IBM Software Group

IBM® TXSeries® for Multiplatforms V6

Migration Overview

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This presentation will cover migrating to TXSeries for Multiplatforms V6 from the previous version of TXSeries.

Goals

- Provide an overview of the migration process when upgrading to TXSeries for Multiplatforms V6

The goal of this presentation is to provide an overview of the migration process available with TXSeries for Multiplatforms V6.

Agenda

- Discuss some migration related considerations when upgrading to TXSeries V6

- Describe the general migration process when moving from a previous version to TXSeries V6

The agenda for this presentation is to describe migration considerations and the steps involved in migrating to TXSeries for Multiplatforms V6 from the previous version of TXSeries.

Section

Migration considerations

This section will take you through the migration considerations.

TXSeries co-existence

- Two versions of TXSeries cannot co-exist on a machine
  - ▶ Migration of a single machine is therefore:
    - Export CICS® regions
    - De-install old version of TXSeries
    - Install new version of TXSeries
    - Import and migrate region definitions
  - ▶ Migration to a new machine is a simpler process
    - Less downtime
    - Opportunity for housekeeping
    - Opportunity to upgrade supporting software and retest

Migration overview

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It is important to understand that multiple versions of TXSeries cannot co-exist on the same machine. Because of this, migrating the old version of TXSeries to a new machine is considered optimal. This will give you the benefit in having minimal downtime of your systems where the current level of TXSeries is functional, and will also provide you an opportunity to upgrade the supporting software and conduct testing in the migrated environment.

Migration to TXSeries V6: Key points

- All the following must now exist on same machine as the CICS region
  - ▸ SFS Servers
  - ▸ PPC Gateway Servers

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With TXSeries V6, you will need to define and configure SFS servers and PPC Gateway servers on the same machine where your CICS regions are defined.

Initial migration checks

- Ensure the latest level of supported software is installed
    - See http://www.ibm.com/software/htp/cics/txseries/

- Review any new resource definition attributes added and modify their values accordingly. For example:
    - TCPProcessCount [LD definition]
    - ServerMemCheckInterval [RD definition]
    - NameService [RD definition]

- Check user written scripts working against files such as the console, symrecs, or CSMT.out as message formats can change.

Before migrating, you should ensure the latest level of supported IBM and third-party products are installed. You should also review the release notes for any new or changed features, and to ensure backward compatibility for your CICS server applications. For example, with TXSeries V6 there are new resource definition attributes introduced, such as ServerMemCheckInterval that enables checking of process memory growth, that will need your attention. If you have written scripts to interpret CICS logs such as console, symrecs and CSMT.out then you must check for any changes in the format of these logs.

Section

Migration steps

This section will describe the steps necessary to perform the migration.

CICS region migration steps

1. Export the CICS regions to be migrated to an archive file

   ▸ cicsexport -r <region> -o <archive>

2. Import the CICS region on system with latest CICS level

   ▸ cicsimport -r <region> -i <archive>

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Begin the migration procedure by first migrating the CICS region definitions. For this you will need to export the region definitions of the current version of TXSeries using the cicsexport command. The cicsexport command will create an archive file containing the region data. This archive file must be transferred in BINARY mode to the target machine where the new version of TXSeries is installed. Once transferred, you will use the cicsimport command to import the region data from the transferred archive file. The cicsimport command will create the CICS region by reading the definitions from the archive file.

CICS region migration steps

3. Migrate the CICS region definitions to the latest level
   - cicsmigrate –r <region> -g <script> -o <log>   **UNIX®**
     - Run the upgrade script as generated by the cicsmigrate tool
   - cicsmigrate <region>   **Windows®**
     - The command updates the region directly without needing a script

4. Cold start the CICS region

Once the region definitions are imported successfully using the cicsimport command, run the cicsmigrate command to generate a migration script. The migration script will contain all the instructions necessary to migrate the region definitions to the new version of TXSeries. The migration script must be run to complete the migration of the CICS region.

On Windows platforms, the migration script is not generated and the migration of CICS region definitions is done by the cicsmigrate command. Ensure that you do a cold start of the CICS region in order to pick up the migrated region definitions.

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General migration steps

1. ## Migrate File Manager VSAM files

   ▶ **Migrate VSAM application data using:**
     - cicssdt, for SFS file manager
     - cicsddt, for DB2® file manager
     - cicsodt, for ORACLE file manager

   ▶ **Migrate CICS region specific VSAM files:**
     - which are used for storing information related to TSQ, TDQ, IC.
     - Only migrate region's SFS files if data must persist the migration
     - Files called <region_name>cics*fil*
       - Region will create the SFS files on first startup if missing

2. ## Migrate Resource Manager data files

Continuing the migration of CICS region definitions, you will need to migrate the application and CICS specific data from your file manager or the resource manager.

Migration of the application data stored in the VSAM file manager can be done using the supplied commands with TXSeries. For instance, if you are using the SFS server as your file manager, you can run the cicssdt command to help you migrate the application data. Apart from the application data stored in these file managers, there are CICS region specific VSAM files which are used to store information related to Temporary Storage Queues, Transient Data Queues, and Timed start of user transactions. If you want this information to persist you will require to migrate the CICS region specific VSAM files as well.

Migration of the application data stored in the resource manager is performed using the utilities provided by the resource manager. For example, if you are using IBM® DB2® as your resource manager, use the DB2 import and export utility to migrate.

General migration steps

1. Preparing language runtime
   - If using Micro Focus COBOL, rebuild COBOL runtime using cicsmkcobol script.
3. Re-build XA switch-load files
4. Re-build CICS server applications and BMS maps
5. Re-build external modules:
   - External Authentication Modules (EAM)
   - External Security Manager Modules (ESM)
   - User Exit programs, Monitoring or Statistics formatters

You must consider rebuilding of the language runtimes, XA switch-load files, CICS server applications, BMS maps, and external modules if there is a change in the TXSeries version such as in this migration.

For language runtime, if you are using Micro Focus Server Express COBOL on UNIX platforms, you will need to re-build the language runtime using the cicsmkcobol command. For other language runtimes supported by TXSeries, you will be using the pre-built language runtime supplied with the TXSeries product.

If you are using any XA compliant resource managers or file managers, you will need to rebuild the switch-load files.

If you are using your own compile and link scripts to produce CICS server application modules you will be required to review the compile, link options and additional library modules linked as specified in the cicstcl utility.

A rebuild is required for any external modules that use TXSeries components, such as User Exit programs, External Authentication Modules, External Security Manager modules, and Monitoring or statistics formatters.

Summary

- Discussed migration related considerations when upgrading to TXSeries V6

- Described the general migration process when moving from a previous version to TXSeries V6

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In summary, this presentation covered migration related considerations and general migration process for migrating to TXSeries for Multiplatforms V6.

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