



IBM TXSeries for Multiplatforms Version 5.1

Part 3: Comparing CICS® Transaction Server for z/OS® and TXSeries® for Multiplatforms V5.1

CICS® for Unix
and Windows® environments

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What is TXSeries?

- **IBM TXSeries™ for Multiplatforms includes the CICS and Encina® application servers for AIX®, HP-UX, Solaris and Windows systems.**
- **TXSeries CICS is part of IBM's CICS family of products. You can optimize your applications' cost, performance, and qualities of service by choosing the appropriate set of CICS clients, gateways and servers to match your business needs.**

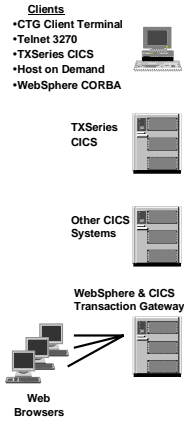
What is TXSeries?

- **Use TXSeries CICS to ...**

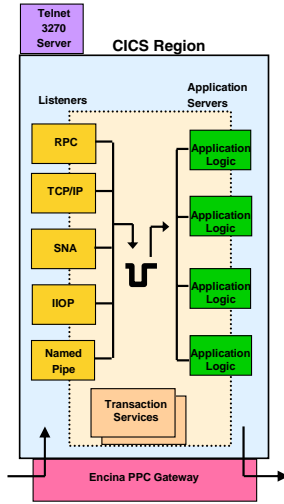
- **Build** new applications using traditional languages including COBOL, PL/I, C, C++, and Java
- **Reuse** existing applications and application programming skill sets in your organization
- **Extend** CICS applications to the web and web services via the CICS Transaction Gateway and WebSphere® Application Server
- **Access** data and applications in various distributed and back-end systems including CICS and IMS

TXSeries CICS in Pictures

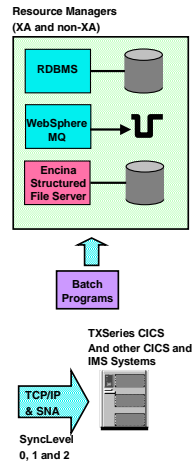
Inbound Work



TXSeries - CICS



Target Resources



TXSeries CICS is CICS

- **Designed for mission-critical applications**
 - Scalable
 - Available
 - Secure
 - Comprehensive interoperability
- **Choice of programming models**
 - Procedural or Object-oriented
- **Choice of programming languages**
 - COBOL, PL/I, C, C++, Java
- **Supports open standards**
 - Java, CORBA, X/Open XA interfaces

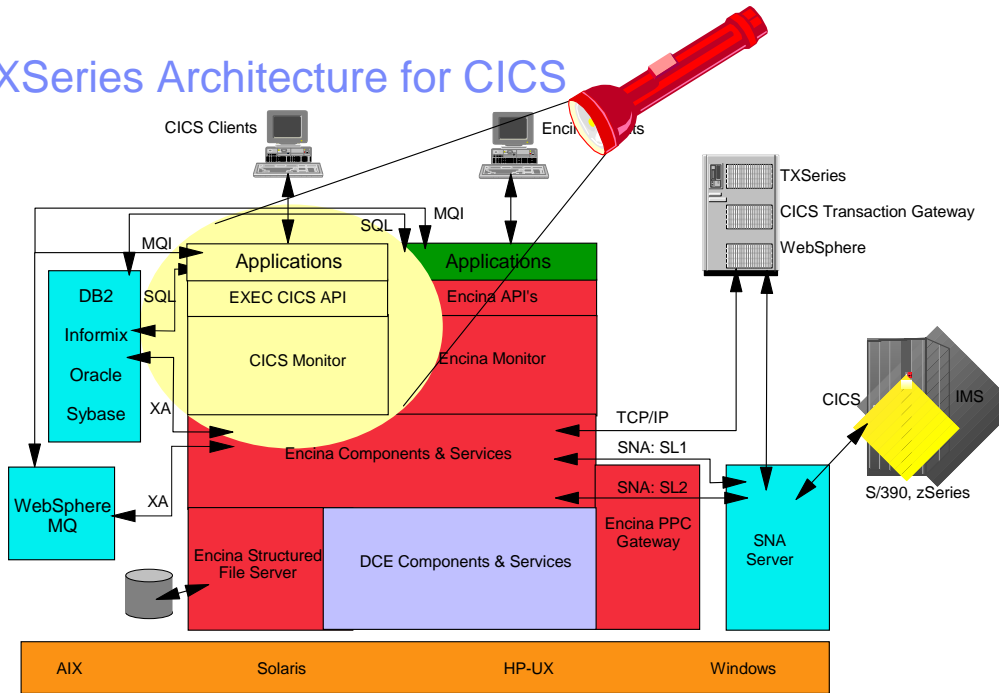
TXSeries CICS Architecture

- **Applications are isolated and independent of work origin**
 - Execute in own Application Server process
- **Pool of Application Server processes actively managed**
 - Minimum no. of servers
 - Maximum no. of servers
- **Transaction scheduling**
 - Automatically balances workload over application servers

TXSeries CICS must do more than CICS

- **Provides CICS facilities**
 - EXEC CICS API
 - CICS intersystem communication
- **Supports XA-compliant Resource Managers**
 - Relational Database Management Systems
 - IBM DB2®, Oracle®, Informix, Sybase, Microsoft® SQL Server
 - Messaging systems
 - WebSphere MQ
 - Includes a record-oriented file system
 - Provides VSAM-like support - used by CICS
- **Batch access as well as online**
- **Runs on multiple platforms**
 - AIX, HP-UX, Solaris, Microsoft Windows

TXSeries Architecture for CICS



Deployment Patterns

- **Intelligent gateway/router for host CICS/IMS systems**
 - security checks
 - integration with other distributed systems
 - smart routing to host region
- **Branch office server**
- **Application server**
 - New apps for customers who don't have mainframes
 - ISVs who offer their CICS-based product for distributed platforms
 - Customers rehosting targeted applications from the mainframe

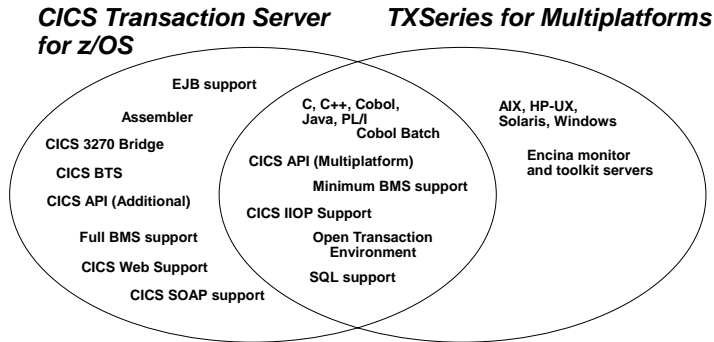
- **Solutions typically include ...**
 - WebSphere and CICS Transaction Gateway – for web clients
 - CICS Universal Client – for desktop clients
 - One or more relational databases

Comparing Functionality

FUNCTION	TXSeries CICS V5.1	CICS TS for z/OS V2.3
CICS API	✓ ~ CICS/ESA V4.1 level	✓ Latest level
CICS SPI	✓ ~ CICS/ESA V4.1 level	✓ Latest level
EXCI	✓ Use ECI	✓
COBOL	✓	✓
C	✓	✓
C++	✓	✓
CICS C++ Foundation Classes	✓ AIX & Windows only	✓
ASSEMBLER	✗	✓
Java (including JCICS classes)	✓ Not on HP-UX	✓ Latest level
Enterprise JavaBeans	✗	✓
IIOP	✓ AIX only	✓
CICS Web Support	✗	✓
3270 Bridge	✗	✓
CICS Transaction Gateway and CICS Universal Client support	✓	✓
RDO	✓ Command line ✓ GUI on AIX & Windows only	✓
Intersystem Communication	✓	✓
CICS File Manager support	✓ SFS (emulates VSAM) ✓ DB2+Oracle (emulates VSAM)	✓ VSAM
Relational Database support	✓ DB2, Oracle, Sybase, Informix ✓ Microsoft SQL Server	✓ DB2
WebSphere MQ support	✓	✓
Open Transaction Environment	✓	✓
CICSplex SM	✗	✓

Comparing API

Comparing CICS API support



TXSeries 5.1 supports a subset of the complete CICS API at approximately the level of CICS/MVS 4.1+ Java API support (JCICS) as for CICS TS for z/OS V2.2

Supplied CICS Transactions

CEBR	Browse Temporary Storage/Transient Data
CECI	Command Level Interpreter
CECS	Command Level syntax checker
CEDF	Execution Diagnostic Facility
CADB	Invoke Micro Focus COBOL Animator
CJDB	Enable Java application debug
CDCN	Enable IBM Application Debugging Program
CALF	VSAM file conversion
CEMT	Master Terminal
CMLV	Console message log viewer
CSTD	Display statistics
CESF	User Sign-off
CESN	User Sign-on
CRTE	Transaction Router

TXSeries CICS Connectivity

TXSeries CICS connected to.....	TCP/IP	SNA
SERVERS		
CICS TS for z/OS or S/390	x	✓
CICS for MVS/ESA V4.1	x	✓
CICS TS for VSE/ESA	x	✓
CICS/VSE V2.3	x	✓
TXSeries CICS	✓	✓
TXSeries Encina	✓	✓
WebSphere Application Server and other Web servers via the CICS Transaction Gateway	✓	✓
WebSphere Application Server and other Web Applications Servers via IIOP	✓	x
CPI-C based applications	x	✓
CLIENTS		
Web Browsers (via the CICS Transaction Gateway)	✓	✓
CICS Universal Clients	✓	✓
TXSeries Clients	✓	x
Telnet 3270 Clients	✓	x
IIOP Clients	✓	x

CICS Intersystem Communication

- **Full CICS Intersystem Communication support**
 - Function Shipping
 - Distributed Program Link
 - Transaction Routing
 - Distributed Transaction Processing
 - Asynchronous Transaction Start
 - Synch Level 1 or 2 support over SNA
 - Synch Level 1 support over TCP/IP
 - *TXSeries CICS to TXSeries CICS only*

Security

- **CICS provided**
 - Password sign-on
 - Transaction access
 - Resource access
- **DCE based security (optional)**
 - Centralized security for entire DCE environment
 - Authenticated and encrypted RPCs
- **External Security Manager support**
 - User Replaceable Module
- **External Authentication Manager support**
 - User Replaceable Module - allows integration with RACF, LDAP, etc.

TXSeries CICS Resource Definitions

- **Traditional CICS resource types**
 - Programs, Transactions, Files, Transient Data Queues, etc
 - Region Definition (RD) resource type equivalent to the SIT
 - Resource Definition Online (RDO) is supported
- **Resource Definition**
 - Command line interface on all platforms
 - Graphical User Interface on AIX and Windows
 - Windows - TXSeries Administration Tool
 - AIX - exploits the AIX System Management Interface Tool (SMIT)
 - Resource definition database composed of stanza files
 - One stanza file per resource type

CICS Resource Definition

CICS/390	TXSeries CICS
System Initialization Table (SIT)	Region Definitions (RD)
Destination Control Table (DCT)	Transient Data Definitions (TDD)
File Control Table (FCT)	File Definitions (FD)
Journal Control Table (JCT)	Journal Definitions (JD)
Monitoring Control Table (MCT)	Monitoring Definitions (MD)
Program Control Table (PCT)	Transaction Definitions (TD)
Program List Table (PLT)	Included in the Region Definitions (RD)
Processing Program Table (PPT)	Program Definitions (PD)
Signon Table (SNT)	User Definitions (UD)
Terminal Control Table (TCT)	Terminal Definitions (WD); Communications Definitions (CD)
Temporary Storage Table (TST)	Temporary Storage Definitions (TSD)
Transaction List Table (XLT)	Included in the Transaction Definitions (TD)

Other Differences

- **Other Differences**

- CICS user exits
- Application debugging tools
- System debugging tools
- Administrative tools and procedures
- Monitoring
- Designing solutions for high Qualities of Service

Additional Information

- **TXSeries for Multiplatforms V5.1 announcement letter**
 - ZP04-0135 available at <http://www.ibm.com/wwoi>
- **Main Website**
 - <http://ibm.com/software/htp/txseries>
- **Support Web page**
 - <http://ibm.com/software/htp/txseries/support>
 - PTFs, Hints & Tips, Supported Software Stack
- **Publications Web page**
 - <http://ibm.com/software/htp/txseries/library>
 - Recommended publications
 - Concepts and Planning
 - Planning and Installation Guide
 - Release Notes

Summary

- **TXSeries CICS is designed for running mission-critical applications**
 - High availability, high transaction rates, high scalability
 - Proven track record
- **TXSeries CICS provides a high degree of compatibility and interoperability with CICS Transaction Server for OS/390, z/OS and VSE/ESA**
- **TXSeries CICS provides comprehensive integration capabilities**
 - Runs on multiple platforms
 - Mainframe connectivity
 - WebSphere interoperability
 - Wide range of clients

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