Read	OPERAUDT PCSPAUDT PRODAUDT SYSPAUDT	Read
$$CTOXAM.qname.TYPE1RSL	Read	OPERAUDT PCSPAUDT PRODAUDT SYSPAUDT	Read
$$CTOXAM.qname.TYPE1TRM	Read	OPERAUDT PCSPAUDT PRODAUDT SYSPAUDT	Read
$$CTOXAM.qname.TYPE2LOC	Read	OPERAUDT PCSPAUDT	Read

Resource Names	Logging	User Group	Access
		PRODAUDT SYSPAUDT	
$$CTOXAM.qname.TYPE3GLB	Read	OPERAUDT PCSPAUDT PRODAUDT SYSPAUDT	Read
$$CTOXAM.qname.TYPE3RUL	Read	OPERAUDT PCSPAUDT PRODAUDT SYSPAUDT	Read
$$CTOXAMF	Read	OPERAUDT PCSPAUDT PRODAUDT SYSPAUDT	Read
$$IOARES	None	OPERAUDT PCSPAUDT PRODAUDT SYSPAUDT	Read
$$RUL1LOG	None	OPERAUDT PCSPAUDT PRODAUDT SYSPAUDT	Read
$$RUL1ZOO	None	OPERAUDT PCSPAUDT PRODAUDT SYSPAUDT	Read
$$RUL2FRE	None	OPERAUDT PCSPAUDT PRODAUDT SYSPAUDT	Read
$$RUL2HLD	None	OPERAUDT PCSPAUDT PRODAUDT SYSPAUDT	Read
$$RUL2MOD	None	OPERAUDT PCSPAUDT PRODAUDT SYSPAUDT	Read
$$RUL2RES	None	OPERAUDT PCSPAUDT PRODAUDT SYSPAUDT	Read
$$RUL3CAN	Read	OPERAUDT PCSPAUDT PRODAUDT SYSPAUDT	Read

Resource Names	Logging	User Group	Access
$$RUL3DEL	Read	OPERAUDT PCSPAUDT PRODAUDT SYSPAUDT	Read
$$SECCTO.qname	None	*	Read

Table 11-5: BMC INCONTROL Resources Description

Resource Names	Description
$$ADDCND	Add a condition name.
$$ADDCTL	Add a Control Resource.
$$ADDNOT	Add NOTES to a report.
$$ADDRES	Add a Quantitative resource name.
$$ADNASR	Add a note.
$$BKPORD	Order a Backup Mission.
$$CDDSEL	Select a record.
$$CHARES	Change a Quantitative resource name.
$$CHKCND	Check a condition name.
$$CHKCTL	Check a Control Resource.
$$CHKRCL	Perform a recall of a migrated CDAM file.
$$CHKRES	Check a Quantitative resource name.
$$CTDACT	Controlling Access to Reports.
$$CTDASR	Controlling Access to Reports by CONTROL-D.
$$CTDCDD	Controlling CONTROL-D Delivery functions.
$$CTDEDM	Extended Definition mode permits enhanced functionality.
$$CTDJOB	Controlling Access to Sysouts.
$$CTDOBJ	Entering to screen DO option 1 Report Clique. Entering to screen DO option 2 Resource Set. Saving a new or a modified report clique name. Deleting a report clique name or a resource set name.
$$CTDPNLA	Access to the Active Mission Status screen.
$$CTDPNLF	Access the Active Transfer screen.
$$CTDPREFIX	Controlling Access to PREFIX Parameter.
$$CTDPRF	Controlling Access to PREFIX Parameter.
$$CTDRRST	Access to the Active Mission Status screen.
$$CTMEDM	Extended Definition mode permits enhanced functionality.
$$CTMPNL3	Access to the Active Environment Screen.
$$CTMSTC	Order a started task.
$$CTOAOP	Access or Use of Automated Options.
$$CTOASK	DO ASKOPER if a WTOR is issued. DO ASKOPER before a WTOR is issued.
$$CTOCMD	DO COMMAND.
$$CTOCMO	DO FORCEJOB.
$$CTODOM	DO DOM (delete operator message).
$$CTODRL	DO RULE.

Resource Names	Description
$$CTODSN	ON DSNEVENT.
$$CTODSP	DO DISPLAY with SUPPRESS set to NO.
$$CTOEDM	Extended Definition mode permits enhanced functionality when defining automation rules.
$$CTOENV	ON EVENT.
$$CTOJAR	ON JOBARRIV.
$$CTOJED	ON JOBEND.
$$CTOJSO	Jobname on Message
$$CTOJST	DO STOPJOB.
$$CTOKSL	DO KSL.
$$CTOMSG	DO DISPLAY.
$$CTOOMG	Exception Code on JOBSYSOUT.
$$CTOONC	Beginning of COMMAND TEXT.
$$CTOONM	ON MESSAGE.
$$CTOONP	ON CTOPCMSG
$$CTOORD	Controlling Rule Ordering.
$$CTOORL	ON RULE.
$$CTOPCM	DO CTOPCMSG.
$$CTOPKS	DO KLS.
$$CTOPNLOS	Initial access to Rule Status Screen.
$$CTOPRC	DO TSO or KLS.
$$CTOPTS	DO TSO.
$$CTORES	DO COND or DO RESOURCE.
$$CTORTS	Runtime security checking resource. Used to determine whether runtime security checks are performed, depending on the value set for the RUNTDFT global parameter (NONE, OWNER, or TRIGGER) in the CTOPARM member during CONTROL-O installation.
$$CTORUL	DO RULE and ON RULE.
$$CTOSET	DO SET for an IOA AutoEdit variable.
$$CTOSRL	Check if user is authorized to trigger a rule.
$$CTOSRQ	DO SYSREQ.
$$CTOSTP	ON STEP.
$$CTOSUP	DO DISPLAY with SUPPRESS set to YES.
$$CTOTSO	DO TSO.
$$CTOXAM	Controlling Access to Services Provided using the XAM (Extended Automation Mechanism). Security checking for XAM is more granular than the CTOXAMF basic automation mechanism mode of operation.
$$CTOXAM.qname.TYPE1INI	INIT action.
$$CTOXAM.qname.TYPE1RSL	RESOLVE action.
$$CTOXAM.qname.TYPE1TRM	TERM action.
$$CTOXAM.qname.TYPE2LOC	SETOLOC action.
$$CTOXAM.qname.TYPE3GLB	SETOGLB action.

Resource Names	Description
$$CTOXAM.qname.TYPE3RUL	DORULE action.
$$CTOXAMF	Performs a security check for authorization in basic automation mode. Security checking for XAM is less granular.
$$CTVINX	Use CONTROL-V Indexing features.
$$CTVQAC	Use CONTROL-V Quick Access features.
$$DELCND	Delete a condition name.
$$DELCTL	Delete a Control Resource.
$$DELNOT	Add NOTES.
$$DELRES	Delete a Quantitative resource name.
$$DLNASR	Delete a note.
$$DPC1VIE	Read the File Transfer facility.
$$DPC2FRE	Free the File Transfer facility.
$$DPC2HLD	Hold the File Transfer facility.
$$DPC3DEL	Delete the File Transfer facility.
$$DPC3PRN	Print the File Transfer facility.
$$DPC4TRN	Retransmit or Modify the File Transfer facility.
$$EDITNO	Add/Alter NOTES of a report.
$$EDNASR	Edit a note.
$$ERACND	Erase a manual condition name.
$$EXTENT	Define a Ruler.
$$GIPASR	Accessing the Global Index Path that is included in the list of paths in the CONTROL-D/WebAccess Index box or specified in the CONTROL-D/WebAccess filter manually by the user.
$$GIVETO	Copy a record.
$$IOAAS	Used by Control-D to interface with the IOAGATE address space.
$$IOACMD	Enter Operator Command.
$$IOADEL	Delete User Dataset.
$$IOADIR	Dir User Dataset.
$$IOAEDM	Extended Definition mode permits enhanced functionality.
$$IOAEDT	Edit User Dataset.
$$IOAGL	Accessing the Global Variable.
$$IOAONLINE	Access to the IOA Online facility.
$$IOARES	IOA Condition. CONTROL-M Quantitative Resource. CONTROL-M Control Resource. IOA Manual Condition. CONTROL-O DO COND or DO RESOURCE.
$$IOASAV	Save User Dataset.
$$IOAUTL	Access to Running Batch Utilities.
$$IOAVIW	View User Dataset.
$$IPRASR	Immediate printing of a report.
$$JOB1ACT	React in the Active Environment.
$$JOB1AES	AutoEdit simulation in the Active Environment.

Resource Names	Description
$$JOB1LOG	Log in the Active Environment.
$$JOB1STA	View statistics in the Active Environment.
$$JOB1SYS	View Sysout in the Active Environment.
$$JOB1ZOO	Zoom in the Active Environment.
$$JOB2CHA	Change in the Active Environment Screen.
$$JOB2CNF	Confirm in the Active Environment.
$$JOB2FOK	Force OK in the Active Environment.
$$JOB2FRE	Free in the Active Environment.
$$JOB2HLD	Hold in the Active Environment.
$$JOB2RRN	Rerun or Restore in the Active Environment.
$$JOB3CHA	Change in the Active Environment.
$$JOB3DEL	Delete or Undelete in the Active Environment.
$$JOB3EDI	Edit JCL in the Active Environment.
$$JOB3KIL	Kill an executing job in the Active Environment.
$$JOB3PRI.	Change priority in the Active Environment.
$$JOBORD	Order a job.
$$JOBORD.*qname.userid*	Order a job for a specific Environment
$$MIS1LOG	Log an Active Mission.
$$MIS1ZOO	Zoom an Active Mission.
$$MIS2FRE	Free an Active Mission.
$$MIS2HLD	Hold an Active Mission.
$$MIS2RRN	Rerun an Active Mission.
$$MIS3CHA	Change Active Mission.
$$MIS3DEL	Delete an Active Mission.
$$MIS3PPL	Print an Active Mission.
$$MIS3UPD	Alter an Active Mission.
$$NEWCND	Define a manual condition name.
$$PAGI	Printing a report of more than MAX number of pages.
$$PAGII	Printing a report within MIN-MAX number of pages.
$$PAGIII	Printing a report within MIN-MID number of pages.
$$PGASRI	Printing a report of more than MAX number of pages.
$$PGASRII	Printing a report within MIN-MAX number of pages.
$$PGASRIII	Printing a report within MIN-MID number of pages.
$$PRTORD	Order a Print mission.
$$RCPASR	Request to Copy a Report to another Recipient.
$$RDLASR	Delete a report record.
$$RECALL	Submit a job to perform recall of a migrated CDAM file.
$$RECDEL	Delete a record.
$$RECHEX	View the report in hexadecimal format.
$$RECINS	Insert a record.
$$RECIPR	Immediate print for a report.
$$RECRPR	Reprint a report.
$$RECRST	Restore a report.
$$RECUPD	Alter a record.

Resource Names	Description
$$REFALL	REFRESH ALL. Activates the processes described above (NET, DEADLINE and PROPAGATE) simultaneously in the CONTROL-M monitor.
$$REFDEAD	REFRESH DEADLINE. Adjust DUE OUT times, if necessary, for all job orders in the Active Jobs file that are not Held.
$$REFNET	REFRESH NET. Update the list of dependent jobs in the Job Dependency Network screen.
$$REFPROP	REFRESH PROPAGATE. Check and adjust the priority of predecessor jobs.
$$REGSTR	JOBDSN security check.
$$REPLST	Permit report access without Recipient Tree.
$$REPORD	Decollating mission.
$$RMVASR	Request to Move a Report to another Recipient.
$$RPRASR	Request for a Deferred Print.
$$RSTASR	Restore a report or record.
$$RSTORD	Order a Restore Mission.
$$RUL1LOG	Log on rule definition.
$$RUL1ZOO	Zoom on rule definition.
$$RUL2FRE	Free on rule definition.
$$RUL2HLD	Hold on rule definition.
$$RUL2MOD	Mode on rule definition.
$$RUL2RES	Resume on rule definition.
$$RUL3CAN	Cancel on rule definition.
$$RUL3DEL	Delete on rule definition.
$$RULONF	Suppress or activate a ruler or use Global ruler. A ruler is a set of screen-editing rules that make a report look different when displayed or printed.
$$RULSAV	Save a ruler definition.
$$SECCTD	Security activate for CONTROL-D.
$$SECCTM	Security activate for CONTROL-M.
$$SECCTO	Security activate for CONTROL-O.
$$SECIOA	Security activate for IOA.
$$SHNASR	Show notes of a report.
$$STCORD	Order a started task.
$$STRSTC	Starting a started task.
$$TREE	Use of Recipient Tree Definitions by Online Users.
$$UNRSTR	Cancel Restore for History Report.
$$UPDASR	Alter report View Indicator.
$$UPDNOT	Alter NOTES to a report.
$$UPNASR	Alter a note.
$$UPRASR	Alter a Report Record.
$$VEWUPD	Alter Report View Indicator.
$$VIEASR	View Reports in Browse Mode.

Resource Names	Description
$$VIEWCO	View (browse) a report.
$$VIEWNO	Browse NOTES of a report.
$$VWNASR	View a note.

11.3 CA 1 Requirements

The following table entries are guidelines regarding access authorizations to CA 1 resources:

Table 11-6: CA 1 Command Resources

Referenced by: ZCA10020

CA 1 Command Resources			
Resource Name	**Legitimate User**	**Access Level**	**Log**
L0ADD	Tape librarian	READ	N
L0CLEAN	Tape librarian	READ	N
L0CHECKI	Tape librarian	READ	N
L0CHECKO	Tape librarian	READ	N
L0DELETE	Tape librarian	READ	N
L0ERASE	Tape librarian	READ	N
L0EXTEND	Tape librarian and users requiring the functionality of extending retention dates for tape data sets	READ	N
L0EXPIRE	Tape librarian	READ	N
L0PTRS	Tape librarian and System Programmer	READ	N
L0RETAIN	Tape librarian and users requiring the functionality of extending retention dates for tape data sets	READ	N
L0SCRATC	Tape librarian	READ	N
L0UPDTE	Tape librarian; users requiring update authority for command processing and System Programmer	READ	N

Table 11-7: CA 1 Function and Password Resources

Referenced by: ZCA10021

CA 1 Function and Password Resources			
Resource Name	**Legitimate User**	**Access Level**	**Log**
NLRES	Tape librarian and technical support personnel	READ, UPDATE	N
NLNORES	Tape librarian and technical support personnel	READ, UPDATE	Y
NSLRES	Tape librarian and technical support personnel	READ, UPDATE	N
NSLNORES	Tape librarian and System Programmer	READ, UPDATE	Y
BLPRES	Tape librarian and System Programmer	READ, UPDATE	Y
BLPNORES	Tape librarian and technical System Programmer	READ, UPDATE	Y
FORRES	Tape librarian	READ, UPDATE	Y
FORNORES	Tape librarian and System Programmer	READ, UPDATE	Y
YSVCCOND	Users requiring tape data set processing	READ, UPDATE	N
YSVCUNCD	Tape librarian	READ, UPDATE	N
YSVCUNCD	System Programmer	READ	N
Password	Users requiring access to CA 1 on-line applications for tape data set processing **Note:** Multiple passwords are available providing different levels of CA 1 functionality ranging from general user to tape librarian.	READ	N
REINIT	Operations staff and systems personnel responsible for supporting CA 1	READ	N
BATCH	Operations staff and systems personnel responsible for supporting CA 1	READ	N
DEACT	Operations staff and systems personnel responsible for supporting CA 1	READ	N
COPYCAT	Operations staff and systems personnel responsible for supporting CA 1	READ	N

Note: Tape librarian includes tape personnel, as well as STCs and Batch Users that perform CA 1 maintenance. The users for L0UPDTE may include off-siter personnel who require ability maintain applications.

11.3.1 ACF2 Tables

Table 11-8: CA 1 Command Resources for ACF2

Used by: ZCA10020

CA 1 Command Resources for ACF2		
Resource Type	**Resource Name**	**Description**
CAC	L0ADD	On-line command ADD
CAC	L0CHECKI	On-line command CHECKIN
CAC	L0CHECKO	On-line command CHECKOUT
CAC	L0CLEAN	On-line command CLEAN
CAC	L0DELETE	On-line command DELETE
CAC	L0ERASE	On-line command ERASE
CAC	L0EXPIRE	On-line command EXPIRE
CAC	L0EXTEND	On-line command EXTEND
CAC	L0RETAIN	On-line command RETAIN
CAC	L0SCRATC	On-line command SCRATCH
CAC	L0UPDTE	On-line command UPDATE

Table 11-9: CA 1 Function and Password Resources for ACF2

Used by: ZCA10021

CA 1 Function and Password Resources for ACF2		
Resource Type	**Resource Name**	**Description**
CAT	BLPNORES	Bypass label processing for a tape undefined to CA 1
CAT	BLPRES	Bypass label processing for a tape defined to CA 1
CAT	FORNORES	Foreign tape undefined to CA 1
CAT	FORRES	Foreign tape defined to CA 1
CAT	NLNORES	Non-label tape undefined to CA 1
CAT	NLRES	Non-label tape defined to CA 1
CAT	NSLNORES	Non-standard label tape undefined to CA 1
CAT	NSLRES	Non-standard label tape defined to CA 1
CAT	YSVCCOND	Y SVC conditional access

CA 1 Function and Password Resources for ACF2		
Resource Type	**Resource Name**	**Description**
CAT	YSVCUNCD	Y SVC unconditional access
CAT	*password*	CA 1 internal password used to access CA 1 on-line applications **Note**: A rule is written for each available password, including default passwords.
CAT	REINIT	TMSINIT re-initialization
CAT	BATCH	TMSINIT batch status
CAT	DEACT	TMSINIT deactivation
CAT	COPYCAT	TMSINIT file copy

11.3.2 RACF Tables

Table 11-10: CA 1 Command Resources for RACF

Referenced by: ZCA10020

CA 1 Command Resources for RACF	
RACF Command	**Description**
RDEFINE CA@MD (L0CLEAN) UACC(NONE)	On-line command CLEAN
RDEFINE CA@MD (L0EXTEND) UACC(NONE)	On-line command EXTEND
RDEFINE CA@MD (L0EXPIRE) UACC(NONE)	On-line command EXPIRE
RDEFINE CA@MD (L0RETAIN) UACC(NONE)	On-line command RETAIN
RDEFINE CA@MD (L0DELETE) UACC(NONE)	On-line command DELETE
RDEFINE CA@MD (L0ADD) UACC(NONE)	On-line command ADD
RDEFINE CA@MD (L0CHECKI) UACC(NONE)	On-line command CHECKIN
RDEFINE CA@MD (L0CHECKO) UACC(NONE)	On-line command CHECKOUT
RDEFINE CA@MD (L0ERASE) UACC(NONE)	On-line command ERASE
RDEFINE CA@MD (L0SCRATC) UACC(NONE)	On-line command SCRATCH
RDEFINE CA@MD (L0UPDTE) UACC(NONE)	On-line command UPDATE

Table 11-11: CA 1 Function and Password Resources for RACF

Referenced by: ZCA10021

CA 1 Function and Password Resources for RACF	
RACF Command	**Description**
RDEFINE CA@APE (YSVCCOND) UACC(NONE)	Y SVC conditional
RDEFINE CA@APE (YSVCUNCD) UACC(NONE)	Y SVC unconditional
RDEFINE CA@APE (NLRES) UACC(NONE)	Non-label tape defined to CA 1
RDEFINE CA@APE (NLNORES) UACC(NONE)	Non-label tape undefined to CA 1
RDEFINE CA@APE (NSLRES) UACC(NONE)	Non-standard label tape defined to CA 1
RDEFINE CA@APE (NSLNORES) UACC(NONE)	Non-standard label tape undefined to CA 1
RDEFINE CA@APE (BLPRES) UACC(NONE)	Bypass label processing for a tape defined to CA 1
RDEFINE CA@APE (BLPNORES) UACC(NONE)	Bypass label processing for a tape undefined to CA 1
RDEFINE CA@APE (FORRES) UACC(NONE)	Foreign tape defined to CA 1
RDEFINE CA@APE (FORNORES) UACC(NONE)	Foreign tape undefined to CA 1
RDEFINE CA@APE (*password*) UACC(NONE)	CA 1 internal password used to access CA 1 on-line applications **Note**: A rule is written for each available password, including default passwords.
RDEFINE CA@APE (REINIT) UACC(NONE)	TMSINIT re-initialization
RDEFINE CA@APE (BATCH) UACC(NONE)	TMSINIT batch status
RDEFINE CA@APE (DEACT) UACC(NONE)	TMSINIT deactivation
RDEFINE CA@APE (COPYCAT) UACC(NONE)	TMSINIT file copy

11.3.3 TSS Tables

Table 11-12: CA 1 Command Resources for TSS

Used by: ZCA10020

CA 1 Command Resources for TSS	
Top Secret Command	**Description**
TSS ADD(*dept-acid*) CACMD(L0CLEAN)	On-line command CLEAN
TSS ADD(*dept-acid*) CACMD(L0EXTEND)	On-line command EXTEND
TSS ADD(*dept-acid*) CACMD(L0EXPIRE)	On-line command EXPIRE

CA 1 Command Resources for TSS	
Top Secret Command	**Description**
TSS ADD(*dept-acid*) CACMD(L0RETAIN)	On-line command RETAIN
TSS ADD(*dept-acid*) CACMD(L0DELETE)	On-line command DELETE
TSS ADD(*dept-acid*) CACMD(L0ADD)	On-line command ADD
TSS ADD(*dept-acid*) CACMD(L0CHECKI)	On-line command CHECKIN
TSS ADD(*dept-acid*) CACMD(L0CHECKO)	On-line command CHECKOUT
TSS ADD(*dept-acid*) CACMD(L0ERASE)	On-line command ERASE
TSS ADD(*dept-acid*) CACMD(L0SCRATC)	On-line command SCRATCH
TSS ADD(*dept-acid*) CACMD(L0UPDTE)	On-line command UPDATE

Table 11-13: CA 1 Function and Password Resources for TSS

Used by: ZCA10021

CA 1 Function and Password Resources for TSS	
Top Secret Command	**Description**
TSS ADD(*dept-acid*) CACMD(L0CLEAN)	On-line command CLEAN
TSS ADD(*dept-acid*) CATAPE(YSVCCOND)	Y SVC conditional access
TSS ADD(*dept-acid*) CATAPE(YSVCUNCD)	Y SVC unconditional access
TSS ADD(*dept-acid*) CATAPE(NLRES)	Non-label tape defined to CA 1
TSS ADD(*dept-acid*) CATAPE(NLNORES)	Non-label tape undefined to CA 1
TSS ADD(*dept-acid*) CATAPE(NSLRES)	Non-standard label tape defined to CA 1
TSS ADD(*dept-acid*) CATAPE(NSLNORES)	Non-standard label tape undefined to CA 1
TSS ADD(*dept-acid*) CATAPE(BLPRES)	Bypass label processing for a tape defined to CA 1
TSS ADD(*dept-acid*) CATAPE(BLPNORES)	Bypass label processing for a tape undefined to CA 1
TSS ADD(*dept-acid*) CATAPE(FORRES)	Foreign tape defined to CA 1
TSS ADD(*dept-acid*) CATAPE(FORNORES)	Foreign tape undefined to CA 1
TSS ADD(*dept-acid*) CATAPE(*password*)	CA 1 internal password used to access CA 1 on-line applications **Note**: A rule is written for each available password.
TSS ADD(*dept-acid*) CATAPE(REINIT)	TMSINIT re-initialization

CA 1 Function and Password Resources for TSS	
Top Secret Command	**Description**
TSS ADD(*dept-acid*) CATAPE(BATCH)	TMSINIT batch status
TSS ADD(*dept-acid*) CATAPE(DEACT)	TMSINIT deactivation
TSS ADD(*dept-acid*) CATAPE(COPYCAT)	TMSINIT file copy

11.4 CATALOG SOLUTIONS Requirements

Table 11-14: CATALOG SOLUTIONS Resource List

Referenced by: ZCSL0020

You can enable data set and catalog security verification by adding a FACILITY class profile with the resource name hlq1.hlq2.GLOBAL.DATASET. If the named FACILITY class resource has been defined to the security software, then Catalog Solution will determine if the current user is authorized to bypass data set security verification according to the following conditions:

- If the user has READ authorization for the named FACILITY class resource, data set security will be bypassed. This will allow for the existence of one or more "super users" that will not be subjected to data set and catalog security verification.
- If the current user is not authorized for the named FACILITY class resource, Catalog Solution will not bypass data set and catalog security verification. The security software currently executing in the user environment should cause OPEN processing to fail if the user is not authorized for the attempted access.

If the named FACILITY class resource has not been defined to the security software, Catalog Solution will bypass data security.

Resource Names	Logging	User Groups	Access
hlq1		*	NONE
hlq1.hlq2.GLOBAL.DATASET	READ	*	NONE
		DASDAUDT	READ
		DASBAUDT	READ
		SYSPAUDT	READ
hlq1.hlq2.READ.CATLIST		*	READ
hlq1.hlq2.READ.LIST		*	READ
hlq1.hlq2.READ.SCAN		*	READ
hlq1.hlq2.READ.PRINT		*	READ
hlq1.hlq2.READ.ALIASCHK		*	READ
hlq1.hlq2.READ.DIAGNOSE		*	READ
hlq1.hlq2.READ		DASDAUDT	READ
		DASBAUDT	READ
		SYSPAUDT	READ
hlq1.hlq2.UPDATE		DASDAUDT	READ

		DASBAUDT	READ
		SYSPAUDT	READ

* - All Users

hlq1 - The high-level qualifier for the resource. EMC for software version 9.00 and below and ROCKET for software version 9.10 and above.

hlq2 - The high-level qualifier for the resource. CSL for software version 9.00 and below and RCS for software version 9.10 and above.

READ Resource Names	Related Command/Keyword
hlq1.hlq2.READ.ALIASCHK	ALIASCHECK
hlq1.hlq2.READ.CATLIST	CATLIST
hlq1.hlq2.READ.DIAGNOSE.CSR	DIAGNOSE/TEST=CSR or DIAGNOSE/TEST=CHECK-SPANNED-RECS
hlq1.hlq2.READ.DIAGNOSE.CVB	DIAGNOSE/TEST=CVB or DIAGNOSE/TEST=CHECK-VVDS-BACKUP
hlq1.hlq2.READ.DIAGNOSE.CVC	DIAGNOSE/TEST=CVC or DIAGNOSE/TEST=CHECK-VVDS-CATALOGS
hlq1.hlq2.READ.DIAGNOSE.DDA	DIAGNOSE/TEST=DDA or DIAGNOSE/TEST=DELETE-DEAD-ALIAS
hlq1.hlq2.READ.DIAGNOSE.DS	DIAGNOSE/TEST=DS or DIAGNOSE/TEST=DATA-STRUCTURE
hlq1.hlq2.READ.DIAGNOSE.GADB	DIAGNOSE/TEST=GADB or DIAGNOSE/TEST=GENERATE-AMS-DIAG-BCS
hlq1.hlq2.READ.DIAGNOSE.GADV	DIAGNOSE/TEST=GADV or DIAGNOSE/TEST=GENERATE-AMS-DIAG-VVDS
hlq1.hlq2.READ.DIAGNOSE.GDC	DIAGNOSE/TEST=GDC or DIAGNOSE/TEST=GENERATE-DELETE-CARD
hlq1.hlq2.READ.DIAGNOSE.GDIAG3C	DIAGNOSE/TEST=GDIAG3C or DIAGNOSE/TEST=GENERATE-DIAG3-CARD
hlq1.hlq2.READ.DIAGNOSE.GDLN	DIAGNOSE/TEST=GDLN or DIAGNOSE/TEST=GENERATE-DELETE-NONVSAM
hlq1.hlq2.READ.DIAGNOSE.GDN	DIAGNOSE/TEST=GDN or DIAGNOSE/TEST=GENERATE-DEFINE-NONVSAM
hlq1.hlq2.READ.DIAGNOSE.GRC	DIAGNOSE/TEST=GRC or DIAGNOSE/TEST=GENERATE-RECATALOG-CARD

READ Resource Names	Related Command/Keyword
hlq1.hlq2.READ.DIAGNOSE.GUL	DIAGNOSE/TEST=GUL or DIAGNOSE/TEST=GENERATE-UNCAT-LIST
hlq1.hlq2.READ.DIAGNOSE.GVC	DIAGNOSE/TEST=GVC or DIAGNOSE/TEST=GENERATE-VERIFY-CARD
hlq1.hlq2.READ.DIAGNOSE.IS	DIAGNOSE/TEST=IS or DIAGNOSE/TEST=INDEX-STRUCTURE
hlq1.hlq2.READ.DIAGNOSE.LA	DIAGNOSE/TEST=LA or DIAGNOSE/TEST=LIST-ASSOCIATIONS
hlq1.hlq2.READ.DIAGNOSE.VCE	DIAGNOSE/TEST=VCE or DIAGNOSE/TEST=VERIFY-CATALOG-ENTRIES
hlq1.hlq2.READ.DIAGNOSE.VV	DIAGNOSE/TEST=VV or DIAGNOSE/TEST=VTOC-VVDS
hlq1.hlq2.READ.DIAGNOSE.VVC	DIAGNOSE/TEST=VVC or DIAGNOSE/TEST=VVCM-VVCN-CHECK
hlq1.hlq2.READ.DISPLAY	DISPLAY
hlq1.hlq2.READ.DUMP	DUMP
hlq1.hlq2.READ.LIST	LIST
hlq1.hlq2.READ.OELIST	OELIST
hlq1.hlq2.READ.PRINT	PRINT
hlq1.hlq2.READ.QUERY	QUERY
hlq1.hlq2.READ.SCAN	SCAN
hlq1.hlq2.READ.SCAVENGE	SCAVENGE
hlq1.hlq2.READ.SMFLIST	SMFLIST
hlq1.hlq2.READ.SYSCHECK	SYSTEMCHECK

hlq1 - The high-level qualifier for the resource. EMC for software version 9.00 and below and ROCKET for software version 9.10 and above.

hlq2 - The high-level qualifier for the resource. CSL for software version 9.00 and below and RCS for software version 9.10 and above.

UPDATE Resource Names	Related Command/Keyword
hlq1.hlq2.UPDATE.ALIASCHK	RESYNCH ALIASCHECK/RESYNCH
hlq1.hlq2.UPDATE.ALTER	ALTER
hlq1.hlq2.UPDATE.BCSRCVR	BCSRECOVER
hlq1.hlq2.UPDATE.DELETE	DELETE
hlq1.hlq2.UPDATE.DIAGNOSE	RVC DIAGNOSE/TEST=RVC or DIAGNOSE/TEST=REMOVE-VVDS-CATALOGS
hlq1.hlq2.UPDATE.EXTRACT	EXTRACT
hlq1.hlq2.UPDATE.LIST.VERREP	LIST/VER & REP
hlq1.hlq2.UPDATE.MODIFY	MODIFY
hlq1.hlq2.UPDATE.PURGE	PURGE
hlq1.hlq2.UPDATE.REBUILD	REBUILD
hlq1.hlq2.UPDATE.RECOVER	RECOVER
hlq1.hlq2.UPDATE.REPROMC	REPROMC
hlq1.hlq2.UPDATE.RESET	RESET
hlq1.hlq2.UPDATE.SCRATCH	SCRATCH

hlq1 - The high level qualifier for the resource. EMC for software version 9.00 and below and ROCKET for software version 9.10 and above.

hlq2 - The high level qualifier for the resource. CSL for software version 9.00 and below and RCS for software version 9.10 and above.

11.5 CICS Requirements

Consult the current IBM CICS Transaction Server for z/OS RACF Security Guide for the latest information on categories of CICS-supplied transactions. This information found in that reference as well as the information in this Addendum specifies recommended security specifications. The Site Security plan should be the authorization for access.

Table 11-15: Category 1 Transactions for CICS TS 4.1 - 5.3

This transaction must be restricted to CICS regions only.
Referenced by: ZCIC0020

CATA	CATD	CDBD	CDBF	CDBO	CDBQ	CDTS	CEPD
CEPF	CEPM	CESC	CEX2	CFCL	CFCR	CFOR	CFQR
CFQS	CFTL	CFTS	CGRP	CHCK	CIS1	CIS4	CISB
CISC	CISD	CISE	CISM	CISP	CISQ	CISR	CISS
CIST	CISU	CISX	CITS	CJLR	CJSL	CJSP	CJSR
CJTR	CMPE	CMTS	COHT	COIE	COIR	COI0	CONA
COND	CONH	CONL	CONM	COVR	COWC	CPCT	CPIR
CPIS	CPLT	CRLR	CRMD	CRMF	CRSQ	CRST	CRSY
CRTP	CSFR	CSFU	CSHA	CSHQ	CSKP	CSNC	CSNE
CSOL	CSPQ	CSQC	CSSY	CSTE	CSTP	CSZI	CTSD
CWBG	CWXN	CWXU	CXCU	CXRE			

Table 11-16: Category 2 Transactions for CICS TS 4.1 - 5.3

Referenced by: ZCIC0020

Transaction	User Group	Access	Logging
CADP	SYSPAUDT APPDAUDT	Read	Y
CBAM	SYSPAUDT OPERAUDT	Read	
CCRL	SYSPAUDT	Read	Y
CDBC	SYSPAUDT DABAAUDT	Read	Y
CDBI	SYSPAUDT DABAAUDT	Read	Y
CDBM	SYSPAUDT DABAAUDT INQUIRE	Read	Y
CDBT	SYSPAUDT APPDAUDT DABAAUDT	Read	Y
CDFS	SYSPAUDT INTERCOM	Read	
CDST	SYSPAUDT	Read	Y
CEBR	SYSPAUDT APPDAUDT	Read	Y
CEBT **see Notes**	SYSPAUDT	Read	Y
CECI	APPDAUDT SYSPAUDT	Read	Y
CECS	SYSPAUDT APPDAUDT	Read	Y
CEDA	SYSPAUDT	Read	Y
CEDB	SYSPAUDT	Read	Y
CEDC **see Notes**	SYSPAUDT INQUIRE APPDAUDT	Read	
CEDF	SYSPAUDT APPDAUDT	Read	Y
CEDX	SYSPAUDT APPDAUDT	Read	Y
CEHP	SYSPAUDT INTERCOM	Read	
CEHS	SYSPAUDT INTERCOM	Read	
CEKL	SYSPAUDT	Read	Y
CEMN	SYSPAUDT	Read	Y
CEMT **see Notes**	SYSPAUDT	Read	Y

Transaction	User Group	Access	Logging
CEOT	SYSPAUDT OPERAUDT	Read	
CEPH	SYSPAUDT EVENTUSER	Read	
CEPQ	SYSPAUDT EVENTUSER	Read	
CEPR	SYSPAUDT EVENTUSER	Read	
CEPS	SYSPAUDT EVENTUSER	Read	
CEPT	SYSPAUDT EVENTUSER	Read	
CESD **see Notes**	SYSPAUDT	Read	Y
CEST	SYSPAUDT OPERAUDT	Read	
CETR	SYSPAUDT APPDAUDT	Read	Y
CHLP (alias for CMAC)	*	Read	
CIDP	SYSPAUDT OPERAUDT	Read	Y
CIND	SYSPAUDT	Read	Y
CIRP	IIOPUSER	Read	
CJSA	WEBUSER CICSDEF	Read	
CJSU	WEBUSER CICSDEF	Read	
CLDM	SYSPAUDT PIPEUSER	Read	
CLDM	SYSPAUDT PIPEUSER	Read	
CMAC	*	Read	
CMSG	SYSPAUDT OPERAUDT	Read	
CPIA	SYSPAUDT PIPEUSER	Read	
CPIH	SYSPAUDT PIPEUSER	Read	
CPIL	SYSPAUDT PIPEUSER	Read	
CPIQ	SYSPAUDT PIPEUSER	Read	
CPMI	SYSPAUDT	Read	

Transaction	User Group	Access	Logging
	INTERCOM		
CREA	SYSPAUDT	Read	
CREC	SYSPAUDT INQUIRE	Read	
CRPA	SYSPAUDT RPCUSER	Read	
CRPC	SYSPAUDT RPCUSER	Read	
CRPM	SYSPAUDT RPCUSER	Read	
CRTE	SYSPAUDT APPDAUDT OPERAUDT	Read	
CRTX	*	Read	
CSFE	SYSPAUDT OPERAUDT	Read	
CSGM	*	Read	
CSHR	SYSPAUDT INTERCOM	Read	
CSM1	SYSPAUDT INTERCOM	Read	
CSM2	SYSPAUDT INTERCOM	Read	
CSM3	SYSPAUDT INTERCOM	Read	
CSM5	SYSPAUDT INTERCOM	Read	
CSMI	SYSPAUDT INTERCOM	Read	
CTIN	SYSPAUDT INTERCOM	Read	
CVMI	SYSPAUDT INTERCOM	Read	
CWBA	WEBUSER CICSDEF	Read	
CWWU	WEBUSER	Read	
CW2A	WEBUSER	Read	
CWTO	SYSPAUDT OPERAUDT	Read	
DSNC	SYSPAUDT OPERAUDT	Read	
CK**	SYSPAUDT MQSAAUDT	Read	

Note:

- The CEMT and CEBT (Master for Alternate CICS) transactions can be secured at the command level allowing for a more inclusive authorization through the use of SPI and the user base can be expanded.
- These are IBM recommended users for these category 2 transactions, outside of SYSPAUDT, use of other transactions can be justified with the approval of the CICS Systems Programmer and the ISSO/ISSM.
- Give CICS default users access to the CESD shutdown-assist transaction. Users who can attach CICSPlex SM transactions or define debugging transactions need access to CESD in case of CMAS failure.

CICS Users identified in the above table, detailed descriptions can be found in Section 3 z/OS Privileged Users.

CICSDEF The CICS regions default user ids, as specified in the DFLTUSER parameter.

PIPEUSER These transactions are used when a CICS application is in the role of a Web service provider or requester.

IIOPUSER These transactions use Java server applications that communicate with a client application using the IIOP protocol.

INTERCOM These transactions are used in function shipping. The mirror transactions must be available to remote users in a function shipping environment. When a database or file resides on another CICS region, CICS function ships the request to access the data, and this request runs under one of the CICS-supplied mirror transactions. This means:

- The terminal user running the application must be authorized to use the mirror transaction.
- The terminal user must also be authorized to use the data that the mirror transaction accesses.

RPCUSER These transactions are used with remote procedure calls.

INQUIRE These transactions are available to inquire into CICS to obtain information.

EVENTUSER These transactions are default EP adapter transaction IDs.

Table 11-17: Category 3 Transactions for CICS TS 4.1 - 5.3

The following transactions are eligible for exemption from security checking.

Referenced by: ZCICA024

CATR	CCIN	CDBN	CEGN	CEKL	CESF	CESL	CESN	CIEP
CLQ2	CLR1	CLR2	CLS1	CLS2	CLS3	CLS4	CMPX	CPCT
CPSS	CQPI	CQPO	CQRY	CRDR	CRSR	CSAC	CSCY	CSPG
CSPK	CSPP	CSPS	CSRK	CSRS	CSSF	CSXM	CXRT	

Table 11-18: CICS Category 4 COTS-Supplied Sensitive Transactions

(COTS-supplied transactions are used to support and administer vendor products. Some of these transactions may offer the ability to bypass ESM controls for resources managed under CICS. These transactions are considered sensitive and are identified as Category 4 transactions. Category 4 transactions are restricted to systems programming personnel. The list is not all-inclusive.)

Transaction	Description
ACFM	CA-ACF2 Master Transaction
ACFA	CA-ACF2
ACFT	CA-ACF2
ACUL	CA-ACF2
DBOC	CA-DATACOM
LOOK	CA-LOOK
TMSU	CA 1
TSEU	CA-TOP SECRET
TSSC	CA-TOP-SECRET

Table 11-19: TSS FACILITY Initialization Parameters for CICS Region

Referenced by: ZCIC0030, ZCICT050

DEFACID(*NONE*)	No default ACID
NOABEND	For multi-user address space
RES	Allows storage of access authorizations for all resources within the online user region.
MODE(FAIL)	All unauthorized facility or resource access is denied unconditionally.

Ensure that users cannot sign on more than once within the scope of a single CICS production region.

SIGN(S)	Single sign-on within the same CICS facility
SIGN(M)	Multiple sign-on within the same CICS facility (*use only with test or development regions*)
SHRPRF	Allows a copy of the profile to be shared by all users in the multiuser facility.
XDEF	Sets protection in place by default for all commands and transactions controlled by the facility.
PCTEXTSEC=OVERRIDE	CA-TOP SECRET does not honor the PCT EXTSEC= and RSLC= parameters and forces a security call.
EXTSEC=YES	CA-TOP SECRET security is invoked for this region
FACMATRX=YES	Controls for CICS security are specified in Facility Matrix.
LOCKTIME=0	This parameter is set to zero since the OPTIME parameter (refer to *Section 8.2.3.4, CICS User Controls*) provides a more efficient method for managing idle time.
XTRAN=YES	Transaction checking is performed.

Table 11-20: ACF2/CICS Parameters

Referenced by: ZCICA023

Parameter	Keyword(s)	Description
CICSKEY*	OPTION=VALIDATE, TYPE=*ttt*,** RESOURCE=TRANS	The CICSKEY parameter establishes CA-ACF2 CICS control over a CICS resource.
DEFAULT	Terminal= <*parameter*> Nonterminal=<*parameter*>	Ensures that every CICS task has a valid user identified.
EXIT	MROIN MROOUT	In normal operations, you would not use these exits. However if either of these exits are used they must follow the same guidelines as MVSEXIT described in AAMV0450.
OPTION	CONSOLE=VALIDATE DISCONNECT=YES MAXVIO=3 MODE=ABORT TIMEOUT=5	Security controls are in effect for transactions being processed at the console. When the violation limit is reached, disconnects the terminal from CICS and returns it to VTAM. Maximum number of security violations allowed. Aborts the transaction if access is denied. Number of minutes between each scan for inactive terminals
INHERIT	TDJOB=YES	Batch jobs submitted to an internal reader through extra-partition transient data queues inherit the logonid of the submitting task

Parameter	Keyword(s)	Description
SIGNON	ENQSCOPE =NONE***	Multiple sign-on within the same CICS region (*use only with test or development regions*)
	ENQSCOPE=CICS***	Single sign-on within the same CICS region
	QUICK=NO	Disallows quick sign-on format, which enables the user to enter the password in clear text at the same time as the logonid is entered.
	REQUIRE=YES	Specifies that a user must sign-on before executing transactions.
SUSPEND	PASSWORD=YES	Suspends user during sign-on if the password violation count reaches the established threshold.
	RULE=YES	Suspends users during resource validation if the CA-ACF2 violation count reaches the established threshold.
VERIFY	IDLE=YES IDLE=NO **See Note**	Re-verify password after terminal idle time is exceeded.
MRO	TRANSMIT=YES RECEIVE=YES	This assures that logonid inheritance is performed.

*At a minimum, enforce transaction-level protection.

**The default ACF2/CICS type for transactions is CKC, but is unique for each region, as specified above. An exception would be the situation where regions are grouped together in an MRO environment that may share a common transaction type with that unique MRO environment.

Note: IDLE=NO can be specified if mixed case passwords are being used.

Table 11-21: CICS Systems Programmer's Worksheet

Referenced by: ZCIC0010, ZCIC0020, ZCIC0030, ZCIC0040, ZCIC0041, ZCIC0042, ZCICA011, ZCICA022, ZCICA023, ZCICA024, ZCICA025, ZCICR021, ZCICR041, ZCICR042, ZCICT041, ZCICT050

1. CICS TABLES/RDO DEFINITIONS

a. Provide information for all SITs:

CICS JOBNAME	Data Set Name

CICS JOBNAME	Data Set Name

Note: Add additional lines if required

b. Provide a list of all defined CICS transactions for product, test/development, and training regions.

CICS JOBNAME	Data Set Name

Note: Add additional lines if required.

2. CICS REGIONS

Complete the following with the JOB NAME, LOGONID/USERID/ACID, CICS REGION TYPE (TOR, AOR, other), CICS Version, and the Operational Function of the region, i.e., Production, Test, Development or Training.

DSN= _____

JOB NAME	LOGONID/ACID USERID	REGION TYPE	CICS Version	Operational Function

Table 11-22: CICS SPI Resources Table

Referenced by: ZCICA021, ZCICR021, ZCICT021

Note: For access levels in this table please consult individual external security management products to reconcile access syntax. Example. Alter access in CA-ACF2 would equate to Update in RACF. User and accesses in this table are recommendation only. Assessment of vulnerability should be determined by contents of the site security plan

Note: Final resource definitions should be governed by *Table 42. Resource and command check cross-reference* in the latest release of IBM CICS RACF Security Guide.

Resource/TSS Resource	Command	Access	Users
ASSOCIATION/ASSOCIAT	ASSOCIATION	READ	SYSCAUDT CICSAUDT CICUAUDT
ATOMSERVICE/ATOMSERV	ATOMSERVICE	READ	CICUAUDT
		ALTER	SYSCAUDT CICSAUDT
AUTINSTMODEL/AUTINSTM	AUTINSTM	READ	CICUAUDT
		UPDATE	SYSCAUDT CICSAUDT
AUTOINSTALL/AUTOINST	AUTOINST	READ	NONE
		UPDATE	SYSCAUDT CICSAUDT
BEAN/BEAN	BEAN	READ	SYSCAUDT CICSAUDT CICUAUDT
BRFACILITY/BRFACILIT	BRFACILITY	READ	CICUAUDT
		UPDATE	SYSCAUDT CICSAUDT
BUNDLE/BUNDLE	BUNDLE	READ	CICUAUDT
		ALTER	SYSCAUDT CICSAUDT
CAPTURESPEC/CAPTURES	CAPTURESPEC	READ	SYSCAUDT CICSAUDT CICUAUDT
CFDTPOOL/CFDTPOOL	CFDTPOOL	READ	SYSCAUDT CICSAUDT CICUAUDT
CLASSCACHE/CLASSCAC	CLASSCACHE	READ	CICUAUDT
		UPDATE	SYSCAUDT CICSAUDT
CONNECTION/CONNECTI	CONNECTION	READ	CICBAUDT CICDAUDT
		UPDATE	OPERAUDT CICUAUDT

Resource/TSS Resource	Command	Access	Users
		ALTER	SYSCAUDT CICSAUDT
CORBASERVER/CORBASER	CORBASERVER	READ	CICUAUDT
		UPDATE	NONE
		ALTER	SYSCAUDT CICSAUDT
DB2CONN/DB2CONN	DB2CONN	Read	OPERAUDT CICUAUDT CICDAUDT
		ALTER	SYSCAUDT CICSAUDT
DB2ENTRY/DB2ENTRY	DB2ENTRY	READ	OPERAUDT CICUAUDT CICDAUDT
		ALTER	SYSCAUDT CICSAUDT
DB2TRAN/DB2TRAN	DB2TRAN	READ	OPERAUDT CICUAUDT CICDAUDT
		ALTER	SYSCAUDT CICSAUDT
DELETESHIPPED/DELETESH	DELETSHIPPED	READ	OPERAUDT CICUAUDT CICDAUDT
		UPDATE	SYSCAUDT CICSAUDT
DISPATCHER/DISPATCH	DISPATCHER	READ	CICUAUDT
		UPDATE	SYSCAUDT CICSAUDT
DJAR/DJAR	DJAR	READ	CICUAUDT
		ALTER	SYSCAUDT CICSAUDT
DOCTEMPLATE/DOCTEMPL	DOCTEMPLATE	READ	CICUAUDT CICDAUDT
		ALTER	SYSCAUDT CICSAUDT
DSNAME/DSNAME	DSNAME	READ	OPERAUDT CICDAUDT
		UPDATE	SYSCAUDT CICSAUDT CICUAUDT
DUMP/DUMP	DUMP	UPDATE	SYSCAUDT CICSAUDT CICUAUDT
DUMPDS/DUMPDS	DUMPDS	READ	CICDAUDT
		UPDATE	SYSCAUDT

Resource/TSS Resource	Command	Access	Users
			CICSAUDT CICUAUDT
ENQMODEL/ENQMODEL	ENQMODEL	Read	CICUAUDT
		ALTER	SYSCAUDT CICSAUDT
EVENTBINDING/EVENTBIN	EVENTBINDING	READ	CICUAUDT
		UPDATE	SYSCAUDT CICSAUDT
EVENTPROCESS/ EVENTPRO	EVENTPROCESS	Read	CICUAUDT
		UPDATE	SYSCAUDT CICSAUDT
EXCI/EXCI	EXCI	READ	SYSCAUDT CICSAUDT CICUAUDT
EXITPROGRAM/EXITPROG	EXITPROGRAM	UPDATE	CICSAUDT CICUAUDT OPERAUDT SYSCAUDT
FECONNECTION/FEPIRESO	FECONECTION	READ	NONE
		UPDATE	SYSCAUDT CICSAUDT CICBAUDT OPERAUDT CICUAUDT
FENODE/FEPIRESO	FENODE	READ	NONE
		UPDATE	SYSCAUDT CICSAUDT CICBAUDT OPERAUDT CICUAUDT
FEPOOL/FEPIRESO	FEPOOL	READ	NONE
		UPDATE	SYSCAUDT CICSAUDT CICBAUDT OPERAUDT CICUAUDT
FEPROPSET/FEPIRESO	FEPROSET	READ	NONE
		UPDATE	SYSCAUDT CICSAUDT CICBAUDT OPERAUDT CICUAUDT
FETARGET/FEPIRESO	FETARGET	READ	NONE
		UPDATE	SYSCAUDT CICSAUDT CICBAUDT

Resource/TSS Resource	Command	Access	Users
			OPERAUDT CICUAUDT
FILE/FILE	FILE	READ	ALL
		UPDATE	**CICBAUDT** **OPERAUDT** **CICUAUDT** APPDAUDT*
		ALTER	SYSCAUDT CICSAUDT
HOST/HOST	HOST	READ	CICUAUDT
		UPDATE	SYSCAUDT CICSAUDT
IPCONN/IPCONN	IPCONN	READ	OPERAUDT CICUAUDT CICDAUDT
		ALTER	SYSCAUDT CICSAUDT
IRC/IRC	IRC	READ	OPERAUDT CICDAUDT
		UPDATE	SYSCAUDT CICSAUDT CICUAUDT
JOURNALMODEL/JOURNALM	JOURNALMODEL	READ	CICUAUDT
		ALTER	SYSCAUDT CICSAUDT
JOURNALNAME/JOURNALN	JOURNALNAME	READ	NONE
		UPDATE	SYSCAUDT CICSAUDT CICUAUDT
JVM/JVM	JVM	READ	SYSCAUDT CICSAUDT CICUAUDT
JVMPOOL/JVMPOOL	JVMPOOL	READ	CICUAUDT
		UPDATE	SYSCAUDT CICSAUDT
JVMPROFILE/JVMPROFI	JVMPROFILE	READ	SYSCAUDT CICSAUDT CICUAUDT
JVMSERVER/JVMSERVER	JVMSERVER	READ	NONE
		ALTER	SYSCAUDT CICSAUDT
LIBRARY/LIBRARY	LIBRARY	READ	CICUAUDT CICDAUDT
		ALTER	SYSCAUDT CICSAUDT
LSRPOOL/LSRPOOL	LSRPOOL	ALTER	SYSCAUDT

Resource/TSS Resource	Command	Access	Users
			CICSAUDT
MAPSET/MAPSET	MAPSET	ALTER	SYSCAUDT CICSAUDT
MODENAME/MODENAME	MODENAME	READ	CICUAUDT
		UPDATE	SYSCAUDT CICSAUDT
MONITOR/MONITOR	MONITOR	READ	CICDAUDT
		UPDATE	SYSCAUDT CICSAUDT CICUAUDT
MQCONN/MQCONN	MQCONN	READ	OPERAUDT CICUAUDT CICDAUDT
		ALTER	SYSCAUDT CICSAUDT
MQINI/MQINI	MQINI	READ	SYSCAUDT CICSAUDT OPERAUDT CICDAUDT
MVSTCB/MVSTCB	MVSTCB	READ	SYSCAUDT CICSAUDT CICUAUDT
NETNAME/TERMINAL	NETNAME	READ	CICDAUDT
		UPDATE	SYSCAUDT CICSAUDT CICBAUDT OPERAUDT CICUAUDT
PARTITIONSET/PARTITIO	PARTITIONSET		
		ALTER	SYSCAUDT CICSAUDT
PARTNER/PARTNER	PARTNER	READ	CICUAUDT
		ALTER	SYSCAUDT CICSAUDT
PIPELINE/PIPELINE	PIPELINE	READ	CICUAUDT CICDAUDT
		ALTER	SYSCAUDT CICSAUDT
PROCESSTYPE/PROCESST	PROCESSTYPE	READ	CICUAUDT
		ALTER	SYSCAUDT CICSAUDT
PROFILE/PROFILE	PROFILE	READ	CICUAUDT
		ALTER	SYSCAUDT CICSAUDT
PROGRAM/PROGRAM	PROGRAM	READ	CICBAUDT CICDAUDT

Resource/TSS Resource	Command	Access	Users
		UPDATE	OPERAUDT CICUAUDT APPDAUDT*
		ALTER	SYSCAUDT CICSAUDT
REQID/REQID	REQID	READ	SYSCAUDT CICSAUDT
REQUESTMODEL/ REQUESTM	REQUESTMODEL	READ	CICUAUDT
		ALTER	SYSCAUDT CICSAUDT
RESETTIME	RESETTIME	UPDATE	SYSCAUDT CICSAUDT
RRMS/RRMS	RRMS	READ	SYSCAUDT CICSAUDT CICUAUDT
SECURITY/SECURITY	SECURITY	UPDATE	SYSCAUDT CICSAUDT
SESSIONS/SESSIONS	SESSIONS	ALTER	SYSCAUDT CICSAUDT
SHUTDOWN/SHUTDOWN	SHUTDOWN	UPDATE	SYSCAUDT CICSAUDT OPERAUDT CICUAUDT
STATISTICS/STATISTI	STATISTICS	READ	NONE
		UPDATE	SYSCAUDT CICSAUDT CICUAUDT
STORAGE/STORAGE	STORAGE	READ	SYSCAUDT CICSAUDT CICUAUDT
STREAMNAME/STREAMNA	STREAMNAME	READ	SYSCAUDT CICSAUDT CICUAUDT
SUBPOOL/SUBPOOL	SUBPOOL	READ	SYSCAUDT CICSAUDT CICUAUDT
SYSDUMPCODE/SYSDUMPC	SYSDUMPCODE	READ	CICUAUDT
		UPDATE	SYSCAUDT CICSAUDT
		CONTROL	SYSCAUDT CICSAUDT
SYSTEM/SYSTEM	SYSTEM	READ	CICBAUDT OPERAUDT CICUAUDT
		UPDATE	SYSCAUDT CICSAUDT

Resource/TSS Resource	Command	Access	Users
TASK/TASK	TASK	READ	CICBAUDT OPERAUDT CICDAUDT
		UPDATE	SYSCAUDT CICSAUDT CICUAUDT
TCLASS/TCLASS	TRANCLASS	READ	CICUAUDT
		UPDATE	SYSCAUDT CICSAUDT
TCPIP/TCPIP	TCPIP	READ	CICUAUDT CICDAUDT
		UPDATE	SYSCAUDT CICSAUDT
TCPIPSERVICE/TCPIPSER	TCPIPSERVICE	READ	CICUAUDT CICDAUDT
		ALTER	SYSCAUDT CICSAUDT
TDQUEUE/TDQUEUE	TDQUEUE	READ	OPERAUDT CICUAUDT CICDAUDT
		UPDATE	SYSCAUDT CICSAUDT
TEMPSTORAGE	TEMPSTORAGE	READ	CICUAUDT
		UPDATE	CICSAUDT
			SYSCAUDT
TERMINAL/TERMINAL	TERMINAL	READ	CICDAUDT
		UPDATE	CICBAUDT OPERAUDT CICUAUDT
		ALTER	SYSCAUDT CICSAUDT
TRANDUMPCODE/TRANDUMP	TRANDUMPCODE	READ	CICUAUDT CICDAUDT
		UPDATE	SYSCAUDT CICSAUDT
TRANSACTION/TRANSACT	TRANSACTION	READ	CICDAUDT
		UPDATE	OPERAUDT CICUAUDT APPDAUDT*
		ALTER	SYSCAUDT CICSAUDT
TSMODEL/TSMODEL	TSMODEL	READ	CICUAUDT
		ALTER	SYSCAUDT CICSAUDT
TSPOOL/TSPOOL	TSPOOL	READ	SYSCAUDT

Resource/TSS Resource	Command	Access	Users
			CICSAUDT CICUAUDT
TSQNAME/TSQNAME	TSQNAME	READ	CICUAUDT
		UPDATE	SYSCAUDT CICSAUDT
TSQUEUE/TSQUEUE	TSQUEUE	READ	CICUAUDT CICDAUDT
		UPDATE	SYSCAUDT CICSAUDT
TYPETERM/TYPETERM	TYPETERM	ALTER	SYSCAUDT CICSAUDT
UOW/UOW	UOW	READ	CICUAUDT
		UPDATE	SYSCAUDT CICSAUDT
UOWDSNFAIL/UOWDSNFA	UOWDSNFAIL	READ	SYSCAUDT CICSAUDT CICUAUDT
UOWENQ/UOWENQ	UOWENQ	READ	SYSCAUDT CICSAUDT CICUAUDT
UOWLINK/UOWLINK	UOWLINK	READ	CICUAUDT
		UPDATE	SYSCAUDT CICSAUDT
URIMAP/URIMAP	URIMAP	READ	CICUAUDT CICDAUDT
		ALTER	SYSCAUDT CICSAUDT
VOLUME/VOLUME	VOLUME	UPDATE	SYSCAUDT CICSAUDT
VTAM/VTAM	VTAM	READ	CICDAUDT
		UPDATE	SYSCAUDT CICSAUDT OPERAUDT CICUAUDT
WEB/WEB	WEB	READ	CICUAUDT
		UPDATE	SYSCAUDT CICSAUDT
WEBSERVICE/WEBSERVI	WEBSERVICE	READ	NONE
		ALTER	SYSCAUDT CICSAUDT

Resource/TSS Resource	Command	Access	Users
WORKREQUEST/WORKREQU	WORKREQUEST	READ	SYSCAUDT CICSAUDT CICUAUDT
XMLTRANSFORM/XMLTRANS	XMLTRANSFORM	READ	CICUAUDT
		UPDATE	SYSCAUDT CICSAUDT

*Application Development Programmers can be granted this access ONLY on a Development or Test CICS region.

Each Command can take any combination of the following actions:

INQUIRE	Retrieve information about
SET	To Change or Modify
DISCARD	To Remove
CREATE	To Define
PERFORM	Perform an action against (Initialize, Terminate, Delete, Request, Start, Reset, Refresh, Initiate)

ACCESS	PERMISSIONS
READ permits	INQUIRE
UPDATE permits	PERFORM, SET and DISCARD
ALTER permits	Create
CONTROL permits	Access to update the **JOBLIST** or **DSPLIST** option on **SET SYSDUMPCODE**.

SRRAUDIT GROUPS

SYSCAUDT	CICS Systems Programmers
CICSAUDT	CICS Started Task
CICBAUDT	CICS Batch Programs
CICUAUDT	CICS Utilities (Control O, Batch IDs submitted by Control M, MAINVIEW)
CICDAUDT	CICS Developers
OPERAUDT	OST CICS commands
APPDAUDT	Application Development Programmers

Table 11-23: CICS SPI Resource Descriptions Table

Referenced by: ZCICA021, ZCICR021, ZCICT021

Command	Description
ASSOCIATION	Association of information for a specified task
ATOMSERVICE	ATOMSERVICE resource definition
AUTINSTM	Terminal autoinstall model
AUTOINST	Terminal autoinstall values
BEAN	Information about an installed enterprise bean.
BRFACILITY	A virtual terminal (bridge facility) used by the 3270 bridge mechanism.
BUNDLE	A BUNDLE resource in the local CICS region
CAPTURESPEC	Information about a capture specification
CFDTPOOL	Information about a coupling facility data table pool

Command	Description
CLASSCACHE	A shared class cache in the CICS® region
CONNECTION	A CICS Connection
CORBASERVER	A CorbaServer
DB2CONN	A CICS DB2 connection
DB2ENTRY	Used to define resources to be used by a specific transaction or by a group of transactions when accessing DB2
DB2TRAN	A DB2TRAN associated with a DB2ENTRY
DELETSHIPPED	System settings that control automatic deletion of shipped terminal definitions
DISPATCHER	CICS dispatcher system information
DJAR	A definition of a specified deployed JAR file
DOCTEMPLATE	A document template
DSNAME	An external data set
DUMP	System dump of CICS
DUMPDS	CICS transaction dump data sets
ENQMODEL	An ENQMODEL definition
EVENTBINDING	A specified event binding
EVENTPROCESS	Event processing
EXCI	External CICS interface
EXITPROGRAM	A user exit
FECONECTION	Information about the state of FEPI connections
FENODE	FEPI nodes
FEPOOL	FEPI pools of connections
FEPROPSET	FEPI property set
FETARGET	FEPI target
FILE	A FILE definition
HOST	A virtual host
IPCONN	An IPCONN resource is a Transport Control Protocol/Internet Protocol (TCP/IP) communication link from your local CICS® region to another CICS region or another system
IRC	An interregion communication
JOURNALMODEL	A journal model definition
JOURNALNAME	A journal name
JVM	JVMs in a CICS region
JVMPOOL	Pool of JVMs in the CICS address space
JVMPROFILE	JVM profiles that have been used in a CICS region
JVMSERVER	JVM server runtime environment in the CICS region
LIBRARY	LIBRARY resource in the local CICS region
LSRPOOL	Local shared resources (LSR) pool
MAPSET	The definition of a particular program, map set, or partition set
MODENAME	Sessions in an APPC session group
MONITOR	MONITOR command to find out whether CICS monitoring is active, which types of data are being recorded, and other recording options
MQCONN	The connection between CICS and WebSphere® MQ

Command	Description
MQINI	Initiation queue to be used for the connection between CICS and WebSphere MQ
MVSTCB	Addresses and storage usage information for MVS TCBs
NETNAME	Terminal or session
PARTITIONSET	Command installs a PARTITIONSET definition with the attribute specified on the command
PARTNER	The name assigned in its PARTNER resource definition
PIPELINE	PIPELINE in the local CICS region
PROCESSTYPE	A PROCESSTYPE in the local CICS region
PROFILE	A PROFILE definition
PROGRAM	A PROGRAM definition
REQUESTMODEL	A REQUESTMODEL resource definition maps an inbound request that is formatted using the Internet Inter-ORB PROTOCOL (IIOP) to a CICS transaction that is to be started to process the request
RESETTIME	Reset date and time
RRMS	Indicates whether inbound transactional EXCI work is currently being accepted
SECURITY	A request for CICS security information to be refreshed from its external security manager (ESM) source, so that it reflects any updates made since the information was last retrieved
SESSIONS	A SESSIONS definition
SHUTDOWN	Shuts down the CICS system
STATISTICS	Retrieve the current statistics for a single resource, or global statistics for a class of resources
STORAGE	You can use it to get a list of the task storage areas associated with a particular task (using the NUMELEMENTS option), or you can use it to find the length and starting address of a particular area of storage (using the ADDRESS option)
STREAMNAME	Retrieve information about a currently connected MVS log stream
SUBPOOL	Command returns information about a particular storage subpool
SYSDUMPCODE	System dump code table entry
SYSTEM	Returns information about the CICS system under which the task issuing the command is executing
TASK	Returns information about a specific user task. User tasks are those associated with user-defined transactions or with CICS-supplied transactions that are normally invoked by an operator
TCLASS	Transaction Class
TCPIP	CICS internal sockets support
TCPIPSERVICE	TCPIP ports on which CICS internal TCPIP support is currently
TDQUEUE	A transient data queue in the local CICS region
TERMINAL	Terminal Command
TRANDUMPCODE	A transaction dump code
TRANSACTION	A transaction installed in your CICS system
TSMODEL	A temporary Storage Table in the local CICS region
TSPOOL	A shared temporary storage pool

Command	Description
TSQNAME	A queue with a name up to 16 characters long
TYPETERM	A terminal type in the local CICS region
UOW	Information about a unit of work (UOW)
UOWDSNFAIL	The UOWDSNFAIL command returns UOWs that are shunted and also UOWs that are in the process of being retried. In the latter case, the only data sets returned are those that have not yet been processed as part of the retry.
UOWENQ	Retrieves information about enqueues. Enqueues are used by CICS to lock recoverable resources, such as file records or queues, to the UOW that is updating them. User enqueues obtained by the EXEC CICS ENQ command are also returned.
UOWLINK	Retrieves information about a connection involved in a unit of work. The connection can be to a remote system, to a task-related user exit, or to a CFDT server.
URIMAP	A URIMAP resource definition
VTAM	The connection between CICS and VTAM
WEB	CICS Web support
WEBSERVICE	A WEBSERVICE in the local CICS region
WORKREQUEST	Tasks that are started as a result of action by a request receiver
XMLTRANSFORM	Information about an installed XMLTRANSFORM resource. This information can include the state of the XMLTRANSFORM resource and details about the conditions under which the XMLTRANSFORM resource was installed, such as which mapping level was used.

11.6 WebSphere MQ Requirements

Table 11-24: WebSphere MQ Command Security Controls

Referenced by: ZWMQ0059

Command	Profile	Access Level	Authorized Users	Log
ALTER *xxxxx*	ssid.ALTER.xxxxx	ALTER	MQ administrator Systems programmers Queue managers	Y
ALTER queue	Ssid.ALTER.queue Except ssid.SYSTEM.queue	ALTER	MQ administrator Decentralized MQ admin Systems Programmers Queue managers	Y
ARCHIVE LOG	*ssid*.ARCHIVE.LOG	CONTROL	MQ administrator Systems programmers Queue managers Operators Console automation software	Y

Command	Profile	Access Level	Authorized Users	Log
CLEAR QLOCAL	*ssid*.CLEAR.QLOCAL	ALTER	MQ administrator Systems programmers Queue managers MQ System Admin Batch	Y
DEFINE *xxxxx*	ssid.DEFINE.xxxxx	ALTER	MQ administrator Systems programmers Queue managers	Y
DEFINE QUEUE	Ssid.DEFINE.QUEUE Except ssid.SYSTEM.queue	ALTER	MQ administrator Decentralized MQ admin Systems programmers Queue managers	Y
DELETE *xxxxx*	ssid.DELETE.xxxxx	ALTER	MQ administrator Systems programmers Queue managers	Y
DELETE queue	Ssid.DELETE.queue Except ssid.SYSTEM.queue	ALTER	MQ administrator Decentralized MQ admin Systems Programmers Queue managers	Y
DISPLAY *xxxxx*	*ssid*.DISPLAY.*xxxxx*	READ	Auditors Application programmers MQ administrator Systems programmers Queue manager Operators Console automation software MQ System Admin Batch	N
PING *xxxxx*	ssid.PING.xxxxx	CONTROL	Application programmers MQ administrator Systems programmers Queue managers Operators Console automation software	N
RECOVER BSDS	*ssid*.RECOVER.BSDS	CONTROL	MQ administrator Systems programmers Queue managers	Y
REFRESH *xxxxx*	*ssid*.REFRESH.*xxxxx*	ALTER	Security staff MQ administrator Systems programmers Queue managers	Y

Command	Profile	Access Level	Authorized Users	Log
RESET *xxxxx*	ssid.RESET.xxxxx	CONTROL	MQ administrator Systems programmers Queue managers	Y
RESOLVE *xxxxx*	ssid.RESOLVE.xxxxx	CONTROL	MQ administrator Systems programmers Queue managers Operators Console automation software	Y
RESUME QMGR	*ssid*.RESUME.QMGR	CONTROL	MQ administrator Systems programmers Queue managers Operators Console automation software	Y
RVERIFY SECURITY	*ssid*.RVERIFY.SECURITY	ALTER	Security staff MQ administrator	Y
START *xxxxx*	ssid.START.xxxxx	CONTROL	MQ administrator Systems programmers Queue managers Operators Console automation software	Y
STOP *xxxxx*	*ssid*.STOP.xxxxx	CONTROL	MQ administrator Systems programmers Queue managers Operators Console automation software	Y
SUSPEND QMGR	*ssid*.SUSPEND.QMGR	CONTROL	MQ administrator Systems programmers Queue managers Operators Console automation software	Y

11.7 Web Application Server Requirements

Table 11-25: WAS HFS Permission Bits

Referenced by:ZWAS0020

IHS Vendor Server Software HFS Object Security Settings				
Directory or File	**Permission Bits**	**User Audit Bits**	**Owner**	**Group**
/usr/lpp/internet	755	fff	*UID(0) user*	IMWEB
/usr/lpp/internet/bin	755	fff	*UID(0) user*	IMWEB
/usr/lpp/internet/sbin	750	fff	*UID(0) user*	IMWEB

IHS Local Server Standard HFS Object Security Settings				
Directory or File	**Permission Bits**	**User Audit Bits**	**Owner**	**Group**
…/*websrv1_root*/	555	fff	*websrv1*	*webadmg1*
…/*websrv1_root*/Admin	550	fff	*websrv1*	*webadmg1*
…/*websrv1_root*/admin-bin	550	fff	*websrv1*	*webadmg1*
…/*websrv1_root*/cgi-bin	551	fff	*websrv1*	*webadmg1*
…/*websrv1_root*/fcgi-bin	550	fff	*websrv1*	*webadmg1*
…/*websrv1_root*/pub	555	fff	*websrv1*	*webadmg1*
/etc/*websrv1*/httpd.conf	460	faf	*websrv1*	*webadmg1*
/etc/*websrv1*/httpd.envvars	564	faf	*websrv1*	*webadmg1*
/etc/*websrv1*/mvsds.conf	460	faf	*websrv1*	*webadmg1*

IHS Local Server Log HFS Object Security Settings				
Directory or File	**Permission Bits**	**User Audit Bits**	**Owner**	**Group**
…/*websrv1_root*/logs	750	fff	*websrv1*	*webadmg1*
…/*websrv1_root*/logs/httpd-log	750	fff	*websrv1*	*webadmg1*
…/*websrv1_root*/logs/httpd-errors	750	fff	*websrv1*	*webadmg1*
…/*websrv1_root*/logs/cgi-error	750	fff	*websrv1*	*webadmg1*

11.8 SDSF Requirements

The following describes the definitions of the entries in the User Group column for all of the tables in the SDSF Requirements:

User Group
APPDAUDT - Application Development Programmers
APPSAUDT - Application Support Programmers
AUDTAUDT - Auditors
OPERAUDT - Operations Personnel
SYSPAUDT - Systems Programming staff
* - All Users

Table 11-26: SDSF SAF Resources

Referenced by: ZISF0020

Resource Name	User Group	Access	Logging
GROUP.**	*	NONE	
GROUP.group-name.server-name	Dependent on group	READ	
ISF.CONNECT.*sysname*	*	READ	
ISFAPF.*datasetname*	OPERAUDT SYSPAUDT	READ	
ISFAPPL.*device-name.jesx*	*	READ	
	OPERAUDT SYSPAUDT	CONTROL	
ISFATTR.**	*	NONE	
ISFATTR.CHECK.**	AUDTAUDT OPERAUDT SYSPAUDT	UPDATE	
ISFATTR.ENCLAVE.**	AUDTAUDT OPERAUDT SYSPAUDT	UPDATE	
ISFATTR.JOB.**	APPDAUDT APPSAUDT OPERAUDT SYSPAUDT	UPDATE	
ISFATTR.JOB.PRTDEST	*	UPDATE	
ISFATTR.JOBCL.**	OPERAUDT SYSPAUDT	UPDATE	
ISFATTR.LINE.**	OPERAUDT SYSPAUDT	UPDATE	
ISFATTR.MEMBER.**	OPERAUDT SYSPAUDT	UPDATE	
ISFATTR.MODIFY.**	OPERAUDT SYSPAUDT	UPDATE	
ISFATTR.NODE.**	OPERAUDT SYSPAUDT	UPDATE	
ISFATTR.OFFLOAD.**	OPERAUDT SYSPAUDT	UPDATE	
ISFATTR.OUTDESC.**	*	UPDATE	
ISFATTR.OUTPUT.**	AUDTAUDT APPDAUDT APPSAUDT OPERAUDT SYSPAUDT	UPDATE	
ISFATTR.OUTPUT.BURST	*	UPDATE	
ISFATTR.OUTPUT.CLASS	*	UPDATE	
ISFATTR.OUTPUT.DEST	*	UPDATE	
ISFATTR.OUTPUT.FCB	*	UPDATE	
ISFATTR.OUTPUT.FLASH	*	UPDATE	
ISFATTR.OUTPUT.FORMS	*	UPDATE	

Resource Name	User Group	Access	Logging
ISFATTR.OUTPUT.PRMODE	*	UPDATE	
ISFATTR.OUTPUT.UCS	*	UPDATE	
ISFATTR.OUTPUT.WRITER	*	UPDATE	
ISFATTR.PROPTS.**	OPERAUDT SYSPAUDT	UPDATE	
ISFATTR.RDR.**	OPERAUDT SYSPAUDT	UPDATE	
ISFATTR.RESMON.**	OPERAUDT SYSPAUDT	UPDATE	
ISFATTR.RESOURCE.**	OPERAUDT SYSPAUDT	UPDATE	
ISFATTR.SELECT.**	OPERAUDT SYSPAUDT	UPDATE	
ISFATTR.SPOOL.**	OPERAUDT SYSPAUDT	UPDATE	
ISFAUTH.**	*	NONE	
ISFAUTH.DEST.**	APPDAUDT APPSAUDT	READ	
	OPERAUDT SYSPAUDT	ALTER	
ISFCFC	OPERAUDT SYSPAUDT	READ	
ISFCFS	OPERAUDT SYSPAUDT	READ	
ISFCMD.**	*	NONE	
ISFCMD.DSP.ACTIVE.jesx	*	READ	
ISFCMD.DSP.HELD.jesx	*	READ	
ISFCMD.DSP.INPUT.jesx	*	READ	
ISFCMD.DSP.JGROUP.*jesx*	*	READ	
ISFCMD.DSP.OUTPUT.jesx	*	READ	
ISFCMD.DSP.SCHENV.system	*	READ	
ISFCMD.DSP.STATUS.jesx	*	READ	
ISFCMD.DSP.SYMBOL.*system*	OPERAUDT SECAAUDT SYSPAUDT	READ	
ISFCMD.FILTER.ACTION	APPDAUDT APPSAUDT OPERAUDT SYSPAUDT	READ	
ISFCMD.FILTER.DEST	*	READ	
ISFCMD.FILTER.FINDLIM	*	READ	
ISFCMD.FILTER.INPUT	* SYSPAUDT	READ	
ISFCMD.FILTER.OWNER	*	READ	
ISFCMD.FILTER.PREFIX	*	READ	

Resource Name	User Group	Access	Logging
ISFCMD.FILTER.RSYS	APPDAUDT APPSAUDT OPERAUDT SECAAUDT SYSPAUDT	READ	
ISFCMD.FILTER.SYSID	*	READ	
ISFCMD.FILTER.SYSNAME	*	READ	
ISFCMD.MAINT.ABEND	SYSPAUDT	READ	
ISFCMD.MAINT.TRACE	APPDAUDT APPSAUDT SYSPAUDT	READ	
ISFCMD.ODSP.APF.system	APPDAUDT APPSAUDT OPERAUDT SECAAUDT SYSPAUDT	READ	
ISFCMD.ODSP.AS	APPDAUDT APPSAUDT OPERAUDT SECAAUDT SYSPAUDT	READ	
ISFCMD.ODSP.CFSTRUCT.sysname	OPERAUDT SECAAUDT SYSPAUDT	READ	
ISFCMD.ODSP.COUPLE.sysname	OPERAUDT SECAAUDT SYSPAUDT	READ	
ISFCMD.ODSP.CSR.sysname	OPERAUDT SECAAUDT SYSPAUDT	READ	
ISFCMD.ODSP.DEVACT.sysname	OPERAUDT SECAAUDT SYSPAUDT	READ	
ISFCMD.ODSP.ENCLAVE	APPDAUDT APPSAUDT OPERAUDT SECAAUDT SYSPAUDT	READ	
ISFCMD.ODSP.ENQUEUE.*system*	APPDAUDT APPSAUDT OPERAUDT SECAAUDT SYSPAUDT	READ	
ISFCMD.ODSP.DYNX	APPDAUDT APPSAUDT	READ	

Resource Name	User Group	Access	Logging
	OPERAUDT SECAAUDT SYSPAUDT		
ISFCMD.ODSP.FILESYS.sysname	OPERAUDT SECAAUDT SYSPAUDT	READ	
ISFCMD.ODSP.HCHECKER.system	APPDAUDT APPSAUDT OPERAUDT SECAAUDT SYSPAUDT	READ	
ISFCMD.ODSP.INITIATOR.jesx	APPDAUDT APPSAUDT OPERAUDT SECAAUDT SYSPAUDT	READ	
ISFCMD.ODSP.JOB0.jesx	APPDAUDT APPSAUDT OPERAUDT SECAAUDT SYSPAUDT	READ	
ISFCMD.ODSP.JOBCLASS.jesx	APPDAUDT APPSAUDT OPERAUDT SYSPAUDT	READ	
ISFCMD.ODSP.LINE.jesx	APPDAUDT APPSAUDT OPERAUDT SECAAUDT SYSPAUDT	READ	
ISFCMD.ODSP.LNK.system	APPDAUDT APPSAUDT OPERAUDT SECAAUDT SYSPAUDT	READ	
ISFCMD.ODSP.LPA.system	APPDAUDT APPSAUDT OPERAUDT SECAAUDT SYSPAUDT	READ	
ISFCMD.ODSP.MAS.jesx	APPDAUDT APPSAUDT OPERAUDT SECAAUDT SYSPAUDT	READ	

Resource Name	User Group	Access	Logging
ISFCMD.ODSP.NC.jesx	APPDAUDT APPSAUDT OPERAUDT SECAAUDT SYSPAUDT	READ	
ISFCMD.ODSP.NETACT.sysname	OPERAUDT SECAAUDT SYSPAUDT	READ	
ISFCMD.ODSP.NODE.jesx	APPDAUDT APPSAUDT OPERAUDT SECAAUDT SYSPAUDT	READ	
ISFCMD.ODSP.NS.jesx	APPDAUDT APPSAUDT OPERAUDT SECAAUDT SYSPAUDT	READ	
ISFCMD.ODSP.PAGE.system	APPDAUDT APPSAUDT OPERAUDT SECAAUDT SYSPAUDT	READ	
ISFCMD.ODSP.PARMLIB.system	APPDAUDT APPSAUDT OPERAUDT SECAAUDT SYSPAUDT	READ	
ISFCMD.ODSP.PRINTER.jesx	APPDAUDT APPSAUDT OPERAUDT SECAAUDT SYSPAUDT	READ	
ISFCMD.ODSP.PROCESS	APPDAUDT APPSAUDT OPERAUDT SECAAUDT SYSPAUDT	READ	
ISFCMD.ODSP.PROCLIB.JES2	APPDAUDT APPSAUDT OPERAUDT SECAAUDT SYSPAUDT	READ	
ISFCMD.ODSP.PUNCH.jesx	APPDAUDT APPSAUDT	READ	

Resource Name	User Group	Access	Logging
	OPERAUDT SECAAUDT SYSPAUDT		
ISFCMD.ODSP.READER.jesx	APPDAUDT APPSAUDT OPERAUDT SECAAUDT SYSPAUDT	READ	
ISFCMD.ODSP.RESMON.jesx	APPDAUDT APPSAUDT OPERAUDT SECAAUDT SYSPAUDT	READ	
ISFCMD.ODSP.RESOURCE.system	APPDAUDT APPSAUDT OPERAUDT SECAAUDT SYSPAUDT	READ	
ISFCMD.ODSP.SO.jesx	APPDAUDT APPSAUDT OPERAUDT SECAAUDT SYSPAUDT	READ	
ISFCMD.ODSP.SPOOL.jesx	APPDAUDT APPSAUDT OPERAUDT SECAAUDT SYSPAUDT	READ	
SFCMD.ODSP.SMSVOL.sysname	OPERAUDT SECAAUDT SYSPAUDT	READ	
ISFCMD.ODSP.SR.system	APPDAUDT APPSAUDT OPERAUDT SECAAUDT SYSPAUDT	READ	
ISFCMD.ODSP.STORGRP.sysname	OPERAUDT SECAAUDT SYSPAUDT	READ	
ISFCMD.ODSP.SUBSYS.sysname	OPERAUDT SECAAUDT SYSPAUDT	READ	
ISFCMD.ODSP.SYSLOG.jesx	APPDAUDT APPSAUDT AUDTAUDT	READ	

Resource Name	User Group	Access	Logging
	OPERAUDT SECAAUDT SYSPAUDT		
ISFCMD.ODSP.SYSTEM.system	APPDAUDT APPSAUDT OPERAUDT SECAAUDT SYSPAUDT	READ	
ISFCMD.ODSP.TRACKER.sysname	OPERAUDT SECAAUDT SYSPAUDT	READ	
ISFCMD.ODSP.ULOG.jesx	APPDAUDT APPSAUDT AUDTAUDT OPERAUDT SECAAUDT SYSPAUDT	READ	
ISFCMD.ODSP.VIRTSTOR.sysname	OPERAUDT SECAAUDT SYSPAUDT	READ	
ISFCMD.OPT.SERVER	SYSPAUDT	READ	
ISFDEV.	OPERAUDT SYSPAUDT	READ	
ISFDISP.	* OPERAUDT SYSPAUDT	READ	
ISFDYNEX.	OPERAUDT SYSPAUDT	READ	
ISFENC.subsystem-type.subsystem-name	OPERAUDT SYSPAUDT	ALTER	
ISFENQ.*majorname.sysname*	OPERAUDT SYSPAUDT	READ	
ISFFS.	OPERAUDT SYSPAUDT	READ	
ISFGT.	OPERAUDT SYSPAUDT	READ	
ISFINIT.Ixx.jesx	* APPDAUDT APPSAUDT	READ	
	OPERAUDT SYSPAUDT	CONTROL	
ISFJDD.	* OPERAUDT SYSPAUDT	READ	
ISFJOBCL.class.jesx	*	READ	

Resource Name	User Group	Access	Logging
	OPERAUDT SYSPAUDT	CONTROL	
ISFLINE.device-name.jesx	* APPDAUDT APPSAUDT	READ	
	OPERAUDT SYSPAUDT	ALTER	
ISFLNK.*datasetname*	OPERAUDT SYSPAUDT	READ	
ISFLPA.*datasetname*	OPERAUDT SYSPAUDT	READ	
ISFMEMB.member-name.jesx	*	READ	
	OPERAUDT SYSPAUDT	ALTER	
ISFNETACT.	OPERAUDT SYSPAUDT	READ	
ISFNODE.node-name.jesx	*	READ	
	OPERAUDT SYSPAUDT	CONTROL	
ISFNS.device-name.jesx	OPERAUDT SYSPAUDT	CONTROL	
ISFOPER.ANYDEST.jesx	* APPDAUDT APPSAUDT OPERAUDT SYSPAUDT	READ	
ISFOPER.DEST.jesx	APPDAUDT APPSAUDT OPERAUDT SYSPAUDT	READ	
ISFOPER.SYSTEM	AUDTAUDT OPERAUDT SECAAUDT SYSPAUDT	READ	
ISFPAG.*datasetname*	OPERAUDT SYSPAUDT	READ	
ISFPARM.*datasetname*	OPERAUDT SYSPAUDT	READ	
ISFPLIB.	OPERAUDT SYSPAUDT	READ	
ISFPROC.owner.process	APPDAUDT APPSAUDT	READ	
	OPERAUDT SYSPAUDT	ALTER	
ISFRES.resource.system	*	READ	

Resource Name	User Group	Access	Logging
	OPERAUDT SYSPAUDT	ALTER	
ISFRM.resource.jesx	OPERAUDT SYSPAUDT	CONTROL	
ISFSE.sched-env.system	OPERAUDT SYSPAUDT	READ	
ISFSMFVOL.	OPERAUDT SYSPAUDT	READ	
ISFSO.device-name.jesx	*	READ	
	OPERAUDT SYSPAUDT	ALTER	
ISFSOCK.device-name.jesx	OPERAUDT SYSPAUDT	CONTROL	
ISFSP.volser.jesx	APPDAUDT APPSAUDT	READ	
	OPERAUDT SYSPAUDT	CONTROL	
ISFSR.ACTION.org-system.jobname	OPERAUDT SYSPAUDT	READ	
ISFSR.REPLY.org-system.jobname	OPERAUDT SYSPAUDT	READ	
ISFSR.type.org-system.jobname	OPERAUDT SYSPAUDT	READ	
ISFSTORGRP.	OPERAUDT SYSPAUDT	READ	
ISFSUBSYS.	OPERAUDT SYSPAUDT	READ	
ISFSYM.*symbolname.sysname*	OPERAUDT SYSPAUDT	READ	
ISFSYS. *sysplexname.sysname*	OPERAUDT SYSPAUDT	READ	
SERVER.NOPARM	SYSPAUDT	READ	READ

Table 11-27: SDSF SAF Resource Descriptions

Resource Name	Description
GROUP.group-name.server-name	Membership in group
ISFACCR.ENCLAVE.**	Modify fields on the Enclaves (ENC) panel
ISFATTR.CHECK.**	Modify fields on the Health checker (CK) panel
ISFATTR.JOB.**	Modify job fields on the Display Active (DA), Input (I), and Status (ST) panels
ISFATTR.JOB.PRTDEST	Modify JES2 print destination name on ST and I panels

Resource Name	Description
ISFATTR.JOBCL.**	Modify Job Class panel fields
ISFATTR.LINE.**	Modify Line panel fields
ISFATTR.MEMBER.**	Modify Multi-Access Spool panel fields
ISFATTR.MODIFY.**	Modify Spool Offload panel fields
ISFATTR.NODE.**	Modify Node panel fields
ISFATTR.OFFLOAD.**	Modify Spool Offload panel fields
ISFATTR.OUTDESC.**	Modify output descriptor fields on the Job Data Set (JDS) and Output Descriptor (OD) panels
ISFATTR.OUTPUT.**	Modify output group fields on the Held Output (H) and Output Queue (O) panels
ISFATTR.OUTPUT.BURST	Modify burst indication field on H and O panels
ISFATTR.OUTPUT.CLASS	Modify JES2 output class on H and O panels
ISFATTR.OUTPUT.DEST	Modify JES2 print destination name on H and O panels
ISFATTR.OUTPUT.FCB	Modify output FCB ID on H and O panels
ISFATTR.OUTPUT.FLASH	Modify output flash ID on H and O panels
ISFATTR.OUTPUT.FORMS	Modify output form number on H and O panels
ISFATTR.OUTPUT.PRMODE	Modify printer process mode on H and O panels
ISFATTR.OUTPUT.UCS	Modify output UCS ID on H and O panels
ISFATTR.OUTPUT.WRITER	Modify output external writer name on H and O panels
ISFATTR.PROPTS.**	Modify Printer panel fields, lines and transmitter fields on the Lines panel, and Punch panel fields
ISFATTR.RDR.**	Modify fields on the Readers (RDR) panel
ISFATTR.RESMON.**	Modify fields on the Resource monitor (RM) panel
ISFATTR.RESOURCE.**	Modify WLM Resource panel fields
ISFATTR.SELECT.**	Modify selection criteria fields on the Initiator, Line, Printer, Punch, and Spool Offload panels
ISFATTR.SPOOL.**	Modify fields on the Spool volumes (SP) panel
ISFAUTH.DEST.destname	Specific destination name
ISFAUTH.DEST.destname	Display and list jobs
ISFAUTH.DEST.destname	All other functions such as cancel, purge, and release jobs
ISFCMD.DSP.ACTIVE.jesx	Display Active users (DA) panel command
ISFCMD.DSP.HELD.jesx	Held Output (H) panel command
ISFCMD.DSP.INPUT.jesx	Input Queue (I) panel command
ISFCMD.DSP.OUTPUT.jesx	Output Queue (O) panel command
ISFCMD.DSP.SCHENV.system	Scheduling Environment (SE) panel command
ISFCMD.DSP.STATUS.jesx	Status (ST) panel command

Resource Name	Description
ISFCMD.FILTER.ACTION	Gives user authority to issue the ACTION command.
ISFCMD.FILTER.DEST	Gives user authority to issue the DEST command.
ISFCMD.FILTER.FINDLIM	Gives user authority to issue the FINDLIM command.
ISFCMD.FILTER.INPUT	Gives user authority to issue the INPUT command.
ISFCMD.FILTER.OWNER	Gives user authority to issue the OWNER command.
ISFCMD.FILTER.PREFIX	Gives user authority to issue the PREFIX command.
ISFCMD.FILTER.RSYS	Gives user authority to issue the RSYS command.
ISFCMD.FILTER.SYSID	Gives user authority to issue the SYSID command.
ISFCMD.FILTER.SYSNAME	Gives user authority to issue the SYSNAME command.
ISFCMD.MAINT.ABEND	Cause SDSF to abend
ISFCMD.MAINT.TRACE	Create trace records with SDSF data
ISFCMD.ODSP.ENCLAVE	Enclave (ENC) panel command
ISFCMD.ODSP.INITIATOR.jesx	Initiator (INIT) panel command
ISFCMD.ODSP.JOBCLASS.jesx	Job Class (JC) panel command
ISFCMD.ODSP.LINE.jesx	Line (LI) panel command
ISFCMD.ODSP.MAS.jesx	Multi-Access Spool (MAS) panel command
ISFCMD.ODSP.NODE.jesx	Node (NO) panel command
ISFCMD.ODSP.PRINTER.jesx	Printer (PR) panel command
ISFCMD.ODSP.PROCESS	Process (PS) panel command
ISFCMD.ODSP.PUNCH.jesx	Punch (PUN) panel command
ISFCMD.ODSP.READER.jesx	Reader (RDR) panel command
ISFCMD.ODSP.RESOURCE.system	Resource (RES) panel command
ISFCMD.ODSP.SO.jesx	Spool Offload (SO) panel command
ISFCMD.ODSP.SPOOL.jesx	Spool (SP) volume panel command
ISFCMD.ODSP.SR.system	System Request (SR) panel command
ISFCMD.ODSP.SYSLOG.jesx	Syslog and Operlog (LOG) panel command
ISFCMD.ODSP.ULOG.jesx	User Log (ULOG) panel command
ISFCMD.OPT.SERVER	Use of the SERVER parameter on the SDSF command
ISFENC.subsystem-type.subsystem-name	Resume and quiesce an enclave
ISFINIT.Ixx.jesx	Display information about an initiator
ISFINIT.Ixx.jesx	All other functions such as start, stop, and drain an initiator
ISFJOBCL.class.jesx	Display information about a job class
ISFJOBCL.class.jesx	Modify job class characteristics

Resource Name	Description
ISFLINE.device-name.jesx	Display information about a line and associated transmitters and receivers
ISFLINE.device-name.jesx	Cancel data being transmitted and received
ISFLINE.device-name.jesx	All other functions such as start, stop, and disconnect a line
ISFMEMB.member-name.jesx	Display information about a MAS member
ISFMEMB.member-name.jesx	Stop and restart a member in a MAS
ISFMEMB.member-name.jesx	All other functions such as stop (abend) and stop (ignore activity) a MAS member
ISFNODE.node-name.jesx	Display information about a node
ISFNODE.node-name.jesx	All other functions such as start node communication
ISFNS.device-name.jesx	Network servers
ISFOPER.ANYDEST.jesx	Any destination name
ISFOPER.DEST.jesx	Browse and print Standard SYSIN/SYSOUT data sets
ISFOPER.SYSTEM	Command line commands (/)
ISFPROC.owner.process	Display information about a process
ISFPROC.owner.process	Cancel a process
ISFRES.resource.system	Display information about a WLM resource
ISFRES.resource.system	Modify the state of a WLM resource
ISFRM.resource.jesx	JES resources
ISFSE.sched-env.system	Display information about a scheduling environment
ISFSO.device-name.jesx	Display information about a spool offloader and associated transmitters and receivers
ISFSO.device-name.jesx	Cancel the job and output active on a transmitter and receiver
ISFSO.device-name.jesx	All other functions such as start and drain an offloader
ISFSOCK.device-name.jesx	Network connections
ISFSP.volser.jesx	Display information about a spool volume
ISFSP.volser.jesx	All other commands such as drain, start, and halt a spool volume
ISFSR.ACTION.org-system.jobname	Remove action messages from the display
ISFSR.REPLY.org-system.jobname	Reply to a system message
ISFSR.type.org-system.jobname	Display information about system request messages
SERVER.NOPARM	Reverting to ISFPARMS in assembler macro format

- jesx is the name of the JES2 subsystem
- destname is destination name of the job
- xx is the number of the JES2 initiator

- device-name is the name of the line, offloader, transmitter, or receiver
- node-name is the name of the JES2 node
- member-name is the name of the member defined in the MAS configuration
- class is the job class
- sched-env is the name of the scheduling environment
- system is the name of the MVS system (sysplex support)
- resource is the name of the WLM resource
- type is the message type (ACTION or REPLY)
- org-system is the name of the originating system
- jobname is the name of the job issuing the message
- subsystem-type is the type of subsystem such as MQ or DB2
- subsystem-name is the name of the subsystem
- owner is the owner of the z/OS UNIX process
- process is the name of the z/OS UNIX process
- volser is the serial number of the spool volume

Table 11-28: SDSF Server OPERCMDS Resources

Referenced by: ZISF0021

Resource Name	Description	Logging	User Group	Access
server.MODIFY.DISPLAY	Use of the DISPLAY parameter on the MVS MODIFY command (F) for the SDSF server		AUDTAUDT OPERAUDT SYSPAUDT	READ
server.MODIFY.*mod-parm*	Use of various parameters on the MVS MODIFY command for the SDSF server	UPDATE	SYSPAUDT	CONTROL

In the table:

- *server* is the name of the SDSF server specified either by the ISFPMAC macro or SDSF command.
- *mod-parm* is one of the following parameters specified on the MVS MODIFY command: DEBUG, FOLDMSG, LOGCLASS, LOGTYPE, REFRESH, START, STOP, TRACE, and TRCLASS.
- The server START and STOP commands are protected by MVS. The resources are MVS.START.STC.*server* and MVS.STOP.STC.*server* respectively. They are defined to the OPERCMDS resource class and require update authority.

Table 11-29: WebSphere MQ Queue Definition Authority SAF Resources

Resource Class	Resource Name	Description	Req'd Access	
			Server	Client
MQCMDS	*ssid*.DEFINE.QMODEL	Define queues	ALTER	NONE
MQCMDS	*ssid*.DEFINE.QALIAS	Define a queue alias	ALTER	NONE
MQADMIN	*ssid*.QUEUE.*prefix*.MODEL. QUEUE	Define queues	ALTER	NONE
MQQUEUE	*ssid*.SYSTEM.COMMAND. REPLY.MODEL.	Model queue (used to create the temporary ReplyTo queue)	ALTER	NONE
MQQUEUE	*ssid*.SYSTEM.COMMAND.INPUT	Command input queue (used to submit DEFINE commands)	ALTER	NONE

In the table:

- *ssid* is the MQ subsystem ID. This is the queue manager name specified on the COMM statement of ISFPARMS.
- *prefix* is a string that identifies the queue name. It is defined by the QPREFIX parameter of the COMM statement in ISFPARMS.

11.9 CL/SuperSession Requirements

Table 11-30: Required GLOBAL Common Profile Segment Options

Referenced by: ZCLS0040

Required GLOBAL Common Profile Segment Options		
Option	**Description**	**Required Value**
Administrator authority	Grants Administrator authority	N
Maintain customized menu	Allows the user to customize the application menu	Y
Add sessions to the menu	Allows the user to add VTAM sessions to the application menu	N
Note: The above options may be set to **Yes** only for the Administrator(s).		
Resource validation	Resource name (APPLID and/or Session Id) used when calling the ESM for dynamic application lists	A

Required GLOBAL Common Profile Segment Options		
Option	**Description**	**Required Value**
Timeout interval	Interval after which the user's session should be terminated for inactivity	00:15
Group profile name	Associated group profile	Will only be specified in a user level profile

Table 11-31: Required SuperSess GLOBAL Profile Segment Options

Referenced by: ZCLS0040

Required SupSess GLOBAL Profile Segment Options		
Option	**Description**	**Required Value**
Maintain trigger profile	Allows the user to save changes to the trigger (*hot-key* string) profile when logging off	N
Add triggers to profile	Allows the user to create trigger definitions and add them to the trigger (*hot-key* string) profile	N
Modify triggers in profile	Allows the user to modify existing trigger definitions in the trigger (*hot-key* string) profile	N
Switch terminals	Allows switching an active CL/SUPERSESSION session to another VTAM terminal	Y
Preserve sessions upon exit	Allows VTAM application sessions to remain active (until they time out) if the CL/SUPERSESSION session is terminated for some reason (e.g., switching to another CL/SUPERSESSION at another site or host)	N

11.10 CA ROSCOE Requirements

11.10.1 Access Attribute Translation

Throughout this guide, access attributes are listed as CONTROL, READ, or UPDATE. Table 11.32 displays the Advantage CA-Roscoe access attributes and the corresponding attributes you must specify for your external security system.

Table 11-32: Advantage CA-Roscoe Access Attributes—External Security System

Access Attribute	eTrust CA-ACF	eTrust CA-Top Secret	IBM RACF
CONTROL	DELETE	CONTROL	CONTROL
READ	READ	READ	READ
UPDATE	UPDATE	UPDATE	UPDATE

Table 11-33: CA ROSCOE Resources

Referenced by: ZROS0020

RESOURCE	ACCESS	USER GROUPS**
[rosid.]ROSCMD	CONTROL	
	READ	*
[rosid.]ROSCMD.ETSO.program	READ	*
[rosid.]ROSCMD.ETSO.ROSTMP	READ	*
[rosid.]ROSCMD.MONITOR.mon	READ	SYSPAUDT
[rosid.]ROSCMD.MONITOR	CONTROL	SYSPAUDT
[rosid.]ROSCMD.MONITOR.AMS	CONTROL	SYSPAUDT
	READ	*
[rosid.]ROSCMD.MONITOR.AWS	CONTROL	SYSPAUDT
[rosid.]ROSCMD.MONITOR.CA1	CONTROL	SYSPAUDT
	READ	*
[rosid.]ROSCMD.MONITOR.COB	CONTROL	SYSPAUDT
	READ	*
[rosid.]ROSCMD.MONITOR.CON	CONTROL	SYSPAUDT
		OPERAUDT
[rosid.]ROSCMD.MONITOR.DIS	CONTROL	SYSPAUDT
	READ	*
[rosid.]ROSCMD.MONITOR.DMS	CONTROL	SYSPAUDT
	READ	*
[rosid.]ROSCMD.MONITOR.DOC	CONTROL	SYSPAUDT
	READ	*
[rosid.]ROSCMD.MONITOR.EXP	CONTROL	SYSPAUDT
	READ	*
[rosid.]ROSCMD.MONITOR.IMP	CONTROL	SYSPAUDT
	READ	*
[rosid.]ROSCMD.MONITOR.JCK	CONTROL	SYSPAUDT
	READ	*
[rosid.]ROSCMD.MONITOR.MON	READ	SYSPAUDT
[rosid.]ROSCMD.MONITOR.PUR	READ	SYSPAUDT
	READ	*
[rosid.]ROSCMD.MONITOR	CONTROL	SYSPAUDT
	READ	*
[rosid.]ROSCMD.MONITOR.RTF	CONTROL	SYSPAUDT
[rosid.]ROSCMD.MONITOR.SIM	CONTROL	SECAAUDT
		SECDAUDT
		AUDTAUDT
[rosid.]ROSCMD.MONITOR.SOR	CONTROL	SYSPAUDT
	READ	*
[rosid.]ROSCMD.MONITOR.TIQ	CONTROL	SYSPAUDT
	READ	*
[rosid.]ROSCMD.MONITOR.TSS	CONTROL	SECAAUDT
		SECDAUDT
		AUDTAUDT
[rosid.]ROSCMD.MONITOR.ZAP	CONTROL	SYSPAUDT
[rosid.]ROSCMD.PRIV.ACCT.ACCT.BUFFERS	CONTROL	SYSPAUDT
[rosid.]ROSCMD.PRIV.ACCT.ACCT.FILES	CONTROL	SYSPAUDT

RESOURCE	ACCESS	USER GROUPS**
[rosid.]ROSCMD.PRIV.ACCT.ACCT.ROSCOE	CONTROL	SYSPAUDT
[rosid.]ROSCMD.PRIV.ACCT.ACCT.SMF	CONTROL	SYSPAUDT
[rosid.]ROSCMD.PRIV.ACCT.ACCT.STATUS	CONTROL	SYSPAUDT
[rosid.]ROSCMD.PRIV.ACCT.ACCT.SWITCH	CONTROL	SYSPAUDT
[rosid.]ROSCMD.PRIV.ACCT.RTM.DISPLAY	CONTROL	SYSPAUDT
[rosid.]ROSCMD.PRIV.ACCT.RTM.INCL	CONTROL	SYSPAUDT
[rosid.]ROSCMD.PRIV.ACCT.RTM.LIST	OPERATOR	
[rosid.]ROSCMD.PRIV.ACCT.RTM.ON	CONTROL	SYSPAUDT
[rosid.]ROSCMD.PRIV.ETSO.CANCEL	OPERATOR	
[rosid.]ROSCMD.PRIV.ETSO.FREE	CONTROL	SYSPAUDT
[rosid.]ROSCMD.PRIV.ETSO.QUERY.ALLOCATE	OPERATOR	
[rosid.]ROSCMD.PRIV.ETSO.QUERY.CALL	CONTROL	SYSPAUDT
[rosid.]ROSCMD.PRIV.OPER.DEBUG.ADD	READ	
[rosid.]ROSCMD.PRIV.OPER.DEBUG.ANY	CONTROL	SYSPAUDT
[rosid.]ROSCMD.PRIV.OPER.DEBUG.C	CONTROL	SYSPAUDT
[rosid.]ROSCMD.PRIV.OPER.DEBUG.D	CONTROL	SYSPAUDT
[rosid.]ROSCMD.PRIV.OPER.DEBUG.LAST	CONTROL	SYSPAUDT
[rosid.]ROSCMD.PRIV.OPER.DEBUG.NAME	CONTROL	SYSPAUDT
[rosid.]ROSCMD.PRIV.OPER.DEBUG.NEW	CONTROL	SYSPAUDT
[rosid.]ROSCMD.PRIV.OPER.DEBUG.SDUMP	CONTROL	SYSPAUDT
[rosid.]ROSCMD.PRIV.OPER.DEBUG.SPACE	CONTROL	SYSPAUDT
[rosid.]ROSCMD.PRIV.OPER.DEBUG.SPIE	READ	
[rosid.]ROSCMD.PRIV.OPER.DEBUG.SUBTST	CONTROL	SYSPAUDT
[rosid.]ROSCMD.PRIV.OPER.LIBCACHE.ON	CONTROL	SYSPAUDT
[rosid.]ROSCMD.PRIV.OPER.LIBCACHE.PURGE	READ	
[rosid.]ROSCMD.PRIV.OPER.MESSAGE	CONTROL	SYSPAUDT
[rosid.]ROSCMD.PRIV.OPER.OPER.INTERVAL	CONTROL	SYSPAUDT
[rosid.]ROSCMD.PRIV.OPER.OPER.INTERVAL	CONTROL	SYSPAUDT
[rosid.]ROSCMD.PRIV.OPER.OPER.LERPRT	CONTROL	SYSPAUDT
[rosid.]ROSCMD.PRIV.OPER.OPER.LERPRT	CONTROL	SYSPAUDT
[rosid.]ROSCMD.PRIV.OPER.OPER.MESSAGES	CONTROL	SYSPAUDT
[rosid.]ROSCMD.PRIV.OPER.OPER.MESSAGES	CONTROL	SYSPAUDT
[rosid.]ROSCMD.PRIV.OPER.OPER.NETSTAT	CONTROL	SYSPAUDT
[rosid.]ROSCMD.PRIV.OPER.OPER.NETSTAT	CONTROL	SYSPAUDT
[rosid.]ROSCMD.PRIV.OPER.OPER.OFF	CONTROL	SYSPAUDT
[rosid.]ROSCMD.PRIV.OPER.OPER.RESTART	CONTROL	SYSPAUDT
[rosid.]ROSCMD.PRIV.OPER.OPER.RETRY	CONTROL	SYSPAUDT
[rosid.]ROSCMD.PRIV.OPER.OPER.ROSLOG	CONTROL	SYSPAUDT
[rosid.]ROSCMD.PRIV.OPER.OPER.SEND	UPDATE	SYSPAUDT
[rosid.]ROSCMD.PRIV.OPER.OPER.SPOOL	UPDATE	SYSPAUDT
[rosid.]ROSCMD.PRIV.OPER.OPER.STATUS	CONTROL	SYSPAUDT
[rosid.]ROSCMD.PRIV.OPER.OPER.STATUSX	CONTROL	SYSPAUDT
[rosid.]ROSCMD.PRIV.OPER.OPER.STATUSX	CONTROL	SYSPAUDT
[rosid.]ROSCMD.PRIV.OPER.OPER.STOP	CONTROL	SYSPAUDT
[rosid.]ROSCMD.PRIV.OPER.OPER.VTAM	CONTROL	SYSPAUDT
[rosid.]ROSCMD.PRIV.OPER.PEEK	READ	*
[rosid.]ROSCMD.PRIV.OPER.RCSTRACE	CONTROL	SYSPAUDT
[rosid.]ROSCMD.PRIV.OPER.ROZAP.ABEND	CONTROL	
		*

RESOURCE	ACCESS	USER GROUPS**
[rosid.]ROSCMD.PRIV.OPER.ROZAP.DUMP	CONTROL	
		*
[rosid.]ROSCMD.PRIV.OPER.ROZAP.ENABLE	CONTROL	
[rosid.]ROSCMD.PRIV.OPER.ROZAP.FLUSH	CONTROL	
[rosid.]ROSCMD.PRIV.OPER.ROZAP.LOCK	CONTROL	
		*
[rosid.]ROSCMD.PRIV.OPER.ROZAP.REFRESH	CONTROL	
		*
[rosid.]ROSCMD.PRIV.OPER.ROZAP.RELOAD	CONTROL	
		*
[rosid.]ROSCMD.PRIV.OPER.ROZAP.SHUTDOWN	CONTROL	
		*
[rosid.]ROSCMD.PRIV.OPER.ROZAP.SIGNON	CONTROL	
		*
[rosid.]ROSCMD.PRIV.OPER.ROZAP.SUBMIT	CONTROL	
[rosid.]ROSCMD.PRIV.OPER.ROZAP.VTRACE	CONTROL	
[rosid.]ROSCMD.PRIV.ROSLIB	CONTROL	ROSCAUDT
		SECAAUDT
		SECDAUDT
[rosid.]ROSCMD.PRIV.ROSUPS	CONTROL	ROSCAUDT
		SECAAUDT
		SECDAUDT
[rosid.]ROSCMD.PRIV.RPS.PRINT.CANCEL	CONTROL	SYSPAUDT
[rosid.]ROSCMD.PRIV.RPS.PRINT.HOLD	CONTROL	SYSPAUDT
[rosid.]ROSCMD.PRIV.RPS.PRINT.MOD	CONTROL	SYSPAUDT
[rosid.]ROSCMD.PRIV.RPS.PRINT.ROUTE	CONTROL	SYSPAUDT
[rosid.]ROSCMD.PRIV.RPS.PRINT.START	CONTROL	SYSPAUDT
[rosid.]ROSCMD.RPF.pfx.mem	READ	*

* - All Users
** **Note:** Consult the current Broadcom Advantage CA-Roscoe Security Administration Guide for the latest information on Roscoe resources. The information found in that reference as well as the information in this Addendum specifies suggested security specifications. However, the Site Security Plan should be the authoritative resource for access.

ROSCAUTH - ROSCOE Master and Maintenance IDs

11.11 Vanguard Security Solutions Requirements

Table 11-34: Vanguard Security Solutions Resources

Referenced by: ZVSS0020

Resource Names	Logging	User Group	Access
IRR.PASSWORD.RESET		*	None
VIP$.NOEDIT.COMMANDS		*	None
VRA$.		*	None
VRA$.ACSTASK	Read	AUDTAUDT	Read

Resource Names	Logging	User Group	Access
		SECAAUDT	
VRA$.DIGTCERT.EDIT.COMMAND		AUDTAUDT SECAAUDT	Read
VRA$.LIVE.USER		AUDTAUDT SECAAUDT SYSPAUDT	Read
VRA$.PASSWORD	Read	AUDTAUDT SECAAUDT SECDAUDT	Read
VRA$.REFRESH.		AUDTAUDT SECAAUDT SECDAUDT	Read
VRA$.REFRESH.GENERIC		AUDTAUDT SECAAUDT SECDAUDT	Read
VRA$.REFRESH.GLOBAL		AUDTAUDT SECAAUDT SECDAUDT	Read
VRA$.REFRESH.RACLIST		AUDTAUDT SECAAUDT SECDAUDT	Read
VRA$.REFRESH.WHENPROGRAM		AUDTAUDT SECAAUDT SECDAUDT	Read
VRA$.SCOPE		*	None
		AUDTAUDT SECAAUDT SECDAUDT SYSPAUDT	Read
VRA$.VRAACCA	Read	AUDTAUDT SECAAUDT SECDAUDT SYSPAUDT	Read
VRA$.VRAADUPA	Read	AUDTAUDT SECAAUDT SECDAUDT	Read
VRA$.VRABRPT	Read	AUDTAUDT SECAAUDT SECDAUDT SYSPAUDT	Read
VRA$.VRACMND	Read	AUDTAUDT SECAAUDT SECDAUDT	Read
VRA$.VRADSNA	Read	AUDTAUDT SECAAUDT	Read

Resource Names	Logging	User Group	Access
		SECDAUDT SYSPAUDT	
VRA$.VRAEXTR	Read	AUDTAUDT SECAAUDT SECDAUDT SYSPAUDT	Read
VRA$.VRAGRPT	Read	AUDTAUDT SECAAUDT SECDAUDT SYSPAUDT	Read
VRA$.VRAOCMD		AUDTAUDT SECAAUDT SECDAUDT	Read
VRA$.VRAORPT	Read	AUDTAUDT SECAAUDT SECDAUDT SYSPAUDT	Read
VRA$.VRASRPT	Read	AUDTAUDT SECAAUDT SECDAUDT	Read
VRA$.VRAVTOC	Read	AUDTAUDT SECAAUDT SECDAUDT SYSPAUDT	Read
VRA$.VRTRAA	Read	AUDTAUDT SECAAUDT SECDAUDT SYSPAUDT	Read
VRAADM$.VARIABLES	Read	SECAAUDT SECDAUDT	Read
VRAIDM$.	Read	SECAAUDT	Update
VRAIDM$.classname.profile	Read	SECAAUDT SECDAUDT	Update
VRAPW$.*.**	Read	*	None
VRAPW$.ALL	Read	SECAAUDT	Read
VRAPW$.ALLOW.HREVOKE	Read	SECAAUDT SECDAUDT	Read
VRAPW$.groupid	Read	SECAAUDT SECDAUDT	Read
VRAPW$.NOHISTCHK	Read	*	None
VRAPW$.NONE.AUDITOR	Read	SECDAUDT	Read
VRAPW$.NONE.OPERATIONS	Read	SECDAUDT	Read
VRAPW$.NONE.SPECIAL	Read	SECDAUDT	Read
VRAPW$.NONE.target-userid	Read	*	None

Resource Names	Logging	User Group	Access
VRAPW$.NONE.target-userid-default-group	Read	*	None
VRAPW$.userid	Read	SECAAUDT SECDAUDT	Read
VRAPWHR$.groupid	Read	SECAAUDT SECDAUDT	Read
VRAPWHR$.userid	Read	SECAAUDT SECDAUDT	Read
VRAUD$.classname	Read	SECAAUDT	Update
VRAUD$.classname.fieldname	Read	SECAAUDT	Update
VRAUD$.classname.fieldname.1stnode	Read	SECAAUDT SECDAUDT	Update
VSA$.VSA	Read	SECAAUDT SECDAUDT	Read
VSR$.**		*	None
VSR$.VSR	Read	AUDTAUDT SECAAUDT SECDAUDT	Read

* - All Users

Table 11-35: Vanguard Security Solutions Resources Description

Resource Names	Description
IRR.PASSWORD.RESET	This profile allows users to use NOEXPIRE. To use NOEXPIRE, you must allow the user UPDATE access to the RACF FACILITY class profile.
VIP$.NOEDIT.COMMANDS	Controls the Security Server Command component. If READ access or greater is allowed, the user will not be presented with an ISPF edit session and the generated commands will be executed immediately. It is recommended that this profile be defined with a UACC of NONE.
VRA$.ACSTASK	Specifies user(s) who are permitted to execute Administrator Automated Command Scheduler, VRAAJACS. A user with READ access or greater has authority to execute the Automated Command Scheduler. It is recommended that this profile be defined with a UACC of NONE. This profile is required for the Automated Command Scheduler.
VRA$.DIGTCERT.EDIT.COMMAND	Controls RACDCERT command editing. If READ access or greater is allowed, the user will be presented with an ISPF edit session to allow review or modification of the RACDCERT command.
VRA$.LIVE.USER	Controls the use of Live RACF database access in Administrator. If READ access or greater is allowed, Administrator user may access the live RACF database

Resource Names	Description
	where available. It is recommended that this profile be defined with a UACC of NONE. It must have the APPLDATA field populated with a string userid/groupid. Userid is a RACF defined user who has READ access to the RACF database. Groupid is a RACF defined group, that userid is connected to. This userid/groupid combination is used to gain access to the live RACF database.
VRA$.PASSWORD	Identity Manager - The RACFCMDS member also includes the commands to define profiles and permit access to Identity Manager functions. For information about these profile definitions, refer to the *Vanguard Administrator Technical Reference Guide*.
VRA$.REFRESH.*	This profile is the High Level Control of SETROPTS REFRESH Command Generation.
VRA$.REFRESH.GENERIC	This profile pertains to in-storage generic profiles. By permitting a user or group access to this profile with at least READ access, you enable the automatic generation of SETROPTS REFRESH commands for in-storage generic profiles within the specified general resource class that has had a change within one of its profiles.
VRA$.REFRESH.GLOBAL	This profile controls frequently accessed profiles for public resources. By permitting user or group access to this profile with at least READ access, you enable the automatic generation of SETROPTS REFRESH commands for this class of resources when a profile within this class had been changed.
VRA$.REFRESH.RACLIST	This profile controls general resource class profiles. By permitting user or group access to this profile with at least READ access, you enable the automatic generation of SETROPTS REFRESH commands for the particular general resource class which has had any of its profiles changed.
VRA$.REFRESH.WHENPROGRAM	This profile has to do with activating program control. By permitting a user or group access to this profile with at least READ access, you enable the automatic generation of SETROPTS REFRESH commands for activating program control that provides both access control to load modules and program access to data sets.
VRA$.SCOPE	When this profile is defined with a UACC of NONE, GROUP SPECIAL administrators are only allowed to see those profiles within their RACF scope of authority. To allow a user or group to override

Resource Names	Description
	scoping support, PERMIT the user/group READ access to this profile.
VRA$.VRAACCA	Batch Access Analyzer
VRA$.VRAADUPA	Access List Anomaly Analysis
VRA$.VRABRPT	Batch RACF Reports
VRA$.VRACMND	Batch Commands
VRA$.VRADSNA	Data Set Access Analysis
VRA$.VRAEXTR	Extract Process
VRA$.VRAGRPT	Batch Group Tree Analysis
VRA$.VRAOCMD	Online Commands
VRA$.VRAORPT	Online RACF Reports
VRA$.VRASRPT	VRA Scope of Authority Analysis
VRA$.VRAVTOC	VTOC Data Set Reports
VRA$.VRTRAA	On-line Access and Authorization
VRAADM$.VARIABLES	Initialization Variable Maintenance
VRAIDM$.*.*	VRA Inst Data High Level
VRAIDM$.classname.profile	Controls access to the installation data field in RACF profiles when using the Administrator Installation Data Management function. It is recommended that these profiles be defined with a UACC of NONE, specifically permitting users READ or UPDATE access. The classname can be any valid RACF general resource class name, GROUP, USER, or DATASET. The profile can be a specific profile name, or a generic, to limit the profiles that can be administered. For example, if you define the profile VRAIDM$.USER.* with a UACC of NONE, and PERMIT user FREDV to the profile with access of UPDATE, FREDV would be allowed to view and alter the installation data fields of any RACF user profiles. **Note:** Asterisks (*) or percent signs (%) encountered in a Dataset or General Resource profile are replaced by a lowercase x. If an ampersand (&), which indicates the presence of a &RACFVARS symbolic is encountered, the return and reason codes will be set to produce the USER NOT AUTHORIZED message on the panel. Therefore, profiles that contain these symbolics will not have their Installation Data updated via this method.
VRAPW$.*.**	This profile prevents unauthorized access to Identity Manager. Define it with a UACC of NONE, and do not permit any users or groups. - - Important: If you define this profile with a UACC greater than NONE or permit access to this profile, unpredictable results are likely to occur as a result of access to profiles, such

Resource Names	Description
	as those listed in Table 7. Profiles Disallowing Identity Management.
VRAPW$.ALL	Allows access to ALL users.
VRAPW$.ALLOW.HREVOKE	Any non-System SPECIAL user that requires Hard Revoke authority must have READ access to this profile. In addition, the user needs READ access to an appropriate VRAPWHR$ profile.
VRAPW$.groupid	This profile allows access by group name. *groupid* in the profile name should be the same as the default group name of the user ID specified in the command. An optional profile, VRAPWCON.CONGRP, can be defined in the RACF FACILITY class to change the meaning of the VRAPW$.*groupid* profile. If the user has READ access to this optional profile, the group name specified in the VRAPW$.*groupid* profile changes to mean any group a user is connected to, not just the user's default group.
VRAPW$.NOHISTCHK	By permitting user or group access to this profile with at least READ access, passwords changed by that user or group are not compared to the current password or the password history. If you want this to be the default action for all users that administer passwords, create the profile with a UACC of READ.
VRAPW$.NONE.AUDITOR	By permitting user or group access to this profile with at least READ access, you prevent the user or group from administering passwords for any user with the RACF System Auditor attribute, regardless of other granted authority.
VRAPW$.NONE.OPERATIONS	By permitting user or group access to this profile with at least READ access, you prevent the user or group from administering passwords for any user with the RACF Operations attribute, regardless of other granted authority.
VRAPW$.NONE.SPECIAL	By permitting user or group access to this profile with at least READ access, you prevent the user or group from administering passwords for any user with the RACF System SPECIAL attribute, regardless of other granted authority.
VRAPW$.NONE.target-userid	By permitting user or group access to this profile with at least READ access, you prevent the user or group from administering passwords for this target User ID, regardless of other granted authority. You can therefore, prevent a user with READ access to the VRAPW$.ALL profile from administering the password of a specific user, while allowing them to administer all other user passwords.

Resource Names	Description
VRAPW$.NONE.target-userid-default-group	By permitting user or group access to this profile with at least READ access, you prevent the user or group from administering passwords for a target Userid that has this group as a default group, regardless of other authority granted. You can, therefore prevent a user with READ access to the VRAPW$.ALL profile from administering the password for all users with a specific default group, while allowing them to administer all other users' passwords.
VRAPW$.userid	This profile allows access by user ID. *userid* in the profile name should be the same as the user ID specified in the command.
VRAPWHR$.groupid	*groupid* is the ID of the default group of the user specified in the command. An optional profile, VRAPWCON.CONGRP, can be defined in the RACF FACILITY class to change the meaning of the VRAPWHR$.*groupid* profile. If the user has read access to this optional profile, the Group ID in the VRAPWHR$.*groupid* profile changes to mean any group a user is connected to, not just their default group.
VRAPWHR$.userid	*userid* is the user ID specified in the command.
VRAUD$.classname	Controls access to the User Data fields in the base segment of RACF profiles, when using the Administrator User Data Management function. It is recommended that these profiles be defined with a UACC of NONE. You must then define specific access to permit users READ or UPDATE access. The classname can be any valid RACF general resource class name, GROUP, USER, or DATASET. These profiles allow initial access to the User Data of each class.
VRAUD$.classname.fieldname	Standard Authority Checking: Controls access to a specific User Data field in a given class. e.g., if you define the profile VRAUD$.USER.FIRSTNME with a UACC of NONE, and PERMIT user FREDV to the profile with access of UPDATE, FREDV would be allowed to view and alter the User Data field named FIRSTNME of any RACF user profile. **Note:** Standard Authority Checking is the default.
VRAUD$.classname.fieldname.1stnode	Enhanced Authority Checking; Controls access to a specific User Data field in a specific profile in a given class. E.g., if you define the profile VRAUD$.DATASET.CHKKEY.PAYROLL with a UACC of NONE, and PERMIT user FREDV to the profile with access of UPDATE, FREDV would be

Resource Names	Description
	allowed to view and alter the Dataset User Data field named CHKKEY in all of the Dataset profiles with a lsnode of PAYROLL. **Note:** In order to use the Enhanced Authority Checking, the UDM_ENHANCED_SECURITY keyword must be set to Y in the VRAOPT00 , member of the VIPOPTS DDNAME.
VSA$.VSA	Grants access to Analyzer online and batch reports
VSR$.VSR	Grants access to Advisor online and batch reports

11.12 Compuware Abend-AID Requirements

Table 11-36: Compuware Abend-AID Resources

Referenced by: ZAID0020

Function	Resource Names	User Group
LOGON.FD	prefix.SERVER.LOGON.FD.servername	APPDAUDT APPSAUDT OPERAUDT SYSPAUDT
LOGON.IC	prefix.SERVER.LOGON.IC.servername	SYSPAUDT
LOGON.TC	prefix.SERVER.LOGON.TC.servername	OPERAUDT SYSPAUDT
DDIRTx	prefix.DDIRTx.servername.applid_of_CICS_region.tranid_of_entry_in_directory	APPDAUDT APPSAUDT SYSPAUDT
DDIRBx.	prefix.DDIRBx.servername.jobname_of_address_space_in_report	APPDAUDT APPSAUDT SYSPAUDT
DDIRSx	prefix.DDIRSx.servername.jobname_of_address_space_in_dump	APPDAUDT APPSAUDT SYSPAUDT
IMPORT	prefix.SERVER.IMPORT.servername	APPDAUDT APPSAUDT SYSPAUDT
IPCS	prefix.SERVER.IPCSCMD.servername	APPDAUDT APPSAUDT SYSPAUDT
SHUTDOWN	prefix.SERVER.CONTROL.servername	OPERAUDT SYSPAUDT
LOGSPOOL	prefix.SERVER.CONTROL.servername	OPERAUDT SYSPAUDT
REXX	prefix.SERVER.REXXAPI.servername	APPDAUDT APPSAUDT SYSPAUDT

prefix - The value specified for the EXTERNAL_SECURITY_PREFIX of the Abend-AID Viewer server configuration parameter.

servername - The name of the viewing server specified as a parameter on the execute statement of the Abend-AID Viewer server JCL.

11.13 BMC MAINVIEW Requirements

Table 11-37: BMC MAINVIEW Resources

Referenced by: ZMVZ0020

Resource	User Group
BBM.ssid.CN	AUTOAUDT DASDAUDT MQSAAUDT MV STCs MVREAD MVUPDT PCSPAUDT SYSPAUDT
BBM.COMMON.ASU.PA	NONE
BBM.systemid.MVALARM.targetid.TC	MV STCs
BBM.systemid.MVALERT.targetid.TC	MV STCs
BBM.systemid. MVAO.targetid.TC	MV STCs
BBM.systemid.MVCSMON.targetid.TA	AUTOAUDT DASDAUDT MQSAAUDT MVUPDT PCSPAUDT SYSPAUDT
BBM.systemid.MVCSMON.targetid.TC	MV STCs
BBM.systemid.MVMVS.targetid.TA	AUTOAUDT DASDAUDT MQSAAUDT MV STCs MVUPDT PCSPAUDT SYSPAUDT
BBM.systemid.MVMVS.targetid.TC	MV STCs
BBM.systemid.MVSPS.targetid.TA	AUTOAUDT DASDAUDT MQSAAUDT MVREAD MVUPDT PCSPAUDT SYSPAUDT

Resource	User Group
BBM.systemid.MVSPS.targetid.TC	MV STCs
BBM.systemid.MVSRM.targetid.TC	MV STCs
BBM.systemid.MVUSS.targetid.TA	AUTOAUDT DASDAUDT MQSAAUDT MV STCs MVUPDT PCSPAUDT SYSPAUDT
BBM.systemid.MVUSS.targetid.TC	MV STCs
BBM.systemid.PLEXMGR.targetid.TA	AUTOAUDT DASDAUDT MQSAAUDT MV STCs MVREAD MVUPDT PCSPAUDT SYSPAUDT
BBM. MVCICS.targetid.AA	AUTOAUDT DASDAUDT MQSAAUDT CICDAUDT PCSPAUDT SYSPAUDT
BBM.MVCICS.targetid.QQ210.*	SYSPAUDT
BBM.MVCICS.targetid.SET*.*	SYSPAUDT
BBM.MVCSMON.targetid.AA	AUTOAUDT DASDAUDT MQSAAUDT MVUPDT PCSPAUDT SYSPAUDT
BBM.MVCSMON.targetid.COMMON.AA	SYSPAUDT
BBM.MVCSMON.targetid.CSMON.PA	AUTOAUDT DASDAUDT MQSAAUDT MVUPDT PCSPAUDT SYSPAUDT
BBM.MVCSMON.targetid.MYA20.	SYSPAUDT
BBM.MVCSMON.targetid.MYA30.OD	SYSPAUDT
BBM.MVDB2.targetid.AA	SYSPAUDT AUTOAUDT DASDAUDT DABAAUDT MV STCs

Resource	User Group
	MVREAD PCSPAUDT
BBM. MVCICS.targetid.*.AO	SYSPAUDT
BBM.MVDB2.targetid.*.AO	SYSPAUDT
BBM. MVCICS.targetid.*.OD	AUTOAUDT DASDAUDT DABAAUDT MV STCs CICDSAUDT PCSPAUDT SYSPAUDT
BBM.MVDB2.targetid.*.OD	AUTOAUDT DASDAUDT DABAAUDT MV STCs MVREAD PCSPAUDT SYSPAUDT
BBM. MVCICS.targetid.*.*.OA	AUTOAUDT DASDAUDT DABAAUDT CICDSAUDT PCSPAUDT SYSPAUDT
BBM.MVDB2.targetid.*.*.OA	AUTOAUDT DASDAUDT DABAAUDT MVREAD PCSPAUDT SYSPAUDT
BBM.MVMVS.targetid.AA	AUTOAUDT DASDAUDT MQSAAUDT MVUPDT PCSPAUDT SYSPAUDT
BBM.MVMVS.targetid.COMMON.AA	SYSPAUDT
BBM.MVMVS.targetid.D*.OD	AUTOAUDT DASDAUDT MQSAAUDT MV STCs MVUPDT PCSPAUDT SYSPAUDT
BBM.MVMVS.targetid.DC101.CLCMD.OA	AUTOAUDT DASDAUDT

Resource	User Group
	MVUPDT PCSPAUDT SYSPAUDT
BBM.MVMVS.targetid.MVSCOPE.PA	SYSPAUDT
BBM.MVMVS.targetid.MYA20.	SYSPAUDT
BBM.MVMVS.targetid.MYA30.OD	SYSPAUDT
BBM.MVSPS.targetid.*.OD	AUTOAUDT DASDAUDT MQSAAUDT MVREAD MVUPDT PCSPAUDT SYSPAUDT
BBM.MVSPS.targetid.AA	AUTOAUDT DASDAUDT MQSAAUDT MVREAD MVUPDT PCSPAUDT SYSPAUDT
BBM.MVSPS.targetid.COMMON.AA	SYSPAUDT
BBM.MVSPS.targetid.MYA20.	SYSPAUDT
BBM.MVSPS.targetid.MYA30.OD	SYSPAUDT
BBM.MVSPS.targetid.SYSPROG.PA	MVREAD MVUPDT SYSPAUDT
BBM.MVUSS.targetid.*.OD	DASDAUDT MQSAAUDT MV STCs MVUPDT SYSPAUDT
BBM.MVUSS.targetid.AA	MVUPDT SYSPAUDT
BBM.MVUSS.targetid.COMMON.AA	SYSPAUDT
BBM.MVUSS.targetid.MYA20.	SYSPAUDT
BBM.MVUSS.targetid.MYA30.OD	SYSPAUDT
BBM.MVUSS.targetid.UCE48.OD	SYSPAUDT
BBM.MVUSS.targetid.UCEC0.OD	SYSPAUDT
BBM.MVUSS.targetid.UCEC2.OD	SYSPAUDT
BBM.MVUSS.targetid.UCEC3.OD	SYSPAUDT
BBM.MVUSS.targetid.UCEC4.OD	AUTOAUDT MQSAAUDT MVREAD MVUPDT PCSPAUDT SYSPAUDT

Resource	User Group
BBM.MVUSS.targetid.UCECC.OD	SYSPAUDT
BBM.MVUSS.targetid.UCECE.OD	SYSPAUDT
BBM.MVUSS.targetid.UCED0.OD	SYSPAUDT
BBM.MVUSS.targetid.UCED1.OD	SYSPAUDT
BBM.MVUSS.targetid.UCED6.OD	MV STCs SYSPAUDT
BBM.MVUSS.targetid.UEC3A.AO	SYSPAUDT
BBM.MVUSS.targetid.UEC3A.BPXLIMIT.OA	SYSPAUDT
BBM.MVUSS.targetid.UEC3A.OD	AUTOAUDT MQSAAUDT MVREAD MVUPDT PCSPAUDT SYSPAUDT
BBM.MVUSS.targetid.UUSSD.ACTIVATE.OA	SYSPAUDT
BBM.MVUSS.targetid.UUSSD.AO	SYSPAUDT
BBM.MVUSS.targetid.UUSSD.DEACT.OA	SYSPAUDT
BBM.MVUSS.targetid.UUSSD.OD	SYSPAUDT
BBM.PLEXMGR.targetid.	SYSPAUDT
BBM.PLEXMGR.targetid.AA	SYSPAUDT
BBM.PLEXMGR.targetid.CCE92.OD	AUTOAUDT DASDAUDT MQSAAUDT MVREAD MVUPDT PCSPAUDT SYSPAUDT
BBM.PLEXMGR.targetid.COMMON.AA	SYSPAUDT
BBM.PLEXMGR.targetid.CYA10.	SYSPAUDT
BBM.PLEXMGR.targetid.CYA10.OD	AUTOAUDT DASDAUDT MQSAAUDT MVREAD MVUPDT PCSPAUDT SYSPAUDT
BBM.PLEXMGR.targetid.CYA50.	SYSPAUDT
BBM.PLEXMGR.targetid.CYA50.OD	AUTOAUDT DASDAUDT MQSAAUDT MVREAD MVUPDT PCSPAUDT SYSPAUDT
BBM.PLEXMGR.targetid.CYA60.OD	AUTOAUDT DASDAUDT

Resource	User Group
	MQSAAUDT MVREAD MVUPDT PCSPAUDT SYSPAUDT
BBM.PLEXMGR.targetid.CYA70.OD	SYSPAUDT
BBM.PLEXMGR.targetid.CYA80.	SYSPAUDT
BBM.PLEXMGR.targetid.CYA90.	SYSPAUDT
BBM.PLEXMGR.targetid.CYAA0.OD	SYSPAUDT
BBM.PLEXMGR.targetid.CYAB0.	SYSPAUDT
BBM.PLEXMGR.targetid.CYAC0.OD	AUTOAUDT DASDAUDT MQSAAUDT MVREAD MVUPDT PCSPAUDT SYSPAUDT
BBM.PLEXMGR.targetid.CYAD0.OD	SYSPAUDT
BBM.PLEXMGR.targetid.CYAE0.OD	SYSPAUDT
BBM.PLEXMGR.targetid.CZZ01.OD	SYSPAUDT
BBM.PLEXMGR.targetid.CZZ02.OD	SYSPAUDT
BBM.PLEXMGR.targetid.MYA20.	SYSPAUDT
BBM.PLEXMGR.targetid.MYA20.OD	AUTOAUDT DASDAUDT MQSAAUDT MVUPDT PCSPAUDT SYSPAUDT
BBM.PLEXMGR.targetid.MYA30.OD	AUTOAUDT DASDAUDT MQSAAUDT MVUPDT PCSPAUDT SYSPAUDT
BBM.PLEXMGR.targetid.MYA40.	SYSPAUDT
BBM.PLEXMGR.targetid.MYB30.OD	MV STCs SYSPAUDT
BBM.PLEXMGR.targetid.MYD00.OD	MV STCs SYSPAUDT

ssid - The subsystem id specified in the Mainview CAS and PAS procedures.

systemid - The SYSNAME specified in the IEASYSxx member of the SYS1.PARMLIB concatenation.

targetid - The SYSNAME specified in the IEASYSxx member of the SYS1.PARMLIB concatenation.

MV STCs - Mainview STCs.

11.14 CA MIM Requirements

Table 11-38: CA MIM Resource Sharing Resources

Referenced by: ZMIM0020

Command	Resource	User Group	Access
ACTIVATE	safprefix.ACTIVATE	SYSPAUDT	UPDATE
ADDQNAME	safprefix.ADDQNAME	SYSPAUDT	UPDATE
ALLOCATE	safprefix.ALLOCATE	SYSPAUDT	UPDATE
ALTER	safprefix.ALTER	SYSPAUDT	UPDATE
AUTHCHK	safprefix.AUTHCHK	OPERAUDT SYSPAUDT	UPDATE
COLLECT	safprefix.COLLECT	SYSPAUDT	UPDATE
CP	safprefix.CP	SYSPAUDT	UPDATE
CTC	safprefix.CTC	DASDAUDT SYSPAUDT	UPDATE
DEALLOCATE	safprefix.DEALLOCATE	SYSPAUDT	UPDATE
DEFALIAS	safprefix.DEFALIAS	SYSPAUDT	UPDATE
DELQNAME	safprefix.DELQNAME	SYSPAUDT	UPDATE
DEQJOB	safprefix.DEQJOB	PCSPAUDT SYSPAUDT	UPDATE
DIAGNOSE	safprefix.DIAGNOSE	OPERAUDT SYSPAUDT	UPDATE
DISPLAY ECMF	safprefix.DISPLAY	*	READ
DISPLAY EDIF	safprefix.DISPLAY	*	READ
DISPLAY GCMF	safprefix.DISPLAY	*	READ
DISPLAY GDIF	safprefix.DISPLAY	*	READ
DISPLAY GTAF	safprefix.DISPLAY	*	READ
DISPLAY ICMF	safprefix.DISPLAY	*	READ
DISPLAY MIM	safprefix.DISPLAY	*	READ
DISPLAY TPCF	safprefix.DISPLAY	*	READ
DOM	safprefix.DOM	OPERAUDT SYSPAUDT	UPDATE
DROPSYS	safprefix.DROPSYS	SYSPAUDT	UPDATE
DUMP GCMF	safprefix.DUMP	*	NONE
DUMP GDIF	safprefix.DUMP	*	NONE
DUMP GTAF	safprefix.DUMP	*	NONE
DUMP ICMF	safprefix.DUMP	*	NONE
DUMP MIM	safprefix.DUMP	*	NONE
DUMP TPCF	safprefix.DUMP	*	NONE
EDITEST	safprefix.EDITEST	OPERAUDT	UPDATE

Command	Resource	User Group	Access
		SYSPAUDT	
EXEMPT	safprefix.EXEMPT	OPERAUDT SYSPAUDT	UPDATE
FREE	safprefix.FREE	AUTOAUDT SYSPAUDT	UPDATE
FREECONS	safprefix.FREECONS	OPERAUDT SYSPAUDT	UPDATE
GLOBALVALUE	safprefix.GLOBALVALUE	SYSPAUDT	UPDATE
ICMF	safprefix.ICMF	SYSPAUDT	UPDATE
IDEFSYS	safprefix.IDEFSYS	SYSPAUDT	UPDATE
LINK	safprefix.LINK	SYSPAUDT	UPDATE
MIGRATE	safprefix.MIGRATE	SYSPAUDT	UPDATE
MSGTABLE	safprefix.MSGTABLE	SYSPAUDT	UPDATE
QUIESCE	safprefix.QUIESCE	OPERAUDT SYSPAUDT	UPDATE
REMOVE	safprefix.REMOVE	SYSPAUDT	UPDATE
RESTART	safprefix.RESTART	OPERAUDT SYSPAUDT	UPDATE
RESYNCH	safprefix.RESYNCH	DASDAUDT SYSPAUDT	UPDATE
SETOPTION ECMF	safprefix.SETOPTION	SYSPAUDT	UPDATE
SETOPTION EDIF	safprefix.SETOPTION	SYSPAUDT	UPDATE
SETOPTION GCMF	safprefix.SETOPTION	SYSPAUDT	UPDATE
SETOPTION GDIF	safprefix.SETOPTION	SYSPAUDT	UPDATE
SETOPTION ICMF	safprefix.SETOPTION	SYSPAUDT	UPDATE
SETOPTION MIM	safprefix.SETOPTION	SYSPAUDT	UPDATE
SETOPTION TPCF	safprefix.SETOPTION	SYSPAUDT	UPDATE
SHUTDOWN	safprefix.SHUTDOWN	AUTOAUDT OPERAUDT SYSPAUDT	UPDATE
SYSDUMP	safprefix.SYSDUMP	SYSPAUDT	UPDATE
USERDATA	safprefix.USERDATA	SYSPAUDT	UPDATE
VARY	safprefix.VARY	DASDAUDT SYSPAUDT	UPDATE
VCF	safprefix.VCF	SYSPAUDT	UPDATE

* - All Users
safprefix - Obtained from the value set in the MIMINIT SAFPREFIX option, the default value is MIMGR.

Note: The **safprefix.DUMP** resources will only be given to SYSPAUDT with access of UPDATE only when CA Technical Support directs that the **DUMP** command be issued. Upon completion of the command execution request, the access to this resource will be removed.

11.15 NetView Requirements

Table 11-39: NetView Resources

Referenced by: ZNET0020

Resource	Group	Access
netid	*	NONE
netid.luname.ADDCMD	SYSPAUDT	READ
netid.luname.AFTER	AUTOAUDT SYSPAUDT	READ
netid.luname.ALLOCATE.CATALOG	AUTOAUDT SYSPAUDT	READ
netid.luname.ALLOCATE.DELETE	SYSPAUDT	READ
netid.luname.ALLOCATE.NEW	AUTOAUDT SYSPAUDT	READ
netid.luname.ALLOCATE.UNCATALO	SYSPAUDT	READ
netid.luname.AT	AUTOAUDT SYSPAUDT	READ
netid.luname.ATTACH	*	READ
netid.luname.ATTACH.DUMP	*	READ
netid.luname.AUTOTASK	AUTOAUDT SYSPAUDT	READ
netid.luname.AUTOTBL	AUTOAUDT SYSPAUDT	READ
netid.luname.AUTOTBL.STATUS	*	READ
netid.luname.AUTOTEST	AUTOAUDT SYSPAUDT	READ
netid.luname.CHNGFP	SYSPAUDT	READ
netid.luname.CHRON	AUTOAUDT SYSPAUDT	READ
netid.luname.CLOSE	SYSPAUDT	READ
netid.luname.CLRSTATS	SYSPAUDT	READ
netid.luname.CNME0001	AUTOAUDT SYSPAUDT	READ
netid.luname.CNME0002	AUTOAUDT SYSPAUDT	READ
netid.luname.CNME0006	SYSPAUDT	READ
netid.luname.CNME0013	SYSPAUDT	READ
netid.luname.CNME0015	AUTOAUDT SYSPAUDT	READ
netid.luname.CNME0017	AUTOAUDT SYSPAUDT	READ
netid.luname.CNME0018	AUTOAUDT SYSPAUDT	READ
netid.luname.CNME0019	SYSPAUDT	READ
netid.luname.CNME0025	SYSPAUDT	READ

Resource	Group	Access
netid.luname.CNME0030	AUTOAUDT SYSPAUDT	READ
netid.luname.CNME0032	AUTOAUDT SYSPAUDT	READ
netid.luname.CNME1016	AUTOAUDT SYSPAUDT	READ
netid.luname.CNME1055	SYSPAUDT	READ
netid.luname.CNME1057	AUTOAUDT SYSPAUDT	READ
netid.luname.CNME1089	AUTOAUDT SYSPAUDT	READ
netid.luname.CNME1098	AUTOAUDT SYSPAUDT	READ
netid.luname.CNME2002	AUTOAUDT SYSPAUDT	READ
netid.luname.CNME2007	AUTOAUDT SYSPAUDT	READ
netid.luname.CNME2008	AUTOAUDT SYSPAUDT	READ
netid.luname.CNME3006	AUTOAUDT SYSPAUDT	READ
netid.luname.CNME7009	SYSPAUDT	READ
netid.luname.CNME7201	AUTOAUDT SYSPAUDT	READ
netid.luname.CNME7204.LISTCONN	AUTOAUDT SYSPAUDT	READ
netid.luname.CNME7204.LISTOPID	AUTOAUDT SYSPAUDT	READ
netid.luname.CNME7204.START	AUTOAUDT SYSPAUDT	READ
netid.luname.CNME7204.STOP	AUTOAUDT SYSPAUDT	READ
netid.luname.CNME8004	AUTOAUDT SYSPAUDT	READ
netid.luname.CNME8200	AUTOAUDT SYSPAUDT	READ
netid.luname.CNME8205	AUTOAUDT SYSPAUDT	READ
netid.luname.CNME8206	AUTOAUDT SYSPAUDT	READ
netid.luname.CNME8206.LISTINFO	AUTOAUDT SYSPAUDT	READ
netid.luname.CNME8206.LSTSRVRS	AUTOAUDT SYSPAUDT	READ

Resource	Group	Access
netid.luname.CNME8206.START	AUTOAUDT SYSPAUDT	READ
netid.luname.CNME8206.STOP	AUTOAUDT SYSPAUDT	READ
netid.luname.CNME8221	AUTOAUDT SYSPAUDT	READ
netid.luname.CNME8225	AUTOAUDT SYSPAUDT	READ
netid.luname.CNME8250.START	AUTOAUDT SYSPAUDT	READ
netid.luname.CNME8250.STOP	AUTOAUDT SYSPAUDT	READ
netid.luname.CNME8260	AUTOAUDT SYSPAUDT	READ
netid.luname.CNME9001	SYSPAUDT	READ
netid.luname.CNME9002	SYSPAUDT	READ
netid.luname.CNMEAUTB	SYSPAUDT	READ
netid.luname.CNMEMCXX	SYSPAUDT	READ
netid.luname.CNMEMCXY	SYSPAUDT	READ
netid.luname.CNMESNMP	AUTOAUDT SYSPAUDT	READ
netid.luname.CNMEXCON	AUTOAUDT SYSPAUDT	READ
netid.luname.CNMEXPRC	AUTOAUDT SYSPAUDT	READ
netid.luname.CNMSBWLK	AUTOAUDT SYSPAUDT	READ
netid.luname.CNMSGET	AUTOAUDT SYSPAUDT	READ
netid.luname.CNMSGETB	AUTOAUDT SYSPAUDT	READ
netid.luname.CNMSGETN	AUTOAUDT SYSPAUDT	READ
netid.luname.CNMSSET	AUTOAUDT SYSPAUDT	READ
netid.luname.CNMSTRAP	AUTOAUDT SYSPAUDT	READ
netid.luname.CNMSWALK	AUTOAUDT SYSPAUDT	READ
netid.luname.DEFAULTS	AUTOAUDT SYSPAUDT	READ
netid.luname.DELCMD	SYSPAUDT	READ
netid.luname.DSIMCAP	SYSPAUDT	READ
netid.luname.DSIPIINS.COMMON	SYSPAUDT	READ

Resource	Group	Access
netid.luname.DSIPITSO.TSOSERV	AUTOAUDT SYSPAUDT	READ
netid.luname.DSIPITSO.TSOSERV.CNMPROC/CNMSJTSO	*	READ
netid.luname.DSIPITSO.VERB	AUTOAUDT SYSPAUDT	READ
netid.luname.DSIPITSO.VERB.HOMETEST	*	READ
netid.luname.DSIPITSO.VERB.NETSTAT	*	READ
netid.luname.DSIPITSO.VERB.NSLOOKUP	*	READ
netid.luname.DSIPIXCF	AUTOAUDT SYSPAUDT	READ
netid.luname.DSIPIXTB	AUTOAUDT SYSPAUDT	READ
netid.luname.DSISAUTH	AUTOAUDT SYSPAUDT	READ
netid.luname.DSISRVR	AUTOAUDT SYSPAUDT	READ
netid.luname.DSIUSNDM	AUTOAUDT SYSPAUDT	READ
netid.luname.DSIZKNYJ	SYSPAUDT	READ
netid.luname.EKGVREXX	AUTOAUDT SYSPAUDT	READ
netid.luname.EVERY	AUTOAUDT SYSPAUDT	READ
netid.luname.EXCMD	AUTOAUDT SYSPAUDT	READ
netid.luname.EZLE600A	AUTOAUDT SYSPAUDT	READ
netid.luname.EZLE840A	SYSPAUDT	READ
netid.luname.EZLEAMAN	AUTOAUDT SYSPAUDT	READ
netid.luname.EZLEF002	AUTOAUDT SYSPAUDT	READ
netid.luname.EZLEPOLY	AUTOAUDT SYSPAUDT	READ
netid.luname.FOCALPT	SYSPAUDT	READ
netid.luname.FREE.DELETE	SYSPAUDT	READ
netid.luname.FREE.UNCATALO	SYSPAUDT	READ
netid.luname.IDCAMS	AUTOAUDT SYSPAUDT	READ
netid.luname.MODIFY	AUTOAUDT SYSPAUDT	READ
netid.luname.MONIT	SYSPAUDT	READ
netid.luname.MVS	SYSPAUDT	READ
netid.luname.MVS.$D	*	READ
netid.luname.MVS.D	*	READ

Resource	Group	Access
netid.luname.MVS.D.MPF	SYSPAUDT	READ
netid.luname.MVS.D.NET	SYSPAUDT	READ
netid.luname.MVS.D.VTAM	SYSPAUDT	READ
netid.luname.MVS.DISPLAY	*	READ
netid.luname.MVS.DISPLAY.MPF	SYSPAUDT	READ
netid.luname.MVS.DISPLAY.NET	SYSPAUDT	READ
netid.luname.MVS.DISPLAY.VTAM	SYSPAUDT	READ
netid.luname.NLDM.DISABLE	AUTOAUDT SYSPAUDT	READ
netid.luname.NLDM.PURGE	AUTOAUDT SYSPAUDT	READ
netid.luname.NLDM.TRACE	AUTOAUDT SYSPAUDT	READ
netid.luname.NPDA.PURGE	AUTOAUDT SYSPAUDT	READ
netid.luname.OVERRIDE.DSIARPT	SYSPAUDT	READ
netid.luname.OVERRIDE.DSIASRC	SYSPAUDT	READ
netid.luname.OVERRIDE.DSICLD	SYSPAUDT	READ
netid.luname.OVERRIDE.DSILIST	SYSPAUDT	READ
netid.luname.OVERRIDE.DSIMSG	SYSPAUDT	READ
netid.luname.OVERRIDE.DSIOPEN	SYSPAUDT	READ
netid.luname.OVERRIDE.DSIPARM	SYSPAUDT	READ
netid.luname.OVERRIDE.DSIPRF	SYSPAUDT	READ
netid.luname.OVERRIDE.DSIVTAM	SYSPAUDT	READ
netid.luname.OVERRIDE.SLOGCMDR	AUTOAUDT SYSPAUDT	READ
netid.luname.PLEXCTL	AUTOAUDT SYSPAUDT	READ
netid.luname.PURGE.TIMER	AUTOAUDT SYSPAUDT	READ
netid.luname.REACC	SYSPAUDT	READ
netid.luname.READSEC	AUTOAUDT SYSPAUDT	READ
netid.luname.REFRESH	SYSPAUDT	READ
netid.luname.REFRESH.AUTHCHK	SYSPAUDT	READ
netid.luname.REFRESH.CMDAUTH	SYSPAUDT	READ
netid.luname.REFRESH.OPERS	SYSPAUDT	READ
netid.luname.REFRESH.OPERSEC	SYSPAUDT	READ
netid.luname.REFRESH.RMTSEC	SYSPAUDT	READ
netid.luname.RELCONID	SYSPAUDT	READ
netid.luname.RESETDB	AUTOAUDT SYSPAUDT	READ
netid.luname.RESTORE	AUTOAUDT SYSPAUDT	READ

Resource	Group	Access
netid.luname.RESTYLE	AUTOAUDT SYSPAUDT	READ
netid.luname.REVISE	SYSPAUDT	READ
netid.luname.REVISMSG	SYSPAUDT	READ
netid.luname.REVISRPT	SYSPAUDT	READ
netid.luname.RID	SYSPAUDT	READ
netid.luname.SETBQL	AUTOAUDT SYSPAUDT	READ
netid.luname.START.MOD	AUTOAUDT SYSPAUDT	READ
netid.luname.START.TASK	AUTOAUDT SYSPAUDT	READ
netid.luname.START.TASK.CNMTAMEL	*	READ
netid.luname.START.TSOSERV	AUTOAUDT SYSPAUDT	READ
netid.luname.START.UNIXSERV	SYSPAUDT	READ
netid.luname.START.XCFGROUP	SYSPAUDT	READ
netid.luname.SUBMIT	AUTOAUDT SYSPAUDT	READ
netid.luname.SUBMIT.BATCHTSO	*	READ
netid.luname.SUBMIT.SMTPJCL	*	READ
netid.luname.SWITCH	AUTOAUDT SYSPAUDT	READ
netid.luname.TE	SYSPAUDT	READ
netid.luname.TRACE	AUTOAUDT SYSPAUDT	READ
netid.luname.TS	SYSPAUDT	READ
netid.luname.VARY	AUTOAUDT SYSPAUDT	READ
netid.luname.WRITESEC	AUTOAUDT SYSPAUDT	READ

SYSPAUDT - System programming personnel
AUTOAUDT - Automated operations users
* - All users authorized to access Netview

netid Obtained from the value specified for the NetID variable in the CxxSTYLE member.

luname Obtained from the value specified for the DOMAIN variable specified in the CNMPROC JCL. If the DOMAIN variable is null the DOMAIN statement in the CxxSTYLE member can be used.

Note: The values specified for NetID and DOMAIN are also returned by the netid() and domain() REXX™ functions.

Note: Additional resources are defined in the current release of the IBM Tivoli NetView for z/OS Security Reference.

11.16 RACF Password Exit Settings

Table 11-40: Parameters for RACF IRRPWREX

Referenced by RACF0462

REXX Parameter	Setting
STIG_Compliant	'yes'
Pwd_minlen	8
numbers	'0123456789'
Lower_letters	'abcdefghijklmnopqrstuvwxyz'
Upper_letters	'ABCDEFGHIJKLMNOPQRSTUVWXYZ'
special	'$@#.<+|&!*-%_>?:'
Pwd_allowed_chars	numbers||Upper_letters||special
Pwd_req_types	4
Pwd_name_allowed	'no'
Pwd_name_minlen	8
Pwd_name_chars	4
Pwd_min_unique	3
Pwd_min_unique_upper	'yes'
Pwd_max_unchanged	3
Pwd_max_unchanged_upper	'yes'
Pwd_max_unchanged_consecutive	'yes'
Pwd_all_unique	'no'
Pwd_no_consecutive	'no'
Pwd_no_consecutive_upper	'yes'
Pwd_min_new	4
Pwd_userID_allowed	'no'
Pwd_userID_chars	4
Pwd_repeat_chars	0
Pwd_repeat_upper	'yes'
Pwd_dict.0	8 /* Change this as words are added and deleted */
Pwd_dict.1	'IBM'
Pwd_dict.2	'RACF'
Pwd_dict.3	'PASSWORD'
Pwd_dict.4	'PHRASE'
Pwd_dict.5	'SECRET'
Pwd_dict.6	'IBMUSER'
Pwd_dict.7	'SYS1'

REXX Parameter	Setting
Pwd_dict.8	'12345678'
Pwd_dict.9	'99999999'
Pwd_prefix.0	33 /* Change this as values are added and deleted
Pwd_prefix.1	'APPL'
Pwd_prefix.2	'APR'
Pwd_prefix.3	'AUG'
Pwd_prefix.4	'ASDF'
Pwd_prefix.5	'BASIC'
Pwd_prefix.6	'CADAM'
Pwd_prefix.7	'DEC'
Pwd_prefix.8	'DEMO'
Pwd_prefix.9	'FEB'
Pwd_prefix.10	'FOCUS'
Pwd_prefix.11	'GAME'
Pwd_prefix.12	'IBM'
Pwd_prefix.13	'JAN'
Pwd_prefix.14	'JUL'
Pwd_prefix.15	'JUN'
Pwd_prefix.16	'LOG'
Pwd_prefix.17	'MAR'
Pwd_prefix.18	'MAY'
Pwd_prefix.19	'NET'
Pwd_prefix.20	'NEW'
Pwd_prefix.21	'NOV'
Pwd_prefix.22	'OCT'
Pwd_prefix.23	'PASS'
Pwd_prefix.24	'ROS'
Pwd_prefix.25	'SEP'
Pwd_prefix.26	'SIGN'
Pwd_prefix.27	'SYS'
Pwd_prefix.28	'TEST'
Pwd_prefix.29	'TSO'
Pwd_prefix.30	'VALID'
Pwd_prefix.31	'VTAM'
Pwd_prefix.32	'XXX'
Pwd_prefix.33	'1234'