ORACLE TUXEDO JCA ADAPTER

FEATURES

- Call Tuxedo services from JEE applications (Servlets, JSPs, EJBs and POJOs)
- Call EJBs and POJOs from Tuxedo services
- Bi-directional global XA transactions context propagation between JEE application server and Tuxedo
- Security context propagation from JEE application server to Tuxedo
- Common Client Interface with support for use of all Tuxedo buffer types
- JATMI support for simplified access and optimized performance
- SSL encryption across network links
- Support for Tuxedo domains features, such as failover, compression
- Support for JCA 1.5 and 1.6 compliant application servers
- Interoperability with Tuxedo 8.1 and later versions
- Oracle JDeveloper integration via SOA Suite

BENEFITS

- Standards-based interoperability among distributed applications that span diverse hardware and software platforms
- No need to change Tuxedo domains configuration
- Global XA transactions ensure data consistency
- Facilitates the development of heterogeneous distributed applications with a cross-platform, cross-language data model.
- Lower your TCO by leveraging existing IT assets without the need for costly rewrites, integrate existing Tuxedo services into a SOA-based framework.

Oracle Tuxedo JCA Adapter is a JEE Connector Architecture (JCA) based, bi-directional connector between Tuxedo applications and JCA compliant JEE application servers. Oracle Tuxedo JCA Adapter provides transparent and reliable access to existing Oracle Tuxedo services from JEE applications using standard Common Client Interface (CCI) and highly optimized Tuxedo JATMI. In addition, using Oracle Tuxedo JCA Adapter, Oracle Tuxedo applications can call EJBs and POJOs hosted in a JEE application server. The result is composite applications preserving existing investment in Tuxedo and flexibility in interoperability among distributed applications that span diverse hardware and software platforms.
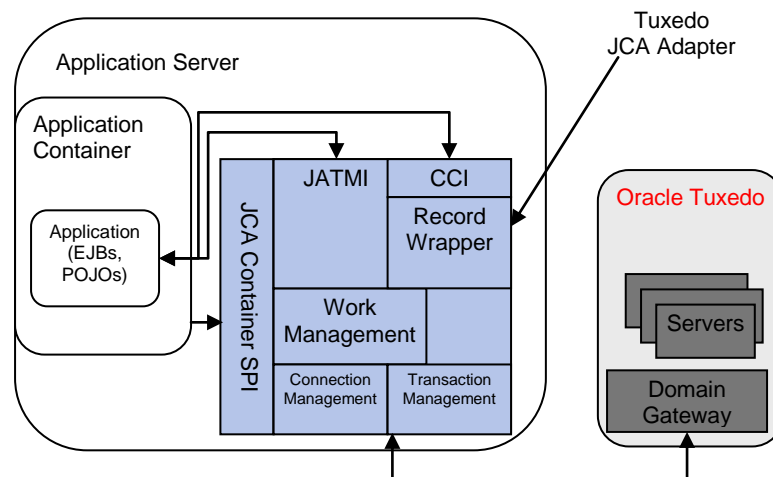

Figure 1. Oracle Tuxedo JCA Adapter architecture

Standards-based Development Environment

Oracle Tuxedo JCA Adapter supports JCA standard Common Client Interface (CCI) to access Tuxedo services from JEE applications. It supports CCI records, which can be used in conjunction with all Tuxedo buffer types for optimized data handling. Support of standard CCI allows easy access to Tuxedo services from JCA enabled frameworks. CCI supports synchronous and asynchronous interaction styles.

In addition to CCI, Tuxedo JCA Adapter also supports Tuxedo JATMI (Java Application To Monitor Interface) API for simplified and optimized access to Tuxedo services. JATMI is a Java API similar to the Tuxedo ATMI. In addition to support of synchronous and asynchronous interaction styles, JATMI also supports

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Tuxedo queuing APIs (tpenqueue, tpdequeue APIs) and conversational APIs, when invoking Tuxedo services from a JEE Application Server.

Global Transaction Support

Oracle Tuxedo JCA Adapter supports global transactions in addition to local and delegated transactions. With Oracle Tuxedo JCA Adapter, your application can update a resource on the JEE application server and the other resource using Tuxedo service. All this can be done within the same global transaction, maintaining the integrity across diverse platforms. Transactions can be started on the JEE application server as user transactions, or from the Tuxedo application as Tuxedo global transactions.

Simple Configuration and Deployment

Oracle Tuxedo JCA Adapter can be deployed to a JCA 1.5 or JCA 1.6 compliant application server. Configuration of Tuxedo JCA Adapter is based on standard ra.xml and a Tuxedo specific configuration file. The adapter is deployed using standard application server tools or console and does not require any additional tool for operations and administration.

The standard configuration mode closely follows the way configuring domains is performed in Tuxedo. It is designed for flexibility, fine-tuning of performance and optimal use of resources.

The factory-based configuration mode offers flexibility and broader application server support. The configuration artifacts of the Tuxedo specific configuration file are moved to an application server dependent location for access by that application server's console.

The client only configuration mode allows Tuxedo JCA Adapter to act as a client to Tuxedo domain. Using this mode, simplifies Tuxedo JCA configuration on the application server side and does not require any changes in the Tuxedo configuration.

Oracle Tuxedo JCA Adapter does not require any component to be installed on the Tuxedo node and connects to Tuxedo domain gateway as depicted in figure 1.

Security

Oracle Tuxedo JCA Adapter supports identity propagation of users logged into JEE application servers. Tuxedo JCA Adapter can pass user identity to Tuxedo eliminating need to login again to Tuxedo application, thus creating single sign-on across application platforms. User identity is then used by Tuxedo to control access to Tuxedo services.

Oracle Tuxedo JCA Adapter can also help establish mutual trust relationship between JEE application server and Tuxedo applications. The connection can be mutually authenticated either through password configuration or through use of SSL certificates.

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Oracle Tuxedo delivers a robust platform to run high-volume applications across distributed, heterogeneous computing environments, enabling transactions that stretch from customer-facing, business-critical applications to back-office processes, across any system, anywhere in the world.

RELATED PRODUCTS:

- Oracle Tuxedo
- Oracle Tuxedo System and Applications Monitor (TSAM)
- Oracle Tuxedo SALT
- Oracle Tuxedo Mainframe Adapters
- Oracle Tuxedo Jolt
- Oracle Tuxedo Application Rehosting Workbench
- Oracle Tuxedo Application Runtime for CICS and Batch
- Oracle Tuxedo Application Runtime for IMS
- Oracle Tuxedo Application Runtime for Batch
- Oracle WebLogic Server
- Oracle JDeveloper
- Oracle SOA Suite

Optimize Performance, Scalability, and Availability

Oracle Tuxedo JCA Adapter offers full support for multiple interaction styles, including inbound/outbound, synchronous/asynchronous and conversations. Oracle Tuxedo JCA Adapter is based on a highly optimized Tuxedo domains architecture/protocol enabling it to provide reliability, availability, scalability and performance comparable to Tuxedo domains. Tuxedo JCA Adapter can automatically perform load balancing of requests across available Tuxedo nodes or route requests to available remaining nodes in case of catastrophic failure in a cluster environment, thus improving the availability and reliability of composite applications.

SOA and JDeveloper Interactive Development Environment ready

Service Oriented Architecture (SOA) provides an enterprise architecture that supports building connected enterprise applications to provide solutions to business problems.

Oracle Tuxedo JCA Adapter, in conjunction with the Oracle JDeveloper IDE and Oracle SOA Suite, facilitates the development of enterprise applications as modular business web services that can easily integrate with and reuse Tuxedo services, thus creating a truly flexible, adaptable IT infrastructure.

Oracle SOA Suite recognizes the Oracle Tuxedo JCA Adapter as a binding component and thus Tuxedo services are seen as native services in a composite application. All features of the Oracle Tuxedo JCA Adapter can be leveraged when accessing Tuxedo services in a SOA environment using graphical composition tools.

Contact Us

For more information about Oracle Tuxedo JCA Adapter, please visit oracle.com or call +1.800.ORACLE1 to speak to an Oracle representative.

Oracle is committed to developing practices and products that help protect the environment

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