Windows PowerShell Get-Help on Cmdlet 'New-SqlColumnMasterKey'

PS:\>Get-HELP New-SqlColumnMasterKey -Full

NAME

New-SqlColumnMasterKey

SYNOPSIS

Creates a column master key object in the database.

SYNTAX

New-SqlColumnMasterKey [-Name] <String> [-InputObject] <Database> [-AccessToken <PSObject>] -ColumnMasterKeySettings <SqlColumnMasterKeySettings> [-Encrypt {Mandatory | Optional | Strict}] [-HostNameInCertificate <String>] [-ProgressAction <ActionPreference>] [-Script] [-TrustServerCertificate] [<CommonParameters>]

New-SqlColumnMasterKey [-Name] <String> [[-Path] <String>] [-AccessToken <PSObject>] -ColumnMasterKeySettings <SqlColumnMasterKeySettings> [-Encrypt {Mandatory | Optional | Strict}] [-HostNameInCertificate <String>] [-ProgressAction <ActionPreference>] [-Script] [-TrustServerCertificate] [<CommonParameters>]

DESCRIPTION

The New-SqlColumnMasterKey cmdlet creates a column master key object in the database. A column master key object captures the location of a physical cryptographic key

that is intended to be used as a column master key for the Always Encrypted feature.

PARAMETERS

-AccessToken <PSObject>

The access token used to authenticate to SQL Server, as an alternative to user/password or Windows Authentication.

This can be used, for example, to connect to `SQL Azure DB` and `SQL Azure Managed Instance` using a `Service Principal` or a `Managed Identity`.

The parameter to use can be either a string representing the token or a `PSAccessToken` object as returned by running `Get-AzAccessToken -ResourceUrl

https://database.windows.net`.

> This parameter is new in v22 of the module.

Required? false

Position? named

Default value None

Accept pipeline input? False

Accept wildcard characters? false

-ColumnMasterKeySettings <SqlColumnMasterKeySettings>

Specifies the SqlColumnMasterKeySettings object that specifies the location of the actual column master key.

The SqlColumnMasterKeySettings object has two properties: KeyStoreProviderName and KeyPath . KeyStoreProviderName specifies the name of a column master key store

provider, which an Always Encrypted-enabled client driver must use to access the key store containing the column master key. KeyPath specifies the location of the

column master key within the key store. The KeyPath format is specific to the key store.

Required? true

Position? named

Default value None

Accept pipeline input? False

Accept wildcard characters? false

-Encrypt <String>

The encryption type to use when connecting to SQL Server.

This value maps to the `Encrypt` property `SqlConnectionEncryptOption` on the SqlConnection object of the Microsoft.Data.SqlClient driver.

In v22 of the module, the default is `Optional` (for compatibility with v21). In v23+ of the module, the default value will be 'Mandatory', which may create a

breaking change for existing scripts.

> This parameter is new in v22 of the module.

Required? false

Position? named

Default value None

Accept pipeline input? False

Accept wildcard characters? false

-HostNameInCertificate <String>

The host name to be used in validating the SQL Server TLS/SSL certificate. You must pass this parameter if your SQL Server instance is enabled for Force

Encryption and you want to connect to an instance using hostname/shortname. If this parameter is omitted then passing the Fully Qualified Domain Name (FQDN) to

-ServerInstance is necessary to connect to a SQL Server instance enabled for Force Encryption.

> This parameter is new in v22 of the module.

Required? false

Position? named

Default value None

Accept pipeline input? False

Accept wildcard characters? false

-InputObject <Database>

Specifies the SQL database object, for which this cmdlet runs the operation.

Required? true

Position? 2

Default value None

Accept pipeline input? True (ByValue)

Accept wildcard characters? false

-Name <String>

Specifies the name of the column master key object that this cmdlet creates.

Required? true

Position? 1

Default value None

Accept pipeline input? False

Accept wildcard characters? false

-Path <String>

Specifies the path of the SQL database, for which this cmdlet runs the operation. If you do not specify a value for this parameter, the cmdlet uses the current

working location.

Required? false

Position? 2

Default value None

Accept pipeline input? False

Accept wildcard characters? false

-ProgressAction <ActionPreference>

Determines how PowerShell responds to progress updates generated by a script, cmdlet, or provider, such as the progress bars generated by the Write-Progress

cmdlet. The Write-Progress cmdlet creates progress bars that show a command's status.

Required? false

Position? named

Default value None

Accept pipeline input? False

Accept wildcard characters? false

-Script [<SwitchParameter>]

Indicates that this cmdlet returns a Transact-SQL script that performs the task that this cmdlet performs.

Required? false

Position? named

Default value False

Accept pipeline input? False

Accept wildcard characters? false

-TrustServerCertificate [<SwitchParameter>]

Indicates whether the channel will be encrypted while bypassing walking the certificate chain to validate trust.

In v22 of the module, the default is `$true` (for compatibility with v21). In v23+ of the module, the default value will be '$false', which may create a breaking

change for existing scripts.

> This parameter is new in v22 of the module.

Required? false

Position? named

Default value False

Accept pipeline input? False

Accept wildcard characters? false

<CommonParameters>

This cmdlet supports the common parameters: Verbose, Debug,

ErrorAction, ErrorVariable, WarningAction, WarningVariable,

OutBuffer, PipelineVariable, and OutVariable. For more information, see

about_CommonParameters (https:/go.microsoft.com/fwlink/?LinkID=113216).

INPUTS

Microsoft.SqlServer.Management.Smo.Database

OUTPUTS

Microsoft.SqlServer.Management.Smo.SqlColumnMasterKey

NOTES

Example 1: Create a column master key object that references a certificate

```
$CmkSettings = New-SqlCertificateStoreColumnMasterKeySettings -CertificateStoreLocation 'CurrentUser' -CertificateThumbprint 'f2260f28d909d21c642a3d8e0b45a830e79a1420'
New-SqlColumnMasterKey -Name 'CMK1' -ColumnMasterKeySettings $CmkSettings
```

The first command uses the New-SqlCertificateStoreColumnMasterKeySettings cmdlet to create a column master settings referencing a certificate in Windows Certificate

Store and stores the result in the variable named `$CmkSettings`.

Example 2: Create a column master key object that references a key in Azure Key Vault

```
$CmkSettings = New-SqlAzureKeyVaultColumnMasterKeySettings -KeyUrl
'https://myvault.vault.contoso.net/keys/CMK/4c05f1a41b12488f9cba2ea964b6a700'
New-SqlColumnMasterKey 'CMK1' -ColumnMasterKeySettings $CmkSettings
```

The first command uses the New-SqlCertificateStoreColumnMasterKeySettings cmdlet to create column master key object referencing a key in Azure Key Vault and stores

the result in the variable named `$CmkSettings`.

Example 3: Create a column master key object that references a key supporting CNG

```
$CmkSettings = New-SqlCngColumnMasterKeySettings -CngProviderName 'Microsoft Software Key Storage Provider'
-KeyName 'AlwaysEncryptedKey'
New-SqlColumnMasterKey 'CMK1' -ColumnMasterKeySettings $CmkSettings
```

The first command uses the New-SqlCertificateStoreColumnMasterKeySettings cmdlet to create column master key object referencing a key in a key store supporting the

Cryptography Next Generation (CNG) API and stores the result in the variable named `$CmkSettings`.

Example 4: Create a column master key object that references a key supporting CSP

```
$CmkSettings = New-SqlCspColumnMasterKeySettings 'MyCspProvider' 'AlwaysEncryptedKey'
New-SqlColumnMasterKey 'CMK1' -ColumnMasterKeySettings $CmkSettings
```

The first command uses the New-SqlCertificateStoreColumnMasterKeySettings cmdlet to create column master key object referencing a key in a key store key store with a

Cryptography Service Provider (CSP) supporting Cryptography API (CAPI).

Example 5: Create a column master key object that references a certificate, it is auto-signed and supports enclave computations

```
$CmkSettings = New-SqlCertificateStoreColumnMasterKeySettings -CertificateStoreLocation 'CurrentUser'
-CertificateThumbprint
'f2260f28d909d21c642a3d8e0b45a830e79a1420' -AllowEnclaveComputations
```

New-SqlColumnMasterKey -Name 'CMK1' -ColumnMasterKeySettings $CmkSettings

The first command uses the New-SqlCertificateStoreColumnMasterKeySettings cmdlet to create column master settings referencing a certificate that supports enclave computations and is stored in Windows Certificate Store.

RELATED LINKS

Online Version: https://learn.microsoft.com/powershell/module/sqlserver/new-sqlcolumnmasterkey

Get-SqlColumnMasterKey

Remove-SqlColumnMasterKey