



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

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

NAME

New-SqlColumnMasterKeySettings

SYNOPSIS

Creates a SqlColumnMasterKeySettings object describing a master key stored in an arbitrarily specified key store provider and path.

SYNTAX

```
New-SqlColumnMasterKeySettings [-KeyStoreProviderName] <String> [-KeyPath] <String>
[[-AllowEnclaveComputations]] [[-Signature] <String>] [-KeyVaultAccessToken
<String>] [-ManagedHsmAccessToken <String>] [-ProgressAction <ActionPreference>] [<CommonParameters>]
```

DESCRIPTION

The New-SqlColumnMasterKeySettings cmdlet creates a SqlColumnMasterKeySettings in-memory object that stores properties of a column master key for Always Encrypted:

KeyStoreProviderName, KeyPath, AllowEnclaveComputations, and Signature. This cmdlet can be used for custom key store providers and when both the key store provider

name and a fully-formatted key path are known.

The cmdlet may communicate with a key store holding the column master key to generate a signature of key metadata properties. If the key is stored in Azure, you need

to specify a valid authentication token for a key vault or a managed HSM holding the key. Alternatively, you can authenticate to Azure with

Add-SqlAzureAuthenticationContext before calling this cmdlet.

> `Module requirements: version 21+ on PowerShell 5.1; version 22+ on PowerShell 7.x.`

PARAMETERS

-AllowEnclaveComputations [<SwitchParameter>]

Specifies whether the column master key allows enclave computations. If the parameter is specified, server-side secure enclaves will be allowed to perform computations on data protected with the column master key. Not valid for SQL Server 2017 and older versions.

Required?	false
Position?	2
Default value	False
Accept pipeline input?	False
Accept wildcard characters?	false

-KeyPath <String>

Specifies the path within the key store of the physical master key.

Required?	true
Position?	1
Default value	None
Accept pipeline input?	False
Accept wildcard characters?	false

-KeyStoreProviderName <String>

Specifies the provider name of the key store used to protect the physical master key.

Required?	true
Position?	0
Default value	None
Accept pipeline input?	False
Accept wildcard characters?	false

-KeyVaultAccessToken <String>

Specifies an access token for key vaults in Azure Key Vault. Use this parameter if the specified column master key is stored in a key vault in Azure Key Vault and the cmdlet is expected to sign key metadata.

Required?	false
Position?	named
Default value	None
Accept pipeline input?	False
Accept wildcard characters?	false

-ManagedHsmAccessToken <String>

Specifies an access token for managed HSMs in Azure Key Vault. Use this parameter if the specified column master key is stored in a managed HSM in Azure Key Vault and the cmdlet is expected to sign key metadata.

Required?	false
Position?	named
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

-Signature <String>

Specifies a hexadecimal string that is a digital signature of column master key properties. A client driver can verify the signature to ensure the column master

key properties have not been tampered with. This parameter is allowed only if AllowEnclaveComputations is specified. If AllowEnclaveComputations is specified, but

Signature is not, the cmdlet automatically computes the signature and populates the Signature property of the new SqlColumnMasterKeySettings object.

Required?	false
Position?	3
Default value	None
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

OUTPUTS

NOTES

Example 1: Generate settings for a column master key that is in Azure Key Vault and is not enclave-enabled.

```
$cmkSettings = New-SqlColumnMasterKeySettings -KeyStoreProviderName 'AZURE_KEY_VAULT' -KeyPath  
'https://myvault.vault.azure.net/keys/CMK/4c05f1a41b12488f9cba2ea964b6a700'
```

Example 2: Generate settings for a column master key that is in a custom provider

```
$cmkSettings = New-SqlColumnMasterKeySettings -KeyStoreProviderName 'CUSTOM_PROVIDER' -KeyPath  
'\\SecureNetworkShare\Keys\AlwaysEncrypted.key'
```

Example 3: Generate settings for a column master key that is in Azure Key Vault, allows enclave computations and is signed using the provided signature.

```
$cmkSettings = New-SqlColumnMasterKeySettings -KeyStoreProviderName 'AZURE_KEY_VAULT' -KeyPath  
'https://myvault.vault.azure.net/keys/CMK/4c05f1a41b12488f9cba2ea964b6a700' -AllowEnclaveComputations -Signature  
'0x19BEB4F27F582FDBBD0C7E5F92CF161D79D5E7F5A5183F9C8E7
```

```
10252E7028A3654FBEAF834EE45925024F1A32BD3C6D7D92B46E38690830E20E0777607B073E6665EB05E39263C02  
557D1208ACECB2251A108D0DEFC25232B67FD223C590258C817292FAFCE2388507812D64A0
```

```
AEC9E546B0B8E4B2F3EA436053CB158F3CF478C5F5EDA511D0F752F60C3B129BF21356A93368FCC7FD6FAA8DB4  
E919EB551F375181CA3F4D0404A811C99BD2C8D10C0003AC12B138371F2D76611768B4E84D441
```

```
16C42F00D679B36D41FBD9467B58291B1F4348C7B422793DA0614EF980CA0A7F42B6D627AFA5A753F0869D2C2F9B  
0FD38289D5433CE9266C6F867334654BE12'
```

Example 4: Generate settings for a column master key that is in Azure Key Vault, allows enclave computations and is

auto-signed.

```
# Connect to Azure account.
```

```
Import-Module Az.Accounts -MinimumVersion 2.2.0
```

```
Connect-AzAccount
```

```
## Obtain an access token for key vaults.
```

```
$keyVaultAccessToken=(Get-AzAccessToken-ResourceUrl'https://vault.azure.net').Token
```

Pass the token to the cmdlet. It will use the token to communicate with a key vault in Azure Key Vault to sign the column master key properties.

```
$cmkSettings = New-SqlColumnMasterKeySettings -KeyStoreProviderName 'AZURE_KEY_VAULT' -KeyPath
```

```
'https://myvault.vault.azure.net/keys/CMK/4c05f1a41b12488f9cba2ea964b6a700' -AllowEnclaveComputations
```

```
-KeyVaultAccessToken:$keyVaultAccessToken
```

RELATED LINKS

Online Version: <https://learn.microsoft.com/powershell/module/sqlserver/new-sqlcolumnmasterkeysettings>

New-SqlCngColumnMasterKeySettings

New-SqlCspColumnMasterKeySettings