

DSpace Integration & Interoperability Training

COURSE CONTENT

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About Multisoft

Train yourself with the best and develop valuable in-demand skills with Multisoft Systems. A leading certification training provider, Multisoft collaborates with top technologies to bring world-class one-on-one and certification trainings. With the goal to empower professionals and business across the globe, we offer more than 1500 training courses, which are delivered by Multisoft's global subject matter experts. We offer tailored corporate training; project Based Training, comprehensive learning solution with lifetime e-learning access, after training support and globally recognized training certificates.

About Course

DSPACE Integration & Interoperability Training by Multisoft Systems is designed to help professionals understand how to seamlessly connect DSPACE repositories with external systems, applications, and data services. This training focuses on building strong integration capabilities using APIs, web services, and standard protocols to ensure efficient data exchange and system compatibility.

Module 1: Introduction to DSpace Integration & Interoperability

- ✓ Overview of DSpace architecture
- ✓ Importance of integration in digital repositories
- ✓ Interoperability concepts and benefits
- ✓ Use cases in enterprise and academic environments

Module 2: DSpace Architecture for Integration

- ✓ DSpace backend and frontend structure
- ✓ Database and storage layers
- ✓ REST API architecture in DSpace
- ✓ Integration points within DSpace

Module 3: Metadata Standards & Mapping

- ✓ Introduction to metadata standards (Dublin Core, MODS, etc.)
- ✓ Metadata crosswalks and mapping techniques
- ✓ Metadata normalization and validation
- ✓ Best practices for metadata interoperability

Module 4: OAI-PMH Protocol & Metadata Harvesting

- ✓ Understanding OAI-PMH protocol
- ✓ Configuring DSpace for OAI-PMH
- ✓ Harvesting metadata from external repositories
- ✓ Troubleshooting harvesting issues

Module 5: REST APIs & Web Services Integration

- ✓ Introduction to REST APIs in DSpace
- ✓ Authentication and authorization mechanisms

- ✓ CRUD operations using APIs
- ✓ Integrating with external applications via APIs

Module 6: Integration with External Systems

- ✓ Integrating DSpace with CMS and LMS platforms
- ✓ Integration with institutional and research systems
- ✓ Connecting with cloud storage and third-party tools
- ✓ Real-time vs batch integration approaches

Module 7: Data Exchange & Interoperability Frameworks

- ✓ Data exchange formats (XML, JSON)
- ✓ Interoperability frameworks and standards
- ✓ Workflow automation and synchronization
- ✓ Event-driven integration concepts

Module 8: Security & Access Control in Integration

- ✓ Securing APIs and endpoints
- ✓ Role-based access control (RBAC)
- ✓ Data privacy and compliance considerations
- ✓ Secure data transfer practices

Module 9: Performance Optimization & Scalability

- ✓ Optimizing API performance
- ✓ Load balancing and caching techniques
- ✓ Handling large-scale data exchange
- ✓ Monitoring and performance tuning

Module 10: Troubleshooting & Best Practices

- ✓ Identifying and resolving integration issues

- ✓ Debugging API and metadata errors
- ✓ Logging and monitoring tools
- ✓ Industry best practices for interoperability

Module 11: Real-Time Projects & Case Studies

- ✓ Integration of DSpace with enterprise systems
- ✓ Metadata harvesting implementation project
- ✓ API-based integration use cases
- ✓ End-to-end interoperability solution design

Module 12: Deployment & Future Trends

- ✓ Deployment strategies for integrated environments
- ✓ CI/CD considerations for DSpace integration
- ✓ Emerging trends in repository interoperability
- ✓ AI and automation in digital repositories