XAOperator
Automated XA Operations!

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Agenda

- XAO Overview

- Automated Backups and Operations

- Verification

- Recovery Process

- IM/COM Period Close

- Coming Soon!

XAO Overview

- Helps MAPICS customers protect their iSeries systems and application data

- Supports a comprehensive Disaster Recovery Strategy encompassing iSeries operating environment, custom systems and MAPICS environment

- Automates common End-of-Day operations tasks

- Automates MAPICS jobs that cannot be run during the day due to conflicts

- Perform regular cleanup of output queues and data

- Automate IM and/or COM Period and Year-End Close

XAO Backups and Operations

- Removes limitations that cause XA backup to fail
  - Save with active batches
  - Get users out of the environment and keep them out
  - Prevent outside access that lock objects (invisible to XA)

- Respects MAPICS save requirements
  - End and restart U-jobs
  - Manage XA journaling
  - Clean up abended jobs in JOBACT file
  - Clean up used batches
  - Run cleanup of application transaction and log files
  - Purge TRDATA records

XAO Backups and Operations

- Automate MAPICS tasks typically done manually
  - Finish IM, AR, REP and PCC suspended and closed batches
  - Run MAPICS file reorganization
  - Run selective MAPICS reports
  - Set Horizon Dates and Run MRP
  - End and Start Java Servers
  - Print COM Invoices

- Manage your environment availability (even after IPL)
  - Configure specific U-jobs to end and start
  - Configure environments to start Power Link

XAO Backups and Operations

- Configure daily and weekly jobs
  - Daily jobs save your XA files and related data
  - Weekly jobs save the system or components you choose
- Customize to meet your Backup and Recovery Strategy
  - Environments
  - Libraries and folders
  - Before/After commands
- Simplify verification of backup
- View History for libraries saved and commands run
- Email notification for failure and volume information

XAO Backups and Operations

- ## Configure Daily Backup Job
  - One for each production environment
  - Save to disk or tape
  - When to run
  - What to save
    - Libraries and Folders
    - IFS directories
  - Message to send to green-screen users

XAO Backups and Operations

- Daily Backup

```
                         Configure Backup Options                    6/28/12
AB0001D1                    Daily Backup Job                          10:30:54

  Tape Device. . . . ? DISK            Backup. . S Y M Y T Y W Y T Y F Y S Y
  Density. . . . . . . *CTGTYPE             Time to Start Save . .  035000
  Volume . . . . . . . *SAME
Backup:
  Security Information. . . . N   Y-Yes       MAPICS
  Configuration Data. . . . . N   N-No        Environment . . . . . . . . AA
  IBM libraries . . . . . . . N               End all active jobs . . . Y
  IBM and User directories. . N               Backup w/Active Batches . Y

Backup All User Libraries. . S   Y-All O-Omit Initialize before backup  Y
Backup All Document Folders. N   S-Selected   Eject/Unload option . . . *REWIND
                                 N-None
                                              Finish Closed Batches . . Y
IPL When Complete . . . . . N   Y-Yes        Backup Program Libraries. N
Print Save Listings . . . . Y   N-No         Lock library active...... Y

                                              Message delay . . . . 10  (Minutes)
Message to all workstations: PLEASE EXIT FROM THE CLARKSVILLE ENVIRONMENT FOR B
ACKUPS IN 10 MINUTES.
F3=Exit  F4=Prompt          F10=Lib  F11=Folder  F12=Cancel  F23=Delete
```

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XAO Backups and Operations

- Before/After commands to run MAPICS jobs
  - IM Quantity Audits
  - MRP and MPSP Planning run (including setting horizon values)
  - Print IM Transaction Register
  - PMC Transaction Register (clean up TRDATA)
  - Start/End Power Link servers and Global Environment
  - Print all unprinted COM invoices

- Other Before/After commands
  - Restrict access during backups
  - Purge Output Queues
  - Submit other jobs
  - Save disk image to tape

XAO Backups and Operations

- Before/After commands
  - Prompt for syntax validation
  - Define the sequence
  - No Constraint – run even if the backup fails (for streaming jobs)

```
CISBDA1                    Enter Commands to run          AA           10:27:56
AB0005D1                                                                6/28/12

Command Text . . .  END ALL POWERLINK JOBS


Command to run . . .  CALL PGM(ABLIB/ENDPLCLNT) PARM(AA)






Before or After. . . B

Sequence Number. . .  20

Execute this command with no constraints. . .(Y/N)  Y


F3=Exit   F4=Prompt  F12=Previous   F23=Delete
```

XAO Backups and Operations

- High Availability Systems
  - No libraries are saved
  - Only environment cleanup tasks are performed
  - Before/After commands are processed as usual

XAO Backups and Operations

- ## Weekly Backup – System Save
  - ### When to run
  - ### What to save
    - Selected system components
    - Full-System Save
  - ### IPL
  - ### Message to green screen users

XAO Backups and Operations

- Weekly Backup
  - Not environment specific
  - Intended for system saves and weekly processing

```
CISTECH2A1                    Configure Backup Options              6/28/12
AB0001D1                        Weekly Backup Job                   10:48:59

 Tape Device. . . . ? TAP01            Day of Week. . . . . . . 1 (Sun=1)
 Density. . . . . . . *CTGTYPE         Time to Start Save . . 040000
 Volume . . . . . . . *SAME
Backup:
 Security Information. . . . Y  Y-Yes
 Configuration Data. . . . . Y  N-No
 IBM libraries . . . . . . . Y
 IBM and User directories. . Y

Backup All User Libraries. . Y  Y-All O-Omit  Initialize before backup  Y
Backup All Document Folders. Y  S-Selected    Eject/Unload option . . . *UNLOAD
                                N-None

IPL When Complete . . . . . Y  Y-Yes
Print Save Listings . . . . N  N-No           Lock library active...... Y

                                              Message delay . . . .     (Minutes)
Message to all workstations: _____

F3=Exit  F4=Prompt            F10=Lib  F11=Folder  F12=Cancel  F23=Delete
```
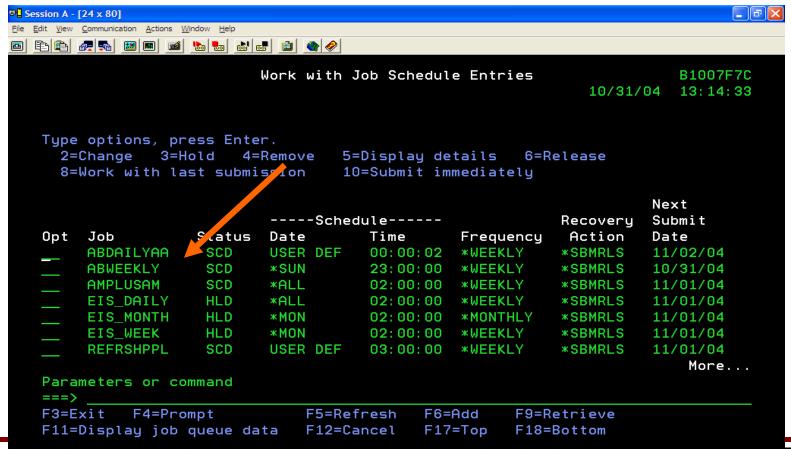
XAO Backups and Operations

- ## Weekly Backup Before/After commands
    - Get users out and keep them out
    - End jobs
    - Run MAPICS reorganization
    - Purge Output Queues

XAO Backups and Operations

- iSeries Job Scheduler
  - View and check backups
  - Omit dates when tapes will not be loaded (holidays)

XAO Backup Verification

- Checking your backup
  1. Review backup messages
  2. Review Reports
     - Jobs that were ended
     - Display of tape contents
  3. Scan Joblog
     - Only if messages indicate problems
  4. Review Save History

XAO Backup Verification

- **Backup Messages**
  - Major steps
  - Libraries that did not save completely
  - Tape label and save information for accurate catalogs

```
                              Display Messages
                                          System:      S06EAB44
Queue . . . . . :     ABMSGQ          Program . . . . :    *DSPMSG
  Library . . . :      ABLIB            Library . . . :
Severity . . . :     00               Delivery . . . :    *HOLD

Type reply (if required), press Enter.
  ABDAILYAA : Post Backup Processing for Environment AA completed.
  From   . . . :     AKESUPPORT      06/28/12   04:21:34
  ABDAILYAA  -- Library PBRFILA    was Successfully Saved.
  From   . . . :     AKESUPPORT      06/28/12   04:21:52
  ABDAILYAA  -- Library SYNUSGENMA was Successfully Saved.
  From   . . . :     AKESUPPORT      06/28/12   04:21:52
  00002 Libraries were Saved
  From   . . . :     AKESUPPORT      06/28/12   04:21:52
  00000 Folders were Saved
  From   . . . :     AKESUPPORT      06/28/12   04:24:43
  ABDAILYAA : Mapics Jobqs for Environment AA have been released.
  From   . . . :     AKESUPPORT      06/28/12   04:24:48
  ABDAILYAA : Journaling for Environment AA has been started.
                                                        More...
```

XAO Backup Verification

- Save History
  - Last time a library was saved and if there were errors
  - Job and Volume ID
  - Commands and if they succeeded

```
QPADEV009P                      Save History Log                       09:27:55
SFCTL01                         All                                    1/15/13

                                       Save       Start      End
 Object/Command                 Job Type  Date       Time       Time     Status
AMFLIB6    Volume DAILY         Lib    1/15/13    1:40:53    2:09:31    SAVED
AMTLIB6    Volume DAILY         Lib    1/15/13    2:09:32    2:10:19    SAVED
IWPDTA     Volume DAILY         Lib    1/15/13    2:13:58    2:14:16    SAVED
JLHLIB     Volume DAILY         Lib    1/15/13    2:14:16    2:14:25    SAVED
MTEKSAV    Volume DAILY         Lib    1/15/13    2:14:25    2:14:37    SAVED
MXAMOD6    Volume DAILY         Lib    1/15/13    2:14:37    2:15:05    SAVED
QGPL       Volume DAILY         Lib    1/15/13    2:15:05    2:16:33    SAVED
ROD        Volume DAILY         Lib    1/15/13    2:16:33    2:16:45    SAVED
RODQUERY   Volume DAILY         Lib    1/15/13    2:16:45    2:16:55    SAVED
TLXJ       Volume DAILY         Lib    1/15/13    2:16:55    2:17:09    SAVED
TLX400J    Volume DAILY         Lib    1/15/13    2:17:09    2:17:31    SAVED
TOMO       Volume DAILY         Lib    1/15/13    2:17:31    2:17:37    SAVED
END SOS MONITOR                 Cmd    1/13/13    1:01:18    1:01:18    EXECUTED
END ALL STARTED UJOBS FOR ALL   Cmd    1/13/13    1:08:30    1:08:30    EXECUTED
***START SOS MONITOR            Cmd    1/13/13    1:09:16    1:09:16    NOT EXECTD
CLEAN UP BACKUP OUTQ            Cmd    1/13/13    1:10:21    1:10:21    EXECUTED +


F3=Exit     F6=Toggle All/Exceptions
```

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XAO Recovery

- **Restoring your system using IBM guides**
  1. Restore from the last weekly full save
     - Refer to the *iSeries Backup and Recovery Guide Checklist 20 – Recovering your entire system after a complete system loss*
  2. Restore your libraries and folders from the last daily save
  3. Verify your environment

  The system will be the same as when the last daily save was performed

XAO Recovery

We use these tools for our DR Customers

- – Warm-site DR for Business Continuity (24 hrs or less)
- – Annual DR testing with evaluation and score card
- – Routine DR Audits (check your plan)

XAO IM/COM Period Close

- Period Close Configuration
  - Select IM and/or COM
  - Schedule time for ABMTHENDxy job
  - Email address to send list of users still in the environment (used with delay so that person can get everyone out)

XAO IM/COM Period Close

- Get users out of the environment for the close process

From: qpgmr@cistech.net
Sent: Friday, March 01, 2013 12:47 AM
To: drsupportteam@cistech.com
Subject: Month End User List

The following users are in the environment and need to exit immediatly.

ADLERGXM
AUGUSTIN
BLACKRM
BOURNK
HALLBCT

XAO IM/COM Period Close

- Period Close Calendar
  - Same for IM and COM
  - Date the close will actually run (consider the time the job will run if after midnight)

XAO IM/COM Period Close

- ## Period/Year-end Close
  - – Before/After commands
    - Programs you want to run only on month-end
  - – Dedicated system recommended to avoid conflicts

XAO – Coming Soon!

Web interface

- Configuration
- Verification

XAO – Coming Soon!

- ## Media Catalog
  - Volume id, save date, location, retention date
  - Prevent using media before it is expired
  - Reminders to load a tape before you leave

```
DATE:   3/04/2013          DISASTER RECOVERY MEDIA REPORT FOR: Bristol Compressors                              PRTDRRPTR
TIME:   13:40:33                                                                                                Page:    1

Label       Description              Date Saved    Location        Date Returned   Type Error   Retent. Date   Verified B
0085L4      Full System               3/03/2013    Bristol                         FS    N       4/14/2013      BENTONA
0084L4      Daily Save                3/02/2013    Bristol                         DA    N       3/16/2013      BENTONA
0213L4      Month End                 3/01/2013    Bristol                         ME    N       3/02/2018
0083L4      Daily Save                2/28/2013    Bristol                         DA    N       3/14/2013      BENTONA
0075L4      Daily Save                2/27/2013    Bristol                         DA    N       3/13/2013      BENTONA
0062L4      Daily Save                2/26/2013    Bristol                         DA    N       3/12/2013      BENTONA
0040L4      Full System               2/24/2013    Cistech DC                      FS    N       4/07/2013
0039L4      Daily Save                2/23/2013    Bristol                         DA    N       3/09/2013      BENTONA
0038L4      Daily Save                2/22/2013    Bristol                         DA    N       3/08/2013      BENTONA
0029L4      Daily Save                2/21/2013    Bristol                         DA    N       3/07/2013      BENTONA
0089L4      Daily Save                2/20/2013    Bristol                         DA    N       3/06/2013      BENTONA
0079L4      Daily Save                2/19/2013    Bristol                         DA    N       3/05/2013      GRICOLT
0072L4      Full System               2/17/2013    Cistech DC                      FS    N       3/31/2013      BENTONA
0066L4      Daily Save                2/16/2013    Bristol                         DA    N       3/02/2013      BENTONA
0056L4      Daily Save                2/15/2013    Bristol                         DA    N       3/01/2013      BENTONA
0051L4      Daily Save                2/14/2013    Bristol                         DA    N       2/28/2013      BENTONA
```

XAO – Coming Soon!

- **XA Monitor**
  - **U-Job Monitor**
    - Configure U-jobs critical to your business
    - Alert when the U-jobs are not running or are waiting on a message
  - **Java Monitor**
    - Alert if java server jobs are not active on the system (Power Link is not available)

Thank you!

Questions?