

MoSMB Operations & Administration Essentials

Course Introduction:

The "MoSMB Operations & Administration" course is designed to provide IT professionals with a robust understanding of managing and administering MoSMB (Microsoft's Server Message Block) systems. This course will delve into the configuration, management, and troubleshooting of MoSMB environments, equipping learners with the skills necessary to ensure optimal system performance and reliability. Participants will gain hands-on experience with real-world scenarios and learn best practices for maintaining secure and efficient MoSMB operations.

Module 1: Introduction to MoSMB

- 1.1 Overview of MoSMB Architecture
 - 1.2 Key Features and Benefits
 - 1.3 SMB Protocol Overview
 - 1.4 MoSMB Components and Services
 - 1.5 Use Cases and Deployment Scenarios
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Module 2: Installation & Initial Configuration

- 2.1 System Requirements
 - 2.2 Installation Methods
 - 2.3 Initial Configuration
 - 2.4 Network Configuration
 - 2.5 Integration with Existing Infrastructure
 - 2.6 Post-Installation Verification
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Module 3: User & Share Administration

- 3.1 User Management
 - 3.2 Group Management
 - 3.3 Share Creation and Management
 - 3.4 Access Control Lists (ACLs)
 - 3.5 Quotas and Resource Management
 - 3.6 Permission Best Practices
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Module 4: Security & Compliance

- 4.1 Security Architecture
- 4.2 Authentication Mechanisms
- 4.3 Kerberos Integration
- 4.4 SMB Encryption & Signing

Module 5: Monitoring & Performance

- 5.1 Performance Monitoring
 - 5.2 Resource Utilization
 - 5.3 Performance Metrics
 - 5.4 Performance Tuning
 - 5.5 Capacity Planning
 - 5.6 Health Monitoring
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Module 6: High Availability & Clustering

- 6.1 High Availability Concepts
 - 6.2 Cluster Architecture
 - 6.3 Cluster Configuration
 - 6.4 Failover Mechanisms
 - 6.5 Load Balancing
 - 6.6 Cluster Maintenance
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Module 7: Cloud & Advanced Features

- 7.1 Advanced Networking Features
 - 7.2 Multi-Channel SMB
 - 7.3 Cloud Integration
 - 7.4 Hybrid Deployments
 - 7.5 Multi-Cloud Considerations
 - 7.6 Future Enhancements
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Module 8: Operations & Maintenance

- 8.1 Routine Administrative Tasks
 - 8.2 System Health Checks
 - 8.3 Patch & Upgrade Management
 - 8.4 Configuration Management
 - 8.5 Maintenance Best Practices
 - 8.6 Operational Checklist
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Module 9: Backup & Recovery

- 9.1 Data Protection Overview

9.2 Backup Architecture

9.3 Snapshot Architecture

Understanding:

- Point-in-time Recovery
- Crash-Consistent Snapshots
- Application-Consistent Snapshots

9.4 Backup Validation

Validation Steps:

- Data Validation
- ACL Validation
- Restore Testing

9.5 Snapshot Verification

Verification Steps:

- Snapshot Existence
- Snapshot Accessibility
- Recovery Testing

9.6 File-Level Recovery

9.7 Disaster Recovery Procedures

Module 10: Routine Troubleshooting

10.1 Common Administrative Issues

10.2 Diagnostic Utilities

10.3 Service Management

10.4 Connectivity Issues

10.5 Share Access Problems

10.6 Support Best Practices

Module 11: Best Practices & Lifecycle Management

11.1 Operational Best Practices

11.2 Capacity Planning

11.3 Upgrade Strategy

11.4 Configuration Backup

11.5 Documentation Standards

11.6 Preparing for Future Releases

Module 12: Advanced Troubleshooting

12.1 Authentication Failures

12.2 DNS Issues

12.3 Kerberos Issues

12.4 File Locking Issues

12.5 Slow Share Access

12.6 Network Performance Problems

12.7 Backend Storage Bottlenecks

12.8 Cluster Failures

RCA Techniques

- Log Analysis
 - Correlation Analysis
 - Timeline Reconstruction
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Module 13: Logs & Diagnostics

13.1 MoSMB Logs

13.2 Cluster Logs

13.3 Authentication Logs

13.4 Performance Logs

13.5 Debug Collection

13.6 Log Retention Strategy

Course Conclusion and Certification

- Recap and Key Takeaways