WAS for z/OS - Level 2 Update

Michael Stephen – msteff@us.ibm.com
IBM

Friday, August 12, 2011  8:00 AM
Session Number - 09490
## WebSphere Application Server Sessions

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<th>Time</th>
<th>#</th>
<th>Title</th>
<th>Speaker</th>
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<td>3:00</td>
<td>9483</td>
<td>Using IBM’s New Cross-Platform Installer on z/OS</td>
<td>Loos</td>
<td>Oceanic5</td>
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<td>Thursday</td>
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<td>9482</td>
<td>WAS Version 8 – Overview</td>
<td>Follis</td>
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<td>Stephen</td>
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<td>Friday</td>
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<td>9487</td>
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<td>Follis, Loos, Hutchinson, Stephen</td>
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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  

- 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:
- APAR PM38719
Applications that contain HA enabled embedded resource adapters may fail to (re)start

- 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:
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_semaophore_webspherev61_CBCFG1_control
      C230D1A32_memory_webspherev61_CBCFG1_control_G01
      C230D1A32_semaophore_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.
• 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/clusternamservername/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/wbcsredirect?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: 
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) xxxxxxx ....... 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) xxxxxxx ....... for a description of the
* problem(s) and corrective action(s).
*
* Evaluate these APARs for the potential impact in your environment.
************************************************************
QUESTIONS ???