

## **JD Edwards EnterpriseOne Tools**

System Overview Guide

Release 9.1.x

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# Preface

Welcome to the *JD Edwards EnterpriseOne Tools System Overview Guide*.

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**Note:** This guide has been updated for JD Edwards EnterpriseOne Tools Release 9.1 Update 4.2. For details on documentation updates, refer to the JD Edwards EnterpriseOne Tools Net Change for Tools Documentation Library.

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## Audience

This guide is intended as an overview of hardware and software requirements for system administrators and technical consultants.

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## Related Documents

For more information, see the resources list at the end of each section in this guide.

## Conventions

The following text conventions are used in this document:

Convention	Meaning
<b>boldface</b>	Boldface type indicates graphical user interface elements associated with an action, or terms defined in text or the glossary.

Convention	Meaning
<i>italic</i>	Italic type indicates book titles, emphasis, or placeholder variables for which you supply particular values.
monospace	Monospace type indicates commands within a paragraph, URLs, code in examples, text that appears on the screen, or text that you enter.



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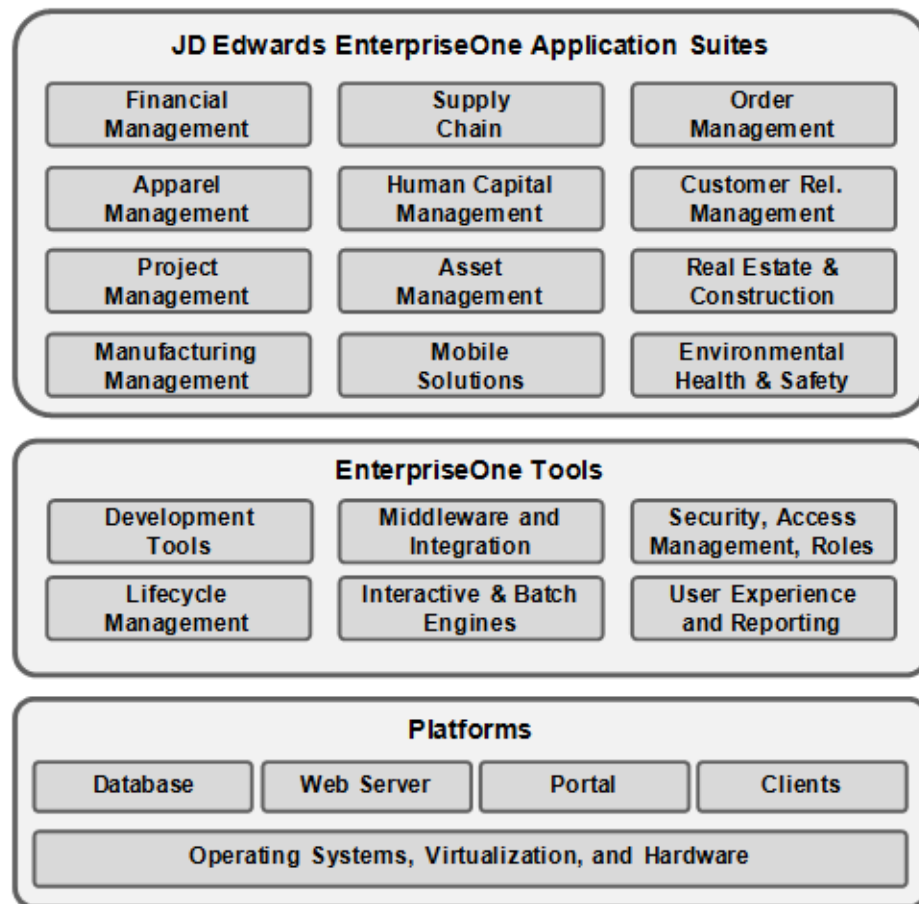
# Overview of the JD Edwards EnterpriseOne Architecture

JD Edwards EnterpriseOne is a complete suite of modular, preintegrated, industry-specific business applications designed for rapid deployment, ease of administration, and low total cost of ownership. It is ideally suited for organizations that manufacture, construct, distribute, service, or manage products or physical assets.

JD Edwards EnterpriseOne Tools is the runtime architecture and integrated development environment at the heart of the EnterpriseOne architecture. JD Edwards EnterpriseOne Tools is the technology layer that integrates with database systems, web application servers, reporting tools, and other third-party solutions. JD Edwards EnterpriseOne Tools provides an abstraction layer that allows the JD Edwards EnterpriseOne applications to function without a direct dependency on the platforms and middleware beneath them.

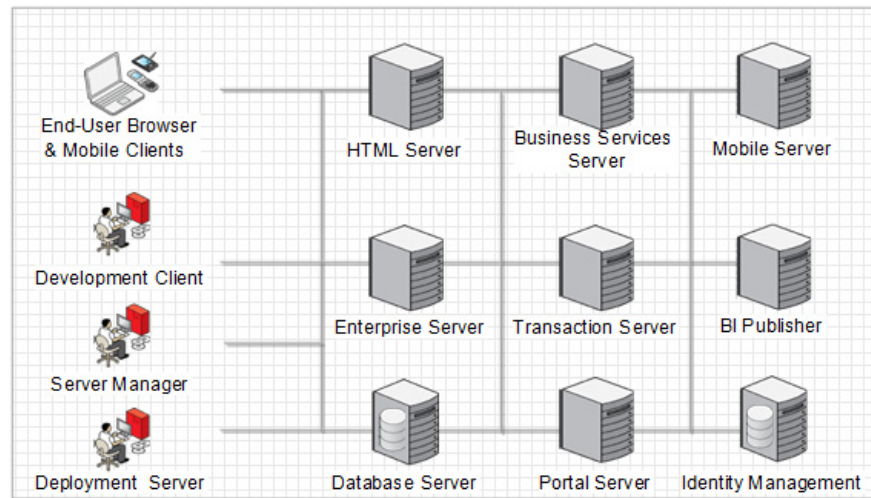
JD Edwards EnterpriseOne Tools supports the industry's leading hardware, operating systems, and database platforms. Moreover, JD Edwards EnterpriseOne applications look the same to application users, regardless of the database or hardware platform being used.

**Figure 1–1 JD Edwards EnterpriseOne Application Suites**



The following illustration provides a high-level overview of the components that comprise the JD Edwards EnterpriseOne technology layer. These components enable functionality such as user interface, security, reporting, and so on, across all JD Edwards EnterpriseOne application modules. Although depicted and often named as servers, these are actually logical components, which often can be colocated on the same physical hardware or installed into virtual machines.

**Figure 1–2 JD Edwards EnterpriseOne Technology Layer**



This System Overview Guide provides a brief description of each of these technology components within the JD Edwards architecture. The information will help you plan the topology of your JD Edwards EnterpriseOne implementation by helping you understand the general function of each component, which components are mandatory, which are optional, and which components run on which platforms.



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## Base Components

This chapter contains the following topics:

- [Section 2.1, "Enterprise Server"](#)
- [Section 2.2, "HTML Server"](#)
- [Section 2.3, "Database Server"](#)

### 2.1 Enterprise Server

This section discusses these topics:

- Overview of Enterprise Server
- Enterprise Server Architecture
- Enterprise Server Certified Platforms
- Additional References

#### 2.1.1 Overview of Enterprise Server

The JD Edwards EnterpriseOne Enterprise Server is a critical component of the EnterpriseOne architecture. It validates users (Security Server), runs Business Logic (Logic Server) and Batch processing (UBE's), Interoperability Logic (XML requests), Embedded BI, and many other critical functions for EnterpriseOne.

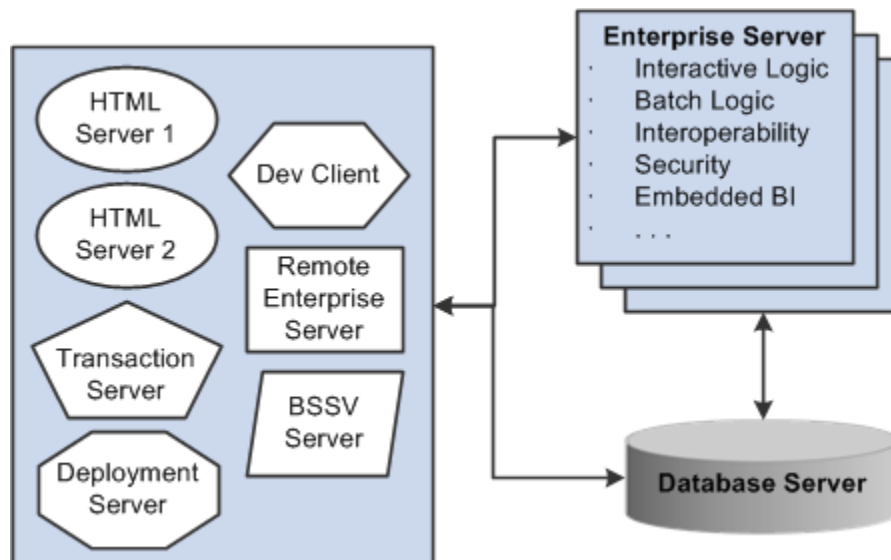
Using Object Configuration Manager (OCM), it is possible to create separate Enterprise Server instances to distribute workload or work type (Batch Server, Interactive Server, XML Server, JDBNet server, etc.), but each Enterprise Server instance is capable of doing all types of work if so desired and configured.

OCM can also be used to map third-party (e.g. Vertex, PC Miler) interface logic to an Enterprise Server where these products are installed, while most of the Interactive and Batch logic runs on larger server-class machines.

Enterprise Servers can be set up so that they trust each other from a Security perspective. This allows a central Security Server that can authenticate E1 Users, while their activities can run on other Enterprise Server instances.

## 2.1.2 Enterprise Server Architecture

**Figure 2–1 Enterprise Server Architecture**



The Enterprise Server is the central hub that receives requests from multiple clients as well as other Enterprise Server Instances. It communicates with the database for transactional processing and can be clustered for failover and hot-swap capabilities.

## 2.1.3 Enterprise Server Certified Platforms

Enterprise Server is certified to run on the following platforms:

- Linux / x86-64
- Oracle Solaris / SPARC
- Microsoft Windows /x86-64
- HP-UX / Itanium
- IBM AIX /Power
- IBM i/Power

## 2.1.4 Additional References

- Oracle Certification: <https://support.oracle.com>, Certifications tab
- Product = JD Edwards EnterpriseOne Enterprise Server
- *JD Edwards EnterpriseOne Tools Server and Workstation Administration Guide*
  - *JD Edwards EnterpriseOne Tools System Administration Guide*
  - *JD Edwards EnterpriseOne Tools Configurable Network Computing Implementation Guide*
  - My Oracle Support document [1382706.1]

## 2.2 HTML Server

This section discusses these topics:

- Overview of HTML Server
- HTML Server Architecture
- HTML Server Certified Platforms
- Additional References

## 2.2.1 Overview of HTML Server

The HTML Server component of the JD Edwards EnterpriseOne architecture is largely a presentation/user interface layer. It is one module of the JD Edwards EnterpriseOne web client solution architecture. The HTML Server also executes some Java processing; therefore, it is sometimes referred to as the Java Application Server (JAS). The terms HTML Server and JAS are synonymous.

The web client solution consists of the following:

### HTTP server

This makes the web client available via a TCP/IP port. The JD Edwards interactive applications are presented to the user via an html interface accessed through a port on an http server. Examples include Oracle HTTP Server, IBM HTTP Server, and Microsoft Internet Information Services (IIS).

### Java J2EE runtime environment

This is the Java-based web application server. JD Edwards web applications are hosted in the framework of a J2EE web application server, such as Oracle WebLogic Server or IBM WebSphere Application Server.

The J2EE environment is a web server plug-in for running Java servlets, JSBs and EJBs. HTML Server is running on top the J2EE environment and manifests itself as one or more Java Virtual Machines (JVMs). This is a runtime process which runs the java-based code, which generates the HTML pages presented to the user and runs a portion of the application logic. To run the logic and present the user interface, HTML Server accesses the Serial Objects tables, which contain the metadata for same (specs). A JNI-based generation process creates these Serialized Objects (F989998/F989999) from the TAM-formatted data in the JD Edwards EnterpriseOne metadata tables (F987\*). The Serialized Objects are suitable for manipulation by Java code.

### HTML Server

The role of HTML Server itself is to build the HTML, which presents the applications to the user. It also retrieves the other components necessary, such as .jpg graphics and JavaScript files which run some application logic on the browser.

The user logs into a known URL which points to the HTML Server instance in question. The URL contains a specific path on the machine hosting the J2EE instance as well as the http port pointing to that instance. The first page is a sign-in page. The user credentials are passed by HTML Server to the Security Server (which resides on the Enterprise Server) and authenticates them.

Application logic is coded in Event Rules (ER), a JD Edwards EnterpriseOne proprietary development language. This code takes the form of metadata called specifications (specs) which is read and interpreted by a JVM running on the HTML Server server in the web application server framework. ER code also makes some direct access to the JD Edwards EnterpriseOne Business data in the course of running application logic.

ER code in turn makes calls to Business Functions, which are written in ANSI C. Business Functions do not run in the HTML Server environment (Java-based), but are

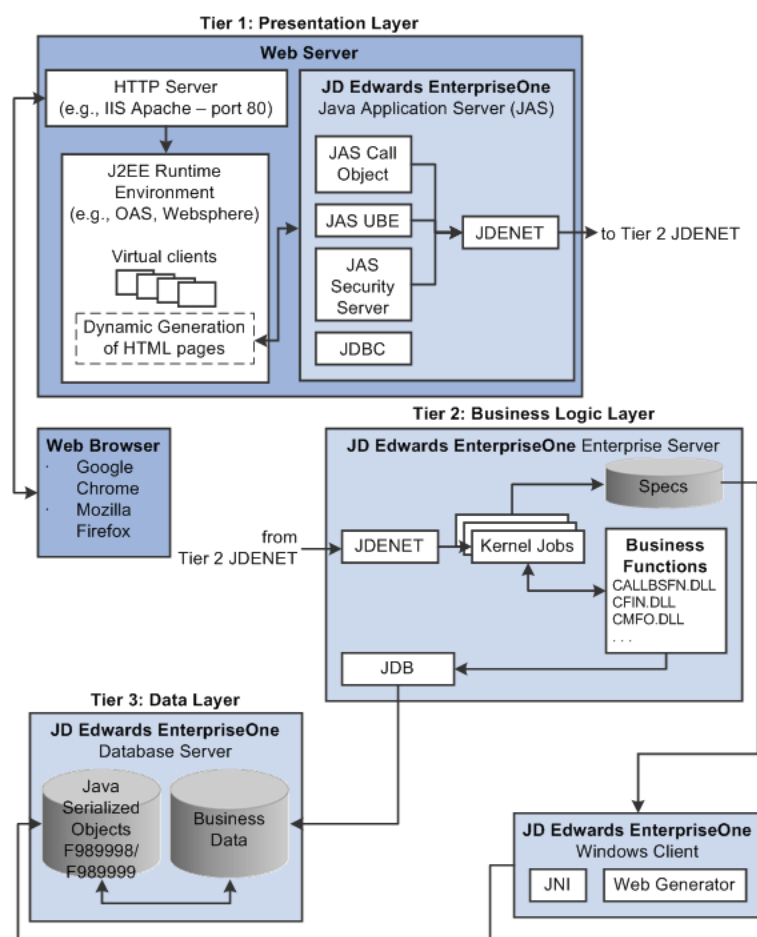
passed to the Enterprise Server (C-based). Only a few small, simple BSFNs (about two dozen) run on HTML Server as Java code plug-ins for performance reasons. The results are passed back to the machine running the HTML Server instance.

Finally, some logic actually runs on the browser itself in the form of javascript code. The .js executables are downloaded as part of the HTML stream.

The JD Edwards EnterpriseOne Enterprise Server and Database must be installed and ready to use before HTML Server is installed for production. HTML Server does not replace the Enterprise Server's functionality. All UBEs and most Business Functions run on the Enterprise Server.

## 2.2.2 HTML Server Architecture

**Figure 2-2 HTML Server Architecture**



## 2.2.3 HTML Server Certified Platforms

HTML Server is certified to run on the following platforms (operating systems and web application servers):

- Linux/x86-64
- Oracle Solaris/SPARC
- Microsoft Windows/x86-64



- HP-UX/Itanium
- IBM AIX/Power
- IBM i/Power
- Oracle WebLogic Server
- IBM WebSphere Application Server

## 2.2.4 Additional References

- Oracle Certification: <https://support.oracle.com>, Certifications tab  
Product = JD Edwards EnterpriseOne HTML Server
- *JD Edwards EnterpriseOne HTML Server on WebLogic Reference Guide for Microsoft Windows*
- *JD Edwards EnterpriseOne HTML Server on WebSphere Reference Guide for Microsoft Windows*

## 2.3 Database Server

This section discusses these topics:

- Overview of the Database Server
- Database Server Architecture
- Database Server Certified Platforms
- Additional References

### 2.3.1 Overview of the Database Server

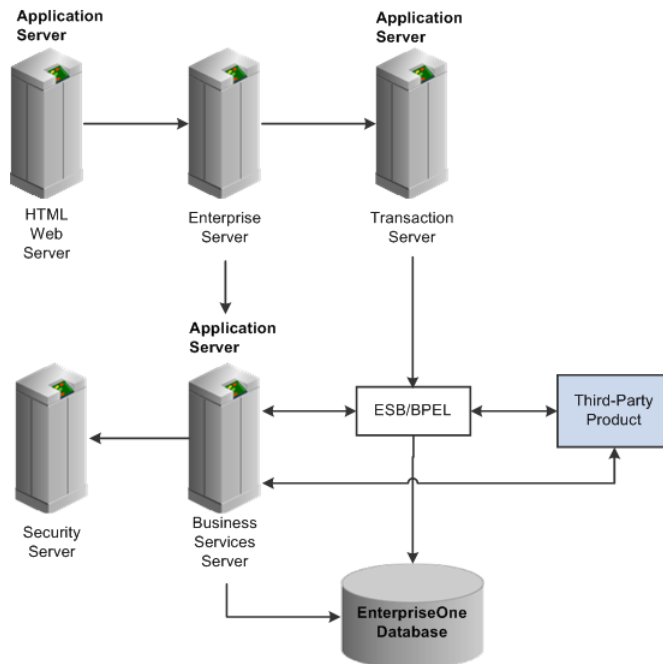
The Database Server is the generic term given to the server and the database management software that provides the storage of data used for the EnterpriseOne application. There can be multiple database sources serving the JD Edwards EnterpriseOne architecture. The database management software stores data in tables that are accessed by the application.

There are four different database management software systems that are supported by the JD Edwards EnterpriseOne application:

- Oracle Database
- Microsoft SQL Server
- IBM DB2
- IBM DB2 for Linux, Unix, and Windows (JD Edwards EnterpriseOne supports IBM DB2 only on AIX and Windows)

## 2.3.2 Database Server Architecture

**Figure 2–3 Database Server Architecture**



The EnterpriseOne Database serves as the repository of all of the tables used by the EnterpriseOne application.

### 2.3.3 Database Server Certified Platform

- Oracle Database on linux/x86-64; Oracle Solaris/SPARC; Microsoft Windows/x86-64; IBM AIX/Power; HP-UX/Itanium
- Microsoft SQL Server on Microsoft Windows/x86-64
- IBM DB2 on IBMi, IBM AIX/Power, and Microsoft Windows/x86-64

### 2.3.4 Additional References

- Oracle Certification: <https://support.oracle.com>, Certifications tab  
Product = JD Edwards EnterpriseOne Database Server
- *JD Edwards EnterpriseOne Tools Configurable Network Computing Implementation Guide*

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## System Administration and Monitoring

This chapter contains the following topics:

- [Section 3.1, "Deployment Server"](#)
- [Section 3.2, "Server Manager"](#)
- [Section 3.3, "Oracle Application Management Suite for JD Edwards EnterpriseOne"](#)

### 3.1 Deployment Server

This section discusses these topics:

- Overview of Deployment Server
- Deployment Server Architecture
- Deployment Server Certified Platforms
- Additional References

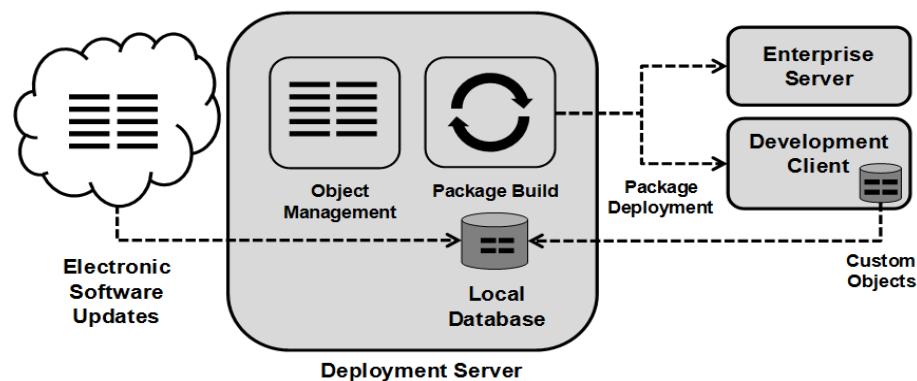
#### 3.1.1 Overview of Deployment Server

The complete JD Edwards EnterpriseOne product comprises many components, such as kernels that run on the enterprise server, Java components that run on web application servers, database tables and schemas that reside on the database server, and development clients with local copies of objects. The JD Edwards EnterpriseOne platform certification matrix provides a broad set of platform options for deploying these various components. Therefore, the complete set of possible deployment scenarios can be daunting.

As its name implies, the job of the deployment server is to help the system architect and system administrator to plan the topology of the JD Edwards EnterpriseOne components, to deploy those components to the appropriate servers, and to deploy Electronic Software Updates and custom modifications throughout the lifecycle of a JD Edwards EnterpriseOne implementation. The deployment server accomplishes these tasks regardless of which platforms the JD Edwards EnterpriseOne components run on.

### 3.1.2 Deployment Server Architecture

Figure 3–1 Deployment Server Architecture



### 3.1.3 Deployment Server Certified Platforms

The deployment server is certified to run on the following platforms:

- Microsoft Windows /x86-64 (64-bit)  
Server and desktop operating systems are supported.

### 3.1.4 Additional References

- Oracle Certification: <https://support.oracle.com>, Certifications tab  
Product: JD Edwards EnterpriseOne Deployment Server
- *JD Edwards EnterpriseOne Deployment Server Reference Guide for Enterprise Systems for Microsoft Windows*

## 3.2 Server Manager

This section discusses these topics:

- Overview of Server Manager
- Server Manager Architecture
- Server Manager Certified Platforms
- Additional References

### 3.2.1 Overview of Server Manager

Server Manager for JD Edwards EnterpriseOne is a web based application used to manage the complete life cycle of the JD Edwards EnterpriseOne server products. It is available with the JD Edwards EnterpriseOne Tools Release 8.97 and later. Server Manager supports the same JD Edwards EnterpriseOne application releases that are supported by the tools releases.

With JD Edwards Server Manager you can:

- Securely access and manage the configuration of your JD Edwards EnterpriseOne installed components from anywhere using a standard web browser

- Install, uninstall, and update your JD Edwards EnterpriseOne servers regardless of their physical location or platforms
- Start and stop any of your JD Edwards EnterpriseOne servers, Oracle WebLogic application servers, or supported third party J2EE application servers directly from the Management Console

Server Manager Features:

**Configuration Management:** Easily change and manage configuration settings for all managed servers. View each configuration item along with integrated help describing the setting.

**Configuration Comparison:** Compare the configuration of two or more servers to identify configuration differences, regardless of the platform or physical location of the JD Edwards EnterpriseOne server.

**Save and Restore Configuration:** Save a complete configuration state before making changes or updates.

**Integrated EnterpriseOne Software Management:** Use Server Manager to centrally maintain all your JD Edwards EnterpriseOne server tools releases, including the ability to copy the software to the remote server machines.

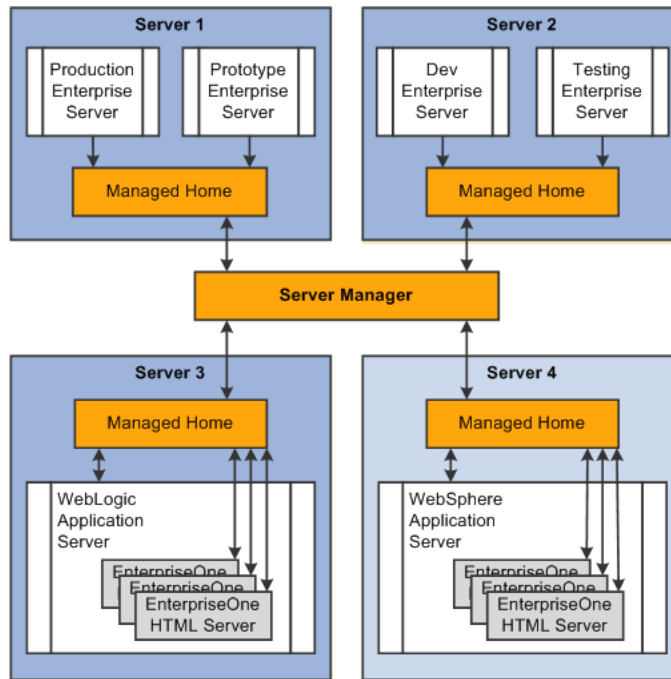
**Logical Server Grouping:** Server Manager allows you to group servers with a similar purpose. These groups can include any of the server types, such as Enterprise Server, HTML Server and a Web Server. A default or template configuration is maintained for each server group.

**Tools Release Independence:** Newer versions of the Server Manager application will continue to support the management of earlier tools releases back to JD Edwards EnterpriseOne initial release in Tools Release 8.97.

**Audit History:** Server Manager maintains a history of changes made to the managed servers. This includes a history of each configuration change, each server start and stop, and each tools release update. Including the user that performed the change or operation. The Management Console application provides mechanisms to query and view the audit history that is maintained.

### 3.2.2 Server Manager Architecture

**Figure 3–2 Server Manager Architecture**



Server Manager consists of a web based 'console' application and a set of 'agents' that communicate with the console. The console sends control commands and information requests to the agents and the agents pass along control commands to the local web application server or enterprise server or reports status and runtime information back to the console.

### 3.2.3 Server Manager Certified Platforms

Server Manager console is certified to run on the following platforms:

- Linux / x86-64 with Oracle Weblogic Server
- Oracle Solaris / SPARC with Oracle Weblogic Server
- Microsoft Windows /x86-64 with Oracle Weblogic Server, Oracle Containers for J2EE (OC4J), and IBM WebSphere Application Server

Server Manager Agent is certified to run on the following platforms:

- Linux / x86-64
- Oracle Solaris / SPARC
- Microsoft Windows /x86-64
- HP-UX / Itanium
- IBM AIX /Power
- IBM i/Power

### 3.2.4 Additional References

- Oracle Certification: <https://support.oracle.com>, Certifications tab

Product = JD Edwards EnterpriseOne Server Manager

- *JD Edwards EnterpriseOne Tools Server Manager Guide*

### 3.3 Oracle Application Management Suite for JD Edwards EnterpriseOne

This section discusses these topics:

- Overview of Oracle Application Management Suite for JD Edwards EnterpriseOne
- Oracle Application Management Suite for JD Edwards EnterpriseOne Architecture
- Oracle Application Management Suite for JD Edwards EnterpriseOne Certified Platforms

#### 3.3.1 Overview of Oracle Application Management Suite for JD Edwards EnterpriseOne

The Oracle Application Management Suite for JD Edwards EnterpriseOne allows you to use the graphical user interface of Oracle Enterprise Manager to monitor and manage your JD Edwards server products. This product leverages the existing JD Edwards Server Manager functionality that monitors all entities constituting an EnterpriseOne installation.

It supports discovering all servers managed by server manager in Enterprise Manager as one JD Edwards EnterpriseOne domain which can consist of following different target types:

- Enterprise Server
- HTML Server
- Transaction Server
- Business Services Server
- Collaborative Portal Server
- Data Access Driver
- Data Access Server

It monitors the configuration metrics (jde.ini, HTML Server.ini, jdbj.ini, interop.ini etc.). It also provides options to save configuration and compare configuration for similar target types.

It also collects runtime metrics like user sessions, open applications, Java memory usage, JDBj connection, kernel process metrics, and prepared statement configurations.

The Oracle Application Management Suite for JD Edwards EnterpriseOne provides the following additional benefits:

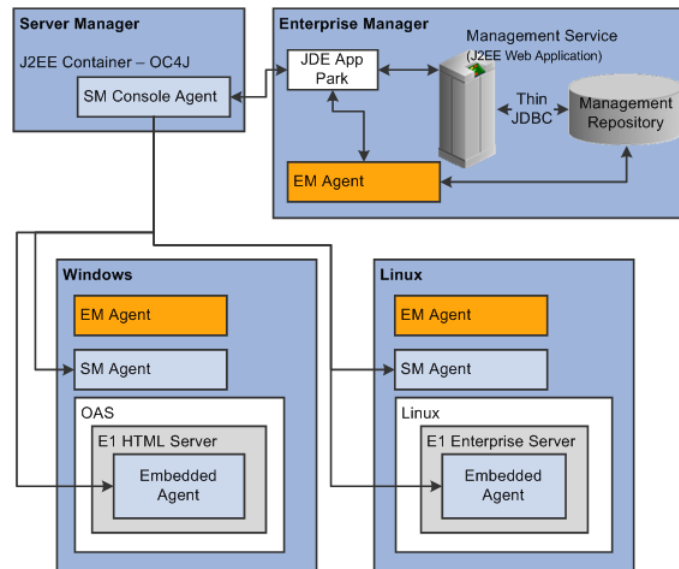
- Service level management
- History and trending (usage, server metrics, uptime)
- Enhanced graphics and dashboards for administrators
- Reporting capabilities
- Single view of an organization's complete system topology

#### 3.3.2 Application Management Suite Architecture

Enterprise Manager consists of a web based 'console' OMS application and a set of EM 'agents' that communicate with the console. The console sends control commands and

information requests to the agents and the agents pass along control commands to the HTML server or enterprise server via server manager, or report status and runtime information back to the console.

**Figure 3–3 Application Management Suite Architecture**



### 3.3.3 Application Management Suite Certified Platforms

The Application Management Suite is certified to run on the following platforms:

- Linux/x86-64
- Oracle Solaris

### 3.3.4 Additional References

- Oracle Certification: <https://support.oracle.com>, Certifications tab  
Product = Enterprise Manager for JD Edwards EnterpriseOne Plug-in
- *JD Edwards EnterpriseOne Application Pack for Oracle Enterprise Manager Cloud Control Implementation Guide*



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## Integration and Interoperability

This chapter contains the following topics:

- [Section 4.1, "Overview of Integration and Interoperability"](#)
- [Section 4.2, "Business Services Server"](#)
- [Section 4.3, "EnterpriseOne Application Interface Services \(AIS\) Server"](#)
- [Section 4.4, "Transaction Server"](#)
- [Section 4.5, "Connectors for Point-to-Point Integrations"](#)
- [Section 4.6, "Batch Interfaces"](#)

### 4.1 Overview of Integration and Interoperability

Although equipped with a robust set of over eighty application modules, the JD Edwards EnterpriseOne product suite typically does not cover 100% of an enterprises's application requirements. As with any implementation of enterprise software, perhaps the most important requirement is that it integrates easily with other complementary applications. In this regard JD Edwards EnterpriseOne does not take a one-size-fits-all approach. Rather, it offers several interoperability and integration patterns to ensure that system architects can apply the appropriate technology for an optimal solution to the requirements.

JD Edwards EnterpriseOne offers the following methods for interoperability and integration with other Oracle applications and third-party products:

- Business Services Server
- Transaction Server
- Connectors for point-to-point integration
- Batch interfaces for bulk data transfer

### 4.2 Business Services Server

This section discusses these topics:

- Overview of Business Services Server
- Business Services Server Architecture
- Business Services Server Certified Platforms
- Additional References

## 4.2.1 Overview of Business Services Server

The Business Services Server provides interoperability between JD Edwards EnterpriseOne and other Oracle applications and third-party systems by natively producing and consuming web services. It can also send XML over HTTP(s) in an asynchronous request/reply model when the third party does not support web service calls. The business services server is built on top of a Java 2 Platform, Enterprise Edition (J2EE) server, which can be an Oracle WebLogic Server or a WebSphere Application Server. Applications that are developed or run on the Business Services Server are written in the Java programming language.

The business services server exposes business services as web services. A web service is a standardized way of integrating web-based applications, and in JD Edwards EnterpriseOne, web services are referred to as published business services. Business services provide operations that access the business logic in JD Edwards EnterpriseOne for many supported business transactions, such as journal entries, exchange rates, accounts payable vouchers, inventory look-ups, pricing, sales orders, etc and they enable JD Edwards EnterpriseOne to expose transactions as a basic service that can expose an XML document-based interface.

### 4.2.1.1 Interoperability Patterns

The business services server supports the following integration patterns for interoperating with other Oracle applications and third-party applications or systems:

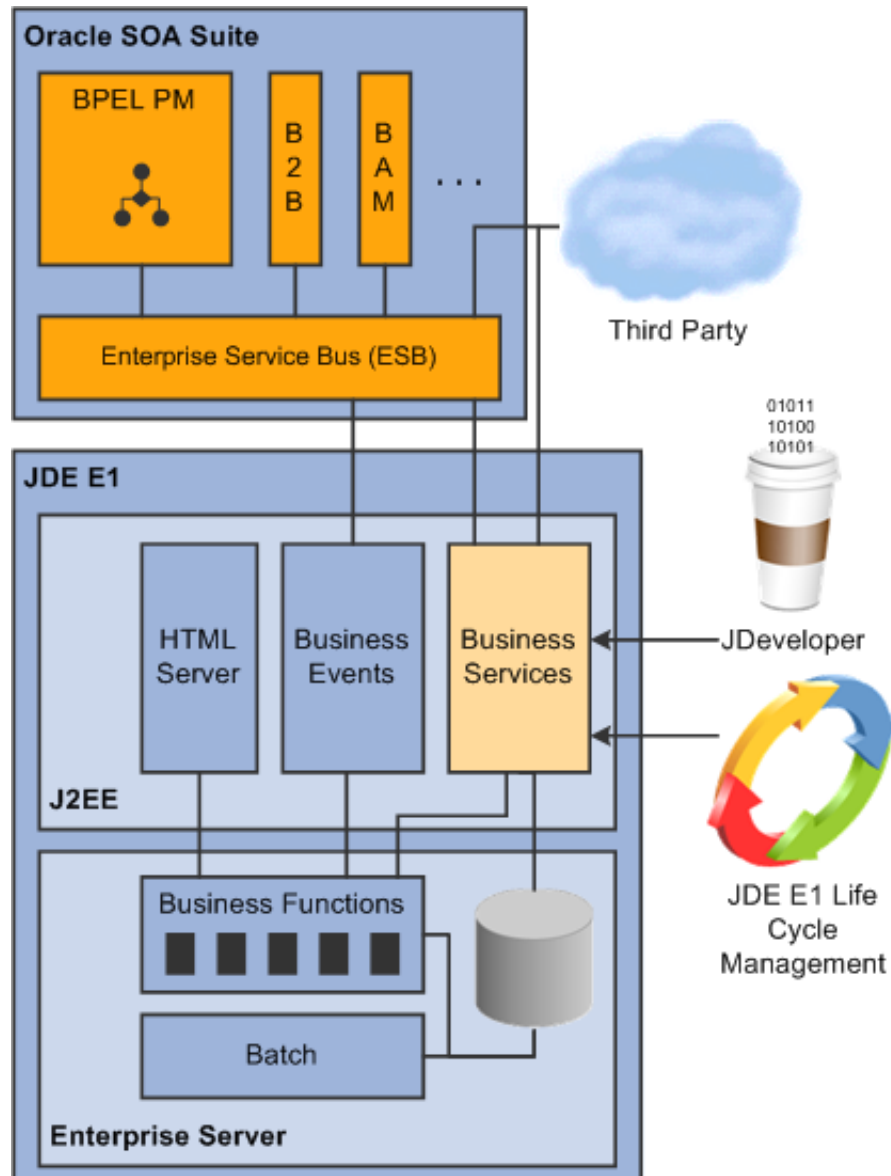
- Service provider
- Service consumer
- Event Notification

### 4.2.1.2 Business Services Lifecycle

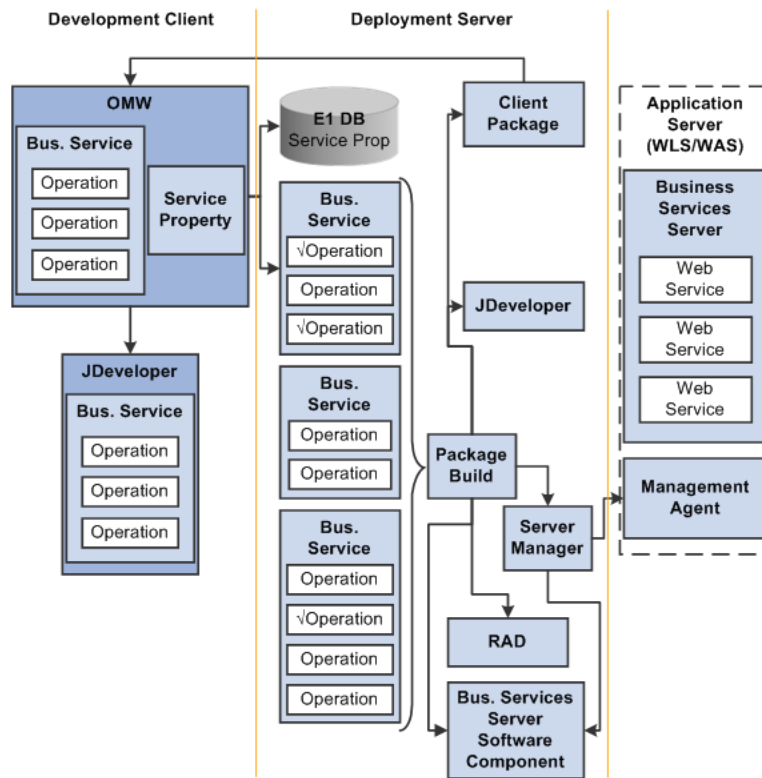
The lifecycle of a business service is similar to the lifecycle of a business function. A business service is created on the development client as a JD Edwards EnterpriseOne object using both JD Edwards EnterpriseOne tooling and JDeveloper. Object Management Workbench (OMW) controls the artifacts for add, check-in, check-out, get, restore, and delete. The business service is compiled and assembled into a deployable artifact during the package build process. Server Manager uses that deployable artifact to deploy a business services server. Subsequent client installs will include any new or updated business service artifacts.

## 4.2.2 Business Services Server Architecture

The following diagram depicts the relationships between the various JD Edwards EnterpriseOne servers and the Business Services Server and it also shows how the business services server provides interoperability with other Oracle applications and third-party systems:

**Figure 4-1 Business Services Server Architecture**

The below diagram provides an architectural overview of the business services lifecycle:

**Figure 4–2 Business Services Server Lifecycle Architecture**

### 4.2.3 Business Services Server Certified Platforms

Business Services Server is certified to run on the following platforms:

- Linux / x86-64
- Oracle Solaris / SPARC
- Microsoft Windows /x86-64
- HP-UX / Itanium
- IBM AIX /Power
- IBM i/Power
- Oracle WebLogic Server
- IBM WebSphere Application Server

### 4.2.4 Additional References

- Oracle Certification: <https://support.oracle.com>, Certifications tab  
Product = JD Edwards EnterpriseOne Business Services Server
- *JD Edwards EnterpriseOne Tools Business Services Server Reference Guide*
- *JD Edwards EnterpriseOne Tools Business Services Development Guide*
- *JD Edwards EnterpriseOne Tools Business Services Development Methodology Guide*
- *JD Edwards EnterpriseOne Tools Interoperability Guide*
- *JD Edwards EnterpriseOne Tools Interoperability Reference Implementations Guide*

## 4.3 EnterpriseOne Application Interface Services (AIS) Server

This section discusses these topics:

- Overview of AIS Server
- AIS Server Architecture
- AIS Server Certified Platforms
- Additional References

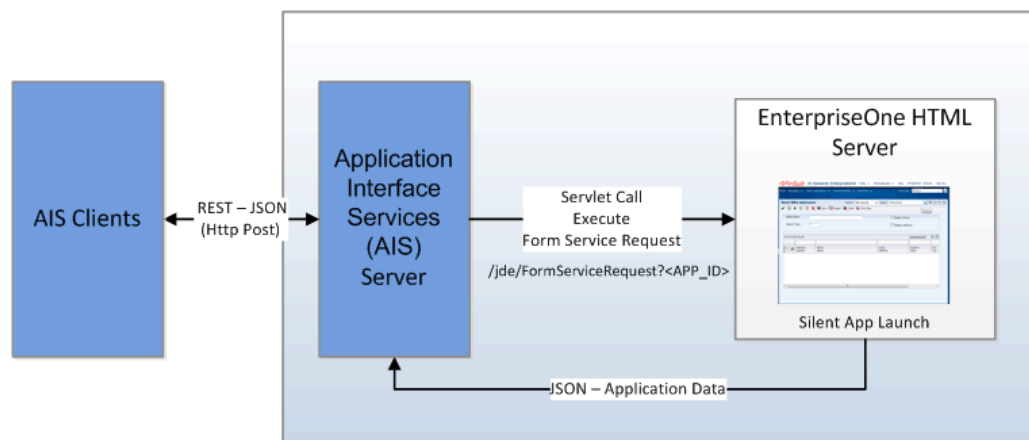
### 4.3.1 Overview of AIS Server

The AIS Server provides a JSON over REST interface, which is a light-weight interface that AIS clients (including mobile enterprise applications, AIS Java API clients, and the Simplified Applications Framework) use to interact with EnterpriseOne applications and forms. The interaction with EnterpriseOne requires an AIS Server configuration with the EnterpriseOne HTML Server.

### 4.3.2 AIS Server Architecture

The following illustration shows how the AIS Server functions as the interface between mobile applications and the EnterpriseOne HTML Server.

**Figure 4-3 JD Edwards Mobile Architecture**



### 4.3.3 AIS Server Certified Platforms

AIS is certified to run on the following platforms (operating systems and web application servers):

- Linux / x86-64
- Oracle Solaris / SPARC
- Microsoft Windows /x86-64
- HP-UX / Itanium
- IBM AIX /Power
- IBM i/Power
- Oracle WebLogic Server
- IBM WebSphere Application Server

### 4.3.4 Additional References

- Oracle Certification: <https://support.oracle.com>, Certifications tab
- Product = JD Edwards EnterpriseOne AIS Server
- *JD Edwards EnterpriseOne Application Interface Services Server for Mobile Enterprise Applications Configuration Guide*
  - *JD Edwards EnterpriseOne Tools Developing and Customizing Mobile Enterprise Applications Guide*
  - *JD Edwards EnterpriseOne Tools AIS Client Java API Developer's Guide*
  - *JD Edwards EnterpriseOne Application Interface Services Server for Simplified User Experience Applications Configuration Guide*

## 4.4 Transaction Server

This section discusses these topics:

- Overview of Transaction Server
- Transaction Server Architecture
- Transaction Server Certified Platforms
- Additional References

### 4.4.1 Overview of Transaction Server

Transaction Server is a key component for the Real Time Event (RTE) notification system. RTE is an extension of the normal transaction process. This additional processing is performed to capture the JD Edwards EnterpriseOne transaction data for subsequent notification and delivery to external parties. This can also be termed as an Outbound Notification.

Transaction Server and Real time Event system consists of the following components:

- Event - Contains JD Edwards EnterpriseOne data structure and values in binary and XML format for outbound notification in both single and aggregate format.
- Event Category - Decides how event data is processed: for example RTE, XAPI, Z-FILE etc.
- Transport Type - How the event is delivered using JAVA connector, COM connector, JDENET, MQ Series, JMS Topic etc.
- Subscriber - Third party interested in receiving event and is associated with a transport type.

Following are the three life cycle events of processing in transaction server:

- Event Generation

Business Function calls JdeIEO\_EventFinalize API - An event or set of events is inserted into F90710 table

A JDENET message is sent to RTE server to trigger event transfer.
- Event Transfer

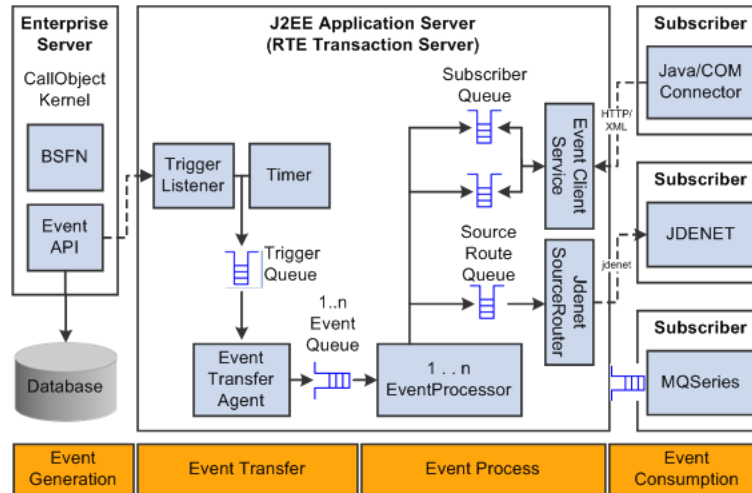
Sequencing - Provides multiple options to sequence events

Transaction - Uses JMS Bean managed transaction.

- Event Processing/Delivery
  - Convert binary format of data structure into XML format
  - Delivered to all interested subscribers based on transport type

## 4.4.2 Transaction Server Architecture

**Figure 4-4 Transaction Server Architecture**



## 4.4.3 Transaction Server Certified Platforms

Transaction Server is certified to run on the following platforms:

- Linux / x86-64
- Oracle Solaris / SPARC
- Microsoft Windows /x86-64
- HP-UX / Itanium
- IBM AIX /Power
- IBM i/Power
- Oracle Weblogic Server
- IBM WeSphere Application Server

## 4.4.4 Additional References

- Oracle Certification: <https://support.oracle.com>, Certifications tab
- Product = JD Edwards EnterpriseOne Transaction Server
- *JD Edwards EnterpriseOne Transaction Server Reference Guide for Microsoft Windows using Oracle WebLogic*
  - *JD Edwards EnterpriseOne Tools Interoperability Reference Implementations Guide*
  - *JD Edwards EnterpriseOne Tools Interoperability Guide*

## 4.5 Connectors for Point-to-Point Integrations

Connectors are point-to-point, component-based models that enable third-party applications and JD Edwards EnterpriseOne to share logic and data. JD Edwards EnterpriseOne connector architecture includes Java and COM connectors. The connectors accept inbound XML requests and expose business functions for reuse. Output from the connectors is in the form of an XML document. The connectors include:

- Java

Java is a portable language, so you can easily tie JD Edwards EnterpriseOne functionality to Java applications. The JD Edwards EnterpriseOne dynamic Java connector supports real-time event processing.

- COM

The JD Edwards EnterpriseOne COM connector solution is fully compliant with the Microsoft component object model. You can easily tie JD Edwards EnterpriseOne functionality to Visual Basic and VC++ applications. The COM connector also supports real-time event processing.

Some benefits of using connectors include:

- Scalability
- Multi-threaded capability
- Concurrent users

### 4.5.1 Connectors Certified Platforms

The JD Edwards EnterpriseOne integration connectors run on the enterprise server. Refer to certified platforms for enterprise server for more information.

### 4.5.2 Additional References

- *JD Edwards EnterpriseOne Tools Interoperability Guide*

## 4.6 Batch Interfaces

Batch implies processing multiple transactions at the same time and usually involves movement of bulk information. Batch processing is often scheduled and is non-interactive. JD Edwards EnterpriseOne provides several model types for batch processing, and each model type has one or more capabilities that enable you to access JD Edwards EnterpriseOne data. The model types include:

- Interface tables
- Electronic Data Exchange
- Table conversions
- Output Stream Access
- Open Data Access

### 4.6.1 Batch Interfaces Certified Platforms

The JD Edwards EnterpriseOne batch interfaces run on the Enterprise Server. Refer to certified platforms for Enterprise Server for more information.



## 4.6.2 Additional References

- *JD Edwards EnterpriseOne Tools Interoperability Guide*



This chapter contains the following topics:

- [Section 5.1, "JD Edwards EnterpriseOne Universal Batch Engine"](#)
- [Section 5.2, "Oracle Business Intelligence Publisher"](#)
- [Section 5.3, "One View Reporting"](#)

## **5.1 JD Edwards EnterpriseOne Universal Batch Engine**

JD Edwards EnterpriseOne provides a fully integrated reporting engine to generate report output from any transactional data stored within its database. This information includes employee data, accounts receivable and payable information, financial data, and product information. The JD Edwards EnterpriseOne reports might be used to convey information about business operations, for example profitability reports, or they might function as transactional documents, such as invoices or pay checks.

The Universal Batch Engine executes the runtime processing of reports, which can be submitted manually by end users, scheduled, or automatically launched by other JD Edwards EnterpriseOne applications. Because they are processed by the universal batch engine, reports are often referred to as "UBEs" by the JD Edwards community.

JD Edwards EnterpriseOne provides many predesigned reports; however, it is unlikely that any report can anticipate the needs of individual customers. Therefore, JD Edwards EnterpriseOne also includes the Report Design Aid application, which allows end users to modify or create new reports to suit their requirements.

Reports that are used primarily to manipulate data are referred to as batch processes. Reporting and batch processing can be combined in a single report. Reports and batch processes are considered by the system as batch applications.

### **5.1.1 Universal Batch Engine Certified Platforms**

The JD Edwards EnterpriseOne Universal Batch Engine runs on the Enterprise Server. Refer to certified platforms for enterprise server for more information.

The Report Design Aid tool runs on a JD Edwards EnterpriseOne development workstation, which requires a 64-bit edition of Microsoft Windows desktop operating system.

### **5.1.2 Additional References**

- *JD Edwards EnterpriseOne Tools Report Design Aid Guide*
- *JD Edwards EnterpriseOne Tools Batch Versions Guide*

## 5.2 Oracle Business Intelligence Publisher

This section discusses these topics:

- Overview of Embedded BI Publisher
- Embedded BI Publisher Architecture
- Embedded BI Publisher Certified Platforms
- Data Access Driver with Standalone BI Publisher
- Data Access Driver with Standalone BI Publisher Certified Platforms
- Additional References

### 5.2.1 Overview of Embedded BI Publisher

JD Edwards EnterpriseOne provides an embedded BI Publisher reporting solution based on Oracle's BI Publisher. The solution integrates the embedded BI Publisher reports into JD Edwards EnterpriseOne life cycle management, and the embedded reports are created, managed and processed using the JD Edwards EnterpriseOne toolset.

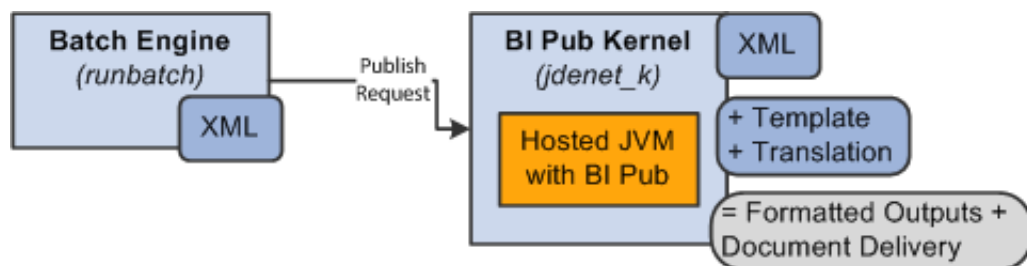
Embedding BI Publisher reduces the high cost of producing, customizing, and maintaining business documents. Built on the open XSL-FO (Extensible Stylesheet Language Formatting Objects) The extended standard provides a full range of reporting capabilities, including charts, formulas, watermarks, and graphics. Using a set of familiar desktop tools, users can create and maintain their own report formats based on data extracts from JD Edwards EnterpriseOne reports.

This tight integration between the Universal Batch Engine and BI Publisher allows the batch engine to handle data selection, logic processing, and output to XML format. BI Publisher then accepts the XML and formats the data according to predefined templates for fonts, layouts, graphics, and distribution to a variety of print and electronic outputs.

### 5.2.2 Embedded BI Publisher Architecture

The Embedded BI Publisher solution works by having the Universal Batch Engine generate and extract XML data, which is then sent to a BI Publisher Kernel in EnterpriseOne, which hosts the embedded BI Publisher JVM. This kernel takes the XML generated along with the report template and translation/transformation data calls into the hosted BI Publisher to create the output(s) desired. These outputs are stored and then, depending on the configuration, optionally printed or emailed to the desired recipients.

**Figure 5–1 Embedded BI Publisher Architecture**



### 5.2.3 Embedded BI Publisher Certified Platform

Embedded BI Publisher is certified to run on the following platforms:

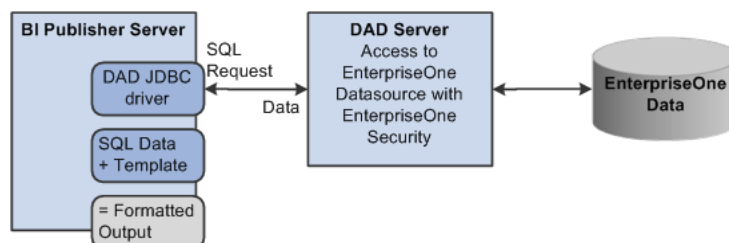
Linux / x86-64  
 Oracle Solaris / SPARC  
 Microsoft Windows /x86-64  
 HP-UX / Itanium  
 IBM AIX /Power  
 IBM i/Power

### 5.2.4 Data Access Driver with Standalone BI Publisher

In addition to the use case of BI Publisher being embedded within the JD Edwards EnterpriseOne reporting process, the BI Publisher desktop application can be used to create custom reports from JD Edwards EnterpriseOne data sources.

JD Edwards EnterpriseOne provides a Data Access Driver (DAD) that is a JDBC datasource plugin for the Standalone BI Publisher product. This allows processing reports in Oracle BI Publisher with JD Edwards data using the Oracle BI Publisher toolset.

**Figure 5–2 Data Access Driver with Standalone BI Publisher**



### 5.2.5 Additional References

- *JD Edwards EnterpriseOne Tools BI Publisher for JD Edwards EnterpriseOne Guide*
- *JD Edwards EnterpriseOne Tools Embedded Business Intelligence for JD Edwards EnterpriseOne Guide*

## 5.3 One View Reporting

This section discusses these topics:

- Overview of One View Reporting
- One View Reporting Architecture
- One View Reporting Certified Platforms
- Additional References

### 5.3.1 Overview of One View Reporting

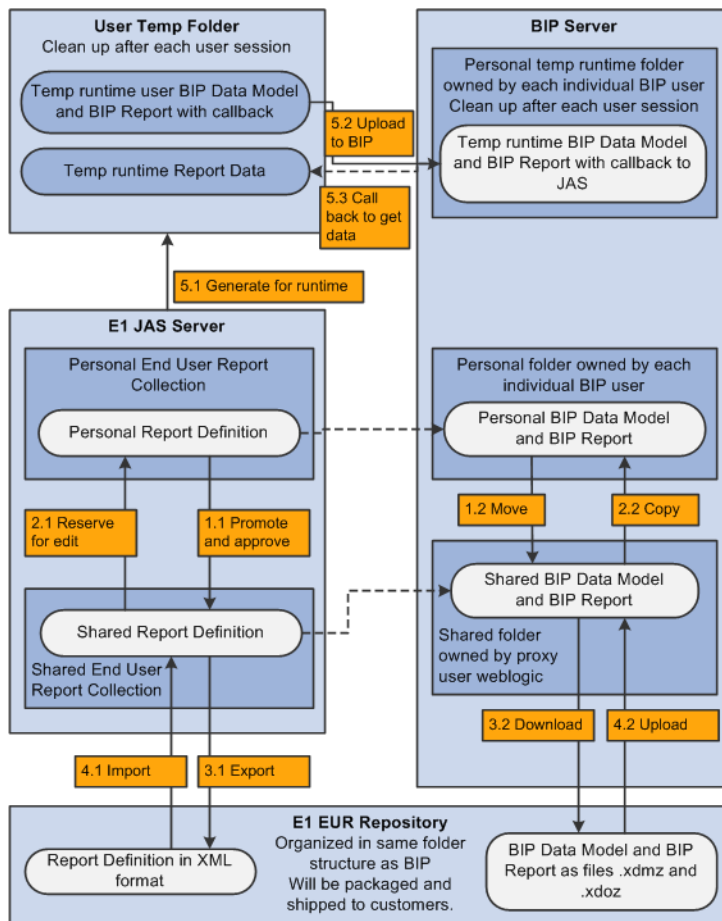
Oracle's JD Edwards EnterpriseOne One View Reporting provides an intuitive, easy-to-use method for you to access data and produce reports with Oracle BI Publisher.

One View Reporting enables end users to create and run their personalized reports directly from JD Edwards EnterpriseOne interactive applications. These reports are typically specific to the user or role and are those that users will run on a daily, weekly, or other periodic basis as part of their normal activities. Users require a high degree of personalization regarding data selection, sequencing, data columns included, and data visualization (charts, tables, graphs) with this type of report. These end user reports improve user productivity by providing users with better visibility into operational data as part of their standard day-to-day business process. One View Reporting enables users to select data fields and perform specific data selection from within JD Edwards EnterpriseOne applications and leverage the layout capabilities within BI Publisher to define the report output formatting. Common use cases might be sales reports, customer reports, supplier reports, and employee reports.

One View Reporting allows the use of standard and customized find browse forms to locate report data. Release 9.1 also introduces One View applications, which use joined business views to access records from multiple tables. The One View find browse forms combine business transactional and master data in combinations not previously available, and you can view these data combinations in the BI Publisher layout you choose. You can also use Data Browser to locate report data and produce One View reports.

### **5.3.1.1 One View Reporting Lifecycle**

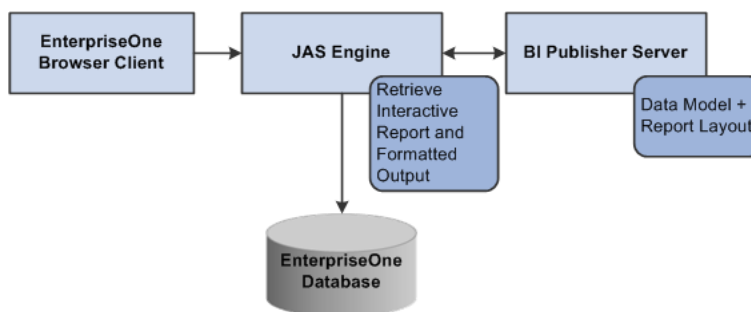
The diagram below provides an architectural overview of the One View Reporting lifecycle.

**Figure 5–3 One View Reporting Lifecycle**

### 5.3.2 One View Server Architecture

The following diagram depicts the relationships between the various JD Edwards EnterpriseOne HTML Server and the BI Publisher Server and it also shows how the OVR report interacts with the system.

Run the Report

**Figure 5–4 One View Server Architecture**

### 5.3.3 One View Reporting Certified Platforms

One View Reporting is certified to run on the following platforms:

- Linux / x86-64
- Oracle Solaris / SPARC
- Microsoft Windows /x86-64
- HP-UX / Itanium
- IBM AIX /Power

### 5.3.4 Additional References

- Oracle Certification: <https://support.oracle.com>, Certifications tab  
Product = JD Edwards EnterpriseOne One View Reporting
- *JD Edwards EnterpriseOne Tools One View Administration Guide*
- JD Edwards EnterpriseOne One View Reporting - Functional Content Overview  
<http://www.oracle.com/us/products/applications/jd-edwards-enterpriseone/one-view-reporting-presentation-1579089.pdf>
- JD Edwards EnterpriseOne One View Reporting demo  
<http://www.youtube.com/watch?v=TqXajQ9GrbA>



This chapter contains the following topics:

- [Section 6.1, "Security Server"](#)
- [Section 6.2, "LDAP"](#)
- [Section 6.3, "Single Sign-on"](#)

## 6.1 Security Server

This section discusses these topics:

- Overview of Security Server
- Security Server Architecture
- Security Server Certified Platforms
- Additional References

### 6.1.1 Overview of Security Server

JD Edwards EnterpriseOne security runs on an enterprise server in a dedicated internal process. You create a security table on the database server that stores information, such as:

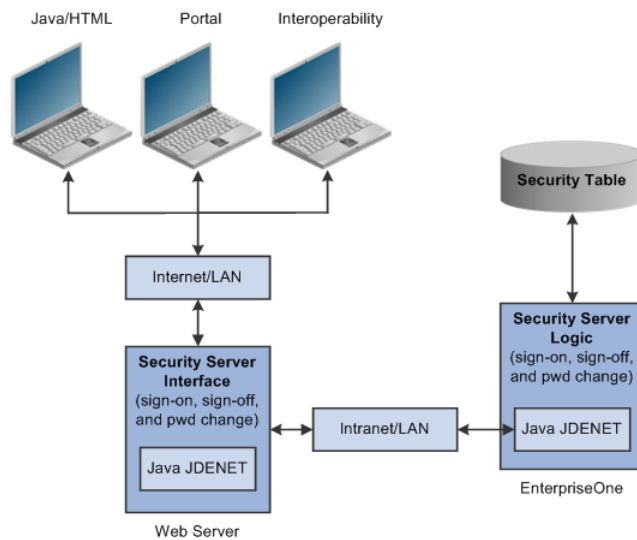
Value	Description
EnterpriseOne User	The user ID used to sign in to JD Edwards EnterpriseOne.
EnterpriseOne Password	The user's password, which the software validates when the user signs in to JD Edwards EnterpriseOne.
System User and System Password	The actual user and password used to connect to all database management systems (DBMS). If the JD Edwards EnterpriseOne environment includes more than one DBMS, you can create different system users and passwords for each data source.
Change Frequency	The frequency of password changes required by the software.
Last Change	The date that the password was last changed.

You must define a security record for each user either by group or by individual. It is recommended that you map multiple users to the same system user. For example, each user can use the same system user that the software uses to connect the database management systems. By setting up the security in this manner, you can simplify database administration of users and passwords.

You can also set up unified logon with JD Edwards EnterpriseOne to simplify sign-in security. When you set up unified logon, JD Edwards EnterpriseOne uses Windows Authentication to verify security. This verification enables sign-in security to use the network logon information that a user supplies when logging on to Windows; JD Edwards EnterpriseOne does not require the user to enter another user ID and password when signing in.

## 6.1.2 Security Server Architecture

**Figure 6–1 Security Server Architecture**



As the security intermediary, the HTML Server security server handles these tasks:

- Connecting to the JD Edwards EnterpriseOne Security Server for user security authentication and password when a web user signs in.
- Switching to a secondary JD Edwards EnterpriseOne Security Server when the primary server is down, provided the correct HTML Server.ini settings are defined.
- Notifying Java/HTML, Portal, and Interoperability client workstations when a user password has expired.
- If an Interoperability user's password has expired, sign-in fails without notification of the cause.
- Sending error message to user log after the web user has attempted unsuccessfully to sign in x number of times to JD Edwards EnterpriseOne, where x is the number of sign-in attempts defined in the F98OWSEC table.
- Allowing Java/HTML and Portal users to change name and password.
- Encrypting JDENET messages sent between the HTML server security Server and the JD Edwards EnterpriseOne security server.

- Keeping a valid user session open until the user signs off or the session expires.
- To the web user, sign-in and sign-out function the same as they do to a user on Windows, UNIX, or IBM i platforms.

### 6.1.3 Security Server Certified Platform

The Security Server is certified to run on the following platforms:

- Linux / x86-64
- Oracle Solaris / SPARC
- Microsoft Windows /x86-64
- HP-UX / Itanium
- IBM AIX /Power
- IBM i/Power

### 6.1.4 Additional References

- Oracle Certification: <https://support.oracle.com>, Certifications tab  
Product = JD Edwards EnterpriseOne Enterprise Server
- *JD Edwards EnterpriseOne Tools Security Administration Guide*

## 6.2 LDAP

This section discusses these topics:

- Overview of LDAP
- LDAP Architecture
- LDAP Certified Platforms
- Additional References

### 6.2.1 Overview of LDAP

LDAP is an open industry standard protocol that directory services use to manage user profiles, such as user IDs and passwords, across multiple application systems. You can enable EnterpriseOne to use an LDAP-compliant directory service to manage EnterpriseOne user profiles and user-role relationships. After enabling EnterpriseOne for LDAP, user profiles can be administered through an LDAP version 3 compliant directory server, otherwise referred to as the LDAP server. System administrators use a third-party LDAP-enabled application to access the LDAP server.

LDAP provides these benefits:

- Central administration and repository for user profiles.
- You can easily maintain user profiles in a single location that serves multiple end user applications, including EnterpriseOne applications.
- Reduced complexity.

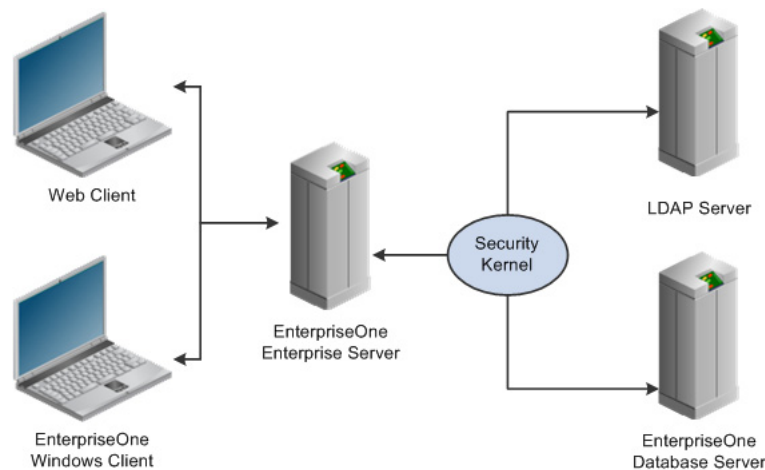
You are not required to use several applications to maintain user profiles. In addition, users are not required to maintain multiple passwords across multiple systems.

LDAP support does not address single sign-on functionality that might exist through other EnterpriseOne functionality.

LDAP does not support certain user profile information. Such information remains in the domain of the EnterpriseOne server and must be maintained by the EnterpriseOne system administrator. Therefore, two distinct and separate user profiles may exist:

## 6.2.2 LDAP Architecture

**Figure 6–2 LDAP Architecture**



The security kernel in the Enterprise Server performs authentication against the LDAP server when LDAP is enabled in the [SECURITY] section of the jde.ini file of the Enterprise Server. Otherwise, when LDAP is disabled, the security kernel authenticates the user against the Enterprise Server database.

## 6.2.3 LDAP Certified Platform

LDAP is certified to run on the following platforms:

- Linux / x86-64
- Oracle Solaris / SPARC
- Microsoft Windows /x86-64
- HP-UX / Itanium
- IBM AIX /Power
- IBM i/Power

## 6.2.4 Additional References

- Oracle Certification: <https://support.oracle.com>, Certifications tab  
Product = JD Edwards EnterpriseOne LDAP
- *JD Edwards EnterpriseOne Tools Security Administration Guide*

## 6.3 Single Sign-on

This section discusses these topics:

- Overview of Single Sign-on
- Single Sign-on Architecture
- Single Sign-on Certified Platforms
- Additional References

### 6.3.1 Overview of Single Sign-on

JD Edwards EnterpriseOne single sign-on enables users to access JD Edwards EnterpriseOne applications without re-entering a user ID and password. Single sign-on increases the security for the JD Edwards EnterpriseOne system since passwords are no longer passing between different sub-systems in JD Edwards EnterpriseOne.

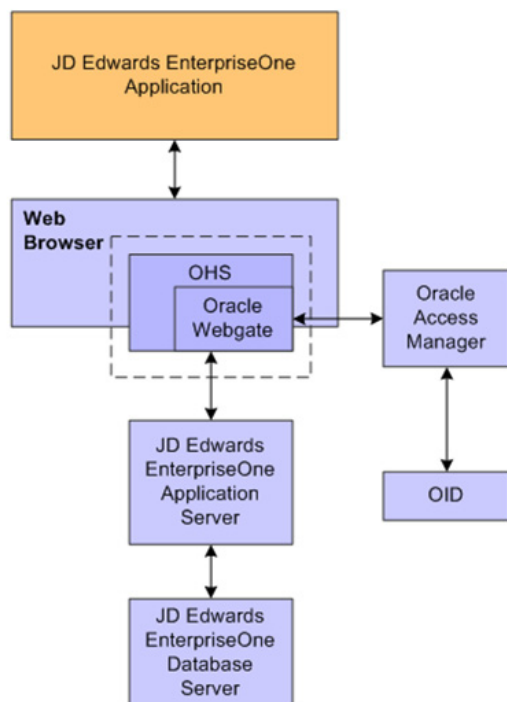
Integration with Oracle Access Manager provides an alternative to the native sign-on security with JD Edwards EnterpriseOne. Using Oracle Access Manager as the sign-on mechanism to JD Edwards EnterpriseOne provides several benefits including:

- Use of long user ids and passwords
- Windows Native Authentication
- Single sign-on with other Oracle and third-party applications

### 6.3.2 Single Sign-on Architecture

Single sign-on with Oracle Access Manager integrates with the JD Edwards EnterpriseOne HTML Server to provide an alternative to the native JD Edwards EnterpriseOne sign-on screen. An Oracle Access Manager Web Gate is installed on an Oracle HTTP Server, and it must be configured to protect the JD Edwards EnterpriseOne URLs that are used to access the HTML Server.

The following illustration shows the integration environment and process flow:

**Figure 6–3 JD Edwards EnterpriseOne Single Sign-on through Oracle Access Manager**

### 6.3.3 Single Sign-on Certified Platform

Single Sign-on with Oracle Access Manager integrates with the JD Edwards EnterpriseOne HTML Server running on Oracle WebLogic Server. Refer to the HTML Server section for Certified Platforms.

### 6.3.4 Additional References

- Oracle Certification: <https://support.oracle.com>, Certifications tab
- Product = JD Edwards EnterpriseOne HTML Server
- Product = Oracle Access Manager
- *JD Edwards EnterpriseOne Tools Security Administration Guide*

This chapter contains the following topics:

- [Section 7.1, "Overview of Portal"](#)
- [Section 7.2, "Portal Architecture"](#)
- [Section 7.3, "Portal Certified Platform"](#)
- [Section 7.4, "Additional References"](#)

## 7.1 Overview of Portal

A portal can be thought of as a Web-based application that is customizable by the end-user both in the look and feel of the portal and in the available content and applications which the portal contains. A portal is an aggregator of content and applications or a single point of entry to a user's set of tools and applications. A portlet is a Web component which is managed by a container and can process requests and generate dynamic content. Portlets come in many flavors -- some are standards-based (JSR-168, WSRP), while others are proprietary to the portal which hosts them (JPDK).

EnterpriseOne Tools Release 9.1 supports these Portal Servers:

- Oracle WebCenter Portal
- IBM WebSphere Portal

JD Edwards EnterpriseOne Portal solution is based on the WSRP standard. Two foundational terminologies in Web Services for Remote Portlets (WSRP) standards are Producer and Consumer. The Producer is a web service that offers one or more portlets and implements various WSRP interfaces and operations. In the JDEdwards EnterpriseOne solution, the JD Edwards EnterpriseOne HTML Web Server is the WSRP producer. Many JD Edwards EnterpriseOne application modules provide prebuilt Portlets, such as Employee Self-Service and Customer Self-Service, which are deployed and run in the HTML Server.

The Consumer is a web service client that invokes producer-offered WSRP webservices and provides an environment for users to interact with portlets offered by one or more producers. JD Edwards EnterpriseOne supports two portal products as WSRP Consumers:

- Oracle WebCenter Portal
- IBM WebSphere Portal

Server Manager must be used to deploy the EnterpriseOne HTML Web Client as a WSRP/Portal producer.

You have an option not to deploy WSRP components if the instance is for an HTML Server only. If you are planning to use the instance as your WSRP producer, ensure you have this option checked during deployment. The default is checked. Changing the ini setting after deployment will not install or un-install the WSRP components. You must re-deploy the application for the ini settings to take effect.

**Figure 7-1 Install WSRP**

**Create/Register A Managed Instance**

Shown below are the configuration items that must be manually confirmed. Please validate or update, as appropriate, the configuration items. Once complete select

Instance Type    Instance Properties    Confirmation    Finish

HTTP Server (WAS Only)

Node Name

Node Password

Bootstrap Environment

Path Codes

Default Environment

Default Role

Install WSRP ☒

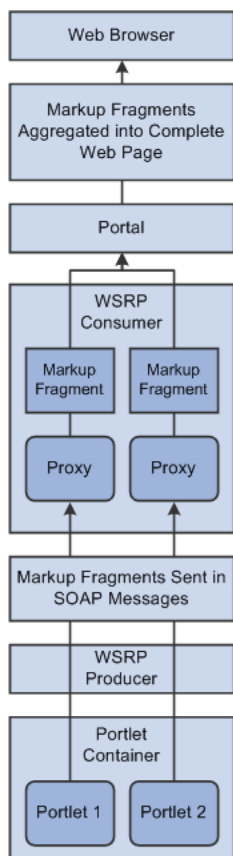
The default is to deploy WSRP components.

You can register the Producer by logging into the consumer (portal server) and registering the WSDL service definitions (producer/HTML Server server URL) and consume the portals from the registered producer. You can create a new portal page and place the portlets on the new portal page consumed from the producer.



## 7.2 Portal Architecture

**Figure 7–2 Portal Architecture**



## 7.3 Portal Certified Platform

EnterpriseOne Tools Release 9.1 supports these Portal Servers as WSRP Consumers:

Oracle Webcenter Portal is certified to run on the following platforms:

- IBM AIX
- Linux /x86-64
- Oracle Solaris /SPARC
- Microsoft Windows /x86-64
- HP-UX /Itanium
- IBM AIX /Power

IBM Web Sphere Portal is certified to run on the following platforms:

- Linux /x86-64
- Oracle Solaris /SPARC
- Microsoft Windows /x86-64
- HP-UX /Itanium
- IBM AIX /Power

- IBM i /Power

## 7.4 Additional References

- Oracle Certification: <https://support.oracle.com>, Certifications tab  
Product = JD Edwards EnterpriseOne Portal
- *JD Edwards EnterpriseOne Portal Content Configuration Guide*
- *JD Edwards EnterpriseOne Tools IBM WebSphere Portal Reference Guide*
- *Creating Custom Portal Using WebCenter Framework: How-To Tutorial*

This chapter contains the following topics:

- [Section 8.1, "Overview of Secure Search"](#)
- [Section 8.2, "Secure Search Architecture"](#)
- [Section 8.3, "Secure Search Certified Platform"](#)
- [Section 8.4, "Additional References"](#)

## 8.1 Overview of Secure Search

JD Edwards EnterpriseOne contains a text search engine that takes information from the tables and associated media objects and builds a text search index. When a text search is initiated, it goes through the text search index and returns database records that match the search criteria. In JD Edwards EnterpriseOne, the text search engine uses a business view-data source pair to retrieve table data.

Text search indexes exist as folders on a file system, so text search indexes must be accessible using a path name to the enterprise server. Administrators must designate the locations of these folders by specifying the base folder in Text Search Properties.

To achieve text searches from database records, JD Edwards EnterpriseOne uses Oracle Secure Enterprise Search (SES).

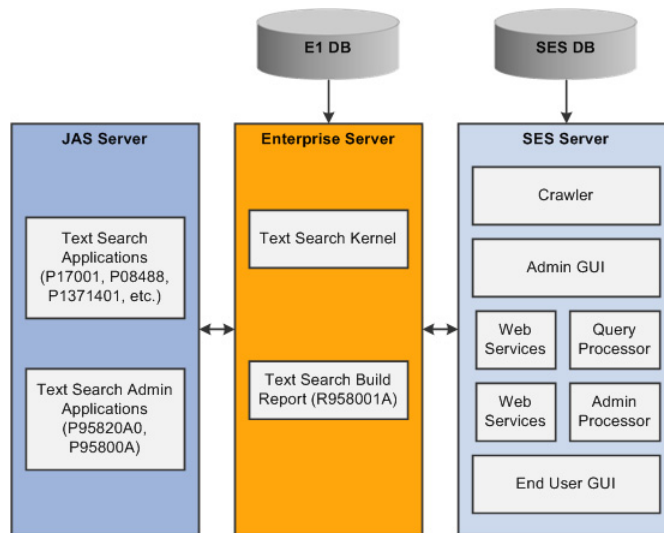
SES is a standalone, self-contained server for search; it operates as a black box that indexes information from the crawler and serves up the results. It comes with its own user interface and administration; it does not, for example, need you to program using SQL or administer as a DBA.

SES enables a secure, high quality, easy-to-use search across all enterprise information assets. Key features include:

- The ability to search and locate public, private and shared content across Intranet Web servers, databases, IMAP e-mail, document management systems, applications, and portals.
- Highly secure crawling, indexing, and searching.
- A simple, intuitive search interface leading to an excellent user experience.
- Excellent search quality, with the most relevant items for a query shown first, even when the query spans diverse public and private data sources.
- Analytics on search results and usage patterns.
- Sub-second query performance.
- Ease of administration and maintenance, leveraging existing IT expertise.

## 8.2 Secure Search Architecture

**Figure 8–1 Secure Search Architecture**



Records from text enabled business views are fed into the SES server to index in the form of XML feeds. SES server reads these XML feeds and indexes them under the source group created in the name of business view / data source combination.

Through the SES Text Search Properties application (P95820A0) we define SES/FTP properties and validate them. Then we define business view data sources through the SES index build definition (P95800A) and build the indexes through the SES Text Search Build report (R958001A).

While searching texts from text enabled applications, the search query formed by the text search kernel is sent to the SES server along with the source group name. The SES server returns data to the text search kernel and that result returned back to text search application through the HTML Server.

## 8.3 Secure Search Certified Platform

Oracle Secure Enterprise Search can be integrated with JD Edwards EnterpriseOne running on any of its certified platforms. Oracle Secure Enterprise Search itself is certified on the following Platforms:

- Linux / x86-64
- Oracle Solaris / SPARC
- Microsoft Windows x64 (64-bit)
- IBM AIX /Power

## 8.4 Additional References

- Oracle Certification: <https://support.oracle.com>, Certifications tab

Product = Oracle Secure Enterprise Search

- *JD Edwards EnterpriseOne Tools System Administration Guide*
- *JD Edwards EnterpriseOne Tools Form Design Aid Guide*

This chapter contains the following topics:

- [Section 9.1, "Web Client"](#)
- [Section 9.2, "Mobile Applications"](#)
- [Section 9.3, "Development Client"](#)

## **9.1 Web Client**

This section discusses these topics:

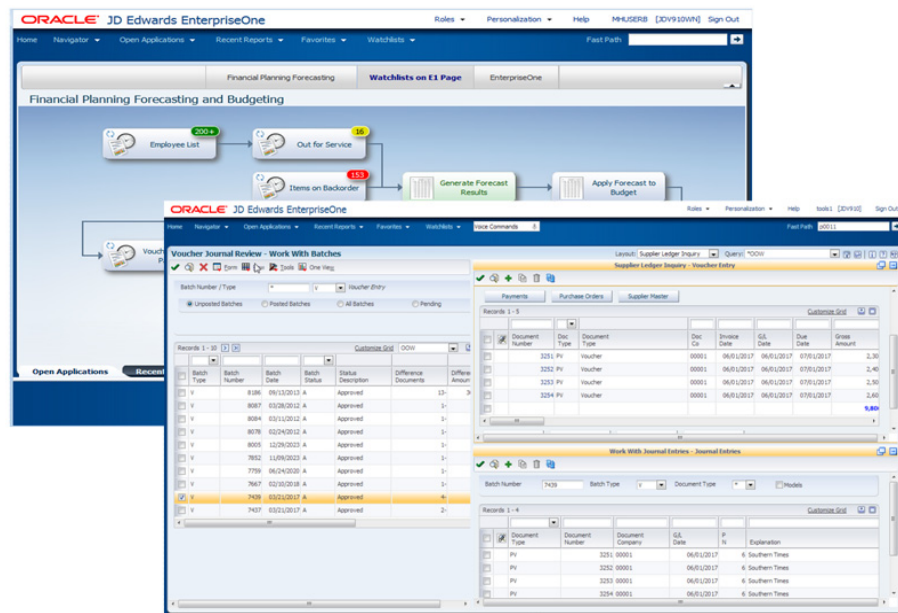
- Overview of Web Client
- Web Client Architecture
- Web Client Certified Platforms
- Additional References

### **9.1.1 Overview of Web Client**

JD Edwards EnterpriseOne end users access all applications through the web client via a web browser. The HTML server delivers the user interface to the web browser as HTML and JavaScript. The user interface is highly interactive, allowing the end user not only to simply enter and retrieve transactional data, but also to personalize the interface, set lists of favorites, view business intelligence reports, and aggregate content from other external web sources.

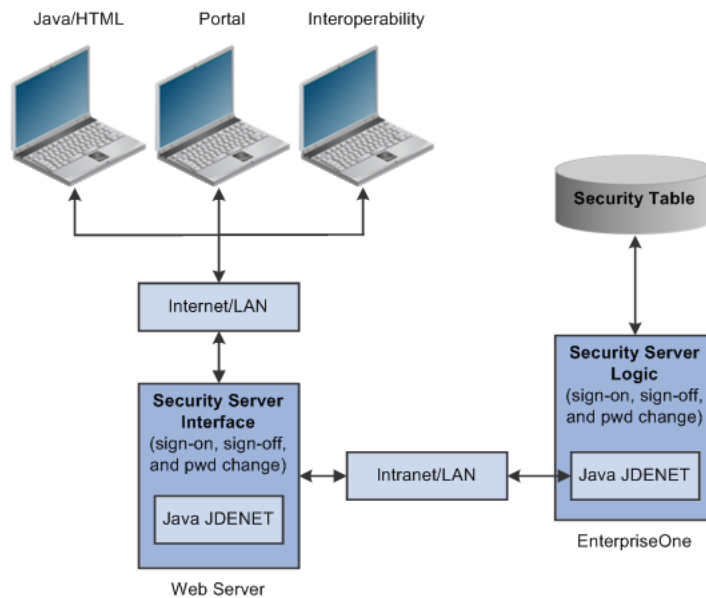
There are no requirements to install additional components on the end-user's desktop; all interaction with the JD Edwards EnterpriseOne applications takes place through the web browser. Certain JD Edwards EnterpriseOne functionality, such as the ability to import/export data to/from the grid, may require third party software such as Microsoft Office to be installed on the users' desktops; however, such features are generally optional.

**Figure 9–1 Web Client**



### 9.1.2 Web Client Architecture

**Figure 9–2 Web Client Architecture**



### 9.1.3 Web Client Certified Platform

Web Client is certified to run on the following platforms:

Microsoft Windows /x86-64 (32-bit or 64-bit desktop operating systems)

- Internet Explorer
- Firefox

- Chrome
- Apple Mac OS
- Firefox

### 9.1.4 Additional References

- Oracle Certification: <https://support.oracle.com>, Certifications tab  
Product = JD Edwards EnterpriseOne Web Client
- *JD Edwards EnterpriseOne Tools Foundation Guide*

## 9.2 Mobile Applications

This section discusses these topics:

- Overview of Mobile Applications
- Mobile Applications Architecture
- Mobile Applications Certified Platforms
- Additional References

### 9.2.1 Overview of Mobile Applications

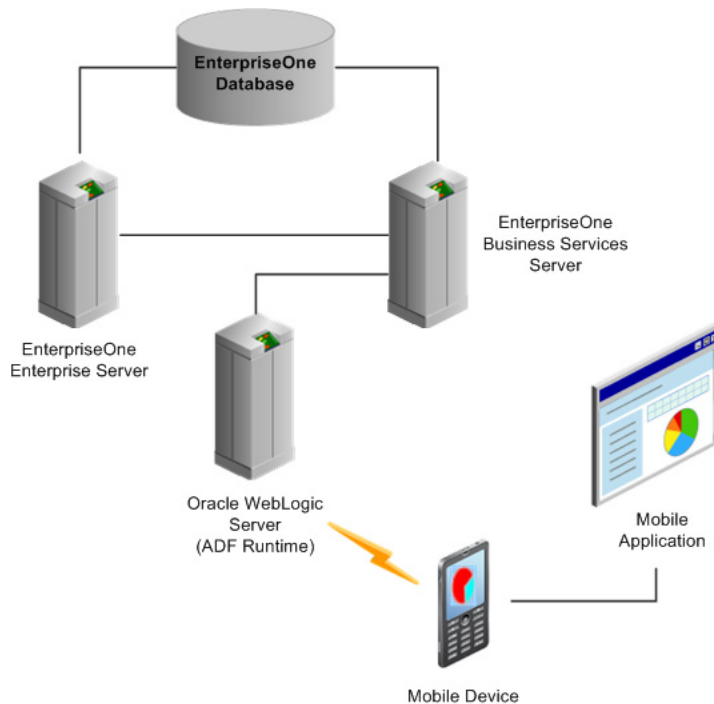
JD Edwards EnterpriseOne mobile applications provide users in the field access to timely and critical data to meet their business needs and quickly and efficiently perform tasks, such as:

- Entering expense reports
- Reviewing and approving expense reports
- Reviewing and approving purchase orders
- Reviewing and approving requisitions entered through Requisition Self Service
- Reviewing current and historical sales orders
- Querying item price and availability information

The mobile applications were developed using Oracle Application Development Framework Mobile (ADF Mobile), a component of Oracle Fusion Middleware

## 9.2.2 Mobile Applications Architecture

**Figure 9–3 Mobile Client Architecture**



JD Edwards EnterpriseOne mobile architecture takes advantage of Oracle's Application Development Framework for Mobile which allows the mobile applications to be an extension of the EnterpriseOne application suite. In order to ensure data integrity across your system, the mobile applications leverage the same business logic and interact with the same data tables as the existing JD Edwards EnterpriseOne web applications. Each application adjusts to the unique mobile device transparently delivering the same functionality no matter which device is used.

### 9.2.3 Mobile Client Certified Platform

Mobile Client is certified to run on the following platforms:

- Apple iOS
- BlackBerry
- Android

### 9.2.4 Additional References

- Oracle Certification: <https://support.oracle.com>

Product = JD Edwards EnterpriseOne Mobile Client

*JD Edwards EnterpriseOne Mobile Applications Installation and Configuration Guide*

## 9.3 Development Client

This section discusses these topics:

- Overview of Development Client



- Development Client Architecture
- Development Client Certified Platforms
- Additional References

### 9.3.1 Overview of Development Client

The JD Edwards EnterpriseOne development client (also known as a Web Development Client, Fat Client, Administrative Client, Windows client, or Workstation) contains components that run as standard Microsoft Windows applications (for example, Active Console, Forms Design Aid (FDA), and Report Design Aid (RDA)) and components that run in a web browser.

This document uses the following terminology when discussing JD Edwards EnterpriseOne clients:

- Web Client - Components that run in a web browser.
- Development Client - Composed of standard Windows components and Web Client.
- The Web Client part of the Development Client runs inside an application server that is installed locally on the development client. The local application server allows the developer to preview web applications on the desktop before deploying them to the production environment.

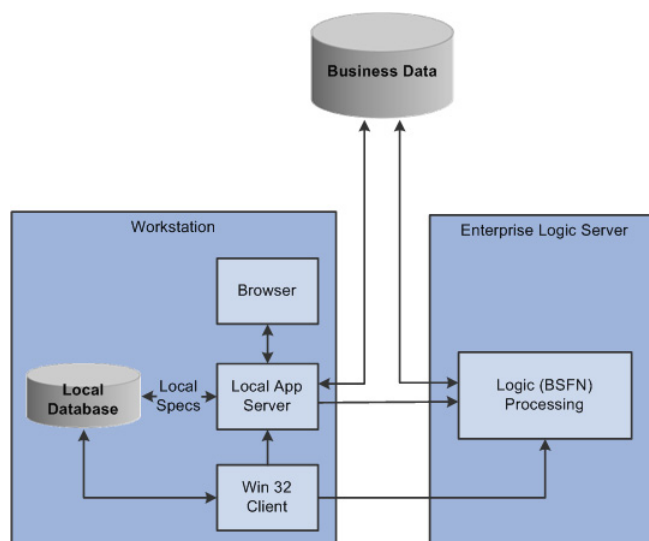
The supported Application Servers are:

- Oracle Application Server (OAS)
- IBM WebSphere Application Server (WAS) Express or WebSphere Application Server for Developers.

The development client also uses a locally installed database, which stores local versions of objects that are under development. An integrated object management facility controls the check-out, check-in, and promotion of objects throughout their lifecycle.

### 9.3.2 Development Client Architecture

**Figure 9-4 Development Client Architecture**



### 9.3.3 Development Client Certified Platform

Development Client is certified to run on the following platforms:

- Microsoft Windows /x86-64 (64-bit) desktop operating systems

Local Web Application Server

- Oracle Application Server
- IBM WebSphere Application Server Express
- IBM WebSphere Application Server for Developers

Local Database

- Oracle Database

Compiler

- Microsoft Visual Studio

### 9.3.4 Additional References

- Oracle Certification: <https://support.oracle.com>, Certifications tab

Product: JD Edwards EnterpriseOne Development Client

- *JD Edwards EnterpriseOne Tools Development Tools Overview Guide*
- *JD Edwards EnterpriseOne Tools Development Guidelines for Application Design Guide*
- *JD Edwards EnterpriseOne Tools Development Standards for Business Function Programming Guide*
- *JD Edwards EnterpriseOne Deployment Server Reference Guide for Enterprise Systems for Microsoft Windows*
- Tools Release 9.1.x and Applications Release 9.0 or 9.1 for Microsoft Windows
- *JD Edwards EnterpriseOne Development Client Installation Guide for Oracle Application Server (OAS) and WebSphere Application Server (WAS) Express*
- Applications Release 9.0 or 9.1 and Tools Release 9.1.x for Oracle Application Server (OAS) and WebSphere Application Server (WAS) Express
- JD Edwards EnterpriseOne 9.1.X Web Client Support Statement (Doc ID 1487909.1)

This chapter contains the following topics:

- [Section 10.1, "Overview of Java Platform"](#)
- [Section 10.2, "Java Platform Architecture"](#)
- [Section 10.3, "Java Platform Certified Platform"](#)
- [Section 10.4, "Additional References"](#)

## 10.1 Overview of Java Platform

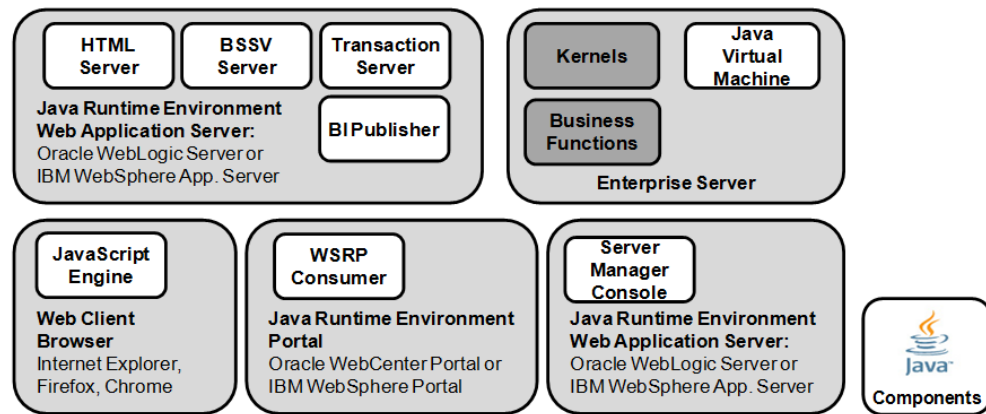
Java is a set of several computer software products and specifications from Oracle / Sun Microsystems that together provide a system for developing application software and deploying it in a cross-platform computing environment. Java is used in a wide variety of computing platforms from embedded devices and mobile phones on the low end, to enterprise servers and supercomputers on the high end. Writing in the Java programming language is the primary way to produce code that will be deployed as Java bytecode.

The platform is not specific to any one processor or operating system, but rather an execution engine (called a virtual machine) and a compiler with a set of libraries that are implemented for various hardware and operating systems so that Java programs can run identically on all of them. A Java virtual machine is a virtual machine that can execute Java bytecode. It is the code execution component of the Java platform. The Java Development Kit (JDK) is an implementation of either one of the Java SE, Java EE or Java ME platforms released by Oracle Corporation in the form of a binary product aimed at Java developers on Solaris, Linux, Mac OS X or Windows. A Java Runtime Environment (JRE) is the set of Java libraries that can be installed on various platforms and used to run Java programs that have been previously written using the Java programming language.

JD Edwards EnterpriseOne products contain a variety of components written in Java, and therefore require a JRE or JDK in order to run.

## 10.2 Java Platform Architecture

**Figure 10–1 JD Edwards EnterpriseOne Java Platform Architecture**



Several JD Edwards EnterpriseOne components are written in Java and deployed to run within Java runtime environments. Specifically:

- HTML Server, Business Services Server, and Transaction Server all deploy into a Java runtime environment managed by a Java application server (Oracle WebLogic Server or IBM WebSphere Application Server).
- Oracle BI Publisher, used for JD Edwards EnterpriseOne One View Reporting or as a standalone report creation tool, runs in a JRE within Oracle WebLogic Server.
- Portal frameworks (WSRP consumers) such as Oracle WebCenter Portal or IBM WebSphere Portal, run within Java application servers and communicate with the HTML server (WSRP producer).
- The Server Manager console runs within a Java application server and communicates with agents installed on JD Edwards EnterpriseOne components via Java Management Extensions (JMX).
- Although no full Java application server is required, the enterprise server runs a Java virtual machine to process certain Java functions called from C/C++ programs.
- To enable a rich and dynamic end user experience, certain functionality within the web client runs as JavaScript on the client.

## 10.3 Java Platform Certified Platform

Various versions of the Java runtime environment are certified to run on all supported platforms.

## 10.4 Additional References

- Oracle Certification: <https://support.oracle.com>, Certifications tab
- Under Certifications, check the requirements for individual JD Edwards EnterpriseOne products and look for supported JDK versions.
- Supported JDK versions for JD Edwards EnterpriseOne 9.1.x HTML Server
- My Oracle Support document [1506201.1]