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TECH EVENTS WITH PERSPECTIVE
The Ultimate Education Destination
ORLANDO 2023
Managing Active Directory with PowerShell
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Learning Architect
Level: Intermediate
Visual Studio LIVE!
SQL Server LIVE!
TECHMENTOR
Artificial Intelligence LIVE!
Cloud & Containers LIVE!
Cybersecurity & Ransomware LIVE!

PS C:\> whoami

- Veteran IT Pro
- Microsoft MVP
- Author
- Teacher
- https://jdhitsolutions.github.io

Microsoft MVP Most Valuable Professional

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Why PowerShell

- Available everywhere
  - Install PowerShell 7
- Manage from your desktop
- Consistency
- Efficiency
- Scalability
  - Manage at Scale

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Requirements

- PowerShell
- RSAT ActiveDirectory tools
  - Local AD infrastructure
  - Run from your desktop
  - NO RDP!
- Permissions
- DNSServer module
  - Out of scope today

```
PS C:\> Get-WindowsCapability -name rsat.ActiveDirectory* -online


Name         : Rsat.ActiveDirectory.DS-LDS.Tools~~~~0.0.1.0
State        : Installed
DisplayName  : RSAT: Active Directory Domain Services and Lightweight Directory Services Tools
Description  : Active Directory Domain Services (AD DS) and Active Directory Lightweight Directory Services (AD LDS)
               Tools include snap-ins and command-line tools for remotely managing AD DS and AD LDS on Windows Server.
DownloadSize : 5230259
InstallSize  : 34704398
```

Remote Server Administration Tools

Ships with Windows 10/11

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```
Get-WindowsCapability -name rsat.ActiveDirectory* -online |
Add-WindowsCapability -online
```

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```
PS C:\> Get-Command -module ActiveDirectory | Group Verb

Count Name                      Group
----- ----                      -----
    7 Add                       {Add-ADCentralAccessPolicyMember, Add-ADComputerServiceAccount, Add-ADDomainControll...
    2 Clear                     {Clear-ADAccountExpiration, Clear-ADClaimTransformLink}
    2 Disable                   {Disable-ADAccount, Disable-ADOptionalFeature}
    2 Enable                    {Enable-ADAccount, Enable-ADOptionalFeature}
   43 Get                       {Get-ADAccountAuthorizationGroup, Get-ADAccountResultantPasswordReplicationPolicy, G...
    1 Grant                     {Grant-ADAuthenticationPolicySiloAccess}
    1 Install                   {Install-ADServiceAccount}
    3 Move                      {Move-ADDirectoryServer, Move-ADDirectoryServerOperationMasterRole, Move-ADObject}
   20 New                       {New-ADAuthenticationPolicy, New-ADAuthenticationPolicySilo, New-ADCentralAccessPoli...
   26 Remove                    {Remove-ADAuthenticationPolicy, Remove-ADAuthenticationPolicySilo, Remove-ADCentralA...
    1 Rename                    {Rename-ADObject}
    1 Reset                     {Reset-ADServiceAccountPassword}
    1 Restore                   {Restore-ADObject}
    1 Revoke                    {Revoke-ADAuthenticationPolicySiloAccess}
    1 Search                    {Search-ADAccount}
   30 Set                       {Set-ADAccountAuthenticationPolicySilo, Set-ADAccountControl, Set-ADAccountExpiratio...
    1 Show                      {Show-ADAuthenticationPolicyExpression}
    1 Sync                      {Sync-ADObject}
    1 Test                      {Test-ADServiceAccount}
    1 Uninstall                 {Uninstall-ADServiceAccount}
    1 Unlock                    {Unlock-ADAccount}


PS C:\> Get-Command -module ActiveDirectory | Measure-Object | Select-Object Count

Count
-----
  147
```

PSDrive

- Navigate AD as a drive

```
PS AD:\DC=Company,DC=Pri> dir

Name                ObjectClass          DistinguishedName
----                -----------          -----------------
Accounting          organizationalUnit   OU=Accounting,DC=Company,DC=Pri
Builtin             builtinDomain        CN=Builtin,DC=Company,DC=Pri
Computers           container            CN=Computers,DC=Company,DC=Pri
Dev                 organizationalUnit   OU=Dev,DC=Company,DC=Pri
Domain Controllers  organizationalUnit   OU=Domain Controllers,DC=Company,DC=Pri
Employees           organizationalUnit   OU=Employees,DC=Company,DC=Pri
ForeignSecurityPr... container            CN=ForeignSecurityPrincipals,DC=Company,DC=Pri
Infrastructure      infrastructureUpdate CN=Infrastructure,DC=Company,DC=Pri
IT                  organizationalUnit   OU=IT,DC=Company,DC=Pri
JEA_Operators       organizationalUnit   OU=JEA_Operators,DC=Company,DC=Pri
Keys                container            CN=Keys,DC=Company,DC=Pri
LostAndFound        lostAndFound         CN=LostAndFound,DC=Company,DC=Pri
Managed Service A... container            CN=Managed Service Accounts,DC=Company,DC=Pri
Marketing           organizationalUnit   OU=Marketing,DC=Company,DC=Pri
NTDS Quotas         msDS-QuotaContainer  CN=NTDS Quotas,DC=Company,DC=Pri
Program Data        container            CN=Program Data,DC=Company,DC=Pri
Sales               organizationalUnit   OU=Sales,DC=Company,DC=Pri
Servers             organizationalUnit   OU=Servers,DC=Company,DC=Pri
System              container            CN=System,DC=Company,DC=Pri
TPM Devices         msTPM-Information... CN=TPM Devices,DC=Company,DC=Pri
Users               container            CN=Users,DC=Company,DC=Pri


PS AD:\DC=Company,DC=Pri> get-item '//Rootdse/CN=Administrator,CN=Users,DC=Company,DC=Pri'

Name                ObjectClass          DistinguishedName
----                -----------          -----------------
Administrator       user                 CN=Administrator,CN=Users,DC=Company,DC=Pri


PS AD:\DC=Company,DC=Pri> _
```

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- Use the QR code or search for “Converge360 Events” in your app store
- Find this session on the Agenda tab
- Click “Session Evaluation”
- Thank you!

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Questions

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