NEEDS

Function

Indicates to the high level scheduler the probable maximum number of online peripherals that will be required at any one time during the running of a job.

Format

NEEDS $a_1, a_2, \ldots a_n$

Each parameter gives the maximum number of on-line peripherals of a particular type which the job is expected to use at the same time. The format of each parameter is

sign number peripheral type

where *sign* is +, - or absent, *number* is a number and *peripheral type* is not preceded by an asterisk.

Forbidden contexts

NO USER

Execution

The NEEDS command is a system macro, which makes use of the JOBDATA command. It stores the information given in its parameters in the file :SYSTEM.JOBLIST, for use by the high level scheduler. When deciding which jobs to present to the low level scheduler, the high level scheduler takes into consideration on-line peripheral requirements of which it has been informed. In this way it can schedule jobs more efficiently and avoid jams resulting from jobs trying to use too many of the same type of peripheral at the same time.

Example

NEEDS 3LP,5MT,2CR

Notes

1 Users should give NEEDS commands before attempting to use online peripherals.

2 The NEEDS command may be submitted at any time. If *number* is preceded by + or -, the number will be added to or subtracted from the existing peripheral count. The absence of + or - will cause the count to be set to the number specified. If none of the NEEDS parameters are preceded by + or -, then all preceding NEEDS data is removed

3 If a NEEDS command requests peripherals not available (either in type or number) on the configuration, this is not detected immediately, but by the high level scheduler when the job is to be made fully started. For background jobs, abandonment is forced by zeroising job time, which gives rise to the message:

JOB TIME EXCEEDED

For MOP jobs the effect is the same as if the peripherals were extant but otherwise occupied, the message being:

JOB CANNOT BE FULLY STARTED: PERIPHERALS NOT AVAILABLE

Error messages

z NOT RECOGNIZED

PARAMETER MISSING

PARAMETER NULL

See also note 3 above.

NEW (NE)

Function

Introduces one or more magnetic tapes to the system as work tapes, pool tapes or owned tapes. It may also be used to claim ownership of a tape currently at Query Status and thought by :SYSTEM.SERIAL to be a pool tape.

Format

NEW *tape description*$_1$, *tape description*$_2$, ... , *tape description*$_n$

The magnetic tape description has a different format if it is issued in USER context rather than NO USER context:

1 NO USER context

(*tape serial number, code*) (*MT,PROPERTY *magnetic tape properties*)

The code is optional and if given must be either P for a pool tape or W for a work tape. If the code is omitted the tape will become a work tape.

2 USER context

(*tape serial number, magnetic tape name*) (*MT,PROPERTY *magnetic tape properties*)

The magnetic tape name is optional.

In both cases the *MT qualifier is mandatory and the PR *magnetic tape properties* qualifier is optional. If the latter is given the tape introduced will have the specified tape characteristics; other properties will not be taken into account. Other permitted qualifiers are FROZEN, OWNERACC, TRAPGO, TRAPSTOP.

Forbidden contexts

Format 1: NOT OPERATOR, REMOTE

Format 2: NO USER, MOP

Execution

1 NO USER context

An entry for each of the specified tapes is created in :SYSTEM.SERIAL indicating that each tape is a pool tape or work tape. The tapes that are to become pool tapes must be loaded so that they may be relabelled POOL▽TAPE.

2 USER context

If the tape is not currently known to the system then a directory entry is set up in the directory implied in the tape description (the new tape must then belong to the proper user unless the user is suitably privileged, see *Ownership of entrants*, page 175). If a local name was not given in the parameter then a name of 12 zeros is put in the directory until the tape is next loaded, at which time the file name on the header label can be accessed and used to overwrite the 12 zeros. A corresponding entry is set up in :SYSTEM.SERIAL and the user's SPACEMT budget is checked and updated. All traps are initially set open for the proper user.

If there is already a tape of this serial number known to the system and thought to be a pool tape but in query status, then the tape is loaded and its name checked against the name given in the magnetic tape description. If they are the same a directory entry is set up as described above. The entry for this tape in :SYSTEM.SERIAL and the user's SPACEMT budget are updated and the query status is removed.

If SPACEMT is exceeded the following message is output:

ERROR IN PARAMETER *z* IN NE : USER IS OVERDRAWN ON SPACEMT BUDGET

If the user has no SPACEMT budget the message is:

ERROR IN PARAMETER *z* IN NE : USER HAS NO SPACEMT BUDGET

Examples

USER context

NEW (124250) (*MT),(36225,MYTAPE) (*MT),(36103) (*MT,PR PE)

NO USER context

NEW (360222) (*MT),(366221,W) (*MT),(366222,P) (*MT)

Error messages

SERIAL NUMBER ALREADY GIVEN IN THIS COMMAND

DEVICE TYPE QUALIFIER IMPERMISSIBLE

DEVICE TYPE QUALIFIER MISSING

SERIAL NUMBER MISSING

z IS A XENOTAPE AND MAY NOT BE REFERRED TO BY THIS COMMAND

SERIAL NUMBER ALREADY KNOWN

THE POOL/WORK TAPE CODE IS INCORRECT

TAPE IN USE

YOU DO NOT OWN *z*

MT *z* HAS BEEN WRONGED BY OPERATOR

MT *z* CORRECTLY IDENTIFIED BUT NOT AVAILABLE

MAGNETIC TAPE FAILED

TAPE IS AT QUERY STATUS BUT NAME GIVEN DOES NOT AGREE WITH HEADER LABEL

ILLEGAL COMBINATION OF PROPERTIES

z IS AN OWNED TAPE

NEWPASSWORD (NP)

Function

Changes the password of the proper user to the form given.

Format

NEWPASSWORD *text*

The text should be up to twelve characters long. Any characters which can be generated by using a MOP terminal are permitted.

Forbidden contexts

NO USER, OFFLINE

Execution

If more than twelve characters are given, the first twelve only are used. Leading space characters are not used, but if no characters are given, the password will be changed to twelve space characters.

Example

```
NEWPASSWORD   ?*/#(15)          | The user's password will be changed to ?*/#(15)
```

Error messages

None.

OBEY (OB)

Function

Issues a file description as a macro.

Format

OBEY *file description*, PARAM ($a_1, a_2, \ldots a_n$)

There are no restrictions on the form of the *file description*; applicable entrant description qualifiers are NOWAIT, REPLY, FROZEN. The $a_1, a_2, \ldots a_n$ parameters will be used as the parameters of the issued macro. Note that this is more general than issuing the name of the file as a macro, as the file may be a workfile, or under any directory, or distinguished by generation number or language code.

Forbidden contexts

NO USER

Execution

The command causes the file description, given as the first parameter, to be issued as a macro with the parameters separated by commas after PARAM as its parameters. The user must have EXECUTE access to the file specified.

Examples

OBEY :SYSTEM.FRED(3/PROG),PARAM–(20,DUMPFILE)	This causes the file :SYSTEM.FRED(3/PROG) to be issued as a macro. In the expansion of the macro, %A will be replaced by 20 and %B by DUMPFILE
OBEY FRED1(2/0),PARAM(20,DUMPFILE)	This causes the file FRED1, with generation number 2, of the current user to be issued as a macro. In its expansion, %A will be replaced by 20 and %B by DUMPFILE.

Error messages

z IS NOT A CORRECT ENTRANT DESCRIPTION FORMAT

FILE DESCRIPTION MISSING

ENTRANT DOES NOT EXIST

The document separators and terminators output at the beginning and end of the document and the action taken in the event of a peripheral failure during the output of these or the lines mentioned above are as for LISTFILE. If the specified peripheral is a train printer with a 48 character set in use, characters in the headings and terminators that are not part of the standard 48 character set are dealt with as for LISTFILE.

Similarly, the SETUP parameter and the PROPERTY parameter are dealt with as for LISTFILE.

Examples

ONLINE *LP1,PRINTDOC	Line printer output will be headed with the document name PRINTDOC.
ONLINE *LP2,CHEQUEDOC, SETUP CHEQUEFILE, PROPERTY PRINT160	Line printer output will be headed with the document name CHEQUEDOC, the paper will be lined up according to the test pattern found in the file CHEQUEFILE, and the printer allocated will have the property PRINT160.

Format 2(b)

The current core image is connected to the monitoring file and, in the case of a MOP job, to the MOP terminal as well. PERI instructions for the named peripheral are serviced by sending the output in question direct to the user's terminal and/or to the monitoring file in the OBJECT and ONLINE categories.

The data transferred is processed in exactly the same way as if the program peripheral channel were connected to a filestore file of the same type; shift paper tape punch transfers are the only exception to this (see PERI *type 1* (*TP*), page 443).

Notes:

The ONLINE category is a subset of the OBJECT category. Therefore, a monitoring file listing from which the OBJECT category is excluded by an ALLBUT, OBJECT or FU LBUT, OBJECT parameter will not contain any messages in the ONLINE category.

As with input peripherals, output peripherals may have the IDENTIFY qualifier, to identify output to the MOP terminal or monitoring file system; for example:

```
*CP1 ABCD
*LP2 ZXY
```

The results obtained when using formats 1(b) and 2(b) can also be achieved with the ASSIGN command, page 200. This, however, does not include the IDENTIFY facility.

Examples

```
ONLINE   *CP3
ONLINE   *LP2(IDENTIFY)
```

3 Magnetic tape

The magnetic tape specified by the second parameter is loaded, or, if no magnetic tape description is given, a work tape is loaded. The tape is then opened and connected to the current program in such a way that PERI instructions for the named magnetic tape will be serviced by reading from or writing to this magnetic tape.

The tape must have a standard 1900 Series header label or have been introduced to the system by the REDON command if the tape is a non-standard tape or xenotape. If the required tape is a xenotape then the tape serial number in the magnetic tape description must have an X appended; if the required tape is nonstandard then the NONS entrant property or NONSTANDARD qualifier must be used in the magnetic tape description. PERI instructions, with the exception of open mode PERIs (see below), will control tape operations directly, as under a standard Executive.

GIVE may be specified as a qualifier to the magnetic tape description. This will simulate an operator's GIVE instruction; that is, ALLOT will give an affirmative reply and no subsequent Open PERI will be permitted.

Any properties specified are taken into account when suggesting suitable decks on which to load the tape. It is not usually necessary to specify a tape characteristic property, as the characteristic of a secure tape is remembered by the system once the tape has been initially loaded as a secure tape (or NEWed in specifying a tape characteristic property). If a worktape is being acquired (that is, if the second parameter is missing) then any special tape characteristic may be specified in the third parameter. If the third parameter is missing then any worktape available will be used unless the installation has specified a standard characteristic by means of the STAPE GIN macro in which case the user will be given a worktape with the standard characteristic.

The qualifier FROZEN may also be given with the magnetic tape description.

Open mode PERI instructions and magnetic tape peripheral name qualifiers

After an ONLINE command for a standard magnetic tape, the tape is left positioned immediately after the header label. (A non-standard tape is positioned before thefirst block on the tape). The program's Open PERI instruction to the tape will then have no effect except that normal replies will be set. Program Open PERIs for which an ONLINE command has not been given will be implemented normally.

The magnetic tape peripheral name may be qualified by READ or WRITE and MODE *n*. If READ is specified, the tape will be opened for reading and the *absence* of the write permit ring will be tested. If WRITE is specified the *presence* of a write permit ring will be tested.

In most cases, if neither READ nor WRITE is specified, the tape will be open for reading, but no test will be made on the write permit ring unless the user requesting the tape does not have a trap to permit WRITE access, in which case the *absence* of a write permit ring will be tested. However, if the magnetic tape peripheral name is the only parameter given and it is not qualified, the WRITE qualifier will be assumed and the tape will be opened as for an open mode #600 PERI.

If MODE *n* is specified the action taken will depend on whether the tape is already loaded or not. If the tape is loaded, a check will be made to ensure that the deck is in the correct mode. If it is not, but can be changed to the required value, a temporary change will be made. If the deck is unsuitable and cannot be switched to the required mode, then the tape will be unloaded and a message output listing suitable decks for the tape to be loaded on. If the tape is not loaded a PLEASE LOAD message will be output indicating the required mode. For the meaning of the various modes see the MODE command, page 312.

If a worktape name is given, then a WRITE qualifier is assumed unless READ is specified.

The ONLINE command provides all the alternative methods of opening the tape provided by open mode PERI instructions, apart from modes #400 and #500. The table below gives a list of these open modes and the parameter forms of the equivalent ONLINE commands.

Open mode	*ONLINE command parameters*
#100	*magnetic tape peripheral name* (not qualified by READ or WRITE), *magnetic tape description* (not a worktape name)
#200	*magnetic tape peripheral name* (READ), *magnetic tape description*
#300	*magnetic tape peripheral name* (WRITE), *magnetic tape description* or *magnetic tape peripheral name, worktape name*
#400	For this mode see the GETONLINE command.
#600	*magnetic tape peripheral name* (WRITE),, PROPERTY *property names*

Whether the tape is opened by an ONLINE command or by an open mode PERI, the following message is sent to the monitoring file system in the JOURNAL and LOGGING categories:

USED *unitnumber* AS *MT*n*: { MT *tape serial number* / NONSTANDARD MT } ,*magnetic tape name* (*gen.*,*reel*)

where the magnetic tape name is the local name of the tape; or, in the case of a named worktape

USED MT *tape serial number, worktape name*

A complete description of the use of properties with magnetic tapes is given in Chapter 4.

Notes

1 If the Librarian is being used, traps will be set so that

(a) users who are allowed to write to the tape can open it in any mode

(b) users who are allowed only to read from the tape can open the tape in mode #100, but the effect of obeying this command is the same as for open mode #200, in that the absence of the write permit ring is tested. The absence of the write permit ring is also checked if the ONLINE equivalent of open mode #100 is obeyed.

2 For the use of signed generation numbers with the ONLINE command for magnetic tape names, see *Magnetic tape names,* page 168.

3 Effects of an ONLINE command when the user's directory contains more than one tape of the name specified in the ONLINE command:

(a) If two or more tapes of that name are currently not in use, the serial numbers of two of the tapes not in use are included in the PLEASE LOAD message to the operator.

(b) If only one tape of that name is currently not in use, the serial number of the tape not in use and the serial number of a tape in use are included in the PLEASE LOAD message.

(c) If all the tapes of that name are in use the job will wait for a tape to become free.

The operator need not load a suggested tape; any tape in the user's directory which answers the description is accepted.

Examples

ONLINE *MT0,(1234,:BILL.A(2/50))	This is equivalent to open mode #100 of the PERI instruction, except that the absence of the write permit ring will be tested if the tape is a Librarian tape and the user is only allowed to read it.
ONLINE *MT1 (WRITE) or ONLINE *MT1	These are equivalent to open mode #600 of the PERI instruction. A work tape will be loaded and opened for writing and the presence of the write permit ring will be checked.
ONLINE *MT1(MODE36),(1234X,FREDSTAPE)	This ONLINEs the xenotape FREDSTAPE on a deck with odd parity long gap and 800 b.p.i. The user is allowed READ access to the tape but the absence of a write permit ring will not be checked.
ONLINE *MT1(MODE36),FREDSTAPE (NONSTANDARD)	This ONLINEs the NONSTANDARD tape FREDSTAPE on a deck with odd parity long gap and 800 b.p.i. The user is allowed READ access to the tape but the absence of a write permit ring will not be checked.
ONLINE *MT2,!WORKTAPE	This ONLINEs the most recently acquired worktape with a worktape name of WORKTAPE. A write permit ring is required.
ONLINE *MT1,FREDSTAPE(PRTRACK9), PR FAST	This ONLINEs FREDSTAPE with the magnetic tape property TRACK9 on a deck with the peripheral property FAST.

4 Direct access peripherals (*DA)

The exofile named by the second parameter is connected to the current program. PERI instructions for the specified direct access channel are serviced by processing the specified exofile.

The peripheral type will be *DA; the only distinction between devices is contained in the serial number. The peripheral name may be qualified by READ, OVERLAY, WRITE, OFFSET or SCRATCH. The exofile description may be qualified by GIVE, REVGEN (all modes) and MAYBE (SCRATCH mode only).

For further details see *Entrant descriptions*, page 166.

Examples

ONLINE *DA0(WRITE),(100,XFILE(3))	The file XFILE, generation number 3, on storage unit #100 will be opened in mode #300.
ONLINE *DA1(OFFSET),F120(-1)	The highest generation of file F120 will be opened in mode #400.
ONLINE *DA1(SCRATCH),(80,2,#231,#232)	A scratch file, 80 blocks long, in 2 block buckets, will be opened, if possible, on one of the units #231 or #232.
ONLINE *DA3,(200,FILEX) (GIVE)	Open the highest generation of file FILEX on unit #200 as an input file and any subsequent open mode PERI will be made illegal.
ONLINE *DA1(SCRATCH),(40,1)(MAYBE)	A scratch file will be opened as specified and a subsequent open mode PERI will succeed only if the acquired file satisfies the PERI instruction.
ONLINE *DA1(WRITE),(1234,FILENAME(2,50)) (REVGEN14)	The file FILENAME generation number 2, will be opened in mode #300 and given a revised generation number 14.

Note: *ED and *FD are still acceptable as peripheral names and it is not mandatory to amend job descriptions containing these names.

5 File handlers

In the case of *FH the job source and the monitoring file, and in the case of a MOP job the MOP terminal, are connected to the current core image in such a way that

(a) Mode #2 PERI instructions for the named peripheral are serviced by reading from the job source

(b) Mode #1 PERI instructions for the named peripheral are serviced by sending the output direct to the user's terminal and/or to the monitoring file in the OBJECT and ONLINE categories

A mode #12 PERI is also allowed and will give the type of the job source file (a MOP terminal is GRAPHIC). The data written by the program's mode #1 PERIs should be appropriate for this type of file and will be converted by GEORGE if necessary, before being sent to the terminal and/or monitoring file.

All other modes of PERI (that is, #0, #3, #4, #5, #6, #7, #21, #22 and #23) are illegal.

*FR and *FW are similar to *FH, except that only modes #2 and #12 are allowed with *FR, and only modes #1 and #12 are allowed with *FW. Note that with *FW, a mode #12 PERI still gives the type of the job source.

6 Anticipated command issuers

After this command has been obeyed, a channel will exist between GEORGE and the object program. The program can then, by issuing certain combinations of the available modes, make the channel appear to GEORGE to be a MOP terminal.

Example

ONLINE *CI2

7 Exotic peripherals

The specified peripheral is connected on-line to the current core image in a similar way to a normal basic

peripheral so that transfers are implemented directly between the peripheral and the program. The difference is that GEORGE does not perform transfers on these devices and cannot therefore connect an input exotic peripheral by document name or head the output to an output exotic peripheral with the usual output headings.

If the exotic is an ordinary engageable device, the name in the second parameter is used by GEORGE to request the operators to prepare the device concerned, if necessary. The message output to the operator's console is

PLEASE CHECK *data description* ON UNIT *n*

where *n* is the operator's number of the device concerned. To prepare the device the operators may have to load a document on an input exotic peripheral, ensure that the correct stationery is on an output exotic peripheral, or merely ensure that the peripheral is ready for use. The operator will know what action is appropriate depending on the type of device involved. He must then press the engage button to inform GEORGE that the device is ready for use.

If the job has to be set waiting for the specified device, the message

WAITING FOR *peripheral type*

will be sent to the job's monitoring file. This message, preceded by the appropriate user name and job name, will also be output to the operator's console.

The message

WAITING FOR *data description* TO BE CHECKED

may also be sent to the job's monitoring file. Both these messages are in the COMMENT category.

Before an ONLINE command for a flag setting exotic is obeyed, a REALTIME ON command must have been issued.

Examples

ONLINE *GP1,GOUT

ONLINE *201,GOUT

In both cases a graph plotter will be connected on-line to the current core image and the following message will be output to the operator's console:

PLEASE CHECK GOUT ON UNIT *n*

8 Multiplexers and uniplexers

The peripherals in this group are character-buffering multiplexers and uniplexers and message-buffering multiplexers, which can be used for MOP and/or for system use of RJE terminals.

The peripherals which may be used by the system are uniplexer (type 10), multiplexer (type 11) and 7900 communications processor (type 24). A multiplexer or uniplexer may be connected to a program as a whole unit, or as a conceptual unit. In each case the connection is effected by means of an ONLINE command.

In the case of a whole unit on-line to a program, the format of the ONLINE command is:

ONLINE *multiplexer or uniplexer peripheral name*

If a whole unit is being on-lined, the peripheral must first be made available for connection to a program. For details of how to do this, see the MOP command.

If the job has to be set waiting for the specified device, the message

WAITING FOR *peripheral type*

will be sent to the job's monitoring file in the COMMENT category. This message, preceded by the appropriate user name and job name, will also be output on the operator's console.

Examples

ONLINE *MX0

ONLINE *CC0

In the case of a conceptual unit on-line to a program, the format of the ONLINE command is

ONLINE *multiplexer or uniplexer peripheral name, conceptual name*

The *conceptual name* parameter is the name of the conceptual required as defined in a previous CONCEPTUAL command. If the *conceptual name* is entered in another user's directory, the user who gives the ONLINE command must be given a READ trap (see the TRAPGO command.)

Example

ONLINE *MX1,CL CONCEP

Before an ONLINE command for a character-buffering multiplexer or uniplexer is obeyed, a REALTIME ON command must have been issued.

9 IPC links

An end of a link as described by the second parameter of the command is attached to the input/output channel of the program specified by the first parameter. An autonomous search is initiated for another link end of the same name and opposite direction to which a connection may be made to establish the data channel between the programs.

The direction of the link must be specified by a READ or WRITE qualifier to either the IPC channel name or the link description parameter. If the channel name parameter is so qualified, a READ or WRITE qualifier to the second parameter will be ignored.

The search for a corresponding link end will, in general, start with programs in the same machine and then, if necessary, proceed to try programs in other machines to which a connection via an Inter-Processor Buffer is available. If, however, the IPC channel name parameter is qualified by WMC, for Within Machine Communication, or IMC, for Inter Machine Communication the search will be restricted as appropriate.

If a property parameter is specified for IMC, GEORGE will attempt to open the link through an Inter-Processor Buffer with the properties required. If there is no IPB with all the required properties and the missing properties are temporary ones, the operator will be asked to ATTRIBUTE them. If, however, any of the missing properties are permanent, or cannot be ATTRIBUTEd, a command error will be generated if the link is qualified by IMC; otherwise the link will be restricted to Within Machine Communication.

IPC links are available to Realtime jobs only.

Examples

ONLINE *PB0(WRITE,WMC),XLINK	The transmitting end of an IPC link named XLINK will be attached to the program's I/O channel of type 28, unit number 0, and a search initiated for a corresponding receiving end in the same machine.
ONLINE *PB1(IMC,DELAY 40),YLINK(READ)	The receiving end of an IPC link named YLINK will be attached to the program's I/O channel of type 28, unit number 1, and a search initiated for a corresponding transmitting end in a machine connected to this machine by an Inter-Processor Buffer.

Error messages

General

PERIPHERAL TYPE *z* NOT AVAILABLE (if the peripheral is not on the configuration or is WRONGed, or if a flag setting peripheral has not been switched to the MOP OFF state (see the MOP command, in the manual *GEORGE 3 and 4 Operation Management*) before the ONLINE command is obeyed).

Basic peripherals

DOCUMENT NAME FORMAT ERROR

z NOT FOUND (where the operator issues a CANTDO command on being requested to load the specified document)

PERIPHERAL PARAMETER MISSING

ERROR IN PARAMETER SEQUENCE

TRACING AND REPORTING ARE SUCH THAT YOU WILL GET NO OUTPUT FROM THIS COMMAND

Magnetic tape peripherals

MT NAME *z* DOES NOT AGREE WITH THE DIRECTORY ENTRY

MT *z* CORRECTLY IDENTIFIED BUT NOT AVAILABLE

MT *z* DOES NOT BELONG TO USER DESCRIBED

MT *z* IS A POOL TAPE

MT *z* REQUESTED NOT IDENTIFIED

TAPE HEADER DOES NOT AGREE WITH DIRECTORY ENTRY

XENOTAPE DESCRIPTION MUST HAVE NAME AS WELL AS TSN

XENOTAPE NAME AND TSN *z* DUPLICATE NAME AND TSN ALREADY IN SYSTEM

RELATIVE GENERATION NUMBERS ARE NOT PERMITTED FOR THIS TYPE OF ENTRANT

YOU ARE ALREADY USING *z*

NO TAPE AVAILABLE FOR USE

NO WORK TAPES AVAILABLE

THE WORKFILE STACK SYSTEM HAS BEEN CORRUPTED

MT *z* HAS BEEN WRONGED BY THE USER

MT *z* HAS BEEN WRONGED BY THE OPERATORS

MT *z* IS IN QUERY STATUS

MT *z* IS A WORK TAPE

A DEAD COMMAND HAS BEEN GIVEN TO MT *z*

TSN DOES NOT APPLY TO NON STANDARD TAPES

NO SUITABLE DECK AVAILABLE

ILLEGAL COMBINATION OF PROPERTIES

ILLEGAL MODE GIVEN

Direct access peripherals

FILE NOT FOUND *z*

FILE *z* NOT TO BE WRITTEN

ILLEGAL NAME *z*

NO SERIAL NUMBER *z*

SYSTEM FILE CORRUPT ON *z*

z NOT ONLINE

FILE NAME PARAMETER MISSING

ILLEGAL NAME *z*

FILE *z* IS PROTECTED

FILE *z* NOT FOUND

FILE *z* IS LOCKED OUT

FILE *z* IS IN USE BY GEORGE

FILE *z* IS NOT TO BE WRITTEN TO

SCRATCH FILE CANNOT BE OPENED

Exotic and flag setting peripherals

JOB IS NOT REALTIME (if the device concerned requires REALTIME and a REALTIME ON command has not been obeyed)

z DOES NOT DESCRIBE A UNIPLEXER (if the conceptual concerned has more than one line)

z IS NOT CURRENTLY AVAILABLE (if no units of the required type are MOPped OFF, or if the conceptual concerned is already ONLINE)

z NOT RECOGNISED (if the conceptual name has not been defined)

IPC links

DIRECTION OF LINK *z* MISSING

NO MORE LINKS AVAILABLE

z IS NOT A VALID LINK DESCRIPTION

NO IMC AVAILABLE

LINK DESCRIPTION PARAMETER MISSING

JOB IS NOT REALTIME

z IS NOT A CORRECTLY FORMED NAME

PROPERTY NAME *z* UNKNOWN

MORE PROPERTIES SPECIFIED THAN ALLOWED

MORE THAN ONE CONSOLE PROPERTY GIVEN

PERIPHERAL PROPERTIES *z* NOT AVAILABLE

PERIPHERAL TYPE *z* NOT AVAILABLE

DEVICE NOT AVAILABLE DUE TO PERMANENT EXCLUSIVE PROPERTIES

Logging messages

time USED *number* AT *peripheral name*

time FREE *peripheral name, number* TRANSFERS

time FREE, $number_1$ TRANSFERS, $number_2$ REPEATS, $number_3$ FAILS

(If either $number_2$ or $number_3$ is non-zero that part of the message is omitted).

ONLINEX

Function

Connects a magnetic peripheral on-line to an object program. It can be used instead of ONLINE when another magnetic tape with the same name as the one to be ONLINEd may already be loaded or where the tape serial number is not known.

Format

ONLINEX *magnetic tape peripheral name, magnetic tape description*

As with the ONLINE command, the peripheral name may be qualified by READ or WRITE in parentheses.

Forbidden contexts

NO CORE IMAGE

Execution

ONLINEX is a system macro. It first requests the serial number of the unused tape of the name specified in the second parameter by means of the command

QUESTION : GIVE TSN OF UNUSED MT NAMED %B

where %B is the magnetic tape description specified as the second parameter of ONLINEX.

If the tape serial number cannot be given, the operator should reply with

ANSWER *username, jobname,* CANT

in which case, the command

ONLINE %A,%B

is issued, where %A is the magnetic tape peripheral name originally specified and %B is the magnetic tape description.

If the operator ANSWERs with the tape serial number, then the command

ONLINE %A, %C

is issued, where %A is as above and %C is the tape serial number specified.

Error messages

As for ONLINE magnetic tape peripherals.

OPERATOR (OP)

ICL wishes to acknowledge the contribution of the Universities and ICL Joint Project Co-ordination Team in the development of this enhancement.

Function

Allows a user who has been given the appropriate privilege to issue an operator command with the same effect as issuing it from the operator's console (central or remote, depending on the source of the job).

Format

OPERATOR *command*

Forbidden contexts

NO USER

Execution

The command parameter is executed as if from the operator's console, with any reply being sent to the monitoring file and/or MOP terminal, except as indicated in individual command descriptions.

The following commands are permitted:

To users with the PASSIVOP privilege

WHATJOBS (see page 400.21)

WHATSTATE (see page 400.25)

To users with the ACTIVOP privilege

INSTPARA (see page 294)

SCHEDULE (see page 394)

ABANDON (see page 189)

REGENERATE (see page 376)

Error messages

YOU DO NOT HAVE THE REQUIRED PRIVILEGE TO USE THIS COMMAND

PAGES (PA)

Function

Specifies the number of pages that require repeating on a line printer after a restart.

Format

PAGES *peripheral description*, NUMBER *number*

where *peripheral description* is as described on page 174, and the NUMBER parameter is the number of pages to be repeated on the line printer. The parameters may be in either order and the letter N is sufficient to identify the NUMBER parameter.

Forbidden contexts

NOT OPERATOR

Execution

If the need for a restart on a line printer occurs naturally (following an error condition) or is forced (by a CANTDO reply to the system request to engage the printer after an exception condition) while a file is being listed on the line printer the system request:

PLEASE GIVE PAGES FOR ERROR RESTART ON UNIT *peripheral description*

may be output. If it is the operator should use the PAGES command.

The *peripheral description* is checked to ensure that there is an extant request for an error restart with that *peripheral description.* The NUMBER *number* is checked against the value of the installation parameter IPAGE at the time the LISTFILE command was issued. An error message will be output if the *number* is too large to indicate the maximum permitted value. If the number of pages listed is less than *number* the maximum possible number of pages will be repeated. If the value of IPAGE is 1 or the number of pages listed is 1 no system request will be output and one page will be repeated. The meaning of a page of output in the context of PAGE restart procedures is defined in the documentation of restarts included with the LISTFILE command.

If CANTDO is typed instead of PAGES a default value of 1 page will be assumed.

Any error in the PAGES command causes the command to be ignored and any outstanding requests for pages will continue to be repeated until either a correct PAGES command or a CANTDO command has been issued for each request.

Example

PA U14, N3

If unit 14 has become disengaged as a result of an error or exception condition while servicing a LISTFILE request, then a restart will be implemented. The restart will be from the beginning of the page, two pages before that on which the printer became disengaged.

Error messages

NUMBER PARAMETER MISSING

THERE IS NO EXTANT REQUEST FOR A RESTART WITH THIS UNIT NUMBER

THE MAXIMUM NUMBER OF PAGES IS *n*

PRINT (PT)

Function

Writes one or more regions of the current core image to the monitoring file system or to a specified file.

Format

1 PRINT *region*$_1$,*region*$_2$,.....*region*$_n$

2 PRINT *file description,region list*$_1$,*region list*$_2$,...*region list*$_n$

where *file description* is obligatory but may be null and permitted file description qualifiers are NOWAIT, REPLY, FROZEN, OWNERACC, APPEND, TRAPGO, TRAPSTOP, MULTIPLE. Each *region list* parameter has one of the following formats:

(a) REGION (*region*$_1$,*region*$_2$,...*region*$_n$)

(b) REGION *region*

(c) ALL

Each *region* parameter can be written in one of three ways:

(i) as two separate parameters (*n*,*m*), where *n* and *m* are numbers specifying the first and last locations of a region. This format should not be used for command format 2(b) above.

(ii) as one parameter, *n*(*m*), where *n* is as above and *m* is the total number of words in the region.

(iii) as one parameter *n*, where *n* is a number specifying a location to be printed.

Forbidden contexts

NO CORE IMAGE

Execution

Printing is in the standard format, that is:

A C D O I

where A is the address of the location in decimal,

C is the contents in character form,

D is the contents as a signed decimal number,

O is the contents in octal and

I is the contents in instruction format (F X M/N)

The core image is preserved after the command has been obeyed.

If a series of identical locations (including zeroised locations) is encountered by PRINT, only the first and last locations of the series will be written.

If a *file description* parameter is present the named file will be created or overwritten according to the usual rules. The file will be a graphic file. If *file description* parameter is null, the printing is sent to the monitoring file system.

If there is an ALL *region list* parameter the whole of the core image is printed.

In GEORGE 4 pages which have not been used will not be accessed and hence will not be printed. The whole of a sparse program can be printed by specifying the area 0 to 4M-1.

It should also be noted in GEORGE 4 that an area can be printed even if it does not have read permission.

Examples

```
PRINT  (20,22)
PRINT  20(3)
PRINT  20,21,22
```

These commands will all have the effect of sending the contents of locations 20 to 22 of the current core image to the monitoring file system (POSTMORT category)

PRINT PRINTFILE,REGION(20,21,22) PRINT PRINTFILE,REGION((20,22)) PRINT PRINTFILE,REGION(20(3))	These commands will all have the effect of sending the contents of locations 20 to 22 to file PRINTFILE.
PRINT ,ALL	The whole core image is sent to the monitoring file system.

Error messages

z CONTAINS AN UNPAIRED DELIMITER

NUMBER OF PRINTWORDS MUST BE POSITIVE

PARAMETER CONTAINS INVALID NUMBER FORMAT

TRACING AND REPORTING ARE SUCH THAT YOU WILL GET NO OUTPUT FROM THIS COMMAND

FILE FULL: LAST LOCATION PRINTED *z*

PARAMETER FORMAT ERROR

PRINTLAST (PL)

Function

To print out a copy of the last REPLY set by the Monitoring File System.

Format

PRINTLAST

Forbidden contexts

NOT MOP

Execution

A copy of the last REPLY set by the Monitoring File System is output. This can be used to obtain a full copy of an error message that has been suppressed by a QUIET command.

Error messages

NO REPLY

PROPERTY (PR)

Function

Introduces the name of a peripheral property to the system.

A description of CANCEL PROPERTY follows this specification.

Format

PROPERTY *property name* (*qualifiers*),CONSOLE *console description*

The property name is a string of up to 12 character (letters, digits, hyphens and spaces). The character string must commence with a letter (that is, in local name format) and spaces are significant.

For an account of the use of property name qualifiers, see Chapter 5, page 83. The qualifiers, which may be specified in full or in shortened form, are PERMANENT (PERM), TEMPORARY (TEMP), INCLUSIVE (INCL) and EXCLUSIVE (EXCL).

A maximum of two qualifiers may be specified. Either PERM or TEMP may be given (TEMP is assumed unless PERM is given) and either INCL or EXCL (EXCL is assumed unless INCL is given).

If the PERMANENT qualifier is given, a command requesting the property while it is not ATTRIBUTEd will generate a command error. This is because a permanent property will not be the sort of thing that an operator can attribute or cancel on demand.

If the TEMPORARY qualifier is given, a command requesting the property while it is not ATTRIBUTEd will generate a request to the operator to ATTRIBUTE the property to a particular peripheral.

If the INCLUSIVE qualifier is given, a command requesting the property will use only units to which the property has been ATTRIBUTEd but the unit may also be used by other commands.

If the EXCLUSIVE qualifier is given, a unit to which the property has been ATTRIBUTEd may not be used by commands not requesting the property.

The CONSOLE parameter is optional, and if present causes the property name given to be classed as a *console property* and used as a *cluster name.* For a description of the setting up of clusters see Chapter 12 of the manual *GEORGE 3 and 4 Operation Management.* The CONSOLE parameter defines a cluster console and may have one of two forms:

1 If the cluster console is the central operator's console, the *console description* has the form: U0 or 0

2 If the cluster console is a remote operator's console, the *console description* has the form of a remote peripheral description (see page 178) except that for operator consoles or RJE terminals connected via character buffering multiplexers and uniplexers it is not necessary to specify an interface number. Where no interface number is specified, the first teletypewriter on the terminal is taken as the cluster console

Console properties are assumed to be PERMANENT and EXCLUSIVE; therefore PERMANENT/TEMPORARY or INCLUSIVE/EXCLUSIVE qualifiers are ignored in PROPERTY commands that include a CONSOLE parameter.

Forbidden contexts

NOT OPERATOR, REMOTE

Execution

If the property name is not known to the system and is not the special property CENTRAL, then it, together with its qualifier, is added to the list in :SYSTEM.PROPERTY. If the property is to be a CONSOLE property then details of the console are entered in :SYSTEM.IDF.

If the property name is known to the system and is not a console property, a command error is generated.

If the property name is known to the system but is a console property, the command is assumed to be defining a replacement cluster console. Details of the previous cluster console are therefore removed from :SYSTEM.IDF and the new console's details are inserted. Subsequently, the new console will be used for cluster messages. A maximum of 32767 properties (including PROPERTY CENTRAL) may exist in the system at any one time.

Examples

PROPERTY GASBILL(TEMP,EXCL)

PR AST (PERMANENT,INCLUSIVE)

PR STEVENAGE(PERM,EXCL),CONSOLE U30.L10.IAA

Error messages

PROPERTY NAME PARAMETER MISSING

DELIMITERS MUST BE PAIRED

THIS COMBINATION OF QUALIFIERS IS ILLEGAL

ONLY ONE SET OF QUALIFIERS MAY BE GIVEN

z IS NOT A CORRECTLY FORMED NAME

PROPERTY *z* EXISTS

PROPERTY NAME 'CENTRAL' EXISTS AND MAY NOT BE CANCELLED

THE MAXIMUM NUMBER OF PROPERTIES HAS ALREADY BEEN DEFINED

CANCELLATION OF PROPERTY

A property name is removed from the system by the CANCEL PROPERTY command

Format

CANCEL PROPERTY *property name*

The property name must have been declared by a previous PROPERTY command.

Forbidden contexts

NOT OPERATOR,REMOTE

Execution

The record of the property is removed from :SYSTEM.PROPERTY (and from :SYSTEM.IDF if it is a CONSOLE property). If it was ATTRIBUTEd to or ASSOCIATEd with any unit, then the attribution or association is removed. If the property name had been specified in an outstanding LISTFILE or ONLINE command, a command error is generated.

The following message is output to the operator's console:

PROPERTY *z* HAS BEEN CANCELLED

Example

CANCEL PROPERTY GASBILLS

Error messages

PROPERTY NAME PARAMETER MISSING

PROPERTY NAME *z* UNKNOWN

z IS NOT A CORRECTLY FORMED NAME

PROPERTY NAME 'CENTRAL' EXISTS AND MAY NOT BE CANCELLED

QUESTION (QN)

Function

Causes a question to be sent to the CENTRAL console, the cluster console, the monitoring file system or combinations thereof.

Format

QUESTION *routing parameter, text*

where *routing parameter* is a number in the range 0 to 3 inclusive, or a peripheral name, and *text* is a string of up to 40 characters. If the job is a background job, the first parameter must not be 0.

The text, which should be a question, may be up to 40 characters long. Any excess characters will be lost (see *Texts,* page 163 for format details).

Forbidden contexts

NO USER, BREAK-IN

Execution

Output is controlled by the routing parameter, as defined below. The name of an on-line peripheral has the same effect as 2; the name of any other peripheral has the same effect as 0.

If the routing parameter is 0, the message

QUESTION TO USER: *text*

is sent to the monitoring file system (DISPLAY category). The text is the second parameter of the QUESTION command. No output is sent to the operator's console.

If the routing parameter is 1, the message

user name.job name QUESTION: *text*

is sent to the cluster console (which will be the central console if the user's terminal does not belong to a remote cluster). The user name and job name are those of the job from which the QUESTION command was issued, and the text is the second parameter of the QUESTION command. This message is repeated periodically until an ANSWER command is given. In this case, a message is also sent to the monitoring file system (DISPLAY category); this has the form

QUESTION: *text*

Either the operator or the user (in a MOP job) may reply to a question by means of an ANSWER command (see page 196). If the user wishes to give the answer, he must first break in. The job will wait until an answer has been given.

If the routing parameter is 2, the action is the same as if it were 0 and additionally the message is sent to the central console. This value is for use in jobs initiated from remote clusters.

If the routing parameter is 3, the action is the same as for 2 and 1 combined.

Examples

QUESTION 0, WHICH INPUT FILE FOR THIS PROGRAM?

Reply (to monitoring file system)

QUESTION TO USER : WHICH INPUT FILE FOR THIS PROGRAM?

QUESTION 1, IS(1234) (*MT) LOADED?

Reply 1 (to cluster console)

:BILL.OLJ1 QUESTION : IS (1234) (*MT) LOADED?

Reply 2 (to monitoring file system)

QUESTION : IS (1234) (*MT) LOADED?

Note: If the question is to be output on a console, it will be repeated at the interval specified in the installation parameter MESSAGETIME (see the INSTPARA command, page 294).

Error messages

INVALID ROUTING PARAMETER

TRACING AND REPORTING ARE SUCH THAT YOU WILL GET NO OUTPUT FROM THIS COMMAND

QUIET (QI)

Function

Suppresses the full printing of command error messages on the MOP console. It can be cancelled by CANCEL QUIET, described below.

Format

QUIET

Forbidden contexts

NOT MOP

Execution

After this command has been issued, any command error message that would normally be output to the MOP console will be replaced by the character string:

ERROR

The full message will be output in the Monitoring File if the tracing level permits it. To find out what the message was, the user can issue a PRINTLAST command, since the full message is left as the REPLY; if a return to the full message system is required, the CANCEL QUIET command can be used.

Notes:

1 The default setting for outputting error messages is the full form

2 If command error messages are suppressed by the REPORT command, nothing will be output on the MOP terminal if an error occurs.

Error messages

None.

CANCEL QUIET (CC QI)

Function

To allow full printing of error messages on the MOP terminal.

Format

CANCEL QUIET

Forbidden contexts

None.

Execution

After issuing this command, provided command error messages are not suppressed by REPORT, error messages will be printed or displayed in full on the MOP terminal.

Error messages

None.

QUIT (QU)

Function

Returns a job in the BREAK-IN context to the top command processor level.

Format

QUIT

Forbidden contexts

NOT BREAK-IN

As a result of the command the context changes to NO CORE IMAGE and NOT BREAK-IN.

Execution

All command processor levels up to the top level (and the core image, if any) are deleted, and the break-in is terminated. If the user was logged in, he remains logged in after the QUIT command is obeyed.

Error messages

None

Logging messages

time milltime REALTIME FINISHED

This message will be sent if there was a core image when the QUIT command was issued and a REALTIME ON command has been obeyed, but not a subsequent REALTIME OFF command.

time milltime DELETED, CLOCKED *prog time*

This message will be sent if there was a core image when the QUIT command was issued.

QUOTA (QT)

Function

Requests that a program be given a quota of a particular size. The command is effective only in GEORGE 4 and has a null effect in GEORGE 3.

Format

1 QUOTA *number*

2 QUOTA FREE *number*

3 QUOTA FIX *number*

The *number* is optional in all formats.

Forbidden contexts

NO CORE IMAGE

Execution

The *number* is rounded up to a multiple of 1024 and the program's quota is set to the smallest of *number*, the installation parameter MAXQUOTA, and the value set by a MAXQUOTA command if one has been obeyed.

If the character string FIX is specified the quota will be fixed at this value until a subsequent QUOTA command is used, otherwise GEORGE is free to adjust the quota.

If no *number* follows either the character string FIX or the character string FREE, the command has no immediate effect on the quota size but merely fixes or frees the quota.

Caution should be exercised when using the FIX parameter. If the quota is fixed too low it can generate page turning loops.

The quota of a realtime program is fixed by GEORGE to be equal to the program's size. A command error is given if a QUOTA command is issued for a realtime program.

Examples

```
QUOTA   8000
QUOTA   FIX
```

Error messages

PROGRAM QUOTA REQUESTED IS INVALID

QUOTA OF REALTIME PROGRAMS CANNOT BE ALTERED