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Introduction:

This document provides you information regarding the contents of the ADCD z/OS V2R3 November Edition for 2018. It also provides some additional notes and tips to effectively manage the ADCD system. The instructions for starting WAS, z/OSMF, Health Checker are also included in this document.

Release Notes:

Listed below are modifications / enhancements incorporated into this ADCD z/OS V2R3 November Edition for 2018.

With this release of ADCD the z/OSMF Server and Angel are auto started. This is a requirement to support the new function of JES2 Email Support delivered in z/OS 2.3. Additionally the TSO logon procedures have been changed to end at the READY prompt. So it will be necessary to type ISPF to access the ISPF panels.

The following z/OSMF functions were implemented:

- Software Management
- Performance
- Consoles
- Jobs and Resources (ie. SDSF Plugin)
- Rest Services
- z/OS Classic Interfaces
- z/OSMF JES2 Email Support

The option to use Secure SSL/TLS for TN3270 has been provided in this ADCD release. Please reference the webpage Section: Announcements, Changes and Updates.

The following products have been added:

- IBM Z Development and Test Environment Enterprise 12.0.1
- IBM Toolkit for Swift on z/OS V4.0
- IBM Dependency Based Build V01.00.00

The following products have been updated with the latest available version/release/modification level.

- IBM Rational Team Concert V6.0.6
- IBM Urban Code Deploy for z/OS V7.0.0

All of z/OS base, z/OS products and middleware volume size has been increased to mod-9 (10,017 cylinders) to provide more free space for expansion

Page Data Sets:

This ADCD system provides you with three volumes dedicated for page data sets, C3PAGA through C3PAGC. The contents of the volumes are listed below.

C3PAGA – SYS1.S0W1.PLPA.PAGE, SYS.S0W1.COMMON.PAGE, SYS1.S0W1.LOCALA.PAGE
C3PAGB – SYS1.S0W1.LOCALB.PAGE
C3PAGC – SYS1.S0W1.LOCALC.PAGE

The pre-configured loadparms that are meant for bringing up DB2 and WAS, use all of the above listed page data sets. The rest of the loadparms use only the ones on first two volumes listed above. Depending upon your requirement you can add
or remove these page data sets using the example parameters below in IEASYSxx member after copying it to USER.PARMLIB.

PAGE=(SYS1.S0W1.PLPA.PAGE,
    SYS1.S0W1.COMMON.PAGE,
    SYS1.S0W1.LOCALA.PAGE,
    SYS1.S0W1.LOCALB.PAGE,L),
Starting IMS and running an IVP transaction:

The instructions for starting and stopping IMS can be found at the below link:


Above page has pointers to the levels of IMS V15 and V14. On each level click on the "Issues, Hints and Tips" to see the instructions for starting and stopping. The IVP jobs are available on ADCD system, in the data set DFSF10.INSTALIB for IMS v15, DFSE10.INSTALIB for IMS v14 and one needs to run each series in a specific manner to create the particular IVP environment and data to be able to follow each IVP.

WLM configuration provided on ADCD z/OS:

The WLM configuration of application environments for DB2 Stored Procedures for DBBG are self-documented in the WLM application environment display.

For DBCG(DB2 V12) the comment describes the usage of each environment.

DBCGENV                           Default
DBCGENVC                          DSNWLM_DSNACICS
DBCGENVD                          DSNWLM_DEBUGGER
DBCGENVG                          DSNWLM_GENERAL
DBCGENVJ                          DSNWLM_JAVA
DBCGENVM                          DSNWLM_MQSERIES
DBCGENVO                          DSNWLM_JAVA_BIGMEM
DBCGENVP                          DSNWLM_PGM_CONTROL
DBCGENVR                          DSNWLM_REXX
DBCGENVU                          DSNWLM_UTILS
DBCGENVW                          DSNWLM_WEBSERVICES
DBCGENVX                          DSNWLM_XML
DBCGENV1                          DSNWLM_NUMTCB1
DBCGRFSH                          Stored Procedure REFRESH

For DBBG(DB2 V11) the comment describes the usage of each environment.

DBBGENV                           Default
DBBGENVC                          DSNWLM_DSNACICS
DBBGENVD                          DSNWLM_DEBUGGER
DBBGENVG                          DSNWLM_GENERAL
DBBGENVJ                          DSNWLM_JAVA
DBBGENVM                          DSNWLM_MQSERIES
DBBGENVO                          DSNWLM_JAVA_BIGMEM
DBBGENVP                          DSNWLM_PGM_CONTROL
DBBGENVR                          DSNWLM_REXX
DBBGENVU                          DSNWLM_UTILS
DBBGENVW                          DSNWLM_WEBSERVICES
DBBGENVX                          DSNWLM_XML
DBBGENV1                          DSNWLM_NUMTCB1
DBBGRFSH                          Stored Procedure REFRESH

ACS routines provided on ADCD:

DB2 V12 requires that its Catalog and Directory be SMS managed. The ACS routines available on ADCD z/OS system were created to handle HLQ DSNCC10, which is the HLQ of the DB2 V12 Catalog and Directory. The logic is to use two qualifiers, first is DSNCC10 and the second is DSNDBC or DSNBD. The DSNDBC and DSNBD indicates the cluster and data portion of the VSAM data set of a DB2 Tablespace. Other datasets for DB2 V12 have a HLQ of DSNC10 and
these are not SMS managed. A DB2 STOGROUP called SYSSMS has been created for the Catalog and Directory Tablespaces with a VCAT of DSNC10 and VOL of (*). The (*) is for SMS managed STOGROUP. The DB2 STOGROUP, SYSDEFLT uses VCAT of DSNB10 and lists actual volumes and is not SMS managed. The installation is configured to use SYSSMS when creating the Catalog and Directory Tablespaces. If users create and specify a STOGROUP of their own or default to SYSDEFLT STOGROUP, their Tablespaces will fall into non-SMS managed volumes as specified in the STOGROUP.

DB2 V11 requires that its Catalog and Directory be SMS managed. The ACS routines available on ADCD z/OS system were created to handle HLQ DSNCB10, which is the HLQ of the DB2 V11 Catalog and Directory. The logic is to use two qualifiers, first is DSNCB10 and the second is DSNDBC or DSNDBD. The DSNDBC and DSNDBD indicates the cluster and data portion of the VSAM data set of a DB2 Tablespace. Other datasets for DB2 V11 have a HLQ of DSNB10 and these are not SMS managed. A DB2 STOGROUP called SYSSMS has been created for the Catalog and Directory Tablespaces with a VCAT of DSNCB10 and VOL of (*). The (*) is for SMS managed STOGROUP. The DB2 STOGROUP, SYSDEFLT uses VCAT of DSNB10 and lists actual volumes and is not SMS managed. The installation is configured to use SYSSMS when creating the Catalog and Directory Tablespaces. If users create and specify a STOGROUP of their own or default to SYSDEFLT STOGROUP, their Tablespaces will fall into non-SMS managed volumes as specified in the STOGROUP.

The data class DCEXTEAV is defined to allow larger than four Gigabyte dataset allocation. With this data class and the accompanying storage group and class, a dataset can be allocated on the provided SMS managed volume C3USR1. The ACS routines are defined so no filtering is needed. To allocate and SMS managed dataset, specify the data class (DCEXTEAV) in the allocation JCL and the dataset will be defined on the provided volume. Below are the names of the Data class, Storage Group and Storage class for reference purposes:

<table>
<thead>
<tr>
<th>Data Class</th>
<th>Storage Group</th>
<th>Storage Class</th>
<th>Volume Defined to Storage Group</th>
</tr>
</thead>
<tbody>
<tr>
<td>DCEXTEAV</td>
<td>SGEXTEAV</td>
<td>SCEXTEAV</td>
<td>C3USR1 (Storage Group)</td>
</tr>
</tbody>
</table>

**Table:**

<table>
<thead>
<tr>
<th>DC</th>
<th>SG</th>
<th>SC</th>
<th>Vol</th>
</tr>
</thead>
<tbody>
<tr>
<td>D</td>
<td>S</td>
<td>S</td>
<td>C</td>
</tr>
<tr>
<td>CEXTEAV</td>
<td>GEXTEAV</td>
<td>CEXTEAV</td>
<td>USR1</td>
</tr>
</tbody>
</table>
Recreating the coupling data sets:

Below listed are the coupling data sets provided on ADCD.

SYS1.ADCDPL.CDS01
SYS1.ADCDPL.CDS02
SYS1.ADCDPL.CFRM.CDS01
SYS1.ADCDPL.CFRM.CDS02
SYS1.ADCDPL.LOGR.CDS01
SYS1.ADCDPL.LOGR.CDS02
SYS1.ADCDPL.OMVS.CDS01
SYS1.ADCDPL.OMVS.CDS02
SYS1.ADCDPL.WLM.CDS01
SYS1.ADCDPL.WLM.CDS02

In case any of these data sets are corrupted or become unusable, delete them and use the JCL available in the member ALOCCOPL in 'ADCD.LIB.JCL' data set, to allocate them again.

Note: Be sure to make the appropriate volume change that reflects the level of ADCD you are using.

Note: This procedure is provided to you, assuming that you have a thorough knowledge of setting up a SYSPLEX environment. These steps are a bit involved and could cause disruption of normal functioning of your ADCD system.

Allocating DB2 archive logs into an esoteric device:

Additional storage volume C3DBAR has been defined and is pointed to by a new esoteric DBARCH, for DB2 archive logs. Instructions for adding more volumes to this esoteric is provided in this document below. Ensure to map this volume C3DBAR to device# 0AA3 in your devmap, so that it is in sync with the IODF definition.

In this edition of ADCD z/OS, the loadparms that are meant to bring up DB2, have been configured to use the esoteric device DBARCH for holding the DB2 archive logs. This means that the archive logs will go only into this volume (or volumes if you add more to the esoteric). You will still need to manage the space on the volume and delete archive logs that are no longer needed. The fourth qualifier in the data set name is a date of the format Dyynnn where “yy” is the year and “nnn” is the Julian day of the year. When you start DB2, examine the console log to see that it does not read any archive logs. If no archive logs are used at the start, then you have a clean start of DB2 and you can delete all the prior archive logs. If you are running DB2 and run out of space in the esoteric DBARCH volume(s), look at the SDSF console log for DB2 and determine the start date. Then you can delete archive logs prior to the start date of the last clean start of DB2. You should monitor the space available on your DBARCH esoteric volume(s). Better space management can be achieved by turning off logging on some of your Tablespace, that can be recovered by just dropping, re-creating and re-loading. You can also reduce logging by using the LOG NO parm in your load utility job. You would need to reset the COPY pending flag with the NOCOPYPEND parm in the load utility or the REPAIR utility. Please note that these are to be used only for Tablespace that you can recover on your own without any of DB2’s recovery. A thoughtful management of DB2 archive logs is important in any DB2 environment - test, development or production.

Also note that, even though you delete the DSNx10.DBxG.ARCLOG1.Date.Time.A00000000# data sets you need to keep enough of the DSNx10.DBxG.ARCLOG1.Date.Time.B000000# data sets to cover two successful restarts of DB2. These are the backups for your BSDS data sets. If anything happens to your BSDS; you will need these backups to restore your BSDS.

The DBARCH esoteric is coded into DB2 ZPARM, via the link-edit JCL member DSNTIJUZ in DSNx10.NEW.SDSNSAMP. You can find the below parms coded under DSN6ARVP section of DSNTIJUZ. This information is provided here, just in case you want to create and update with a different esoteric other than the one provided.

TSTAMP=YES, X
UNIT=DBARCH, X
UNIT2=
Follow the below instructions, if you need to add more volumes to the esoteric DBARCH.

The IODF file needs to be updated in order to make changes to an esoteric. The default active IODF in ADCD system is SYS1.IODF99. When we try to modify this, a temporary work IODF is created, which can be named as per our preference. In this case, let us name it SYS1.IODF03.WORK. Once the changes are done, this work file can be used to create a production IODF file, let us name it SYS1.IODF03. The system can be re-IPLed after changing loadparm to use IODF03 and check if the changes we have done are working properly. We can either continue to use IODF03 or copy it to IODF99. For copying to IODF99, we need to take a backup of IODF99 and then delete IODF99. After deleting IODF99, copy IODF03 to IODF99 and update the loadparm member to use IODF99.

1. Go to option M.4 from ISPF primary option menu, to enter into the HCD tool (Hardware Configuration Tools).

   ![HCD Tool Screenshot]

   **Command **

   Hardware Configuration

   Select one of the following.

   0. Edit profile options and policies
   1. Define, modify, or view configuration data
   2. Activate or process configuration data
   3. Print or compare configuration data
   4. Create or view graphical configuration report
   5. Migrate configuration data
   6. Maintain I/O definition files
   7. Query supported hardware and installed UIMs
   8. Getting started with this dialog
   9. What's new in this release

   For options 1 to 5, specify the name of the IODF to be used.

   I/O definition file... 'SYS1.IODF99' +

2. Ensure that the default IODF file is selected as shown in above screenshot. Select option 1 (Define, Modify, or View Configuration Data)

   ![Select Type of Objects Screenshot]

   **Select type of objects to define, modify, or view data.**

   1. Operating system configurations
      - consoles
      - system-defined generics
      - EDTs
      - esoterics
      - user-modified generics
   2. Switches
      - ports
      - switch configurations
      - port matrix
   3. Processors
      - channel subsystems
      - partitions
      - channel paths
   4. Control units
   5. I/O devices
   6. Discovered new and changed control units and I/O devices
3. Select option 1 (Operating System Configurations). Type '/' to select Config. ID OS390 in the next screen and press enter.

4. A pop-up window is thrown as shown below, select option 5 (Work with EDTs) in this pop-up.
5. Now it throws a list of EDTs, select EDT# 00, by typing '/" and press enter.

6. Throws another pop-up with actions to be performed on EDTs, select option 4 (Work with esoterics).
7. This lists the esoterics already available, select the esoteric DBARCH by typing ‘/’ and press enter for further options.

8. Select option 4 (Assign devices)
9. Throws a pop-up window with list of devices available, select the appropriate device or device range that you want to add to this esoteric. In the screenshot below, we are trying to add one additional device at address 0AA7. Change the status of 'Assigned' column from 'No' to 'Yes' across the device range that you want to add and also specify the starting device address, and number of devices to add a range.

10. On pressing enter after above selections, a pop-up window is thrown to capture the details for creating a work IODF file that will capture the changes.
11. On pressing enter, now it shows the updated list of devices assigned. As device# 0AA6 was already assigned, now with 0AA7 added, it shows 2 devices in that range.

12. Now, go back to primary option menu of HCD and select option 2 (Activate or process configuration data) against the work IODF file that we just created.
13. Select option 1 (Build production I/O definition file) as shown below

<table>
<thead>
<tr>
<th>S</th>
<th>1. Build production I/O definition file</th>
</tr>
</thead>
<tbody>
<tr>
<td>2</td>
<td>2. Build IOCDS</td>
</tr>
<tr>
<td></td>
<td>3. Build IOCP input data set</td>
</tr>
<tr>
<td></td>
<td>4. Create JES5 initialization stream data</td>
</tr>
<tr>
<td></td>
<td>5. View active configuration</td>
</tr>
<tr>
<td></td>
<td>6. Activate or verify configuration dynamically</td>
</tr>
<tr>
<td></td>
<td>7. Activate configuration sysplex-wide</td>
</tr>
<tr>
<td></td>
<td>8. *Activate switch configuration</td>
</tr>
<tr>
<td></td>
<td>9. *Save switch configuration</td>
</tr>
<tr>
<td></td>
<td>10. Build I/O configuration data</td>
</tr>
<tr>
<td></td>
<td>11. Build and manage S/390 microprocessor IOCDSs and IPL attributes</td>
</tr>
<tr>
<td></td>
<td>12. Build validated work I/O definition file</td>
</tr>
</tbody>
</table>

* = requires TSA I/O Operations

14. The changes made are verified and if any errors / warnings are displayed at this stage. A warning message as shown below, can be ignored.

```
Save Query Help

Command ==> Scroll ==> PAGE

Messages are sorted by severity. Select one or more, then press Enter.
/ Sev Msg. ID Message Text
/ W  CBDR339I EDT 00 of OS configuration OS390 does not use tokens for its esoterics.
************************************************************************** Bottom of data **********************
```
15. Press F3 to go back and create the production IODF file, call it 'SYS1.IODF03', specify the volume and hit enter. **Note:** The volume specified here should be the same volume as where IODF99 is residing.

16. Throws a pop-up window for descriptor fields as shown below, hit enter again.
17. You should get a message for successful creation as shown below

18. Come out of HCD and create a new loadparm member (using LOADCS as a template) as shown below, to use IODF03, by changing the IODF parm value from 99 to 03.

```
EDIT SYSL IPLPARM(LOAD01) - 01.00
```

```
000001 IODF 03 SYS1
000002 SYSCAT Z1SYS1113CCATALOG.Z21Z.MASTER
000003 SYSPARM CS
000004 IEASYM 00
000005 PARMLIB USER.PARMLIB Z1SYS1
000006 PARMLIB ADDC.Z21Z.PARMLIB Z1RES1
000007 PARMLIB SYS1.PARMLIB Z1RES1
000008 NUCLEUS 1
000009 SYSPLEX ADDCPL
```

19. IPL the system with loadparm '01' to ensure that IODF03 works without any issues. If you want to continue using IODF03, modify other loadparms that you need, to use IODF03. Otherwise if you want to copy the changes to IODF99, take a backup of IODF99 using option 6 (Maintain I/O definition files) and then option 2 (Copy I/O definition file). After taking a backup, delete IODF99 file and repeat the same options 6 and 2 to copy IODF03 into IODF99.

**Steps for dumping SMF data into GDG data sets**

The system is configured to clear SMF data using the procedure SMFCLEAR. This procedure is triggered by the exit routine IEFU29, the source code of which is available in ADDC.Library.JCL. In case, you wish to save the SMF data into GDG data sets, this exit routine needs to be modified to invoke procedure SMFDUMPS. Edit the routine IEFU29 to change occurrences of string SMFCLEAR to SMFDUMPS and assemble / link-edit the load module using the JCL member IEFU29, also available in ADDC.Library.JCL. The system needs to be re-IPLed for this to take effect. A GDG base SYS1.SMF.DATA has already been defined using the JCL in ADDC.Library.JCL(SMFGDG). The procedures SMFCLEAR and SMFDUMPS are available in ADDC.Z23C.PROCLIB.
Using the esoteric devices

Esoteric devices called WORK, TEMP and SORT have been defined and mapped to devices in the range 0600 – 060 F. Create emulated 3390 volumes in your zPDT system and map them to these device address via the devmap file, in order to use these esoterics. Also note that the appropriate VATLSTxx member (volume attribute list) should be updated with necessary statement, as shown highlighted in below sample. In this example, we want to use volumes WORK01 through WORK12, which is marked as WORK*. This member defines the mount and use attributes of direct access volumes.

VATDEF IPLUSE(PRIVATE),SYSUSE(PRIVATE)
C3SYS1,0,0,3390    ,Y
WORK*   ,0,0,3390    ,Y

Steps for starting IBM Health Checker for z/OS

With this edition, IBM Health Checker has been pre-configured to start automatically.

This utility can be started manually with the below start command.

/START HZSPROC

http://www-03.ibm.com/systems/z/os/zos/hchecker/index.html

For stopping issue the below command manually or include it in your shutdown script SHUTxx in parmlib.

/STOP HZSPROC

Steps for starting IBM z/OS Management Facility (z/OSMF)

All loadparm’s  have been configured to autostart the z/OSMF product. The only related z/OSMF task still being started in the startup scripts is the CIM(Common Information Model) server.

S CFZCIM

This might take 20 plus minutes to come up, depending upon your zPDT system. Look for the below messages for successful start of the z/OSMF.

S IZUANG1
CWWKB0056I INITIALIZATION COMPLETE FOR ANGEL
S IZUSVR1 IZUG400I: The z/OSMF Web application services are initialized.
+ CWWKF0011I: The server zosmfServer is ready to run a smarter planet.

The z/OSMF console can be accessed by using the below url.

https://s0w1.dal-ebis.ihost.com:10443/zosmf
The initial login screen is as shown in below screenshot.

The welcome screen of z/OSMF console is shown in below screenshot.
The commands for stopping z/OSMF are listed below.

P IZUSVR1
P CFZCIM
P IZUANG1
Steps for starting WebSphere Application Server (WAS V9.0)

It is recommended to have more than 4 GB real memory on your system and code at least 3000m (3 GB) in the devmap. IPL the system with loadparm WA and follow the below steps to bring up WAS V9.0:

1) Issue the below command from SDSF, to start the Deployment Manager. In SDSF, type / and hit enter to get the System Command Extension window.
   START XADCR,JOBNAME=XADMGR,ENV=XACELL.XADMNODE.XADMGR

2) This November take several minutes, look for the below message in the System log:
   BBOO0019I INITIALIZATION COMPLETE FOR WEBSPHERE FOR Z/OS CONTROL 478 PROCESS XADMGR.

3) After receiving above message issue the next command to start the Node Agent
   START XAACR1,JOBNAME=XAAGNT1,ENV=XACELL.XANODE1.XAAGNT1

4) This November take several minutes, look for the below message in the System log
   BBOO0019I INITIALIZATION COMPLETE FOR WEBSPHERE FOR Z/OS CONTROL 346 PROCESS XAAGNT1.

5) Now try to connect to the Admin console from your browser, using the below link.
   http://s0w1.dal-ebis.ihost.com:9305/ibm/console
6) Should get a logon screen like shown below, login with userid 'xaadmin'.

7) The Application Server can be started from the Admin console as shown below. Go to Servers → Server Types → WebSphere application servers. The server XASR011 should be listed on the right side panel. Select it by checking the box against it and click on the 'Start' button to start the application server.

8) This November take several minutes, look for the below message in the System log

   BBOO0019I INITIALIZATION COMPLETE FOR WEBSPHERE FOR Z/OS CONTROL 541   PROCESS XASR011.
The status of the server turns into green arrow, indicating that it is started now.

9) The application server can be stopped from the browser itself, by selecting the server and clicking on the 'Stop' button. Click OK on the confirmation message to stop the server. Alternatively, a stop command can also be issued from the SDSF:

/P XASR011

10) Look for the below message to confirm that the application server is shut down normally.

BBOO0002I WEBSPHERE FOR Z/OS CONTROL PROCESS XASR011 ENDED NORMALLY.

11) Issue the below command, to stop the Deployment Manager and Node Agent

/P XADEMN

12) This will take several minutes, look for the below message for normal completion.

BBOO0008I WEBSPHERE FOR Z/OS DAEMON S0W1 ENDED NORMALLY.

LOADPARMS option

Table Listing of available pre-configured distributed LOADPARMS.

<table>
<thead>
<tr>
<th>LOADPARM</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>CS</td>
<td>CLPA and Cold start of JES2. Base z/OS system functions i.e. no CICS, DB2, IMS, WAS, etc.</td>
</tr>
<tr>
<td>00</td>
<td>CLPA and Warm start of JES2. Base z/OS system functions i.e. no CICS, DB2, IMS, WAS, etc.</td>
</tr>
<tr>
<td>WS</td>
<td>CLPA and Warm start of JES2. Base z/OS system functions i.e. no CICS, DB2, IMS, WAS, etc.</td>
</tr>
<tr>
<td>CI</td>
<td>CLPA and Warm start of JES2. Loads CICS 5.4 and 5.3 libraries. Starts up CICS 5.4, z/OSMF and RDz.</td>
</tr>
<tr>
<td>DB</td>
<td>CLPA and Warm start of JES2. Loads DB2 V12 and V11 libraries. Starts up DB2 V12, z/OSMF and RDz.</td>
</tr>
<tr>
<td>IM</td>
<td>CLPA and Warm start of JES2. Loads IMS 15 and 14 libraries. Starts up IMS 15, z/OSMF and RDz.</td>
</tr>
<tr>
<td>-----</td>
<td>------------------------------------------------------------------------------------------------</td>
</tr>
<tr>
<td>IZ</td>
<td>CLPA and Warm start of JES2. Starts up z/OSMF and RDz.</td>
</tr>
<tr>
<td>WA</td>
<td>CLPA and Warm start of JES2. Loads WAS v9. Starts up z/OSMF, RDz. WAS needs to be manually started.</td>
</tr>
<tr>
<td>AL</td>
<td>CLPA and Warm start of JES2. Loads all middleware libraries. Starts up CICS 5.4, DB2 V12, IMS 15, z/OSMF, RDz and UCD. WAS needs to be manually started.</td>
</tr>
<tr>
<td>DC</td>
<td>CLPA and Cold start of JES2. Loads CICS, DB2 libraries. Starts up CICS 5.4, DB2 V12, UCD 7.0.0, RTC 6.0.6, RDz and UCD.</td>
</tr>
<tr>
<td>DW</td>
<td>CLPA and Warm start of JES2. Loads CICS, DB2 libraries. Starts up CICS 5.4, DB2 V12, UCD 7.0.0, RTC 6.0.6, RDz and UCD.</td>
</tr>
</tbody>
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