



IBM Session Manager for z/OS

Quick Reference

Version 2 Release 2



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Note

Before using this information and the product it supports, be sure to read the general information under “Notices” on page 97.

This edition applies to Version 2 Release 2 of IBM Session Manager for z/OS, program number 5697-N61, and to all subsequent versions, releases, and modifications until otherwise indicated in new editions.

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About this manual

This is the *Quick Reference* for IBM® Session Manager for z/OS®. It contains prototypes of many of the most commonly used commands and statements in Session Manager. It is intended to be used by Technical Programmers who have gained some familiarity with Session Manager and who no longer need detailed explanations of each command or statement.

A complete list of commands, control statements and parameters, along with full descriptions of their use can be found in the *Technical Reference*.

Full descriptions of each variable can be found in the *Panels, Scripts and Variables* manual.

Note Any references in this manual to “Session Manager version 1.3.15” and to “1.3 Functional Enhancement PTF 3” are synonymous.

Online and Batch Administration

Online Administration

Instead of supplying product configuration statements directly, Online Administration (hereafter “OLA”) enables administrators and end-users of Session Manager to tailor the product using a series of menus, lists and attribute display panels.

Batch Administration

If many changes are required to a large number of configuration definitions, this capability enables administrators and end-users of Session Manager to tailor the product using a batch job.

Note To use Online and/or Batch Administration, you must first upgrade to Session Manager 1.1.10 or higher and then, if your existing configuration is Classic (that is, all configuration definitions are stored in members of PDS(s) allocated to the DDNAME of CONFIG), you must run the OLA Enabler to implement the new format configuration. For details, see ‘OLA Enabler’ in the *Online and Batch Administration* manual.

External Security Managers

External Security Managers (hereafter “ESMs”), such as RACF®, can be used with Session Manager to authenticate users, set their authorization level and OLA security class, and determine which applications a user can access.

For details, see the ‘Defining security and implementing dynamic menus’ chapter in the *Installation and Customization* manual.

Session Manager documentation

The following documentation accompanies Session Manager:

Manual	Purpose
<i>Installation and Customization</i>	Goes through the steps required to install the Session Manager software, and provides general information on the methods and options available to configure and operate your system.
<i>User and Administrator</i>	Describes in detail the features and facilities provided by Session Manager.
<i>Online and Batch Administration</i>	Explains the set-up and configuration of OLA, how to use the interface, and how to utilize both OLA and Batch Administration to modify the Session Manager configuration.
<i>Technical Reference</i>	Provides a detailed reference for Session Manager commands and configuration statements, along with problem diagnosis assistance.
<i>Quick Reference</i>	Provides a quick way to find the correct syntax for commands, configuration statements, and variables, without detailed explanations.
<i>Panels, Scripts and Variables</i>	Gives a detailed technical account of defining panels, using scripts and variables, and the product's Panel and Script Language (TPSL).
<i>Messages and Codes</i>	Contains explanations of all messages issued by Session Manager, and the actions that should be taken.

Additionally, the *Program Directory* contains information for systems programmers about the program material and procedures for installing IBM Session Manager under z/OS.

Conventions

The following typographic conventions are used:

boldface	Indicates a command or keyword that you should type, exactly as shown. When mixed case is used, the element in upper case represents the shortest acceptable form. For example, <code>MSGsuffix</code> can be abbreviated as far as <code>MSG</code> .
<i>italics</i>	Indicates a variable for which you should substitute an appropriate value.
monotype	Indicates literal input and output.
Ctrl+D	Indicates two or more keys pressed simultaneously.
[]	Brackets surround an optional value.
	Vertical bars separate alternative values from which you must make a selection.
...	Ellipsis indicates that the preceding element may be repeated.
@	Some commands or key sequences make use of the 0x7C (i.e. x'7C') character. When using the English language code page, this character is displayed as the @ sign, but may be displayed as a different character in some other code pages. In this document, the 0x7C character is always presented as the @ sign. You should enter the appropriate 0x7C character symbol for the code page you are using.

Summary of new features

For a summary of changes made to the product in its most recent releases, please refer to the *Installation and Customization* manual.

CHAPTER 1

Session Manager commands

This chapter contains prototypes of many of the most commonly used commands in Session Manager. A complete list of commands, along with full descriptions of their use, can be found in the *Technical Reference*.

The chapter is divided into these sections:

- General user commands
 - Basic – the most universal end user commands (see page 14).
 - User – commands that are usually available to end-users (see page 14).
- Privileged user commands
 - Operator – additional commands that are usually available to system operators (see page 17).
 - Administrator – further commands that are only normally available to system administrators (see page 17).

General user commands

See

- ‘Basic commands’ below
- ‘User commands’ below

Basic commands

A full description of the following commands is provided in the *Technical Reference*. All basic commands have a default security level of 1.

Backward [*nn*]
Bwd [*nn*]
Down [*nnn*]
Forward [*nn*]
Fwd [*nn*]
Help [*help-topic-name*]
QUIT [Exit|Logon|Signon]
Retrieve
RETURN
TOP
Up [*nnn*]

User commands

A full description of the following commands is provided in the *Technical Reference*. All user commands have a default security level of 1.

ADDSESS *applname sessionnumber*
BRECeive [WAITinp|BELL|Queue|Yes|No|ON|OFF]
CONCEAL *PFkey|session_number|this_applid*
DELSESS [*sessionnumber|ALL*]
DISconnect [Exit|Logon|Signon]
END *seln-id|**
FILTer *applid*
FIND *applid*
HALtscript *seln-id|**
HARdcopy *seln-id* [Profile *hcprofile* Option *hcoption*]
HCoption [*option-number*]
INITSC Yes|No|ON|OFF *seln-id|**
LOCK [Yes|No|ON|OFF]

```
| LOCKTERM
LOGoff [Exit|Logon|Signon]
MSG message-text
  Applid applid |
  Group group-name |
  Lu luname |
  Profile profile-name |
  User user-id
  [ [Hold hh:mm ]
    [FOR hh:mm|days|days hh:mm ] ]
  [URGent ]
MSGID [Yes|No|ON|OFF]
NLOG VTAM-applid
PANELID [Yes|No|ON|OFF]
PCTransfer [Yes|No|ON|OFF] [seln-id]
QACTuser
QQuit [Exit|Logon|Signon]
```

```

Query ACb acb-pattern |
ALL |
Applid appl-pattern |
BRDVAR id-pattern |
Broadcast |
Group group-name |
Ident |
ISZsmgr |
LAstmsg |
LU lu-pattern
    [RTM [RESET]|RTMALL [RESET] ] |
Net ALLSESSions |
    LInk link-pattern |
    NETMan NOde nodename |
    N0de node-pattern |
    NUMbers |
    SESSion |
        N0de nodename|LInk linkname |
        TAsk taskname |
        CORelator name-pattern |
PROFile profile-pattern |
REMOte node-pattern |
SIGNON |
SPY |
STAts |
STOruse [Pool] |
SUSpend |
TERMinAl term-pattern
    [RTM [RESET]|RTMALL [RESET] ] |
TN3[270] tcpclient-pattern
    [RTM [RESET]|RTMALL [RESET] ] |
User userid-pattern
    [RTM [RESET]|RTMALL [RESET] ]

QUSER userid [LU lu_name]
RESet seln-id*
REVEAL PFkey|session_number|this_applid|ALL
SEND nodename command
SME
SPYOFF
STARTSC Yes|No|ON|OFF seln-id*
TOP
TRANSFER [Override]
VIEW demonstrator-id
    [PASS password]
    [Override]
Windows [script-name]

```


Privileged user commands

See

- ‘Operator commands’ below
- ‘Administrator commands’ below

Operator commands

A full description of the following commands is provided in the *Technical Reference*. All operator commands have a default security level of 5.

```

BLOck applid [ON|Yes|OFF|No]
      [EXclude group-name]

DEMO [PASS password|NOPASS ]
      [AUTocopy [Yes|No|ON|OFF] ]
      [INTerna] [Yes|No|ON|OFF] ]
      [DISplay [Yes|No|ON|OFF] ]
      [STOP]

DLog

FLash message-text
      [Applid applid|Variable global-variable]

RECOrd [ON|YES|TERM|APPL|CLEAR|Ø|OFF|No]

REPLAY

SPY User userid |
      LU luname
      [NOAUTO] [Override]

```

Administrator commands

A full description of the following commands is provided in the *Technical Reference*. All administrator commands have a default security level of 9.

```

BRoadcast message-text
      ALL |
      Applid appl-pattern |
      BRDVAR id-pattern |
      Group group-pattern |
      Lu lu-pattern |
      Profile profile-pattern |
      User user-pattern |
      [ [Hold hh:mm ] |
        [FOR hh:mm|days|days hh:mm ] ]
      [URGent ]

CLOsedown [FORce|END]

DELETE BRoadcast msg-number

DELETE MSG msg-number

DStore [sub-command]

DTERM ['LU luname']

DUMP

```

```

FORCE task-name|LINK linkname
GFS STATS|USAGE|STOR
INQUIRE
ISZtest [Yes|No|ON|OFF]
PASSFREE LU luname
PUPdate ddname member-name
QTask [Task task-name           |
      User userid-pattern      |
      LU lu-pattern            |
      [Selection seln-id ] ]
REMOVEUSER userid
SECFRESH
SPIN AUdit|Trace|AUDITGDG
STARTCp
STARTLink linkname
STOP User userid|ALLDISC [user_qualifier] |
      LU luname
      [Sel seln-id] [ALL]
STOPAcb appl_name acb_name
STOPLink linkname
STOPTcp
SWITCHplx
TERMINATE [FORce|END]
TRace Data|MISER|Vtam|NETDATA
      [Yes|No|ON|OFF|SPIN]
      [User userid           |
      LU luname ]
      [Selection seln-id ]
TRace LINK link-name
      [NETCTL]
      [Yes|No|ON|OFF|SPIN]
TRace Internal [Yes|No|ON|OFF] [DUMP|NODUMP]
      [Task task-name       |
      User userid           |
      LU luname
      [Selection seln-id ] ]
TTps1 [[Yes|No|ON|OFF|Display]
      Task task-name/[Selection seln-id
      [User userid|LU luname]]
      [PAnel|SCript]
      [PPrint|NOPrint [DUmp|NODump]]
      [Internal|NOInternal]
      [All|TRaceverb]
      [SIze nn]]
UPDate Exit exit-name |0           |
      E05 S|E           |
      E06 S|E           |
      E08 S|E           |
      E11 S|E           |
      E21 S|E           |

```

```
|          E22 S|E          |
|          E26 S |          |
|          E29 S|E          |
|          E31 S|E          |
|          E33 S|E          |
|          E36 S |          |
|          E39 S|E          |
|          E79 S|E          |
|          E99 S|E
UPDate Print [Yes|No|ON|OFF]
Config suffix      |
Member member-name|
ALL
```


Control statements

Control statements are used to configure the product. They can be separated into a number of groups:

- General and User configuration (see page 22)
- Initialization options (see page 33)
- Support statements (see page 35)
- Technical configuration (see page 36)
- Messaging (see page 38)
- Printing (see page 39)
- Panels and Scripts (see page 40)

The statements, and parameters that can be used with them, are listed in separate sections by group. A full description of the configuration control statements appears in the *Technical Reference*.

The PANEL and SCRIPT statements differ from the other control statements in that they may contain logic statements for loops and conditional processing. These logic statements are referred to as TPSL, the Panel and Script Language. The prototypes for these are given in this manual but the full description appears in the *Panels, Scripts and Variables* manual.

General and User Configuration

The statements in this section control the general configuration of the system and the settings applicable to individual users, terminals, and sessions. The statements available are:

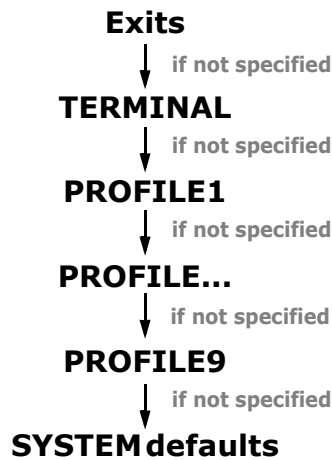
SYSTEM
 PROFILE
 USER
 TERMINAL
 APPL

As well as individual parameters that apply to the statements separately, some parameters apply to more than one of the statements. As parameters may sometimes be set to different values in different places, the following diagrams show the logic that is used by Session Manager when deciding which setting to use.

Common enduser parameters

Before signon, or if signon not enabled

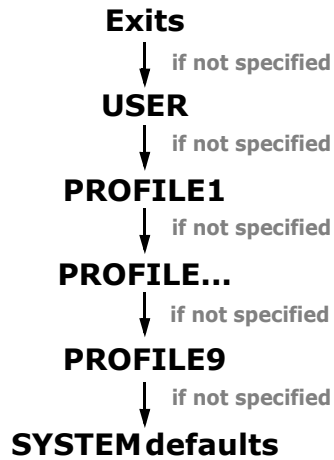
Before a signon has taken place, or if the SYSTEM parameter SIGNON has been set to NO (in which case no signon will take place), the settings to be used will be determined as follows,



For more information on using Exit Points, refer to the *Installation and Customization* manual.

After signon

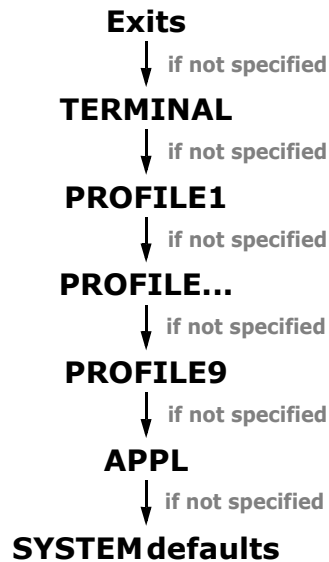
After a signon has taken place the settings to be used will be determined as follows,



For more information on using Exit Points, refer to the *Installation and Customization* manual.

Common session parameters**If signon not enabled**

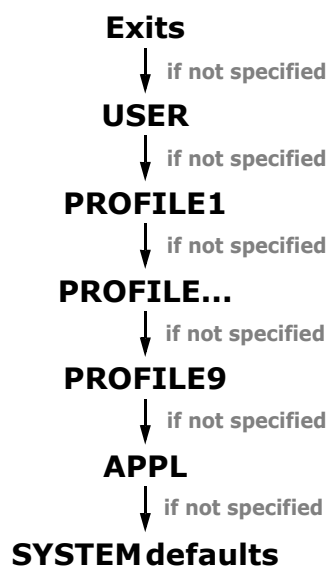
If the SYSTEM parameter SIGNON has been set to NO (in which case no signon will take place), then the settings to be used will be determined as follows,



For more information on using Exit Points, refer to the *Installation and Customization* manual.

After signon

After a signon has taken place the settings to be used will be determined as follows,

**Determining Profile order**

Profiles associated with a user are read in the order they appear on the **USER** statement or, if you have configured your system to allow the External Security Manager to determine a user's Profiles, as dictated by the External Security Manager and the **ESMLEVEL** parameter. This is the same order in which they appear when viewed using **OLA**. The first profile in the list will be Profile1, the second Profile2, and so on.

Common enduser parameters

The following parameters can be used with the SYSTEM, PROFILE, USER, and TERMINAL statements. For an explanation of the logic used when deciding which setting to use, refer to ‘General and User Configuration’ on page 22.

Full descriptions of these parameters are provided in the *Technical Reference*.

```
[ACTivesessions active-session-limit]
[AFFINITY affinity-acbname]
[AUTH auth-level]
[AUTOSELECT session-number|applname]
[AUTOSEQ escape [A|I|E|N script-name]]
[BACKWARD escape]
[BRECEIVE [Yes|No|ON|OFF|WAIT|np|BELL|QUEUEd]]
[CMDACTionkey aidkey]
[COMMANDPrfxva| character]
[CURESC [Yes|No|ON|OFF]]
[CUT escape [NFILLC [Yes|No|ON|OFF]]]
[DEMO [DEMOKEY escape]
    [AUTocopy [Yes|No|ON|OFF]]
    [INTerna| [Yes|No|ON|OFF]]
    [DISplay [Yes|No|ON|OFF]]]
[DOUBLESC interval]
[ESCAPE escape [CURSOR row col]]
[FORWARD escape]
[HCPROF hcprofile-name]
[HCREQUEST escape [CURSOR row col]]
[IDLEDisc minutes [DIRECTION [IN|INOUT]] [WARN [Yes|No|ON|OFF]]]
[IDLELOCK minutes [DIRECTION [IN|INOUT]]]
[IDLELogoff minutes [AFTERDISC] [DIRECTION [IN|INOUT]] [WARN
[Yes|No|ON|OFF]]]
[LANGuage language-id]
[LOGDISC EXIT|SIGNON]
[MENU panel-name]
[MOBILE [Yes|No|ON|OFF] [LOCK [Yes|No|ON|OFF]]]
[MSGID [Yes|No|ON|OFF]]
[NCSESC Yes|No|ON|OFF]
[OLAClass ola-class]
```

```
[PASTE escape
  [NFILLP [Yes|No|ON|OFF]]
  [SPILLW [Yes|No|ON|OFF]]]

[PREVIOUS escape]

[PULL escape]

[PUSH escape]

[PUSHLimit push-limit]

[REBIND [Yes|No|ON|OFF]]

[RECORDLimit record-limit]

[RECOVERYLevel High|Intermediate|None]

[REPLAY ASRECORD|FMTopts]

[SENDCDonsrd [Yes|No|ON|OFF]]

[SESSAUTOSApp1 [Yes|No|ON|OFF]]

[SESSPRIApp1 [Yes|No|ON|OFF]]

[SHARE [Yes|No|ON|OFF]]

[SHAREDISC [Yes|No|ON|OFF]]

[SHARESESS [Yes|No|ON|OFF]]

[SIMRecon [Yes|No|ON|OFF]]

[SPYABLE [TELL|Yes|No|ON|OFF]]

[SPYGROUP group-name|*]

[TERMERROR EXIT|SIGNON [DISC|LOGOFF|SIGNOFF]]

[TRANSTab transtable-name]

[USERDATA1 data|variable]

[USERDATA2 data|variable]

[USERDATA3 data|variable]

[USERDATA4 data|variable]

[USERDATA5 data|variable]

[WINDSCRIPT script-name]
```

Common session parameters

The following parameters can be used with the SYSTEM, PROFILE, USER, TERMINAL and APPL statements. For an explanation of the logic used when deciding which setting to use, refer to ‘General and User Configuration’ on page 22.

Full descriptions of these parameters are provided in the *Technical Reference*.

```
[ACB override-acbname]
[ADDSID test|variable
  AT row col
  [COND text AT row col]
  [MODEL model-number]]
[ALARM [Yes|No|ON|OFF]]
[ALLOWEscape [Yes|No|ON|OFF]]
[APPLSEL search-text]
[AUTOSCRIPt script-name]
[AUTOSTART [Yes|No|ON|OFF]]
[BRDVAR text]
[COMPRESS [Yes|No|ON|OFF]]
[CONCEAL [Yes|No|ON|OFF]]
[CONDLOGOFF [Yes|No|ON|OFF]]
[DATA logon-data]
[DESCRIPTION description]
[DISCActive [Yes|No|ON|OFF]]
[DROP_SESSION [Yes|No|ON|OFF]]
[ENDSCript script-name]
[ENVIRONSCript script-name]
[HIDE [Yes|No|ON|OFF]]
[ILU [Yes|No|ON|OFF]]
[IMSConvert Yes|No|ON|OFF]
[INITSCript script-name]
[INTERNALSess Yes|No|ON|OFF]
[LOGMODE logmode-entry-name]
[LOGOFF END|RESET]
[MISER [Yes|No|ON|OFF] | [INput] [OUTput] REA] [ERB]]
[NETID network-id]
[ONESCape CONTInue|END|RESET]
[ONREAD IGNore|SElect|DISPMenu]
[ONWRITE IGNore|SElect|DISPMenu]
```

```

[OUTPUTWarn nnnn [Minutes mmm]]
[PASSTIMEOUT DISPMenu|LOGAPPL]
[PASSTRAnsId [Yes|No|ON|OFF]]
[PSTKAPPL passticketapplname]
[PSTKUSER alternativeuserid]
[PCTRANSFER [Yes|No|ON|OFF]]
[QUITACtive [Yes|No|ON|OFF]]
[REMOTE nodename]
[RMISER [Yes|No|ON|OFF] | [INPut] [OUTput]]
[SAUTOSEQ escape
  [A|C ismcommand|I|J|E|N script-name]
  [PASS]
  [NOCURESC]
  [REMESC]
  [ACTIONKEY aidkey]
  [COMMANDPRFX Y|N|ON|OFF]
  [PARM Y|N]
]
[SEQUENCE nnnn]
[SESSDATA1 data|variable]
[SESSDATA2 data|variable]
[SESSDATA3 data|variable]
[SESSDATA4 data|variable]
[SESSDATA5 data|variable]
[SESSPROGMSG [Yes|No|ON|OFF]]
[SESTYPE nnnn]
[SIDLTime minutes [DIRECTION [IN|INOUT]]]
[SNABUSY [Yes|No|ON|OFF]]
[STARTSCript script-name]
[STATs [Yes|No|ON|OFF]]
[TERMSCript script-name]
[UNBIND [IMMEDiate|WAIT]]
[UNBINDAPPL VTAM-applid]
[UNDERISZSMGR|CLOSEDISC|CLOSELOGOFF] ]

```

SYSTEM statement

The following parameters can be used with the SYSTEM statement. Full descriptions are provided in the *Technical Reference*.

```

[ACB system-acbname|0]
[ALLUSERS [Yes|No|ON|OFF]]

```

```

[ATTR attr-char] OFF|field-attribute-parameters ]
[AUDITOGDG [Yes|No|ON|OFF]
  [ATGBASE atgbasename]
  [ATGUNIT unitdevicetype]
  [ATGSMSCCLASS smsclassname]
  [ATGPSPACE nnn]
[BINDTIMEOUT seconds]
[CLOSEACBInact [Yes|No|ON|OFF]]
[CV64 [Yes|No|ON|OFF]]
[DEFAPPL applname]
[DEFMENU menu-name]
[DEFPROFILE profile-name]
[Domax domax-limit]
[ESMASGNPRN Yes|No|ON|OFF]
[EXITWALen nnnnn]
[GENERICACB generic-acbname]
[GENRESName ismgenericresourcename]
[HARDENUser Yes|No|ON|OFF]
[INITIAL_CMD initial_cmd]
[INPUTEXit exitname]
[INQINTERval minutes]
[LOCALnode nodename]
[LOGCmdauth command-auth-level]
[LOGMnnx logmode-entryname]
[MDY|DMY|YMD|YDM]
[MSGsuffix I|E|W|*
  [AUDIT [Yes|No|ON|OFF]]
  [CONTent [Yes|No|ON|OFF|CODE|TEXT]]
  [DESCRiptor descriptor-code-list]
  [INFORM users-inform-list]
  [LOG [Yes|No|ON|OFF]]
  [ROUTE route-code-list]
[MULTUser [TERML4|COUNT RECONAnyterm [Yes|No|ON|OFF]
  PORTNumber]
[OPEROLACCLASS olaclassname]
[OUTPUTEXit exitname]
[PANELID Yes|No|ON|OFF]
[PASSTry passtry-limit]
[PREFLANGuage language-id]

```

```

[RETRCMDS nn]
[RTMT1 nnnnn]
[RTMT2 nnnnn]
[SCREENMODE Normal|Alternate]
[SECURITY
  [AUTHRESname authresname]
  [OLARESname olaresname]
  [AUTHCLASsname authclassname]
  [DYNMResnm dynamicmenuresourcenam]
  [DYNMClass dynamicmenuclassname]
  [DYNMDROPSESSION Yes|No|ON|OFF]
  [DYNMLog Yes|No|ON|OFF]
  [DYNMAUtsthid Yes|No|ON|OFF]
  [DYNMType Appl|Vtamappl]
  [DYNMHide Yes|No|ON|OFF]
  [DYNMLogmax nnnn]
  [ESMPRFCLNM esmprofileclass]
  [ESMPRFRSNM esmprofileresname]
  [ESMPRFACC Yes|No|ON|OFF]
  [SIGNONClass signonclass]
  [SIGNONAccess Yes|No|ON|OFF]
  [SIGNONResname signonresname]
  [TERMINALClass terminalclass]
  [TERMINALResname terminalresname]
  [TERMINALAccess Yes|No|ON|OFF]]
[SESACB default-acbname]
[SHAREAPPL appl-statement-name]
[SIGNon [Yes|No|ON|OFF]]
[SIGNONPANEL panel-name]
[SRBUFsize buffer-size]
[STANDBY N|nodename]
[SYSDUMP [NODUMP|DUMP|BYPASS|RTMDUMP]]
[SYSPLEXGroup xxxx
  [GLOBALMessages Yes|No|ON|OFF]
  [LINKTRace Yes|No|ON|OFF]
  [LINKNEtct1 Yes|No|ON|OFF]
  [LOGSTREAMName logstreamname]
  [PSTIMER 1 to 32767]
  [STANDBYTAKETIME [0 to 32767]]
  [USERStructure Yes|No|ON|OFF]
  [WAITFORCNTLTIME [0 to32767]]]
[SYSPLEXTYPE C|S|I]

```

```

[TCP [Yes|No|ON|OFF]
  [DISPLAY [Yes|No|ON|OFF]]
  [STN3270 port-no
    [TN3270_MSG4049 [Yes|No|ON|OFF]]
    [TN3270E [Yes|No|ON|OFF]]
    [TN3270E_CONNECT [Yes|No|ON|OFF]]

  [[IBM] [ADDRDDN addr-ddname]
    [DATADDN data-ddname]
    [IUCVname resource-name]
    [SITEDDN site-ddname]]
  [TRACE [Yes|No|ON|OFF]] ]

[TRBUFsize buffer-size]
[TRNUMBER buffer-number]
[VERBOSE Yes|No|ON|OFF]
[WORKQUE workque-limit]

```

PROFILE statement

The following parameters can be used with the PROFILE statement. Full descriptions are provided in the *Technical Reference*.

```

PROFILE profile-name
  [ESMLEVEL esmlevel-value]
  [PASSTry passtry-limit]
  [RETAIN [Yes|No|ON|OFF]]
  [SIGNon [Yes|No|ON|OFF]]
  [SIGNONPANEL signon-panel]
  SESSION DEFAULTS |
    SESSION nnnn [ selection-commands ] |
    KEY PFnn
  APPLID VTAM-applid|appl-statement-name |
    [REFapp1 [Yes|No|ON|OFF]]]
  [CMD command] (any valid Session Manager command)
  [TRANSID transid-list]

```

USER statement

The following parameters can be used with the USER statement. Full descriptions are provided in the *Technical Reference*.

```

[USER username
  [PASSWORD password]
  [PROF profile-name]
  [RENUMDUP nnnn]
  [TRACE Internal|Data|MISER|Vtam|NETDATA]

```

TERMINAL statement

The following parameters can be used with the TERMINAL statement. Full descriptions are provided in the *Technical Reference*.

```
[TERMINAL termid|termid-pattern
[PASSTry passtry-limit]
[PROF profile-name]
[RETAIN [Yes|No|ON|OFF]]
[SIGNon [Yes|No|ON|OFF]]
[SIGNONPANEL signon-panel]
[TRACE Internal|Data|MISER|Vtam|NETDATA]
```

APPL statement

The following parameters can be used with the APPL statement. Full descriptions are provided in the *Technical Reference*.

```
APPL appl-name
[APPLID applid]
[INDRAnge appl_name]
[INQUIRE [Yes|No|ON|OFF]]
[RECOVERYLevel [High|Intermediate|None]]
[TERMLogmode logmode-name|* [ACBRange rangename]]
```


Initialization Options

The statements in this section control the settings used by Session Manager when the system first starts up. The statements available are:

COPY

OPTION

PCOPY

Full descriptions are provided in the *Technical Reference*.

COPY statement

The following parameter can be used with the COPY statement.

COPY *member-name*

OPTION statement

The following parameters can be used with the OPTION statement.

```
[OPTION [Config xx]
      [EXit exit-name]
      [E05 E|S]
      [E06 E|S]
      [E08 E|S]
      [E11 E|S]
      [E21 E|S]
      [E22 E|S]
      [E26 S]
      [E29 E|S]
      [E31 E|S]
      [E33 E|S]
      [E36 S]
      [E39 E|S]
      [E79 E|S]
      [E99 E|S]
      [GFS Yes|No|ON|OFF]
      [STORLim nnnnnnnn|nnnnnnnnK|nnnnM]
      [CUSHion nnnnnnnn|nnnnnnnnK|nnnnM]
      [THREShold Yes|No|LOG]
      [WARNing nnn]
      [SEVEre nnn]
      [CRITical nnn]
      [MAXstor Yes|No|ON|OFF]
      [MSGupper [Yes|No|ON|OFF]]
      [Print [Yes|No|ON|OFF]]
      [Security [Yes|No|ON|OFF]]
      [Start [Yes|No|ON|OFF]]
      [Test [Yes|No|ON|OFF]] ]
```

PCOPY statement

The following parameter can be used with the PCOPY statement.

PCOPY *ddname* [*member-name*]

Support statements

Support statements are used by Technical Support representatives to configure and update the Session Manager system. They should not be used by others except at the request of a local Support Representative. The statements available are:

APPLYSU

DELETE

INSTALLSU

PATCH

PATCHSU

REMOVESU

Full descriptions of these statements are provided in the *Technical Reference*.

Technical configuration

Technical Configuration statements enable you to control fundamental settings affecting how Session Manager runs. The statements available are:

COMMAND
LINK
RANGE
RUSER
TRANSTABLE
AUDITROUTE
TRACEROUTE

Full descriptions are provided in the *Technical Reference*.

COMMAND statement

The following parameters can be used with the COMMAND statement.

```
[COMMAND cmd-name
  [AUTH auth-level]
  [ACTKEY Yes|No]
  [KEYWORD cmd-parm-1 KAUTH auth-level1]
  [KEYWORD cmd-parm-2 KAUTH auth-level2]
  ...
  [KEYWORD cmd-parm-n KAUTH auth-leveln]
  [CMDSCRIPT Yes|No|ON|OFF [SNAME script-name] ] ]
```

LINK statement

The following parameters can be used with the LINK statement.

```
[LINK link-name
  Vtam local-acb To remote-acb
  [LOGMode logmode]
  [RECVary n]
  [OPENRETRYLIM nnn]
  [OPENRETRYINT seconds]
  [RECONIntvl seconds]
  [BUFsize buffer-size]
  [STARTLink [Yes|No|ON|OFF]]
  [TRace [Yes|No|ON|OFF] [NETCTL]]
  [ISZ]
  [ACTIVATE [Yes|No|ON|OFF]] ]
```

RANGE statement

The following parameters can be used with the RANGE statement.

```
[RANGE acb-rangenname
  FROM start-acbname [TO stop-acbnumber]
  [HEX|DEC]
  [RRA Yes|No|ON|OFF]]
```

RUSER statement

The following parameter can be used with the RUSER statement.

```
[RUSER name-pattern
      NOde node-name Auth auth-level OLAClass ola-class ]
```

TRANSTABLE statement

The following parameters can be used with the TRANSTABLE statement.

```
[TRANSTABLE table-name
  [INPUT|OUTPUT]
  [SET offset list-of-hex-chars]
  [SET offset list-of-hex-chars ]... ]
```

Common print routing parameters

The following parameters can be used with the AUDITROUTE, TRACEROUTE, and HCROUTE statements.

```
[CLASS class-code]
[COPIES copies]
[DESTINATION destination-code]
[EXTWTR name]
[FCB fcf-name]
[FLASH overlay [count]]
[FORM forms-name]
[HIGHLIGHT [Yes|No|ON|OFF]]
[HOLD [Yes|No|ON|OFF]]
[NAME override-name]
[NODE node-name]
[OUTPUT output-JCL-statement-name]
```

AUDITROUTE statement

The common print routing parameters, shown on above, can be used with the AUDITROUTE statement.

```
[AUDITROUTE print-routing-parameters ]
```

TRACEROUTE statement

The common print routing parameters, shown on above, can be used with the TRACEROUTE statement.

```
[TRACEROUTE print-routing-parameters ]
```

Messaging

These statements enable the configuration of messages and the setting up of groups who receive them. The statements available are:

GROUP

MESSAGE

Full descriptions are provided in the *Technical Reference*.

GROUP statement

The following parameters can be used with the GROUP statement.

```
[GROUP group-name
  [LUNAMES list-of-lunames]
  [PROFILES list-of-profilenames]
  [TERMINALS list-of-terminals]
  [USERS list-of-usernames] ]
```

MESSAGE statement

The following parameters can be used with the MESSAGE statement.

```
[MESSAGE msg-number
  [SUFFix I|E|W]
  [AUDit [Yes|No|ON|OFF]]
  [INFORM users-inform-list]
  [LOG [YES|No|ON|OFF]]
  [DESCRiptor descriptor-code-list]
  [ROUTE route-code-list]
  [TEXT message-text [LANGuage language-id]] ]
```

Printing

The printing statements configure how hardcopies produced by the system are formatted and routed. The statements available are:

HCFORMAT

HCPROFILE

HCROUTE

Full descriptions are provided in the *Technical Reference*.

HCFORMAT statement

The following parameters can be used with the HCFORMAT statement.

```
[HCFORMAT formatname
  [HEADER header-text]
  [TRAILER trailer-text] ]
```

HCPROFILE statement

The following parameters can be used with the HCPROFILE statement.

```
[HCPROFILE profile-name
  HCOPTION description
  [FORMAT hardcopy-formatname]
  [ROUTE hardcopy-routename] ]
```

HCROUTE statement

The following parameters can be used with the HCROUTE statement.

```
[HCROUTE routename print-routing-parameters ]
```

The common print routing parameters are listed on page 37.

Panels and Scripts

Panel and Script statements provide facilities for customized panels and scripts to be used with Session Manager. They differ from the other control statements in that they may contain logic statements for loops and conditional processing. These logic statements are referred to as TPSL, the Panel and Script Language. The prototypes for these are given in this manual but the full description appears in the *Panels, Scripts and Variables* manual.

PANEL statement

The following parameters can be used with the PANEL statement. Full descriptions are provided in the *Panels, Scripts and Variables* manual.

```
[PANEL panel-name
  [BRANCH label name ]
  [LAB label name ]
  [DEFINE
    [LANGUage languageid]
    [WIDTH 80|132]
    [MODE NORMal|ALTErnate]
    [DOMAX domax-limit]
    [CURSOR field-name]
    attr-definitions [...]

    attr-definitions (one or more, as desired):
  [ATTR attr-char OFF|field-attribute-parameters ] ]

  field-attribute-parameters:

  Protection, content:
  [ASKIP|SKIP]
  [DETEct|NODETEct]
  [UNPROTEcted|PROTEcted]
  [NUMERIC|ALPHAnumeric]
  [NODisp|NONDisp]

  Colour, effects:
  [RED|YELlow|WHItE|GREEN|BLUe|PINK|TURquoise]
  [HIGh|NORMal]
  [REVERSE|BLInking|UNDErscore|USCOre]

  Special attributes:
  [ETMODE|DBCS]
  [ICursor]
  [BLANK|NOBLANK]
  [IN|OUT|LITera] ]

[HEADER
  [LINES line-number attr-definitions] ]

attribute-definitions (one or more, as required).
Note that these may not be defined within TPSL structures:
```


[ATTR *attribute-character* OFF|*field-attribute-parameters*]

For *field-attributes*, see PANEL DEFINE.

The following PANEL operations may be embedded within TPSL structures and interspersed with TPSL LETs and RETURNS.

[CALL *panel-sub-definition*]

[COLUMN *col*]

[FIELD *variable*[(*nn*)]|*literal*
[*field-attributes*

REFATTR *attribute-character*]|
character-variable]

[FORMATMSG (*nnnn* 'SEND'|'SENDNO' 'MSGID'|'ID' 'NOID' P1 P2...P9)]

For *field-attributes*, see PANEL DEFINE.

[ICDISP *cursor-displacement*]

[NLIN *lines*]

[TEXTSTART *panel-image-definition* TEXTEND]

[TRACEON]

[TRACEOFF]

[CONTENT *parameters*]

The *parameters* are the same as the HEADER subparameters (except LINES).

[TRAILER [LINES *line-number*] *parameters*]

The *parameters* are the same as the HEADER subparameters.

[PROCESS [CALL *process-sub-definition*] [TRACEON] [TRACEOFF]]]

The rest is defined using TPSL structures and operations.

PHEADER statement

The following parameters can be used with the PHEADER statement. Full descriptions are provided in the *Panels, Scripts and Variables* manual.

[PHEADER *sub-header-name*]

The PHEADER statement is used to define a common panel HEADER which can be CALLED from another HEADER section. The PHEADER definition is defined in the same way as the HEADER parameter, but with these exceptions:

- The LINES parameter on the HEADER parameter *cannot* be specified on the PHEADER definition.
- The LANGUAGE parameter on the PHEADER definition *cannot* be specified on the HEADER parameter.

PCONTENT statement

The following parameters can be used with the PCONTENT statement. Full descriptions are provided in the *Panels, Scripts and Variables* manual.

[PCONTENT *sub-content-name*]

The PCONTENT statement is used to define a common panel CONTENT which can be CALLED from another CONTENT section. The PCONTENT definition is defined in the same way as the CONTENT parameter, but with this exception:

The LANGUAGE parameter on the PCONTENT definition *cannot* be specified on the CONTENT parameter.

PTRAILER statement

The following parameters can be used with the PTRAILER statement. Full descriptions are provided in the *Panels, Scripts and Variables* manual.

[PTRAILER *sub-trailer-name*]

The PTRAILER statement is used to define a common panel TRAILER which can be CALLED from another TRAILER section. The PTRAILER definition is defined in the same way as the TRAILER parameter, but with these exceptions:

- The LINES parameter on the TRAILER parameter *cannot* be specified on the PTRAILER definition.

The LANGUAGE parameter on the PTRAILER definition *cannot* be specified on the TRAILER parameter.

PPROCESS statement

The following parameters can be used with the PPROCESS statement. Full descriptions are provided in the *Panels, Scripts and Variables* manual.

[PPROCESS *sub-process-name*]

The PPROCESS statement is used to define a common panel PROCESS which can be CALLED from another PROCESS section. The PPROCESS definition is defined in the same way as the PROCESS parameter, but with this exception:

- The LANGUAGE parameter on the PPROCESS definition *cannot* be specified on the PROCESS parameter.

SCRIPT statement

The following parameters can be used with the SCRIPT statement. Full descriptions are provided in the *Panels, Scripts and Variables* manual.

[SCRIPT *script-name*
 [APPLTIME *application-timeout-limit*]
 [DOMAX *domax-limit*]
 [RPQLSCRIPTAUTO [YES|NO]]
 [SIMRPQ [Yes|No]]

The following SCRIPT operations may be embedded within TPSL structures and interspersed with TPSL LETs and RETURNS.

[AUDITMSG *message-text*]
 [BRANCH *label name*]
 [LAB *label name*]
 [CALL *script-name*]
 [CALLEXIT [DATA *user-data*] [RSN *exit-reason-code*]]

```

[DISPAPPL [FLUSH]]
[ERASE [Eof|A11]]
[EXTRACT DATA variable-name
  [FROM row|variable-name
  [TO [col|variable-name]] col|variable-name ] ]
[HOME]
[INPUT [PASS | [CURSOR row col]
  [KEY key|NO]
  [SBA [row|variable-name col|variable-name] [No|OFF] ]
  [TEXT text] ] ]
[INSCAN inscan-string
  [FROM row|row-variable col|col-variable]
  [TO row|row-variable [col|col-variable] ] |
  AT row|row-variable [col|col-variable] ] ]
[ISZCMD command] (any valid Session Manager command)
[OUTSCAN outscan-string
  [FROM row|row-variable [col|col-variable]]
  [TO row|row-variable [col|col-variable] ] |
  AT row|row-variable [col|col-variable] ] ]
[PAUSE seconds|variable-name]
[TDEQ enqueue-value ]
[TENQ enqueue-value ]
[TAB [Forward|Backward]]
[TRACEON]
[TRACEOFF]
[USERMSG PANEL panel-name|TEXT usermsg-text]
[VCALL variable-name | 'script-name']
[WAITAPPL [DISPLAY [Yes|No|ON|OFF]]
  [TIMEOUT timeout-value ] [KEEP] ]
[WAITTERM [PASS]]

```

Verbs – Scripts, Application Builder scripts, and Windows

Script verbs are parameters that cause actions to take place. When using Application Builder scripts, these verbs can be used with other ordinary session script parameters to define scripts that enable you to build a new application. A Window script displays one or more windows which can be used to run sessions.

General descriptions of the Application Builder feature and the Session Manager Windows feature can be found in the *Installation and Customization* manual and *User and Administrator* manual respectively.

Script and Application Builder script verbs

```
[ENDSESS [SESSION session-id] ]
```

[WAITDATA [PASS] [TIMEOUT *timeout-value*] [KEEP]]

Application Builder script verbs

[HALTSCRIPT *session-id*]

[READSESS *variable-name*
 [FROM *row|row-variable* [*col|col-variable*]]
 [TO *col|col-variable*]]

[RUNSCRIPT *session-id script-name*]

[SENDATA/SENDVAL *variable-name|literal*
 SESSION *session-id|RPARTNER*]

[STARTSESS *session-id*]

Windows script verbs

WACTIVATE [WINDOW *window-identifier|window-name*]

WAITEVENT ESCAPE|MSG|SESSEND|SWITCH

WALTER [WINDOW *window-identifier|window-name*]
 [ORIGIN ROW *row* COLUMN *col*|OFFSET *offset*]
 [ENDPOS ROW *row* COLUMN *col*|OFFSET *offset*]
 [SIZE DEPTH *depth* WIDTH *width*]
 [NAME *window-name*]
 [BORDER *border-set-name*|NONE]
 [OWNER *window-identifier|window-name*|NONE]
 [REMATTr [Yes|No|ON|OFF]]
 [SESSION *session-number|session-pfkey*
 [OUTPUT [Yes|No|ON|OFF]]
 or WINPANEL *panel-name*
 or WINTEXT *message-text*]

WBACKGROUND [CHAR *background-character*]
 [*attr-list*|REFATTR *attr-char|variable-name*]]

WBORDER NAME *border-set-name*
 [TOP [CHAR *character*]
 [*attr-list*|REFATTR *attr-char|variable-name*]
 [TEXT [COLUMN *col*]
 [FIELD *variable*[(*nnn*)]|*literal*
 [*attr-list*|REFATTR *attr-char* |
 character-variable]]]
 [NONE]]
 [BOTTOM (see TOP parameter)]
 [LEFT (see TOP parameter)]
 [RIGHT (see TOP parameter)]
 [DEFAULT (see TOP parameter)]
 [CORNER CHAR *character*]
 [BOX]

WCLOSE [WINDOW *window-identifier|window-name*]

WHIDE [WINDOW *window-identifier|window-name*]

```

WIDENTIFY [CURSOR]
  [LOCATION ROW row COLUMN col|OFFSET offset]
  [WINDOW window-identifier|window-name]

WNORM [WINDOW window-identifier|window-name]

WOPEN [ORIGIN ROW row COLUMN col|OFFSET offset]
  [ENDPOS ROW row COLUMN col|OFFSET offset]
  [SIZE DEPTH depth WIDTH width]
  [NAME window-name]
  [BORDER border-set-name|NONE]
  [OWNER window-identifier|window-name|NONE]
  [REMATTr [Yes|No|ON|OFF]]
  [SESSION session-number|session-pfkey]
  [OUTPUT [Yes|No|ON|OFF]]
  or WINPANEL panel-name
  or WINTEXT message-text ]

[WCA [Yes|No|ON|OFF]]

WPOP [WINDOW window-identifier|window-name]

WSCROLL [WINDOW window-identifier|window-name]
  [VERTICAL vertical-scroll-value]
  [HORIZONTAL horizontal-scroll-value]

WZOOM [WINDOW window-identifier|window-name]

```

TPSL syntax

The Panel and Script Language consists of seven logic statements. DO, IF, and SELECT statements may be used to build TPSL structures, and LET, ITERATE, LEAVE, and RETURN statements are used for TPSL operations.

TPSL structures and operations may be used in combination with specialized PANEL and SCRIPT keywords, within the PANEL and SCRIPT statements, to control logic and to alter or define data for output on screens, or input for Session Manager and applications. A subset of these logic statements can also be used anywhere in the configuration file to control definition of the Session Manager system. The full definition can be found in the *Panels, Scripts and Variables* manual.

Testing – simple condition

```

IF [NOT] conditional-expression
  [AND|OR [NOT] conditional-expression]
  [THEN]
    one or more operations
  [ELSE one or more operations]
END

```

**Testing –
multiple choice**

```
SELECT|CASE
  WHEN [NOT] conditional-expression-1
    [AND|OR [NOT] conditional-expression-2
      [THEN]
        one or more operations
  WHEN [NOT] conditional-expression-3
    [AND|OR [NOT] conditional-expression-4
      [THEN]
        one or more operations
  ...
  WHEN [NOT] conditional-expression-n
    [AND|OR [NOT] conditional-expression-n
      [THEN]
        one or more operations
[ ELSE
  one or more operations]
END
```

Looping

```
DO
  WHILE conditional-expression |
  UNTIL conditional-expression |
  FOREVER |
  FOR nnn|variable-name
  one or more operations
END
```

For a full description of *conditional-expression* as used in the previous three statements, refer to ‘The IF Statement’ in the *Panels, Scripts and Variables* manual.

Assignment

```
LET variable-name | &variable-name =
  variable|literal|string|arithmetic-expression |function
```

where *function* can be one of:

ABBREV (*string input length*)
 ABS (*number*)
 ADDOUT (*string row col attr*)
 CENTRE (*string length pad*)
 CHANGESTR (*string1 string2 new*)
 COMPARE (*string1 string2 pad*)
 COPIES (*string n*)
 COUNTSTR (*string1 string2*)
 DELSTR (*string n length*)
 DELWORD (*string n length*)
 D2X (*variable*)
 ENTDATA (*fieldnum extdata row-col-prefix*)
 ENTRY_IO (*'operation' ddname other_parms*)
 FORMATMSG (*nnnn 'SEND'|'SENDNO' 'MSGID'|'ID'|'NOID' P1 P2...P9*)
 INSERT (*new string n length pad*)
 KEYPOS (*string words n*)
 LASTPOS (*string1 string2 n*)
 LEFT (*string length pad*)
 LENGTH (*string*)
 MAX (*n1 ... nx*)
 MIN (*n1 ... nx*)
 OVERLAY (*new string n length pad*)
 PASSIN (*session*)
 PASSOUT (*session*)
 POS (*string1 string2 n*)
 REVERSE (*string*)
 RIGHT (*string length pad*)
 SIGN (*number*)
 SPACE (*string n pad*)
 SPLXLOCUSER (*'U' | 'T', object, stem <,'ALL'>*)
 SPLXLOG (*stem*)
 SPLXNODES (*stem*)
 STRIP (*string 'B' | 'L' | 'T' char*)
 SUBSTR (*string n length pad*)
 SUBWORD (*string n length*)
 TMSG (*variable*)
 UPPER (*string*)
 VERIFY (*string chars 'N'|'M' n*)
 WORD (*variable*)
 WORDINDEX (*string n*)
 WORDLENGTH (*string n*)
 WORDPOS (*string1 string2 n*)
 WORDS (*variable*)
 X2D (*variable*)

Altering the flow within a DO loop ITERATE

Exiting – immediately from a DO loop LEAVE

**Exiting – early
termination of
logic processing**

RETURN

CHAPTER 3

Session Manager variables

Many variables are available within Session Manager. These can be used in a range of situations and provide for powerful product customization. They can be separated into a number of groups:

- Session Manager supplied variables (see page 51)
- Panel variables (see page 53)
- Terminal variables (see page 55)
- User variables (see page 57)
- Session variables (see page 59)
- Session statistics and response time monitor variables (see page 62)
- Facility-related variables (see page 64)
- TPSL and SCRIPT processing variables (see page 67)
- Session Manager user definable variables (see page 73)

Using the tables

In the following tables the column headed Modifiable contains NO for read-only variables, YES for read-write variables, or Y/N, which signifies that the variable is modifiable only from certain screens.

The column headed Format indicates the format of the information held by the variable, where 'x' is an alphanumeric character and 'n' is a numeric character.

The column headed Parm, where it is included, indicates the address in the parameter list at which the variable can be found. A full description is given in the 'Session Manager user exit processing' chapter in the *Installation and Customization* manual.

Session Manager supplied variables

Global variables

Global variables may be used on any parameter that accepts variable substitution, although on certain parameters their use would be nonsensical.

For descriptions of the column headings, see ‘Using the tables’ on page 50.

Variable name	Modifiable	Format
smax	YES	nnn
t_applid	NO	xxxxxxxx
t_authclass	NO	xxxxxxxx
t_authresn	NO	xxx ... xxx
t_company	NO	xxx ... xxx
t_config_suf	NO	xx
t_copyr	NO	xxx ... xxx
t_dapplcheck	NO	x
t_date	NO	dd/mm/yy or mm/dd/yy
t_date_l	NO	dd/mm/yyyy or mm/dd/yyyy
t_dynmalog	NO	Y or N
t_dynmautsthid	NO	Y or N
t_dynmclass	NO	xxxxxxxx
t_dynmdropsess	NO	Y or N
t_dynmhide	NO	Y or N
t_dynmlogmax	NO	nnnn
t_dynmresnm	NO	xxx ... xxx
t_dynmtype	NO	APPL or VTAMAPPL
t_feature	NO	nnnnnnnnnnnnnnnnnn
t_esmprfclnm	NO	xxxxxxxx
t_esmprfrsnm	NO	xxx ... xxx
t_esmprfacc	NO	x
t_genresname	NO	xxxxxxxx
t_global_msg	YES	x
t_global_msgdef	NO	x

Variable name	Modifiable	Format
t_hardenu	NO	Y or N
t_mxcpass	NO	x
t_olaresn	NO	xxx ... xxx
t_opsys	NO	z/OS
t_n	NO	xxxxxx
t_p	NO	xxx
t_pgmname	NO	5697-N61 IBM Session Manager for z/OS <i>v.rmmX</i>
t_security	NO	x
t_signonaccess	NO	x
t_signonclass	NO	xxxxxxxxx
t_signonresname	NO	xxx ... xxx
t_sos_msg	NO	xxx ... xxx
t_sysname	NO	xxxxxxxxx
t_tcp_stack	NO	xxx ... xxx
t_terminalaccess	NO	x
t_terminalclass	NO	xxxxxxxxx
t_terminalresname	NO	xxx ... xxx
t_time	NO	hh.mm.ss
t_tvnode	NO	xxxxxxxxx

Panel variables

Common panel variables

Common panel variables may be used on any panel definition, and some of them must be defined for certain panels.

For descriptions of the column headings, see ‘Using the tables’ on page 50.

Variable name	Modifiable	Format
t_aid	YES	x
t_aid_c	NO	xxxx
t_cmd_ok	NO	x
t_command	YES	xxx ... xxx
t_cursor_name	YES	xxxxxxxxx
t_cursfld	NO	xxxxxxxxx
t_curssub	NO	x
t_menutop	YES	nnnn
t_message	YES	xxx ... xxx
t_more_lines	NO	x
t_panel	YES	xxxxxxxxx
t_recnt	NO	nnn
t_repdof	YES	nnn
t_rephdr	NO	xxx ... xxx
t_replen	NO	nnnn

Note t_menutop only applies to the menu panel.

Signon panel variables

These variables are available for definition on signon panels. The values are also made available to the E21 exit point of the User exit.

For descriptions of the column headings, see ‘Using the tables’ on page 50.

Variable name	Modifiable	Format
t_affinity	YES	xxxxxxxxx
t_npass	YES	xxxxxxxxx
t_nprof	YES	xxxxxxxxx

Special Session Manager displays

Special displays are those which display Session Manager preformatted data, such as those used for QUERY command replies, displaying the audit file, and displaying broadcasts. Note that panels containing the `t_data` variable are not pageable in the same way that an Application Selection panel or Help panel is pageable. With most panels, the paging commands cause the format of the panel to be moved. With panels containing a set of `t_data` variables, for example the supplied DATA panel, the paging commands scroll the values of the `t_data` variable, the format does not alter.

For descriptions of the column headings, see ‘Using the tables’ on page 50.

Variable name	Modifiable	Format
<code>t_data</code>	NO	xxx ... xxx
<code>t_tskid</code>	NO	xxx ... xxx

Terminal variables

Terminal description variables

Terminal description variables contain values pertaining to the terminal, and may not be updated.

For descriptions of the column headings, see ‘Using the tables’ on page 50.

Variable name	Modifiable	Format
t_apl	NO	x
t_colour	NO	x
t_dbcs	NO	x
t_depth_alt_part	NO	nnn
t_depth_def_part	NO	nnn
t_exthi	NO	x
t_ge	NO	x
t_ipaddr	NO	xxx.xxx.xxx.xxx
t_ipport	NO	xxxxx
t_logm	NO	xxxxxxxxx
t_logm_bf	NO	xxxxxxxxx
t_luname	NO	xxxxxxxxx
t_model	NO	x
t_mts_modl	NO	xxxxxxxxx
t_mtsprt1	NO	xxxxxxxxx
t_mtsprt2	NO	xxxxxxxxx
t_netid	NO	xxxxxxxxx
t_pss	NO	x
t_rtermcls	NO	xxxx
t_rtermid	NO	xxxx
t_sna	NO	x
t_termcls	NO	xxxx
t_termid	NO	xxxxxxxxx
t_termtyp	NO	xxxx
t_width_alt_part	NO	nnn
t_width_def_part	NO	nnn
t_wsfrpq	NO	x

Terminal cursor variables

Terminal cursor variables provide the current position of the cursor on screen. Their main use is in the panel processing section of Session Manager panels.

For descriptions of the column headings, see 'Using the tables' on page 50.

Variable name	Modifiable	Format
t_csr_row	NO	nnn
t_csr_col	NO	nnn
t_csr_ofs	NO	nnnn

User variables

User associated variables

User associated variables contain user related information, much of which is taken from the configuration data. Some of the variables may be updated.

For descriptions of the column headings, see ‘Using the tables’ on page 50.

Variable name	Modifiable	Format
t_actcmd	YES	PF1-PF24, or NONE
t_actprf	YES	x
t_appcdata	NO	xxx ... xxx
t_auth	Y/N	n
t_deauthmsg	Y/N	n
t_dsrng_from	NO	nnnn
t_dsrng_to	NO	nnnn
t_fmtopt	NO	x
t_hcprof	YES	xxxxxxxx
t_lang	YES	xx
t_menu	NO	xxxxxxxx
t_msgid	NO	x
t_node	NO	xxxxxxxx
t_pass	Y/N	xxxxxxxx
t_prof	NO	xxxxxxxx
t_record	NO	xxxx
t_script	YES	xx
t_security_class	Y/N	xxxxxxxx
t_share	NO	x
t_shareacb	NO	xxxxxxxx
t_signed_on	NO	x
t_tn3270e	NO	x
t_tn3270e_name	NO	xxxxxxxx
t_user	Y/N	xxxxxxxx
t_user_acb	YES	xxxxxxxx
t_user_appl	NO	xxxxxxxx
t_user_qual	NO	xxxxxxxx

Variable name	Modifiable	Format
t_userdata1 - t_userdata5	NO	xxx ... xxx
ucsautoparm	NO	xxxxxxxx
ucrestescn	NO	xxxxxxxx
unrestescrown	NO	xxx
unrestesccoln	NO	xxx

User escape command variables

For all escape commands, the case is significant for input. Thus, if `t_esc` is defined as 'HH', then if 'hh' is keyed as input, it will not be recognized as the menu escape command.

For descriptions of the column headings, see 'Using the tables' on page 50.

Variable name	Modifiable	Format
t_auto	YES	xxxxxxxx
t_bwd	YES	xxxxxxxx
t_cut	YES	xxxxxxxx
t_esc	YES	xxxxxxxx
t_fwd	YES	xxxxxxxx
t_hcmd	YES	xxxxxxxx
t_paste	YES	xxxxxxxx
t_prev	YES	xxxxxxxx
t_pull	YES	xxxxxxxx
t_push	YES	xxxxxxxx

Session variables

Session detail variables

These variables relate to details of the session definition.

For descriptions of the column headings, see ‘Using the tables’ on page 50.

Variable name	Modifiable	Format
s_a	NO	nnn
s_aa	NO	xxx
s_acb	Y/N	xxxxxxxxx
s_acb_x	Y/N	xxx ... xxx
s_allowesc	YES	x
s_appl	Y/N	xxxxxxxxx
s_applid	Y/N	xxxxxxxxx
s_auto_seq	YES	xxxxxxxxx
s_auto_script	YES	xxxxxxxxx
s_brdvar	YES	xxx ... xxx
s_cmd	Y/N	xxx ... xxx
s_cmdret	YES	x
s_cols	NO	nnn
s_colosa	NO	nnn
s_conceal	YES	x
s_desc	YES	xxx ... xxx
s_dropsess	NO	x
s_escape	YES	x
s_flash	Y/N	xxx ... xxx
s_hidden	NO	x
s_logd	Y/N	xxx ... xxx
s_logd_x	Y/N	xxx ... xxx
s_logm	Y/N	xxxxxxxxx
s_miser	NO	n
s_model	NO	x
s_mts_modl	YES	xxxxxxxxx
s_mts_prt1	YES	xxxxxxxxx
s_mts_prt2	Y/N	xxxxxxxxx

Variable name	Modifiable	Format
s_netid	YES	xxxxxxxx
s_node	Y/N	xxxxxxxx
s_n	NO	nnn
s_pstkappl	NO	xxxxxxxx
s_pstkuser	NO	xxxxxxxx
s_ref	Y/N	x
s_rows	NO	nnn
s_rowosa	NO	nnn
s_runinitsc	NO	x
s_runstartsc	NO	x
s_s	NO	nnn
s_sel	YES	xxxxxxxx
s_sequence	NO	nnnn
s_sescount	NO	nnnnn
s_sessdata1 - s_sessdata5	NO	xxx ... xxx
s_sestype	NO	nnnn
s_script_cmds	YES	x
s_shareterm	NO	xxxxxxxx
s_size	NO	nnnnn
s_sizea	NO	nnnnn
s_sna	NO	x
s_start	Y/N	x
s_status_updates	Y/N	x
s_tran	YES	xxxxxxxx
s_standby	NO	x

TCP/IP variables

TELNET panel variables

The following variables are used to provide TCP/IP TELNET support in Session Manager.

For descriptions of the column headings, see 'Using the tables' on page 50.

Variable name	Modifiable	Format
s_tcp_url	NO	nnn

Variable name	Modifiable	Format
s_telnet_hidec	NO	x

TCP/IP session variables

Variable name	Modifiable	Format
s_telnet_port	NO	nnnn
s_telnet_user	NO	nnnn
s_telnet_pswd	NO	nnnn
s_telnet_host	NO	xxxxxx
s_tcp_stype	NO	xxxxxx
s_telnet_output	NO	xxx ... xxx
s_telnet_lupd	NO	x
s_telnet_lmore	NO	x
s_telnet_more	NO	nnn
s_tn3270e	NO	x
s_tn3270e_dev	NO	xxxxxxxx

Session statistics and response time monitor variables

The following variables are available only if the session has STATS YES specified. They can be used by panels, scripts and exit scripts. The E39 exit script is the place where the totals for a session should be recorded.

Session statistics variables

For descriptions of the column headings, see ‘Using the tables’ on page 50.

Variable name	Modifiable	Format
s_stat_sict	NO	nnnn
s_stat_siby	NO	nnnnnnnn
s_stat_soct	NO	nnnn
s_stat_soby	NO	nnnnnnnn
s_stat_ioct	NO	nnnn
s_stat_ioin	NO	nnnnnnnn
s_stat_ioon	NO	nnnnnnnn
s_stat_iict	NO	nnnn
s_stat_iiin	NO	nnnnnnnn
s_stat_ion	NO	nnnnnnnn
s_stat_ifct	NO	nnnn
s_stat_ifon	NO	nnnnnnnn
s_stat_ifct	NO	nnnn
s_stat_ibon	NO	nnnnnnnn
s_stat_cmct	NO	nnnn
s_stat_cmin	NO	nnnnnnnn
s_stat_cmon	NO	nnnnnnnn

Response time monitor variables

For descriptions of the column headings, see ‘Using the tables’ on page 50.

Variable name	Modifiable	Format
s_rtm_rtmt1	NO	nn.nn
s_rtm_rtmt2	NO	nn.nn
s_rtm_strtt	NO	nnnnnnnn
s_rtm_strtd	NO	nnnnnnnn

Variable name	Modifiable	Format
s_rtm_restit	NO	nnnnnnnnn
s_rtm_restd	NO	nnnnnnnnn
s_rtm_restu	NO	nnnnnnnnn
s_rtm_restm	NO	nnnnnnnnn
s_rtm_restp	NO	nnnnnnnnn
s_rtm_tot1	NO	nnnn
s_rtm_tot2	NO	nnnn
s_rtm_tot3	NO	nnnn
s_rtm_totav	NO	nn.nn
s_rtm_totlg	NO	nn.nn
s_rtm_totlt	NO	nnnnnnnnn
s_rtm_totld	NO	nnnnnnnnn
s_rtm_net1	NO	nnnn
s_rtm_net2	NO	nnnn
s_rtm_net3	NO	nnnn
s_rtm_netav	NO	nn.nn
s_rtm_netlg	NO	nn.nn
s_rtm_netlt	NO	nnnnnnnnn
s_rtm_netld	NO	nnnnnnnnn
s_rtm_app1	NO	nnnn
s_rtm_app2	NO	nnnn
s_rtm_app3	NO	nnnn
s_rtm_appav	NO	nn.nn
s_rtm_applg	NO	nn.nn
s_rtm_applt	NO	nnnnnnnnn
s_rtm_appld	NO	nnnnnnnnn

Facility-related variables

Hardcopy option variables

The various values are obtained from the HCOPTION parameters of the HCPROFILE configured for the user. The HCPROFILE name is contained in the User Associated variable, t_hcprof.

For descriptions of the column headings, see ‘Using the tables’ on page 50.

Variable name	Modifiable	Format
t_hcop	NO	xxx ... xxx
t_hcop_n	NO	nn
t_hcformat	NO	xxxxxxxx
t_hcroute	NO	xxxxxxxx
hmax	NO	nnn

Demonstration and viewer variables

Demo/View variables contain values pertaining to the use of the Demonstration and View feature.

For descriptions of the column headings, see ‘Using the tables’ on page 50.

Variable name	Modifiable	Format
t_daut	NO	x
t_dint	NO	x
t_dkey	YES	xxxxxxxx
t_dnview	NO	nnn
t_dtermid	NO	xxxxxxxx
t_duserid	NO	xxxxxxxx
t_inview	YES	nnn
t_inview_n	YES	xxxxxxxx
t_unview	YES	nnn
t_unview_n	YES	xxxxxxxx

Application Builder variables

The following variables pertain to the Application Builder.

For descriptions of the column headings, see ‘Using the tables’ on page 50.

Variable name	Modifiable	Format
t_sendval.n	NO	xxxxxxxx

Variable name	Modifiable	Format
t_sendvals	NO	xxx

Window variables – user level

The following variables give general information regarding the status of windowing for a user. All variables except t_w_status contain a default value:

- Zero For numeric-type variables
- Blanks For character-type variables, when windowing is inactive.

For descriptions of the column headings, see ‘Using the tables’ on page 50.

Variable name	Modifiable	Format
t_w_curses	NO	nnn
t_w_esc	YES	xxxxxxxx
t_w_event	NO	x
t_w_id	NO	nnn
t_w_input	NO	xxxxxxxx
t_w_msg	NO	xxxxxxxx
t_w_mstime	NO	xxxxxxxx
t_w_msuser	NO	xxxxxxxx
t_w_name	NO	xxxxxxxx
t_w_status	NO	x
t_w_zoom	NO	nnn
t_windows	NO	nnn

Window variables – window level

The following variables are subscripted, with one copy of each per window. The subscript for each window is its window identifier; for the currently active window this value is held in the variable t_w_id. When no subscript is specified, the currently active window is assumed.

For descriptions of the column headings, see ‘Using the tables’ on page 50.

All the following variables contain a default value:

- Zero For numeric-type variables.
- Blanks For character-type variables when windowing is inactive, or the subscript does not refer to an open window.

Variable name	Modifiable	Format
w_active	NO	x
w_aid	NO	x

Variable name	Modifiable	Format
w_border	NO	xxxxxxxx
w_cdepth	NO	nnn
w_csr_col	NO	nnn
w_csr_ofs	NO	nnnn
w_csr_row	NO	nnn
w_cwidth	NO	nnn
w_depth	NO	nnn
w_end_col	NO	nnn
w_end_ofs	NO	nnnn
w_end_row	NO	nnn
w_name	NO	xxxxxxxx
w_org_col	NO	nnn
w_org_ofs	NO	nnnn
w_org_row	NO	nnn
w_output	NO	x
w_owned	NO	nnn
w_owner	NO	nnn
w_scrollh	NO	nnn
w_scrollv	NO	nnn
w_session	NO	nnn
w_visible	NO	x
w_wca	NO	x
w_width	NO	nnn
w_zoom	NO	x

Window variables – session level

The following variables are subscripted, with a copy of each one per window session.

For descriptions of the column headings, see ‘Using the tables’ on page 50.

Variable name	Modifiable	Format
s_w_id	NO	nnn
s_w_name	NO	xxxxxxxx

TPSL and SCRIPT processing variables

Return code variables

These variables are set by the execution of most script statements and TPSL statements. They indicate the success or failure of the execution of that statement.

For descriptions of the column headings, see ‘Using the tables’ on page 50.

Variable name	Modifiable	Format
t_rc	YES	nnnnn
t_result	YES	nnnnn

Script verb variables

The following variables are set by the execution of ‘script verbs’, for example OUTSCAN.

For descriptions of the column headings, see ‘Using the tables’ on page 50.

Variable name	Modifiable	Format
s_inscan_col	NO	nnn
s_inscan_row	NO	nn
s_outscan_col	NO	nnn
s_outscan_row	NO	nn
t_inplen	NO	nnnn
t_recur_script	YES	x
t_scparms	YES	xxx ... xxx
t_waitdata	NO	x

Exit script variables

The following variables are used by exit scripts to access the exit parameters of the User exit.

For descriptions of the column headings, see ‘Using the tables’ on page 50.

Variable name	Modifiable	Parm	Format
ec_rcode	NO	1	nnn
ec_reason	NO	1	xxxxxxxxx
ec_julian	NO	1	xxxxxxxxx
ec05_name	NO	4	xxx ... xxx
ec05_keywd	NO	4	xxx ... xxx

Variable name	Modifiable	Parm	Format
ec05_record	NO	5	xxx ... xxx
ec06_appl	NO	4	xxxxxxxx
ec06_nstatus	NO	4	x
ec06_ostatus	NO	4	x
ec11_ttype	NO	4	xxxx
ec11_term	NO	4	xxxxxxxx
ec11_logm	NO	4	xxxxxxxx
ec11_bind	NO	4	xxx ... xxx
ec11_prof	NO	5	xxxxxxxx
ec11_sign	NO	5	x
ec11_user	YES	6	xxxxxxxx
ec11_pass	YES	6	xxxxxxxx
ec11_npass	YES	6	xxxxxxxx
ec11_nprof	YES	6	xxxxxxxx
ec11_nsign	YES	6	x
ec21_ttype	NO	4	xxxx
ec21_term	NO	4	xxxxxxxx
ec21_logm	NO	4	xxxxxxxx
ec21_bind	NO	4	xxx ... xxx
ec21_euser	NO	5	xxxxxxxx
ec21_epass	NO	5	xxxxxxxx
ec21_enpass	NO	5	xxxxxxxx
ec21_eprof	NO	5	xxxxxxxx
ec21_enode	NO	5	xxxxxxxx
ec21_config	NO	6	x
ec21_cauth	NO	6	xx
ec21_cpass	NO	6	xxxxxxxx
ec21_cprof	NO	6	xxxxxxxx
ec21_cnode	NO	6	xxxxxxxx
ec21_npass	YES	7	xxxxxxxx

Variable name	Modifiable	Parm	Format
ec21_nprof	YES	7	xxxxxxxxxx
en21_nauth	YES	7	xx
ec21_ruser	YES	7	x
ec21_rpass	YES	7	x
ec21_rnpass	YES	7	x
ec21_rnprof	YES	7	x
ec21_nnode	YES	7	xxxxxxxxxx
ec21_ndata	YES	7	xxx ... xxx
ec22_ttype	NO	4	xxxx
ec22_term	NO	4	xxxxxxxxxx
ec22_logm	NO	4	xxxxxxxxxx
ec22_bind	NO	4	xxx ... xxx
ec22_user	NO	5	xxxxxxxxxx
ec22_pass	NO	5	xxxxxxxxxx
ec22_prof	NO	5	xxxxxxxxxx
en22_auth	YES	5	xx
en22_autos	YES	6	nn
ec26_ttype	NO	4	xxxx
ec26_term	NO	4	xxxxxxxxxx
ec26_logm	NO	4	xxxxxxxxxx
ec26_bind	NO	4	xxx ... xxx
ec26_user	NO	5	xxxxxxxxxx
ec26_prof	NO	5	xxxxxxxxxx
ec29_ttype	NO	4	xxxx
ec29_term	NO	4	xxxxxxxxxx
ec29_logm	NO	4	xxxxxxxxxx
ec29_bind	NO	4	xxx ... xxx
ec29_user	NO	5	xxxxxxxxxx
ec29_pass	NO	5	xxxxxxxxxx
ec29_prof	NO	5	xxxxxxxxxx

Variable name	Modifiable	Parm	Format
en29_auth	NO	5	xx
ec31_ttype	NO	4	xxxx
ec31_term	NO	4	xxxxxxxxxx
ec31_logm	NO	4	xxxxxxxxxx
ec31_bind	NO	4	xxx ... xxx
ec31_user	NO	5	xxxxxxxxxx
ec31_pass	NO	5	xxxxxxxxxx
ec31_prof	NO	5	xxxxxxxxxx
en31_auth	NO	5	xx
ec31_taskida	NO	6	SAAnnnnn
ec31_taskidb	NO	6	xxxxxxxxxx
ec31_appl	YES	6	xxxxxxxxxx
ec31_acb	YES	6	xxxxxxxxxx
ec31_slogm	YES	6	xxxxxxxxxx
ec31_script	YES	6	xxxxxxxxxx
ec31_data	YES	6	xxx ... xxx
ec33_ttype	NO	4	xxxx
ec33_term	NO	4	xxxxxxxxxx
ec33_logm	NO	4	xxxxxxxxxx
ec33_bind	NO	4	xxx ... xxx
ec33_user	NO	5	xxxxxxxxxx
ec33_pass	NO	5	xxxxxxxxxx
ec33_prof	NO	5	xxxxxxxxxx
en33_auth	NO	5	xx
ec33_taskida	NO	6	SAAnnnnn
ec33_taskidb	NO	6	xxxxxxxxxx
ec33_applid	NO	6	xxxxxxxxxx
ec33_acb	NO	6	xxxxxxxxxx
ec33_appl	NO	6	xxxxxxxxxx
ec33_dstream	YES	7	xxx ... xxx

Variable name	Modifiable	Parm	Format
ec36_ttype	NO	4	xxxx
ec36_term	NO	4	xxxxxxxxxx
ec36_logm	NO	4	xxxxxxxxxx
ec36_bind	NO	4	xxx ... xxx
ec36_user	NO	5	xxxxxxxx
ec36_prof	NO	5	xxxxxxxx
ec36_taskida	NO	6	SAAnnnnn
ec36_taskidb	NO	6	xxxxxxxx
ec36_applid	NO	6	xxxxxxxx
ec36_acb	NO	6	xxxxxxxx
ec36_slogm	NO	6	xxxxxxxx
ec39_ttype	NO	4	xxxx
ec39_term	NO	4	xxxxxxxxxx
ec39_logm	NO	4	xxxxxxxxxx
ec39_bind	NO	4	xxx ... xxx
ec39_user	NO	5	xxxxxxxx
ec39_pass	NO	5	xxxxxxxx
ec39_prof	NO	5	xxxxxxxx
en39_auth	NO	5	xx
ec39_taskida	NO	6	SAAnnnnn
ec39_taskidb	NO	6	xxxxxxxx
ec39_applid	NO	6	xxxxxxxx
ec39_acb	NO	6	xxxxxxxx
ec39_slogm	NO	6	xxxxxxxx
ec79_ttype	NO	4	xxxx
ec79_term	NO	4	xxxxxxxxxx
ec79_logm	NO	4	xxxxxxxxxx
ec79_bind	NO	4	xxx ... xxx
ec79_user	NO	5	xxxxxxxx
ec79_pass	NO	5	xxxxxxxx
ec79_prof	NO	5	xxxxxxxx

Variable name	Modifiable	Parm	Format
en79_auth	NO	5	xx
ec79_taskida	NO	6	xxxxnnnnn
ec79_taskidb	NO	6	xxxxxxxx
ec79_applid	NO	6	xxxxxxxx
ec79_acb	NO	6	xxxxxxxx
ec79_appl	NO	6	xxxxxxxx
ec79_oapplid	NO	6	xxxxxxxx
ec79_napplid	NO	6	xxxxxxxx
ec79_dstream	YES	7	xxx ... xxx

Session Manager user definable variables

Any number of user definable variables may be used. A user definable variable is defined when it first has data assigned to it. They are distinguished from Session Manager supplied variables by the variable name prefix, the first character of which indicates the scope of the variable as follows:

Prefix	Scope	Description
G	Global	The variable takes the same value throughout the system and is available until system shutdown.
U	User	The variable has a different value for each user and is available while a user is active.
L	Local	The variable is temporary, it is only applicable within the current PANEL or SCRIPT definition and any called sub-definitions or scripts.

The second character of the prefix defines the data type, that is, C for 'character', or N for 'numeric'. The rest of the name, which may be up to 14 more characters, may be any alphanumeric character or an underscore character (_).

Subscripting user definable variables

User definable variables may be subscripted to form one-dimensional arrays. The special variables sub1 to sub9 may be used for subscripting, or any element may be referenced by an absolute value. The user definable variable name is restricted to 11 characters so that the subscript name can be accommodated in the maximum total length of 16 characters.

Variable name	Format
sub1,sub2, ...,sub9	nnn

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Bibliography

IBM Session Manager library

The following publications contain information about IBM Session Manager.

<i>Installation and Customization</i>	GC34-7066
<i>Technical Reference</i>	SC34-7067
<i>User and Administrator</i>	SC34-7069
<i>Panels, Scripts and Variables</i>	SC34-7068
<i>Messages and Codes</i>	GC34-7070
<i>Quick Reference</i>	SC34-7071
<i>Online and Batch Administration</i>	SC34-7072
<i>Program Directory</i>	GI13-0520

Accessibility

Accessibility for people with disabilities

The following features make it easier for disabled people to use Session Manager:

- Operation by keyboard alone
- Optional font enlargement
- High-contrast display settings
- Can be used with screen readers
- Absence of audio prompts.

Changing font, color and display settings

Session Manager can be controlled using a 3270 emulator such as IBM Personal Communications or Hummingbird HostExplorer. Refer to the emulator documentation for guidance on adjusting font and color settings.

Using Session Manager with a screen reader

Screen readers can be used to provide accessible output for blind users. Session Manager has been tested with the following screen readers:

- Jaws version 4.5, using Hummingbird HostExplorer and the script file for Hummingbird HostExplorer
- WindowEyes 4.2, using Hummingbird HostExplorer and the set file for Hummingbird HostExplorer.

Contact the screen reader manufacturer for information about the availability of set and script files.

Documentation

Softcopy PDF documentation is shipped with Session Manager. The documentation supports optional font enlargement, high-contrast display settings, and may be operated by the keyboard alone. Alternative text is not provided for screen-reader users. Fully accessible softcopy documentation, with alternative text for diagrams, will be made available on request. Contact your IBM service representative for information.

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