WEBSPHERE TRAINING

Presented By

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WebSphere Training Outline

- WebSphere Platform Overview
  - WebSphere Product Categories
  - WebSphere Development, Presentation, Integration and Deployment Tools
  - WebSphere Application Server Features
  - WebSphere Application Server Offerings
- J2EE Architecture Overview
  - Enterprise Application Overview and Development Cycle
  - J2EE Architecture and Containers
  - Applet, Servlet and JSP Overviews
  - JDBC, JNDI and JTA
  - EJB, JMS and RMI Over IIOP
  - JavaMail, JAF, JAAS and JACC
  - XML and JAXP
  - New in J2EE 1.4
  - Web Services Support: JAX-RPC, SAAJ, Web Services for J2EE and JAXR
  - J2EE Connector, Management and Deployment
  - Development Roles and Deployment Descriptors
- WebSphere Application Server Architecture
  - Application Server Architecture Overview
  - Under the Cover
  - Basic Concepts
  - Web Server Plug-ins
  - Containers
  - Application Server Services: Transaction, ORB, PMI, Message Listener, Naming and Security Services
  - Web Services Support
  - WebSphere Administration Architecture
  - Master Configuration Repository
  - Network Deployment Architecture Overview
  - Cells, Nodes and Node Agents
  - Clusters
- WebSphere Application Server Installation
  - Hardware/Software Requirements
  - Installation Planning
  - Cell Topologies
  - Installation Process
  - GUI and Silent Installation
  - Application Server Components
  - Verifying the Installation
  - WebSphere Configuration Files
- Administrative Console
  - Starting the Console
  - Navigating the Console
  - Administrative Tasks
  - Scope, Filters and Preferences

- o Saving Configuration Changes
- o Getting Help
- Managing Profiles
  - o Profile Types
  - o Directory Structure
  - o Default Profile
  - o Creating Profiles
  - o Using the Profile Creation Wizard
  - o Using wasprofile
  - o Federation
- Configuring WebSphere Resources
  - o Defining JDBC Resources
  - o Configuring JCA Resources
  - o WebSphere JavaMail Provider
  - o Defining Virtual Hosts
  - o WebSphere Variables
  - o Shared Libraries and Library References
- Application Assembly and Packaging
  - o J2EE Deployable Units
  - o Assembly Process
  - o J2EE Modules
  - o Assembly Steps
  - o Packaging Checklist
  - o Deployment Descriptor Elements (EJB, Web, Connector, Client and Application)
  - o IBM Extensions and Bindings
- Application Server Toolkit
  - o AST Features
  - o Commonly Used Perspectives and Views
  - o JAR Dependency Editor
  - o Creating Projects and Defining Project Properties
  - o Creating Modules: Web, EJB, Application Client and Connector
  - o Importing Resources
  - o Web Deployment Descriptor (Servlet Properties, Filters, Listeners, Environment Variables, References, Pages, MIME Mappings, Parameters and Extensions)
  - o EJB Deployment Descriptor (EJB Properties, Assembly Descriptor, Transactions, References and Access)
  - o EJB Client JARs
  - o Application Client Properties
  - o Application Deployment Descriptor (Modules and Security)
  - o Application Validation
  - o Generating Deployment Code
  - o Exporting Applications
- Enterprise Application Deployment
  - o Deployment Process
  - o Deployment Preparation
  - o Application Installation Options
  - o Mapping Modules to Servers
  - o Specifying Virtual Hosts
  - o Managing Deployed Applications
- Java and Process Management
  - o WebSphere Class Loaders
  - o Class Loader Hierarchy and Delegation

- Common Class Loading Problems
- Class Loader Configuration
- Process Definition
- JVM Settings
- Monitoring Policy

- Session Management
  - Session Management Configuration
  - Session Persistence
  - Session Scope
  - WebSphere Affinity
  - Session Management Options
  - Internal Messaging Properties
  - Replication Domains and Entries
  - Shared Session Database Settings

- Command Line Administration
  - Wsadmin Advantages and Disadvantages
  - Configuring Wsadmin
  - Wsadmin Objects
  - Configuration Types and Object Names
  - Containment Path
  - Running Commands
  - JACL
  - Running Scripts
  - Examples
  - Managing Nodes and Servers
  - Creating and Restoring Backups

- Workload Management
  - Workload Management Benefits
  - Vertical, Horizontal and Combination Scaling
  - Clustering
  - Creating and Managing a Cluster
  - Implementing Workload Management
  - Workload Management Selection Policy
  - Load Balancing Problems

- Tivoli Performance Viewer
  - Analyzed Resources
  - Performance Data Reporting Process
  - Enabling PMI and JVMPI
  - Launching the Performance Viewer
  - Performance Monitoring Settings
  - Selecting Counters
  - Summary Reports
  - Performance Viewer: Actions
  - Recording and Replaying Performance Data
  - Enabling and Viewing Performance Advice

- Troubleshooting Tools
  - Define Symptoms
  - Identify the Source of the Problem
  - Trouble-Shooting Resources and Tools
  - Runtime Status Messages
  - Diagnostic Providers
  - Enabling Trace and Specifying Trace Settings

- Viewing Log Files
- WebSphere Logging Tools
- Profiling and Logging Perspective
- Analyzing Entries
- Viewing Information from the Symptom Database
- Dumping the Name Space
- WebSphere Security Basics
  - Security Risks
  - Security Layers
  - Authentication and Authorization
  - Lazy Authentication
  - LTPA
  - User Registries and Supported LDAP Servers
  - Single Sign-On
  - Transport Level Security
  - Encryption and Decryption
  - Cryptography
  - Certificates
  - Digital Signatures
  - Message Integrity
  - SSL and TLS
- Defining Security Settings
  - Securing Web Applications
  - Authenticating Users
  - Defining Security Roles, Security Constraints and Web Resource Collections
  - Servlet Security Settings
  - Securing EJB Applications
  - Annotations: Roles and Method Permissions
  - Defining Method Permissions and Security Role References
  - Security Identity and Run As Identity
  - Gathering and Mapping Security Roles
  - Security Configuration Files
  - Examples
  - Security Tips
- JMS Deployment and Configuration
  - JMS Capabilities and Messaging Styles
  - JMS Interactions and Participants
  - JMS Runtime Environment
  - Message-Driven Beans
  - Listener Ports and JMS Activation Specifications
  - WebSphere JMS Support
  - Feature Comparison
  - Security Considerations
  - JMS Provider Configuration: Default Messaging, WebSphere MQ and Generic JMS Providers
  - Configuring JMS Resources
  - JMS References and Transactions
- Service Integration Bus
  - Bus Features and Components
  - SIB Architecture
  - Creating a Bus
  - Bus Properties

- Bus Security
- Message Store Types
- Adding Bus Members
- Destinations
- Configuring a Foreign Bus
- Messaging Engines
- Linking Messaging Engines
- Server Messaging Properties
- Web Service Support
  - Service-Oriented Architecture
  - Supported Standards
  - Web Service Deployment
  - SIBWS Setup
  - Inbound and Outbound Services
  - Handlers and Handler Lists
  - Applying a Mediation
  - UDDI References
  - Gateway Services
- Defining Web Services Security
  - Supported Specifications
  - WebSphere Security Model for Web Services
  - Configuration Files
  - WS Security Wizard
  - Enabling Authentication
  - Specifying Message Integrity
  - Configuring Confidentiality
  - Examples