

DSpace Installation & System Setup Training

COURSE CONTENT

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About Multisoft

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About Course

DSpace Installation & System Setup training by Multisoft Systems is designed to provide a comprehensive understanding of deploying and managing digital repository systems effectively. This course focuses on the end-to-end installation process of DSpace, including system requirements, environment setup, and configuration of essential components such as databases, application servers, and storage systems.

Module 1: Introduction to DSpace

- ✓ Overview of DSpace and digital repositories
- ✓ Key features and use cases
- ✓ DSpace architecture and components
- ✓ Understanding communities, collections, and items
- ✓ DSpace versions and deployment options

Module 2: System Requirements & Environment Setup

- ✓ Hardware and software requirements
- ✓ Installing Java (JDK) and environment variables
- ✓ Database setup (PostgreSQL configuration)
- ✓ Installing Apache Maven and Apache Ant
- ✓ Application server setup (Apache Tomcat)

Module 3: DSpace Installation Process

- ✓ Downloading DSpace source code
- ✓ Building DSpace using Maven
- ✓ Configuring installation directories
- ✓ Installing DSpace on Linux/Windows
- ✓ Initial startup and verification

Module 4: Database Configuration & Management

- ✓ Creating and configuring DSpace database
- ✓ Database connectivity setup
- ✓ Managing schemas and tables
- ✓ Backup and restore strategies
- ✓ Performance tuning basics

Module 5: Application Server & Deployment

- ✓ Deploying DSpace on Apache Tomcat
- ✓ WAR file configuration and deployment
- ✓ Managing server ports and services
- ✓ Troubleshooting deployment issues
- ✓ Log monitoring and debugging

Module 6: User Management & Authentication

- ✓ Creating admin and user accounts
- ✓ Role-based access control
- ✓ Authentication methods (LDAP, Shibboleth)
- ✓ Authorization and permissions setup
- ✓ Managing user groups and roles

Module 7: Repository Structure & Content Management

- ✓ Creating communities and collections
- ✓ Uploading and managing digital assets
- ✓ Metadata standards (Dublin Core)
- ✓ Batch import/export of content
- ✓ Workflow configuration

Module 8: Customization & Configuration

- ✓ Customizing UI (XMLUI/REST API basics)
- ✓ Branding and theme customization
- ✓ Configuring email and notifications
- ✓ Modifying configuration files
- ✓ Localization and language settings

Module 9: Integration & Interoperability

- ✓ Integration with external systems
- ✓ OAI-PMH configuration
- ✓ REST API usage and basics
- ✓ Search engine integration (Solr)
- ✓ Third-party plugin support

Module 10: Security & Access Control

- ✓ Implementing security best practices
- ✓ SSL configuration and HTTPS setup
- ✓ Access restrictions and IP control
- ✓ Data protection and compliance
- ✓ Audit logs and monitoring

Module 11: Performance Optimization & Maintenance

- ✓ System performance tuning
- ✓ Indexing and search optimization
- ✓ Regular maintenance activities
- ✓ System monitoring tools
- ✓ Handling large-scale repositories

Module 12: Troubleshooting & Upgrade Management

- ✓ Common installation and runtime issues
- ✓ Debugging errors and logs
- ✓ Version upgrade process
- ✓ Patch management
- ✓ Best practices for system stability

Module 13: Real-Time Project & Case Studies

- ✓ End-to-end DSpace setup project
- ✓ Repository deployment scenarios
- ✓ Industry use cases (academic/research)
- ✓ Performance and security implementation