

Power Since VSE2.5

Functions/Commands added to
POWER since VSE/ESA 2.5

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What's New Since VSE 2.5

- PNET TCP/IP
- SAS exploited by IUI for browsing queue entries
- DEL and CRE queue
- D ALL D TOTAL
- Data File (1 or n extents) extension on warm start
- NJE SSL
- 100,000 queue entries
- D BIGGEST
- Queue File Reallocation on warm start
- Node name change during warm start
- POFFLOAD/ BACKUP/PICKUP/SAVE tape journal
- 2 stage deletion
- D Q
- D STATUS – APAR level
- PSEGMENT
- PVARY MSG
- Queue entry manipulation by QNUM
- DY46375/390 D QUEUE , SORT=OLD/NEW,LIMIT=

Extending Networking Capability

Ground rule – When used TCPIP means CSI/TCPIP aka TCPIP For VSE

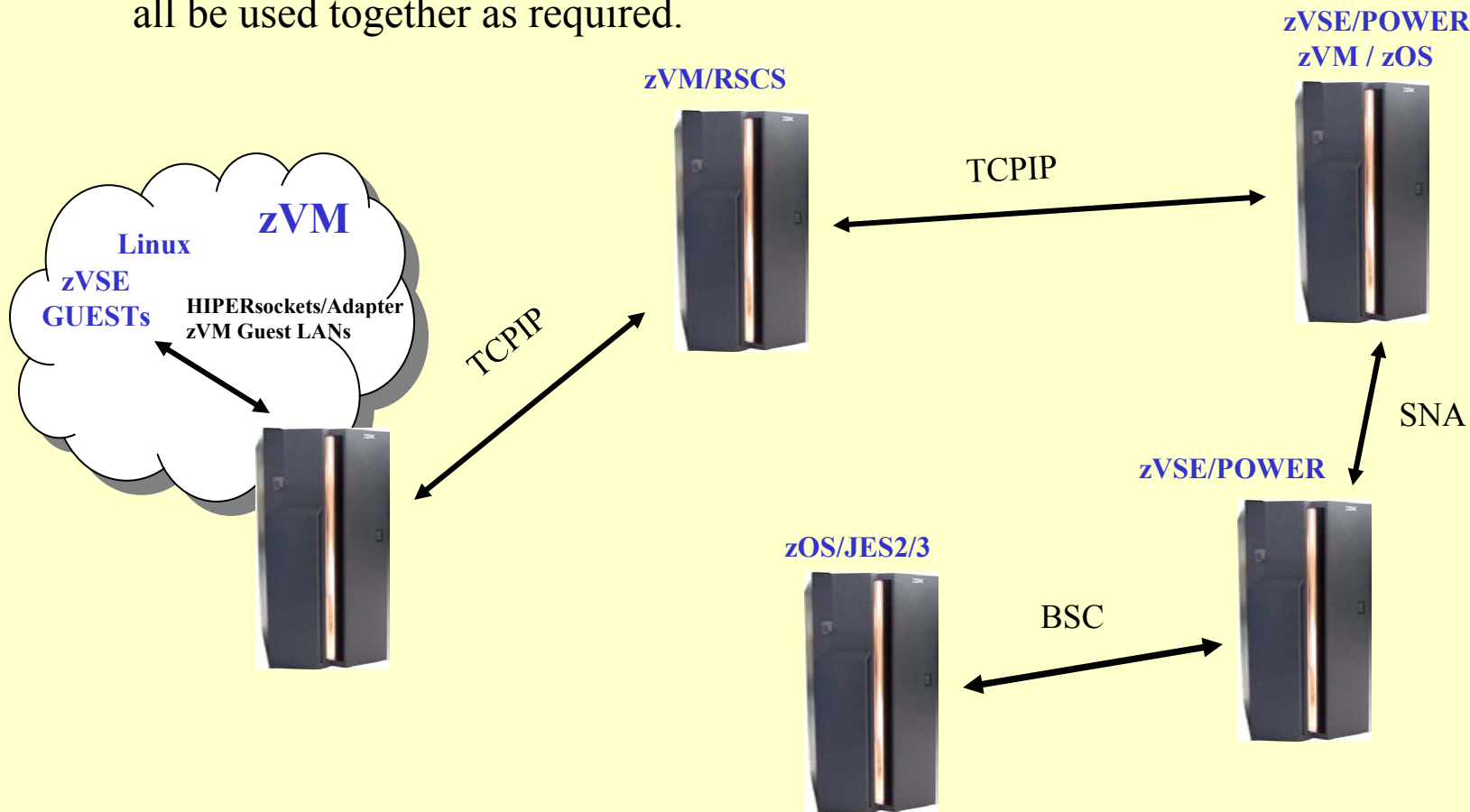
Extending Networking Capability

VSE/POWER PNET supports NJE communications via TCP/IP

- Secure Sockets Layer (SSL) is available with TCP/IP for VSE to provide authentication and data security between TCP/IP nodes.
- PNET SSL requires addition definitions in the Network Definition Table (NDT) to enable SSL.

NJE TCPIP SUPPORT

- A NJE link for a TCP node can be defined in the Network Definition Table. This support is added to existing BSC, VCTC and SNA capability and they can all be used together as required.



NJE TCPIP SUPPORT

Example of a NJE TCP only NDT

```
* -----
*   O W N   ( O R   L O C A L )   N O D E
* -----
PNZVSE  PNODE NODE=ZVSE,
        LOCAL=YES,
        PORT=7777
        SPACE
* -----
*   T C P   D I R E C T L Y   L I N K E D   R E M O T E   N O D E ,   T R I G G E R S   O W N   N O D E   T O   C O M M U N I C A T E
* -----
*   T O   Z V S E 1   I S   A   T C P / I P   C O N N E C T I O N
        PNODE NODE=ZVSE1,
        LOCAL=NO,
        IPHOSTAD=10.10.10.6,      IP-ADDRESS
        MAXBUF=(4,4),           BUFFERS
        AUTH=JOB,                NODE AUTHORITY
        PORT=7777                TCP/IP PORT NUMBER OF
        SPACE
* -----
*   T O   Z V S E 2   I S   A   D I R E C T   C O N N E C T I O N
        PNODE NODE=ZVSE2,
        LOCAL=NO,
        IPHOSTAD=192.168.0.100,  IP-ADDRESS, ALSO 'IPHOSTNM='
* -----
```

Local Node
This defines this system to PNET as ZVSE

Remote Nodes
These define other PNET Nodes and how to get there from ZVSE

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New Since VSE2.5

6

• The skeleton SKPWRNDT in ICCF Library 59 has entries for all the possible PNET connections.

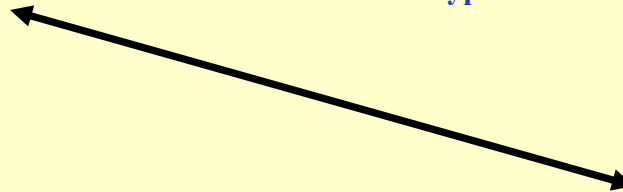
NJE Secure Socket Layer SUPPORT

PNET SSL

An optional support that can be provided by TCPIP For VSE that allows for the encryption of data being transferred between systems by PNET/IP. When used all data such as Jobs , List , Punch data and control records that might contain passwords are encrypted



Can Set NORMAL, WEAK
Or STRONG Encryption



NJE Secure Socket Layer SUPPORT

Keyman/VSE

A tool that can be downloaded from:

<http://www-03.ibm.com/servers/eserver/zseries/zvse/downloads/>

- create 512-bit and 1024-bit RSA key pairs
- create self-signed certificates for testing and learning purposes
- create PKCS#10 certificate requests
- sign certificate requests
- import and export certificates in Base64 text form
- read and write from and to the clipboard
- read and write PKCS#12 keyring files
- connect to multiple VSE systems
- catalog keys and certificates on VSE
- validate a VSE keyring
- show the member list in the VSE keyring library
- show the mappings of VSE client certificates to VSE user IDs
- create VSE client certificates and create/update their mapping to a VSE user ID

Not really part of POWER but a handy tool.

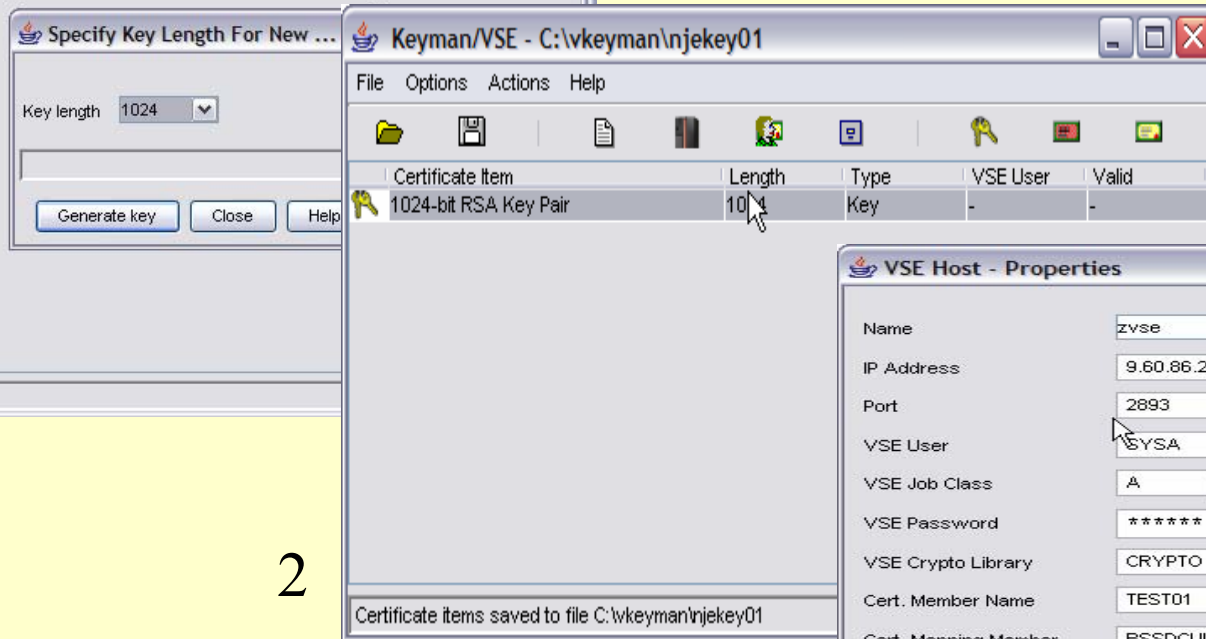
NJE Secure Socket Layer SUPPORT

Keyman/VSE

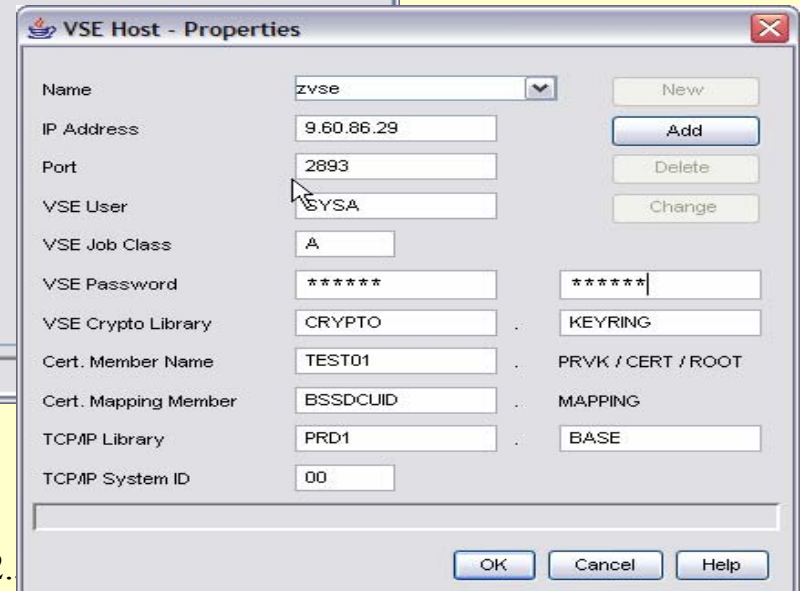
This is a Java app and is based in the VSE Connector Client, install the Connector Client first.



1



2



3

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NJE SSL SUPPORT

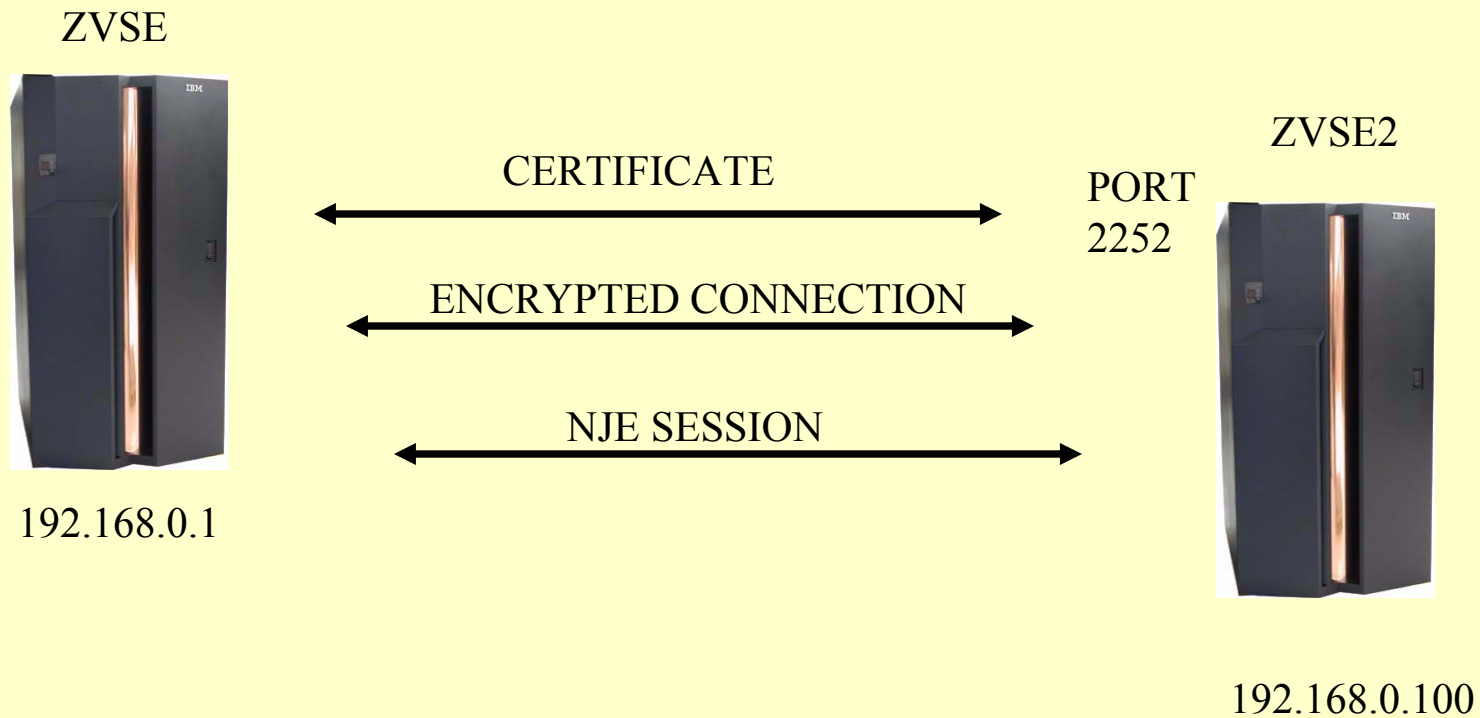
Example of a NJE TCP SSL entry

```
PNODE NODE=ZVSE2, *
      LOCAL=NO, *
      ISHOSTAD=192.168.0.100, DECIMAL IP-ADDRESS *
      AUTH=JOB, NODE AUTHORITY, SEE --V152-- *
      BUFSIZE=4096, TRANSMIT BUFFER SIZE, SEE --V153-- *
      MAXBUF=(2,2), BUFFERS PER RCV/TSM, SEE --V154-- *
      SPORT=2252, TCP/IP SSL PORT NUMBER OF REMOTE NODE*
      ENCRYPT=WEAK, ENCRYPTION LEVEL, SEE --V158-- *
      DNAME=ZVSE NAME OF KEY MEMBER
SPACE
```

* This PNODE example is from skeleton file SKPWRNDT in ICCF Lib 59.

NJE SSL SUPPORT

At a High Level Here's What Happens ...



Node Name Change – Warm Start

Node Name Change

During a warm start the NJE local node name can be changed.

d pnet

AR 0015 1C39I COMMAND PASSED TO VSE/POWER

*F1 0001 1RB7I ***** NDT NAME = PNZVSE ******

F1 0001 1RB7I NODE ROUTE1 ROUTE2 AUTH BSIZE APPLID/IPADDR IPPORT SPORT

*F1 0001 1RB7I **ZVSE** ----- LOCAL ----- ZVSE 7777 2252*

Changed the local node from ZVSE to LOCZVSE in the existing NDT and reassembled, shutdown and reipl.

F1 0001 // JOB POWSTART

DATE 12/07/2005, CLOCK 20/38/21

F1 0001 1RE5I NETWORK DEFINITION TABLE PNZVSE FOUND WITH NEW LOCAL NODE NAME

LOCZVSE

F1-0001 1RE6D CONFIRM CHANGE OF LOCAL NODE NAME FROM ZVSE TO LOCZVSE BY

'YES', ELSE 'NO'

1 YES

Node Name Change

F1 0001 1RB4I PLOAD NETWORK DEFINITION TABLE **PNZVSE** LOADED
F1 0095 1RT7I TCP/IP: INTERFACE STARTING, SOCKET CALL INITAPI ISSUED
F1 0001 1RTMI TCP/IP SUBTASK ATTACHED
F1 0001 1QB7I FULL QUEUE FILE RECOVERY IN PROGRESS
F1 0001 1QB8I QUEUE FILE RECOVERY COMPLETED
F1 0001 1RECI **STATUS REPORT \$LSTNNNN BEING CREATED DUE TO NODE NAME CHANGE**
F1 0001 1Q8GI **STATUS REPORT DISPLAYED IN LIST ENTRY \$LST0346**
F1 0001 1RE7I CHANGE OF LOCAL NODE NAME FROM ZVSE TO LOCZVSE IN PROGRESS
F1 0001 1RE7I **CHANGE OF LOCAL NODE NAME FROM ZVSE TO LOCZVSE COMPLETED**

Very quickly the NJE node name was changed without having To Cold start and an internal **D ALL,LST** command created a status Report for reference.

The Queues

The Queues

Significant Changes

Since Power 6.7 there are 100,000 QUEUE records available (99,998 usable) an increase from 32768 (32766 usable). The maximum job number of 65,535 remains unchanged.

New Queues

- **CRE** Queue holds QUEUE entries that are “In Creation” they are currently in the process of being spooled to one of the queues as displayed by the **D A** command but not yet visible on the RDR, LST, or PUN queue.
- **DEL** Queue holds QUEUE entries that are marked to be deleted as soon as possible.

The Queues

New

- Browsing of Queue Entries via SAS has been exploited by the IUI for improved performance and concurrent browse access for up to 255 active browsers.
- **B-Column** and **MACC** count seen with (FULL=YES) for => 1 depending upon how many active browsers there are.

```
d lst,full=yes
AR 0015 1C39I COMMAND PASSED TO VSE/POWER
F1 0001 1R46I LIST QUEUE P D C S PAGES CC FORM B
F1 0001 1R46I SVASCII 00566 3 H A 4 1 * TO=((GRAC) FROM=((GRAC)
F1 0001 D=03/07/2006 DBGP=000001 L=00000016
F1 0001 MACC=002 QNUM=01879 T=21:24:11
```

SVASCII is being Browsed by
Two Users

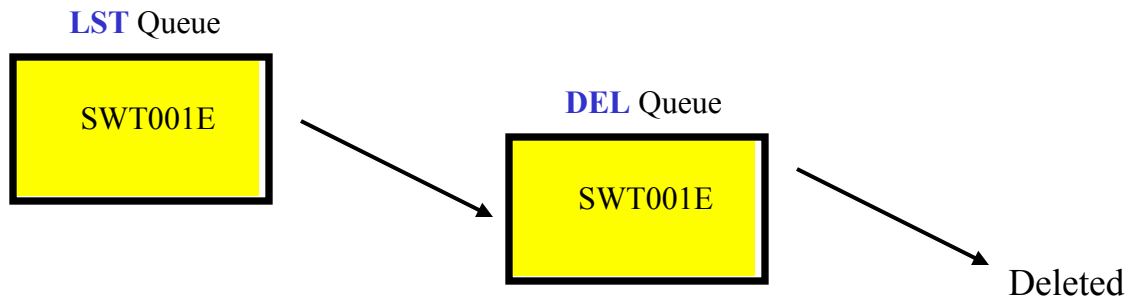
- Browse “in creation” entries in CRE queue
- Browse DISP=* entries that are in execution.

The Queues

Two Stage Deletion

Two Stage Deletion, jobs to be deleted are no longer processed immediately but Placed on the **DEL** queue. The **DEL** queue holds the jobs until they are deleted by a POWER low priority task, this is a *significant performance benefit* as tasks no longer stop and wait for a queue entry to be deleted.

```
pdelete lst,swt001e
```

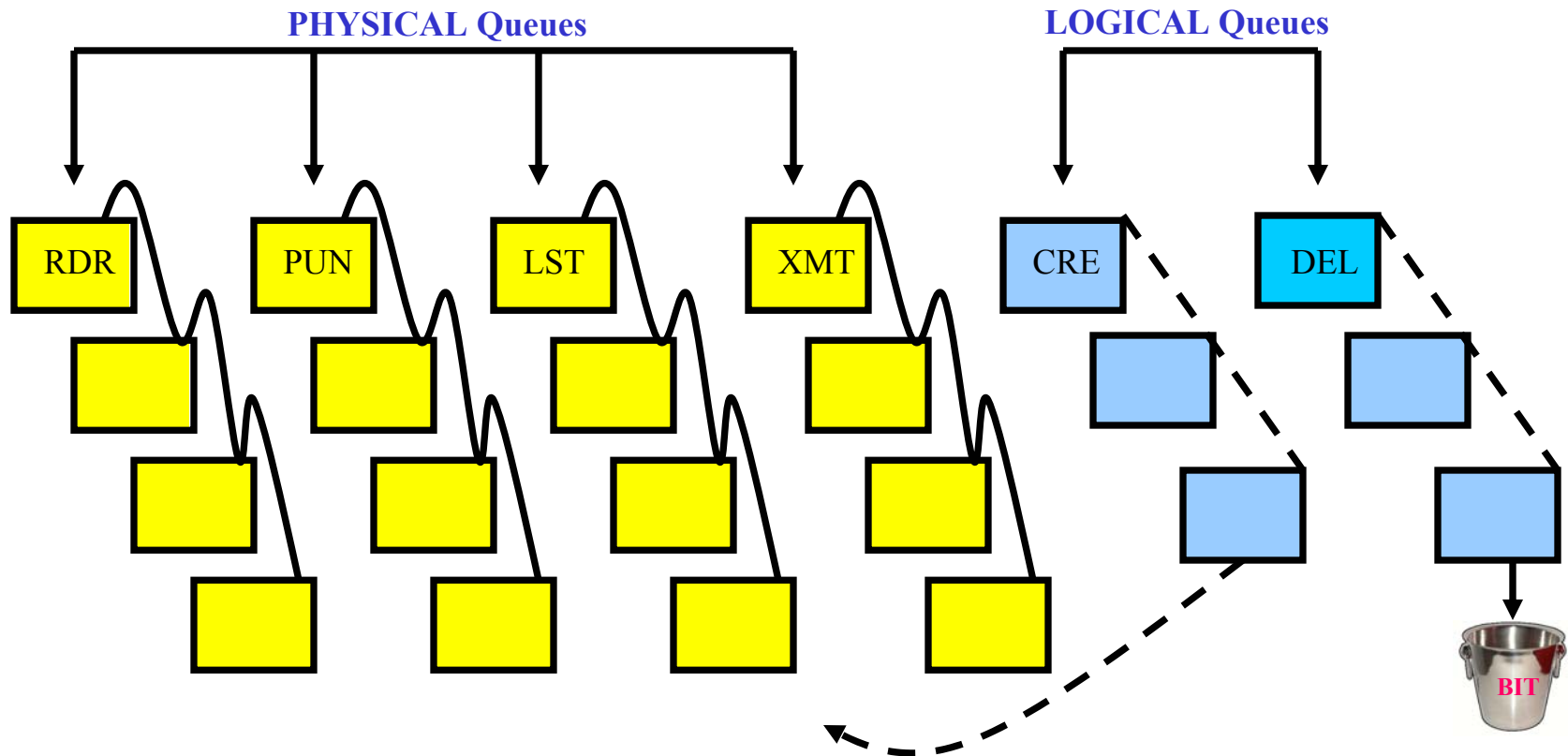


The deleted LST job SWT001E will be added to the DEL queue and eventually be deleted by a POWER Internal Task.

The Queues

VSE/POWER - Two Additional Queues

An in **CRE**ation Entry Goes To Another Queue, the **DEL**etion Queue Entry Will Go Away When The Last Browser Is Finished.



Commands

Commands

To display the Queue File characteristics.

D Q

d q

AR 0015 1C39I COMMAND PASSED TO VSE/POWER

F1 0001 1R49I **QUEUE FILE 001% FULL - 3775 FREE QUEUE RECORDS**

F1 0001 1R49I **USED QUEUE RECORDS: 31, CRE-Q: 4, DEL-Q: 0**

F1 0001 1R49I **RDR-Q: 21, LST-Q: 6, PUN-Q: 0, XMT-Q: 0**

F1 0001 1R49I **QUEUE FILE EXTENT ON CKD-807, SYS001, 16680, 30**

F1 0001 1R49I **DATA FILE 002% FULL - 1646 FREE DBLK GROUPS**

F1 0001 1R49I **CURRENT DBLK SIZE=07548, DBLK GROUP SIZE=00008**

F1 0001 1R49I DATA FILE EXTENT 1 ON CKD-807, SYS002, 6330, 1920

F1 0001 1R49I ACCOUNT FILE 3 % FULL

F1 0001 1R49I ACCOUNT FILE EXTENT ON CKD-807, SYS000, 8250, 90

D Q shows all the Queues, total capacity, used capacity, Queue and Data File physical locations.

Commands

To Display by DBLKGP's consumed the biggest Queue entries.

D BIGGEST

d biggest

AR 0015 1C39I COMMAND PASSED TO VSE/POWER

<i>F1</i>	<i>0001</i>	<i>1R4BI</i>	<i>16</i>	<i>BIGGEST SORTED</i>	<i>C I</i>	<i>CARD/LINE</i>	<i>DBGP</i>	<i>QNUM</i>	<i>SUF</i>	<i>PAGES</i>	<i>QUE</i>
<i>F1</i>	<i>0001</i>	<i>1R4BI</i>	<i>01</i>	<i>LIBR1</i>	<i>00713</i>	<i>0 L</i>	<i>2435</i>	<i>0000004</i>	<i>01860</i>	<i>47</i>	<i>LST</i>
<i>F1</i>	<i>0001</i>	<i>1R4BI</i>	<i>02</i>	<i>LIBALL</i>	<i>00725</i>	<i>0 L</i>	<i>3096</i>	<i>0000004</i>	<i>01862</i>	<i>58</i>	<i>LST</i>
<i>F1</i>	<i>0001</i>	<i>1R4BI</i>	<i>03</i>	<i>TOVSE27</i>	<i>00670</i>	<i>A L</i>	<i>2437</i>	<i>0000004</i>	<i>01881</i>	<i>48</i>	<i>LST</i>
<i>F1</i>	<i>0001</i>	<i>1R4BI</i>	<i>04</i>	<i>TOVSE27</i>	<i>00673</i>	<i>A L</i>	<i>2437</i>	<i>0000004</i>	<i>01886</i>	<i>48</i>	<i>LST</i>
<i>F1</i>	<i>0001</i>	<i>1R4BI</i>	<i>05</i>	<i>CICSICCF</i>	<i>00664</i>	<i>2 R</i>	<i>71</i>	<i>0000001</i>	<i>00001</i>		<i>RDR</i>
<i>F1</i>	<i>0001</i>	<i>1R4BI</i>	<i>06</i>	<i>STARTVCS</i>	<i>00667</i>	<i>R R</i>	<i>8</i>	<i>0000001</i>	<i>00002</i>		<i>RDR</i>
<i>F1</i>	<i>0001</i>	<i>1R4BI</i>	<i>07</i>	<i>TAPESRVR</i>	<i>00338</i>	<i>R R</i>	<i>7</i>	<i>0000001</i>	<i>00003</i>		<i>RDR</i>
<i>F1</i>	<i>0001</i>	<i>1R4BI</i>	<i>08</i>	<i>LIBR2</i>	<i>00717</i>	<i>0 L</i>	<i>251</i>	<i>0000001</i>	<i>00004</i>	<i>6</i>	<i>LST</i>
<i>F1</i>	<i>0001</i>	<i>1R4BI</i>	<i>09</i>	<i>CEL\$OPT\$</i>	<i>00006</i>	<i>C R</i>	<i>41</i>	<i>0000001</i>	<i>00005</i>		<i>RDR</i>
<i>F1</i>	<i>0001</i>	<i>1R4BI</i>	<i>10</i>	<i>CEEWARC</i>	<i>00665</i>	<i>C R</i>	<i>46</i>	<i>0000001</i>	<i>00006</i>		<i>RDR</i>



Continues to 16 Entries

Commands

Command with Queue Number (cqnum) operand, example PDELETE with current qnum to remove one LST queue entry as there maybe be many entries with the same Job name and number.

First Use PDISPLAY LST,FULL=YES to get QNUM this is NOT the job number.

```
d lst,swt*,full=yes
```

```
AR 0015 1C39I COMMAND PASSED TO VSE/POWER
```

```
F1 0001 1R46I LIST QUEUE P D C S PAGES CC FORM B
```

```
F1 0001 1R46I SWTA00 00520 3 D A 3 1 TO=(GRAC) FROM=(GRAC)
```

```
F1 0001 D=02/28/2006 DBGP=000001 L=00000009
```

```
F1 0001 QNUM=01825 T=19:00:41
```

```
F1 0001 1R46I SWTA00 00520 3 D A 3 1 TO=(GRAC) FROM=(GRAC)
```

```
F1 0001 D=02/28/2006 DBGP=000001 L=00000009
```

```
F1 0001 QNUM=01886 T=19:00:44
```

```
F1 0001 1R46I SWTA00 00520 3 D A 3 1 TO=(GRAC) FROM=(GRAC)
```

```
F1 0001 D=02/28/2006 DBGP=000001 L=00000009
```

```
F1 0001 QNUM=01835 T=19:00:45
```

```
l lst,swt*,cqnum=1886
```

```
AR 0015 1C39I COMMAND PASSED TO VSE/POWER
```

```
F1 0001 1R88I OK : 1 ENTRY PROCESSED BY L LST,SWT*,CQNUM=1886
```

Commands

d lst

```
AR 0015 1C39I COMMAND PASSED TO VSE/POWER
F1 0001 1R46I LIST QUEUE P D C S PAGES CC FORM B
F1 0001 1R46I LIBR1 00713 3 D 0 47 1 FROM=(GRAC)
F1 0001 1R46I LIBR2 00717 3 D 0 6 1 FROM=(GRAC)
F1 0001 1R46I LIBR3 00721 3 D 0 3 1 FROM=(GRAC)
F1 0001 1R46I LIBALL 00725 3 D 0 58 1 FROM=(GRAC)
F1 0001 1R46I $STA0732 00732 9 H A 2 1
```

Jobs currently displayed
On the LST Queue

D DEL

d del

```
AR 0015 1C39I COMMAND PASSED TO VSE/POWER
F1 0001 1R4BI DELETION QUEUE P D C I LINES B
F1 0001 1R4BI TOVSE27 00673 3 D A L 2437 * TO=(GRAC) FROM=(GRAC)
F1 0001 D=10/31/2005 DBGP=000004
F1 0001 MACC=001 QNUM=01886
```

TOVSE27R has been Deleted from
the LST queue while being browsed
it is put on the DEL queue

D CRE

d cre

```
AR 0015 1C39I COMMAND PASSED TO VSE/POWER
F1 0001 1R4BI CREATE QUEUE C I LINES B DBGP QNUM TASK OWNER
F1 0001 1R4BI CICSICCF 00664 A L 270 000001 01871 F2 FEE JOB=CICSICCF
F1 0001 1R4BI TCPIP00 00666 A L 176 000001 01876 F7 FEE JOB=TCPIP00
F1 0001 1R4BI VTAMSTRT 00663 A L 21 000001 01879 F3 FEE JOB=VTAMSTRT
F1 0001 1R4BI STARTVCS 00667 A L 6 000001 01883 R1 FEE JOB=STARTVCS
```

Jobs currently being
Spooled not complete

Commands

D ALL - Displays all the Queue Entries that are in the *Physical Queues*. These are the RDR, PUN, LST, and XMT Queues where the Queue entries are linked together this command does not show what is in the CRE and DEL queues.

D TOTAL – Displays all the *Physical Queue* Entries as well as the CRE and DEL *Logical Queues*.

Commands

PSEGMENT

d cre

AR 0015 1C39I COMMAND PASSED TO VSE/POWER

F1 0001 1R4BI CREATE QUEUE C I LINES B DBGP QNUM TASK OWNER

F1 0001 1R4BI CICSICCF 00664 A L 333 000001 01871 F2 FEE JOB=CICSICCF

F1 0001 1R4BI TCPIP00 00666 A L 176 000001 01876 F7 FEE JOB=TCPIP00

F1 0001 1R4BI VTAMSTRT 00663 A L 21 000001 01879 F3 FEE JOB=VTAMSTRT

F1 0001 1R4BI STARTVCS 00667 A L 6 000001 01883 R1 FEE JOB=STARTVCS

Job **TCPIP00** has spooled 176 lines to the CRE Queue but they can not be printed , deleted or transmitted, **but can be Browsed**. The PSEGMENT command can be used to segment the listing up to this point to the LST Queue.

psegment f7,fee,imm

AR 0015 1C39I COMMAND PASSED TO VSE/POWER

F1 0001 1R88I OK

F7 0001 1Q53I OUTPUT SEGMENTED FOR TCPIP00 00666 001 F7,FEE

Commands

PSEGMENT

d cre

AR 0015 1C39I COMMAND PASSED TO VSE/POWER

F1	0001	1R4BI	CREATE QUEUE	C	I	LINES	B	DBGP	QNUM	TASK	OWNER
F1	0001	1R4BI	CICSICCF	00664	A	L	333	000001	01871	F2 FEE	JOB=CICSICCF
F1	0001	1R4BI	VTAMSTRT	00663	A	L	21	000001	01879	F3 FEE	JOB=VTAMSTRT
F1	0001	1R4BI	STARTVCS	00667	A	L	6	000001	01883	R1 FEE	JOB=STARTVCS
F1	0001	1R4BI	TCPIP00	00666	A	L	0	000001	01886	F7 FEE	JOB=TCPIP00

The **CRE** Queue entry is now 0 and
The **d lst** shows the entry as the first
Segment, **S=001** this entry can be
Browsed, Printed, Altered. Deleted.

d lst

AR 0015 1C39I COMMAND PASSED TO VSE/POWER

F1	0001	1R46I	LIST QUEUE	P	D	C	S	PAGES	CC	FORM	B
F1	0001	1R46I	LIBR1	00713	3	D	0	47	1		FROM=(GRAC)
F1	0001	1R46I	LIBR2	00717	3	D	0	6	1		FROM=(GRAC)
F1	0001	1R46I	LIBR3	00721	3	D	0	3	1		FROM=(GRAC)
F1	0001	1R46I	LIBALL	00725	3	D	0	58	1		FROM=(GRAC)
F1	0001	1R46I	TOVSE27	00670	3	D	A	48	1		TO=(GRAC) FROM=(GRAC)
F1	0001	1R46I	TCPIP00	00666	3	D	A	3	1		S=001 TO=(SYSA) FROM=(SYSA)
F1	0001	1R46I	\$STA0732	00732	9	H	A	2	1		

Commands

PVARY MSG

- Are there times you do not want to see certain messages, like maybe when testing?
- Don't want to flood the console with numerous informational yet expected messages running your normal workload.
- But you want a record of all the messages.
- PVARY MSG can provide this function.

Commands

PVARY MSG

```
Session A - [24 x 80]
File Edit View Communication Actions Window Help
[Icons]
SYSTEM:  ZVSE                z/VSE 3.1                TURBO (01)                USER:  GRAC
VM USER ID:  ZVSE1                TIME:  13:18:37
BG 0001 1Q34I    BG WAITING FOR WORK
F1 0001 1Q34I    LST WAITING FOR WORK ON 00E
BG 0001 1Q47I    BG LIST001 00580 FROM ZVSE(SYSA) , TIME=13:18:36
BG 0000 // JOB LIST PRD1 MACLIB
          DATE 03/08/2006, CLOCK 13/18/36
BG 0000 EOJ LIST          MAX.RETURN CODE=0000
          DATE 03/08/2006, CLOCK 13/18/37, DURATION    00/00/00
F1 0001 1Q41I    MISMATCHING PRINTER TYPE FOR LIST001 00580 ON 00E,
          SPOOL-TYPE=X'43'(FEE), REAL-TYPE=X'40'(00E)
BG 0001 1Q34I    BG WAITING FOR WORK
F1 0001 1Q34I    LST WAITING FOR WORK ON 00E

==> _

1=HLP 2=CPY 3=END 4=RTN 5=DEL 6=DELS 7=RED 8=CONT 9=EXPL 10=HLD                12=RTRV

ACT_MSG:  HOLDRUN                PAUSE:  01    SCROLL:  1                MODE:  CONSOLE

MA  a                20/006
Connected to remote server/host 9.60.86.26 using port 23
```

You get many MSG1Q41I and you want them gone For a while.

Commands

PVARY MSG

For example you get many MSG1Q41I that are expected and you want to shut them off temporarily

pvary msg,1q41i,nocons - MSG1Q41I will no longer be displayed at the console

pvary msg,alldisab,show - Show which messages that are disabled for display

pvary msg,alldisab,cons - re-enable all disabled messages to display at the console
individual messages can be selected instead of ***alldisab***

**NOTE: All disabled messages will still show in the hardcopy file only
the console display is changed.**

Commands

PVARY MSG

```
Session A - [24 x 80]
File Edit View Communication Actions Window Help
SYSTEM: ZVSE z/VSE 3.1 TURBO (01) USER: GRAC
VM USER ID: ZVSE1 TIME: 14:54:58
pvary msg,1q41i,nocons
AR 0015 1C39I COMMAND PASSED TO VSE/POWER
F1 0001 1Q8HI MESSAGE 1Q41I BEEN ENABLED, NOW DISABLED FOR CONSOLE ←
BG 0001 1Q47I BG LIST001 00582 FROM ZVSE(SYSA) , TIME=14:53:16
BG 0000 // JOB LIST PRD1 MACLIB
DATE 03/08/2006, CLOCK 14/53/16
BG 0000 EOJ LIST MAX.RETURN CODE=0000
DATE 03/08/2006, CLOCK 14/53/16, DURATION 00/00/00
BG 0001 1Q34I BG WAITING FOR WORK
F1 0001 1Q34I LST WAITING FOR WORK ON 00E
pvary msg,alldisab,show
AR 0015 1C39I COMMAND PASSED TO VSE/POWER
F1 0001 1Q8HI MESSAGE 1Q41I IS DISABLED ←
pvary msg,alldisab,cons
AR 0015 1C39I COMMAND PASSED TO VSE/POWER
F1 0001 1Q8HI MESSAGE 1Q41I BEEN DISABLED, NOW ENABLED FOR CONSOLE ←

==> _

1=HLP 2=CPY 3=END 4=RTN 5=DEL 6=DELS 7=RED 8=CONT 9=EXPL 10=HLD 12=RTRV

ACT_MSG: HOLDRUN PAUSE: 01 SCROLL: 1 MODE: CONSOLE
MA a 20/006
Connected to remote server/host 9.60.86.26 using port 23
```

Commands

D STATUS

d status

AR 0015 1C39I COMMAND PASSED TO VSE/POWER

F1 0001 1R46I VSE/POWER 7.1.0 STATUS FOR ZVSE ON 02/28/2006 TIME 15/50/51

F1 0001 LAST QUEUE/DATA FILE COLD START ON 11/02/2005

F1 0001 PRESENT SESSION START (TURBO-DISP.-NP) ON 02/09/2006 TIME 16/23/31

F1 0001 APPLIED SERVICE LEVEL >> DY46462 << OF 10/11/2005

F1 0001 1R46I NODE = ZVSE , SYSID = -

F1 0001 1R46I QUEUE FILE IJQFILE

F1 0001 TOTAL NUMBER OF TRACKS 15 TRACKS

F1 0001 TOTAL NUMBER OF QUEUE RECORDS 1886 RECORDS

F1 0001 FREE QUEUE RECORDS (INCL. 10 FOR CUSHION) 1847 RECORDS

Function APARs

New Function

Event Scheduling - parameter *DUEFRQ=* can be used with DUEDAY parameter of the * \$\$ JOB card to schedule a job more than once a day. The *DUETIME=* parameter schedules a job in 24 hour format (HHMM). APAR DY46248.

Execution Disposition – when using parameter DISP=I a second parameter *EDISP=* can now be specified to place the job in the reader as DISP *D/H/K/L*. See APAR DY46367.

Dynamic Partitions – default output class can be set by *SET DYNOUTC=* See APAR DY46324.

PALTER disposition – Of a job that is DISP=* in execution. If you make changes to a long running job like CICSICCF you can submit the new job to the RDR, change the DISP of the running job to D and it will be deleted at EOJ.

Function APARs

New Function

* \$\$ LST & PUN – card continuation is allowed in a SLI book.

Warm Start – release migration of spool files supported during the FSU process. POWER during a warm start will accept existing QUEUE and DATA files.

Warmstart Queue And Data File Extensions

Warmstart Queue And Data File Extensions

- POWER now allows for the Extension of the Queue and Data file during a Warm Start. The QUEUE and/or DATA File can be extended at warm start with the advantage of not having to POFFLOAD the Queue and Data file then perform a Cold start, which is time consuming.
- The DATA File will have one Label (IJDFILE) but can support up to 32 EXTENTS. The QUEUE File can have one EXTENT but will have two Labels (IJQFILE IJQFOLD) temporarily, while the old Queue file is relocated to the new EXTENT.

Extending The Queue File

Before Extending

DQ

AR 0015 1C39I COMMAND PASSED TO VSE/POWER

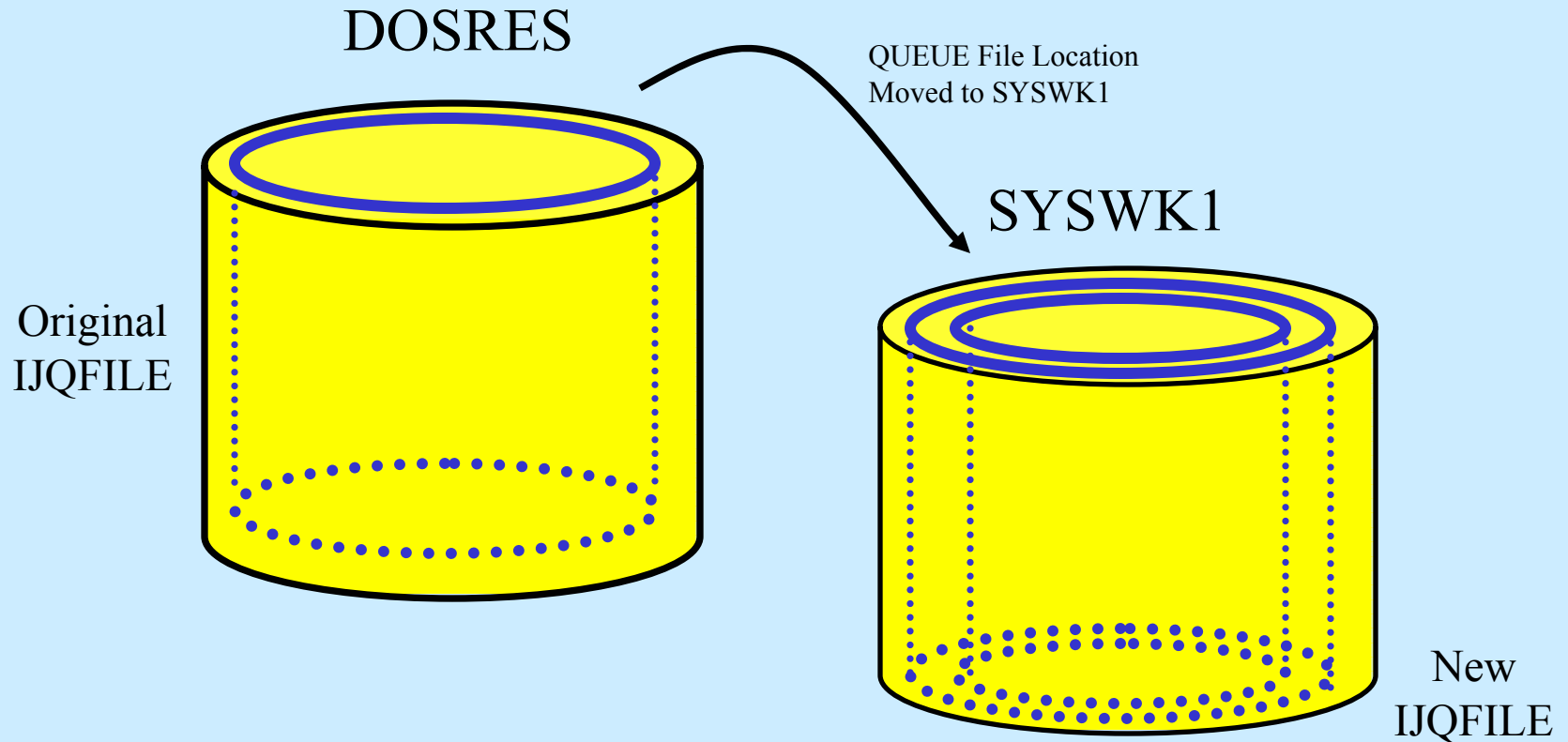
F1 0001 1R49I **QUEUE FILE 002% FULL - 1855 FREE QUEUE RECORDS**

F1 0001 1R49I USED QUEUE RECORDS: 31, CRE-Q: 5, DEL-Q: 0

F1 0001 1R49I RDR-Q: 22, LST-Q: 2, PUN-Q: 0, XMT-Q: 2

F1 0001 1R49I **QUEUE FILE EXTENT ON CKD-806, SYS001, 945, 15**

Extending The Queue File



In this example we will increase the original QUEUE file from 1 cylinder on DOSRES to 2 cylinders on SYSWK1
The Existing Used Queue Records Are Moved To The New Extents.

Extending The Queue File

POWER detects the additional LABEL during the warm start and processes the new LABEL, DTRPOWER.PROC was updated.

• Section of STDLABEL.PROC with the original QUEUE file IJQFILE

```
/. POWER QUEUE FILE =====  
// DLBL IJQFILE, 'VSE.POWER.QUEUE.FILE', 99/366, DA  
// EXTENT SYS001, DOSRES, 1, 0, 945, 15
```

• Section of STDLABEL.PROC with the new QUEUE file location IJQFOLD

```
/. POWER QUEUE FILE =====  
// DLBL IJQFOLD, 'VSE.POWER.QUEUE.FILE', 99/366, DA  
// EXTENT SYS034, DOSRES, 1, 0, 945, 15  
// DLBL IJQFILE, 'VSE.POWER.QUEUE.FILE', 99/366, DA  
// EXTENT SYS001, SYSWK1, 1, 0, 1112, 30
```

• DTRPOWER.PROC

```
CATALOG DTRPOWER.PROC      EOD=YY DATA=YES REPLACE=YES  
// ASSGN SYS000, DISK, VOL=SYSWK1, SHR      POWER ACCOUNT FILE  
// ASSGN SYS001, DISK, VOL=SYSWK1, SHR      POWER QUEUE FILE NEW  
// ASSGN SYS002, DISK, VOL=SYSWK1, SHR      POWER DATA FILE 1  
// ASSGN SYS034, DISK, VOL=DOSRES, SHR      POWER QUEUE FILE OLD
```

Extending The Queue File

```
F1 0001 // JOB POWSTART
          DATE 11/11/2005, CLOCK 16/38/12
F1 0001 4601I NO FORMAT 1 LABEL FOUND  IJQFILE  SYS001=807  SYSWK1
F1 0001 1QE1I  RE-ALLOCATION PROCESS STARTED FOR VSE/POWER QUEUE FILE
F1 0001 1QE3I  IJQFOLD: // EXTENT SYS034,DOSRES,1,000, 945, 15
F1 0001 1QE3I  IJQFILE: // EXTENT SYS001,SYSWK1,1,000, 1112, 30
F1-0001 1QE3D  CONFIRM QUEUE FILE RE-ALLOCATION FROM IJQFOLD TO IJQFILE BY
          'YES' ELSE 'NO'

1 yes
F1 0001 1QE4I  VERIFYING LOCATION OF NEW QUEUE FILE IJQFILE BY OPEN FOR
          'IJQTEST'
F1 0001 1QE5I  LOCATION OF NEW QUEUE FILE IJQFILE VERIFIED SUCCESSFULLY
F1 0001 1QE6A  RE-ALLOCATION FOR IJQFILE COMPLETED, 1920 FREE QUEUE RECORDS
          ADDED
```

After the Queue files location and size has been successfully altered then remove the statements for the old Queue definitions from STDLABEL and DTRPOWR proc.

Extending The Queue File

After Extending

DQ

AR 0015 1C39I COMMAND PASSED TO VSE/POWER

F1 0001 1R49I **QUEUE FILE 001% FULL - 3775 FREE QUEUE RECORDS**

F1 0001 1R49I USED QUEUE RECORDS: 31, CRE-Q: 5, DEL-Q: 0

F1 0001 1R49I RDR-Q: 22, LST-Q: 2, PUN-Q: 0, XMT-Q: 2

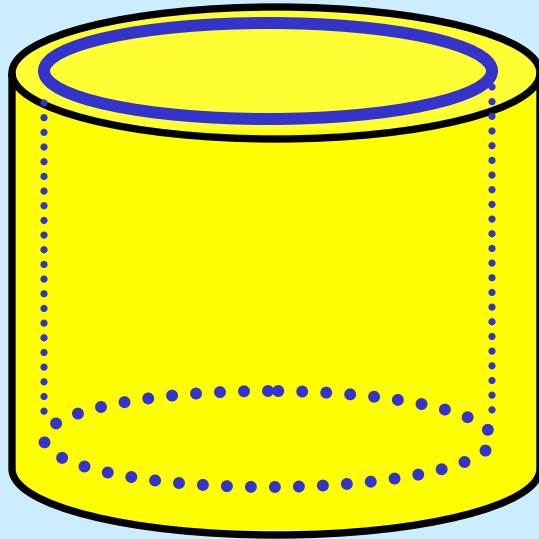
F1 0001 1R49I **QUEUE FILE EXTENT ON CKD-807, SYS001, 1112, 30**

Warmstart Data File Extension

DATA File Example

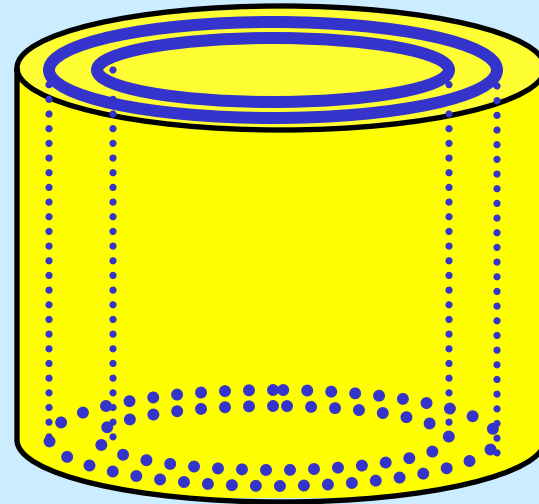
SYSWK1

Original
IJDFILE



SYSWK1

New
Extended
IJDFILE



This example increases the original DATA file from 1 Extent on SYSWK1 to 2 Extents on SYSWK1.

When the data file is extended the already existing extent(s) will remain in their positions.

Extending The Data File

Before Extending

D Q

```
AR 0015 1C39I COMMAND PASSED TO VSE/POWER
F1 0001 1R49I QUEUE FILE 001% FULL - 3775 FREE QUEUE RECORDS
F1 0001 1R49I USED QUEUE RECORDS: 31, CRE-Q: 5, DEL-Q: 0
F1 0001 1R49I RDR-Q: 22, LST-Q: 2, PUN-Q: 0, XMT-Q: 2
F1 0001 1R49I QUEUE FILE EXTENT ON CKD-807, SYS001, 1112, 30
F1 0001 1R49I DATA FILE 007% FULL - 1564 FREE DBLK GROUPS
F1 0001 1R49I CURRENT DBLK SIZE=07548, DBLK GROUP SIZE=00008
F1 0001 1R49I DATA FILE EXTENT 1 ON CKD-807, SYS001, 6330, 1920
```

Extending The Data File

POWER will see the additional EXTENT during the warm start and process the new EXTENT

• Section of STDLABEL.PROC Original definition

```
/. POWER DATA FILE LABEL AND EXTENTS =====  
// DLBL IJDFILE, 'VSE.POWER.DATA.FILE', 99/366, DA  
// EXTENT SYS002, SYSWK1, 1, 0, 6330, 1920
```

• Section of STDLABEL.PROC with new Extent

```
/. POWER DATA FILE LABEL AND EXTENTS =====  
// DLBL IJDFILE, 'VSE.POWER.DATA.FILE', 99/366, DA  
// EXTENT SYS002, SYSWK1, 1, 0, 6330, 1920  
// EXTENT SYS002, SYSWK1, 1, 1, 16680, 300
```

Extending The Data File

POWER will see the additional EXTENT during the warm start and process the new EXTENT

```
4814 F1 0001 // JOB POWSTART
          DATE 09/12/2005, CLOCK 13/47/00
F1 0001 1QD7A  1 ADDITIONAL EXTENT(S) FOUND FOR EXTENSION OF EXISTING DATA
          FILE WITH 1 EXTENT(S)
F1 0001 1QD2I  EXISTING DATA FILE EXTENT NO. 1 FOUND IN IJDFILE DLBL/EXTENT
          (// EXTENT SYS002,SYSWK1,1,000, 6330, 1920)
F1-0001 1QD2D  DATA FILE EXTENT NO. 2 -FOR FORMATTING REPLY 'YES' ELSE 'NO'
          (// EXTENT SYS002,SYSWK1,1,001, 16680, 300)
1 YES
F1 0001 1QD4I  VERIFYING LOCATION OF ADDITIONAL DATA FILE EXTENT(S) BY OP
          FOR 'IJDTEST'
F1 0001 1QD5I  LOCATION OF ADDITIONAL DATA FILE EXTENT(S) VERIFIED
          SUCCESSFULLY
```

Extending The Data File

After Extending

D Q

```
AR 0015 1C39I COMMAND PASSED TO VSE/POWER
F1 0001 1R49I QUEUE FILE 001% FULL - 3775 FREE QUEUE RECORDS
F1 0001 1R49I USED QUEUE RECORDS: 31, CRE-Q: 5, DEL-Q: 0
F1 0001 1R49I RDR-Q: 22, LST-Q: 2, PUN-Q: 0, XMT-Q: 2
F1 0001 1R49I QUEUE FILE EXTENT ON CKD-806, SYS001, 945, 15
F1 0001 1R49I DATA FILE 002% FULL - 1906 FREE DBLK GROUPS
F1 0001 1R49I CURRENT DBLK SIZE=07548, DBLK GROUP SIZE=00008
F1 0001 1R49I DATA FILE EXTENT 1 ON CKD-807, SYS002, 6330, 1920
F1 0001 1R49I DATA FILE EXTENT 2 ON CKD-807, SYS002, 16680, 300
```

Function APARs

DY46375 D queue, SORT=OLD/NEW, LIMIT=

D LST, SORT=OLD

```
AR 0015 1C39I COMMAND PASSED TO VSE/POWER
F1 0001 1R46I FOR 'D LST,.,LIMIT=016,SORT=OLD' COLLECTED 011 OF 00011 ENTRIES
F1 0001 1R46I LIST QUEUE P D C S PAGES CC FORM B
F1 0001 1R46I CEEWARC 00311 3 D A 2 1 D=11/15/2005 T=14:04:57
F1 0001 1R46I PAUSEF5 00016 3 D A 664 1 D=11/15/2005 T=14:12:24
F1 0001 1R46I STARTVCS 00312 3 D A 2 1 D=11/23/2005 T=16:38:42
F1 0001 1R46I CEEWARC 00322 3 D A 2 1 D=11/23/2005 T=16:38:45
F1 0001 1R46I SVEBCDIC 00323 3 D A 2 1 D=12/02/2005 T=13:36:15
F1 0001 1R46I CEEWARC 00334 3 D A 2 1 D=12/07/2005 T=14:00:57
```

D LST, SORT=OLD, LIMIT=3

```
AR 0015 1C39I COMMAND PASSED TO VSE/POWER
F1 0001 1R46I FOR 'D LST,.,LIMIT=003,SORT=OLD' COLLECTED 003 OF 00011 ENTRIES
F1 0001 1R46I LIST QUEUE P D C S PAGES CC FORM B
F1 0001 1R46I CEEWARC 00311 3 D A 2 1 D=11/15/2005 T=14:04:57
F1 0001 1R46I DITVTAPE 00317 3 D A 4 1 D=11/15/2005 T=14:10:11
F1 0001 1R46I DITVTAPE 00318 3 D A 4 1 D=11/15/2005 T=14:11:01
```


POFFLOAD

POFFLOAD TAPE Journal

POFFLOAD - BACKUP / PICKUP / SAVE

For these POFFLOAD functions the default is for POWER to produce a journal while writing spool entries to tape. The journal will have the creation date and time of the tape and information about every spool entry that was written. When the POFFLOAD function completes the journal is written to the POWER as a LST queue entry.

The documented tape inventory eliminates the need to later mount tapes to identify what they contain.



POFFLOAD TAPE Journal

o backup,rdr,581,,*

AR 0015 1C39I COMMAND PASSED TO VSE/POWER

F1 0001 1Q2AI OFFLOADING BACKUP SUCCESSFULLY COMPLETED ON 581, JOURNAL LST
ENTRY \$OFJ0341 CREATED

\$OFJ0341 LISTING

```
1R4CI                                POFFLOAD JOURNAL BEGIN
1R4CI
1R4CI JOURNAL LST ID=$OFJ0341 00341
1R4CI INPUT COMMAND=BACKUP,RDR,581,,*
1R4CI TAPE VOL1 LABEL=
1R4CI (NONE)
1R4CI TAPE HDR1 LABEL=
1R4CI (NONE)
1R4CI
1R4CI DATE BEGIN=12/07/05,TIME BEGIN=15:16:43,TIME NOW=15:16:50,VOL=000
1R41I READER QUEUE  P D C S  CARDS-----
1R41I PRTDUMPA 00021 3 L 0          7   FROM=(SYSA)
      D=11/02/2005  DBGP=000001
1R41I PRTDUMPB 00022 3 L 0          7   FROM=(SYSA)
      D=11/02/2005  DBGP=000001
1R41I PAUSEBG  00009 3 L 0          4   FROM=(SYSA)
      D=11/02/2005  DBGP=000001
1R41I PAUSEF1  00012 3 L 1          4   FROM=(SYSA)
      D=11/02/2005  DBGP=000001
1R41I CICSICCF 00333 3 K 2          71   FROM=(SYSA)
```

Poffload Upward or Downward

It would be helpful for VSE/POWER 7.1 in zVSE 3.1 to Read Queue entries for an older VSE/POWER and Write

- Different Data Block (DBLK) and Dblock Group (DBLKGP) sizes are not of concern to the user, the difference in Queue Record size is a concern the Queue record length was a problem up to 6.4. With zVSE the POFFLOAD command has removed the problem.

POFFLOAD LOAD/SELECT – Can read tapes from any previous release of POWER the Queue record is understood.

POFFLOAD BACKUP/PICKUP/SAVE – Works for a POWER target of 6.4 and greater.

POFFLOAD BACKUP_{xxx} – Works for a POWER target of 6.3 and lower!

Poffload Pickup

Generally POFFLOAD PICKUP does Not lock the queue file.

Example

```
poffload pickup61,1st,E01
```

This POFFLOAD command tells zVSE/POWER to backup all queue entries in a format compatible with POWER 6.1 in VSE/ESA 2.1 the queue record will be the correct length.

POWER 8.1

Automatic Deletion of SPOOL Entries - JECL

LST & PUN Card Operands

EXPDAYS = nnn

EXPHRS = hh

Expiration **DAYS** and **HOURS**. Time before a Job is automatically deleted from the Queue if DAYS and HOURS are both specified the times are added together.

Automatic Deletion – Command Options

Command Operands

CEXPDAYS = nnn

CEXPHRS = hh

EXPDAYS = nnn

EXPHRS = hh

PALTER, PDELETE, PDISPLAY, PHOLD, POFFLOAD SELECT, PRELEASE

Duplication/Copying Spool Entries

PCOPY

```
_PCOPY LST ....  
      PUN ...  
      XMT  
      DEL
```

Make copies of LST or PUN Entries

Tape Spooling

POFFLOAD APPEND

Only for 3592 Tape Device. The new Spool entries are *Appended* to the End of a previous Offload command output.

JECL

Duplicate LST PUN Job Output

* \$\$ LSTDUP

* \$\$ PUNDUP

You can duplicate and change some of the output parameters of a Job currently being spooled.

REFERENCES

<http://www-03.ibm.com/servers/eserver/zseries/zvse/>

<http://www-03.ibm.com/servers/eserver/zseries/zvse/downloads/>

