

# WAS for z/OS - Level 2 Update

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IBM

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# WebSphere Application Server Sessions



| Day       | Time  | #    | Title  | Speaker                           | Room     |
|-----------|-------|------|--|-----------------------------------|----------|
| Wednesday | 3:00  | 9483 | Using IBM's New Cross-Platform Installer on z/OS               | Loos                              | Oceanic5 |
| Thursday  | 8:00  | 9482 | WAS Version 8 – Overview                                       | Follis                            | Europe 2 |
| Thursday  | 9:30  | 9486 | WAS Version 8 – Batch Update                                   | Huchinson                         | Europe 2 |
| Thursday  | 11:00 | 9485 | WAS Version 8 – New z/OS Exploitation/Differentiation Features | Follis                            | Europe 2 |
| Thursday  | 1:30  | 9484 | WAS Version 8 – High Availability Enhancements                 | Follis                            | Europe 2 |
| Thursday  | 3:00  | 9488 | WAS - Back to Basics Part 1                                    | Loos                              | Europe 2 |
| Thursday  | 4:30  | 9489 | WAS - Back to Basics Part 2                                    | Stephen                           | Europe 2 |
| Friday    | 8:00  | 9490 | WAS for z/OS - Level 2 Update                                  | Stephen                           | Europe 2 |
| Friday    | 9:30  | 9487 | WAS for z/OS – PotPourri                                       | Follis, Loos, Hutchinson, Stephen | Europe 2 |



# TOC



- APAR PM32461
- HA Enabled Embedded Resource Adapters
- SHR\_LIB\_RGN\_SIZE
- java sharedclasscache
- OSGI Cache refresh / purge
- APAR PM43663
- Transaction Partner Logs
- CICS TS 4.2 and WAS / WOLA
- RACF APAR OA36762
- V8 Items



# APAR PM32461

- Thread Identity incorrectly used when two applications share the same datasource
- Symptoms
  - Originally encountered with DB2 Trusted Context, but can occur outside of DB2 Trusted Context setup when two applications share the same datasource
  - Two applications are configured to use the same DB2 type 2 datasource in WebSphere.
  - Container Managed Alias is not being picked up
  - The servant ID is passed to the backend DB2 database instead of the container managed auth alias defined in the administration console
- Workarounds:
  - Do not share the datasource between both applications.
  - Create two datasources in WebSphere, and configure each application to use its own unique datasource.
- Fixed in 7.0.0.19

## Applications that contain HA enabled embedded resource adapters may fail to (re)start (1 of 2)

- If applications have embedded resource adapters which have High Availability (HA) enabled
- *UndeclaredThrowableException* is thrown from `_J2CHAProxyController_Stub.getMemberState()`:
- *NullPointerException* may be observed in: `J2CHAProxyControllerImpl.getMemberState()`:
- Techdoc:
  - <http://www.ibm.com/support/docview.wss?uid=swg21506607>
- APAR PM38719
  - <http://www.ibm.com/support/docview.wss?uid=swg1PM38719>

## Applications that contain HA enabled embedded resource adapters may fail to (re)start (2 of 2)

- To resolve this problem set JVM Custom Property:  
"com.ibm.ejs.j2c.J2CServerListener.deferEndpointActivation=true"
  - defers endpoint initialization until after the Application Server servant region has started.
- Navigate to: *Servers > Application Servers > server\_name > Process Definition >*
- *Servant | Control > Java Virtual Machine > Custom Properties.*
  - Click on New, define new property:  
Name: com.ibm.ejs.j2c.J2CServerListener.deferEndpointActivation  
Value: true
  - Click OK, then save and synchronize the changes. Please restart the server for the changes to take effect.
- You could also set property "enableHASupport=false"
  - this will disable HA for the specific Resource

# SHR\_LIB\_RGN\_SIZE



- Set in BPXPRMxx
  - applies to ALL ASID's
  - APAR OA33516 (USS) can disable shared libs per process
- Various symptoms:
  - Native Storage shortage
  - servers running in 31 bit mode

- WhitePaper:

<http://www.ibm.com/support/techdocs/atsmastr.nsf/WebIndex/WP101320>



# java sharedclasscache

- On by default
  - helps in server startup time (after initial start)
- Various problems:
  - Hang during server startup, CR abend SDC3, etc.
  - report the problems to us
- Can clear the cache:
  - servers must be stopped
    - `<WAS_HOME>/java/cache/javasharedresources/` (and `/java64/..`)
      - `/Websphere/V7R0/test/BBOS001/AppServer/java/..`
    - delete all files clear it out
      - `C230D1A32_semaphore_webspherev61_CBCFG1_control`
      - `C230D1A32_memory_webspherev61_CBCFG1_control_G01`
      - `C230D1A32_semaphore_webspherev61_CBCFG1_servant`
      - `C230D1A32_memory_webspherev61_CBCFG1_servant_G01`
- will be re-built on server startup



# OSGI Cache refresh / purge

- Various / strange problems
  - server startup failures
  - application startup failures
- Symptom
  - usually has the following on the stacktrace of failing thread:
    - org/eclipse/osgi/baseadaptor/bundle/.../.../...
    - org/eclipse/osgi/baseadaptor/loader/.../...
- Usually after some 'change'
  - application changes
  - after changes to MQ resource adapters
- We provide `osgiCfgInit.sh` to clear OSGi cache
  - `<WAS-HOME>/profiles/default/bin/osgiCfgInit.sh`
  - `<profile_root>/bin/osgiCfgInit.sh`

## PM43663 (PE)

- FixPack 7.0.0.17
- Problem: Attempt to change log level in admin console may fail  
Troubleshooting > Logging and Tracing > servername > change log detail levels  
Expand tree under 'ALL Components' to show package names
- User on web browser sees:  
Internal error during parse 01  
java.lang.reflect.UndeclaredThrowableException:  
ADMN0022E: Access is denied for the listAllRegisteredGroups
- SR output  
ExtendedMessage: BBOO0222I: SECJ0305I: The role-based authorization check failed for admin-authz operation  
TraceService:listAllRegisteredGroups.

## PM43663 (PE)

(cont)

- Post-Install Action was not driven during PTF Install (7.0.0.17)
- Easy Workaround

Login to OMVS shell or telnet using Websphere admin id (ie. WSADMIN or equivalent)

- For Network DeploymentManager setup:  
    cd WAS\_HOME/DeploymentManager/profiles/default/bin  
    iscdeploy.sh -restoreProfiles
- For Base Application server setup:  
    cd WAS\_HOME/AppServer/profiles/default/bin  
    iscdeploy.sh -restoreProfiles
- Restart the DeploymentManager or Base application server.
- FLASH in the works

# Transaction Partner Logs

- When they have entries in them, can cause problems
  - At server startup, checks to see if there are any to recover
    - If so it will try to recover them, and KEEP TRYING until it can
    - can cause high cpu (how many are out there)
  - BBOT0009I: TRANSACTION SERVICE RESTART UR STATUS COUNTS FOR W6SR02A: IN-BACKOUT=0, IN-DOUBT=0, IN-COMMIT=0
  - If there are entries, you will have to resolve them with RRS
    - STOP the WebSphere App Server
    - delete UR's associated with this server
    - delete partner logs(log1 and log2)
- <WAS\_HOME>/profiles/default/tranlog/cellname/clustername/servername/transaction/partnerlog/
- Start the WebSphere App Server
    - may see message about 'epoch mismatch' now that RRS and WAS logs out of sync
  - infocenter article: **Updating resources for an application server**  
[http://www14.software.ibm.com/webapp/wsbroker/redirect?version=matt&product=was-nd-zos&topic=trun\\_svr\\_updateresource](http://www14.software.ibm.com/webapp/wsbroker/redirect?version=matt&product=was-nd-zos&topic=trun_svr_updateresource)

## CICS TS 4.2 and WAS / WOLA

- There are changes needed from WebSphere if you are using WOLA in WebSphere to communicate with the new CICS TS 4.2 level
- After migrating a WOLA application from CICS TS 4.1 to CICS TS 4.2, calls to BBOA1REG return RC=4 RSN=4
- The register is successful but transactional support is not available
- The CICS transaction may abend with an ASRA abend code during transaction completion

## CICS TS 4.2 and WAS / WOLA

- WAS APARs
  - V7 APAR – PM45369
  - V8 APAR - PM45373
- Will place an entry in WebSphere PSP Bucket, Cross Product Dependency Section, with the APAR#
- Should we 'FLASH' this type of info ?
  - How would you like to be notified ?
- Target of FixPack 7.0.0.21 (1/19/12)

# RACF APAR OA36762

- WRONG GID ASSIGNED TO NEW DIRECTORY OR FILE INTERMITTENTLY DESPITE NOT HAVING FILE.GROUPOWNER.SETGID IN UNIXPRIV CLASS
- Problems with GID inheritance for WAS customers on z/OS 1.11
- Files or directories might get created with the GID of the creating process <servant\_id>, instead of the GID of the parent directory <admin\_id>
- This can cause a problem preventing the DMRG from reading files it needs for several processes (e.g synchronization)

# V8 Items



- I-fixes will be installed as i-fixes
  - no waiting for ++APAR to be built
- Maintenance Strategy
  - Use 'the cloud'
- WCT Tooling
  - originally needed PassPort Advantage ID to download
  - PPA requirement should now be lifted
  - Install from IM:

<http://www.ibm.com/software/repositorymanager/com.ibm.websphere.WCT.v80>





## V8 Items

- Maintenance Delivery Vehicle - MDV
  - a published fix for an IBM Software Product
  - WebSphere Application Server 'FixPacks' and 'Interim Fixes (i-fixes)'
- MDV is an approved process being adopted across SWG (SoftWare Group)
- You know about 'PE' (PTF in Error)
- MDV=PE for WebSphere App Server z/OS V8
  - PE will continue to be used for V6.1 and V7
  - MDV will be used for V8 and beyond
- WebSphere Distributed did not have externalized 'PE-like' flagging prior to this

## V8 Items

- “MDVREGR”
  - used to flag APARs that fix regressions, where the original fix broke a function that previously worked
- “MDVPARTL”
  - used to flag APARs that fix problems due to the original fix being incomplete
- Fix Pack download page (DCF Download) is updated with:
  - List of all regressing / incomplete APARs
  - Pointers to the resolving APARs
  - If a regression or incomplete fix is included in multiple Fix Packs or interim fixes, then the download page for every fix will be updated.

# V8 Items

- **MDVREGR example**
- **MDVs that introduce a regression will have the following text added:**

\*\*\*\*\*

\* A change introduced by this <type of MDV> might negatively  
\* affect existing product function.

\*

\* Please refer to APAR(s) xxxxxxxx ..... for a description of the  
\* problem(s) and corrective action(s).

\*

\* Evaluate these APARs for the potential impact in your environment.

\*\*\*\*\*

# V8 Items

- **MDVPARTL example**
- **MDVs with incomplete fixes will have the following text added:**

```
*****  
* A change introduced by this <type of MDV> is incomplete but will  
* not adversely affect existing function.  
*  
* Please refer to APAR(s) xxxxxxxx ..... for a description of the  
* problem(s) and corrective action(s).  
*  
* Evaluate these APARs for the potential impact in your environment.  
*****
```



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# QUESTIONS ???