

# Migrating to IBM Z Performance and Capacity Analytics Version 3.1.0

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Changes this edition: Step 2.2 Apply PTFs: Add GA APAR2 PH24670; Section 5 Step 2.17 Set up alerts for KPM exceptions: clarify point 1 on customizing the startup JCL.

This document contains instructions to migrate to IBM Z Performance and Capacity Analytics Version 3.1.0 from previous versions. These migration instructions should be read in conjunction with the installation instructions in the *Administration Guide and Reference* to develop an installation and migration plan appropriate for your environment.

The following migration pathways are provided and are described in detail in the sections which follow below:

1. Migrating from Tivoli Decision Support for z/OS Version 1.8.0
2. Migrating from Tivoli Decision Support for z/OS Version 1.8.1
3. Migrating from Tivoli Decision Support for z/OS Version 1.8.2
4. Migrating from IBM Z Decision Support Version 1.9.0
5. Migrating from IBM Z Decision Support for Capacity Planning Version 2.1.0

## Section 1: Migrating from Tivoli Decision Support for z/OS Version 1.8.0

### 1. Before you migrate

Follow these steps before you migrate:

#### Step 1.1:

It is highly recommended to take a backup of your existing database.

#### Step 1.2:

If you have installed IMS components, please take note of the following:

- a) Checkpoint record data sets (records output to DD name DRLICHKO during the IMS collect process) created before migrating to IBM Z Performance and Capacity Analytics Version 3.1.0 may not be usable as DRLICHKI input to the IMS collect after the migration is completed, and therefore these checkpoint data sets must be discarded before you migrate. In order to prevent loss of data, specify WRITEPENDING=YES on the last collect run before migrating to IBM Z Performance and Capacity Analytics Version 3.1.0.
- b) This product provides support for IMS Version 12+ only. Support for earlier IMS versions is no longer available. If you have collected IMS records for versions earlier than Version 12, you should delay migration to IBM Z Performance and Capacity Analytics Version 3.1.0 until after you have migrated your IMS systems to a supported level of IMS.

#### Step 1.3:

IBM Z Performance and Capacity Analytics Version 3.1.0 (excluding Usage and Accounting Collector) requires Db2 V11. If you are already on Db2 V11+, skip this step. If not, you must migrate to Db2 V11 or higher prior before commencing the migration to IBM Z Performance and Capacity Analytics Version 3.1.0.

Once you have migrated to Db2 V11+, your Tivoli Decision Support for z/OS application runtime environment must be made compatible with Db2 V11+ by following these steps:

- a) Apply the PTFs for PI26707 and PI71656. These APARs provide sample job DRLJDCVM in the DRL180.SDRLCNTL library. This job drops and recreates system views that are Db2 version dependent. Copy member DRLJDCVM from DRL180.SDRLCNTL to &HLQ.LOCAL.CNTL and follow the instructions in the DRLJDCVM member to customize the JCL prior to running the job.

- b) Db2 V10+ no longer supports binding DBRMs directly into plans. Instead it supports the binding of packages into plans. Pre-existing plans that are bound from DBRMs may be rebound using the REBIND command specifying the COLLID option to create packages. The following sample REBIND command creates a package called DRLPLAN and binds that back into plan DRLPLAN:

```
REBIND PLAN(DRLPLAN) COLLID(DRLPLAN)
```

The plan name (DRLPLAN) and collection ID (DRLPLAN) shown here are just examples. You can use any plan name and collection ID that meet your system naming standards. For more information about the BIND and REBIND commands refer to the Db2 publications.

#### Step 1.4:

If you have installed the Tivoli Performance Modeler for z/OS component, and you have not previously applied the PTFs for PM46135, you will need to discard or extract any existing data in the TPM\_LPAR\_T and TPM\_WORKLOAD\_T tables before migrating to IBM Z Performance and Capacity Analytics Version 3.1.0. After migrating to IBM Z Performance and Capacity Analytics Version 3.1.0 any existing data in these tables will cause extraction errors.

## 2. The migration process

Migrating to IBM Z Performance and Capacity Analytics Version 3.1.0 consists of the following steps:

- Step 2.1: SMP/E installation
- Step 2.2: Apply PTFs
- Step 2.3: REBIND Db2 plans and packages
- Step 2.4: Review dialog parameters

Step 2.5: Update system tables  
 Step 2.6: Test the installation of the IBM Z Performance and Capacity Analytics base  
 Step 2.7: Reintroduce customizations  
 Step 2.8: Review IBM Z Performance and Capacity Analytics supplied JCL  
 Step 2.9: Review table space profiling  
 Step 2.10: Migrate the database  
 Step 2.11: Reinstall components  
 Step 2.12: Migrate the Usage and Accounting Collector  
 Step 2.13: Migrate the IMS light feature

Each step is documented here in detail:

### Step 2.1: SMP/E installation

The SMP/E installation of the IBM Z Performance and Capacity Analytics base and its features is described in the *IBM Z Performance and Capacity Analytics Program Directory*.

Confirm that the installation completed successfully by ensuring that the following data sets and file system directory were created during SMP/E installation. The names given are defaults and might not match the names used in your implementation. Check with your Systems Programmer to confirm the actual names used.

#### a) IBM Z Performance and Capacity Analytics data sets

| Data set name   | Description                                                                          |
|-----------------|--------------------------------------------------------------------------------------|
| DRL310.SDRLEXTR | Authorized load modules for the SMF Extractor                                        |
| DRL310.SDRLCNTL | Sample jobs and Db2 DBRM module                                                      |
| DRL310.SDRLDEFS | Definitions of records, tables, and other objects                                    |
| DRL310.SDRLEXEC | REXX execs                                                                           |
| DRL310.SDRLOAD  | Load modules                                                                         |
| DRL310.SDRLSKEL | ISPF skeletons                                                                       |
| DRL310.SDRLBIN  | OS/400, Workstation and all binaries including DRLDOC<br>Replaces SDRL400 and SDRLWS |
| DRL310.SDRLFENU | GDDM/ICU formats                                                                     |
| DRL310.SDRLMENU | ISPF messages                                                                        |
| DRL310.SDRLPENU | ISPF panels                                                                          |
| DRL310.SDRLRENU | Definitions of reports                                                               |
| DRL310.SDRLTENU | ISPF tables                                                                          |

SMP/E DDEF SDRLUSS will install tar files (Data Mover, Forecaster, Splunk and ELK report packages) here:  
 /usr/lpp/IBM/IZPCA/v3r1m0/IBM/ USS file system directory containing tar files

#### b) Local data sets

| Data set name        | Description                                                                                          |
|----------------------|------------------------------------------------------------------------------------------------------|
| &HLQ.LOCAL.ADMCFORM  | Local GDDM Presentation Graphics Facility(GDDM-PGF) and Interactive Chart Utility (GDDM/ICU) formats |
| &HLQ.LOCAL.CHARTS    | Saved graphic reports (GDDM ADMGDF format)                                                           |
| &HLQ.LOCAL.CNTL      | Local IBM Z Performance and Capacity Analytics jobs                                                  |
| &HLQ.LOCAL.DEFS      | Local IBM Z Performance and Capacity Analytics definitions                                           |
| &HLQ.LOCAL.EXEC      | Local IBM Z Performance and Capacity Analytics execs                                                 |
| &HLQ.LOCAL.MESSAGES  | Messages sent through the dialog                                                                     |
| &HLQ.LOCAL.REPORTS   | Saved tabular reports                                                                                |
| &HLQ.LOCAL.USER.DEFS | Local IBM Z Performance and Capacity Analytics user/alter definitions                                |

### Step 2.2: Apply PTFs

Apply the PTFs for the following IBM Z Performance and Capacity Analytics Version 3.1.0 APARs, following the HOLD actions:

#### GA APARs

- PH23206
- PH24670

### Step 2.3: REBIND Db2 plans and packages

A new DBRM is supplied with IBM Z Performance and Capacity Analytics Version 3.1.0. Follow these instructions to rebind to the new DBRM:

1. Copy member DRLJDBND in the DRL310.SDRLCNTL library to the &HLQ.LOCAL.CNTL library.
2. Review and action the customization instructions in the job prolog before submitting the job.

### Step 2.4: Review dialog parameters

Review the information in section "Preparing the dialog and updating the dialog profile" in the *Administration Guide and Reference* to ensure the migration environment refers to the IBM Z Performance and Capacity Analytics Version 3.1.0 data sets.

IBM Z Performance and Capacity Analytics Version 3.1.0 contains the functionality of the following APARs which introduced these changes to the dialog parameters:

| Dialog parameter | Parameter description                             | Description of change                                                                                                              | APAR    |
|------------------|---------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------|---------|
| def_Db2plan      | Db2 plan name                                     | New                                                                                                                                | PM07437 |
| def_drshwid      | Show Tivoli Decision Support for z/OS system info | New                                                                                                                                | PM07437 |
| Db2ver           | Db2 version                                       | This variable no longer allows alphabetical characters - only numerical values are allowed. For example, specify '11' for Db2 V11. | PI09853 |

If you have not previously installed the PTFs for these APARs listed above, review the changes in the new sample DRLFPROF from DRL310.SDRLCNTL and customize your &HLQ.DRLFPROF accordingly. Refer to the *Administration Guide and Reference* for more information on these dialog parameters.

If you made changes to your &HLQ.DRLFPROF in this step, you must start IBM Z Performance and Capacity Analytics Version 3.1.0 specifying the RESET parameter in the next step to activate these DRLFPROF changes.

### Step 2.5: Update system tables

Follow these steps to update the system tables using the IBM Z Performance and Capacity Analytics dialog:

- Invoke the IBM Z Performance and Capacity Analytics dialog with this command: TSO %DRLEINIT [RESET]
- Display the Administration window by selecting 2 (Administration) on the Primary Menu.
- From the Administration window select 1 (System) to display the System window.
- From the System window select 2 (System tables).
- From the System Tables window press F6 to update the system tables.

### Step 2.6: Test the installation of the IBM Z Performance and Capacity Analytics base

Install the Sample component, collect the Sample log and run the Sample report to verify that the IBM Z Performance and Capacity Analytics base is operational.

### Step 2.7: Reintroduce customizations

If you have previously made changes to Tivoli Decision Support for z/OS supplied objects in your &HLQ.LOCAL.DEFS, you will need to manually apply the IBM Z Performance and Capacity Analytics Version 3.1.0 changes to these objects in your &HLQ.LOCAL.DEFS. Identify the Version 3.1.0 changes by comparing each object in your &HLQ.LOCAL.DEFS with the DRL310.SDRLDEFS version.

If an object exists in the &HLQ.LOCAL.DEFS library, IBM Z Performance and Capacity Analytics installs the object from this customized definition, instead of from the shipped DRL310.SDRLDEFS version. Therefore, if you do not take the action described in this step, the Version 3.1.0 changes will not be installed when you reinstall the components.

### Step 2.8: Review IBM Z Performance and Capacity Analytics supplied JCL

The DRL310.SDRLCNTL library contains several batch jobs that you can copy to &HLQ.LOCAL.CNTL and customize to match your installation.

If you have previously customized sample JCL from DRL180.SDRLCNTL, review the Version 3.1.0 changes in the new sample JCL provided in DRL310.SDRLCNTL and manually apply these changes to your customized versions in &HLQ.LOCAL.CNTL.

### Step 2.9: Review table space profiling

IBM Z Performance and Capacity Analytics Version 3.1.0 contains table space profiling. A table space profile allows you to define a single copy of all the settings for the creation of Db2 table spaces, tables, and indexes. This single copy of the settings could then be used at component install time for all the Db2 table spaces, tables, and indexes.

Please take note of the following:

- A migration path is not provided to migrate previously installed components to partitioned data tables.
- The table space profiling allows you to implement partitioning by growth or range when installing any of the enabled components for the first time, without having to customize any of the object definitions.
- Although default table space profiles are provided for these components, you have the option to review and modify all the profile settings (which includes partitioning settings as well as table space and index parameters) before you install the components.

When you are migrating to IBM Z Performance and Capacity Analytics Version 3.1.0, you need to follow these steps to activate table space profiling for partitioning before you install any of the components listed above:

- Run job DRLJDBIP to create the Db2 storage groups required for partitioning support. Only run this job if you have not previously created the storage groups required for partitioning.
- Run migration job DRLJGENL to insert the default supplied profiles into lookup tables GENERATE\_PROFILES and GENERATE\_KEYS.
- Before you install components, review the contents of these lookup tables and amend if required. Refer to the components' customization chapter in the Reference manual for more information on this step.

### Step 2.10: Migrate the database

The following table lists all database migration tasks which may be required to migrate to Version 3.1.0. Review each step, to determine whether it would be required, based on your current installation.

Migration tasks are listed by Component. The *APAR* column lists the Version 1.8.0 APARs with which the migration task was introduced. A migration task is only required if:

- a) You have previously installed the impacted Component, and
- b) You have *not* previously installed the APAR in Version 1.8.0, and
- c) Your installation meets the additional requirements detailed in the *Description* column.

For example, if you have the Db2 component installed, and you have not previously installed the PTFs for PI64117, you should consider running the SQL statements provided to improve your data quality.

The *Mandatory* column indicates whether the migration task is mandatory or optional. Optional migration tasks improve the accuracy/quality of data previously collected. Mandatory migration tasks are needed to make your database compatible with the IBM Z Performance and Capacity Analytics Version 3.1.0 definitions.

The *Migration instructions* column contains either a sample migration job which is supplied in the DRL310.SDRLCNTL library, or actual migration instructions, for example SQL statements.

| Component                                        | APAR                                                           | Mandatory Y/N | Migration instructions                                                                                                                                                                                                                                         | Description                                                                                                                                                                                                                                                                                                                                                                                        |
|--------------------------------------------------|----------------------------------------------------------------|---------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| ---                                              | PI26707<br>PI71656                                             | N             | DRLJDCVM                                                                                                                                                                                                                                                       | Update system views on the Db2 CATALOG to make it compatible with Db2 Version 10+.<br><br>This task is only required if you want to display the system views using the System Tables List panel (DRLDASYT).                                                                                                                                                                                        |
| CICS Monitoring & Key Performance Metrics - CICS | PM23679<br>PM40234<br>PM82516<br>PI47090<br>PI82173<br>PH05372 | Y             | DRLJCIF1                                                                                                                                                                                                                                                       | Rebuild the CICS_FIELD table. If this table has been customized (member DRLTCIFI), these customizations must be reapplied before you run this migration job. See step 2.7 above for instructions on reintroducing customizations. Although this job only needs to be run once during the migration, it needs to be run if the PTFs for either of these two APARs have not previously been applied. |
|                                                  | PM11488                                                        | N             | DRLJC001                                                                                                                                                                                                                                                       | If you have compression on and have records written to the DRLNDICT dataset that require reprocessing, this job resets the length of the DRLNDICT records so that the record can be processed correctly on the subsequent collect.                                                                                                                                                                 |
| Db2                                              | PK89999                                                        | Y             | DRLJAGGR                                                                                                                                                                                                                                                       | Create lookup table AGGR_VALUE for use in table Db2_PACKAGE_H update definitions.                                                                                                                                                                                                                                                                                                                  |
|                                                  | PK52681                                                        | Y             | DRLJDB3                                                                                                                                                                                                                                                        | Change primary key of Db2_PACKAGE_* tables.                                                                                                                                                                                                                                                                                                                                                        |
|                                                  | PK61570                                                        | N             | DRLJDB08                                                                                                                                                                                                                                                       | Single table space replaced with multiple for this component's data tables.                                                                                                                                                                                                                                                                                                                        |
|                                                  | PK85596                                                        | Y             | DRLJDB09                                                                                                                                                                                                                                                       | Make table space DRLSDB2 available to all Db2 subcomponents.                                                                                                                                                                                                                                                                                                                                       |
|                                                  | PM91971                                                        | N             | DRLJDBAA                                                                                                                                                                                                                                                       | Fix IDAA time values in Db2 data tables. Only run this job if you have previously applied IDAA support APAR PM66403.                                                                                                                                                                                                                                                                               |
|                                                  | PI64117                                                        | N             | SQL UPDATE &PREFIX.Db2_IDAA_STAT_H<br>SET DISK_INUSE_AVG_PCT =<br>DISK_INUSE_AVG_PCT/100<br>WHERE DISK_INUSE_AVG_PCT <> -1;<br><br>SQL UPDATE &PREFIX.Db2_IDAA_STAT_D<br>SET DISK_INUSE_AVG_PCT =<br>DISK_INUSE_AVG_PCT/100<br>WHERE DISK_INUSE_AVG_PCT <> -1; | Convert value in column DISK_INUSE_AVG_PCT of tables Db2_IDAA_STAT_H and Db2_IDAA_STAT_D to a percentage value.                                                                                                                                                                                                                                                                                    |
| Network VTAM Statistics                          | PM03940                                                        | N             | DRLJNW01                                                                                                                                                                                                                                                       | Delete the incorrect entries in the system tables which are causing the -104 when doing an uninstall of the Network VTAM Statistics component.                                                                                                                                                                                                                                                     |
| Tivoli Workload Scheduler for z/OS (OPC)         | PI67891                                                        | Y             | DRLJOPT2                                                                                                                                                                                                                                                       | Add the new column OPERATION_NUMBER with a default of 0 as a primary key of table OPC_OPER_EVENT_T.                                                                                                                                                                                                                                                                                                |
| TCPIP                                            | PM09069                                                        | N             | DRLJTCP2                                                                                                                                                                                                                                                       | Correct values in several TCPIP data tables.                                                                                                                                                                                                                                                                                                                                                       |
| z/OS Performance Management (MVSPM)              | PI17092                                                        | N             | UPDATE &PREFIX.MVSPM_LPAR_H<br>SET MSU_4HRA = NULL WHERE<br>FROM_LPAR_NO <> LPAR_NO OR<br>PROCESSOR_TYPE <> 'CP';                                                                                                                                              | Set MSU_4HRA to null in table MVSPM_LPAR_H for all rows where it should not have been collected, using the provided SQL statement as template. Only run this SQL script if you have previously applied APAR PM61917 to add column MSU_4HRA.                                                                                                                                                        |
| z/OS System (MVS)                                | PK74091                                                        | N             | DRLJMVPR                                                                                                                                                                                                                                                       | Fix aggregation data error in table MVS_PROCESSOR_M.                                                                                                                                                                                                                                                                                                                                               |

| Component | APAR               | Mandatory Y/N | Migration instructions                                                                                          | Description                                                                                                                                                                                                                                                                         |
|-----------|--------------------|---------------|-----------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|           | PM30613            | N             | DRLJMVPH                                                                                                        | Correct values in the MVS_7700_HBA_* tables.                                                                                                                                                                                                                                        |
|           | PM89335            | Y             | DRLJMVAM (see note below)                                                                                       | Change primary key of table MVS_ACCNT_PGM_T.                                                                                                                                                                                                                                        |
|           | PI17092            | N             | UPDATE &PREFIX.MVS_LPAR_D<br>SET MSU_4HRA = NULL WHERE<br>FROM_LPAR_NO <> LPAR_NO OR<br>PROCESSOR_TYPE <> 'CP'; | Set MSU_4HRA to null in tables MVS_LPAR_D and MVS_LPAR_M for all rows where it should not have been collected, using the provided SQL statement as template. Only run this SQL script if you have previously applied APAR PM61917 to add column MSU_4HRA.                           |
|           | PI20342            | N             | DRLJMVOM                                                                                                        | Swap contents of column SYSCALL_NUMBER and CPU_TIME of tables MVS_OMVSADDR_T and MVS_OMVSADIS_T.                                                                                                                                                                                    |
|           | PH05668            | Y             | DRLJMVAC                                                                                                        | Add MVS_SYSTEM_ID to primary key of MVS_ADDRSPACE2_T.                                                                                                                                                                                                                               |
|           |                    |               | DRLJMVAO                                                                                                        | Add MVS_SYSTEM_ID to primary key of MVS_OMVSADDR_T.                                                                                                                                                                                                                                 |
|           |                    |               | DRLJMVAP                                                                                                        | Add MVS_SYSTEM_ID to primary key of MVS_ACCNT_PGM_T and MVS_ACCNT23_PGM_T.                                                                                                                                                                                                          |
|           |                    |               | DRLJMVAS                                                                                                        | Add MVS_SYSTEM_ID to primary key of MVS_ADDRSPACE_T and MVS_TAPEMOUNTS_T. the DEFINE step will get a return code of 8. This is normal as there are other definitions in the included member that will return SQL errors -601 or -803.                                               |
|           |                    |               | DRLJMVDO                                                                                                        | Add MVS_SYSTEM_ID to primary key of MVS_OMVSADIS_T.                                                                                                                                                                                                                                 |
|           | PH08338<br>PH18411 | Y             | DRLJGEND<br>DRLJGENL                                                                                            | Update contents of system tables GENERATE_PROFILES and GENERATE_KEYS. Run DRLJGEND to clear these tables and then DRLJGENL to repopulate. If you have previously customized the contents of these system tables, you will need to reintroduce the changes after you ran these jobs. |

Note: Step 3 of DRLJMVAM will result in RC8 due to existing objects. Member DRLTMVAP is executed to recreate table MVS\_ACCNT\_PGM\_T. However, DRLTMVAP also contains the definition for table MVS\_ACCNT23\_PGM\_T. If the RC8 in Step 3 is because MVS\_ACCNT23\_PGM\_T exists already, you can ignore this return code. RC8 in Step 3 will not halt the execution of this job.

### Step 2.11: Reinstall components

Now reinstall ALL previously installed components.

### Step 2.12: Migrate the Usage and Accounting Collector

This step is only required if you make use of the Usage and Accounting Collector.

- a) The UAC CICS dictionary must be rebuilt if you have not previously applied all of these APARs to Version 1.8.0:  
PM13229 PM63035 PM69394 PM98973 PI40948 PI88656

Refer to the *IBM Z Performance and Capacity Analytics Usage and Accounting Collector User Guide* (Chapter 7: Dictionary - CIMSDTV) for information on rebuilding the dictionary using the dictionary utility DRLCDTLD.

- b) If you have not previously applied APAR PI26707 to Version 1.8.0:  
If you want to create DRLCUNIV Chargeback Records from IDMS V18 or higher SMF records, you must provide an additional control statement to identify that DRLCUN01 is processing an IDMS V18 or higher SMF log. The control statement is *IDMS SMF18 REC*.

### Step 2.13: Migrate the IMS light feature

This step is only required if you make use of the IMS light feature.

IBM Z Performance and Capacity Analytics Version 3.1.0 includes changes to the IMS Shared Queue Feature log procedures.

If you are using the IMS light feature to collect data remotely with program DRLSLOGP for subsequent transmission and processing at a central site, you must review and rerun your customized version of sample job DRLJCSQL. The re-created light feature load library must then be re-sent to all remote sites executing DRLSLOGP.

The migration to IBM Z Performance and Capacity Analytics Version 3.1.0 is now completed. You may now consider turning on the Automated Data Gathering and Continuous Collect new functions of IBM Z Performance and Capacity Analytics Version 3.1.0. Instructions to activate these new functions are published in Chapter 3 of the *Administration Guide and Reference*.

## Section 2: Migrating from Tivoli Decision Support for z/OS Version 1.8.1

### 1. Before you migrate

Follow these steps before you migrate:

#### Step 1.1:

It is highly recommended to take a backup of your existing database.

#### Step 1.2:

If you have installed IMS components, please take note of the following:

- a) Checkpoint record data sets (records output to DD name DRLICHKO during the IMS collect process) created before migrating to IBM Z Performance and Capacity Analytics Version 3.1.0 may not be usable as DRLICHKI input to the IMS collect after the migration is completed, and therefore these checkpoint data sets must be discarded before you migrate. In order to prevent loss of data, specify WRITEPENDING=YES on the last collect run before migrating to IBM Z Performance and Capacity Analytics Version 3.1.0.
- b) This product provides support for IMS Version 12+ only. Support for earlier IMS versions is no longer available. If you have collected IMS records for versions earlier than Version 12, you should delay migration to IBM Z Performance and Capacity Analytics Version 3.1.0 until after you have migrated your IMS systems to a supported level of IMS.

#### Step 1.3:

IBM Z Performance and Capacity Analytics Version 3.1.0 (excluding Usage and Accounting Collector) requires Db2 V11. If you are already on Db2 V11+, skip this step. If not, you must migrate to Db2 V11 or higher prior to commencing the migration to IBM Z Performance and Capacity Analytics Version 3.1.0.

Once you have migrated to Db2 V11+ your Tivoli Decision Support for z/OS application runtime must be made compatible with Db2 V11+ by following these steps:

- a) Apply the PTFs for PI26707 and PI71656. These APARs provide sample job DRLJDCVM in the DRL181.SDRLCNTL library. This job drops and recreates system views which are Db2 version dependent. Copy member DRLJDCVM from DRL181.SDRLCNTL to &HLQ.LOCAL.CNTL and follow the instructions in the DRLJDCVM member to customize the JCL prior to running the job.
- b) Db2 V10+ no longer supports binding DBRMs directly into plans. Instead it supports the binding of packages into plans. Pre-existing plans that are bound from DBRMs may be rebound using the REBIND command specifying the COLLID option to create packages. The following sample REBIND command creates a package called DRLPLAN and binds that back into plan DRLPLAN:  
`REBIND PLAN(DRLPLAN) COLLID(DRLPLAN)`

The plan name (DRLPLAN) and collection ID (DRLPLAN) shown here are just examples. You can use any plan name and collection ID that meet your system naming standards. For more information about the BIND and REBIND commands refer to the Db2 publications.

#### Step 1.4:

If you have installed the Tivoli Performance Modeler for z/OS component, and you have not previously applied the PTFs for PM46135, you will need to discard or extract any existing data in the TPM\_LPAR\_T and TPM\_WORKLOAD\_T tables before migrating to IBM Z Performance and Capacity Analytics Version 3.1.0. After migrating to IBM Z Performance and Capacity Analytics Version 3.1.0 any existing data in these tables will cause extraction errors.

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- Step 2.2: Apply PTFs
- Step 2.3: REBIND Db2 plans and packages
- Step 2.4: Review dialog parameters
- Step 2.5: Update system tables
- Step 2.6: Test the installation of the IBM Z Performance and Capacity Analytics base
- Step 2.7: Reintroduce customizations
- Step 2.8: Review IBM Z Performance and Capacity Analytics supplied JCL
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Each step is documented here in detail:

#### Step 2.1: SMP/E installation

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|-----------------|-------------------------------------------------------|
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| DRL310.SDRLCNTL | Sample jobs and Db2 DBRM module                       |
| DRL310.SDRLDEFS | Definitions of records, tables, and other objects     |
| DRL310.SDRLEXEC | REXX execs                                            |
| DRL310.SDRLOAD  | Load modules                                          |
| DRL310.SDRLSKEL | ISPF skeletons                                        |
| DRL310.SDRLBIN  | OS/400, Workstation and all binaries including DRLDOC |
|                 | Replaces SDRL400 and SDRLWS                           |
| DRL310.SDRLFENU | GDDM/ICU formats                                      |
| DRL310.SDRLMENU | ISPF messages                                         |
| DRL310.SDRLPENU | ISPF panels                                           |
| DRL310.SDRLRENU | Definitions of reports                                |
| DRL310.SDRLTENU | ISPF tables                                           |

SMP/E DDEF SDRLUSS will install tar files (Data Mover, Forecaster, Splunk and ELK report packages) here:  
/usr/lpp/IBM/IZPCA/v3r1m0/IBM/ USS file system directory containing tar files

#### b) Local data sets

| Data set name        | Description                                                                                          |
|----------------------|------------------------------------------------------------------------------------------------------|
| &HLQ.LOCAL.ADMCFORM  | Local GDDM Presentation Graphics Facility(GDDM-PGF) and Interactive Chart Utility (GDDM/ICU) formats |
| &HLQ.LOCAL.CHARTS    | Saved graphic reports (GDDM ADMGDF format)                                                           |
| &HLQ.LOCAL.CNTL      | Local IBM Z Performance and Capacity Analytics jobs                                                  |
| &HLQ.LOCAL.DEFS      | Local IBM Z Performance and Capacity Analytics definitions                                           |
| &HLQ.LOCAL.EXEC      | Local IBM Z Performance and Capacity Analytics execs                                                 |
| &HLQ.LOCAL.MESSAGES  | Messages sent through the dialog                                                                     |
| &HLQ.LOCAL.REPORTS   | Saved tabular reports                                                                                |
| &HLQ.LOCAL.USER.DEFS | Local IBM Z Performance and Capacity Analytics user/alter definitions                                |

#### Step 2.2: Apply PTFs

Apply the PTFs for the following IBM Z Performance and Capacity Analytics Version 3.1.0 APARs, following the HOLD actions:

##### GA APARs

- PH23206
- PH24670

#### Step 2.3: REBIND Db2 plans and packages

A new DBRM is supplied with IBM Z Performance and Capacity Analytics Version 3.1.0. Follow these instructions to rebind to the new DBRM:

1. Copy member DRLJDBND in the DRL310.SDRLCNTL library to the &HLQ.LOCAL.CNTL library.
2. Review and action the customization instructions in the job prolog before submitting the job.

#### Step 2.4: Review dialog parameters

Review the information in section “Preparing the dialog and updating the dialog profile” in the *Administration Guide and Reference* to ensure the migration environment refers to the IBM Z Performance and Capacity Analytics Version 3.1.0 data sets.

IBM Z Performance and Capacity Analytics Version 3.1.0 contains the functionality of the following APARs which introduced these changes to the dialog parameters:

| Dialog parameter | Parameter description                             | Description of change                                                                                                              | APAR    |
|------------------|---------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------|---------|
| def_Db2plan      | Db2 plan name                                     | New                                                                                                                                | PM07437 |
| def_drishwid     | Show Tivoli Decision Support for z/OS system info | New                                                                                                                                | PM07437 |
| Db2ver           | Db2 version                                       | This variable no longer allows alphabetical characters - only numerical values are allowed. For example, specify '11' for Db2 V11. | PI09853 |

If you have not previously installed the PTFs for these APARs listed above, review the changes in the new sample DRLFPROF from DRL310.SDRLCNTL and customize your &HLQ.DRLFPROF accordingly. Refer to the *Administration Guide and Reference* for more information on these dialog parameters.

If you made changes to your &HLQ.DRLFPROF in this step, you must start IBM Z Performance and Capacity Analytics Version 3.1.0 specifying the RESET parameter in the next step to activate these DRLFPROF changes.

#### Step 2.5: Update system tables

Follow these steps to update the system tables using the IBM Z Performance and Capacity Analytics dialog:

- a) Invoke the IBM Z Performance and Capacity Analytics dialog with this command: TSO %DRLEINIT [RESET]
- b) Display the Administration window by selecting 2 (Administration) on the Primary Menu.
- c) From the Administration window select 1 (System) to display the System window.
- d) From the System window select 2 (System tables).
- e) From the System Tables window press F6 to update the system tables.

### Step 2.6: Test the installation of the IBM Z Performance and Capacity Analytics base

Install the Sample component, collect the Sample log and run the Sample report to verify that the IBM Z Performance and Capacity Analytics base is operational.

### Step 2.7: Reintroduce customizations

If you have previously made changes to Tivoli Decision Support for z/OS supplied objects in your &HLQ.LOCAL.DEFS, you will need to manually apply the IBM Z Performance and Capacity Analytics Version 3.1.0 changes to these objects in your &HLQ.LOCAL.DEFS. Identify the Version 3.1.0 changes by comparing each object in your &HLQ.LOCAL.DEFS with the DRL310.SDRLEDFS version.

If an object exists in the &HLQ.LOCAL.DEFS library, IBM Z Performance and Capacity Analytics installs the object from this customized definition, instead of from the shipped DRL310.SDRLEDFS version. Therefore, if you do not take the action described in this step, the Version 3.1.0 changes will not be installed when you reinstall the components.

### Step 2.8: Review IBM Z Performance and Capacity Analytics supplied JCL

The DRL310.SDRLCNTL library contains several batch jobs that you can copy to &HLQ.LOCAL.CNTL and customize to match your installation.

If you have previously customized sample JCL from DRL181.SDRLCNTL, review the Version 3.1.0 changes in the new sample JCL provided in DRL310.SDRLCNTL and manually apply these changes to your customized versions in &HLQ.LOCAL.CNTL.

### Step 2.9: Review table space profiling

IBM Z Performance and Capacity Analytics Version 3.1.0 contains table space profiling. A table space profile allows you to define a single copy all the settings for the creation of Db2 table spaces, tables, and indexes. This single copy of the settings could then be used at component install time for all the Db2 table spaces, tables, and indexes.

Please take note of the following:

- A migration path is not provided to migrate previously installed components to partitioned data tables.
- The table space profiling allows you to implement partitioning by growth or range when installing any of the enabled components for the first time, without having to customize any of the object definitions.
- Although default table space profiles are provided for these components, you have the option to review and modify all the profile settings (which includes partitioning settings as well as table space and index parameters) before you install the components.

When you are migrating to IBM Z Performance and Capacity Analytics Version 3.1.0, you need to follow these steps to activate table space profiling for partitioning before you install any of the components listed above:

1. Run job DRLJDBIP to create the Db2 storage groups required for partitioning support. Only run this job if you have not previously created the storage groups required for partitioning.
2. Run migration job DRLJGENL to insert the default supplied profiles into lookup tables GENERATE\_PROFILES and GENERATE\_KEYS.
3. Before you install components, review the contents of these lookup tables and amend if required. Refer to the components' customization chapter in the Reference manual for more information on this step.

### Step 2.10: Migrate the database

The following table lists all database migration tasks which may be required to migrate to Version 3.1.0. Review each step, to determine whether it would be required, based on your current installation.

Migration tasks are listed by Component. The *APAR* column lists the Version 1.8.1 APARs with which the migration task was introduced. A migration task is only required if:

- d) You have previously installed the impacted Component, and
- e) You have *not* previously installed the APAR in Version 1.8.1, and
- f) Your installation meets the additional requirements detailed in the *Description* column.

For example, if you have the Db2 component installed, and you have not previously installed the PTFs for PI64117, you should consider running the SQL statements provided to improve your data quality.

The *Mandatory* column indicates whether the migration task is mandatory or optional. Optional migration tasks improve the accuracy/quality of data previously collected. Mandatory migration tasks are needed to make your database compatible with the IBM Z Performance and Capacity Analytics Version 3.1.0 definitions.

The *Migration instructions* column contains either a sample migration job which is supplied in the DRL310.SDRLCNTL library, or actual migration instructions, for example SQL statements.

| Component | APAR               | Mandatory Y/N | Migration instructions | Description                                                                        |
|-----------|--------------------|---------------|------------------------|------------------------------------------------------------------------------------|
| ---       | PI26707<br>PI71656 | N             | DRLJDCVM               | Update system views ON THE Db2 CATALOG to make it compatible with Db2 Version 10+. |

| Component                                        | APAR                                                           | Mandatory Y/N | Migration instructions                                                                                                                                                                                                                                         | Description                                                                                                                                                                                                                                                                                                                                                                                        |
|--------------------------------------------------|----------------------------------------------------------------|---------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|                                                  |                                                                |               |                                                                                                                                                                                                                                                                | This task is only required if you want to display the system views using the System Tables List panel (DRLDASYT).                                                                                                                                                                                                                                                                                  |
| CICS Monitoring & Key Performance Metrics - CICS | PM23679<br>PM40234<br>PM82516<br>PI47090<br>PI82173<br>PH05372 | Y             | DRLJCIF1                                                                                                                                                                                                                                                       | Rebuild the CICS_FIELD table. If this table has been customized (member DRLTCIFI), these customizations must be reapplied before you run this migration job. See step 2.7 above for instructions on reintroducing customizations. Although this job only needs to be run once during the migration, it needs to be run if the PTFs for either of these two APARs have not previously been applied. |
|                                                  | PM11488                                                        | N             | DRLJC001                                                                                                                                                                                                                                                       | If you have compression on and have records written to the DRLNDICT dataset that require reprocessing, this job resets the length of the DRLNDICT records so that the record can be processed correctly on the subsequent collect.                                                                                                                                                                 |
| Db2                                              | PM91971                                                        | N             | DRLJDBAA                                                                                                                                                                                                                                                       | Fix IDAA time values in Db2 data tables. Only run this job if you have previously applied IDAA support APAR PM66403.                                                                                                                                                                                                                                                                               |
|                                                  | PI64117                                                        | N             | SQL UPDATE &PREFIX.Db2_IDAA_STAT_H<br>SET DISK_INUSE_AVG_PCT =<br>DISK_INUSE_AVG_PCT/100<br>WHERE DISK_INUSE_AVG_PCT <> -1;<br><br>SQL UPDATE &PREFIX.Db2_IDAA_STAT_D<br>SET DISK_INUSE_AVG_PCT =<br>DISK_INUSE_AVG_PCT/100<br>WHERE DISK_INUSE_AVG_PCT <> -1; | Convert value in column DISK_INUSE_AVG_PCT of tables Db2_IDAA_STAT_H and Db2_IDAA_STAT_D to a percentage value.                                                                                                                                                                                                                                                                                    |
| Network VTAM Statistics                          | PM03940                                                        | N             | DRLJNW01                                                                                                                                                                                                                                                       | Delete the incorrect entries in the system tables which are causing the -104 when doing an uninstall of the Network VTAM Statistics component.                                                                                                                                                                                                                                                     |
| Tivoli Workload Scheduler for z/OS (OPC)         | PI67891                                                        | Y             | DRLJOPT2                                                                                                                                                                                                                                                       | Add the new column OPERATION_NUMBER with a default of 0 as a primary key of table OPC_OPER_EVENT_T.                                                                                                                                                                                                                                                                                                |
| TCPIP                                            | PM09069                                                        | N             | DRLJTCP2                                                                                                                                                                                                                                                       | Correct values in several TCPIP data tables.                                                                                                                                                                                                                                                                                                                                                       |
| z/OS Performance Management (MVSPM)              | PI17092                                                        | N             | UPDATE &PREFIX.MVSPM_LPAR_H<br>SET MSU_4HRA = NULL WHERE<br>FROM_LPAR_NO <> LPAR_NO OR<br>PROCESSOR_TYPE <> 'CP';                                                                                                                                              | Set MSU_4HRA to null in table MVSPM_LPAR_H for all rows where it should not have been collected, using the provided SQL statement as template. Only run this SQL script if you have previously applied APAR PM61917 to add column MSU_4HRA.                                                                                                                                                        |
| z/OS System (MVS)                                | PM30613                                                        | N             | DRLJMVPH                                                                                                                                                                                                                                                       | Correct values in the MVS_7700_HBA_* tables.                                                                                                                                                                                                                                                                                                                                                       |
|                                                  | PM89335                                                        | Y             | DRLJMVAM (see note below)                                                                                                                                                                                                                                      | Change primary key of table MVS_ACCNT_PGM_T.                                                                                                                                                                                                                                                                                                                                                       |
|                                                  | PI17092                                                        | N             | UPDATE &PREFIX.MVS_LPAR_D<br>SET MSU_4HRA = NULL WHERE<br>FROM_LPAR_NO <> LPAR_NO OR<br>PROCESSOR_TYPE <> 'CP';                                                                                                                                                | Set MSU_4HRA to null in tables MVS_LPAR_D and MVS_LPAR_M for all rows where it should not have been collected, using the provided SQL statement as template. Only run this SQL script if you have previously applied APAR PM61917 to add column MSU_4HRA.                                                                                                                                          |
|                                                  | PI20342                                                        | N             | DRLJMVOM                                                                                                                                                                                                                                                       | Swap contents of column SYSCALL_NUMBER and CPU_TIME of tables MVS_OMVSADDR_T and MVS_OMVSADIS_T.                                                                                                                                                                                                                                                                                                   |
|                                                  |                                                                |               |                                                                                                                                                                                                                                                                |                                                                                                                                                                                                                                                                                                                                                                                                    |
|                                                  | PH05668                                                        | Y             | DRLJMVAC                                                                                                                                                                                                                                                       | Add MVS_SYSTEM_ID to primary key of MVS_ADDRSPACE2_T.                                                                                                                                                                                                                                                                                                                                              |
|                                                  |                                                                |               | DRLJMVAO                                                                                                                                                                                                                                                       | Add MVS_SYSTEM_ID to primary key of MVS_OMVSADDR_T.                                                                                                                                                                                                                                                                                                                                                |
|                                                  |                                                                |               | DRLJMVAP                                                                                                                                                                                                                                                       | Add MVS_SYSTEM_ID to primary key of MVS_ACCNT_PGM_T and MVS_ACCNT23_PGM_T.                                                                                                                                                                                                                                                                                                                         |
|                                                  |                                                                |               | DRLJMVAS                                                                                                                                                                                                                                                       | Add MVS_SYSTEM_ID to primary key of MVS_ADDRSPACE_T and MVS_TAPEMOUNTS_T. the DEFINE step will get a return code of 8. This is normal as there are other definitions in the included member that will return SQL errors -601 or -803.                                                                                                                                                              |
|                                                  |                                                                |               | DRLJMVDO                                                                                                                                                                                                                                                       | Add MVS_SYSTEM_ID to primary key of MVS_OMVSADIS_T.                                                                                                                                                                                                                                                                                                                                                |
|                                                  |                                                                |               |                                                                                                                                                                                                                                                                |                                                                                                                                                                                                                                                                                                                                                                                                    |

| Component | APAR               | Mandatory Y/N | Migration instructions | Description                                                                                                                                                                                                                                                                         |
|-----------|--------------------|---------------|------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| -         | PH08338<br>PH18411 | Y             | DRLJGEND<br>DRLJGENL   | Update contents of system tables GENERATE_PROFILES and GENERATE_KEYS. Run DRLJGEND to clear these tables and then DRLJGENL to repopulate. If you have previously customized the contents of these system tables, you will need to reintroduce the changes after you ran these jobs. |

Note: Step 3 of DRLJMVAM will result in RC8 due to existing objects. Member DRLTMVAP is executed to recreate table MVS\_ACCNT\_PGM\_T. However, DRLTMVAP also contains the definition for table MVS\_ACCNT23\_PGM\_T. If the RC8 in Step 3 is because MVS\_ACCNT23\_PGM\_T exists already, you can ignore this return code. RC8 in Step 3 will not halt the execution of this job.

#### Step 2.11: Reinstall components

Now reinstall ALL previously installed components.

#### Step 2.12: Migrate the Usage and Accounting Collector

This step is only required if you make use of the Usage and Accounting Collector.

- c) The UAC CICS dictionary must be rebuilt if you have not previously applied all of these APARs to Version 1.8.1:  
PM13229 PM63035 PM69394 PM98973 PI40948 PI88656

Refer to the *IBM Z Performance and Capacity Analytics Usage and Accounting Collector User Guide* (Chapter 7: Dictionary - CIMSDTV) for information on rebuilding the dictionary using the dictionary utility DRLCDTLD.

- d) If you have not previously applied APAR PI26707 to Version 1.8.1:

If you want to create DRLCUNIV Chargeback Records from IDMS V18 or higher SMF records, you must provide an additional control statement to identify that DRLCUN01 is processing an IDMS V18 or higher SMF log. The control statement is *IDMS SMF18 REC*.

#### Step 2.13: Migrate the IMS light feature

This step is only required if you make use of the IMS light feature.

IBM Z Performance and Capacity Analytics Version 3.1.0 includes changes to the IMS Shared Queue Feature log procedures

If you are using the IMS light feature to collect data remotely with program DRLSLOGP for subsequent transmission and processing at a central site, you must review and rerun your customized version of sample job DRLJCSQL. The re-created light feature load library must then be re-sent to all remote sites executing DRLSLOGP.

The migration to IBM Z Performance and Capacity Analytics Version 3.1.0 is now completed. You may now consider turning on the Automated Data Gathering and Continuous Collect new functions of IBM Z Performance and Capacity Analytics Version 3.1.0. Instructions to activate these new functions are published in Chapter 3 of the *Administration Guide and Reference*.

### Section 3: Migrating from Tivoli Decision Support for z/OS Version 1.8.2

#### 1. Before you migrate

Follow these steps before you migrate:

**Step 1.1:**

It is highly recommended to take a backup of your existing database.

**Step 1.2:**

If you have installed IMS components, please take note of the following:

- a) Checkpoint record data sets (records output to DD name DRLCHKO during the IMS collect process) created before migrating to IBM Z Performance and Capacity Analytics Version 3.1.0 may not be usable as DRLCHKI input to the IMS collect after the migration is completed, and therefore these checkpoint data sets must be discarded before you migrate. In order to prevent loss of data, specify WRITEPENDING=YES on the last collect run before migrating to IBM Z Performance and Capacity Analytics Version 3.1.0.
- b) This product provides support for IMS Version 12+ only. Support for earlier IMS versions is no longer available. If you have collected IMS records for versions earlier than Version 12, you should delay migration to IBM Z Performance and Capacity Analytics Version 3.1.0 until after you have migrated your IMS systems to a supported level of IMS.

#### 2. The migration process

Migrating to IBM Z Performance and Capacity Analytics Version 3.1.0 consists of the following steps:

- Step 2.1: SMP/E installation
- Step 2.2: Apply PTFs
- Step 2.3: REBIND Db2 plans and packages
- Step 2.4: Review dialog parameters
- Step 2.5: Test the installation of the IBM Z Performance and Capacity Analytics base
- Step 2.6: Reintroduce customizations
- Step 2.7: Review IBM Z Performance and Capacity Analytics supplied JCL
- Step 2.8: Update system tables
- Step 2.9: Migrate the database
- Step 2.10: Reinstall components
- Step 2.11: Migrate the Usage and Accounting Collector
- Step 2.12: Migrate the IMS light feature

Each step is documented here in detail:

**Step 2.1: SMP/E installation**

The SMP/E installation of the IBM Z Performance and Capacity Analytics base and its features is described in the *IBM Z Performance and Capacity Analytics Program Directory*.

Confirm that the installation completed successfully by ensuring that the following data sets and file system directory were created during SMP/E installation. The names given are defaults and might not match the names used in your implementation. Check with your Systems Programmer to confirm the actual names used.

**a) IBM Z Performance and Capacity Analytics data sets**

| Data set name   | Description                                                                          |
|-----------------|--------------------------------------------------------------------------------------|
| DRL310.SDRLEXTR | Authorized load modules for the SMF Extractor                                        |
| DRL310.SDRLCNTL | Sample jobs and Db2 DBRM module                                                      |
| DRL310.SDRLDEFS | Definitions of records, tables, and other objects                                    |
| DRL310.SDRLEXEC | REXX execs                                                                           |
| DRL310.SDRLOAD  | Load modules                                                                         |
| DRL310.SDRLSKEL | ISPF skeletons                                                                       |
| DRL310.SDRLBIN  | OS/400, Workstation and all binaries including DRLDOC<br>Replaces SDRL400 and SDRLWS |
| DRL310.SDRLFENU | GDDM/ICU formats                                                                     |
| DRL310.SDRLMENU | ISPF messages                                                                        |
| DRL310.SDRLPENU | ISPF panels                                                                          |
| DRL310.SDRLRENU | Definitions of reports                                                               |
| DRL310.SDRLTENU | ISPF tables                                                                          |

SMP/E DDEF SDRLUSS will install tar files (Data Mover, Forecaster, Splunk and ELK report packages) here:  
/usr/lpp/IBM/IZPCA/v3r1m0/IBM/ USS file system directory containing tar files

## b) Local data sets

| Data set name        | Description                                                                                          |
|----------------------|------------------------------------------------------------------------------------------------------|
| &HLQ.LOCAL.ADMCFORM  | Local GDDM Presentation Graphics Facility(GDDM-PGF) and Interactive Chart Utility (GDDM/ICU) formats |
| &HLQ.LOCAL.CHARTS    | Saved graphic reports (GDDM ADMGDF format)                                                           |
| &HLQ.LOCAL.CNTL      | Local IBM Z Performance and Capacity Analytics jobs                                                  |
| &HLQ.LOCAL.DEFS      | Local IBM Z Performance and Capacity Analytics definitions                                           |
| &HLQ.LOCAL.EXEC      | Local IBM Z Performance and Capacity Analytics execs                                                 |
| &HLQ.LOCAL.MESSAGES  | Messages sent through the dialog                                                                     |
| &HLQ.LOCAL.REPORTS   | Saved tabular reports                                                                                |
| &HLQ.LOCAL.USER.DEFS | Local IBM Z Performance and Capacity Analytics user/alter definitions                                |

### Step 2.2: Apply PTFs

Apply the PTFs for the following IBM Z Performance and Capacity Analytics Version 3.1.0 APARs, following the HOLD actions:

#### GA APARs

- PH23206
- PH24670

### Step 2.3: REBIND Db2 plans and packages

A new DBRM is supplied with IBM Z Performance and Capacity Analytics Version 3.1.0. Follow these instructions to rebind to the new DBRM:

1. Copy member DRLJDBND in the DRL310.SDRLCNTL library to the &HLQ.LOCAL.CNTL library.
2. Review and action the customization instructions in the job prolog before submitting the job.

### Step 2.4: Review dialog parameters

Review the information in section "Preparing the dialog and updating the dialog profile" in the *Administration Guide and Reference* to ensure the migration environment refers to the IBM Z Performance and Capacity Analytics Version 3.1.0 data sets.

If you made changes to your &HLQ.DRLFPROF in this step, you must start IBM Z Performance and Capacity Analytics Version 3.1.0 specifying the RESET parameter in the next step to activate these DRLFPROF changes.

### Step 2.5: Test the installation of the IBM Z Performance and Capacity Analytics base

Install the Sample component, collect the Sample log and run the Sample report to verify that the IBM Z Performance and Capacity Analytics base is operational.

### Step 2.6: Reintroduce customizations

If you have previously made changes to Tivoli Decision Support for z/OS supplied objects in your &HLQ.LOCAL.DEFS, you will need to manually apply the IBM Z Performance and Capacity Analytics Version 3.1.0 changes to these objects in your &HLQ.LOCAL.DEFS. Identify the Version 3.1.0 changes by comparing each object in your &HLQ.LOCAL.DEFS with the DRL310.SDRLDEFS version.

If an object exists in the &HLQ.LOCAL.DEFS library, IBM Z Performance and Capacity Analytics installs the object from this customized definition, instead of from the shipped DRL310.SDRLDEFS version. Therefore, if you do not take the action described in this step, the Version 3.1.0 changes will not be installed when you reinstall the components.

### Step 2.7: Review IBM Z Performance and Capacity Analytics supplied JCL

The DRL310.SDRLCNTL library contains several batch jobs that you can copy to &HLQ.LOCAL.CNTL and customize to match your installation.

If you have previously customized sample JCL from DRL182.SDRLCNTL, review the Version 3.1.0 changes in the new sample JCL provided in DRL310.SDRLCNTL and manually apply these changes to your customized versions in &HLQ.LOCAL.CNTL.

### Step 2.8: Update system tables

Follow these steps to update the system tables using the IBM Z Performance and Capacity Analytics dialog:

- a) Invoke the IBM Z Performance and Capacity Analytics dialog with this command: TSO %DRLEINIT [RESET]
- b) Display the Administration window by selecting 2 (Administration) on the Primary Menu.
- c) From the Administration window select 1 (System) to display the System window.
- d) From the System window select 2 (System tables).
- e) From the System Tables window press F6 to update the system tables.

### Step 2.9: Migrate the database

The following table lists all database migration tasks which may be required to migrate to Version 3.1.0. Review each step, to determine whether it would be required, based on your current installation.

Migration tasks are listed by Component. The APAR column lists the Version 1.8.2 APARs with which the migration task was introduced. A migration task is only required if:

- g) You have previously installed the impacted Component, and
- h) You have *not* previously installed the APAR in Version 1.8.2., and
- i) Your installation meets the additional requirements detailed in the *Description* column.

For example, if you have the Db2 component installed, and you have not previously installed the PTFs for PI64117, you should consider running the SQL statements provided to improve your data quality.

The *Mandatory* column indicates whether the migration task is mandatory or optional. Optional migration tasks improve the accuracy/quality of data previously collected. Mandatory migration tasks are needed to make your database compatible with the IBM Z Performance and Capacity Analytics Version 3.1.0 definitions.

The *Migration instructions* column contains either a sample migration job which is supplied in the DRL310.SDRLCNTL library, or actual migration instructions, for example SQL statements.

| Component                                        | APAR                          | Mandatory Y/N | Migration instructions                                                                                                                                                                                                                                                 | Description                                                                                                                                                                                                                                                                                                                                                                                                                                       |
|--------------------------------------------------|-------------------------------|---------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| ---                                              | PI26707<br>PI71656            | N             | DRLJDCVM                                                                                                                                                                                                                                                               | Update system views ON THE Db2 CATALOG to make it compatible with Db2 Version 10+.<br><br>This task is only required if you want to display the system views using the System Tables List panel (DRLDASYT).                                                                                                                                                                                                                                       |
| CICS Monitoring & Key Performance Metrics - CICS | PI47090<br>PI82173<br>PH05372 | Y             | DRLJCIF1                                                                                                                                                                                                                                                               | Rebuild the CICS_FIELD table. If this table has been customized (member DRLTCIFI), these customizations must be reapplied before you run this migration job. See step 2.6 above for instructions on reintroducing customizations. Although this job only needs to be run once during the migration, it needs to be run if the PTFs for either of these two APARs have not previously been applied.                                                |
| Db2                                              | PI64117                       | N             | SQL UPDATE &PREFIX.Db2_IDAA_STAT_H<br>SET DISK_INUSE_AVG_PCT =<br>DISK_INUSE_AVG_PCT/100<br>WHERE DISK_INUSE_AVG_PCT <> -1;<br><br>SQL UPDATE &PREFIX.Db2_IDAA_STAT_D<br>SET DISK_INUSE_AVG_PCT =<br>DISK_INUSE_AVG_PCT/100<br>WHERE DISK_INUSE_AVG_PCT <> -1;         | Convert value in column DISK_INUSE_AVG_PCT of tables Db2_IDAA_STAT_H and Db2_IDAA_STAT_D to a percentage value.                                                                                                                                                                                                                                                                                                                                   |
| Key Performance Metrics - IMS                    | PI73517                       | N             | 1. Copy the following members to your &HLQ.LOCAL.DEFS:<br>DRLRIB1A (IMS Version 11)<br>DRLRIC1A (IMS Version 12)<br>DRLRID1A (IMS Version 13)<br>DRLRIE1A (IMS Version 14)<br>2. Edit each member by setting variable RECTYPE_ATF to your IMS ATF summary record type. | This task is only required if you want to collect IMS Application Tracing Facility (ATF) SUMMARY records. The IMS ATF record type is user-defined. IBM Z Performance and Capacity Analytics maps these records with a default record type of 160 (X'A0').<br><br>If your IMS ATF summary record type is not 160, this task is required to customize the record definitions <i>before</i> you install the Key Performance Metrics - IMS component. |
| Tivoli Workload Scheduler for z/OS (OPC)         | PI67891                       | Y             | DRLJOPT2                                                                                                                                                                                                                                                               | Add the new column OPERATION_NUMBER with a default of 0 as a primary key of table OPC_OPER_EVENT_T.                                                                                                                                                                                                                                                                                                                                               |
| -                                                | PH08338<br>PH18411            | Y             | DRLJGEND<br>DRLJGENL                                                                                                                                                                                                                                                   | Update contents of system tables GENERATE_PROFILES and GENERATE_KEYS. Run DRLJGEND to clear these tables and then DRLJGENL to repopulate. If you have previously customized the contents of these system tables, you will need to reintroduce the changes after you ran these jobs.                                                                                                                                                               |
| z/OS System (MVS)                                | PH05668                       | Y             | DRLJMVAC                                                                                                                                                                                                                                                               | Add MVS_SYSTEM_ID to primary key of MVS_ADDRSPACE2_T.                                                                                                                                                                                                                                                                                                                                                                                             |
|                                                  |                               |               | DRLJMVAO                                                                                                                                                                                                                                                               | Add MVS_SYSTEM_ID to primary key of MVS_OMVSADDR_T.                                                                                                                                                                                                                                                                                                                                                                                               |
|                                                  |                               |               | DRLJMVAP                                                                                                                                                                                                                                                               | Add MVS_SYSTEM_ID to primary key of MVS_ACCNT_PGM_T and MVS_ACCNT23_PGM_T.                                                                                                                                                                                                                                                                                                                                                                        |
|                                                  |                               |               | DRLJMVAS                                                                                                                                                                                                                                                               | Add MVS_SYSTEM_ID to primary key of MVS_ADDRSPACE_T and MVS_TAPEMOUNTS_T. the DEFINE step will get a return code of 8. This is normal as there are other definitions in the included member that will return SQL errors -601 or -803.                                                                                                                                                                                                             |
|                                                  |                               |               | DRLJMVDO                                                                                                                                                                                                                                                               | Add MVS_SYSTEM_ID to primary key of MVS_OMVSADIS_T.                                                                                                                                                                                                                                                                                                                                                                                               |

## Step 2.10: Reinstall components

Now reinstall ALL previously installed components.

**Step 2.11: Migrate the Usage and Accounting Collector**

This step is only required if you make use of the Usage and Accounting Collector.

The UAC CICS dictionary must be rebuilt if you have not previously applied both these APARs to Version 1.8.2:

PI40948

PI88656

Refer to the *IBM Z Performance and Capacity Analytics Usage and Accounting Collector User Guide* (Chapter 7: Dictionary - CIMSDTV) for information on rebuilding the dictionary using the dictionary utility DRLCDTLD.

**Step 2.12: Migrate the IMS light feature**

This step is only required if you make use of the IMS light feature.

IBM Z Performance and Capacity Analytics Version 3.1.0 includes changes to the IMS Shared Queue Feature log procedures

If you are using the IMS light feature to collect data remotely with program DRLSLOGP for subsequent transmission and processing at a central site, you must review and rerun your customized version of sample job DRLJCSQL. The re-created light feature load library must then be re-sent to all remote sites executing DRLSLOGP.

The migration to IBM Z Performance and Capacity Analytics Version 3.1.0 is now completed. You may now consider turning on the Automated Data Gathering and Continuous Collect new functions of IBM Z Performance and Capacity Analytics Version 3.1.0. Instructions to activate these new functions are published in Chapter 3 of the *Administration Guide and Reference*.

## Section 4: Migrating from IBM Z Decision Support Version 1.9.0

### 1. Before you migrate

Follow these steps before you migrate:

#### Step 1.1:

It is highly recommended to take a backup of your existing database.

#### Step 1.2:

If you have installed IMS components, please take note of the following:

- a) Checkpoint record data sets (records output to DD name DRLCHKO during the IMS collect process) created before migrating to IBM Z Performance and Capacity Analytics Version 3.1.0 may not be usable as DRLCHKI input to the IMS collect after the migration is completed, and therefore these checkpoint data sets must be discarded before you migrate. In order to prevent loss of data, specify WRITEPENDING=YES on the last collect run before migrating to IBM Z Performance and Capacity Analytics Version 3.1.0.
- b) This product provides support for IMS Version 12+ only. Support for earlier IMS versions is no longer available. If you have collected IMS records for versions earlier than Version 12, you should delay migration to IBM Z Performance and Capacity Analytics Version 3.1.0 until after you have migrated your IMS systems to a supported level of IMS.

### 2. The migration process

Migrating to IBM Z Performance and Capacity Analytics Version 3.1.0 consists of the following steps:

- Step 2.1: SMP/E installation
- Step 2.2: Apply PTFs
- Step 2.3: REBIND Db2 plans and packages
- Step 2.4: Review dialog parameters
- Step 2.5: Test the installation of the IBM Z Performance and Capacity Analytics base
- Step 2.6: Reintroduce customizations
- Step 2.7: Review IBM Z Performance and Capacity Analytics supplied JCL
- Step 2.8: Update system tables
- Step 2.9: Migrate the database
- Step 2.10: Reinstall components
- Step 2.11: Rerun table mapping utility
- Step 2.12: Migrate the IMS light feature
- Step 2.13: Reinstall Cognos reports
- Step 2.14: Reinstall Splunk and ELK reports
- Step 2.15: Reinstall the Data Mover

Each step is documented here in detail:

#### Step 2.1: SMP/E installation

The SMP/E installation of the IBM Z Performance and Capacity Analytics base and its features is described in the *IBM Z Performance and Capacity Analytics Program Directory*.

Confirm that the installation completed successfully by ensuring that the following data sets and file system directory were created during SMP/E installation. The names given are defaults and might not match the names used in your implementation. Check with your Systems Programmer to confirm the actual names used.

#### a) IBM Z Performance and Capacity Analytics data sets

| Data set name   | Description                                           |
|-----------------|-------------------------------------------------------|
| DRL310.SDRLEXTR | Authorized load modules for the SMF Extractor         |
| DRL310.SDRLCNTL | Sample jobs and Db2 DBRM module                       |
| DRL310.SDRLDEFS | Definitions of records, tables, and other objects     |
| DRL310.SDRLEXEC | REXX execs                                            |
| DRL310.SDRLLOAD | Load modules                                          |
| DRL310.SDRLSKEL | ISPF skeletons                                        |
| DRL310.SDRLBIN  | OS/400, Workstation and all binaries including DRLDOC |
|                 | Replaces SDRL400 and SDRLWS                           |
| DRL310.SDRLFENU | GDDM/ICU formats                                      |
| DRL310.SDRLMENU | ISPF messages                                         |
| DRL310.SDRLPENU | ISPF panels                                           |
| DRL310.SDRLRENU | Definitions of reports                                |
| DRL310.SDRLTENU | ISPF tables                                           |

SMP/E DDEF SDRLUSS will install tar files (Data Mover, Forecaster, Splunk and ELK report packages) here:  
/usr/lpp/IBM/IZPCA/v3r1m0/IBM/ USS file system directory containing tar files

## b) Local data sets

| Data set name        | Description                                                                                          |
|----------------------|------------------------------------------------------------------------------------------------------|
| &HLQ.LOCAL.ADMCFORM  | Local GDDM Presentation Graphics Facility(GDDM-PGF) and Interactive Chart Utility (GDDM/ICU) formats |
| &HLQ.LOCAL.CHARTS    | Saved graphic reports (GDDM ADMGDF format)                                                           |
| &HLQ.LOCAL.CNTL      | Local IBM Z Performance and Capacity Analytics jobs                                                  |
| &HLQ.LOCAL.DEFS      | Local IBM Z Performance and Capacity Analytics definitions                                           |
| &HLQ.LOCAL.EXEC      | Local IBM Z Performance and Capacity Analytics execs                                                 |
| &HLQ.LOCAL.MESSAGES  | Messages sent through the dialog                                                                     |
| &HLQ.LOCAL.REPORTS   | Saved tabular reports                                                                                |
| &HLQ.LOCAL.USER.DEFS | Local IBM Z Performance and Capacity Analytics user/alter definitions                                |

### Step 2.2: Apply PTFs

Apply the PTFs for the following IBM Z Performance and Capacity Analytics Version 3.1.0 APARs, following the HOLD actions:

#### GA APARs

- PH23206
- PH24670

### Step 2.3: REBIND Db2 plans and packages

A new DBRM is supplied with IBM Z Performance and Capacity Analytics Version 3.1.0. Follow these instructions to rebind to the new DBRM:

1. Copy member DRLJDBND in the DRL310.SDRLCNTL library to the &HLQ.LOCAL.CNTL library.
2. Review and action the customization instructions in the job prolog before submitting the job.

### Step 2.4: Review dialog parameters

Review the information in section “Preparing the dialog and updating the dialog profile” in the *Administration Guide and Reference* to ensure the migration environment refers to the IBM Z Performance and Capacity Analytics Version 3.1.0 data sets.

If you made changes to your &HLQ.DRLFPROF in this step, you must start IBM Z Performance and Capacity Analytics Version 3.1.0 specifying the RESET parameter in the next step to activate these DRLFPROF changes.

### Step 2.5: Test the installation of the IBM Z Performance and Capacity Analytics base

Install the Sample component, collect the Sample log and run the Sample report to verify that the IBM Z Performance and Capacity Analytics base is operational.

### Step 2.6: Reintroduce customizations

If you have previously made changes to IBM Z Decision Support supplied objects in your &HLQ.LOCAL.DEFS, you will need to manually apply the IBM Z Performance and Capacity Analytics Version 3.1.0 changes to these objects in your &HLQ.LOCAL.DEFS. Identify the Version 3.1.0 changes by comparing each object in your &HLQ.LOCAL.DEFS with the DRL310.SDRLDEFS version.

If an object exists in the &HLQ.LOCAL.DEFS library, IBM Z Performance and Capacity Analytics installs the object from this customized definition, instead of from the shipped DRL310.SDRLDEFS version. Therefore, if you do not take the action described in this step, the Version 3.1.0 changes will not be installed when you reinstall the components.

### Step 2.7: Review IBM Z Performance and Capacity Analytics supplied JCL

The DRL310.SDRLCNTL library contains several batch jobs that you can copy to &HLQ.LOCAL.CNTL and customize to match your installation.

If you have previously customized sample JCL from DRL190.SDRLCNTL, review the Version 3.1.0 changes in the new sample JCL provided in DRL310.SDRLCNTL and manually apply these changes to your customized versions in &HLQ.LOCAL.CNTL.

### Step 2.8: Update system tables

Follow these steps to update the system tables using the IBM Z Performance and Capacity Analytics dialog:

- a) Invoke the IBM Z Performance and Capacity Analytics dialog with this command: TSO %DRLEINIT [RESET]
- b) Display the Administration window by selecting 2 (Administration) on the Primary Menu.
- c) From the Administration window select 1 (System) to display the System window.
- d) From the System window select 2 (System tables).
- e) From the System Tables window press F6 to update the system tables.

### Step 2.9: Migrate the database

The following table lists all database migration tasks which may be required to migrate to Version 3.1.0. Review each step, to determine whether it would be required, based on your current installation.

Migration tasks are listed by Component. The APAR column lists the Version 1.9.0 APARs with which the migration task was introduced. A migration task is only required if:

- j) You have previously installed the impacted Component, and
- k) You have *not* previously installed the APAR in Version 1.9.0., and
- l) Your installation meets the additional requirements detailed in the *Description* column.

The *Mandatory* column indicates whether the migration task is mandatory or optional. Optional migration tasks improve the accuracy/quality of data previously collected. Mandatory migration tasks are needed to make your database compatible with the IBM Z Performance and Capacity Analytics Version 3.1.0 definitions.

The *Migration instructions* column contains either a sample migration job which is supplied in the DRL310.SDRLCNTL library, or actual migration instructions, for example SQL statements.

| Component                                        | APAR               | Mandatory Y/N | Migration instructions | Description                                                                                                                                                                                                                                                                                                                                                                                        |
|--------------------------------------------------|--------------------|---------------|------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| CICS Monitoring & Key Performance Metrics - CICS | PH05372            | Y             | DRLJCIF1               | Rebuild the CICS_FIELD table. If this table has been customized (member DRLTCIF1), these customizations must be reapplied before you run this migration job. See step 2.6 above for instructions on reintroducing customizations. Although this job only needs to be run once during the migration, it needs to be run if the PTFs for either of these two APARs have not previously been applied. |
| -                                                | PH08338<br>PH18411 | Y             | DRLJGEND<br>DRLJGENL   | Update contents of system tables GENERATE_PROFILES and GENERATE_KEYS. Run DRLJGEND to clear these tables and then DRLJGENL to repopulate. If you have previously customized the contents of these system tables, you will need to reintroduce the changes after you ran these jobs.                                                                                                                |
| z/OS System (MVS)                                | PH05668            | Y             | DRLJMVAC               | Add MVS_SYSTEM_ID to primary key of MVS_ADDRSPACE2_T.                                                                                                                                                                                                                                                                                                                                              |
|                                                  |                    |               | DRLJMVAO               | Add MVS_SYSTEM_ID to primary key of MVS_OMVSADDR_T.                                                                                                                                                                                                                                                                                                                                                |
|                                                  |                    |               | DRLJMVAP               | Add MVS_SYSTEM_ID to primary key of MVS_ACCNT_PGM_T and MVS_ACCNT23_PGM_T.                                                                                                                                                                                                                                                                                                                         |
|                                                  |                    |               | DRLJMVAS               | Add MVS_SYSTEM_ID to primary key of MVS_ADDRSPACE_T and MVS_TAPEMOUNTS_T. the DEFINE step will get a return code of 8. This is normal as there are other definitions in the included member that will return SQL errors -601 or -803.                                                                                                                                                              |
|                                                  |                    |               | DRLJMVDO               | Add MVS_SYSTEM_ID to primary key of MVS_OMVSADIS_T.                                                                                                                                                                                                                                                                                                                                                |

#### Step 2.10: Reinstall components

Now reinstall ALL previously installed components.

#### Step 2.11: Rerun table mapping utility

This step is required if you are streaming data off-platform. Follow the instructions in Chapter 3 of the *Administration Guide and Reference* to rerun the mapping utility DRLJCDPS.

#### Step 2.12: Migrate the IMS light feature

This step is only required if you make use of the IMS light feature.

IBM Z Performance and Capacity Analytics Version 3.1.0 includes changes to the IMS Shared Queue Feature log procedures

If you are using the IMS light feature to collect data remotely with program DRLSLOGP for subsequent transmission and processing at a central site, you must review and rerun your customized version of sample job DRLJCSQL. The re-created light feature load library must then be re-sent to all remote sites executing DRLSLOGP.

#### Step 2.13: Reinstall Cognos reports

##### 1. Import the Report Package

- Download the report package file from the &HLQ.SDRLUSS library (DRLWCPCA) in binary format and then rename it to a .zip file. For example, rename the downloaded DRLWCPCA binary file as "IZPCA\_ReportsPack.zip".
- Copy this zip file into the Cognos folder C:\Program Files\IBM\Cognos\analytics\deployment.
- Open Cognos and Navigate to the Administration Console.
- Select the configuration tab, and then select Content Administration from the side menu on the left.
- If an import job has previously been created for the same package, jump to Step f. Otherwise follow the instructions below to create a new import job:**
  - Click the icon to 'Create a New Import'.
  - Select a deployment archive from the list, for example 'IZPCA\_ReportsPack', then click Next.
  - Specify a name for the import job then click Next (IZPCA Reports Import).
  - Ensure the import objects are checked in the list.
  - Set the owner to "the User performing the import" and then click Next through the following pages.
  - Click Finish to move ahead to Step g.
- Click the Run button next to 'IZPCA Reports Import'.
- Click the Run button and then the OK button.

- h. If your schema names are DRL and DRLSYS, confirm that the installation is successful by running the installed reports in the Cognos Reports Folders. If your schema names are not DRL and DRLSYS, proceed to the next step to change the default schema names of DRL and DRLSYS to your schema name.

## 2. Change the schema name in Framework Manager

- a. Download the data table mappings file from the HLQ.DRLUSS library (DRSWC31M for Cognos 11) in binary format and then rename it to a zip file. For example, rename the downloaded DRSWC31M binary file as DRSWC31M.zip
- b. Extract this zip file content to a folder that is available for Framework Manager to access, i.e. C:\CognosFM
- c. Run Framework Manager and then select 'Open a Project' and navigate to the 'IZPCA\_Release.cpf' file.
- d. Navigate to the Data Sources tree, select Data Source IZDS\_DRL, then click the '...' next to Schema. Change the schema to the correct schema name.
- e. Repeat the previous step for Data Source IZDS\_DRLSYS.
- f. Open the Packages tree, then right click 'Z Performance and Capacity Reporting' and select 'Publish Packages'.
- g. Ensure the publish location folder is correct (Team Content > IBM Z Performance and Capacity Analytics).
- h. Deselect 'Enable model versioning' and click Next.
- i. Click Next again.
- j. Leave "Verify the package before publishing" checked and click Publish.
- k. Click Yes to overwrite.
- l. Click Finish to complete the process.
- m. Confirm that the installation is successful by running the installed reports in the Cognos Reports Folders.

## 3. Housekeeping: Delete previous version

- a. Navigate to the Team Content folder, right click 'IZDS' then click Delete.
- b. Confirm the delete.

### Step 2.14: Reinstall Splunk and ELK reports

If you have customized Splunk and ELK reports, save a copy of them as new reports.

Download the Splunk and ELK reports provided with IBM Z Performance and Capacity Analytics Version 3.1.0 and load them into Splunk and ELK, overwriting the previous reports. Refer to the *Guide to Reporting* for instructions on installing Splunk and ELK reports.

### Step 2.15: Reinstall the Data Mover

IBM Z Performance and Capacity Analytics Version 3.1.0 includes an updated version of the Data Mover.

Plan to migrate the Hub before you migrate the targets. While you progressively migrate the Data Movers, data can still be transferred using the old Data Movers, and between an old Data Mover and a new Data Mover.

To prepare to install the new Data Mover, locate DRLPJDM in /usr/lpp/IBM/IZPCA/v3r1m0/IBM/ and untar the file into a new subdirectory.

To switch over, stop the Data Mover and copy the java/DataMover.jar file into your existing Data Mover directories. Also review the other files provided – DataMover.sh, DataMover.bat, logging.properties and the config files – and merge any changes or extensions into the files you are currently using. Then restart the Data Mover.

The migration to IBM Z Performance and Capacity Analytics Version 3.1.0 is now completed.

## Section 5: Migrating from IBM Z Decision Support for Capacity Planning Version 2.1.0

### 1. Before you migrate

Follow these steps before you migrate:

#### Step 1.1:

It is highly recommended to take a backup of your existing database.

#### Step 1.2:

If you have installed IMS components, please take note of the following:

- a) Checkpoint record data sets (records output to DD name DRLCHKO during the IMS collect process) created before migrating to IBM Z Performance and Capacity Analytics Version 3.1.0 may not be usable as DRLCHKI input to the IMS collect after the migration is completed, and therefore these checkpoint data sets must be discarded before you migrate. In order to prevent loss of data, specify WRITEPENDING=YES on the last collect run before migrating to IBM Z Performance and Capacity Analytics Version 3.1.0.
- b) This product provides support for IMS Version 12+ only. Support for earlier IMS versions is no longer available. If you are collecting IMS records for versions earlier than Version 12, you should delay migration to IBM Z Performance and Capacity Analytics Version 3.1.0 until after you have migrated your IMS systems to a supported level of IMS.

### 2. The migration process

Migrating to IBM Z Performance and Capacity Analytics Version 3.1.0 consists of the following steps:

- Step 2.1: SMP/E installation
- Step 2.2: Apply PTFs
- Step 2.3: REBIND Db2 plans and packages
- Step 2.4: Review dialog parameters
- Step 2.5: Test the installation of the IBM Z Performance and Capacity Analytics base
- Step 2.6: Reintroduce customizations
- Step 2.7: Review IBM Z Performance and Capacity Analytics supplied JCL
- Step 2.8: Update system tables
- Step 2.9: Migrate the database
- Step 2.10: Reinstall components
- Step 2.11: Rerun table mapping utility
- Step 2.12: Migrate the IMS light feature
- Step 2.13: Reinstall Cognos reports
- Step 2.14: Reinstall Splunk and ELK reports
- Step 2.15: Reinstall the Data Mover
- Step 2.16: Reinstall the Forecaster
- Step 2.17: Set up alerts for KPM exceptions
- Step 2.18: Set up the Continuous Collector to use a zIIP processor

Each step is documented here in detail:

#### Step 2.1: SMP/E installation

The SMP/E installation of the IBM Z Performance and Capacity Analytics base and its features is described in the *IBM Z Performance and Capacity Analytics Program Directory*.

Confirm that the installation completed successfully by ensuring that the following data sets and file system directory were created during SMP/E installation. The names given are defaults and might not match the names used in your implementation. Check with your Systems Programmer to confirm the actual names used.

#### a) IBM Z Performance and Capacity Analytics data sets

| Data set name   | Description                                           |
|-----------------|-------------------------------------------------------|
| DRL310.SDRLEXTR | Authorized load modules for the SMF Extractor         |
| DRL310.SDRLCNTL | Sample jobs and Db2 DBRM module                       |
| DRL310.SDRLDEFS | Definitions of records, tables, and other objects     |
| DRL310.SDRLEXEC | REXX execs                                            |
| DRL310.SDRLOAD  | Load modules                                          |
| DRL310.SDRLSKEL | ISPF skeletons                                        |
| DRL310.SDRLBIN  | OS/400, Workstation and all binaries including DRLDOC |
|                 | Replaces SDRL400 and SDRLWS                           |
| DRL310.SDRLFENU | GDDM/ICU formats                                      |
| DRL310.SDRLMENU | ISPF messages                                         |
| DRL310.SDRLPENU | ISPF panels                                           |
| DRL310.SDRLRENU | Definitions of reports                                |
| DRL310.SDRLTENU | ISPF tables                                           |

SMP/E DDEF SDRLUSS will install tar files (Data Mover, Forecaster, Splunk and ELK report packages) here:  
/usr/lpp/IBM/IZPCA/v3r1m0/IBM/ USS file system directory containing tar files

## b) Local data sets

| Data set name        | Description                                                                                          |
|----------------------|------------------------------------------------------------------------------------------------------|
| &HLQ.LOCAL.ADMCFORM  | Local GDDM Presentation Graphics Facility(GDDM-PGF) and Interactive Chart Utility (GDDM/ICU) formats |
| &HLQ.LOCAL.CHARTS    | Saved graphic reports (GDDM ADMGDF format)                                                           |
| &HLQ.LOCAL.CNTL      | Local IBM Z Performance and Capacity Analytics jobs                                                  |
| &HLQ.LOCAL.DEFS      | Local IBM Z Performance and Capacity Analytics definitions                                           |
| &HLQ.LOCAL.EXEC      | Local IBM Z Performance and Capacity Analytics execs                                                 |
| &HLQ.LOCAL.MESSAGES  | Messages sent through the dialog                                                                     |
| &HLQ.LOCAL.REPORTS   | Saved tabular reports                                                                                |
| &HLQ.LOCAL.USER.DEFS | Local IBM Z Performance and Capacity Analytics user/alter definitions                                |

### Step 2.2: Apply PTFs

Apply the PTFs for the following IBM Z Performance and Capacity Analytics Version 3.1.0 APARs, following the HOLD actions:

#### GA APARs

- PH23206
- PH24670

### Step 2.3: REBIND Db2 plans and packages

A new DBRM is supplied with IBM Z Performance and Capacity Analytics Version 3.1.0. Follow these instructions to rebind to the new DBRM:

1. Copy member DRLJDBND in the DRL310.SDRLCNTL library to the &HLQ.LOCAL.CNTL library.
2. Review and action the customization instructions in the job prolog before submitting the job.

### Step 2.4: Review dialog parameters

Review the information in section “Preparing the dialog and updating the dialog profile” in the *Administration Guide and Reference* to ensure the migration environment refers to the IBM Z Performance and Capacity Analytics Version 3.1.0 data sets.

If you made changes to your &HLQ.DRLFPROF in this step, you must start IBM Z Performance and Capacity Analytics Version 3.1.0 specifying the RESET parameter in the next step to activate these DRLFPROF changes.

### Step 2.5: Test the installation of the IBM Z Performance and Capacity Analytics base

Install the Sample component, collect the Sample log and run the Sample report to verify that the IBM Z Performance and Capacity Analytics base is operational.

### Step 2.6: Reintroduce customizations

If you have previously made changes to IBM Z Decision Support for Capacity Planning supplied objects in your &HLQ.LOCAL.DEFS, you will need to manually apply the IBM Z Performance and Capacity Analytics Version 3.1.0 changes to these objects in your &HLQ.LOCAL.DEFS. Identify the Version 3.1.0 changes by comparing each object in your &HLQ.LOCAL.DEFS with the DRL310.SDRLDEFS version.

If an object exists in the &HLQ.LOCAL.DEFS library, IBM Z Performance and Capacity Analytics installs the object from this customized definition, instead of from the shipped DRL310.SDRLDEFS version. Therefore, if you do not take the action described in this step, the Version 3.1.0 changes will not be installed when you reinstall the components.

### Step 2.7: Review IBM Z Performance and Capacity Analytics supplied JCL

The DRL310.SDRLCNTL library contains several batch jobs that you can copy to &HLQ.LOCAL.CNTL and customize to match your installation.

If you have previously customized sample JCL from DRL190.SDRLCNTL, review the Version 3.1.0 changes in the new sample JCL provided in DRL310.SDRLCNTL and manually apply these changes to your customized versions in &HLQ.LOCAL.CNTL.

### Step 2.8: Update system tables

Follow these steps to update the system tables using the IBM Z Performance and Capacity Analytics dialog:

- a) Invoke the IBM Z Performance and Capacity Analytics dialog with this command: TSO %DRLEINIT [RESET]
- b) Display the Administration window by selecting 2 (Administration) on the Primary Menu.
- c) From the Administration window select 1 (System) to display the System window.
- d) From the System window select 2 (System tables).
- e) From the System Tables window press F6 to update the system tables.

### Step 2.9: Migrate the database

The following table lists all database migration tasks which may be required to migrate to Version 3.1.0. Review each step, to determine whether it would be required, based on your current installation.

Migration tasks are listed by Component. The APAR column lists the Version 2.1.0 APARs with which the migration task was introduced. A migration task is only required if:

- m) You have previously installed the impacted Component, and
- n) You have *not* previously installed the APAR in Version 2.1.0., and
- o) Your installation meets the additional requirements detailed in the *Description* column.

The *Mandatory* column indicates whether the migration task is mandatory or optional. Optional migration tasks improve the accuracy/quality of data previously collected. Mandatory migration tasks are needed to make your database compatible with the IBM Z Performance and Capacity Analytics Version 3.1.0 definitions.

The *Migration instructions* column contains either a sample migration job which is supplied in the DRL310.SDRLCNTL library, or actual migration instructions, for example SQL statements.

| Component                                        | APAR               | Mandatory Y/N | Migration instructions | Description                                                                                                                                                                                                                                                                                                                                                                                        |
|--------------------------------------------------|--------------------|---------------|------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| CICS Monitoring & Key Performance Metrics - CICS | PH05372            | Y             | DRLJCIF1               | Rebuild the CICS_FIELD table. If this table has been customized (member DRLTCIFI), these customizations must be reapplied before you run this migration job. See step 2.6 above for instructions on reintroducing customizations. Although this job only needs to be run once during the migration, it needs to be run if the PTFs for either of these two APARs have not previously been applied. |
| -                                                | PH08338<br>PH18411 | Y             | DRLJGEND<br>DRLJGENL   | Update contents of system tables GENERATE_PROFILES and GENERATE_KEYS. Run DRLJGEND to clear these tables and then DRLJGENL to repopulate. If you have previously customized the contents of these system tables, you will need to reintroduce the changes after you ran these jobs.                                                                                                                |
| z/OS System (MVS)                                | PH05668            | Y             | DRLJMVAC               | Add MVS_SYSTEM_ID to primary key of MVS_ADDRSPACE2_T.                                                                                                                                                                                                                                                                                                                                              |
|                                                  |                    |               | DRLJMVAO               | Add MVS_SYSTEM_ID to primary key of MVS_OMVSADDR_T.                                                                                                                                                                                                                                                                                                                                                |
|                                                  |                    |               | DRLJMVAP               | Add MVS_SYSTEM_ID to primary key of MVS_ACCNT_PGM_T and MVS_ACCNT23_PGM_T.                                                                                                                                                                                                                                                                                                                         |
|                                                  |                    |               | DRLJMVAS               | Add MVS_SYSTEM_ID to primary key of MVS_ADDRSPACE_T and MVS_TAPEMOUNTS_T. the DEFINE step will get a return code of 8. This is normal as there are other definitions in the included member that will return SQL errors -601 or -803.                                                                                                                                                              |
|                                                  |                    |               | DRLJMVDO               | Add MVS_SYSTEM_ID to primary key of MVS_OMVSADIS_T.                                                                                                                                                                                                                                                                                                                                                |

#### Step 2.10: Reinstall components

Now reinstall ALL previously installed components.

#### Step 2.11: Rerun table mapping utility

This step is required if you are streaming data off platform. Follow the instructions in Chapter 3 of the *Administration Guide and Reference* to rerun the mapping utility DRLJCDPS.

#### Step 2.12: Migrate the IMS light feature

This step is only required if you make use of the IMS light feature.

IBM Z Performance and Capacity Analytics Version 3.1.0 includes changes to the IMS Shared Queue Feature log procedures.

If you are using the IMS light feature to collect data remotely with program DRLSLOGP for subsequent transmission and processing at a central site, you must review and rerun your customized version of sample job DRLJCSQL. The re-created light feature load library must then be re-sent to all remote sites executing DRLSLOGP.

#### Step 2.13: Reinstall Cognos reports

##### 1. Import the Report Package

- Download the report package file from the &HLQ.SDRLUSS library (DRLWCPCA) in binary format and then rename it to a .zip file. For example, rename the downloaded DRLWCPCA binary file as "IZPCA\_ReportsPack.zip".
- Copy this zip file into the Cognos folder C:\Program Files\IBM\Cognos\analytics\deployment.
- Open Cognos and Navigate to the Administration Console.
- Select the configuration tab, and then select Content Administration from the side menu on the left.
- If an import job has previously been created for the same package, jump to Step f. Otherwise follow the instructions below to create a new import job:**
  - Click the icon to 'Create a New Import'.
  - Select a deployment archive from the list, for example 'IZPCA\_ReportsPack', then click Next.
  - Specify a name for the import job then click Next (IZPCA Reports Import).
  - Ensure the import objects are checked in the list.
  - Set the owner to "the User performing the import" and then click Next through the following pages.
  - Click Finish to move ahead to Step g.
- Click the Run button next to 'IZPCA Reports Import'.
- Click the Run button and then the OK button.

- h. If your schema names are DRL and DRLSYS, confirm that the installation is successful by running the installed reports in the Cognos Reports Folders. If your schema names are not DRL and DRLSYS, proceed to the next step to change the default schema names of DRL and DRLSYS to your schema name.

## 2. Change the schema name in Framework Manager

- a. Download the data table mappings file from the HLQ.DRLUSS library (DRSWC31M for Cognos 11) in binary format and then rename it to a zip file. For example, rename the downloaded DRSWC31M binary file as DRSWC31M.zip.
- b. Extract this zip file content to a folder that is available for Framework Manager to access, i.e. C:\CognosFM.
- c. Run Framework Manager and then select 'Open a Project' and navigate to the 'IZPCA\_Release.cpf' file.
- d. Navigate to the Data Sources tree, select Data Source IZDS\_DRL, then click the '...' next to Schema. Change the schema to the correct schema name.
- e. Repeat the previous step for Data Source IZDS\_DRLSYS.
- f. Open the Packages tree, then right click 'Z Performance and Capacity Reporting' and select 'Publish Packages'.
- g. Ensure the publish location folder is correct (Team Content > IBM Z Performance and Capacity Analytics).
- h. Deselect 'Enable model versioning' and click Next.
- i. Click Next again.
- j. Leave "Verify the package before publishing" checked and click Publish.
- k. Click Yes to overwrite.
- l. Click Finish to complete the process.
- m. Confirm that the installation is successful by running the installed reports in the Cognos Reports folders.

## 3. Housekeeping: Delete previous version

- a. Navigate to the Team Content folder, right click 'IZDS for Capacity Planning' then click Delete.
- b. Confirm the delete.

### Step 2.14: Reinstall Splunk and ELK reports

If you have customized Splunk and ELK reports, save a copy of them as new reports.

Download the Splunk and ELK reports provided with IBM Z Performance and Capacity Analytics Version 3.1.0 and load them into Splunk and ELK, overwriting the previous reports. Refer to the *Guide to Reporting* for instructions on installing Splunk and ELK reports.

### Step 2.15: Reinstall the Data Mover

IBM Z Performance and Capacity Analytics Version 3.1.0 includes an updated version of the Data Mover.

Plan to migrate the Hub before you migrate the targets. While you progressively migrate the Data Movers, data can still be transferred using the old Data Movers, and between an old Data Mover and a new Data Mover.

To prepare to install the new Data Mover, locate DRLPJDM in /usr/lpp/IBM/IZPCA/v3r1m0/IBM/ and untar it into a new subdirectory.

To switch over, stop the Data Mover and copy the java/DataMover.jar file into your existing Data Mover directories. Also review the other files provided – DataMover.sh, DataMover.bat, logging.properties and the config files – and merge any changes or extensions into the files you are currently using. Then restart the Data Mover.

### Step 2.16: Reinstall the Forecaster

IBM Z Performance and Capacity Analytics Version 3.1.0 includes an updated version of the Forecaster. To prepare to install the new Forecaster, untar the supplied file into a new subdirectory.

To switch over, stop the Forecaster and copy the java/Forecaster.jar file into your existing Forecaster directories. Also review the other files provided – Forecaster.sh, logging.properties and the config files – and merge any changes or extensions into the files you are currently using. Note that there are new Forecast configurations that you will need to customize before you run them. Then restart the Forecaster.

### Step 2.17: Set up alerts for KPM exceptions

If you wish to set up Console Alerts (WTO) for KPM exceptions (that is, where a threshold is breached and an exception row is written to the KPM\_EXCEPTION\_T table), do the following:

1. Modify the startup JCL for your Db2 REXX stored procedure Workload Manager (WLM) address space to add the IZPCA V3.1.0 SDRLOAD library to the STEPLIB and add SDRLEXEC to the SYSEXEC.
2. Customize and run the sample job DRLJCP01. Refer to the detailed instructions in this sample member.

If you later wish to remove the Console Alerts, you will need to customize and run the sample job DRLJCP02. These sample jobs are in the DRL310.SDRLCNTL data set.

### Step 2.18: Set up the Continuous Collector to use a zIIP processor

If you wish to set up the Continuous Collector to run on a zIIP processor, do the following:

1. Add the IZPCA V3.1.0 SDRLOAD library to the APF Authorized list.
2. Add the parameter ZIIP to your COLLECT statement as the last parameter.

Note that the option to run on a zIIP processor is not available for a Collect running in batch mode.

The migration to IBM Z Performance and Capacity Analytics Version 3.1.0 is now completed.