

RISC to RISC Transition Procedures

Note: These procedures are designed to be a checklist and notes detailing the major tasks performed in migrating from an older source AS/400 to a new target System i server. These procedures also assume that the source system is at an earlier release than the target system, and that IBM supports the upgrade from the source release to the target release (two or less release levels difference i.e. V5R4 to V7R1). The source documents for these procedures are the Release to Release support from chapter 15 of IBM's Backup and Recovery guide.

← Source System Save Procedures:

- ← Determine if the source system console is functional. If it is functional, skip the next 3 steps
 - Use the System Service Tools to determine how the source system console is configured (i.e. Twinax, Lan Console, Direct Ops Console, etc.) and LAN setting in LAN Console
 - If necessary, reset the SST QSECOFR password using CHGDSTPWD to *DEFAULT
 - Use supplemental documentation and IBM Support Line to assist in setting up the console on the source system to match the original console configuration or if necessary convert to LAN console.

- ← Determine if the source tapes are readable on the target tape drive. If so skip the next 4 steps
 - Determine requirements for a loaner tape drive for the source system. LTO drives can read 2 levels down (i.e. an LTO6 drive on the target can read an LTO4 tape produced on the source system).
 - Use the IBM System Planning Tool to determine where in the source system the adapter cards that will attach the loaner tape drive can be installed (i.e. A model 520 or model 515 can accept a 2844 IOP in C1 and a 5712 or 5736 SCSI adapter in C2). The system planning tool can be downloaded at:
<http://www.ibm.com/systems/support/tools/systemplanningtool/>

- ← You may need to print a rack configuration of the source system in order to determine open card slots for installing tape adapter cards. To print a Rack Config:
 1. Start System Service Tools - on the command line type STRSST.
 2. Sign on as QSECOFR and whatever your SST password is.
 3. Take option 1. Start a service tool
 4. Take option 7. Hardware service manager
 5. Use F6=Print configuration
 6. Hit Enter
 7. F3 twice and then Enter to exit

Then do a WRKJOB and option 4 to find the QPCSMPT print file. Copy it to a PC txt file or PDF file using Ops Navigator or whatever tool you currently use to send spool files via PC file and email it to me.

- ← To print a list of IBM Licensed Programs and current disk utilization:
 1. Sign on OS/400 as QSECOFR
 2. Enter the following commands:
 DSPSFWRSC OUTPUT(*PRINT)
 DSPSYSSTS OUTPUT(*PRINT)

Then do a WRKJOB and option 4 to find the QSYSPRT and QPDSPSTS print files. Copy them to a PC txt file or PDF file using Ops Navigator or whatever tool you currently use to send spool files via PC file and email them to me.

- ← Power down the source system and install the loaner tape adapter card(s), cable the tape drive to the SCSI or SAS adapter card and power the source system back on.

- Use the WRKHDWRSC *STG and WRKDEVD commands to determine if the loaner tape drive reported in and its device description name (usually TAP0x or Tx where x equals a number).
- ← Signon the console as QSECOFR
- ← Use the Retrieve the System Information command to store the system values, network attributes, edit descriptions etc. into the QUPGRADE library.
 - If the QUPGRADE library exists, then CLRLIB QUPGRADE
 - If the QUPGRADE library does not exist then CRTLIB QUPGRADE
 - Then RTVSYSINF to library-name QUPGRADE
- ← Save the Job Schedule object and output queues in QUSRSYS for restore on the target system.
 - Create a save file for the job schedule object:
 - CRTSAVF FILE(QUPGRADE/Q_JOBSCD)
 - Create a save file for the output queues in QUSRSYS:
 - CRTSAVF (QUPGRADE/Q_OUTQS)
 - Save the job schedule object in QUSRSYS:
 - SAVOBJ OBJ(QDFTJOBSCD) LIB(QUSRSYS) DEV(*SAVF) SAVF(QUPGRADE/Q_JOBSCD)
 - Save the Output Queues in QUSRSYS:
 - SAVOBJ OBJ(*ALL) LIB(QUSRSYS) DEV(*SAVF) OBJTYPE(*OUTQ) SAVF(QUPGRADE/Q_OUTQS) SAVFDTA(*YES)
- ← Print the system information into output queue QDKT
 - CHGJOB OUTQ(QDKT)
 - PRSYSINF
- ← Verify all customer NWSD (Network storage devices and spaces) are varied off:
 - Use the WRKNWSD *ALL command and check all NWSDs
- ← Verify that the customer has license keys for all of their software
 - Download keys using customer and order number from IBM ESS website:
 - <http://www-304.ibm.com/servers/eserver/ess/index.wss>
 - Use CALL QSFWINV to determine which IBM product have licenses on the source system and make sure you have corresponding licenses for the target system at the target system version and release level.
- ← Backup the entire system using option 21 on the SAVE menu.
 - Make sure you are signed on the console as QSECOFR
 - Note the QSTRUPGM system value then change it to *NONE
 - Insert a tape into the compatible tape drive and initialize it. i.e.:
 - INZTAP DEV(TAP0x) NEWVOL(SAVSYS) CHECK(*NO)
 - ENDSBS *ALL *IMMED and use WRKSBS to make sure all subsystems end
 - GO SAVE, option 21
 - Device: TAP0x, Prompt: N, Check: N, Delivery: *NOTIFY, Start: Current, Unmount: Y, Vary off: *ALL, Print: N, Reply List: N. Spooled Files: *ALL

→Target System Installation and Restore Procedures:

- You must first hardware install the new target server, unbox it and sort through the shipping group. Label the boxed components and get all of the screws and rack nuts together.
- If a UPS is included, unbox it and use the installation instructions provided to install it

- If a UPS sensing card was included remove the cover to the interface option slot and slide the card into the slot. Plug the cable provided with the card in the 9-pin plug on the back of the card. Use the set of sensing cables that came with the target system to interface to serial port S2.
 - If the UPS is rack mounted install it in the lowest rack positions available. Use the provided rails and screws.
 - If an extended battery module is included rack mount it on its rails above and adjacent to the rack mounted UPS, plug the EBM cable into the UPS.
 - Plug the UPS into the power receptacle and power it up.
- If the target system is a tower model set it up, loop the power cables through the retaining brackets on each power supply then plug them into 110 volt power. Run patch cables to the user and Ops Console NICs. The Ops Console NIC should be the top connector on the Ethernet card. Run cables for any other peripherals (i.e. SAS or fibre cable for tape drive). Skip the next 5 steps.
- Select area in the rack that is a comfortable height so that the operator can easily reach the DVD drive and see the operator panel.
- Mount the slides in the rack. As you install each slide remove the screw in the rear and open up the rear latch then open the front latch, push the mounting studs into the rack holes then close the front and rear latch. Install the screw that was removed earlier in the rear of the slide. Pull both slide extensions all the way out the front of the rack.
- Get some help. IBM recommends three people lift the new target system unit (CEC) into place, one in the front and one on each side. Clear enough room around the front of the rack for two people to carry and install the CEC and fasten it into place. Lift the CEC by the metal handles on each side. Set the back side mounting studs into the cutouts on each slide, then lower the front of the CEC into the other two cutouts on each slide. Make sure the white keeper engages the front mounting stud on each side. Then use the blue levers in the slide on each side to release the slides and allow the newly installed CEC to slide into the rack. Pop the front cover onto the CEC and secure each side with a screw.
- Install the cable management trough in the rear of the CEC using the slide extensions and support slide provided. Unfurl the Velcro cable ties so that cables can be easily installed. Run all cabling through the cable management trough. Slide the CEC in and out to test the movement of the cable management trough.
- The standard 1400 Watt power supplies in a rack mounted Power 8 server require 208 volts. Power 7 and the RPQ 900 Watt power supplies are auto-ranging and will run on 110 or 208 volts. Run the power cables through the cable management trough and to the appropriate power source. Loop the CEC end of the power cables through the retaining brackets on each power supply. Also run the Ethernet cables for the user NIC and Ops Console or HMC NIC. The Ops Console NIC should be the top connector on the Ethernet card. Run cables for any other peripherals (i.e. SAS or fiber cable for tape drive).

→Setup Operations Console

Make sure the most current version of client access is installed on the Ops Console PC.
Use the IBM support Line documents 612975257 and 509240963 below as reference:



Lan Console P7 Quick
Start Adobe Acrobat



Lan Console P6 and
P7 Quick Start

→ Download the latest target O/S PTFs

Obtain the latest Cumulative and Group PTFs for the target system O/S level from IBM's Fix Central website:

<https://www-933.ibm.com/support/fixcentral/>

Note: I use the FTP server option. Once the PTFs are available an email is sent to the requester then you can use an FTP tool like Filezilla to download the images to your PC or to a thumb drive.

Next I FTP the PTF image files to my System i in the following type of directory structure:
/PTF/V7R2/013115 for V7R2 PTF images that were uploaded on 1/31/15

Finally I save the directory to a V7R2 PTF tape, adding to the other PTF files on the tape so that I always have a previous version of the PTFs in case there is a problem with the latest load.

→Load Licensed Internal Code and Base Operating System

- If the new target system was ordered for migration and the License Internal Code and base Operating System are the only options installed you can skip this sections entitled Load Licensed Internal Code and Base Operating System, otherwise proceed from here.
- Place the system in Manual Mode
 - If your system unit has a lock on the control panel, use the key or keystick to unlock the control panel. Note: Not Applicable on Power 5 or later. Place the system in Manual mode. Note: Not Applicable on the model 520
 - Press the Function Select switch (or buttons) to display 02 (IPL) in the Function display.
 - Press the Enter button on the control panel.
 - Press the Function Select switch (or buttons) to display D (IPL from tape, optical media, or CD-ROM) in the Data display and M (Manual) in the Mode display.
 - Press the Enter button on the control panel.
 - Ensure that any switches for the alternate IPL device (tape unit) and for all disk units are in the On position.
- Restart the system form the I_Base_01 CD
- From the DST menu, verify disk drive configuration, setup disk protection, add drives to the system Auxiliary Storage Pool, and load the base Operating system.
- Use the attached Backup recovery Manual pages 350 through 359 as reference:



Backup Recovery
Chapter 15

→Restore the target system

- Sign on to the target server as user QSECOFR. You do not need to enter a password at this time.
- At the IPL Options screen, enter the correct date and time. Verify that the following values are set as follows:
 - Start to system to restricted state = Y
 - Define or change system at IPL = Y
 - Set major system options = Y
- On the Set Major System Options screen, select Y to enable automatic configuration.
- On the Define or Change the System at IPL screen, do the following:
 - Select option 3 (System value commands).
 - On the System Value Commands screen, select option 3 (Work with System Values).
 - On the Work with System Values screen, type 2 next to the following system values:
 Change QALWOBJRST to *ALL
 Change QFRCCVNRST to 0
 Change QIPLTYPE to 2
 Change QJOBMSGQFL to *PRTWRAP
 Change QJOBMSGQMX to 64
 Change QLMTDEVSSN to 0
 Change QLMTSECOFR to 0
 Change QLOGOUTPUT to 0
 Change QMAXSIGN to *NOMAX
 Change QPFRADJ to 3
 Change QPWDEXPITV to *NOMAX
 Change QSCANFCTL to *NOPOSTRST
 Change QVFYOBJRST to 1
 Change QTIMZON to match the source system value
- After the system changed the system values, press F3 twice to return to the Define or Change the System at IPL screen
- On the Define or Change the System at IPL screen, press F3 to exit and continue the IPL.
- On the Change Password screen, type QSECOFR as the current password. Enter a new password. Re-enter the password to verify and press Enter.
- Perform steps 31 through 40 in the topic, Restoring previous release user data to a new system: Step-by-step instructions in Chapter 15 of the Backup and Recovery Guide. Page 337 in SC41-5304.
 - Change the following reply list entry if you want the restore to go all the way to finish without reporting an error:
 WRKRPYLE CPA3709 change to default of "g"
 - End the subsystems then verify that the system is in restricted state:
 ENDSBS *ALL *IMMED
 WRKSBS
 - Change the QSYSOPR message queue to break mode:
 CHGMSGQ QSYSOPR *BREAK

- To prevent the joblogs from printing on the system default printer:
CHGJOB, F4, then change outq to QDKTfor joblogs
- Restore user profiles and security data:
RSTUSRPRF DEV(TAP0x) ALWOBJDIF(*ALL) ENDOPT(*LEAVE)
- Restore configuration object:
RSTCFG OBJ(*ALL) DEV(TAP0x) OBJTYPE(*ALL) SRM(*NONE)
ALWOBJDIF(*ALL) ENDOPT(*LEAVE)
- Restore non-system libraries:
RSTLIB SAVLIB(*NONSYS) DEV(TAP0x) OPTION(*NEW) MBROPT(*ALL)
FRCOBJCVN(*NO) OMITOBJ(QOFC) ALWOBJDIF(*ALL) ENDOPT(*LEAVE)

Note: At V6R1 or later this restore will create a side file called a DFRID. It keeps the objects that cannot be restored because a prerequisite was not met (i.e. a logical file attempting to restore before the physical file has been restored) in the DFRID and restores them at the end of the *NONSYS restore.

Run DSPLOBLOG OUTPUT(*PRINT) Search for errors that occurred during the restore operations. Check that all DFRID objects were restored. Search for CPF3773 and CPI373B errors to see that all libraries restored properly. Resolve any problems that you encountered.

If a second pass of restore library is required to get logical files restored that are associated with physical files, walk through the tape and restore the uninstalled object in the problem libraries using the following example:

```
RSTLIB SAVLIB(LIB_NAME) DEV(TAP0x) OPTION(*NEW)
MBROPT(*NEW) ALWOBJDIF(*ALL) FRCOBJCVN(*NO)
ENDOPT(*LEAVE)
```

- Restore Document Library objects:
RSTDLO DLO(*ALL) DEV(TAP0x) SAVFLR(*ANY) ALWOBJDIF(*ALL)
ENDOPT(*LEAVE)
- Restore the IFS objects:
RST DEV('/QSYS.LIB/TAP0x.DEVD') OBJ(('/' *
('/QSYS.LIB' *OMIT) ('/QDLS' *OMIT)) ALWOBJDIF(*ALL) OPTION(*NEW)
- Restore the job schedule object in QUSRSYS:
RSTOBJ OBJ(QDFTJOBSCD) LIB(QUSRSYS) DEV(*SAVF)
SAVF(QUPGRADE/Q_JOBSCD)
- Restore the Output Queues in QUSRSYS:
RSTOBJ OBJ(*ALL) LIB(QUSRSYS) DEV(*SAVF) OBJTYPE(*OUTQ)
SAVF(QUPGRADE/Q_OUTQS)
- Update the system information :
UPDSYSINF LIB(QUPGRADE)
- Install QGPL and QUSRSYS and all other IBM Licensed programs. Make sure OPT01 is varied on. Make sure PID CDs are in order (I_BASE_01, B2924_01-0x, F2924_01).Load the I_Base_01 CD in OPT01.
GO LICPGM take Option 1. Install all

Install Option: 1
 Installation Device: OPT01
 Replace if current: Y
 Nonaccepted agreement: 2
 Automatic IPL: N

Note: Add any new licensed programs that may be required (i.e. new Java components, Transformation Services, etc.).

Note: If Extended Base Support (option 3) fails to install with CPF3839, CPD3DC3, or CPD377C then delete: QIBM/ProdData/os/OSGi/LWI71/lib/i5OSjaas.jar

If you encounter problems with the restore of 5770XE1 over 5722XE1 you will have to do a DLTLICPGM of both products and delete these directories:

/QIBM/ProdData/CA400
 /QIBM/UserData/CA400
 /QIBM/ProdData/Access/Windows

- Restore Authority
RSTAUT
 - CHGSYSVAL for above values back to original values.
 - Install the License keys using: WRKLICINF
 - SIGNOFF (*list), this will create a joblog.
 - If the source system was at V5R4 or earlier you will need to run Object Conversion. Start the QBATCH subsystem then submit the following command and let it run to completion:
SBMJOB CMD(STROBJCVN LIB(*ALLUSR) JOB(STROBJCV) JOBQ(QBATCH))
 - Verify subsystems for JOBQ entries, routing entries, workstation entries and prestart jobs
 - If you want the target system name to be the same as the source use the CHGNETA command. Specify SYSNAME, LCLCPNAME, LCLLOCNAME, NWSDOMAIN.
 - Check on any changed default command changes. QUSRTOOLS has a command to perform checks on these.
 - Map line descriptions to the new hardware. Use the WRKHDWRSC *CMN and WRKLIND commands to do this.
- Note: If the Ethernet lines fail with CPD2772 R/C 00002080 then change the serviceability option on the LIND to *NONE.
- Check the default relational database name on the source system vs. the target system using the WRKRDBDIRE command. It is advisable for them to match. You will have to delete the current entry on the target system and add a new default to match.
 - If the customer is using SSL on their HTTP server the security pulldown will have to be re-enabled for SSL in the Apache server configuration and the HTTP application added back.

- If you installed Windows(R) Server for iSeries on your server and you saved your server with the Integrated xSeries(TM) Server in a Varied off setting, follow these steps:
Add the links for the server descriptions. Enter the following for each server description:

```
ADDNWSSTGL NWSSTG (storage_name) NWS(server_description)'
```

Vary on your Integrated xSeries Server by entering WRKCFGSTS *NWS and selecting option 1 to vary on each server.

- Install the latest Cumulative and Group PTFs

If you are using a tape to distribute the PTFs from Fix Central. Use the MD (make directory) command to create the directory structure on the target system i.e.:

```
MD '/ptf'
```

```
MD '/ptf/v7r2'
```

```
MD '/ptf/V7R2/013115'
```

Then use the RST command to restore the images into the target directory, remember to specify the sequence number to specify where on the tape the most current PTFs reside.

Create an image catalog for the PTF installation with the CRTIMGCLG command, specify *OPT and the target directory created above. Sample name: V7R2PTF.

Then add each of the images using the ADDIMGCLG command, specify *FROMFILE.

You may need to recreate the OPTVRT01 device with the CRTDEVOPT command if the current OPTVRT01 device will not vary on.

Mount the OPTVRT01 device on the image catalog.

Use GO PTF Option 8 to install the PTFs from device OPTVRT01 and IPL: N.

Note: The PTFs will install on the next unattended IPL.

- IPL the system.

```
ENDSBS *ALL *IMMED
```

```
PWRDWN SYS *CNTRLD 120 RESTART(*YES)
```

```
F16 to verify power down
```

- Use GO LICPGM and verify all IBM products are installed.

- Use WRKPTFGRP to verify that the PTF groups are fully installed.

- Save the entire server using option 21 of the GO SAVE command. Make sure that you specify the following options:

```
Vary off the network server...*ALL
```

```
Unmount file systems.....Y
```

- Resume normal operations and verify that all your applications run properly.

- Verify Service Director, use GO Service and follow the prompts. Take option 2 and make sure SD is enabled. Use SNDPTFORD SF987x0 to send a test PTF request. Then use SNDSRVRQS *TEST to send a test problem. If either procedure fails, then use the Repairing Electronic Service Agent Files procedure below to fix Service Agent.

→Repairing Electronic Service Agent Files

Backlevel QASX* files in QUSRSYS library can cause problems with problem send and SNDPTFORD functions of Electronic Service Agent. The same is true for the contact information file, QAEDCDB*. Some error messages you could see when backlevel files are present are as follows:

CPF3CF2 - Error occurred during running of QsxRetrieveProblemLogEntry API.
 CPFEF32 - Error creating a test problem. when attempting to create a test problem.
 C2M3003 - Data was truncated on an input, output or update operation.

At V7R1, in WRKLNK '/qibm/userdata/os400/universalconnection/eccerr.stdout', you may see:

Failing class[ProblemLog] Failing method[retrieveProblemLogEntry] Failure descrip Entry] Failure description[Error when trying to run a procedure in AS400

You can check for backlevel QASX* and contact information files by doing the following:

DSPOBJD OBJ(QUSRSYS/QASXPROB) OBJTYPE(*FILE) DETAIL(*SERVICE) and check that the System Level is the same as the OS

DSPOBJD OBJ(QUSRSYS/QASXPTF) OBJTYPE(*FILE) DETAIL(*SERVICE) and check that the System Level is the same as the OS

DSPOBJD OBJ(QUSRSYS/QAEDCDBPF) OBJTYPE(*FILE) DETAIL(*SERVICE) and check that the System Level is the same as the OS

If you find the files are not the same System Level as the OS, you will need to get the correct version of those files installed on the system. This can be done by installing the files directly from the OS install media.

- Locate the base OS install media or image catalog. The objects are on the following CD/DVD labeled:
 - o V5R4 - B2924_02
 - o V6R1 - B2924_01
 - o V7R1 and V7R2 - B_GROUPx_01
- Rename (or delete) the existing QASX* physical files and logical files in QUSRSYS library:
 - o WRKOBJ QUSRSYS/QASX*
Select Option 7 to rename them all (or Option 4 to delete them all)
**NOTE: Rename or delete the QASXPROB2 logical file first
 - o WRKOBJ QUSRSYS/QAEDCDB*
Select Option 7 to rename (or Option 4 to delete) QAEDCDBLF first, followed by QAEDCDBPF.
- Execute this command to get all of the QASX* files restored to QUSRSYS from the install media:
 - o RSTOBJ OBJ(QASX*) SAVLIB(QUSRSYS) DEV(OPT01)
OPTFILE('/QUSRLIBS/Qvrm0024/QUSRSYS')

Where vrm is the Version/Release/Modification Level of your OS (for example, 540, 610, 710 or 720). (Note: You may not see all of the files listed, depending on your operating system version):

 - QASXCALL
 - QASXDTA
 - QASXEVT
 - QASXFRU
 - QASXNOTE
 - QASXPROB

QASXPROB2
 QASXPTF
 QASXSYMP
 QASXURI

- Execute this command to get all the QAEDCDB* files restored to QUSRSYS from the install media:
 - RSTOBJ OBJ(QAEDCDB*) SAVLIB(QUSRSYS) DEV(OPT01)
OPTFILE('/QUSRLIBS/Qvrm0024/QUSRSYS')
 - For each of the QASX* and QAEDCDB* files, enter the following command:
CHGOBJOWN OBJ(QUSRSYS/xxxxx) OBJTYPE(*FILE) NEWOWN(QSYS)
CUROWNAUT(*REVOKE)
**Where xxxxx is one of the QASX* and QAEDCDB* files listed above.
- Check the authority for each object:
 - WRKOBJ QUSRSYS/QASX*
Take an Option 2 on each object.
The Owner (in the upper right hand corner) should say QSYS.
The authorities should look like this:

Object	User	Group	Authority
	*PUBLIC		*CHANGE
	QSYS		*ALL
- If the contact information files were restored, the contact information must be updated using the CHGCNTINF command.
 7. Test that the new files resolved the issue by sending a test problem (GO SERVICE, Option 15, and accept the defaults) or by using SNDPTFORD.

→Recovering Database Catalogs and Deleting Database Host Server SQL Packages

- If you encounter database errors when attempting to use ODBC, transferring files, downloading files to spreadsheets or when using System i Access you may need to recreate the DB2 catalogs in QSYS2 and the SYSIBM libraries. Use the following procedure to recover from catalog issues:
 - 1) Wait for a time of low database usage
 - 2) DSPFD QSYS/QADBREF and note CCSID for fields and use on CHGJOB command
 - 3) CHGJOB LOG(4 00 *SECLVL) LOGCLPGM(*YES) CCSID(37)
 - 4) CALL QSYS2/QSQXRLF PARM(DLT 'QSYS2')
 - 5) CALL QSYS2/QSQXRLF PARM(CRT 'QSYS2')
 - 6) CALL PGM(QSQSYSIBM) /* recreates items in SYSIBM */
 - 7) CALL PGM(QSQIBMCHK) /* checks the status of SYSIBM objects */
 - 8) DSPJOBLOG OUTPUT(*PRINT)

We want to see:

TOTAL IBM OBJECTS UNKNOWN = 0
 TOTAL IBM OBJECTS MISSING = 0

The database cross reference indexes may need to be rebuilt. To check run:

RCLDBXREF *CHECK if there are errors
 ENDSBS *ALL *IMMED
 RCLSTG *DBXREF

- Occasionally it is necessary to delete the SQL package QZDAPKG on V7R1 or earlier release (QZDAPKG is not used on V7R2 or later). The database host server will automatically create another package when it restarts. If you encounter database errors when attempting to use ODBC, OLEDB, with the .NET managed data provider, transferring files, downloading files to

spreadsheets or when using System i Access you may need to delete this SQL package. Use the following procedure:

```
ENDHOSTSVR *DATABASE
ENDPJ QUSRWRK QZDASOINIT *IMMED
ENDPJ QUSRWRK QZDASSINIT *IMMED
ENDPJ QSERVER QZDAINIT *IMMED
DLTSQLPKG QGPL/QZDAPKG
STRHOSTSVR *DATABASE
STRPJ QSERVER QZDAINIT
```

DISK SUBSYSTEM RECOVER

1. **Reclaim Cache** - the reclaim will reset the IOP/IOA so if disk(s) are active under that IOA as opposed to the other IOA 2BE1

- there may be a short disruption - short hang with A6xx0266/0255

- Do not want to do it during a busy time

- in some cases they go to reclaim and there is nothing to reclaim

reclaim IOP cache at SST:

1. STRSST, sign on with either QSECOFR or 2s.
2. Choose option 3, Work with disk units.
3. Choose option 3, Work with disk unit recovery.
4. Choose option 7, Reclaim IOP cache storage.

2. There are some PTFs to **prevent this in the future**: APAR MA41890 R710 PTF MF55304. Make sure that PTF is applied or gets applied.

3. **Phantom drive**:

An IPL should clear this up.

4. If **multipaths** are not correct, IPL and run the MULTIPATHRESETTER Advanced Analysis macro:

To 'reset' the number of paths to the actual number of paths that are currently enlisted, do the following:

From DST or SST, choose

Start a service tool

Display/Alter/Dump

Display/Alter storage

Licensed Internal Code (LIC) data

Advanced analysis (you will need to scroll down to see this option)

At the Select Advanced Analysis Command screen, scroll down and put a 1 by MULTIPATHRESETTER and hit enter.

For options use: -RESETMP -ALL

Remember to use the -CONFIRM option!!! (when in doubt - read the screen!)

Installing IBM PTF's from DVD Images

Create Virtual Optical Device

CRTDEVOPT DEVD(OPTVRT01) RSRCNAME(*VRT)

Vary the device on

VRYCFG CFGOBJ(OPTVRT01) CFGTYPE(*DEV) STATUS(*ON)

Create a directory on the IFS called PTF

CRTDIR '/PTF'

Create image catalog called FIXES and associate it to the directory PTF

CRTIMGCLG IMGCLG(FIXES) DIR('/PTF')

Put the DVD in the AS400

Copy the image catalog from the DVD to FIXES

ADDIMGCLGE IMGCLG(FIXES) FROMDEV(OPT01)

Mount the fix to install - it can only load the one that's mounted and, only one can be mounted at a time

WRKIMGCLGE IMGCLG(FIXES) DEV(OPTVRT01)

Load the image catalog FIXES from the virtual optical device

LODIMGCLG IMGCLG(FIXES) DEV(OPTVRT01)

Now you're ready to install the PTFs

GO PTF and take **option 8**. Choose the virtual optical device: **OPTVRT01**

Automatic IPL = N

Prompt for media = 1