



ENQWATCH

Program Information

E-mail: Support@abbydalesystems.com

COPYRIGHT

This computer programming material remains the exclusive property of Abbydale Systems LLC..
Permission for its use may be obtained by contacting:

Abbydale Systems LLC.
2925 Gulf Freeway South
Suite B #229
LEAGUE CITY
Texas USA
77573

ATTN: K.E.Ferguson
Legal@abbydalesystems.com

Disclaimer

Kevin E. Ferguson of **Abbydale Systems LLC.**, has developed this computer program and associated materials.

This material has been used successfully by **Abbydale Systems LLC.** and to the best of our knowledge this material and any system(s) of which it is a part are operational as of the service level or date stated in the body of this material (if so stated). However, **no warranty** is given or implied as to the accuracy of this material or any related material or systems, and **no responsibility** is assumed for any effect or modification directly or indirectly caused by the use of this material.

It is the responsibility of any user of this material to evaluate its usefulness to the user's environment.

Abbydale Systems LLC. does not guarantee to keep this nor any related material current, nor does it guarantee to provide any corrections or extensions described by any users of this material or any corrections or extensions made in the future by **Abbydale Systems LLC.** itself.

Acknowledgements

This document refers to several software products that are produced by other companies. In most cases the names of these products are trademarks and/or copyright of those companies. It is not our intention to claim either the name of the trademark, nor the product itself, these remain solely the right of the owning companies.

CONTENTS

<u>COPYRIGHT</u>	2
<u>Disclaimer</u>	2
<u>Acknowledgements</u>	2
1 Overview	6
1.1 Passed Parameters	6
1.2 Called Programs: None (Indirectly calls) None	6
1.3 IBM macros used:	6
1.4 Assembled Program Values	6
1.4.1 MAXMSGS	7
1.4.2 MAXOWNER	7
1.4.3 AREASIZE	7
1.4.4 SMFON	7
1.4.5 SMFREC	7
1.4.6 WAITTIME	7
2 Installation Procedure	8
2.1 From XMI File	8
2.2 By Assembling the Source Code	8
2.2.1 Sample Assembly Job.....	8
2.3 Sample JCL for ENQWATCH	9
Example 1.....	9
Example 2.....	Error! Bookmark not defined.
Example 3.....	Error! Bookmark not defined.
Example 4.....	Error! Bookmark not defined.
Example 5.....	Error! Bookmark not defined.
3 Messages	10
ENQW001I	10
ENQW002I	10
ENQW003I	10
ENQW004I	11
ENQW005E	11
ENQW006E	11
ENQW007I	12
ENQW008I	12
ENQW009E	13
ENQW010E	13
ENQW011I	13
ENQW012E	14
4 Summary of Amendments	15
<u>Obtaining Support</u>	16

1 Overview

The program, **ENQWATCH**, is based around the IBM supplied program ISGECMON with the features of the David Alcock's ISGECMOM added and massively re-written and some 'bells and whistles' added.

ENQWATCH will only work for dataset conflicts between batch jobs and TSO users. Conflicts between two or more batch jobs are not handled by this program.

It is designed to be used as a long running program, in fact it won't end at all until you issue a stop for, or cancel, it. With this in mind remember that you will need to code TIME=NOLIMIT or TIME=1440 on the EXEC statement.

The purpose of the program is the monitor the system for any dataset contention and if the holder of the resource is a TSO user, it will send them a message requesting that they free the resource.

The added features of **ENQWATCH** include:

- The ability to force an iteration of the loop thereby allowing automation to be written to immediately send a message to a TSO user if they are holding up an important batch run.
- More statistics are available including how many times the iteration was forced by the above feature.
- The program has been modified to allow commands to take effect immediately rather than wait until the loop time limit is met.
- Dynamic adjustment of the wait time limit is now supported.
- The ability to cut SMF records. These will be cut even if the maximum number of notifies has been sent.

ENQWATCH must be run from an authorized library because a STIMER exit is used within it

1.1 Passed Parameters

An optional wait time can be passed to the program. It must be between one and four numbers long. If omitted a default value will be used (60 seconds).

1.2 Called Programs: *None* **(Indirectly calls)** *None*

1.3 IBM macros used:

CVT	IEZCOM	LTORG	STORAGE
EXTRACT	IHAASCB	MODESET	TIME
GQSCAN	IRAUCB	QEDIT	TPUT
IEZCIB	ISGRIB	SMFWTM	WAIT
	LOCASCB	STIMER	WTO

1.4 Assembled Program Values

There are six values that currently are only set when the program is assembled. If you need to change any of the first three values, then the program will only pick them up after a restart. These values are located at the top part of the program and they are:

1.4.1 MAXMSGs

This is the maximum number of 'Get the heck out of the dataset' messages that will be sent to single individual TSO users for any given ENQ conflict. The current value for this is 5. This value will not affect the SMF record being produced.

1.4.2 MAXOWNER

This is the value for the maximum number of ENQ conflicts that can be tracked. This value is currently set at 50. Note: only conflicts between TSO users and batch jobs are included.

1.4.3 AREASIZE

This value specifies the size of the area to be used to hold the RIBS and RIBES and should only be changed by a system programmer. This value is multiplied by 1000 in the program. The current value for AREASIZE is 10.

1.4.4 SMFON

This is a flag that denotes whether SMF records are cut when an ENQ notify is issued. 1 means cut SMF records, any other value and no SMF records are cut.

The status can be changed dynamically using the SMF command.

1.4.5 SMFREC

This is the numeric value of the SMF record type to be cut if SMF recording is switched on. The value must be between 128 and 255.

Please be sure to check with your site SMF administrators before setting this value to ascertain which SMF record number to use. Some third-party vendors produce SMF records in the range 128-255 notably Syncsort which cuts SMF type 208 records by default.

The default value for the SMF record number is 223.

1.4.6 WAITTIME

This is the value, in seconds, which the program will wait for between normal iterations of the loop cycle. The current value for WAITTIME is 60 seconds.

Do not exceed 9999 seconds or the program may fail.

The value for WAITTIME can be changed dynamically while the program is running, but obviously if a permanent change is desired this value needs to be changed, the program re-assembled and then restarted.

The current settings for these values can be displayed using the INFO command (F sysname,INFO).

2 Installation Procedure

2.1 From XMI File

The XMI (or XMIT) file is in IBM TSO TRANSMIT format and **must** be transferred to z/OS™ as a fixed blocked 80 byte BINARY file. The disk space requirement for the file is 2 tracks of 3390 disk.

The FTP process (if performed in a 3270 emulator) must be performed in TSO READY mode or in option 6 of ISPF™.

The dataset name used as input for the TSO TRANSMIT was ABBYDALE.ENQWATCH.LOADLIB. Unless this is changed by the TSO RECEIVE command it will be the name of the dataset created by the RECEIVE command.

2.2 By Assembling the Source Code

To assemble **ENQWATCH** the source code must be saved in a partitioned dataset and assembled using High Level Assembler. (ASMA90).

It should be linked using LIST,LET,NCAL,MAP LOADER options.

2.2.1 Sample Assembly Job

The following is a sample assemble and link JCL the can be used to assemble **ENQWATCH**

```
//STEP1 EXEC PGM=ASMA90, PARM='OBJECT,NODECK', REGION=1024K
//SYSPRINT DD SYSOUT=*
//SYSLIB DD DSN=SYS1.MACLIB, DISP=SHR
// DD DSN=SYS1.AMODGEN, DISP=SHR
//SYSUT1 DD SPACE=(CYL,(2,1)), UNIT=SYSDA, DSN=&&WRK1
//SYSLIN DD DSN=&&WRK5, UNIT=SYSDA, SPACE=(CYL,(2,1)),
// DCB=(RECFM=FB, BLKSIZE=3200, LRECL=80), DISP=(, PASS)
//SYSIN DD DSN=your.input.pds (ENQWATCH), DISP=SHR
//LKED1 EXEC PGM=IEWL, PARM='LIST,LET,NCAL,MAP', COND=(4,LT)
//SYSLMOD DD DSN=your.output.load.library (ENQWATCH), DISP=SHR
//SYSPRINT DD SYSOUT=*
//SYSLIN DD DSN=&&WRK5, DISP=(OLD,DELETE)
```

2.3 *Sample JCL for ENQWATCH*

The following JCL will run **ENQWATCH**

Example 1

```
//stepname EXEC PGM=ENQWATCH,TIME=NOLIMIT  
//STEPLIB DD DISP+SHR,DSN=your.loadlib  
//SYSUDUMP DD SYSOUT=*
```

This JCL will run **ENQWATCH**. You will need to specify 'TIME=NOLIMIT' as the program will not end until a stop is issued for it.

It is recommended that **ENQWATCH** is run as a started task and that it is started and stopped by an automation product.

3 Messages

ENQW001I

ENQW001I : Starting - ENQWATCH last assembled on *mm/dd/yy* at *hh.mm*

Meaning

This message is issued when **ENQWATCH** is started. The date and time values will be filled in with the actual date and time that **ENQWATCH** was last assembled.

Corrective Action

This is an informational message and no action need be taken.

ENQW002I

ENQW002I - Enqueue monitor active

Meaning

This message is an indication that **ENQWATCH** has obtained all of the storage it needs and successfully established the operator interface and is now waiting on the ECB list. In other words...it is up and running.

Corrective Action

This is an informational message and no action need be taken.

ENQW003I

ENQW003I -- Free of start CIB unsuccessful

Meaning

This message is issued to indicate that **ENQWATCH** had trouble freeing the control interface block for a start command. This is no big deal as we don't use a subsystem start command.

You should never see this message, but it is included for completeness.

Corrective Action

This is an informational message and no action need be taken.

ENQW004I

ENQW004I - Enqueue monitor shutdown in progress.

Meaning

This message is issued to indicate that and stop command was issued for **ENQWATCH** and it is being closed down.

Corrective Action

This is an informational message and no action need be taken.

ENQW005E

ENQW005E - GQSCAN Failed. Retrying.

Meaning

This message is issued to indicate that **ENQWATCH** had a problem issuing the GQSCAN macro to list dataset contentions. The program will attempt a retry at the next wait time expiration.

If the message continues to keep on being issued, then notify the System Programmer.

Corrective Action

This message is an indication that the GQSCAN area is too small to hold all the contentions. If this message keeps on being issued, consider increasing the value for ARAEASIZE and re-assembling the program.

ENQW006E

ENQW006E – Invalid command.

Meaning

This message is issued to indicate that the operator command entered for **ENQWATCH** was invalid or not supported.

Corrective Action

This message is an indication that the GQSCAN area is too small to hold all the contentions. If this message keeps on coming out consider increasing the value for ARAEASIZE and re-assembling the program.

ENQW007I

ENQW007I - ENQWATCH was assembled using these values:.

Meaning

The ENQW007I messages are issued to display the current value of the MAXMSGs, MAXOWNER, AREASIZE and WAIT time.

In the case of WAIT time there is also an indication of how the wait time limit was set (operator command, default or passed parameter).

These messages are issued and startup and as the result of the INFO operator command being issued.

An example of the ENQW007I messages follows:

```
ENQW007I - ENQWATCH was assembled using these values:  
ENQW007I - Maxmsgs=5, Maxowner=50, Areasize=10,000  
ENQW007I - Wait time=232 Seconds (Set via Parm).  
ENQW007I - SMF Recording is ON. Record Number=223
```

Corrective Action

These are informational messages and no action need be taken,

ENQW008I

ENQW008I - Status: Notify=n, Cycles=c, Loops=l

Meaning

The ENQW008I message is issued either as a response to a STATS command or at **ENQWATCH** termination time.

The message is a count of :

- How many times a message was sent to TSO users (The notify value)
- How many CYCLE commands were issued to the program (The cycle value)
- How many times the wait interval triggered a GQSCAN (The loops value)

Corrective Action

These are informational messages and no action need be taken.

ENQW009E**ENQW009E - Invalid WAIT command. No action taken.****Meaning**

The ENQW009E message is issued as the result of an invalid wait value being requested by an operator command.

The prior wait value will still be in effect until a successful WAIT command is processed.

Corrective Action

Correct the WAIT command and retry.

ENQW010E**ENQW010E - Invalid PARM passed. Default wait taken****Meaning**

The ENQW010E message is issued when the parameter being passed to **ENQWATCH** on the EXEC JCL card is detected to be invalid.

The parameter will be ignored, and the default wait time value used (currently 60 seconds).

Corrective Action

The wait value can be changed dynamically via the WAIT command, but the JCL will need to be corrected in order to make this a permanent change.

ENQW011I**ENQW011I - SMF recording has been switched OFF | ON****Meaning**

The ENQW011I message is issued in response to a F ENQWATCH, SMF OFF or SMF ON command.

The status of SMF recording can be displayed by using the INFO command.

Corrective Action

This is an informational message and no action need be taken.

ENQW012E**ENQW012E - Invalid SMF command. No action taken.****Meaning**

This message is issued when the program detects that an invalid format of the F ENQWATCH,SMF command has been issued.

The only options for the SMF command are SMF OFF or SMF ON

Corrective Action

This is an informational message and no action need be taken, however you will need to correct the modify with the valid format and re-issue it before the desired action is complete.

4 Summary of Amendments

Date	Version	Fix Id.	Comment
19 th January 2026	6.0	n/a	Corrected the JCL section.
15 th December 2023	6.0	n/a	Correct messages.
30 th May 2017	6.0	n/a	Made program 31 bit addressable.
28 th May 2017	5.1	n/a	Transferred to Abbydale Systems LLC.
20 th February 2012	5.1	JOB0 2	Added Replace_Jobname subroutine
19 th February 2012	5.0	JOB0 1	Commented out redundant code

Obtaining Support

Support for, comments about and suggestions for enhancements for this product can be obtained from our website :

www.abbydalesystems.com

or by emailing us at

support@abbydalesystems.com

In order to assist us in filtering support emails please specify in the heading of the email the name of the product that you require support on.

Spam will not be tolerated at this email address.

Where source code is provided for the product, support will be on a 'best efforts' basis. Where the user site has modified the source code, support may entail requesting copies of that sites source code and may result in support being withdrawn if this is not provided.

Abbydale Systems LLC. reserves the right to any code modifications that may have been undertaken at the user site.

Any alteration of the copyright information contained in the original source code is an infringement of the copyright of this and any other Abbydale Systems product and may result in legal action being taken against the perpetrator.

