

[External] [In-Progress] Database Migration PowerShell Commands

A. Initial Setup

| | To-do | PS Command |
|---|-------------------|-------------------------------------------------------------------------------|
| 1 | Enable remoting | <code>Enable-PSRemoting</code> |
| 2 | One-to-one remote | <code>Enter-PSSession -computerName</code> <code><Server -R2></code> |

B. Auditing Server Properties

| | Server Property | PS Command |
|---|--------------------|--------------------------------------------------------------------------------------------------------------|
| 1 | Localhost | <code>\$env:computername</code> |
| 2 | IP address | <code>Get-NetIPAddress -AddressFamily</code> <code>IPv4</code> |
| 3 | PowerShell version | <code>Get-Host Select-Object -Property</code> <code>Version</code> <code>\$PSVersionTable</code> |

C. dbatools

 dbatools require a minimum PowerShell version of 3.0: <https://www.powershellgallery.com/packages/dbatools/1.0.135>


See command B3 for checking the version, as well as the following articles on updating PowerShell:


- <https://docs.microsoft.com/en-us/powershell/scripting/windows-powershell/install/installing-windows-powershell?view=powershell-7.1#upgrading-existing-windows-powershell>
- <https://docs.microsoft.com/en-us/powershell/scripting/windows-powershell/wmf/setup/install-configure?view=powershell-7.1>

If PowerShell is greater or equal to 3.0 but less than 5.0, dbatools can be installed using [chocolatey](#):


```
choco install dbatools --version 1.1.145
```

1.1.145 is the latest release prior to dbatools version 2. At this time, there is a bug with chocolatey not including the new `dbatools.library` dependency for version 2. See comments here:

 [dbatools \(PowerShell Module\) 2.1.4](#)

 If step 3 returns an error like "PowerShell Gallery is currently unavailable," try running the commands here and restart PowerShell:

<https://dev.to/darksmile92/powershell-disabled-support-for-tls-1-0-for-the-gallery-update-module-and-install-module-broken-1oii>

 Newer versions of PowerShell may throw an error like "The certificate chain was issued by an authority that is not trusted" when commands are run. As a workaround, `Connect-DbalInstance` can be used as such:

```
$server = Connect-DbalInstance -SqlInstance sql2016 -TrustServerCertificate
```

```
Find-DbaAgentJob -SqlInstance $server -JobName *backup*
```

[Can we change the parameter of Find-DbaAgentJob?](#)

| | To-do | PS Command | Example |
|----|--------------------------------------------|-----------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1 | Get list of installed modules and versions | <code>Get-InstalledModule</code> | <code>Get-InstalledModule dbatools</code> |
| 2 | Execution Policy | <code>Set-ExecutionPolicy -ExecutionPolicy RemoteSigned -Scope CurrentUser</code> | |
| 3 | Trust PowerShell Gallery | <code>Set-PSRepository -Name PSGallery -InstallationPolicy Trusted</code> | |
| 4 | Install dbatools | <code>Install-Module -Name dbatools</code> | |
| 5 | Update dbatools | <code>Update-Module dbatools</code> | |
| 6 | Test DB connection | <code>Connect-DbaInstance</code> | <code>Connect-DbaInstance -SqlInstance EBENGUNADI255E\MSSQLSERVER01</code> |
| 7 | Disable SQL Agent Jobs | <code>Set-DbaAgentJob -Disable</code> | <pre>1 Get-DbaAgentJob -SqlInstance localhost 2 Set-DbaAgentJob -SqlInstance localhost -Disable</pre> |
| 8 | Enable running SQL Agent Jobs | <code>Start-DbaAgentJob -Enable</code> | <pre>1 Get-DbaAgentJob -SqlInstance localhost 2 Set-DbaAgentJob -SqlInstance localhost -Enable</pre> |
| 9 | Create Credential object | <code>Get-Credential</code> | <code>\$cred = Get-Credential sa</code> |
| 10 | Copy all non-system Logins | <code>Copy-DbaLogin -ExcludeSystemLogins</code> | <pre>1 Copy-DbaLogin -Source \$replica -Destination \$replica 2 -SourceSqlCredential \$cred -DestinationSqlCredential 3 -ExcludeLogin realcajun -ExcludeSystemLogins -EnableE</pre> |
| 11 | Copy SQL Jobs | <code>Copy-DbaAgentJob</code> | <pre>1 Copy-DbaAgentJob -Source sqlserver2014a -Destination 2 -SourceSqlCredential \$cred -DestinationSqlCredential</pre> |

| | | | |
|----|---------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| | <p>⚠ Some jobs have hard-coded IPs, hostnames, database names, or directories. To check for these, it's safer to recreate the jobs by scripting them out.</p> | | |
| 12 | Visualize SQL Job schedules | Find-DbaAgentJob Get-DbaAgentJobHistory ConvertTo-DbaTimeline | <pre> 1 \$oneweekago = [datetime]::Today.AddDays(-7) 2 Find-DbaAgentJob -SqlInstance localhost 3 Get-DbaAgentJobHistory -StartDate \$oneweekago 4 ConvertTo-DbaTimeline 5 Out-File -FilePath c:\temp\jobs.html -Encoding ASCII </pre> |
| 13 | Check for active connections to the database | Get-DbaProcess | <pre> 1 Get-DbaProcess -SqlInstance SourceServer -Database Mi 2 Select Host, login, Program </pre> |
| 14 | Remove connections to the database | Stop-DbaProcess | <pre> 1 Get-DbaProcess -SqlInstance SourceServer -Database Mi 2 Stop-DbaProcess </pre> |
| 15 | Copy databases | Copy-DbaDatabase | <pre> 1 Copy-DbaDatabase -Source sql2014a -Destination sql201 </pre> |
| 16 | Restore databases | Restore-DbaDatabase | <pre> 1 Restore-DbaDatabase -SqlInstance dbatoolslab\sql2017 </pre> |
| 17 | Install Standard Maintenance Plan | Install-DbaMaintenanceSolution | <pre> 1 \$params = @{ 2 SqlInstance = 'SQLSERVER01' 3 Database = 'medical' 4 ReplaceExisting = \$true 5 InstallJobs = \$true 6 CleanupTime = 72 7 Verbose = \$true 8 } 9 Install-DbaMaintenanceSolution @params </pre> |
| 18 | Automatically calculate and set maximum memory | Set-DbaMaxMemory | <pre> 1 Set-DbaMaxMemory -SqlInstance \$SQLInstance </pre> |