

PowerShell und SQL – na wie
geht das denn?



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SQL-Server Powershell Modul

- Microsoft Feature Pack:
 - SQLSysClrTypes.msi
 - ShareManagementObjects.msi
 - PowerShellTools.msi

```
PS:> Import-Module -name sqlps
```



Microsoft® SQL Server® 2014 Feature Pack

Sprache auswählen:

Deutsch

Herunterladen

Das Microsoft SQL Server 2014 Feature Pack ist eine Sammlung eigenständiger Pakete, die den Leistungsumfang von Microsoft SQL Server erweitern.

Details

Note: There are multiple files available for this download. Once you click on the "Download" button, you will be prompted to select the files you need.

Version:	Veröffentlichungsdatum:
12.0.2000.8	15.04.2014
File Name:	File Size:
DEU\DB2OLEDBV5_x64.msi	4.2 MB
DEU\DB2OLEDBV5_x86.msi	3.1 MB
DEU\x64\AttunityOracleCdcDesigner.msi	2.2 MB
DEU\x64\AttunityOracleCdcService.msi	2.3 MB
DEU\x64\BalancedDataDistributor-amd64.msi	1.6 MB
DEU\x64\PowerShellTools.msi	2.1 MB
DEU\x64\RBS.msi	4.3 MB
DEU\x64\SapBI.msi	2.3 MB
DEU\x64\SharedManagementObjects.msi	7.7 MB
DEU\x64\SQL_AS_ADOMD.msi	5.4 MB
DEU\x64\SQL_AS_AMO.msi	4.1 MB
DEU\x64\SQL_AS_OLEDB.msi	54.2 MB
DEU\x64\SqCloudAdapter.msi	2.0 MB
DEU\x64\SqDom.msi	2.5 MB
DEU\x64\sqls.msi	33.2 MB
DEU\x64\SQLSysClrTypes.msi	3.1 MB
DEU\x64\SaUA.msi	13.3 MB

Invoke-Sqlcmd

- sqlcmd.exe auf Powershell
- Liefert Daten als Objekte zurück

```
Invoke-Sqlcmd -query „select * from  
AdventureWorks2012.Person.Address“ -ServerInstance .
```

Neu, nicht mit Perwoll geschaffen

```
Add-SqlFirewallRule  
Get-SqlDatabase  
Get-SqlInstance  
Get-SqlSmartAdmin  
New-SqlBackupEncryptionOption  
Remove-SqlFirewallRule  
Set-SqlAuthenticationMode  
Set-SqlNetworkConfiguration  
Set-SqlSmartAdmin  
Start-SqlInstance  
Stop-SqlInstance  
Test-SqlSmartAdmin
```

Commandlets für Always on

CommandType	Name	ModuleName
-----	----	-----
Cmdlet	Add-SqlAvailabilityDatabase	sqlps
Cmdlet	Add-SqlAvailabilityGroupListenerStaticIp	sqlps
Cmdlet	Join-SqlAvailabilityGroup	sqlps
Cmdlet	New-SqlAvailabilityGroup	sqlps
Cmdlet	New-SqlAvailabilityGroupListener	sqlps
Cmdlet	New-SqlAvailabilityReplica	sqlps
Cmdlet	Remove-SqlAvailabilityDatabase	sqlps
Cmdlet	Remove-SqlAvailabilityGroup	sqlps
Cmdlet	Remove-SqlAvailabilityReplica	sqlps
Cmdlet	Resume-SqlAvailabilityDatabase	sqlps
Cmdlet	Set-SqlAvailabilityGroup	sqlps
Cmdlet	Set-SqlAvailabilityGroupListener	sqlps
Cmdlet	Set-SqlAvailabilityReplica	sqlps
Cmdlet	Suspend-SqlAvailabilityDatabase	sqlps
Cmdlet	Switch-SqlAvailabilityGroup	sqlps
Cmdlet	Test-SqlAvailabilityGroup	sqlps
Cmdlet	Test-SqlAvailabilityReplica	sqlps
Cmdlet	Disable-SqlAlwaysOn	sqlps
Cmdlet	Enable-SqlAlwaysOn	sqlps

Weitere Commandlets

CommandType	Name
-----	----
Cmdlet	Add-SqlFirewallRule
Cmdlet	Backup-SqlDatabase
Cmdlet	Convert-UrnToPath
cmdlet	Decode-SqlName
Cmdlet	Encode-SqlName
Cmdlet	Get-SqlCredential
Cmdlet	Get-SqlDatabase
Cmdlet	Get-SqlInstance
Cmdlet	Get-SqlSmartAdmin
Cmdlet	Invoke-PolicyEvaluation
Cmdlet	Invoke-Sqlcmd
Cmdlet	New-SqlBackupEncryptionOption
Cmdlet	New-SqlCredential
Cmdlet	New-SqlHADREndpoint

CommandType	Name
-----	----
Cmdlet	Remove-SqlCredential
Cmdlet	Remove-SqlFirewallRule
Cmdlet	Restore-SqlDatabase
Cmdlet	Set-SqlAuthenticationMode
Cmdlet	Set-SqlCredential
Cmdlet	Set-SqlHADREndpoint
Cmdlet	Set-SqlNetworkConfiguration
Cmdlet	Set-SqlSmartAdmin
Cmdlet	Start-SqlInstance
Cmdlet	Stop-SqlInstance
Cmdlet	Test-SqlDatabaseReplicaState
Cmdlet	Test-SqlSmartAdmin

Sql Server Managed Backup für Azure

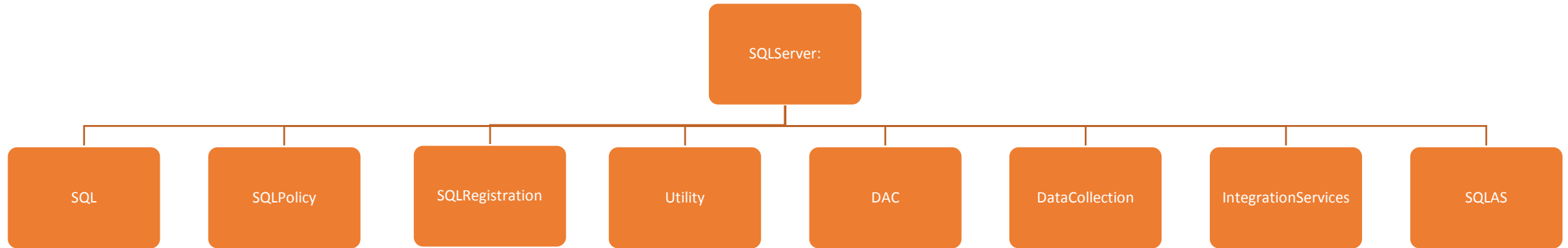
```
cd SQLSERVER:\SQL\Computer\MyInstance
$encryptionOption = New-SqlBackupEncryptionOption -EncryptionAlgorithm Aes128 -EncryptorType
ServerCertificate -EncryptorName "MyBackupCert"
Get-SqlSmartAdmin | Set-SqlSmartAdmin -BackupEnabled $True -BackupRetentionPeriodInDays 10 -
EncryptionOption $encryptionOption
```


Server Management Objects

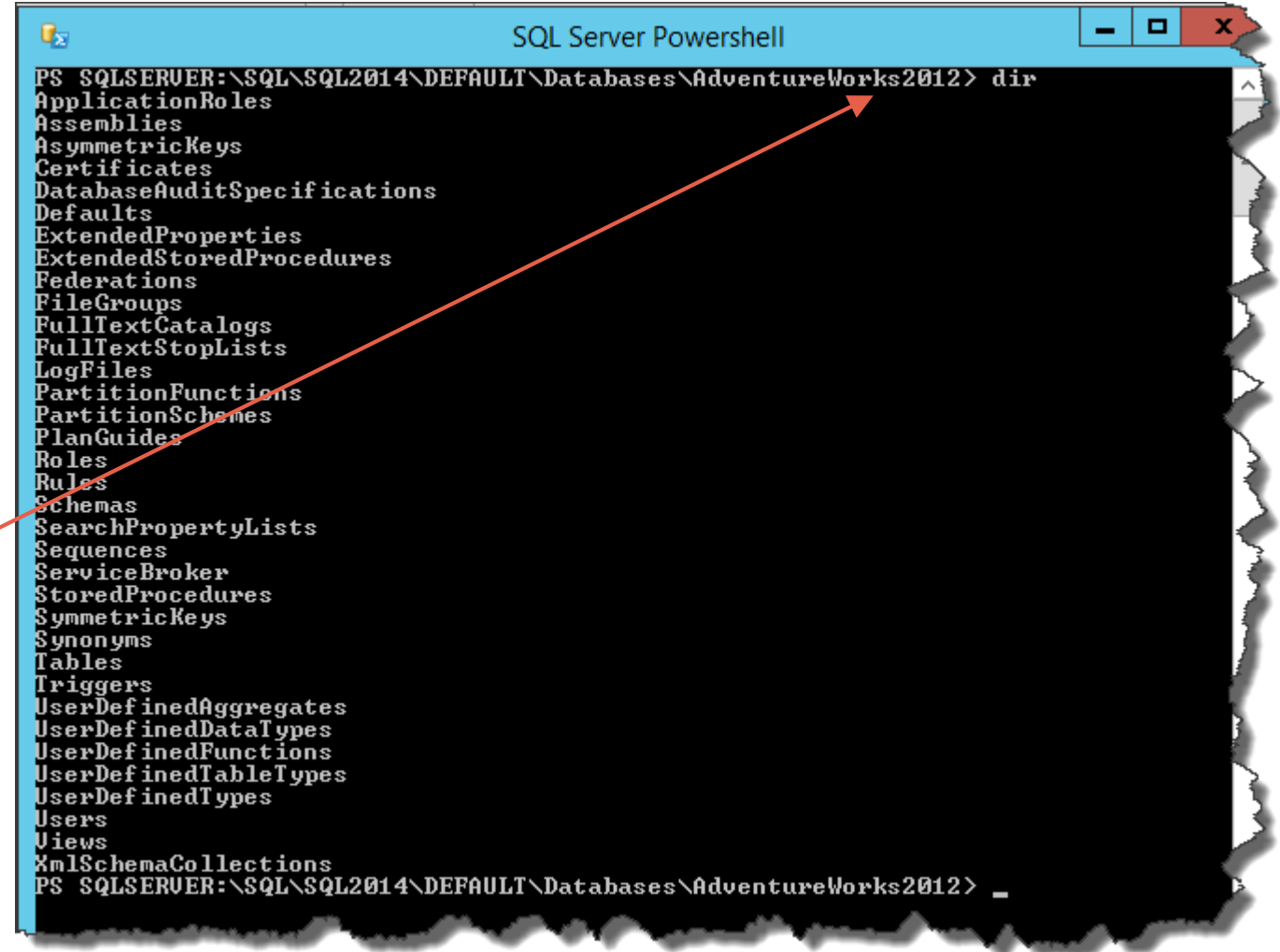
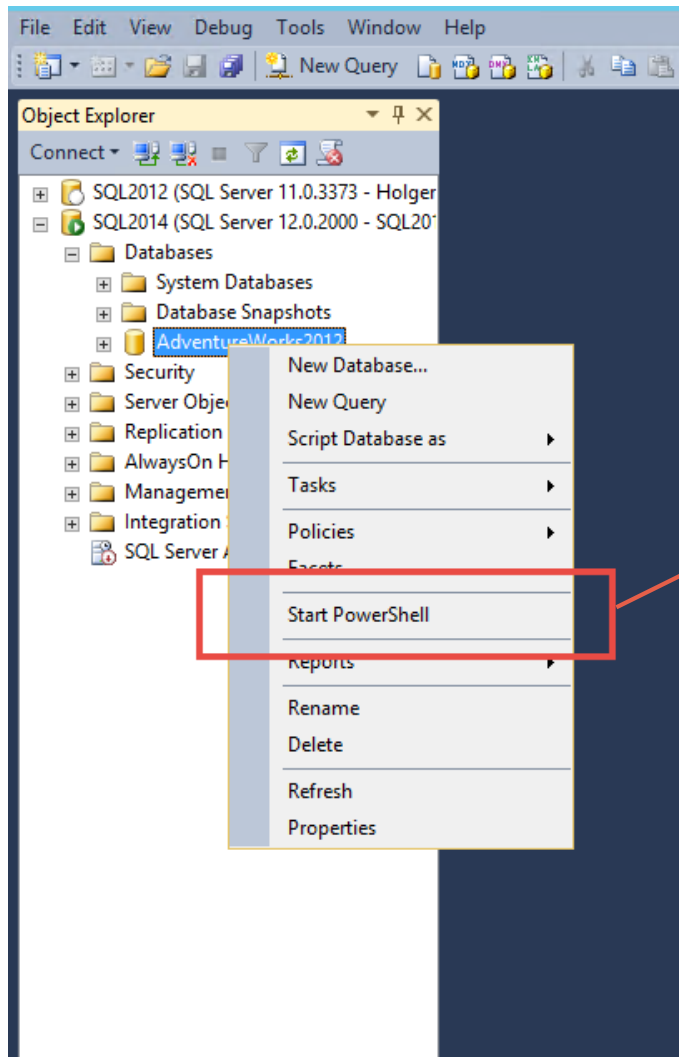
- Grundlage für Powershell
- Wird von PSH automatisch geladen
- Stellt eine API zum SQL-Server dar
- Liefert jede Menge Diagnoseinformationen

```
$instanceName = „SQL2012“  
$server = New-Object -TypeName Microsoft.SqlServer.Management.Smo.Server -ArgumentList $instanceName
```

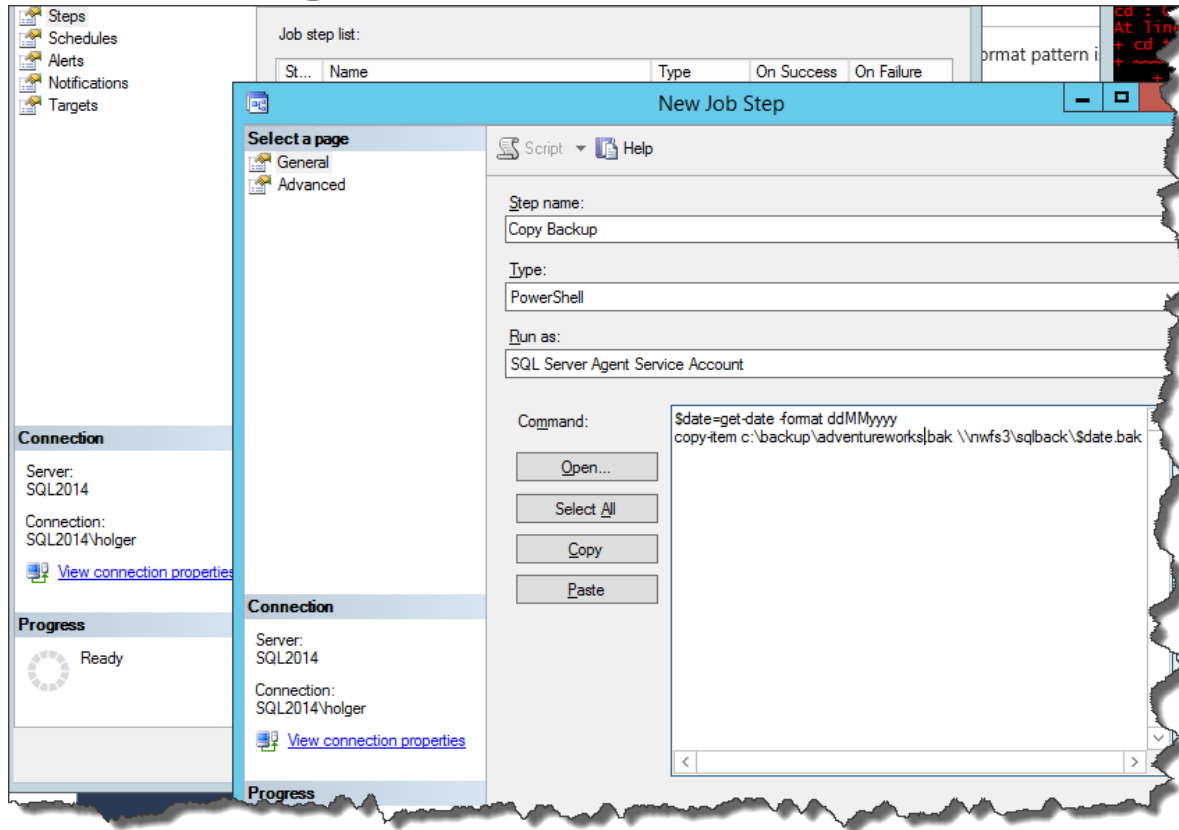
SQL-Server Powershell Provider



SQLPS aus dem Management Studio



SQL-Agent Jobs mit Powershell



```
$RSService = "http://localhost/ReportServer/ReportService2010.asmx?wsdl"  
$RSServiceProxy = New-WebServiceProxy -uri $RSService -class RS2 -Namespace ReportingWebservice -Credential Get-Credential  
$RSServiceProxy.ListSubscriptions("")  
$id = $RSServiceProxy.ListSubscriptions("") | where Report -eq "Sales_Order_Detail_2008R2" | select subscriptionID -ExpandProperty  
$RSServiceProxy.FireEvent("TimedSubscription", $id, "")
```

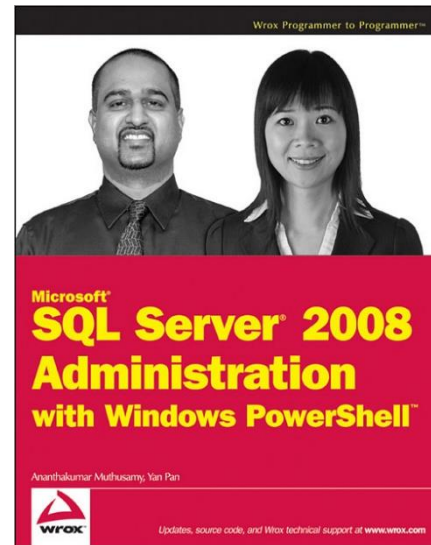
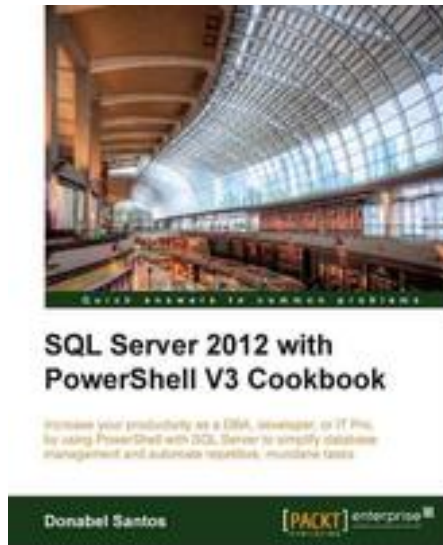
SQL mit Powershell ausführen

- Invoke-sql startet SQL-Befehle
- Wenn sqlps nicht zur Verfügung steht, muß .net erhalten

```
$ConnStr = "Server=SQLDB;Initial Catalog=Nwind;Integrated Security = True"  
$conn= New-Object System.Data.SqlClient.SqlConnection  
$conn.ConnectionString = $ConnStr  
$Conn.Open()  
$command = New-Object System.Data.SqlClient.SqlCommand  
$command.Connection = $conn  
$statement = "INSERT INTO log (runtime,errors) values ('${endtime}',${errors})"  
$command.CommandText = $statement  
$command.ExecuteNonQuery()
```

Weiterführende Informationen

- www.simpletalk.com
- www.Netz-Weise.de/weisheiten





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www.netz-weise.de

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