

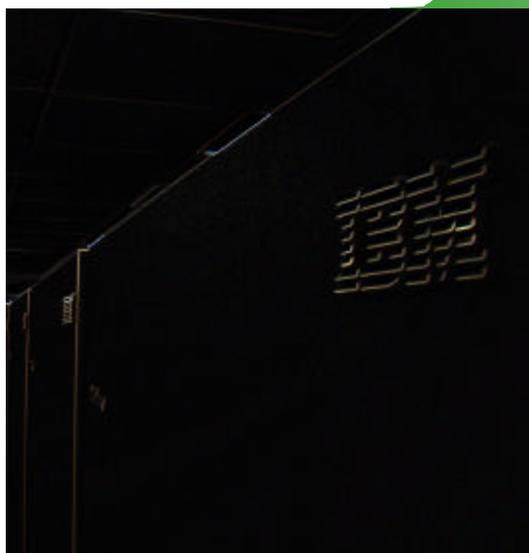
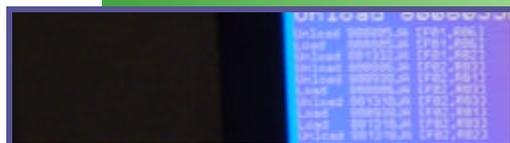


Shell Canada Ltd.

Information and Computing

Business Systems

Infrastructure



iSeries Weekend Procedures & IPL Manual

@server

iSeries

Document Conventions

1. Often executable command line instructions extend further than the width of the page allows. In this case, the command string will be continued on the following line(s). Most often, each individual command string will be preceded by the word "Run", it can then be assumed that all of the bolded command line text that follows is one command regardless of the number of lines it uses in the manual.

Occasionally, when a series of lengthy commands are listed in succession, the group will be preceded by a single instance of the word "Run:" (note the colon). Individual command strings may still be displayed on multiple lines but will always be contained within their own paragraph. In this case, individual commands are separated by paragraph spacing.

2. Before stating specific executable commands, some steps will begin with a sentence describing the actions of the step in general. These descriptions will be rendered in italics.

(e.g. *Delete BPDB_OLD library:*

Run **DLTLIB LIB(BPDB_OLD).**)

3. A lowercase "x" is used as a variable character. (e.g. **CAASxx**) A series of lower case "x"s may also be used (e.g. File xxxxx) however the number of "x"s does not necessarily correspond to the number of characters in the actual name. A "#" character is also used in some cases. It denotes a number only.
4. Angled brackets surrounding a variable type will be used as a variable in some situations. (e.g. **DSPLIB LIB(<library name>)**) DO NOT type the angled brackets in the command, they are used strictly as part of the variable notation style. Type all other brackets as shown.
5. It is assumed that the readers of this manual are familiar with basic command line interface usage. In most cases procedures in this manual will not include instructions to "press enter" after typing a command. In circumstances where it is necessary to press a key other than enter after a command, a long dash will follow the command and be followed by the specific key to press (e.g. Run **TRCCNN—Press F4**).
6. When reference is made to entries elsewhere in this manual a format of *chapter section> entry name* (e.g. See *Contacting IBM> Using SST*) and will simply state the entry name if it is in the same chapter section (e.g. See *Using SST*).
7. If you have any updates or new information for this manual, or if you notice any errors, contact Jason Plett or Dan Bainbridge.



Information and Computing

Business Systems

Infrastructure

Update History

Feb. 2, 2007. Document created by Jason Plett.

Mar. 27, 2007. Updated 6-9, added 15-16. Jason Plett.

Apr. 13, 2007. Update 6,7. Jason Plett.

Aug. 17, 2007. Updated various content and structure. Jason Plett

Table of Contents

Weekend Maintenance Windows	5
General Guidelines For Weekend Procedures	5
System Offline Schedule	6
Nominal Maintenance Window Procedures	7
Full Maintenance Window Procedures	9
Includes IPL , SAVSYS* and Reclaim Storage*	
High Availability Window Procedures	13
Performing IPL From Remote Location (with Console Monitor)	14
Performing IPL From Remote Location (without Console Monitor)	15
Applying PTFs	17
Performing IPL on a PTF Weekend	19
Appendices	21
Appendix A: Associated Procedures	21
Appendix B: Post-IPL Jobs	23
Appendix C: Pre-IPL Jobs	25

*As performed in conjunction with IPL procedure.



Information and Computing

Business Systems

Infrastructure



Information and Computing

Business Systems

Infrastructure



Weekend Maintenance Windows

1. **Nominal Maintenance Window**
No IPL, SAVSYS or Reclaim Storage, only system checks.
2. **Full Maintenance Window**
Weekend activities include the IPL and possibly SAVSYS and/or Reclaim Storage.
3. **High Availability Window**
No system maintenance is performed as full system functionality must be sustained over high availability weekends. This requires certain jobs to be held before the weekend.
4. **Hardware/OS Upgrade Window**
No other maintenance should be scheduled when hardware upgrades are planned. Each situation will be different so there is no single procedure to follow. Hardware Upgrades will be planned as separate events.

General Guidelines for Weekend Procedures

1. Always perform more restrictive activities (i.e. work that cannot be cancelled) **before** less restrictive activities.
2. It is advised **not** to use the display station pass-through (STRPASTHR) on consoles.
3. **Do Not** introduce unplanned activities into the scheduled maintenance window without first reviewing time/availability constraints.
4. Always notify Help Desk **early**, if the outage work is going to exceed the planned service window for production systems. Escalate according to normal TT procedures.
Being late by less than 30 minutes does not require an SN.
5. If issues/delays are encountered in the window, escalate to TT support or IBM (as required) **as soon as possible** in order to minimize potential time delays.
6. **Do Not** schedule PTF and Hardware activities on the same weekend.
7. Always prioritize outage window work to assure the availability of systems in order of criticality.
More Critical **02 > 06 > 04 > 03 > 01/05** Less Critical
8. **Never** execute a native i5OS SAVSYS or SAVE command on a BRMS-managed system.



Information and Computing

Business Systems

Infrastructure



Information and Computing

Business Systems

Infrastructure

System Offline Schedule

System	System Description	System Shutdown	System Online
CAAS01	JDE Test	Saturday 22:00	Sunday 14:00
CAAS02	JDE Production	Sunday 8:00	Sunday 14:00
CAAS03	Data Warehouse	Sunday 8:00	Sunday 14:00
CAAS04	Express/Rover	Sunday 8:00	Sunday 14:00
CAAS05	BOSS Test	Saturday 22:00	Sunday 14:00
CAAS06	BOSS Production	Sunday 8:00	Sunday 14:00
CAASM1	JDE/BOSS Prod MPar	Sunday 8:00	Sunday 14:00
CAASM2	DW/Express MPar	Sunday 8:00	Sunday 14:00

Consider starting test machine IPLs on Saturday night. This will allow for better observation of any problems that arise. When PTFs are applied, any problems will often become lengthier. Allowing the maximum amount of time for test machine IPLs will mean better preparation for when the same PTFs are applied to the production machines.



Nominal Window Procedures



Information and Computing

Business Systems

Infrastructure

Details

On weekends where no IPL, SAVSYS or Reclaim Storage is scheduled and it is not a High Availability weekend, the POST-IPL checks must still be performed to ensure systems are fully operational.

Procedure

Friday morning

Ask the Tech Team if they have any system activity planned on the weekend.

Friday afternoon

Ensure all 01/02 HA Weekend jobs are released.

*TTUTRVRK is not normally held, if it is, check with the team (Express Support) before releasing.

Sunday morning

Check that pre-IPL job and dependancies have completed (99-step has run). You should also verify that the reorgs are running on prod machines. (Test machines are on an earlier cycle.)

Sunday afternoon (no later than 14:30)

Go through the Sunday afternoon Post Full Maintenance Window systems checks checklist.



Information and Computing

Business Systems

Infrastructure



Full Maintenance Window Procedures



Information and Computing

Business Systems

Infrastructure

If applying PTFs, see section on Performing IPL on a PTF Weekend before beginning maintenance procedures.

Friday Afternoon

1. Ensure job-step 1 is released on **TTUTPREIPL** and **TTUTPSTIPL**.
2. If applying PTFs, check PTF status (**DSPPTF** and **WRKPTFGRP**) to ensure that PTFs will be applied on IPL. Note that IPL will take more time if there are PTFs.
3. It is possible to hold database reorgs **TTRRSYSWKY** (CAAS01-06) and **TTR-RBRMUSR** (M1/M2), which are otherwise triggered at 8:00 AM on Sunday and run for two hours. If you plan on starting the IPL at 8:00 AM on Sunday, hold the reorgs (job-step 1) on Friday. If you're planning on starting after 10:00 AM, let them run as scheduled but be extremely careful that they are not running when you begin the IPL.



Once these reorgs have begun, they **MUST NOT** be stopped. They also **MUST** be completed by Sunday **14:00**. If, for some reason, a reorg is not going to be completed by 14:00 a decision must be made, whether or not to cancel the job. This decision must be based on specific information. See Associated Procedures > *Canceling Reorgs*.

Consider starting test machine IPLs on Saturday night. (See System Offline Schedule on page 5 for times.) This will allow for better observation of any problems that arise. When PTFs are applied, any problems will often become lengthier. Allowing the maximum amount of time for test machine IPLs will mean better preparation for when the same PTFs are applied to the production machines.

Sunday Morning (After 8:00 AM)



The following work must be done in **QCTL**—not in **QINTER**.

Steps 1 - 8 **MUST** be performed on all partitions undergoing the IPL.

1. Ensure you are working in **QCTL**. If console is in **QINTER**, press **Alt-Jump** to switch to **QCTL**.
2. Ensure **TTUTPREIPL** ran successfully.
3. Run **WRKACTJOB** to find out what is running on each server. Verify that all WAS shutdown jobs have completed in subsystem **A4UTILCNTL**. On some systems, certain jobs are always running in **A4UTILCNTL**. These are: **DSKHTR***, **TTSMCMT*** and **XC***.
4. Make a note of the job details for any JDE jobs running on 02 and then end the jobs. Make sure to let the app teams know.
5. Run **ENDSBS SBS(*ALL) DELAY(120)**—press **F4**, press **F9**, set *End Subsystem Option* to ***Nojoblog**.



6. Run **WRKSBS**—press **F11**, to check subsystem status. Eventually, the only subsystem running should be **QCTL** (in **RSTD** status). It will take a few minutes for subsystems to shut down, press **F5** to refresh.
7. If schedule calls for a SAVSYS:
 - a. *Ensure a tape library and drive are available:* Run **WRKMLBSTS AML3584**. AML3584 should be *varied on* with at least one drive allocated as “unprotected.” Run **DSPTAPSTS AML3584** to ensure drive has no tapes mounted in it.



If PTFs/CUMs are being applied, then execute the SAVSYS shown in the following step (step b)—once before PTF/CUM application and once after, using one different parameter setting each time: **CYCLES(*SINGLE)**.

- b. For all systems: Run **SAVSYSMLD DEV(AML3584) MEDCLS(SAVSYSMLD2) MEDPCY(SAVSYSMLD2) CYCLES(*DUAL)**.



Always check the interactive job log to verify that the SAVSYSMLD did process correctly (via BRMS confirmation messages).

8. If schedule calls for a Reclaim Storage:



Five Important Items to Remember for the Reclaim Storage:

- 1. Process Cancellation.** Do not cancel either database reorgs or reclaim storage unless absolutely required as the very last resort. If the process is canceled then use a delay of 120 seconds (RGZPFM) and execute subsequent clean up actions regardless of the damage scope indicators.
- 2. Cancelled DB2 Reorg Recovery.** If a DB2 reorg operation is cancelled then first check the edit rebuild access path (EDTRBDAP) interface to see which if any indexes have been left in a “check pending” (rebuild required) state. Resolve, or in some cases hold, the EDTRBDAP index rebuild processing before executing a RCLSTG or a system IPL.
- 3. Cancelled RCLSTG Recovery.** If a RCLSTG operation must be cancelled then immediately execute a second RCLSTG followed by a full system IPL before bringing the system back online. (Hold any pending access path rebuilds.)
- 4. Damage Checks.** Check the VLOG's after the system IPL to see if any damage records were generated and then act to resolve the damage (if detected).
- 5. Backup / Recovery Processing.** In the same context it should be noted that save/restore processing is also tightly coupled to microcode operations and the cancellation of a backup or recovery can have similar or worse consequences as cancellation of reorgs or reclaim storage. It is less common to experience such failures when canceling a backup however the impact can be much higher in that (worst case) machine operations can be impacted immediately (including system abend).



DO NOT press Enter on the next command. For a Reclaim Storage, *Select* **MUST** be set to ***DBXREF**.

Run **RCLSTG**—press **F4**, set *Select* to ***DBXREF**.



A full Reclaim Storage is a time consuming process requiring from 1.5 to 7 hours depending on the system and object count.

9. On M1/M2; run **STRSST**, select **option 5**, then select **option 2** to view partition status. Secondary partitions should have the following settings:
IPL Source - **B**
IPL Mode - **Normal**
IPL Action - **Hold**

Step 14 may be run at any point during, or directly after, the next four steps, but be extremely careful to keep track of the progress of each action on each machine.

10. On CAAS02/06/03/04, run **PWRDWNSYS**—press **F4**. Change settings to:
Option - ***CTRLD**
Restart - ***NO**
Delay Time - **30**
IPL Source - **B**



11. On M1/M2, press **F10** (see status) to watch secondary partitions shut down (state **OFF**).
 12. When both 02/06 are down: on M1, run **PWRDWNSYS**—press **F4**. Change settings to:
 - Option - *CTRLD*
 - Restart - *YES*
 - Delay Time - 30*
 - IPL Source - B.*When both 03/04 are down: on M2, run **PWRDWNSYS**—press **F4**. Change settings to:
 - Option - *CTRLD*
 - Restart - *YES*
 - Delay Time - 30*
 - IPL Source - B.*
 13. When M1 is back up, return to SST. *Power on 02/06*: input **1** next to appropriate partitions. Press **F10** to monitor status. When M2 is back up, return to SST. *Power on 03/04*: input **1** next to appropriate partitions. Press **F10** to monitor status.
 14. On CAAS01/05/07, run **PWRDWNSYS**—press **F4**. Change settings to:
 - Option - *CTRLD*
 - Restart - *YES*
 - Delay time - 30*
 - IPL Source - B*
 15. If held, release and run **TTRRSYSWKY** (on 02/03/04/06) and **TTRBRMUSR** (on M1/M2).
 16. Run **WRKDSTQ**. All queues should be status **WAITING**. If any are **RTY-FAIL**, use **option 2** to send to queue. Check 02/04 to make sure SPOUTQ is not filling up.
 17. On 02, run **WRKACTJOB SBS(Z9SPL) JOB(SP*)**. Select **option 2** on each job and enter parameter **RUNPTY (25)**.
 18. Check to ensure that the OneWorld scheduled startup (OWNETSTR) successfully ran (on 01/02) at 12:40 (delayed timing may impact this job run). If this job did not run at the scheduled time then submit it via manual demand execute (JS option 11).
 19. Call or page CNC support and inform them that the IPL has been completed.
-
- 01/02 should be handed over to CNC by 12:30. Reorgs can run after 12:30 but **MUST** be completed by 14:00.
-
20. On Sunday afternoon, proceed to the Post Maintenance Window system checks located on the following page.



A full Reclaim Storage is a time consuming process requiring from 1.5 to 7 hours depending on the system and object count.



Information and Computing

Business Systems

Infrastructure

Sunday Afternoon (After 14:00)

Complete the Post Maintenance Window system checks below:

Some checks can be skipped based on positive results of earlier checks.

System Check	Perform check on:	Details
1. Pre/Post IPL jobs	All machines	Ensure these jobs are released. If system startup was after 13:00, TTUTPSTIPL must be manually run using option 11 . See table on page 10 for all jobs triggered by TTUTPSTIPL.
2. Greenscreen	All machines	Ensure iSeries Access active on DC console and office stations.
3. SPOUTQ*	02,04	Check remote outqueue processing from 02 to 04; ensure it is not backed up.
4. Batch Job Queues	All machines	Ensure batch job queues are in a released state.
5. Express Web Interface	Web	On ShellNet, follow: Home> Company Wide> Express - click both the test and production links. If unsuccessful, follow directions on the Web Interface Troubleshooting table (see below).
6. OW Web Interface	Web	On ShellNet, follow: Home> Company Wide> JDE OneWorld - click both the test and production links. Go to http://caas02.shell.ca:8800/cesl/ to check that CESL is up. If unsuccessful, follow directions on the Web Interface Troubleshooting table (see below). Also notify CNC.
7. OWNETSTR	01,02	Ensure OWNETSTR is complete. If it has not started, contact CNC and ask if it is safe to run; if there is no answer, run it.
8. WRKJOBQ	All machines	Release JSTRIGGER . Run SETBATJOBQ *RLS to execute autorelease. Ensure that JSTRIGGER has released along with all JOBQs except for those in the "Always-Held" table below. Investigate any unreleased JOBQs (i.e. 99-step complete, TTUTRLSAJQ released).
9. SNADS	02,03,04,06	Run WRKDSTQ and ensure distribution queues are active (e.g. 02 to 04) and are not in <i>rty/fail</i> mode. If in <i>rty/fail</i> , restart as required.
10. ESS/Job Posting	Web	On ShellNet, follow: Home> Company Wide> ESS
11. HATS	Web	Go to https://services.shell.ca/hats/TECH IMPORTANT: This URL is case sensitive. If unsuccessful, follow directions on the Web Interface Troubleshooting table (see below).
12. DataMirror	02	Run WRKACTJOB SBS(D_MIRROR) . Ensure that at least one job is shown from each target listed in the DM Targets table (see next page).
13. DB Reorgs	All machines	Ensure TTRR* reorgs have run.
14. MPLUS	-	Be sure to check MPLUS if you do not receive IPL confirmation pages from each system.

DataMirror Targets	
TARGET(DWJDEGL)	TARGET(DWALBIAN)
TARGET(DWF0901)	TARGET(DWUPADLY)
TARGET(DWBALD03)	TARGET(DWUPAMTH)
TARGET(DWOASYS)	TARGET(DWPO03AL)
TARGET(DWSALE03)	TARGET(S02TOS01)
TARGET(DWORDD03)	TARGET(DWSSINV)
TARGET(DWPO03)	TARGET(DWEM)
TARGET(DWF0902)	TARGET(WEBMETH)
TARGET(DWEM03)	TARGET(INTRA_S02)

Web Interface Troubleshooting
1. Check URL
2. Check Post-IPL Job
3. Check WAS Post-IPL Job
4. Check WAS Console

Always-Held JOBQs
BRMRTVJOBQ
ODBCTEST
PEX01
SBSUBE1
SYSINTER
SYSDUPJOBQ
BPMIDNITE
BPMIDRESLR
BPOFFPRIME

High Availability Weekend

During a high availability weekend, there will be no outage of production JDE or production Rover/Express.



Information and Computing

Business Systems

Infrastructure

Friday (Late Afternoon)

1. The following jobs **MUST** be held prior to an HA weekend:

Only job-step 1 needs to be held for each job.

CAAS02 (JDE PRODUCTION)

TTUTPREIPL	Triggers Pre-IPL Job
TTUTPSTIPL	Triggers Post-IPL Job
TT95IFSBKP	Locks OW TAM file directory (IFS directory backup exclusions)
TTRRSYSWKY	Initiates Database Re-Org
OWNETSTR	Starts all OW Network services
OWNETEND	Ends all OW Network services
TTOWDIRCLN	OW JDEB7333 Directory Management
TTRRSYSCTL	Performs a reorg on the DASD Plus control tables

CAAS04 (ROVER/EXPRESS)

TTUTPREIPL	Triggers Pre-IPL Job
TTUTPSTIPL	Triggers Post-IPL Job
TTRRSYSWKY	Initiates Database Re-Org
TTUTRVRKRV	Initiates PIM/ROVER Archive
TT95STRBAS	Triggers "Alternate" System Backup
TTRRSYSCTL	Performs a reorg on the DASD Plus control tables

2. If CAAS03 and CAAS06 need to be up during the HA Weekend, also hold the following jobs:

CAAS03 (DATA WAREHOUSE)

TTUTPREIPL	Triggers Pre-IPL Job
TTUTPSTIPL	Triggers Post-IPL Job
TTRRSYSWKY	Initiates Database Re-Org
TTRRSYSCTL	Performs a reorg on the DASD Plus control tables

CAAS06 (BOSS PRODUCTION)

TTUTPREIPL	Triggers Pre-IPL Job
TTUTPSTIPL	Triggers Post-IPL Job
TTRRSYSWKY	Initiates Database Re-Org
TTRRSYSCTL	Performs a reorg on the DASD Plus control tables

Sunday (8:00 AM)

Check that jobs have held. (i.e. TTUTPREIPL)

Sunday (Afternoon)

Check that jobs have held. (i.e. TTUTPSTIPL)

Sunday (Late)

Release jobs.



DO NOT forget to release jobs when HA Weekend is complete.



Information and Computing

Business Systems

Infrastructure

Performing IPL From Remote Location (with Console Monitor)



To perform restricted state operations, a console monitor program must be invoked. Some preparation must be done in the data center, to start the monitor, before leaving for the weekend. This method will allow you to perform the restricted state IPL, SAVSYS and Reclaim Storage from a remote location.

For Each Machine scheduled for IPL:

At Data Centre:

1. Ensure you are working in **QCTL**. If console is in QINTER, press **Alt-Jump** to switch to QCTL.
2. Sign in and run **DSPJOB**. Take note of the job listed in the upper left corner.
3. Run **CALL RMTSAV3590** to invoke the console monitor program.
4. Press **Alt-Jump** to switch to QINTER. Sign in.
5. Run **WRKUSRJOB**.
6. Input **3** (hold) next to the console monitor job noted in step 2.
7. Sign off.

At Remote Location:

8. If a SAVSYS is scheduled: run **WRKDTAARA SAVSYSIND**. Input **5** next to SAVSYSIND, *value* should display as N. Go back and input **2** next to SAVSYSIND—press **F4**, set *new value* to **'Y'**.



Note the single quotes around Y in the above step.

9. If a Reclaim Storage is scheduled: run **WRKDTAARA RCLSTGIND**. Input **5** next to RCLSTGIND, *value* should display as N. Go back and input **2** next to RCLSTGIND—press **F4**, set *new value* to **'Y'**.



Note the single quotes around Y in the above step.

10. Run **TFRJOB QCTL**.
11. Run **WRKUSRJOB**. Input **6** (release) next to job held in step 6.
12. In WRKUSRJOB, when status changes to MSGW, input **7** (display messages) next to the job.
13. System will ask if you want to perform a Reclaim Storage as well as if you want to perform a SAVSYS. If either are scheduled, input **Y** when prompted.
14. The system will disconnect and will page out when the SAVSYS/Reclaim Storage is complete. Reconnect to the system. It will ask you if you want to perform another SAVSYS. Input **N**.
15. System will then ask you if you want to perform an IPL. Input **Y**.
16. System will disconnect. Reconnect in about an hour to see if the system is back up.



It is vital to ensure that the systems have successfully restarted. If you still cannot logon to the system after 90 minutes, go to the data centre to bring the systems up.

Performing IPL From Remote Location (without Console Monitor)



Information and Computing

Business Systems

Infrastructure



No preparation is required beforehand in the data centre for this IPL method, however, in the absence of a console program, the restricted state SAVSYS and Reclaim Storage **CANNOT** be performed.

At remote location:

Steps 1 - 8 **MUST** be performed on all partitions scheduled for IPL.

1. Run **TFRJOB QCTL**.
2. Ensure **TTUTPREIPL** and dependancies ran successfully.
3. Run **WRKACTJOB** to find out what is running on each server. Verify that all WAS shutdown jobs have completed in subsystem **A4UTILCNTL**. On some systems, certain jobs are always running in **A4UTILCNTL**. These are: **DSKHTR***, **TTSMCMT*** and **XC***.
4. Make a note of the job details for any JDE jobs running on 02 and then end the jobs. Make sure to let the app teams know.
5. Run **WRKSBS**.



Ensure you have performed Step 1 correctly before performing the following step. If you end subsystems without having transferred to QCTL, you will become locked out of the system. If this occurs, refer to Appendix A: Associated Procedures> Initializing QINTER via FTP.

6. For ALL subsystems EXCEPT **QCTL** and **QSYSWRK**: input **4**—press **F4**, perform a 120-second controlled end.
7. On M1/M2; run **STRSST**, select **option 5**, then select **option 2** to view partition status. Secondary partitions should have the following settings:
IPL Source - B
IPL Mode - Normal
IPL Action - Hold

Step 14 may be run at any point during, or directly after, the next four steps, but be extremely careful to keep track of the progress of each action on each machine.

8. On CAAS02/06/03/04, run **PWRDWNSYS**—press **F4**. Change settings to:
*Option - *CTRLD*
*Restart - *NO*
Delay Time - 30
IPL Source - B
9. On M1/M2, press **F10** (see status) to watch secondary partitions shut down (*state OFF*).
10. When both 02/06 are down: on M1, run **PWRDWNSYS**—press **F4**. Change settings to:
*Option - *CTRLD*
*Restart - *YES*
Delay Time - 30
IPL Source - B.
When both 03/04 are down: on M2, run **PWRDWNSYS**—press **F4**. Change settings to:
*Option - *CTRLD*
*Restart - *YES*
Delay Time - 30
IPL Source - B.



Information and Computing

Business Systems

Infrastructure

11. Wait 30 - 45 minutes, then attempt to logon to M1 to see if it is back up. Once it is up, *Power on 02/06*: input **1** next to appropriate partitions. Press **F10** to monitor status.
Attempt to logon to M2 to see if it is back up. Once it is up, *Power on 03/04*: input **1** next to appropriate partitions. Press **F10** to monitor status.
12. On CAAS01/05/07, run **PWRDWN SYS**—press **F4**. Change settings to:
*Option - *CTRLD*
*Restart - *YES*
Delay time - 30
IPL Source - B
13. If held, release and run **TTRSYSWKY** (on 02/03/04/06) and **TTRBRMUSR** (on M1/M2). If an IPL has been postponed or the system was taken to a restricted state, then start the reorgs at **step 99**. (This will avoid time delays for the JS and ODBC recycles and the QSERVER restart in steps 10 and 20.)
14. Run **WRKDSTQ**. All queues should be status **WAITING**. If any are **RTY-FAIL**, use **option 2** to send to queue. Check 02/04 to make sure SPOUTQ is not filling up.
15. On 02, run **WRKACTJOB SBS(Z9SP1) JOB(SP*)**. Select **option 2** on each job and enter parameter **RUNPTY (25)**.
16. Call or page CNC support and inform them that the IPL has been completed.

01/02 should be handed over to CNC by 12:30. Reorgs can run after 12:30 but **MUST** be completed by 14:00.

Applying PTFs



Information and Computing

Business Systems

Infrastructure

Staging PTFs Via CD (Pre-Weekend)

For large fixes and regular Groups/HIPERS.

1. Make a call to IBM. Put in an a **RUSH** order for PTFs. If your initial request is denied, upgrade the request to **Severity 2**.
2. Once ordered, update the PTF tracking spreadsheet with new versions.
3. Go to the Data Centre; logon to necessary machines. (Start with the test machine if it is receiving the PTF.)
4. Run **GO PTF**.
5. Select **option 8** (Install Program Temporary Fix Package.)
6. Set *Device* to **OPT01**. Ensure the other option settings are as follows:

Auto IPL	N
Prompt for Media	1
Restart Type	*SYS
Other Options	N
7. Insert CD in proper drive—wait for drive light to stop flashing, usually this means waiting for a few seconds after the light has stopped **for one last flash**. When certain that the drive has stopped flashing, press Enter on console.
8. Press **Shift+SysReq**. Input **6**. Page down to ensure **Load Volume** is correct. This screen prompts for **C** or **G** (Cancel or Go)—Press **G**. PTF will begin copying onto machine.
9. After all files from the first CD are copied, the message “Waiting for reply to message loading queue QSYSOPR.” Repeat steps 7 - 9 until the final CD is copied onto machine.
10. Once PTFs are on system but before the IPL is performed, the following commands must be run:



Where shown below, it is **Extremely Important** that *delayed* be set to ***YES**.

```
LODPTF LICPGM(5722999)
LODPTF LICPGM(5722SS1)
APYPTF LICPGM(5722999) DELAYED(*YES)
APYPTF LICPGM(5722SS1) DELAYED(*YES)
```

11. For PTF CUMs, LPP Groups and HIPERs, run **WRKPTFGRP** and ensure the correct level is set and status is “**Not Installed**”.
12. For individual fixes:
Run **DSPPTF LICPGM(5722999) SELECT(<ptf number>)**.

LICPGM value can change depending on the product the current PTF is for.

13. Run **DSPPTF**, select **option 5**. Ensure that *PTF status* shows “**Not Applied**”, *Unattended IPL action* shows “**Apply Temporarily**” and *Type* shows “**Delayed**”.
14. Repeat steps 10 - 13 for all machines receiving the PTF.
15. Remind the person scheduled to perform the IPL that the PTFs are loaded.
16. Update the PTF tracking spreadsheet with load dates.



17. After IPL is performed, run **WRKPTFGRP** (or **DSPPTF – option 5**) on all machines receiving the PTF, to check that PTFs have successfully been applied/installed. If they have not, the IPL will need to be repeated.
18. Once installed (after IPL), update the PTF tracking spreadsheet with apply dates.

Staging PTFs Via ECS Download (Pre-Weekend)

For small, individual fixes and/or emergency fixes ONLY.

1. Logon to necessary machine. (Start with test machine if it is receiving the PTF.)
2. Run **SNDPTFORD <ptfname>**.
3. Change *Mailing Address* to include your name, and your office number and change *Alternative Number* to your cell number. Press Enter.
4. Input **1** (send Service Request Now).
5. If the PTF is small, repeat steps 1 - 4 for each machine receiving the PTF. If the PTF is large go to step 6.
6. Run **SAVRSTOBJ OBJ(Q<ptfname>) LIB(QGPL) RMTLOCNAME(CAASxx) SAVACT(*LIB) RSTLIB(RESTPTF)**.
7. Logon to the next machine receiving the PTF.
8. Run **MOV OBJ(RESTPTF/Q<name>) OBJTYPE(*SAVF) TOLIB(QGPL)**.
9. Repeat steps 7 - 8 for all machines receiving the PTF.
10. Once PTFs are on system(s) but before the IPL is performed, the following commands must be run:



Where shown below, it is **Extremely Important** that *delayed* be set to **YES**.

```
LODPTF LICPGM(5722999)
LODPTF LICPGM(5722SS1)
APYPTF LICPGM(5722999) DELAYED(*YES)
APYPTF LICPGM(5722SS1) DELAYED(*YES)
```

11. For PTF CUMs, LPP Groups and HIPERs, run **WRKPTFGRP** and ensure the correct level is set and status is **"Not Installed"**.
12. For individual fixes:
Run **DSPPTF LICPGM(5722999) SELECT(<ptf number>)**.

LICPGM value may change depending on the product the current PTF is for.

13. Run **DSPPTF**, select **option 5**. Ensure that *PTF status* shows **"Not Applied"**, *Unattended IPL action* shows **"Apply Temporarily"** and *Type* shows **"Delayed"**.
14. Repeat steps 10 - 13 for all machines receiving the PTF.
15. Remind the person scheduled to perform the IPL that the PTFs are loaded.
16. Update the PTF tracking spreadsheet with load dates.
17. After IPL is performed, run **WRKPTFGRP** (or **DSPPTF – option 5**) on all machines receiving the PTF, to check that PTFs have successfully been applied/installed. If they have not, the IPL will need to be repeated.
18. Once installed (after IPL), update the PTF tracking spreadsheet with apply dates.

Performing IPL on a PTF Weekend



Information and Computing

Business Systems

Infrastructure



This procedure need only be done for quarterly PTF maintenance weekend.

1. When system is brought down to restricted state, perform a SAVSYS before the IPL in which the PTFs will be applied. Also run the Reclaim Storage if scheduled.
2. Perform IPL.
3. Ensure PTFs were successfully applied on all system LPARs. (Especially when CUMs are applied.) Using **WRKPTFGRP** will show "installed". Check SS1/999 using **DSPPTF** to show status of manual installs. **GO PTF**—option **5** can also be used as appropriate. For CUMs check for "ACN pending". If PTFs were unsuccessful, investigate and resolve.
4. After the IPL and the system is back up, bring it back to restricted, perform another SAVSYS, and then perform the IPL again.





Information and Computing

Business Systems

Infrastructure



Appendix A

Associated Procedures



Information and Computing

Business Systems

Infrastructure

Cancelling Reorgs

Reorg jobs should not be cancelled unless it is absolutely necessary as the indexes associated with the table being adjusted will be placed in *check pending* status, which will force the operating system to rebuild the indexes prior to the next file/table open statement. The tables will remain unusable until the rebuild is completed. On a large table this could have a very significant time and performance impact.



The reorg of the BRMS database should **NEVER** be cancelled under any conditions as this may corrupt the BRMS tape management meta-data.

If the production system reorgs extend beyond 14:00 (i.e. into the prime shift service window) the action to be taken will vary by system;

On CAAS02:

- **DO NOT** terminate any reorg streams running over the primary JDE databases or the custom reorgs running over the F42* tables.
- The non-JDE and ALLUSR reorg streams can be cancelled in controlled mode with a delay of 120 seconds.

On CAAS03:

- **DO NOT** terminate any reorg streams running over the primary Data Warehouse database (CORPDB).
- The ALLUSR reorg streams can be cancelled in controlled mode with a delay of 120 seconds.

On CASS04:

- The ALLUSR reorg streams can be cancelled in controlled mode with a delay of 120 seconds but **ONLY IF** the job is running over the S4i* databases.

On CAAS06:

- **DO NOT** terminate any reorg streams running over the primary BOSS database (BPDB).
- The ALLUSR reorg streams can be cancelled in controlled mode with a delay of 120 seconds.

Validating Table Status

The **EDTRBDAP** command is used to validate the status of tables being rebuilt after a reorg job is cancelled.



Initializing QINTER via FTP



Knowledge of this system access method is considered sensitive information and should not be shared with anyone outside of the tech team.

Details

In order to perform the IPL tasks on the iSeries, it is standard procedure to shutdown the QINTER subsystem. For instances when the QINTER subsystem is accidentally shut down before the interactive job has been transferred to the QCTL subsystem, QINTER can be brought up from a remote location (provided the target system is not in restricted state and both the QCTL and QSYSWRK subsystems are active on it).

Procedure

1. Run **FTP CAASxx**. Where *xx* is the machine number.
2. Enter username and password.
3. Run **QUOTE RCMD STRSBS QINTER**.

Through this procedure, QUOTE RCMD can be used to run any standard iSeries command that does not require screen output.

Adjusting Clock for Daylight Saving Time

Severity

High. This action must be taken at both spring and fall daylight saving time weekends.

Resolution

An automated time management process will regress the clock, however the on-call team member must manually change the time zone on all LPARs on the Sunday of the time change, during the 8:00 - 14:00 outage window.

On each system (01-06/M1/M2):

1. Run **WRKSYSVAL QTIME** and select **option 5** (display) to verify time.
2. Run **WRKSYSVAL QTIMZON** and select **option 2** (change) to change time zone. In the spring, set the time zone to **SHELL_MDT**; in the Fall, set the time zone to **SHELL_MST**.

Emergency Start-Up Procedure

In cases when the systems have been brought to a restricted state and must be brought back up without completing the IPL, the following method can be used:

Run **STRSBS SBS(D)QCTL**.

Appendix B

Post-IPL Jobs



Information and Computing

Business Systems

Infrastructure

Job	Group	Application	Description
OWSBSSTART	OWSBSSTART	OneWorld	Start OW Subsystem Jobs
TTHTSTRSVR	TTHTSTRSVR	HTTP	Start HTTP Server
TTMQSTRMQS	TTMQSTRMQS	MQ Series	Start MQS Network Service
TTPCSETUSR	TTPCSETUSR		Set Pools (user batch)
TTSMCMTMON	TTSMCMTMON		Initialize DB2 Commit Cycle Monitor (STG mgmt)
TTSMDSPIPL	TTSMDSPIPL		Update System IPL Status (STG mgmt)
TTSMSTRHTR	TTSMSTRHTR		Initiate Disk Hunter (STG mgmt)
TTSMSTRZZM	TTSMSTRZZM		Start SBS ZZMAINSTOR (STG mgmt)
TTTSSTRMIR	TTTSSTRMIR	DataMirror	Start DataMirror - CAAS02 -> CAAS03 Targets
TTUTCPYRR	TTUTCPYRR		Copy Reorg Job Logs to Retain60
TTUTDUPSTR	TTUTDUPSTR	Print	Startup all DUPMON Monitors (if not already up)
TTUTFRMSTR	TTUTFRMSTR	Print	Startup all FRMMON Monitors (as required)
TTUTHVPMON	TTUTHVPMON	HVP - Relizon	Send HVP Outq to Relizon for Print and Mail
TTUTLANSTR	TTUTLANSTR	LANSAS	Startup LANSAS Subsystem
TTUTLSRSTR	TTUTLSRSTR	Print	Startup LASERMON Monitor (if not already up)
TTUTMPLRLS	TTUTMPLRLS	MPlus	Release ZPLUS Ping Monitor (system utility)
TTUTPSFSTR	TTUTPSFSTR	Print	Startup all PSFMON Monitors (if not already up)
TTUTRLSAJQ	TTUTRLSAJQ		Release Application Batch Job Queues (system mgmt)
TTUTSTRPRG	TTUTSTRPRG		Start Progress Monitor
TTUTSTRTIV	TTUTSTRTIV	TIVOLI	Start Tivoli Monitoring Service
TTWSWASSTR	TTWSWASSTR	WAS/HATS	Start WebSphere Servers
TT95SETAML	TT95SETAML	BRMS	Set AML3494 Resource Status (drives) (AML utility)

CAAS02

Job	Group	Application	Description
TTHTSTRSVR	TTHTSTRSVR	HTTP	Start HTTP Server
TTPCSETUSR	TTPCSETUSR		Set Pools (user batch)
TTSMSTRHTR	TTSMSTRHTR		Initiate Disk Hunter (STG mgmt)
TTUTDUPSTR	TTUTDUPSTR	Print	Startup all DUPMON Monitors (if not already up)
TTUTFRMSTR	TTUTFRMSTR	Print	Startup all FRMMON Monitors (as required)
TTUTLANSTR	TTUTLANSTR	LANSAS	Startup LANSAS Subsystem
TTUTLSRSTR	TTUTLSRSTR	Print	Startup LASERMON Monitor (if not already up)
TTUTMPLRLS	TTUTMPLRLS	MPlus	Release ZPLUS Ping Monitor (system utility)
TTUTPSFSTR	TTUTPSFSTR	Print	Startup all PSFMON Monitors (if not already up)
TTUTRLSAJQ	TTUTRLSAJQ		Release Application Batch Job Queues (system mgmt)
TTXCNETSTR	TTXCNETSTR		Start DB/2-ODBC Monitoring servers
TT95SETAML	TT95SETAML	BRMS	Set AML3494 Resource Status (drives) (AML utility)
TT95STRAML	TT95STRAML	BRMS	
TTWSWASSTR	TTWSWASSTR	WAS/HATS	

CAAS03



Post-IPL Jobs con't

Information and Computing

Business Systems

Infrastructure

Job	Group	Application	Description
TTHTSTRSVR	TTHTSTRSVR	HTTP	Start HTTP Server
TTMCSTRSVR	TTMCSTRSVR		Start TCP SERVER MGTC
TTPCSETUSR	TTPCSETUSR		Set Pools (user batch)
TTSMSTRHTR	TTSMSTRHTR		Initiate Disk Hunter (STG mgmt)
TTUDUPSTR	TTUDUPSTR	Print	Start all DUPMON Monitors (if not already up)
TTUTFRMSTR	TTUTFRMSTR	Print	Start all FRMMON Monitors (as required)
TTULSRSTR	TTULSRSTR	Print	Start LASERMON Monitor (if not already up)
TTUTMPLRLS	TTUTMPLRLS	MPlus	Release ZPLUS Ping Monitor (system utility)
TTUTPSFSTR	TTUTPSFSTR	Print	Start all PSFMON Monitors (if not already up)
TTUTVRDUP	TTUTVRDUP	Rover	DUP master initiation
TTUTVRIPL	TTUTVRIPL	Rover	Start Rover
TTWSWASSTR	TTWSWASSTR	WAS/HATS	Start WebSphere Servers
TTWSXPBSTR	TTWSXPBSTR	WAS-Express	Start S4i Express XPB WebSphere Application Server
TTWSXPXSTR	TTWSXPXSTR	WAS-Express	Start S4i Express XPX WebSphere Appl Server
TTWSXPZSTR	TTWSXPZSTR	WAS-Express	Start S4i Express XPZ WebSphere Appl Server
TTXPXIPL	TTXPXIPL	Express	Start EXPRESS subsystem monitors (IPL startup)
TTXPXIPLV	TTXPXIPLV	Express	Start S4IXPXV EXPRESS WebView (IPL startup)
TTXPYIPL	TTXPYIPL	Express	Start S4IXPY subsystem monitors (IPL startup)
TT95SETAML	TT95SETAML	BRMS	Set AML3494 Resource Status (drives) (AML utility)

Job	Group	Application	Description
TTHTSTRSVR	TTHTSTRSVR	HTTP	Start HTTP Server
TTPCMEMLOD	TTPCMEMLOD		Load Resident Objects in Memory
TTPCSETUSR	TTPCSETUSR		Set Pools (user batch)
TTSMSTRHTR	TTSMSTRHTR		Initiate Disk Hunter (STG mgmt)
TTUTDABAS	TTUTDABAS		Stop and Restart Database Host Servers
TTUDUPSTR	TTUDUPSTR	Print	Start all DUPMON Monitors (if not already up)
TTUTFRMSTR	TTUTFRMSTR	Print	Start all FRMMON Monitors (as required)
TTULSRSTR	TTULSRSTR	Print	Start LASERMON Monitor (if not already up)
TTUTPSFSTR	TTUTPSFSTR	Print	Start all PSFMON Monitors (if not already up)
TTUTRLSAJQ	TTUTRLSAJQ	Express	Release Application Batch Job Queues (system mgmt)
TTXCNETSTR	TTXCNETSTR	Express-WebView	Start DB/2-ODBC Monitoring Servers
TTXPBIPL	TTXPBIPL	Express	Start Auto Profile - Boss
TTXPBIPLV	TTXPBIPLV	Express-WebView	Start Auto Profile - Boss WebView
TTXPZIPL	TTXPZIPL	Express	Start Auto Profile - Legacy
TTXPZIPLV	TTXPZIPLV		Start Auto Profile - Legacy WebView
TT95SETAML	TT95SETAML	BRMS	Set AML3494 Resource Status (drives) (AML utility)
TT95STRAML	TT95STRAML	BRMS	Set AML3590 Online

Appendix C

Pre-IPL Jobs



Information and Computing

Business Systems

Infrastructure

Job	Group	Description
OWNETEND	OWNETEND	End OW Services
TTHTENDSVR	TTHTENDSVR	MGTC and HTTP Server Startup
TTMQENDMQS	TTMQENDMQS	End MQSeries Services
TTOWDIRCLN	TTOWDIRCLN	OW JDEB7333 Directory Management
TTPCSETUTL	TTPCSETUTL	Set Pools (utility)
TTRRSYSWKY	TTRRSYSWKY	Reorg Master Initiator
TTSMENDHTR	TTSMENDHTR	Terminat e Disk Hunter (STG management)
TTTSENDMIR	TTTSENDMIR	Demand End DTS400 Control
TTUTDUPEND	TTUTDUPEND	Shutdown all DUPMON Monitors
TTUTENDJOB	TTUTENDJOB	Check for Active Application Jobs
TTUTENDPRG	TTUTENDPRG	End Progress Monitor
TTUTENDTIV	TTUTENDTIV	End Tivoli Monitoring Service
TTUTENHSVR	TTUTENHSVR	End HOST Servers *DATABASE
TTUTFRMEND	TTUTFRMEND	Shutdown all FRMMON Monitors
TTUTHVPEND	TTUTHVPEND	Shutdown all HVPMON Monitors
TTUTLSREND	TTUTLSREND	Shutdown all LASERMON Monitors
TTUTMPLHLD	TTUTMPLHLD	Hold ZPLUS Ping Monitor (system utility)
TTUTPSFEND	TTUTPSFEND	Shutdown all PSFMON Monitors
TTWSWASEND	TTWSWASEND	End WebSphere
TT95IFSBKP	TT95IFSBKP	IFS Directory Back-up Exclusions (BKP special)

CAAS02



Information and Computing

Business Systems

Infrastructure

