

SAP AI Core

COURSE CONTENT

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About Multisoft

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About Course

The SAP AI Core Training provides professionals with practical knowledge of managing artificial intelligence and machine learning workloads within the SAP ecosystem. The course covers SAP AI Core architecture, environment configuration, resource groups, Git and Docker integration, AI/ML workflow execution, model training, deployment, inference endpoints, APIs, security, monitoring, and troubleshooting. Through practical exercises and enterprise-focused scenarios, participants gain an understanding of the complete AI workload lifecycle and learn how SAP AI Core can support scalable, controlled, and operationally efficient AI initiatives across business environments.

Module 1: Introduction to SAP AI Core and Enterprise AI

- ✓ Introduction to enterprise artificial intelligence
- ✓ AI and machine learning in SAP environments
- ✓ Overview of SAP Business AI
- ✓ Introduction to SAP AI Core
- ✓ Purpose and capabilities of SAP AI Core
- ✓ SAP AI Core as an AI runtime
- ✓ Understanding AI workload orchestration
- ✓ Relationship between AI Core and AI applications
- ✓ SAP AI Core and SAP BTP landscape
- ✓ Overview of the AI workload lifecycle
- ✓ Typical enterprise use cases for SAP AI Core
- ✓ Understanding training and inference workloads

Module 2: SAP AI Core Architecture and Key Components

- ✓ Understanding SAP AI Core architecture
- ✓ Core services and architectural elements
- ✓ SAP AI Core tenants
- ✓ Service instances and service keys
- ✓ Resource groups and workload isolation
- ✓ AI scenarios and configurations
- ✓ Executables and templates
- ✓ Executions and deployments
- ✓ Artifacts and models
- ✓ Applications and repositories

- ✓ Understanding configurations and parameters
- ✓ Connections between major SAP AI Core objects
- ✓ AI workload lifecycle within the architecture
- ✓ Understanding runtime resources

Module 3: Environment Setup, Tools, and Resource Configuration

- ✓ SAP AI Core environment requirements
- ✓ SAP BTP account and subaccount considerations
- ✓ Creating and configuring SAP AI Core service instances
- ✓ Understanding service plans
- ✓ Creating service keys
- ✓ Accessing SAP AI Core services
- ✓ Authentication fundamentals
- ✓ Working with SAP AI Core APIs
- ✓ Introduction to command-line and API interaction
- ✓ Resource group creation and management
- ✓ Configuring credentials
- ✓ Working with secrets
- ✓ Understanding object storage requirements
- ✓ Preparing repositories for AI workloads
- ✓ Validating initial environment configuration

Module 4: AI Workloads, Executables, and Docker Containers

- ✓ Understanding containerized AI workloads
- ✓ Introduction to Docker concepts for SAP AI Core
- ✓ Preparing AI applications for container execution
- ✓ Docker images and container registries
- ✓ Image references and version management
- ✓ Understanding executables
- ✓ Executable templates and specificationsParameters and placeholders
- ✓ Input and output artifacts
- ✓ AI scenario association
- ✓ Resource requirements for workloads
- ✓ Environment variables
- ✓ Secrets within workload configurations
- ✓ Container execution lifecycle
- ✓ Best practices for organizing AI workloads

Module 5: Git Repositories, Applications, and Workflow Configuration

- ✓ Role of Git in SAP AI Core
- ✓ Repository structure for AI applications
- ✓ Connecting Git repositories
- ✓ Repository credentials and authentication
- ✓ Application configuration
- ✓ Understanding application synchronization

- ✓ Workflow definition concepts
- ✓ YAML-based configuration fundamentals
- ✓ Organizing scenarios and executables
- ✓ Managing configuration changes
- ✓ Version-controlled AI workload definitions
- ✓ Updating application resources
- ✓ Validating synchronization status
- ✓ Troubleshooting repository and synchronization issues
- ✓ Configuration management practices

Module 6: Training AI/ML Models with SAP AI Core

- ✓ Understanding machine learning training workloads
- ✓ Preparing training code for SAP AI Core
- ✓ Training executable configuration
- ✓ Creating training configurations
- ✓ Working with input datasets
- ✓ Artifact management
- ✓ Parameters for training executions
- ✓ Starting training executions
- ✓ Monitoring execution status
- ✓ Understanding execution states
- ✓ Accessing workload logs
- ✓ Tracking training progress
- ✓ Handling failed executions
- ✓ Output artifact generation
- ✓ Model artifact management

- ✓ Re-running training with modified configurations
- ✓ Resource considerations for model training
- ✓ Training workflow troubleshooting

Module 7: Model Serving, Deployments, and Inference

- ✓ Introduction to model serving
- ✓ Understanding inference workloads
- ✓ Preparing models for deployment
- ✓ Serving executable configuration
- ✓ Creating deployment configurations
- ✓ Creating and managing deployments
- ✓ Deployment lifecycle and states
- ✓ Accessing deployment endpoints
- ✓ Sending inference requests
- ✓ Understanding request and response structures
- ✓ Authentication for inference endpoints
- ✓ Model version considerations
- ✓ Updating deployed models
- ✓ Monitoring deployment health
- ✓ Scaling and resource considerations
- ✓ Stopping and deleting deployments
- ✓ Troubleshooting inference failures
- ✓ Model serving operational practices

Module 8: Generative AI Capabilities and SAP Generative AI Hub

- ✓ Introduction to generative AI in SAP environments
- ✓ Role of Generative AI Hub
- ✓ Generative AI Hub within SAP AI Core
- ✓ Understanding foundation model access
- ✓ Model selection considerations
- ✓ Generative AI use cases in enterprise applications
- ✓ Working with prompts
- ✓ Prompt parameters and model responses
- ✓ Understanding inference for generative AI
- ✓ Connecting applications to generative AI capabilities
- ✓ Generative AI API interaction concepts
- ✓ Managing model access
- ✓ Responsible use considerations
- ✓ Data privacy considerations for generative AI
- ✓ Evaluating generative AI responses
- ✓ Enterprise scenarios using generative AI
- ✓ Relationship with SAP Business AI applications

Module 9: APIs, SAP BTP Integration, and Application Connectivity

- ✓ Overview of SAP AI Core APIs
- ✓ API authentication and authorization
- ✓ Working with service credentials

- ✓ Managing resource groups through APIs
- ✓ Accessing scenarios and configurations
- ✓ Managing executions programmatically
- ✓ Managing deployments through APIs
- ✓ Retrieving execution and deployment status
- ✓ Accessing logs and operational information
- ✓ Integrating SAP AI Core with SAP BTP applications
- ✓ AI service consumption patterns
- ✓ Application-to-AI Core communication
- ✓ Handling inference responses
- ✓ Integration considerations for enterprise applications
- ✓ API error handling
- ✓ Connectivity troubleshooting

Module 10: Monitoring, Security, Resource Management, and Troubleshooting

Monitoring and Operations

- ✓ Monitoring AI executions
- ✓ Monitoring deployments
- ✓ Understanding workload states
- ✓ Accessing and interpreting logs
- ✓ Tracking failed and completed workloads
- ✓ Deployment health monitoring
- ✓ Operational visibility for AI workloads

Security and Access

- ✓ Authentication concepts
- ✓ Authorization considerations
- ✓ Service credentials
- ✓ Resource-group-based isolation
- ✓ Managing secrets securely
- ✓ Repository credentials
- ✓ Container registry credentials
- ✓ Protecting AI endpoints
- ✓ Enterprise security considerations

Resource Management

- ✓ Understanding compute resource requirements
- ✓ CPU and memory considerations
- ✓ Resource allocation for training
- ✓ Resource allocation for serving
- ✓ Managing concurrent workloads
- ✓ Workload efficiency considerations
- ✓ Cleaning unused executions and deployments

Troubleshooting

- ✓ Diagnosing configuration issues
- ✓ Git synchronization failures
- ✓ Container image errors
- ✓ Training execution failures
- ✓ Deployment initialization issues
- ✓ Inference endpoint errors

- ✓ Credential and authentication problems
- ✓ Resource-related failures
- ✓ Log-based troubleshooting techniques
- ✓ Common configuration mistakes

Module 11: Hands-on Scenarios and End-to-End SAP AI Core Implementation

- ✓ Preparing an SAP AI Core project structure
- ✓ Connecting an AI workload repository
- ✓ Configuring a resource group
- ✓ Creating an AI scenario
- ✓ Preparing executable definitions
- ✓ Configuring training parameters
- ✓ Running a model training execution
- ✓ Monitoring training logs and execution status
- ✓ Managing generated model artifacts
- ✓ Preparing a serving executable
- ✓ Creating an inference deployment
- ✓ Testing the deployed endpoint
- ✓ Updating deployment configurations
- ✓ Exploring a generative AI consumption scenario
- ✓ Connecting an application to AI capabilities
- ✓ Applying credentials and secrets
- ✓ Monitoring the complete workload lifecycle
- ✓ Diagnosing common implementation issues

- ✓ End-to-end enterprise AI workflow exercise
- ✓ Operational and deployment best practices