



TPF Users Group Fall 2007

DASD Module Queue Monitoring APAR PJ31925

Judy Kearney

System Control Program (SCP) subcommittee

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DASD Module Queue Monitoring

What's the Problem?

DASD problems and/or hot packs are potential for outage.

Early warning allows you to take preventative action -- swap hardware or find out what is keeping a DASD hot before you have a catastrophic situation.

DASD Module Queue Monitoring

z/TPF Functions Provided

1. Customized DASD IOB queue scanning: you set scan time interval and queue count threshold.
 - If any DASD IOB queue is at or bigger than the user-specified count, z/TPF displays a warning message.
2. ZDMOD DISPLAY command to display the size and content of DASD IOB queues.

DASD Module Queue Monitoring

Customized Scan Setup

- **New ZSONS parameter -- DQmon**
 - ZSONS Display DQmon (IProc-n)
 - ZSONS Alter DQmon Time-tt Count-ccc (IProc-n)
 - DQmon settings are subsystem independent

- **ONLFIL sip macro**
 - New DQMONTIME parameter
 - New DQMONCOUNT parameter

DASD Module Queue Monitoring

ZSONS DQmon Examples

```
AAES0008I 00 ==> zsons di spl ay dqmon
CSMP0097I 11. 21. 37 CPU-B SS-BSS SSU-HPN IS-01
SONS0034I 11. 21. 37 DASD QUEUE MONITOR TIME IS 0, COUNT IS 0
                MONITOR IS NOT ACTIVE
END OF DI SPLAY+
```

```
AAES0008I 00 ==> zsons al ter dqmon time-30
CSMP0097I 11. 33. 00 CPU-B SS-BSS SSU-HPN IS-01
SONS0034I 11. 33. 00 DASD QUEUE MONITOR TIME IS 30, COUNT IS 5
                COUNT DEFAULTED TO 5
END OF DI SPLAY+
```

```
AAES0008I 00 ==> zsons al ter dqmon count-5
CSMP0097I 11. 35. 48 CPU-B SS-BSS SSU-HPN IS-01
SONS0034I 11. 35. 48 DASD QUEUE MONITOR TIME IS 30, COUNT IS 5
                SCANNING EVERY 30 SECONDS FOR I/O QUEUES OVER    5
END OF DI SPLAY+
```

DASD Module Queue Monitoring

Sample DQ Warning Message

```
CSMP0097I 11.08.12 CPU-C SS-BSS SSU-HPN IS-03  
CYDQ0001W 11.08.12 DASD MODULES EXCEEDING QUEUE COUNT OF 5
```

```
TOTAL MODULES = 3
```

SDA	MOD	VSN	SS	USE	SSID	QUEUE	SERVTIME	STATUS
FB12	0058	SK0018	BSS	RLT	1076	10	721	NORMAL
FC17	0061	SK0027	BSS	RLT	107A	9	735	NORMAL
FE1C	0062	SK0028	BSS	RLT	104C	9	829	NORMAL

```
END OF DISPLAY+
```

- Display is sorted by QUEUE size
- At most 10 mods are displayed

DASD Module Queue Monitoring

Command to Display Size and Content of DASD IOB queues

ZDMOD DISPLAY

```

>>-ZDMOD DI SPI ay-- ----->
                      . - --NUMBER-1---.
>--+--+SDA-sda-----+--+-----+--+-----+--+-----><
|  +-MOD-modul e+    ' - --NUMBER-num-'    ' - --Queue-qcount-' |
|  '-VSN-vsn-----' |
|  |                                     |
|  +-SSI D-ssi d-+-----+-----+-----+-----+ |
|  |                                     ' - --Queue-qcount-' |
|  |                                     |
|  '-Queue-qcount-----' |

```

- Replaces old ZDMOD command

DASD Module Queue Monitoring

Sample ZDMOD DISPLAY IOB Queue

AAES0011I j mak 14 ==> zdmmod di spl ay sda-fb12 or
 AAES0011I j mak 14 ==> bss/zdmmod di spl ay mod-58 or
 AAES0011I j mak 14 ==> bss/zdmmod di spl ay vsn-sk0018

CSMP0097I 11.08.20 CPU-C SS-BSS SSU-HPN IS-01

DMOD0001I 11.08.20 DASD MODULE QUEUE DISPLAY

SDA	MOD	VSN	SS	USE	SSID	QUEUE	SERVTIME	STATUS
FB12	0058	SK0018	BSS	RLT	1076	9	708	NORMAL

MFST SECTION 0: 03971044

MFST SECTION 1: 03975800

SSST ADDRESS: 039358C8

IOB QUEUE:

IOB ADDR	MACRO	ECB ADDR	PGM	FILE	ADDRESS	ID	SVC	TOD
11146000	FI LNC	13D3E000	QHT1	00000000	701F0019	C8D9/HR	11:07:58.	364017
11130400	UNFRC	13591000	QHT1	00000000	701F0039	C8D9/HR	11:07:58.	364212
11262200	FI LNC	13726000	QHT1	00000000	701F0025	C8D9/HR	11:07:58.	364585
114D8A00	FI LNC	13597000	QHT1	00000000	701F0029	C8D9/HR	11:07:58.	364587
110A1800	UNFRC	13C48000	QHT1	00000000	701F0041	C8D9/HR	11:07:58.	364904
11232400	FI LNC	140C8000	QHT1	00000000	701F002D	C8D9/HR	11:07:58.	366165
112F1400	FI LNC	13B52000	QHT1	00000000	701F0031	C8D9/HR	11:07:58.	366169
10FFD800	UNFRC	135B2000	QHT1	00000000	701F003D	C8D9/HR	11:07:58.	366268
11093800	FI NWC	14005000	CJ00	00000000	5058D4CD	FC16/..	11:07:58.	367204

END OF DISPLAY+

DASD Module Queue Monitoring

Sample ZDMOD DISPLAY commands

```
AAES0011I jmak 14 ==> zdmmod display queue-10
CSMP0097I 11.08.32 CPU-C SS-BSS SSU-HPN IS-01
DMOD0005I 11.08.32 NO DASD MODULES HAVE A QUEUE OF 10 OR GREATER+
```

```
AAES0011I jmak 14 ==> zdmmod display queue-9
CSMP0097I 11.08.36 CPU-C SS-BSS SSU-HPN IS-01
DMOD0005I 11.08.36 NO DASD MODULES HAVE A QUEUE OF 9 OR GREATER+
```

```
AAES0011I jmak 14 ==> zdmmod display queue-5
CSMP0097I 11.08.39 CPU-C SS-BSS SSU-HPN IS-01
DMOD0003I 11.08.39 DASD MODULE DISPLAY BY QUEUE LENGTH
```

DASD MODULES WITH A QUEUE OF 5 OR MORE: 3

SDA	MOD	VSN	SS	USE	SSID	QUEUE	SERVTIME	STATUS
FB12	0058	SK0018	BSS	RLT	1076	7	738	NORMAL
FC17	0061	SK0027	BSS	RLT	107A	6	710	NORMAL
FE1C	0062	SK0028	BSS	RLT	104C	5	810	NORMAL

END OF DISPLAY+

DASD Module Queue Monitoring

Sample ZDMOD DISPlay list by ssid

```

AAES0008I 00 ==> zdmod di spl ay ssi d-1040 queue-1
CSMP0097I 21.36.58 CPU-B SS-BSS SSU-HPN IS-01
DMOD0004I 21.36.58 DASD MODULE DISPLAY FOR SSID 1040

```

NUMBER OF DASD MODULES: 12

SDA	MOD	VSN	SS	USE	SSID	QUEUE	SERVTIME	STATUS
4032	0020	WJ0003	WP	RLT	1040	11	1332	NORMAL
4030	001E	WJ0001	WP	RLT	1040	3	1392	NORMAL
4000	0047	ZJ0001	BSS	RLT	1040	2	1373	NORMAL
4001	0049	ZJ0003	BSS	RLT	1040	2	1350	NORMAL
4002	004B	ZJ0005	BSS	RLT	1040	2	1366	NORMAL
4006	0053	ZJ0013	BSS	RLT	1040	2	1344	NORMAL
4009	0059	ZJ0019	BSS	RLT	1040	2	1364	NORMAL
4003	004D	ZJ0007	BSS	RLT	1040	1	1351	NORMAL
4004	004F	ZJ0009	BSS	RLT	1040	1	1366	NORMAL
4005	0051	ZJ0011	BSS	RLT	1040	1	1352	NORMAL
4007	0055	ZJ0015	BSS	RLT	1040	1	1364	NORMAL
4008	0057	ZJ0017	BSS	RLT	1040	1	1376	NORMAL

END OF DISPLAY

DASD Module Queue Monitoring

Sample ZDMOD DISPlay list by MOD

```

AAES0008I 00 ==> zdmod display mod-47 number-11
CSMP0097I 21.36.58 CPU-B SS-BSS SSU-HPN IS-01
DMOD0002I 21.36.58 DASD MODULE DISPLAY
SDA MOD VSN SS USE SSID QUEUE SERVTIME STATUS
4000 0047 ZJ0001 BSS RLT 1040 3 1326 NORMAL
FC4A 0048 ZJ0002 BSS RLT 107B 0 1242 CPY
      0049 BSS RLT OFFLINE
FC4B 004A ZJ0004 BSS RLT 107B 1 830 NORMAL
4002 004B ZJ0005 BSS RLT 1040 2 1238 NORMAL
FC4C 004C ZJ0006 BSS RLT 107B 2 832 NORMAL
4003 004D ZJ0007 BSS RLT 1040 2 1215 NORMAL
FC4D 004E ZJ0008 BSS RLT 107B 0 828 CPY/DWN
4004 004F ZJ0009 BSS RLT 1040 2 1223 NORMAL
FC4E 0050 ZJ0010 BSS RLT 107B 1 833 NORMAL
4005 0051 ZJ0011 BSS RLT 1040 0 1229 ERP/SCP
END OF DISPLAY+

```

- Response sorted by MOD number
- Subsystem dependent
- Online and offline mods are displayed

DASD Module Queue Monitoring

Sample ZDMOD DISPLAY list by SDA

```

AAES0008I 00 ==> zdmod display sda-4024 number-22
CSMP0097I 21.36.58 CPU-B SS-BSS SSU-HPN IS-01
DMOD0002I 21.36.58 DASD MODULE DISPLAY
SDA  MOD  VSN      SS   USE  SSID  QUEUE  SERVTIME  STATUS
4024 006B ZJ0037 BSS  RLT  1040    0    1319  NORMAL
4025 006D ZJ0039 BSS  RLT  1040    0         0  NORMAL
4026 006F ZJ0041 BSS  RLT  1040    0    1280  NORMAL
4030 001E WJ0001 WP   RLT  1040    3    1212  NORMAL
4032 0020 WJ0003 WP   RLT  1040   10    1192  NORMAL
4034 0022 WJ0005 WP   RLT  1040    0         0  NORMAL
4036 0024 WJ0007 WP   RLT  1040    0    2900  NORMAL
4038 0026 WJ0009 WP   RLT  1040    0    4694  NORMAL
END OF DISPLAY+

```

- Response sorted by SDA
- Only display online/mounted SDAs
- subsystem independent

DASD Module Queue Monitoring

Sample ZDMOD DISPLAY supported USEs

```

AAES0008I 00 ==> zdmod display mod-43 number-7
CSMP0097I 13.00.00 CPU-B SS-BSS SSU-HPN IS-01
DMOD0002I 13.00.00 DASD MODULE DISPLAY
SDA  MOD  VSN      SS  USE  SSID  QUEUE  SERVTIME  STATUS
      0043      BSS  GEN                OFFLINE
      0044      BSS  GEN                OFFLINE
      0045      BSS  GEN                OFFLINE
OEE5 0047 TI 0001 BSS  RLT  FF01      0      5896  NORMAL
OE80 0048 TI 0002 BSS  RLT  FF08      0     12454  NORMAL
ODE3 0049 TI 0003 BSS  RLT  FF06      0      1594  NORMAL
END OF DISPLAY+

```

- Response sorted by MOD number
- Support for GENeral files, RLT (realtime), GDS and CPY (copy mods)
- Undefined mods (46) are excluded

Questions?



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