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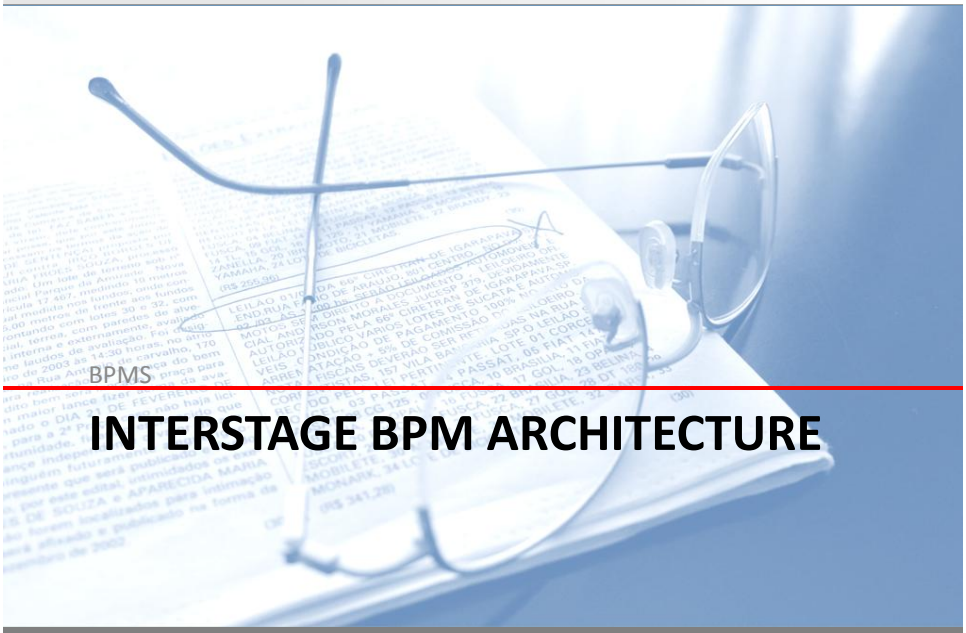

BPMS

INTERSTAGE BPM ARCHITECTURE

Outline

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- Architecture
  - Interstage BPM Components
  - Multi Tenant Architecture
  - Adapters
  - Model API

Interstage BPM Execution Environment

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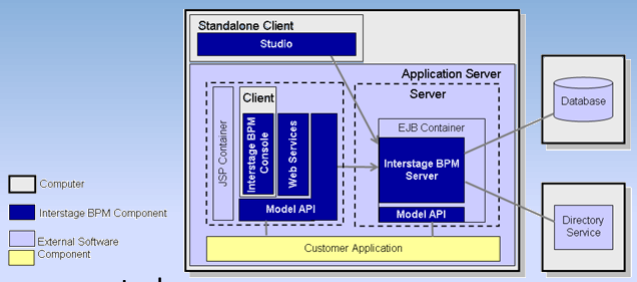
- Interstage BPM runs on a J2EE Application Server and utilizes the resources of the Application Server to provide
  - Transaction
  - Load Balance
  - Failover



- Application Servers supported:
  - Interstage Application Server
  - BEA WebLogic Server
  - IBM Websphere Application Server
  - JBoss Application Server

Interstage BPM Components

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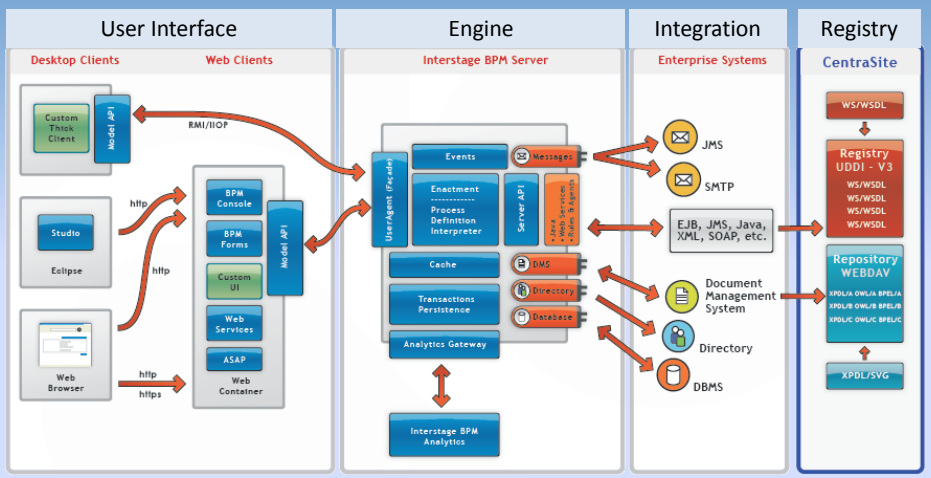
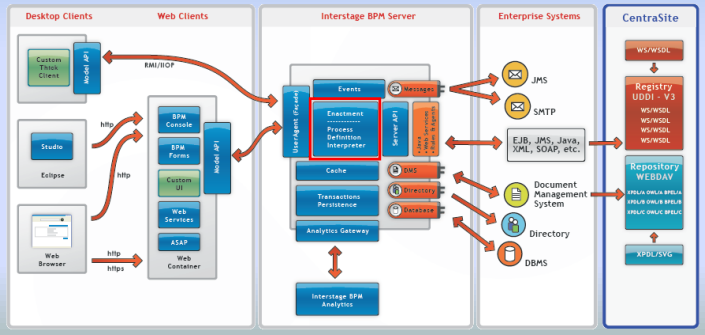
- Main components of Interstage BPM



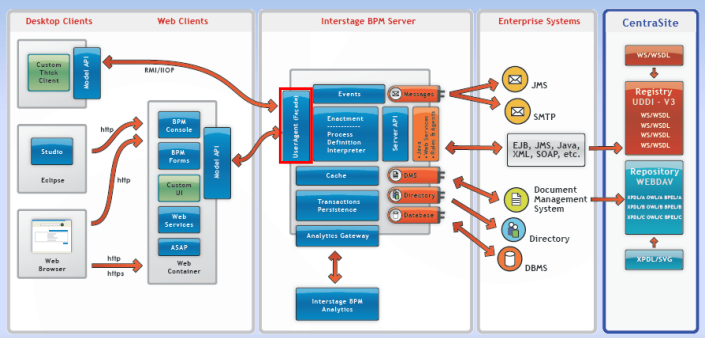
The Enactment Server

- Runtime engine is responsible for enacting a Process Definition designed in Interstage BPM modeler.
- The Enactment Server uses various adapters to monitor and control the execution of the process.



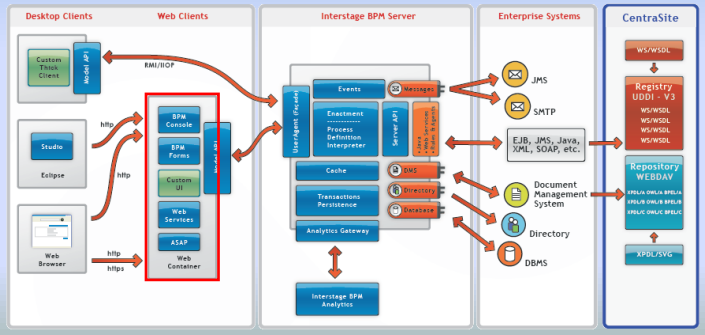
User Agent

- Façade between User Interfaces and the Enactment Server :
  - Enables clients to login and communicate to the Interstage BPM system and controls interaction with Server

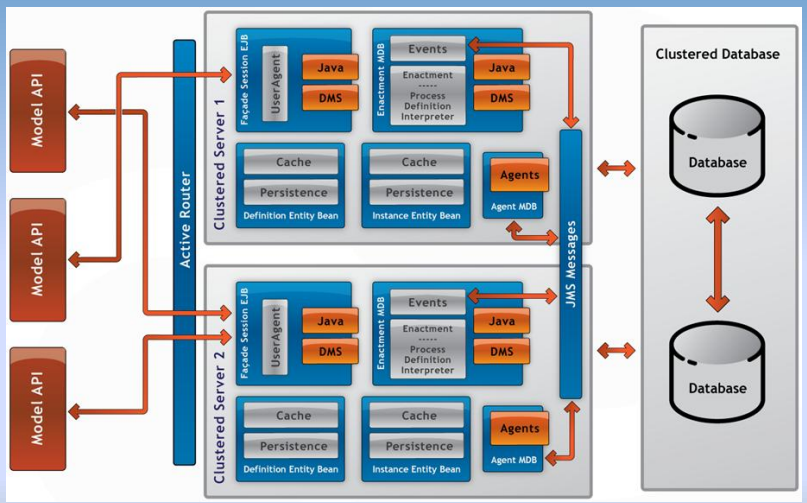


GUI – User Interface Tier

- Web Application: Interstage BPM Console provides
- Desktop Clients: BPM Studio and Eclipse Plug-in
- Model API can be used to create custom client applications
- Web Services



Server Clustering



DMZ Deployment

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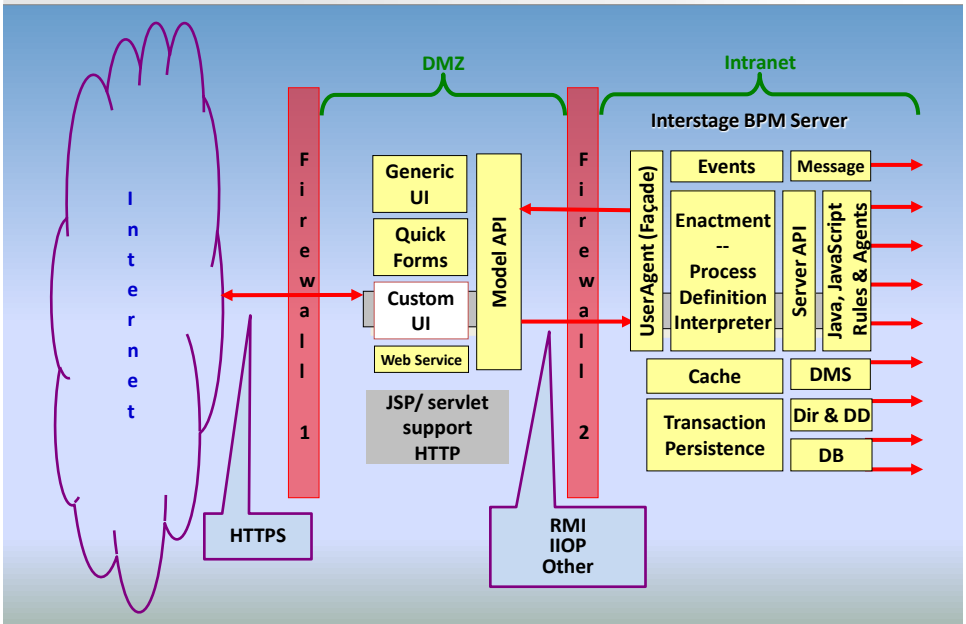

Database Adapter

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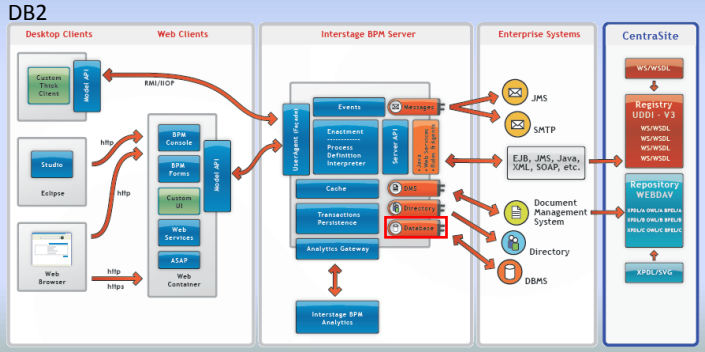
- The Data Base Adapter:
  - Controls the connection between the Enactment Server and the database
  - Uses JDBC for connection.
  - Supported Databases:
    - **Oracle** 10g
    - **Microsoft SQL Server** 2005 and 2008
    - DB2

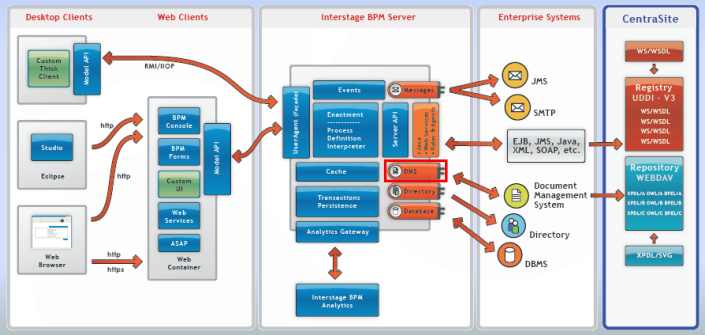


Directory Adapters

- Directory Service Consists of two Adapters
- DD Framework Adapter
  - The DD Framework Adapter is used for authentication. It's invoked by User Agent to authenticate users.
- The Directory Adapter
  - Resolves user group into a list of individuals at run time to assign work items.
- The Directory Adapter uses LDAP and supports
  - Microsoft Active Directory
  - Sun Java System Directory Server

DMS Adapter

- Document Management System (DMS) Adapter:
  - Connects Interstage BPM with external file systems using standard copy and transfer protocol
  - Forms, documents and other process attachments can be stored in local file system or external Document Repository
  - DMS Adapter uses WebDAV protocol to connect to external Document Repositories



Java Actions and JavaScript

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- Java Actions can be configured to execute at specific points in process lifecycle:
  - Start/ End of process
  - Before/ After a node execution
  - Role assignment
  - Error handling
  - On Suspend/Resume/Abort
- Allows a Process Instance to access information from, or update to, external applications (such as CRM or ERP systems) or databases;
- Out-of-the-box Actions and Custom (Generic) Java Action;
- JavaScript can be used via the Evaluate Script action
  - JavaScript functions for communicating with Interstage BPM.

Agents & Rules Engines

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- **Agents** are set up to run automatically and asynchronously on behalf of a process instance.
- They are useful for accessing web services and legacy applications, particularly when multiple retries may be required.
- **Rules Engine** Bridge is java action that allows process instance to invoke rules engines for executing rules. Supported rules engines are:
  - Interstage BPM Decision Table
  - iLog JRules;
  - Fair Isaac Blaze Advisor

Messages Adapter

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- Message Adapter provides connectivity with SMTP Mail servers
- Used to send notifications/email messages from BPM Server on predefined events
- Email listener and trigger supports processing of incoming emails for process management.
- Notifications:
  - When task is assigned
  - Complete task by sending email to server
  - Send email messages from process during execution.

Trigger Handler

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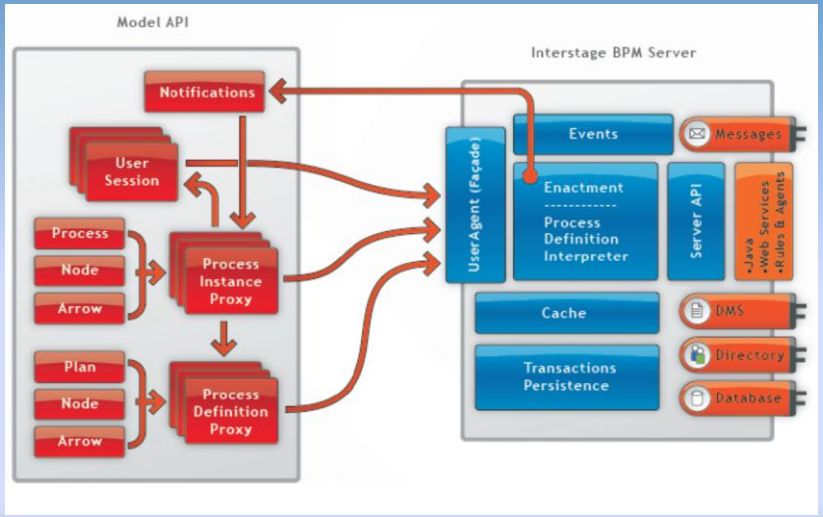
- Triggers are used to perform action based on predefined events
  - Can be used to create a new process instance
  - Can be used to make-choice on task or invoke an action on a task/node.
- Triggers can populate data from incoming files (usually in XML format) into the Process.
- Triggers work in conjunction with listeners.
- Triggers has two components:
  - Event Handler to process the triggering event
  - Trigger Action to trigger the action defined for the event.

Model API - Overview

- Interstage BPM has a comprehensive set of published APIs for communicating with BPM engine
- APIs can be used to manage
  - Administrative functions.
  - Process Definitions
  - Process Instances (including modifying user roles and updating user defined attributes)
- With Model API you can build custom applications, model processes, communicate with server like Studio and Console.
- Integrate with external applications

Model API – Internal Details



Multi Tenancy

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- Multi Tenancy enables SaaS mode
  - Multiple Tenants can be created within the same engine instance and leased out
  - Organizations may have separate environments (Tenants) for business units to host and run BPM applications
  - Tenants are created and administered by “super user”;
  - Non SaaS mode can be used if multi-tenancy/SaaS is not needed.
- Each tenant
  - May have different settings
  - Resources are kept completely separate from others
  - Can host multiple applications
  - has its own Administrator

Tenant Creation

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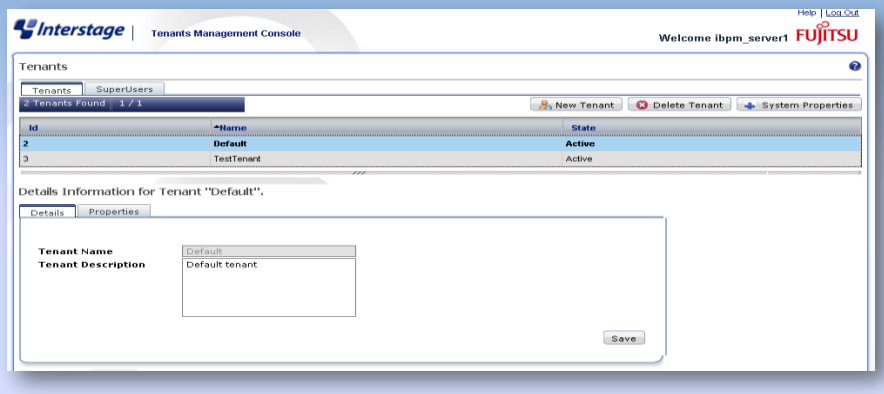
- Tenants are created by the “super” user (defined when Interstage BPM is installed) using the Tenant Manager Console.
- “super” user is responsible for these tenant management activities:
  - Create;
  - Delete;
  - Activate
  - Deactivate; and
  - Refresh.

Tenant Manager

- Super User can manage all Tenants and their properties/settings

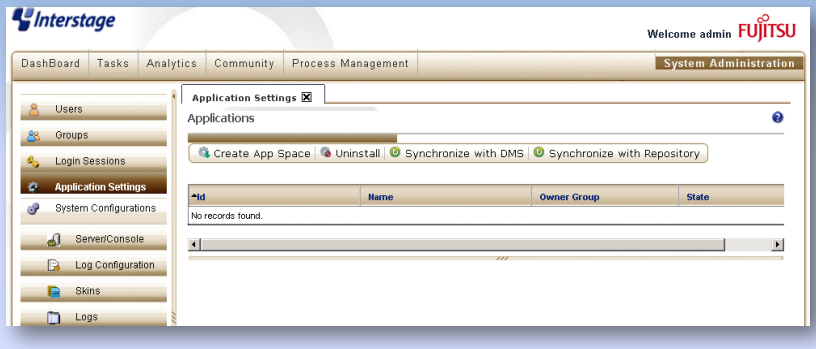


Tenant Administration

- Tenants are administered by the Tenant Administrator.
- Tenant Administrator can:
  - create application space and deploy applications
  - Maintain applications
  - Change Console/ Server settings
  - Change Styles, Logos and Skins
  - Maintain DMS settings

Tenant Administration

- "System Administration" options are only available only for tenant administrator.



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