VSI ACMS for OpenVMS Quick Reference Guide

Operating System and Version: VSI OpenVMS Alpha Version 8.4-2L1 or higher
VSI OpenVMS IA-64 Version 8.4-1H1 or higher

Software Version: ACMS for OpenVMS Version 5.3-3

VMS Software, Inc. (VSI)
Boston, Massachusetts, USA

VSI ACMS for OpenVMS Quick Reference Guide

Legal Notice

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Preface

1. About VSI

VMS Software, Inc. (VSI) is an independent software company licensed by Hewlett Packard Enterprise to develop and support the OpenVMS operating system.

2. Intended Audience

This manual is a quick reference to all the syntax for the utilities of VSI ACMS for OpenVMS (ACMS) software.

This manual is intended for application designers, programmers, and anyone responsible for managing applications using ACMS.

3. Document Structure

This manual contains the following chapters and appendixes:

Chapter 1, "ADU Commands and Clauses"	Lists syntax for the ACMS Application Definition Utility (ADU) commands and clauses.
Chapter 2, "ACMS Management Utilities and Commands"	Lists syntax for the ACMS management utilities and operator commands.
Chapter 3, "ACMS Application Programming Services and Task Debugger Commands"	Lists syntax for the ACMS programming services and Task Debugger commands.
Chapter 4, "Systems Interface (SI) Services"	Lists syntax for the ACMS Systems Interface services.
Appendix A, "Checklist for ACMS Application Development"	Illustrates and provides a detailed checklist of the phases of ACMS application development.
Appendix B, "Changing and Debugging ACMS Applications"	Summarizes the relationships between different parts of ACMS applications.
Appendix C, "Summary of ACMS System Workspaces"	Describes ACMS system workspaces.

4. ACMS Help

ACMS and its components provide extensive online help.

- DCL level help

  Enter **HELP ACMS** at the DCL prompt for complete help about the **ACMS** command and qualifiers, and for other elements of ACMS for which independent help systems do not exist. DCL level help also provides brief help messages for elements of ACMS that contain independent help systems (such as the ACMS utilities) and for related products used by ACMS (such as DECforms or Oracle CDD/Repository).

- ACMS utilities help

Each of the following ACMS utilities has an online help system:

- ACMS Debugger ACMSGEN Utility
- ACMS Queue Manager (ACMSQUEMGR)
- Application Definition Utility (ADU)
- Application Authorization Utility (AAU)
- Device Definition Utility (DDU)
- User Definition Utility (UDU)
- Audit Trail Report Utility (ATR)
- Software Event Log Utility Program (SWLUP)

The two ways to get utility-specific help are:

- Run the utility and type **HELP** at the utility prompt.
- Use the DCL **HELP** command. At the "`Topic?`" prompt, type **@** followed by the name of the utility. Use the ACMS prefix, even if the utility does not have an ACMS prefix (except for SWLUP). For example:

  ```
  Topic? @ACMSQUEMGR
  Topic? @ACMSADU
  ```

  However, do not use the ACMS prefix with SWLUP:

  ```
  Topic? @SWLUP
  ```

Note

Note that if you run the ACMS Debugger Utility and then type **HELP**, you must specify a file. If you ask for help from the DCL level with **@**, you do not need to specify a file.

- ACMSPARAM.COM and ACMEXCPAR.COM help

  Help for the command procedures that set parameters and quotas is a subset of the DCL level help. You have access to this help from the DCL prompt, or from within the command procedures.

- LSE help

  ACMS provides ACMS-specific help within the LSE templates that assist in the creation of applications, tasks, task groups, and menus. The ACMS- specific LSE help is a subset of the ADU help system. Within the LSE templates, this help is context-sensitive. Type **HELP/IND (PF1-PF2)** at any placeholder for which you want help.

- Error help

  ACMS and each of its utilities provide error message help. Use **HELP ACMS ERRORS** from the DCL prompt for ACMS error message help. Use **HELP ERRORS** from the individual utility prompts for error message help for that utility.

- Terminal user help

  At each menu within an ACMS application, ACMS provides help about terminal user commands, special key mappings, and general information about menus and how to select tasks from menus.

- Forms help

  For complete help for DECforms or TDMS, use the help systems for these products.

5. Related Documents

The following table lists the documents in the VSI ACMS for OpenVMS documentation set.

ACMS Information	Description
VSI ACMS Version 5.0 for OpenVMS Installation Guide [https://docs.vmssoftware.com/vsi-acms-installation-guide/]	Description of installation requirements, the installation procedure, and postinstallation tasks.
VSI ACMS for OpenVMS Getting Started [https://docs.vmssoftware.com/vsi-acms-get-started-guide/]	Overview of ACMS software and documentation. Tutorial for developing a simple ACMS application. Description of the AVERTZ sample application.
VSI ACMS for OpenVMS Concepts and Design Guidelines [https://docs.vmssoftware.com/vsi-acms-concepts-and-design-guide/]	Description of how to design an ACMS application.
VSI ACMS for OpenVMS Writing Applications [https://docs.vmssoftware.com/vsi-acms-writing-apps/]	Description of how to write task, task group, application, and menu definitions using the Application Definition Utility. Description of how to write and migrate ACMS applications on an OpenVMS system.
VSI ACMS for OpenVMS Writing Server Procedures [https://docs.vmssoftware.com/vsi-acms-writing-server-proc/]	Description of how to write programs to use with tasks and how to debug tasks and programs.
VSI ACMS for OpenVMS Systems Interface Programming [https://docs.vmssoftware.com/vsi-acms-sys-interface-prog/]	Description of using Systems Interface (SI) Services to submit tasks to an ACMS system.
VSI ACMS for OpenVMS ADU Reference Manual [https://docs.vmssoftware.com/vsi-acms-adu-ref-manual/]	Reference information about the ADU commands, phrases, and clauses.
VSI ACMS for OpenVMS Quick Reference [https://docs.vmssoftware.com/vsi-acms-quick-ref/]	List of ACMS syntax with brief descriptions.
VSI ACMS for OpenVMS Managing Applications [https://docs.vmssoftware.com/vsi-acms-managing-applications/]	Description of authorizing, running, and managing ACMS applications, and controlling the ACMS system.
VSI ACMS for OpenVMS Remote Systems Management Guide [https://docs.vmssoftware.com/vsi-acms-remote-systems-management-guide/]	Description of the features of the Remote Manager for managing ACMS systems, how to use the features, and how to manage the Remote Manager.

ACMS Information	Description
Online help	Online help about ACMS and its utilities.

6. OpenVMS Documentation

The full VSI OpenVMS documentation set can be found on the VMS Software Documentation webpage at https://docs.vmssoftware.com.

7. VSI Encourages Your Comments

You may send comments or suggestions regarding this manual or any VSI document by sending electronic mail to the following Internet address: <docinfo@vmssoftware.com>. Users who have VSI OpenVMS support contracts through VSI can contact <support@vmssoftware.com> for help with this product.

8. Conventions

The following conventions are used in this manual:

Ctrl/*x*	A sequence such as **Ctrl/*x*** indicates that you must press and hold the key labeled Ctrl while you press another key or a pointing device button.
PF1 *x*	A sequence such as **PF1 *x*** indicates that you must first press and release the key labeled PF1 and then press and release another key or a pointing device button.
Return	In the HTML version of this document, this convention appears as brackets rather than a box.
. . .	A horizontal ellipsis in examples indicates one of the following possibilities: • Additional optional arguments in a statement have been omitted. • The preceding item or items can be repeated one or more times. • Additional parameters, values, or other information can be entered.
⋮	A vertical ellipsis indicates the omission of items from a code example or command format; the items are omitted because they are not important to the topic being discussed.
`Monospace text`	Monospace type indicates code examples and interactive screen displays. In the C programming language, monospace type in text identifies the following elements: keywords, the names of independently compiled external functions and files, syntax summaries, and references to variables or identifiers introduced in an example. In the HMTL version of this document, this text style may appear as italics.
-	A hyphen at the end of a command format description, command line, or code line indicates that the command or statement continues on the following line.

numbers	All numbers in text are assumed to be decimal unless otherwise noted. Nondecimal radixes—binary, octal, or hexadecimal—are explicitly indicated.
bold text	Bold text represents the introduction of a new term or the name of an argument, an attribute, or a reason. In the HMTL version of this document, this text style may appear as italics.
italic text	Italic text indicates important information, complete titles of manuals, or variables. Variables include information that aries in system output (Internal error *number*), in command lines (**/PRODUCER=*name***), and in command parameters in text (where *dd* represents the predefined code for the device type).
UPPERCASE	Uppercase text indicates the name of a routine, the name of a file, the name of a file protection code, or the abbreviation for a system privilege. In command format descriptions, uppercase text is an optional keyword.
UPPERCASE	In command format descriptions, uppercase text that is underlined is required. You must include it in the statement if the clause is used.
lowercase	In command format descriptions, a lowercase word indicates a required element.
<lowercase>	In command format descriptions, lowercase text in angle brackets indicates a required clause or phrase.
( )	In command format descriptions, parentheses indicate that you must enclose the options in parentheses if you choose more than one.
[| |]	In command format descriptions, vertical bars within square brackets indicate that you can choose any combination of the enclosed options, but you can choose each option only once.
{ | | }	In command format descriptions, vertical bars within braces indicate that you must choose one of the options listed, but you can use each option only once.

9. References to Oracle Products

VSI ACMS documentation set, to which this document belongs, refers to the following Oracle products by their full and abbreviated names:

Full product name	**Shortened product name**
Oracle Common Data Dictionary	CDD
Oracle Rdb	Rdb
Oracle Database/DBMS	DBMS
Oracle Trace	Trace

Chapter 1. ADU Commands and Clauses

This chapter contains syntax for the commands and clauses of the ACMS Application Definition Utility (ADU). ADU commands allow you to create or change definitions for ACMS tasks, task groups, applications, and menus. The definitions themselves are made up of ADU clauses and phrases. See the *VSI ACMS for OpenVMS ADU Reference Manual* [https://docs.vmssoftware.com/vsi-acms-adu-ref-manual/] for more information about ADU commands and clauses.

1.1. ADU Commands

Use ADU commands to create or change the definitions an ACMS application uses, or to gather information about your own work or that of an ACMS application. You can issue ADU commands interactively or in a command file.

To create an ACMS application, use ADU commands to reset your data dictionary default directory during a session, as well as write, change, copy, delete, and compile definitions for tasks, task groups, menus, and applications. Use other ADU commands to build or rebuild task group, menu, and application database files.

To gather information about your work, you can use ADU commands to check the version of ADU on your system, log an interactive session to a file in your default directory for later reference, check if logging is active, and verify the work a command file performs during execution. To gather information about an ACMS application, you can use ADU commands to list the contents of task group, application, or menu database files, so you can check the consistency of procedure names, workspaces, and servers. See the *VSI ACMS for OpenVMS ADU Reference Manual* [https://docs.vmssoftware.com/vsi-acms-adu-ref-manual/] for a detailed explanation of the syntax of ADU commands.

Table 1.1, "Startup Qualifiers and Their Functions" lists the ADU startup command qualifiers.

Table 1.1. Startup Qualifiers and Their Functions

Qualifier	Function
/COMMAND [=*file-spec*] NOCOMMAND	Tells ADU whether or not to execute a startup command file when you invoke the utility. By default, when you invoke ADU, it runs a command file named ADUINI.COM, located in your default directory. To invoke a different startup command file, include its file specification with the **/COMMAND** qualifier. When you specify the **/NOCOMMAND** qualifier, ACMS starts the ADU without executing any startup command file.
/JOURNAL /NOJOURNAL	By default, ADU creates a journal file that contains every keystroke made during your ADU session. The journal file, named ADUJNL.JOU, is located in your default directory. The journal file is saved if your ADU session is interrupted. When you exit normally (by using the **EXIT** command or entering **Ctrl/Z**), the journal file is not saved. Use the **/NOJOURNAL** qualifier to turn off the journaling feature.

Qualifier	Function
/PATH=*path-name*	Assigns a CDD directory. If you do not specify a path name, ADU uses the default CDD directory.
/RECOVER /NORECOVER	If you specify the **/RECOVER** qualifier, ADU runs the journal file (ADLJNL.JOU), to restore an ADU session that has ended abnormally. With **/RECOVER** in effect, ADU replays the interrupted session to recover your work. **/NORECOVER** is the default.

1.1.1. @ (At sign) Command (ADU>)

@ (At sign) (ADU>)

@ (At sign) (ADU>) — Executes a command file containing either ADU commands or ACMS definitions. If you do not specify a file type, ACMS supplies .COM as the default.

Format

@ *command-file-spec*

1.1.2. ATTACH Command (ADU>)

ATTACH Command (ADU>)

ATTACH Command (ADU>) — Transfers control from your process to another process in your job.

Format

ATTACH *process-name*

1.1.3. BUILD Command (ADU>)

BUILD (ADU>)

BUILD (ADU>) — Converts object definitions from the dictionary into binary database files that ACMS uses at run time.

Format

BUILD { APPLICATION / GROUP / MENU } *path-name* [*database-file-spec*] [/*qualifiers*]

Command Qualifiers	Defaults
/AUDIT[=*audit-list*] /NOAUDIT	/AUDIT=*standard-audit-string*
/[NO]DEBUG	/NODEBUG
/LIST[=*list-file-spec*] /NOLIST	/LIST (Batch mode) /NOLIST (Interactive mode)

Command Qualifiers	Defaults
/[NO]LOG	/NOLOG
/OBJECT=(*file-spec* [,...]) /NOOBJECT	/NOOBJECT
/[NO]PRINT	/NOPRINT
/[NO]STDL	/STDL
/[NO]SYSLIB	/SYSLIB
/[NO]SYSSHR	/SYSSHR
/USERLIBRARY=(*file-spec* [,...]) /NOUSERLIBRARY	/NOUSERLIBRARY

1.1.4. COMPILE Command (ADU>)

COMPILE (ADU>)

COMPILE (ADU>) — Checks an application, task group, menu, or task definition for syntax errors, and writes the compilation results to a file.

Format

COMPILE { APPLICATION | GROUP | MENU } *reference-name* [*definition-file-spec*] [*/qualifiers*]

Command Qualifiers	Defaults
/DIAGNOSTICS[=*diagnostics-file-spec*] /NODIAGNOSTICS	/NODIAGNOSTICS
/LIST[=*list-file-spec*] /NOLIST	/LIST (Batch mode) /NOLIST (Interactive)
/[NO]LOG	/NOLOG
/OUTPUT=*output-file-spec* [,...])	
/[NO]PRINT	/NOPRINT

1.1.5. COPY Command (ADU>)

COPY (ADU>)

COPY (ADU>) — Creates a copy of a definition.

Format

COPY { APPLICATION | GROUP | MENU | TASK } *src-path-name dst-path-name* [*/qualifiers*]

Command Qualifiers	Defaults
/AUDIT[=*audit-list*] /NOAUDIT	/AUDIT=*standard-audit-string*
/[NO]LOG	/NOLOG

1.1.6. CREATE Command (ADU>)

CREATE (ADU>)

CREATE (ADU>) — Checks an application, task group, menu, or task definition for syntax errors, and stores valid new definitions in the dictionary.

Format

CREATE { APPLICATION | GROUP | MENU | TASK } *path-name* [*file-spec*] [*/qualifiers*]

Command Qualifiers	Defaults
/AUDIT[=*audit-list*] /NOAUDIT	/AUDIT=*standard-audit-string*
/DIAGNOSTICS[=*diagnostics-file-spec*] /NODIAGNOSTICS	/NODIAGNOSTICS
/LIST[=*list-file-spec*] /NOLIST	/LIST (Batch mode) /NOLIST (Interactive)
/[NO]LOG	/NOLOG
/[NO]PRINT	/NOPRINT

1.1.7. DELETE Command (ADU>)

DELETE (ADU>)

DELETE (ADU>) — Removes a definition from the dictionary.

Format

DELETE { APPLICATION | GROUP | MENU | TASK } *path-name* [*/qualifiers*]

Command Qualifiers	Defaults
/[NO]CONFIRM	/NOCONFIRM
/[NO]LOG	/NOLOG

1.1.8. DUMP Command (ADU>)

DUMP (ADU>)

DUMP (ADU>) — Displays the contents of an application, menu, or task group database file.

Format

DUMP { APPLICATION | GROUP | MENU } *database-file-spec* [*/qualifiers*]

Command Qualifiers	Defaults
/OUTPUT[=*file-spec*] /NOOUTPUT	/NOOUTPUT
/[NO]PRINT	/NOPRINT

1.1.9. EDIT Command (ADU>)

EDIT (ADU>)

EDIT (ADU>) — Invokes a text editor to let you make changes to the last command you entered.

Format

EDIT

1.1.10. EXIT Command (ADU>)

EXIT (ADU>)

EXIT (ADU>) — Ends the current ADU session and returns you to the DCL prompt.

Format

EXIT

1.1.11. HELP Command (ADU>)

HELP (ADU>)

HELP (ADU>) — Displays information about ADU commands and clauses.

Format

HELP [*/qualifier*] [*topic*]

Command Qualifiers	Defaults
/[NO]PROMPT	/PROMPT

1.1.12. LINK Command (ADU>)

LINK (ADU>)

LINK (ADU>) — Converts object definitions from OpenVMS files into binary database files that ACMS uses at run time.

Format

LINK { APPLICATION / GROUP / MENU } *compile-result-file-spec* [*database-file-spec*] [*/qualifiers*]

Command Qualifiers	Defaults
/AUDIT[=*audit-list*] /NOAUDIT	/AUDIT=*standard-audit-string*
/[NO]DEBUG	/NODEBUG
/LIST[=*list-file-spec*] /NOLIST	/LIST (Batch mode) /NOLIST (Interactive mode)
/[NO]LOG	/NOLOG
/OBJECT=(*file-spec* [,...]) /NOOBJECT	/NOOBJECT
/[NO]PRINT	/NOPRINT
/[NO]STDL	/STDL
/[NO]SYSLIB	/SYSLIB
/[NO]SYSSHR	/SYSSHR
/USERLIBRARY=(*file-spec* [,...]) /NOUSERLIBRARY	/NOUSERLIBRARY

1.1.13. LIST Command (ADU>)

LIST (ADU>)

LIST (ADU>) — Displays the contents of a definition in a dictionary directory.

Format

LIST { APPLICATION / GROUP / MENU / TASK } *path-name* [*/qualifiers*]

Command Qualifiers	Defaults
/OUTPUT[=*list-file-spec*]	/NOOUTPUT

Command Qualifiers	Defaults
/NOOUTPUT	
/[NO]PRINT	/NOPRINT

1.1.14. MODIFY Command (ADU>)

MODIFY (ADU>)

MODIFY (ADU>) — Retrieves a definition from the dictionary and runs a text editor so you can change the definition.

Format

MODIFY { APPLICATION / GROUP / MENU / TASK } *path-name* [*/qualifiers*]

Command Qualifiers	Defaults
/AUDIT[=*audit-list*] /NOAUDIT	/AUDIT=*standard-audit-string*
/DIAGNOSTICS[=*diagnostics-file-spec*] /NODIAGNOSTICS	/NODIAGNOSTICS
/LIST[=*list-file-spec*] /NOLIST	/LIST (Batch mode) /NOLIST (Interactive mode)
/[NO]LOG	/NOLOG
/[NO]PRINT	/NOPRINT

1.1.15. REPLACE Command (ADU>)

REPLACE (ADU>)

REPLACE (ADU>) — Replaces an old dictionary definition with a new one.

Format

REPLACE { APPLICATION / GROUP / MENU / TASK } *path-name* [*file-spec*] [*/qualifiers*]

Command Qualifiers	Defaults
/AUDIT[=*audit-list*] /NOAUDIT	/AUDIT=*standard-audit-string*
/[NO]CREATE	/CREATE

Command Qualifiers	Defaults
/DIAGNOSTICS[=*diagnostics-file-spec*] /NODIAGNOSTICS	/NODIAGNOSTICS
/LIST[=*list-file-spec*] /NOLIST	/LIST (Batch mode) /NOLIST (Interactive mode)
/[NO]LOG	/NOLOG
/[NO]PRINT	/NOPRINT

1.1.16. SAVE Command (ADU>)

SAVE (ADU>)

SAVE (ADU>) — Puts the last command you entered in the file you designate.

Format

SAVE *save-file-spec*

1.1.17. SET DEFAULT Command (ADU>)

SET DEFAULT (ADU>)

SET DEFAULT (ADU>) — Assigns your default directory in the dictionary.

Format

SET DEFAULT *path-spec*

1.1.18. SET LOG Command (ADU>)

SET LOG (ADU>)

SET LOG (ADU>) — Creates a log file of an interactive ADU session you enable with the **SET LOG** command. The **SET NOLOG** command disables logging.

Format

SET LOG [*log-file-spec*]

SET NOLOG

1.1.19. SET VERIFY Command (ADU>)

SET VERIFY (ADU>)

SET VERIFY (ADU>) — Displays commands and source definitions as they are processed from a command file you execute with the **@(At sign)** command. The **SET NOVERIFY** command disables the displaying of processed commands and source definitions.

Format

SET VERIFY

SET NOVERIFY

1.1.20. SHOW DEFAULT Command (ADU>)

SHOW DEFAULT (ADU>)

SHOW DEFAULT (ADU>) — Displays your current default dictionary directory.

Format

SHOW DEFAULT

1.1.21. SHOW LOG Command (ADU>)

SHOW LOG (ADU>)

SHOW LOG (ADU>) — Displays information about logging you enable with the **SET LOG** command. The **SET NOLOG** command disables logging.

Format

SHOW LOG

1.1.22. SHOW VERSION Command (ADU>)

SHOW VERSION (ADU>)

SHOW VERSION (ADU>) — Displays the current software version number of ADU.

Format

SHOW VERSION

1.1.23. SPAWN Command (ADU>)

SPAWN (ADU>)

SPAWN (ADU>) — Creates a subprocess of the current process and transfers job control to the subprocess.

Format

SPAWN [*command*] [*/qualifiers*]

Command Qualifiers	Defaults
/INPUT=*file-spec*	/INPUT=SYS$INPUT

Command Qualifiers	Defaults
/[NO]LOGICAL_NAMES	/LOGICAL_NAMES
/OUTPUT=*file-spec* /NOOUTPUT	/OUTPUT=SYS$OUTPUT
/PROCESS [=*subprocess-name*]	
/[NO]SYMBOLS	/SYMBOLS
/[NO]WAIT	/WAIT

1.2. %INCLUDE

Many definitions share common parts. For example, suppose you always include certain default characteristics in an application definition. Instead of rewriting the same part of a definition many times, you can use %INCLUDE to put the contents of a file in a source definition.

1.2.1. %INCLUDE

%INCLUDE

%INCLUDE — Includes the contents of a file in a source definition. If you do not specify a file type, ACMS supplies the .COM default.

Format

%INCLUDE "*file-spec*"

1.3. Task Definition Clauses

This section lists the syntax for the ADU clauses and phrases you use to write task definitions. You use these clauses with the **ADU CREATE**, **MODIFY**, **REPLACE**, or **EDIT** commands.

A **task definition** is made up of clauses describing the attributes of a task and the work done when a user selects a task. **Task attribute clauses** can either define the implementation characteristics or the control attributes of a task.

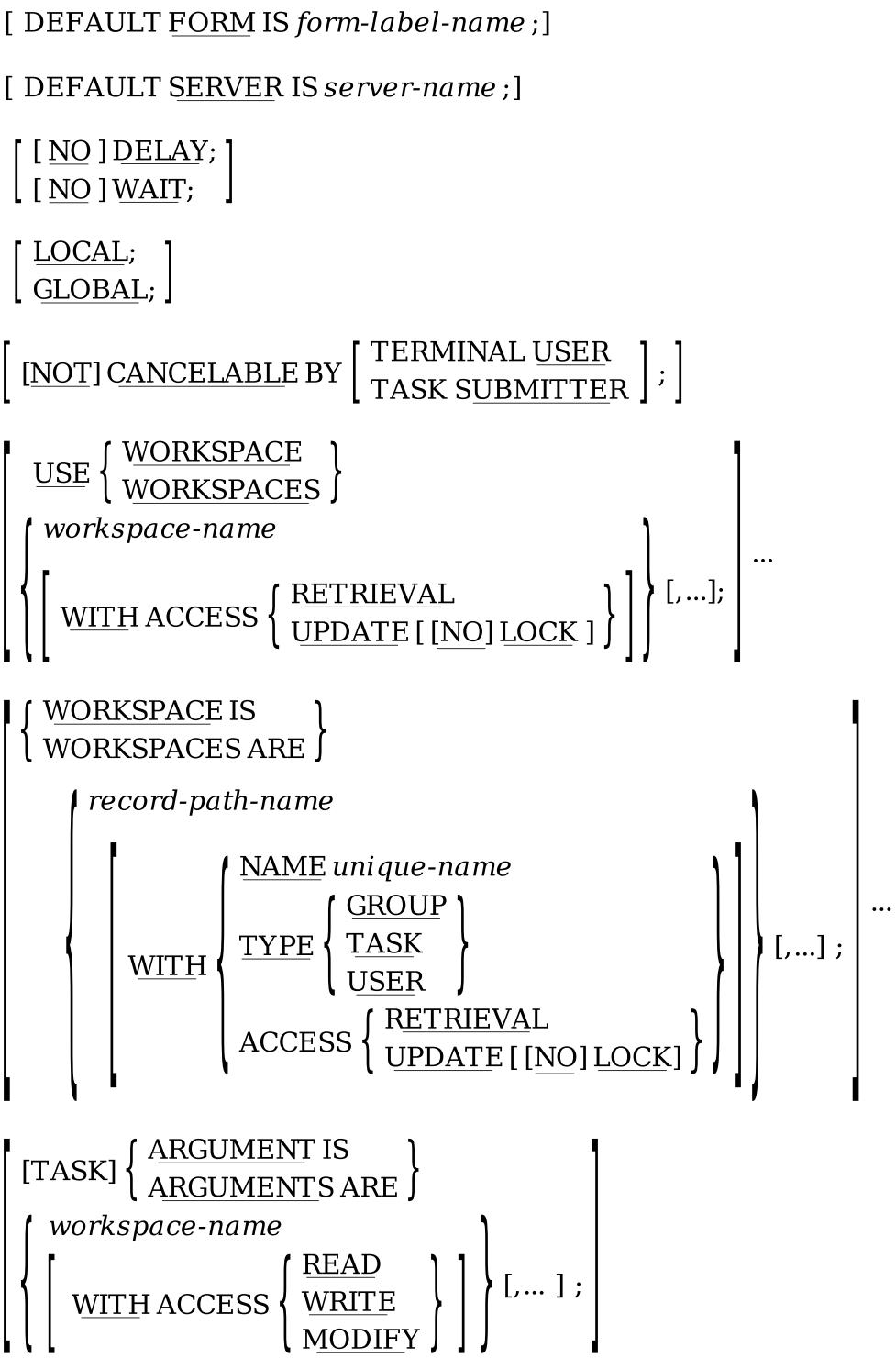
Task attribute clauses describe general characteristics of a task, such as the workspaces used by task steps or a default server that handles processing work. You can override some characteristics by specifying the same clause with a different attribute in a step definition.

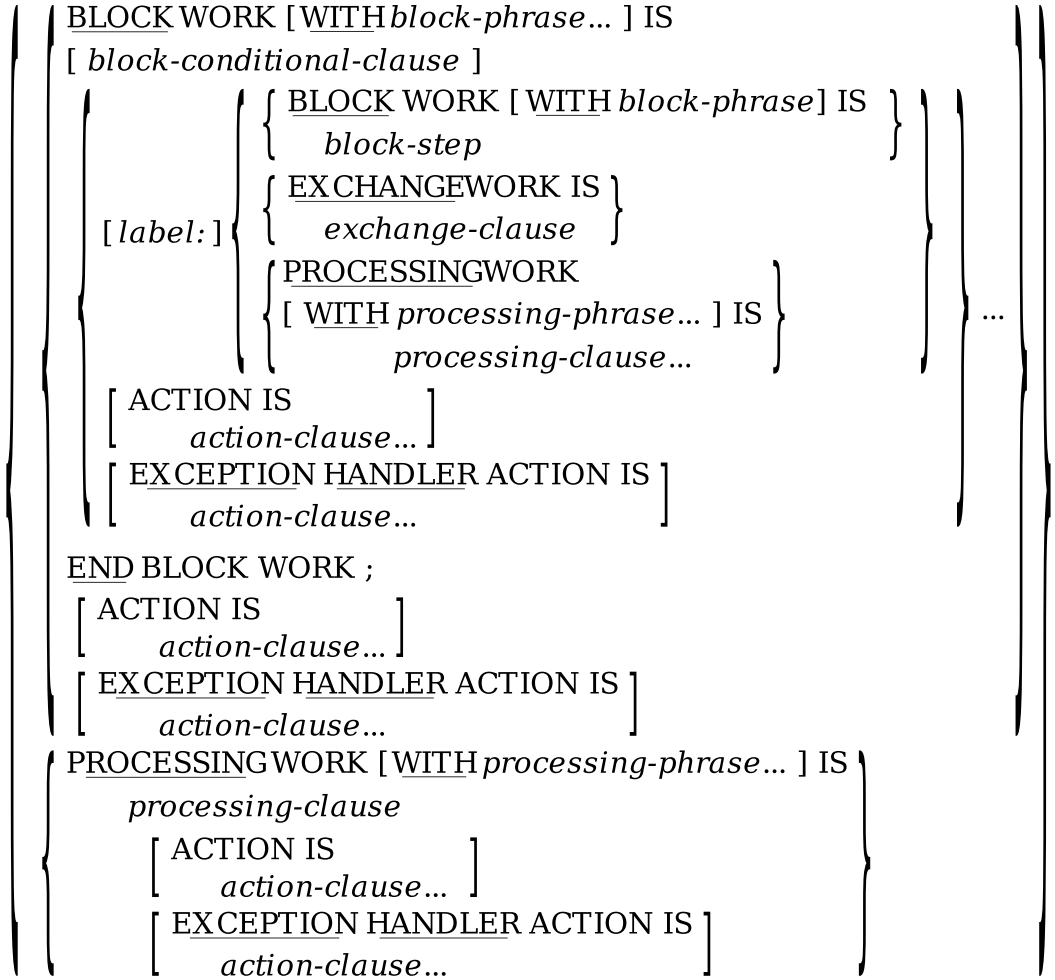
The work part of a task is defined either in a processing step or a block step made up of processing and exchange steps. You can define a single-step task or use the BLOCK WORK clause to define multiple-step tasks. ACMS lets you nest block steps so that a task can contain multiple blocks.

This section begins with overview syntax for tasks, block step phrases, exchange steps, processing steps, action clauses, and exception handler action clauses. The overview syntax is followed by syntax for individual task definition clauses and phrases.

1.3.1. Task Syntax

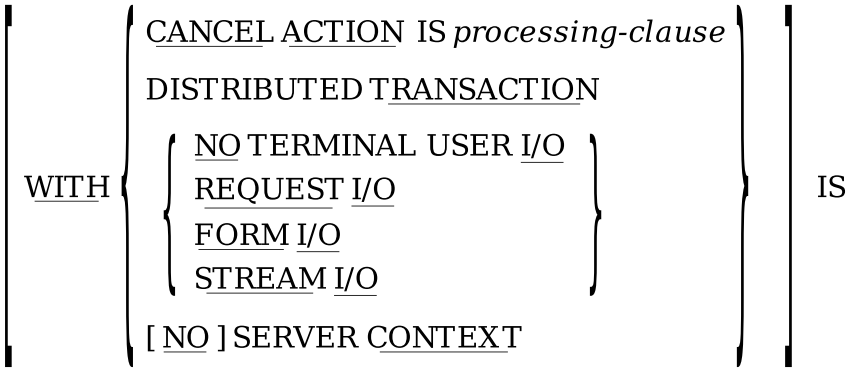
[DEFAULT REQUEST LIBRARY IS *request-library-name* ;]


[DEFAULT FORM IS form-label-name ;]
[DEFAULT SERVER IS server-name ;]
[[NO] DELAY;
[NO] WAIT;]
[LOCAL;
GLOBAL;]
[[NOT] CANCELABLE BY [TERMINAL USER
TASK SUBMITTER] ;]
USE { WORKSPACE
WORKSPACES }
{ workspace-name
[WITH ACCESS { RETRIEVAL
UPDATE [[NO] LOCK] }] } [,...]; ...
{ WORKSPACE IS
WORKSPACES ARE }
{ record-path-name
[WITH { NAME unique-name
TYPE { GROUP
TASK
USER }
ACCESS { RETRIEVAL
UPDATE [[NO] LOCK] } }] } [,...] ; ...
[TASK] { ARGUMENT IS
ARGUMENTS ARE }
{ workspace-name
[WITH ACCESS { READ
WRITE
MODIFY }] } [,...] ;

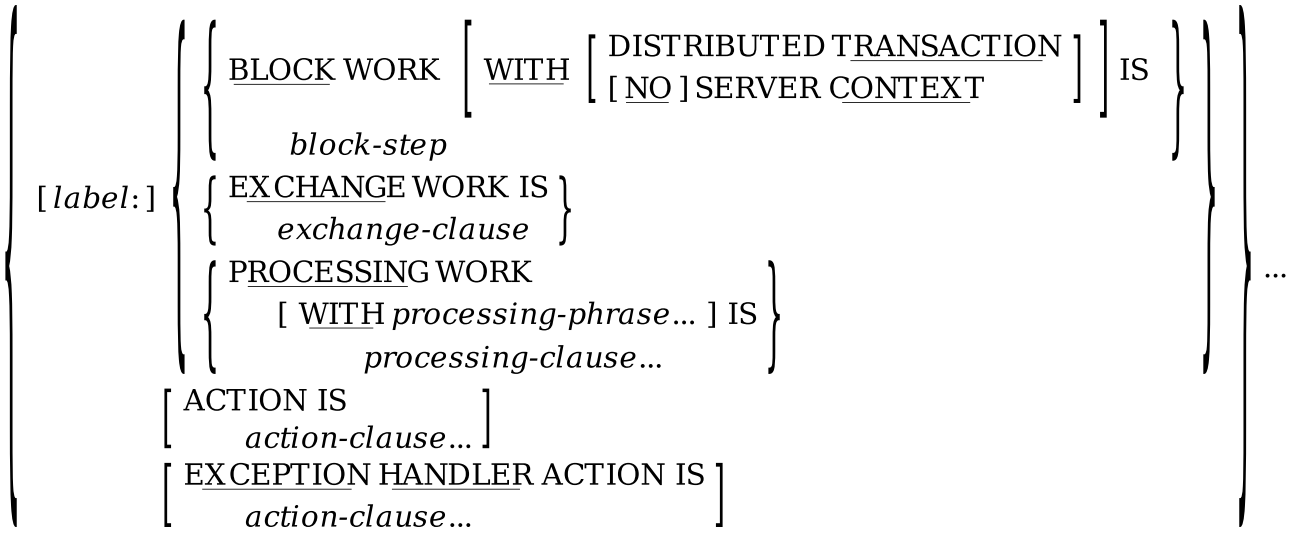


1.3.2. Block Step Phrases Syntax

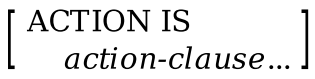
BLOCK WORK



[*block-conditional-clause*]

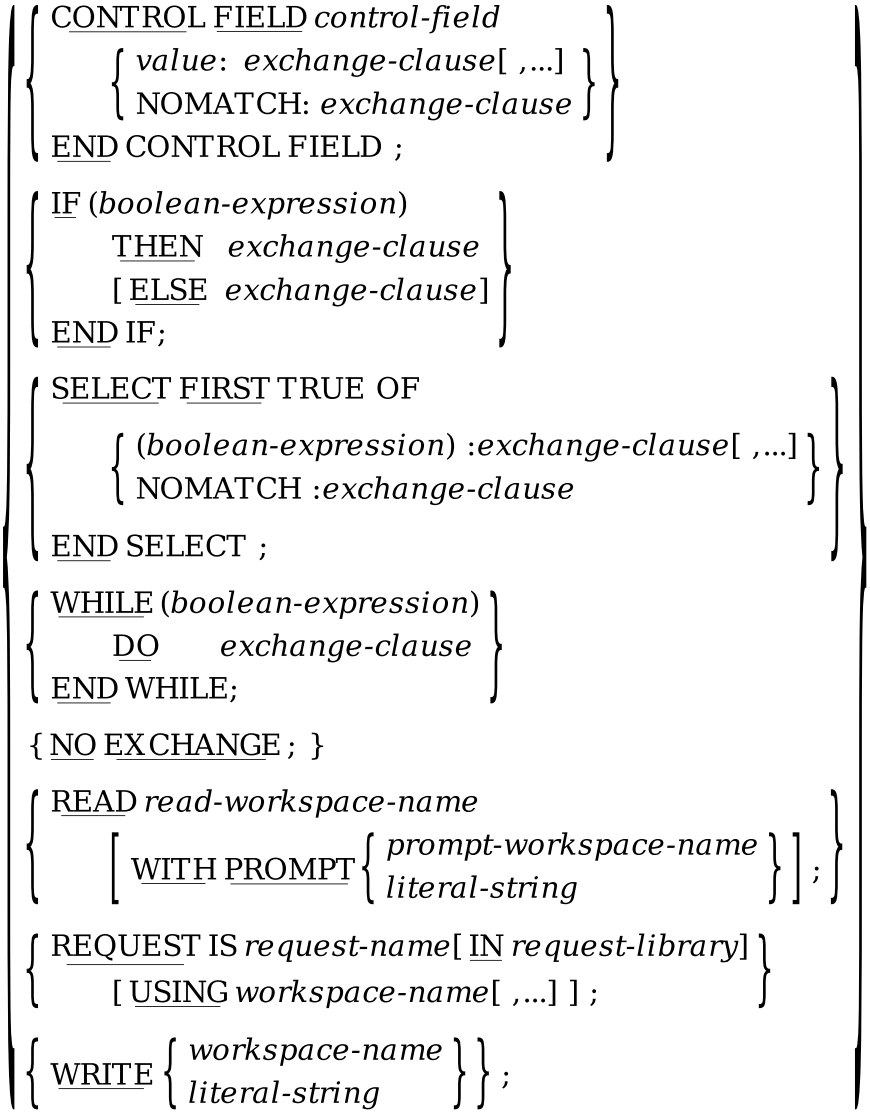


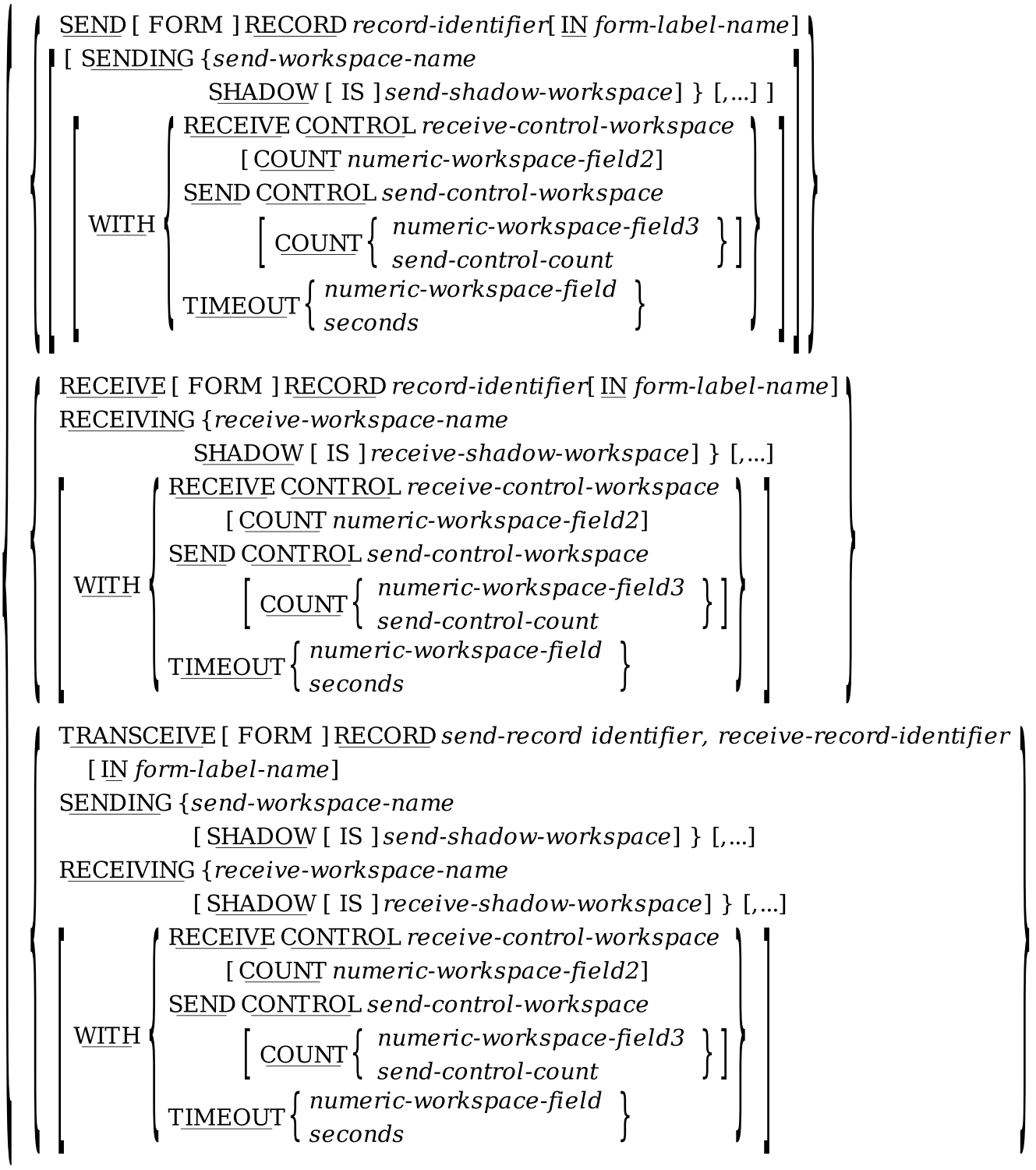
END BLOCK WORK ;



1.3.3. Exchange Step Syntax

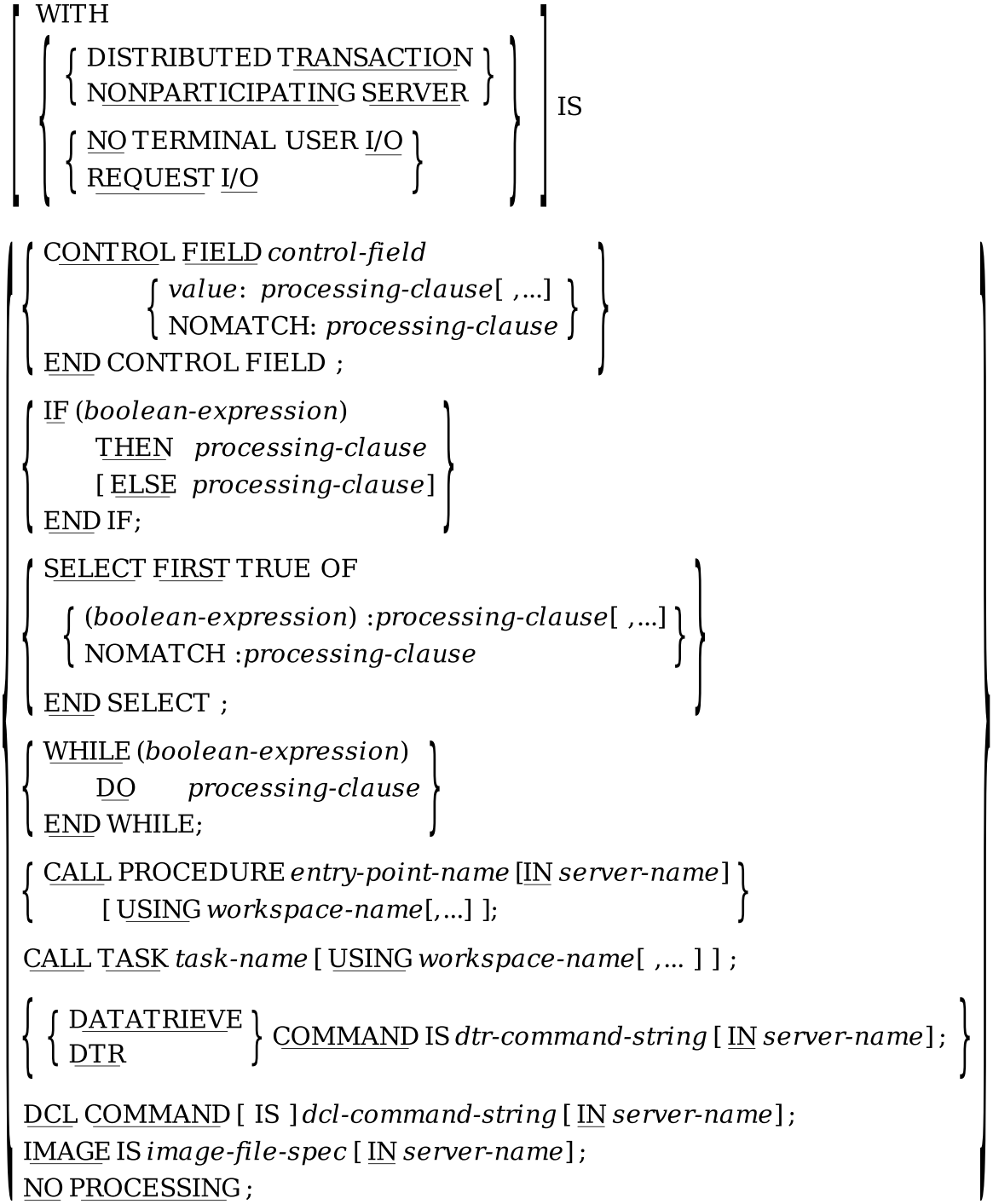
EXCHANGE WORK IS


CONTROL FIELD control-field
value: exchange-clause[,...]
NOMATCH: exchange-clause
END CONTROL FIELD ;
IF (boolean-expression)
THEN exchange-clause
[ELSE exchange-clause]
END IF;
SELECT FIRST TRUE OF
(boolean-expression) :exchange-clause[,...]
NOMATCH :exchange-clause
END SELECT ;
WHILE (boolean-expression)
DO exchange-clause
END WHILE;
{ NO EXCHANGE ; }
READ read-workspace-name
WITH PROMPT
prompt-workspace-name
literal-string
;
REQUEST IS request-name[IN request-library]
[USING workspace-name[,...]] ;
WRITE
workspace-name
literal-string
;

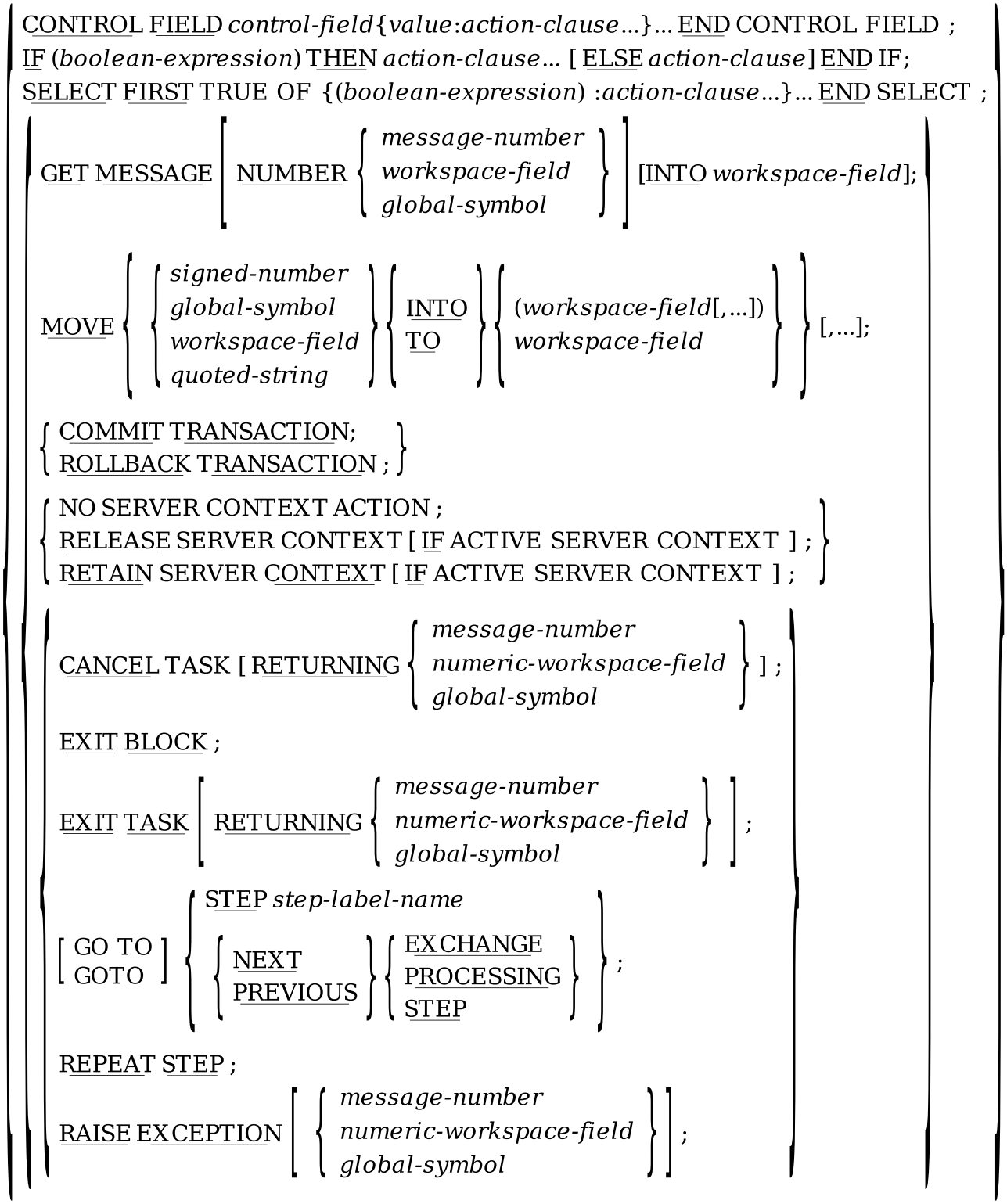


1.3.4. Processing Step Syntax

PROCESSING WORK


WITH
DISTRIBUTED TRANSACTION
NONPARTICIPATING SERVER
NO TERMINAL USER I/O
REQUEST I/O
IS
CONTROL FIELD control-field
value: processing-clause[,...]
NOMATCH: processing-clause
END CONTROL FIELD ;
IF (boolean-expression)
THEN processing-clause
[ELSE processing-clause]
END IF;
SELECT FIRST TRUE OF
(boolean-expression) :processing-clause[,...]
NOMATCH :processing-clause
END SELECT ;
WHILE (boolean-expression)
DO processing-clause
END WHILE;
CALL PROCEDURE entry-point-name [IN server-name]
[USING workspace-name[,...]];
CALL TASK task-name [USING workspace-name[,...]] ;
DATATRIEVE
DTR
COMMAND IS dtr-command-string [IN server-name] ;
DCL COMMAND [IS] dcl-command-string [IN server-name] ;
IMAGE IS image-file-spec [IN server-name] ;
NO PROCESSING ;

1.3.5. Action Clauses Syntax

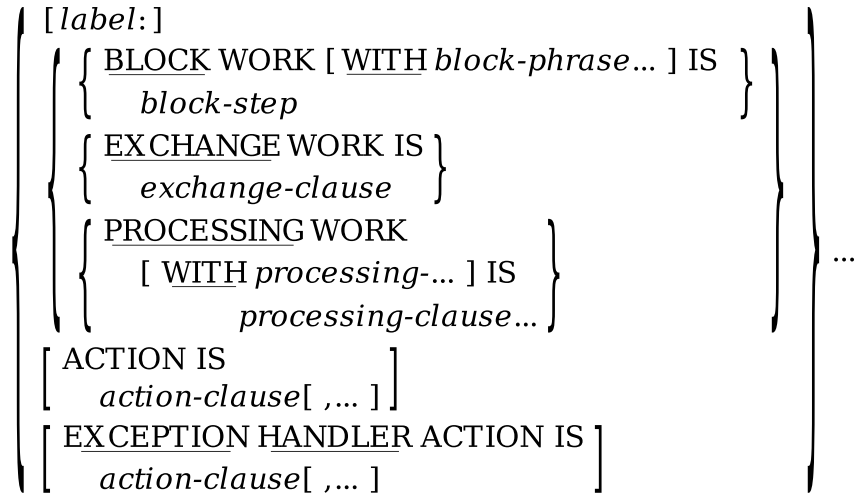


1.3.6. BLOCK Clause (Block)

BLOCK Clause (Block)

BLOCK Clause (Block) — Describes the work done in a block step in terms of block, exchange, processing, and action clauses.

Format



END BLOCK WORK ;

[ACTION IS
action-clause[,...]]

[EXCEPTION HANDLER ACTION IS
action-clause[,...]]

1.3.7. CALL Clause (Processing)

CALL Clause (Processing)

CALL Clause (Processing) — Names a procedure in a procedure server to do the work for a processing step. Also names any workspaces used by that procedure.

Format

CALL PROCEDURE *entry-point-name* [IN *server-name*] [USING *workspace-name*[,...]];

1.3.8. CALL TASK Clause (Processing)

CALL TASK Clause (Processing)

CALL TASK Clause (Processing) — Names a task called by a processing step and any workspaces supplied to the called task.

Format

CALL TASK *task-name* [USING *workspace-name*[,...]] ;

1.3.9. CANCEL ACTION Phrase (Block)

CANCEL ACTION Phrase (Block)

CANCEL ACTION Phrase (Block) — Specifies processing ACMS does when a task is canceled.

Format

CANCEL ACTION IS *processing-clause*

1.3.10. CANCEL TASK Clause (Action)

CANCEL TASK Clause (Action)

CANCEL TASK Clause (Action) — Stops the task in the action part of the current step by canceling the current task instance.

Format

CANCEL TASK [RETURNING { *message-number* / *numeric-workspace-field* / *global-symbol* }] ;

1.3.11. CANCELABLE Clause (Task)

CANCELABLE Clause (Task)

CANCELABLE Clause (Task) — Specifies whether or not a task can be canceled by a user or task submitter.

Format

[NOT] CANCELABLE BY [[TERMINAL] USER / [TASK] SUBMITTER] ;

1.3.12. COMMIT TRANSACTION Clause (Action)

COMMIT TRANSACTION Clause (Action)

COMMIT TRANSACTION Clause (Action) — Signals the end of a distributed transaction and makes permanent any file or database operations performed within the distributed transaction.

Format

COMMIT TRANSACTION;

1.3.13. CONTROL FIELD Clause (Action, Block, Exchange, Processing)

CONTROL FIELD Clause (Action, Block, Exchange, Processing)

CONTROL FIELD Clause (Action, Block, Exchange, Processing) — Performs a step or action based on a condition.

Format

```
CONTROL FIELD control-field
        { value:      clause[ ,... ] }
        { NOMATCH :   clause[ ,... ] }
END CONTROL FIELD ;
```

1.3.14. DATATRIEVE COMMAND Clause (Processing)

DATATRIEVE COMMAND Clause (Processing)

DATATRIEVE COMMAND Clause (Processing) — Names a DATATRIEVE command to do work for a processing step.

Format

```
{ DATARETRIEVE } COMMAND IS dtr-command-string [ IN server-name];
{ DTR         }
```

1.3.15. DCL COMMAND Clause (Processing)

DCL COMMAND Clause (Processing)

DCL COMMAND Clause (Processing) — Names a DCL command to do work for a processing step.

Format

```
DCL COMMAND IS dcl-command-string [ IN server-name];
```

1.3.16. DEFAULT FORM Clause (Task)

DEFAULT FORM Clause (Task)

DEFAULT FORM Clause (Task) — Names a default form used by the SEND, RECEIVE, and TRANSCEIVE clauses in exchange steps of a task.

Format

```
DEFAULT FORM IS form-label-name;
```

1.3.17. DEFAULT REQUEST LIBRARY Clause (Task)

DEFAULT REQUEST LIBRARY Clause (Task)

DEFAULT REQUEST LIBRARY Clause (Task) — Names a default request library used by REQUEST clauses in exchange steps of a task.

Format

DEFAULT REQUEST LIBRARY IS *request-library-name*;

1.3.18. DEFAULT SERVER Clause (Task)

DEFAULT SERVER Clause (Task)

DEFAULT SERVER Clause (Task) — Names a default server to handle processing and cancel actions for the step or steps in a task.

Format

DEFAULT SERVER IS *server-name*;

1.3.19. DELAY Clause (Task)

DELAY Clause (Task)

DELAY Clause (Task) — Controls whether or not ACMS pauses after a task finishes running before clearing the screen and displaying the ACMS menu.

Format

[NO] DELAY ;

1.3.20. EXCEPTION HANDLER Clause (Block, Exchange, Processing)

EXCEPTION HANDLER Clause (Block, Exchange, Processing)

EXCEPTION HANDLER Clause (Block, Exchange, Processing) — Describes the actions to be taken to recover from one or more exceptions.

Format

EXCEPTION HANDLER ACTION IS *action-clause*... ;

1.3.21. EXCHANGE Clause (Task)

EXCHANGE Clause (Task)

EXCHANGE Clause (Task) — Describes the interaction between the application and the user.

Format

```
EXCHANGE WORK IS
        exchange-clause

[ ACTION IS                          ]
[       action-clause[ ,... ]        ]
[ EXCEPTION HANDLER ACTION IS        ]
[       action-clause...             ]
```

1.3.22. EXIT BLOCK Clause (Action)

EXIT BLOCK Clause (Action)

EXIT BLOCK Clause (Action) — Transfers control of the task to the action part of the block step definition.

Format

```
EXIT BLOCK ;
```

1.3.23. EXIT TASK Clause (Action)

EXIT TASK Clause (Action)

EXIT TASK Clause (Action) — Ends the current task.

Format

```
EXIT TASK [ RETURNING { message-number       } ] ;
          [           { numeric-workspace-field }
          [           { global-symbol           }
```

1.3.24. FORM I/O Phrase (Block)

FORM I/O Phrase (Block)

FORM I/O Phrase (Block) — Specifies that the exchange steps in a block step use DECforms to interface with the user.

Format

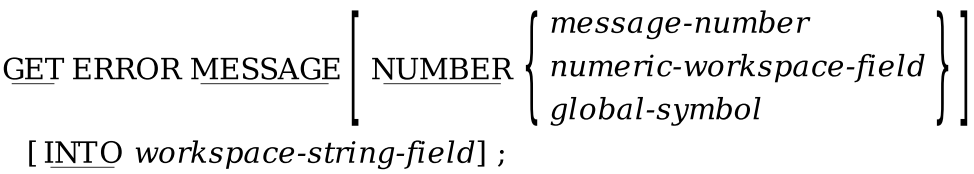
```
FORM I/O
```

1.3.25. GET ERROR MESSAGE Clause (Action)

GET ERROR MESSAGE Clause (Action)

GET ERROR MESSAGE Clause (Action) — Uses the OpenVMS message facility to translate a message number into a message and move that message from a message file to a workspace field.

Format



1.3.26. GLOBAL Clause (Task)

GLOBAL Clause (Task)

GLOBAL Clause (Task) — Specifies that a task can be selected from a menu, called by an agent, or called by another task.

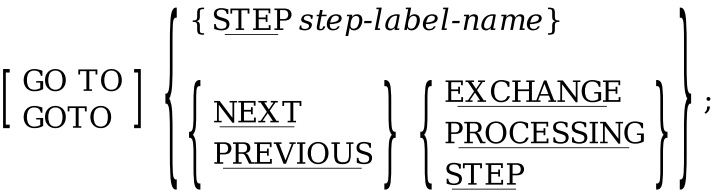
Format

1.3.27. GOTO STEP Clause (Action)

GOTO STEP Clause (Action)

GOTO STEP Clause (Action) — In the action part of a step definition, specifies which block, exchange, or processing step to execute next.

Format

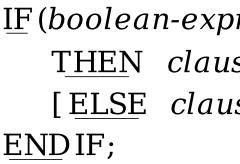


1.3.28. IF THEN ELSE Clause (Action, Block, Exchange, Processing)

IF THEN ELSE Clause (Action, Block, Exchange, Processing)

IF THEN ELSE Clause (Action, Block, Exchange, Processing) — Takes action based on values you test with Boolean expressions. Use the IF THEN ELSE clause to start a block, exchange, or processing step (thereby creating a conditional block, exchange, or processing step), or to start an action clause (thereby creating a conditional action clause).

Format



1.3.29. IMAGE Clause (Processing)

IMAGE Clause (Processing)

IMAGE Clause (Processing) — Names an OpenVMS image to do work for a processing step.

Format

IMAGE IS *image-file-spec* [IN *server-name*] ;

1.3.30. LOCAL Clause (Task)

LOCAL Clause (Task)

LOCAL Clause (Task) — Specifies that a task can be called by or chained to another task, but not selected from a menu or called by an agent.

Format

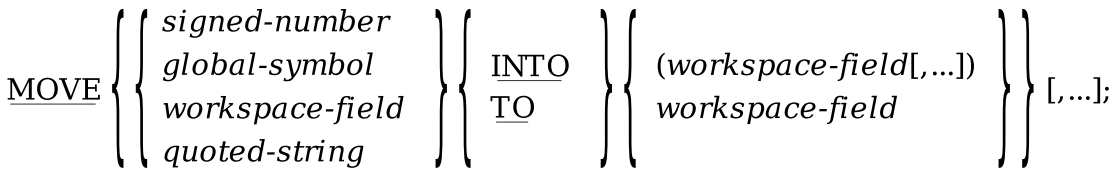
LOCAL ;

1.3.31. MOVE Clause (Action)

MOVE Clause (Action)

MOVE Clause (Action) — Specifies that a number, the numeric value of a global symbol, workspace field, or quoted string is to move into another workspace field or fields.

Format



1.3.32. NO EXCHANGE Clause (Exchange)

NO EXCHANGE Clause (Exchange)

NO EXCHANGE Clause (Exchange) — Specifies that an exchange step does not do any work.

Format

NO EXCHANGE ;

1.3.33. NO PROCESSING Clause (Processing)

NO PROCESSING Clause (Processing)

NO PROCESSING Clause (Processing) — Specifies that the step does not do any processing work.

Format

NO PROCESSING ;

1.3.34. NO SERVER CONTEXT ACTION Clause (Action)

NO SERVER CONTEXT ACTION Clause (Action)

NO SERVER CONTEXT ACTION Clause (Action) — Maintains the current state of any server context associated with the task.

Format

NO SERVER CONTEXT ACTION ;

1.3.35. NO TERMINAL I/O Phrase (Block, Processing)

NO TERMINAL I/O Phrase (Block, Processing)

NO TERMINAL I/O Phrase (Block, Processing) — States that the block or processing step does no terminal I/O.

Format

NO TERMINAL USER I/O

1.3.36. NONPARTICIPATING SERVER Phrase (Processing)

NONPARTICIPATING SERVER Phrase (Processing)

NONPARTICIPATING SERVER Phrase (Processing) — Excludes a processing step from participating in an existing distributed transaction.

Format

NONPARTICIPATING SERVER

1.3.37. PROCESSING Clause (Task)

PROCESSING Clause (Task)

PROCESSING Clause (Task) — Describes work done in a single-step processing task.

Format

PROCESSING WORK [WITH *processing-*[,...] IS
    processing-clause

[ACTION IS
    action-clause[,...]]

```
[ EXCEPTION HANDLER ACTION IS
      action-clause... ]
```

1.3.38. RAISE EXCEPTION Clause (Action)

RAISE EXCEPTION Clause (Action)

RAISE EXCEPTION Clause (Action) — Raises a step exception and passes control to the exception handler action part of the step.

Format

```
RAISE EXCEPTION [ { message-number
                  { numeric-workspace-field
                  { global-symbol } ] ;
```

1.3.39. READ Clause (Exchange)

READ Clause (Exchange)

READ Clause (Exchange) — If the block step uses STREAM I/O, the READ clause reads from an ACMS stream into a workspace. If the block step uses REQUEST I/O, the READ clause passes information from the exception line (line 24) on the terminal screen to a workspace.

Format

```
READ read-workspace-name [ WITH PROMPT { prompt-workspace-name
                                       { literal-string } ] ;
```

1.3.40. RECEIVE Clause (Exchange)

RECEIVE Clause (Exchange)

RECEIVE Clause (Exchange) — Transfers information from form data items to your task workspace.

Format

```
{ RECEIVE [ FORM ] RECORD record-identifier [ IN form-label-name ]
  RECEIVING { receive-workspace-name
                [ SHADOW [ IS ] receive-shadow-workspace ] } [,...]
  [ WITH { RECEIVE CONTROL receive-control-workspace
             [ COUNT numeric-workspace-field2 ]
         { SEND CONTROL send-control-workspace
             [ COUNT { numeric-workspace-field3
                     { send-control-count } ]
         { TIMEOUT { numeric-workspace-field
                   { seconds } } ] }
```

1.3.41. RELEASE SERVER CONTEXT Clause (Action)

RELEASE SERVER CONTEXT Clause (Action)

RELEASE SERVER CONTEXT Clause (Action) — Releases the server process allocated for a task.

Format

RELEASE SERVER CONTEXT [IF ACTIVE SERVER CONTEXT] ;

1.3.42. REPEAT STEP Clause (Action)

REPEAT STEP Clause (Action)

REPEAT STEP Clause (Action) — Repeats the current exchange, processing, or block step.

Format

REPEAT STEP ;

1.3.43. REQUEST Clause (Exchange)

REQUEST Clause (Exchange)

REQUEST Clause (Exchange) — Names a TDMS request that does input and output for an exchange step.

Format

REQUEST IS *request-name* [IN *request-library*] [USING {*workspace-name*} [,...]] ;

1.3.44. REQUEST I/O Phrase (Block, Processing)

REQUEST I/O Phrase (Block, Processing)

REQUEST I/O Phrase (Block, Processing) — Specifies using TDMS to communicate with the user. Specify the REQUEST I/O phrase at the block or processing step level.

Format

REQUEST I/O

1.3.45. RETAIN SERVER CONTEXT Clause (Action)

RETAIN SERVER CONTEXT Clause (Action)

RETAIN SERVER CONTEXT Clause (Action) — Retains the server context within the current server.

Format

RETAIN SERVER CONTEXT [IF ACTIVE SERVER CONTEXT] ;

1.3.46. ROLLBACK TRANSACTION Clause (Action)

ROLLBACK TRANSACTION Clause (Action)

ROLLBACK TRANSACTION Clause (Action) — Marks the end of a distributed transaction and returns any files and databases within the transaction to the state they were in before the transaction started.

Format

ROLLBACK TRANSACTION ;

1.3.47. SELECT FIRST Clause (Action, Block, Exchange, Processing)

SELECT FIRST Clause (Action, Block, Exchange, Processing)

SELECT FIRST Clause (Action, Block, Exchange, Processing) — Takes action based on values you test with Boolean expressions. Use a SELECT FIRST clause to start a block, exchange, or processing step (thereby creating a conditional block, exchange, or processing step), or to start an action clause (thereby creating a conditional action clause).

Format

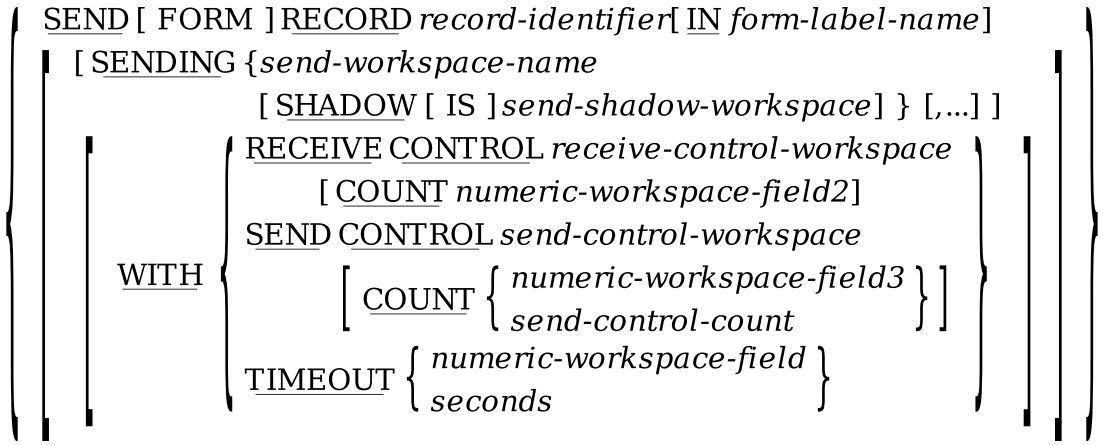
```
SELECT FIRST TRUE OF
        { (boolean-expression) :    clause[ ,... ] }
        { NOMATCH :                 clause[ ,... ] }
END SELECT ;
```

1.3.48. SEND Clause (Exchange)

SEND Clause (Exchange)

SEND Clause (Exchange) — Transfers information from your task workspace to form data items.

Format



1.3.49. SERVER CONTEXT Phrase (Block)

SERVER CONTEXT Phrase (Block)

SERVER CONTEXT Phrase (Block) — Specifies whether or not server context is retained by default between steps in a block step.

Format

[NO] SERVER CONTEXT

1.3.50. STREAM I/O Phrase (Block)

STREAM I/O Phrase (Block)

STREAM I/O Phrase (Block) — Specifies that the exchange steps in a block step use ACMS streams to communicate with the user or other task submitter.

Format

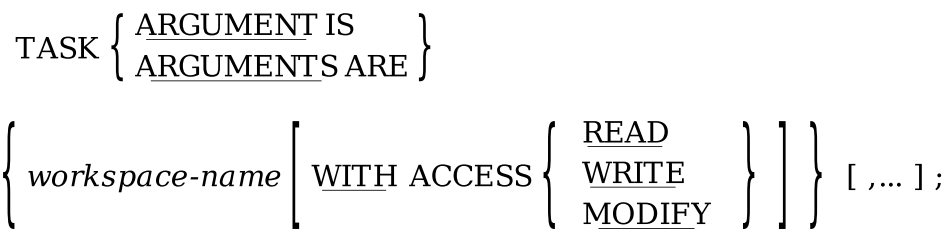
STREAM I/O

1.3.51. TASK ARGUMENTS Phrase (Task)

TASK ARGUMENTS Phrase (Task)

TASK ARGUMENTS Phrase (Task) — Identifies the names and the order of the task workspace arguments that can be supplied to a called task by an agent or by another task.

Format



1.3.52. TERMINAL I/O Phrase (Processing)

TERMINAL I/O Phrase (Processing)

TERMINAL I/O Phrase (Processing) — Specifies that a processing step communicates directly with the terminal by means of programming statements, OpenVMS services, or TDMS requests.

Format

TERMINAL I/O

1.3.53. TRANSACTION Phrase (Block, Processing)

TRANSACTION Phrase (Block, Processing)

TRANSACTION Phrase (Block, Processing) — Identifies the block or processing step as a transaction; all work within the step either completes successfully or is rolled back.

Format

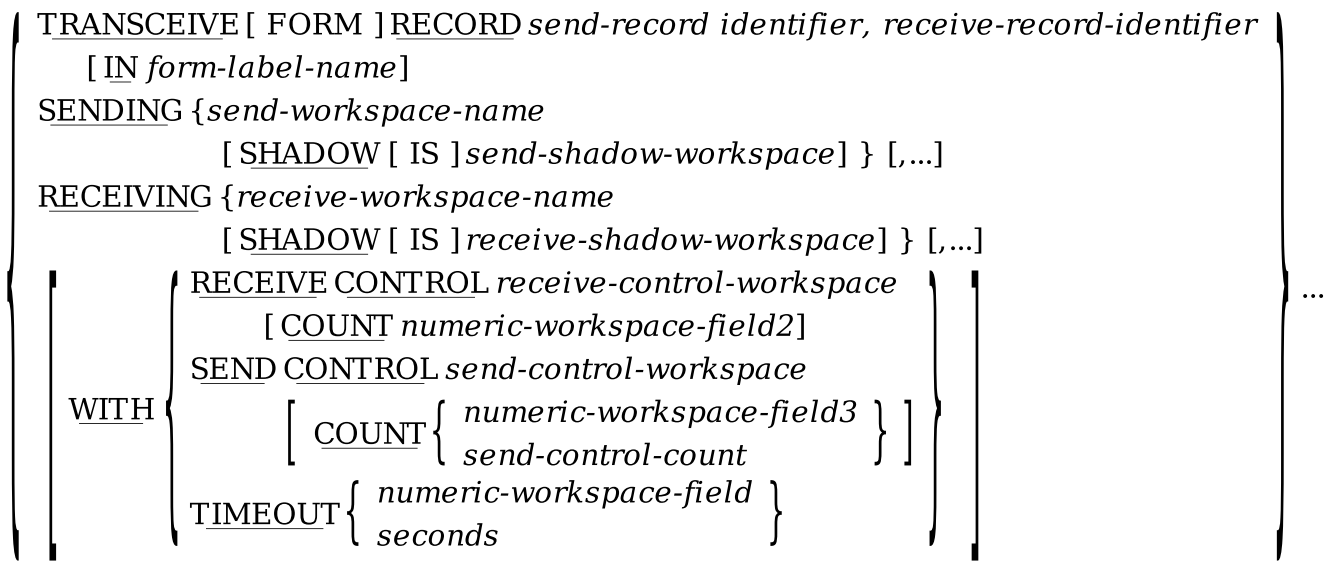
DISTRIBUTED TRANSACTION

1.3.54. TRANSCEIVE Clause (Exchange)

TRANSCEIVE Clause (Exchange)

TRANSCEIVE Clause (Exchange) — Combines the SEND and RECEIVE operations. First, DECforms sends data from your task workspace to form data items. Then it moves data from the form to your task workspace.

Format

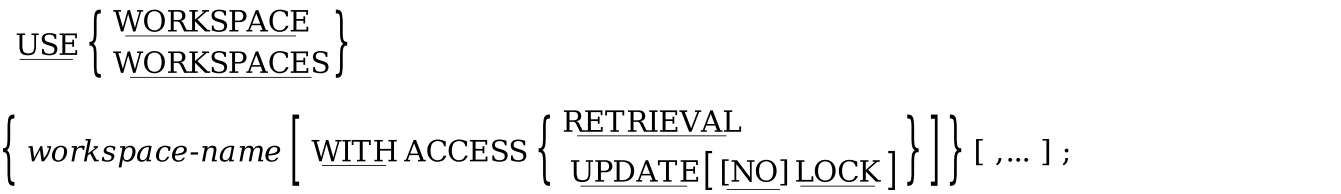


1.3.55. USE WORKSPACE Clause (Task)

USE WORKSPACE Clause (Task)

USE WORKSPACE Clause (Task) — Names one or more workspaces, declared in the task group, that a task needs to access.

Format



1.3.56. WAIT Clause (Task)

WAIT Clause (Task)

WAIT Clause (Task) — Controls whether or not ACMS displays a message prompting users to press **Return**. Pressing **Return** clears the terminal screen and displays the previous ACMS menu.

Format

[NO] WAIT ;

1.3.57. WHILE DO Clause (Block, Exchange, Processing)

WHILE DO Clause (Block, Exchange, Processing)

WHILE DO Clause (Block, Exchange, Processing) — Performs block, exchange, or processing work as long as a specified Boolean expression evaluates to true.

Format

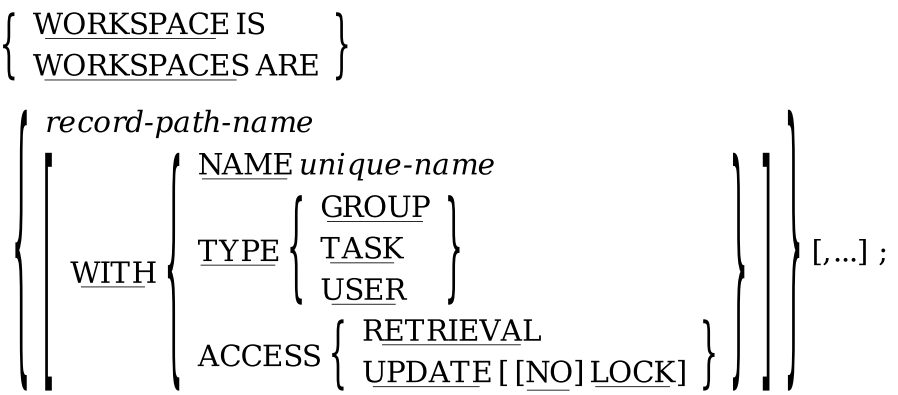
WHILE (*boolean-expression*)
    DO *clause*
END WHILE;

1.3.58. WORKSPACES Clause (Task)

WORKSPACES Clause (Task)

WORKSPACES Clause (Task) — Names one or more workspaces used by steps in a task.

Format



1.3.59. WRITE Clause (Exchange)

WRITE Clause (Exchange)

WRITE Clause (Exchange) — If the block step uses STREAM I/O, the WRITE clause writes the contents of a workspace field to a stream. If the block step uses REQUEST I/O, the WRITE clause

passes a literal string or the contents of a workspace to the exception line (line 24) on the terminal screen.

Format

WRITE { *workspace-name* | *literal-string* } ;

1.4. Task Group Definition Clauses

A task group is a set of tasks that share resources and are built into a single database file. This section lists the syntax for the ADU clauses and subclauses used to define task groups.

Use task group clauses to define:

- Characteristics applying to all tasks in the group
- Servers that handle the processing for tasks in the group

Also use task group clauses to name the tasks belonging to the group and to define some tasks directly in the task group definition.

You can use two kinds of subclauses with task group clauses: **processing subclauses** and **server subclauses**. If a task consists of a single processing step, you can include the definition for the task directly in the task group definition. The task group clauses used to define a task directly in a task group definition are called processing subclauses.

When you define a server in a task group definition, use server subclauses to describe characteristics for that server.

You can define a task directly in a task group definition if that task:

- Consists of a single unconditional processing step
- Defines no step actions or exception handler actions
- Defines no default server or default form file
- Uses no workspaces other than the ACMS system workspaces

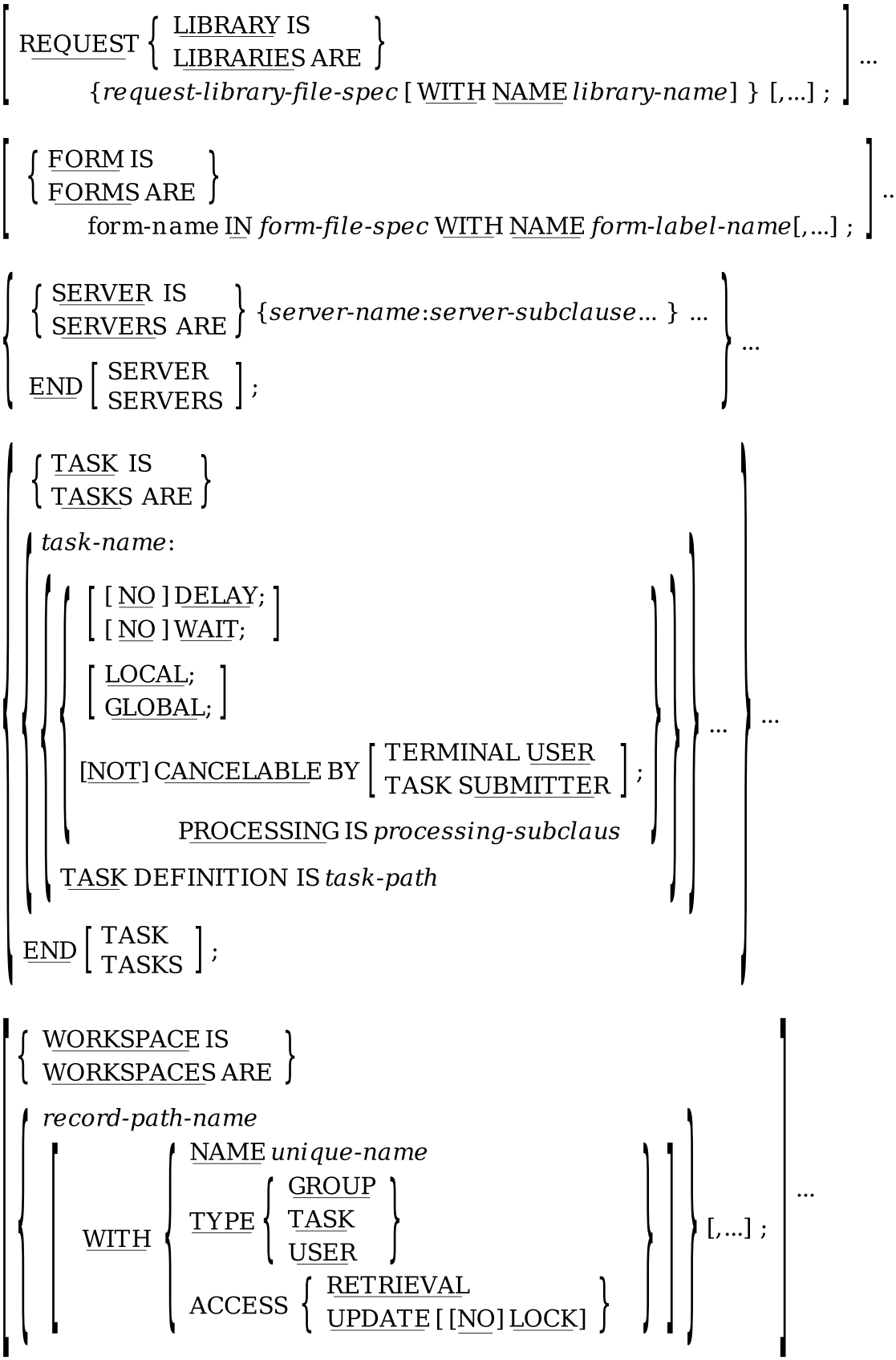
If a task definition does not follow these rules, name it in the task group definition. Define it separately, using task and block clauses.

This section begins with overview syntax for task groups, processing subclauses, and server subclauses. The overview syntax is followed by syntax for individual task group definition clauses and subclauses.

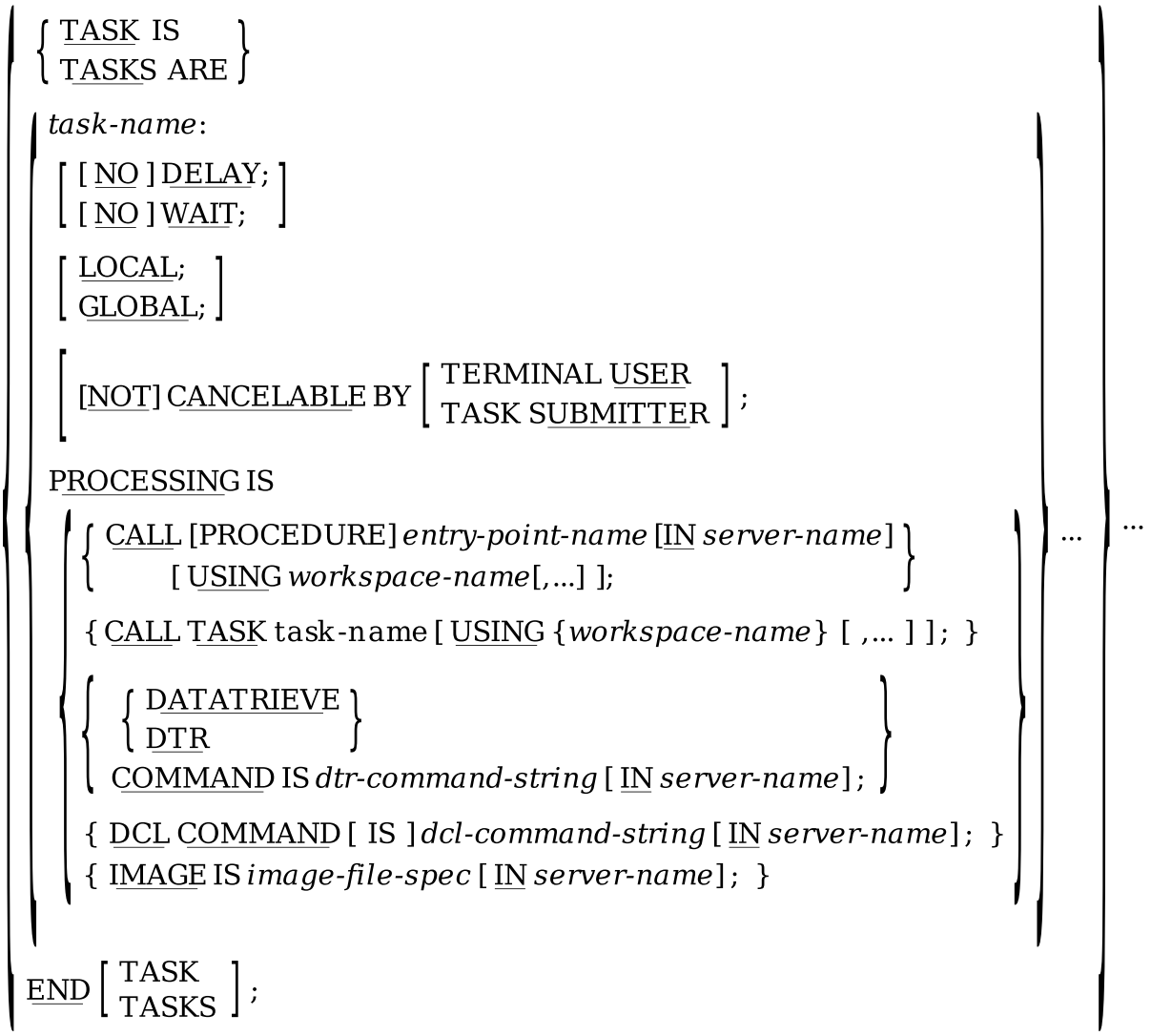
1.4.1. Task Group Syntax

[DEFAULT TASK GROUP FILE IS *task-group-database-file*;]

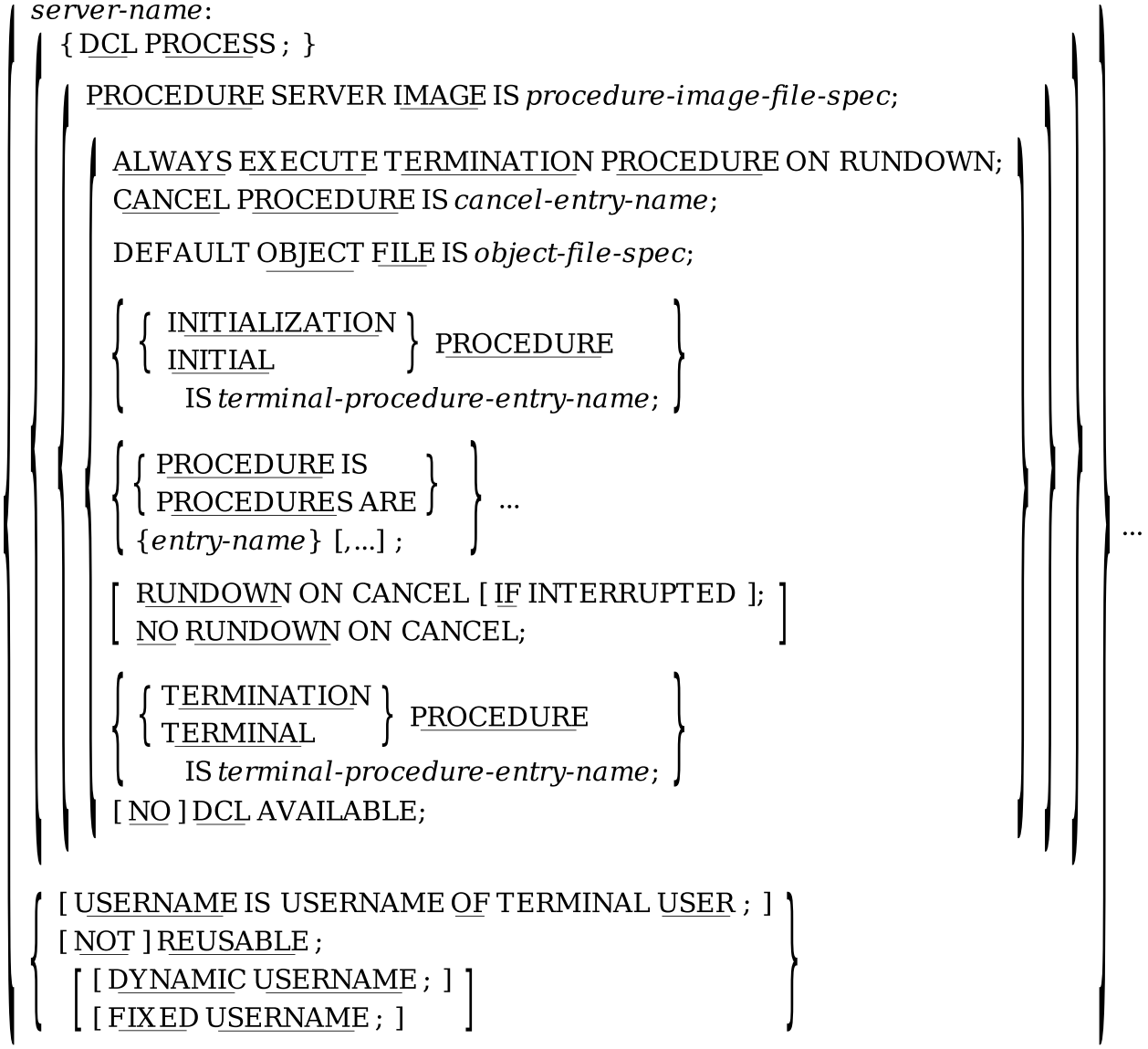
[MESSAGE [FILE IS | FILES ARE] *message-file-spec*[,...] ;] ...


REQUEST
LIBRARY IS
LIBRARIES ARE
{request-library-file-spec [WITH NAME library-name] } [,...] ;
FORM IS
FORMS ARE
form-name IN form-file-spec WITH NAME form-label-name[,...] ;
SERVER IS
SERVERS ARE
{server-name:server-subclause... } ...
END
SERVER
SERVERS
;
TASK IS
TASKS ARE
task-name:
[NO] DELAY;
[NO] WAIT;
LOCAL;
GLOBAL;
[NOT] CANCELABLE BY
TERMINAL USER
TASK SUBMITTER
;
PROCESSING IS processing-subclaus
TASK DEFINITION IS task-path
END
TASK
TASKS
;
WORKSPACE IS
WORKSPACES ARE
record-path-name
WITH
NAME unique-name
TYPE
GROUP
TASK
USER
ACCESS
RETRIEVAL
UPDATE [[NO] LOCK]
[,...] ;

1.4.2. Processing Subclauses Syntax



1.4.3. Server Subclauses Syntax



1.4.4. ALWAYS EXECUTE TERMINATION PROCEDURE Subclause (Server)

ALWAYS EXECUTE TERMINATION PROCEDURE Subclause (Server)

ALWAYS EXECUTE TERMINATION PROCEDURE Subclause (Server) — Specifies that ACMS should always process the server's termination procedure when the server process is run down.

Format

ALWAYS EXECUTE TERMINATION PROCEDURE ON RUNDOWN;

1.4.5. CALL Subclause (Processing)

CALL Subclause (Processing)

CALL Subclause (Processing) — Names a procedure in a procedure server to do the work for a processing step.

Format

CALL PROCEDURE *entry-point-name* [IN *server-name*] [USING *workspace-name*[,...]];

1.4.6. CANCEL PROCEDURE Subclause (Server)

CANCEL PROCEDURE Subclause (Server)

CANCEL PROCEDURE Subclause (Server) — Names a procedure that runs when a task instance is canceled while that task is processing in a server or is maintaining server context in the server.

Format

CANCEL PROCEDURE IS *cancel-entry-name*;

1.4.7. DATATRIEVE COMMAND Subclause (Processing)

DATATRIEVE COMMAND Subclause (Processing)

DATATRIEVE COMMAND Subclause (Processing) — Runs a DATATRIEVE command to do work for a processing step.

Format

{ DATARETRIEVE | DTR } COMMAND IS *dtr-command-string* [IN *server-name*] ;

1.4.8. DCL AVAILABLE Subclause (Server)

DCL AVAILABLE Subclause (Server)

DCL AVAILABLE Subclause (Server) — Allows you to specify the loading of the DCL command line interpreter (CLI) into a procedure server process.

Format

[NO] DCL AVAILABLE;

1.4.9. DCL COMMAND Subclause (Processing)

DCL COMMAND Subclause (Processing)

DCL COMMAND Subclause (Processing) — Uses a DCL command to process a task.

Format

DCL COMMAND [IS] *dcl-command-string* [IN *server-name*] ;

1.4.10. DCL PROCESS Subclause (Server)

DCL PROCESS Subclause (Server)

DCL PROCESS Subclause (Server) — Indicates that a server processes tasks that use DCL commands or command procedures, DATATRIEVE commands or procedures, or OpenVMS images.

Format

DCL PROCESS ;

1.4.11. DEFAULT OBJECT FILE Subclause (Server)

DEFAULT OBJECT FILE Subclause (Server)

DEFAULT OBJECT FILE Subclause (Server) — Specifies a file name for the object module produced for a server when you build the task group containing that server.

Format

DEFAULT OBJECT FILE IS *object-file-spec*;

1.4.12. DEFAULT TASK GROUP FILE Clause (Task Group)

DEFAULT TASK GROUP FILE Clause (Task Group)

DEFAULT TASK GROUP FILE Clause (Task Group) — Names the default file specification of the task group database.

Format

DEFAULT TASK GROUP FILE IS *task-group-database-file*;

1.4.13. DYNAMIC USERNAME Subclause (Server)

DYNAMIC USERNAME Subclause (Server)

DYNAMIC USERNAME Subclause (Server) — Specifies that the user name, UIC, and default directory of a server change to match those of the user each time the server process is used.

Format

DYNAMIC USERNAME ;

1.4.14. FIXED USERNAME Subclause (Server)

FIXED USERNAME Subclause (Server)

FIXED USERNAME Subclause (Server) — Specifies that the user name, UIC, and default directory of the server are those associated with the user name the server starts under.

Format

FIXED USERNAME ;

1.4.15. FORMS Clause (Task Group)

FORMS Clause (Task Group)

FORMS Clause (Task Group) — Names the forms the task group uses.

Format

```
{ FORM IS  }
{ FORMS ARE }
      form-name IN form-file-spec WITH NAME form-label-name[,...] ;
```

1.4.16. IMAGE Subclause (Processing)

IMAGE Subclause (Processing)

IMAGE Subclause (Processing) — Names the OpenVMS image that ACMS runs when users select an image task.

Format

IMAGE IS *image-file-spec* [IN *server-name*];

1.4.17. INITIALIZATION PROCEDURE Subclause (Server)

INITIALIZATION PROCEDURE Subclause (Server)

INITIALIZATION PROCEDURE Subclause (Server) — Names a procedure that runs when a procedure server image is started. An initialization procedure performs such activities as opening files used by the procedures handled by a server.

Format

```
{ INITIALIZATION } PROCEDURE IS initial-procedure-entry-name ;
{ INITIAL        }
```

1.4.18. MESSAGE FILES Clause (Task Group)

MESSAGE FILES Clause (Task Group)

MESSAGE FILES Clause (Task Group) — Names the message files used by the GET ERROR MESSAGE clause in the definitions of tasks in a task group.

Format

MESSAGE [FILE IS | FILES ARE] *message-file-spec*[,...] ;

1.4.19. PROCEDURE SERVER IMAGE Subclause (Server)

PROCEDURE SERVER IMAGE Subclause (Server)

PROCEDURE SERVER IMAGE Subclause (Server) — Identifies a server as a procedure server and names the procedure server image that does processing work for one or more tasks.

Format

PROCEDURE SERVER IMAGE IS *procedure-image-file-spec*;

1.4.20. PROCEDURES Subclause (Server)

PROCEDURES Subclause (Server)

PROCEDURES Subclause (Server) — Names the step procedures that can run in a procedure server.

Format

{ PROCEDURE IS | PROCEDURES ARE } *entry-name*[,...] ;

1.4.21. REQUEST LIBRARIES Clause (Task Group)

REQUEST LIBRARIES Clause (Task Group)

REQUEST LIBRARIES Clause (Task Group) — Names the request libraries the task group uses.

Format

REQUEST { LIBRARY IS | LIBRARIES ARE }
request-library-file-spec [WITH NAME *library-name*] [,...] ;

1.4.22. REUSABLE Subclause (Server)

REUSABLE Subclause (Server)

REUSABLE Subclause (Server) — Identifies a server process as able or unable to process more than one processing step for more than one task without being restarted. Server processes that are not reusable must be started each time they are needed.

Format

```
[ NOT ] REUSABLE ;
```

1.4.23. RUNDOWN ON CANCEL Subclause (Server)

RUNDOWN ON CANCEL Subclause (Server)

RUNDOWN ON CANCEL Subclause (Server) — Causes a procedure server to exit when a task cancel occurs while the task is keeping context in that server. When the server exits, ACMS releases server context. If you specify RUNDOWN ON CANCEL IF INTERRUPTED, ACMS runs down the server process only if ACMS interrupts the execution of a step procedure due to an exception.

Format

```
[ RUNDOWN ON CANCEL [ IF INTERRUPTED ] ;  ]
[ NO RUNDOWN ON CANCEL ;                  ]
```

1.4.24. SERVERS Clause (Task Group)

SERVERS Clause (Task Group)

SERVERS Clause (Task Group) — Defines the servers that handle the processing work for the tasks in a task group.

Format

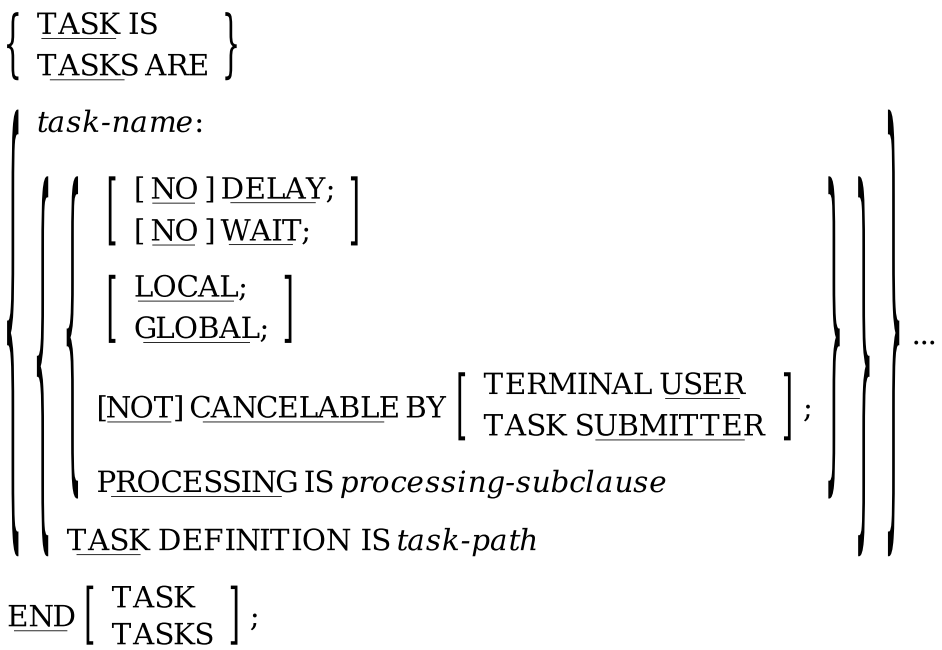
```
{ SERVER IS  }
{ SERVERS ARE }
      { server-name:server-subclause[,...] } ...
END [ SERVER  ] ;
    [ SERVERS ]
```

1.4.25. TASKS Clause (Task Group)

TASKS Clause (Task Group)

TASKS Clause (Task Group) — Identifies the tasks belonging to the task group you define.

Format



1.4.26. TERMINATION PROCEDURE Subclause (Server)

TERMINATION PROCEDURE Subclause (Server)

TERMINATION PROCEDURE Subclause (Server) — Names a procedure that runs when a procedure server image is stopped.

Format

1.4.27. USERNAME Subclause (Server)

USERNAME Subclause (Server)

USERNAME Subclause (Server) — Indicates that the server process runs under the OpenVMS user name of the user, and has the same UIC and default directory as that user.

Format

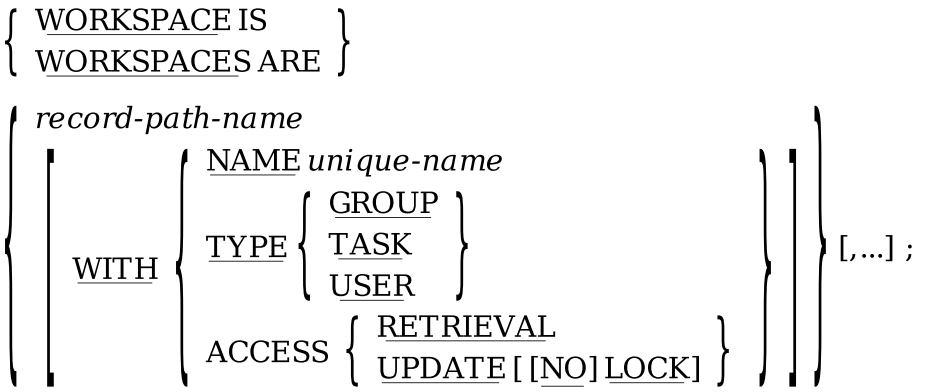
USERNAME IS USERNAME OF TERMINAL USER ;

1.4.28. WORKSPACES Clause (Task Group)

WORKSPACES Clause (Task Group)

WORKSPACES Clause (Task Group) — Declares one or more workspaces used by the tasks in a task group.

Format



1.5. Application Definition Clauses

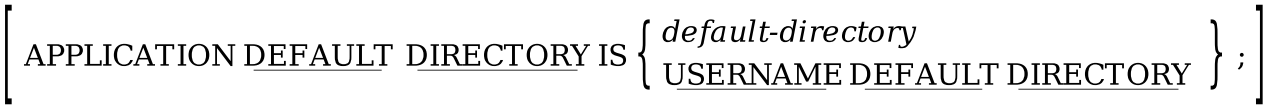
An application definition consists of a set of clauses that define control attributes for tasks, servers, and the application execution controller (EXC) that manages the server processes in which tasks run. This section lists the syntax for the ADU clauses and subclauses you use to define applications.

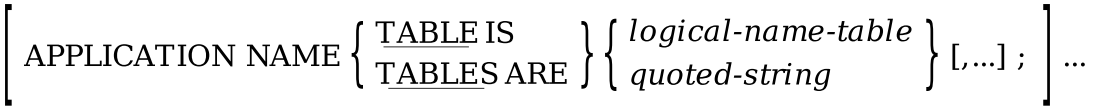
Two application definition clauses are required. The TASK GROUPS clause names the task group or groups that define the tasks of an application. The APPLICATION USERNAME clause defines the user name under which the application execution controller runs. The other clauses in the application definition are optional.

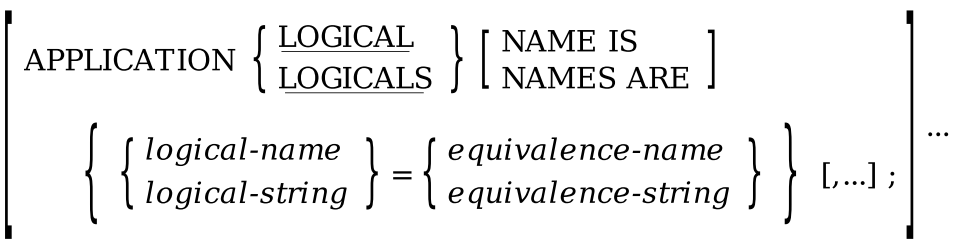
When ADU begins processing an application definition, it assigns default values to all characteristics of tasks and servers. You can change these default values by assigning different task characteristics to the tasks of an application with the TASK ATTRIBUTES or TASK DEFAULTS clause and by assigning different server characteristics to the servers of an application with the SERVER ATTRIBUTES or SERVER DEFAULTS clause.

This section begins with overview syntax for application definitions, server attributes clauses, server defaults clauses, task attributes clauses, and task defaults clauses. The overview syntax is followed by syntax for individual application definition clauses and subclauses.

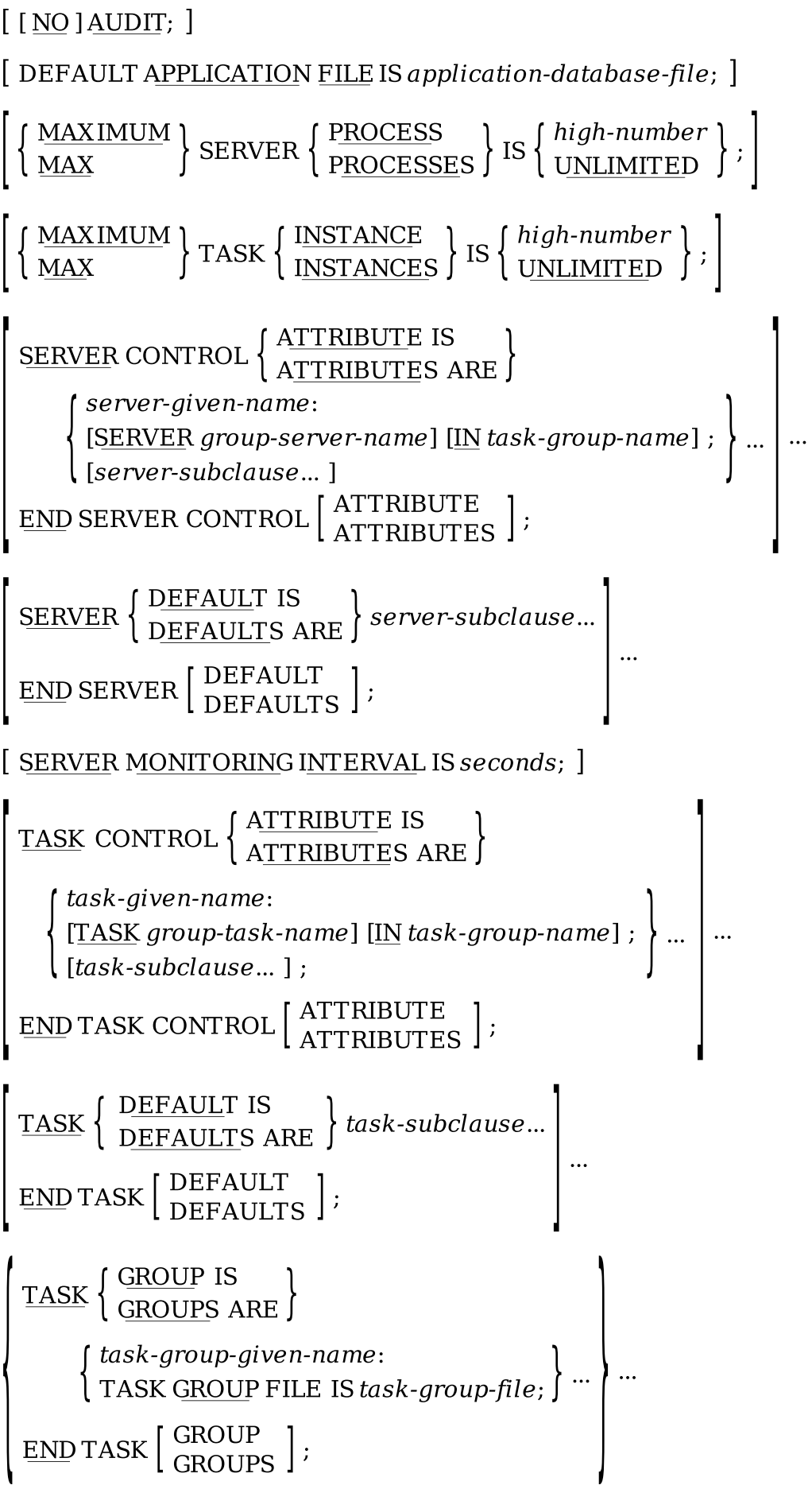
1.5.1. Application Definition Syntax



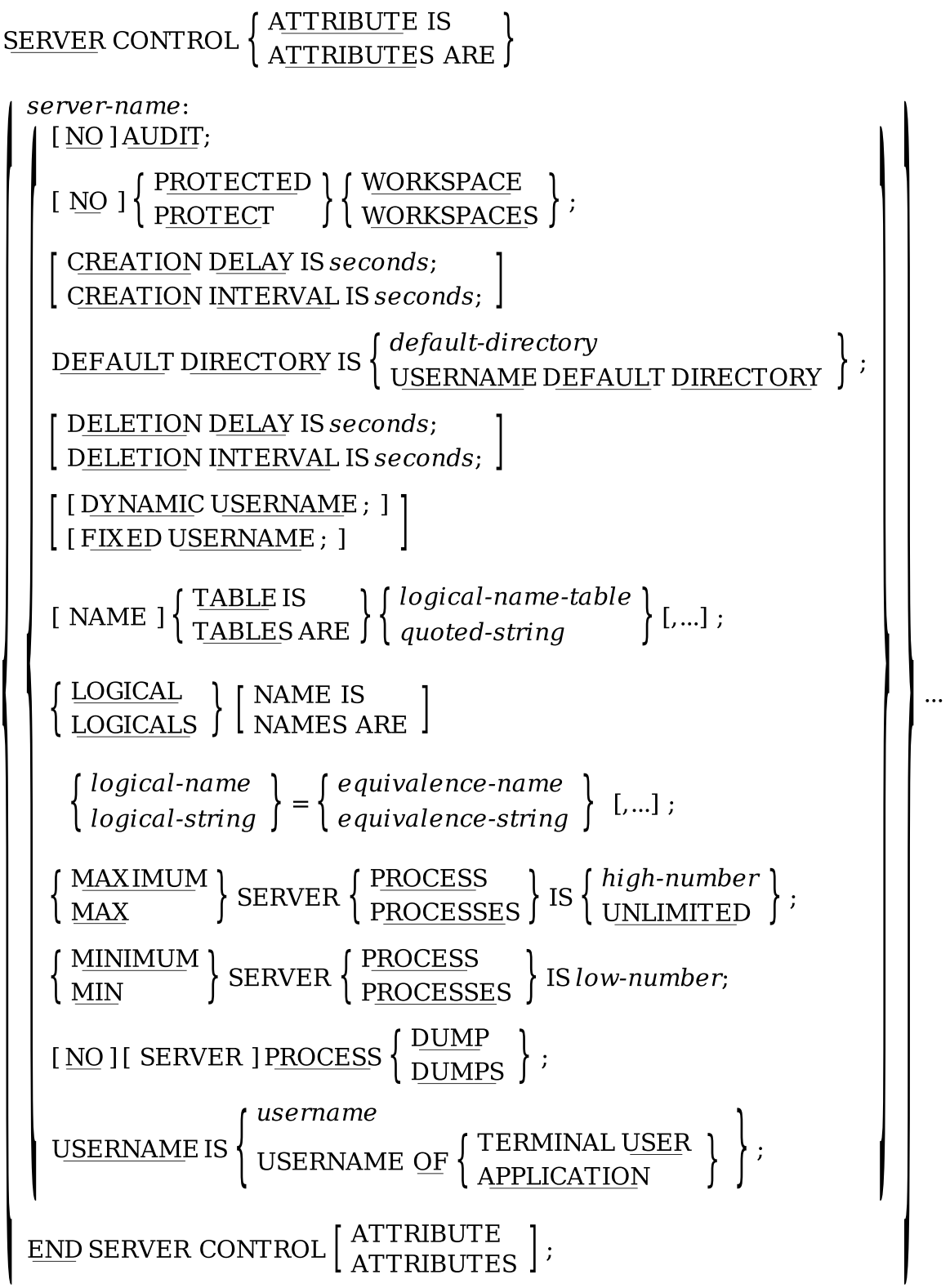




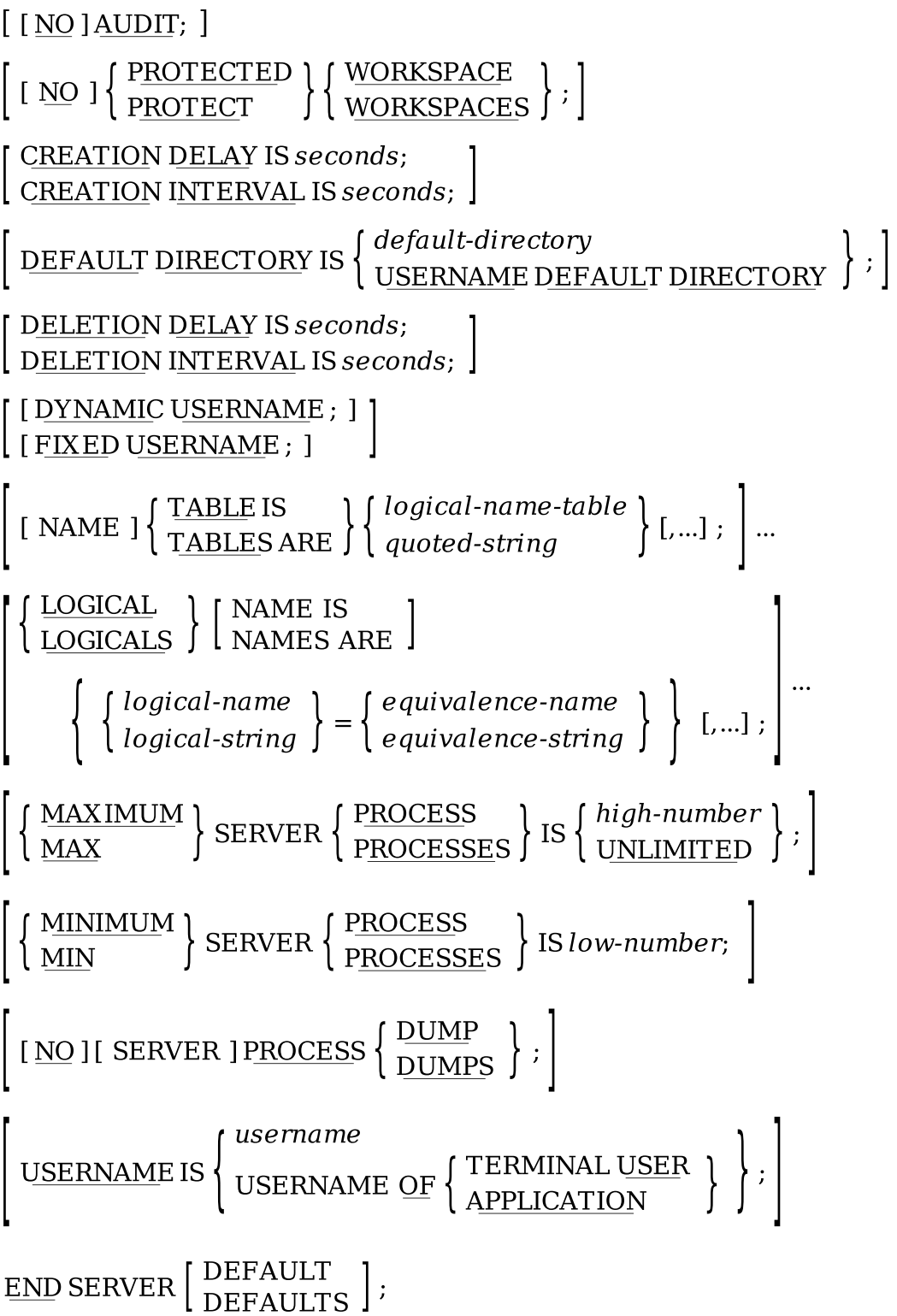
{ APPLICATION USERNAME IS *user-name*; }


[[NO] AUDIT;]
[DEFAULT APPLICATION FILE IS application-database-file;]
{ MAXIMUM | MAX } SERVER { PROCESS | PROCESSES } IS { high-number | UNLIMITED } ;
{ MAXIMUM | MAX } TASK { INSTANCE | INSTANCES } IS { high-number | UNLIMITED } ;
SERVER CONTROL { ATTRIBUTE IS | ATTRIBUTES ARE }
{ server-given-name: [SERVER group-server-name] [IN task-group-name] ; | [server-subclause...] } ... ...
END SERVER CONTROL [ATTRIBUTE | ATTRIBUTES] ;
SERVER { DEFAULT IS | DEFAULTS ARE } server-subclause...
END SERVER [DEFAULT | DEFAULTS] ; ...
[SERVER MONITORING INTERVAL IS seconds;]
TASK CONTROL { ATTRIBUTE IS | ATTRIBUTES ARE }
{ task-given-name: [TASK group-task-name] [IN task-group-name] ; | [task-subclause...] ; } ... ...
END TASK CONTROL [ATTRIBUTE | ATTRIBUTES] ;
TASK { DEFAULT IS | DEFAULTS ARE } task-subclause...
END TASK [DEFAULT | DEFAULTS] ; ...
TASK { GROUP IS | GROUPS ARE }
{ task-group-given-name: | TASK GROUP FILE IS task-group-file; } ... ...
END TASK [GROUP | GROUPS] ;

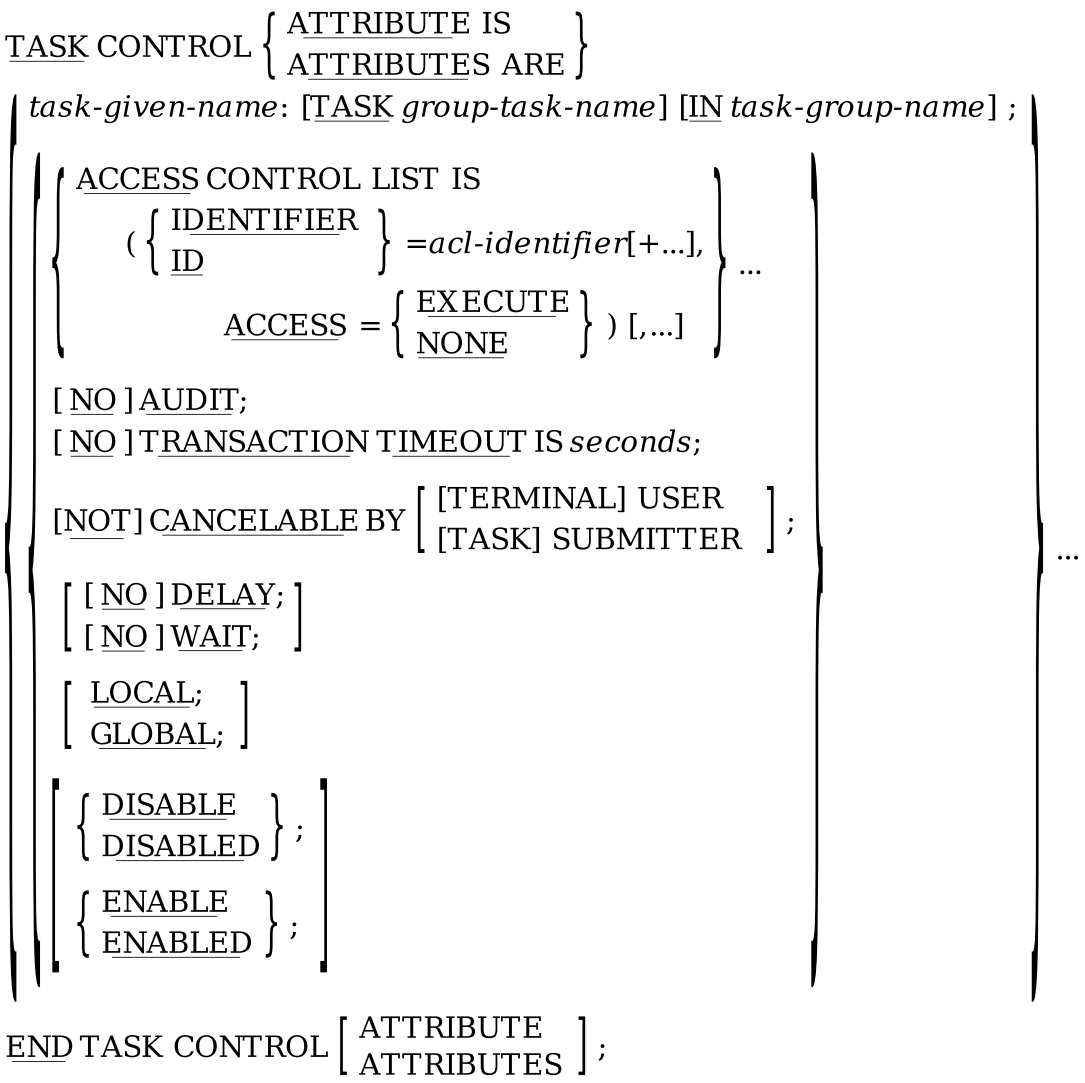
1.5.2. SERVER ATTRIBUTES Clause Syntax



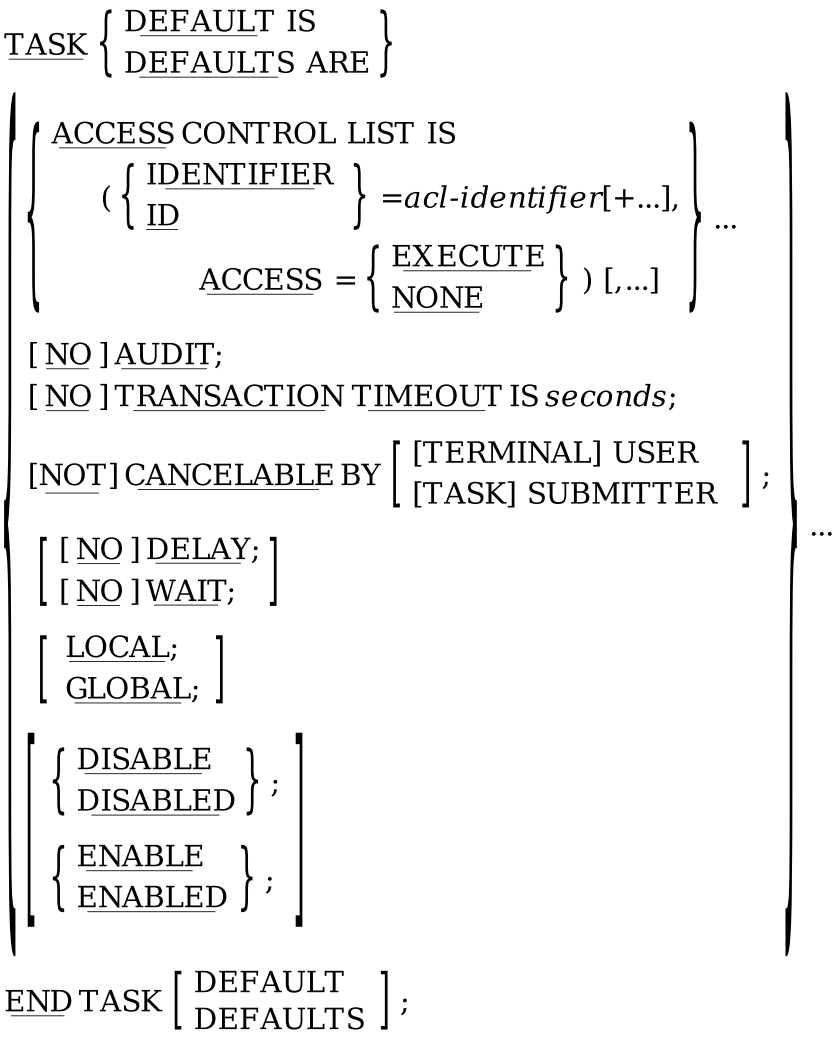
1.5.3. SERVER DEFAULTS Clause Syntax


[[NO] AUDIT;]
[[NO] { PROTECTED / PROTECT } { WORKSPACE / WORKSPACES } ;]
[CREATION DELAY IS seconds;
CREATION INTERVAL IS seconds;]
[DEFAULT DIRECTORY IS { default-directory / USERNAME DEFAULT DIRECTORY } ;]
[DELETION DELAY IS seconds;
DELETION INTERVAL IS seconds;]
[[DYNAMIC USERNAME ;]
[FIXED USERNAME ;]]
[[NAME] { TABLE IS / TABLES ARE } { logical-name-table / quoted-string } [,...] ;] ...
[{ LOGICAL / LOGICALS } [NAME IS / NAMES ARE]
{ { logical-name / logical-string } = { equivalence-name / equivalence-string } } [,...] ;] ...
[{ MAXIMUM / MAX } SERVER { PROCESS / PROCESSES } IS { high-number / UNLIMITED } ;]
[{ MINIMUM / MIN } SERVER { PROCESS / PROCESSES } IS low-number;]
[[NO] [SERVER] PROCESS { DUMP / DUMPS } ;]
[USERNAME IS { username / USERNAME OF { TERMINAL USER / APPLICATION } } ;]
END SERVER [DEFAULT / DEFAULTS] ;

1.5.4. TASK ATTRIBUTES Clause Syntax



1.5.5. TASK DEFAULTS Clause Syntax

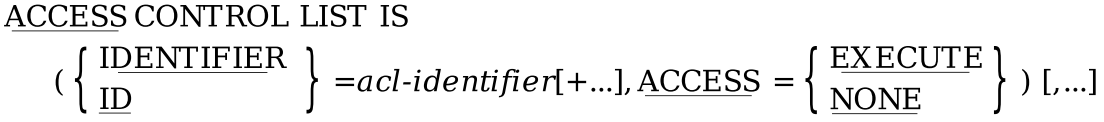


1.5.6. ACCESS Subclause (Task)

ACCESS Subclause (Task)

ACCESS Subclause (Task) — Defines who can and cannot select a task.

Format



1.5.7. APPLICATION DEFAULT DIRECTORY Clause (Application)

APPLICATION DEFAULT DIRECTORY Clause (Application)

APPLICATION DEFAULT DIRECTORY Clause (Application) — Assigns a default device and directory for the process in which an application execution controller (EXC) runs.

Format

APPLICATION DEFAULT DIRECTORY IS { *default-directory* | USERNAME DEFAULT DIRECTORY } ;

1.5.8. APPLICATION LOGICALS Clause (Application)

APPLICATION LOGICALS Clause (Application)

APPLICATION LOGICALS Clause (Application) — Defines one or more process logical names for the process in which an application execution controller (EXC) runs.

Format

APPLICATION { LOGICAL | LOGICALS } [NAME IS | NAMES ARE]

{ { *logical-name* | *logical-string* } = { *equivalence-name* | *equivalence-string* } } [,...] ;

1.5.9. APPLICATION NAME TABLES Clause (Application)

APPLICATION NAME TABLES Clause (Application)

APPLICATION NAME TABLES Clause (Application) — Specifies one or more logical name tables the application execution controller (EXC) can use.

Format

APPLICATION NAME { TABLE IS | TABLES ARE } { *logical-name-table* | *quoted-string* } [,...] ;

1.5.10. APPLICATION USERNAME Clause (Application)

APPLICATION USERNAME Clause (Application)

APPLICATION USERNAME Clause (Application) — Assigns an OpenVMS user name under which the application execution controller (EXC) runs.

Format

APPLICATION USERNAME IS *user-name;*

1.5.11. AUDIT Clause (Application, Server, Task)

AUDIT Clause (Application, Server, Task)

AUDIT Clause (Application, Server, Task) — Determines whether or not application, server, and/or task events are written to the ACMS Audit Trail Log.

Format

[NO] AUDIT ;

1.5.12. CANCELABLE Subclause (Task)

CANCELABLE Subclause (Task)

CANCELABLE Subclause (Task) — Specifies whether or not a task can be canceled by a user or task submitter while the task is executing.

Format

[NOT] CANCELABLE BY [[TERMINAL] USER | [TASK] SUBMITTER] ;

1.5.13. CREATION DELAY Subclause (Server)

CREATION DELAY Subclause (Server)

CREATION DELAY Subclause (Server) — Controls how long ACMS waits before beginning to create new server processes when tasks are waiting for a server process.

Format

CREATION DELAY IS *seconds*;

1.5.14. CREATION INTERVAL Subclause (Server)

CREATION INTERVAL Subclause (Server)

CREATION INTERVAL Subclause (Server) — Controls the intervals at which ACMS creates new server processes.

Format

CREATION INTERVAL IS *seconds*;

1.5.15. DEFAULT APPLICATION FILE Clause (Application)

DEFAULT APPLICATION FILE Clause (Application)

DEFAULT APPLICATION FILE Clause (Application) — Defines the application database file (.ADB) that ACMS uses when you do not name an application database file with the **BUILD** command.

Format

DEFAULT APPLICATION FILE IS *application-database-file*;

1.5.16. DEFAULT DIRECTORY Subclause (Server)

DEFAULT DIRECTORY Subclause (Server)

DEFAULT DIRECTORY Subclause (Server) — Assigns a default device and directory for each of the server processes that are associated with a server.

Format

DEFAULT DIRECTORY IS { *default-directory* | USERNAME DEFAULT DIRECTORY } ;

1.5.17. DELAY Subclause (Task)

DELAY Subclause (Task)

DELAY Subclause (Task) — Controls whether or not ACMS waits 3 seconds after a task finishes running before clearing the screen and displaying the ACMS menu.

Format

[NO] DELAY ;

1.5.18. DELETION DELAY Subclause (Server)

DELETION DELAY Subclause (Server)

DELETION DELAY Subclause (Server) — Controls how long ACMS waits before deleting inactive server processes.

Format

DELETION DELAY IS *seconds*;

1.5.19. DELETION INTERVAL Subclause (Server)

DELETION INTERVAL Subclause (Server)

DELETION INTERVAL Subclause (Server) — Controls the intervals at which ACMS deletes inactive server processes.

Format

DELETION INTERVAL IS *seconds*;

1.5.20. DISABLE Subclause (Task)

DISABLE Subclause (Task)

DISABLE Subclause (Task) — Specifies that a task is not available for selection by task submitters.

Format

```
{ DISABLE  }
{ DISABLED } ;
```

1.5.21. DYNAMIC USERNAME Subclause (Server)

DYNAMIC USERNAME Subclause (Server)

DYNAMIC USERNAME Subclause (Server) — Specifies that the user name, UIC, and default directory of a server change to match that of the user each time the server process is allocated for a task.

Format

```
DYNAMIC USERNAME ;
```

1.5.22. ENABLE Subclause (Task)

ENABLE Subclause (Task)

ENABLE Subclause (Task) — Specifies that a task is available for selection by task submitters.

Format

```
{ ENABLE  }
{ ENABLED } ;
```

1.5.23. FIXED USERNAME Subclause (Server)

FIXED USERNAME Subclause (Server)

FIXED USERNAME Subclause (Server) — Specifies that the user name, UIC, and default directory of the server are those associated with the user name under which the server process starts.

Format

```
FIXED USERNAME ;
```

1.5.24. GLOBAL Subclause (Task)

GLOBAL Subclause (Task)

GLOBAL Subclause (Task) — Specifies that a task can be selected from a menu, called by an agent, or called by another task.

Format

```
GLOBAL ;
```

1.5.25. LOCAL Subclause (Task)

LOCAL Subclause (Task)

LOCAL Subclause (Task) — Specifies that a task can be called by or chained to another task, but not selected from a menu or called by an agent.

Format

LOCAL ;

1.5.26. LOGICALS Subclause (Server)

LOGICALS Subclause (Server)

LOGICALS Subclause (Server) — Defines a set of process logical names for one or more server processes.

Format

{ LOGICAL / LOGICALS } [NAME IS / NAMES ARE]

{ { *logical-name* / *logical-string* } = { *equivalence-name* / *equivalence-string* } } [,...] ;

1.5.27. MAXIMUM SERVER PROCESSES Clause (Application, Server)

MAXIMUM SERVER PROCESSES Clause (Application, Server)

MAXIMUM SERVER PROCESSES Clause (Application, Server) — Sets the maximum number of OpenVMS processes that can be created for an application or for a particular server within an application. This number cannot exceed the maximum number of processes that can be created for any given system (determined by the SYSGEN parameter MAXPROCESSCNT).

Format

{ MAXIMUM / MAX } SERVER { PROCESS / PROCESSES } IS { *high-number* / UNLIMITED } ;

1.5.28. MAXIMUM TASK INSTANCES Clause (Application)

MAXIMUM TASK INSTANCES Clause (Application)

MAXIMUM TASK INSTANCES Clause (Application) — Sets the largest number of task instances that can be active at one time for an application.

Format

```
{ MAXIMUM } TASK { INSTANCE  } IS { high-number } ;
{ MAX     }      { INSTANCES }    { UNLIMITED  }
```

1.5.29. MINIMUM SERVER PROCESSES Subclause (Server)

MINIMUM SERVER PROCESSES Subclause (Server)

MINIMUM SERVER PROCESSES Subclause (Server) — Sets the minimum number of server processes that you want ACMS to have available for a server at one time.

Format

```
{ MINIMUM } SERVER { PROCESS   } IS low-number;
{ MIN     }        { PROCESSES }
```

1.5.30. NAME TABLES Subclause (Server)

NAME TABLES Subclause (Server)

NAME TABLES Subclause (Server) — Specifies one or more logical name tables the server process can use.

Format

```
[ NAME ] { TABLE IS  } { logical-name-table } [,...] ;
         { TABLES ARE} { quoted-string     }
```

1.5.31. PROTECTED WORKSPACES Subclause (Server)

PROTECTED WORKSPACES Subclause (Server)

PROTECTED WORKSPACES Subclause (Server) — Enables a workspace mapping option that maps the entire task instance workspace pool during the first procedure call to a task server. The workspaces stay mapped until the server runs down.

Format

```
[ NO ] { PROTECTED } { WORKSPACE  } ;
       { PROTECT   } { WORKSPACES }
```

1.5.32. SERVER ATTRIBUTES Clause (Application)

SERVER ATTRIBUTES Clause (Application)

SERVER ATTRIBUTES Clause (Application) — Defines the control attributes for individual servers. Both the SERVER ATTRIBUTES and SERVER DEFAULTS clauses use the same subclauses.

Format

```
SERVER CONTROL { ATTRIBUTE IS     }
               { ATTRIBUTES ARE   }
  { server-given-name: [SERVER group-server-name] [IN task-group-name] ; }
  {                    [server-subclause... ]                           } ...
END SERVER CONTROL [ ATTRIBUTE  ];
                   [ ATTRIBUTES ]
```

1.5.33. SERVER DEFAULTS Clause (Application)

SERVER DEFAULTS Clause (Application)

SERVER DEFAULTS Clause (Application) — Changes one or more of the current default settings for one or more server control attributes. The changes you make with the SERVER DEFAULTS clause affect all of the servers defined explicitly or implicitly after the SERVER DEFAULTS clause.

Format

```
SERVER { DEFAULT IS     }
       { DEFAULTS ARE   }
       server-subclause...
END SERVER [ DEFAULT  ];
           [ DEFAULTS ]
```

1.5.34. SERVER MONITORING INTERVAL Clause (Application)

SERVER MONITORING INTERVAL Clause (Application)

SERVER MONITORING INTERVAL Clause (Application) — Controls how often queues are checked to determine whether or not to create or delete new server processes.

Format

```
SERVER MONITORING INTERVAL IS seconds;
```

1.5.35. SERVER PROCESS DUMP Subclause (Server)

SERVER PROCESS DUMP Subclause (Server)

SERVER PROCESS DUMP Subclause (Server) — Specifies whether or not an OpenVMS process dump is generated for a server process if the process terminates abnormally.

Format

```
[ NO ][ SERVER ]PROCESS { DUMP  }
                        { DUMPS } ;
```

1.5.36. TASK ATTRIBUTES Clause (Application)

TASK ATTRIBUTES Clause (Application)

TASK ATTRIBUTES Clause (Application) — Defines one or more task control attributes on a task-by-task basis.

Format

```
TASK CONTROL { ATTRIBUTE IS   }
             { ATTRIBUTES ARE }
   { task-given-name: [TASK group-task-name] [IN task-group-name] ;
                      [task-subclause... ]                        } ...
END TASK CONTROL [ ATTRIBUTE  ] ;
                 [ ATTRIBUTES ]
```

1.5.37. TASK DEFAULTS Clause (Application)

TASK DEFAULTS Clause (Application)

TASK DEFAULTS Clause (Application) — Changes the default values for one or more task control attributes in an application definition.

Format

```
TASK { DEFAULT IS   }
     { DEFAULTS ARE }
        task-subclause...
END TASK [ DEFAULT  ] ;
         [ DEFAULTS ]
```

1.5.38. TASK GROUPS Clause (Application)

TASK GROUPS Clause (Application)

TASK GROUPS Clause (Application) — Names the task groups containing the tasks associated with an application. Include at least one TASK GROUPS clause in each application definition you write.

Format

```
TASK { GROUP IS   }
     { GROUPS ARE }
   { task-group-given-name: TASK GROUP FILE IS task-group-file; } ...
END TASK [ GROUP  ] ;
         [ GROUPS ]
```

1.5.39. TRANSACTION TIMEOUT Subclause (Task)

TRANSACTION TIMEOUT Subclause (Task)

TRANSACTION TIMEOUT Subclause (Task) — Places a limit on how long a distributed transaction can remain active.

Format

[NO] TRANSACTION TIMEOUT IS *seconds*;

1.5.40. USERNAME Subclause (Server)

USERNAME Subclause (Server)

USERNAME Subclause (Server) — Defines the user name the server process runs under.

Format

USERNAME IS { *username* | USERNAME OF { TERMINAL USER | APPLICATION } } ;

1.5.41. WAIT Subclause (Task)

WAIT Subclause (Task)

WAIT Subclause (Task) — Controls whether or not ACMS displays a message prompting users to press **Return**. Pressing **Return** clears the terminal screen and displays the previous ACMS menu.

Format

[NO] WAIT ;

1.6. Menu Definition Clauses

Menu definitions describe the contents of ACMS menus, which are screen displays of entries that users can select. Users can select task entries that do the work of an application, or menu entries that display other menus with their own entries. This section lists the syntax for the ADU clauses and subclauses you use to define menus.

The ENTRIES clause is the only required menu clause. It includes a required subclause specifying whether an entry selects a task or another menu. The ENTRIES clause can also include optional subclauses for displaying descriptive text and controlling screen display characteristics.

This section begins with overview syntax for menu definitions. The overview syntax is followed by syntax for individual menu definition clauses and subclauses and for the application specification parameter.

1.6.1. Menu Definition Syntax

[DEFAULT APPLICATION IS *application-spec*;]

[DEFAULT MENU FILE IS *menu-database-file*;]

[HEADER IS *string* [,*string*] ;]

[{ REQUEST IS *request-name* [WITH number ENTRIES PER SCREEN] ; }
  [{ [SEND] CONTROL TEXT [IS] { *string* / *quoted-string* }
      [WITH *number* ENTRIES PER SCREEN]; }]

{ { { ENTRY IS / ENTRIES ARE } }
  { *entry-name*
    { { { MENU IS *menu-path-name*; / TASK IS *task-name* [IN *application-spec*] ; }
      [TEXT IS *description-string*;]
      [[NO] DELAY; / [NO] WAIT;] } ... } ...
  END [ENTRY / ENTRIES] ; }

END DEFINITION ;

1.6.2. CONTROL TEXT Clause (Menu)

CONTROL TEXT Clause (Menu)

CONTROL TEXT Clause (Menu) — Lets you customize your DECforms menu by sending up to five control text items to the form.

Format

[[SEND] CONTROL TEXT [IS] { *string* / *quoted-string* }
  [WITH *number* ENTRIES PER SCREEN];]

1.6.3. DEFAULT APPLICATION Clause (Menu)

DEFAULT APPLICATION Clause (Menu)

DEFAULT APPLICATION Clause (Menu) — Defines the application specification that ACMS uses as the default for TASK entries, unless you name a different application database file with the TASK subclause.

Format

DEFAULT APPLICATION IS *application-spec*;

1.6.4. DEFAULT MENU FILE Clause (Menu)

DEFAULT MENU FILE Clause (Menu)

DEFAULT MENU FILE Clause (Menu) — Defines the menu database file that ACMS uses as the default when it builds a menu tree. ACMS builds the menu tree when you use the ADU **BUILD** command and includes the specified menu as the top menu in the tree.

Format

DEFAULT MENU FILE IS *menu-database-file*;

1.6.5. DELAY Subclause (Optional ENTRIES)

DELAY Subclause (Optional ENTRIES)

DELAY Subclause (Optional ENTRIES) — Controls whether or not ACMS waits 3 seconds after a task entry stops running before clearing the screen and displaying the ACMS menu.

Format

[NO] DELAY ;

1.6.6. ENTRIES Clause (Menu)

ENTRIES Clause (Menu)

ENTRIES Clause (Menu) — Defines an entry as a menu entry or as a task entry. A menu entry displays a menu when users select the entry. A task entry runs a task.

Format

```
{ { ENTRY IS   }
{ { ENTRIES ARE}
{
{     { entry-name: required-subclause   ... } ... } ...
{                   optional-subclause
{
{ END [ ENTRY   ] ;
{     [ ENTRIES ]
```

1.6.7. HEADER Clause (Menu)

HEADER Clause (Menu)

HEADER Clause (Menu) — Defines the title of a menu.

Format

HEADER IS *string* [,*string*] ;

1.6.8. MENU Subclause (Required ENTRIES)

MENU Subclause (Required ENTRIES)

MENU Subclause (Required ENTRIES) — Defines an entry as a menu and points to the CDD location of the definition for that menu.

Format

MENU IS *menu-path-name*;

1.6.9. REQUEST Clause (Menu)

REQUEST Clause (Menu)

REQUEST Clause (Menu) — Identifies the TDMS request that defines the menu layout.

Format

REQUEST IS *request-name* [WITH *number* ENTRIES PER SCREEN] ;

1.6.10. TASK Subclause (Required ENTRIES)

TASK Subclause (Required ENTRIES)

TASK Subclause (Required ENTRIES) — Names the task ACMS runs when a user selects the entry from a menu.

Format

TASK IS *task-name* [IN *application-spec*] ;

1.6.11. TEXT Subclause (Optional ENTRIES)

TEXT Subclause (Optional ENTRIES)

TEXT Subclause (Optional ENTRIES) — Provides descriptive text that ACMS displays with a menu or task entry.

Format

TEXT IS *description-string*;

1.6.12. WAIT Subclause (Optional ENTRIES)

WAIT Subclause (Optional ENTRIES)

WAIT Subclause (Optional ENTRIES) — Controls whether or not ACMS prompts a user to press **Return**, after a task entry completes, before clearing the screen and displaying the ACMS menu.

Format

[NO] WAIT ;

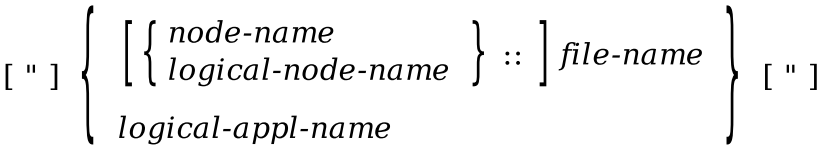
1.6.13. Application Specification Parameter

Application Specification Parameter

Application Specification Parameter — Several ADU clauses include an application specification parameter. For example, in the DEFAULT APPLICATION clause, you must specify the name of the application that is the default when the user signs in to ACMS.

Format

The syntax for the application specification parameter is:



1.7. Declining Features Syntax

The task clauses and phrases in this section are considered to be declining features in the task definition language. It is recommended that you use the distributed transaction syntax to control file and database transactions. Most of the clauses and phrases in this section are for declaring file and database recovery units in the task definition.

In addition to clauses and phrases related to file and database recovery units, this section contains the CONTINUE ON BAD STATUS phrase and the GOTO TASK and REPEAT TASK clauses. It is recommended that you use the RAISE EXCEPTION and EXCEPTION HANDLER clauses instead of CONTINUE ON BAD STATUS; the CALL TASK clause instead of GOTO TASK; and REPEAT STEP instead of REPEAT TASK.

Existing applications that use the clauses and phrases in this section can run under ACMS Version 4.0 or higher.

1.7.1. COMMIT Clause (Action)

COMMIT Clause (Action)

COMMIT Clause (Action) — Signals the end of the current transaction in steps you define using DBMS, Rdb, RMS, or SQL recovery units. Also causes any changes made since the start of the transaction to be written to the DBMS or Rdb database or an RMS file.

Format

COMMIT [RETAINING RECOVERY UNIT] [IF ACTIVE RECOVERY UNIT];

1.7.2. CONTINUE ON BAD STATUS Phrase (Processing)

CONTINUE ON BAD STATUS Phrase (Processing)

CONTINUE ON BAD STATUS Phrase (Processing) — Instructs ACMS to continue task execution if a task called by a processing step returns a failure status.

Format

CONTINUE ON BAD STATUS

1.7.3. DBMS RECOVERY Phrase (Block, Processing)

DBMS RECOVERY Phrase (Block, Processing

DBMS RECOVERY Phrase (Block, Processing — The DBMS RECOVERY phrase readies a DBMS database at the start of a block or processing step.

Format

DBMS RECOVERY *dml-string* [,...]

1.7.4. GOTO TASK Clause (Action)

GOTO TASK Clause (Action)

GOTO TASK Clause (Action) — Ends the current task and starts a new task without requiring the user to make a task selection.

Format

[GO TO | GOTO] TASK *task-name* [PASSING *workspace-name* [,...]] ;

1.7.5. NO RECOVERY UNIT ACTION Clause (Action)

NO RECOVERY UNIT ACTION Clause (Action)

NO RECOVERY UNIT ACTION Clause (Action) — Specifies that there is no action taken on any active recovery unit.

Format

NO RECOVERY UNIT ACTION ;

1.7.6. RDB RECOVERY Phrase (Block, Processing)

RDB RECOVERY Phrase (Block, Processing)

RDB RECOVERY Phrase (Block, Processing) — Starts an Rdb database transaction at the beginning of a block or processing step.

Format

RDB RECOVERY *dml-string* [,...]

1.7.7. REPEAT TASK Clause (Action)

REPEAT TASK Clause (Action)

REPEAT TASK Clause (Action) — Ends the current task instance and restarts the task without requiring the user to select the task from a menu.

Format

REPEAT TASK [PASSING *workspace-name* [,...]] ;

1.7.8. RETAIN RECOVERY UNIT Clause (Action)

RETAIN RECOVERY UNIT Clause (Action)

RETAIN RECOVERY UNIT Clause (Action) — Maintains the recovery unit within the current server.

Format

RETAIN RECOVERY UNIT [IF ACTIVE RECOVERY UNIT];

1.7.9. RMS RECOVERY Phrase (Block, Processing)

RMS RECOVERY Phrase (Block, Processing)

RMS RECOVERY Phrase (Block, Processing) — Starts an RMS recovery unit for a block or processing step.

Format

RMS RECOVERY

1.7.10. ROLLBACK Clause (Action)

ROLLBACK Clause (Action)

ROLLBACK Clause (Action) — Signals the end of a recovery unit, returning all recoverable objects to the state they were in at the beginning of the current recovery unit.

Format

ROLLBACK [IF ACTIVE RECOVERY UNIT];

1.7.11. SQL RECOVERY Phrase (Block, Processing)

SQL RECOVERY Phrase (Block, Processing)

SQL RECOVERY Phrase (Block, Processing) — Starts an SQL transaction with an Rdb database or a VIDA database at the beginning of a block or processing step.

Format

SQL RECOVERY *dml-string* [,...]

Chapter 2. ACMS Management Utilities and Commands

This chapter contains syntax for the ACMS application and system management utilities, and operator and show commands.

2.1. ACMSQUEMGR Commands

This section contains syntax for the ACMS Queue Manager (ACMSQUEMGR) Utility commands. ACMSQUEMGR commands allow you to create and manage ACMS task queues and the queued task elements in the queues. See *VSI ACMS for OpenVMS Managing Applications* [https://docs.vmssoftware.com/vsi-acms-managing-applications/] for more information about ACMSQUEMGR commands and qualifiers.

2.1.1. CREATE QUEUE Command (ACMSQUEMGR>)

CREATE QUEUE Command (ACMSQUEMGR>)

CREATE QUEUE Command (ACMSQUEMGR>) — Creates a queue for queued task elements.

Format

CREATE QUEUE *queue-name*

Command Qualifiers	Defaults
/DEQUEUE=*keyword*	/DEQUEUE=RESUMED
/ENQUEUE=*keyword*	/ENQUEUE=RESUMED
/FILE_SPECIFICATION=*file-spec*	SYS$SYSTEM:<*queue-name*>.DAT
/MAX_WORKSPACES_SIZE=*n*	/MAX_WORKSPACES_SIZE=256

2.1.2. DELETE ELEMENT Command (ACMSQUEMGR>)

DELETE ELEMENT Command (ACMSQUEMGR>)

DELETE ELEMENT Command (ACMSQUEMGR>) — Removes one or more queued task elements from the specified queue.

Format

DELETE ELEMENT *element-id queue-name*

Command Qualifiers	Defaults
/[NO]CONFIRM	/NOCONFIRM
/EXCLUDE=(*keyword*[,...])	None
/SELECT=(*keyword*[,...])	None

2.1.3. DELETE QUEUE Command (ACMSQUEMGR>)

DELETE QUEUE Command (ACMSQUEMGR>)

DELETE QUEUE Command (ACMSQUEMGR>) — Deletes the queue you specify.

Format

DELETE QUEUE *queue-name*

Command Qualifiers	Defaults
/[NO]PURGE	/NOPURGE

2.1.4. EXIT Command (ACMSQUEMGR>)

EXIT Command (ACMSQUEMGR>)

EXIT Command (ACMSQUEMGR>) — Ends the ACMSQUEMGR session and returns to DCL level.

Format

EXIT

2.1.5. HELP Command (ACMSQUEMGR>)

HELP Command (ACMSQUEMGR>)

HELP Command (ACMSQUEMGR>) — Displays information about ACMSQUEMGR commands and qualifiers.

Format

HELP [*topic* [...]]

Command Qualifiers	Defaults
/[NO]PROMPT	/PROMPT

2.1.6. MODIFY QUEUE Command (ACMSQUEMGR>)

MODIFY QUEUE Command (ACMSQUEMGR>)

MODIFY QUEUE Command (ACMSQUEMGR>) — With a qualifier, modifies the static characteristics of a task queue.

Format

MODIFY QUEUE *queue-name*

Command Qualifiers	Defaults
/FILE_SPECIFICATION=*file-spec*	Existing queue repository file
/MAX_WORKSPACES_SIZE=*n*	Existing definition specification

2.1.7. SET ELEMENT Command (ACMSQUEMGR>)

SET ELEMENT Command (ACMSQUEMGR>)

SET ELEMENT Command (ACMSQUEMGR>) — With the **/PRIORITY** qualifier, sets the priority of one or more queued task elements. With the **/STATE** qualifier, sets the state of one or more queued task elements.

Format

SET ELEMENT *element-id queue-name*

Command Qualifiers	Defaults
/[NO]CONFIRM	/NOCONFIRM
/EXCLUDE=(*keyword*[,...])	None
/PRIORITY=*n*	None
/SELECT=(*keyword*[,...])	None
/STATE=[NO]HOLD	None

2.1.8. SET QUEUE Command (ACMSQUEMGR>)

SET QUEUE Command (ACMSQUEMGR>)

SET QUEUE Command (ACMSQUEMGR>) — With a qualifier, dynamically sets the queue state. The changes to the queue state take effect immediately.

Format

SET QUEUE *queue-name*

Command Qualifiers	Defaults
/DEQUEUE=*keyword*	Current queue state
/ENQUEUE=*keyword*	Current queue state

2.1.9. SHOW ELEMENT Command (ACMSQUEMGR>)

SHOW ELEMENT Command (ACMSQUEMGR>)

SHOW ELEMENT Command (ACMSQUEMGR>) — Displays information about one or more queued task elements in a queue.

Format

SHOW ELEMENT *element-id queue-name*

Command Qualifiers	Defaults
/BRIEF	/BRIEF
/EXCLUDE=(*keyword*[,...])	None
/FULL	/BRIEF
/OUTPUT[=*file-spec*]	/OUTPUT=SYS$OUTPUT
/SELECT=(*keyword*[,...])	None
/TOTAL_ONLY	/BRIEF

2.1.10. SHOW QUEUE Command (ACMSQUEMGR>)

SHOW QUEUE Command (ACMSQUEMGR>)

SHOW QUEUE Command (ACMSQUEMGR>) — Displays the characteristics of the task queue you specify.

Format

SHOW QUEUE *queue-name*

Command Qualifiers	Defaults
/OUTPUT[=*file-spec*]	/OUTPUT=SYS$OUTPUT

2.2. AAU Commands

This section contains syntax for the ACMS Application Authorization Utility (AAU) commands. AAU commands allow you to authorize ACMS applications. See *VSI ACMS for OpenVMS Managing Applications* [https://docs.vmssoftware.com/vsi-acms-managing-applications/] for more information on AAU commands and qualifiers.

2.2.1. ADD Command (AAU>)

ADD Command (AAU>)

ADD Command (AAU>) — Authorizes one or more application names for installation in ACMS$DIRECTORY.

Format

ADD *application-name*

Command Qualifiers	Defaults
/ACL=(*access-control-list*[,...])	From DEFAULT definition
/APPL_USERNAME=*username*	From DEFAULT definition

Command Qualifiers	Defaults
/[NO]DYNAMIC_USERNAMES	From DEFAULT definition
/SRV_USERNAMES[=(*server-username*[,...])]	From DEFAULT definition
/[NO]WILD_SUFFIX	From DEFAULT definition

2.2.2. COPY Command (AAU>)

COPY Command (AAU>)

COPY Command (AAU>) — Makes a copy of an existing application authorization.

Format

COPY *source-application-name new-application-name*

Command Qualifiers	Defaults
/ACL=(*access-control-list*[,...])	From source authorization
/APPL_USERNAME=*username*	From source authorization
/[NO]DYNAMIC_USERNAMES	From source authorization
/SRV_USERNAMES[=(*server-username*[,...])]	From source authorization
/[NO]WILD_SUFFIX	From source authorization

2.2.3. DEFAULT Command (AAU>)

DEFAULT Command (AAU>)

DEFAULT Command (AAU>) — Changes information in the DEFAULT authorization.

Format

DEFAULT

Command Qualifiers	Defaults
/ACL=(*access-control-list*[,...])	From existing authorization
/APPL_USERNAME=*username*	From existing authorization
/[NO]DYNAMIC_USERNAMES	From existing authorization
/SRV_USERNAMES[=(*server-username*[,...])]	From existing authorization
/[NO]WILD_SUFFIX	From existing authorization

2.2.4. EXIT Command (AAU>)

EXIT Command (AAU>)

EXIT Command (AAU>) — Ends an AAU session and returns to the DCL prompt.

Format

EXIT

2.2.5. HELP Command (AAU>)

HELP Command (AAU>)

HELP Command (AAU>) — Displays information about AAU commands and qualifiers.

Format

HELP [*topic* [...]]

Command Qualifiers	Defaults
/[NO]PROMPT	/PROMPT

2.2.6. LIST Command (AAU>)

LIST Command (AAU>)

LIST Command (AAU>) — Writes the contents of an authorization to ACMSAAU.LIS in your default directory or to an output file you specify.

Format

LIST *application-name*

Command Qualifiers	Defaults
/BRIEF	Full authorizations
/OUTPUT[=*file-spec*]	/OUTPUT=ACMSAAU.LIS

2.2.7. MODIFY Command (AAU>)

MODIFY Command (AAU>)

MODIFY Command (AAU>) — Changes information in an application authorization.

Format

MODIFY *application-name*

Command Qualifiers	Defaults
/ACL=(*access-control-list*[,...])	From existing authorization
/APPL_USERNAME=*username*	From existing authorization
/[NO]DYNAMIC_USERNAMES	From existing authorization

Command Qualifiers	Defaults
/SRV_USERNAMES[=(*server-username*[,...])]	From existing authorization
/[NO]WILD_SUFFIX	From existing authorization

2.2.8. REMOVE Command (AAU>)

REMOVE Command (AAU>)

REMOVE Command (AAU>) — Deletes an authorization from the ACMSAAF.DAT application authorization database file.

Format

REMOVE *application-name*

2.2.9. RENAME Command (AAU>)

RENAME Command (AAU>)

RENAME Command (AAU>) — Gives an application authorization a new name.

Format

RENAME *old-application-name new-application-name*

Command Qualifiers	Defaults
/ACL=(*access-control-list*[,...])	From old authorization
/APPL_USERNAME=*username*	From old authorization
/[NO]DYNAMIC_USERNAMES	From old authorization
/SRV_USERNAMES[=(*server-username*[,...])]	From old authorization
/[NO]WILD_SUFFIX	From old authorization

2.2.10. SHOW Command (AAU>)

SHOW Command (AAU>)

SHOW Command (AAU>) — Displays information about application authorizations on your terminal screen.

Format

SHOW *application-name*

Command Qualifiers	Defaults
/BRIEF	Displays full authorizations

2.3. ACMSGEN Commands

This section contains syntax for the ACMSGEN Utility commands. ACMSGEN commands allow you to modify ACMS parameters. See *VSI ACMS for OpenVMS Managing Applications* [https://docs.vmssoftware.com/vsi-acms-managing-applications/] for more information about the ACMSGEN commands and qualifiers.

2.3.1. EXIT Command (ACMSGEN>)

EXIT Command (ACMSGEN>)

EXIT Command (ACMSGEN>) — Ends the ACMSGEN session and returns to the DCL prompt.

Format

EXIT

2.3.2. HELP Command (ACMSGEN>)

HELP Command (ACMSGEN>)

HELP Command (ACMSGEN>) — Displays information about ACMSGEN commands and qualifiers.

Format

HELP [*topic* [...]]

2.3.3. SET Command (ACMSGEN>)

SET Command (ACMSGEN>)

SET Command (ACMSGEN>) — Changes parameter values in the ACMSGEN work area. The parameter changes are not made to any real parameter until you use the **WRITE** command.

Format

SET *parameter-name value*

2.3.4. SHOW Command (ACMSGEN>)

SHOW Command (ACMSGEN>)

SHOW Command (ACMSGEN>) — Displays the value in the work area, the default value, the minimum value, the maximum value, the unit of measure, and the dynamic/fixed status for ACMS system parameters.

Format

SHOW { *parameter-name* / *qualifier*[...] }

Command Qualifiers	Defaults
/ACC	None
/ALL	None
/CP	None
/EXC	None
/MSS	None
/QTI	None
/TSC	None

2.3.5. USE Command (ACMSGEN>)

USE Command (ACMSGEN>)

USE Command (ACMSGEN>) — Initializes the ACMSGEN work area with values from a work file.

Format

USE *file-spec*

2.3.6. USE ACTIVE Command (ACMSGEN>)

USE ACTIVE Command (ACMSGEN>)

USE ACTIVE Command (ACMSGEN>) — Initializes the ACMSGEN work area with active values for all parameters from an ACMS system global section.

Format

USE ACTIVE

2.3.7. USE CURRENT Command (ACMSGEN>)

USE CURRENT Command (ACMSGEN>)

USE CURRENT Command (ACMSGEN>) — Initializes the ACMSGEN work area with current values for all parameters from the SYS$SYSTEM:ACMSPAR.ACM parameter file.

Format

USE CURRENT

2.3.8. USE DEFAULT Command (ACMSGEN>)

USE DEFAULT Command (ACMSGEN>)

USE DEFAULT Command (ACMSGEN>) — Initializes the ACMSGEN work area with ACMS default values for all ACMS parameters.

Format

USE DEFAULT

2.3.9. WRITE Command (ACMSGEN>)

WRITE Command (ACMSGEN>)

WRITE Command (ACMSGEN>) — Writes values from the ACMSGEN work area to a work file, creating a new version of the file.

Format

WRITE *file-spec*

2.3.10. WRITE ACTIVE Command (ACMSGEN>)

WRITE ACTIVE Command (ACMSGEN>)

WRITE ACTIVE Command (ACMSGEN>) — Changes active values for dynamic parameters by writing values from the ACMSGEN work area to an ACMS system global section.

Format

WRITE ACTIVE

2.3.11. WRITE CURRENT Command (ACMSGEN>)

WRITE CURRENT Command (ACMSGEN>)

WRITE CURRENT Command (ACMSGEN>) — Changes current values by writing values from the ACMSGEN work area to the SYS$SYSTEM:ACMSPAR.ACM file.

Format

WRITE CURRENT

2.4. ATR Commands

This section contains syntax for the ACMS Audit Trail Report (ATR) Utility commands. ATR commands allow you to generate reports containing information logged by the Audit Trail Logger. See *VSI ACMS for OpenVMS Managing Applications* [https://docs.vmssoftware.com/vsi-acms-managing-applications/] for more information on ATR commands and qualifiers.

2.4.1. EXIT Command (ATR>)

EXIT Command (ATR>

EXIT Command (ATR> — Ends the ATR Utility session and returns to the DCL prompt.

Format

EXIT

2.4.2. HELP Command (ATR>)

HELP Command (ATR>)

HELP Command (ATR>) — Displays information about ATR Utility commands and their qualifiers

Format

HELP [*topic* [...]]

2.4.3. LIST Command (ATR>)

LIST Command (ATR>)

LIST Command (ATR>) — Produces a report about information in the Audit Trail Log file. You can limit the amount of information in the report by using qualifiers.

Format

LIST [*file-spec*]

Command Qualifiers	**Defaults**
/APPLICATION=*application-name*	All application names
/BEFORE[=*time*]	Full report
/BRIEF	Full report
/IDENTIFICATION=*task-id*	All task IDs
/OUTPUT=*file-spec*	/OUTPUT=SYS$OUTPUT
/SINCE[=*time*]	Full report
/SUBMITTER=*submitter-id*	All submitter IDs
/TASK=*task-name*	All task names
/TERMINAL=*device-name*	All device names
/TYPE=*type*	All types
/USERNAME=*user-name*	All user names

2.5. DDU Commands

This section contains syntax for the ACMS Device Definition Utility (DDU) commands. You can use DDU commands to authorize and control ACMS terminals. See *VSI ACMS for OpenVMS Managing Applications* [https://docs.vmssoftware.com/vsi-acms-managing-applications/] for more information about DDU commands and qualifiers.

2.5.1. ADD Command (DDU>)

ADD Command (DDU>)

ADD Command (DDU>) — Authorizes and assigns login characteristics to an ACMS terminal by creating a DDU definition and adding it to the device authorization file (ACMSDDF.DAT).

Format

ADD *device-name*

Command Qualifiers	Defaults
/[NO]AUTOLOGIN=*username*	From DEFAULT definition
/[NO]CONTROLLED	From DEFAULT definition
/PRINTFILE [= *print-file-spec* / *spooled-device-name*]	From DEFAULT definition

2.5.2. COPY Command (DDU>)

COPY Command (DDU>)

COPY Command (DDU>) — Authorizes a terminal, using the login characteristics from the DDU definition you specify.

Format

COPY *source-device-name new-device-name*

Command Qualifiers	Defaults
/[NO]AUTOLOGIN=*username*	From source definition
/[NO]CONTROLLED	From source definition
/PRINTFILE [= *print-file-spec* / *spooled-device-name*]	From source definition

2.5.3. DEFAULT Command (DDU>)

DEFAULT Command (DDU>)

DEFAULT Command (DDU>) — Changes information in the DDU DEFAULT definition.

Format

DEFAULT

Command Qualifiers	Defaults
/[NO]AUTOLOGIN=*username*	From current DEFAULT definition

Command Qualifiers	Defaults
/[NO]CONTROLLED	From current DEFAULT definition
/PRINTFILE [= *print-file-spec* *spooled-device-name*]	From current DEFAULT definition

2.5.4. EXIT Command (DDU>)

EXIT Command (DDU>)

EXIT Command (DDU>) — Ends the DDU session and returns to the DCL prompt.

Format

EXIT

2.5.5. HELP Command (DDU>)

HELP Command (DDU>)

HELP Command (DDU>) — Displays information about DDU commands and qualifiers.

Format

HELP [*topic* [...]]

Command Qualifiers	Defaults
/[NO]PROMPT	/PROMPT

2.5.6. LIST Command (DDU>)

LIST Command (DDU>)

LIST Command (DDU>) — Writes DDU definitions to ACMSDDU.LIS in your default directory, or to an output file you specify.

Format

LIST *device-name*

Command Qualifiers	Defaults
/BRIEF	Full DDU definitions
/OUTPUT[=*file-spec*]	/OUTPUT=ACMSDDU.LIS

2.5.7. MODIFY Command (DDU>)

MODIFY Command (DDU>)

MODIFY Command (DDU>) — Changes the login characteristics in a DDU definition.

Format

MODIFY *device-name*

Command Qualifiers	Defaults
/[NO]AUTOLOGIN=*username*	From current definition
/[NO]CONTROLLED	From current definition
/PRINTFILE [= *print-file-spec* *spooled-device-name*]	From current definition

2.5.8. REMOVE Command (DDU>)

REMOVE Command (DDU>)

REMOVE Command (DDU>) — Removes a DDU definition from the device authorization file.

Format

REMOVE *device-name*

2.5.9. RENAME Command (DDU>)

RENAME Command (DDU>)

RENAME Command (DDU>) — Changes the device name in a DDU definition.

Format

RENAME *old-device-name new-device-name*

Command Qualifiers	Defaults
/[NO]AUTOLOGIN=*username*	From old definition
/[NO]CONTROLLED	From old definition
/PRINTFILE [= *print-file-spec* *spooled-device-name*]	From old definition

2.5.10. SHOW Command (DDU>)

SHOW Command (DDU>)

SHOW Command (DDU>) — Displays DDU definitions.

Format

SHOW *device-name*

Command Qualifiers	Defaults
/BRIEF	Full definition

2.6. Operator Commands

This section contains syntax for the ACMS operator commands. ACMS operator commands allow you to control the ACMS system and its components. See *VSI ACMS for OpenVMS Managing Applications* [https://docs.vmssoftware.com/vsi-acms-managing-applications/] for more information about ACMS operator commands and qualifiers.

2.6.1. ACMS/CANCEL TASK Command

ACMS/CANCEL TASK Command

ACMS/CANCEL TASK Command — Stops one or more task instances. With qualifiers, stops only the task instance you identify.

Format

ACMS/CANCEL TASK [*task-name*]

Command Qualifiers	Defaults
/APPLICATION=*application-name*	All applications
/[NO]CONFIRM	/CONFIRM
/DEVICE=*device-name*	All devices
/IDENTIFIER=*task-id*	All tasks
/[NO]LOG	/NOLOG
/SUBMITTER=*submitter-id*	All submitters
/USER=*user-name*	All user names

2.6.2. ACMS/CANCEL USER Command

ACMS/CANCEL USER Command

ACMS/CANCEL USER Command — Cancels a user by stopping all of the user's outstanding tasks and by signing the user out of ACMS.

Format

ACMS/CANCEL USER [*user-name*]

Command Qualifiers	Defaults
/[NO]CONFIRM	/CONFIRM
/DEVICE=*device-name*	All devices
/[NO]LOG	/NOLOG

Command Qualifiers	Defaults
/SUBMITTER=*submitter-id*	All submitters

2.6.3. ACMS/DEBUG Command

ACMS/DEBUG Command

ACMS/DEBUG Command — Starts the ACMS Task Debugger. This command allows you to test tasks and server procedures without building an entire ACMS application.

Format

ACMS/DEBUG [*task-group name*]

Command Qualifiers	Defaults
/AGENT_HANDLE	None
/PID	None
/SERVER	None
/TWS_POOLSIZE[=*n*]	1600 pagelets (on Alpha and IA-64)
/TWSC_POOLSIZE[=*n*]	50 pagelets (on Alpha and IA-64)
/WORKSPACE	None

2.6.4. ACMS/ENTER Command

ACMS/ENTER Command

ACMS/ENTER Command — Allows a terminal that has logged in to OpenVMS to use the ACMS menu system.

Format

ACMS/ENTER

Command Qualifiers	Defaults
/[NO]RETURN	/RETURN

2.6.5. ACMS/INSTALL Command

ACMS/INSTALL Command

ACMS/INSTALL Command — Installs an application in ACMS$DIRECTORY or removes an application database file from ACMS$DIRECTORY.

Format

ACMS/INSTALL *file-spec*

Command Qualifiers	Defaults
/[NO]REMOVE	/NOREMOVE

2.6.6. ACMS/MODIFY APPLICATION Command

ACMS/MODIFY APPLICATION Command

ACMS/MODIFY APPLICATION Command — Modifies the attributes of an active application.

Format

ACMS/MODIFY APPLICATION [*application-name*[,...]]

Command Qualifiers	Defaults
/APPLICATION_ATTRIBUTES=(*attribute*[,...])	None
/[NO]CONFIRM	/CONFIRM
/[NO]LOG	/NOLOG
/SERVER_ATTRIBUTES=(*attribute*[,...])	None
/TASK_ATTRIBUTES=(*attribute*[,...])	None

2.6.7. ACMS/REPLACE SERVER Command

ACMS/REPLACE SERVER Command

ACMS/REPLACE SERVER Command — Replaces a server image with a new version of that image. All subsequent tasks use the new image.

Format

ACMS/REPLACE SERVER [*server-name*[,...]]

Command Qualifiers	Defaults
/APPLICATION=*application-name*	All applications
/[NO]CONFIRM	/CONFIRM
/[NO]LOG	/NOLOG

2.6.8. ACMS/REPROCESS APPLICATION_SPEC Command

ACMS/REPROCESS APPLICATION_SPEC Command

ACMS/REPROCESS APPLICATION_SPEC Command — Causes ACMS to retranslate the application specification for an application and redirect all subsequent task selections to the application pointed to by the application specification.

Format

ACMS/REPROCESS APPLICATION_SPEC *application-spec*

Command Qualifiers	Defaults
/[NO]CONFIRM	/CONFIRM
/[NO]LOG	/NOLOG

2.6.9. ACMS/RESET AUDIT Command

ACMS/RESET AUDIT Command

ACMS/RESET AUDIT Command — Resets the ACMS Audit Trail Log, and causes the current ACMS Audit Trail Log file to close and a new log file to open.

Format

ACMS/RESET AUDIT

2.6.10. ACMS/RESET TERMINALS Command

ACMS/RESET TERMINALS Command

ACMS/RESET TERMINALS Command — Causes ACMS to read the Device Definition Utility (DDU) database file, authorize any new controlled terminals, and release any terminals no longer authorized.

Format

ACMS/RESET TERMINALS

2.6.11. ACMS/SET QUEUE Command

ACMS/SET QUEUE Command

ACMS/SET QUEUE Command — Sets the processing characteristics of a started task queue. The processing characteristics are used by the queued task initiator (QTI) to process tasks in a queue.

Format

ACMS/SET QUEUE *queue-name*[,...]

Command Qualifiers	Defaults
/TASK_THREADS=*n*	/TASK_THREADS=1

2.6.12. ACMS/SET SYSTEM Command

ACMS/SET SYSTEM Command

ACMS/SET SYSTEM Command — Depending on the qualifiers used, enables or disables Audit Trail logging, or enables or disables ACMS operator terminals.

Format

ACMS/SET SYSTEM

Command Qualifiers	Defaults
/[NO]AUDIT	Current setting
/[NO]OPERATOR	Current setting
/PROCESS	Current setting
/TERMINAL=*device-name*	Current setting

2.6.13. ACMS/SHOW APPLICATION Command

ACMS/SHOW APPLICATION Command

ACMS/SHOW APPLICATION Command — Displays information about one or more active ACMS applications in static mode. See the **ACMS/SHOW APPLICATION/CONTINUOUS** command to display application information in continuous mode.

Format

ACMS/SHOW APPLICATION [*application-name*[,...]]

Command Qualifiers	Defaults
/CONNECTIONS	No connection information displayed
/DETACHED_TASKS	No detached task information displayed
/POOL	No pool information displayed
/SERVER_ATTRIBUTES	No server attributes displayed
/TASK_ATTRIBUTES	No task attributes displayed

2.6.14. ACMS/SHOW APPLICATION/CONTINUOUS Command

ACMS/SHOW APPLICATION/CONTINUOUS Command

ACMS/SHOW APPLICATION/CONTINUOUS Command — Displays information about an active ACMS application in continuous refresh mode.

Format

ACMS/SHOW APPLICATION/CONTINUOUS *application-name*

Command Qualifiers	Defaults
/[NO]BEGINNING_TIME=*time*	/NOBEGINNING_TIME

Command Qualifiers	Defaults
/[NO]ENDING_TIME=*time*	/NOENDING_TIME
/[NO]INTERVAL[=*seconds*]	/NOINTERVAL
/[NO]OUTPUT[=*file-spec*]	/NOOUTPUT

2.6.15. ACMS/SHOW QTI Command

ACMS/SHOW QTI Command

ACMS/SHOW QTI Command — Displays the run-time characteristics of the queued task initiator (QTI).

Format

ACMS/SHOW QTI

2.6.16. ACMS/SHOW QUEUE Command

ACMS/SHOW QUEUE Command

ACMS/SHOW QUEUE Command — Displays information about one or more task queues.

Format

ACMS/SHOW QUEUE [*queue-name*[,...]]

2.6.17. ACMS/SHOW SERVER Command

ACMS/SHOW SERVER Command

ACMS/SHOW SERVER Command — Displays information about one or more servers running under a specified application.

Format

ACMS/SHOW SERVER [*server-name*[,...]]

Command Qualifiers	Defaults
/APPLICATION=*application-name*	All applications

2.6.18. ACMS/SHOW SYSTEM Command

ACMS/SHOW SYSTEM Command

ACMS/SHOW SYSTEM Command — Displays information about the ACMS run-time system, all local and remote users, and all local applications.

Format

ACMS/SHOW SYSTEM

Command Qualifiers	Defaults
/POOL	No pool information displayed
/ALL	All processes using message-switch displayed

2.6.19. ACMS/SHOW TASK Command

ACMS/SHOW TASK Command

ACMS/SHOW TASK Command — Displays information about one or more active ACMS tasks executing on the local node.

Format

ACMS/SHOW TASK [*task-name*[,...]]

Command Qualifiers	Defaults
/APPLICATION=*application-name*	All applications
/DEVICE=*device-name*	All devices
/IDENTIFIER=*task-id*	All tasks
/SUBMITTER=*submitter-id*	All submitters
/USER=*user-name*	All users

2.6.20. ACMS/SHOW USER Command

ACMS/SHOW USER Command

ACMS/SHOW USER Command — Displays information about ACMS users. With qualifiers, displays information about only those users you identify

Format

ACMS/SHOW USER [*user-name*[,...]]

Command Qualifiers	Defaults
/ALL	/ALL
/APPLICATION	All applications
/DEVICE=*device-name*	All devices
/[NO]FULL	/NOFULL
/LOCAL	All submitters
/REMOTE	All submitters

Command Qualifiers	Defaults
/SUBMITTER=*submitter-id*	All submitters

2.6.21. ACMS/START APPLICATION Command

ACMS/START APPLICATION Command

ACMS/START APPLICATION Command — Starts one or more ACMS applications.

Format

ACMS/START APPLICATION *application-name*[,...]

2.6.22. ACMS/START QTI Command

ACMS/START QTI Command

ACMS/START QTI Command — Starts the queued task initiator (QTI).

Format

ACMS/START QTI

2.6.23. ACMS/START QUEUE Command

ACMS/START QUEUE Command

ACMS/START QUEUE Command — Starts the task queue you specify. Once you start a task queue, the QTI begins processing any queued task elements in the queue.

Format

ACMS/START QUEUE *queue-name*[,...]

Command Qualifiers	Defaults
/ERROR_QUEUE=*error-queue-name*	No error queue
/TASK_THREADS=*n*	/TASK_THREADS=1

2.6.24. ACMS/START SYSTEM Command

ACMS/START SYSTEM Command

ACMS/START SYSTEM Command — Starts the ACMS system.

Format

ACMS/START SYSTEM

Command Qualifiers	Defaults
/[NO]AUDIT	/AUDIT
/[NO]QTI	/NOQTI
/[NO]TERMINALS	/TERMINALS

2.6.25. ACMS/START TASK Command

ACMS/START TASK Command

ACMS/START TASK Command — Starts a detached task in the specified application.

Format

ACMS/START TASK *task-name application-name*

Command Qualifiers	Defaults
/[NO]LOG	/NOLOG
/[NO]RETRY_LIMIT[=*n*]	/RETRY_LIMIT=0
/SELECTION_STRING=*selection_string*	Null string
/USERNAME=*username*	User name of application
/WAIT_TIMER=*n*	/WAIT_TIMER=5 seconds

2.6.26. ACMS/START TERMINALS Command

ACMS/START TERMINALS Command

ACMS/START TERMINALS Command — Starts the terminal subsystem controller (TSC) when ACMS is running. The **ACMS/START TERMINALS** command enables terminal users to access ACMS menus.

Format

ACMS/START TERMINALS

2.6.27. ACMS/STOP APPLICATION Command

ACMS/STOP APPLICATION Command

ACMS/STOP APPLICATION Command — Stops one or more ACMS applications.

Format

ACMS/STOP APPLICATION *application-name*[,...]

Command Qualifiers	Defaults
/[NO]CANCEL	/NOCANCEL

2.6.28. ACMS/STOP QTI Command

ACMS/STOP QTI Command

ACMS/STOP QTI Command — Stops the queued task initiator (QTI) and all active task queues.

Format

ACMS/STOP QTI

Command Qualifiers	Defaults
/[NO]CANCEL	/NOCANCEL

2.6.29. ACMS/STOP QUEUE Command

ACMS/STOP QUEUE Command

ACMS/STOP QUEUE Command — Stops the specified task queue.

Format

ACMS/STOP QUEUE *queue-name*[,...]

Command Qualifiers	Defaults
/[NO]CANCEL	/NOCANCEL

2.6.30. ACMS/STOP SYSTEM Command

ACMS/STOP SYSTEM Command

ACMS/STOP SYSTEM Command — Stops the ACMS system, the terminal subsystem controller (TSC), the queued task initiator (QTI), and all applications.

Format

ACMS/STOP SYSTEM

Command Qualifiers	Defaults
/[NO]CANCEL	/NOCANCEL

2.6.31. ACMS/STOP TERMINALS Command

ACMS/STOP TERMINALS Command

ACMS/STOP TERMINALS Command — Stops the terminal subsystem controller (TSC), thereby canceling the tasks of all ACMS menu users and logging out all current terminal users.

Format

ACMS/STOP TERMINALS

2.7. SWLUP Commands

This section contains syntax for the ACMS Software Event Log Utility (SWLUP) commands. SWLUP commands allow you to generate reports containing information logged by the Software Event Logger (SWL). See *VSI ACMS for OpenVMS Managing Applications* [https://docs.vmssoftware.com/vsi-acms-managing-applications/] for more information about SWLUP commands and qualifiers.

2.7.1. @ (At sign) Command (SWLUP>)

@ (At sign) Command (SWLUP>)

@ (At sign) Command (SWLUP>) — Runs an indirect command file that contains SWLUP commands.

Format

@ *file-spec*

2.7.2. EDIT Command (SWLUP>)

EDIT Command (SWLUP>)

EDIT Command (SWLUP>) — Lets you edit the last SWLUP command you typed, or lets you create an edit buffer for entering SWLUP commands.

Format

EDIT

2.7.3. EXIT Command (SWLUP>)

EXIT Command (SWLUP>)

EXIT Command (SWLUP>) — Causes SWLUP to exit or ends the execution of a command file.

Format

EXIT

2.7.4. HELP Command (SWLUP>)

HELP Command (SWLUP>)

HELP Command (SWLUP>) — Displays information about SWLUP commands and qualifiers.

Format

HELP [*topic* [...]]

Command Qualifiers	Defaults
/[NO]PROMPT	/PROMPT

2.7.5. LIST Command (SWLUP>)

LIST Command (SWLUP>)

LIST Command (SWLUP>) — Lists events recorded in the Software Event Logger file.

Format

LIST [EVENTS]

Command Qualifiers	Defaults
/BEFORE[=*time*]	Full report
/EVENT_CODE=*event-code*[,...]	All event codes
/FACILITY=*facility-name*[,...]	All facilities
/IMAGE=*image-name*[,...]	All images
/INPUT=*file-spec*	/INPUT=SYS$ERRORLOG:SWL.LOG
/OUTPUT=*file-spec*	/OUTPUT=SYS$OUTPUT
/PRINT	Does not print
/PROCESS_NAME=*process-name*[,...]	All processes
/SEVERITY=*severity-code*[,...]	All severity codes
/SINCE[=*time*]	Full report
/USER=*user-name*[,...]	All user names

2.7.6. RENEW Command (SWLUP>)

RENEW Command (SWLUP>)

RENEW Command (SWLUP>) — Starts a new system wide Software Event Logger file.

Format

RENEW

2.7.7. SAVE Command (SWLUP>)

SAVE Command (SWLUP>)

SAVE Command (SWLUP>) — Writes to a file that the last command typed.

Format

SAVE *file-spec*

2.7.8. SET [NO]LOG Command (SWLUP>)

SET [NO]LOG Command (SWLUP>)

SET [NO]LOG Command (SWLUP>) — Enables or disables creation of a log file that records your SWLUP session.

Format

SET LOG [*file-spec*]

SET NOLOG

2.7.9. SET [NO]VERIFY Command (SWLUP>)

SET [NO]VERIFY Command (SWLUP>)

SET [NO]VERIFY Command (SWLUP>) — Enables or disables the printing of commands stored in an indirect command file. SWLUP sends output to the default output device SYS$OUTPUT.

Format

SET [NO]VERIFY

2.7.10. SHOW CURRENT Command (SWLUP>)

SHOW CURRENT Command (SWLUP>)

SHOW CURRENT Command (SWLUP>) — Displays the name of the current log file opened by the SWL detached process.

Format

SHOW CURRENT

2.7.11. SHOW LOG Command (SWLUP>)

SHOW LOG Command (SWLUP>)

SHOW LOG Command (SWLUP>) — Displays whether or not you are currently logging SWLUP commands and the name of the log file, if applicable.

Format

SHOW LOG

2.7.12. SHOW VERSION Command (SWLUP>)

SHOW VERSION Command (SWLUP>)

SHOW VERSION Command (SWLUP>) — Displays the current version of SWLUP on the default output device SYS$OUTPUT.

Format

SHOW VERSION

2.7.13. STOP Command (SWLUP>)

STOP Command (SWLUP>)

STOP Command (SWLUP>) — Stops the SWL detached process so that it can exit properly.

Format

STOP

2.8. UDU Commands

This section contains syntax for the ACMS User Definition Utility (UDU) commands. You can use UDU commands to authorize ACMS users. See *VSI ACMS for OpenVMS Managing Applications* [https://docs.vmssoftware.com/vsi-acms-managing-applications/] for more information about the UDU commands and qualifiers.

2.8.1. ADD Command (UDU>)

ADD Command (UDU>)

ADD Command (UDU>) — Authorizes and assigns sign-in characteristics to ACMS users by adding UDU definitions to the user authorization file (ACMSUDF.DAT). You can use qualifiers to assign sign-in characteristics or let new definitions receive information from the UDU DEFAULT definition.

Format

ADD *user-name*

Command Qualifiers	Defaults
/[NO]AGENT	From DEFAULT definition
/[NO]DISPLAY_MENU	From DEFAULT definition
/[NO]FINAL=(*keyword*[,...])	From DEFAULT definition
/[NO]INITIAL=(*keyword*[,...])	From DEFAULT definition
/LANGUAGE=*language-name*	From DEFAULT definition
/MDB=*menu-database-file*	From DEFAULT definition
/MENU[=*menu-path-name*]	From DEFAULT definition
/PRINTFILE [= *print-file-spec* / *spooled-device-name*]	From DEFAULT definition
/[NO]SKIPMENULANGUAGE	From DEFAULT definition

2.8.2. ADD/PROXY Command (UDU>)

ADD/PROXY Command (UDU>)

ADD/PROXY Command (UDU>) — Adds a user proxy to the ACMS proxy file (ACMSPROXY.DAT). Before you can use the **ADD /PROXY** command, you must have already created a proxy file using the **CREATE /PROXY** command.

Format

ADD /PROXY *remote-node::remote-user local-user*

2.8.3. COPY Command (UDU>)

COPY Command (UDU>)

COPY Command (UDU>) — Authorizes and assigns sign-in characteristics to ACMS users by creating new UDU definitions from existing UDU definitions. With qualifiers, you can assign different sign-in characteristics to the new definitions.

Format

COPY *source-user-name new-user-name*

Command Qualifiers	Defaults
/[NO]AGENT	From source definition
/[NO]DISPLAY_MENU	From source definition
/[NO]FINAL=(*keyword*[,...])	From source definition
/[NO]INITIAL=(*keyword*[,...])	From source definition
/LANGUAGE=*language-name*	From source definition
/MDB=*menu-database-file*	From source definition
/MENU[=*menu-path-name*]	From source definition
/PRINTFILE [= *print-file-spec* *spooled-device-name*]	From source definition
/[NO]SKIPMENULANGUAGE	From source definition

2.8.4. CREATE/PROXY Command (UDU>)

CREATE/PROXY Command (UDU>)

CREATE/PROXY Command (UDU>) — Creates an empty ACMS proxy file (ACMSPROXY.DAT).

Format

CREATE /PROXY

2.8.5. DEFAULT Command (UDU>)

DEFAULT Command (UDU>)

DEFAULT Command (UDU>) — Changes information in the UDU DEFAULT definition. If you omit one or more qualifiers from an **ADD** command, the resulting new definition receives information from the existing DEFAULT definition.

Format

DEFAULT

Command Qualifiers	Defaults
/[NO]AGENT	From existing DEFAULT definition
/[NO]DISPLAY_MENU	From existing DEFAULT definition
/[NO]FINAL=(*keyword*[,...])	From existing DEFAULT definition
/[NO]INITIAL=(*keyword*[,...])	From existing DEFAULT definition
/LANGUAGE=*language-name*	From existing DEFAULT definition
/MDB=*menu-database-file*	From existing DEFAULT definition
/MENU[=*menu-path-name*]	From existing DEFAULT definition
/PRINTFILE [= *print-file-spec* *spooled-device-name*]	From existing DEFAULT definition
/[NO]SKIPMENULANGUAGE	From existing DEFAULT definition

2.8.6. EXIT Command (UDU>)

EXIT Command (UDU>)

EXIT Command (UDU>) — Ends the UDU session and returns to DCL level.

Format

EXIT

2.8.7. HELP Command (UDU>)

HELP Command (UDU>)

HELP Command (UDU>) — Displays information about UDU commands and qualifiers.

Format

HELP [*topic* [...]]

Command Qualifiers	Defaults
/[NO]PROMPT	**/PROMPT**

2.8.8. LIST Command (UDU>)

LIST Command (UDU>)

LIST Command (UDU>) — Writes UDU definitions to ACMSUDU.LIS in your default directory or to a specified output file.

Format

LIST *user-name*

Command Qualifiers	Defaults
/BRIEF	Full definition
/OUTPUT[=*file-spec*]	/OUTPUT[=*file-spec*]

2.8.9. LIST/PROXY Command (UDU>)

LIST/PROXY Command (UDU>)

LIST/PROXY Command (UDU>) — Writes all the proxies in the ACMS proxy file to the output file ACMSPROXY.LIS. You can use the **/OUTPUT** qualifier to specify a different output file name.

Format

LIST /PROXY

Command Qualifiers	Defaults
/OUTPUT[=*file-spec*]	ACMSPROXY.LIS

2.8.10. MODIFY Command (UDU>)

MODIFY Command (UDU>)

MODIFY Command (UDU>) — Changes the user information by allowing you to change information in UDU definitions.

Format

MODIFY *user-name*

Command Qualifiers	Defaults
/[NO]AGENT	From existing definition
/[NO]DISPLAY_MENU	From existing definition
/[NO]FINAL=(*keyword*[,...])	From existing definition
/[NO]INITIAL=(*keyword*[,...])	From existing definition
/LANGUAGE=*language-name*	From existing definition

Command Qualifiers	Defaults
/MDB=*menu-database-file*	From existing definition
/MENU[=*menu-path-name*]	From existing definition
/PRINTFILE [= *print-file-spec* *spooled-device-name*]	From existing definition
/[NO]SKIPMENULANGUAGE	From existing definition

2.8.11. REMOVE Command (UDU>)

REMOVE Command (UDU>)

REMOVE Command (UDU>) — Removes a UDU definition from the user authorization file.

Format

REMOVE *user-name*

2.8.12. REMOVE/PROXY Command (UDU>)

REMOVE/PROXY Command (UDU>)

REMOVE/PROXY Command (UDU>) — Removes the specified proxy from the ACMS proxy file (ACMSPROXY.DAT).

Format

REMOVE /PROXY *remote-node::remote-user*

2.8.13. RENAME Command (UDU>)

RENAME Command (UDU>)

RENAME Command (UDU>) — Changes the user names and, with qualifiers, other information in UDU definitions.

Format

RENAME *old-user-name new-user-name*

Command Qualifiers	Defaults
/[NO]AGENT	From old definition
/[NO]DISPLAY_MENU	From old definition
/[NO]FINAL=(*keyword*[,...])	From old definition
/[NO]INITIAL=(*keyword*[,...])	From old definition
/LANGUAGE=*language-name*	From old definition
/MDB=*menu-database-file*	From old definition

Command Qualifiers	Defaults
/MENU[=*menu-path-name*]	From old definition
/PRINTFILE [= *print-file-spec* *spooled-device-name*]	From old definition
/[NO]SKIPMENULANGUAGE	From old definition

2.8.14. SHOW Command (UDU>)

SHOW Command (UDU>)

SHOW Command (UDU>) — Displays UDU definitions.

Format

SHOW *user-name*

Command Qualifiers	Defaults
/BRIEF	Full definition

2.8.15. SHOW/PROXY Command (UDU>)

SHOW/PROXY Command (UDU>)

SHOW/PROXY Command (UDU>) — Displays one or more proxies in the ACMS proxy file (ACMSPROXY.DAT).

Format

SHOW /PROXY *remote-node::remote-user*

Chapter 3. ACMS Application Programming Services and Task Debugger Commands

This chapter contains reference material for the programming services supplied by ACMS, and for the ACMS Task Debugger commands.

3.1. ACMS Application Programming Services

This section provides reference material for the ACMS application programming services, ACMS$GET_TID, ACMS$RAISE_NONREC_EXCEPTION, ACMS$RAISE_STEP_EXCEPTION, ACMS$RAISE_TRANS_EXCEPTION, and ACMSAD$REQ_CANCEL, and the ACMS queuing services, ACMS$DEQUEUE_TASK and ACMS$QUEUE_TASK.

3.1.1. ACMS$GET_TID

ACMS$GET_TID

ACMS$GET_TID — Is used by a server procedure to obtain the transaction ID (TID) currently associated with an executing task.

Format

```
ACMS$GET_TID
(tid.wo.r)
```

3.1.2. ACMS$RAISE_NONREC_EXCEPTION

ACMS$RAISE_NONREC_EXCEPTION

ACMS$RAISE_NONREC_EXCEPTION — Used by a server procedure to raise a nonrecoverable exception and cancel the task.

Format

```
ACMS$RAISE_NONREC_EXCEPTION
([exception_code.rl.r])
```

3.1.3. ACMS$RAISE_STEP_EXCEPTION

ACMS$RAISE_STEP_EXCEPTION

ACMS$RAISE_STEP_EXCEPTION — Raises a step exception if a step procedure detects an error from which it cannot recover, but which the task definition is able to handle.

Format

```
ACMS$RAISE_STEP_EXCEPTION
```

```
([exception_code.rl.r])
```

3.1.4. ACMS$RAISE_TRANS_EXCEPTION

ACMS$RAISE_TRANS_EXCEPTION

ACMS$RAISE_TRANS_EXCEPTION — Raises a transaction exception if a step procedure detects an error from which it cannot recover, but which the task definition is able to handle.

Format

```
ACMS$RAISE_TRANS_EXCEPTION
([exception_code.rl.r])
```

3.1.5. ACMSAD$REQ_CANCEL

ACMSAD$REQ_CANCEL

ACMSAD$REQ_CANCEL — Cancels a task. ACMS writes the task cancellation to the Audit Trail Log. When you include a reason parameter, the call also writes the reason for the cancel to the Audit Trail Log. This service is considered to be a declining feature. It is recommended that you use ACMS$RAISE_NONREC_EXCEPTION instead.

Format

```
ACMSAD$REQ_CANCEL
([reason.rl.r])
```

3.1.6. ACMS$DEQUEUE_TASK

ACMS$DEQUEUE_TASK

ACMS$DEQUEUE_TASK — Removes or reads a queued task element from the queued task repository and returns information about the task.

Format

```
ACMS$DEQUEUE_TASK
(queue_name.rt.dx,
[element_id.rr.r],
[flags.rlu.r],
[ret_task.wt.dx],
[ret_application.wt.dx],
[ret_workspace_list.wz.r],
[ret_workspace_count.wl.r],
[ret_element_priority.wl.r],
[ret_username.wt.dx],
[ret_element_id.wr.r],
[ret_error_count.wlu.r],
[ret_last_error.wlu.r],
```

[ret_last_error_adt.wadt.r])

3.1.7. ACMS$QUEUE_TASK

ACMS$QUEUE_TASK

ACMS$QUEUE_TASK — Stores the queued task element in an on-disk queued task repository.

Format

ACMS$QUEUE_TASK
(queue_name.rt.dx,
task.rt.dx,
application.rt.dx,
[workspace_list.rz.r],
[flags.rlu.r],
[element_priority.rl.r],
[username.rt.dx],
[element_id.wr.r])

3.2. ACMS Task Debugger Commands

This section lists the commands available with the ACMS Task Debugger. Use these commands to run an ACMS task without starting an application, to control the task, and to examine and change the contents of the workspaces the task uses as it runs.

3.2.1. @ (At sign) Command

@ (At sign) Command

@ (At sign) Command — Runs the ACMS Task Debugger commands contained in the named file. The file can contain any ACMS Task Debugger command, including another @ command.

Format

`@ file-spec`

3.2.2. ACCEPT Command

ACCEPT Command

ACCEPT Command — Allows the Task Debugger to accept calls from an agent program.

Format

`ACCEPT [/qualifier]`

Command Qualifiers	Defaults
/CONTINUOUS	None

3.2.3. ASSIGN Command

ASSIGN Command

ASSIGN Command — Assigns a process logical name for a server.

Format

```
ASSIGN [/qualifier] equivalence-name logical-name
```

Command Qualifiers	Defaults
/SERVER=*server-name*	/SERVER=*current-server*

3.2.4. CANCEL BREAK Command

CANCEL BREAK Command

CANCEL BREAK Command — Removes one or more breakpoints from a task or from all tasks.

Format

```
CANCEL BREAK [/qualifiers] [breakpoint]
```

Command Qualifiers	Defaults
/ALL[=*task-name*]	None

3.2.5. CANCEL TASK Command

CANCEL TASK Command

CANCEL TASK Command — Cancels the current task.

Format

```
CANCEL TASK
```

3.2.6. CANCEL TRANSACTION_TIMEOUT Command

CANCEL TRANSACTION_TIMEOUT Command

CANCEL TRANSACTION_TIMEOUT Command — Cancels any transaction timeout period previously set.

Format

```
CANCEL TRANSACTION_TIMEOUT
```

3.2.7. DEPOSIT Command

DEPOSIT Command

DEPOSIT Command — Puts a value into a workspace field.

Format

```
DEPOSIT [/qualifiers] workspace-field-name=value
```

Command Qualifiers	Defaults
Same as for OpenVMS Debugger	

3.2.8. EXAMINE Command

EXAMINE Command

EXAMINE Command — Displays the contents of a workspace field.

Format

```
EXAMINE [/qualifiers] workspace-field-name [OF workspace-record-name]
```

3.2.9. EXIT Command

EXIT Command

EXIT Command — Ends the debugging session or ends the execution of commands in a command procedure. If typed after the ACMSDBG> prompt, the **EXIT** command stops all subprocesses started by the Task Debugger and returns to DCL command level. If included in a command procedure, the **EXIT** command returns control to the command stream that started the command procedure.

Format

```
EXIT
```

3.2.10. GO Command

GO Command

GO Command — Continues a task after a breakpoint. Also returns to a server process that you left from with **Ctrl/G** and continues any command after an **INTERRUPT** command.

Format

```
GO
```

3.2.11. HELP Command

HELP Command

HELP Command — Displays information about Task Debugger commands, step points, control characters, and symbols.

Format

```
HELP [topic] [...]
```

3.2.12. INTERRUPT Command

Interrupts a server and gives control to the OpenVMS Debugger in that server process. Use this command to get to the DBG> prompt so you can set breakpoints, examine addresses, or change values in a server that has already been started.

INTERRUPT Command

INTERRUPT Command — Interrupts a server and gives control to the OpenVMS Debugger in that server process. Use this command to get to the DBG> prompt so you can set breakpoints, examine addresses, or change values in a server that has already been started.

Format

```
INTERRUPT server-name [/qualifiers]
```

Command Qualifiers	Defaults
/[TASK=*task-name*]	None

3.2.13. SELECT Command

SELECT Command

SELECT Command — Selects and starts a task.

Format

```
SELECT task-name [selection-string]
```

3.2.14. SET BREAK Command

SET BREAK Command

SET BREAK Command — Sets a breakpoint in the task.

Format

```
SET BREAK task-name \ step-name \ location
SET BREAK task-name \ event
```

3.2.15. SET SERVER Command

SET SERVER Command

SET SERVER Command — Names the server used as the default for the **ASSIGN** command.

Format

```
SET SERVER server-name
```

3.2.16. SET TRANSACTION_TIMEOUT

Sets the current transaction timeout period.

SET TRANSACTION_TIMEOUT

SET TRANSACTION_TIMEOUT — Sets the current transaction timeout period.

Format

```
SET TRANSACTION_TIMEOUT seconds
```

3.2.17. SHOW BREAK Command

SHOW BREAK Command

SHOW BREAK Command — Displays task-level breakpoints you have set.

Format

```
SHOW BREAK
```

3.2.18. SHOW SERVERS Command

SHOW SERVERS Command

SHOW SERVERS Command — Displays all servers you have started (and not stopped) in the current Task Debugger session

Format

```
SHOW SERVERS
```

3.2.19. SHOW TRANSACTION_TIMEOUT

SHOW TRANSACTION_TIMEOUT

SHOW TRANSACTION_TIMEOUT — Displays the value of the current transaction timeout.

Format

```
SHOW TRANSACTION_TIMEOUT
```

3.2.20. SHOW VERSION Command

SHOW VERSION Command

SHOW VERSION Command — Displays the version number of the Task Debugger.

Format

```
SHOW VERSION
```

3.2.21. START Command

START Command

START Command — Starts one or more reusable servers.

Format

```
START [/qualifier] [server-name] [,...]
```

Command Qualifiers	Defaults
/ALL	None

3.2.22. STEP Command

STEP Command

STEP Command — Runs the task from the current step point to the next task-level step point. When stepping through a task that was called by another task, the Task Debugger proceeds through all the steps in the called task until the task completes. Control then returns to the parent task where you can continue typing the **STEP** command to cause the Task Debugger to step through the parent task.

Format

```
STEP
```

3.2.23. STOP Command

STOP Command

STOP Command — Stops one or more servers.

Format

```
STOP [/qualifier] [server-name][,...]
```

Command Qualifiers	Defaults
/ALL	None

Chapter 4. Systems Interface (SI) Services

This chapter provides reference material for calling the SI initialization, exchange I/O, submitter, and stream services in agent programs.

4.1. Initialization and Exchange I/O Services

This section provides reference material for calling the SI initialization and exchange I/O services in agent programs.

4.1.1. ACMS$INIT_EXCHANGE_IO

ACMS$INIT_EXCHANGE_IO

ACMS$INIT_EXCHANGE_IO — When the agent is prepared to perform any necessary exchange I/O, ACMS$INIT_EXCHANGE_IO specifies the type of I/O to perform. It returns an exchange I/O ID. For tasks that use DECforms, call ACMS$INIT_EXCHANGE_IO to open a DECforms session.

Format

```
ACMS$INIT_EXCHANGE_IO
(submitter_id.rq.r,
exchange_io_id.wq.r,
[io_enable_flag.rl.r],
[item_list.rx.r],
[io_capabilities_flag.wl.r]

ACMS$INIT_EXCHANGE_IO_A
(submitter_id.rq.r,
exchange_io_id.wq.r,
[io_enable_flag.rl.r],
[item_list.rx.r],
[io_capabilities_flag.wl.r],
[comp_status.wq.r],
[efn.rbu.r],
[astadr.szem.r],
[astprm.rz.v]
```

4.1.2. ACMS$SIGN_IN

ACMS$SIGN_IN

ACMS$SIGN_IN — Lets an agent sign in a task submitter to ACMS.

Format

```
ACMS$SIGN_IN
```

```
(submitter_id.wq.r,
[username.rt.dx],
[device.rt.dx],
[cancel_routine.rem.r],
[cancel_param.rz.v]

ACMS$SIGN_IN_A
(submitter_id.wq.r,
[username.rt.dx],
[device.rt.dx],
[cancel_routine.rem.r],
[cancel_param.rz.v],
[comp_status.wq.r],
[efn.rbu.r],
[astadr.szem.r],
[astprm.rz.v]
```

4.1.3. ACMS$SIGN_OUT

ACMS$SIGN_OUT

ACMS$SIGN_OUT — Lets an agent remove a task submitter from ACMS.

Format

```
ACMS$SIGN_OUT
(submitter_id.rq.r,
[cancel_flag.rlu.r]

ACMS$SIGN_OUT_A
(submitter_id.rq.r,
[cancel_flag.rlu.r],
[comp_status.wq.r],
[efn.rbu.r],
[astadr.szem.r],
[astprm.rz.v]
```

4.1.4. ACMS$TERM_EXCHANGE_IO

ACMS$TERM_EXCHANGE_IO

ACMS$TERM_EXCHANGE_IO — This service allows an agent to finish using any I/O initialized during the ACMS$INIT_EXCHANGE_IO services. ACMS$TERM_EXCHANGE_IO frees any resources being used by the submitter, for example, DECforms sessions or TDMS channels. Any active call on the channel is canceled.

Format

```
ACMS$TERM_EXCHANGE_IO
(exchange_io_id.rq.r)

ACMS$TERM_EXCHANGE_IO_A
(exchange_io_id.rq.r,
[comp_status.wq.r],
```

```
[efn.rbu.r],
[astadr.szem.r],
[astprm.rz.v]
```

4.2. Submitter Services

This section provides reference material for the submitter services.

4.2.1. ACMS$CALL

ACMS$CALL

ACMS$CALL — Submits an ACMS task. This service completes when the task ends. If you use the asynchronous ACMS$CALL_A service, you also must call the ACMS$WAIT service.

Format

ACMS$CALL

```
([submitter_id.rq.r],
procedure_id.rq.r,
arguments.rz.r,
[tid.ro.r])
```

ACMS$CALL_A

```
([submitter_id.rq.r],
procedure_id.rq.r,
arguments.rz.r,
[tid.ro.r],
[comp_status.wq.r],
[efn.rbu.r],
[astadr.szem.r],
[astprm.rz.v])
```

4.2.2. ACMS$CANCEL_CALL

ACMS$CANCEL_CALL

ACMS$CANCEL_CALL — Cancels a task started by the task submitting agent. This service only cancels tasks started with ACMS$START_CALL. The agent must also use the ACMS$WAIT_FOR_CALL_END service with this service to get notification of the call canceling.

Format

ACMS$CANCEL_CALL

```
([submitter_id.rq.r],
call_id.rq.r,
[reason_code.rlu.r])
```

ACMS$CANCEL_CALL_A

```
([submitter_id.rq.r],
call_id.rq.r,
[reason_code.rlu.r],
[comp_status.wq.r],
```

```
[efn.rbu.r],
[astadr.szem.r],
[astprm.rz.v])
```

4.2.3. ACMS$GET_PROCEDURE_INFO

ACMS$GET_PROCEDURE_INFO

ACMS$GET_PROCEDURE_INFO — Finds and returns the I/O method (terminal, request, stream, or none), the procedure ID for the task, and the number of workspace arguments the agent can pass to a task in an ACMS application.

Format

```
ACMS$GET_PROCEDURE_INFO
([submitter_id.rq.r],
procedure.rt.dx,
package.rt.dx,
item_list.rx.r)

ACMS$GET_PROCEDURE_INFO_A
([submitter_id.rq.r],
procedure.rt.dx,
package.rt.dx,
item_list.rx.r,
[comp_status.wq.r],
[efn.rbu.r],
[astadr.szem.r],
[astprm.rz.v])
```

4.2.4. ACMS$START_CALL

ACMS$START_CALL

ACMS$START_CALL — Submits an ACMS task. This service completes when the task has been submitted. It returns a call ID to the agent.

Format

```
ACMS$START_CALL
([submitter_id.rq.r],
procedure_id.rq.r,
call_id.wq.r,
arguments.rz.r,
[tid.ro.r])

ACMS$START_CALL_A
([submitter_id.rq.r],
procedure_id.rq.r,
call_id.wq.r,
arguments.rz.r,
[tid.ro.r],
[comp_status.wq.r],
[efn.rbu.r],
```

```
[astadr.szem.r],
[astprm.rz.v])
```

4.2.5. ACMS$WAIT_FOR_CALL_END

ACMS$WAIT_FOR_CALL_END

ACMS$WAIT_FOR_CALL_END — Waits for a task to complete. This service only waits for tasks started with ACMS$START_CALL. This service also reports access errors that occurred after the task was submitted.

Format

```
ACMS$WAIT_FOR_CALL_END
([submitter_id.rq.r],
call_id.rq.r)

ACMS$WAIT_FOR_CALL_END_A
([submitter_id.rq.r],
call_id.rq.r,
[comp_status.wq.r],
[efn.rbu.r],
[astadr.szem.r],
[astprm.rz.v])
```

4.3. Stream Services

This section provides reference material for calling the SI stream services in agent programs.

4.3.1. ACMS$REPLY_TO_STREAM_IO

ACMS$REPLY_TO_STREAM_IO

ACMS$REPLY_TO_STREAM_IO — Reacts to I/O requests on the stream. The agent must gather information for the ACMS$WAIT_FOR_STREAM_IO input string and fill the string before calling this service.

Format

```
ACMS$REPLY_TO_STREAM_IO
(connect_id.rq.r,
io_id.wq.r,
[io_status.rl.r])

ACMS$REPLY_TO_STREAM_IO_A
(connect_id.rq.r,
io_id.wq.r,
[io_status.rl.r],
[comp_status.wq.r],
[efn.rbu.r],
[astadr.szem.r],
[astprm.rz.v])
```

4.3.2. ACMS$WAIT_FOR_STREAM_IO

ACMS$WAIT_FOR_STREAM_IO

ACMS$WAIT_FOR_STREAM_IO — Waits for I/O messages. This service completes when the application execution controller (EXC) executes a READ or WRITE clause in the task definition.

Format

```
ACMS$WAIT_FOR_STREAM_IO
(connect_id.rq.r,
output_object.wz.r,
input_object.wz.r,
io_id.wq.r,
[cancel_routine.rem.r],
[cancel_param.rz.v])

ACMS$WAIT_FOR_STREAM_IO_A
(connect_id.rq.r,
output_object.wz.r,
input_object.wz.r,
io_id.wq.r,
[comp_status.wq.r],
[efn.rbu.r],
[astadr.szem.r],
[astprm.rz.v],
[cancel_routine.rem.r],
[cancel_param.rz.v])
```

4.4. Superseded Services

This section provides reference material for six services used in earlier versions of ACMS.

4.4.1. ACMS$CLOSE_RR

ACMS$CLOSE_RR

ACMS$CLOSE_RR — Closes a TDMS channel to a terminal and disassociates it from a submitter ID. Any active TDMS call on the channel is canceled.

Format

```
ACMS$CLOSE_RR
([channel.rlu.r],
[nullarg])

ACMS$CLOSE_RR_A
([channel.rlu.r],
[nullarg],
[comp_status.wq.r],
[efn.rbu.r],
[astadr.szem.r],
[astprm.rz.v])
```

4.4.2. ACMS$CONNECT_STREAM

ACMS$CONNECT_STREAM

ACMS$CONNECT_STREAM — Establishes a connection to a stream and returns a connect ID. Before using this service, you have to create a stream with ACMS$CREATE_STREAM.

Format

ACMS$CONNECT_STREAM
(stream.id.rq.r,
mode.rl.r,
connect.id.wq.r,
[submitter.id.rq.r])

ACMS$CONNECT_STREAM_A
(stream.id.rq.r,
mode.rl.r,
connect.id.wq.r,
[comp_status.wq.r],
[efn.rbu.r],
[astadr.szem.r],
[astprm.rz.v],
[submitter_id.rq.r])

4.4.3. ACMS$CREATE_STREAM

ACMS$CREATE_STREAM

ACMS$CREATE_STREAM — Creates a stream and returns the stream identification.

Format

ACMS$CREATE_STREAM
(mode.rl.r,
stream_id.wq.r)

ACMS$CREATE_STREAM_A
(mode.rl.r,
stream_id.wq.r,
[comp_status.wq.r],
[efn.rbu.r],
[astadr.szem.r],
[astprm.rz.v])

4.4.4. ACMS$DELETE_STREAM

ACMS$DELETE_STREAM

ACMS$DELETE_STREAM — Deletes a stream. Use this service after ACMS$DISCONNECT_STREAM disconnects all connect IDs to the stream. Once deleted, a stream is not available for use by other tasks.

Format

ACMS$DELETE_STREAM
(stream_id.rq.r,
[flags.rl.r])

ACMS$DELETE_STREAM_A
(stream_id.rq.r,
[flags.rl.r],
[comp_status.wq.r],
[efn.rbu.r],
[astadr.szem.r],
[astprm.rz.v])

4.4.5. ACMS$DISCONNECT_STREAM

ACMS$DISCONNECT_STREAM

ACMS$DISCONNECT_STREAM — Breaks a connection to a stream. The application execution controller (EXC) must disconnect from the stream before the agent can disconnect.

Format

ACMS$DISCONNECT_STREAM
(connect_id.rq.r,
[flags.rl.r])

ACMS$DISCONNECT_STREAM_A
(connect_id.rq.r,
[flags.rl.r],
[comp_status.wq.r],
[efn.rbu.r],
[astadr.szem.r],
[astprm.rz.v])

4.4.6. ACMS$OPEN_RR

ACMS$OPEN_RR

ACMS$OPEN_RR — For tasks that use TDMS, the agent calls ACMS$OPEN_RR to open a TDMS channel to a terminal and associates it with a submitter ID. Subsequent task selections for that submitter use the channel for all task request I/O, including remote request I/O. For tasks that use the ACMS Request Interface (RI), the agent calls ACMS$OPEN_RR to prepare the agent process to do the I/O.

Format

ACMS$OPEN_RR
(device.rt.dx,
channel.wlu.r,
[submitter_id.rq.r],
[flags.rl.r],
[nullarg])

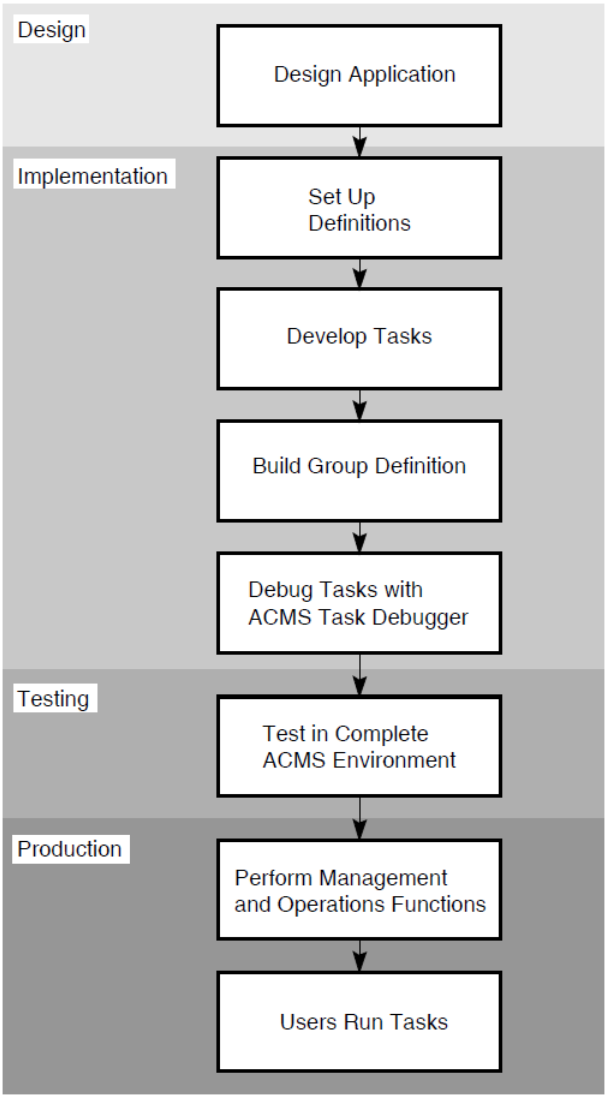
ACMS$OPEN_RR_A
(device.rt.dx,

```
channel.wlu.r,
[submitter_id.rq.r],
[flags.rl.r],
[nullarg],
[comp_status.wq.r],
[efn.rbu.r],
[astadr.szem.r],
[astprm.rz.v])
```

Appendix A. Checklist for ACMS Application Development

Figure A.1, "ACMS Application Design, Development, and Use" illustrates the phases of application development for ACMS, from the initial design of an application to the actual production of the application. *Figure A.1, "ACMS Application Design, Development, and Use"* is followed by a more detailed checklist of the phases of application development you can use with the figure.

Figure A.1. ACMS Application Design, Development, and Use



1. Design application
   - Analyze business
   - Design application
   - Create preliminary definition and other specifications
2. Set up data

RMS:

- Define the records (CDO)
- Create the files (RMS utilities or DCL commands)

DBMS:

- Define the schema, subschema, storage schema (DDL)
- Create the database (DBO)

Rdb:

- Define the records and their relationships (SQL or RDO)
- Create the database (SQL or RDO)

3. Define tasks
   - Create task definitions (ADU)
4. Create workspaces
   - Create a file containing record definition (editor)
   - Store the definition in the data dictionary (CDO)
5. Create DECforms forms
   - Create the panel using the panel editor (FDE)
   - Edit the IFDL file
   - Translate the IFDL file to the FORM file (IFDL translator)
6. Create TDMS forms
   - Define background text, input and output fields (FDU)
   - Define the help form (FDU)
7. Create TDMS requests
   - Define a request (RDU)
   - Define a request library (RDU)
   - Build the request library (RDU)
8. Write procedures
   - Write and compile step procedures
   - Write and compile initialization and termination procedures for each procedure server
   - Write and compile cancel procedures

9. Create message files
   - Create message source files (editor or DCL)
   - Generate object modules (OpenVMS Message Utility)
   - Generate executable message files (DCL **LINK** command)
10. Create task groups
    - Define the task group including tasks and servers (ADU)
    - Build the task group using the **/DEBUG** qualifier (ADU)
11. Create the procedure server image
    - Link the task group transfer module, the message file object module, and the object modules for step procedures, cancel procedures, and initialization and termination procedures (**LINK/DEBUG** command)
12. Debug
    - Run tasks under ACMS Task Debugger and OpenVMS Symbolic Debugger
    - Revise definitions and programs and test again
13. Set up the application
    - Create the application definition (ADU)
    - Build the application database (ADU)
14. Move the application database to ACMS$DIRECTORY
    - Use the DCL **COPY** command
    - Or, create the application authorization definition (AAU) and use the **ACMS/INSTALL** command
15. Set up menus
    - Create menu definitions (ADU)
    - Build the menu database (ADU)
16. Test the application
    - Start the application and run tasks to test implementation
17. Authorize users
    - Authorize users for access to OpenVMS (OpenVMS Authorize Utility)
    - Authorize users for access to ACMS, assign the menu database and initial the menu (UDU)
18. Authorize terminals
    - Authorize terminals for access to ACMS (DDU)

- Define whether terminals are controlled by ACMS or OpenVMS (DDU)

19. Manage and tune the application

- Start and stop application
- Monitor and tune application
- Modify application, servers, tasks, and menus as necessary

Appendix B. Changing and Debugging ACMS Applications

Application development is a cyclical process. Omissions or problems in the analysis or design might not show up until implementation is complete. To correct these omissions or problems, you might need to redo part of the design and implementation. For this reason, it is helpful to understand what parts of an application have to change if you change some other part.

Table B.1, "Changing ACMS Applications" summarizes these relationships between different parts of ACMS applications.

Table B.1. Changing ACMS Applications

Changed Component	Changes to Related Components	When Change Takes Effect
Menu database name (.MDB)	User definitions (in ACMSUDF.DAT file) pointing to menu database must be changed.	Next time user signs in to ACMS.
	Menu definitions should be changed if they include a clause naming database file.	When user signs in after menu database is rebuilt.
Menu definition	Menu database containing that definition must be rebuilt. New database must be put in directory pointed to by ACMSUDF.DAT records (usually ACMS$DIRECTORY).	When user signs in after menu database is rebuilt.
Application database name (.ADB)	Menu definitions pointing to tasks in that application must be changed and menu database rebuilt.	When user signs in after menu database is rebuilt.
	Application authorization definitions must be modified to reflect new application name.	When application database is reinstalled with **ACMS/INSTALL** command.
Application definition	Application database must be rebuilt. Menu definition database does not need to be changed unless name of task is changed in application definition.	When application is stopped and restarted.
	If changes to application definition conflict with existing authorization for application in ACMSAAF.DAT, authorization must be modified and application database reinstalled with **ACMS/INSTALL** command.	When application is moved to ACMS$DIRECTORY with **ACMS/INSTALL** command.
Task group database name (.TDB)	Application definition must be changed and rebuilt. Task group definition should be changed and rebuilt if it points to task group database file.	When application is stopped and restarted.
Task group definition	Task group database must be rebuilt.	When application is stopped and restarted.
	If a task was added or removed, the application database must be rebuilt, even	

Changed Component	Changes to Related Components	When Change Takes Effect
	if no change is required in application definition.	
	If a task is removed or a task name changed, menu definition pointing to task must be changed. In addition, the menu database and application database must be rebuilt. If the task removed from the task group was also named in application definition, application definition must be changed and rebuilt.	
	If default control attributes of a task are changed, and these attributes are not overridden in application definition, application database must be rebuilt.	
	If changes to task group definition conflict with existing authorization for application in ACMSAAF.DAT, authorization must be modified and application database reinstalled with **ACMS/INSTALL** command.	When application is moved to ACMS$DIRECTORY with **ACMS/INSTALL** command.
Task definition	Task group database must be rebuilt.	When application is stopped and restarted.
	If default control attributes of task are changed, and these attributes are not overridden in application definition, application database must be rebuilt.	
	If task name is changed, task group definition must be changed to reflect new name.	
Request	Request library (.RLB) must be rebuilt.	When application is stopped and restarted.
	If number of records or if record definitions used by request are changed, task group database must be rebuilt.	
	If request name is changed, task definition must be changed.	
	If request library name is changed, task group definition must be changed.	
Form definition	Request library (.RLB) must be rebuilt.	When application is stopped and restarted.
	If form name is changed, request definition must be changed.	
Form panel	FORM file must be back-translated to produce a source IFDL file. Object module must be extracted and relinked with or without escape units.	When application is stopped and restarted.
Form record	IFDL file must be translated to produce a new FORM file. Object module must be extracted and relinked with or without escape units.	When application is stopped and restarted.

Changed Component	Changes to Related Components	When Change Takes Effect
Step procedure	Step procedure must be recompiled and server image (.EXE) relinked	When application is stopped and restarted, or when server is replaced.
	If number of workspaces or if record definitions that the procedure uses for workspaces are changed, task must be redefined and task group database rebuilt.	
	If procedure name is changed, procedure server definition in task group must be changed. Task definition must be changed.	
Message source file	File of message texts (.EXE) must be relinked.	When server using message is restarted after relink.
	If message was added or removed or order of messages changed, new message object module must be generated. Server image must be relinked with the new module.	Stop and restart application to ensure that changes are available.
Workspace definition	If task definition, form record, request, or procedure refers to fields that have changed name, definition or program must be changed. Task group database or request library must be rebuilt, or procedure relinked.	When application is stopped and restarted after rebuild.
	Both task group and form file or request library must also be rebuilt and program relinked if order of fields in workspace or other characteristics have changed, even if requests, task definitions, and procedures are not affected by change.	
	If name of workspace definition is changed, procedure, task definition, and form record or request must also be changed. Task group and request library must be rebuilt. Procedure must be recompiled and relinked.	
Application authorization (with AAU)	If using **ACMS/INSTALL** command, reinstall application database.	When application database is moved into ACMS$DIRECTORY with **ACMS/INSTALL** command.
	If changes to authorization place further restrictions on application, remove old application from ACMS$DIRECTORY and reinstall application database.	
User or device authorization (with UDU or DDU)	If change does not affect access control lists or menu names, no other change is required.	Next time user signs in to ACMS.
	If change affects access control lists in application definition, application must be redefined and rebuilt.	
	If change affects names of menus, menus must be redefined and rebuilt.	

Changed Component	Changes to Related Components	When Change Takes Effect
	If change affects which terminals are controlled by ACMS, no other change is required.	After **ACMS/RESET TERMINALS** command is issued, or after ACMS is stopped and restarted.

Table B.2, "Files Used to Debug ACMS Tasks" describes the files needed to run a task with the ACMS Task Debugger.

Table B.2. Files Used to Debug ACMS Tasks

File	Description
Data files or database files for task group	Created and populated using either RMS, DBMS, or Rdb.
Message file or files for task group	Created with the OpenVMS Message Utility. This file contains text of messages and their message symbols. You need this file only if your tasks use the GET MESSAGE clause to access a message file that is separate from the server image.
Procedure Server Images	Created with the **LINK** command. Contains executable versions of the procedure server transfer module, message file module, and all procedures for the task group.
DECforms form files	Created using DECforms.
Task database – TDB	Created with the **BUILD** command of the ACMS Application Definition Utility – ADU. Contains information used by ACMS to run tasks. Include the **/DEBUG** qualifier with the **BUILD** command to examine and deposit data in the workspace while debugging the task.

Table B.3, "Source Files for Debugging" describes the sources used to create the files used for debugging ACMS tasks.

Table B.3. Source Files for Debugging

File	Description
ADU input files	Contain source definitions for task groups and tasks.
CDO input files	Contain CDD source definitions for ACMS workspace records.
RDU input files	Contain source definitions for requests and request libraries.
Step, initialization, termination, and cancel procedures	Written in COBOL, BASIC, or other high-level languages.
Message source files	Contain source text for messages.

File	Description
Procedure server transfer module	Created by building the task group. Contains vectors for the procedures handled by the server and the main entry point for the procedure server image.

Appendix C. Summary of ACMS System Workspaces

Each of the three ACMS system workspaces has a different purpose. All of the Common Data Definition Language (CDDL) record definitions for these workspaces are stored in the CDD$TOP.ACMS$DIR.ACMS$WORKSPACES directory in the CDD. This appendix lists these workspaces and explains the uses of each.

C.1. ACMS$PROCESSING_STATUS System Workspace

The ACMS$PROCESSING_STATUS workspace handles processing status information. It has four fields, each for a different part of that information. The CDD location of the CDDL record definition for this workspace is CDD$TOP.ACMS$DIR.ACMS$WORKSPACES.ACMS$PROCESSING_STATUS. *Table C.1, "Fields in ACMS$PROCESSING_STATUS"* describes the fields in the ACMS$PROCESSING_STATUS workspace.

Table C.1. Fields in ACMS$PROCESSING_STATUS

ACMS$PROCESSING_STATUS Workspace	
ACMS$L_STATUS	
Type	Signed longword
Description	Contains the return status from the last processing step. The initial value of the ACMS$L_STATUS field is set to 1 (SUCCESS) when a task is started.
ACMS$T_SEVERITY_LEVEL	
Type	Text
Size	1 character
Description	Contains a single-character severity level code representing the return status in the ACMS$L_STATUS field. The characters this field can contain are: S (SUCCESS), I (INFORMATION), W (WARNING), E (ERROR), F (FATAL), ? (OTHER). The initial value of ACMS $T_SEVERITY_LEVEL is "S".
ACMS$T_STATUS_TYPE	
Type	Text
Size	1 character
Description	Contains a single character indicating the severity level of the return status in the ACMS$L_STATUS field. A "G" indicates the low bit in the ACMS$L_STATUS field is set to 1. A "B" indicates the low bit is clear. The initial value of the ACMS$T_STATUS_TYPE field is "G".
ACMS$T_STATUS_MESSAGE/ACMS$T_STATUS_MESSAGE_LONG	
Type	Text

ACMS$PROCESSING_STATUS Workspace	
Size	80/132 characters
Description	ACMS$T_STATUS_MESSAGE is an 80-character variant of the 132-character ACMS$T_STATUS_MESSAGE_LONG field. When you use the GET ERROR MESSAGE clause, this field contains the error message associated with the return status code in ACMS$L_STATUS. The ACMS$T_STATUS_MESSAGE_LONG field is set initially to spaces.

C.2. ACMS$SELECTION_STRING System Workspace

The ACMS$SELECTION_STRING workspace handles strings passed by a task submitter (terminal user) at task selection time. It has a single field. The CDD location of the CDDL record definition for this workspace is CDD$TOP.ACMS$DIR.ACMS$WORKSPACES.ACMS$SELECTION_STRING. *Table C.2, "Fields in ACMS$SELECTION_STRING"* describes the field in the ACMS$SELECTION_STRING workspace.

Table C.2. Fields in ACMS$SELECTION_STRING

ACMS$SELECTION_STRING Workspace	
ACMS$T_SELECTION_STRING	
Type	Text
Size	255 characters
Description	Contains the selection string provided by a terminal user at task selection time. If the user does not provide a selection string, ACMS sets the field to spaces. If the task is a queued task, the first 32 bytes of the selection string contain the queued task element ID.

C.3. ACMS$TASK_INFORMATION System Workspace

The ACMS$TASK_INFORMATION workspace handles task execution information. It has 10 fields, each for a different part of that information. The CDD location of the CDDL record definition for this workspace is CDD$TOP.ACMS$DIR.ACMS$WORKSPACES.ACMS$TASK_INFORMATION. *Table C.3, "Fields in ACMS$TASK_INFORMATION"* describes the fields in the ACMS$TASK_INFORMATION workspace.

Table C.3. Fields in ACMS$TASK_INFORMATION

ACMS$TASK_INFORMATION Workspace	
ACMS$AL_TASK_ID	
Type	Signed longword array
Size	4 longwords

ACMS$TASK_INFORMATION Workspace	
Description	Contains the task ID in binary format for the current task instance; the ACMS$AL_TASK_ID field is a four-element longword array. It is possible that two task instances can have the same value, if the tasks have been selected on two different nodes. To ensure a unique task identifier, use both the ACMS$AL_TASK_ID field and the ACMS$T_SUBMITTER_NODE field.
ACMS$L_TASK_SEQUENCE_NUMBER	
Type	Signed longword
Description	Contains the number of the current task instance within the current task; the content of this field is always one (1) when the task is initially selected from a menu. ACMS increments this number each time the user repeats the task or chains to another task, thus starting a new task instance without returning to the menu.
ACMS$T_TASK_NAME	
Type	Text
Size	31 characters
Description	Contains the task name as defined in the application under which the task is running. ACMS does not update this field when a task chains to another task.
ACMS$T_TASK_IO_DEVICE	
Type	Text
Size	8 characters
Description	Contains the device name for the task submitter. For remote users, the device name is always NL. For local request I/O or terminal I/O users, this field includes the terminal device name. For stream I/O or no I/O, this field is set to spaces. If this field contains a device name (not spaces or NL), then the device can be used by the task to perform I/O from a processing step.
ACMS$AL_TASK_SUBMITTER_ID	
Type	Signed longword array
Size	4 longwords
Description	Contains the current terminal user's identification code for the user who started the current task instance. This field is a four-element longword array.
ACMS$T_TASK_USERNAME	
Type	Text
Size	12 characters

ACMS$TASK_INFORMATION Workspace	
Description	Contains the OpenVMS user name for the terminal user who started the current task instance. For remote tasks, this is the name of the proxy.
ACMS$T_SUBMITTER_NODE_NAME	
Type	Text
Size	15 characters
Description	Contains the DECnet node name for the task submitter.
ACMS$L_CALL_SEQUENCE_NUMBER	
Type	Signed longword
Description	Contains the call sequence number of the currently called task. ACMS increments this number each time a task calls another task.
ACMS$T_SIGN_IN_USERNAME	
Type	Text
Size	12 characters
Description	Contains the OpenVMS user name of the user on the submitter node. If a submitter selects a remote task, then the user name under which that task runs may be different from the user name under which the task is signed in. The contents of the ACMS$T_TASK_USERNAME is based on the proxy lookup and user name defaulting mechanism and may differ from the ACMS$T_SIGN_IN_USERNAME field. If a submitter selects a local task, the ACMS$T_SIGN_IN_USERNAME field will be the same as the ACMS$T_TASK_USERNAME field. To distinguish between users that have the same name but reside on different nodes, use the ACMS$T_SIGN_IN_USERNAME field with the ACMS$T_SUBMITTER_NODE_NAME field to log the user name and the node location.
ACMS$T_SIGN_IN_DEVICE	
Type	Text
Size	8 characters
Description	Contains the name of the device that was supplied to ACMS when the submitter signed in. For applications using the ACMS command process, this field contains a terminal device name. For applications using a user-written command process (agent), this field can contain a terminal device name, the name of a nonterminal device that the agent is handling, or the NL device specification.

ACMS$TASK_INFORMATION Workspace	
	Use the ACMS$T_SIGN_IN_DEVICE field with the ACMS$T_SUBMITTER_NODE_NAME field to log the device name and its node location. It is necessary to use both of these fields if you wish to distinguish between devices that have the same name but are residing on different nodes.