WebSphere® software

IBM TXSeries for Multiplatforms, Version 6.1

Highlights

■ **Delivers the next generation of distributed CICS transaction processing for the AIX, Microsoft Windows, HP-UX and Sun Solaris platforms**

■ **Provides a managed application-hosting environment to support failure detection and recovery, and to synchronize access to shared data**

■ **Enables you to develop managed TXSeries CICS transactional services written in COBOL, C, C++, PL/I and Java**

■ **Provides an excellent deployment environment for high-performance, distributed transactions that integrate well in your SOA**

■ **Enables you to scale up to centralized CICS Transaction Server for z/OS as your business needs evolve**

■ **Offers simplified installation, configuration and administration by removing the DCE and Encina prerequisites from all supported platforms**

■ **Provides a powerful and intuitive new Web-based administration console, designed to look and operate like the WebSphere Application Server administration console**

■ **Offers a higher-availability infrastructure that enables TXSeries to withstand planned or unplanned downtime of XA-connected resources**
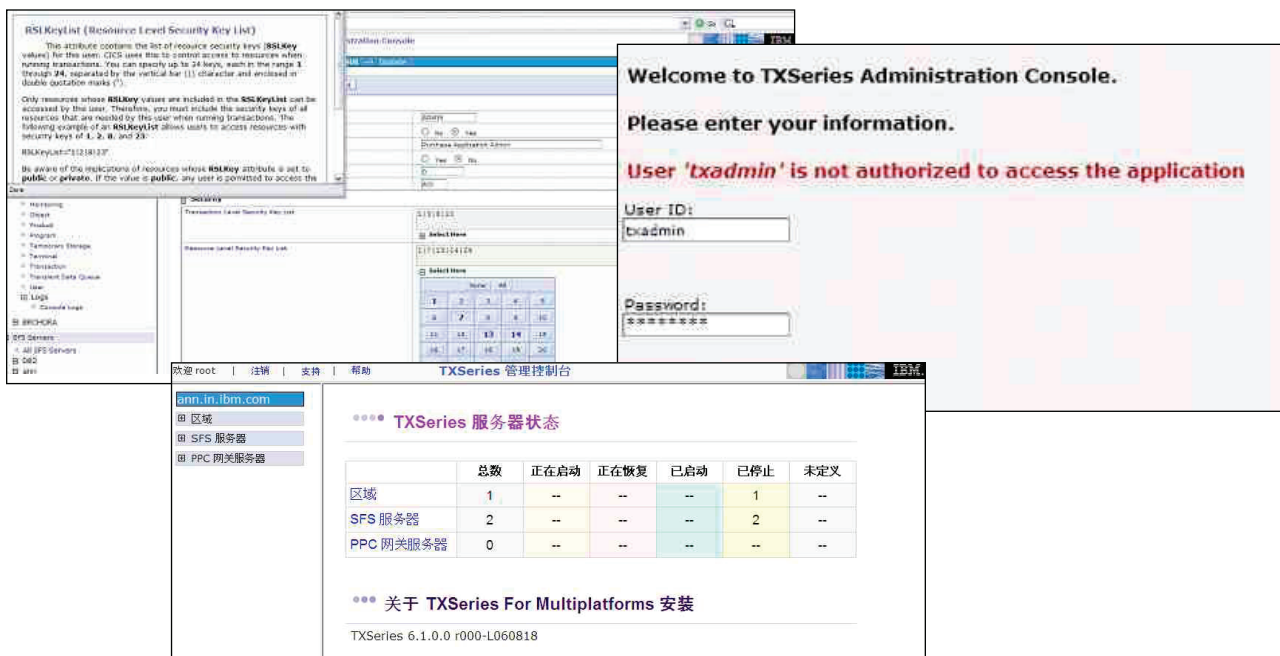

Figure 1. TXSeries for Multiplatforms, Version 6.1 comes with an advanced and user-friendly Web-based administration console that supports security-rich remote administration, enabling TXSeries systems and resources to be easily and intuitively managed in all Group 1 languages.

A transaction-processing monitor is an essential 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.

As a distributed transaction server, as well as a rapid-deployment, transactional-integration platform, IBM TXSeries® for Multiplatforms has, for more than a decade, delivered high-performance transaction services in a modern, reusable, critical applications environment. It enables you to maximize the effectiveness of COBOL, C, C++, PL/l and Java™ applications, as well as the employees skilled in these languages, across IBM AIX®, Microsoft® Windows®, Sun Solaris and HP-UX platforms. You can use the high-performing, distributed

transactional services deployed in TXSeries for Multiplatforms in a stand-alone environment, or in support of larger mainframe and Java Enterprise Edition (Java EE) application deployments. And TXSeries uniquely offers you the ability to scale up to a centralized IBM CICS® Transaction Server for z/OS solution, as your business needs evolve.

Kick-start your SOA success story here

Service oriented architecture (SOA) is a business-centric IT architectural approach that supports integrating your business as linked, repeatable business tasks, or services. SOA helps you build composite applications, which are applications that draw upon function from multiple sources. As a result, SOA can deliver real business value by giving your organization flexibility, supporting reuse and helping to decrease cost.

With TXSeries for Multiplatforms, you can develop managed transactional services written in COBOL, C, C++, PL/l and Java. You can integrate these services with IBM WebSphere® SOA foundation technologies, enabling end-to-end, distributed, mixed-language solutions within your SOA.

The Java 2 Platform, Enterprise Edition (J2EE) Connector Architecture (JCA) interface provided in IBM CICS Transaction Gateway can connect to TXSeries applications from IBM WebSphere SOA server products such as IBM WebSphere Application Server, IBM WebSphere Enterprise Service Bus (WebSphere ESB) and IBM WebSphere Process Server. You can use IBM WebSphere MQ to connect TXSeries to IBM WebSphere Message Broker, or to any other product that supports native WebSphere MQ transport. These capabilities make TXSeries an excellent deployment environment for integrating high-performing, distributed transactional applications into your SOA.

The next generation of distributed CICS transaction processing

TXSeries for Multiplatforms, Version 6.1 delivers a significant step forward in distributed CICS transaction-processing monitor technologies by internalizing the functions provided by IBM DCE and IBM Encina® infrastructure. They have been replaced with equivalent systems functions within the CICS online transaction processor (OLTP) and the CICS structured file server (SFS).

- CICS OLTP

  The CICS OLTP supports the base-level CICS application programming interface (API) with 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 can provide 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 Transaction Server and even non-CICS programs can share SFS files to help maximize the ability of these applications to interoperate in an enterprise environment.

TXSeries for Multiplatforms 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 helps enable COBOL, C, C++, PL/I and Java specialists to develop modern, reusable applications that fit into a corporation's enterprise-wide requirements.

Applications hosted in TXSeries can communicate with CICS Transaction Server for z/OS through CICS intersystem communication (CICS ISC) mechanisms — meaning that 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 software an excellent companion product for enterprise mainframe deployments.

Offering less complexity and more functionality
TXSeries for Multiplatforms, Version 6.1 is a major new release that delivers a significant number of improvements aimed at making the product easier to use and more robust through a collection of useful new features. Enhancements have been made in three key areas:

A significantly simplified infrastructure
TXSeries for Multiplatforms, Version 6.1 extends and enhances the next generation of distributed CICS transaction-processing solutions by providing a version of TXSeries without the DCE or Encina prerequisites across the AIX, Windows, HP-UX and Sun Solaris platforms. This capability means that the installation, configuration and administration of TXSeries servers is simplified, helping to increase system programmer and system administrator productivity.

Separate configuration of DCE or Encina applications is no longer necessary because all the required DCE and Encina functions have been internalized and are transparent to TXSeries users. A single command set provides the required operations, which helps reduce the time and expense to train users and administrators to understand new configurations and concepts. Also, CICS processes now communicate using secure shared memory, which can enhance the performance and security of applications without requiring additional configuration or administration.

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

New intuitive administration capability
TXSeries, Version 6.1 also delivers a powerful and intuitive new Web-based administration console, which helps further reduce complexity and introduces significant new function. The Web-based interface is designed to look and behave in a similar manner to the WebSphere administration console. It lets you intuitively manage and configure TXSeries systems and resources.

The new TXSeries Web-based administration console provides an extensive range of new capabilities that include:

- *Security-rich remote administration using a Web-based interface that enables authorized users to administer the TXSeries system from a Web browser.*
- *Display of current status information for all configured TXSeries regions, SFSs and peer-to-peer communication (PPC) gateways.*
- *Intuitive grouping and sorting of information regarding TXSeries systems, properties, resources, transactions and so on.*
- *Assistance with the configuration of TXSeries resources using drop-down menus, radio buttons, tables, online help and so on.*
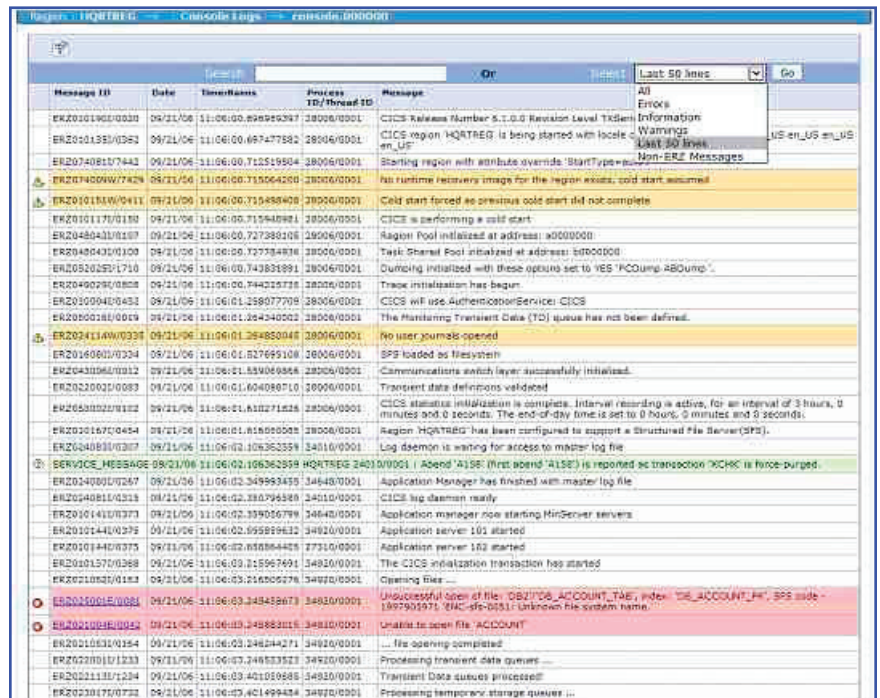

Figure 2. Problem-determination capabilities are enhanced with the new event-log viewing capability of the new administration console.

- *Problem-determination capabilities that enable viewing, filtering and searching of event logs, with error codes now hyperlinked to message explanations.*
- *Availability of the administration console in all Group 1 languages, including French, Korean, Chinese, Spanish, Portuguese-Brazilian, German, Japanese, Italian and English.*

More power and higher availability

TXSeries for Multiplatforms, Version 6.1 also adds to its core value proposition by delivering higher availability of CICS regions than previous versions. A new infrastructure enhancement now enables TXSeries regions to remain up and running even when an XA-connected database or resource manager becomes unavailable. As a result, TXSeries now has the increased resiliency to withstand planned or unplanned downtime of the database, or other XA-compliant resource managers. In the event of an outage of an XA-connected database, TXSeries CICS regions can continue running transactions that do not need to interact with the unavailable data source. Transactions that require data from the unavailable database return the appropriate error message and are not processed. TXSeries takes all appropriate actions to help ensure that full data integrity is maintained. When the database is returned to its running state, it is available for all TXSeries transactions to use again.

With this release, TXSeries also includes enhancements to the `cicscp` command, enabling the current status of regions and other servers to be discovered using the enhanced options and function added with this command. Details about the installed version of TXSeries and maintenance that has been applied can also be obtained using this command.

Extending platform capabilities

Along with the previously discussed new function, a number of enterprise-integration features that were originally delivered in TXSeries for Multiplatforms, Version 6.0 on the AIX platform have been extended to all supported platforms in TXSeries for Multiplatforms, Version 6.1.

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 RACF® that is supplied with IBM z/OS®, Version 1.7 or later. TXSeries can define and maintain all system users in a RACF repository—and enables users and system administrators to maintain a single user ID and password for both TXSeries and CICS Transaction Server—helping to save user and developer time, and potentially reducing 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. Support has also been extended for IBM Business Partner Acucorp's open systems COBOL, called *ACUCOBOL-GT.* This COBOL development system includes a compiler, a source-level interactive debugger and nearly a dozen support utilities.

Connectivity between remote TXSeries regions using SyncLevel 2 (SL2) over TCP/IP has now been enabled—helping to ensure maximum transactional integrity of physically distributed data-sources using standards-based networking. This capability was a restriction in TXSeries for Multiplatforms, Version 6.0.

For more information

IBM TXSeries for Multiplatforms, Version 6.1 delivers significantly more capabilities, while helping to reduce the complexity and cost of administration. To learn more about TXSeries transaction-management solutions, contact your IBM representative or IBM Business Partner, or visit:

ibm.com/software/txseries

To learn more about IBM's SOA offerings, visit:

ibm.com/soa

IBM TXSeries for Multiplatforms, Version 6.1 at a glance

Supported operating systems

- AIX, Version 5.3
- Sun Solaris Operating Environment, Version 10
- Windows Server 2003
- HP-UX 11i, Version 2

AIX

Hardware requirements

- Any IBM System p™ hardware capable of running AIX, Version 5.3 with Maintenance Level 3
- 1GB available disk space
- 256MB RAM recommended (memory and disk requirements depend on TXSeries component configuration)

Software requirements

- AIX, Version 5.3 with Maintenance Level 3

Windows

Hardware requirements

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

Software requirements

- Windows Server 2003 with Service Pack (SP) 1

Sun Solaris Operating Environment

Hardware requirements

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

Software requirements

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