JBOSS Course Content:35-40hours
Course Outline

- Java EE
- Overview of Java EE
- Java EE vs. other Web technologies
- Java EE standards/specifications/semantics
- Java EE and JBoss
- JBoss
- JBoss Organization History of JBoss AS Features of JBoss AS JBoss AS Architecture JBoss AS Services JBoss AS Requirements Installation
- Getting and Installing Java Configuring Java Getting JBoss AS Building JBoss AS from source Installing JBoss AS Unpackin Running Java Installer Understanding Differences Directory Structure Explaining JBoss AS Directories bin, client, docs, lib, server, common Explaining JBoss AS Configuration Sets Difference between minimal, default, all Internal Directory Structure conf, lib, deploy, temp, work, data, log, etc Logging on JBoss
- Starting/Stopping
- Starting JBoss AS from command-line Starting JBoss AS as a service Verifying JBoss Startup Stopping JBoss (locally, remotely) Booting JBoss AS from network Deployments
- J2EE Development/Deployment Lifecycle and Roles Deployment Descriptors (DTDs vs. Schemas) Deployment on JBoss AS
- JBoss Deployers (WAR, EAR, EJB, JAR, RAR, SAR, HAR, etc.) Deployment Dependencies Hot vs. Cold Deployment JBoss conf/jboss-service.xml file
- XMBeans Services
- Tomcat Web Container
- Architecture and Configuration (server.xml)
- Concepts (Connectors, Engine, Host, Context, Valve, etc.)
- Understanding web.xml (Filters, Servlets, Mappings, etc.)
- Default web.xml
- Serving Static Content
- Virtual Hosting
- Web Access Logging
- JNDI
- Overview
- JNDI on JBoss
- JavaMail on JBoss
- Overview
- Configuration
- JMX
- Overview
- Architecture
- JMX on JBoss
- JMX Console

- Twiddle command-line tool Automation
- Deploying JMX Services Web Console JBoss Monitoring JBoss Scheduler JBoss Snapshots Admin Console JConsole JMS
- Overview Architecture
- Domains (Point-to-Point vs. Publish-Subscribe)
- JMS on JBoss
- Configuration
- EJB
- Overview (stateless/stateful session, entity, message-driven beans) Architecture
- Deployments (including EAR packaging)
- EJB on JBoss
- Remote Clients
- Turning
- Web Services
- Overview
- Architecture
- Web Services on JBoss
- Deployments
- Remote Clients
- Tooling
- Class Loading
- Java Class Identity
- JavaEE Class Loading Requirements
- Class Loading on JBoss
- Default Class Search Order
- Scoped Class Search Order
- Log4j Issues
- Common Problems With Class Loading
- Database Connectivity
- Installing/setting up MySQL
- Overview of JDBC
- Installing JDBC Drivers
- Defining Resource Requirements
- Describing Database Resources (Connection Pools)
- Resource Mapping
- Testing database access
- Embedded Hypersonic database
- Security
- Securing Applications on JBoss AS
- Filtering clients by IP/Hostname
- Implementing JAAS-based declarative security
- Authentication and Authorization
- Plain-text
- Database-based
- Securing passwords
- Basic vs Form login

- Handling A&A failures
- Data Transport Security (SSL)
- Generating SSL certificates
- Configuring embedded Tomcat for SSL
- Requiring SSL by applications
- Securing JMS Destinations (Queues and Topics)
- Securing EJBs
- Securing JBoss AS
- User and file system security Securing console applications/tools Securing other JBoss AS services Running with Java Security Manager Running behind a firewall Performance
- JVM Tuning and GC Optimization Tomcat Tunin JMS Tunin RMI/EJB Tuning Log4J Tuning Tuning other JBoss services Slimming JBoss
- High Availability and Scalability
- Defining Requirements
- Overview of clustering architectures
- Fronting JBoss with Apache Web Server
- Advantages
- Installing and Configuring modjk
- Load Balancing with mod_jk
- Enabling sticky sessions (server-affinity)
- Clustered Session Replication
- Clustered Single-Signon
- Clustering other JBoss AS Services
- HA-JNDI
- HA-JMS
- Cluster Farming Deployment