

## Windows 2012 R2 System Administration

**Duration:** 5 Days

**Price:** CDN\$3275 *\*Prices are subject to GST/HST*

**Discounts:** We offer multiple discount options. [Click here](#) for more info.

**Delivery Options:** Attend face-to-face in the classroom, [remote-live](#) or [on-demand streaming](#).

### Students Will Learn

- Installing, configuring and maintaining Windows Server 2012
- Network configuration
- Working with user accounts, group accounts, permissions and rights
- Configuring disk partitions and volumes
- Granting permissions to folders and files
- Creating hidden shares
- Installing and configuring DFS to facilitate advanced folder sharing
- Installing the Print and Document role and role services
- Assigning IP addresses to servers in workgroup and domain environments
- Using the subnet to determine the network ID of a network
- Using FSRM to configure quotas, file screens and reports
- Creating sites, site links and subnets
- Monitoring and troubleshooting replication
- Planning a group policy deployment scheme for a domain
- Using group policy to configure security and user desktop environments
- Using Event Viewer to track important system events
- Using Task Manager to get an overview of process resource utilization
- Performing backups and restores using Windows Server Backup
- Installing and configuring each type of cluster
- Planning a virtualization configuration
- Installing and configuring the Hyper-V role
- Security configuration
- Basic PowerShell syntax

### Course Description

This course provides hands on experience installing and configuring Windows Server 2012 R2. Students will perform full installations, switch between GUI and Server Core features, configure and tune the server and assign roles and services. Attendees will practice local and remote administration of security, network, data and hardware in hands on labs. After

installing an Active Directory domain controller, students will create and assign users, groups, permissions, rights, policies and profiles.

Attendees will configure and troubleshoot the TCP/IP network, utilize PowerShell cmdlets, and implement a backup strategy. Also covered are many aspects of local security, such as group policy objects (GPO), Encrypting File System (EFS), rights and permissions. Students will learn to use enterprise tools such as Distributed File System (DFS) and File System Resource Manager (FSRM) to manage file storage and accessibility, as well as facilitate clustering and virtualization. Comprehensive labs and exercises give the students real experience deploying, managing and troubleshooting the Windows 2012 infrastructure.

## Course Prerequisites

Understanding of Windows Vista or Windows 7 Aero interface and Control Panel applets.

## Course Overview

### Overview of Windows Server 2012 R2    Installing Windows

- Windows Architecture
- Windows Server 2012 Editions
- Server Roles
- TCP/IP
- PowerShell
- Virtualization (Hyper-V)
- Patch and Update Management
- Tuning System Performance
- Remote Assistance
- Backup and Recovery
- Licensing and Activation
- Active Directory
- Hardware Requirements
- DVD Installation
- Windows 2012 GUI Features
- Upgrading Existing Operating Systems

### Configuring Windows

- Command Line Server Core Configuration
- Configuring the Network
- Selecting and Installing Device Drivers
- Configuring Printers

### Windows Management

- Server Manager
- Remote Server Admin Tools (RSAT)
- Event Viewer
- Event Subscriptions
- Performance Monitor
- Reliability Monitor
- Performance Logs and Alerts
- Tuning System Performance
- Windows System Resource Manager (WSRM)
- Windows Remote Management (WinRM)

### Administering Users and Groups

- Creating Local Users and Groups
- Creating Domain Users and Groups
- Local and Domain Groups
- Distribution and Security Groups
- Group Nesting

### Networking

- TCP/IP version 4 (IPv4)
- IPv4 Addressing
- Understanding Workgroups and Domains
- TCP/IP Diagnostic Tools

- Setting User Rights
- User Profiles
- Setting the Accounts Policy

## Print Servers

- Configuring Print Servers
- Printer Priorities
- Printer Pooling

## Active Directory Domain Services

- ADDS Architecture
- Domains, Trees and Forests
- Organizational Units (OUs)
- Global Catalog Servers
- Domain Controller Installation
- DNS Requirements
- Configuring Active Directory
- Delegating Authority
- AD Replication

## PowerShell

- Cmdlets
- Creating Users, Groups and OUs
- Manipulating Objects

## Clustering

- High Availability
- Cluster Models
- Planning
- Failover Clusters
- Network Load Balancing (NLB)
- Storage Area Network (SAN) Technologies

## Distributed File System (DFS)

- DFS Replication
- Domain-based DFS
- Namespace Root
- Access-Based Enumeration
- Diagnostic Reports
- Replication Groups

## System Recovery and Restoration

- Server Backup and Restore

- Network Troubleshooting

## Security Features

- Encrypting File System
- NTFS Permissions
- User Rights

## Group Policy

- Blocking Group Policy
- Enforcing Group Policy
- Domain and Local Policies
- Group Policy Inheritance
- Group Policy Management Console (GPMC)

## Virtualization

- Planning and Design
- Hyper-V
- Hardware Requirements
- Consolidating Resources
- Isolating Services
- Licensing Requirements
- Virtual Networks
- Controlling VM Resources
- Isolating VM Traffic

## Permissions

- NTFS File and Folder Permissions
- Permission Inheritance
- Effective Permissions
- Shared Folder Permissions
- Administrative Shares

## File Server Resource Manager (FSRM)

- Configuring Quotas
- File Screening
- Reporting

## AD Sites and Replication

- Creating and Managing AD Sites

- Volume Shadow Copy Service
- System State Data
- System Image Recovery / Bare Metal Restore
- Recovery Console
- Site Topology
- DFS Replication Overview
- SYSVOL Replication
- Replication Monitoring and Troubleshooting

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