



Microsoft Premier Workshops

Catalog

Microsoft Premier Workshops

Premier Support Workshops are advanced technical training sessions that last from 1 to 5 days and exclusively available to Premier Support customers. Delivered by a Microsoft engineer in person or online, these Workshops are focused on enhancing knowledge and skills around a specific technology, product or online service. Our Workshops are designed as a combination of theory and practical applications and provide customers with Microsoft best practices. Then they receive knowledge transfer directly from Microsoft Subject Matter Experts that will help them using and getting the best of Microsoft technologies.

Premier Workshops Delivery model

Workshops could be either purchased on a per-attendee basis or as a dedicated delivery to your organization. Multi company sessions are held on our Microsoft France premises and are delivered in French only. Dedicated sessions could be either held on your organization's premises or on our Microsoft France premises and could be delivered either in French or in English.

The Premier Workshops provided by Microsoft engineers can usually range from a 200-400 level (see below).

Premier Workshops technical levels

To ensure that participants get the most out of each Premier Workshop, the technical level of the presentation has been included. Classification has been done in accordance with the classic undergraduate class model and the description of each level is listed below:

100 Introductory	100-level workshop is an introduction to the topic or an overview. Assumes little or no expertise with the topic being covered
200 Intermediate	Assumes 100-level knowledge and a fairly complete understanding of product features. The 200-level Premier Workshops may discuss case studies that cover a breadth of common scenarios or explain how to use more advanced features
300 Advanced	Assumes 200-level knowledge and an in-depth understanding of product features in a real-world environment. The 300-level Premier Workshops may go into unusual case studies that illustrate specific aspects of the product that are key to improving performance or interoperability
400 Expert	Assumes the deepest level of technical knowledge we expect a customer to have. The 400-level Premier Workshops are essentially expert-to-expert sessions. The content provides the means for customers to push products to maximum performance, achieve the broadest possible interoperability, and create applications using even the most advanced features

Contacts information:

You can find the list of available Premier Workshops in this catalog.

The latest Premier Workshop sessions planning and Workshops details could be found at the following website

<http://www.microsoft.com/france/services/workshop-plus.aspx>

For further information, please contact your Service Delivery Manager, Services Sales representative, or the Premier Education Services team premierwksfr@microsoft.com.

Other Premier support customer exclusive education services available:

Workshops Library on-Demand

Workshops Library on-demand is a subscription service providing access to a rich portfolio of on-demand video trainings. Each video features content based on our in-person Workshops. The topics of the Workshops Library on-Demand can range from a 100-400 level.

The content is split into segments featuring lectures and demonstrations delivered by Microsoft expert engineers. One of the key advantages of on-demand training is that it gives you the opportunity to revisit any or all of the material at your convenience. You can select from dozens of available on-demand online courses based on your role or technology. By subscribing to Workshop Library on-Demand you will have access to the entire Library portfolio. This will enable you to enhance your learning skills and reap the benefits of this rapidly growing portfolio focused on deep technical content across a broad spectrum of technologies. Over the course of your subscription you will also see the service evolve to include additional features and functionality to enrich your learning experience.

For a complete list of available and upcoming sessions in the Workshop Library please contact your Service Delivery Manager or Services Sales representative.

Premier Webcast

Premier Webcasts are remote presentations delivered by highly skilled Microsoft field engineers or support engineers who are experts in various Microsoft technologies. The topics of the Webcasts can range from a 100-400 level about troubleshooting deep dive, new and upcoming Microsoft product, operations "how to" or best practices to name a few. Premier Webcasts are 2-hour sessions that typically comprise of a 90-minute presentation with a 30-minute Q&A session.

For a complete list of available and upcoming Premier Webcast sessions please contact your Service Delivery Manager or Services Sales representative.

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Datacenter Technologies

Windows Server 2012/2012 R2: Active Directory Domain Services – Level 300

Target Audience:

This WorkshopPLUS is an advanced course about Windows Server 2012 and 2012 R2 Active Directory Domain Services (AD DS). This course is only targeted at senior IT staff who have deployed, administered, and managed an Active Directory forest infrastructure for at least one full year.

The basic concepts and know-how of the product will not be covered in this course, and it is expected that participants must already possess that knowledge.

Overview

The Windows Server 2012/2012 R2 Active Directory Domain Services WorkshopPLUS introduces new features from Windows Server 2012 and Windows Server 2012 R2 that improve ease of management and deployment. This WorkshopPLUS also discusses new features for managing service accounts, group policies and new access control capabilities leveraging Dynamic Access Control.

Key Features and Benefits

- Exercise on upgrading a Windows Server 2008 R2 forest with a trust to a Windows Server 2012 R2 forest.
- Extensive hands-on labs and presentations introducing new features related to Domain Services in Windows Server 2012 and Windows Server 2012 R2 operating system.

Technical Highlights

After completing this WorkshopPLUS, you will be able to utilize:

- New Server Manager
- New Promotion/Demotion processes
- New Virtualization
- New and improved group Managed Service Accounts
- New features for Kerberos
- New Dynamic Access Control
- Changes in Group Policy
- Enhancements in Windows Server 2012 R2 AD DS

Hardware Requirements:

- Windows Server 2012 R2 or Windows 8.1 Pro operating system with Hyper-V
- 16 GB of RAM
- 250 GB hard disk space, 7200 RPM speed (minimum 120 GB available)
- 16 MB video adapter (32 MB recommended)

Syllabus

This workshopPLUS runs for four full days. Participants should anticipate consistent start and end times for each day. Early departure on any day is not recommended.

Module 1: Deployment and Administration

- Upgrading existing Windows Server 2008 R2 domain to Windows Server 2012 R2
- Exploring new features in Server Manager
- Promotion/Demotion of Windows Server 2012 R2 Domain Controllers
- Windows PowerShell
- Server monitoring
- Changes to Relative ID (RID) management

Module 2: Virtualized Domain Controllers

- How to clone existing virtual domain controllers
- Safe restore features for virtual domain controllers.

Module 3: Group Managed Service Accounts (GMSA) This module discusses the following:

- Introduction to GMSA feature including setup and use
- Improved over legacy Managed Service Account.

Module 4: Authorization

- Refreshing Kerberos knowledge
- Introduction to Kerberos armoring, and token compression
- Changes to Kerberos implementation
- Disabling cross-domain unconstrained Kerberos delegation

Module 5: Dynamic Access Control

Introduction to setup and use of Windows authorization claims including claim creation, resource management, and new access control user interface using conditions

Module 6: Group Policy Objects (GPOs)

Introduction to new features with GPOs with reporting, Resultant Set of Policy (RSOP), and remote GPO refresh

Module 7: Enhancements in Windows Server 2012 R2 AD DS

- Updates to the components in Windows Server 2012 R2 AD DS
- New GPO functionality
- The enhancements in Distributed File System replication (DFSR) and introduction to the new Work Folders feature

Active Directory: Distributed File System (DFSN and DFSR) In Depth – Level 300

Target Audience

This workshop is designed and intended for Networking and IT Professionals seeking to:

- Gain exposure to the DFSN and DFSR services in Windows Server 2008, Windows Server 2008R2, Windows Server 2012, Windows Server 2012R2.
- Understand how to successfully deploy and maintain DFSN and DFSR environment.
- Get a deep knowledge in troubleshooting DFSN and DFSR.
- Get hands on practices deploying, monitoring and troubleshooting DFSN and DFSR.

Detailed instruction combined with solid high quality practice labs prepares students to successfully deploy and support distributed File System environments.

This course provides an in depth knowledge of the Distributed File System services implemented by Windows Server 2008, Windows Server 2008R2, Windows Server 2012 and Windows Server 2012R2. It addresses in detail the two components of DFS: DFSN and DFSR.

Microsoft® DFSN service is increasingly used to store business-critical information and is essential for sharing data for users within your IT infrastructure.

Microsoft® DFSR service is a key component allowing data to be replicated between servers, providing both fault-tolerance and data collection mechanisms. Starting with Windows Server® 2008, it is also a major component of the Directory Services technologies as it can be used to replicate SYSVOL.

Key Focus Areas

Knowledgeable trainers and high quality hands-on labs will facilitate solid understanding of core technologies covered in this course. In addition to a deep architectural and functionality view of both DFSN and DFSR services, this workshop covers in detail their administration, monitoring and troubleshooting. It will help you identify and solve issue proactively. It will even help you to developing your own monitoring tools for controlling DFSR health.

Agenda

This workshop is delivered in 3 days. It covers the following chapters:

■ DFSN:

- History.
- Overview.
- Consideration for choosing a name space.
- Administration.
- DFSN Name consolidation.
- DFSN Internals.
- DFSN Design consideration.
- Monitoring.
- DFSN and Access Based Enumeration.
- Domain Base Namespace Migration.

■ DFSR:

- Introduction to DFSR
- Similarities / differences between DFSR and FRS.
- DFSR Components.
- DFSR Replication Mechanisms.
- DFSR and Clusters.
- SYSVOL Migration via DFSR.
- DFSR administration.
- Troubleshooting DFSR.
- Monitoring DFSR.
- Developing Your Own Monitoring Tools.

Active Directory: Troubleshooting – Level 300

- Gain hands-on experience in troubleshooting a wide range of Active Directory directory service issues in Windows Server 2008, Windows Server 2008 R2, Windows Server 2012 and Windows Server 2012 R2.
- Efficiently reduce time to resolution by providing the support staff with the key skills to effectively diagnose critical problems.

Prerequisites:

Students are expected to already know Active Directory concepts. Students without this knowledge might be unsatisfied because this course does not teach core concepts, except those needed specifically to understand troubleshooting. Review the student criteria information (Target Audience section on the next page) and contact your Microsoft Services representative to ensure that this WorkshopPLUS is appropriate to the student's experience and technical expertise.

Overview

The Active Directory: Troubleshooting four-day WorkshopPLUS provides participants with the skills required to understand and successfully troubleshoot Active Directory problems that include:

- Active Directory related critical services.
- Domain Name System (DNS) issues.
- Logon failures.
- Active Directory replication failures.
- Distributed File System Replication (DFSR) related issues.

There is an optional module on troubleshooting domain controller performance as well.

In this WorkshopPLUS, students will learn the tools used in Active Directory troubleshooting to help them accelerate time to resolution. The hands-on lab exercises help reinforce the key learnings. This WorkshopPLUS contains Level 300 content.

Key Features and Benefits

Each module is organized by scenarios, and is designed to provide participants with in-depth expertise, tools and hands-on experience to help troubleshoot specific Active Directory scenarios.

Technical Highlights

After completing this course, students will be able to understand:

- The dependencies of Active Directory on DNS, and how to diagnose and troubleshoot DNS issues including Windows Server 2008 read-only domain controller (RODC) features.
- How to identify Client Logon Authentication problems, such as Tokensize and Kerberos issues.
- The processes supporting Active Directory replication and troubleshooting.
- How to diagnose and correct common DFSR problems that lead to System Volume (Sysvol) replication issues.
- How to identify and troubleshoot key domain controller performance issues (optional, as per time availability).

Syllabus

This WorkshopPLUS runs for full four days. Students should anticipate consistent start and end times for each day. Early departure on any day is not recommended.

Target Audience:

To ensure the high quality knowledge transfer students expect from this four-day WorkshopPLUS, class size is limited to a maximum of 16 students who meet the following criteria:

- Senior or top-level IT staff possessing at a minimum MCSE-level certification in Microsoft Windows Server 2012 and/or Microsoft Certified IT Professional (MCITP) in Windows Server 2008.
- Operating-environment infrastructure architects with a good understanding of Active Directory.
- Administrators of computers running Windows Server 2012/ Windows Server 2008 with good understanding of Active Directory.
- Escalation support staff (top-tier only).

Hardware Requirements:

Contact your TAM if the necessary hardware needs to be provided.

If you are attending an Open enrollment WorkshopPLUS, the hardware will be provided for you.

Module 1: Introduction to Active Directory Troubleshooting. This module introduces the basic methodology for troubleshooting Active Directory issues.

Module 2: Troubleshooting Critical Services and Flexible Single Master Scenarios. This module introduces students to the Active Directory Critical services. The module covers Flexible Single-Master Operation (FSMO) roles and key troubleshooting scenarios.

Module 3: Troubleshooting Active Directory Issues Related to DNS. This module explains:

- Why Active Directory is reliant on DNS.
- How Active Directory uses DNS—including the symptoms, causes, and resolution to DNS problems.

Note: This WorkshopPLUS assumes that the student is familiar with DNS.

Module 4: Troubleshooting Client Logon and Authentication. This module guides students through common logon scenarios for client logon and authentication issues, including Secure Channel, Kerberos, and Tokensize problems. The module also covers auditing Active Directory and delegation of administration.

Module 5: Troubleshooting Active Directory Replication. This module focuses on the replication topology and the tools and methods used to diagnose and resolve Active Directory replication issues. This module will:

- Discuss a wide range of troubleshooting scenarios along with their solutions.
- Build on the troubleshooting tools covered in previous modules.
- Explain RODC replication and troubleshooting.
- Discuss common issues in depth with update sequence number (USN) Rollback, Lingered Objects, Secure Channels and trusts.

Module 6: Troubleshooting DFSR. This module covers the role of DFSR in an Active Directory domain and the replication process. It also discusses a range of troubleshooting scenarios, tools, and solutions for DFSR.

Module 7: (Optional, as time allows): Troubleshooting Domain Controller Performance. This module focuses specifically on typical performance issues and causes. It also:

- Identifies operating system performance and hardware issues.
- Discusses third-party drivers and agents issues.
- Explains performance-troubleshooting tools.

Many common troubleshooting real-world scenarios are introduced and discussed in depth to help students swiftly apply the learnings in their work environment.

Active Directory Federation Services: Deployment, Administration, and Troubleshooting – Level 300

Target Audience:

This WorkshopPLUS is targeted at architects, developers and IT administrators.

Attendees must possess knowledge of the following:

- Active Directory Domain Services
- XML Document and Schema
- HTTP
- Protocol/Troubleshooting
- SQL Server/Active Directory Lightweight Directory Services (AD LDS)

Overview

This three-day Active Directory Federation Services: Deployment, Administration, and Troubleshooting WorkshopPLUS is designed to help customers address the significant changes to identity and managing access to resources that have developed thanks to Web Service (WS-*) standards and interoperability. It is difficult to make a suitable choice with so many alternatives. This often results in poor selection, and imposes limitation on authentication and authorization for how the applications will be accessed in future. This WorkshopPLUS puts concepts of claims-based authentication and authorization into action, and helps organizations to deploy AD FS.

Key Features and Benefits

This WorkshopPLUS will give attendees the knowledge to understand the requirements and approaches involved in implementing federated authentication, and will enable them to deploy and troubleshoot AD FS. The WorkshopPLUS covers the AD FS 3.0 in Windows Server 2012 R2.

Technical Highlights

After attending this WorkshopPLUS, students will be able to:

- Understand claims-based identity and authentication.
- Plan and deploy AD FS server in an enterprise.
- Configure claims-based application.
- Troubleshoot AD FS issues.

Hosted Requirements:

Participants will require a computer with the following configuration:

- Operating system: Windows 7
- Hard Disk: 50 GB free drive space
- Peripherals: USB port
- Network: 10 Mbps or faster network adapter
- Application Software: At least an evaluation copy of Microsoft Office 2010 Professional and a PDF reader

Participants also need a Microsoft account to connect to the virtual environment. The classroom must be networked with access to the Internet and at least total Internet bandwidth of 2 Mbps. TCP port 443 must be open. We highly recommend a wired network in the classroom.

IT Requirements:

Participants will require a computer with the following configuration:

- Operating system: Windows Server 2012 R2 Hyper-V Role or Windows 8.1 with Client Hyper-V
- Memory: 16 GB of RAM
- Hard disk: 40 GB of available hard disk space

Syllabus

This WorkshopPLUS runs for three full days. Students should anticipate consistent start and end times for each day. Early departure on any day is not recommended.

Module 1: Introduction to Claims-Based Authentication:

This module provides an overview of Claims Based authentication, AD FS Planning and Deployment and how to install AD FS, use a managed service account, install the AD FS Proxy, and setup federation trust with other organization.

Module 2: SSO, Claims and Tokens: This module discusses Single Sign-On (SSO) for intranet application and federated access. This will also cover Kerberos Device and User Claims and different AD FS token types.

Module 3: Workplace Join: This module presents new features introduced in AD FS 3.0 such as workplace join, work folders, Web Application Proxy (WAP) and publishing non-claims aware application with AD FS.

Module 4: Authentication Policies and Multi-Factor Authentication: This module covers Web Single Sign-On (WebSSO) from domain join and workplace join with different authentication types, password reset/notification/soft account lock out.

Module 5: Advanced Concepts: This module focuses on the advanced AD FS topic like attribute store, IdP-initiated Single Sign-On, home realm discovery, and customizing the look and feel of AD FS UI and webpages.

Module 6: Troubleshooting: This module provides troubleshooting steps to identify issues related to SSO, authentication prompts, certificates, workplace joins.

Windows Server 2012 R2: Capabilities, Administration & Support – Level 300

Target Audience:

IT Professionals and consultants implementing or supporting Windows Server 2012 R2.

Prerequisites:

Attendees should be experienced users of previous versions of Windows Server. Previous experience with Windows Server 2012 is not required.

Content Level:

The intent of this is to deliver a breadth of information and hands-on experience to familiarize the learner with the scope of changes in Windows Server 2012 R2.

Overview

This course introduces the learner to new functionality and features of Windows Server 2012 R2 across the major support areas of Deployment, Activation & Servicing, Networking, Active Directory & Federation Services, Networking and Hyper-V, Failover Clustering and Storage. Hands-on labs provides a simulated environment to learn the new features and concepts covered in the course. Participants will learn the fundamental steps for configuring Windows Server 2012 R2 environment and gain experience with its technical capabilities.

How the Offering Works

WorkshopPLUS Windows Server 2012 R2 Capabilities, Administration and Support is 4 day (32 Hour) instructor-led workshop. The workshop may be delivered in-person in a traditional classroom environment using a hosted server solution, or Classroom-In-A-Box hardware. The workshop can also be delivered via virtual instructor-led experience with hosted servers using Lync.

Key Features and Benefits

- Course will provide a broad overview of the top support topics and features of the new WS2012 R2 release.
- Course provides technical understanding of concepts and technology and key new features of Windows Server 2012 R2.
- Attendees will learn to set-up and configure and work with new features in Windows Server 2012 R2.

Technical Highlights

After completing this course, you will be able to:

- Perform Delta Compression
- Configure Secure boot in a VM
- Understand group policy and work folders
- Understand Software Defined Networking, infrastructure services, and remote access.
- Deploy Guest Cluster on Hyper-V using shared virtual disks.

Hardware Requirements:

Pentium IV or equivalent computer with process speed greater than or equal to 2.4 GHz.

Minimum of 2GB RAM

Monitor resolution 1024X768. Dual Monitors Strongly Recommended

Windows Vista or later Operating System

Internet Explorer 9 preferred with the latest version of Silverlight installed

Internet Connection Recommendation
5MB/s Download & 0.5 MB/s Upload.

Syllabus

This workshop runs for 4 full days. Students should anticipate consistent start and end times for each day. Early departure on any day is not recommended.

This course consists of 9 modules covering the topics below.

Course Introduction: Provides an overview of changes in Windows Server 2012 & Windows Server 2012 R2 across the following support areas: Networking, Hyper-V, Clustering & Storage, Work Folders, Set-up, Activation and Servicing, and more. This day will also cover Server Manager and PowerShell to build foundation knowledge for the class.

PowerShell Introduction: Provides an introduction to PowerShell, essential cmdlets and new features in 3.0 and 4.0.

Storage and File System: This module covers NTFS, SMB 3.0, SMB Multi-channel, and Storage spaces including capabilities, resiliency and storage tiers.

Storage and iSCSI: An introduction to iSCSI target server and improvements this module also includes work folders, offloaded data transfer, and managing storage.

Hyper-V: The Hyper-V module provides a feature comparison between Windows 2008 R2 2012/R2, dynamic memory, Hyper-V networking features, generation 2 VMs, live migration, dynamic memory and more.

Active Directory: This module covers the Active Directory Server Manager, Dynamic Access Control, Virtualized Domain Controller, and Fine-grained Password policy configuration and management.

Networking: This module focuses on software defined networking, infrastructure services and remote access, including IPAM, NIC Teaming, SMB 3.0 File Share Implementation and DNSSEC.

High Availability: Storage Layer Availability, Network & Virtualization availability and failover clustering. Failover clustering also features Scale Out File Server, AD Dependency, and Cluster logging for support.

Remote Desktop Services: This module offers an introduction to remote desktop services, performance, management and new features.

Windows Server 2012 R2: Failover Clustering – Level 300

This workshop will provide participants with the necessary knowledge to begin deploying and managing Failover Clustering technology using Windows Server 2012 R2 in their environment.

Target Audience:

To ensure the high-quality knowledge-transfer expected by attendees of this three-day workshop, class size is limited to a maximum of 16 students who meet the following criteria:

3-5 years minimum experience administering Microsoft Windows Server based operating systems.

Overview

Windows Server 2012 R2 Failover Clustering is a three-day workshop that will give participants everything they need to successfully design, deploy and manage Windows Server 2012 R2 Failover Clusters. Numerous hands-on labs cover all aspects of the Windows Server 2012 R2 Failover Clustering platform, including deployment, troubleshooting and disaster recovery.

Key Features and Benefits

Each workshop module is designed to provide participants with in-depth knowledge of all relevant Failover Cluster topics, such as the Quorum model, advanced management using Windows PowerShell and automatic updates using Cluster Aware Updating.

Technical Highlights

After completing this course, attendees will be able to:

- Identify key features of Failover Clustering.
- Review Best Practices.
- Understand efficient methods of deploying and managing Failover Clustering environments.

Hardware Requirements:

To participate in the course, students need to have access to a workstation that meets or exceeds the minimum hardware and software requirements below.

If you are attending an Open Enrollment, the hardware will be provided for you.

Contact your TAM if the necessary hardware needs to be provided.

If you are coordinating a closed delivery (dedicated delivery for your organization) and require hardware or are interested in having the virtual environment hosted in the cloud, then please contact your TAM for more information.

Cloud Hosted labs only require internet connectivity. Hardware requirements are:

Windows 8.1 with Hyper-V enabled, at least 4 CPU cores, 16GB of RAM and 100 GB of free disk space.

Syllabus

This workshop runs for three full days. Students should anticipate consistent start and end times for each day. Early departure on any day is not recommended.

Module 1: An Introduction: The first module covers all that is required to successfully deploy a Windows Server 2012 R2 Failover Cluster, using either the full user interface or Windows PowerShell.

Module 2: A Closer Look: Topics include a discussion of the Quorum, the various cluster networks and how a Failover Cluster checks all of its highly available roles and how it responds to any failures, should they occur.

Module 3: Managing A Failover Cluster: This module covers managing cluster nodes, cluster storage (including encrypting cluster disks using BitLocker) and migrating roles between clusters. It also includes techniques to talk to older clusters that natively do not understand Windows PowerShell.

Module 4: Troubleshooting And Disaster Recovery: The last module in this workshop is all about troubleshooting any issue that may appear in your Windows Server 2012 R2 Failover Cluster environment, and taking the most efficient action to fix whatever is not working as it should. This includes using the Cluster Log and various backup and restore methods.

Windows Server 2012 R2: Hyper-V and Failover Cluster for Cloud Service Providers – Level 300

This workshop will provide participants with the necessary knowledge to begin deploying and managing Hyper-V Server Virtualization and Failover Clustering technology using Windows Server 2012 R2 in their environment.

Target Audience:

To ensure the high-quality knowledge-transfer expected by attendees of this 3-day workshop, class size is limited to a maximum of 8 students who meet the following criteria:

3-5 years minimum experience administering Microsoft Windows Server based operating systems.

1-3 years minimum experience with some virtualization technologies.

Overview

The Windows Server 2012 R2 Hyper-V and Failover Cluster for Cloud Service Providers Workshop is a 3-day workshop that will provide participants with the best practices necessary to design, deploy, customize and manage Windows Server 2012 R2 Hyper-V Cluster environments through instructor-led training and hands-on labs. This workshop examines the key features of the Hyper-V role and Failover Clustering feature for Windows Server 2012 R2. Architecture concepts are examined only as needed to support attendee understanding of installation, management, and troubleshooting of the Hyper-V environment. Troubleshooting materials are also provided to aid the solving of problems in customer deployments.

Key Features and Benefits

Each module is organized by scenario and is designed to provide participants with in-depth expertise, tools, and hands-on experience with Hyper-V and Hyper-V Clusters.

Technical Highlights

After completing this course, you will be able to:

- Understand how Hyper-V and Failover Clustering work together to provide a virtualization platform.
- Identify features of Hyper-V and Failover Clustering for Hyper-V.
- Understand different methods of deploying and managing Hyper-V environments.
- Understand networking and storage advanced topics.
- Understand additional products and features that build upon the Hyper-V and Failover Clustering platform.
- Understand backup and disaster recovery tools and scenarios.
- Discuss performance metrics for troubleshooting Hyper-V.

Hardware Requirements:

To participate in the course, students need to have access to a workstation that meets or exceeds the minimum hardware and software requirements below.

If you are attending an Open Enrollment, the hardware will be provided for you. Your TAM can provide additional details.

If you are coordinating a closed delivery (dedicated delivery for your organization) and require hardware please contact your TAM for more information.

Minimum Requirements:

- Windows Server 2012 R2
- Dual or Quad core AMD/Intel processor with virtualization extensions and 1.8 GHz or higher
- 16GB RAM or higher
- Each student will require two hosts

Syllabus

This workshop runs for 3 full days. Students should anticipate consistent start and end times for each day. Early departure on any day is not recommended.

Module 1: Hyper-V & Failover Clustering Introduction: This module will begin with an introduction to virtualization topics and the evolution of Hyper-V. Hyper-V architecture will be covered along with an introduction to failover clustering, and a brief introduction to management tools.

Module 2: Hyper-V Cluster Installation & Management: The process to build a Hyper-V cluster will be discussed step by step including a review of networking and storage concepts. Hyper-V management tools and additional cluster topics will also be discussed.

Module 3: Implementing Virtual Machines: Virtual Machine concepts, deploying virtual machines, and virtual machine mobility will be reviewed.

Module 4: Hyper-V Networking: A deeper dive into networking technologies including teaming, switches, SR-IOV, and VMQ. Additionally, network virtualization(NVGRE) will be reviewed.

Module 5: Hyper-V Storage: A deeper dive into storage technologies including SMB, Storage Spaces, and Cluster Shared Volumes.

Module 6: Backups & Disaster Recovery: A review of backup and disaster recovery technologies will be reviewed including Windows Server Backup, Hyper-V Replica, Azure Backups, and Hyper-V Recovery Manager.

Module 7: Performance Counters and troubleshooting tools: Covering VM resource metering, CPU, Memory, Network and Memory Counters and working with the Hyper-V and Windows Event logs.

Windows Server 2012 R2: Hyper-V Performance Monitoring – Level 300

Learn how to effectively monitor Hyper-V role performance for Windows Server 2012 & Windows Server 2012 R2.

Target Audience:

Virtualization administrators for Hyper-V, Performance and Monitor administrators. Technical Decision Maker (TDM) and Technical related roles.

Overview

Windows Server 2012 and Windows Server 2012 R2 are widely implemented to be the core infrastructure for Server virtualization and Private/Hybrid Cloud deployments.

It is very important to understand the basic concepts of performance on Hyper-V, what and how to measure the performance object to have a complete view of every key piece to maintain a high quality service level.

Key Features and Benefits

This 1 day class is aimed to help to understand the basics performance concepts starting from the Hyper-V architecture and building up a knowledge for the 4 key components on performance: CPU, Memory, Storage and Networking oriented on Hyper-V infrastructure.

This class gives to students performance best practices and discusses performance tools to obtain and analyze the performance data.

Technical Highlights

After attending this class, students will be able to:

- Understand basic Hyper-V architecture
- Learn Performance counters for CPU, Memory, Storage and Network
- Understand when and how to measure performance (Host or Guest)
- Practice with performance and analysis tools

Hardware Requirements:

Contact your TAM if the necessary hardware needs to be provided.

Each student need:

1 Windows Machine with Windows Server 2012 R2 or Windows 8.1 installation.

Syllabus

This classroom has a duration of 1 day.

The agenda is:

■ **Hyper-V Concepts**

- Hyper-V Hypervisor

■ **CPU**

- Logical Processors
- Virtual processors

■ **Memory**

- Dynamic Memory
- NUMA & Remote Pages

■ **Disk**

- Logical Disk & Physical Disk
- Cluster Shared Volumes

■ **Network**

- Network Interface
- Network Adapter

■ **Generic Recommendations**

■ **Graphic User Interface information**

■ **Perform and DataCollectors**

■ **TypePerf and Logman**

■ **Performance Analysis and Log tool (PAL)**

Windows Server 2012 R2: Remote Desktop Services – Level 300

The Windows Server 2012 R2 RDS workshop provides attendees with an in-depth look at the new features in 2012 R2, teaching you to how to deploy, configure, secure and optimize a full Remote Desktop Services environment

Target Audience :

To allow a knowledge transfer of high quality expertise during these 3 days of training, the workshop is limited to a maximum of 16 persons who meet the following criteria:

- Experience in Terminal Services or Remote Desktop Services
- Experience in Windows Server 2012 R2

Overview

The Windows Server 2012 R2 Remote Desktop Services (RDS) workshop is a 3 day training course that teaches students about the new features in Remote Desktop Services (formerly Terminal Services), including role duties and deployment strategies on Windows Server 2012 R2. The knowledge acquired by the end of this workshop will enable presentation virtualization system administrators and IT professionals to understand, deploy, configure and optimize new features in RDS for Windows Server 2012 R2.

This workshop does not include the Remote Desktop Services VDI (Virtual Desktop Infrastructure) but just an Overview.

Key Features and Benefits

During this training participants will learn:

- New features in RDS for Windows Server 2012 R2.
- How to deploy a full RDS infrastructure.
- Best practices for deployment and configuration of an RDS infrastructure.
- How to effectively troubleshoot an RDS environment.

Technical Highlights

The materials in this workshop include:

- A deep dive into the new features of Remote Desktop Services in Windows Server 2012 R2, covered by individual role.
- Interactive labs that enable attendees to familiarize themselves with the concepts taught in each module.
- Dedicated modules that teach attendees how to deploy, secure and optimize a Remote Desktop Services infrastructure.
- A look at the different tools and methods used to effectively troubleshoot an RDS environment.

Syllabus

Module 1: Introduction to Remote Desktop Services
This module provides students with an overview of the new features of Windows Server 2012 R2 Remote Desktop Services.

Module 2: Remote Desktop Connection Broker
In this module students learn the Connection Broker's central role, installation prerequisites and deployment best practices.

Hardware Requirements:

- Windows Server 2012 R2
- Dual or Quad core AMD/Intel processor with virtualization extensions and 1.8 GHz or higher
- 16GB RAM or higher.

Module 3: Remote Desktop Session Host Servers

In this module we cover all requirements for the implementation of the Remote Desktop Session Host server, covering installation and configuration best practices.

Module 4: Remote Desktop Web Access

A detailed insight into the benefits of implementing Web Access, also covering installation and configuration best practices.

Module 5: RemoteApp

This module provides students with an intricate look at RemoteApp, including deployment, accessibility options and common application issues.

Module 6: Remote Desktop Licensing

In addition to the prerequisites for RD License Server installation, this module also covers best practices for the implementation of RDS CALs.

Module 7: Remote Desktop Gateway

In this module we discuss installation prerequisites for RD Gateway, together with the role of connection authorization policies (CAPs) and resource authorization policies (RAPs), including new features and their implementation.

Module 8: Securing Remote Desktop Services

This module guides students through the various methods to effectively secure an RDS environment.

Module 9: Remote Desktop Services Infrastructure

A detailed look at the components comprising an RDS infrastructure and how best to implement high availability solutions using built-in Windows functionality.

Module 10: Troubleshooting RDS: tips and tools

In this module we dive into some of the common tools used to monitor and troubleshoot the health of a RDS infrastructure.

Module 11: User Experience

In this module we walk students through the process of optimizing profile management and customizing RDP to provide a seamless remote desktop experience for end users.

Module 12: RDS and Azure

In our final module we present new possibilities offered by Azure with Hybrid Infrastructure, full cloud infrastructure but also RemoteApp in Azure.

This workshop includes labs that allow participants to practice the skills acquired in each different module. These labs will create a complete RDS infrastructure that follows Microsoft best practices.

Windows Server 2008/R2-2012/R2: Group Policy Administration and Troubleshooting – Level 300

Target Audience:

This course is an advanced course for Group Policy Administration and Troubleshooting is only targeted at senior IT staff who have designed, deployed, administered and managed a Windows Server infrastructure or Active Directory infrastructure for at least one full year and are familiar with architecture, security, networking, and diagnostics tools prior to attending this workshop.

The basic concepts and know-how of the product will not be covered in this course, and it is expected that attendees will possess that knowledge prior to attendance of this course.

Overview

The Windows Server: Group Policy Administration and Troubleshooting 3-day WorkshopPLUS course provides participants with the knowledge and skills necessary to effectively set up, configure, administer, and troubleshoot a Group Policy environment in either Windows Server 2008/R2 or Windows Server 2012/R2.

Group Policies are an important element of an efficient and well-managed environment: they enable control, central administration, and change. Responsible personnel should be aware of how to administer and troubleshoot Group Policies.

This workshop contains Level-300 content. Please review the Target Audience information and contact your Microsoft Services representative to ensure that this workshop is appropriate to the student's experience and technical expertise.

Key Features and Benefits

Each group of modules is organized by scenario and is designed to provide participants with in-depth expertise, tools and hands-on experience to help troubleshoot and manage specific Group Policy Object actions.

Technical Highlights

After completing this course, you will be able to understand:

- The components of Group Policies.
- How Group Policies are configured.
- How to identify the tools used to create, support, and back-up Group Policies.
- How Group Policies are processed and replicated.
- How to troubleshoot Group Policies.
- How to identify key performance indicators as well as design best practices.
- Group Policies Preferences.
- The Advanced Group Policy Management Tool (AGPM).
- The Security Compliance Manager.

To ensure the high- quality knowledge transfer that students expect from this 3-day workshop, class size is limited to a maximum of 16

Hardware Requirements: Classroom in a box or cloud-based labs are highly recommended.

Syllabus

This workshop runs for three full days. Students should anticipate consistent start and end times for each day. Early departure on any day is not recommended.

Module 1: Fundamentals of Management: This module provides an overview of management tools used most often with Group Policy and related actions.

Module 2: Fundamentals of Group Policies: In this module, you will be presented with how Group Policies are stored, replicated, and presented.

Module 3: Configuring Group Policies: This module presents areas of configuration of Group Policy Preferences, Group Policy Objects, and a number of specific settings that affect performance.

Module 4: Processing Mechanics: This module covers the back-end of the mechanics that involved with the processing of Group Policy Objects from the server to the client.

Module 5: Troubleshooting: This module focuses on the troubleshooting of the most common issues Group Policy Objects and their processing.

Windows Server 2012 R2: SDN for Cloud Service Providers with WSSC 2012 R2 – Level 300

Target Audience:

This course is an advanced course for Cloud Service Providers and Enterprise customers that want to implement Software Defined Networking based on Windows Server 2012 R2 and SC 2012 R2 Virtual Machine Manager.

During the course of this training students will learn how to setup, tune and troubleshoot advanced Hyper-V network configurations and multitenant environments based on NVGRE and the Windows Server Gateway.

The basic concepts and know-how of the product will not be covered in this course, and it is expected that attendees will already possess that knowledge

Overview

The “Software Defined Networking for Cloud Service Providers with Windows Server and System Center 2012 R2 Workshop PLUS” provides attendees with deep knowledge, understanding and troubleshooting techniques needed to deploy multitenant environments using NVGRE and the Windows Server Gateway deployed by SC 2012 R2 VMM. The training includes common scenarios that Cloud Service Providers and Enterprise customer might need to implement based on their business requirements. Through presentations, white-board discussions, and goal-based labs, this 4-day workshop covers the required configuration, best practices and troubleshooting tools required to implement a Software Defined Networking datacenter using the Microsoft Cloud OS solution.

Key Features and Benefits

- Software Defined Networking
- Multitenant environments for Cloud Service Providers
- Hybrid Clouds and the Windows Server Gateway
- Hyper-V Network optimization and tuning
- Best practices and Troubleshooting
- Labs

Technical Highlights

After completing this course, you will be able to:

- Understand the Hyper-V Network Fundamentals and the L2 Hyper-V Switch Features
- Understand Hyper-V and NIC Teaming and the Hyper-V Network Optimizations and Performance Tuning
- Understand the Hyper-V Network Architectures and how to implement SDN with SC 2012 R2 VMM
- Understand Hyper-V Network Virtualization (HNV) and how to configure Hybrid Clouds with the Windows Server Gateway
- Identify the different Multitenant environments options and how to design the architecture with SC 2012 R2 VMM

Hardware Requirements:

To participate in the course, students need to have access to a workstation that meets or exceeds the minimum hardware and software requirements below.

If you are attending an Open Enrollment, the hardware will be provided for you. Your TAM can provide additional details.

If you are coordinating a closed delivery (dedicated delivery for your organization) and require hardware please contact your TAM for more information.

Minimum Requirements:

- Windows Server 2012 R2
- Dual or Quad core AMD/Intel processor with virtualization extensions and 1.8 GHz or higher
- 16GB RAM or higher
- Each student will require four hosts
- 3 hosts with at least 2 NICs
- 1 host with at least 3 NICs

Syllabus

This workshop runs for 4 full days. Students should anticipate consistent start and end times for each day. Early departure on any day is not recommended.

Module 1: Hyper-V Network Fundamentals: In this module you will learn the different types of Virtual Switches and Virtual Network Adapters you can use with Hyper-V and how to configure them.

Module 2: L2 Hyper-V Switch Features: This module covers all the L2 security and advanced features you can use with the Hyper-V Switch and what 3rd Party extensions you can add to the default functionalities.

Module 3: Hyper-V and NIC Teaming: This module presents the different Team Modes and Load balancing algorithms that you can use we Windows Server 2012 R2 Hyper-V.

Module 4: Hyper-V Network Optimizations and Performance Tuning: This module explains how the different Hyper-V Network optimizations work, how to tune the configuration and how to troubleshoot in case of problems.

Module 5: Hyper-V Network Architectures: This module focuses on the different Architecture options and scenarios you can use depending on your Network adapters and your backplane technologies.

Module 6: SDN with SC 2012 R2 VMM: This module explains the SC 2012 R2 VMM Network objects model required to implement Software Defined Networking through Logical Networks, Sites, Port Profiles, VM Networks, Subnets, VLANs, IP Pools, Logical Switches and Host Groups.

Module 7: Hyper-V Network Virtualization (HNV): In this module, you will learn HNV in deep. Concepts like NVGRE, RDID, VSID, CA address, PA address are explained in detail. It will also explain what Powershell commands are available to troubleshoot issues and how to use them.

Module 8: Hybrid Clouds with HNV and the Windows Server Gateway: This module explain the different Hybrid Cloud scenarios that can be implemented with the new WSG deployed by the different VMM Templates.

Module 9: Test Cases - Multitenant Scenarios with SC 2012 R2 VMM: This module covers different Cloud Service Providers or Enterprise customers requirements and explain possible solutions using SDN implemented by VMM and the Windows Server Gateway.

Windows PowerShell v4.0 for the IT Professional – Part 1 – Level 300

Target Audience:

This is an introductory level course for Windows PowerShell version 4.0. The course is targeted at IT staff with a good understanding of general systems installation, administration and troubleshooting. Previous programming and/or scripting experience is beneficial but not required for this course.

Overview

The Windows PowerShell v4.0 for IT Professionals – Part 1 WorkshopPLUS provides attendees with an introduction to using PowerShell for system and application management. Through presentations, white-board discussions, and goal-based labs, this 4-day workshop covers various topics that are designed to take the attendee from just starting out with PowerShell to an intermediate level.

Key Features and Benefits

Modules are organized by scenario and designed to provide participants with expertise, tools and hands-on experience with Windows PowerShell version 4.0.

Technical Highlights

After completing this course, you will be able to:

- Use PowerShell interactively
- Create scripts using the PowerShell integrated scripting environment
- Package code in script-based modules for simplified deployment and distribution

Syllabus

This workshop runs for 4 full days. Attendees should anticipate consistent start and end times for each day. Early departure on any day is not recommended.

Module 1: Introduction

This module describes the command-line shell and then introduces PowerShell and its main components and features like the ISE, workflows, desired state configuration.

Module 2: Commands 1

PowerShell commands and their syntax are discussed in this module. Key cmdlets are also covered.

Module 3: Pipeline 1

This module describes how multiple PowerShell commands can be used together to become a very powerful utility command.

Module 4: Commands 2

This module introduces how multiple commands can be combined in PowerShell language features like script blocks, functions, and remoting.

Module 5: Scripts

The concept of packaging commands into script files is introduced in this module. Script execution, command lookup precedence and using the integrated scripting environment are also covered.

Module 6: Help System

Managing and using the built-in help system are covered in this module.

Module 7: Object Models

PowerShell as an object-based language is discussed in this module, along with the associated terminology.

Module 8: Operators 1

The PowerShell scripting language provides the user with many operators. This module discusses some of them.

Module 9: Pipeline 2

This module builds on the previous pipeline module and includes intermediate level information on using the pipeline.

Module 10: Providers

PowerShell's support for interaction with various data sources (such as file system, Windows registry, certificate store) is covered in this module.

Module 11: Variables and Data Types

This module builds on the previous Operators module and introduces more operators.

Module 12: Operators 2

The different types of variables and how they are used in PowerShell are discussed in this module.

Module 13: Arrays

Creating, managing and using arrays to store and access information are covered in this module.

Module 14: Hash Tables

Creating, managing and using hash tables are covered in this module.

Module 15: Flow Control

This module introduces looping, branching and flow control statements.

Module 16: Scopes

The concept of scopes as a protection mechanism and how to work with them are discussed in this module.

Module 17: Modules

The final module discusses PowerShell Modules as a code packaging and distribution method.

Windows PowerShell v4.0 for the IT Professional – Part 2 – Level 300

Target Audience:

This is an intermediate to advanced level course for Windows PowerShell version 4.0. The course is ideally targeted at IT staff who have already attended "Windows PowerShell v4.0 for the IT Professional Part 1". Previous basic PowerShell scripting experience is required!

Overview

The Windows PowerShell v4.0 for the IT Professional Part 2 workshop is a continuation of concepts from the Windows PowerShell v4.0 for the IT Professional Part 1 course. It provides attendees with a deeper understanding of PowerShell's capabilities for system and application management. Through presentations, white-board discussions, and hands-on labs, this 3-day workshop covers various topics that are designed to advance the attendee's PowerShell knowledge and skills.

Key Features and Benefits

Modules are organized by scenario and are designed to provide participants with expertise, tools and hands-on experience with Windows PowerShell version 4.0.

Technical Highlights

After completing this course, you will be able to:

- Execute PowerShell code remotely and in parallel
- Make your scripts more robust with error handling and correct errors more quickly
- Create advanced functions and scripts that behave similarly to cmdlets
- Use PowerShell to deploy standard and custom configurations using Desired State Configuration
- Create and execute parallel long running tasks using PowerShell WorkFlow

Syllabus

This workshop runs for 3 full days. Attendees should anticipate consistent start and end times for each day. Early departure on any day is not recommended.

Module 1: Review of PowerShell for the IT Professional Part 1
The workshop starts with a brief re-cap of the essential PowerShell concepts covered in the Part 1 workshop.

Module 2: Remoting

Discover how to leverage PowerShell and CIM remoting features to achieve universal script execution across your Windows environment. Create, run and manage many concurrent, long-running, background tasks in the Windows Task scheduler using the PowerShell scheduled jobs.

Modules 3 and 4: Functions

PowerShell functions can behave just like compiled Cmdlets. Add these capabilities into your own functions, including help, advanced parameters, and risk mitigation.

Module 5: Regular Expressions (Regex)

PowerShell is object-based, but the many development tools are not so friendly! Explore how PowerShell can use the UNIX administrator's tool of choice for manipulating unstructured text.

Module 6: Error Handling

PowerShell provides many strategies to deal with errors that occur during script execution. In this module, you will learn how to effectively trap and respond to runtime errors.

Module 7: Debugging

Learn the tools and techniques for finding and resolving script bugs and increase their reliability.

Module 8: Introduction to Desired State Configuration (DSC)

Create declarative statements to take control of your Windows Server configuration. This module covers the essentials of this new PowerShell 4.0 feature for administrators.

Module 9: Introduction to Workflow

"When PowerShell met Workflow!" Learn how PowerShell layers on top of Windows Workflow Foundation (WWF) to enable the creation of highly parallelizable, scalable and robust long-running tasks using the familiar syntax of a PowerShell function.

Windows Server 2012: Introduction & Overview – Level 200

Key benefits

- Setup and configure Windows Server 2012;
- Work with the new features in Windows Server 2012;
- Understand how all the new features work in hands-on instructor led labs.

Target audience

Attendees should be experienced users of Windows Server in previous versions. Ideally, they will have Windows background in Windows administration experience and will be comfortable using and troubleshooting Windows Server from past experience. No previous Windows Server 2012 experience is required.

Overview

Windows Server 2012: Introduction and Overview is a 3- day, level 200 Workshop aimed at providing participants with a practical introduction. Very much a hands-on experience, attendees will have ample opportunity to learn about the key new features and best practices.

How the Offering Works

This course provides a complete hands-on exploration of Windows Server 2012 and the many new features added to the core technologies of Windows Server 2008/R2. You gain experience in the first steps toward implementing a Windows Server 2012 environment.

Benefits:

After completing this course, you will be able to understand all new key features in Windows Server 2012. Get hands on experience with labs on all new features. Install and configure Windows Server 2012

Hardware Requirements

- Meeting room with projector.
- For each student a dedicated Microsoft Windows 2012 Hyper-V host with 100 GB free hard drive space and 8 GB of RAM

Agenda:

Module 1: Installation

- Server Manager Overview Editions Windows Deployment Services

Module 2: Active Directory

- New Windows Server 2012 AD Features
- Windows Server 2012 Setup Requirements
- Preparing Active Directory
- DCpromo changes
- Dynamic Access
- Recycle-Bin

Module 3: Networking

- IPV6 Connection Manager DHCP IPAM Network Adapter Teaming

Module 4: Storage & Filesystems

- Resilient File System (ReFS) SMB 3.0 NTFS Storage Spaces iSCSI FSRM

Module 5: High Availability

- Intro about High Availability Features Failover Clustering

Module 6: Hyper-V

- Editions Hyper-V Networking Hyper-V Storage Live Migration Replication

Module 7: Remote Desktop Services

- Implementing session-based desktop deployment Configuring or RemoteApp programs

Module 8: PowerShell

- Introduction Powershell Powershell 3.0

Windows Server 2012: DirectAccess Deployment and Troubleshooting – Level 300

Target Audience:

Attendees of this course should be experienced users of Windows Server in previous versions. Ideally, they will have some background in Windows administration and will be comfortable using and troubleshooting Windows Server from past experience. No previous Windows Server 2012 experience is required. Having networking background is a plus.

Overview

DirectAccess was first introduced in Windows[®] 7, Windows Server[®] 2008 R2 operating systems and later with Forefront Unified Access Gateway[®] additional features were added. DirectAccess is a remote access technology that seamlessly connects remote users to the corporate network any time they have Internet access. With DirectAccess, users can securely access corporate resources without having to go through a virtual private network (VPN). DirectAccess also enables IT administrators to manage remote computers as if they were on the corporate network.

Windows Server 2012 DirectAccess Deployment and Troubleshooting Workshop is a 3 day workshop which enables enterprise administrators to optimize their DirectAccess deployments, and do precise and quick diagnostics on DirectAccess by acquiring an in-depth knowledge of the technology and its troubleshooting methodology.

Key Features and Benefits

Each group of modules is organized by scenario and is designed to provide participants with in-depth expertise, tools and hands-on experience to help deploy and troubleshoot Windows Server 2012 DirectAccess.

Technical Highlights

After completing this course, you will be able to:

- Understand the key features of Windows Server 2012 DirectAccess
- Prepare and Deploy Windows Server 2012 DirectAccess
- Identify the tools that can help troubleshoot Windows Server 2012 DirectAccess.

Hardware Requirements:

- Processor: Quad Core Intel/AMD 64-bit with Virtualization Technology capabilities
- HDD: at least 500GB
- RAM: at least 16GB

Syllabus

This workshop runs for 3 full days. Students should anticipate consistent start and end times for each day. Early departure on any day is not recommended.

Module 1: IPv6 Introduction and Addressing: This module provides an introduction and overview to IPv6 addressing which is a key component of DirectAccess technology.

Module 2: IPv6 Autoconfiguration NameResolution: In this module, you will learn how IPv6 Autoconfiguration and NameResolution works.

Module 3: IPv6 Transition Technologies: This module presents the IPv6 transition technologies which are used in DirectAccess connectivity.

Module 4: IPv6 Deployment and Support: This module covers the planning aspects of an IPv6 Deployment and the state of support for IPv6.

Module 5: DirectAccess Overview: This module provides you an introduction and overview to DirectAccess.

Module 6: DirectAccess Design and Deployment: This module presents the design, deployment scenarios and capacity planning for DirectAccess

Module 7: DirectAccess with Network Access Protection: In this module, you will be able to understand how NAP can be integrated with DirectAccess.

Module 8: DirectAccess with High Availability : This module explains how to implement DirectAccess with Multi Site and NLB.

Module 9: DirectAccess Troubleshooting: In this module you, you will learn the techniques and tools required to troubleshoot DirectAccess.

App-V 5.0: Infrastructure, Administration and Troubleshooting – Level 300

Target Audience:

This course covers the basic concepts and know-how of the App-V product targeted to the IT staff experienced in server management and application deployment.

Overview

The Application Virtualization V5 Infrastructure, Administration and Troubleshooting workshopPLUS provides attendees with the knowledge and understanding of the basic concepts, troubleshooting techniques and tools needed to deliver virtual applications through an App-V server infrastructure. Through presentations, white-board discussions, and goal-based labs, this two-day workshopPLUS covers the individual approaches for building, administration and troubleshooting of an App-V 5 environment.

Key Features and Benefits

Each group of modules is organized by scenario and is designed to provide participants with in-depth expertise, tools and hands-on experience to help build and administer a functional App-V environment.

Technical Highlights

After completing this course, you will be able to:

- Install the App-V server components.
- Install the sequencer components and produce virtualized applications for delivery to the client system using the server.
- Understand how to approach different troubleshooting scenarios.

Hardware Requirements:

Windows 8 Professional or Windows 8 Enterprise or Windows Server 2012 with Hyper-V, with enough capabilities to concurrently launch and utilize four virtual machines. Minimum 8-GB RAM and 80GB free harddrive space.

Syllabus

This workshopPLUS runs for two full days. Students should anticipate consistent start and end times for each day. Early departure on any day is not recommended.

Module 1: Introduction: This module provides an overview of Application Virtualization (App-V) using an App-V infrastructure to deliver virtualized applications in an enterprise.

Module 2: App-V Servers: In this module, the different server components and architecture options used to distribute App-V applications are reviewed.

Module 3: App-V Clients: This module presents the information needed to understand the App-V client, its components, and the planning for a successful implementation.

Module 4: App-V Sequencer: This module covers the actual packaging or sequencing of applications. Best practices of sequencer setup as well as theories on how to create successful virtual application will be discussed and practiced in the module.

Module 5: Reporting Server: This module focuses on the installation and configuration of the reporting service used to track virtual application usage.

App-V 5.0: Advanced Sequencing and Troubleshooting – Level 300

Target Audience:

This course covers the advanced concepts and know-how of the App-V product and is targeted at the IT staff experienced in application virtualization, server management, and application deployment.

Overview

The Application Virtualization (App-V) 5.0 Advanced Sequencing and Troubleshooting WorkshopPLUS provides attendees with the knowledge and understanding of the advanced concepts, troubleshooting techniques, and tools needed to deliver virtual applications. Through presentations, white-board discussions, and goal-based labs, this two-day WorkshopPLUS covers the individual approaches for:

- Creating virtual applications.
- Combining virtual applications so they can share resources.
- Customizing virtual applications with scripting.
- Troubleshooting the problem scenarios along with the procedures involved.

Key Features and Benefits

Each group of modules is organized by scenario and is designed to provide participants with expertise, tools and hands-on experience to help students better understand the inner working of App-V.

Technical Highlights

After completing this course, you will be able to:

- Sequence applications.
- Create and manage Connection Groups.
- Exercise better control and customize virtual applications through scripting.
- Understand how to approach different troubleshooting scenarios.

IT Requirements:

Windows 8 Professional or Windows 8 Enterprise or Windows Server 2012 with Hyper-V, with enough capabilities to concurrently launch and utilize four virtual machines.

A minimum of 8-GB RAM and 80-GB of free hard drive space.

Syllabus

This WorkshopPLUS runs for two full days. Students should anticipate consistent start and end times for each day. Early departure on any day is not recommended.

Module 1: Introduction: This module provides an overview of Application Virtualization (App-V) as well as the expectations and deliverables of this course.

Module 2: Sequencing: This module discusses the topic of creating virtualized packages.

Module 3: Application Package Upgrade: This module covers the lifecycle of virtual application including updates and upgrades. It also discusses different upgrade scenarios.

Module 4: Client integration: This module details the inner workings of the App-V client, which include the locations where App-V packages are stored both in the registry and in the local file system. It also discusses how updates to packages work on the client side.

Module 5: Scripting: This module focuses on the ability to customize virtual packages using scripting. Scripting offers great flexibility and will reduce the number of packages that need to be created.

Module 6: Connection Groups (CG): This module focuses on the joining of two or more App-V packages. It details topics such as how to sequence applications to be a member of a CG, and how this is performed on the client.

Module 7: Troubleshooting: This module discusses the logging, tools, and technique associated with the troubleshooting of App-V and virtual applications.

Module 8: Trouble Scenarios: This module explores in to broken application to help students better understand things that can go wrong and how to remediate any such issues.

Vital Signs: Performance Monitoring Windows Server – Level 300

Minimize performance issues and time to resolution by using the top performance counters to accurately and quickly identify and resolve issues.

Target Audience:

To ensure the high-quality knowledge transfer students expect from this 3-day workshop, class size is limited to a maximum of 16 students and is targeted at IT professional staff who have at least two years of experience with Windows Server 2008 R2, Windows 7, Windows Server 2012, or Windows 8.

Overview

Vital Signs: Performance Monitoring Windows Server is a 3-day WorkshopPLUS course that provides participants with the skills they need to analyze and troubleshoot the overall health of the Windows Server. This course reviews key performance counters that measure the health of the operating system and the hardware. After successfully completing this workshop, participants will understand how to use Performance Monitor and will be able to analyze environments running Windows Server 2012 and Windows 8, as well as Windows Server 2008 and Windows 7.

Technical Highlights

After completing this course, students will be able to:

- Use the key counters to analyze the most common performance issues.
- Apply concepts learned in the class to real-world scenarios.
- Use features in Performance Monitor first introduced in Windows Server 2008 and Windows Vista.

Hardware Requirements:

Contact your TAM if the necessary hardware needs to be provided.

If you are attending an Open enrollment workshop, the hardware will be provided for you.

Syllabus

The course provides multiple examples of how to troubleshoot real-world operating-system performance issues on servers running Active Directory, Internet Information Services, Exchange Server, and SQL Server.

This workshop contains Level 300 content. Please review the target-audience information and contact your Microsoft Services representative to ensure that this workshop is appropriate to the student's experience and technical expertise.

This workshop is a 3-day delivery. Students should anticipate consistent start and end times for each day. Early departure on any day is not recommended.

The course has the following components:

Module 1: Introduction

Module 2: Disk

Module 3: Virtual memory

Module 4: Physical memory

Module 5: Network

Module 6: Processor

Module 7: Hyper-V

Module 8: Performance Analysis of Logs (PAL) tool

Vital Signs: Advanced – Level 300

Building on the foundation of Vital Signs: Performance Monitoring Windows Server Workshop

Taking your IT administrators deeper into analysis topics and tools to analyze and resolve performance and stability issues

Overview

The Vital Signs: Performance Monitoring Windows Server workshop teaches skilled IT administrators the basic concepts of analyzing performance issues. This three-day Vital Signs Advanced workshop extends the foundation of this knowledge and introduces the students to more advanced topics like:

- Analysis in virtualization scenarios.
- Storage analysis best practices.
- How Windows manages memory.
- How much Pagefile is actually needed. Powerful new tools like the Xperf, the Debugging tools for Windows, and key SysInternals utilities.

Upon completion of the Vital Signs Workshop, students who diligently apply those key learnings will bring significant reduction in, the number of stability or performance issues and their time to closure.

Technical Highlights

Upon completion of the Vital Signs Workshop, students who diligently apply those principles will bring significant reduction in the number of stability or performance issues and in their time to closure. They will be able to:

- Resolve problematic issues faster.
- Understand storage analysis and provide servers with the I/O performance needed to meet latency targets.
- Understand how to analyze performance in a Virtual environment.
- Improve Storage analysis techniques.

Target Audience

To ensure the high-quality knowledge transfer expected from this three-day workshop, class size is limited to a maximum of 16 students, who meet the following criteria:

- Previous attendance of the Vital Signs: Performance Monitoring Windows Server Workshop
- Usage of Performance Monitor for at least 20-25 hours to help possess good analysis skills

Syllabus

Advanced performance analysis techniques, Part I: Virtualization and Performance Analysis

This part discusses, what to look for, what works, what does not, and optimization when using Virtual Machines (VMs) of any major Hypervisor (VMware, Xen, Hyper-V)

Advanced performance analysis techniques, Part II: Advanced Memory Analysis

This part describes how memory works and provides an indepth understanding of what is really occurring. This is highly useful when Vista/Win7/Windows Server references all memory as cache to see how much is really committed and how much is really free.

Advanced performance analysis techniques, Part III: Deciding optimal Redundant Array of Independent

Disks (RAID) configurations and Cluster sizes Best practices and tests that generally help to indicate Queue depth, RAID type, Cache configuration of Read vs. Write, and cluster size to determine maximum performance for a specific OS and role, are discussed in this part.

Advanced performance analysis techniques, Part IV: Finding leaks using advanced analysis tools

This part discusses the best practices and tests that generally help to indicate who is causing User mode or Kernel mode system leaks and processes to take selected dump captures. Poolmon, Poolsnap, Process Explorer, Process Monitor, DebugDiag, NotMyFault, and Dumpchk scenarios are also discussed.

Advanced performance analysis techniques, Part V: Xperf

This part covers the new Advanced performance tool that can map load to a function call inside of a process, and associated case study and labs. This training is essential for Windows Vista/Windows 7/Windows Server 2008 operating systems that are experiencing stability or performance issues.

Advanced performance Xperf case studies, Part VI: IX

This part helps students to understand the Slow Boot, Disk, Processor, and Networking analysis capabilities of Xperf. The case studies pertaining to this will be provided.

Exchange Server 2013: Deployment (Ignite) – Level 200

Target Audience:

This is a course for Exchange Server 2013 and is targeted at IT staff who plan to design, deploy, administer and manage Exchange Server 2013 infrastructure.

This course will cover most important architecture and functional changes. It will also discuss most of the new features introduced in Exchange Server 2013.

Overview

The Exchange Server 2013 Ignite WorkshopPLUS is a technical deep Microsoft Premier version of the Ignite course provided originally by the Microsoft Exchange product group. It will provide attendees with the knowledge and understanding of new features and architectural changes introduced in the newest version of Microsoft Exchange Server. Through presentations, white-board discussions and labs, this 3-day workshop covers all information which is required to get familiar with new the product and being able to assess business needs for deployment.

Key Features and Benefits

You will learn how you can tailor the Exchange 2013 solution based on your unique needs, ensure that the e-mail system is always available with minimal operational cost. You will understand how to protect business communication and sensitive information to meet internal and regulatory compliance requirements and make corporate communication available on any device with the highest user experience.

Technical Highlights

After completing this course, you will:

- Understand architectural changes introduced in Exchange Server 2013.
- Understand all new features introduced in the product.
- Understand improvements available for end-users
- Be able to start planning the Exchange Server 2013 deployment in your environment

Hardware Requirements:

To participate in the course, students need to have access to a workstation that meets or exceeds the minimum hardware and software requirements below.

Every student needs one computer which runs Windows Server 2012 with at least 16GB of RAM, AMD/Intel Multi-Core Processor (min. Quad Core) with virtualization extensions and 2x Hard Disks (min 7200rpm) with 200GB of Free Disk Space. The computer also needs to run Hyper V.

Syllabus

This workshop runs for three full days. Students should anticipate consistent start and end times for each day. Early departure on any day is not recommended.

Module 1: Exchange 2013 architecture

This module will introduce the major architectural changes available in the product.

Module 2: New tools and user interface

This module will focus on new administrative tools and user interface changes in Exchange Server 2013.

Module 3: Client Access Server

During this part of the training you will understand the architecture of the new Client Access Server, see how client connectivity is handled, identify changes in load balancing requirements and namespace planning.

Module 4: Transport Architecture

This module will cover transport related improvements and will give you an understanding on how to analyze problems with message transport.

Module 5: Mailbox Server

Exchange Server 2013 provides users with a new search infrastructure, site mailboxes and modern public folders. You will have a chance to discuss all of them during this part of the workshop.

Module 6: Service Availability

Exchange Server 2013 was designed to provide high availability and self healing capabilities with minimal operational costs. This module will cover most important improvements made in this area.

Module 7: Compliance and eDiscovery

Exchange Server 2013 makes sure that data stored on server is protected and any communication can be monitored. Exchange provides tools to quickly identify any abuse in your organization. This module will introduce those features.

Module 8: Migration and Coexistence

After this module you will have good understanding of steps necessary to introduce Exchange Server 2013 in your environment.

Module 9: Hybrid configurations with Office365

After completing this module you will understand benefits and steps necessary to implement a hybrid configuration with Exchange Server 2013

Exchange Server 2013: Administration and Troubleshooting – Level 300

This workshopPLUS will provide participants with the necessary knowledge to administer and troubleshoot Microsoft Exchange Server 2013 including SP1.

Target Audience:

This course is an advanced course for Exchange Server 2013 and is targeted at the IT staff who have designed, deployed, administered and managed an Exchange Server 2007 or an Exchange Server 2010 infrastructure for at least one full year.

The basic concepts and know-how of the product will not be covered in this course. It is expected that attendees will already possess that knowledge.

Overview

The Exchange server 2013: Administration and Troubleshooting WorkshopPLUS provides attendees with an in-depth knowledge and understanding of the:

- Exchange administration.
- Troubleshooting techniques.
- Tools needed to identify and solve issues.

Through presentations, white-board discussions, and goal-based labs, this four-day WorkshopPLUS covers the various approaches for administering and troubleshooting Exchange Server 2013 including SP1. The instructor will integrate lessons from field experience and Microsoft best practices.

Key Features and Benefits

Each module is designed to provide participants with expertise, tools and hands-on experience to help administer and troubleshoot Exchange server 2013.

Technical Highlights

After completing this course, you will be able to:

- Understand the tools that can help administer Exchange Server 2013.
- Understand the proactive techniques to identify misconfigurations, performance issues, and general Exchange Server 2013 organization health issues.
- Understand how to approach different troubleshooting scenarios.

Hardware Requirements:

To participate in the course, students need to have access to a workstation that meets or exceeds the following minimum hardware and software requirements.

If you are attending an Open Enrollment, the hardware will be provided for you.

Contact your TAM if:

- You need the necessary hardware to be provided.
- You are coordinating a dedicated delivery for your organization and require hardware.
- You are interested in having the virtual environment hosted in the cloud.

Requirements:

Each Students needs:

- One Windows Server 2012 with Hyper-V.
- Quad core AMD/Intel processor with virtualization extensions and 16-GB RAM (or more).

Syllabus

This WorkshopPLUS runs for four full days. Students should anticipate consistent start and end times for each day. Early departure on any day is not recommended.

Every module will contain troubleshooting techniques.

Module 1: Administration: This module provides an overview of the administration tools, the Exchange 2013 permission model, and calendar sharing.

Module 2: Client Access: This module covers the new Client Access Server role architecture overview, Outlook Web App, Outlook Connectivity, and ActiveSync.

Module 3: Mailbox: This module covers the following:

- The new Mailbox role architecture
- The new Information Store, also called the Managed Store
- The new Public Folders
- The site Mailbox
- Mailbox moves
- The search indexing
- The Offline Address Book
- Messaging Policy and Compliance

Module 4: Transport: This module covers Mail flow, the Front End Transport Service, and Anti-Malware.

Module 5: Server Health Monitoring: This module will explore the new Exchange 2013 concept of health monitoring.

Module 6: High Availability: This module covers Load Balancing, Database Availability Group, Managed Availability, and the Safety Net.

Module 7: Virtualization: In this module, you will be presented what is supported and what the recommendations are when going through the virtualization path.

Exchange Server 2013: High Availability – Level 300

This Workshop will provide participants with the necessary knowledge how to plan, setup, and configure Microsoft Exchange Server 2013 high available infrastructure and provides hands-on experience with Exchange Server 2013.

Target Audience:

This course is an advanced course for Exchange Server 2013 and is targeted at the IT staff who have designed, deployed, administered and managed an Exchange Server (2013 highly recommended) infrastructure for at least one full year.

The basic concepts and know-how of the product will not be covered in this course. It is expected that attendees will already possess that knowledge.

Overview

The Exchange Server 2013: High Availability provides participants with the knowledge and skills necessary to setup and configure Exchange Server 2013 in a High Availability environment. The workshop instructor will integrate information from field experience and Microsoft's best practices.

This workshop contains Level 300 content. Please review the target-audience information and contact your Microsoft Services representative to ensure that this workshop is appropriate to the student's experience and technical expertise.

Key Features and Benefits

Knowledgeable trainers and high quality hands-on labs facilitate solid understanding of core technologies covered in this course, including latest innovations and features like Managed Availability, AutoReseed, Dynamic Quorum and others.

Technical Highlights

After completing this course, you will be able to:

- Understand Architecture of Exchange server roles and components
- Understand High Availability features in Exchange Server 2013
- Understand and configure different options and settings related to Exchange 2013 High Availability
- Understand how to approach appropriate troubleshooting scenarios

Hardware Requirements:

To participate in the course, students need to have access to a workstation that meets or exceeds the following minimum hardware and software requirements.

If you are attending an Open Enrollment, the hardware will be provided for you. Contact your TAM if:

- You need the necessary hardware to be provided.
- You are coordinating a dedicated delivery for your organization and required hardware.
- You are interested in having the virtual environment hosted in the cloud.

Requirements:

Each Student needs:

- One Windows Server 2012 with Hyper-V.
- Quad core AMD/Intel processor with virtualization extensions and 16GB RAM (or more).
- 300 Gb of disk space

Syllabus

This Workshop runs for four full days. Students should anticipate consistent start and end times for each day. Early departure on any day is not recommended.

Every module will contain troubleshooting techniques.

Module 1: High Availability Overview: This module provides an overview of High Availability Concepts and Exchange 2013 High Availability features.

Module 2: Understanding Client Access Server role in High Availability: This module will cover the architecture components required to achieve High Availability for Client Access Role in Exchange 2013, describes load balancing options and client connectivity.

Module 3: Understanding Transport High Availability: This module will cover the architecture of Transport services and different High Availability features (throttling and resource management, load balancing and fault tolerance options with message routing, options for third party servers and devices, Shadow Redundancy, SafetyNet).

Module 4: Understanding Mailbox High Availability: This module provides information about the mailbox high availability features, including concepts around Continuous Mailbox Availability and Database Availability Groups.

Module 5: Managed Availability: This module will cover Managed Availability feature -integration of built-in monitoring and recovery actions with the Exchange high availability platform.

Module 6: Planning, Deployment and Management of Exchange 2013 High Availability Features: This module will cover the Planning Deployment and Management tasks to successfully implement a Database Availability Group (DAG) with Exchange 2013 and provides understanding of various Failover and Switchover Scenarios, Exchange Native Data Protection and Preferred Architecture, corresponding troubleshooting options and recommendations.

Practical skills: Workshop contains a lot of labs and highly focused on providing practical skills on troubleshooting, configuration and demonstration of high availability features, including:

- SafetyNet resubmission
- DAG configuration including AutoReseed
- Managed Availability troubleshooting
- Demonstration of Loose Truncation
- Dynamic Quorum
- Lagged Copy Activation
- Datacenter Switchover and others.

Exchange Server 2013: Compliance Management – Level 300

Target Audience:

This three day WorkshopPLUS is targeted at Messaging engineers and Compliance Officers who need to familiarize with Exchange Server 2013 features that help meet regulatory, legal or business requirements on privacy and data storage laws.

Overview

Exchange Server 2013: Compliance Management three day Workshop provides students with the knowledge and skills necessary to effectively plan and configure Compliance features provided in Exchange Server 2013. The workshop includes extensive hands on labs covering the deployment of Data Loss Prevention, Archiving, Auditing and Retention features.

Instructor will integrate lessons from field experience and Microsoft best practices.

This workshop contains Level 300 content.

Key Features and Benefits

The workshop is designed to provide participants with in-depth knowledge about Compliance options available in Exchange Server 2013. After completing this training, students will be able to plan and implement Compliance features to meet legal and business requirements.

Technical Highlights

After completing this course, you will be able to:

- Understand and implement Retention Policies
- Perform multi mailbox searches
- Use Exchange features to fulfil legal restrictions on data storage
- Implement Data Loss Prevention policies
- Generate Auditing reports

Hardware Requirements:

Minimum requirements for students machine

- 2.40+ GHz Dual or Quad core processor (with Virtualization capabilities)
- 16-GB RAM
- 128-GB HDD
- Windows Server 2012 R2 with Hyper-V

Syllabus

This workshop runs for three full days. Students should anticipate consistent start and end times for each day. Early departure on any day is not recommended.

Module 1: Messaging Records Managing

During this module students will get familiar with Retention Tags and Retention Policies.

Module 2: In-Place Archiving

This module covers in detail the Archiving features of Exchange Server 2013.

Module 3: eDiscovery

In this module students will learn advanced mailbox searches using KQL language.

Module 4: In-Place Hold

After completing this module students will understand Exchange features that will enable them to fulfil legal restrictions for data storage.

Module 5: Transport Rules

In this module students will learn how Transport Rules are constructed and what they can be used for.

Module 6: Data Loss Prevention

This module discusses the Data Loss Prevention features available in Exchange Server 2013 including, DLP Policies, Document Fingerprinting etc.

Module 7: Auditing

In this module students will learn how to track what changes were made in the Exchange Organization and record non-owner access to the mailboxes.

Exchange Server 2013: Migration from Exchange Server 2007/2010 – Level 300

This workshop will provide participants with the necessary knowledge to begin deploying and managing Exchange Server 2013.

Target Audience:

This course is an advanced course for Exchange Server 2013. It is targeted at IT personnel who have designed, deployed, administered, and managed an Exchange Server 2007 or 2010 infrastructure for at least one full year.

Overview

The Exchange Server 2013: Migration from Exchange Server 2007/2010 WorkshopPLUS is a two-day course that provides participants with the knowledge and skills necessary to effectively set up and configure Exchange Server 2013 in an existing Exchange organization (Exchange Server 2007 or Exchange Server 2010).

The workshop includes extensive hands-on labs covering upgrading and coexisting with Exchange Server 2007 and Exchange Server 2010. The workshopPLUS instructor will integrate lessons from field experience and Microsoft best practices.

This two-day workshopPLUS contains Level 300 content.

Key Features and Benefits

The WorkshopPLUS is organized into modules and is designed to provide participants with in-depth knowledge and hands-on experience to help migrate to Exchange Server 2013.

Technical Highlights

After completing this course, you will be able to:

- Identify new features of Exchange Server 2013.
- Understand efficient methods of deploying Exchange Server 2013 in environments with Exchange Server 2007, Exchange Server 2010 or both.
- Learn all relevant migration tasks, which follow Microsoft best practices.

Hardware Requirements:

To participate in the course, each student needs to have access to a workstation that meets or exceeds the following minimum hardware and software requirements:

- One Windows Server 2012 workstation with Hyper-V
- Quad core AMD/Intel processor with virtualization extensions
- 16-GB RAM (or more)

If you are coordinating a dedicated delivery for your organization and require hardware, or are interested in having the virtual environment hosted in the cloud, contact your TAM for more information.

Syllabus

This workshop runs for two full days. Students should anticipate consistent start and end times for each day. Early departure on any day is not recommended.

Module 1: Overview: This module provides a brief overview of the new features in Exchange Server 2013. It also discusses discontinued or changed features in Exchange Server 2013.

Module 2: Prerequisites: This module discusses the prerequisites for successful setup and installation of Exchange Server 2013.

Module 3: Deployment Guidelines: This module discusses key considerations for deploying Exchange Server 2013, which include Hardware planning, Virtualization and Load Balancing.

Module 4: Outlook Anywhere: This module explains the differences in how Outlook clients access Exchange Server 2013 Mailboxes.

Module 5: Client Protocol Flow : This module explains the logon flow to an Exchange Server 2007 or an Exchange Server 2010 Mailbox when the primary Namespace is moved to Exchange Server 2013.

Module 6: Other Migration Tasks: This module explains migration from to modern Public Folders. It discusses the relevant changes for Offline Address book and Transport Rules. This module also covers required modifications when Microsoft Threat Management Gateway (TMG) or Unified Access Gateway (UAG) is deployed.

Module 7: MAPI over HTTP: This module explains the future connectivity model for Outlook to Exchange without RPC.

Module 8: Migrating to Exchange 2013 Unified Messaging: This module explains the Unified Messaging architectural changes in Exchange Server 2013 and the migration process from Exchange Server 2007 and Exchange Server 2010.

Exchange Server 2013: PowerShell for the Exchange Administrator – Level 200

Target Audience:

This course is an intermediate level course for PowerShell and Exchange Server 2010 and is targeted at IT staff who have a good understanding of all Exchange Server 2010, Windows Server, and Active Directory components, as well as a general understanding of PowerShell core concepts.

The basic concepts of these products will not be covered in this course, and it is expected that attendees will already possess that knowledge.

Overview

The PowerShell for the Exchange Administrator is a 2 day workshop that provides participants with the knowledge and skills necessary to show you how to automate routine tasks and solve common problems using the Exchange Management Shell. This workshop contains advanced IT Professional content. Please review the target-audience information and contact your Microsoft Services representative to ensure that this workshop is appropriate to the student's experience and technical expertise.

Key Features and Benefits

Each group of modules is organized by scenario and is designed to provide participants with in-depth expertise, tools and hands-on experience to help automate and troubleshoot specific Exchange Server tasks.

Technical Highlights

After completing this course, you will be able to:

- Understand how to use the Exchange Management Shell to manage and maintain an Exchange Server 2010 environment.
- Understand how to use the shell to troubleshoot common problems.
- Collect and analyze data to troubleshoot Exchange Server 2010.
- Identify ways to automate routine tasks using the Exchange Management Shell.

Hardware Requirements:

This is a hands-on workshop with labs. Every student needs one computer which runs Windows Server 2008-R2 with at least 8GB of RAM, Multi-Core Processor and 100GB of Free Disk Space. The computer also needs to run Hyper V (R2).

Syllabus

This workshop runs for 2 full days. Students should anticipate consistent start and end times for each day. Early departure on any day is not recommended.

Module 1: Windows PowerShell Basics: This module provides an overview of the basic PowerShell techniques and concepts. Several foundational PowerShell core concepts are introduced such as cmdlets, providers, scripting, functions and remoting.

Module 2: Exchange Management Shell: Introduction to managing Exchange from the command line. Topics include management shell basics, Cmdlet Extension Agents, Managing Exchange Management Shell, and Troubleshooting Exchange Management Shell.

Module 3: Recipient Management: This module covers some of the most commonly implemented recipient management tasks such as creating mailboxes, importing/exporting mailbox data, and managing distribution group membership.

Module 4: Role Based Access Control: This module covers an introduction to Role Based Access Control.

Module 5: Role Configuration and Management: This module focuses on the core concepts required to manage each of the Exchange Server roles. Topics include Client Access Arrays, controlling mail flow, managing database settings, and high availability.

Module 6: Security and Compliance: This module covers using the shell to manager the Exchange Server 2010 compliance and auditing features. Mailbox Auditing, managing Personal Archive, and Messaging Records Management (MRM) will be reviewed.

Module 7: Reporting and Troubleshooting: In this module, various techniques used to report on and troubleshoot common Exchange Server issues will be demonstrated.

Exchange Server: Bring Your Own Device with Microsoft Exchange ActiveSync – Level 300

Target Audience:

IT Professionals and consultants implementing or supporting Microsoft Exchange Server 2013.

Prerequisites:

Participants should be experienced users of Exchange 2013.

Content Level:

This course will provide participants with the necessary knowledge to understand and troubleshoot Exchange ActiveSync mobile device access to Exchange 2013.

Overview

The Exchange Server: Bring Your Own Device with Microsoft Exchange ActiveSync 3 day course introduces to Microsoft Exchange ActiveSync used on a broad range of Mobile Devices. The Workshop is focused on troubleshooting the Bring Your Own Device (BYOD) strategy. Participants will gain experience on how Android, iOS and Windows Phone communicate with Exchange 2013. This includes troubleshooting techniques used by Microsoft Support for mailboxes which are hosted onpremises or within Office365.

This WorkshopPLUS consists of hands-on labs, covering Exchange ActiveSync architecture and troubleshooting various mobile device issues. The instructor will integrate lessons from field experience and Microsoft support best practices.

This three-day Workshop contains Level 300 content.

Key Features and Benefits

- The course provides technical understanding of the Exchange ActiveSync protocol and architecture.
- The course will provide the top Exchange ActiveSync support topics and shows how to effectively troubleshoot those problems.
- It explains sizing strategies for enabling mobile device access for Exchange Server users.

Technical Highlights

After completing this course, you will be able to:

- Understand the risks and benefits of BYOD strategy.
- Explain the Exchange ActiveSync architecture.
- Perform Exchange ActiveSync troubleshooting on-premises and in Office365.
- Understand sizing for mobile device access.

Hosted Requirements:

Each participant will need the following:

- A computer running at least Windows 7 with 50 GB free drive space, a USB port, a 10 Mbps or faster network adapter, at least an evaluation copy of Microsoft Office 2010 Professional or later, and a PDF reader.
- A Microsoft/Windows Live ID to connect to the virtual environment.
- Networked classroom with access to the Internet and at least Internet bandwidth of 2 Mbps. TCP port 443 must be open.
- A wired network in the classroom.

Hardware Requirements:

- One server running Windows Server 2012 R2 with Hyper-V.
- At least Quad core AMD/Intel processor with virtualization extensions and 16 GB RAM (or more).

Syllabus

This Workshop runs for three full days. Participants should anticipate consistent start and end times for each day. Early departure on any day is not recommended.

This course consists of six modules discussing the following topics:

- **Bring Your Own Device –BYOD Introduction:** This module provides an overview of Exchange ActiveSync and explains the importance of BYOD.
- **Architecture:** This module explains the Architecture of the protocol and its underlying connectivity model, proxying and redirection to legacy versions of Exchange Server. It also covers alternative ways to access mailbox data from a mobile device.
- **DeviceManagement:** This module covers the various ways to manage mobile devices: Exchange ActiveSync (EAS) and Allow/Block/Quarantine (ABQ) Policies, Remote Wipe and Microsoft System Center Configuration Manager / Windows Intune.
- **Troubleshooting:** This module explains on-premises and Office 365 troubleshooting techniques, tools and reports.
- **Sizing:** This module provides information on data collection and analysis, which allows effective sizing for mobile device access.
- **General:** This module provides important information, which helps to securely publish Exchange ActiveSync, setting up emulators and where to find the latest support information.

Outlook and Exchange Server 2013: Calendar Troubleshooting – Level 300

Gain a deeper understanding of Outlook 2013 and Exchange 2013 calendar concepts and utilization of tools for efficient troubleshooting of calendar issues.

Target Audience:

To ensure the high-quality knowledge-transfer expected by attendees of this three-day WorkshopPLUS, class size is limited to a maximum of 16 participants who meet the following criteria:

- Exchange 2013 administrators and Outlook 2013 help desk staff responsible for assisting in supporting and troubleshooting Outlook users
- Minimum of six months experience administering Exchange Server or supporting Microsoft Outlook 2013
- Help-desk professionals

Overview

The Outlook and Exchange 2013 Calendar Troubleshooting three-day WorkshopPLUS course provides participants with the knowledge to:

- Understand the architecture of the calendar feature set in Outlook and Exchange Server.
- Utilize the tools commonly used to troubleshoot calendar issues.
- Effectively troubleshoot calendar issues.

In addition to primarily focusing on Outlook 2013 and Exchange 2013, the WorkshopPLUS will also include information about Microsoft Office 2011 for Mac.

The WorkshopPLUS contains advanced content. Please review the Target Audience information, and contact your Microsoft Services representative to ensure that this course is appropriate to the participant's experience and technical expertise.

Key Features and Benefits

- Understanding Outlook 2013 and Exchange 2013 Calendaring Features: Detailed information is provided on the architecture of several calendar features.
- Outlook and Exchange Logging Capabilities: Instructions are provided to show participants how to enable calendar logging for Outlook and Exchange Server.
- Analysis of Outlook and Exchange Server Logs: Outlook and Exchange Server log files are presented and analyzed in detail for multiple common end-user scenarios.
- Troubleshooting Methods for Common Calendar Issues: Microsoft has a documented process for its support professionals when they help customers troubleshoot common calendar issues, such as missing or duplicate calendar items.

In order to achieve the best results from the class, participants must have a good understanding of Outlook and Exchange Server functionality, including manager-delegate scenarios and calendar features and settings. Helpdesk professionals can benefit from several modules in the WorkshopPLUS. This is not a beginner's course or training targeted at Outlook developers.

Hardware Requirements:

Contact your Technical Account Manager (TAM) if the necessary hardware to be provided. If you are attending an open enrollment WorkshopPLUS, the hardware will be provided to you.

Technical Highlights

After attending this WorkshopPLUS, participants will be able to:

- Explain the proper methodologies for analyzing and troubleshooting Calendar issues, especially related to missing or duplicate calendar items.
- Explain major calendar features and logging capabilities in Outlook 2013 and Exchange 2013.
- Generate and locate calendar log files for Outlook and Exchange Server.

Syllabus

This WorkshopPLUS runs for three days. Participants must anticipate consistent start and end times for each day. Early departure on any day is not recommended.

Module 1: Overview, Outlook 2013 Calendar Features and Architecture: This module discusses new Outlook 2013 Calendar features. It covers key architectural components and features. The module also discusses delegation design and best practices.

Module 2: Exchange 2013 Calendar Features and Architecture: This module discusses key Exchange 2013 Calendar features (such as the Calendar Attendant and Calendar Repair Assistant) and settings (Windows PowerShell cmdlets and registry settings).

Module 3: Troubleshooting Tools and Technics: This module explains how to enable, locate and provide log files from Outlook and Exchange Server for further analysis by Microsoft Support. It will also discuss several commonly known issues and the process for troubleshooting them.

Labs: In each module, several lab exercises are provided to enhance the participants' learning experiences.

SharePoint Server 2013: Site Administration and Collaboration – Level 200

Target Audience:

To ensure the high-quality knowledge transfer expected by the attendees of this 2-day workshop, class size is limited to a maximum of 16 students, and recommended that students meet the following criteria:

- Experienced SharePoint users who are familiar with the basic concepts and features of SharePoint.

Overview

The SharePoint Server 2013: Site Administration and Collaboration Workshop addresses the depths of SharePoint Server 2013 site management, security, collaboration features, and more. Through presentations, white-board discussions, and goal-based labs, this 2-day workshop will provide SharePoint site administrators the skills to walk away with a firm grasp on the technical concepts required to successfully administer this world-class collaboration infrastructure.

Key Features and Benefits

Each group of modules is organized by scenario and is designed to provide participants with in-depth expertise, tools and hands-on experience to administer and work with SharePoint 2013 sites and features.

Technical Highlights

After completing this course, you will be able to:

- Understand the SharePoint Server 2013 site and collaboration features.
- Manage site collections, site templates, security, site features, list and libraries, and site data..
- Experience working with web parts, apps, content types, site columns, the search interface, object sharing features, and more.
- Learn how to translate the SharePoint Server 2013 site collaboration features to your everyday business needs.

Hardware Requirements:

Lab environments for this course are generally hosted in the cloud.

Labs delivered on computers within the classroom must meet or exceed the following:

- Windows Server 2012 with Hyper-V
- Intel Core i5-class processor with at least 4 cores (8 recommended)
- USB 3.0 support
- 24GB RAM (32GB recommended)
- 120GB HDD
- 19" monitor

Syllabus

This workshop runs for 2 full days. Students should anticipate consistent start and end times for each day. Early departure on any day is not recommended.

Module 1: Site Administration: Learn the difference between site collection and site administration settings and the various administration user roles. Also explore the various site templates available for use and best practices around site taxonomy and structure.

Module 2: Lists and Libraries: Take a deep dive into working with lists and libraries, list templates, columns, views, versioning, check in/out, and alerts.

Module 3: Working with content: Explore the powerful content management features such as content types, site columns, managed metadata, policies, the search interface and more.

Module 4: Securing Content: Understand site and object security options such as permissions, permission levels, groups, and the inheritance model.

Module 5: Web Parts and Apps: Gain insight into working with the available Web Parts provided with SharePoint 2013 products and learn how to leverage SharePoint Apps.

SharePoint Server 2013: Administration – Level 300

Configure, secure, and operate SharePoint 2013

Target Audience:

This class is intended for IT administrators and architects with previous experience on SharePoint products.

Overview

The three-day SharePoint 2013: Administration course provides detailed coverage of Microsoft SharePoint 2013 configuration, security and operations. This workshop contains Level 300 content and introduces new services, as well as improvements on key capabilities from the farm administrators' perspective.

SharePoint administrators will gain a firm grasp of the technical concepts required to successfully operate this collaboration infrastructure.

Technical Highlights

After attending this workshop, students will be able to:

- Perform SharePoint 2013 general farm administration and service applications management.
- Configure and administrate the following new and improved service applications: Search, Apps Management, Workflow Manager and Social Features.
- Plan and implement security for different SharePoint 2013 components, including authentication options for web applications and services.
- Understand the features in SharePoint 2013 to improve scalability and explore the health framework.
- Monitor and manage the overall health of a SharePoint 2013 server farm.

This workshop does not include modules on server deployment, farm creation or upgrade, and patch management. For more information on these topics, review the SharePoint 2013: Deployment and Upgrade datasheet.

Hardware Requirements:

Lab environments for this course are generally hosted in the cloud.

Labs delivered on computers within the classroom must meet or exceed the following:

- Windows Server 2012 with Hyper-V
- Intel Core i5-class processor with at least 4 cores (8 recommended)
- USB 3.0 support
- 32GB RAM
- 120GB HDD
- 19" monitor

Syllabus

This is a three-day workshop typically scheduled from 9 A.M. to 5 P.M.

Module 1: Farm Administration Overview

- SharePoint Governance Team and Farm Administration Tiers
- Tools and server components to be managed by Farm Administrators in a SharePoint 2013 farm

Module 2: Authentication and Security

- SharePoint 2013 authentication modes
- Kerberos authentication, claims-based authentication, identity federation and OAuth

Module 3: Search

- Search architectural changes in SharePoint 2013
- Search service configuration, monitoring and troubleshooting

Module 4: Apps Management and Workflow Manager

- Apps for SharePoint 2013: apps deployment, management and on-premises app catalogs. Apps security model
- Types of workflows in SharePoint 2013, workflow farms, monitoring, scaling and availability considerations for workflows

Module 5: Social Features

- User profile synchronization options and configuration
- Personal sites and communities
- Tags, newsfeed and social collaboration
- Yammer and on-premises deployments

Module 6: Diagnostics and Health Monitoring

- Understand the different performance improvements in SharePoint 2013 and how to plan for performance
- Consider the different SharePoint configurations and mechanisms that affect performance
- Learn how to use diverse tools to diagnose SharePoint problems

SharePoint Server 2013: Troubleshooting and Performance – Level 300

Target Audience:

This WorkshopPLUS is ideally suited to the participants who want to develop an in-depth skill set in troubleshooting reliability and performance issues with SharePoint 2013.

This course contains Level 300 content. This is not a beginner's workshop and requires at least six months of experience as a SharePoint 2013 Administrator or Architect.

Overview

The SharePoint 2013: Troubleshooting and Performance three-day WorkshopPLUS provides participants with in-depth knowledge and skills to effectively troubleshoot Microsoft SharePoint 2013 environments. It gives comprehensive coverage of main troubleshooting tools and techniques, common causes of performance degradation, reliability issues and solutions. The session by expert trainer, demonstrations and extensive hands-on labs provide in-depth experience using the concepts learned in the course.

Prerequisites (either):

- Experience as SharePoint Architect or Administrator in SharePoint 2013
- Participated in the SharePoint 2013: Administration WorkshopPLUS

Key Features and Benefits

Each module is based on scenarios and is designed to provide participants with in-depth expertise, knowledge of tools and hands-on experience to diagnose and eliminate reliability and performance issues in SharePoint 2013 environments.

Technical Highlights

This course will cover advanced functionality in regards to SharePoint

Troubleshooting and solving Performance issues:

- SharePoint Performance and Troubleshooting Introduction
- SharePoint Farm Reliability
- SharePoint Service Troubleshooting
- SharePoint Performance Primer
- Improving SharePoint Farm Performance
- Improving SharePoint Service Performance

Hardware Requirements:

Lab environments for this WorkshopPLUS are generally hosted in the cloud.

Labs delivered on computers within the classroom must meet or exceed the following:

- Windows Server 2012 with Hyper-V
- Intel Core i5-class processor with at least four cores (recommended: eight cores)
- USB 3.0 support
- 24 GB RAM (recommended: 32 GB RAM)
- 120 GB HDD
- 19 inch monitor

Syllabus

This WorkshopPLUS runs for three full days. The participants should anticipate consistent start and end times for each day. Early departure on any day is not recommended.

Module 1: SharePoint Performance and Troubleshooting Introduction

In this module, the participants will understand the troubleshooting process and explore useful data collection, and analysis tools.

Module 2: SharePoint Farm Reliability

In this module, the participants will learn about common SharePoint farm reliability issues and solutions including: missing server side dependencies, database orphans and patching issues.

Module 3: SharePoint Service Troubleshooting

In this module, the participants will understand troubleshooting of some SharePoint service applications and services, for example, Search, User Profile and Distributed Cache Service.

Module 4: SharePoint Performance Primer

In this module, the participants will learn how to establish performance baseline for a SharePoint farm and analyze SharePoint services usage.

Module 5: Improving SharePoint Farm Performance

In this module, the participants will understand how to identify performance bottleneck and its common causes, for example, client-server communication, web server, database server, virtual machines and customizations.

Module 6: Improving SharePoint Service Performance

In this module, the participants will explore common causes of service application and service's performance degradation. The participants will be able to deep dive into Search and Distributed Cache Service performance troubleshooting.

SharePoint Server 2013: Business Intelligence – Level 300

Target Audience:

To ensure the high-quality knowledge transfer expected by the attendees of this 3 -day workshop, class size is limited to a maximum of 16 students, it is recommended that students meet the following criteria:

Experienced SharePoint users and Designers who are familiar with the basic concepts and features of the product and have been actively working with SharePoint for 6 months or longer. Coding experience is not a pre-requisite.

Overview

The SharePoint Server 2013: Business Intelligence 3-day Workshop course introduces new and improved Business Intelligence features made available in SharePoint Server 2013. The Business Intelligence applications and tools included with the enterprise version of Microsoft SharePoint Server 2013 enable you to integrate business data into SharePoint sites and present that data as meaningful information.

Geared toward Site Administrators and Site Developers this course addresses areas of integration such as Performance Point, Power Pivot and SQL Reporting services for creating an overall Business Intelligence solution. SharePoint 2013 site administrators and developers will walk away with a firm grasp on the technical concepts required to successfully build and administer a world-class Business Intelligence solution to present your organizations data in a meaningful way.

This workshop contains Level 300 content. Please review the target-audience information and contact your Microsoft Services representative to ensure that this workshop is appropriate to the student's experience.

Key Features and Benefits

Learn advanced Business Intelligence techniques to achieve the most out of your SharePoint 2013 implementation. This workshop will guide students through many of the Business Intelligence features and toolset that SharePoint 2013 leverages.

Hands-on labs based on real world scenarios -Throughout the course students will be presented with real world scenarios and will be tasked with utilizing SharePoint 2013 to achieve a solution to the scenario presented. The workshop objective is to not only ensure that the students walk away with knowing what functionality is available but how it can be best leveraged for requirements corporations encounter today.

After completing this course, students will:

- Understand SharePoint Server 2013 Business Intelligence features
- Learn how to translate SharePoint Server 2013 Business Intelligence features to aid their everyday business decision making.

To participate in this course, students need to have access to a workstation that meets or exceeds the minimum hardware requirements below. Contact your TAM if the necessary hardware needs to be provided. If you are attending an open enrollment workshop, the hardware will be provided for you. If you are coordinating a closed delivery (dedicated delivery for your organization) and require hardware or are interested in having the virtual environment hosted in the cloud, then please contact your TAM for more information.

Hardware requirements for Labs hosted in the cloud:

- Internet Explorer 9.0 or newer along with internet connectivity
- Hardware requirements for Labs installed locally in the classroom:
- Windows Server 2012 R2 with Hyper-V
- Internet Explorer 9.0 or newer along with internet connectivity
- 32 gigabyte (GB) of RAM
- 160 GB minimum Disk space
- Solid State Drive(s) preferred for best performance
- 16-megabyte (MB) video adapter (32 MB recommended)

Syllabus

This workshop runs for 3 full days. Students should anticipate consistent start and end times for each day. Early departure on any day is not recommended.

Module 1: Introduction to Microsoft BI in SharePoint 2013. Review the Business Intelligence capabilities & tools that are available in SharePoint Server 2013 such as interactive dashboards, KPIs and scorecards. Learn how you can use SharePoint BI applications to analyze raw data and turn it into meaningful information.

Module 2: Excel Services. Learn how SharePoint extends Excel and enables you to load, calculate, and display Microsoft Excel workbooks on a browser. Explore how to create and publish Charts, Reports, and Dashboards. Review the capabilities of Power BI.

Module 3: PowerPivot and Power View. Explore PowerPivot features and Benefits. Learn to assemble data from various Data Sources, enrich your reports with advanced BI analysis techniques and create powerful Visual Reports using Power Pivot. Learn how to create access and manage a PowerPivot workbook in SharePoint.

Module 4: SQL Reporting Services. Explore the SSRS range of tools and services to help you create, deploy, manage, and disseminate reports quickly and easily. Learn how to configure SharePoint libraries and data sources to support self-service authoring, create reports and datasets using Report Builder 3.0, and embed reports into SharePoint pages and applications.

Module 5: Access and Visio Services. Learn how to Create and Publish Access Web Apps to SharePoint 2013 Access Services. Learn how to create Visio based Performance dashboards and how to publish Visio to SharePoint. Learn to integrate Visio diagrams into SharePoint applications.

Module 6: PerformancePoint Services. Learn how to create Analytic Charts, Reports, KPIs, Filter and Scorecards. Explore PerformancePoint Dashboard Designer and Time Intelligence Date Filters. Learn how to Create and Publish Dashboards.

Module 7: Business Connectivity Services. Explore how to present External Data in SharePoint. Work with Business Data Web Parts, create reports using BCS data.

Labs –Included are several detailed hands on labs that are designed to get students thinking about how to translate each feature into a solution for real world business scenarios.

SharePoint Server 2013: Developer – Level 300

Target Audience:

This is an advanced course targeted to staff who have prior experience with SharePoint 2010 Development and experience with Visual Studio 2010.

The course is written with the expectation that attendees will already possess at least six months of experience with SharePoint and/or SharePoint development tools.

Overview

The SharePoint 2013: Developer 4-day course provides detailed coverage of Microsoft SharePoint 2013 Development Models, Tools and concepts. This workshop contains Level 300 content and introduces new SharePoint development practices, as well as introduces improvements on key capabilities from a SharePoint developers' perspective.

SharePoint developers will gain a firm grasp on the development concepts and methods required to successfully create custom Apps and Solutions on top of the powerful SharePoint Platform. As well as gain an understanding of the new and improved features for SharePoint development.

Technical Highlights:

After attending this workshop, students will:

- Have a deep understanding of the SharePoint development process and be able to quickly begin to apply these practices in their working environment.
- See what is new and improved in SharePoint 2013
- Learn to leverage all of the SharePoint development tools
- Learn how to leverage the new SharePoint App Model and new restful web services to provide rich data interaction.
- Explore how to leverage Claims Authentication in combination with other SharePoint services such as: Events, Workflow, and BCS
- Be able to better utilize the greatly improved Search and Enterprise Content Management/Web Content Management features.

Hardware Requirements:

Lab environments for this course are generally hosted in the cloud.

Labs delivered on computers within the classroom must meet or exceed the following:

- Windows Server 2012 with Hyper-V
- Intel Core i5-class processor with at least 4 cores (8 recommended)
- USB 3.0 support
- 32GB RAM
- 120GB HDD
- 19" monitor

Syllabus

Module 1: Overview

- SharePoint Development Overview
- What's New in SharePoint 2013 Development
- Developing SharePoint Solutions

Module 2: Development

- SharePoint Development Tools
- SharePoint App Model
- Using the new Events

Module 3: Data Access and Security

- Accessing data with REST and CSOM
- Leveraging Claims based authentication
- Using BCS to display Business Intelligence Data

Module 4: Data management

- Enterprise Content Management
- Web Content Management
- Creating SharePoint Workflows

Module 5: Enterprise Search

- Evolution of Enterprise Search
- Query Execution
- Search Verticals
- Leveraging Search in solutions
- SharePoint 2013 Social Features

Lync Server 2013: Deployment (Ignite) – Level 300

Target Audience:

This course is an introductory course for Lync Server 2013 and is targeted at IT staff who are familiar with Lync Server 2010 or Office Communication Server (OCS 2007 R2).

Hardware Requirements:

Text goes here –based on the workshop setup that is provided.

Overview

The Lync Server 2013: Deployment workshop provides attendees with an overview of the new features introduced in Lync Server 2013. Through presentations, white-board discussions, and goal-based labs, this 4-day workshop covers various topics that include High Availability and Disaster Recovery, Archiving, Mobility and Persistent Chat.

Key Features and Benefits

Each module is designed to provide participants with basic deployment knowledge and hands-on setup experience to help understand specific Lync Server and Lync client features.

Technical Highlights

After completing this course, you will be able to:

- Learn about new features in Lync 2013 and Lync Server 2013.
- Understand how to setup Lync Server 2013.
- Understand migration options from previous versions.
- Learn about conferencing, collaboration, and video experience.
- Learn about Lync Web App, VDI and mobility.
- Understand High Availability and Disaster Recovery options
- Learn about the voice enhancements.
- Learn about Persistent Chat

Syllabus

This workshop runs for 4 full days. Students should anticipate consistent start and end times for each day. Early departure on any day is not recommended.

Module 1: What's New in Microsoft Lync 2013: This module provides an overview of the new features in Lync 2013 client and Lync Server 2013.

Module 2: Architecture and Manageability: This module introduces to the changes in Lync 2013 Server Topology, Brick model, high availability and disaster recovery options, Lync Server Storage Service, Open Authorization, Archiving options in Lync Server 2013, Unified Contact Store, and monitoring improvements when using System Center Operations Manager.

Module 3: Setup and Deployment: This module talks about deploying Lync Server 2013, hardware and software requirements, and manageability tools such as the Planning tool and Topology Builder.

Module 4: Migration, Coexistence and Interoperability: This module introduces you to the migration options from Office Communications Server 2007 R2 or Lync Server 2010 to Lync Server 2013. It also covers client interoperability.

Module 5: Hybrid Deployments: This module discusses the Split domain deployment where the Address space is shared between on-premises and Lync Online. It also covers integration with O365 services such as Exchange Online and SharePoint Online.

Module 6: People, Presence and Federation Infrastructure: This module covers the People experience in Microsoft Office, Aggregated Presence, Microsoft Exchange Integration, and Lync Federation.

Module 7: Persistent Chat Experience and Infrastructure: This module provides an overview of Persistent Chat, Persistent Chat Server Architecture, Deployment, Administration, and High Availability and Disaster Recovery options for Persistent Chat.

Module 8: Mobility Experience: This module presents an overview of Lync Mobile Architecture, and the new features in Lync 2013 mobile clients. This module also covers the mobility policies.

Module 9: Conferencing Infrastructure: In this module, you will be presented with the changes in Conferencing for Lync Server 2013 including meeting invite customization, collaboration options on mobile devices, integration with Office Web Application Server, and the High Availability and Disaster Recovery options related to conferencing for Lync Server 2013.

Module 10: Collaboration Experience: This module provides an overview of the collaboration experience in Lync 2013 including Content Controls in Lync 2013, and also covers the basic administration settings for collaboration.

Module 11: Video Experience and Infrastructure : This module provides an overview of video in Lync 2013, video experience in peer-to-peer calls, ad-hoc conferences and scheduled conferences and manageability options.

Module 12: Video Interoperability : This module provides an overview of video interoperability in Lync Server 2013, requirements and call flows.

Module 13: Lync Web App : This module provides an overview of the Lync Web Application and features available.

Module 14: Voice Architecture and Routing Enhancements : This module provides an overview of Enterprise Voice, and the voice routing enhancements in Lync Server 2013 including M:N Interworking through multiple trunks, Location Based Routing, Session management, improved Caller ID management and improved delegate routing. This module also covers the delegation of Response Group Management to a Response Group Manager.

Module 15: Network Assessment Methodologies: This module explains why a network assessment is needed and discusses goals and methodologies.

Module 16: High Availability and Disaster Recovery: This module presents an overview of the new options for High Availability and Disaster Recovery in Lync Server 2013.

Module 17: Virtual Desktop Infrastructure: This module presents an overview of Virtual Desktop Infrastructure(VDI), Lync in VDI, Lync plug-in, setup and deployment.

Module 18: Media Quality, Logging and Lync Media over Wi-Fi: This module presents an overview of performance monitoring capabilities in Lync Server 2013, Lync media quality, and Lync over Wi-Fi. It also covers the new Centralized Logging Service in Lync Server 2013.

Module 19: Devices Strategy: This module presents an overview of the phone devices that can be used with Lync Server 2013.

Lync Server 2013: Advanced Core – Level 300

Target Audience:

This course is an advanced course for Lync Server 2013 and is targeted at senior IT staff who have designed, deployed, administered and managed a Lync Server 2010 infrastructure or an Office Communication Server (OCS 2007 R2) infrastructure for at least one full year.

The basic concepts and know-how of the product will not be covered in this course. It is expected that attendees will already possess that knowledge

Overview

The Lync Server 2013: Advanced Core WorkshopPLUS provides attendees with deep knowledge and understanding of the new features introduced in Lync Server 2013. Through presentations, white-board discussions, and goal-based labs, this four-day WorkshopPLUS covers various topics that include High Availability and Disaster Recovery, Archiving, and Persistent Chat.

Key Features and Benefits

Each module is designed to provide participants with expertise, tools and hands-on experience to help understand specific Lync Server and Lync Client features.

Technical Highlights

After completing this course, you will be able to:

- Understand the new features in Lync Server 2013.
- Understand High Availability and Disaster Recovery options
- Understand Exchange integration.
- Learn about Persistent Chat.
- Collect and analyze log traces used to troubleshoot Lync Server 2013.

Hardware Requirements:

Contact your TAM if the necessary hardware needs to be provided.

If you are attending an open enrollment WorkshopPLUS, the hardware will be provided for you.

Syllabus

This WorkshopPLUS runs for four full days. Students should anticipate consistent start and end times for each day. Early departure on any day is not recommended.

Module 1: Architecture: This module provides an overview of the new features in Lync Server 2013, and Exchange integration and migration options.

Module 2: High Availability and Disaster Recovery: In this module, you will be presented with the options available in Lync Server 2013 for high availability for the Lync pool, Lync backend database, and file store. In addition, this module extensively discusses the disaster recovery approach in case of a datacenter failure.

Module 3: Clients: This module discusses the different clients that can be used against Lync Server 2013. These include

- Client-side changes in video.
- Autodiscover, which is used by Lync 2013 clients to locate the Lync Server 2013.

Module 4: Virtualization: This module discusses the virtualization support for all Lync workloads.

Module 5: Archiving: This module discusses the new option in Lync Server 2013 to archive to a user's mailbox on Exchange Server 2013.

Module 6: Conferencing: This module covers the conferencing architecture and protocols, Office Web Application Servers, and changes to dial-in conferencing.

Module 7: Administration: In this module, you will learn:

- The most common areas of issues related to the Lync 2013 client.
- How to capture logs to help tracing and identifying their root cause.

Module 8: Logging: This module explains how to use: Snooper.

The new Centralized Logging Feature in Lync Server 2013.

Module 9: Persistent Chat: This module covers the following:

- Administration of Persistent Chat
- Creation of Chat rooms
- High Availability and Disaster Recovery options for Persistent Chat

Module 10: Edge: This module covers the following:

- Extensible Messaging and Presence Protocol (XMPP) federation in Lync Server 2013.
- The protocols used by the Lync 2013 Edge Server in detail.
- How media connectivity is established for audio, video, and application sharing.

Skype for Business Server 2015: Deployment – Level 300

Target Audience:

This course is focused on Skype for Business Server 2015 and is targeted at IT staff who are familiar with Lync Server 2010 or Lync Server 2013.

Overview

The Skype for Business Server Deployment workshop provides participants the knowledge and skills to effectively deploy a supported core Skype for Business infrastructure. Through presentations, white-board discussions, and goal-based labs, this 3-day workshop covers various topics that include an overview of the new features introduced in Skype for Business Server 2015, In-Place Upgrade, and Migration.

Key Features and Benefits

Each module is designed to provide participants with basic deployment knowledge and hands-on setup experience to help understand specific Skype for Business Server and Skype for Business client features.

Technical Highlights

After completing this course, you will be able to:

- Learn about new features in Skype for Business Server 2015.
- Learn about the deployment options
- Understand upgrade paths from previous versions
- Understand the in-place upgrade process
- Understand how to migrate to Skype for Business Server 2015.
- Understand how to deploy SQL Always On Availability groups
- Learn how to deploy external access components
- Learn how to plan for hybrid Skype for Business deployment
- Learn about the various Skype for Business clients and the dual user interface experience
- Understand how to integrate Skype for Business with Outlook Web App
- Learn how to troubleshoot deployment issues

Minimum Hardware Requirements:

- Intel Core-i5 based PC with 4GB RAM and 128GB HDD
- Windows 7 SP1 or later
- Office 2013 Professional Plus
- Internet access with at least 1Mbps per student

Syllabus

This workshop runs for 3 full days. Students should anticipate consistent start and end times for each day. Early departure on any day is not recommended.

Module 1: Introduction to Skype for Business Server 2015: This module provides an overview of the new features and improvements in Skype for Business Server 2015. It also covers planning for Skype for Business Server deployments, architecture recommendations and sizing considerations.

Module 2: Deployment: This module covers In-Place upgrade from Lync Server 2013 and migration to Skype for Business Server 2015. The module also covers an overview of SQL Always On Availability Groups and deployment of external access components such as Skype for Business Server Edge Server and Reverse proxy.

Module 3: Hybrid Deployments with Office 365: This module talks about planning for hybrid deployments and the prerequisites. The module also covers the hybrid configuration wizard and explains how to migrate users and services between Skype for Business Server 2015 on-premises and Office 365 Skype for Business Online.

Module 4: Client and Feature Deployment: This module covers the new features of the Skype for Business client and goes over the policy controlling the first run experience. It also covers integration with Exchange Outlook Web Access.

Module 5: Troubleshooting Deployment Issues: This module introduces you to the different tools available to assist with deployment issues and explains how to troubleshoot deployment issues.

Skype for Business Server 2015: Core Concepts – Level 300

Target Audience:

This course is focused on Skype for Business Server 2015 and is targeted at the IT staff who are familiar with Lync Server 2010 or Lync Server 2013.

Overview

The Skype for Business Server Core Concepts WorkshopPLUS provides attendees with deep knowledge and understanding of the new features introduced in Skype for Business Server 2015.

Through presentations, white-board discussions, and goal-based labs, this four-day WorkshopPLUS covers various topics that include Skype for Business Architecture, High Availability and Disaster Recovery, Operations and Troubleshooting.

Key Features and Benefits

Each module is designed to provide participants with expertise, tools and hands-on experience to help understand specific Skype for Business server and client features.

Technical Highlights

After completing this course, you will be able to:

- Understand the new features in Skype for Business Server.
- Understand high availability and disaster recovery options.
- How to maintain and optimize your Skype for Business Server environment.
- Collect and analyze log traces used to troubleshoot issues within Skype for Business Server

Minimum IT Requirements:

- Intel Core-i5 based computer with 4-GB RAM and 128-GB HDD
- Windows 7 SP1 or later
- Microsoft Office 2013 Professional Plus
- Internet access with a minimum speed of 1 Mbps per student

Syllabus

This WorkshopPLUS runs for four full days. Students should anticipate consistent start and end times for each day. Early departure on any day is not recommended.

Module 1: Skype for Business Architecture: This module provides an overview of the preferred architecture for Skype for Business. This module also covers external access (Edge) and authentication methods.

Module 2: Conferencing: This module will introduce the learner to Skype for Business' conferencing capabilities. You will learn how meetings are scheduled, how meetings are stored, accessed, and how to manage and control the various modalities used in a conference.

Module 3: High Availability and Disaster Recovery: In this module, you will be presented with the options available in Skype for Business Server for high availability for the Front End Pool, Back End database, and file store. In addition, this module extensively discusses the disaster recovery approach in case of a datacenter failure.

Module 4: Clients and Devices: This module covers the new functionality of Skype for Business clients and devices. You will deep dive into client internals for a deeper understanding of how the clients and devices work.

Module 5: Mobility: This module will focus on the Skype for Business mobile clients for Windows, IOS and Android and how they connect, increase productivity and keep your communications secure.

Module 6: Operations: This module will cover the day to day monitoring and performance of your Skype for Business Server environment. Here you will learn how to keep your servers and media flows optimized and your network bandwidth under control.

Module 7: Archiving and Compliance: In this module, you will learn the features and functionality in Skype for Business Server to keep your communications in regulatory compliance and easily discoverable in Microsoft Exchange Server or SQL Server.

Module 8: Interoperability: This module focuses on how Skype for Business Server can operate and extend communications with 3rd party video conferencing servers, Exchange Server and Sharepoint Server.

Module 9: Troubleshooting: This module will introduce you to the Centralized Logging feature in Skype for Business Server along with the tools to help troubleshoot and solve problems in your environment. Specialized scenarios and "In the field" experiences help arm the learner with the knowledge to fix issues quickly.

SQL Server 2008-2012: Analysis Services Multidimensional Model – Level 300

Target Audience:

This is an advanced course for SQL Server 2012 Analysis Services and is only targeted at IT staff with good understanding of data warehousing, business intelligence and general OLAP techniques. An understanding of Unified Dimensional Model and MDX query language will help but are not required for this course.

Overview

The SQL Server 2012 Analysis Services Multidimensional Model WorkshopPLUS provides attendees with the deep knowledge and understanding of architecture, design, administration, troubleshooting techniques and best practices needed to build, manage, secure and use SQL Server 2008 Analysis Services, SQL Server 2008 R2 Analysis Services, and SQL Server 2012 Analysis Services. Through presentations, white-board discussions, and goal-based labs, this 4-day workshop covers the individual approaches for creating and administering an enterprise deployment of an Analysis Services Multidimensional project.

Key Features and Benefits

This training is aimed at advanced Business Intelligence and Analysis Services developers and SQL DBAs who want to master the concept of the SQL Server 2008, 2008 R2, and 2012 Multidimensional Modeling. The course includes hands-on lab exercises for creating a multidimensional model, solving business problems, administrating the server and writing MDX to query the model.

Technical Highlights

After completing this course, you will be able to:

- Understand the architecture, functionality and configuration of Analysis Services in Multidimensional Mode
- Understand how to build a model to solve business problems
- Administer features such as deployment, dimension design, partitioning, processing, and security
- Use popular client tools such as an Excel pivot table, Reporting Services reports, or PerformancePoint to query the server for reporting and analytics.

Hardware Requirements:

The virtual machines used in this WorkshopPLUS are complex, and require hardware not typically available in the classroom, so the virtual machines are Cloud-hosted. Course participants will need a computer with the following minimum configuration:

- Operating System: Windows 7 or higher
- Hard drive with 50 GB of free disk space
- A USB port
- A 10 megabits per second or faster network adapter
- Office 2010 Professional
- A PDF reader

Participants also need a Microsoft account /Windows Live ID to connect to the virtual environment. The classroom must be networked with at least a total Internet bandwidth of 2 Mbps. TCP port 443 must be open. We highly recommend a wired network in the classroom.

Syllabus

This workshop runs for 4 full days. Students should anticipate consistent start and end times for each day. Early departure on any day is not recommended.

Module 1: Introduction to Business Intelligence: This module provides an overview of the fundamental components of a typical Business Intelligence project. Beginning with Maturity models, then data warehousing, OLTP systems, ETL processing, OLAP systems, and on to the presentation layer all of which are crucial for business analytics.

Module 2: Overview of the Microsoft BI Stack: In this module, we provide an overview of the Microsoft Business Intelligence stack. This includes overviews of SQL Server Analysis Services, SQL Server Integration Services, SQL Server Reporting Services, SharePoint, and the tool sets used to build BI solutions.

Module 3: Analysis Services Installation : This module covers initial installation and configuration of Analysis Services, Post-installation Management of server configuration, Firewall configuration, and configuration of HTTP access.

Module 4: Connectivity for Analysis Services: This module discusses aspects of connectivity from the perspective of Analysis Services as both a Client application and a Server application. The discussion includes Data Sources and Providers, the TCP and HTTP protocols, Windows Authentication and Kerberos Authentication.

Module 5: Analysis Services Security: This module focuses on security from the perspective of the Service Account, configuration of Firewalls and Ports, as well as security Roles. The discussion includes discussion of Security Permissions, Types of Security, and Securable objects.

Module 6: Introduction to Multidimensional Design: This module compares principles of dimensional design with principles of entity relationship design. The module also covers multidimensional design beginning with creation of a Data Source, to creation and design of Dimensions, and creation and design of a Cube.

Module 7: Introduction to Multidimension eXpressions(MDX): This module includes writing Multidimension eXpressions(MDX) queries and using MDX Calculated member expressions to solve business problems.

Module 8: Analysis Services Administration and Maintenance: This module covers Database Deployment, opening database Design mode vs. Online mode, Backup and Restore operation, Processing, Shared Scalable Databases, and using Attach and Detach functionality.

Module 9: Analysis Services Administration, Monitoring Server Behavior: This module provides in-depth presentation of the day-to-day administrative tasks necessary for monitoring and tuning of Analysis Services. The topics covered include using Profiler, Performance Monitor, and Dynamic Management Views.

SQL Server 2008 R2 / 2012: Reporting Services for Report Developers – Level 300

Target Audience:

This WorkshopPLUS is an advanced course for SQL Server Reporting Services (SSRS) development and is targeted at database administrators, report developers, and business analysts who have two or three years of experience with any version of SQL Server.

Note that if you need to administer or troubleshoot SSRS, consider attending the SQL Server 2008 R2 Reporting Services Administration and Troubleshooting workshop.

Overview

SQL Server 2008 R2 / SQL Server 2012 Reporting Services for Report Developers is a four-day course that delivers an engaging hands-on experience, exploring the reporting architecture and diving deep into report development. Through lecture, demo, and hands-on labs, students discover the SSRS features of SQL Server 2008 R2 and SQL Server 2012. This WorkshopPLUS covers the Reporting Services architecture and configuration of a Reporting Services installation. It focuses on report design methods and builds on this foundation by covering formatting techniques, cascading parameters, drill through and drilldown, sub-reports, parameters and expressions, table, matrix, charts and other traditional report components. Participants learn visual report design practices by leveraging:

- Controls such as gauges, maps, data bars, Sparklines, indicators.
- Report Parts and other components.

Additionally, participants learn to create reports in both Business Intelligence Development Studio (BIDS) / Visual Studio and the client-based Report Builder application. This WorkshopPLUS also covers performance-tuning techniques for the report developer and the SQL Server 2012 features of Power View, Data Alerts and more.

Key Features and Benefits

Each group of modules is organized by scenario and is designed to provide participants with expertise, tools and hands-on experience with report development.

Classroom and Computer Requirements

The virtual machines used in this WorkshopPLUS are complex, and require hardware not typically available in the classroom, so the virtual machines are Cloud-hosted. Course participants will need a computer with the following minimum configuration:

- Operating System: Windows 7
- Hard drive with 50 GB of free disk space
- A USB port
- A 10 megabits per second (Mbps) or faster network adapter
- An evaluation copy of Office 2010 Professional
- A PDF reader

Participants also need a Microsoft account /Windows Live ID to connect to the virtual environment. The classroom must be networked with at least a total Internet bandwidth of 2 Mbps. TCP port 443 must be open. We highly recommend a wired network in the classroom.

Technical Highlights

After completing this course, you will be able to:

- Understand Reporting Services architecture and configuration, including report processing and rendering.
- Create reports in both BIDS and Report Builder.
- Leverage different report design techniques using methods available in SQL Server 2008 R2 and SQL Server 2012.
- Leverage metadata to identify poorly performing reports and techniques on improving report performance.
- Use SQL Server 2012 Power View to make self-service reporting a reality by providing a highly interactive, web-based data exploration, visualization, and presentation experience to users.
- Use SQL Server Data Alerts to keep you informed about report data that is important at a relevant time. You will learn to create rules that identify interesting

Syllabus

This WorkshopPLUS runs for four full days. Students should anticipate consistent start and end times for each day. Early departure on any day is not recommended.

Lesson 01 -SQL Server Reporting Services Architecture and Management. In this lesson, we cover:

- The server-based reporting platform and the web-hosted components that support the Reporting Services environment
- The catalog databases and the information stored there
- The Reporting Services architecture and the tools and services that leverage this architecture.

Lesson 02 -Planning the Installation. In this lesson, we cover:

- The considerations for installing SQL Server Reporting Services, such as which edition to use and whether to use Native mode or SharePoint integrated mode.
- The deployment methods and scale-out reporting as well as estimating database size and placement.

Lesson 03 -Installation and Configuration. In this lesson, we cover:

- The Reporting Services installation methods.
- How to configure Reporting Services through the Reporting Services Configuration Manager.

Lesson 04 -Beginning Report Design. In this lesson, we cover:

- The Report Design process, including requirements gathering and the different tools that can be used for authoring.
- The different building blocks of report design: files, data sources, and report components.

Lesson 05 -Advanced Report Design. In this lesson, we focus on report design using advanced expressions and custom code elements. We will discuss:

- The different connectivity examples using XML and Integration Services
- The cascading parameters, interactive sorting, document maps, calculated fields, and other techniques.
- The visualization components of charts and gauges along with report design best practices.

Lesson 06 -What's New in for Report Authoring in SQL Server 2008 R2. In this lesson, we will:

- Discuss the improvements such as expression language changes, layout features including data alignment, and data visualization using maps with spatial data.
- Learn to work with shared components such as shared datasets and report parts
- Review administrative functionality.

Lesson 07 -SQL Server 2012 –Power View and Data Alerts. In this lesson, we discuss:

- The Power View and Data Alerts that deliver self-service reporting to all users.
- The architecture behind Power View, leveraging BISM (Business Intelligence Semantic Modeling) models and SharePoint.\
- How Data Alerting through email can get users the report data they need based on report data changes.

Lesson 08 -Performance Tuning. In this lesson, we cover:

- General performance topics and how to identify performance issues in SQL Server and SQL Server Reporting Services.
- The key performance monitor counters for Reporting Services to enable trending and troubleshooting
- The Dynamic Management Views (DMVs), leveraging the Execution Log views, and leveraging SQL Server Integration Services to capture reporting trends over time.
- The Reporting Services best practices for better performance.

SQL Server 2012: Common Tasks and Solutions for Non SQL Administrators – Level 200

Target Audience

This workshop is designed for Non SQL Administrators who are new to SQL Server 2012.

This workshop is not aimed at providing the knowledge required for full-time SQL Server DBAs but it can be used as a starting point towards becoming a SQL Server DBA. Common target audience job titles include:

- SharePoint Administrator
- SCCM Administrator
- SCOM Administrator
- Dynamics Administrator
- Lync Administrator
- Help Desk Specialist
- Systems Administrator
- SAP Administrator
- DBA Manager
- Junior SQL DBA

Overview

The SQL Server 2012: Common Tasks and Solutions for Non SQL Administrators WorkshopPLUS is a 3-day workshop for SharePoint, System Center, or other administrators who use SQL Server, but who are not SQL Administrators. It includes an overview of SQL Server 2012 with presentations and hands-on labs covering how to design, build, and operate a robust, scalable and highly available Microsoft SQL Server 2012 environment.

Key Features and Benefits

This workshop combines presentations with hands-on labs covering various administration tasks of SQL Server 2012, including:

- Installing and configuring SQL Server as per Microsoft best practices
- Managing SQL Server databases
- Performing database maintenance

In addition, participants will learn how to monitor and troubleshoot common SQL Server issues.

Technical Highlights

After completing this workshop, participants will be able to:

- Better support applications that rely on SQL Server
- Administer SQL Server environments
- Implement Microsoft best practices
- Perform common tasks and solutions for SQL Server
- Troubleshoot and identify common SQL Server issues

Prerequisites

No Microsoft SQL Server experience is required.

Suggested Skills

At least two years of experience managing a Windows Server 2008 and/or Windows Server 2012.

Syllabus

This workshop runs for 3 full days. Attendees should anticipate consistent start and end times for each day. Early departure on any day is not recommended.

Module 1: SQL Server Overview

- Introduction to SQL Server
- SQL Server Editions

Module 2: SQL Server Installation

- Planning SQL Server Installation
- Installing SQL Server

Module 3: SQL Server Management Tools

- SQL Server Management Studio (SSMS)
- SQL Server Configuration Manager
- SQLCMD.EXE

Module 4: SQL Server Configuration

- Instance Configuration
- Memory Configuration
- Processor Configuration
- Security Configuration
- Connection Configuration
- Database Settings Configuration

Module 5: Managing SQL Server Databases

- System and User Databases
- Database Configuration
- Data Storage
- SQL Server Security

Module 6: Database Maintenance and Operations

- Disaster Recovery
- Database Backup
- Database Restore
- Common backup problems
- SQL Server Agent
- Database Maintenance

Module 7: Monitoring and Troubleshooting SQL Server Performance

- Built-In Standard SQL Server Management Studio Reports
- SQL Server Performance Dashboard
- SQL Server ERRORLOG and SQL Server Agent Log
- Activity Monitor
- Dynamic Management Views (DMV's)
- Database Tuning Advisor (DTA)
- Performance Counter Guidance
- Performance Analysis for Logs (PAL)
- System Center Operations Manager (SCOM)
- SQL Server Best Practices Analyzer (SQL BPA)
- SQL Server RAP as a Service (RaaS)

Module 8: T-SQL Basics

- Database Objects
- Retrieving Data
- Modifying Data

Module 9: High Availability & Disaster Recovery Overview

- Understanding High Availability
- Understanding Disaster Recovery
- Typical High Availability and Disaster Recovery Solution

Module 10: Product Specific Configurations

- SharePoint
- SCOM
- SCCM
- BizTalk
- Dynamics

SQL Server 2012: Features for Administrators – Level 300

Learn all about the new features for the SQL Server 2012 Engine and what it takes to support SQL Server in the enterprise.

Target Audience:

To ensure the high-quality knowledge-transfer expected by attendees of this four day workshop, class size is limited to a maximum of 16 students who meet the following criteria:

- Minimum of 2-3 years' experience with SQL Server (any version)
- Job titles such as:
 - Database Administrators
 - Database Support Engineers
 - Database Architects
 - Systems Administrators

Overview

SQL Server® 2012: Features for Administrators is a four day course that delivers a breakdown of the new features that affects the SQL Server 2012 engine and an examination of the SQL Server internals that have changed in this release. Students will learn installation and migration topics; cover the use of new SQL Server 2012 tools for Database Administrators; backup and restore with the new Database Recovery Advisor; and SQL Server 2012 high availability technologies including AlwaysOn and Failover Clustering.

Through lecture, demo and hands-on labs, students will discover the new SQL Server Engine and Availability features of SQL Server 2012. We will cover PowerShell, Windows Core, Extended Events, Database Recovery Advisor, and SQL Server AlwaysOn and Failover Clustering. Additional topics include Peer to Peer Replication, and optionally Log Shipping, Database Mirroring, and Windows Azure SQL Database.

Technical Highlights

After attending this workshop, students will be able to:

- Understand changes to the SQL Server 2012 Engine including changes to SQL Server Memory support
- Execute SQL Server installation and migration strategies
- Deep dive into Extended Events, PowerShell, and additions and changes to SQL Server Management tools
- Understand SQL Server AlwaysOn and Failover Clustering Support

Syllabus

This workshop runs a full four days. Students should anticipate consistent start and end times for each day. Early departure on any day is not recommended.

Module 1: SQL Server Internals and Foundation Technologies

This module provides an overview of SQL Server 2012 features and engine internals such as memory management with a focus on SQL Server 2012 features and the role of the Database Administrator.

- Lesson 1 - Introduction and Overview
- Lesson 2 - Windows Server Core Support

Hardware Requirements:

Contact your TAM if the necessary hardware needs to be provided.

If you are attending an Open enrollment workshop, the hardware will be provided for you.

Module 2: Preparing SQL Server Installation and Migration
This module details the techniques used to install SQL Server 2012 via the command line, deprecated features, upgrade and migration techniques, and using the Upgrade Advisor.

- Lesson 3 - Deprecated and Discontinued SQL Server Features
- Lesson 4 - Preparing to Install SQL Server 2012
- Lesson 5 - Installation Techniques using the Command Prompt
- Lesson 6 - Upgrade and Migration Overview
- Lesson 7 - Post Installation Efforts for SQL Server 2012

Module 3: SQL Server Management and Developer Tools
This module describes the changes to SQL Server Management Studio and the support for Extended Events, PowerShell, and other extended tools such as Distributed Replay.

- Lesson 8 - SQL Server Management Studio / Developers Tools
- Lesson 9 - Extended Events
- Lesson 10 - PowerShell and WMI
- Lesson 11 - Distributed Replay

Module 4: SQL Server Backup / Restore and Availability Technologies

This module covers Backup and Restore techniques, the use of the new Database Recovery Advisor, AlwaysOn and Failover Clustering support, and Contained Databases. We will additionally cover SQL Server Replication and optionally Database Mirroring and Database Snapshots as well as Log Shipping.

- Lesson 12 - Database Backup, Restore, Database Recovery Advisor and Compression
- Lesson 13 - Failover Clustering
- Lesson 14 - SQL Server AlwaysOn
- Lesson 15 - Contained Database Authentication
- Lesson 16 - SQL Server Replication

Optional Lessons*:

- Lesson 17 - Leveraging the MAP Toolkit 7.0 and SQL Server Upgrade Advisor
- Lesson 18 - Database Mirroring and Database Snapshots
- Lesson 19 - Log Shipping
- Lesson 20 - Windows Azure SQL Database

* Optional lessons may be used for closed deliveries only. Consult with your TAM in advance if you are scheduling a closed delivery and wish to incorporate optional lessons.

SQL Server 2012: Advanced Management and Monitoring – Level 300

Target Audience:

This service offering is an advanced course for SQL Server 2008 to SQL Server 2012 and is targeted at senior IT staff who have designed, deployed, administered and managed an enterprise SQL Server infrastructure for at least one full year.

The basic concepts and of the product will not be covered in this course, and it is expected that attendees will already possess that knowledge

Overview

SQL Server®2012: Advanced Management and Monitoring is a four day course that delivers on the key principles of fulfilling the role of an enterprise Database Administrator. We will cover how to manage and monitor a large enterprise SQL Server environment using built-in tools, mastering SQL Server internals, security considerations, PowerShell scripting, Policy Based Management, Enterprise Management Framework, System Center Advisor, and other extended tools and methods. Labs and Demonstrations will be based on a realistic enterprise environment consisting of SQL Server 2012, Windows Server 2008 R2, and Windows Core machines. We will cover SQLOS improvements that impacts memory management and technologies such as Resource Governor, we will cover creating custom reporting and user driven perfmon counters. We will also discuss the proper configuration of SQL Server 2012 database and SQL Server instance settings. We address the topics that should be considered when using Azure Database and virtualization technologies with SQL Server.

Through lecture, demo and hands-on labs, students will discover how to configure, manage, and monitor the SQL Server engine and new features in SQL Server 2012.

Key Features and Benefits

This workshop focuses on managing SQL Server 2012 in the enterprise and leveraging built-in tools and additionally other Microsoft technologies such as System Center Advisor (SCA) and System Center Operations Manager (SCOM) to monitor SQL Server. This course is designed to provide participants with in-depth expertise, tools and hands-on experience to help manage and monitor SQL Server instances across the enterprise.

Hardware Requirements:

To participate in the course, students need to have access to a workstation that meets or exceeds the minimum hardware and software requirements listed below. If you are attending an open enrollment workshop, a workstation will be provided for you.

- Windows Server 2008R2
- 6 gigabytes (GB) of RAM
- Minimum of 120-GB hard disk space
- Super VGA (SVGA) monitor (17 inch) or better
- 16-megabyte (MB) video adapter (32 MB recommended)
- High-speed Internet access is required to complete labs and demos

Technical Highlights

In this course students will learn the following:

- Understand changes to the SQLOS regarding memory and how changes affect NUMA management and Resource Governor
- Understand how to leverage PowerShell and XML to get enterprise information quickly from the operating system and SQL Server
- Understand how to manage SQL Server on Windows Azure Database and Hyper-V using SQL Server Management Studio and SQL Server 2012 SQL Server Data Tools
- Cover the best practices and considerations around SQL Server database and SQL Server instance settings
- Cover how to leverage Extended Events to create a lightweight method to obtain performance, AlwaysOn Availability Group information, and more.
- Cover methods to leverage Policy-Based Management and Enterprise Policy Management Framework
- Understand how Management Data Warehouse and Utility Control Point (UCP) can be used to track performance and usage over time
- Cover improvements to SCOM Management Packs for SQL Server
- Understand how SQL Server System Advisor can be leveraged to analyze and alert on SQL Server best practices
- And more.

Syllabus

This workshop runs for four full days. Students should anticipate consistent start and end times for each day. Early departure on any day is not recommended.

Module 1: SQL Server Internals and Base Technologies

This module provides an overview of SQL Server 2012 SQLOS architecture and engine internals such as improvements to memory management. Additional topics focus on managing and monitoring with PowerShell and using XML to analyze system health records and more.

Lesson 1 -SQLOS Architecture and Overview

Lesson 2 -PowerShell and Windows Management Instrumentation (WMI)

Lesson 3 -Extensible Markup Language (XML)

Module 2: SQL Server Cloud and Virtualization

This module provides an overview of managing virtualization with SQL Server on Hyper-V and monitoring SQL Server on Windows Azure Database. Additional topics cover SQL Server Management Studio and Data Tools used to manage these technologies.

Lesson 4 -SQL Server and Virtualization

Lesson 5 -Windows Azure Database with SQL Server Data Tools

Module 3: SQL Server Automation and Configuration

In this module we will cover recommended SQL Server best practices, leveraging table partitioning for large databases, and considerations around SQL Server settings. We will cover the reasons behind SQL Server best practices, when it makes sense to adjust SQL Server settings, what to watch for and why.

Lesson 6 -Automating SQL Server

Lesson 7 -SQL Server Database Settings

Lesson 8 -SQL Server Settings

Lesson 9 -Table Partitioning

Module 4: Resource Governance and Troubleshooting

This module covers additional technologies used to manage SQL Server such as proper use of the dedicated admin connection, leveraging Resource Governor for predictable performance.

Lesson 10 -Resource Governor

Lesson 11 -Dedicated Admin Connection

Module 5: Extended Events, Policy Based Management, and Enterprise Policy Management Framework

In this module, we will combine the knowledge learned about SQL Server settings, WMI, and T-SQL in order to leverage Extended Events, Policy Based Management, and EPMF in the enterprise. We will cover how logging and alerting can be accomplished using PBM and how EPMF can help you gain awareness across your SQL Server installations.

Lesson 12 -Extended Events Enhancements

Lesson 13 -Policy-Based Management

Lesson 14 -Implementing Enterprise Policy Management Framework

Module 6: Advanced Monitoring Tools

This module covers additional monitoring tools and services such as Management Data Warehouse (MDW), Utility Control Point (UCP), SQL Server Performance Dashboard, System Center (SCOM) Management Packs for SQL Server, and the new System Center Advisor (SCA) service.

Lesson 15 -MDW, UCP, and Performance Dashboard

Lesson 16 -SCOM Management Pack for SQL Server

Lesson 17 -SQL Server System Center Advisor (SCA)

Module 7: Security

This module covers SQL Server security topics such as locking down the SQL Server instance, proper use of SQL Server auditing, and transparent data encryption.

Lesson 18 -SQL Server 2012 Auditing

Lesson 19 -SQL Server 2012 Security

SQL Server 2012: AlwaysOn High Availability and Disaster Recovery Solutions – Level 300

Target Audience:

This workshop is targeted at SQL Server 2012 architects, database administrators, IT professionals and SQL Server support staff. This is not a beginner's workshop or training targeted at SQL Server developers. To ensure the high-quality knowledge transfer expected by attendees of this four day workshop, class size is limited to a maximum of 16 students who meet the following criteria:

- At least 1-2 years of experience working with SQL Server as a database administrator
- Basic understanding and hands-on experience with Windows Server 2008

Overview

The SQL Server 2012: AlwaysOn High Availability and Disaster Recovery Solutions is a four-day Workshop that provides in-depth technical and architecture details of SQL Server 2012 AlwaysOn Technologies. Students will perform various hands-on labs and build practical end-to-end High Availability (HA) and Disaster Recovery (DR) solutions for mission critical applications using SQL Server 2012 AlwaysOn technologies.

This workshop focuses on SQL Server 2012 AlwaysOn technologies and it contains Level 300 content. Please review the Target Audience information, and contact your Microsoft Services representative to ensure that this workshop is appropriate to the student's experience and technical expertise.

Technical Highlights

After attending this workshop, students will be able to:

- Understand HA and DR concepts.
- Gain the practical experience and confidence required to manage SQL Server 2012 AlwaysOn HA and DR solutions.
- Administer, maintain and troubleshoot SQL Server 2012 AlwaysOn HA and DR solutions.

Syllabus

This workshop runs for four full days. Students should anticipate consistent start and end times for each day. Early departure on any day is not recommended.

Lesson 1: SQL Server High Availability and Disaster Recovery Technologies.

This lesson introduces several SQL Server 2012 HA and DR solutions that will improve the availability of servers or databases. In this lesson, students gain an understanding of SQL Server 2012 AlwaysOn Failover Cluster Instances (FCI), AlwaysOn Availability Groups (AG), Database Mirroring, Log Shipping and Replication. This lesson also compares the solutions and provides an overview of how they can be used together.

Hardware Requirements:

To participate in the course, students need to have access to a workstation that meets or exceeds the minimum hardware and software requirements listed below. If you are attending an open enrollment workshop, a workstation will be provided for you.

- Windows Server 2008 R2 with HyperV
- Internet connectivity, Internet Explorer 9.0 or newer
- Quad Core Intel/AMD 64-bit or emulated 64-bit processor with Virtualization Technology capabilities
- 16 gigabytes (GB) of RAM
- 250-GB hard disk drive, 7200 RPM
- Super VGA (SVGA) monitor (17 inch) or better

Lesson 2: Windows Server Failover Clustering.

This lesson provides a foundation for Windows Server 2008 R2 Failover Clustering to enable SQL Server administrators to build AlwaysOnFCIs and AGs on Windows Server 2008 R2 Failover Cluster. In this lesson, students get hands-on experience to build a two-node Windows Server 2008 R2 Failover Cluster.

Lesson 3: AlwaysOnFailover Cluster Instances.

This lesson explains the key enhancements in SQL Server 2012 AlwaysOnFCI. This lesson covers planning for AlwaysOnFailover Cluster Instance deployments and installation methods. Students get hands-on experience building a two-node SQL Server 2012 AlwaysOnFCI.

Lesson 4: AlwaysOnFailover Cluster Instance Administration and Maintenance.

In this lesson, students learn and perform common AlwaysOnFCI administration and maintenance tasks.

Lesson 5: AlwaysOnFailover Cluster Instance Troubleshooting.

This lesson covers troubleshooting techniques for installation and post installation of SQL Server AlwaysOnFCI, as well as common problems.

Lesson 6: AlwaysOnAvailability Groups.

This lesson provides an overview of AlwaysOnAGs and discusses AG setup, architecture and client failover. In this lesson, students get hands-on experience to create and configure AlwaysOnAGs to provide high availability and disaster recovery for application databases.

Lesson 7: AlwaysOnActive Secondary Replicas.

AlwaysOnactive secondary replicas enable database administrators to efficiently utilize all hardware in a high-availability SQL Server solution. This lesson discusses what AlwaysOnactive secondary replicas are, how to create backups against them and maximize the hardware utilization by offloading read-only workloads to the secondary replicas. In this lesson, students get hands-on experience confirming active secondary replicas and read-only routing.

Lesson 8: AlwaysOnAvailability Groups Administration and Troubleshooting.

In this lesson, students learn and perform common AlwaysOnAG administration and troubleshooting.

Lesson 9: AlwaysOnFailover Cluster Instances and Availability Groups.

This lesson examines the advantages of SQL Server FCIs combined with AGs over SQL Server FCIs and database mirroring. It also discusses setup and configuration, client connectivity, and the disaster recovery process of the recommended architecture.

Lesson 10: AlwaysOnFailover Cluster Instance and Microsoft Distributed Transaction Coordinator.

This lesson introduces Microsoft Distributed Transaction Coordinator (MSDTC) and explains when it is needed for a clustered instance of SQL Server 2012. This lesson also outlines how to plan for and configure MSDTC in a Windows Server 2008 R2 failover cluster when one or more AlwaysOnFCIs are installed.

Lesson 11: Upgrading a SQL Server Failover Cluster Instance.

This lesson explains how to perform a rolling upgrade from a previous version of SQL Server. In this lesson, students will learn how they can perform a rolling upgrade with minimum downtime.

Lesson 12: AlwaysOnBest Practices.

This lesson discusses the best practices around implementing and maintaining SQL Server 2012 AlwaysOnFCIs and AGs.

Lesson 13: Windows 2012/R2 and SQL Server 2012 SP1 Cluster Enhancements.

This lesson covers some of the important enhancements to the Failover Clustering feature in Windows Server 2012 and Windows Server 2012 R2 releases that helps to further improve the AlwaysOn technology. This lesson also explains the Cross Cluster Migration feature introduced in SQL Server 2012 SP1 that facilitates Availability Group migration between clusters with minimal downtime.

SQL Server 2012: Power Pivot for BI Professionals – Level 300

Target Audience:

This WorkshopPLUS is an advanced course on SQL 2012 Power Pivot modelling, development and administration. This WorkshopPLUS is targeted at BI Consultants, BI Developers, SharePoint BI Administrators, Power Users and business analysts who would like to learn data modelling on Power Pivot using Excel 2010/Excel 2013 and further deploy it on SharePoint for reporting and ad hoc analytics using Power View.

Overview

Power Pivot is a powerful data mashup and data exploration tool based on xVelocity in-memory technologies providing unmatched analytical performance.

The SQL Server 2012 Power Pivot for BI Professionals WorkshopPLUS is a four-day, level 300 workshop on Power Pivot targeted at BI Professionals (consultants, developers and administrators) who want a deep dive into SQL 2012 Power Pivot. The workshop covers the entire spectrum of Power Pivot, covering topics such as installation, data modelling using Excel 2010/Excel 2013, advanced DAX, deploying Power Pivot to SharePoint 2010/SharePoint 2013, scheduling data refresh in SharePoint, optimizing the Power Pivot model for Power View, and developing Power View reports on the Power Pivot data model.

Key Features and Benefits

Lessons are organized by scenario and are designed to provide participants with expertise, tools, and hands-on experience with Power Pivot.

Technical Highlights

After completing this course, you will be able to:

- Understand Power Pivot architecture and how Power Pivot fits in the Microsoft BI Stack compared to traditional multidimensional OLAP tools
- Understand the enhancements in Power Pivot 2013 with Excel 2013
- Use data modelling and development in Power Pivot
- Use Data Analytical Expressions (DAX) to define calculated columns, complex measures, and DAX as a query language
- Install and configure Power Pivot on SharePoint 2010/SharePoint 2013
- Manage Power Pivot and data refresh in SharePoint
- Use SQL Server 2012 Power View to make self-service reporting a reality by providing a highly interactive, web-based data exploration, visualization, and presentation experience to users

Classroom and Computer Requirements

The virtual machines used in this WorkshopPLUS are complex and require hardware not typically available in the classroom, so the virtual machines are Cloud-hosted. Course participants will need a computer with the following minimum configuration:

- Operating System: Windows 7 or higher
- Hard drive with 50 GB of free disk space
- A USB port
- A 10 megabits per second (Mbps) or faster network adapter
- At least an evaluation copy of Office 2010 Professional or higher
- A PDF reader

Participants also need a Microsoft account /Windows Live ID to connect to the virtual environment. The classroom must be networked with at least a total Internet bandwidth of 2 Mbps. TCP port 443 must be open. We highly recommend a wired network in the classroom.

Syllabus

This WorkshopPLUS runs for four full days. Students should anticipate consistent start and end times for each day. Early departure on any day is not recommended.

Lesson 01 –Introduction to Power Pivot

This module focuses on:

- The MSBI stack and where Power Pivot fits in the MSBI stack
- Introduction to Power Pivot architecture in Excel 2010/Excel 2013
- Introduction to xVelocity and column store architecture

Lesson 02 –Power Pivot for Excel

This module focuses on:

- Installation and configuration of Power Pivot on Excel 2010/2013
- Known issues and limitations of Power Pivot on Excel 2010/2013
- Comparing the enhancements in Power Pivot in Excel 2013 with Excel 2010

Lesson 03 –Data Modelling with Power Pivot

This module focuses on:

- Data and dimension modelling concepts
- Importing data from external data sources such as Access data files into the Power Pivot data model
- Defining calculated columns, measures, KPIs, hierarchies, and perspectives in Power Pivot. Sorting, filtering and enhancing the Power Pivot Data Model

Lesson 04 –Introduction to DAX

This module focuses on:

- Evolution of DAX and comparing it with MDX and Excel expressions
- The different building blocks of report design: files, data sources, and report components
- DAX syntax, data types, operators and evaluation contexts

Lesson 05 –Advanced DAX

This module focuses on:

- DAX Functions, such as Aggregation Functions, Filter Functions, Date and Time Functions, Information Functions, Logical Functions, Mathematical, Statistical Functions, Text Functions, and Time Intelligence Functions
- DAX as a query language to query Power Pivot Data Models

Lesson 06 –Power Pivot for SharePoint

This module focuses on:

- Power Pivot Architecture for SharePoint 2010/2013
- Installing and configuring Power Pivot with SharePoint 2010/2013
- Installing and Configuring the Power Pivot Gallery in SharePoint 2010/2013

Lesson 07 –Managing Power Pivot on SharePoint

This module focuses on:

- Power Pivot Management in SharePoint 2010/2013
- Scheduling data refresh for Power Pivot workbooks deployed in SharePoint
- Kerberos, Unattended account and security for Power Pivot in SharePoint

Lesson 08 –Enhancing Power Pivot Model for Power View

This module focuses on:

- Techniques to enhance and optimize Power Pivot Data Model for Power View

Lesson 09 –Using Power View to analyze Power Pivot Data Models

This module focuses on:

- Using table, matrix, charts, maps and powerful visualizations of Power View to perform ad hoc data exploration from Power Pivot Data Models

SQL Server 2014: Features and Administration – Level 200

Target Audience:

This service offering gives an introduction to a large breadth of SQL Server 2014 administration topics. It is targeted at IT staff who have designed, deployed, administered or managed an enterprise SQL Server infrastructure for at least one full year.

This course assumes a basic level of knowledge with SQL Server.

Overview

SQL Server®2014: Features and Administration is a three-day course that presents the key principles of fulfilling the role of an enterprise Database Administrator. We cover how to manage and monitor a SQL Server environment to meet Service Level Agreements (SLAs). The course also highlights new features with SQL Server 2014 and how they can be leveraged in your environment. Labs and demonstrations reinforce the lessons and provide hands-on experience working with SQL Server 2014, Windows Server 2012, and Windows Clustering. The course covers how to create proper SLAs to create clear goals between database teams and business teams. Technologies such as SQL Failover AlwaysOn will be covered to provide a framework for meeting HA/DR SLAs. For performance goals, the course covers monitoring with Performance Monitor, Extended Events, and DMVs. Technologies such as Resource Governor are covered for performance stability. Finally, security topics such as SQL Security best practices, Transparent Data Encryption, and SQL Auditing assist in meeting compliance goals.

Through lecture, demo and hands-on labs, students will discover how to configure, manage, and monitor the SQL Server engine and new features in SQL Server 2014.

Key Features and Benefits

This workshop focuses on managing SQL Server 2014 in the enterprise and how to build appropriate SLAs that detail goals for ensuring IT projects meet business goals and needs, leveraging tools within SQL Server 2014. This course is designed to provide participants with in-depth expertise, tools and hands-on experience to help manage and monitor SQL Server instances across the enterprise.

Technical Highlights

In this course students will learn the following:

- Different strategies for meeting HA/DR SLAs with SQL Server 2014
- Understand the benefits of SQL Server 2014 Failover Clustering and SQL Server 2014 Availability Groups
- How to utilize Azure with SQL Server 2014
- Backup and Restore Strategies
- Sizing guidelines to meet performance goals
- Benchmarking and Base Lining strategies
- Monitoring performance with extend events and performance monitor
- Maintenance and configuration best practices

Hardware Requirements:

To participate in the course, students need to have access to a workstation that meets or exceeds the minimum hardware and software requirements listed below. If you are attending an open enrollment workshop, a workstation will be provided for you.

- Windows Server 2012
- 6 gigabytes (GB) of RAM
- Minimum of 120- GB hard disk space
- Super VGA (SVGA) monitor (17 inch) or better
- 16-megabyte (MB) video adapter (32 MB recommended)
- High-speed Internet access is required to complete labs and demos

- SQL Server 2014 Performance enhancements
- SQL Security best practices
- Configuration and Patch Management
- Auditing and Encryption

Syllabus

This workshop runs for three full days. Students should anticipate consistent start and end times for each day. Early departure on any day is not recommended.

Module 1: Setting SLAs for Database Solutions

This module provides an overview of what Service Level Agreements are and how they can provide a foundation for successful SQL Server deployment.

Module 2: SQL Server High Availability and Disaster Recovery

This module provides an overview of HA and DR strategies. We cover when and how to use technologies such as SQL Server Failover Clustering, AlwaysOn Availability Groups, and other options to achieve availability SLAs.

Lesson 1 – Defining the difference between HA and DR

Lesson 2 – High Availability in SQL Server 2014

Lesson 3 – Disaster Recovery in SQL Server 2014

Module 3: SQL Server Performance

In this module we cover how to set and meet SLAs defined for SQL Server Performance. We cover sizing guidelines, monitoring best practices, configuration guidelines, and performance enhancements in SQL Server 2014.

Lesson 1 – Sizing SQL Server environments

Lesson 2 – Consolidation

Lesson 3 – Monitoring and Baseline SQL Server

Lesson 4 – Configuration Best Practices

Lesson 5 – SQL Server 2014 Performance Enhancements

Module 4: SQL Server Security and Auditing

This module covers topics related to features within SQL Server required to create a secure environment and meet compliance rules. Specifically, this module covers basic SQL Server security such as Server and Database Roles, Credentials and Service Account best practices. Other topics important to overall environment security such as Configuration and Patch Management, Encryption, and Auditing are also covered.

Lesson 1 – Compliance

Lesson 2 – SQL Server Service Accounts

Lesson 3 – SQL Server Security

Lesson 4 – Configuration Management

Lesson 5 – Patch Management

Lesson 6 – Auditing

Lesson 7 – Encryption

SQL Server 2014: Performance Tuning and Optimization – Level 300

Learn what it takes to develop, support, monitor and tune high performing applications on SQL Server 2014.

Target Audience:

To ensure the high-quality knowledge-transfer expected by attendees of this four day workshop, class size is limited to a maximum of 16 students who meet the following criteria:

- Minimum of 2-3 years' experience with SQL Server (any version)

Job titles such as:

- Database Administrators
- Database Developers
- Database Support Engineers
- Database Architects
- ISV developers

Overview

SQL Server 2014: Performance Tuning and Optimization is a four day course that provides an in-depth study into aspects of SQL Server that affect application performance.

Students will learn about the internals of the SQL Server engine such as the memory manager and task scheduler, table and index structures, locking and concurrency, query optimization and programming efficiency.

Through lecture, demo and hands-on labs, students will discover the new performance-related features of SQL Server 2014. They will understand Dynamic Management Views (DMVs) and Extended Events, optimize queries, examine memory management and process scheduling, troubleshoot locking and blocking, and improve programming efficiency.

Technical Highlights

After attending this workshop, students will be able to:

- Analyze performance bottlenecks
- Design an effective index strategy
- Diagnose and avoid blocking and deadlocks
- Analyze execution plans
- Develop efficient queries and stored procedures

Syllabus

This workshop runs for four full days. Students should anticipate consistent start and end times for each day. Early departure on any day is not recommended.

Module 1: Architecture

- SQLOS
- Windows Memory management
- SQL Server Memory management
- SQL Server Disk I/O
- Wait statistics
- SQL Server Process Scheduling

Module 2: SQL Data Structures

- File, Page and Extent Architecture
- SQL Server Object Structures, Data Access and Index Architecture
- TempDB Performance
- FILESTREAM and FileTable

Hosted Requirements:

Participants will need a computer running at least Windows 7, with 50 GB free drive space, a USB port, a 10 Mbps or faster network adapter, at least an evaluation copy of Office 2010 Professional or later, and a PDF reader. Participants also need a Microsoft/Windows Live ID to connect to the virtual environment. The classroom must be networked, with access to the Internet and at least total Internet bandwidth of 2 megabits per second. TCP port 443 must be open. We highly recommend a wired network in the classroom.

Contact your TAM for In-Classroom Hardware Setup Requirements.

Module 3: SQL Server Tools

- SQL Server Management Studio Performance Tools
- Extended Events
- Performance Tools
- Other Performance Tools
- Tuning Methods

Module 4: SQL Server 2014 Table and Index Structure

- Columnstore Indexes
- XML Index
- Developing an Indexing Strategy
- Optimizing and Maintaining Indexes Statistics

Module 5: In Memory OLTP

- In-Memory OLTP

Module 6: SQL Server 2014 Locking and Concurrency

- Locking Concepts
- Isolation Levels
- Transactions
- Blocking and Deadlocks
- Latches and Spinlocks

Module 7: SQL Server 2014 Programming Optimization

- Query Processing
- Understanding Execution Plans
- Query Tuning

Module 8: T-SQL and Programming

- Caching Mechanisms
- Performance Considerations
- Coding Best Practices

SQL Server 2014: AlwaysOn Availability Groups – Level 300

Target Audience

This workshop is targeted at SQL Server Architects, Database Administrators, IT professionals, and SQL Server support staff.

This is not a beginner's workshop or training targeted at SQL Server developers.

Overview

The SQL Server 2014: AlwaysOn Availability Groups is a four day WorkshopPLUS course that provides in-depth technical and architecture details of SQL Server 2014 AlwaysOn Technologies. This workshop will help you learn how to reduce downtime, maximize application availability, and provide data protection using SQL Server 2014 AlwaysOn High Availability (HA) and Disaster Recovery (DR) solutions using Availability Groups.

Key Features and Benefits

This workshop combines presentations with hands-on labs to build practical end-to-end HA and DR solutions for mission critical applications using SQL Server 2014 AlwaysOn Availability Groups and Windows Server 2012 R2 Failover Clustering.

Technical Highlights

After attending this workshop, students will be able to:

- Understand HA and DR concepts.
- Gain the practical experience and confidence required to manage SQL Server 2014 AlwaysOn Availability Groups.
- Learn the tips, tricks and best practices for deploying SQL Server 2014 AlwaysOn Availability Groups.
- Administer, maintain and troubleshoot SQL Server 2014 AlwaysOn HA and DR solutions using Availability Groups.

Prerequisites

At least 1-2 years of experience working with SQL Server.

Suggested Skills

Basic understanding and hands-on experience with Windows Server Failover Cluster.

Syllabus

This workshop runs for four full days. Participants should anticipate consistent start and end times for each day. Early departure on any day is not recommended.

Module 1: Overview of High Availability and Disaster Recovery

- High Availability and Disaster Recovery Concepts

Module 2: AlwaysOn Availability Groups

- Introduction
- Planning Availability Groups
- Deploying Availability Groups
- Post Installation Tasks
- Data Synchronization Internals

Module 3: Availability Group Active Secondary Replicas

- Readable Secondary Replicas
- Database Maintenance using Active Secondary Replicas
- AlwaysOn Integration with Windows Azure

Module 4: Management and Monitoring of Availability Groups

- Managing Availability Groups
- Monitoring Availability Groups

Module 5: Troubleshooting Availability Groups

- Troubleshooting Setup and Configuration
- Common Troubleshooting Scenarios

SQL Server 2014: Enhanced OLTP and Data Warehouse Performance – Level 300

Learn how to develop, support, monitor and tune high performing applications on SQL Server 2014.

Target Audience:

To ensure the high-quality knowledge-transfer expected by attendees of this three day workshop, class size is limited to a maximum of 16 students who meet the following criteria:

- Database Administrators
- Database Developers
- Database Support Engineers
- Database Architects
- ISV developers
- A good understanding of SQL Server Performance Tuning and Optimization.
- A recommended Pre-requisite is the SQL 2012 Performance Tuning and Optimization WorkshopPLUS

Overview

SQL Server 2014: Enhanced OLTP and Data Warehouse Performance is a three-day course that provides an in-depth study of the new high-performance capabilities built into SQL Server 2014 for both OLTP and data warehousing.

Through lecture, demo, discussions, and hands-on labs, students will discover the new performance-related features of SQL Server 2014. They will learn to use In-Memory OLTP and Columnstore indexes, examine memory management with Buffer Pool Extensions, explore the new cardinality engine, understand incremental statistics, and improve programming efficiency.

Key Features and Benefits

Major modules are organized by key mission-critical performance scenarios. Hands-on labs help attendees solidify concepts and gain experience using these new performance capabilities.

Technical Highlights

After completing this course, you will be able to:

- Design an effective In-Memory OLTP strategy
- Implement In-Memory Columnstore for Data warehousing
- Develop a migration strategy for both In-Memory OLTP and In-Memory Columnstore for DW
- Analyze use of Buffer Pool Extensions to SSDs
- Gain understanding of scenarios to use the New Cardinality Estimation, Incremental Statistics and Application Availability improvements such as Managed Lock Priority.

Hardware Requirements:

Contact your TAM if the necessary hardware needs to be provided. If you are attending an Open enrollment workshop, the hardware will be provided for you.

Syllabus

This workshop runs for a full three days. Students should anticipate consistent start and end times for each day. Early departure on any day is not recommended.

Module 1: In-Memory OLTP

In-Memory OLTP is a highly optimized engine that works with memory-optimized data and was designed to handle the most demanding OLTP workloads.

- Section 1: Overview of In-Memory OLTP
We discuss the high level architecture, the design decisions and key advantages in a OLTP environment.
- Section 2: Implementing In-Memory OLTP
We discuss the details of creating memory-optimized objects, the internals of native compilation, memory management, and storage and logging behind the scenes, as well as key changes in the concurrency model.
- Section 3: In-Memory OLTP Performance
We discuss the statistics and query indexing choices and coding constructs that are suited to extract maximum performance from the system. We also discuss hardware and configuration considerations.
- Section 4: In-Memory OLTP Migration
We discuss application patterns that can hugely benefit from this improvement and also look at a methodology to test and migrate into In-Memory OLTP with the associated tools.

Module 2: ColumnStore Indexes

ColumnStore indexes are designed for Data Warehouses and can improve the performance of Data Warehouse queries several folds.

- Section 1: ColumnStore Overview
An overview of the high-level architecture as well as the targeted intended workloads that would benefit.
- Section 2: Implementing ColumnStore Indexes
We cover creation of ColumnStore Indexes, data loading practices and optimizations, concurrency implications as well as the index build process and memory implications of ColumnStore on the system.

Module 2: ColumnStore Indexes Continued

- Section 3: Performance Considerations
We look at query design considerations as well as Query plans and performance implications of Batch mode v/s row mode, Segment Elimination and statistics.

Module 3: Additional Performance Features

In this module we cover other key performance features introduced in SQL 2014.

- **Section 1: Online Application Enhancements**
We discuss enhancements such as Managed Lock Priority and Online index rebuild changes that enable scenarios to reduce downtime due to concurrency.
- **Section 2: Buffer Pool Extension to SSD**
We discuss enabling integration of SSDs to extended Server Memory for the buffer pool, which enables performance gains on read-heavy OLTP workloads.
- **Section 3: Incremental Statistics**
Statistics are a key to the optimizer producing good query plans. Incremental Statistics solve some big problems in the Data Warehouse realm. We discuss their use and scenarios where they can be implemented.
- **Section 4: New Cardinality Estimation**
The Cardinality estimation model has been changed in SQL 2014. We discuss the changes, how they affect query performance and plan choice, areas that will benefit performance, and how to enable and disable cardinality estimation in certain scenarios.

SQL Server: Hands-on Troubleshooting – Level 300

Target Audience:

This is an advanced course for SQL Server database administrators, database architects and developers who wish to formulate a practiced application

The basic concepts and know-how of the product will not be covered in this course, and it is expected that attendees will already possess that knowledge

Overview

The SQL Server Hands On Troubleshooting workshop provides attendees with the deep knowledge and understanding of the troubleshooting techniques and tools needed to identify and solve issues on a SQL Server instance. Through presentations, white-board discussions, and scenario based instruction, this 3-day workshop covers the individual approaches for troubleshooting problems and explores the tools available to monitor, trace and identify the root cause of the issues.

Key Features and Benefits

Each day is presents scenarios designed to provide participants with in-depth expertise, tools and hands-on experience to help troubleshoot specific SQL Server issues.

Technical Highlights

After completing this course, you will be able to:

- Understand the tools that can help troubleshoot SQL Server.
- Understand how to approach different troubleshooting scenarios.
- Collect and analyze performance data in order to form an educated hypothesis about reasons for SQL Server issues.
- Identify action plans to troubleshoot different components and areas of SQL Server.
- Implement action plan/fixes and confirm the changes made repair the issue.

Hardware Requirements:

- Designate engagement space at customer location.
- Internet connectivity with appropriate network bandwidth.
- Customer laptop or CIAB with base windows OS image (Win Server 2008 or Win 8) and 32 bit IE browser.
- SQL Server VM.
- Secure attendance of appropriate personnel for workshops, discussions and demonstrations.

Syllabus

This workshop runs for 3 full days. Students should anticipate consistent start and end times for each day. Early departure on any day is not recommended.

Day 1:

Introduction and overview of classroom setup. Learn how to capture performance data using SQLDIAG, SQLNexus, Profiler, Perfmon, DMVs. Review common performance counters, SQL Wait States, blocking and error logs while providing insight on what performance issues they indicate.

Day 2:

Day two begins with review of the previous day's performance issues and their solutions. The class will be confronted with deeper problems. Students will apply day one knowledge to identify performance issues from the normal activity of a production server. Students learn to identify deadlocking, parameter sniffing, tempdbcontention and provide/implement their solutions.

Day 3:

Day 3 investigates more performance problems including misconfiguration, blocking, and wait states. All previous performance issues might also be part of the lab investigation. This is the last round of performance diagnostics. By the end of the day, students will have addressed performance and configuration issues, implemented solutions, and validated their results.

System Center 2012 Configuration Manager: Concepts and Administration Introduction – Level 300

This course will provide students the basics with concepts and administration of System Center 2012 Configuration Manager.

Target Audience:

To ensure the high-quality knowledge-transfer expected by attendees of this four-day workshop, class size is limited to a maximum of 16 students who meet the following criteria:

- Basics knowledge of Windows operating systems
- Knowledge on Configuration Manager 2007 (preferred)

Overview

The System Center 2012 Configuration Manager Concepts and Administration Introduction WorkshopPLUS course is a four-day workshop that will provide participants with knowledge on the fundamentals of System Center 2012 Configuration Manager, through instructor-led training and hands-on labs.

This workshop focuses on Introduction to Configuration Manager, New Features, Overview of site deployment, Configure Discovery and Deploy clients, Clients Inventory, Asset Intelligence, Metering, Remote Control, Configure Console Security, setup Collections and Queries, Application Deployment, Patch Management, and Client Health.

Technical Highlights

After attending this workshop, students will be able to:

- Understand Configuration Manager sites / systems functionalities.
- Manage client computers by keeping them up-to-date and secured.
- Monitor client's health.
- Deploy applications.

Syllabus

This workshop runs for four days. Students should anticipate consistent start and end times for each day. Early departure on any day is not recommended.

Module 1: Introduction to System Center 2012 Configuration Manager. This module introduces new feature of System Center 2012 Configuration Manager and explains the changes made from the previous version.

Module 2: Deploying System Center 2012 Configuration Manager. This module covers the overview of Site Deployment and Site Systems.

Module 3: Configuring System Center 2012 Configuration Manager Discoveries and Deploying Clients. This module describes the Discoveries and Client Deployment.

Hardware Requirements:

Contact your TAM if the necessary hardware needs to be provided.

If you are attending an Open enrollment workshop, the hardware will be provided for you.

Module 4: Inventory, Asset Intelligence, Software Metering, and Remote Control in System Center 2012 Configuration Manager. Hardware and Software Inventory, Configuring Asset Intelligence components, Enabling/ Customizing/ Reporting Software Metering, Changes to Remote Control.

Module 5: Collections and Queries in System Center 2012 Configuration Manager. This module discusses Collections and Queries, Collection-specific client agent policy, and Maintenance Window overview.

Module 6: Deploying Applications in System Center 2012 Configuration Manager. This module covers the high level overview of legacy software distribution and Introduction to Application Deployment (App Model).

Module 7: Deploying Software Updates in System Center 2012 Configuration Manager. Introduction to Software updates management and Patch management.

Module 8: Endpoint Protection in System Center 2012 Configuration Manager. Introduction to Endpoint Protection

Module 9: Console Security in System Center 2012 Configuration Manager. This module provides an overview of the Console Security in System Center 2012 Configuration Manager and explains Role Based Administration.

Module 10: Client Health in System Center 2012 Configuration Manager, Overview of Client Health features. Introduction to Client Status, Monitoring, Auto-remediation, In-console Client Status reporting, and Client health service

Module 11: Migrating from Configuration Manager 2007 to 2012. This module provides an overview of Client migration, Content distribution, Object migration and monitoring the migration.

Module 12 (Optional): Backup and recovery of System Center 2012 Configuration Manager. This module covers overview of backup feature, understanding recovery methods and recovery scenarios.

System Center 2012 Configuration Manager: Operating System Deployment – Level 300

A behind-the-scenes look at deploying Windows for Enterprise environments using Configuration Manager

Business Drivers

Today's workers are tech-savvy and increasingly mobile. They work anywhere, anytime, on any device they need to get the job done.

IT's challenge: fuel the productivity and keep everything compliant and secure. This workshop helps IT administrators to develop the skills necessary to successfully deploy the latest versions of Windows with a high degree of customization and personalization.

Target Audience:

To ensure the high-quality knowledge transfer expected by attendees of this three-day workshop, class size is limited to a maximum of 16 students who meet the following criteria:

- Prior experience with Configuration Manager
- Some experience with Microsoft Deployment Toolkit is helpful but not required
- Some experience with application packaging is helpful but not required

Overview

This three day WorkshopPLUS Course provides participants with skills required to customize and troubleshoot Operating System deployment in System Center 2012 Configuration Manager, and with hands-on experience utilizing all related technologies for deploying Windows in Enterprise environments. This workshop consists of instructor-led presentation, demonstrations, discussion and hands-on-labs. Attendees will gain insight into the inner workings of supporting technologies and the entire process of Operating System deployment with Configuration Manager.

Operating System Deployment Techniques

Beginning with terminology and concepts, Windows PE, PXE, Multicast, and other supporting technologies, attendees will then review the various scenarios and best practice configurations for Operating System deployments and capturing an image from a reference computer. Attendees will gain insight and tips for effective use of Task Sequences, drivers, and explore user state transfer from the previous Operating System to the newer version. Attendees will learn to keep Operating System Images updated through offline updating capabilities, explore customization techniques, as well as examine the various places to leverage the Microsoft Deployment Toolkit. Throughout workshop students have the opportunity to gain real-world knowledge and insight from our Premier Field Engineers during hands-on-labs and discussions.

Technical Highlights

After attending this workshop, students will be able to:

- Understand technologies involved in Operating System deployment
- Deploy Windows in an Enterprise environment
- Create and capture a reference Operating System
- Customize the Operating System deployment
- Troubleshoot Operating System deployment
- Leverage the Microsoft Deployment Toolkit to enhance user experience

Hardware Requirements:

Contact your TAM if the necessary hardware needs to be provided.

If you are attending an Open enrollment workshop, the hardware will be provided for you.

Syllabus

This workshop is a FULL three days. Students should anticipate consistent start and end times for each day. Early departure on any day is not recommended.

Module 1 – OSD Overview, Concepts and Architecture
Review OSD concepts and architecture.

Module 2 – Windows PE

Discusses how WinPE is used, how to customize WinPE, boot image distribution, and how clients use the boot images.

Module 3 – PXE and Multicast

Detail and set PXE and Multicast configuration.

Module 4 – OSD Boot Scenarios

Examine how clients interact with boot images, how boot images can be delivered to clients, the boot media options, and how the network access account is used.

Module 5 – Image Capture

Covers how to capture an operating system image and default user settings customization.

Module 6 – Task Sequences

Learn task sequence fundamentals, customizing and deployment best practices.

Module 7 – Driver Management

Organize drivers, import and categorize drivers, driver usage and deployment methods, and tips and tricks for effective driver management.

Module 8 – User State Migration

Review features in Configuration Manager to support user state migration, explore the USMT task sequence steps, learn about the State Migration Point in Configuration Manager, review “Hard-linking” capabilities, and computer associations.

Module 9 - Deployment

Discuss deployment types, examine deployment type considerations for each scenario, and understand Computer Import and the Unknown Computers collection.

Module 10 – Offline Image Management

Learn about offline image management. Learn what can be serviced offline. Learn how to add drivers, apply updates, add language packages, and enable/disable Windows features.

Module 11 – Troubleshooting and Customization

Discuss some troubleshooting essentials, some common issues in OSD, and review some advanced customization scenarios.

Module 12 – MDT Integration

Explore Configuration Manager features with MDT integration, install MDT, create an MDT task sequence, deploy an MDT task sequence, create a user-driven installation (UDI) and troubleshoot an MDT task sequence.

System Center 2012 Configuration Manager: Advanced Concepts and Administration – Level 300

Target Audience

To ensure the high-quality knowledge-transfer expected by attendees of this 3-day workshop, class size is limited to a maximum of 16 students who meet the following criteria:

- Intermediate to advanced knowledge of Windows operating systems
- Intermediate to advanced knowledge of and minimum one year experience with Configuration Manager 2007 or 2012 features, or completion of Microsoft Premier Workshop: System Center 2012 Configuration Manager Concepts and Administration Introduction.
- Note: This workshop does not provide an overview of all Configuration Manager features. For an overview of all features, it is recommended to attend Microsoft Premier Workshop: System Center 2012 Configuration Manager Concepts and Administration

Overview

WorkshopPLUS : System Center 2012 Configuration Manager: Advanced Concepts and Administration is a 3-day workshop that provides students with in-depth technical knowledge of advanced features of Configuration Manager through hands-on labs and instructor-led training sessions.

The workshop focuses on:

- System Center 2012 Configuration Manager Deployment and Architecture
- Compliance Settings
- Application Deployment
- Installing System Center Updates Publisher (SCUP)
- Site and Client Monitoring
- Troubleshooting, and Site Recovery

Key Features and Benefits

Each module contains scenarios that provide students with in-depth expertise, tools, and hands-on experience to help implement and troubleshoot System Center 2012 Configuration Manager advanced features.

Technical Highlights

After attending this workshop, students will be able to:

- Deploy System Center 2012 Configuration Manager
- Configure secure client-server communication by implementing Public Key Infrastructure (PKI) certificates
- Assess compliance settings and remediate computers that are noncompliant
- Deploy applications and troubleshoot application installation failures
- Monitor Configuration Manager sites and client health
- Troubleshoot server and client issues
- Back up and restore a Configuration Manager 2012 site

IT Requirements

To participate in the course, each student must have access to a workstation that meets or exceeds the minimum hardware and software requirements of:

- Windows Server 2008 R2
- 16 GB of RAM
- 300 MB free contiguous hard drive disk space Students of an open enrollment workshop will have the hardware provided for them. If you are coordinating a closed delivery (dedicated delivery for your organization) and require hardware or are interested in having the virtual environment hosted in the cloud, then please contact your Technical Account Manager (TAM) for more information.

Syllabus

This workshop runs for three full days. Students should anticipate consistent start and end times for each day. Early departure on any day is not recommended.

Module 1: System Center 2012 Configuration Manager Deployment and Architecture: This module covers deployment and architecture of System Center 2012 Configuration Manager and implementing secure client-server communications using Public Key Infrastructure (PKI).

Module 2: System Center 2012 Configuration Manager Compliance Settings: This module describes how to use Configuration Manager to assess compliance and remediate non-compliant settings.

Module 3: System Center 2012 Configuration Manager Application Deployment: This module focuses on deploying applications using the Application Management model.

Module 4: Installing System Center Updates Publisher (SCUP): This module discusses how to integrate System Center Updates Publisher with your Configuration Manager environment to deploy custom updates.

Module 5: System Center 2012 Configuration Manager Site and Client Monitoring: This module covers monitoring the health of Configuration Manager servers and clients.

Module 6: System Center 2012 Configuration Manager Troubleshooting and Site Recovery: This module explains how to troubleshoot Configuration Manager server and client issues. It also covers how to back up and restore a site server in a recovery scenario.

All modules contain both hands-on labs and demos.

System Center 2012 R2 Configuration Manager: Reporting and Application Management – Level 300

This workshop is focused on the Reporting and Application Management features in System Center 2012 R2 Configuration Manager

Target Audience:

This workshop is primarily intended for Configuration Manager 2012 R2 administrators. To ensure the high-quality knowledge transfer expected by the attendees of this three-day workshop, the class size is limited to a maximum of 16 students who meet the following criteria:

- Administrators who currently manage System Center 2012 Configuration Manager
- Administrators who perform day to day operations of System Center 2012 R2 Configuration Manager and need to improve their knowledge on the application management and reporting features.

Overview

The System Center 2012 R2 Configuration Manager: Reporting and Application Management three-day WorkshopPLUS course provides students with the knowledge to:

- Manage applications in their System Center 2012 R2 Configuration Manager environment
- Understand how ConfigMgr 2012 uses SQL Reporting Services.
- Query site configuration database to design new reports.
- Design new reports for Software Update Compliance, Hardware Inventory and Software inventory.
- Use Report Builder to create reports quickly and easily.

This workshop contains IT professional level content. Review the Target Audience information and contact your Microsoft Services representative to ensure that this workshop is appropriate to the students' experience and technical expertise.

Key Features

- Application Management discusses the application management feature of Configuration Manager 2012.
- Reporting covers several areas of the reporting feature in Configuration Manager 2012, including understanding T-SQL, using Report Builder to create simple and complex reports and also how to backup, import and export reports

Technical Highlights

After completing this course, students will understand:

- Application Management model in Configuration Manager 2012
- How to work with Reports in ConfigMgr, using Console or Web.
- How to build simple reports and complex reports.
- How to customize existing reports
- Manage and maintain SQL SSRS.
- How to implement RBAC to existing custom reports.

Hardware Requirements:

Contact your TAM if the necessary hardware needs to be provided.

If you are attending an Open enrollment workshop, the hardware will be provided for you.

Syllabus

This workshop runs for three full days. Students should anticipate consistent start and end times for each day. Early departure on any day is not recommended.

Module 1: Introduction to Reporting and Application Management

This module is a introductory module to App Management and Reporting Workshop.

Module 2: Overview of SQL SSRS

This module is intended to cover the basics of SQL SSRS, what is the architecture behind SSRS and why we use it for ConfigMgr. On this module we also going to cover the installation and configuration of Reporting Services.

Module 3: Writing T-SQL for Reporting

This module will cover the basics of writing Transact SQL the language use on SQL Server, this is important knowledge in order for the administrators to write the query for the reports.

Module 4: Creating Reports Using Report Builder

This module cover the basics of creating and customizing reports using Report Builder.

Module 5: Securing Reports using Role Based Administration

This module cover the security behinds ConfigMgr and how to take advantage of this when building reports.

Module 6: How to convert a simple report into advance reports

This module explain the process to create more advance reports and the ability to customize those simple custom reports or existing reports.

Module 7: Application Management

This module discusses the new user-centric model in Configuration Manager 2012 and identifies the key differences between application management in Configuration Manager 2007 and Configuration Manager 2012.

Module 8: Application Life Cycle

This module discusses the various phases of the application life cycle in Configuration Manager 2012. This module also discusses the new Application Catalog feature and also provides information on troubleshooting application deployments in Configuration Manager 2012.

Module 9: Windows Intune Applications

This module introduces Windows Intune and discusses how to integrate Windows Intune with Configuration Manager 2012 and provide enhanced manageability of mobile devices.

System Center 2012 R2 Configuration Manager: Troubleshooting – Level 400

Target Audience:

To ensure the highest quality of knowledge transfer expected by attendees, class size is limited to a maximum of eight participants (total of 16 with two instructors) who meet the following criteria:

- Advanced knowledge and experience with Microsoft System Center 2012 Configuration Manager.
- Basic knowledge of Windows Server 2012 and a recent client operating system, such as Windows 7 or later version of Windows operating system.

Overview

This four-day WorkshopPLUS provides participants with the skills required to analyze common System Center 2012 R2 Configuration Manager issues, along with hands-on experience in utilizing related tools and resources for resolving the encountered problems. The session consists of an instructor-led presentation, demonstrations, discussions and hands-on labs. Attendees will gain insight into the techniques and the process of troubleshooting various Configuration Manager issues.

Key Features and Benefits

In this WorkshopPLUS, the participants will have the opportunity to gain real world knowledge and insight from our experienced Premier Field Engineers during hands-on labs and discussions. The participants will understand the tools and resources as well as concepts of troubleshooting Configuration Manager and how to solve common issues in the following areas:

- Management Point
- Client Health
- Site Replication
- Inventory, Metering, and Remote Tools
- Compliance Settings
- Content Management
- Software Distribution
- Software Updates including System Center Endpoint Protection
- Operating System Deployment
- Backup and Recovery

Technical Highlights

After attending this WorkshopPLUS, the participants will be able to:

- Support complex Configuration Manager environments
- Troubleshoot multi-component issues
- Identify the cause of server and client issues
- Provide Microsoft Support with in-depth information as part of reactive cases by using the skills learnt on this WorkshopPLUS

Hardware Requirements:

Contact your Technical Account Manager (TAM) if the necessary hardware needs to be provided for in-house deliveries.

If you are attending an open enrollment WorkshopPLUS, the hardware will be provided for you.

Syllabus

This WorkshopPLUS runs for four complete days and the participants should anticipate consistent start and end times for each day. Early departure on any day is not recommended.

Module 1: Troubleshooting Tools and Resources: In this module, the participants will learn the basic troubleshooting skills and the use of common tools for achieving that goal.

Module 2: Management Point: In this module, the participants will learn the functionality, installation, Client communication and Troubleshooting of Management Points.

Module 3: Client Health: In this module, the participants will learn how to troubleshoot client installation and check client status. The participants will also learn how to utilize alerts and Client Health Reports.

Module 4: Data Replication: In this module, the participants will learn the fundamentals, and the performance tuning and troubleshooting techniques of Data Replication Service in Configuration Manager.

Module 5: Inventory, Metering, and Remote Tools Successful inventory collection is required for many Configuration Manager functions. This module will provide the participants with in-depth information and processes for inventory collection, software metering and remote tools.

Module 6: Compliance Settings: In this module, the participants will learn about concepts and process flow of Compliance Settings.

Module 7: Content Distribution Troubleshooting content distribution is an essential part of keeping a Configuration Manager environment in healthy state. This module will discuss the processes used in distributing content to distribution points.

Module 8: Distributing Software: In this module, the participants will learn the application and package models of software distribution in detail. This includes best practices, workflows and troubleshooting methods.

Module 9: Software updates: In this module, the participants will learn the techniques used to troubleshoot Software Updates and Endpoint Protection definition updates problems.

Module 10: Operating System Deployment In this module, the participants will learn how to avoid common pitfalls and successfully execute Operating System Deployment using Configuration Manager.

Module 11: Backup and Recovery: In this module, the participants will learn the site server backup, customization and considerations as well as recovery strategies and options.

System Center 2012 Service Manager: Planning, Deploying, and Managing – Level 300

Target Audience:

This course is intended for technical and process leads who will design, implement and manage System Center 2012 Service Manager. All attendees should have:

- Completed either their Microsoft Operations Framework v4 Foundations or their ITIL v3 Foundations certification.
- The knowledge of:
 - Active Directory.
 - System Center 2007 Operations Manager or System Center 2012 Operations Manager.
 - System Center 2007 Configuration Manager or System Center 2012 Configuration Manager.

Overview

This four-day instructor-led course provides students with the knowledge and the skills to plan, install and configure System Center 2012 Service Manager (SCSM). The course focuses on the implementation, configuration and interoperation of Service Manager with other System Center products. It also focuses on how IT processes, such as the Microsoft Operations Framework (MOF) and IT Infrastructure Library (ITIL), are implemented within Service Manager. This course will also provide hands-on labs on the following topics:

- Connectors
- Management packs
- SCSM Portal
- Integration to Orchestrator
- Service Level Management
- Reporting
- Automating Service Requests

Key Features and Benefits

The workshopPLUS modules focus on the MOF/ITIL process requirements, and how these process requirements apply to each of the Management Packs in Service Manager. This workshopPLUS will also cover the Planning and architectural requirements including how automation, workflows and notifications will assist in the automation of IT Service Management needs. All the concepts covered will have associated hands-on labs.

Technical Highlights

After completing this course, you will be able to:

- Understand the key components of Service Manager 2012.
- Understand how ITIL/MOF processes drive the implementation of Service Manager 2012.
- Define the hardware, software and deployment options necessary for implementation.
- Get System Center work seamlessly with Active Directory.
- Automate Service Requests leveraging System Center Orchestrator.
- Review and understand the rich reporting features with the System Center Service Manager Data Warehouse and online analytical processing (OLAP) cubes.

Hardware Requirements:

This workshopPLUS has hosted labs and can be delivered onsite at a Microsoft education site. Consult your Microsoft Technical Account Manager about what options are best for your Service Manager training needs.

Syllabus

This workshopPLUS runs for four full days. Students should anticipate consistent start and end times for each day. Early departure on any day is not recommended.

Day 1: The discussions include an overview of the following:

- ITIL/MOF, Planning
- Architecture Design
- Deploying Service Manager
- Service Manager Management Pack
- Configuration Management
- Connectors and the Connectors lab

Day 2: The following topics will be explained:

- Incident Management
- Problem Management
- Change Management
- Knowledge Management
- Release Management

Each module includes hands-on labs to establish the concepts covered in each module.

Day 3: The following topics will be explained:

- Service Request
- Reporting
- User Roles and Functions
- Notifications

The corresponding labs will provide the hands-on experience on how these features apply in Service Manager 2012.

Day 4: The final day of training covers the Service Manager Portal and guides the students on how to automate Service Requests leveraging Orchestrator. Other topics that will be covered include Service Level Management, Service Manager Data Warehouse, and Reporting capabilities.

System Center 2012 Operations Manager: Advanced – Level 300

This WorkshopPLUS will help you to get the most out of your Microsoft System Center 2012 Operations Manager Environment.

Target Audience:

To ensure the high-quality knowledge-transfer expected by attendees of this course, class size is limited to a maximum of 16 students who meet the following criteria:

- Experience with standard computing systems including file storage, networking, and internet technologies
- General understanding of Microsoft Core Technologies
- Preferably experienced with System Center 2012 Operations Manager

Overview

System Center 2012 Operations Manager: Advanced WorkshopPLUS is a three-day course that provides participants with a deep understanding of how to use System Center Operations Manager to monitor an organization's infrastructure. The course provides a technical drill-down into various aspects of the Operations Manager technology with a strong emphasis on hands-on labs.

Upon successful completion of this course, participants will have the knowledge to take control of System Center 2012 Operations Manager infrastructure and to extend its monitoring reach. The participant's improved understanding and expertise will enable them to react to business requirements with greater confidence and speed.

This WorkshopPLUS contains Level 300-400 content. Review the Target Audience information and contact your Microsoft Services representative to ensure that this course is appropriate to the student's experience and technical expertise.

Key Features and Benefits

Each module in this WorkshopPLUS is designed to provide participants with in-depth expertise, tools and hands-on experience to help ensure a thorough understanding of the topics.

Technical Highlights

After attending this course, students will be able to:

- Implement and manage network and UNIX/Linux Monitoring.
- Implement and manage Audit Collection Services and Agentless Exception Monitoring.
- Upgrade System Center 2012 Operations Manager (SP1) to System Center 2012 R2 Operations Manager.
- Gain in-depth knowledge of:
 - Architecture
 - Administration
 - Reporting
 - Troubleshooting
 - Dashboards
 - **Note:** This WorkshopPLUS will not cover the following topics:
 - Installing the Operations Manager environment
 - Advanced Management Pack authoring

Contact your Technical Account Manager (TAM) if the necessary hardware needs to be provided.

If you are attending an Open Enrolment, the hardware will be provided for you.

Syllabus

This WorkshopPLUS runs for three full days. Students should anticipate consistent start and end times for each day. Early departure on any day is not recommended.

Module 1: Operations Manager Upgrades

This module provides explanations and labs for upgrading a System Center 2012 Operations Manager Service Pack 1 (SP1) to System Center 2012 R2 Operations Manager.

Module 2: Advanced Architecture.

This module describes the difference between the server roles and the ways you can utilize them on a more advanced level.

Module 3: Advanced Reporting and Visualization.

This module covers the Advanced Reporting feature and the new Dashboards, which are introduced with System Center 2012 Operations Manager.

Module 4: UNIX and Linux Monitoring.

This module will guide you through the different options for UNIX and Linux Monitoring.

Module 5: Network Monitoring.

Network Monitoring is part of System Center 2012 Operations Manager and in this module, you will learn how to utilize the added value this feature brings.

Module 6: Audit Collection Services (ACS) and Agentless Exception Monitoring (AEM).

This module will explain how you can implement and manage Audit Collection Services and Agentless Exception Monitoring.

Module 7: Application Performance Monitoring (APM).

This module will explain how you can use APM to improve performance and stability of your .NET applications.

Module 8: Advanced Administration.

This module will cover the advanced tasks involved in administrating the Operations Manager Environment.

Module 9: Troubleshooting.

This module will explain how to troubleshoot the different components of System Center 2012 Operations Manager.

System Center 2012 Operations Manager: Management Pack Authoring – Level 400

Target Audience:

To ensure the high-quality knowledge-transfer expected by attendees of this four-day WorkshopPLUS, class size is limited to a maximum of 16 students who meet the following criteria:

- Have an understanding of Operations Manager object model concept
- Have at least 1-year experience of working with Operations Manager authoring in Operations Console
- Are familiar with VBScript and Windows PowerShell.

Overview

The System Center 2012 Operations Manager: Management Pack Authoring is a four-day WorkshopPLUS designed to provide attendees with the knowledge required to create custom Management Packs (MPs). This WorkshopPLUS provides a technical drill-down into Management Pack, and introduces Visual Studio Authoring Extension for Operations Manager.

This WorkshopPLUS contains Level 400 content. Review the Target Audience information and contact your Microsoft Services representative to ensure that this WorkshopPLUS is appropriate to the student's experience and technical expertise.

Key Features and Benefits

Upon successful completion of this WorkshopPLUS, participants will have the knowledge to:

- Extend monitoring for existing applications and features.
- Create complete MPs for complex distributed application and custom monitoring solutions.

Technical Highlights

After completing this WorkshopPLUS, participants will be able to:

- Maximize the deployment and investment of Operations Manager by taking advantage of available authoring features.
- Familiar with the latest MP development tools and features.
- Map the application requirements to an actual design of a MP.
- Create custom discoveries, monitors, and rules with scripts for custom monitoring solutions.
- Administer and troubleshoot custom MPs.

To participate in the course, students need to have access to a workstation that meets / exceeds the minimum hardware requirements below. Contact your TAM if the necessary hardware needs to be provided.

If you are attending an Open enrollment workshop, the hardware will be provided for you.

IT Requirements:

- Windows Server 2008 R2 or 2012 with Hyper-V
- Core2Duo 1.8 GHz
- 8 gigabytes (GB) of RAM
- 50-GB hard disk, 7200 RPM
- Super VGA (SVGA) monitor (17 inch)

Syllabus

This WorkshopPLUS runs for four full days. Students should anticipate consistent start and end times for each day. Early departure on any day is not recommended.

Module 1: Overview: This module covers key MP authoring concepts including schema overview and development tools.

Module 2: Service Model: This module discusses the fundamental concepts and elements that makes up the Service Model in a MP.

Module 3: Health Model: This module discusses the fundamental concepts and elements that makes up the Health Model in a MP.

Module 4: Advanced Concepts: This module reveals the fundamental building blocks of all workflows used in Operations Manager.

Module 5: Authoring MPs for Windows: This module discusses the process of implementing a standard MP for a Windows-based distributed application.

Module 6: Authoring MPs for Network Devices: This module discusses the process of implementing a MP to extend the Network Monitoring feature in Operations Manager.

Module 7: Authoring MPs for Cross-Platform Systems: This module discusses the process of implementing a MP for Cross-Platform monitoring scenarios.

System Center 2012 R2 Data Protection Manager: Advanced – Level 300

Leverage Data Protection Manager for Disaster Recovery through the datacenter! Providing true data protection!

Target Audience:

To ensure the high-quality knowledge-transfer expected by attendees of this three-day workshop, class size is limited to a maximum of 16 students who meet the following criteria:

- Familiar with the System Center components.
- Basic understanding of Disaster Recovery.
- Familiar with storage and tape technology.
- Minimum of 1 year of administrative work in an IT environment.
- Basic understanding of application backup & recovery concepts.

Overview

The System Center 2012 R2 Data Protection Manager Advanced Workshop provides students with the knowledge they require to protect their data using Data Protection Manager. The workshop provides a technical drill-down into Data Protection Manager components and consoles, and best practices surrounding disaster recovery based on various applications and data types.

Upon successful completion of this workshop, students will have the knowledge to successfully backup & restore data using Data Protection Manager. Students will also have the knowledge to plan, install and administer a DPM environment.

The course contains level 300 content. Review the Target Audience information and contact your Microsoft Services representative to ensure that this workshop is appropriate to the student's experience and technical expertise.

Technical Highlights

System Center 2012 R2 –Data Protection Manager Advanced Workshop provides students with skills to plan, deploy, configure, and administer enterprise-level disaster recovery.

Hardware Requirements:

Contact your TAM if the necessary hardware needs to be provided.

If you are attending an Open Enrollment workshop, the hardware will be provided for you.

Syllabus

This workshop runs a full three days. Students should anticipate consistent start and end times for each day. Early departure on any day is not recommended.

Module 1: Data Protection Manager Concepts. This module covers those concepts unique to SCDPM (e.g. replicas, recovery points, and protection groups).

Module 2: Data Protection Manager Architecture and Components. This module provides an in-depth explanation of the underlying architecture of SCDPM, review of VSS, server components and requirements, task executor, and dependent technologies.

Module 3: Workflow. This module covers in detail the inner workings and what is occurring to allow SCDPM to achieve its functionality. The process of how data flows between the source agent and SCDPM server, replication creation, synchronization, recovery points, and consistency checks.

Module 4: Planning and Configuration. This module looks at the design questions that need to be considered for a SCDPM installation and also covers configuration of protection group best practices.

Module 5: Deployment. This module addresses deployment considerations of SCDPM, covering known issues and also looking at best practices for the deployment of SCDPM (e.g. VSS patches, firewall considerations, etc.).

Module 6: PowerShell. This module looks at what can be achieved to help automate and simplify the SCDPM administrators' life through SCDPM PowerShell cmdlets. It will focus on common pain points experienced by SCDPM Administrators.

Module 7: Application Protection. This module describes the best practices for protecting Exchange, SharePoint, SQL, Hyper-V and Client machines.

Module 8: Monitoring. This module describes what is needed operationally to monitor the health of the infrastructure.

Module 9: Troubleshooting. This focuses on what can be done to troubleshoot SCDPM issues.

System Center 2012 Virtual Machine Manager: Implementation and Management – Level 300

Learn how to effectively implement and manage System Center 2012 R2 Virtual Machine Manager in the virtualized datacenter.

Target Audience:

To ensure the high-quality knowledge transfer expected by the attendees of this three-day WorkshopPLUS, the class size is limited to a maximum of 16 students who meet the following criteria:

- Recommended:
 - Familiarity with hypervisors and datacenter concepts (networking, storage)
 - Hyper-V experience

Overview

The System Center 2012 Virtual Machine Manager: Implementation and Management three-day WorkshopPLUS course provides students with the knowledge to:

- Install and configure System Center Virtual Machine Manager 2012 R2
- Understand at a high level Virtual Machine Manager networking concepts such as Logical Switches and Network Virtualization
- Manage Host Groups and utilize dynamic optimization to balance VM resources
- Update Management of Infrastructure Servers and Hyper-V Hosts

This workshop contains IT professional level content. Review the Target Audience information and contact your Microsoft Services representative to ensure that this workshop is appropriate to the students' experience and technical expertise.

Key Features and Benefits

- Installation and Configuration of Virtual Machine Manager 2012 R2 is covered in depth with labs for the installation and configuration of Virtual Machine Manager.
- Fabric Management of storage, networking, and physical virtualization hosts is covered in depth with supporting labs

Technical Highlights

After attending this WorkshopPLUS, students will understand

- Implement Virtual Machine Manager in either standalone or highly available setups.
- The planning required to successfully implement Virtual Machine Manager and configure its fabric resources
- How to create and deploy virtual machines from templates

Hardware Requirements:

Contact your TAM if the necessary hardware needs to be provided.

If you are attending an Open enrollment WorkshopPLUS, then the hardware will be provided for you.

Each student need two physical machines with the following configuration.

- Operating System: Windows Server 2012 R2 with no installed updates
- Processor: Quad Core Intel/AMD 64-bit or emulated 64-bit processor with Virtualization Technology capabilities and a processor speed greater than or equal to 2.0 GHz
- RAM: At least 16-GB RAM
- HD Space: At least 500-GB hard disk drive
- Networking: Minimum of 1-Gbit/sec full-duplex NIC
- Peripherals: 1 Cat 6 Crossover Cable, Video card with at least 256-MB (V) RAM

Syllabus

This WorkshopPLUS runs for three full days. Students should anticipate consistent start and end times for each day. Early departure on any day is not recommended.

Module 1: Introducing and Installing VMM 2012 R2: Overview, requirements, installation, and installation lab

Module 2: Fabric Management -Understanding, configuring and managing the fabric, including adding hypervisor hosts (Hyper-V and VMWare), library servers networking, and storage management. This module also covers fabric updates, dynamic optimization, power optimization, and labs

Module 3: Managing Hyper-V Hosts and Failover Clusters –Understanding how to create and manage Hyper-V Hosts, Failover Clusters, and File Servers through Virtual Machine Manager.

Module 4: VMM Administration-Covers managing VM Templates, Update Management, managing virtual machines and virtual machine settings.

Module 5: Cloud Management and Self-Service –Covers Private Cloud creation, user management, and access through System Center App Controller 2012 R2

Module 6: Understanding and using Service Templates in a Private Cloud environment

Module 7: Using System Center Operations Manager 2012 R2 to monitor and report on VMM operations. Backing up and restoring the VMM Database

Module 8: Multiple Hypervisor Management –Covers migrating from VMWare through V2V, covers managing and configuring VMware and Citrix virtualization hosts.

System Center 2012 R2 Virtual Machine Manager: Implement and Manage a Private Cloud – Level 300

Learn how to effectively implement and manage System Center 2012 R2 Virtual Machine Manager in the virtualized datacenter.

Target Audience:

To ensure the high-quality knowledge transfer expected by the attendees of this three-day WorkshopPLUS, the class size is limited to a maximum of 16 students who meet the following criteria:

■ Recommended:

- Familiarity with hypervisors and datacenter concepts (networking, storage)
- Hyper-V experience

Overview

The WorkshopPLUS - System Center Virtual Machine Manager: Implement and Manage a Private Cloud course provides students with the knowledge to:

- Install and configure System Center Virtual Machine Manager 2012 R2
- Understand at a high level Virtual Machine Manager networking concepts such as Logical Switches and Network Virtualization
- Manage Host Groups and utilize dynamic optimization to balance VM resources
- Update Management of Infrastructure Servers and Hyper-V Hosts

This workshop contains IT professional level content. Review the Target Audience information and contact your Microsoft Services representative to ensure that this workshop is appropriate to the students' experience and technical expertise.

Key Features and Benefits

- Installation and Configuration of Virtual Machine Manager 2012 R2 is covered in depth with labs for the installation and configuration of Virtual Machine Manager.
- Fabric Management of storage, networking, and physical virtualization hosts is covered in depth with supporting labs
- Creating Virtual Machine Templates and Service Templates is covered in detail

Technical Highlights

After attending this WorkshopPLUS, students will understand

- Implement Virtual Machine Manager in either standalone or highly available implementations.
- The planning required to successfully implement Virtual Machine Manager and configure its fabric resources
- How to create and deploy virtual machines from templates

Hardware Requirements:

Contact your TAM if the necessary hardware needs to be provided.

If you are attending an Open enrollment WorkshopPLUS, then the hardware will be provided for you.

Each student need two physical machines with the following configuration.

- Operating System: Windows Server 2012 R2 with no installed updates
- Processor: Quad Core Intel/AMD 64-bit or emulated 64-bit processor with Virtualization Technology capabilities and a processor speed greater than or equal to 2.0 GHz
- RAM: At least 16-GB RAM
- HD Space: At least 500-GB hard disk drive
- Networking: Minimum of 1-Gbit/sec full-duplex NIC
- Peripherals: 1 Cat 6 Network Cable, Video card with at least 256-MB (V) RAM

Syllabus

This WorkshopPLUS runs for three full days. Students should anticipate consistent start and end times for each day. Early departure on any day is not recommended.

Module 1: Introduction to Cloud Computing: This brief module covers Private and Public Cloud computing and how System Center Virtual Machine manager fits into Microsoft's cloud solutions.

Module 2: SCVMM 2012 R2 Core Infrastructure-This module reviews storage features in Windows Server 2012 R2 and covers core Windows 2012 R2 Hyper-V features.

Module 3: Installing System Center Virtual Machine Manager-This module covers planning and implementing a System Center Virtual Machine Manager installation.

Module 4: Fabric Configuration and Management: This module covers understanding, configuring and managing the VMM fabric, including adding hypervisor hosts, library servers, logical networking, and storage management. This module also covers fabric updates, dynamic optimization, power optimization. Detailed labs help cement knowledge in this area.

Module 5: Monitoring and Maintaining the VMM Fabric: This module covers monitoring VMM health, basic usage monitoring scenarios, updating, and maintaining your Private/Public Cloud.

Module 6: Creating and Managing Virtual Machines: This module covers all there is to know about creating and managing virtual machines, VM templates, Service templates, as well as P2V and V2V migration methods.

Module 7: SCVMM 2012 R2 Cloud Management: This module covers creating a Cloud in VMM as well as managing tenant access

Module 8: SCVMM Security: This module covers VMM security and user access.

Appendix A –SCVMM 2012 R2 Multiple Hypervisor Management: This optional module covers management of third-party hypervisors.

Monitoring Private, Public and Hybrid Cloud with SCOM and OMS – Level 300

Target Audience:

This course takes attendees to a journey through all the tools and techniques needed to correctly monitor and operate almost every cloud scenario possible.

With this WorkshopPLUS, IT professionals will learn how to make use of our tools to monitor and operate public, private or hybrid cloud in an easy and effective manner.

System Center Operations Manager, OMS and Orchestrator administrators can upgrade their skills to be up-to-the-task in the cloud era.

Overview

The Monitoring the Private, Public and Hybrid Clouds with Microsoft System Center Operations Manager and Operations Management Suite (OMS) WorkshopPLUS provides attendees with the deep knowledge and understanding of monitoring cloud solutions. Through presentations, white-board discussions, and goal-based labs, this three-day WorkshopPLUS covers the individual approaches for monitoring, automating and auditing all the kind of clouds workload whatever your infrastructure is based on private, public or hybrid cloud and explores the tools available to monitor, audit and automate your datacenter

Key Features and Benefits

Each modules takes you into a journey based on real-life scenarios where you face, and solve all the common challenges of managing a highly dynamic data based on private, public or hybrid cloud using Operations Manager, OMS or both.

Technical Highlights

After completing this course, you will be able to:

- Understand what is a private, a public or an hybrid cloud.
- Understand how to approach different monitoring scenarios.
- Know all the components that are part of the different monitoring scenarios and their relationships.
- Operate and monitor your datacenter using those components in the given scenario
- Automate your datacenter
- Report and visualize the data stored in various data sources and make use of the datacenter BI to develop it.

Hardware Requirements:

Lab environments for this course are generally hosted in the cloud.

Labs delivered on computers within the classroom must meet or exceed the following:

- Windows 8.1 or Windows Server 2012 R2 Hyper-V
- Intel Core i5-class processor with at least four cores (eight cores recommended)
- USB 3.0 support
- 24 GB RAM
- 200 GB HDD
- 19 inches monitor (dual monitor configuration recommended)

Additional Requirements:

- Fast and reliable internet connectivity.
- Microsoft Azure Subscription (Azure Subscription Promotional Codes could be provided if necessary.)

Syllabus

This WorkshopPLUS runs for three full days. The participants should anticipate consistent start and end times for each day. Early departure on any day is not recommended.

Module 1: Cloud Introduction

This module provides an overview of what is a cloud, cloud types and talks in high level about deployment and usage scenarios.

Module 2: Monitoring Scenarios

This module provides an overview on how Operations Manager can be used to monitor On-Premises and Cloud-based resources, and some examples of monitoring On-Premises and Cloud –based Resources from the Cloud.

Module 3: Monitoring Components

This module discusses all the tools available to monitor and operate on-premises, on the cloud or both. The prerequisites, architectures, roles and requirements will be listed for each component with a brief description of their interoperability.

Module 4: Operate and Monitor

This module takes you through the multiplicity of solutions available to operate and monitor your services whether they are based on On-Premises, Cloud or Hybrid scenarios. You will also be learning about how such solutions complement each other in order to enable you to further understand how key components are performing and as the bottom line, improve the overall quality of service you could be providing.

Module 5: Automate Your Hybrid Cloud

This module discusses on making use of Microsoft Automation technologies to automate monitoring scenarios involving alert processing, recoveries, and remediation.

Module 6: Protect Your Hybrid Cloud

This module will show all the ways to protect your datacenter against failure, malicious software or threat. This module discusses on making use of System Centers and OMS, how you will be able to protect your datacenter in a simple and cost effective manner.

Module 7: Reporting and Visualization

This module covers how to visualize the gathered data by using Operations Manager, OMS and Power BI. Starting by Distributed Applications and their SLAs within System Center Operations Manager, you will then be presented to OMS and its main areas: Log Search, Solutions Gallery (taken special attention in Capacity Planning solution pack), Usage and My Dashboard. You will also be introduced to an "Azure OMS Overview dashboard". Finally, you will be learning about how to use Power BI as a Solution to visualize and gain insights over your data.

Enterprise Mobile Device Management using Microsoft Intune and SCCM – Level 300

Strategic partnership addresses the specific needs within the customer environment in terms of Enterprise Mobile Device Management (MDM), organizational constraints and processes / operational infrastructure architectures and business solutions.

Target Audience:

Attendees of this WorkshopPLUS should be experienced users of Microsoft System Center 2012 Configuration Manager. Ideally, they will have some background in Windows administration and network.

Best-Practice Guidance:

Central management of mobile devices in the enterprise provides challenges to IT administrators. This WorkshopPLUS is designed to address these challenges and provides a central management solution.

Overview

With the proliferation of mobile devices in the workplace, employees can (and they do) work from just about anywhere. To stay productive, this mobile workforce demands consistent access to corporate resources and data from any location on any device. This trend has introduced significant challenges for IT administrators who want to enable enterprise mobility while ensuring that corporate resources are protected from unauthorized access.

Using Microsoft Intune, you can deliver application and device management completely from the cloud, or on-premises through integration with Microsoft System Center 2012 R2 Configuration Manager Service Pack 1, all through a single management console. Intune is included as part of the Microsoft Enterprise Mobility Suite, a cost-effective way to leverage the Microsoft enterprise mobility cloud services for all of your employees.

Key Features and Benefits

- Guidance about the Microsoft hybrid Mobile Management Solution
- Setup and Integration of Microsoft Intune and Configuration Manager
- Architectural Concepts
- Provisioning of all managed platforms (Windows Phone; Microsoft Windows, Apple iOS and Google Android)
- Hands-on training on deploying software, policies, and profiles to the devices

Technical Highlights

Students will gain valuable insights from Microsoft industry experts on the challenges facing IT Mobile device management teams as they always have a need to keep up-to-date on new devices in the marketplace. This WorkshopPLUS will go into many best practices in the MDM space.

The lab environment and exercises are used during the WorkshopPLUS, to help the students better understand how these technologies will work for them.

Prerequisites

This WorkshopPLUS will use virtualized Windows Phone devices to demonstrate the functionality. If you want, you can bring a physical Windows Phone (version 8.0 or later);

IT Requirements:

This WorkshopPLUS requires computers running Windows server 2012 R2 that supports Hyper-V. These computers should have at least 16 GB of RAM.

an iPhone / iPad (iOS version 7 or later) or an Android Phone / Tablet (version 4.4 or later). You are also required to create a Microsoft account, an Apple ID, and a Google Account for this WorkshopPLUS upfront.

■ How do I sign up for a Microsoft account?

- <http://windows.microsoft.com/en-us/windows-live/sign-up-create-account-how>

■ Create and start using an Apple ID:

- <http://support.apple.com/en-us/HT203993>

■ Create a Google Account:

- <https://support.google.com/accounts/answer/27441?hl=en>

Syllabus

The Enterprise Mobile Device Management WorkshopPLUS of three days is designed to give the IT Administrators the technical ability to set up and maintain a mobile device infrastructure. Furthermore, we provide guidance in strengthening and securing their environment from the threats that employees and guests bring when they are allowed to use their own devices in a corporate IT environment.

Module 1: Introduction to MDM

This module provides an overview of MDM, and discusses the need of a mobile device management solution and the unique challenges introduced by MDM.

Module 2: Architecture

This module provides an overview of the architecture of Microsoft Device Management Solution and its components. It will also provide a brief view on how MDM integrates with Microsoft Azure Active Directory, Intune and Office 365 Portals and Azure Multi-Factor Authentication.

Module 3: Implementation

This module covers the basics of signing up for Microsoft Intune Subscription service, usage of DirSync (Directory synchronization service), and setting up of integration between Microsoft Intune service and System Center 2012 R2 Configuration Manager.

Module 4: Provisioning

This module covers the basics of enrolling different types of mobile devices (Windows, Windows Phone, iOS, and Android) and configuring hardware inventory for mobile devices. The module also covers functionality related to Selective and Full Wipe.

Module 5: Software Deployment

This module covers the app deployment to mobile devices. It includes Deep Link App deployment, supersedence, as well as side loading apps. We also cover mobile application reporting in this module

Module 6: Policies

This module covers several policy enforcement scenarios using Extension and Compliance Settings. We will also look at OMA-URI settings and enforcements device lockdowns.

Module 7: Profiles

This module provides in-depth knowledge on certificate deployment and distribution using an Network Device Enrollment Service (NDES) infrastructure. We further look at the details of the virtual private network, email and Wi-Fi Profile setup.

Module 8: Troubleshooting

This module explains the components and workflows on implementing the solution, and provides guidance on how to troubleshoot issues.

IIS 7.5: Administration and Troubleshooting – Level 300

This course provides Web administrators with an inside look into how IIS 7.5 works and the core components involved.

Target Audience:

To ensure the high-quality knowledge transfer students expect from this 4-day workshop, class size is limited to a maximum of 16 students who meet the following criteria:

- At least 1 year of experience administering a previous version of IIS (preferably IIS 6.0).
- Experience with .NET application administration, and understanding of the .NET configuration system.
- Experience as escalation support staff (top-tier only).

Overview

The IIS 7.5: Administration and Troubleshooting 4-day WorkshopPLUS course provides students with the skills necessary to deploy, administer, and troubleshoot Internet Information Services 7.5. Students will also gain an understanding of the IIS architecture and how to manage security. The hands-on labs included will help the administrator to troubleshoot IIS using the built-in tools and to manage Web servers.

This workshop contains Level 300 content and assumes prior experience with IIS. Please review the target-audience information (on the next page) and contact your Microsoft Services representative to ensure that this workshop is appropriate to the student's experience and technical expertise.

Technical Highlights

After completing this course, students will understand:

- The Component Based Servicing (CBS) infrastructure in Windows Server 2008 and how it relates to IIS setup.
- The new configuration system in IIS 7.5 and how it interacts with .NET.
- How the new architecture allows for easy extensibility through custom modules, and how existing add-on modules can be used.
- How to delegate administration of Web servers to non-administrators, and how to manage permissions for developers to push configuration information for their applications.
- How to use new troubleshooting tools included in IIS 7.5 that allow administrators to solve application and configuration problems faster.

Hardware Requirements:

Contact your TAM if the necessary hardware needs to be provided.

If you are attending an Open enrollment workshop, the hardware will be provided for you.

Syllabus

This workshop runs a FULL 4 days. Students should anticipate consistent start and end times for each day. Early departure on any day is not recommended.

Module 1: Windows 2008 Concepts. Provides a high-level overview of key areas of Windows Server 2008 as they relate to IIS 7.5.

Module 2: IIS 7.5 Deployment. Covers multiple IIS 7.5 installation methods and options. Also covers tools available for upgrade and migration. Real-world scenarios are used to highlight deployment best practices.

Module 3: IIS 7.5 Architecture. Describes the internal architecture and core components of IIS 7.5. Students examine examples of how each component impacts IIS, and how to use this knowledge to maintain and improve the performance of Web servers.

Module 4: Configuration Mechanism. Describes the new IIS 7.x configuration system and how the various pieces interact. This module introduces the new IIS Manager for delegating features for non-administrators. The distributed configuration model is covered in detail here.

Module 5: Security. Covers security enhancements to IIS 7.5 that can be used to secure applications at levels more granular than previous versions allowed. The hands-on labs provide the administrators a chance to work with these security features to complete tasks such as configure request filtering, SSL, and isapiCgiRestrictions.

Module 6: Supportability. Describes the new troubleshooting tools in IIS 7.5 and how they can be used to diagnose and resolve issues in a timely manner.

Module 7: Scenario Based Labs. Presents key scenarios that students solve without detailed assistance from the instructor. Some of the real-world issues addressed in this module include addressing configuration errors, permission problems, and startup problems.

IIS: Administration, Troubleshooting and Best Practices – Level 300

Target Audience:

This workshopPLUS is intended for IIS Administrators who have worked with prior versions of IIS and are interested in learning the latest features and capabilities of new versions of IIS.

To ensure the high-quality knowledge transfer that students expect from this three-day workshopPLUS, class size is limited to a maximum of 16 students who meet the following criteria:

- At least one year of experience administering a previous version of IIS (preferably IIS 6.0 and above)
- Experience with .NET application administration, and basic understanding of the .NET configuration system
- Experience as escalation support staff (top-tier only)

Overview

The Internet Information Services (IIS): Administration, Troubleshooting and Best Practices workshopPLUS provides students with the skills necessary to administer and troubleshoot IIS 7 and above. Students will gain an understanding of the IIS architecture and how to manage security. The hands-on labs included will help the administrator to efficiently manage Web Servers and to troubleshoot IIS using varying types of troubleshooting tools.

This workshopPLUS contains Level 200-300 content and assumes some experience with IIS. Review the target-audience information and contact your Microsoft Services representative to ensure that this workshopPLUS is appropriate to the student's experience and technical expertise.

Technical Highlights

After completing this course, students will understand:

- The change in IIS architecture in IIS 7 and above and how it affects the inner working of IIS.
- The new configuration system in IIS 7 and above and various tools to interact with the configuration.
- The changes taken place in IIS 8.5 as compared to the previous versions of IIS.
- The ways to use the troubleshooting tools included and various monitoring techniques used for IIS 7 and above.
- The best practices on the use of IIS 7 and above Web Servers.

Hardware Requirements:

Contact your TAM if the necessary hardware needs to be provided.

If you are attending an Open enrollment workshopPLUS, the hardware will be provided for you.

Syllabus

This workshopPLUS runs a full three days. Students should anticipate consistent start and end times for each day. Early departure on any day is not recommended.

Module 1: Architecture. This module describes core components of IIS, and how they interact with each other. The application pool settings are discussed in detail. This module also includes an overview of setup options.

Module 2: Administration. This module describes tools used for administration of IIS server and various configuration details featuring different capabilities IIS has achieved due to the improved configuration. This also covers shared configuration, remote and command line administration, and backup options for IIS servers.

Module 3: Security. This module covers the security features present in IIS 7 and above servers. This module is broken into three key areas, Authentication and authorization, certificate and protection features.

Module 4: Troubleshooting. This module describes general troubleshooting steps and techniques, and introduces various troubleshooting tools available for IIS Administrators. It gives an overview of how and what to monitor proactively.

Module 5: Best Practices. This module describes various best practices for maintaining IIS servers healthy, secure, and performance efficient. It also describes the best practices that help in the administration of the IIS servers.

ASP.NET Troubleshooting – Level 300

Provides the troubleshooting skills for web based application to help reduce time to resolution

Target Audience

This workshop is designed and intended for ASP.NET developers mainly, but web server administrators with some development knowledge would also benefit. Although all dump analysis labs are ASP.NET based, most information provided in this workshop is applicable to any .NET application.

This workshop is intended for organisations who wish to learn about production environment troubleshooting and debugging; mostly user mode dump analysis which is many times the only way to troubleshoot issues.

Overview

This workshop develops the skills required to troubleshoot and resolve common scenarios such as connectivity issues, performance issues, hangs, crashes and memory leaks in ASP.NET applications (including but not limited to web service applications) using various tools and techniques.

How the Offering Works

The workshop is delivered in 3 days, and mainly consists of lab activities regarding many different possible real life scenarios.

Key benefits or customer evidence

- Learn the basics of IIS and ASP.NET applications
- Learn the troubleshooting and techniques specific for web based applications
- Learn dump analysis tools and techniques to be able to make root cause analysis
- Learn how performance baseline and capacity planning can be made for web based applications

Pre-requisites

To ensure the high-quality knowledge transfer expected by the attendees of this 3-day workshop, class size is limited to a maximum of 15 students who meet the following criteria:

- Developers
- Test engineers
- Web server administrators with at least beginner level development skills

Benefits

After completing this course, attendees will be able to:

- Troubleshoot day-to-day issues about web applications and web services hosted on IIS servers
- Check web server access logs for past problems and general performance analysis
- Learn the tools which can be used for performance baselining and capacity planning
- Get hands on practice on dump analysis for various scenarios

Syllabus

Module 1: Architecture

- IIS architecture
- Worker process architecture
- ASP.NET compilation structure
- .NET memory management

Module 2: Types of potential issues

- HTTP protocol basics
- Connection issues and usage of Fiddler tool
- Exceptions and exception handling
- Performance counters

Module 3: Dump analysis

- What is a memory dump
- User mode and kernel mode dumps
- What is a symbol
- Dump collection tools and practices
- Dump analysis – windbg tool
- Debugging extensions – psscor2.dll IIS logs and Log Parser tool

Module 4: Dump analysis labs

- 7 dump analysis labs on
 - Crash scenarios
 - Hang scenarios
 - Memory leak scenarios
 - Performance issues

BizTalk Server 2013: Architecture and Administration – Level 300

Target Audience

This workshop is designed for architects, administrators and support personnel, who are new to or moderately familiar with BizTalk Server 2013.

Students who have experience with prior versions of BizTalk Server may find the new concepts and features taught in this class useful.

This training has topics which will be valuable to architects, system and network administrators, and engineers supporting a production BizTalk environment.

Overview

The BizTalk Server 2103: Architecture and Administration WorkshopPLUS is a 3-day workshop for BizTalk Server architects and administrators. It includes an overview of Microsoft BizTalk Server 2013 with presentations and hands-on labs covering how to design, build, and operate a robust, scalable and highly available Microsoft BizTalk Server 2013 environment.

Key Features and Benefits

This workshop combines presentations with hands-on labs covering various architectural and administration topics of BizTalk Server 2013, including:

- Installing and configuring Microsoft BizTalk Server 2013
- Deploying BizTalk solutions
- Managing Microsoft BizTalk Server 2013 environment
- Designing a scalable and highly available BizTalk environment

In addition, participants will learn how to detect performance issues and troubleshoot common issues.

Technical Highlights

After completing this workshop, participants will be able to:

- Architect and administer BizTalk Server 2013 solutions
- Troubleshoot

Prerequisites

No Microsoft BizTalk Server experience is required, but would be helpful as this will be a fast paced course.

Suggested Skills

At least two years of experience managing a Windows Server 2008 and Windows Server 2012 network.

Syllabus

This workshop runs for 3 full days. Attendees should anticipate consistent start and end times for each day. Early departure on any day is not recommended.

Module 1: Planning and Installing BizTalk Server 2013

- Introduction and history of BizTalk Server
- Installing and configuring a BizTalk standalone environment
- Uninstalling BizTalk Server

Module 2: Architecture

- What is BizTalk Server 2013?
- BizTalk tools —application development tools
- BizTalk architecture

Module 3: Managing

- Managing BizTalk groups
- Deploying BizTalk applications
- Tracking BizTalk Server

Module 4: Maintaining

- Backing up and restoring BizTalk databases
- Backing up and restoring BizTalk computers
- Archiving and purging the tracking database

Module 5: Monitoring

- Service instances states
- Troubleshooting common issues
- Performance/throttling

Module 6: Troubleshooting

- Using the Group Hub Page to troubleshoot messages or orchestration instances
- Using Performance Monitor to troubleshoot performance issues

Module 7: Planning a Multi-Server Environment

- Planning for high availability Planning for scaling BizTalk solutions

Windows Client Technologies

Windows 10 Client: New Features and Upgrade – Level 300

Target Audience:

This course provides deep technical understanding of the operating system, manageability and servicing off Windows 10.

The content is particularly relevant to the Windows Client Support and Imaging teams of organizations that are considering the deployment of Windows 10 and need a deep understanding of the benefits that Windows 10 offers.

Overview

The Windows 10 Client: New Features and Upgrade workshop provides students with a comprehensive introduction to the wide range of new and improved features in Windows 10.

Through out all the module we will provide a broad understanding on enterprise mobility, deployment, security and user experience.

Key Features and Benefits

Through presentations, white-board discussions, and goal-based labs,

this three-day workshop covers:

- Enterprise Mobility and BYOD capabilities
- Security new features and improvements
- Servicing model changes
- Deploying Windows 10 with the Microsoft Deployment Toolkit (MDT) and System Center Configuration Manager (ConfigMgr)

Technical Highlights

After completing this course, students will be able to:

- Understand the structural changes incorporated into Windows 10
- Use the new tools and technologies available to deploy Windows
- Determine the necessary requirements and features available
- Get an understanding on how Windows can help your company be more secure and agile

Hardware Requirements:

This workshop requires Windows 8.1 or 10 Enterprise machines that support Hyper-V and have at least 8GB of RAM.

Touch devices and UEFI are recommended.

Syllabus

This workshop runs for three full days. Students should anticipate consistent start and end times for each day. Early departure on any day is not recommended.

Module 1: Platform Promise

This module provides insights on the cross platform capabilities of Windows 10, how Windows 10 is the OS for the Cloud and Enterprise ready.

Module 2: UI/UX, Modern Apps and Windows Store

In this module you will learn about the UI/UX improvements done in Windows 10, what are Windows Modern Apps, the Microsoft Edge and how to deploy and manage Apps via the Windows Store and Business Portal.

Module 3: Enterprise Mobility

This module presents the new manageability and BYOD set of options, like the built-in MDM client, and how EMS and System Center Configuration Manager provides Enterprises the required control and security, and still provide to users more flexible ways of being productive.

Module 4: Security

This module covers the major security changes in Windows 10, like Secure Credentials and Pass-The-Hash mitigations, Windows Biometrics new features, and many more improvements in the Enterprise Security space.

Module 5: Licensing and Servicing

In this module covers the changes on the new Windows Servicing model, the Windows Update for Business, and also licensing changes and enhancements.

Module 6: Deployment

In this module you will review the new servicing that are available for Windows 10, like the Image Configuration and Designer, the in-place upgrade improvements and the how to use MDT or Configuration Manager to accomplish a successful deployment of Windows 10.

Windows: Deploying and Managing BitLocker in the Enterprise – Level 300

Target Audience:

This course is an advanced course for managing BitLocker and is only targeted at IT staff who have designed, deployed, administered and managed Windows Platform or BitLocker encryption or other encryption software.

This Premier Workshop is delivered by a Premier Field Engineer. The workshop has a duration of 2 days at 300 level involving hands-on labs. Participants will learn the insides of BitLocker and how to deploy and manage encrypted volumes.

Overview

The Windows Deploying and Managing BitLocker in the Enterprise workshop provides attendees with the deep knowledge and understanding of the implementation, management and troubleshooting techniques needed to manage BitLocker. Through presentations, white-board discussions, and goal-based labs, this 2-day workshop covers the individual approaches for troubleshooting problems and explores the tools available to monitor, trace and identify the root cause of the issues.

We start by explaining the aspects of BitLocker; from the small, hidden partition at the start of a boot disk, to the integration with Active Directory, to installing an OS on an encrypted disk, to recovering encrypted disks and finally creating a scalable, manageable platform which is enterprise-ready to store the keys using Microsoft BitLocker Administration and Monitoring (MBAM).

Key Features and Benefits

Data-loss is an ever-growing problem and the consequences of it are numerous and increasing in severity. Being affected by data-loss is becoming a case of “when”, not “if”, sensitive business or personal data is lost. This WorkshopPLUS helps IT pros encrypt their disks, protect their data and keep the encryption keys accessible in a managed way.

Technical Highlights

After completing this course, you will be able to:

- Understand how BitLocker works
- Understand the tools that can help deploy BitLocker.
- Understand how to approach different troubleshooting scenarios.
- Identify action plans to troubleshoot different components and areas of BitLocker encrypted environments.

Hardware Requirements:

Participants will need a computer running at least Windows 8 or Windows Server 2012 with support for virtualization with 250 GB free drive space, minimum 4GB of RAM (8 GB Recommended) and USB port. Microsoft Office 2010 or PDF reader needs to be installed.

Syllabus

This workshop runs for 2 full days. Students should anticipate consistent start and end times for each day. Early departure on any day is not recommended.

Module 1: BitLocker Fundamentals: BitLocker Overview and Requirements, TPM (Trusted Platform Module), Protectors, Recovery Method, What's New in Windows 8/10, Security Considerations

Module 2: BitLocker Internals: PCRs (Platform Configuration Registers), Encryption algorithms, Page File and BitLocker, FVE Kernel driver, Decommissioning Old HDD, FIPS compliance

Module 3: BitLocker To Go: What Is BitLocker To Go, BitLocker To Go Requirements, How the BitLocker To Go Reader Works, BitLocker To Go controls

Module 4: Integration with Active Directory: Storing Recovery Password in Active Directory, Storing TPM Owner Password in Active Directory, Security of BitLocker Information in AD

Module 5: Branch Offices and Slates: Why BitLocker in the Branch Office, RODC in the Branch Office, BitLocker on Tablets

Module 6: Performance Analysis: Hardware Performance, Measuring Performance, Performance Comparison

Module 7: Troubleshooting: BitLocker Logs, Recovery Prompts, TPM Measurements, TPM lockout, DaRT toolset

Module 8: MBAM: MBAM Fundamentals, MBAM Agent and Group Policies, MBAM server components, Architecture, MBAM Help Desk and Self Service Portal, Planning for MBAM High Availability, MBAM Security Considerations, Best Practices, Troubleshooting

Module 9: Deployment: Enabling the TPM, BitLocker Deployment Options, TPM AutoProvisioning, MDT and SCCM deployment examples

Internet Explorer 11: Migration for IT Professionals – Level 300

Get the Most from Your Microsoft Investment

The Windows® Internet Explorer® Migration Workshop helps customers understand the migration process from Internet Explorer 6 to the latest version, using a structured workshop targeted towards IT professionals. Your subject matter experts will learn how to evaluate compatibility issues and remediation techniques. Our engineers deliver a customized lecture and demo based on your technical needs. They fine-tune their delivery to suit the requirements of your enterprise.

Target Audience

This workshop includes content targeted towards IT professionals. We will work with you to deliver a customized lecture and demo based on your technical needs. To help promote return on investment (ROI), the workshop is delivered in conjunction with your resources: personnel, intellectual investments, and existing infrastructure. The engagement provides decision-making expertise based on technical considerations of your websites.

Are your websites ready for Internet Explorer?

Are your websites Ready for Internet Explorer 11? The Windows® Internet Explorer 11 Migration 1 day Workshop helps customers understand the migration process from Internet Explorer 6 to Internet Explorer 11. This is targeted at IT Professionals. You will be taught how to evaluate compatibility issues along with remediation techniques. Microsoft Services offers the to support a successful migration to the latest version of Internet Explorer, by means of consistent, reproducible processes and tools that can help improve efficiency and require less effort to maintain.

Key Features and Benefits

- Provide a high level overview of Windows Internet Explorer migration
- Gain an understanding of the compatibility challenges for web based applications
- Acquire knowledge about the key project components for running an Internet Explorer migration project
- Learn the new IE11 Enterprise mode feature
- Understand the new features and capabilities for developers in IE 11

Windows Internet Explorer 11 Migration & Development Agenda

The Internet Explorer Migration Workshop engagement includes a series of demonstrations and discussions to help you learn about Internet Explorer remediation technique, explore the new compatibility feature Enterprise Mode.

Modules :

- New features and improvements in Internet Explorer
- Internet Explorer Deployment
- Configuration of Internet Explorer in the enterprise
- Internet Explorer security
- Internet Explorer compatibility
- Presentation of the troubleshooting tools

Internet Explorer 11: Migration for Developers – Level 300

Target Audience:

This workshop focuses on the important features and concepts that you can use when you want to migrate to the latest version of Internet Explorer.

The target audience for the workshop is Web developers.

Overview

This workshop targets on the key concepts of migrating to the latest version of Internet Explorer. The workshop focus on Application Compatibility, migrations paths and tools. The delivery includes presentation and demos to provide knowledge transfer to key development staff.

Key Features and Benefits

The Internet Explorer Migration for Developers Workshop is a one day workshop that is provided by Microsoft Services. It is typically delivered onsite and will be customized for your audience specific needs.

The offering provides attendees information and expertise on moving to the latest version of Internet Explorer.

The content of the workshop is intended to assist you in migrating your applications.

Technical Highlights

After completing this course, you will be able to:

- Understand what it takes to drive an Internet Explorer Migration project successfully
- How to face the application compatibility challenge and how to better mitigate discovered issues
- Learn tools and technics to troubleshoot common problems

Hardware Requirements:

No specific hardware is required.

Syllabus

This workshop runs for 1 full day.

Students should anticipate consistent start and end times. Early departure on this day is not recommended.

Module 1: Enterprise Mode: This module will show new features available with latest version of Enterprise Mode and how to manage more easier compabitibility issues in your organization

Module 2: Migration Process Overview: Provides an overview on what an Internet Explorer Migration project requires and suggested best practices using new Site Toolkit Discovery feature.

Module 3: Application Compatibility: This module covers all related topics about application compatibility, ranging from testing methodology, web development mindset and how to mitigate issues consistently.

Module 4: Troubleshooting and Tools: This module focuses on the most relevant tools for the activities at hand and how they can be used more effectively to help ensure a smooth migration.

Windows Client : The XPERF view on Windows Client Performance – Level 300

Solving performance issues to keep users happy and the business flowing

Delivered by highly experienced engineers from Microsoft, this workshop provides the most advanced Windows Client performance troubleshooting techniques and hands-on labs

This workshop provides you:

- A review of the Windows internals
- A comprehensive guide on how to collect traces and visually identify performance issues
- A Deep Dive on the Windows Performance Analyzer
- Troubleshooting techniques for reducing windows boot times
- Troubleshooting techniques to identify performance issues of applications and drivers
- Knowledge transfer from Microsoft Premier Field Engineers to your IT staff

Overview

This service trains customers IT staff to troubleshoot performance issues that may arise on their Windows Client computers.

The students will revise how Windows works internally and what can affect the standard behavior. Based on that information, students will have several hands-on labs where they will experience and fix the most common Windows performance issues using the Windows Performance Toolkit (more specifically the Windows Performance Analyzer).

Regular performance testing of your Windows Desktop images ensures that your users get the maximum productivity from their Windows Desktop installation base. Don't let clients and users become unmanaged and dissatisfied over time.

The service is delivered in 2 days

Day 1:

- Review of the Windows Client internals
- Windows Performance Analyzer usage and data collection
- Boot performance troubleshooting

Day 2:

- Troubleshooting the most common Windows Client performance issues
- Advanced scenarios

A poorly designed Desktop can have a high impact on user satisfaction and loss of productivity. This can have a significant impact on the perception of your corporate Windows Client deployment

This workshop can be used

- As a deep training on troubleshooting the most frequent Windows Desktop performance issues
- To know other frequent performance issues after having done a Windows Desktop Risk Assessment Program (WDRAP)

Maintain Maximum Efficiency

The XPERF view on Windows Client Performance service leverages experience from thousands of customers and customizes information from the documentation and whitepapers available to help you meet your performance and reliability goals

Reduce Support Costs

By learning how to test and troubleshoot Windows Client performance even before a massive rollout, your organization will reduce the costs directly associated with the issues and increase user satisfaction.

Benefit from Real World Examples

XPERF was initially only used internally and has since evolved to become the Windows Performance Toolkit and be available to customers and partners.

Microsoft engineers use that experience to provide real world examples and give the student the opportunity to troubleshoot similar cases using the most comprehensive performance tools.

Takeaways

This workshop introduces the Windows Internals concepts so that attendees know how the operating system works under the hood and understand the most common bottlenecks.

Attendees learn and then deep dive into how to collect traces and identify performance issues using the Windows Performance Toolkit. The troubleshooting techniques can be used to reduce windows boot times and identifying performance issues of applications and drivers.

Office 2013: New Features and Advanced Topics – Level 200

Target Audience:

- The Office 2013: New Features and Advanced Topics WorkshopPLUS is targeted at end users and administrative assistants, as well as IT professionals involved in the migration and support of Office 2013 applications.
- Participants should have knowledge of legacy Office features (that is, Office 2003, Office 2007, or Office 2010).

Overview

Office 2013: New Features and Advanced Topics provides a Level-200 introduction to the new or changed features and options available in the core Office 2013 client applications.

This WorkshopPLUS focuses on:

- Office Core
- Word
- Excel
- PowerPoint
- Outlook
- OneNote

Key Features and Benefits

Increased Productivity

Whether the participants have been using Office for 10 years or two years, they will gain new skills in Office 2013 to help them become more productive in their daily tasks.

Participants will learn how to use Word, Excel, PowerPoint, OneNote, and Outlook messaging and calendaring more effectively. In addition, users will become familiar with the power of Microsoft Lync 2013 functionality, available from within the Office 2013 applications.

What to Expect with Migration

In this WorkshopPLUS, participants will learn:

- How to work in Office 2013 with the files that were created in the previous versions of Office.
- How to identify

Technical Highlights

After completing this WorkshopPLUS, you will be able to understand:

- The new features of Office 2013 and implement it.
- The updated features from previous versions of Office and use them in Office 2013.
- The deprecated features of Office 2013, identify and use the replacement functionality.
- The differences in various file formats and how to work with those formats.

Hardware Requirements:

Computer and processor

- 1 gigahertz (Ghz) or faster
- x86-bit or x64-bit processor with SSE2 instruction set Memory (RAM)
- 4 gigabytes (GB) RAM (32-bit)
- 4 gigabytes (GB) RAM (64-bit) Hard Disk
- 3.0 gigabytes (GB) of free space available

Display

- Graphics hardware acceleration requires a DirectX10 graphics card** and 1024 x 576 resolution
- **A graphics processor helps in increasing the performance of certain features, such as drawing tables in Excel 2013 or transitions, animations, and video integration in PowerPoint 2013.

Operating System

- Windows 7, Windows 8, Windows Server 2008 R2, or Windows Server 2012

Office

- Office 2013 Professional Plus with all features installed to "Run All from My Computer"

Browser

- Microsoft Internet Explorer 10 .NET version
- Version 3.5, 4.0, or 4.5

Syllabus

This WorkshopPLUS runs a full two days and includes hands-on labs.

Participants should anticipate consistent start and end times for each day. Early departure on any day is not recommended.

Lesson 1: Overview of New Core Features

This lesson introduces the participants to the new Office Core features available in the majority of the Office 2013 applications.

Lesson 2: The New Lync Office Interface

This lesson introduces the participants to the new or updated Lync entry points and functionality available from within the Office 2013 applications.

Lesson 3: Introducing Office Telemetry

This lesson introduces the participants to the new Office Telemetry functionality provided within Office 2013 applications.

Lesson 4: New and Updated Features in Word 2013

This lesson introduces the participants to the new or updated Word 2013 features.

Lesson 5: New and Updated Features in Excel 2013

This lesson introduces the participants to the new or updated Excel 2013 features.

Lesson 6: New and Updated Features in PowerPoint 2013

This lesson introduces the participants to the new or updated PowerPoint 2013 features.

Lesson 7: New and Updated Features in OneNote 2013

This lesson introduces participants to the new or updated OneNote 2013 features.

Lesson 8: New and Updated Features in Outlook 2013

This lesson introduces the participants to the new or updated Outlook 2013 features.

Lesson 9: New and Updated Features in Outlook 2013

Calendar

This lesson introduces the participants to the new or updated Outlook 2013 calendaring features.

Office Client: Deployment – Level 200

Target Audience:

This course is an advanced course for Office Deployment and is only targeted at IT staff who have designed, deployed and managed an Office deployment in the past. The basic concepts and know-how of the product will not be covered in this course, and it is expected that attendees will already possess that knowledge.

Overview

The Office Client Deployment 2-day workshop provides attendees with the deep knowledge and understanding of the deployment methods available with the new Office. Through presentations, white-board discussions, and goal-based labs and instructor demos, this 2-day workshop covers the deployment approaches and considerations for Click-to-Run, MSI, and App-V.

Key Features and Benefits

Each group of modules is organized by scenario and is designed to provide participants with in-depth expertise, tools and hands-on experience to help deploy the new Office.

Technical Highlights

After completing this course, you will be able to:

- Understand the distinct differences between Click-to-Run, MSI and App-V deployment methods.
- Explain the differences in what an end-user may experience in activating each deployment type.
- Deploy and customize a Click-to-Run, MSI and App-V package of Office.
- Identify the best deployment strategy for your company.
- Understand patch management differences by deployment type.
- Leverage Office Telemetry data.
- Work with various Office group policy settings or preferences.

Hardware Requirements:

Machines capable of hosting and running the Office VM images. Alternatively, machines should be able to connect to our cloud-hosted Office VMs through RDP with adequate Internet bandwidth.

Syllabus

This workshop runs for 2 full days. Students should anticipate consistent start and end times for each day. Early departure on any day is not recommended.

Module 1: Click-to-Run, MSI or App-V: This module provides an overview of the different deployment methods now available. Subsequent modules will provide more detailed information.

Module 2: Office and Click-to-Run: In this module, we examine why one might choose Click-to-Run as a deployment method. You will use the Office Deployment Tool to customize and deploy as well as “patching” an existing build. The Side-by-Side install strategy is also covered.

Module 3: Advanced Click-to-Run: This module is a deep-dive into the inner workings of Click-to-Run from critical tasks, services, registry and file components. An in-depth discussion on managing updates and troubleshooting is also covered.

Module 4: Office and MSI: This module covers the traditional MSI deployment method. You will use the Office Customization Tool and config.xml file to customize and deploy Office.

Module 5: Office and App-V: This module focuses on the App-V method of deployment for both subscription and volume-licensed types of Office.

Module 6: Licensing and Activation: This module explores the differences in licensing models and activation results when using Click-to-Run or MSI. App-V will follow the licensing model of the type of Office chosen.

Module 7: Office Telemetry: New for Office, this module describes the benefits of using Office Telemetry data when planning an upgrade. Expedite your deployment timeline by focusing on the most actively used documents and solutions.

Module 8: Group Policy Settings: This module explains the new GPO settings for Office as well as providing an overview of some important security settings.

Module 9: Multi-Languages: This optional module is for Global companies who must support different languages and proofing tools for Click-to-Run or MSI.

Windows Client Technologies

Office

DATACENTER
TECHNOLOGIES

CLIENT
TECHNOLOGIES

BUSINESS
SOLUTIONS

CLOUD
TECHNOLOGIES

SECURITY

DEVELOPMENT

Microsoft Business Solutions

Dynamics AX 2012: Administration and Troubleshooting – Level 300

Target Audience:

- This class is intended for an audience with some experience in installing and configuring Microsoft Dynamics AX.
- The class is aimed at IT professionals who want to gain a deep understanding of how to maintain their complex implementation.

Overview

Keeping up with all the components of Microsoft Dynamics AX environment can be a challenging task. With the Microsoft Dynamics AX 2012 Administration and Troubleshooting WorkshopPLUS, you can gain a deeper understanding of how to install, configure, and maintain the different components of Microsoft Dynamics AX environment. This three-day WorkshopPLUS on Microsoft Dynamics AX, conducted by Microsoft experts provides you with the necessary tools to run an effective Enterprise Resource Planning (ERP) application.

This WorkshopPLUS provides you with the following:

- Guidance on requirements and prerequisites for Microsoft Dynamics AX 2012 deployments
- Hands-on experience in configuring the different server components and features of Microsoft Dynamics AX 2012
- Experience working with the monitoring and troubleshooting tools used by Premier Engineers in the field

Technical Highlights

After attending this WorkshopPLUS, you will be able to:

- Understand the requirements and prerequisites for a Microsoft Dynamics AX 2012 deployment.
- Install and configure Microsoft Dynamics AX 2012 server components and features.
- Perform the administrative tasks necessary to maintain a healthy Microsoft Dynamics AX operating environment.
- Manage the movement of customizations from one environment to another.
- Implement and troubleshoot security.

Syllabus

This is a three-day WorkshopPLUS, typically scheduled from 9:00 AM to 5:00 PM.

Module 1: Overview and Planning: This module provides an overview of Microsoft Dynamics AX 2012 architecture and key pre-installation tasks.

Module 2: Installation and Configuration: This module discusses the installation features and tasks necessary to successfully install and configure Microsoft Dynamics AX 2012 for operation.

Hardware Requirements:

Labs delivered on computers within the classroom must meet or exceed the following:

- Windows Server 2008 with Hyper-V
- Intel Core i5-class processor with at least two cores (Four recommended)
- 8 GB RAM
- 120 GB Hard Drive
- 19-inch Monitor

Module 3: Manage Users and Security: This module discusses the security model and its elements with a focus on managing role-based security.

Module 4: Manage Database Logging: This module focusses on learning how to create and manage audit trails using the database logging feature.

Module 5: Model Management and Code Deployment: This module covers how to interact with models and the model store to successfully deploy customizations to a Microsoft Dynamics AX 2012 environment.

Module 6: General System Administration: This module discusses the system parameters, common maintenance procedures, and administrative capabilities available in Microsoft Dynamics AX 2012.

Module 7: Manage Batch Processing: This module focusses on learning how to interact with the batch framework to configure, manage, and troubleshoot batch jobs.

Module 8: Manage AOS Load Balancing: This module discusses how to configure and manage load balancing for services and Microsoft Dynamics AX client connections.

Module 9: System Monitoring: This module covers different tools available to help you monitor the health and performance of a Microsoft Dynamics AX 2012 environment.

Module 10: Reporting: This module explains the reporting architecture and learn how to deploy reports.

Module 11: Office Add-ins: In this module, you can learn how to make Microsoft Dynamics AX data available to Microsoft Office.

Module 12: Analytics: This module discusses Business Intelligence components including default cubes, security, and deployment tools.

Module 13: Enterprise Portal: This module provides an overview of Enterprise Portal architecture, components, security, and deployment tools.

Module 14: Services: This module covers the services and Application Integration Framework (AIF) components and the steps required to configure inbound and outbound ports.

Module 15: Manage Alerts: With this module, you can learn how to configure and manage settings for alerts.

Module 16: Manage Email: This module explains how to configure and manage settings for email.

Dynamics AX 2012: Development Foundations – Level 300

Target Audience:

This 300-level workshop is designed for those responsible for creating, customizing, and extending modifications in Microsoft Dynamics AX. The prerequisites that allow candidates to see the most value from this workshop are:

- A good understanding of Microsoft Dynamics AX, SQL Server, and Visual Studio
- Previous experience with object oriented programming

In order to ensure that concepts are practiced and understood, hands on-labs are an emphasis of this course

Overview

Microsoft Dynamics AX offers a great amount of flexibility to adapt to your business. With the Development Foundations Workshop, we will introduce you to customizing the application to meet your needs.

This workshop is designed to introduce you to Microsoft Dynamics AX development, get you started in customizing your environment, and prepare you for advanced development. This training covers:

- Architecture
- Data dictionary
- User interfaces
- X++ (introductory level)
- Control statements
- Objects and classes (introductory level)
- Accessing the database
- Exception handling
- Security

This workshop is intended for individuals who have minimal or no experience developing in an AX system. In this course participants will learn the development components and how to use these components to create, customize, and extend modifications in and AX 2012 environment.

Technical Highlights

After attending this workshop, students will be able to:

- Understand the requirements and prerequisites for a Microsoft Dynamics AX 2012 development.
- Use the various Microsoft Dynamics AX 2012 development components and features.
- Perform the administrative tasks necessary to create and maintain customizations in a healthy Microsoft Dynamics AX environment.
- Manage the movement of customizations from one environment to another.
- Reverse engineer objects.

Syllabus

This workshop runs 4 full days, typically scheduled from 9 to 4. Students should anticipate consistent start and end times for each day. Early departure on any day is not recommended.

Day 1:

Module 1: Architecture

- Features of Dynamics AX
- Architecture
- Development Environments
- Model Driven Architecture
- Licensing and Configuration

Module 2: Data Dictionary

- MorphX and the Application Object Tree
- Tables Overview
- Data Types, Primitive and Extended
- Creating Tables
- Indexes
- Relations
- Base Enumerations
- Views

Day 2:

Module 3: User Interfaces

- Forms
- Joining Data Sources
- Menu Items
- Form Templates
- List Pages
- Fact Boxes

Module 4: Intro to Xpp

- Characteristics of X++
- Development Tools
- Best Practices

Module 5: XppControl Statements

- Variables
- Operators
- Conditional Statements
- Loops
- Built-in Functions
- Communication Tools

Day 3:

Module 6: Objects and Classes

- Classes
- Method Access Control
- Inheritance
- Objects
- Scoping and Parameters in X++
- Referencing Objects Methods
- Method Types
- Tables as Classes
- Eventing

Module 7: Accessing the Database

- Retrieving Data
- Data Manipulation
- Queries

Day 4:

Module 8: Exception Handling

- Exceptions
- Try and Catch Statements
- Throwing Exceptions
- Optimistic Concurrency Exceptions

Module 9: Security

- Setting Up a New User
- Assigning a User to a Role
- Changing Duties on a Role
- Changing Privileges on a Duty
- Assigning a Permission to a Privilege
- Investigating Access

Module 10: Security for Developers

- Permissions
- Security Policies
- Code Access Security
- Display Method Authorization

Dynamics AX 2012: Advanced Development – Level 300

Target Audience:

This course is designed for those responsible for creating, customizing, and extending modifications in Microsoft Dynamics. The pre-requisites that allow candidates to see the most value from this course are:

- AX2012 Development Foundations Workshop
- A good understanding of Microsoft Dynamics, SQL Server, and Visual Studio
- Previous experience with object oriented programming
- This is a level 400+ level course

Overview

Microsoft Dynamics® AX offers a great amount of flexibility to adapt to your business. With the Advanced Development Workshop, we will take you on a deep dive into customizing the application to meet your needs. The training covers working with data, classes, forms, Visual Studio integration, number sequences, framework features, application foundation features, X++ unit test framework, and workflow. This course is designed to build on your to AX development experience in customizing your environment on an advanced level.

This workshop is intended for individuals who are experienced in developing in an AX system or have completed the AX2012 Development Foundations Workshop. In this course participants will dig into the development components and learn about frameworks and features and how to use them to create, customize, and extend modifications in and AX 2012 environment.

Technical Highlights

After attending this comprehensive workshop, students will be able to:

- Design classes and forms
- Understand the Visual Studio integration
- Create Number Sequences
- Work with framework features
- Understand application foundation features
- Interact with data and build customizations using the extensibility of Dynamics AX

This workshop runs 4 full days.

Students should anticipate consistent start and end times for each day. Early departure on any day is not recommended.

In order to ensure that concepts are practiced and understood, hands on-labs are an emphasis of this course

Syllabus

This is a 4 day workshop, typically scheduled from 9 to 4.

Day 1:

Module 1: Working with Data

While Select · Query · Caching · Locking · Temporary Tables · InitFrom · ParmTables · Date Effectiveness · Computed Columns in Views · Data Integration

Module 2: Classes

Collection Classes · Application Object Classes · Application Substituted Kernel Classes · RunBaseFramework · ArgsObject

Day 2:

Module 3: Forms

Architecture · Data Sources · Form Controls · Form Methods · Placement of Code · Additional Controls

Module 4: Visual Studio Integration

Application Explorer · Visual Studio Projects · Managed Code Projects · Deploying Managed Code · Visual Studio Debugging Experience for X++

Module 5: Number Sequences

Setup and Administration · Extensibility Scenarios · Using Number Sequences in Forms

Day 3:

Module 6: Framework Features

Event Handlers for Customization · Integration with Microsoft Dynamics AX · Application Integration Framework · System Operation Framework · Interop to/from X++ · Deploy .NET Assemblies for Interop

Module 7: Application Foundation Features

Global Address Book · Extensible Data Security Policy Framework · Financial Dimension Framework · Organization Model Framework · Case Management Framework · Policy Framework

Day 4:

Module 8: X++ Unit Test Framework

Creating Test Cases · Adding Methods to Test Cases · Running Test Cases · Build Test Projects and Suites

Module 9: Workflow

Workflow Configuration · Create a Workflow Category · Create a Query · Create a Workflow Type · Enable Workflow on a Form · Create a Workflow Approval · Create Event Handlers · Author a Workflow

Module 10: Workflow Development

Line-Item Workflows · Workflow Providers · Work Item Queues · Currency in the Condition Editor · Hierarchy Type Fields in the Condition Editor

Dynamics AX 2012 R3: Retail Administration and Troubleshooting – Level 300

Target Audience

This course is an advanced course for Dynamics AX 2012 R3 Retail and is targeted at senior IT staff who have designed, deployed, administered and managed Microsoft Dynamics AX 2012.

Pre requisites

The basic concepts and know-how of the basic Microsoft Dynamics AX 2012 product will not be covered in this course, and it is expected that attendees will already possess that knowledge.

Overview

The Microsoft Dynamics AX 2012 R3 Retail workshop provides attendees with the deep knowledge and understanding of the architecture, deployment and troubleshooting techniques and the tools needed to identify and solve issues on Microsoft Dynamics AX 2012 R3 Retail.

Through presentations, white-board discussions, and goal-based labs, this 2-day workshop covers the Retail architecture and deployment aspects as well as individual approaches for troubleshooting problems, explore the tools and logs available to monitor, trace and identify the root cause of issues.

Key Features and Benefits

Each group of modules is organized by scenario and is designed to provide participants with in-depth expertise, tools and hands-on experience to help troubleshoot and design Retail components' workloads.

Technical Highlights

After completing this course, you will be able to:

- Understand the Retail architecture and deployment possibilities and requirements of each component.
- Understand how to design and maintain a Retail infrastructure.
- Collect and analyze log traces used to troubleshoot Retail components.
- Identify action plans to troubleshoot different components and areas of Microsoft Dynamics AX 2012 R3 Retail environments.

Hosted Requirements

Participants will need a computer running at least Windows 7, with 50 GB free drive space, a USB port, a 10 Mbps or faster network adapter, at least an evaluation copy of Office 2010 Professional or later, and a PDF reader.

Participants also need a Microsoft/Windows Live ID to connect to the virtual environment. The classroom must be networked, with access to the Internet and at least total Internet bandwidth of 2 megabits per second. TCP port 443 must be open. We highly recommend a wired network in the classroom.

Syllabus

This workshop runs for two full days. Students should anticipate consistent start and end times for each day. Early departure on any day is not recommended.

Day 1

Module 1: Architecture: This module provides an overview of Microsoft Dynamics AX 2012 R3 Retail components and possible architecture designs.

Module 2: Deployment: In this module, you will be presented with typical deployment scenarios and the best deployment methodology for each and what are the requirements of each component.

Module 3: Commerce Data Exchange (CDX): This module presents the Real-Time service component and the Async Server and Client components. How they work, deployment and configuration.

Day 2

Module 4: Enterprise Point of Sale (EPOS): This module covers installation and configuration of the EPOS and how to manage the most common administrative tasks.

Module 5: End of Day Processing: This module focuses on the periodical tasks needed to maintain data integrity and flow, and how does it all work in batch.

Module 6: Troubleshooting & Monitoring: This module provides troubleshooting steps to identify issues related to Retail components' typical problems and monitoring techniques of each component.

Dynamics CRM 2015: Administration and Troubleshooting – Level 300

Gain a deeper understanding of how to administer and maintain Microsoft Dynamics CRM for optimal functionality, performance, user adoption, and ultimately, return on investment.

Target Audience:

This course is designed for Microsoft Dynamics CRM Administrators. The key focus of this course is to learn how to support the environment in a more productive manner. The prerequisite that helps participants to see the most value from this course is:

- A good understanding of Microsoft Dynamics CRM and underlying technologies such as Microsoft SQL Server, Windows Server, and Active Directory Domain Services (AD DS).

Overview

The Microsoft Dynamics CRM Admin and Troubleshooting WorkshopPLUS is a three-day course that will:

- Focus on the key components of the application and the supporting technology.
- Discuss the tools and impart the knowledge to troubleshoot common issues with the application.
- Discuss the best practices on how to support the users of Microsoft Dynamics CRM application.

Key Features and Benefits

During the course, participants are provided with the content and hands-on exercises encompassing several different aspects of administering Microsoft Dynamics CRM. The key areas include:

- Setup and Configuration
- Application Core Components
- Customizations and Advanced Troubleshooting

This is a level 300+ WorkshopPLUS, which emphasizes on hands-on labs to ensure that concepts are practiced and understood.

Hardware Requirements:

To participate in the course, students need to have access to a development machine that meets or exceeds the minimum hardware requirements below. Contact your TAM if the necessary hardware needs to be provided.

If you are attending an Open Enrollment, the hardware will be provided for you.

Minimum and Recommended IT Requirements

- Operating System: Windows Server 2012 R2 with Hyper-V
- Processor: Pentium IV 2.4 gigahertz (GHz)
- RAM: 16 gigabytes (GB) of RAM
- HD Space: 80-GB hard disk, 7200 RPM
- Networking : Cloud Hosted labs only require internet connectivity
- Peripherals:
 - 16-megabyte (MB) video adapter (32 MB recommended)
 - Super VGA (SVGA) monitor (17 inch)

Syllabus

This WorkshopPLUS runs for three full days. Participants should anticipate consistent start and end times for each day. Early departure on any day is not recommended.

Day 1: Setup and Configuration

- Feature Overview of Microsoft Dynamics CRM
- Server Install, Setup and Configuration
- Email Router and Server Side Sync Install, Setup and Configuration
- Outlook Client Install, Setup and Configuration

Day 2: Application and Customizations

- Customizations and Solutions
- Reporting Overview
- Processes: Workflows, Business Process Flows and Dialogs
- Mobile Solutions: Tablets and Phones

Day 3: Advanced Topics

- Data Management
- SharePoint Integration
- Claims-Based Authentication and Internet-Facing Deployments
- Multi-Currency and Multi-Languages
- Microsoft Dynamics CRM Administration, Performance and Troubleshooting

Cloud Technologies

Office 365 Exchange Online: Administration and Configuration – Level 300

Target Audience:

This course is targeted at IT Administrators that need to learn:

- How to administer and configure Exchange Online as part of the Office 365 for Enterprise.

This course also covers the Exchange Online Hybrid Deployment scenario, where IT Administrators will learn the following through hands-on lab exercises:

- Setup of Single Sign-On
- Active Directory Synchronization
- Exchange 2013 Hybrid configuration

Overview

The Office 365 Exchange Online: Administration and Configuration can be delivered with a three or four day option. The WorkshopPLUS course is designed to cover all concepts of administering the Exchange Online service updated for the latest version, including the Office 365 related components. It also covers the steps required to configure Exchange 2013 Hybrid Coexistence using Single Sign-On with Active Directory Federation Services and Active Directory Synchronization. The course can be delivered in two different modalities.

1. Online Administration Only (three days)

This option is targeted at customers:

- Who do not need or plan to configure any coexistence with their on-premises environment.
- Who have already migrated to Office 365 and need to familiarize with the administration of the new version of the Exchange Online 2013. This option includes Modules 1 through 15 only.

This option includes Modules 1 through 15 only.

2. Full course (four days)

This option is targeted to customers that wish to familiarize themselves with the administration of the new version of the Exchange Online 2013 as well as the Exchange 2013 Hybrid Coexistence. This option includes all modules.

Key Features and Benefits

Each group of modules is organized by scenario and is designed to provide participants with in-depth expertise, tools and hands-on experience.

Technical Highlights

After completing this course, you will be able to:

- Familiarize yourself with administration of Office 365 Admin Center using both the portal as well as PowerShell.
- Understand how to perform innumerable administration tasks in Exchange Online using both the Exchange Admin Center as well as Remote PowerShell.
- Install and configure Active Directory Federation Services.
- Install and configure Active Directory Synchronization.
- Configure Exchange 2013 Hybrid deployment and explore the coexistence features.
- Troubleshoot the most common configuration issues.

Hardware Requirements:

Minimum requirements per student:
An Intel Core-i5 based PC with the following specifications:

- 4-GB RAM
- 128-GB HDD
- Windows 7 SP1 or later
- Office 2013 Professional Plus
- Internet access with at least 1 Mbps per student

Syllabus

This workshop runs for three or four full days depending on the delivery option. Students should anticipate consistent start and end times for each day. Early departure on any day is not recommended. There is a hands-on lab associated with each of the following modules.

Module 1: Introduction to Office 365: This module discusses:

- The overview of the service.
- The subscription plans.
- How to sign up for Office 365 for Enterprises.

Module 2: Office 365 Management Interface: This module covers the Office 365 Admin Center as well as the Windows Azure Active Directory module for Windows PowerShell, used to manage Office 365.

Module 3: User, Groups and Domains: This module covers management tasks associated with users, groups and domains via both the Office 365 Admin Center as well as Windows PowerShell.

Module 4: Diagnostic and Migration Readiness Tools: This module covers the tools used for diagnostics as well as readiness assessments of the on-premises environment. Students will learn how to use the Microsoft Online Services Diagnostics and Logging (MOSDAL) tool and review the reports.

Module 5: Recipients: This module covers the administration of mailboxes, groups, resources, contacts, and shared mailboxes using both the Exchange Admin Center as well as the Remote PowerShell.

Module 6: Permissions: This module covers the concepts and administration of admin roles, user roles and Outlook Web Access (OWA) policies via both the Exchange Admin Center as well as the Remote PowerShell.

Module 7: Compliance Management: This module covers the concepts and administration of the Compliance Management features, including In-place eDiscovery and hold, auditing, data loss prevention, retention policies, retention tags, journal rules via both the Exchange Admin Center as well as the Remote PowerShell.

Module 8: Organization Sharing: This module covers the concepts and administration tasks related to Free/Busy sharing and calendar sharing with other organizations.

Module 9: Exchange Online Protection: This module covers the concepts and administration tasks related to anti-spam and anti-malware, connection filter, content filter, outbound spam and quarantine.

Module 10: Mail Flow: This module covers the concepts and administration tasks related to Transport rules, delivery reports, message trace, accepted domains and connectors.

Mobile 11: Mobile Devices: This module covers the concepts and administration tasks related to Mobile device access and mobile device mailbox policies in Exchange Online.

Module 12: Public Folders: This module covers the concepts and administration tasks related to Public Folders and Public Folder Mailboxes in Exchange Online.

Module 13: Unified Messaging: This module covers the concepts and administration tasks related to Unified Messaging dial plans and Unified Messaging IP gateways in Exchange Online.

Module 14: Office 365 Rights Management Services (RMS): This module covers the concepts and administration tasks related to the RMS in Office 365.

Module 15: Mailbox Moves (Email Migration): This module covers the concepts and administration tasks related to the different options for migrating mailboxes to Exchange Online, including Internet Message Access Protocol (IMAP), cutover and staged migrations.

Module 16: Single Sign-On: This module covers the concepts and administration tasks related to the Single Sign-On (SSO) functionality of Office 365, including Domain Federation via Active Directory Federation Services (AD FS).

Module 17: Active Directory Synchronization: This module covers the concepts and administration tasks related to Active Directory Synchronization in Office 365 as part of the Single Sign-On and Hybrid requirements.

Module 18: Exchange Hybrid Coexistence: This module covers the concepts and administration tasks related to the Exchange 2013 Hybrid configuration, including legacy coexistence with Exchange Server 2010 and Exchange Server 2007 on-premises.

Office 365 Exchange Online: Troubleshooting

– Level 300

Target Audience:

The WorkshopPLUS is for IT pros responsible for migrating and supporting users in Microsoft Office 365. The content is particularly relevant to system administrators and support personnel who can carry out advanced troubleshooting steps across various technologies, including networking, Microsoft Exchange Server, and client configuration.

Prerequisites:

Participants should ideally be experienced with Exchange and have general troubleshooting experience.

Overview

The Office 365 Exchange Online: Troubleshooting WorkshopPLUS will provide participants with the information necessary to troubleshoot common issues that may be encountered by customers when using the Microsoft Exchange Online service, including the Office 365 related components. Courseware includes details on the troubleshooting methods and the required tools to identify problems.

Key Features and Benefits

This workshop is ideal for organizations which are looking to move, or have moved to Office 365, and need a solid understanding of how to identify and troubleshoot issues that may arise when shifting from an on-premises environment to a cloud-based service. Each group of modules is organized by scenario, and is designed to provide participants with in-depth expertise, tools and hands-on experience.

Technical Highlights

During this course, students will:

- Learn general troubleshooting concepts.
- Apply concepts during hands-on labs.
- Identify known issues and workarounds.
- Use tools to identify causes of issues.
- Learn Microsoft Outlook best practices to avoid common end-user issues.
- Learn to tune and optimize the network for best performance.
- Troubleshoot identity and authentication problems.
- Troubleshoot Exchange Hybrid and coexistence features.
- Troubleshoot the most common pre-migration and post-migration issues.

IT Requirements:

The minimum requirements per student is an Intel Core-i5 based computer with the following specifications:

- 4-GB RAM
- 128-GB HDD
- Windows 7 SP1 , 8, 8.1
- Microsoft Office 2013 Professional Plus
- Internet access with at least 1 Mbps per student

Syllabus

This WorkshopPLUS runs for three full days. Students should anticipate consistent start and end times for each day. Early departure on any day is not recommended. There is a hands-on lab associated with each of the following modules.

Module 1: Introduction Office 365 and Exchange Online:

This module provides an overview of the service including Microsoft Azure Active Directory, as well as introduction into the administration of an Office 365 tenant.

Module 2: Office 365 Network Troubleshooting: This module covers Office 365 networking fundamentals, troubleshooting, tuning and configuration guidance.

Module 3: Troubleshooting Outlook: This module provides insight into identifying and resolving common end user issues, as well as providing recommended Outlook best practices that will help to avoid common issues around performance, delegates, and calendaring.

Module 4: Troubleshooting Client Connectivity Problems:

This module discusses the various client and connectivity options available for Exchange Online, and covers the tools used for diagnosing and resolving common Outlook connectivity issues.

Module 5: Troubleshooting Identity Issues: This module discusses troubleshooting common Microsoft Online Services Directory Synchronization tool issues, including monitoring and disaster recovery procedures

Module 6: Troubleshooting Authentication Problems:

This module covers the client authentication flow, Active Directory Federation Services (AD FS) and Password Sync, and troubleshooting credential prompts.

Module 7: Troubleshooting Hybrid Deployment Issues: This module will delve into the common hybrid setup problems, as well as provide insight into how to troubleshoot coexistence issues, mailbox moves, and cross-premises mail flow.

Module 8: Troubleshooting Office 365 Mail Flow Problems:

This module discusses how to deal with quarantined messages, prevention of spam and phishing attacks, and how to trace messages into and out of the Exchange Online Protection environment.

Module 9: Troubleshooting Public Folders: This module covers the concepts of configuring and troubleshooting public folder co-existence, migration and client connectivity issues.

Module 10: Tenant Based Administration Troubleshooting:

This module discusses how to recover accidental deleted user objects and mailboxes, locate and destroy a sensitive message sent to all users, and use auditing to troubleshoot mystery mailbox item deletions.

Office 365 Skype for Business Online: Administration and Configuration – Level 300

Target Audience:

This course is targeted at IT Administrators that need to learn:

- How to administer and configure Skype for Business Online as part of Office 365 for Enterprise
- This course also covers Single Sign-On and Active Directory Synchronization through lecture and labs.

Overview

The Skype for Business Online: Administration and Configuration workshop is designed to cover all concepts of administering the Skype for Business Online service, including the Office 365 related components. It also covers the steps required to configure Skype for Business Online, and includes Single Sign-On with Active Directory Federation Services and Active Directory Synchronization.

The course is delivered as a four-day course covering Online Administration. This option is targeted at customers who have already migrated to Office 365, and need to familiarize with administration of Skype for Business Online, various client options, and troubleshooting tools.

Key Features and Benefits

Each group of modules is organized by scenario, and is designed to provide participants with in-depth expertise, tools, and hands-on experience.

Technical Highlights

After completing this course, you will be able to:

- Familiarize yourself with the administration of Office 365 Admin Center using both the portal as well as Windows PowerShell.
- Understand how to perform various administration tasks in Skype for Business Online using the Skype for Business Online Admin Center.
- Install and configure Active Directory Federation Services.
- Install and configure Active Directory Synchronization.
- Understand the various clients that can be used with Skype for Business Online.
- Understand Conferencing, Federation and Public Internet Connectivity (PIC) options that can be used with Skype for Business Online.
- Understand the feature sets of cloud based real-time communications (Cloud PBX, PSTN Conferencing, Skype Meeting Broadcast and PSTN Calling).
- Configure Exchange integration through Exchange Web Services (EWS).
- Troubleshoot the most common configuration issues.

Hardware Requirements:

Minimum requirements per student:
An Intel Core-i5 based PC with the following specifications:

- 4-GB RAM
- 128-GB HDD
- Windows 7 SP1 or later
- Office 2013 Professional Plus
- Internet access with at least 1 MBps

Syllabus

This workshop runs for four full days. Students should anticipate consistent start and end times for each day. Early departure on any day is not recommended. There are hands-on labs associated with the majority of the modules below.

Module 1: Introduction to Office 365: This module discusses:

- The overview of the service.
- Subscription plans.
- How to sign up for Office 365 for Enterprises.

Module 2: Office 365 Management Interface: This module covers the Office 365 Admin Center and the Windows Azure Active Directory module for Windows PowerShell, used to manage Office 365.

Module 3: User, Groups and Domains: This module covers management tasks associated with users, groups, and domains via both the Office 365 Admin Center as well as Windows PowerShell.

Module 4: Introduction to Skype for Business Online: This module discusses:

- The overview of the Skype for Business Online service, including plans, service details, client versions, and system requirements.
- What is new in Skype for Business Online for Office 365 administrators.

Module 5: Overview of Skype for Business Clients: This module covers the various clients that can be used with Skype for Business Online.

Module 6: Skype for Business Online Admin Center: This module covers the administration of Skype for Business users and various provisioning options.

Module 7: Conferencing, Federation and Public Internet Connectivity (PIC): This module covers the concepts behind Conferencing, Federation and PIC.

Module 8: Active Directory Synchronization: This module covers the concepts and administration tasks related to Active Directory Synchronization in Office 365 as part of the Single Sign-On and Hybrid requirements.

Module 9: Single Sign-On: This module covers the concepts and administration tasks related to the Single Sign-On (SSO) functionality of Office 365, including Domain Federation via Active Directory Federation Services (AD FS).

Module 10: Skype for Business Online Tools and Troubleshooting. This module covers the tools, such as Snooper, Pre-call Diagnostics (PCD), Office 365 Fast Track Network Analysis Tool and Lync Connectivity Analyzer that can be used to troubleshoot common issues.

Module 11: Skype for Business Online Interoperation with Exchange: This module covers the interoperation with Exchange through Exchange Web Services (EWS).

Module 12: Skype for Business Hybrid: This module covers the configuration of Skype for Business hybrid with On-Premises Lync or Skype for Business server. It also demonstrates onboarding and off boarding users between Skype for Business Online and On-Premises Lync or Skype for Business servers.

Module 13: Voicemail integration with Exchange UM: This module covers the implementation of Exchange Online Unified Messaging with Skype for Business Hybrid configurations.

Module 14: Client Sign-in and Provisioning: This module discusses the concepts involved in Skype for Business client sign-in processes as well as in-band provisioning.

Module 15: Skype Meeting Broadcast: This module covers the feature sets, configuration and end user experience with using Skype Meeting Broadcast. It demonstrates the setup and user experience for hosting events for up to 10,000 people live via any modern browser.

Module 16: PSTN Conferencing: This module covers the feature sets, configuration and end user experience with leveraging Microsoft Office 365 as the PSTN Conferencing provider for Skype for Business Online. It demonstrates the dial-in and dial-out conferencing features of the PSTN Conferencing service.

Module 17: Cloud PBX with PSTN Calling: This module covers the feature sets, configuration and call experience for the Microsoft PBX service within Office 365. It also discusses the domestic and international calling plans provided by the PSTN Calling subscription service.

Office 365 SharePoint Online: Administration and Configuration – Level 300

Target Audience

This Workshop is intended for SharePoint Server administrators who work with SharePoint Server and require knowledge about using SharePoint Online in Microsoft Office 365 multi-tenant offering. To ensure the high-quality knowledge transfer expected by students of this three-day Workshop, the class size is limited to a maximum of 16 students who meet the following criteria:

- Currently working as on-premises SharePoint administrators
- Microsoft Certified IT Professionals (MCITP) for SharePoint
- Microsoft Certified System Engineers (MCSE), or those with similar experience

Overview

The Office 365 SharePoint Online: Administration and Configuration Workshop is a three-day course that teaches you how to manage and support Microsoft Office 365 SharePoint Online. The key areas of focus include:

- Office 365 and SharePoint Online features, and platform capabilities
- Office 365 SharePoint Online multi-tenant offering

This Workshop contains level 200 –300 content. Review the Target Audience information and contact your Microsoft Services representative to ensure that this Workshop is appropriate to the student's experience and technical expertise.

Key Features and Benefits

Each group of modules is organized by scenario and is designed to provide students with expertise, tools, and hands-on experience to understand and work with specific SharePoint Online services, and SharePoint Online client workloads.

Technical Highlights

After completing this course, you will understand the following:

- Office 365 services
- Microsoft Online Users and Groups
- SharePoint Online features and capabilities
- SharePoint Online service applications
- SharePoint Online administration

Hardware Requirements

Minimum requirements per student:

- An Intel Core-i5-based PC
- 4 GB RAM
- 128 GB HDD
- Windows 7 SP1 or later
- Office 2013 Professional Plus
- Internet access with at least 1 Mbps bandwidth per student

Syllabus

This Workshop runs for three full days. Students should anticipate consistent start and end times for each day. Early departure on any day is not recommended.

Module 1: Introduction to Office 365

This module discusses:

- The overview of the service
- The subscription plans
- How to sign up for Office 365 for Enterprises
- Office 365 Management Interface
- User, Groups and Domains

Module 2: Introduction to SharePoint Online

This module is an overview of the SharePoint Online service.

In addition, it covers the following:

- SharePoint Online Service description
- Plans
- Service details
- Supported client versions
- System requirements for SharePoint Online
- What's new in SharePoint Online.

Module 3: Office 365 SharePoint Online Admin Center

This module introduces the SharePoint admin center. It provides an overview of all the SharePoint Online service applications, features, and settings used for SharePoint Online administration.

Module 4: SharePoint Online Management Shell

This module covers the use of the SharePoint Online Management Shell PowerShell module. Topics covered in this Module are typical management scenarios in which the SharePoint Online Management Shell can be used to configure and obtain information from a SharePoint Online tenant.

Module 5: Site Collection Administration

This module will:

- Provide an understanding of the different levels of administration —tenant, site collection, and site — within a SharePoint Online environment.
- Discuss site governance, site templates, storage and resource allocations and quotas, managing user access, security, and external user sharing.

Module 6: Social

This module explains important concepts of User Profile Management, Social features and My Sites. This module also introduces the use of Microsoft OneDrive for Business for synchronizing content between a user's My Site and their PC. It also covers the concepts and topics related to the Enterprise version of Yammer.

Module 7: Data Loss Prevention

This module covers how to provision and utilize eDiscovery, a Record Center, and Information Rights Management for controlling specific types of rights, access, and discovery of content as part of an overall Data Loss Prevention solution in SharePoint Online.

Module 8: Apps

This module will:

- Introduce the new App model in SharePoint Online.
- Provide information on how to provision and use an App Catalog within a SharePoint Online tenant.
- Cover the concepts of the SharePoint Apps Store, SharePoint-hosted Apps, and Remote-hosted Apps.

Module 9: Search

This module covers the Search settings and features that are available in SharePoint Online such as Search Dictionaries, Authoritative Pages, Result Sources, and Query rules.

Office 365 SharePoint Online: End User and Site Administration Basics – Level 200

Target Audience:

To ensure the high-quality knowledge transfer expected by the attendees of this 3-day workshop, class size is limited to a maximum of 16 students, and recommended that students meet the following criteria:

- SharePoint users who are familiar with the basic concepts and features of SharePoint.

Overview

The SharePoint Online: End User and Site Administration Basics workshop addresses the depths of SharePoint Online site management, security, collaboration features, and more. Through presentations, white-board discussions, and goal-based labs, this 3-day workshop will provide SharePoint users and site administrators the skills to walk away with a firm grasp on the technical concepts required to successfully administer and use this world-class collaboration infrastructure.

Key Features and Benefits

Each group of modules is organized by scenario and is designed to provide participants with in-depth expertise, tools and hands-on experience to administer and work with SharePoint Online sites and features.

Technical Highlights

After completing this course, you will be able to:

- Understand the SharePoint Online site and collaboration features.
- Manage site collections, site templates, security, site features, list and libraries, and site data..
- Experience working with web parts, apps, content types, site columns, the search interface, object sharing features, and more.
- Learn how to translate the SharePoint Online site collaboration features to your everyday business needs.

Hardware Requirements:

NOTE: There is no hosted VM or CIAB for this workshop. Each student is required to provide their own laptop or PC that has Internet Explorer 10 or 11 installed. Each student's machine must also have Office 2013 installed.

Syllabus

This workshop runs for 3 full days. Students should anticipate consistent start and end times for each day. Early departure on any day is not recommended.

Module 1: Site Administration: Learn the difference between site collection and site administration settings and the various administration user roles. Also explore the various site templates available for use and best practices around site taxonomy and structure.

Module 2: Securing Content: Understand site and object security options such as permissions, permission levels, groups, the inheritance model, and external user sharing

Module 3: Lists and Libraries: Take a deep dive into working with lists and libraries, list templates, columns, views, versioning, check in/out, and alerts.

Module 4: Working with Content: Explore the powerful content management features such as content types, site columns, managed metadata, policies, the search interface and more.

Module 5: Web Parts and Apps: Gain insight into working with the available Web Parts provided with SharePoint Online products and learn how to leverage SharePoint Apps.

Office 365 SharePoint Online: Performance – Level 300

Target Audience:

Architects, developers and solution creators involved SPO developments and deployments within their companies.

Content Level:

This course contains Level 300 content. This is not a beginner's workshop and requires at least 6 months of experience as SharePoint Administrator or Architect.

Pre-requisites:

Experience with on-premise and/or online SharePoint architecture and development.

Overview

This course introduces the core principles of SharePoint Online performance. The course highlights the main differences -from a performance perspective -between On-Premises and Online. You will then be able to recognize and recommend the best practices for optimal performance.

This workshop contains level 300 content.

Key Features and Benefits

For Organizations, customers and partners using SharePoint online heavily and developing solutions on this platform through configuration and customization.

Technical and Functional Highlights

This workshop runs for 1 full day.

Module 1

Architecture and design –the new topologies and architectures associated with SharePoint Online and how these impact on performance when developing solutions

Module 2

The key new features and functionalities to exploit in developing for SPO : Site structures and navigation, Managed meta data, Search, Animations, Client Side Rendering, etc.

Module 3

The new development paradigm –How to develop and customize for SPO : Hosting patterns, Server interaction, Templates, Master pages and branding.

Module 4

Common pitfalls to avoid using when developing with SharePoint Online. Common performance issues in SharePoint Online are discussed and analyzed. You will be able to identify the root cause of the performance problems and help provide a solution.

How the Offering Works

- The workshop sessions are delivered either via Microsoft Lync, or at Microsoft or customers offices.
- The instructor delivers a combination of Microsoft PowerPoint, live demos, and Q&A
- Typical delivery time is 8 hours, including Q&A

Office 365 Security and Compliance – Level 300

Target Audience:

This course is an advanced course for Office 365 Security and Compliance. It is intended for Administrators that have already migrated to Office 365 or soon will be.

The basic concepts and know-how of the product will be covered in this course, however it is expected that attendees will already possess basic knowledge of Office 365.

Overview

The Office 365 Security and Compliance workshop provides attendees with the deep knowledge and understanding of how to leverage the Security and Compliance features of both Exchange Online and SharePoint to comply with their organizations Security and Compliance mandates.

Through presentations, white-board discussions, and goal-based labs, this 3-day workshop covers the Security and Compliance tools needed for an Office 365 administrator.

Key Features and Benefits

Each group of modules is organized by scenario and is designed to provide participants with in-depth expertise, tools and hands-on experience to configure and implement the various Security and Compliance features in Office 365.

Technical Highlights

After completing this course, you will be able to:

- Understand how to set up and configure a Hybrid Exchange and SharePoint environment.
- Understand and implement the various Security and Compliance features in Exchange Online.
- Understand and implement the various Security and Compliance features in SharePoint Online and Hybrid.

Hosted Requirements:

This Workshop Plus can be delivered either remotely or on-site.

Hardware Requirements:

Minimum requirements per student:
An Intel Core-i5 based PC with the following specifications:

- 4-GB RAM
- 128-GB HDD
- Windows 7 SP1 or later
- Office 2013 Professional Plus
- Internet access with at least 1 Mbps per student

Syllabus

This workshop runs for 3 full days. Students should anticipate consistent start and end times for each day. Early departure on any day is not recommended.

Module 1: Office 365 Summary: The overview of the Office 365 service, subscription plans. How to sign up for Office 365 for Enterprises.

Module 2: Active Directory Synchronization: This module covers the concepts and administration tasks related to Active Directory Synchronization in Office 365 as part of the Single Sign-On and Hybrid requirements

Module 3: Single Sign On: This module covers the concepts and administration tasks related to the Single Sign-On (SSO) functionality of Office 365, including Domain Federation via Active Directory Federation Services (AD FS).

Module 4: Exchange Hybrid Coexistence: This module covers the concepts and administration tasks related to the Exchange 2013 Hybrid configuration, including legacy coexistence with Exchange Server 2013.

Module 5: In-Place Hold: This module focuses on the In-Place Hold features of Exchange Online.

Module 6: In-Place Archiving: This module provides an overview of the In-Place Archiving capabilities of Exchange Online.

Module 7: Message Records Management: In this module, you will explore the Message Records Management options of Exchange Online.

Module 8: In-Place eDiscovery: This module explains to perform In-Place eDiscovery tasks in Exchange Online and SharePoint.

Module 9: Information Rights Management: In this module you will discover how to configure and implement Information Right Management.

Module 10: Data Loss Prevention: This module focuses on the configuration and implementation of Data Loss Protection in both Exchange Online and SharePoint..

Module 11: Office 365 Mail Encryption: This module presents the native Mail Encryption Feature of Exchange Online.

Module 12: One Drive for Business Feature: This module covers the Security and Compliance features for One Drive for Business.

Module 13: SharePoint Records Management: In this module you will discover how to configure and implement SharePoint Records Management.

Microsoft Azure: Infrastructure as a Service – Level 300

Turn industry challenges into your opportunity by differentiating yourself, and delighting your customers with Microsoft Azure and Infrastructure as a Service leveraged application platforms

Overview

Microsoft® Microsoft Azure is an internet-scale, high-availability cloud fabric operating on globally-distributed Microsoft data-centers. It and related tools support development and deployment of applications into a hosted environment that extends the on-premises data center. The Microsoft Azure Infrastructure as a Service (IaaS) platform can be leveraged to deploy existing and new application platforms composed of operating systems, applications, middleware, database servers, third-party components and frameworks, as well as internal and external networking configurations required for communications.

This 3 day workshop provides architects, IT pros and developers with the knowledge and experience needed to make the initial architectural and development decisions about their use of Microsoft Azure IaaS. It consists of two main parts: classroom teaching and hands on experience introducing Microsoft Azure concepts and tools.

The course can also be customized to focus on the delivery of a particular application with the flexibility to augment the course with a consulting engagement involving architectural assistance or proof of concept development.

Key Features and Benefits

The course provides classroom presentation, class exercises and hands-on lab materials, which ensure that you quickly acquire knowledge and skills needed to design and develop Microsoft Azure applications. A number of technology-focused demos, as well as sample automations, augment the materials.

Technical Highlights

After completing this course, you will be able to:

- Relate the purpose of Microsoft Azure IaaS to your application requirements
- Architect applications based on Microsoft Azure
- Develop and deploy existing application platforms to Microsoft Azure

Prerequisites:

We expect the participants to have:

- General familiarity with cloud computing
- Understanding of application architecture
- General understanding of networking concepts
- Access to Azure management environment and account

Syllabus

This workshop runs for 3 full days. Students should anticipate consistent start and end times for each day. Early departure on any day is not recommended.

Microsoft Azure overview

- Introduction to cloud computing
- Cloud services and scenarios
- Microsoft Azure Management Portal overview

Microsoft Azure Resource Manager (ARM)

- Describe the usage of ARM
- Details of ARM JSON code structure
- Discussion of Classic and V2 virtual machines

Microsoft Azure Virtual Machines

- Support for key server applications
- Storage management and machine sizes
- Provisioning patterns and approaches
- High availability features

Microsoft Azure Networking

- Virtual Machines and DNS
- Protocols and endpoints
- Cross-premise connectivity
- Virtual networking

Virtual Machine Management with PowerShell

- Microsoft Azure Portal management
- PowerShell Cmdlets for Microsoft Azure
- Desired State Configuration
- Identity
- Discussion about Microsoft Azure Active Directory in IaaS
- Discussion about Microsoft Azure Active Directory
- Discussion about Microsoft Azure Multi-Factor Authentication

Backup and Automation

- Discussion about Azure Backup
- Discussion about Azure Automation

SQL Server in IaaS (Optional)

- SQL Server IaaS vs PaaS
- Provisioning Microsoft Azure VMs for SQL
- Accessing SQL Server
- Migrating SQL Server Data/Workloads
- Best Practices/Summary/Resources

* Note that this module is not typically included in the standard 3 day workshop and therefore may increase the length and cost of the workshop.

Microsoft Azure: Infrastructure Cost Optimization – Level 300

Turn industry challenges into your opportunity by differentiating yourself, and delighting your customers with Microsoft Azure and infrastructure as a service (IaaS) leveraged application platforms

Target Audience:

This course is an advanced course of Azure and is targeted at IT Professionals who will design, deploy, administrate and manage a hybrid cloud infrastructure.

Overview

Microsoft Azure is an internet-scale, high-availability cloud fabric operating on globally-distributed Microsoft datacenters. Azure and its related tools support development and deployment of services into a hosted environment that extends the on-premises datacenter. The Azure IaaS platform can be leveraged to deploy existing and new application platforms composed of operating systems, applications, middleware, database servers, third-party components and frameworks, as well as internal and external networking configurations required for communications.

This three-day WorkshopPLUS provides IT professionals with the knowledge and experience needed to make the initial architectural, design and deployment decisions about their use of Azure infrastructure services. It consists of two main parts: classroom teaching and hands-on experience introducing Azure concepts and tools.

Key Features and Benefits

The course provides classroom presentation, class exercises and hands-on lab materials, which help you to quickly acquire knowledge and skills needed to design, deploy and administrate infrastructure solutions with Azure. A number of technology-focused demos, as well as sample automations, augment the materials.

Technical Highlights

After completing this course, you will be able to:

- Relate the purpose of Azure IaaS to your service requirements.
- Architect solutions based on Azure infrastructure.
- Design, migrate and deploy existing service platforms to Azure.

Prerequisites:

We expect the participants to have:

- General familiarity with cloud computing.
- Understanding of System Center.
- General understanding of networking concepts.

Hardware Requirements:

This WorkshopPLUS uses hosted labs only and requires high speed Internet connection for all student workstations.

Syllabus

This WorkshopPLUS runs for three full days. Students should anticipate consistent start and end times for each day. Early departure on any day is not recommended.

Module 1: Microsoft Azure overview: This module provides an overview of Azure and cloud computing.

Module 2: Microsoft Azure Pricing: This module discusses Azure pricing. It explains how to calculate the price of a solution and the factors that affects the price.

Module 3: Microsoft Azure Storage Service: This module explains how Azure Storage Service works, and how it can be used in an optimized way.

Module 4: Microsoft Azure Networking: This module discusses how to design and administrate networking in Azure including connection to local networks.

Module 5: Microsoft Azure Virtual Machines: This module focuses on virtual machines in Azure, its settings and administration. This module also covers common practices for performance and high availability.

Module 6: SQL Server in Microsoft Azure: This module provides the knowledge to decide when to use SQL Server in IaaS or SQL Server in platform as a service (PaaS). This module also covers database migration and common practices.

Module 7: Evaluate Solution to Transition to Microsoft Azure: In this module, you will learn how to evaluate the services and servers that need to be migrated to Azure. The module also covers how to migrate services.

Module 8: Azure Automation: This module explains how to work with automation of Azure resources.

Module 9: Azure Backup and disaster recovery: This module focuses on Azure Backup and site recovery services with Azure.

Module 10: Monitoring PaaS and IaaS services: This module focuses on monitoring of services in Azure, both with the default Azure features and with System Center Operations Manager.

Module 11: Azure Advanced Concepts: This module focuses on the different traffic control features and Azure RemoteApp.

Microsoft Azure: Developing Solutions – Level 300

Target Audience:

To help us ensure the high-quality knowledge transfer students expect from this 3-day workshop, class size is limited to a maximum of 16 students who meet the following criteria:

- At least 1 year of experience with C# and .NET
- Line of Business Application developers.
- IT Developers
- Microsoft Certified Technology Specialist (MCTS) or Microsoft Certified Professional Developer (MCPD) or those with similar experience.

Overview

The Microsoft Azure Platform Application Developer series provides your Development staff with a jumpstart on Microsoft Azure Development, Application Migration, and Debugging. Each service is delivered by a Microsoft Premier Developer resource, who will bring deep Microsoft Azure technical knowledge, development skills, and best practices to your developer organization. Developers will walk away with a firm grasp on the techniques required to successfully develop and manage enterprise-class applications hosted in Microsoft Azure. Please consider that these workshops contain 200 to 400-level content, carefully review the target-audience below and contact your Microsoft Services representative to ensure that it is appropriate for your developers.

Key Features and Benefits

Focused on your employee needs. It is important for students to gain knowledge that will enable them to excel on the job. To accomplish that end, the instructor will gauge the students' knowledge gaps and adjust the course content to focus on areas that will provide the most benefit to your employees.

Knowledge transfer validation. Students like to know how much they learned as a result of the training. During the workshop, the instructor will revisit the class objectives to help us ensure that students are getting the training they expect and understand the concepts.

Microsoft Lab Exercises and Demos. Applying new knowledge to the real world is the key to getting the most value out of your training budget. Our labs and demos highlight key application development concepts, migration blockers, and troubleshooting tasks.

Maximize your investment in Microsoft Azure

Accelerate your Development staffs effectiveness with Microsoft Azure Platform Application Developer Series offerings.

Syllabus

This workshop runs for 3 full days. Students should anticipate consistent start and end times for each day. Early departure on any day is not recommended. Throughout the course, both labs and demos will be utilized to help drive better understanding of the materials. Each module includes at least one hands-on lab.

Microsoft Azure Websites

In this module, we will discuss the option of deploying web applications to another PaaS feature named 'Azure Websites'. We will discuss the differences between Azure Cloud Service web applications (web/worker roles) and Websites. We will delve in to continuous deployment, diagnostics, monitoring and WebJobs. Students will perform a hands-on lab on deploying a pre-existing web application to an Azure Website.

Microsoft Azure Storage

After discussing Cloud Services, we go into a deep dive of the Microsoft Azure Storage features. Students will perform a hands on lab where they learn how to work with Table Storage, Blob Storage, and Queues.

Microsoft Azure Cloud Services

After an overview of Microsoft Azure capabilities, we continue with a breadth discussion about the key pillars of the Microsoft Azure platform. From there a deeper inspection of the core compute platform and tools that will be used throughout the three day class are introduced. These include –Visual Studio 2013, The Microsoft Azure SDK, and some additional tools needed to work with your application assets in the cloud.

Microsoft Azure SQL Database

We will have a discussion of the features of SQL Database, the differences between on-premise SQL and Azure SQL Database and things to consider when implementing Azure SQL Database. This will be followed up by a hands-on lab.

Identity in the Cloud

In this module, we discuss Microsoft Azure Active Directory and Cloud Identity. This topic covers securing your web sites with the use of Microsoft Azure Active Directory for Authentication.

Microsoft Azure Service Bus

This module will include a discussion on the Microsoft Azure Service Bus namespace and access control, relay patterns and messaging. The discussion on messaging will include Queues, Topics and Subscriptions.

Microsoft Azure: Implementing Private Cloud Automation with Microsoft Azure Pack – Level 300

Turn industry challenges into your opportunity by differentiating yourself, and delighting your customers with Implementing Private Cloud Automation with Microsoft Azure Pack

Target Audience:

This WorkshopPLUS is an advanced course for IT Professionals who will design and build a private cloud infrastructure with Automation technologies and Azure Pack.

Overview

Microsoft Private Cloud Technologies This three day WorkshopPLUS provides IT professionals with the knowledge and experience needed to make the initial architectural, design and deployment decisions about their use of Microsoft Azure Pack. The WorkshopPLUS consists of two main parts: classroom teaching and hands-on experience. These two parts introduce all the technologies that you need to be familiar with to deliver a private cloud with Microsoft Azure Pack and Service Management Automation.

Key Features and Benefits

The WorkshopPLUS provides the following benefits:

- Classroom presentation, exercises and hands-on lab materials, which ensure that you quickly acquire knowledge and skills needed to design and deploy a private cloud with Microsoft Azure Pack.
- A number of technology-focused labs covering real world examples, and augmented materials.

Technical Highlights

After completing this WorkshopPLUS, you will be able to:

- Relate the purpose of Microsoft Azure Pack to your organization.
- Relate the purpose of Service Management Automation to your organization.
- Plan solutions based on Microsoft Azure Pack and Automation Technologies.
- Design and deploy a Private cloud using Microsoft Azure Pack and Service Management Automation.

Prerequisites:

We expect the participants to have:

- General familiarity with Microsoft Hyper-V Server 2012 R2
- General understanding of Virtual Machine Manager 2012 R2
- General understanding of System Center and system management
- General understanding of networking concepts

Hardware Requirements:

- Two computers per student
- 64-bit Intel/AMD processor with Virtualization Technology (VT) and Data Execution Prevention (DEP)
- Two physical disk drives, each with 500 GB storage capacity
- Each computer with 24 GB RAM
- Each computer with two Network Interface Cards (NICs)

Syllabus

This WorkshopPLUS runs for three full days. Participants should anticipate consistent start and end times for each day. Early departure on any day is not recommended.

Module 1: Introduction to Microsoft Azure Pack

This module provides an introduction to Microsoft Azure Pack.

Module 2: Microsoft Azure Pack Architecture

This module explains the components of Azure Pack and provides recommendations for deployment architectures.

Module 3: Service Fabric

This module covers components required in the fabric for Azure Pack to work and the bare minimal components required.

Module 4: Deploying Microsoft Azure Pack

This module focuses on how to deploy Azure pack and the methods available to you.

Module 5: Administration

This module focuses on the components that you need to configure in order to have Azure pack up and running and goes to users. It also discusses about Azure pack subscriptions and plans.

Module 6: Troubleshooting

This module covers the basic communication paths within Azure Pack and Service Fabric as well as the tools available to help troubleshoot.

Module 7: Introduction to Automation

This module introduces generic automation concepts and the thought process around bringing automation into any environment.

Microsoft Azure: Application Monitoring and Diagnostics for IT Professionals – Level 300

Target Audience:

This WorkshopPLUS is an advanced course on Application monitoring and diagnostics under Microsoft Azure.

It is mainly targeted at IT Professionals, IT Administrators, Solution Architects as well as Line-Of-Business Application Managers looking to understand how Microsoft Monitoring technologies would help with regards to operating and monitoring their Cloud Application services.

Attendees are recommended to have had exposure and some experience with Microsoft Monitoring technologies such as System Center Operations Manager. Previous exposure to Microsoft Visual Studio is also recommended.

Overview

The three-day Microsoft Azure Application Monitoring and Diagnostics for IT Professionals WorkshopPLUS course provides attendees with deep knowledge on how to monitor applications hosted on Microsoft Azure from an IT Professional perspective.

Key Features and Benefits

Participants will receive insight on Microsoft Azure and its frameworks making application monitoring possible. They will learn how to leverage these frameworks starting from within Azure itself but mainly through Microsoft System Center 2012 R2 Operations Manager as well as Microsoft Azure Operational Insights and the Microsoft Operations Management Suite.

Participants will also learn the basics on the prerequisites to enable monitoring capabilities on their applications as well as how to extend Microsoft System Center 2012 R2 Operations Manager and Microsoft Azure Operational Insights and Microsoft Operations Management Suite to monitor Microsoft Azure Application scenarios.

Participants will additionally benefit from hands-on lab experiences to help consolidate the concepts learned as well as broaden their knowledge skillset around Microsoft Azure and Microsoft monitoring technologies.

Technical Highlights

After completing this course, participants will be able to:

- Understand the basics of Microsoft Azure and the Windows Azure Diagnostics frameworks.
- Understand Microsoft Azure service management and monitoring capabilities.
- Understand Microsoft Azure monitoring scenarios when using Microsoft System Center and Operations Management Suite technologies.
- Understand how to monitor Microsoft Azure Cloud Service Applications with System Center 2012 R2 Operations Manager, Azure Operational Insights, Operations Management Suite and Azure Application Insights.

Hardware Requirements:

Lab environments for this course are generally hosted in the cloud.

Labs delivered on computers within the classroom must meet or exceed the following:

- Windows 8.1 or Windows Server 2012 R2 Hyper-V
- Intel Core i5-class processor with at least 4 cores (8 recommended)
- USB 3.0 support
- 16GB RAM
- 120GB HDD
- 19" monitor (dual monitor configuration recommended)

Additional Requirements:

- Fast and reliable internet connectivity to the Microsoft Azure Cloud platform.
- Microsoft Azure Subscription (Azure Subscription Promotional Codes could be provided if necessary **** this must be confirmed before the training delivery ****)

Syllabus

This WorkshopPLUS runs for 3 full days. Students should anticipate consistent start and end times for each day, to be agreed with the Trainer when starting the delivery.

Early departure on any day is not recommended unless otherwise agreed.

The course uses both Demonstrations and Hands-On Labs to help students better understand the material and reinforce the topics learnt.

Module 1: Microsoft Azure Overview

This module provides an introduction to the Microsoft Azure key concepts and principles.

Module 2: Understanding Azure Diagnostics and how to leverage monitoring data

This module explains the basics of the Microsoft Azure Management APIs and the Azure Diagnostics frameworks. It will enable you to further understand what are the prerequisites to enable monitoring over your Cloud Service Applications related services.

Module 3: Monitoring Solutions

This module discusses the Cloud scenarios and the multiple solutions available to monitor Microsoft Azure.

Module 4: Monitoring with System Center Operations Manager

This module helps you understand key System Center Operations Manager concepts, where it fits in as well as the broad set of capabilities, scenarios and extensibility options that can be leveraged when monitoring Azure Cloud Service Applications.

Module 5: Monitoring with Operations Management Suite

This module helps you further learn about the Microsoft Operations Management Suite and how Azure Operational Insights integrates with it to monitor your Azure Cloud Service Applications.

Module 6: Monitoring with Azure Application Insights

This module discusses the key capabilities of Azure Application Insights as well as what features are exposed to IT Professional audiences when looking to monitor Azure Cloud Service Applications or even other Web Application Endpoints.

Cloud Technologies

Microsoft Azure

DATACENTER
TECHNOLOGIES

CLIENT
TECHNOLOGIES

BUSINESS
SOLUTIONS

CLOUD
TECHNOLOGIES

SECURITY

DEVELOPMENT

Security

Securing Windows Active Directory – Level 300

Target Audience:

This course is an advanced course for securing Active Directory on all supported Windows Operating Systems. The course is targeted at Active Directory Administrators or Security Architects who have designed, deployed, administered and managed a Windows Active Directory infrastructure.

Active directory fundamental capabilities and behaviors will not be covered in this course, and it is expected that attendees will already possess that knowledge.

Overview

Active Directory is the backbone of every organization it is deployed in through its identity management, configuration management, and authentication services it provides. The thinking that attackers are outside your internal network is an out of date security mentality; according to researchers, the majority of attacks are from inside the network. This starts with protecting the Active Directory service. As Active Directory administrator or Active Directory security architect you have to protect the most sensitive business data and assets in your organization.

This 3-day workshop will teach students how to better secure your Active Directory Domain Controllers by reducing the attack surface, how to look for signs of compromise and how to secure the administrative and other powerful accounts. Our goal is to ensure that all students understand the importance, security mechanisms, and tasks required to secure and audit Active Directory using security recommended practices.

Key Features and Benefits

Each group of modules is organized by scenario and is designed to provide participants with in-depth skills. Attendees will have the opportunity to investigate and identify security issues in a poorly configured Active directory, and accomplish remediation through the use of freely available tools.

Technical Highlights

After completing this course, you will be able to:

- Understand typical security threats and the most effective countermeasures against them.
- Identify Security Issues & Protect Privileged Accounts on your sensitive Servers and your Active Directory partitions.
- Implement Remediation Plan and Monitoring.
- Develop skills for Security and Identity Protection for the Modern World.

Contact your TAM if hardware is to be provided. If you are attending an Open enrollment workshop, the hardware will be provided for you.

Syllabus

This workshop runs for three full days. Students should anticipate consistent start and end times for each day. Early departure on any day is not recommended.

Day 1

Module 1: Security Issues / Threats & Myths and Reality

This module details Active Directory security threats and current Top 10 security issues illustrated by demos. This is also an opportunity for open discussion about Security Myths and Reality.

Module 2: Identify & Protect Privileged Accounts – Part 1

In this module, you will be presented with how to identify powerful accounts and sensitive resources in your organization; how to identify security hygiene issues, where and how credentials are stored; authentication protocol mechanism and an overview of risk management.

Day 2

Module 3: Protect Privileged Accounts – Part 2

This module presents areas of security mitigation through the latest security features in Windows Active Directory and the recommended security practices. A lab put attendees in a real condition where they have to identify security issues in Active Directory using provided list of tools.

Module 4: Protect your Servers and your Active Directory partitions

This module covers how to mitigate security risks for sensitive servers such as Domain Controllers, Active Directory Certificate Services (ADCS), Admin Workstations and check security settings on Active Directory Partitions. You will see security features that can be implemented to reduce the attack surface.

Day 3

Module 5: Remediation Plan and Monitoring

A lab will put attendees in a real scenario where they have to implement remediation to mitigate security issues in Active Directory using provided and freely available tools. This module focuses on how to setup a plan for detecting abnormal activities in Active Directory using a list of tools and methods.

Module 6: Security and Identity Protection for the Modern World

This module provides information about security mechanisms in Windows Azure Active Directory (AAD), security threats with Bring Your Own Device (BYOD) and covers new security features provided by Windows 10 such as Next Generation Credentials.

Windows Server 2012: Managing and Supporting AD CS Advanced – Level 300

Target Audience

To ensure the high-quality knowledge transfer expected by the attendees of this four day workshop, the class size is limited to a maximum of 16 students who meet the following criteria:

- Minimum of 2-3 years' experience with Active Directory administration and at least 1 year intensive experiences in administering AD CS.
- Job titles such as:
 - System Administrators
 - Security Architect/Engineer
 - Active Directory Architect/Engineer

Detailed instruction combined with high quality practice labs prepares students to successfully master the management and support of a Windows Server 2012 R2 AD CS.

Overview

The Windows Server 2012 Managing and Supporting Active Directory Certificate Services (AD CS) Workshop series provides participants with the knowledge and skills to understand, plan, build, manage, monitor, and support a Windows based Public Key Infrastructure (PKI).

This 4-day Advanced WorkshopPLUS consists of demonstrations and labs that provide hands-on experience focusing exclusively on the skills and objectives that align with migration, advanced AD CS role services, enrollment strategies and AD CS management processes.

The content of the workshop series has been designed in a way the modules can be delivered independently from each other, providing the possibility to select which modules are included in the workshop.

Key Features and Benefits

This workshop is valuable for organizations who wish to develop their understanding of Windows Server 2012 PKI management and support, aimed at improving the operational health of the PKI by implementing effective operations, support, and management best practices in addition to considerations to plan a migration to Windows Server 2012 PKI.

Technical Highlights

After completing this course, you will be able to:

- Understand and manage advanced AD CS role services
- Understand advanced enrollment strategies
- Understand the common support tasks required to manage and maintain a PKI
- Manage the most common tasks in managing Windows Server AD CS
- Learn how to upgrade and migrate a Certification Authority Infrastructure

Hardware Requirements:

Contact your TAM if the necessary hardware needs to be provided.

If you are attending an Open enrollment workshop, the hardware will be provided for you.

Syllabus

This workshop runs for four full days. Students should anticipate consistent start and end times for each day. Early departure on any day is not recommended.

Module 6: NDES-Advanced Enrollment Methods (Part 1) -This module explains how network devices which cannot authenticate against Active Directory can enroll for a certificate by the usage of the Network Device Enrollment Protocol service and by implementing the Simple Certificate Enrollment Protocol (SCEP).

Module 7: CES/CEP-Advanced Enrollment Methods (Part 2) -This module explains how the optional role services Certificate Enrollment Policy Web Service and the Certificate Enrollment Web Service have changed the way certificates can be requested enrolled from a Windows Server® 2012 R2 Certification Authority.

Module 8: Cross Forest Auto-Enrollment-This module describes how organizations holding more than one Active Directory forest can benefit from a single Active Directory Certificate Service running on Windows Server® 2012, issuing certificates to domainmembers in other forests.

Module 9: OCSP -This module describes the Online Certificate Status Protocol (OCSP) implementation within the Active Directory Certificate Services in Windows Server® 2012. It will focus on design principles and deployment strategies.

Module 10: Upgrade and Migration -This module explains in detail the proper planning and execution of a Certification Authority migration from Windows Server® 2008 R2 to Windows Server® 2012 R2 in order to ensure stability and supportability of your Public Key Infrastructure.

Module 11: PKI Maintenance and Availability Operations -This module will cover the business continuity plans and disaster recovery procedures any company should have in place to quickly recover from a failure affecting the Active Directory Certificate Services in Windows Server® 2012.

Module 12: Role Separation & Key Recovery-In this module attendees will learn how to implement role separation in order to deal with private key archival and key recovery.

Module 13: Working with CERTUTIL & PowerShell -This module will demonstrate some useful operational tasks that utilize CERTUTIL and the PowerShell. Attendees will learn some basics that allows to ease ADCS and certificate administrations.

Securing Windows Client – Level 300

Target Audience

This WorkshopPLUS is targeted at the following IT professionals who deploy, design, and implement Windows Client environments:

- IT Administrators
- Windows Infrastructure Engineers
- Desktop administrators
- IT Security staff and Administrators

Overview

Security threats are increasingly a focal point for many enterprises. Cybercrime, industrial espionage, and diversity of malware are expanding dramatically. There is no single tool that can protect your assets against all threats. However, by protecting your client infrastructure with defenses at different layers of security, you can significantly reduce the potential exposure.

Corporate client machines and devices can introduce significant security risk. This WorkshopPLUS demonstrates Microsoft's technologies, tools, and methods which can be used to design, deploy, and control client-side security by significantly decreasing several risks in Windows 7, 8, 8.1, and 10 environments. Understand the full story behind Credential Theft and Pass the Hash (PtH) attacks and know all the mitigations and countermeasures available for Windows 7 and later operating systems. The three-day Securing Windows Client WorkshopPLUS provides students with the skills required to protect Windows clients against unintended access or intrusion.

This WorkshopPLUS covers:

- New mitigations in the current Windows client operating systems, including Windows 7, Windows 8, Windows 8.1 and especially Windows 10

Key Features and Benefits

- Hands-on labs and demos
- Workshop structure is modularized and can be customized according to customer's needs

Technical Highlights

After completing this WorkshopPLUS, you will be able to:

- Implement new security features and built-in tools of Windows 7, Windows 8, 8.1 and Windows 10 (auditing enhancements, Credential Guard, Device Guard, Microsoft Passport)
- Understand advanced Windows Firewall capabilities and how to use it to mitigate the risk of PtH attack on network layer, IPsec isolation, and Wi-Fi security.
- Security Compliance Manager (SCM) to evaluate and implement client security configurations.
- Effectively prioritize and implement Microsoft patches for desktops, laptops, and tablets.

Prerequisites

The students must possess knowledge of the following:

- Security threats and vulnerabilities
- Patch management
- Group policy management
- Windows Firewall
- Network security concepts

Hardware Requirements

- Processor: Pentium IV 2.4 GHz
- RAM: 16 GB
- Free hard disk space: 140 GB

Operating System Requirements

- OS: Windows Server 2012 R2 with Hyper-V Role installed.

Syllabus

This WorkshopPLUS suggested duration three full days. Students should anticipate consistent start and end times for each day. Early departure on any day is not recommended.

Module 1: Vulnerabilities, threats and PtH attack overview: This module provides an overview of general vulnerabilities, threats and layered security protection. It covers PtH attack mitigation techniques including the new Windows 10 feature Credential Guard.

Module 2: Securing Client in Application Layer: This module details tools that are available in Windows 7 (Address Space Layout Randomization (ASLR), User Account Control (UAC), Mandatory Integrity Control (MIC) , AppLocker, Session 0 isolation and File and Registry Virtualization) as well as some new features introduced in Windows 10 (auditing enhancements, Device Guard).

Module 3: Securing Client in File/Data layer: This module presents file and data layer security, and protections against offline attacks on client assets. The technologies reviewed in this module include BitLocker and Unified Extensible Firmware Interface (UEFI) boot protections.

Module 4: Client Authentication Security Features: This module covers password challenges and alternatives and new features introduced in Windows 10 (Microsoft Passport, Windows Hello).

Module 5: Protecting Client Network Communication: This module focuses on securing the network layer by providing a deep insight of built-in Windows Firewall and IPsec capabilities, and an overview of secure wireless access, also how to use advanced capabilities of Windows Firewall to mitigate the risk of PtH attack.

Module 6: Patch Management and Protecting Against Client Vulnerabilities: This module provides useful information on Microsoft Support Lifecycle, Microsoft Security Update Release process, client patch management practices, and hotfix branching.

Module 7: Client Baseline Management and Managing Compliance with SCM and DCM: This module provides a detailed overview of SCM. You will understand how to deploy and monitor security baselines of your Windows client infrastructure and how to implement Desired Configuration Manager (DCM) packs created with SCM to evaluate ongoing compliance with System Center Configuration Manager (SCCM).

Microsoft Forensics: Windows 7, 8, Internet Explorer & Office – Level 300

Target Audience:

To ensure the high-quality knowledge-transfer expected by attendees of this 3-day workshop, class size is limited to a maximum of 16 students who meet the following criteria:

- Experience with administration and/or deployment of Microsoft Server 2003/2008 services; including Directory Services and Networking
- Experience with forensic investigations from a tactical perspective
- MCSE, MCITP: Enterprise Admin or equivalent experience in IT Administration
- Experience with administration of security with Microsoft Windows environments

Overview

This workshop is designed to illustrate the artifacts of forensic value that are left behind by Microsoft products. The intent is to provide the forensic investigator, or investigators, a better understanding of the Windows 7 & 8 platforms as well as applications like IE, Office, and others. The workshop provides a mixture of presentation and hands on labs to enable students to better understand the tactical effort in a forensic investigation.

This workshop will cover a variety of topics ranging from the platform, Internet Explorer, and Office line of products. This workshop is spread across 3-days and like all Premier workshops, this class is presented by a product expert with field experience.

Key Features and Benefits

The workshop will provide attendees with a better understanding of what features and locations forensic data can be found. It will help attendees plan for conducting a forensic investigation on Microsoft products. This workshop will also cover the basic guidance around what other investigators are seeing and techniques they use as well as introductory use to some 3rd party tools.

Technical Highlights

After completing this course, you will be able to:

- Explain the differences between Windows 7 & 8
- Identify the features of Windows 7 & 8 that leave artifacts of forensic value
- Understand how Internet Explorer leaves traces of user browsing history
- Identify how Office products include metadata of forensic value
- Understand how to build a Windows FE (Forensic Edition) disk

Hardware Requirements:

Cloud Hosted labs only require internet connectivity from a suitable workstation.

On-premise labs require:

- Windows 8 with Hyper-V
- Pentium IV 3.0 gigahertz (GHz) or higher (Dual-core processor recommended)
- 16 gigabytes (GB) of RAM (16 GB recommended)
- 80-GB hard disk, 7200 RPM (2 hard disks recommended)
- 16-megabyte (MB) video adapter (32 MB recommended)
- Super VGA (SVGA) monitor (17 inch)

Syllabus

This workshop runs for three full days. Students should anticipate consistent start and end times for each day. Early departure on any day is not recommended.

Module 1: Introduction to Windows 7 & 8: This module provides an introduction of Windows 7 & 8 as well as the feature differences between the two.

Module 2: User Accounts: This module discusses how user accounts separate user data from system data.

Module 3: Recycle Bin: This module will cover the 'Recycle Bin' feature and how it handles deleted data.

Module 4: MRU (most recently used) Forensics: This module will cover the MRU feature and how it can show recently used documents.

Module 5: Thumbcache Forensics: This module will cover the concepts related to Thumbcache and how it can yield information about pictures viewed on a suspect system.

Module 6: Libraries: This module will discuss user 'libraries' and how they contribute to investigations.

Module 7: Jumplist: This module will provide information on Jumplists and how they link to items the suspect used.

Module 8: Event Logging: This module discussed evidence found in Event Viewer.

Module 9: Internet Explorer: This module will cover evidence in various versions of Internet Explorer.

Module 10: Prefetch, Superfetch, and ReadyBoost: This module will cover these features and how they are used for memory management.

Module 11: Tracking Removable Media: This module will dive into removable media and how it can be tracked.

Module 12: Volume Shadow Copies: This module will explore the rich data that can be obtained via Volume Shadow Copies.

Module 13: Virtualization: This module will dive into virtualization and how it applies to forensic investigations.

Module 14: Office Forensics: This module will discuss Office forensics starting with Office 2007 to Office 2013.

Module 15: Additional Win8 Features: This module will cover additional features in Win8 and how they might provide forensic value.

Module 16: WinFE(Windows Forensic Edition): This module will demonstrate to students the need for storing forensic tools on non-writeable media and how to create an investigative toolset in Win FE.

System Center 2012 Endpoint Protection: Concepts and Administration – Level 300

Target Audience

To ensure the high-quality knowledge transfer expected by students of this 3-day WorkshopPLUS, the class size is limited to a maximum of 16 students who meet the following criteria:

- Experience with administration and/or deployment of Microsoft System Center Configuration Manager 2007 or System Center Configuration Manager 2012
- Microsoft Certified Systems Engineer (MCSE), Microsoft Certified IT Professional (MCITP): Enterprise Admin or equivalent experience in IT Administration
- Experience with administration of antivirus products, such as Forefront Client Security

Overview

This WorkshopPLUS is designed to provide an administrator, or administrators of System Center Configuration Manager, with the knowledge required to administer and support System Center 2012 Endpoint Protection. The WorkshopPLUS provides a mix of presentation and hands-on labs to help students understand how to deploy and support System Center 2012 Endpoint Protection.

This WorkshopPLUS covers the following topics:

- Architecture
- Agent deployment
- Policy management
- Definition distribution
- Troubleshooting

The duration of this WorkshopPLUS is three days and, like all Premier workshops, is presented by a product expert with field experience.

Key Features and Benefits

The WorkshopPLUS will provide students with in-depth knowledge on the product, and allow them to manage and troubleshoot common issues. After attending this WorkshopPLUS, students will be able to:

- Reduce time required to resolve issues
- Increase their confidence in administering the product

The WorkshopPLUS also covers the inter-operation between System Center Configuration Manager 2007 or System Center Configuration Manager 2012, and System Center 2012 Endpoint Protection. This will allow Configuration Manager administrators to understand the impact of System Center 2012 Endpoint Protection and acquire the skills needed to support it in existing environments.

Technical Highlights

After attending this WorkshopPLUS, students will be able to:

- Deploy System Center 2012 Endpoint Protection clients and policies
- Troubleshoot System Center 2012 Endpoint Protection clients and server components
- Understand and troubleshoot problems related to the inter-operation between System Center 2012 Endpoint Protection and System Center Configuration Manager 2012
- Understand and leverage the protection features of System Center 2012 Endpoint Protection

Hardware Requirements:

To participate in the course, students need to have access to a workstation that meets or exceeds the minimum hardware requirements mentioned below.

Contact your TAM if the necessary hardware needs to be provided.

On-premise labs require:

- Windows Server 2008 R2 with Hyper- V
- Pentium IV 2.4 GHz or higher (Dual-core processor recommended)
- 16 GB of RAM (32 GB recommended)
- 100 GB hard disk, 7200 RPM (2 hard disks recommended)
- 16 MB video adapter (32 MB recommended)
- Super VGA (SVGA) monitor (17-inch)

Syllabus

This WorkshopPLUS runs for three full days. Students should anticipate consistent start and end times for each day. Early departure on any day is not recommended.

Module 1: Introduction

This module provides an introduction to System Center 2012 Endpoint Protection, a description of its protection technologies to detect malware submission and introduction to Defender offline.

Module 2: Integration

This module outlines the new integration of SCEP into ConfigMgr, detailed prerequisites and dependencies, the role SCEP takes in ConfigMgr, and an overview of the definition update process and deployment configuration.

Module 3: Administration

This module explains the various options for deploying antimalware policies in System Center 2012 Endpoint Protection including how to configure client settings, deployment and Firewall policies.

Module 4: Alerts, Tools and Reporting

This module explains how to use the Configuration Manager console's System Center 2012 Endpoint Protection dashboard to monitor the environment for malware activity and how to configure email alerting and SQL Server Reporting Services.

Module 5: Administration and Troubleshooting

This module provides information about administration and troubleshooting techniques, an understanding of the internal flow of information in System Center 2012 Endpoint Protection and related Configuration Manager 2012 features.

Bring Your Own Device (BYOD): Implementation and Operations using Microsoft Technologies – Level 300

Strategic partnership:

Addresses the specific needs within the customer environment in terms of IT & BYOD, organizational constraints and processes / operational infrastructure architectures and business solutions.

Target Audience :

Attendees of this course should be experienced users of Windows Server in previous versions. Ideally, they will have some background in Windows administration and network. No previous Windows Server 2012 experience is required.

Best-Practice Guidance:

The introduction of non-company owned devices accessing corporate resources provides unique challenges to IT. This workshop is designed to address specific challenges.

Overview

This 3-Day WorkshopPLUS enable companies to address the increase in employee owned devices (such as Android, IOS, Windows, Windows Phone, ...) which access the secure corporate network. With this increased proliferation of devices, we will see what strategies can the company do to minimize risk while providing services to their employees and guests.

Key Features and Benefits

- Guidance about the current BYOD landscape
- Administrative policies for BYOD
- Technical controls to implement in a BYOD environment
- Tools and techniques to keep your BYOD environment safe

Technical Highlights

Students will hear from Microsoft Industry Experts on the challenges facing IT security teams as they always have a need to keep up to date on new devices in the marketplace. This workshop will go into many best practices in the BYOD space.

Lab environment and exercise are used during the Workshop, to help student better understand how these technologies will work for them.

Hardware Requirements:

This workshop requires Windows server 2012R2 that support Hyper-V and have at least 8GB of RAM.

Syllabus

This workshop runs a full 3-days and is designed to give the IT Security team and infrastructure, guidance in strengthening and securing their environment from the threats that employees and guests bring when they are allowed to use their own devices in a corporate IT environment .

Module 1: Introduction to BYOD : This module provides an overview and the unique challenges introduced by BYOD.

Module 2: Active Directory Federation service :This module provides an overview on what is new in ADFS 3 and how it can help in BYOD scenarios. Student will see how to install and configure ADFS for enabling options such as Multifactor Authentication or on how to publish an intranet website.

Module 3: Intune : This module explains how to utilize Windows Intune in BYOD Scenarios. The instructor will cover Windows Intune technologies such as delivering applications and other corporate software to devices while monitoring compliance.

Module 4: Web application proxy : This module explains how to publish your environment to internet in a secure and control way. Student will also see how to implement "Device Registration Service", that increase control on data access.

Module 5: Workfolders: In this module, students will learn about work folders which enable users to store and access work files on personal or corporate devices. We will cover storage and access of work files, options to maintain control over corporate data, storing the files on centrally managed file servers and specifying user device policies such as encryption and lock screen passwords.

Module 6: Azure RMS : This module explains how to protect corporate confidential files and avoid data leakage. Azure RMS enables file restriction on user authentication and therefore ensure that only authorized users have access.

Module 7: Windows RT & Windows ToGo:This module explains how to transform personal device into productive tools. How users, can get access to all they enterprise environment in a secure way.

Development

Security Development Lifecycle & Web Application Security – Level 300

Get the Most from Your Microsoft Investment

Target Audience:

Security requires a broad and holistic view of a system and often requires in-depth understanding of how individual pieces of a system work. This workshop presents a 300-level security content targeting technical roles involved in building software such as architects, developers, testers, designers, and also people who manage software development teams and software development processes.

Overview

Building secure software must be on the mind of anyone who develops software. Attention to security must be visible and an essential part of the Application Lifecycle Management. Consequences of lack of or insufficient security can be severe from loss of money to tarnished reputation of a company.

The Security Development Lifecycle (SDL) and Web Application Security workshop is a 4-day instructor-led training course that covers practices involved in developing secure software. The course is divided into 2 parts:

- Security Development Lifecycle (2-days): covers in detail the software development security assurance process consisting of security practices.
- Web Application Security (2-days): goes in detail each of the top 10 OWASP (The Open Web Application Security Project) security threats explaining what the threat is and how to protect against it.

Key Features and Benefits

Participants will learn essential activities and practices to design and develop secure software and test for security. They will also understand top security vulnerabilities and how to protect against them. With the knowledge and awareness gained in this course, the participants should develop and deliver secure software by introducing the Security Development Lifecycle into their processes, understanding the nature of security vulnerabilities, and helping create a security conscious organization.

Technical Highlights

After completing this course, you will be able to:

- Understand the Security Development Lifecycle (SDL)
- Understand secure design, implementation, and testing for security
- Design, develop, and test for security
- Learn Threat Modeling and STRIDE to understand threats
- Learn top 10 security vulnerabilities and how to protect against them
- Use SDL in Application Lifecycle Management with Team Foundation Server

Hardware & Software Requirements:

- Visual Studio 2013
- Team Foundation Server 2013
- IIS 7.x
- SDL Threat Modeling Tool
- Windows 7 and up

Syllabus

Module 1: Introduction to Security Threats and SDL Concepts: This module underlines the importance of security and the consequences of security vulnerabilities. It then proceeds to introduce the Security Development Lifecycle process to explain what it is and how it helps build more secure software.

Module 2: Secure Design Principles: Fundamental principles such as threat modeling, defense in depth, least privilege, and others are covered to make security and privacy an integral and permanent part of the design phase.

Module 3: SDL Threat Modeling Principles: SDL threat modeling process and the threat modelling tool are covered in detail.

Module 4: Secure Implementation Principles: This module lists and goes into detail some of the most common programming practices that lead to security vulnerabilities.

Module 5: Security Verification Principles: In this module, various testing techniques and tools are discussed to uncover threats and vulnerabilities and ensure software meets the security requirements and the measurements put in place works.

Module 6: SDL in Application Lifecycle Management with TFS: Microsoft provided free MSF for Agile 2013 plus Security Development Lifecycle process template for Team Foundation Server 2013 incorporates the policy, process, and tools associated with SDL into TFS. This module introduces the process template and shows how to manage SDL in TFS.

Module 7: Web Application Security: Each of the top 10 OWASP security threats is explained with demos, hands-on labs and how to protect against.

Visual Studio 2013 ALM: Testing Tools – Level 300

Target Audience:

This WorkshopPLUS includes content targeted mainly toward testers and software developers who want to learn about scenarios and best practices for using Visual Studio 2013 Testing Tools. This WorkshopPLUS contains 300-level technical content; attendees should have a working knowledge of Visual Studio and Team Foundation Server.

Overview

The Visual Studio 2013 Application Lifecycle Management (ALM) Testing Tools WorkshopPLUS is a three-day instructor-led training course that provides participants with a wide range of technical information about Visual Studio 2013 Testing Tools. Specifically, it discusses how the Visual Studio integrated tool suite and Microsoft Test Manager (MTM) can help testers and developers create and manage robust test plans and suites throughout the Software Development Life Cycle. After completing the WorkshopPLUS, participants will have a deeper understanding of how to leverage Visual Studio testing tools to thoroughly test their applications and services. This WorkshopPLUS is meant to cover a variety of test types and tools available with Visual Studio 2013. An in-depth coverage for MTM and manual testing as well as automated testing using Visual Studio is included.

Key Features and Benefits

During the WorkshopPLUS, participants are provided with content that covers authoring, executing, and managing tests, including:

- MTM and Test Case Management
- Web-based Test Case Management
- Manual, Unit, and Coded UI testing
- Web Performance and Load testing
- Test Impact Analysis and Code Coverage

Hardware Requirements:

Hands-on labs require a premier, custom, Hyper-V, virtual hard disk (VHD). Minimum requirements also include:

- Disk space: At least 80 gigabytes (GB) of available disk space
- Memory: 8 GB of physical RAM
- Operating system: Windows Server2012 R2, Windows Server 2012, Windows Server2008R2 with Service Pack1 (SP1), Windows Server2008, Windows8 (with Second Level Address Translation (SLAT)-capable processors), or Windows 8.1.

Syllabus

Module 1: Visual Studio ALM Overview: This module provides an overview of Visual Studio ALM. This module also introduces participants to the capabilities and concepts of Visual Studio Team Foundation Server 2013 and MTM.

Module 2: Managing Testing Efforts: This module introduces MTM. An overview of the testing hierarchy is provided and testing artifacts such as test plans, test suites, test cases, and test steps are discussed. This module covers how to create a test plan using MTM and the various options that the test plan provides.

Module 3: Manual Testing: In this module, participants take a closer look at creating and executing manual tests both from MTM and web browser. Test Runner is introduced and examined in detail. By the end of this module, participants will know how to work with test cases, run manual tests, and file bugs from Test Runner. Coverage is provided for all aspects of executing manual tests, including creating and running parameterized tests. Participants will also learn how to use data and diagnostics collectors to gather important information as part of a test run. This module will also examine the workflow between testers and developers to efficiently file, fix, and verify bugs.

Module 4: Unit Testing: In this module, unit testing fundamentals are established and Microsoft Fakes is covered. Visual Studio Unit Test tools are discussed in detail and an introduction to Test-Driven Development (TDD) is provided. Visual Studio Unit Test tools are designed to support developers and teams who wish to incorporate unit testing in their software development practices. Unit tests give developers and testers a quick way to find logic errors.

Module 5: Coded UI Testing: This module focuses on Coded UI tests. There is extensive coverage for creating and customizing Coded UI tests. Creating Coded UI tests using the Coded UI Test Builder and promoting manual tests to Coded UI are discussed. The anatomy of Coded UI testing is examined in detail.

Module 6: Web Performance and Load Testing: This module introduces Web Performance and Load testing. The module focuses on creating, executing, and working with Web Performance and Load tests using Visual Studio. There is also coverage for cloud-based load testing.

Module 7: Introduction to Visual Studio Lab Management: In this module, participants learn about Visual Studio Lab Management fundamentals, such as using Visual Studio Lab Management to set up and manage virtual machines and execute tests.

Visual Studio 2013 ALM: Team Foundation Server Essentials – Level 300

Get the Most from Your Microsoft Investment

Gain a deeper understanding of how to leverage Microsoft Visual Studio and Team Foundation Server 2013 to maximize team collaboration, project transparency, software quality, and overall Application Lifecycle Management (ALM) maturity.

Target Audience

This WorkshopPLUS includes content targeted at developers, but is beneficial to team members of all roles that use Visual Studio and Team Foundation Server. Understanding the various components and best practices is vital to becoming successful users of Visual Studio and Team Foundation Server 2013.

Overview

The Visual Studio 2013 ALM: TFS Essentials WorkshopPLUS is a three-day instructor-led training course that provides participants with 'must have' fundamentals when using Visual Studio and Team Foundation Server 2013.

The best practices for working with Team Foundation Version Control (TFVC), Work Items, and Team Foundation Build will be discussed in-depth. Proficiency with these three "pillars" is key to unlocking the full potential of your software development efforts and becoming skillful with ALM practices.

We demystify the tooling and features to enable developers of all skill levels to 'unlock' huge productivity gains by enhancing their skills on Visual Studio Team Foundation Server.

Key Benefits or Customer Evidence

After completing this WorkshopPLUS, participants will become proficient in:

- Visual Studio 2013 and Team Foundation Server 2013.
- TFVC and Work Items.
- Team Foundation Build.
- Planning and Tracking Projects.
- ALM Concepts and Best Practices.

We adopt a multidimensional approach to learning in the form of lectures, live demos, and guided hands-on activities.

Lab Requirements

Hands-on labs require a Premier Custom Hyper-V Virtual Hard Disk (VHD). Minimum requirements also include:

- Disk space: At least 80 gigabytes (GB) of available disk space
- Memory: 8 GB of physical RAM
- Operating system: Windows Server2012, Windows Server2008R2 with Service Pack1 (SP1), or Windows Server2008, or Windows8 (with SLAT-capable processors), Windows 8.1, Windows Server 2012, and Windows Server 2012 R2.

Syllabus

Module 01: Visual Studio ALM Overview

This module provides an overview of Visual Studio ALM. It also introduces participants to Microsoft Visual Studio Team Foundation Server and provides an overview of the capabilities of Team Foundation Server.

Module 02: Team Projects

This module introduces the participants to creating and managing Team Projects. Guidance around structuring Team Project Collections and Team Projects is also provided.

Module 03: Team Foundation Version Control Fundamentals

Understanding the core concepts and benefits of Version Control is vital to the successful use of TFS. This module examines TFVC concepts and operations.

Module 04: Team Foundation Version Control Advanced Topics

This module focuses on the branching and merging tooling available in TFVC. Commonly used branching strategies and advanced version control topics such as rollback, code review are discussed.

Module 05: Getting Started with Git

In this module, participants will learn to use Git for version control. Developers now have a choice of using Git or TFVC for their source control repositories.

Module 06: Work Items

Work items are the basic building blocks of project management capabilities that TFS provides. They are used to track the assignment and progress of work. This module helps participants understand creating and managing work items.

Module 07: Team Foundation Build

This module introduces participants to the build automation capabilities of TFS and details its benefits. Other topics include Team Foundation Build Architecture, configuring Team Foundation Build Service, creating build definitions, and continuous integration.

Module 08: Release Management

This module provides an introduction to Release Management for Team Foundation Server 2013 which is a continuous deployment solution for .NET teams. It helps automate the deployment process and helps teams manage multiple environments.

Module 09: Plan and Track Projects

In this module, participants will learn about the project management capabilities of TFS. They will be introduced to the tools that can be leveraged to plan and track projects in TFS. We will work with Web Portal to set up, plan, and track sprints/iterations.

Visual Studio 2013 ALM: Team Foundation Server Administration – Level 300

Target Audience

This WorkshopPLUS is targeted mainly at IT pros and software developers who are interested in learning various scenarios of administering Visual Studio Team Foundation Server and best practices around it.

Overview

The Visual Studio 2013 Application Lifecycle Management (ALM): Team Foundation Server Administration WorkshopPLUS is a three-day instructor-led training course that provides participants with a wide range of technical information about administering Team Foundation Server. It specifically discusses how Team Foundation Server provides a fundamental point of integration for the entire suite of development tools and technologies. After completing the WorkshopPLUS, participants will have a deeper understanding of how to implement, manage, administer, and maintain an enterprise level Team Foundation Server deployment.

Key Focus Areas

During the WorkshopPLUS, participants are provided with content surrounding several different Team Foundation Server topics including, but not limited to:

- Architecture and Internals
- Security
- Customizing Team Foundation Server
- Performance Monitoring and Troubleshooting
- Disaster Recovery

Technical Highlights

Gain a deeper understanding of how to administer Team Foundation Server in order to maximize and maintain your investment in Visual Studio 2013 ALM.

Lab Requirements

Hands-on labs will require use of a custom premier Hyper-V Virtual Hard Disk (VHD). Minimum Requirements:

- Processor: Modern processor supporting virtualization
- Disk Space: At least 80 GB of available disk space
- Memory: 8 GB of physical RAM
- Operating System: Windows Server 2012 R2, Windows Server 2012, Windows Server 2008 R2 with Service Pack 1 (SP1) and Windows Server 2008 x64, Windows 8.1 and Windows 8 (with Second-Level Address Translation (SLAT)-capable processors).

Syllabus

This WorkshopPLUS runs a full three days. Participants must anticipate consistent start and end times for each day. Early departure on any day is not recommended.

Module 1: Visual Studio ALM Overview

This module provides an overview of Visual Studio ALM. It also introduces participants to Visual Studio Team Foundation Server and Microsoft Test Manager (MTM). An overview of the capabilities of Team Foundation Server is provided. Participants will also learn the key concepts needed to use it.

Module 2: Architecture and Internals

Team Foundation Server architecture leverages many technologies such as SQL Server, Internet Information Services (IIS), SharePoint, etc. This module will explore the various areas of Team Foundation Server architecture to help participants gain a firm understanding of the Team Foundation Server infrastructure.

Module 3: Security

Security is a vast topic, and Team Foundation Server has a wide array of security flexibility. This module will discuss the security implementation for Team Foundation Server users and groups as well as cover other areas of security impacting Team Foundation Server such as SQL Server Reporting Services and SharePoint.

Module 4: Version Control

One of the key features that Team Foundation Server provides is Version Control. Software developers now have a choice of using Git or Team Foundation Version Control (TFVC) for their source control repositories. This module will cover administration concepts that pertains to Team Foundation Version Control. Participants will also learn to use and administer Git for version control.

Module 5: Team Foundation Build and Release Management

This module introduces participants to the build automation capabilities that Team Foundation Server offers and details the benefits of Team Foundation Build. It also provides an introduction to Release Management for Team Foundation Server 2013, which is a continuous deployment solution for .NET teams.

Module 6: Customizing Team Foundation Server

This module focuses on key areas of Team Foundation Server that allow customizations. Topics include customizing process templates, team projects, web portal, and reporting. Work Item Tracking for Team Foundation Server provides a powerful model for customizing your software development workflows. This module will equip Administrators with best practices for customizing work item types.

Module 7: Disaster Recovery

Keeping your data safe is a high priority while working with any system. Backing up and restoring a complex environment such as Team Foundation Server requires firm planning. This module covers the key areas of handling Disaster Recovery (DR) strategies for large and small Team Foundation Server implementations.

Module 8: Installations and Upgrades

In this module, we will cover various scenarios of implementing and upgrading Team Foundation Server. Installing Team Foundation Server involves several technologies, and there are various options for performing upgrades to the latest version of Team Foundation Server. We will also cover the key concepts such as service accounts, networking requirements, and explore the topologies available.

Module 9: Performance Monitoring and Tuning

Keeping your Team Foundation Server healthy is a key responsibility of any Team Foundation Server administrator. In this module, participants will learn about performance monitoring and tuning of Team Foundation Server. We will work with various tools, techniques, and reports that can help you proactively monitor Team Foundation Server.

Windows 8.1: Store Application Development

– Level 300

Gain in-depth knowledge from the three day hands-on workshop on the new style of developing immersive applications on Windows 8.1

This workshop takes a deep dive into most of the important features that you can use and need to think about when you want to start developing Windows Store Applications for Windows 8.1.

Target Audience:

The target audience for the workshop is developers and architects. No previous experience with developing for Windows is required, although it will certainly help with understanding how developing Windows Store Apps is substantially different than Desktop applications. Since a substantial portion of the workshop is developing the app, the student needs to be familiar with C#, or VB.Net.

Overview

This three-day workshop deep-dives into the key developer concepts of Windows Store App development. The workshop takes you through the most important features and architectural concepts that you will find in this new release of Windows like the new UI, Process Lifecycle Management, Tiles and Notifications and the different contracts to name but a few. After this workshop, you will have written a fully functional working application.

How the Offering Works

The Windows Store Applications Development workshop is a standard three-day workshop that is offered by Microsoft Premier Services.

Windows 8.1 and WinRT

This is a hands-on workshop that exposes students to the new programming model for Windows 8.1. Desktop applications that are designed for Windows 7 will most likely continue to run on Windows 8.1 without any changes. However, developing Windows Store Apps is substantially different from developing Desktop applications. There is a whole new set of possibilities that the new UI offers. On the other hand, there are certain limits on what apps can do on a system compared to desktop applications. This workshop will introduce you to the core concepts and architectural features without forgetting the changes from Windows 8 to 8.1.

Leverage Your Code Base and Your Skillset

You can use multiple languages to develop Windows Store Apps. Languages that you have come to appreciate such as C# and VB.Net can be used. However, it is not limited to managed languages. C++ has evolved and if your development environment has been using this language, you can continue to develop in it for Windows Store Apps. The addition of JavaScript and HTML5 as a first class citizen is new to Windows Store Apps. Note that developing Windows Store App with C++, JavaScript and HTML won't be detailed here.

Get a good understanding of how developing Windows Store Apps for Windows 8.1 is different than writing for desktop or other platforms

Hardware Requirements:

Contact your TAM if the necessary hardware needs to be provided.

If you are attending an Open enrollment workshop, the hardware will be provided for you.

Windows Store App Recurring Themes

- Performance and responsiveness are key, as is evidenced with the ubiquitous asynchronous nature of WinRT
- Battery lifetime and resource management require new ways of doing everyday tasks

Both these aspects take a central role throughout the workshop. You will understand why tiles, notifications and background processes are designed this way in Windows 8.1.

Learn How the Different Programming Languages Interact with the OS

- Use managed languages such as C#, VB.Net with XAML
- Unmanaged C++ can be used as well
- HTML5/Javascript can also target the new Windows Runtime.

IT Requirements/Deliverables

This workshop contains hands-on labs in C#/XAML. Hardware with Windows 8.1 and Visual Studio 2013 need to be available to students.

Scheduling the Workshop

Please contact your Microsoft Technical Account Manager to schedule the workshop.

Syllabus

- Platform and UX
- Modern UI Design Guidelines
- WinRT for .NET Developers
- UI controls
- Search and Share Contracts
- Process Lifetime Management (PLM) and background tasks
- Data management and Settings
- Tiles and notifications
- Windows Store
- Optional
- Networking
- Localization
- What's new in Windows 8.1



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