



Vorstellung dbatools – Powershell meets SQL Server

Instance migrations and best practice implementations have never been safer, faster or freer.

dbatools.io

dbatools is a free PowerShell module with over 150 SQL Server best practice, administration and migration commands included.

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Migration Commands

Everything

Start-SqlMigration

Server

Copy-SqlCustomError

Copy-SqlSpConfigure

Export-SqlSpConfigure

Import-SqlSpConfigure

Databases

Copy-SqlDatabase

Copy-SqlDatabaseAssembly

Copy-SqlSysDbUserObjects

Export-DbaAvailabilityGroup

Test-SqlMigrationConstraint

Security

Copy-SqlLogin

Copy-SqlCredential

Copy-SqlAudit

Copy-SqlAuditSpecification

Export-SqlLogin

Export-SqlUser

Server Objects

Copy-SqlBackupDevice

Copy-SqlEndpoint

Copy-SqlLinkedServer

Copy-SqlServerTrigger

SSIS

Copy-SqlSsisCatalog

Management

Copy-SqlPolicyManagement

Copy-SqlDataCollection

Copy-SqlResourceGovernor

Copy-SqlExtendedEvent

Copy-SqlDatabaseMail

Registered Servers

Copy-SqlCentralManagementServer

SQL Server Agent

Copy-SqlServerAgent

Copy-SqlJob

Copy-SqlSharedSchedule

Copy-SqlAgentCategory

Copy-SqlAlert

Copy-SqlOperator

Copy-SqlProxyAccount

Beispiel - Copy-SqlLogin

This command migrates logins from source to destination SQL Servers. Supports SQL Server versions 2000 and above. Migrates logins with SIDs, passwords, defaultdb, server roles & securables, database permissions & securables, login attributes (enforce password policy, expiration, etc).

By default, all logins with the exception of system (####Example Login## and local (SERVERNAME\administrators) logins are copied. The -Logins parameter is autopopulated for command-line completion and can be used to copy only specific logins.

If the login already exists on the destination, it will be skipped unless -Force is specified. Force drops and recreates the login.

Examples

To copy all logins from sqlserver to sqlcluster, using integrated (Windows) login. If logins with the same name exist on sqlcluster, they will be skipped.

```
Copy-SqlLogin -Source sqlserver -Destination sqlcluster
```

To copy only two SQL logins, netnerds and realcajun, as well as one Windows login 'base\ctrlb'

```
Copy-SqlLogin -Source sqlserver -Destination sqlcluster -Logins netnerds, realcajun, 'base\ctrlb'
```

Best Practice Commands

Expand-SqlTLogResponsibly

Find-SqlDuplicateIndex

Find-SqlUnusedIndex

Get-DbaLastBackup

Get-DbaLastGoodCheckDb

Get-DbaMaxMemory

Repair-DbaServerName

Set-DbaDatabaseOwner

Set-DbaJobOwner

Set-DbaMaxDop

Set-DbaPowerPlan

Set-DbaMaxMemory

Set-SqlTempDbConfiguration

Test-DbaMaxDop

Test-DbaDatabaseCollation

Test-DbaDatabaseCompatibility

Test-DbaDatabaseOwner

Test-DbaDiskAlignment

Test-DbaDiskAllocation

Test-DbaJobOwner

Test-DbaMaxMemory

Test-DbaOptimizeAdHoc

Test-DbaPowerPlan

Test-DbaServerName

Test-DbaSpn

Test-DbaValidLogin

Test-DbaVirtualLogFile

Test-SqlTempDbConfiguration

Beispiel - Test-SqlTempDbConfiguration

Evaluates TempDB against a set of rules to match best practices. The rules are:

- TF 1118 enabled: Is Trace Flag 1118 enabled (See KB328551).
- File Count: Does the count of data files in TempDB match the number of logical cores, up to 8.
- File Growth: Are any files set to have percentage growth, as best practice is all files have an explicit growth value.
- File Location: Is TempDB located on the C:\? Best practice says to locate it elsewhere.
- File MaxSize Set(optional): Do any files have a max size value? Max size could cause TempDB problems if it isn't allowed to grow.

Other rules can be added at a future date. If any of these rules don't match recommended values, a warning will be thrown.

Examples

To check a SQL Server instance:

`Test-SqlTempDbConfiguration -SqlServer localhost`

General Administration Commands

Find-DbaAgentJob	Get-DbaRestoreHistory	Get-SqlRegisteredServerName	Set-DbaDatabaseState
Find-DbaDatabase	Get-DbaRoleMember	Get-SqlServerKey	Set-DbaSpn
Find-DbaOrphanedFile	Get-DbaRunningJob	Install-SqlWhoIsActive	Show-SqlDatabaseList
Find-DbaStoredProcedure	Get-DbaClusterActiveNode	New-DbaDatabaseSnapshot	Show-SqlServerFileSystem
Get-DbaAgentAlert	Get-DbaDiskSpace	Read-DbaBackupHeader	Show-SqlWhoIsActive
Get-DbaAgentOperator	Get-DbaMemoryUsage	Remove-DbaBackup	Sync-SqlLoginPermissions
Get-DbaAvailabilityGroup	Get-DbaMsdtc	Remove-DbaDatabaseSnapshot	Test-DbaConnectionAuthScheme
Get-DbaBackupHistory	Get-DbaPageFileSetting	Remove-DbaSpn	Stop-DbaProcess
Get-DbaDatabaseFreespace	Get-DbaSpConfigure	Remove-SqlDatabaseSafely	Test-DbaFullRecoveryModel
Get-DbaDatabaseSnapshot	Get-DbaSpn	Remove-SqlOrphanUser	Test-SqlNetworkLatency
Get-DbaDatabaseState	Get-DbaStartupParameter	Rename-DbaLogin	Test-SqlPath
Get-DbaDetachedDatabaseInfo	Get-DbaTcpPort	Repair-SqlOrphanUser	Update-SqlWhoIsActive
Get-DbaHelpIndex	Get-DbaTrigger	Reset-SqlAdmin	Watch-SqlDbLogin
Get-DbaPermission	Get-DbaUptime	Resolve-DbaNetworkName	
Get-DbaProcess	Get-DbaXEventsSession	Restore-DbaFromDatabaseSnapshot	

Beispiel - Repair-SqlOrphanUser

Repairing all users within database 'db2'. Some users does not have their matching login.

```
PS C:\Windows\system32> Repair-SqlOrphanUser -SqlServer sql2008 -Databases db2
Attempting to connect to Sql Server..
Validating users on database '[db2]'

User 'TestOrphan1' mapped with their login
WARNING: Orphan user TestOrphan10 does not have matching login.
WARNING: Orphan user TestOrphan2 does not have matching login.

User 'TestOrphan3' mapped with their login
WARNING: Orphan user TestOrphan4 does not have matching login.

User 'TestOrphan5' mapped with their login
WARNING: Orphan user TestOrphan6 does not have matching login.

User 'TestOrphan7' mapped with their login
WARNING: Orphan user TestOrphan8 does not have matching login.

User 'TestOrphan9' mapped with their login
Total Elapsed time: 00:00:00.0744474
```

Repair-SqlOrphanUser -SqlServer sql2008 -Databases db2

Offene Fragen ???



Links

Webseite:

<https://dbatools.io/>

Download Moduls / Github:

<https://github.com/sqlcollaborative/dbatools>

Documentation:

<https://dbatools.io/functions/>

Videos:

https://www.youtube.com/channel/UC1qrq0zfsW5M_Uf9-vBrsiw

License:

<https://github.com/sqlcollaborative/dbatools/blob/master/LICENSE.txt>

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