



CA Datacom/AD Version 14.0 or 15.0 Upgrade to 15.1

CA Datacom/AD Version 15.1



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After completing this session, you will be able to:

- Understand the upgrade process
 - Version 14.0 to Version 15.1
 - Version 15.0 to Version 15.1
- Plan the Version 15.1 implementation
- Identify the JCL members needed to complete the upgrade
- Perform the CA Datacom/AD Version 15.1 upgrade
- Recognize Workflows as a new way to do upgrades



CA Datacom/AD Version 15.1 Upgrade Process Overview

- Product acquisition (same as Version 12.0 to 14.0 upgrade)
- Create SMP/E resources (same as Version 12.0 to 14.0 upgrade)
- Product software maintenance (same as Version 12.0 to 14.0 upgrade)
- CA Datacom/AD Version 15.1 upgrade process (***totally new and easier***)
- CA Datacom/AD Shadow MUF upgrade considerations

Product Acquisition

Broadcom Support Portal

- Product package (.pax.Z) files
- CA Recommended Service (CA RS) maintenance packages (monthly)
- CA Service updates
- Individual PTFs

CA Chorus Software Manager (CSM)

- Into new or existing SMP/E resources
- CA Recommended Service (CA RS) maintenance packages (monthly)
- CA Service updates
- Individual PTFs

Create SMP/E Resources

- **SMP/E PAX-Enhanced ESD acquisition method**
 - Creates HLQ.CAI.CAAXSAMP JCL data set
 - CAAXSAMP contains JCL members to create Version 15.1 SMP/E resources
 - Modify and submit the JCL members
 - SMP/E ACCEPT the base product
 - RECEIVE and APPLY all outstanding maintenance
- **SMP/E CSM acquisition method**
 - Create Version 15.1 SMP/E resources
 - RECEIVE, APPLY and ACCEPT the base product
 - RECEIVE and APPLY all outstanding maintenance

Product Software Maintenance

IBM's SMP/E for z/OS

- IBM standard for product installation
- Manages installation of products
- Manages maintenance to products
- Ensures integrity of product installation and modifications

CA Chorus Software Manager (CSM)

- Easy to use interface (UI)
- Direct access to CA Support on-line
- Ensures integrity of product installation, deployment and configuration
- Displays all available PTFs
 - Identifies HIPER PTFs
 - Identifies individual PTF status (Received, Applied, Accepted)
- CA RS maintenance support

CA Datacom/AD MUF Version 15.1 Upgrade Process

- New enhanced upgrade process replaces the previous Version 12.0 to 14.0 new install/port upgrade method
- New enhanced upgrade process valid for Version 14.0 to 15.1 or Version 15.0 to Version 15.1
- Both the Version 14.0 and 15.0 upgrade steps are the same
 - Review prerequisites
 - Create CAI.HLQ.INSTJCL installation JCL library
 - Create CAI.HLQ.ACT.INSTJCL installation JCL library
 - Perform Version 15.1 upgrade planning
 - Edit and run CAI.HLQ.ACT.INSTJCL upgrade members

Review Prerequisites

Review README information:

<https://techdocs.broadcom.com/content/broadcom/techdocs/us/en/ca-mainframe-software/database-management/ca-datacom-ad/15-1/installing/readme-for-ca-datacom-ad-15-1.html>

Review Version 15.1 documentation:

Link to all CA Datacom/AD documentation:

<https://techdocs.broadcom.com/content/broadcom/techdocs/us/en/ca-mainframe-software/database-management/ca-datacom-ad/15-1.html>

Link to CA Datacom/AD Installation document:

<https://techdocs.broadcom.com/content/broadcom/techdocs/us/en/ca-mainframe-software/database-management/ca-datacom-ad/15-1/installing.html>

Create CAI.HLQ.INSTJCL Installation JCL Library

- Edit and submit CAI.HLQ.CAAXSAMP member AXCUS00

```
DCMQA.AX151.CAAXSAMP (AXCUS00)
```

- Allocates the following libraries
 - CAI.HLQ.INSTJCL
 - CAI.NEWHLQ.CUSMAC
 - CAI.NEWHLQ.CUSLIB
 - CAI.NEWHLQ.CUSPROC
- Populates the following libraries
 - CAI.HLQ.INSTJCL
 - CAI.NEWHLQ.CUSMAC
- Do not save the AXCUS00 changes, it is SMP/E managed

Create CAI.HLQ.ACT.INSTJCL Installation JCL Library

- Edit and submit **CAI.HLQ.INSTJCL** member AXCUSACT

```
DCMQA.AX151.INSTJCL (AXCUSACT)
```

- Creates and populates **CAI.HLQ.ACT.INSTJCL** data set

```
DCMQA.AX151.ACT.INSTJCL
```

- It is recommended that a unique **CAI.HLQ.ACT.INSTJCL** data set be created for each MUF instance being upgraded

Create CAI.HLQ.ACT.INSTJCL Installation JCL Library continued

- Members in the CAI.HLQ.ACT.INSTJCL installation JCL library are:

```
DCMQA.AX151.ACT.INSTJCL
```

\$DCAXEDT	AXACTDDR
@AXWKSHT	AXACTDD1
AD15STOP	AXACTDD2
AD15STUP	AXACTUPG
AXACTALC	AXAPFADD

Version 15.1 Upgrade Planning

- **CAI.HLQ.ACT.INSTJCL** members used to perform an upgrade fall into two categories – pre-upgrade and post-upgrade
- Pre-upgrade members can be executed any time prior to switching MUF to the Version 15.1 code
- Post-upgrade members ***must be*** executed after MUF is running Version 15.1 code
- A Version 15.0 MUF upgrade to Version 15.1 consists of:
 - Running pre-upgrade members
 - Switching MUF to the Version 15.1 code
 - There are no post-upgrade members to run
- A Version 14.0 MUF upgrade to Version 15.1 consists of:
 - Running pre-upgrade members
 - Switching MUF to the Version 15.1 code
 - Running post-upgrade members

Version 15.1 Upgrade Planning continued

- CA Datacom/AD MUF pre-upgrade planning options
 - Individual MUF
 - Create a **CAI.HLQ.ACT.INSTJCL** library
 - Taylor and execute pre-upgrade members
 - Schedule a best time to make the Version 15.1 code switch
 - Multiple MUF upgrades
 - Create one **CAI.HLQ.ACT.INSTJCL** library for each MUF
 - Taylor and execute pre-upgrade members for each MUF
 - Schedule a best time to make the Version 15.1 code switch for each MUF

Version 14.0 to 15.1 Pre-Upgrade Steps

- Complete the Installation Worksheet
- Contains all needed upgrade JCL parameter information
 - JOBCARD information
 - SMP/E dataset high level qualifier
 - Existing dataset high level qualifier
 - New custom dataset high level qualifier
 - New runtime dataset high level qualifier
 - Etc.

```
DCMQA.AX151.ACT.INSTJCL (@AXWKSHT)
```

Version 14.0 to 15.1 Pre-Upgrade Steps continued

- Edit and submit CAI.HLQ.ACT.INSTJCL member AXACTUPG

```
DCMQA.AX151.ACT.INSTJCL (AXACTUPG)
```

- Creates and populates CAI.HLQ.CUSLIB library
- Edit and submit CAI.HLQ.ACT.INSTJCL member AXRIM01

```
DCMQA.AX151.ACT.INSTJCL (AXRIM01)
```

- Executes CAIRIM to load the program call PC routine DBPCCPR

Version 14.0 to 15.1 Pre-Upgrade Steps continued

- Edit and submit **CAI.HLQ.ACT.INSTJCL** member AXACTALC

```
DCMQA.AX151.ACT.INSTJCL(AXACTALC)
```

- Allocates backup datasets and populates CAI.CHLQ.CUSPROC library

Version 14.0 to 15.1 Post-Upgrade Steps

- Edit and submit **CAI.HLQ.ACT.INSTJCL** member AXACTDD1

```
DCMQA.AX151.ACT.INSTJCL (AXACTDD1)
```

- Creates Version 14.0 CXX, DD, DDD data sets backups
- Edit and submit **CAI.HLQ.ACT.INSTJCL** member AXACTDD2

```
DCMQA.AX151.ACT.INSTJCL (AXACTDD2)
```

- Converts the Version 14.0 DD and DDD databases to Version 15.0
- This completes One CA Datacom/AD Version 14.0 MUF instance upgrade

Version 14.0 to 15.1 Upgrade Recap

- The members highlighted in yellow are the ones used to upgrade one CA Datacom/AD MUF instance from Version 14.0 to 15.1

```
DCMQA.AX151.ACT.INSTJCL
```

\$DCAXEDT	AXACTDDR
@AXWKSHT	AXACTDD1
AD15STOP	AXACTDD2
AD15STUP	AXACTUPG
AXACTALC	AXAPFADD

Version 15.0 to 15.1 Pre-Upgrade Steps

- Complete the Installation Worksheet
- Contains all needed upgrade JCL parameter information
 - JOBCARD information
 - SMP/E dataset high level qualifier
 - Existing dataset high level qualifier
 - New custom dataset high level qualifier
 - New runtime dataset high level qualifier
 - Etc.

```
DCMQA.AX151.ACT.INSTJCL (@AXWKSHT)
```

Version 15.0 to 15.1 Pre-Upgrade Steps continued

- Edit and submit CAI.HLQ.ACT.INSTJCL member AXACTUPG

```
DCMQA.AX151.ACT.INSTJCL (AXACTUPG)
```

- Creates and populates CAI.HLQ.CUSLIB library
- Edit and submit CAI.HLQ.ACT.INSTJCL member AXRIM01

```
DCMQA.AX151.ACT.INSTJCL (AXRIM01)
```

- Executes CAIRIM to load the program call PC routine DBPCCPR

Version 15.0 to 15.1 Pre-Upgrade Steps continued

- Edit and submit CAI.HLQ.ACT.INSTJCL member AXACTALC

```
DCMQA.AX151.ACT.INSTJCL(AXACTALC)
```

- Allocates backup datasets and populates CAI.CHLQ.CUSPROC library

Version 15.0 to 15.1 Pre-Upgrade Steps continued

- Verify Version 14.0 to 15.0 upgrade was completed successfully
 - Locate message DB00915I in the CA Datacom/AD MUF JESMSG LG

```
DB00915I - CXX DBID 2 DATA-DICT DEFINITION VERSION 15.0 CHANGE LEVEL 0
```

- DATA-DICT Version **not** 15.0
 - Edit and run members AXACTDD1 and AXACTDD2 prior to the 15.0 to 15.1 upgrade
- DATA-DICT Version is 15.0
 - Proceed with the Version 15.0 to 15.1 upgrade

Version 15.0 to 15.1 Conditional Pre-Upgrade Steps

- Edit and submit **CAI.HLQ.ACT.INSTJCL** member AXACTDD1

```
DCMQA.AX151.ACT.INSTJCL (AXACTDD1)
```

- Creates Version 14.0 CXX, DD, DDD data sets backups
- Edit and submit **CAI.HLQ.ACT.INSTJCL** member AXACTDD2

```
DCMQA.AX151.ACT.INSTJCL (AXACTDD2)
```

- Converts the Version 14.0 DD and DDD databases to Version 15.0
- This completes One CA Datacom/AD Version 14.0 MUF instance upgrade

Version 15.0 to 15.1 Upgrade Recap

- The members highlighted in blue are the ones used to upgrade one CA Datacom/AD MUF instance from Version 15.0 to 15.1

```
DCMQA.AX151.ACT.INSTJCL
```

\$DCAXEDT	AXACTDDR
@AXWKSHT	AXACTDD1
AD15STOP	AXACTDD2
AD15STUP	AXACTUPG
AXACTALC	AXAPFADD

Modify and Execute CAI.HLQ.ACT.INSTJCL Restore

- The CAI.HLQ.ACT.INSTJCL member is available to restore a Version 15.1 system back to Version 14.0 if necessary

```
DCMQA.AX151.INSTJCL (AXACTDDR)
```

- The need to do a restore is extremely rare since all the Version 14.0 system resources are compatible with CA Datacom/AD Versions 14.0, 15.0 and 15.1

CA Datacom/AD Shadow MUF Upgrade Considerations

- Primary and Shadow MUF both running Version 15.1 code
 - EOJ/halt Shadow MUF
 - Switch Shadow MUF to the Version 15.1 code
 - Startup Shadow MUF
 - Transition primary MUF to Shadow MUF
 - EOJ/halt former primary MUF
 - Switch former primary MUF to Version 15.1 code
 - Restart the former primary MUF as Shadow MUF
 - Both primary MUF and Shadow MUF running Version 15.1 code

CA Datacom/AD Shadow MUF Upgrade Considerations continued

- Primary MUF running Version 15.1 Shadow running 14.0 or 15.0
 - **Hiper DB Version 15.1 APAR SO13162** must be applied prior to upgrading
 - Symptoms if APAR not present:
 - 1. PRIMARY MUF HANGS WITH A WAIT ON PLEX MSG REPLY
 - 2. DB00229E FATAL INTERNAL ERROR JOB TERMINATED
 - EOJ/halt former Shadow MUF
 - Switch Shadow MUF to Version 15.1 code
 - Transition primary MUF to Shadow MUF
 - Former Shadow now primary MUF running Version 15.1 code
 - Former primary MUF now Shadow MUF running Version 14.0 or 15.0 code

Workflows – New Interactive CA Datacom/AD Upgrade Interface

What is a z/OS Management Facility (z/OSMF) Workflow?

- A framework that supports z/OS System Programmers to define a guided flow (workflow) through steps to accomplish a system management or configuration task
- Workflows are a mechanism to modernize and automate systems management tasks
- CA Datacom/AD Version 14.0 and 15.0 upgrades to Version 15.1 workflows are being developed
- CA Datacom/AD workflows will be presented in a separate session when they become available

CA Datacom/AD Version 15.1 Upgrade Process review

- The following CA Datacom/AD upgrade topics were presented
 - Pre-upgrade tasks needing to be performed
 - Members supplied to perform a Version 14.0 to 15.1 upgrade
 - Members supplied to perform a Version 15.0 to 15.1 upgrade
 - Version 14.0 to 15.1 upgrade steps
 - Version 15.0 to 15.1 upgrade steps
 - Shadow MUF considerations



Thank You



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