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Systems

SmartPlant Foundation (SPF) 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

SmartPlant Foundation (SPF) Training by Multisoft Systems is designed to equip professionals with the knowledge and skills required to manage complex engineering information effectively across the entire project lifecycle. As a core component of the Hexagon PPM suite, SPF acts as a powerful data-centric engineering document management and collaboration platform, ensuring consistency, traceability, and control of all engineering data and deliverables.

Module 1: Introduction & Architecture

- ✓ What is SmartPlant Foundation — purpose, capabilities, role in the Hexagon ecosystem
- ✓ Components & architecture — core services, modules, clients, integration layers
- ✓ Deployment models — on-premises, cloud, hybrid
- ✓ Versioning and data control paradigms
- ✓ Relationship with other tools (Smart 3D, Smart P&ID, Smart Materials, etc.)
- ✓ Terminology, data model, repository concepts
- ✓ Key design principles — security, scalability, availability

Module 2: Platform & Infrastructure Requirements

- ✓ Hardware recommendations for SPF components (application server, database server, file server)
- ✓ Operating system, database, middleware, and software stack compatibility
- ✓ Client workstation requirements (desktop client, web client)
- ✓ Deployment topology — separating database and app servers for performance
- ✓ Full Text Retrieval (FTR) service & its requirements
- ✓ Hostname / network naming conventions and constraints (e.g. no underscores in hostnames)
- ✓ Virtualization and cloud support (AWS / Azure) statements
- ✓ Performance tips for model viewing & data access

Module 3: Installation, Setup & Environment Configuration

- ✓ SPF installation overview: prerequisite checks, pre-installation steps
- ✓ Setting up database, schema, initial configuration
- ✓ Installing application server components, web services
- ✓ Configuring File Server, FTR, and remote services
- ✓ Setting up desktop client and web client
- ✓ Environment types: Dev, Test, QA, Production

- ✓ Baseline configuration and versioning
- ✓ Patch, update, and upgrade mechanisms

Module 4: Repository, Version Control & Change Management

- ✓ Repository structure and storage of engineering data
- ✓ Check-in / check-out workflows
- ✓ Branching, merging, conflict resolution
- ✓ Revision & version history, audit trails
- ✓ Change requests, approval workflows
- ✓ Baseline snapshots, differencing, comparison tools
- ✓ Locking, concurrency control, and access conflicts

Module 5: Document Management & Collaboration

- ✓ Document libraries and folder structure
- ✓ Document metadata, indexing, and classification
- ✓ Versioning and document checkout/checkin
- ✓ Linking documents to engineering objects
- ✓ Notifications, alerts, and collaboration workflows
- ✓ Document review, approval, and publishing
- ✓ Exporting documents, external sharing
- ✓ Access control and permissions

Module 6: Engineering Data Exchange & Integration

- ✓ Integration architecture with Smart 3D, P&ID, Isometrics, Smart Materials
- ✓ Data exchange protocols and standards
- ✓ Export / import of models and data between SPF and other tools
- ✓ Synchronization of changes across systems
- ✓ Conflict detection and resolution in data exchange

- ✓ Interfaces with ERP, PLM, or other third-party systems
- ✓ Logging, monitoring, and troubleshooting interface jobs

Module 7: Web Client / Remote Services & Client Access

- ✓ Web client architecture and usage
- ✓ Remote service setup and configuration
- ✓ Accessing SPF from different client types (desktop, browser)
- ✓ Performance considerations for web / remote access
- ✓ Security, authentication, single sign-on (SSO)
- ✓ Mobile / tablet access (if supported)
- ✓ Troubleshooting client connectivity

Module 8: Performance, Scalability & Optimization

- ✓ Indexing, caching, and data retrieval optimization
- ✓ Load balancing, clustering, and high availability
- ✓ Database tuning and query optimization
- ✓ File server performance strategies
- ✓ Model viewing performance tips (e.g. for large models)
- ✓ Monitoring tools, logs, and performance metrics
- ✓ Scaling considerations for large projects

Module 9: Administration, Security & Governance

- ✓ User, role, and group management
- ✓ Permission and access model design
- ✓ System settings, global parameters, and defaults
- ✓ Audit logs and security monitoring
- ✓ Backup, recovery, and disaster recovery planning
- ✓ Data retention, archival, and purging strategies
- ✓ Governance policies & compliance
- ✓ Change management & upgrade path planning