Input List Shutdown Driver

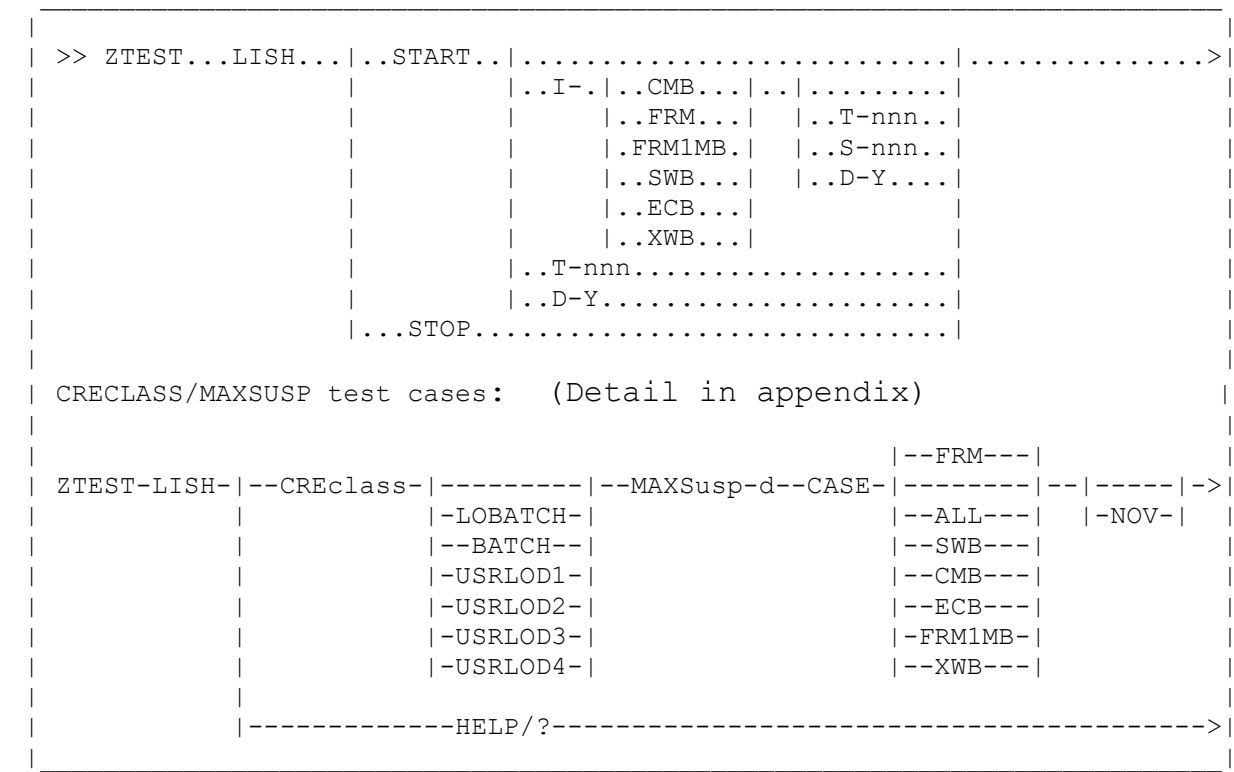
1.0 Introduction

Lodic/Input List Shutdown Driver is intended to be used as a test tool to create background activity in a TPF system. At the same time, the driver will be testing for both Lodic Shutdown Levels, and Input Shutdown Levels. The Levels are:

- Number of ECB's
- Number of FRM's
- Number of SWB's
- Number of CMB's
- Number of XWB's

When QXN5 get invoked, two qxn5s will start simultaneously. One copy will be testing for Lodic Shutdown Level (this copy will get suspended once TPF detects Lodic Level Shutdown limit), the other qxn5 will be testing for input list shutdown level.

2.0 Syntax Information



NOTE:

1). If you want to run the driver in Delay mode or "SLOW MODE", you need to issue:
ZTEST LISH START D-Y

2). You will get an error msg if you try to invoke multiple copies of LISH.

2.2. **Sample Invocations**

- **Ztest lish start** - *This command will start the input shutdown driver (use default values)*
- **Ztest lish stop** - *This command will stop the input shutdown driver*

The driver accepts few parameters:

- **Ztest lish start I-***Resourcename (CMB, FRM,FRM1MB, SWB,ECB)*
- **Ztest lish start T-nnn** *-How many seconds to keep the system in the inputshut down*
- **Ztest lish start I-***Resourcename T-nnn -which resource and for how long to keep the system in inputlist*
- **Ztest lish start I-***Resourcename S-nnn -Which resource and how many blocks to use*
- **Ztest lish start I-cmb** *-will only use cmb*
- **Ztest lish start I-frm** *-will only use frm*
- **Ztest lish start I-frm1mb** *-will only use frm1mb*
- **Ztest lish start I-swb** *-will only use swb*
- **Ztest lish start I-ecb** *-will only use ecb*
- **Ztest lish start T-100** *-The system will stay in inputlist shutdown for 100sec*
- **Zest lish start I-swb S-1000** *-The system will use 1000 units of swb and keep that resource until the system goes to inputlist shutdown or until ztest lish stop is issued*

3.0 Source Code Information

Header Files:

slecb.h

Source Segments:

QXN0 - Invokes QXN3.
QXN1 - Stops the lodic/input list shutdown driver. Sends a signal to QXN5 to stop.
QXN3 - Allocates/deallocates resources. There will be many copy of QNX3. QXN3 also displays two messages to let the operator know if the system is in/above lodic or input list shutdown.
QXN5 - Starts lodic/input list shutdown driver. It displays the messages to let the operator knows when the system is in lodic/inputlist shutdown.

3.1 Building the Driver

Segments/Source code

QXN0.CPP
QXN1.CPP
QXN3.CPP
QXN5.CPP

LoadDeck

The following should be loaded:

LOADER CALL PROG QXN0.so
LOADER CALL PROG QXN1.so
LOADER CALL PROG QXN3.so
LOADER CALL PROG QXN5.so

4.0 Driver Messages

Normal Responses:

```
LISH0001I 12.21.42 ATTEMPTING TO PUT INPUT LIST LEVEL BELOW
RESOURCE=(Resource
                   name)+
LISH0001I 12.21.42 ATTEMPTING TO PUT LODIC LEVEL BELOW RESOURCE=(Resource
                   name)+
LISH0001I 12.23.45 INPUTLIST SHUTDOWN ABOVE LIMIT+
LISH0001I 12.25.13 ECB WAS HELD, TIME IN=<time>,OUT=<time>,NOT
                   ENOUGH-(Resource name)+
LISH0001I 12.21.42 LODIC IS ABOVE LIMIT+
LISH0001I 08.11.38 INPUTLIST SHUTDOWN ABOVE LIMIT+
LISH0001I 12.23.05 LODIC SHUTDOWN WAS DETECTED+
LISH0001I 12.21.42 STARTING DRIVER ... +
LISH0001I 12.24.40 INPUT LIST SHUTDOWN WAS DETECTED+
LISH0001I 12.25.13 ISHUT - RELEASING-<resource name> +
LISH0001I 12.27.58 LODIC - RELEASING-<resource name> +
LISH0001I 11.45.49 DONE TESTING SHUTDOWN ...+
```

Error Responses:

```
LISH0001I 12.29.56 ALREADY RUNNING+
```

Explanation: Trying to run ztest lish start -- more than once.

5.0 Misc. Information

To make sure that the driver is running as it should, tester should monitor the system once in a while using the following commands:

zsysl - to display the lodic shutdown levels
zdclv - to display the input list shutdown levels
zstat u - to display input list, defer list..etc.
zstat - to display memory usage

Note: The priority for lodic is batch

Before running the driver, record the numbers displayed by zdsysl and zdclv.

zsysl disp class-batch

```
SYSL0002I 07.51.24
CURRENT SHUTDOWN LEVELS FOR CLASS BATCH
            TOTAL     SHUTDOWN  SHUTDOWN
KEYWORD   ALLOCATED     LEVEL     PCT-AGE
  CMB         266         127        48
  ECB         500         240        48
  FRM        5000        2400        48
  IOB        2704        1297        48
  SWB        1252         600        48
  FRM1MB       40          19        48
END OF DISPLAY+
```

zdclv

```
DCLV0001I 08.00.11  STORAGE CONTROLS
     DESCRIPTION      VALUE   ZACLV PARM
  SYST   MAX ECB        375     MXECBS
  INPUT  MIN FRAME     1250     MNFRAI
         MIN COMMON      40     MNCMBI
         MIN ECB        125     MNECBI
         MIN SWB        188     MNSWBI
         MIN IOB        270     MNIOBI
         MIN FRM1MB       1     MNFR1MBI
        .....
 END OF DISPLAY+
```

zstat

```
CSMP0097I 08.09.24 CPU-B SS-BSS  SSU-HPN  IS-01
STAT0012I 08.09.24 SYSTEM STATUS DISPLAY
              IOB  FRAME COMMON    SWB    ECB FRM1MB
ALLOCATED    2704   5000    266   1252    500     40
AVAILABLE    2704   1255    113    758    423     40
....
END OF DISPLAY+
```

Remember that you can alter the above values if you think you need to.

Run the driver: ZTEST LISH START

The messages below should agree with the values returned by zsysl, zdclv, and zstat.

Messages:

LISH0001I 12.27.38 ECB WAS HELD, TIME IN=12:26:47, OUT=12:27:38,NOT ENOUGH-***Resource type***

Explanation: Resource type is the name of the resource type that the driver detects input list shutdown for. It does not have to be the same name as the name of the rosource that was specified when the driver was invoked.

LISH0001I 12.21.42 LODIC IS ABOVE LIMIT+

Explanation: The values return it by zstat **"AVAILABLE"** storage is greater than the values return by zsysl functonal msg. Also verify that the deferred list is less than 1.
Verify by typing:

Zstat
Zstat u
zsysl disp class-batch

LISH0001I 12.23.05 LODIC SHUTDOWN WAS DETECTED+

Explanation: The values return it by zstat **"AVAILABLE"** storage is less than the values return by zsysl functonal msg. Also verify that the deferred list starts to increase.
Verify by typing:

Zstat
Zstat u
zsysl disp class-batch

LISH0001I 08.11.38 INPUTLIST SHUTDOWN ABOVE LIMIT+

Explanation: The values return it by zstat **"AVAILABLE"** storage is greater than the values return by zdclv functonal msg. Also verify that the input list is less than 2
Verify by typing:

Zstat
Zstat u
zdclv

LISH0001I 12.24.40 INPUTLIST SHUTDOWN WAS DETECTED+

Explanation: The values return it by zstat **"AVAILABLE"** storage is less than the values return by zdclv functonal msg. Also verify that the input list start to increase.

Verify by typing:

Zstat

Zstat u

zdclv

After running the driver for no less than an hour or two

ZTEST LISH STOP - to stop the driver.

Note: This driver will run until ZTEST LISH STOP is issued.

Driver messages:

ZTEST LISH START

TCPP0004I 12.21.42 TEST CASE QXN5 HAS STARTED +
LISH0001I 12.21.42 STARTING DRIVER ... +
LISH0001I 12.21.42 ATTEMPTING TO PUT INPUT LIST LEVEL BELOW RESOURCE=(CMBs)+
LISH0001I 12.21.42 ATTEMPTING TO PUT LODIC LEVEL BELOW RESOURCE=(ECBs)+
LISH0001I 12.21.42 LODIC IS ABOVE LIMIT+
LISH0001I 12.22.43 LODIC IS ABOVE LIMIT+
LISH0001I 12.23.05 LODIC SHUTDOWN WAS DETECTED+
LISH0001I 12.23.45 INPUT LIST SHUTDOWN ABOVE LIMIT+
LISH0001I 12.24.40 INPUT LIST SHUTDOWN WAS DETECTED+
LISH0001I 12.25.13 ISHUT - RELEASING-CMBs +
LLISH30001I 12.25.13 ECB WAS HELD, TIME IN=12:24:27, OUT=12:25:13,NOT ENOUGH-CMB+
LISH0001I 12.25.22 LODIC IS ABOVE LIMIT+
LISH0001I 12.25.25 ATTEMPTING TO PUT LODIC LEVEL BELOW RESOURCE=(ECBs)+
LISH0001I 12.25.25 ATTEMPTING TO PUT INPUT LIST LEVEL BELOW RESOURCE=(CMBs)+
LISH0001I 12.25.26 LODIC SHUTDOWN WAS DETECTED+
LISH0001I 12.25.49 INPUTLIST SHUTDOWN ABOVE LIMIT+
LISH0001I 12.27.34 ISHUT - RELEASING-CMBs +
LISH0001I 12.27.38 ECB WAS HELD, TIME IN=12:26:47, OUT=12:27:38,NOT ENOUGH-CMB+
LISH0001I 12.27.58 LODIC - RELEASING-ECBs +
LISH0001I 12.28.29 ATTEMPTING TO PUT LODIC LEVEL BELOW RESOURCE=(SWBs)+
LISH0001I 12.28.29 ATTEMPTING TO PUT INPUT LIST LEVEL BELOW RESOURCE=(FRMs)+
LISH0001I 12.28.29 LODIC IS ABOVE LIMIT+
LISH0001I 12.28.48 LODIC IS ABOVE LIMIT+
LISH0001I 12.29.31 LODIC IS ABOVE LIMIT+
LISH0001I 12.29.50 LODIC IS ABOVE LIMIT+

ZTEST LISH START

TCPP0004I 12.29.56 TEST CASE QXN5 HAS STARTED +
LISH0001I 12.29.56 ALREADY RUNNING+
LISH0001I 12.30.32 LODIC IS ABOVE LIMIT+
LISH0001I 12.30.52 LODIC IS ABOVE LIMIT+
LISH0001I 12.30.56 LODIC SHUTDOWN WAS DETECTED+
LISH0001I 12.31.34 INPUTLIST SHUTDOWN ABOVE LIMIT+
LISH0001I 12.31.53 LODIC IS ABOVE LIMIT+
LISH0001I 12.32.36 INPUTLIST SHUTDOWN ABOVE LIMIT+
LISH0001I 12.33.37 INPUTLIST SHUTDOWN ABOVE LIMIT+
LISH0001I 12.45.16 ECB WAS HELD, TIME IN=12:45:16, OUT=12:45:16,NOT ENOUGH-FRM+
LISH0001I 12.45.26 INPUTLIST SHUTDOWN WAS DETECTED+
LISH0001I 12.45.59 ISHUT - RELEASING-FRMs +
LISH0001I 12.47.11 LODIC - RELEASING-SWBs +
LISH0001I 12.47.11 LODIC - RELEASING-SWBs +
LISH0001I 12.47.17 LODIC IS ABOVE LIMIT+
LILSH0001I 12.47.17 LODIC IS ABOVE LIMIT+
LISH00001I 12.48.16 ATTEMPTING TO PUT LODIC LEVEL BELOW RESOURCE=(SWBs)+
LISH0001I 12.48.16 ATTEMPTING TO PUT INPUTLIST LEVEL BELOW RESOURCE=(FRMs)+
LISH0001I 12.48.38 LODIC SHUTDOWN WAS DETECTED+
LISH0001I 12.49.22 INPUTLIST SHUTDOWN ABOVE LIMIT+
LISH0001I 12.50.24 INPUTLIST SHUTDOWN ABOVE LIMIT+
LIS0001I 12.58.12 ECB WAS HELD, TIME IN=12:58:12, OUT=12:58:12,NOT ENOUGH-FRM+
LISH0001I 12.58.20 INPUTLIST SHUTDOWN WAS DETECTED+
LISH0001I 12.59.33 ISHUT - RELEASING-FRMs +
LISH0001I 13.00.49 LODIC IS ABOVE LIMIT+
LISH0001I 13.01.50 LODIC IS ABOVE LIMIT+
LISH0001I 13.01.50 LODIC IS ABOVE LIMIT+
LISH0001I 13.02.11 LODIC - RELEASING-SWBs +
LISH0001I 13.02.51 ATTEMPTING TO PUT LODIC LEVEL BELOW RESOURCE=(CMBs)+
LISH0001I 13.02.51 ATTEMPTING TO PUT INPUTLIST LEVEL BELOW RESOURCE=(ECBs)+
LISH0001I 13.02.51 LODIC IS ABOVE LIMIT+

ZTEST LISH STOP

LISH0001I 13.04.13 DONE TESTING SHUTDOWN ...+

Appendix: CRECLASS/MAXSUSP test cases

1.0 Introduction

The CRECLASS/MAXSUSP test cases is added to the LISH driver to test the new parameters CRECLASS, MAXSUSP and MAXRTN of LODIC macro.
The parameter CREclass (create priority class) is required to run the test case(s) and is used to assign the priority class to the child ECBs. The following priority classes are supported in this driver: BATCH, LOBATCH, IBMHI, IBMLO, USRLOD1, USRLOD2, USRLOD3 and USRLOD4.

The optional parameter MAXSusp is used to indicate that an ECB will be given control regardless of system resource levels if the ECB has been suspended for a maximum amount of time (MAXSUSP). The driver will consume and hold the blocks (system resource), leaving the system below the LODIC shutdown levels for up to 99 minutes.

To avoid any impacts to the other programs running in the system, it is advised to run the test cases independently, if the CREclass test will use up thousands of the allocated blocks (IBMHI uses up 68%, BATCH uses up 52%) or the MAXSUSP used is too large (99 minutes). If you put in 0 for the MAXSusp, you will see the SNAPC dump of "INVALID CALL TYPE IN LODIC FUNCTION CALL".

The MAXRTN is tested in the macro call "LODIC SUSPEND,HOLD= YES,MAXSUSP=1, MAXRTN=TIMEOUT" to see if the control goes to the label TIMEOUT when the ECB is given contol because the specified MAXSUSP (1 minute) reached.

Another optional parameter CASE is used for selecting the block type that will be consumed and held in the test case(s). The following block types are supported in this driver: SWB, CMB, FRM, ECB, FRM1MB.

The priority class defines a set of unique shutdown values that are used to determine when the ECB will be suspended or unsuspended. The priority class for QXN5 is IBMHI which has the lowest shutdown percentages, 15% for FRM1MB and 32% for the other blocks (ie. If the available 4KB frames remains above 32% of the total allocated blocks, the ECB will not be suspended). This reduces the opportunities of getting suspended during the dispatch of the test case(s), eliminates the possible interferences from other programs.

Each test case tests go thru the following processes:

1). Checks the priority class of the child ECB. If it is not the same as CRECLASS, gives error message and exits, otherwise UNMARK the ECB.
2). Computes and consumes the block type to bring the system down to the LODIC shutdown.
3). Tests ETPFLODIC_LOWRES return code from lodic_ext(LODIC_CHECK).
4). Makes the LODIC SUSPEND,MAXSUSP=1,MAXRTN=labelX call to test the macro return control to the labelX label. (For saving the test time, use fixed value 1 for MAXSUSP)
5) Makes the LODIC UNMARK call to reset the ECB.
6). Computes and displays the time elapsed for the LODIC macro test.
7). Makes the lodic_ext(LODIC_SUSPEND+LODIC_ MAXSUSP ..) C function call.
8). Tests ETPFLODIC_MAXSUSP return code.
9). Computes and displays the time elapsed for the lodic_ext() test.
10). Notifies QXN5 that this ECB has been unsuspended from MAXSUSP.
11). Exits.

P.S.

If the priority class you are using for the test has low percentages, you should raise the percentages of the class to avoid the test drive the system into the Input List Shutdown State by using the following command:
To see the values of the Input List Shutdown: “ZDCLV”.
To see the percentages of Lodic Shutdown for the class: “ZSYSL DISP CLASS-className”
To change the percentages for the class: “ZSYSL ALTER CLASS-className FRM-higher %,..“.

Use ZSTAT to monitor the number of blocks:

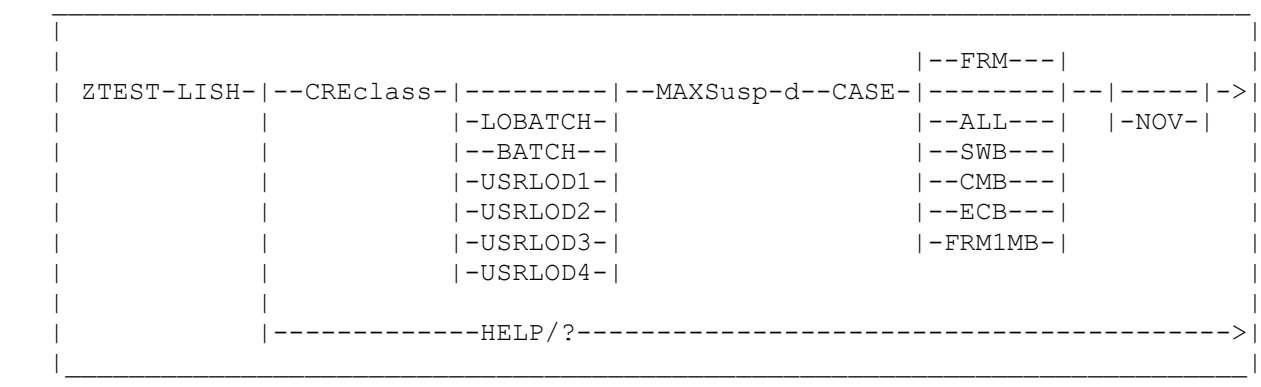
```
AAES0008I 00==> zstat
CSMP0097I 10.13.28 CPU-B SS-BSS  SSU-HPN  IS-01 _
STAT0014I 10.13.28 SYSTEM STATUS DISPLAY
                      IOB   FRAME  COMMON     SWB     ECB     FRM1MB
ALLOCATED            4456    6200     400    2272     600        400
AVAILABLE            4456    6168     397    2226     593        296

 _
ACTIVE ECBS             7
DLY/DFR ECBS            0
PROCESSED               9
LOW SPEED               0
ROUTED                  0
CREATED              2960
SNA                     0
TCP/IP INPUT            0
TCP/IP OUTPUT           0
END OF DISPLAY+
```

2.0 Syntax Information

Use the following command to run the CRECLASS/MAXSUSP test cases of LISH driver. The online help function displays the format of the driver.

2.1 Syntax Diagram:



CREclass-

Specifies a priority class that will be assigned to the child ECBs for the test case(s).

The priority class of the parent ECB (QXN5) is BATCH. No default CRECLASS. If you have a typo in specifing the CRECLASS, you will get an error message and the driver exits. This is a required parameter for the test case(s) to run.

Specify one of the following:

LOBATCH
IBMHI (The lowest shutdown percentage settings)
IBMLO
USRLOD1 (USRLOD1-4: shutdown percentage 100 % for every block type)
USRLOD2
USRLOD3
USRLOD4.
BATCH

MAXSusp-d

Specifies the MAXSUSP for the test case(s). The valid input is from 1 to 99 (minutes). If no MAXsusp is specified, the test case(s) will use the the default value (2).

CASE-ALL|SWB|CMB|FRM|ECB|FRM1MB
The block type the test case will use to create the LODIC shutdown condition.

ALL
Run all five block types in the following sequence:
SWB (System Working Block)
FRM (4KB Frame)
CMB (Common Block)
FRM1MB (1MEG Frame)
ECB (Entry Control Block)
FRM
The default block type. If you have a typo in specifing the block type, the input will be treated as if you put in "FRM".

Verbose
Specify Verbose to display all the informational messages. NOVerbose is the default

NOVerbose
Specify NOVerbose to display only error messages.

Help
HELP, ?, or entering an incorrect format will cause a display describing the format of the ZTEST LISH command.

3.0 Source Code Information

3.1 Segments of the MAXSUSP test cases:

QXN5 (CSO): Called by CVZZ (the entry point of the driver), composed of qxn5.cpp.
QXN0 (CSO): Called by QXN5, composed of qxn0.cpp and qxn01.asm

3.2 Header Files:

slecb.h: The header file holds the variables, definitions and struct used in qxn5.cpp, and qxn0.cpp.

4.0 Driver Messages

```
AAES0008I 00==>ztest lish cre-lobatch
CSMP0097I 08.53.13 CPU-B SS-BSS  SSU-HPN  IS-01
LISH: Current available 4KB FRAMEs:6162 is ABOVE the LODIC level:5952 (CLASS LOB
ATCH); Will reduce to 5932+
CSMP0097I 08.53.13 CPU-B SS-BSS  SSU-HPN  IS-01
LISH: Check ETPFLODIC_LOWRES successfully; The system is in LODIC shutdown (Curr
ent available blocks: 5943)+
CSMP0097I 08.53.13 CPU-B SS-BSS  SSU-HPN  IS-01
LISH: 13:53:13 tests LODIC SUSPEND,MAXSUSP=1,MAXRTN=timeout+
CSMP0097I 08.54.13 CPU-B SS-BSS  SSU-HPN  IS-01
LISH0001I 08.54.13 timeout: GOT CONTROL AFTER GETTING UNSUSPENDED; UNMARK LODIC+
CSMP0097I 08.54.13 CPU-B SS-BSS  SSU-HPN  IS-01
LISH: 13:54:13 got unsuspended after 60 seconds+
CSMP0097I 08.54.13 CPU-B SS-BSS  SSU-HPN  IS-01
```

```
LISH: 13:54:13 tests lodic_ext(LODIC_MAXSUSP-2..)+
CSMP0097I 08.56.13 CPU-B SS-BSS  SSU-HPN  IS-01
LISH: Check ETPFLODIC_MAXSUSP successfully; +
CSMP0097I 08.56.13 CPU-B SS-BSS  SSU-HPN  IS-01
LISH: 13:56:13 got unsuspended after 120 seconds+
CSMP0097I 08.56.13 CPU-B SS-BSS  SSU-HPN  IS-01
LISH: Complete the 4KB FRAME test case, LISH exits+
CSMP0097I 08.56.13 CPU-B SS-BSS  SSU-HPN  IS-01
QXN5: Completed the 4KB FRAME test case+



AAES0008I 00==>ztest lish cre-lobatch case-ecb
CSMP0097I 09.03.54 CPU-B SS-BSS  SSU-HPN  IS-01
LISH: Current available ECBs:592 is ABOVE the LODIC level:576 (CLASS LOBATCH); W
ill reduce to 556+
CSMP0097I 09.03.54 CPU-B SS-BSS  SSU-HPN  IS-01
LISH: Check ETPFLODIC_LOWRES successfully; The system is in LODIC shutdown (Curr
ent available blocks: 555)+
CSMP0097I 09.03.54 CPU-B SS-BSS  SSU-HPN  IS-01
LISH: 14:3:54 tests LODIC SUSPEND,MAXSUSP=1,MAXRTN=timeout+
CSMP0097I 09.04.54 CPU-B SS-BSS  SSU-HPN  IS-01
LISH0001I 09.04.54 timeout: GOT CONTROL AFTER GETTING UNSUSPENDED; UNMARK LODIC+
CSMP0097I 09.04.54 CPU-B SS-BSS  SSU-HPN  IS-01
LISH: 14:4:54 got unsuspended after 60 seconds+
CSMP0097I 09.04.54 CPU-B SS-BSS  SSU-HPN  IS-01
LISH: 14:4:54 tests lodic_ext(LODIC_MAXSUSP-2..)+
CSMP0097I 09.06.54 CPU-B SS-BSS  SSU-HPN  IS-01
LISH: Check ETPFLODIC_MAXSUSP successfully; +
CSMP0097I 09.06.54 CPU-B SS-BSS  SSU-HPN  IS-01
LISH: 14:6:54 got unsuspended after 120 seconds+
CSMP0097I 09.06.54 CPU-B SS-BSS  SSU-HPN  IS-01
LISH: Complete the ECB test case, LISH exits+
CSMP0097I 09.06.54 CPU-B SS-BSS  SSU-HPN  IS-01
QXN5: Completed the ECB test case+
```

```
AAES0008I 00==>ztest lish cre-batch case-swb maxs-3
CSMP0097I 09.59.31 CPU-B SS-BSS  SSU-HPN  IS-01
LISH: Current available SWBs:2230 is ABOVE the LODIC level:1090 (CLASS BATCH); W
ill reduce to 1070+
CSMP0097I 09.59.31 CPU-B SS-BSS  SSU-HPN  IS-01
LISH: Check ETPFLODIC_LOWRES successfully; The system is in LODIC shutdown (Curr
ent available blocks: 1070)+
CSMP0097I 09.59.31 CPU-B SS-BSS  SSU-HPN  IS-01
LISH: 14:59:31 tests LODIC SUSPEND,MAXSUSP=1,MAXRTN=timeout+
CSMP0097I 10.00.31 CPU-B SS-BSS  SSU-HPN  IS-01
LISH0001I 10.00.31 timeout: GOT CONTROL AFTER GETTING UNSUSPENDED; UNMARK LODIC+
CSMP0097I 10.00.31 CPU-B SS-BSS  SSU-HPN  IS-01
LISH: 15:0:31 got unsuspended after 60 seconds+
CSMP0097I 10.00.31 CPU-B SS-BSS  SSU-HPN  IS-01
LISH: 15:0:31 tests lodic_ext(LODIC_MAXSUSP-3..)+
CSMP0097I 10.03.31 CPU-B SS-BSS  SSU-HPN  IS-01
LISH: Check ETPFLODIC_MAXSUSP successfully; +
CSMP0097I 10.03.31 CPU-B SS-BSS  SSU-HPN  IS-01
LISH: 15:3:31 got unsuspended after 180 seconds+
CSMP0097I 10.03.31 CPU-B SS-BSS  SSU-HPN  IS-01
LISH: Complete the SWB test case, LISH exits+
CSMP0097I 10.03.31 CPU-B SS-BSS  SSU-HPN  IS-01
QXN5: Completed the SWB test case+


AAES0008I 00==>ztest lish cre-lobatch case-swb maxs-1 nov
CSMP0097I 09.36.28 CPU-B SS-BSS  SSU-HPN  IS-01
LISH: Complete the SWB test case, LISH exits+


AAES0008I 00==>ztest lish cre-lobatch case-all nov
CSMP0097I 09.40.36 CPU-B SS-BSS  SSU-HPN  IS-01
LISH: Complete the SWB test case, LISH exits+
CSMP0097I 09.43.36 CPU-B SS-BSS  SSU-HPN  IS-01
LISH: Complete the 4KB FRAME test case, LISH exits+
CSMP0097I 09.46.36 CPU-B SS-BSS  SSU-HPN  IS-01
LISH: Complete the CMB test case, LISH exits+
CSMP0097I 09.49.39 CPU-B SS-BSS  SSU-HPN  IS-01
LISH: Complete the 1MB FRAME test case, LISH exits+
CSMP0097I 09.52.39 CPU-B SS-BSS  SSU-HPN  IS-01
LISH: Complete the ECB test case, LISH exits+
```

Error messages:

```
AAES0008I 00==>ztest lish cre-typo
CSMP0097I 09.29.46 CPU-B SS-BSS  SSU-HPN  IS-01
LISH: Invalid Create Priority Class, QXN5 exits ** Case Failed **  +


AAES0008I 00==>ztest lish cre-lobatch maxs-0
CSMP0097I 09.32.05 CPU-B SS-BSS  SSU-HPN  IS-01
LISH: Current available 4KB FRAMEs:6162 is ABOVE the LODIC level:5952 (CLASS LOB
ATCH); Will reduce to 5932+
CSMP0097I 09.32.05 CPU-B SS-BSS  SSU-HPN  IS-01
LISH: Check ETPFLODIC_LOWRES successfully; The system is in LODIC shutdown (Cur
ent available blocks: 5943)+
CSMP0097I 09.32.05 CPU-B SS-BSS  SSU-HPN  IS-01
LISH: 14:32:5 tests LODIC SUSPEND,MAXSUSP=1,MAXRTN=timeout+
CSMP0097I 09.33.05 CPU-B SS-BSS  SSU-HPN  IS-01
LISH0001I 09.33.05 timeout: GOT CONTROL AFTER GETTING UNSUSPENDED; UNMARK LODIC+
CSMP0097I 09.33.05 CPU-B SS-BSS  SSU-HPN  IS-01
LISH: 14:33:5 got unsuspended after 60 seconds+
CSMP0097I 09.33.05 CPU-B SS-BSS  SSU-HPN  IS-01
LISH: 14:33:5 tests lodic_ext(LODIC_MAXSUSP-0..)+
CSMP0097I 09.33.05 CPU-B SS-BSS  SSU-HPN  IS-01
SNAP0003I 09.33.05 CPU-B SS-BSS SSU-HPN IS-1
PSW-07052001 80000000 00000003 98DED52E
PGM-LISH CODE-I00000074 TERM-000000B
INVALID CALL TYPE IN LODIC FUNCTION CALL
END OF SNAPC CONSOLE DISPLAY+
CSMP0097I 09.33.12 CPU-B SS-BSS  SSU-HPN  IS-01
LISH: Didn't receive message from LISH after 65 seconds have elapsed+


AAES0008I 00==>ztest lish                                (Missing CRECLASS)
AAES0008I 00==>ztest lish cre-lobatch case-swb maxs-100  (> 99)

CSMP0097I 09.25.50 CPU-B SS-BSS  SSU-HPN  IS-01
PRSE0009E 09.25.50 QXN5 - MANDATORY PARAMETER NOT GIVEN+
CSMP0097I 09.25.50 CPU-B SS-BSS  SSU-HPN  IS-01
LISH0123I 09.25.50 ZTEST LISH COMMAND FORMAT:
 ZTEST LISH -
  START
  START T-n
        D-y
        I-cmb|frm|frm1mb|swb|ecb
        I-cmb|frm|frm1mb|swb|ecb T-n
                                 D-y
                                 S-n _
  CREclass-c MAXSusp-d CASE-b NOV
        c:BATCH|LOBATCH|IBMHI|IBMLO|USRLOD1|USRLOD2|USRLOD3|USRLOD4
        b:ALL|cmb|frm|frm1mb|swb|ecb
  STOP
  HELP/?
 END OF HELP MESSAGE+


AAES0008I 00==>ztest lish cre-batch case-frm1mb
ztest lish cre-batch case-frm1mb
CSMP0097I 17.22.41 CPU-B SS-BSS  SSU-HPN  IS-01
The lodic shutdown level(40 minus 5) of 1MB FRAME is lower than the input
shutdown level(40); The test case will fail, please lower the avail
```

```
number of 1MB FRAME then try again.+
CSMP0097I 17.22.41 CPU-B SS-BSS  SSU-HPN  IS-01
QXN5: Completed the 1MB FRAME test case+
```