A robust and extensible distributed CICS transaction processing solution

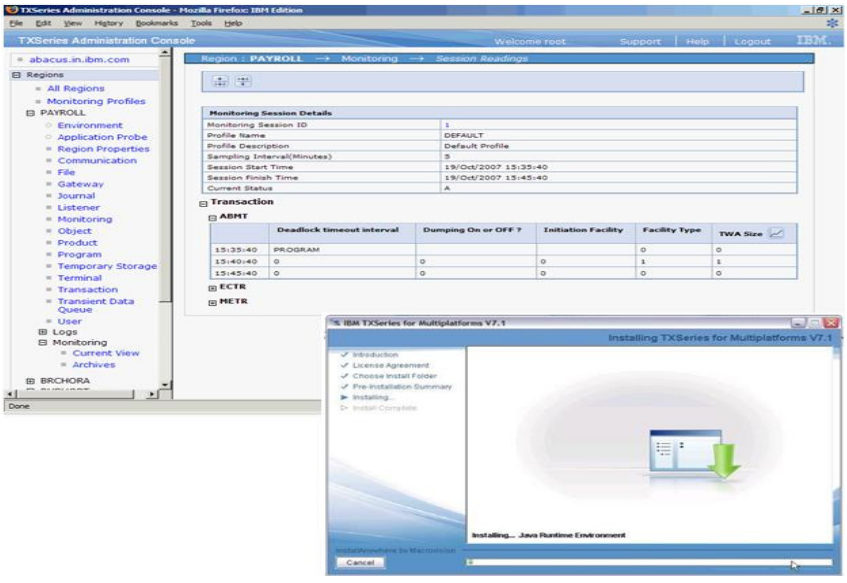
WebSphere. software

IBM

IBM TXSeries for Multiplatforms, Version 7.1

Highlights

- ***Delivers the next generation of distributed CICS® transaction processing on AIX®, Microsoft ® Windows®, HP-UX, HP Integrity and Sun Solaris platforms***
- ***Provides an excellent deployment environment for high-performance, business-critical, transactional applications on distributed platforms***
- ***Enables scaling up to centralized CICS Transaction Server for z/OS® as your business needs evolve***
- ***Delivers major integration and connectivity enhancements, allowing for simplified interoperability with CICS Transaction Server (CICS TS) and CICS Transaction Gateway (CICS TG) on standard protocols***
- ***Offers significant features that enhance system resilience, improve problem determination, and application development tooling***
- ***Enables advanced management and monitoring using the powerful TXSeries Administration Console to ease administration***



TXSeries for Multiplatforms V7.1 delivers advanced monitoring and management using the TXSeries Administration Console

A transaction-processing monitor is a key component of a healthy corporate IT system. It manages and augments the transactional processes that keep your revenue flowing. You might need to process hundreds of thousands of customer requests every day. You might need to automate an existing manual business process to increase your business effectiveness. Or you might need to design an innovative IT-based service that can be reused throughout your organization. Whatever your business needs, a transaction processing monitor can keep your organization operating at the optimum level.

IBM® TXSeries® for Multiplatforms is a distributed IBM CICS Online Transaction Processing (OLTP) environment for mixed language applications. It is widely used for integrating data and applications between distributed solutions and enterprise systems, and for the deployment of CICS applications written in COBOL, C, C++ and PL/I.

It enables you to maximize the effectiveness of applications and employees skilled in these languages, across IBM AIX, Microsoft Windows, Sun Solaris, HP-UX PA-RISC and HP Integrity.

As a distributed transaction server, and a rapid-deployment, transactional-integration platform, TXSeries has, for more than a decade, delivered high performance transaction services in a modern, reusable, critical applications environment.

You can use TXSeries to:

• *Host business-critical transactional CICS applications on distributed platforms in standalone deployments*

• *Integrate between data and applications in distributed solutions and enterprise systems, including CICS, IBM IMS™, IBM DB2® and IBM WebSphere® MQ*

• *Run and extend CICS applications to the Web and Web services using IBM CICS Transaction Gateway and IBM WebSphere Application Server*

• *Reuse existing CICS applications and application programming skill sets in your organization consistent with corporate distributed-platform policy*

• *Develop, test and diagnose CICS applications using COBOL, PL/I, C and C++ for deployment to IBM CICS Transaction Server*

TXSeries for Multiplatforms simplifies interoperability on standard protocols

TXSeries provides extremely good connectivity with IBM CICS Transaction Server for z/OS through full CICS intersystem communication (CICS ISC) support. TXSeries CICS regions and CICS Transaction Server (CICS TS) regions can interoperate over Internet Protocol (IP) for Distributed Program Links (DPL). Data exchange between program components is simplified with the support provided for a more flexible and structured method using containers and channels.

TXSeries can act as a gateway to CICS Transaction Server for z/OS by handling terminal concentration, protocol conversion, or intelligent business logic locally. This can increase the per-formance of CICS Transaction Server for z/OS and protect it from client-origi-nated disruption. Uniquely, TXSeries is also designed to allow you to scale up to CICS TS on the mainframe if the needs of your business grow.

TXSeries can be integrated as a component of your service-oriented architecture (SOA), enabling end-to-end, distributed mixed-language solutions through integration with WebSphere. The Java™ 2 Platform, Enterprise Edition (J2EE) Connector architecture (JCA) interface provided in CICS Transaction Gateway can connect TXSeries to WebSphere SOA server products, such as WebSphere Application Server, IBM WebSphere Enterprise Service Bus and IBM WebSphere Process Server. WebSphere MQ can be used to connect TXSeries to IBM WebSphere Message Broker, or to any other product that supports native IBM MQSeries® transport.

Simplified and powerful distributed CICS transaction processing

TXSeries for Multiplatforms, Version 7.1 takes a significant step forward in distributed CICS transaction-processing technologies with an enhanced distributed CICS transaction processing engine. The core functionality is available through two components, CICS OLTP and CICS Structured File Server (SFS).

• CICS OLTP

The CICS OLTP supports the base-level CICS application programming interface (API), incorporating the fundamental transactional qualities of atomicity, consistency, isolation and durability. By providing services that interact with the underlying hardware and software, TXSeries helps hide the complexity of your IT systems without compromising their functionality. Developers can focus on solving tangible business problems with application logic rather than failure detection, failure recovery and synchronizing access to shared data.

• **CICS SFS**

The integrated CICS SFS is a Virtual Storage Access Method (VSAM)-like, record-oriented file system that provides indexed, relative, and sequential access to file-based data. The SFS enables you to store fully recoverable file-based data that can be processed in a batch environment. TXSeries, CICS TS and even programs that are not CICS technology-based can share SFS files to help maximize the ability of these applications to interoperate in an enterprise environment.

TXSeries facilitates best practices of CICS program design by supporting the separation of the presentation logic, integration logic, business logic and data-access-logic elements of an application. This separation enables COBOL, C, C++ and PL/I specialists to develop modern, reusable applications that fit into a corporation's enterprise-wide requirements.

Applications hosted on TXSeries can communicate with CICS Transaction Server for z/OS through CICS ISC mechanisms. That is, applications can be truly distributed across mainframe and distributed platforms. Multiple data sources, such as relational databases or message queues, can be included in a single unit of work, providing two-phase-commit data integrity across the network. This capability helps make TXSeries for Multiplatforms software an excellent companion product for enterprise mainframe deployments.

Delivers simplified interoperability, improved system resilience, problem determination, and application development tooling

Earlier versions of TXSeries vastly simplified the infrastructure, enhanced administration capabilities by introducing the TXSeries Administration Console, improved usability, system resilience, and interoperability, while addressing a large number of customer requirements. TXSeries for Multiplatforms V7.1 offers significant enhancements in integration and connectivity, system resilience, application development and problem determination tooling, TXSeries Administration Console, and installation. Enhancements have been made in three key areas:

Significantly enhanced integration and connectivity

TXSeries for Multiplatforms V7.1 enhances CICS API and SPI support with the removal of size restrictions on data transfer between programs by using containers and channels, and simplified interoperability between TXSeries and CICS TS regions using TCP/IP networking protocol for Distributed Program Link.

Channels provide a more flexible and structured method of passing data between program components. Variations in the size and number of containers can be conveniently accommodated to allow easier evolution of the interfaces between programs. The size of a container is limited only by the amount of storage available. There is no limit to the number of containers that can be added to a channel. This mechanism also removes the need for programs to sense the exact size of the data returned. When containers go out of scope, they are automatically destroyed, so that the programmer is relieved of storage management concerns.

Channels can be used by applications written in any of the programming languages supported by CICS. Options on the container and related API commands are provided for data conversion, providing a much simpler mechanism than that employed with a COMMAREA.

Whereas in COMMAREA an application's data conversion is controlled by the system programmer, in the case of containers and channels it is controlled by the application programmer.

TXSeries for Multiplatforms V7.1 enables TXSeries CICS regions and CICS TS regions to interoperate over Internet Protocol (IP) for Distributed Program Links (DPL). With this new functionality, networks can be standardized on IP, resulting in simplification of configuration and administration and thus making the system robust. Existing connection definitions can continue to route work between TXSeries and CICS TS systems using ISC over SNA. SNA and IP interconnectivity networks and definitions can now coexist, with existing IP-based protocol support across TXSeries CICS regions continuing to function as in the previous releases.

This IP Interconnectivity for DPL function offers similar capabilities as those available when using other Intersystem Communication (ISC) protocols, including transactional syncpointing (without support for restart and recovery), security controls, and support for the exchange of either COMMAREAs or channels and containers. In addition, TXSeries offers Secure Sockets Layer (SSL) encryption and authentication support for this IP interconnectivity protocol.

Improved system resilience, problem determination, and application development tooling

TXSeries for Multiplatforms V7.1, internally segregates the memory used by itself and the user applications. This prevents applications from overwriting system memory across the boundary in most cases and, hence, improves overall reliability and problem determination.

A history of all the tasks that were undertaken through an application server process can be logged, thus aiding better problem determination by providing a first information report on the occurrence of a problem. You can use the TXSeries Administration Console to configure the system to enable logging.

Programs linked across regions can be mapped to one back level region to obtain critical information such as the transaction name and, program and application ID from the front-end region, thus aiding problem determination.

TXSeries along with IBM Rational® Developer for zSeries®, provides support for syntax checking of CICS TS applications written in COBOL and PL/I. TXSeries for Multiplatforms V7.1 further enhances BMS map compatibility between TXSeries and CICS TS.

TXSeries for Multiplatforms V7.1 enhances the Work Load Manager (WLM) for faster region takeover, thus helping to maximize throughput. This also ensures higher availability of Application Owning Regions (AOR), which avoids transaction ABENDS in case of AOR changeover.

Additional dumps would also be available for XA-specific errors. CICSService utility has also been simplified to enable collection of relevant information only. This release also features significant enhancements to the internal runtime locking to ensure better availability for a larger number of concurrent users.

Enhancements to TXSeries Administration Console and installation packaging

A whole set of additional usability enhancements have been made to the TXSeries Administration Console that allow selection of multiple applications for start and shutdown, intuitive reorganization of WLM views using groups, finer granular control for selecting monitoring data and provide the capability to monitor multiple regions concurrently.

Performance has also been improved by moving WLM attribute validations from the server to the client.

Installation and version-to-version upgrades are enhanced with InstallAnywhere as the installer on all platforms. Using this industry-standard installation program enables quick and easy customization. You can run InstallAnywhere as a GUI, a command-line console or as a silent installation with no user interaction. InstallAnywhere also makes it easier to integrate TXSeries with packaged applications that rely on the transaction-monitor facilities of the CICS OLTP as a component of larger industry-specific solutions.

Process checks have been added before installation or uninstallation to help avoid version inconsistency or overwrite during upgrades. Enhancements have been made to improve the readability of installation logs.

Simplified security management for IBM RACF users

Security handling is simplified when you use TXSeries in conjunction with a mainframe. The new external authentication manager (EAM) module uses Lightweight Directory Access Protocol (LDAP) to integrate with the version of IBM Resource Access Control Facility (IBM RACF®)that is supplied with the IBM z/OS operating system, Version 1.7 or later. TXSeries can define and maintain all system users in an RACF repository. It enables users and system administrators to maintain a centralized security repository for both TXSeries and CICS TS. These functions help to save time for administrators and developers, and potentially reduce security risk.

TXSeries extends support for the most recent versions of other commonly used products, including databases, communications subsystems and system compilers for programming languages supported by TXSeries.

For more information

IBM TXSeries for Multiplatforms, Version 7.1 delivers significantly more capabilities, while helping to reduce the complexity and cost of administration. To learn more about TXSeries for Multiplatforms transaction-management solutions, contact your IBM representative or IBM Business Partner, or visit

http://www-01.ibm.com/software/htp/cics/txseries/.

To learn more about IBM's SOA offerings, visit

http://www-01.ibm.com/software/solutions/soa/

IBM TXSeries for Multiplatforms, Version 7.1 at a glance

Supported operating systems

- AIX, Version 5.3, Version 6.1
- Windows Server 2003, Windows VISTA, Windows XP, Windows 2008
- Sun Solaris Operating Environment, Version 10
- HP-UX 11i, Version 2, Version 3

AIX

Hardware requirements

- Any IBM System p™ hardware capable of running AIX, Version 5.3 with Technology Level 7
- Any IBM System p™ hardware capable of running AIX, Version 6.1 with Technology Level 2
- 1 GB available disk space
- 256 MB RAM recommended (memory and disk requirements depend on TXSeries component configuration)

Software requirements

- AIX, Version 5.3 with Technology Level 7, Version 6.1 with Technology Level 2

Windows

Hardware requirements

- Any Intel® Pentium® II or faster, 32-bit processor-based machine or equivalent, capable of running Microsoft Windows 2003 Server
- Any Intel® Pentium® II or faster, 32-bit processor-based machine or equivalent, capable of running Microsoft Windows 2008 Server
- 1 GB available disk space
- 256 MB RAM recommended (memory and disk requirements depend on TXSeries component configuration)

Software requirements

- Windows Server 2003 with Service Pack (SP) 2
- Windows Server 2008 with Service Pack (SP) 1
- Windows VISTA
- Windows XP Professional Edition

Sun Solaris Operating Environment

Hardware requirements

- Any Sun SPARC or UltraSPARC desktop or server capable of running Sun Solaris Operating Environment, Version 10
- 1 GB available disk space
- 256 MB RAM recommended (memory and disk requirements depend on TXSeries component configuration)

Software requirements

- Sun Solaris Operating Environment, Version 10

HP-UX

Hardware requirements

- Any HP PA-RISC hardware capable of running HP-UX 11i
- Any HP Integrity hardware capable of running HP-UX 11i
- 1 GB available disk space
- 256 MB RAM recommended (memory and disk requirements depend on TXSeries component configuration)

Software requirements

- HP-UX 11i, Release 2 (11.23)
- HP-UX 11i, Release 3 (11.31)

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