



IBM Software Group

IBM TXSeries for Multiplatforms V7.1

New features overview



@business on demand.

© 2009 IBM Corporation
Updated October 23, 2009

This presentation provides an overview of the new features and changes introduced in IBM TXSeries for Multiplatforms V7.1 release.

Goal

- Provide an overview of the new features and changes in TXSeries for Multiplatforms V7.1



The goal of this presentation is to provide an overview of the new features and changes introduced in TXSeries for Multiplatforms V7.1.

New features and changes in TXSeries V7.1

- Significantly enhanced integration and connectivity
- Improved system reliability, availability and serviceability
- Enhanced scalability
- Improved application development and migration
- Better usability

TXSeries V7.1 introduces several features and enhancements that provide you with a better experience with the product. The release provides significantly enhanced integration and connectivity, improved system reliability, availability and serviceability. Changes have been made for improving scalability, better application development and migration and for better usability. The following sections explain the specific features that fall under each of these.

Section

Significantly enhanced integration and connectivity



This section provides an overview of the two new features introduced in TXSeries for Multiplatforms V7.1 that significantly enhance integration and connectivity. These are IPIC (IP connectivity) and containers and channels.

IPIC (IP interconnectivity)

- IPIC is a new communication protocol for intersystem communication
- Extends intersystem connectivity over TCP/IP.
- TXSeries and CICS® TS can now connect using TCP/IP in addition to SNA
- Supports intersystem connectivity across regions
- Supports only DPL-based communications and only with synclevel 1
- SSL-based security support available using GSKit.
- Existing SNA connections with CICS TS work as before
- Existing TCP/IP connections across TXSeries regions work as before

TXSeries V7.1 introduces a new protocol for intersystem communication called IPIC (IP interconnectivity) that extends intersystem connectivity over TCP/IP. Significantly, this protocol enables TXSeries regions to connect to mainframe CICS or CICS TS over TCP/IP. In this sense, it provides an alternative for communication over SNA (Systems Network Architecture). You can also use the IPIC protocol to connect two TXSeries regions.

Note that in TXSeries V7.1, IPIC support is restricted only to DPL-based communications and only with synclevel 1.

TXSeries V7.1 also provides support for SSL-based security by using the GSKit (IBM Global Security Kit) for communication over IPIC. At the same time, existing SNA connections with CICS TS continue to work as before; as do existing CICS-TCP and PPC-TCP protocols.

Containers and channels

- New API support for containers and channels
- Introducing containers and channels for passing data
- Containers and channels can replace COMMAREA
- The prevailing 32 K restrictions on size of data removed
- Data size limitation now based on amount of storage available
- COMMAREA can still be used as before

TXSeries V7.1 provides for interoperability between CICS regions over TCP/IP through its support for containers and channels. A group of new APIs are included that introduce containers and channels. Containers are named blocks of data for passing information between programs. Containers are further grouped in named channels. Containers and channels can now replace COMMAREA for passing data.

The support for containers and channels eliminates the existing restriction of a maximum of 32 K that applied to the amount of data that can be passed between programs by using a COMMAREA. As a result, data greater than 32 K can be passed and the limitation on the amount of data that can be passed is now based on the amount of storage available.

All the communication protocols support containers and channels. At the same time, COMMAREA is still supported as before and applications can use COMMAREA if required.

Section

Reliability, availability, and serviceability

This section provides an overview of the new features introduced in TXSeries for Multiplatforms V7.1 that provide improved reliability, availability and serviceability. These are isolation of memory usage, recovery improvements, and facility for task history logging, information about a remote task, dump enhancements, and cicsservice utility.

Isolation of memory usage

- System memory protected at boundaries with guard pages
- Helps prevent applications from overwriting across boundaries avoiding corruption issues in many cases

In TXSeries V7.1, changes have been made to isolate memory usage and to protect system memory at boundaries. To isolate memory usage, guard pages have been added at the boundaries of system memory. This is done by segregating memory allocated from task-private pool from other heap allocations.

The isolation of memory usage prevents applications from overwriting system memory across the boundary and avoids corruption issues in most cases. It thus improves the overall reliability and problem determination capability.

Recovery improvements

- CICS Application Manager handles recovery better, as a result recovery servers come up faster than before
- Application Manager does not wait for recovery servers to complete their task
- This removes dependency of Application Manager on the recovery server and makes the region more available



In TXSeries V7.1, the CICS Application Manager has been modified to better handle upcoming recovery servers. With this enhancement the Application Manager does not wait for recovery servers to complete recovery. The removal of this bottleneck makes the region more available and enables faster overall recovery.

Task history logging using CICS application probe facility

- CICS application probe facility logs the history of all tasks issued in every application server process
- CICS application probe facility can be configured using TXSeries administration console



TXSeries v7.1 introduces the CICS application probe facility that enables better task history logging. The CICS application probe facility logs the history of all tasks carried out in every application server process. Whenever you are faced with a problem, you can use this facility to trace the sequence of events within an application.

You can use the TXSeries administration console to configure the CICS application probe facility.

Transaction life mapping

- Enables transactions running on a back-end region in an ISC (intersystem communication) scenario to map to the corresponding front-end region which invoked it
- Can gather critical information such as PID (process ID), TID (task ID), program name, transaction name, terminal ID and so on.
- Generates information in an extrapartition TDQ

The Transaction life mapping (remote task information) feature of TXSeries V7.1 helps you to collect information from a back-end task about the corresponding task in the front-end region. Critical information such as PID (process ID), TID (task ID), program name, transaction name, terminal ID, and task start time and so on can be obtained. Typically this is useful when a back-end task is running a CPMI task, and sometimes when both the corresponding front- end and back-end task run a CPMI. At times, when CICS monitoring data are not useful because of lack of clarity regarding the relationship between the front-end and the back-end task, this feature can help to resolve the situation.

When enabled, this feature logs data to an extrapartition TDQ (Transient Data Queue). As of now, there is no mechanism to invoke this feature explicitly.

Dump enhancements

- In XA-enabled CICS regions, additional dumps are created when resource managers return an XA error
- Information is dumped in the `dumps` directory of the region



Dump enhancements made in TXSeries V7.1 provide for generation of additional information for error logging. For XA-enabled CICS regions, additional dumps, such as ring buffer trace, are created whenever resource managers return an XA error. As usual, the additional information is dumped in the **dumps** directory of the region.

cicsservice utility

- On the occurrence of a problem, the cicsservice utility can be used to collect data from the user's system
- The usage of the cicsservice utility is simplified to collect only relevant information



TXSeries V7.1 has introduced changes to the cicsservice utility that allow you to collate the diagnostic information required by an IBM support representative. The usage of cicsservice utility has been simplified to collect only the relevant information without user prompts, as a result of which it can be used in scripts directly.

Section

Scalability



This section provides an overview of the enhancements made in TXSeries V7.1 that allow for greater scalability. These are locking improvements and enhancements to WLM.

Locking improvements and WLM enhancements

- Locking improvements
 - ▶ CICS runtime locking improvements on AIX® and HP platforms
 - ▶ Locking bottlenecks removed
 - ▶ A larger number of concurrent users can connect in a load scenario
- WLM enhancements
 - ▶ Availability of Application Owning (AOR) regions improved to minimize transaction abends in case of AOR outage
 - ▶ Continues to maintain constant TPS

TXSeries V7.1 allows for better scalability through improved provision for locking and through enhancements to WLM (Work Load Manager).

On AIX and HP platforms, a few internal changes have been made to the locking mechanism which better handle the mutex locks in a distributed system and improve system response during heavy load. As a result, an increased number of concurrent users can now use TXSeries regions at the same time.

In case of WLM, the availability of application owning regions (AORs) has been improved by reducing the transaction abends in the event of an AOR outage. This continues to maintain constant TPS.

Section

Enhanced usability



This section provides an overview of the new features and changes made in TXSeries V7.1 that improve the usability of the product. These include enhancements to the installer, an improved TXSeries administration console, and re-designed product documentation.

Installer enhancements

- Packaging with InstallAnywhere
 - ▶ New interface
 - ▶ Easy to use
- Improved readability of installation/uninstallation logs
- Process check facility during installation and uninstallation

The TXSeries V7.1 installer is now based on InstallAnywhere. Apart from a new interface this feature provides for greater ease of use. Installation logs have also been modified to make them more readable. To ensure that your installation or uninstallation is error free, an additional feature has been introduced that allows you to check whether a CICS process is running.

Administration console enhancements

- Enhanced usability in selecting multiple programs for start and shutdown
- WLM attribute validations moved from the server to client
- A reorganized WLM view
- Improved granular control on monitoring data
- Ability to monitor multiple regions concurrently
- Ability to configure CICS application probe facility



Improvements to the TXSeries administration console allow for enhanced usability in selecting multiple programs for start and shutdown using a pop-up window. There are improvements in performance and usability as a result of moving WLM attribute validations from the server to the client. The WLM view in the console has been reorganized to provide a groups perspective. Improvements made to the console allow for better monitoring of monitoring data. A granular control on monitoring data is now possible. Also, multiple regions can be now be monitored at the same time. A new feature allows you to configure the CICS application probe facility by using the TXSeries administration console.

Enhanced documentation

- TXSeries documentation information center re-designed to make it user-goal and task-oriented



The TXSeries v7.1 documentation information center has been substantially re-designed. In contrast to the earlier book-oriented format, information is now presented in a task-oriented user-goals format reflecting the tasks that a user performs when using the product.

Section

Application development and migration



This section provides an overview of the enhancements made to the application development tools and the support provided for migration in TXSeries V7.1.

Enhanced BMS and support for migration

- BMS enhanced:
 - ▶ To accept lower case label names and blank lines
 - ▶ To generate logical map files of consistent lengths to match with CICS TS generated maps files
 - ▶ To primarily address integration with IBM Rational® Developer for System z®
- Migration
 - ▶ Supports migration from TXSeries V6.1 onwards to current release

TXSeries V7.1 introduces improvements in application development through an enhanced Basic Mapping Support (BMS) application development tool. Lowercase label names and blank lines are now accepted in the BMS map translator. These enhancements now make it possible to generate logical map files of the same length as CICS TS generated map files. Enhancements to BMS primarily address the requirements for integration with IBM Rational Developer for System z.

TXSeries V7.1 continues to support version to version migration from the previous two releases. That is, it supports migration from TXSeries V6.1 and TXSeries V6.2 to the current release.

Other improvements

- Microsoft® Windows® 2008 added to the list of supported platforms
- Support provided for pt_BR (Brazilian Portuguese) on HP platforms
- GSKit not installed by default, but shipped with TXSeries

A few more features and enhancements have also been introduced in TXSeries V7.1. For instance, Microsoft Windows 2008 is now added to the existing list of supported platforms. Another small change is that pt_BR (Brazilian Portuguese) locale is now supported on HP platforms; earlier, this was supported through pt_PT (Portuguese) on HP platforms. Other platforms already support pt_BR.

GSKit is once again shipped with TXSeries. But note that it is not installed by default. If required, you can install it by following the instructions given under the installing user goal in the TXSeries information center.

Summary

- TXSeries V7.1 includes these changes and enhancements:
 - ▶ Significantly enhanced integration and connectivity through IPIC (IP connectivity) and, containers and channels
 - ▶ Improved reliability, availability and serviceability through isolation of memory usage, recovery improvements and more
 - ▶ Greater scalability through locking improvements and enhancements to WLM
 - ▶ Improved usability through enhancements to the installer, the TXSeries Administration Console, and product documentation.
 - ▶ Enhanced application development tools and support for migration

23

New features overview

© 2009 IBM Corporation

In summary, several changes and enhancements have been introduced in TXSeries V7.1. TXSeries now provides significantly enhanced integration and connectivity through IPIC (IP connectivity) and, containers and channels.

There are improvements in reliability, availability and serviceability such as isolation of memory usage, recovery improvements, and facility for task history logging, information about a remote task, dump enhancements, and cicsservice utility.

TXSeries V7.1 allows for greater scalability through locking improvements and enhancements to WLM.

The usability of the product has been improved through enhancements made to the installer, the TXSeries Administration Console, and the product documentation.

Enhancements have also been made to the application development tools. The product supports migration from TXSeries V6.1 onwards to the current release.

Feedback

Your feedback is valuable

You can help improve the quality of IBM Education Assistant content to better meet your needs by providing feedback.

- Did you find this module useful?
- Did it help you solve a problem or answer a question?
- Do you have suggestions for improvements?

Click to send e-mail feedback:

mailto:iea@us.ibm.com?subject=Feedback_about_TXSeries_V71_Highlights.ppt

This module is also available in PDF format at: [../TXSeries_V71_Highlights.pdf](..../TXSeries_V71_Highlights.pdf)



You can help improve the quality of IBM Education Assistant content by providing feedback.

Trademarks, copyrights, and disclaimers

IBM, the IBM logo, ibm.com, and the following terms are trademarks or registered trademarks of International Business Machines Corporation in the United States, other countries, or both:

AIX CICS IBM Rational System z

If these and other IBM trademarked terms are marked on their first occurrence in this information with a trademark symbol (® or ™), these symbols indicate U.S. registered or common law trademarks owned by IBM at the time this information was published. Such trademarks may also be registered or common law trademarks in other countries. A current list of other IBM trademarks is available on the Web at "Copyright and trademark information" at <http://www.ibm.com/legal/copytrade.shtml>

Rational is a trademark of International Business Machines Corporation and Rational Software Corporation in the United States, Other Countries, or both.

Microsoft, Windows, and the Windows logo are registered trademarks of Microsoft Corporation in the United States, other countries, or both.

Other company, product, or service names may be trademarks or service marks of others.

Product data has been reviewed for accuracy as of the date of initial publication. Product data is subject to change without notice. This document could include technical inaccuracies or typographical errors. IBM may make improvements or changes in the products or programs described herein at any time without notice. Any statements regarding IBM's future direction and intent are subject to change or withdrawal without notice, and represent goals and objectives only. References in this document to IBM products, programs, or services does not imply that IBM intends to make such products, programs or services available in all countries in which IBM operates or does business. Any reference to an IBM Program Product in this document is not intended to state or imply that only that program product may be used. Any functionally equivalent program, that does not infringe IBM's intellectual property rights, may be used instead.

THE INFORMATION PROVIDED IN THIS DOCUMENT IS DISTRIBUTED "AS IS" WITHOUT ANY WARRANTY, EITHER EXPRESS OR IMPLIED. IBM EXPRESSLY DISCLAIMS ANY WARRANTIES OF MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE OR NONINFRINGEMENT. IBM shall have no responsibility to update this information. IBM products are warranted, if at all, according to the terms and conditions of the agreements (for example, IBM Customer Agreement, Statement of Limited Warranty, International Program License Agreement, etc.) under which they are provided. Information concerning non-IBM products was obtained from the suppliers of those products, their published announcements or other publicly available sources. IBM has not tested those products in connection with this publication and cannot confirm the accuracy of performance, compatibility or any other claims related to non-IBM products.

IBM makes no representations or warranties, express or implied, regarding non-IBM products and services.

The provision of the information contained herein is not intended to, and does not, grant any right or license under any IBM patents or copyrights. Inquiries regarding patent or copyright licenses should be made, in writing, to:

IBM Director of Licensing
IBM Corporation
North Castle Drive
Armonk, NY 10504-1785
U.S.A.

Performance is based on measurements and projections using standard IBM benchmarks in a controlled environment. All customer examples described are presented as illustrations of how those customers have used IBM products and the results they may have achieved. The actual throughput or performance that any user will experience will vary depending upon considerations such as the amount of multiprogramming in the user's job stream, the I/O configuration, the storage configuration, and the workload processed. Therefore, no assurance can be given that an individual user will achieve throughput or performance improvements equivalent to the ratios stated here.

© Copyright International Business Machines Corporation 2009. All rights reserved.

Note to U.S. Government Users - Documentation related to restricted rights-Use, duplication or disclosure is subject to restrictions set forth in GSA ADP Schedule Contract and IBM Corp.

