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iSeries

Operational Assistant APIs

Version 5 Release 3

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> **Note**
>
> Before using this information and the product it supports, be sure to read the information in
> "Notices," on page 21.

Contents

Operational Assistant APIs

Most functions on the iSseries Operational Assistant menu can be accessed individually by calling APIs found in the QSYS library. These Operational Assistant APIs allow you to incorporate Operational Assistant functions into your application menus. You can tailor some of the Operational Assistant functions to your needs by using exit programs.

Your assistance level setting affects the type of display you see when these APIs are called.

The Operational Assistant APIs are:
- "List Signed-On Users (QEZLSGNU) API" on page 2 (QEZLSGNU) generates a list of signed-on users and places the list in the specified user space.
- "Operational Assistant Attention-Key-Handling (group jobs) (QEZMAIN) API" on page 7 (QEZMAIN) creates a group job to display the iSeries Operational Assistant menu.
- "Operational Assistant Attention-Key-Handling (nongroup jobs) (QEZAST) API" on page 7 (QEZAST) uses the GO ASSIST command to display the iSeries Operational Assistant menu.
- "Save Information (QEZSAVIN) API" on page 8 (QEZSAVIN) displays the Save Information to Help Resolve a Problem display.
- "Send Message (QEZSNDMG) API" on page 9 (QEZSNDMG) sends a message to one or more users or display stations and optionally shows the Operational Assistant Send a Message display before sending the message.
- "Work with Jobs (QEZBCHJB) API" on page 14 (QEZBCHJB) displays either the Work with Jobs panel or the Work with User Jobs panel.
- "Work with Messages (QEZMSG) API" on page 15 (QEZMSG) displays either the Work with Messages panel or the Display Messages panel.
- "Work with Printer Output (QEZOUTPT) API" on page 15 (QEZOUTPT) displays either the Work with Printer Output panel or the Work with All Spooled Files panel.

The Operational Assistant exit programs are:
- "Exit Program for Tailoring Automatic Cleanup" on page 16 (XEZUCLNP) for running your own cleanup programs (IBM supplied).
- "Exit Program for Tailoring Operational Assistant Backup" on page 17 for running your own backup functions (user supplied).
- "Exit Program for Tailoring Power Off" on page 18 (XEZPWROF) for changing how you want the system automatically powered on and off (IBM supplied).

APIs

These are the APIs for this category.

List Signed-On Users (QEZLSGNU) API

Required Parameter Group:

1	Qualified user space name	
Input	Char(20)	
2	Format name	
Input	Char(8)	
3	User name	
Input	Char(10)	
4	Display station name	
Input	Char(10)	
5	Include disconnected jobs and suspended group jobs	
Input	Char(10)	
6	Include signed-off users with output waiting to print	
Input	Char(10)	
7	Error code	
I/O	Char(*)	

Default Public Authority: *USE

Threadsafe: No

The List Signed-On Users (QEZLSGNU) API generates a list of signed-on users and places the list in the specified user space. The generated list replaces any existing lists in the user space.

When you specify a generic user name or a generic display station name, you can generate a subset of the signed-on user list. If both a user name and a display station name are specified, only entries that match both the user name and the display station name are included in the list of signed-on users.

You can use the QEZLSGNU API to get a list of users similar to that seen by using the Work with User Jobs (WRKUSRJOB) command with options STATUS (*ACTIVE) and JOBTYPE (*INTERACT).

Authorities and Locks

User Space Authority
   *CHANGE

Library Authority
   *EXECUTE

User Space Lock
   *EXCLRD

Required Parameter Group

Qualified user space name
   INPUT; CHAR(20)

The user space that is to receive the created list. The first 10 characters contain the user space name, and the second 10 characters contain the name of the library where the user space is located. You can use these special values for the library name:

*CURLIB   The job's current library
*LIBL   The library list

Format name
       INPUT; CHAR(8)

The content and format of the information returned for each member. The possible format names are:

SGNU0100   This format returns information about the user's job and what kind of activity they are performing.
SGNU0200   This format returns the same information as the SGNU0100 format, plus the text descriptions of the user profile and display station. This format requires more processing than the SGNU0100 format.

For more information, see "SGNU0100 Format" on page 4 or "SGNU0200 Format" on page 5.

User name
       INPUT; CHAR(10)

A specific user name, a generic user name, or the following special value:

ALL   All signed-on users

Display station name
       INPUT; CHAR(10)

A specific display station name, a generic display station name, or the following special value:

ALL   All display stations with signed-on users

Include disconnected jobs and suspended group jobs
       INPUT; CHAR(10)

An indicator for whether or not to include disconnected jobs and suspended group jobs. You must use one of the following special values:

YES   Include signed-on users with disconnected jobs and users whose group jobs have been suspended.
NO   Do not include signed-on users with disconnected jobs and users whose group jobs have been suspended.

Include signed-off users with output waiting to print
       INPUT; CHAR(10)

An indicator for whether or not to include signed-off users with output waiting to print. This would include all interactive signed-off users with output waiting to print and all batch graphical user interface jobs that have ended with output waiting to print.

You must use one of the following special values:

YES   Include signed-off users with output waiting to print.
NO   Do not include signed-off users with output waiting to print.

Error code
       I/O; CHAR(*)

The structure in which to return error information. For the format of the structure, see Error Code Parameter.

Format of the Generated Lists

The signed-on user list consists of:

- A user area
- A generic header
- An input parameter section
- A list data section:
  - SGNU0100 format
  - SGNU0200 format

For details about the user area and generic header, see For details about the remaining items, see the following sections. For detailed descriptions of the fields in the list returned, see "Field Descriptions" on page 5.

When you retrieve list entry information from a user space, you must use the entry size returned in the generic header. The size of each entry may be padded at the end. If you do not use the entry size, the result may not be valid. For examples of how to process lists, see API Examples.

Input Parameter Section

Offset			
Dec	Hex	Type	Field
0	0	CHAR(10)	User space name
10	A	CHAR(10)	User space library name
20	14	CHAR(8)	Format name
28	1C	CHAR(10)	User name specified
38	26	CHAR(10)	Display station specified
48	30	CHAR(10)	Include disconnected jobs and suspended group jobs indicator specified
58	3A	CHAR(10)	Include signed-off users with output waiting to print indicator specified

SGNU0100 Format

Offset			
Dec	Hex	Type	Field
0	0	CHAR(10)	Display station name
10	A	CHAR(10)	User name
20	14	CHAR(6)	Job number
26	1A	CHAR(10)	Activity
36	24	CHAR(10)	Activity name
46	2E	CHAR(1)	Disconnect job allowed indicator
47	2F	CHAR(17)	Reserved

SGNU0200 Format

Offset			
Dec	Hex	Type	Field
0	0		Everything from the SGNU0100 format
64	40	CHAR(50)	Display station description
114	72	CHAR(50)	User description

Field Descriptions

Activity. Information about what is happening with the interactive job. Valid values are:

BLDIDX   The user is using a file that is currently being rebuilt. The user's interactive job will be delayed until the file rebuild operation is complete or the Transfer to Secondary Job (TFRSECJOB) command has been run. The file name is in the activity name field.

CMD   The user is running a command. The command name is in the activity name field.

CMDENT   The user is currently on the Command Entry display.

DLY   The Delay Job (DLYJOB) command has been run, and the user's interactive job will be delayed until the time limit specified has passed.

DSCJOB   The user is temporarily signed-off (disconnected) the system (for example, option 80 on the ASSIST menu).

DUMP   The user encountered an unexpected error, and a printout of diagnostic information (dump) is being created.

GRP   The job is a suspended group job. The group name is in the activity name field.

HLD   The user's interactive job is temporarily stopped and cannot run until it is released.

MNU   The user is using a menu. The menu name is in the activity name field.

MSG   The user is waiting for a reply to a message.

PGM   The user is running a program. The program name is in the activity name field.

PRT   The job has ended but has output waiting to print.

SIGNOFF   A job is ending because the user has signed off the system, or the interactive job has ended due to one of the following:

- End Job (ENDJOB) command
- End Subsystem (ENDSBS) command
- End Group Job (ENDGRPJOB) command
- An unexpected error

SYSRQS   The user has pressed the System Request key.

S36PRC   The user is running a System/36 environment procedure. The procedure name is in the activity name field.

Activity name. The name of the program, menu, command, System/36 procedure, or file being used; or the group name of a suspended group job. The field is used only when the activity field is *PGM, *MNU, *CMD, *S36PRC, *BLDIDX, or *GRP. This field is blank for other activities.

Disconnect job allowed indicator. An indicator as to whether the job is allowed to be disconnected or not using the Disconnect Job (DSCJOB) command. The valid values that will be returned are:

1   The job is allowed to be disconnected.

0   The job is not allowed to be disconnected.

Display station description. The text that describes the device description of the display station to which the user is signed on.

Display station name. The name of the display station to which the user is currently signed on. This field is used as part of the job name by the system.

Display station specified. The display station or special value specified in the call to this API.

Format name. The name of the format that determines the content of the information returned for each signed-on user. This is specified on the call to this API.

Include disconnected jobs and suspended group jobs indicator specified. The include disconnected jobs and suspended group jobs indicator specified in the call to this API.

Include signed-off users with output waiting to print indicator specified. The include signed-off users with output waiting to print indicator specified in the call to this API.

Job number. The system-assigned job number.

Reserved. An ignored field.

User description. The text of the user profile description for the user currently signed on the system.

User name. The user profile name of the user currently signed on the system.

User name specified. The user name or special value specified in the call to this API.

User space library name. The library in which the user space is located.

User space name. The name of the user space that is to receive the generated list and the name of the library that contains this user space. This is specified in the call to this API.

Error Messages

Message ID	Error Message Text
CPF1EA1 E	User name parameter is not valid.
CPF1EA2 E	Display station parameter is not valid.
CPF1EA3 E	Include disconnected jobs parameter is not valid.
CPF1EA4 E	Include signed-off users with output parameter not valid.
CPF1E99 E	Unexpected error occurred.
CPF24B4 E	Severe error while addressing parameter list.
CPF3CAA E	List is too large for user space &1.
CPF3CF1 E	Error code parameter not valid.
CPF3C21 E	Format name &1 is not valid.
CPF3C90 E	Literal value cannot be changed.
CPF811A E	User space &4 in &9 damaged.
CPF9801 E	Object &2 in library &3 not found.
CPF9802 E	Not authorized to object &2 in &3.
CPF9803 E	Cannot allocate object &2 in library &3.
CPF9804 E	Object &2 in library &3 damaged.
CPF9838 E	User profile storage limit exceeded.
CPF9872 E	Program or service program &1 in library &2 ended. Reason code &3.

API introduced: V2R3

Operational Assistant Attention-Key-Handling (group jobs) (QEZMAIN) API

Default Public Authority: *USE
Threadsafe: No

The Operational Assistant Attention-Key-Handling (QEZMAIN) API creates a group job to display the OS/400 Operational Assistant menu (ASSIST). This avoids the Attention-key-handling program running in the same job as an application which leaves the keyboard unlocked between input and output operations. This API can only be used in an interactive job.

Notes:

1. The various job attributes (such as library list or the System/36$^{(TM)}$ environment) may differ between the user's job and the job in which the ASSIST menu runs. To avoid this situation, you might want to use the QEZAST API.

2. This program is only intended to be used as an Attention-handling program for jobs that do not transfer to other group jobs.

There are no parameters for this API.

Error Messages

Message ID	Error Message Text
CPF1E15 E	Problem occurred while calling Operational Assistant.
CPF3C90 E	Literal value cannot be changed.

API introduced: V2R1

Operational Assistant Attention-Key-Handling (nongroup jobs) (QEZAST) API

Default Public Authority: *USE
Threadsafe: No

The Operational Assistant Attention-Key-Handling (QEZAST) API uses the GO ASSIST command to display the system Operational Assistant menu (ASSIST). If you want your users to access the Operational Assistant menu by selecting an option from your application menus, you can add the control language (CL) statement *CALL QEZAST* to your application. This API can only be used in an interactive job.

This API can be used in place of the Operational Assistant Attention-Key-Handling (QEZMAIN) API when you do not want the Attention key to bring up the ASSIST menu in a group job.

There are no parameters for this API.

Error Messages

Message ID	Error Message Text
CPF3C90 E	Literal value cannot be changed.
CPF6ACD E	Menu &1 in &2 is wrong version for system.
CPF6AC7 E	Menu &1 in library &2 not displayed.

API introduced: V2R1

Save Information (QEZSAVIN) API

> Default Public Authority: *USE
>
> Threadsafe: No

The Save Information (QEZSAVIN) API displays the Save Information to Help Resolve a Problem display (option 10 on the Operational Assistant Documentation and Problem Handling menu). On that display, users can type a short description of the problem that they are experiencing with the system or with an application. A problem ID is assigned so that a problem analysis person can later look at this information using the Work with Problem (WRKPRB) command. The following information is collected:

- The entries in the QHST history log for the previous hour.
- Printer output from the following commands is placed on the QEZDEBUG output queue:
  - Work with Active Jobs (WRKACTJOB)
  - Display Messages (DSPMSG—For the work station and user)
  - Display System Operator Messages (DSPMSG QSYSOPR)
  - Display Job Log (DSPJOBLOG—For each group job at your display station)
  - Display Job (DSPJOB—For each group job at your display station)
  - Display PTF (DSPPTF—*ALL to give the PTF level of your system)
- Any service dumps (QPSRVDMP), program dumps (QPGMDMP), and job logs (QPJOBLOG) for this user.

There are no parameters for this API. This API can be used in an interactive job only.

Error Messages

Message ID	Error Message Text
CPF1E99 E	Unexpected error occurred.
CPF3C90 E	Literal value cannot be changed.
CPF9871 E	Error occurred while processing.
CPF9872 E	Program or service program &1 in library &2 ended. Reason code &3.

API introduced: V2R1

Send Message (QEZSNDMG) API

Optional Parameter Group 1:

1	Message type	
Input	Char(10)	
2	Delivery mode	
Input	Char(10)	
3	Message text	
Input	Char(*)	
4	Length of message text	
Input	Binary(4)	
5	List of user profile or display station names	
Input	Array of Char(10)	
6	Number of user profile or display station names	
Input	Binary(4)	
7	Message sent indicator	
Output	Binary(4)	
8	Function requested	
Output	Binary(4)	
9	Error code	
I/O	Char(*)	

Optional Parameter Group 2:

10	Show Send a Message display	
Input	Char(1)	
11	Qualified message queue name	
Input	Char(20)	
12	Name type indicator	
Input	Char(4)	

Optional Parameter Group 3:

13	Coded character set identifier	
Input	Binary(4)	

Default Public Authority: *USE

Threadsafe: No

The Send Message (QEZSNDMG) API sends a message to one or more users or display stations and optionally shows the Operational Assistant "Send a Message Display" on page 11 display before sending the message. Parameters can be specified, providing the ability to display initial values (defaults) to the user. Parameters determine:

* The type of message that is sent (informational or inquiry)
* The delivery mode of the message (break or normal)
* The message text
* The users or the display stations who will receive the message
* The message queue to receive the reply to an inquiry message
* Whether or not the Send a Message display is shown
* Whether the list of names contains user profile names or display station names

This API combines the functions of the Send Message (SNDMSG) and Send Break Message (SNDBRKMSG) commands. In addition, it provides the ability to:

* Send inquiry messages to more than one user
* Send break messages to user profiles
* Send break and inquiry messages to all active users
* Send nonbreak and inquiry messages to display stations

This API can be called with or without parameters. If parameters are specified, at least nine parameters are required. If this API is called in a batch job, parameter 10, Show Send a Message display, must be specified with a value of N. This will cause the message to be sent without using the Send a Message display.

Refer to Network Management APIs for information on alert messages. Refer to Message Handling APIs for information on the message handling APIs.

Authorities and Locks

Special Authority (*ALL or *ALLACT value on parameter 5)
        *JOBCTL

SNDBRKMSG Command (*BREAK delivery mode on parameter 2)
        *USE

Message Queue Authority
        *OBJOPR and *ADD

Message Queue Library Authority
        *EXECUTE

Send a Message Display

```
                      Send a Message
        Type information below, then press F10 to send.

          Message needs reply. . . . . . . . . . . N      Y=Yes, N=No

          Interrupt user. . . . . . . . . . . . . . . . . Y      Y=Yes, N=No

          Message text. . . . . . . . . . . . . . . . . _
          _____
          _____
          _____
          _____
          _____
          _____

          Send to. . . . . . . . . . . . . . . .  _____      Name, F4 for list
                                   _____
                                   _____

                                                         More...
         F1=Help   F3=Exit   F10=Send  F12=Cancel
```

Optional Parameter Group 1

Message type

        INPUT; CHAR(10)

The type of message to send. The value you specify determines the default for the *Message needs reply* prompt on the Send a Message display (N for *INFO and Y for *INQ). You must specify one of these values:

*INFO	Informational. The message does not need a reply.
*INQ	Inquiry. The message needs a reply. If the message queue and library name parameter was specified, the reply is placed on that message queue; otherwise, the reply is placed on the message queue specified in the user profile of the sender.
	The user profile name of the person sending the reply is added to the beginning of the message text, allowing the person receiving the reply to determine which user it is from.

Delivery mode

        INPUT; CHAR(10)

The delivery mode of the message. The value you specify determines the default for the *Interrupt user* prompt on the Send a Message display (Y for *BREAK and N for *NORMAL). If the user is not authorized to send a break message, *NORMAL is used regardless of the value you specify. You must specify one of these values:

*BREAK	Break message. If the user is signed on, the message goes to the work station message queues that the user is signed on to and temporarily interrupts the work that the user is doing. If the user is not signed on, the message goes to the user profile message queue and the sender is notified. If display station names are specified, the message goes to the message queues for the specified display stations.
*NORMAL	The message goes to the user profile or display station message queue. If the message queue is in notify mode for that user, the message waiting light is turned on. If the message queue is in break mode, the message temporarily interrupts the work that the receiver is doing. If the message queue is in hold mode, the receiver is not notified.

Message text
>   INPUT; CHAR(*)

>   The complete text of the message. The text you specify is displayed as the default on the Send a Message display. This must not be blank if used in a batch job or if the Show Send a Message display parameter is N.

Length of message text
>   INPUT; BINARY(4)

>   The length of the message text, in bytes. Valid values are 0 through 494. This must be greater than 0 if the API is used in a batch job or if the Send a Message display is not to be shown.

List of user profile or display station names
>   INPUT; ARRAY OF CHAR(10)

>   A list of 0 through 299 user profile or display station names to which the message is being sent. The list you specify is shown as the default on the Send a Message display.

>   The name type indicator parameter indicates whether the names in the list are user profile names or display station names; the default is user profile names. At least one name must be specified if the API is used in a batch job or if the Send a Message display is not to be used.

>   The message is sent to the user profile or display station message queue. To specify other user message queues, use one of the following special values:

*ALL	The message queues of all users. When you use this value, it must be the only item in the list. This value cannot be used if *DSP is specified for the name type indicator parameter.
*ALLACT	The message queues of all active users or display stations. This value can be used in combination with specific user profile names or display station names and with *SYSOPR.
*SYSOPR	The system operator's message queue, QSYSOPR. This value can be used in combination with specific user profile names and with *ALLACT. It cannot be used if *DSP is specified for the name type indicator parameter.

>   If the list specifies display station names, the library list will be used to find the work station message queues.

>   **Note:** *JOBCTL special authority is required to use the *ALL or *ALLACT value in this parameter.

Number of user profile

or display station names
>   INPUT; BINARY(4)

>   The number of user profile or display station names specified. Valid values are 0 through 299. When you use the special value *ALL for the list of user profile or display station names parameter, specify 1. This must be greater than 0 if the API is used in a batch job or if the Send a Message display is not to be used.

Message sent indicator
>   OUTPUT; BINARY(4)

>   Whether the user pressed F10 (Send message) to send one or more messages from the Send a Message display. One of the following values is returned:

0	No messages were sent.
1	One or more messages were sent. If the Show Send a Message display parameter is N and the program completes without error, this will always be 1.
2	One or more messages were sent, but one or more of the names specified were not valid. If the Show Send a Message display parameter is Y or not specified, the user names will be displayed and validated before the message is sent; therefore, this value will not be used.

Function requested
> OUTPUT; BINARY(4)

> The function that the user requested when exiting the Send a Message display. One of the following values is returned:

-4 User pressed the Exit key (F3).
-8 User pressed the Cancel key (F12).
0 Send a Message display was not used.

Error code
> I/O; CHAR(*)

> The structure in which to return error information. For the format of the structure, see Error Code Parameter.

Optional Parameter Group 2

Show Send a Message display
> INPUT; CHAR(1)

> Whether or not to show the Send a Message display before sending the message. If this parameter is used, one of the following values must be specified;

Y Use the Send a Message display. This is the default.
N Do not use the Send a Message display. This value must be specified if the program is running in a batch job.

Qualified message queue name
> INPUT; CHAR(20)

> The name of the message queue that is to receive the reply for inquiry-type messages. The first 10 characters contain the message queue name, and the second 10 characters contain the library name. If this parameter is blank or not specified, the reply will be sent to the message queue specified in the user profile of the sender. This parameter is ignored if the message type parameter is not *INQ. If this parameter is used, you can use these special values for the library name:

*LIBL The library list
*CURLIB The job's current library

Name type indicator
> INPUT; CHAR(4)

> The type of names in the list. If this parameter is used, one of the following values must be specified:

*USR The list of names contains only user profile names. *USR is the default.
*DSP The list of names contains only display station names. This value may not be specified if the Show Send a Message display parameter is Y.

Optional Parameter Group 3

Coded character set identifier
> INPUT; BINARY(4)

> The coded character set identifier (CCSID) that the immediate message text is in. The following values are allowed:

0	The immediate message text is assumed in the CCSID of the job running this API. This is the default value if this parameter is not specified.
65535	The immediate message text will not be converted.
CCSID	Specify a valid CCSID that your immediate message is in. Valid values are between 1 and 65535. This API will validate the CCSID.

For a list of valid CCSIDs, see the Globalization topic.

Error Messages

Message ID	Error Message Text
CPF1EA0 E	Not authorized to send message to *ALL or *ALLACT.
CPF1EBA E	Parameters passed on CALL do not match those required.
CPF1EBB E	Value &1 not valid for list of display station names.
CPF1EBC E	At least one user or display station must be specified.
CPF1EBD E	Message text cannot be blank.
CPF1EBE E	Display station names cannot be used with the Send a Message display.
CPF1EBF E	Value for Use Send a Message display not valid
CPF1EB2 E	Delivery mode must be *BREAK or *NORMAL.
CPF1EB3 E	Value for length of message text must be 0 through 494.
CPF1EB4 E	Number of user profile names not valid.
CPF1EB5 E	Value for number of user profile names must be 0 through 299.
CPF1EB6 E	Program &1 cannot be run as a batch job.
CPF1EB7 E	*ALL not allowed with other user profile names.
CPF1EB8 E	Value &1 for name type indicator not valid.
CPF1EB9 E	Value &1 not valid for list of user profile names.
CPF1E99 E	Unexpected error occurred.
CPF24B3 E	Message type &1 not valid.
CPF24B4 E	Severe error while addressing parameter list.
CPF2403 E	Message queue &1 in &2 not found.
CPF2408 E	Not authorized to message queue &1.
CPF3C90 E	Literal value cannot be changed.
CPF3CF1 E	Error code parameter not valid.
CPF9871 E	Error occurred while processing.
CPF9872 E	Program or service program &1 in library &2 ended. Reason code &3.

API introduced: V2R1

Work with Jobs (QEZBCHJB) API

Default Public Authority: *USE
Threadsafe: No

The Work with Jobs (QEZBCHJB) API uses the Work with User Jobs (WRKUSRJOB JOBTYPE (*BATCH)) command to display either of the following:

- For the basic assistance level, the Work with Jobs display
- For the intermediate assistance level, the Work with User Jobs display

There are no parameters for this API.

Error Messages

Messages are the same as the WRKUSRJOB command messages.

API introduced: V2R1

Work with Messages (QEZMSG) API

Default Public Authority: *USE
Threadsafe: No

The Work with Messages (QEZMSG) API shows messages in a message queue.

The Work with Messages (QEZMSG) API uses the Display Message (DSPMSG) command to display either of the following:
- For the basic assistance level, the Work with Messages display
- For the intermediate assistance level, the Display Messages display

There are no parameters for this API. When the API is called, the default parameter values are used for the command.

Authorities and Locks

Command Authority
　　　*USE authority to the DSPMSG (Display Message) command

Message Queue Authority
　　　*USE and *ADD if replying to an inquiry,

　　　*USE and *DLT if removing a message,

　　　*USE for other message functions

Message Queue Library Authority
　　　*USE

Error Messages

Messages are the same as the Work with Messages (WRKMSG) and DSPMSG command messages.

API introduced: V2R1

Work with Printer Output (QEZOUTPT) API

Default Public Authority: *USE
Threadsafe: No

The Work with Printer Output (QEZOUTPT) API uses the Work with Spooled Files (WRKSPLF) command to display either of the following:
- For the basic assistance level, the Work with Printer Output display
- For the intermediate assistance level, the Work with All Spooled Files display

There are no parameters for this API. When the API is called, the default parameter values are used for the command.

Error Messages

Messages are the same as the WRKSPLF command messages.

API introduced: V2R1

Exit Programs

These are the Exit Programs for this category.

Exit Program for Tailoring Automatic Cleanup

You may want to develop your own programs to regularly clean up some of the objects that are not handled by the Operational Assistant automatic cleanup functions.

You can incorporate your own programs into the IBM-supplied automatic cleanup function by using the QEZUSRCLNP program. Then, whenever the system runs automatic cleanup, it also runs your own cleanup programs.

To make a copy of the QEZUSRCLNP program:
1. Type `RTVCLSRC` (the Retrieve CL Source command) on any command line and press F4 (Prompt). Type the following values for the prompts:

Program	QEZUSRCLNP
Library	QSYS
Source file	Name of source file
Library	Name of library

   Press the Enter key.
2. Insert statements that run your own cleanup programs into your copy of QEZUSRCLNP.
3. Compile your copy of the QEZUSRCLNP program and store it in a library that appears before the QSYS library in the system part of the library list as specified in system value QSYSLIBL.

Whenever the system runs the automatic cleanup function, your version of QEZUSRCLNP is also run.

Note: When Operational Assistant batch cleanup program is running, it uses QUSRSYS library or QEZPWRCLN user index. The cleanup may encounter difficulties if other jobs are also using the same library or user index at this time. Therefore, avoid starting such command as SAVLIB QUSRSYS, or the power schedule commands in the QEZUSRCLNP CL program. If you must start those commands, consider adding them to the Exit Program for Tailoring Power Off (QEZPWROFFP), or changing the subsystem that runs your cleanup jobs to allow only two jobs to run at the same time.

Exit program introduced: V2R1

Exit Program for Tailoring Operational Assistant Backup

Required Parameter Group:	
1	Calling product
Input	Char(10)
2	Exit indicator
Input	Char(10)
3	Options
Input	Char(10)
4	Device
Input	Char(40)
5	Tape set
Input	Char(4)
6	Return code
Input	Char(7)

You can tailor the Operational Assistant automatic backup by specifying an exit program on the Change Backup (CHGBCKUP) command. If an exit program is specified, that program is called both before the Operational Assistant backup is run and after backup is run. You specify within the exit program when you want your functions to run.

If this program ends abnormally or sends an escape message to its caller when running before the backup, the backup will not continue.

When running backup, you could write your own exit program to back up some additional objects that are not included on the folder or library backup list.

Another example of using an exit program could be when you want to clean up some items before the system does its backup. This would save time and resources by not backing up objects you want deleted.

Refer to Using the Operational Assistant Exit Program for Operational Assistant Backup in the API Examples for an example exit program for backup.

Required Parameter Group

Parameters your exit program should be able to handle are:

Calling product
    INPUT; CHAR(10)

    The name of the product calling the exit program. This parameter is supplied so that the exit program can tell whether it is called from the iSeries Run Backup (RUNBCKUP) command or from another application. When called from the RUNBCKUP command, the value is QEZBACKUP.

Exit indicator

> INPUT; CHAR(10)

> Whether this program is called before or after the backup is done. The possible values are:

*BEFORE   This call is before the backup has started.
*AFTER   This call is after the backup has run.

Options

> INPUT; CHAR(10)

> Indicates that the specified backup options are used. The possible values are:

*DAILY   The daily backup options are used.
*WEEKLY   The weekly backup options are used.
*MONTHLY   The monthly backup options are used.

Device

> INPUT; CHAR(40)

> The name of up to four devices to be used for the backup. Each device is left-justified on a 10-byte boundary.

Tape set

> INPUT; CHAR(4)

> The name of the tape set to be used for the backup. Operational Assistant backup combines the tape set name (1 to 4 characters) with volume numbers from 01 to 99 to generate the volume IDs of the tape volumes to be used by the backup.

Return code

> INPUT; CHAR(7)

> The message ID of the message returned by backup. This is blank before the backup.

Error Messages

Message ID	Error Message Text
CPC1E62 C	Backup successfully completed.
CPF1E68 E	Backup incomplete.
CPF1EE7 E	Unexpected error occurred during backup.
CPF1E99 E	Unexpected error occurred.

Exit program introduced: V2R2

Exit Program for Tailoring Power Off

The Power-Off exit program (QEZPWROFFP) is shipped with the system and stored in the QSYS library. This exit program powers off the system according to the power on and off schedule by running the Power Down System command PWRDWNSYS OPTION(*IMMED). (Use the Change Power Schedule Entry (CHGPWRSCDE) command or the Change Power Schedule (CHGPWRSCD) command to set the power on and off schedule.)

You can tailor this program to change how you want the system powered off. For example, you could change the program so that the system would not power off immediately.

To change this program:

1. Type `RTVCLSRC` (the Retrieve CL Source command) on any command line and press F4 (Prompt). Type the following values for the prompts:

Program	QEZPWROFFP
Library	QSYS
Source file	Name of source file
Library	Name of library

   Press the Enter key.
2. Change the source to tailor the program. For example, you may want to specify RESTART(*YES) for the PWRDWNSYS command to cause the system to power on (IPL) when the power down is complete.
3. When you are finished changing the program, use the Create CL Program (CRTCLPGM) command and fill in the fields as you did when you retrieved the program. The program you create must be named QEZPWROFFP.
4. To use the new program, put the new program in a library before the QSYS library in the system part of the library list as specified in system value QSYSLIBL.

Notes:
1. Remember that this program controls the scheduled powering off of the system. If you remove the Power Down System (PWRDWNSYS) command, the system does not automatically power down on schedule. If you change the OPTION parameter on the PWRDWNSYS command to *CNTRLD, the system may wait the amount of time specified by the DELAY parameter before it powers off. If the DELAY parameter is changed to *NOLIMIT, the system may never power off.
2. If your next scheduled power-on time is fairly close to the scheduled power-off time, and you have long running commands or calls to programs ahead of the PWRDWNSYS command, your system may not have powered off by the time it is scheduled to power on again. Before the system is powered down, check the time of the next scheduled power up using the Retrieve Power Schedule Entry (RTVPWRSCDE) command. You should also use the Change Power Schedule Entry (CHGPWRSCDE) command to reset the system value. If it is within 1/2 hour, do not power off the system; otherwise, your system may not power on again, and you will need to do a manual IPL.
3. This program will not get called when the current time is less than 30 minutes before the next scheduled power-on time.

Exit program introduced: V2R1

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