



## LEARNING PLAN

# Server Administration & Tools

Learn the management tools and techniques for the server platforms you administer. Develop the skills to use proactive monitoring and script-driven management. Use your new knowledge and expertise to turn your IT department into a well-oiled machine, for each server platform.

### Areas of focus

- Managing Windows Server environments
- Managing Linux server environments
- Hybrid server environments

### Curriculum

VIDEOS FROM COURSE

#### PowerShell 4 Foundations 6 hours

<input type="checkbox"/>	<a href="#">Welcome to PowerShell 4 Foundations!</a>	21 min
<input type="checkbox"/>	<a href="#">Installing PowerShell 4.0</a>	15 min
<input type="checkbox"/>	<a href="#">Getting Started</a>	23 min
<input type="checkbox"/>	<a href="#">Getting Help</a>	25 min
<input type="checkbox"/>	<a href="#">Commands</a>	17 min
<input type="checkbox"/>	<a href="#">The Pipeline</a>	15 min
<input type="checkbox"/>	<a href="#">Objects</a>	26 min
<input type="checkbox"/>	<a href="#">Extending the Shell</a>	18 min
<input type="checkbox"/>	<a href="#">Extending Objects</a>	19 min
<input type="checkbox"/>	<a href="#">Formatting Output</a>	18 min
<input type="checkbox"/>	<a href="#">The Pipeline Returns</a>	21 min
<input type="checkbox"/>	<a href="#">Providers</a>	14 min
<input type="checkbox"/>	<a href="#">WMI &amp; CIM</a>	27 min
<input type="checkbox"/>	<a href="#">Remoting</a>	20 min
<input type="checkbox"/>	<a href="#">Jobs</a>	17 min
<input type="checkbox"/>	<a href="#">Workflows</a>	20 min
<input type="checkbox"/>	<a href="#">Scripting - Getting Started</a>	17 min
<input type="checkbox"/>	<a href="#">Scripting - Essentials</a>	32 min
<input type="checkbox"/>	<a href="#">Scripting - The Real World</a>	26 min
<input type="checkbox"/>	<a href="#">Desired State Configuration - Getting Started</a>	21 min
<input type="checkbox"/>	<a href="#">Desired State Configuration - Making it So!</a>	18 min
<input type="checkbox"/>	<a href="#">Tips, Tools, and Resources</a>	7 min

VIDEOS FROM COURSE

#### Microsoft Windows Server 2012 70-410 with R2 Updates 19 hours

<input type="checkbox"/>	<a href="#">Course Introduction</a>	7 min
<input type="checkbox"/>	<a href="#">Installing and Configuring Servers</a>	41 min

### Prerequisite Plans

FUNDAMENTAL LEVEL

[Virtualization Concepts](#)  
[Information Security Fundamentals](#)



### Current Plan

ASSOCIATE LEVEL

Server Administration & Tools



### Possible Next Plans

EXPERT LEVEL

[Advanced Server Technologies](#)  
[Advanced Virtualization Skills](#)

## VIDEOS FROM COURSE

**Microsoft Windows Server 2012 70-410  
with R2 Updates (cont.)**

<input type="checkbox"/>	<a href="#">Modifying Your Installation</a>	33 min
<input type="checkbox"/>	<a href="#">Configuring Server Core</a>	21 min
<input type="checkbox"/>	<a href="#">Configure Servers for Remote Management</a>	20 min
<input type="checkbox"/>	<a href="#">Introduction to Active Directory and Basic Installation</a>	41 min
<input type="checkbox"/>	<a href="#">Active Directory: Managing Accounts</a>	42 min
<input type="checkbox"/>	<a href="#">Deploy Active Directory IaaS</a>	41 min
<input type="checkbox"/>	<a href="#">Active Directory Domain Controller Installation</a>	62 min
<input type="checkbox"/>	<a href="#">Active Directory: Automating User Accounts</a>	33 min
<input type="checkbox"/>	<a href="#">Active Directory: Computer Accounts, Groups Part 1</a>	45 min
<input type="checkbox"/>	<a href="#">Active Directory: Groups Part 2, Organizational Units, Delegation</a>	36 min
<input type="checkbox"/>	<a href="#">Group Policy: Essentials and Multiple Local</a>	27 min
<input type="checkbox"/>	<a href="#">Group Policy: Central Store and Refresh</a>	29 min
<input type="checkbox"/>	<a href="#">Group Policy: Scope of Management, Preferences, Starter GPO</a>	38 min
<input type="checkbox"/>	<a href="#">Group Policy: Security and Templates</a>	39 min
<input type="checkbox"/>	<a href="#">Group Policy: Rule and Application Enforcement</a>	25 min
<input type="checkbox"/>	<a href="#">Group Policy: Windows Firewall</a>	34 min
<input type="checkbox"/>	<a href="#">IPv4</a>	53 min
<input type="checkbox"/>	<a href="#">IPv6</a>	45 min
<input type="checkbox"/>	<a href="#">DHCP</a>	58 min
<input type="checkbox"/>	<a href="#">DNS</a>	50 min
<input type="checkbox"/>	<a href="#">Desired State Configuration</a>	31 min
<input type="checkbox"/>	<a href="#">Configuring Hyper-V</a>	44 min
<input type="checkbox"/>	<a href="#">Hyper-V in R2</a>	30 min
<input type="checkbox"/>	<a href="#">Configuring Local Storage</a>	45 min
<input type="checkbox"/>	<a href="#">Storage Spaces Using Enclosures</a>	25 min
<input type="checkbox"/>	<a href="#">Share and NTFS Permissions</a>	30 min
<input type="checkbox"/>	<a href="#">Additional Storage Features</a>	38 min
<input type="checkbox"/>	<a href="#">Work Folders</a>	35 min
<input type="checkbox"/>	<a href="#">Configuring Printers</a>	31 min

## VIDEOS FROM COURSE

**Microsoft Windows Server 2012 70-411  
with R2 Updates**

21 hours

<input type="checkbox"/>	<a href="#">Introduction to Administering Windows Server 2012 R2 70-411</a>	7 min
<input type="checkbox"/>	<a href="#">Windows Deployment Services: Installing and Configuring</a>	38 min
<input type="checkbox"/>	<a href="#">Powershell for WDS Driver Packages and Groups</a>	10 min
<input type="checkbox"/>	<a href="#">Windows Deployment Services: Server Properties and Discover Images</a>	28 min
<input type="checkbox"/>	<a href="#">Windows Deployment Services: Image Modification and Capture</a>	38 min
<input type="checkbox"/>	<a href="#">Active Directory Authentication Services</a>	52 min

## VIDEOS FROM COURSE

**Microsoft Windows Server 2012 70-411  
with R2 Updates (cont.)**

<input type="checkbox"/>	<a href="#">Active Directory: UGMC and Operations Masters</a>	46 min
<input type="checkbox"/>	<a href="#">Active Directory: RODC and Cloned Domain Controllers</a>	50 min
<input type="checkbox"/>	<a href="#">Active Directory: Maintenance</a>	58 min
<input type="checkbox"/>	<a href="#">Active Directory: Account Policies</a>	41 min
<input type="checkbox"/>	<a href="#">Group Policy Objects: Part 1</a>	28 min
<input type="checkbox"/>	<a href="#">Group Policy Objects: Part 2</a>	35 min
<input type="checkbox"/>	<a href="#">Group Policy Objects: Part 3</a>	31 min
<input type="checkbox"/>	<a href="#">Group Policy Objects: Part 4</a>	29 min
<input type="checkbox"/>	<a href="#">Group Policy Objects: Part 5</a>	28 min
<input type="checkbox"/>	<a href="#">Group Policy Objects: Part 6</a>	15 min
<input type="checkbox"/>	<a href="#">Group Policy Objects: Part 7</a>	36 min
<input type="checkbox"/>	<a href="#">VPN: Part 1</a>	23 min
<input type="checkbox"/>	<a href="#">VPN: Part 2</a>	31 min
<input type="checkbox"/>	<a href="#">VPN: Part 3, Routing</a>	34 min
<input type="checkbox"/>	<a href="#">VPN: Part 4</a>	38 min
<input type="checkbox"/>	<a href="#">Network Address Translation and RADIUS</a>	39 min
<input type="checkbox"/>	<a href="#">RADIUS Templates and Network Policy Processing</a>	27 min
<input type="checkbox"/>	<a href="#">Network Access Protection Part 1</a>	33 min
<input type="checkbox"/>	<a href="#">Network Access Protection Part 2</a>	15 min
<input type="checkbox"/>	<a href="#">DNS Part 1</a>	30 min
<input type="checkbox"/>	<a href="#">DNS Part 2</a>	38 min
<input type="checkbox"/>	<a href="#">Web Application Proxy</a>	44 min
<input type="checkbox"/>	<a href="#">File Server Resource Manager Part 1</a>	28 min
<input type="checkbox"/>	<a href="#">File Server Resource Manager Part 2</a>	18 min
<input type="checkbox"/>	<a href="#">Distributed File System</a>	33 min
<input type="checkbox"/>	<a href="#">Distributed File System R2</a>	50 min
<input type="checkbox"/>	<a href="#">Encrypting File System and BitLocker</a>	35 min
<input type="checkbox"/>	<a href="#">Monitoring Servers Part 1</a>	31 min
<input type="checkbox"/>	<a href="#">Monitoring Servers Part 2</a>	20 min
<input type="checkbox"/>	<a href="#">Monitoring Servers Part 3</a>	29 min
<input type="checkbox"/>	<a href="#">Monitoring Servers Part 4</a>	34 min
<input type="checkbox"/>	<a href="#">Windows Server Update Services Part 1</a>	38 min
<input type="checkbox"/>	<a href="#">Windows Server Update Services Part 2</a>	19 min

## VIDEOS FROM COURSE

**Microsoft Windows Server 2012 70-412  
with R2 Updates**

15 hours

<input type="checkbox"/>	<a href="#">Course Introduction</a>	4 min
<input type="checkbox"/>	<a href="#">Network Load Balancing Overview</a>	9 min
<input type="checkbox"/>	<a href="#">Network Load Balancing Demo: Configuring the Cluster</a>	10 min
<input type="checkbox"/>	<a href="#">Network Load Balancing Demo: Modifying the Cluster</a>	10 min

## VIDEOS FROM COURSE

**Microsoft Windows Server 2012 70-412  
with R2 Updates (cont.)**

<input type="checkbox"/>	Configuring Cluster Storage and Networking	21 min
<input type="checkbox"/>	Configuring a Cluster	33 min
<input type="checkbox"/>	Advanced Clustering and PowerShell	35 min
<input type="checkbox"/>	Virtual Machine Movement: Clusterless	22 min
<input type="checkbox"/>	Virtual Machine Movement: Clustered	28 min
<input type="checkbox"/>	Configure and Optimize Storage	36 min
<input type="checkbox"/>	BranchCache and NFS	28 min
<input type="checkbox"/>	Dynamic Access Control Overview	6 min
<input type="checkbox"/>	Dynamic Access Control Demo	25 min
<input type="checkbox"/>	Configure Advanced File Services	38 min
<input type="checkbox"/>	Configure Site-Level Fault Tolerance: Replicas	29 min
<input type="checkbox"/>	Configuring Site-Level Fault Tolerance: Clusters	23 min
<input type="checkbox"/>	Configure and Manage Backups: Windows Backup	22 min
<input type="checkbox"/>	Configure and Manage Backups: Azure and VSS	22 min
<input type="checkbox"/>	Recover Servers	22 min
<input type="checkbox"/>	Active Directory Federation Services (ADFS) Overview	12 min
<input type="checkbox"/>	Active Directory Federation Services (ADFS) Demo	33 min
<input type="checkbox"/>	Active Directory Federation Services (ADFS) Workplace Join	9 min
<input type="checkbox"/>	DHCP Overview	12 min
<input type="checkbox"/>	DHCP Reservations, Policies, and Filters	9 min
<input type="checkbox"/>	DHCP: IPv6, Multicast Scopes, Superscopes	15 min
<input type="checkbox"/>	DHCP High Availability: Split Scopes	9 min
<input type="checkbox"/>	DHCP High Availability: DHCP Failover	8 min
<input type="checkbox"/>	DHCP: DNS Registration and DHCP Name Protection	12 min
<input type="checkbox"/>	IP Address Management (IPAM) Overview and Server Configuration	27 min
<input type="checkbox"/>	IP Address Management (IPAM) Implementation	22 min
<input type="checkbox"/>	DNSsec Overview, Keys, and Resource Records	9 min
<input type="checkbox"/>	DNSsec Demo	25 min
<input type="checkbox"/>	DNS Socket Pool and DNS Cache Locking	10 min
<input type="checkbox"/>	DNS Logging, Analyze Zone Level Statistics, Configure Delegated Administration	7 min
<input type="checkbox"/>	DNS: Configure Recursion, Netmask Ordering, and GlobalNames	11 min
<input type="checkbox"/>	Active Directory Certificate Services: Overview	6 min
<input type="checkbox"/>	Active Directory Certificate Services: Hierarchy, Standalone vs Enterprise, Install an Enterprise Certificate Authority	17 min
<input type="checkbox"/>	Active Directory Certificate Services: Manual Enrollment and Revocation	13 min
<input type="checkbox"/>	Active Directory Certificate Services: CRL Distribution Point and Online Responder	13 min
<input type="checkbox"/>	Active Directory Certificate Services: Issue Web Server Certs	11 min

## VIDEOS FROM COURSE

**Microsoft Windows Server 2012 70-412  
with R2 Updates (cont.)**

<input type="checkbox"/>	Active Directory Certificate Services: Autoenrollment	9 min
<input type="checkbox"/>	Active Directory Certificate Services: Configure and Manage Key Archival and Recovery	21 min
<input type="checkbox"/>	Active Directory Certificate Services: CA Role Separation and Certificate Renewal	11 min
<input type="checkbox"/>	Active Directory: Multi-Domain and Multi-Forest Environments	15 min
<input type="checkbox"/>	Active Directory: Interoperability with Previous Versions, Upgrading Domains and Forests, Functional levels	14 min
<input type="checkbox"/>	Active Directory Trusts	21 min
<input type="checkbox"/>	Active Directory: SID Filtering, Name Suffix Routing, UPN	10 min
<input type="checkbox"/>	Active Directory Sites: Overview	8 min
<input type="checkbox"/>	Active Directory Sites: Demo	17 min
<input type="checkbox"/>	Active Directory: RODC Replication	14 min
<input type="checkbox"/>	Active Directory: Sysvol and Replication	13 min
<input type="checkbox"/>	Active Directory Rights Management Services Overview	19 min
<input type="checkbox"/>	Active Directory Rights Management Services Demo	19 min

## VIDEOS FROM COURSE

**Microsoft Windows Server 2012 70-417  
with R2 Updates****19 hours**

<input type="checkbox"/>	70-417 R2 Course Introduction	6 min
<input type="checkbox"/>	Planning for a Server Installation	18 min
<input type="checkbox"/>	Server Installation Levels	10 min
<input type="checkbox"/>	Windows Migration Tools Overview and Tools Demo	12 min
<input type="checkbox"/>	Windows Migration Tools: Migrating a Role	7 min
<input type="checkbox"/>	Install Windows Server Full and Core	7 min
<input type="checkbox"/>	Features on Demand	18 min
<input type="checkbox"/>	Switching Between Full and Core Installations	9 min
<input type="checkbox"/>	Add and Remove Features in Offline Images	7 min
<input type="checkbox"/>	Configuring Server Core Intro and Remote Desktop	6 min
<input type="checkbox"/>	Configuring Server Core with Commands and Sconfig	11 min
<input type="checkbox"/>	Configure Services	12 min
<input type="checkbox"/>	NIC Teaming	9 min
<input type="checkbox"/>	Desired State Configuration Overview	10 min
<input type="checkbox"/>	Desired State Configuration Demo	19 min
<input type="checkbox"/>	Remote Management Methods	12 min
<input type="checkbox"/>	Remote Management Methods: Server Core	9 min
<input type="checkbox"/>	Remote Management Methods: Manage Non-Domain Joined Servers	9 min

## VIDEOS FROM COURSE

**Microsoft Windows Server 2012 70-417  
with R2 Updates (cont.)**

<input type="checkbox"/>	<a href="#">Remote Management Methods: DCOM and WinRM, Down-level Server Management</a>	12 min
<input type="checkbox"/>	<a href="#">Configure Local Storage: Basic and Dynamic Disk Overview</a>	12 min
<input type="checkbox"/>	<a href="#">Configure Local Storage: Storage Spaces and Demos</a>	21 min
<input type="checkbox"/>	<a href="#">Create and Mount Virtual Hard Disks (VHDs)</a>	11 min
<input type="checkbox"/>	<a href="#">Hyper-V Configuring Virtual Machines: Memory</a>	15 min
<input type="checkbox"/>	<a href="#">Configure Hyper-V Resource Metering and Guest Integration Services</a>	9 min
<input type="checkbox"/>	<a href="#">Configure Generation 1 and Generation 2 Virtual Machines</a>	5 min
<input type="checkbox"/>	<a href="#">Hyper-V: Configuring Differencing Drives</a>	10 min
<input type="checkbox"/>	<a href="#">Hyper-V: Storage Management</a>	13 min
<input type="checkbox"/>	<a href="#">Hyper-V Networking</a>	16 min
<input type="checkbox"/>	<a href="#">Install Domain Controllers: Add, Remove, Upgrade</a>	16 min
<input type="checkbox"/>	<a href="#">Install Domain Controllers: Install From Media</a>	12 min
<input type="checkbox"/>	<a href="#">Install Domain Controllers: Configure a Global Catalog Server</a>	8 min
<input type="checkbox"/>	<a href="#">Install Domain Controllers: Resolve DNS SRV Record Registration Issues</a>	9 min
<input type="checkbox"/>	<a href="#">Deploying Active Directory Infrastructure as a Service in Microsoft Azure</a>	14 min
<input type="checkbox"/>	<a href="#">Monitor VMs</a>	5 min
<input type="checkbox"/>	<a href="#">Monitor Real-Time Performance: Task Manager</a>	12 min
<input type="checkbox"/>	<a href="#">Monitor Real-Time Performance: Resource Monitor</a>	10 min
<input type="checkbox"/>	<a href="#">Monitor Servers: Performance Monitor Overview</a>	13 min
<input type="checkbox"/>	<a href="#">Event Viewer</a>	11 min
<input type="checkbox"/>	<a href="#">Configure Event Subscriptions</a>	9 min
<input type="checkbox"/>	<a href="#">Configure Network Monitoring</a>	11 min
<input type="checkbox"/>	<a href="#">Direct Access Overview</a>	7 min
<input type="checkbox"/>	<a href="#">Direct Access Demo</a>	17 min
<input type="checkbox"/>	<a href="#">Direct Access: Certificate and DNS Requirements</a>	8 min
<input type="checkbox"/>	<a href="#">Network Access Protection Overview</a>	13 min
<input type="checkbox"/>	<a href="#">Network Access Protection Enforcement Types and DHCP Demo</a>	23 min
<input type="checkbox"/>	<a href="#">Network Access Protection: VPN</a>	20 min
<input type="checkbox"/>	<a href="#">Configure Domain Controller Cloning: Overview</a>	7 min
<input type="checkbox"/>	<a href="#">Configure Domain Controller Cloning: Demo</a>	11 min
<input type="checkbox"/>	<a href="#">Operations Master Overview</a>	16 min
<input type="checkbox"/>	<a href="#">Operations Master Demo</a>	7 min
<input type="checkbox"/>	<a href="#">Read-Only Domain Controllers: Overview</a>	14 min
<input type="checkbox"/>	<a href="#">Read-Only Domain Controllers: Demo</a>	15 min
<input type="checkbox"/>	<a href="#">Directory Services Repair Mode Authoritative Restore Overview</a>	7 min

## VIDEOS FROM COURSE

**Microsoft Windows Server 2012 70-417  
with R2 Updates (cont.)**

<input type="checkbox"/>	<a href="#">Directory Services Repair Mode Authoritative Restore Demo</a>	11 min
<input type="checkbox"/>	<a href="#">Clean Up Metadata and Optimize an Active Directory Database</a>	11 min
<input type="checkbox"/>	<a href="#">Configure Active Directory Snapshots</a>	7 min
<input type="checkbox"/>	<a href="#">Active Directory Recycle Bin</a>	6 min
<input type="checkbox"/>	<a href="#">Group Policy Objects: Client Side Extensions, Updates, and Caching</a>	14 min
<input type="checkbox"/>	<a href="#">Group Policy: Slow Link Processing and Scope of Management</a>	21 min
<input type="checkbox"/>	<a href="#">Group Policy: Processing Adjustments</a>	12 min
<input type="checkbox"/>	<a href="#">Group Policy: Adjustments with WMI and Loop-back</a>	11 min
<input type="checkbox"/>	<a href="#">Configure Cluster Storage and Networking</a>	23 min
<input type="checkbox"/>	<a href="#">Configuring a Cluster</a>	36 min
<input type="checkbox"/>	<a href="#">Advanced Clustering</a>	38 min
<input type="checkbox"/>	<a href="#">Virtual Machine Movement: Clusterless</a>	25 min
<input type="checkbox"/>	<a href="#">Virtual Machine Movement: Clustered</a>	32 min
<input type="checkbox"/>	<a href="#">Dynamic Access Control</a>	36 min
<input type="checkbox"/>	<a href="#">File Classification Infrastructure</a>	23 min
<input type="checkbox"/>	<a href="#">Configure Site-Level Fault Tolerance: Replicas</a>	28 min
<input type="checkbox"/>	<a href="#">Configuring Site-Level Fault Tolerance: Clusters</a>	32 min
<input type="checkbox"/>	<a href="#">Configure and Manage Backups: Windows Backup</a>	29 min
<input type="checkbox"/>	<a href="#">Configure and Manage Backups: Azure and VSS</a>	24 min
<input type="checkbox"/>	<a href="#">IPAM Overview and Server Configuration</a>	30 min
<input type="checkbox"/>	<a href="#">IPAM Functional Use</a>	17 min
<input type="checkbox"/>	<a href="#">Active Directory Federation Services Overview</a>	10 min
<input type="checkbox"/>	<a href="#">Active Directory Federation Services Demo and Workplace Join</a>	36 min

## VIDEOS FROM COURSE

**Microsoft Windows 10 70-697: Configuring  
Windows Devices**

17 hours

<input type="checkbox"/>	<a href="#">Course Introduction</a>	3 min
<input type="checkbox"/>	<a href="#">Office 365: Overview and Installation</a>	10 min
<input type="checkbox"/>	<a href="#">Office 365: Configuring Users and Groups</a>	7 min
<input type="checkbox"/>	<a href="#">Office 365: Multi-Factor Authentication</a>	8 min
<input type="checkbox"/>	<a href="#">Office 365: Using a Company Email Address</a>	12 min
<input type="checkbox"/>	<a href="#">Office 365: Azure Active Directory Connector</a>	11 min
<input type="checkbox"/>	<a href="#">Office 365: Click-to-Run Overview</a>	5 min
<input type="checkbox"/>	<a href="#">Office 365: Click-to-Run Demos</a>	12 min
<input type="checkbox"/>	<a href="#">Office 365: Update Branches</a>	14 min
<input type="checkbox"/>	<a href="#">Sideloading Apps in Online and Offline Images</a>	12 min
<input type="checkbox"/>	<a href="#">Intune: Overview</a>	8 min

## VIDEOS FROM COURSE

**Microsoft Windows 10 70-697: Configuring Windows Devices (cont.)**

<input type="checkbox"/>	<a href="#">Intune: Configuration, Compliance, and Conditional Access Policies</a>	10 min
<input type="checkbox"/>	<a href="#">Intune: Setup Phone Enrollment</a>	7 min
<input type="checkbox"/>	<a href="#">Intune: Demo iPhone Enrollment</a>	10 min
<input type="checkbox"/>	<a href="#">Intune: Provision User Accounts and Manage User Groups</a>	8 min
<input type="checkbox"/>	<a href="#">Intune Managing Windows Computers</a>	7 min
<input type="checkbox"/>	<a href="#">Intune: Deeplink Apps</a>	7 min
<input type="checkbox"/>	<a href="#">Intune: Sideload, Update, and Retire Apps</a>	11 min
<input type="checkbox"/>	<a href="#">Integrate a Microsoft Account</a>	7 min
<input type="checkbox"/>	<a href="#">Intune: Configure Monitoring and Alerts</a>	13 min
<input type="checkbox"/>	<a href="#">Intune: Configure the Microsoft Intune Connector</a>	25 min
<input type="checkbox"/>	<a href="#">Client-Side Update Settings</a>	7 min
<input type="checkbox"/>	<a href="#">Intune: Deploy Software Updates</a>	14 min
<input type="checkbox"/>	<a href="#">Group Policy Object Update Settings</a>	13 min
<input type="checkbox"/>	<a href="#">WSUS Basics</a>	8 min
<input type="checkbox"/>	<a href="#">Azure RemoteApp Overview</a>	7 min
<input type="checkbox"/>	<a href="#">Azure RemoteApp Demo Default Image and Client Connection</a>	11 min
<input type="checkbox"/>	<a href="#">Azure Group Policy Objects for Signed Packages</a>	14 min
<input type="checkbox"/>	<a href="#">Azure PowerShell</a>	7 min
<input type="checkbox"/>	<a href="#">Import Azure RemoteApp Configurations Overview</a>	6 min
<input type="checkbox"/>	<a href="#">Import Azure RemoteApp Configurations Demo</a>	11 min
<input type="checkbox"/>	<a href="#">Azure: Using Images and Exporting RemoteApp</a>	8 min
<input type="checkbox"/>	<a href="#">Work Folders Overview</a>	7 min
<input type="checkbox"/>	<a href="#">Work Folders Demo</a>	19 min
<input type="checkbox"/>	<a href="#">Offline Files and Sync Center</a>	12 min
<input type="checkbox"/>	<a href="#">OneDrive Overview</a>	7 min
<input type="checkbox"/>	<a href="#">OneDrive Demo</a>	17 min
<input type="checkbox"/>	<a href="#">DFS Client</a>	8 min
<input type="checkbox"/>	<a href="#">Storage Spaces</a>	11 min
<input type="checkbox"/>	<a href="#">Configure Power Policies</a>	5 min
<input type="checkbox"/>	<a href="#">Power Settings with GPOs and PowerCFG</a>	9 min
<input type="checkbox"/>	<a href="#">Windows to Go Description</a>	12 min
<input type="checkbox"/>	<a href="#">Windows to Go Wizard Demo</a>	6 min
<input type="checkbox"/>	<a href="#">Windows to Go with PowerShell</a>	15 min
<input type="checkbox"/>	<a href="#">Configure Wi-Fi Direct</a>	5 min
<input type="checkbox"/>	<a href="#">Broadband Tethering and Metered Connections</a>	7 min
<input type="checkbox"/>	<a href="#">BitLocker Description</a>	9 min
<input type="checkbox"/>	<a href="#">BitLocker: Data Recovery Agent and Group Policy Settings</a>	13 min
<input type="checkbox"/>	<a href="#">BitLocker and BitLocker to Go Demo</a>	10 min
<input type="checkbox"/>	<a href="#">Hyper-V: Description</a>	4 min

## VIDEOS FROM COURSE

**Microsoft Windows 10 70-697: Configuring Windows Devices (cont.)**

<input type="checkbox"/>	<a href="#">Hyper-V: Creating a Virtual Machine</a>	10 min
<input type="checkbox"/>	<a href="#">Hyper-V: Settings and Moving Storage</a>	9 min
<input type="checkbox"/>	<a href="#">Roaming User Profiles</a>	6 min
<input type="checkbox"/>	<a href="#">Folder Redirection</a>	6 min
<input type="checkbox"/>	<a href="#">Mandatory User Profiles</a>	4 min
<input type="checkbox"/>	<a href="#">Migrate User Profiles with USMT</a>	13 min
<input type="checkbox"/>	<a href="#">Using a HomeGroup to Share Resources</a>	13 min
<input type="checkbox"/>	<a href="#">Configure Libraries</a>	6 min
<input type="checkbox"/>	<a href="#">Configure Shared Folder Permissions</a>	13 min
<input type="checkbox"/>	<a href="#">Configure Shared Printers</a>	14 min
<input type="checkbox"/>	<a href="#">Encrypting File System (EFS): Description</a>	4 min
<input type="checkbox"/>	<a href="#">Encrypting File System (EFS): Data Recovery Agent (DRA)</a>	15 min
<input type="checkbox"/>	<a href="#">Configure NTFS Permissions</a>	15 min
<input type="checkbox"/>	<a href="#">Dynamic Access Control Overview</a>	8 min
<input type="checkbox"/>	<a href="#">Dynamic Access Control Demo</a>	9 min
<input type="checkbox"/>	<a href="#">Access to Removable Storage Media</a>	5 min
<input type="checkbox"/>	<a href="#">Configure Disk Quotas</a>	10 min
<input type="checkbox"/>	<a href="#">Configure File Access Auditing</a>	7 min
<input type="checkbox"/>	<a href="#">Virtual Smart Cards</a>	9 min
<input type="checkbox"/>	<a href="#">Picture Passwords</a>	2 min
<input type="checkbox"/>	<a href="#">Microsoft Passport</a>	10 min
<input type="checkbox"/>	<a href="#">Windows Hello and Biometrics</a>	6 min
<input type="checkbox"/>	<a href="#">Workplace Join</a>	14 min
<input type="checkbox"/>	<a href="#">Workgroup vs. Domain</a>	9 min
<input type="checkbox"/>	<a href="#">Secure Channel</a>	11 min
<input type="checkbox"/>	<a href="#">Account Policies</a>	15 min
<input type="checkbox"/>	<a href="#">Credential Manager</a>	5 min
<input type="checkbox"/>	<a href="#">Application Compatibility Toolkit</a>	17 min
<input type="checkbox"/>	<a href="#">App-V: Description</a>	4 min
<input type="checkbox"/>	<a href="#">App-V: Demo</a>	13 min
<input type="checkbox"/>	<a href="#">UE-V: Description</a>	3 min
<input type="checkbox"/>	<a href="#">UE-V: Demo</a>	15 min
<input type="checkbox"/>	<a href="#">Network Basics</a>	11 min
<input type="checkbox"/>	<a href="#">IP Addressing and Name Resolution</a>	13 min
<input type="checkbox"/>	<a href="#">Configure Network Locations</a>	11 min
<input type="checkbox"/>	<a href="#">Wireless Networks</a>	8 min
<input type="checkbox"/>	<a href="#">Location Aware Printing</a>	3 min
<input type="checkbox"/>	<a href="#">Windows Firewall</a>	11 min
<input type="checkbox"/>	<a href="#">Connection Security Rules (IPsec)</a>	16 min
<input type="checkbox"/>	<a href="#">VPN: Description</a>	3 min
<input type="checkbox"/>	<a href="#">VPN: Types</a>	9 min

## VIDEOS FROM COURSE

**Microsoft Windows 10 70-697: Configuring Windows Devices (cont.)**

<input type="checkbox"/>	<a href="#">Remote VPN Authentication and Demonstrations</a>	12 min
<input type="checkbox"/>	<a href="#">Direct Access</a>	10 min
<input type="checkbox"/>	<a href="#">Remote Desktop</a>	15 min
<input type="checkbox"/>	<a href="#">File History</a>	9 min
<input type="checkbox"/>	<a href="#">Backup and Restore</a>	15 min
<input type="checkbox"/>	<a href="#">System Restore</a>	14 min
<input type="checkbox"/>	<a href="#">Driver Rollback</a>	4 min
<input type="checkbox"/>	<a href="#">Refresh and Recycle Windows</a>	3 min

## VIDEOS FROM COURSE

**Microsoft Windows 10 70-698: Installing and Configuring Windows 10**

10 hours

<input type="checkbox"/>	<a href="#">70-698 Course Introduction</a>	6 min
<input type="checkbox"/>	<a href="#">Intro to the Implement Windows Section</a>	5 min
<input type="checkbox"/>	<a href="#">Hardware Requirements and Compatibility</a>	8 min
<input type="checkbox"/>	<a href="#">Upgrades Versus Clean Installs</a>	7 min
<input type="checkbox"/>	<a href="#">Windows 10 Editions</a>	8 min
<input type="checkbox"/>	<a href="#">Requirements for Special Features</a>	8 min
<input type="checkbox"/>	<a href="#">Creating Appropriate Installation Media</a>	12 min
<input type="checkbox"/>	<a href="#">Performing Various Installations</a>	16 min
<input type="checkbox"/>	<a href="#">Performing a Clean Install</a>	11 min
<input type="checkbox"/>	<a href="#">Installing Additional Windows Features</a>	7 min
<input type="checkbox"/>	<a href="#">Additional Regional and Language Support</a>	5 min
<input type="checkbox"/>	<a href="#">Device Drivers</a>	7 min
<input type="checkbox"/>	<a href="#">Advanced Device Driver Management</a>	8 min
<input type="checkbox"/>	<a href="#">Start Menu, Desktop, Taskbar, and Notification Settings</a>	13 min
<input type="checkbox"/>	<a href="#">Accessibility Options</a>	7 min
<input type="checkbox"/>	<a href="#">Cortana</a>	5 min
<input type="checkbox"/>	<a href="#">Microsoft Edge</a>	12 min
<input type="checkbox"/>	<a href="#">Internet Explorer</a>	8 min
<input type="checkbox"/>	<a href="#">Hyper-V</a>	10 min
<input type="checkbox"/>	<a href="#">Power Settings</a>	8 min
<input type="checkbox"/>	<a href="#">Windows Imaging and Configuration Designer (ICD) Tool</a>	7 min
<input type="checkbox"/>	<a href="#">Volume Activation</a>	8 min
<input type="checkbox"/>	<a href="#">Miscellaneous Activation Topics</a>	4 min
<input type="checkbox"/>	<a href="#">Introducing Active Directory</a>	7 min
<input type="checkbox"/>	<a href="#">Active Directory and Group Policies</a>	8 min
<input type="checkbox"/>	<a href="#">User Account Control (UAC)</a>	8 min
<input type="checkbox"/>	<a href="#">Intro to the Configure and Support Core Services Section</a>	3 min
<input type="checkbox"/>	<a href="#">IPv4 and IPv6 Network Settings</a>	15 min

## VIDEOS FROM COURSE

**Microsoft Windows 10 70-698: Installing and Configuring Windows 10 (cont.)**

<input type="checkbox"/>	<a href="#">Name Resolution</a>	6 min
<input type="checkbox"/>	<a href="#">Connect to a Network</a>	6 min
<input type="checkbox"/>	<a href="#">Network Locations</a>	6 min
<input type="checkbox"/>	<a href="#">Windows Firewall</a>	14 min
<input type="checkbox"/>	<a href="#">Windows Firewall with Advanced Security</a>	10 min
<input type="checkbox"/>	<a href="#">Network Discovery</a>	5 min
<input type="checkbox"/>	<a href="#">Wi-Fi Settings</a>	10 min
<input type="checkbox"/>	<a href="#">Wi-Fi Direct, Wi-Fi Sense, and Hotspot 2.0</a>	5 min
<input type="checkbox"/>	<a href="#">Troubleshoot Network Issues</a>	7 min
<input type="checkbox"/>	<a href="#">VPNs</a>	8 min
<input type="checkbox"/>	<a href="#">IPsec</a>	7 min
<input type="checkbox"/>	<a href="#">DirectAccess</a>	4 min
<input type="checkbox"/>	<a href="#">Disk Management and Windows PowerShell</a>	14 min
<input type="checkbox"/>	<a href="#">VHDs</a>	10 min
<input type="checkbox"/>	<a href="#">Storage Spaces</a>	11 min
<input type="checkbox"/>	<a href="#">Removable Devices</a>	9 min
<input type="checkbox"/>	<a href="#">Troubleshoot Storage</a>	9 min
<input type="checkbox"/>	<a href="#">File and Printer Sharing</a>	9 min
<input type="checkbox"/>	<a href="#">Folder Shares, Public Folders, and OneDrive</a>	12 min
<input type="checkbox"/>	<a href="#">File System Permissions</a>	11 min
<input type="checkbox"/>	<a href="#">Troubleshoot Data Access</a>	4 min
<input type="checkbox"/>	<a href="#">Desktop Apps</a>	6 min
<input type="checkbox"/>	<a href="#">Startup Options</a>	10 min
<input type="checkbox"/>	<a href="#">Windows Store</a>	7 min
<input type="checkbox"/>	<a href="#">Provisioning Packages</a>	6 min
<input type="checkbox"/>	<a href="#">Windows PowerShell</a>	9 min
<input type="checkbox"/>	<a href="#">The Microsoft Management Console (MMC)</a>	9 min
<input type="checkbox"/>	<a href="#">Remote Management</a>	9 min
<input type="checkbox"/>	<a href="#">Introduction to the Manage and Maintain Windows Section</a>	4 min
<input type="checkbox"/>	<a href="#">Configure Updates</a>	11 min
<input type="checkbox"/>	<a href="#">Event Viewer</a>	9 min
<input type="checkbox"/>	<a href="#">Task Manager and Resource Monitor</a>	8 min
<input type="checkbox"/>	<a href="#">Performance Monitor</a>	12 min
<input type="checkbox"/>	<a href="#">Monitor and Manage Printers</a>	6 min
<input type="checkbox"/>	<a href="#">Indexing Options</a>	10 min
<input type="checkbox"/>	<a href="#">Windows Defender</a>	7 min
<input type="checkbox"/>	<a href="#">Reliability Monitor</a>	5 min
<input type="checkbox"/>	<a href="#">Troubleshoot Performance Issues</a>	7 min
<input type="checkbox"/>	<a href="#">Recovery Options</a>	7 min
<input type="checkbox"/>	<a href="#">Backup Options</a>	6 min
<input type="checkbox"/>	<a href="#">Authorization and Authentication</a>	5 min

## VIDEOS FROM COURSE

**Microsoft Windows 10 70-698: Installing and Configuring Windows 10** (cont.)

<input type="checkbox"/>	Configure Services	6 min
<input type="checkbox"/>	Task Scheduler	8 min
<input type="checkbox"/>	Your 70-698 Exam	7 min

## VIDEOS FROM COURSE

**Linux Essentials** 7 hours

<input type="checkbox"/>	Introduction	2 min
<input type="checkbox"/>	Linux Evolution and Popular Operating Systems	16 min
<input type="checkbox"/>	Major Open Source Applications	14 min
<input type="checkbox"/>	Understanding Open Source Software and Licensing	22 min
<input type="checkbox"/>	ICT Skills and Working in Linux	22 min
<input type="checkbox"/>	Command Line Basics	21 min
<input type="checkbox"/>	Using the Command Line to Get Help	20 min
<input type="checkbox"/>	Using Directories and Listing Files	18 min
<input type="checkbox"/>	Creating, Moving, and Deleting Files	17 min
<input type="checkbox"/>	Archiving Files on the Command Line	25 min
<input type="checkbox"/>	Searching and Extracting Data from Files	34 min
<input type="checkbox"/>	Turning Commands into a Script	21 min
<input type="checkbox"/>	Choosing an Operating System	21 min
<input type="checkbox"/>	Understanding Computer Hardware	23 min
<input type="checkbox"/>	Where Data is Stored	20 min
<input type="checkbox"/>	Your Computer on the Network	23 min
<input type="checkbox"/>	Basic Security and Identifying User Types	14 min
<input type="checkbox"/>	Creating Users and Groups	13 min
<input type="checkbox"/>	Managing File Permissions and Ownership	28 min
<input type="checkbox"/>	Special Directories and Files	15 min

## VIDEOS FROM COURSE

**LPI Linux LPIC-1 & CompTIA Linux+ Prep** 15 hours

<input type="checkbox"/>	Intro	2 min
<input type="checkbox"/>	Integrated Hardware Devices	12 min
<input type="checkbox"/>	Removable Devices	13 min
<input type="checkbox"/>	Dealing with Devices: procs, sysfs, udev, and dbus	10 min
<input type="checkbox"/>	The Linux Boot Process & Initrd	10 min
<input type="checkbox"/>	Boot Time Kernel Commands and the Init System(s)	10 min
<input type="checkbox"/>	Managing Runlevels with SysVinit	10 min
<input type="checkbox"/>	Managing Boot Targets with Systemd	11 min
<input type="checkbox"/>	Proper Halting and Rebooting of Your System	10 min
<input type="checkbox"/>	Partitions & Mount Points	14 min
<input type="checkbox"/>	RAID vs. LVM	13 min
<input type="checkbox"/>	Bootloaders: GRUB & GRUB2	14 min

## VIDEOS FROM COURSE

**LPI Linux LPIC-1 & CompTIA Linux+ Prep** (cont.)

<input type="checkbox"/>	Managing Shared Libraries	13 min
<input type="checkbox"/>	Using APT	13 min
<input type="checkbox"/>	Using YUM with RPM Files	11 min
<input type="checkbox"/>	Using rpm2cpio and yumdownloader	9 min
<input type="checkbox"/>	Command Line Intro	7 min
<input type="checkbox"/>	Working with Environment Variables	9 min
<input type="checkbox"/>	Manipulating Text: Head, Tail, Cat, Split	8 min
<input type="checkbox"/>	Manipulating Text: Paste, Join, Expand, Unexpand	9 min
<input type="checkbox"/>	Manipulating Text: sed	10 min
<input type="checkbox"/>	File Management	9 min
<input type="checkbox"/>	The "find" Command	12 min
<input type="checkbox"/>	Using tar, cpio, and dd	20 min
<input type="checkbox"/>	Compressing with Gzip and Bzip2	11 min
<input type="checkbox"/>	Standard Input (STDIN), Standard Output (STDOUT), and Standard Error (STDERR)	13 min
<input type="checkbox"/>	Pipes, Data Redirection, and Xargs	14 min
<input type="checkbox"/>	Foreground and Background Jobs	14 min
<input type="checkbox"/>	Signals and PIDs	14 min
<input type="checkbox"/>	Advanced Process Management	12 min
<input type="checkbox"/>	Process Priorities (Nice Levels)	17 min
<input type="checkbox"/>	Regular Expressions with grep, egrep, & fgrep	9 min
<input type="checkbox"/>	Basic vi Usage	12 min
<input type="checkbox"/>	Intermediate vi Usage	16 min
<input type="checkbox"/>	GPT & MBR	18 min
<input type="checkbox"/>	Formatting Partitions	13 min
<input type="checkbox"/>	Maintaining Filesystems	13 min
<input type="checkbox"/>	Mounting & Unmounting	11 min
<input type="checkbox"/>	Drive Quotas	10 min
<input type="checkbox"/>	File Ownership & Permissions	10 min
<input type="checkbox"/>	Changing Permissions & Creation Masks	14 min
<input type="checkbox"/>	SUID, GUID, & the Sticky Bit	20 min
<input type="checkbox"/>	Hard & Soft Links	9 min
<input type="checkbox"/>	File Hierarchy Standard	9 min
<input type="checkbox"/>	Find & Locate	8 min
<input type="checkbox"/>	User Profiles & System Profiles	15 min
<input type="checkbox"/>	Scripting Basics	7 min
<input type="checkbox"/>	Scripting Conditionals & Loops	13 min
<input type="checkbox"/>	SQL Data Management	15 min
<input type="checkbox"/>	X11 (Xorg) Configuration	13 min
<input type="checkbox"/>	Display Managers	6 min
<input type="checkbox"/>	Accessibility	7 min
<input type="checkbox"/>	Managing Users & Groups	9 min
<input type="checkbox"/>	Password, Group, and Shadow Databases	11 min

## VIDEOS FROM COURSE

**LPI Linux LPIC-1 & CompTIA Linux+ Prep (cont.)**

<input type="checkbox"/>	<a href="#">Personal Job Scheduling with At &amp; Cron</a>	16 min
<input type="checkbox"/>	<a href="#">System Job Scheduling with Cron &amp; Anacron</a>	10 min
<input type="checkbox"/>	<a href="#">Localization &amp; Internationalization</a>	13 min
<input type="checkbox"/>	<a href="#">Maintaining System Time</a>	12 min
<input type="checkbox"/>	<a href="#">System Logging</a>	15 min
<input type="checkbox"/>	<a href="#">Mail Transfer Agent Basics</a>	7 min
<input type="checkbox"/>	<a href="#">Managing Printers</a>	13 min
<input type="checkbox"/>	<a href="#">IPv4 &amp; IPv6</a>	11 min
<input type="checkbox"/>	<a href="#">Subnet Masks and CIDR Notation</a>	20 min
<input type="checkbox"/>	<a href="#">Ports &amp; Protocols</a>	11 min
<input type="checkbox"/>	<a href="#">Basic Network Configuration</a>	15 min
<input type="checkbox"/>	<a href="#">Basic Network Troubleshooting</a>	10 min
<input type="checkbox"/>	<a href="#">Client-side DNS</a>	7 min
<input type="checkbox"/>	<a href="#">Basic Security Audits</a>	11 min
<input type="checkbox"/>	<a href="#">Services &amp; Security</a>	11 min
<input type="checkbox"/>	<a href="#">User Limits</a>	9 min
<input type="checkbox"/>	<a href="#">Encryption &amp; Signing</a>	9 min
<input type="checkbox"/>	<a href="#">Creating and Using Keypairs</a>	13 min

## VIDEOS FROM COURSE

**Ubuntu****9 hours**

<input type="checkbox"/>	<a href="#">Ubuntu Server Course Introduction</a>	2 min
<input type="checkbox"/>	<a href="#">Ubuntu's Unique Underbelly</a>	16 min
<input type="checkbox"/>	<a href="#">Hard Drives &amp; Partitions</a>	31 min
<input type="checkbox"/>	<a href="#">The Installation Process</a>	31 min
<input type="checkbox"/>	<a href="#">Initial Setup Considerations</a>	30 min
<input type="checkbox"/>	<a href="#">Package Management</a>	30 min
<input type="checkbox"/>	<a href="#">Networking!</a>	22 min
<input type="checkbox"/>	<a href="#">Udev and Upstart and UFW, Oh My...</a>	27 min
<input type="checkbox"/>	<a href="#">Services: DNS &amp; DHCP</a>	30 min
<input type="checkbox"/>	<a href="#">Services: Web &amp; Databases</a>	28 min
<input type="checkbox"/>	<a href="#">Services: Mail &amp; POP3/IMAP</a>	30 min
<input type="checkbox"/>	<a href="#">Services: File &amp; Print</a>	37 min
<input type="checkbox"/>	<a href="#">Services: SSH</a>	36 min
<input type="checkbox"/>	<a href="#">Services: LTSP</a>	19 min
<input type="checkbox"/>	<a href="#">Security</a>	25 min
<input type="checkbox"/>	<a href="#">Monitoring</a>	29 min

## VIDEOS FROM COURSE

**Ubuntu (cont.)**

<input type="checkbox"/>	<a href="#">Virtualization</a>	19 min
<input type="checkbox"/>	<a href="#">Clouds &amp; Containers</a>	24 min
<input type="checkbox"/>	<a href="#">Recovery Tools</a>	21 min
<input type="checkbox"/>	<a href="#">Getting Help!</a>	20 min

## VIDEOS FROM COURSE

**CentOS System Administrator Prep****9 hours**

<input type="checkbox"/>	<a href="#">Intro</a>	1 min
<input type="checkbox"/>	<a href="#">What Makes CentOS Unique?</a>	11 min
<input type="checkbox"/>	<a href="#">Manipulating Text I/O</a>	35 min
<input type="checkbox"/>	<a href="#">Access Remote Systems</a>	27 min
<input type="checkbox"/>	<a href="#">Archiving, and Compressing and Chmod'ing, Oh My!</a>	33 min
<input type="checkbox"/>	<a href="#">Manipulating Files, Directories, and Links</a>	19 min
<input type="checkbox"/>	<a href="#">How to Read the Manual, CentOS Style</a>	23 min
<input type="checkbox"/>	<a href="#">Reboots &amp; Runlevels</a>	16 min
<input type="checkbox"/>	<a href="#">Renicing and Killing Rogue Processes</a>	28 min
<input type="checkbox"/>	<a href="#">Network Services and Their Log Files</a>	24 min
<input type="checkbox"/>	<a href="#">Partitions &amp; Logical Volumes</a>	31 min
<input type="checkbox"/>	<a href="#">Filesystems &amp; Mounting Them</a>	30 min
<input type="checkbox"/>	<a href="#">Auto-mounting Local, Network, and Encrypted Filesystems</a>	18 min
<input type="checkbox"/>	<a href="#">Chmod'ing, Chown'ing, and Chgrp'ing, Oh My</a>	24 min
<input type="checkbox"/>	<a href="#">Special Permissions - SetUID, SetGID, and Sticky Bits</a>	32 min
<input type="checkbox"/>	<a href="#">Managing ACL's</a>	19 min
<input type="checkbox"/>	<a href="#">Local Users &amp; Groups</a>	23 min
<input type="checkbox"/>	<a href="#">Configuring the Network</a>	15 min
<input type="checkbox"/>	<a href="#">Kickstart Your Install</a>	20 min
<input type="checkbox"/>	<a href="#">Hosting Virtual Machines</a>	11 min
<input type="checkbox"/>	<a href="#">Package Management</a>	25 min
<input type="checkbox"/>	<a href="#">Setting up Web &amp; FTP Services</a>	14 min
<input type="checkbox"/>	<a href="#">Cron &amp; Time Services</a>	21 min
<input type="checkbox"/>	<a href="#">Configuring the System Firewall</a>	10 min
<input type="checkbox"/>	<a href="#">SELinux - What Is It?</a>	21 min
<input type="checkbox"/>	<a href="#">SELinux - Configuration and Troubleshooting</a>	14 min