



## ***Windows PowerShell Get-Help on Cmdlet 'Copy-NetIPsecMainModeCryptoSet'***

***PS:\>Get-HELP Copy-NetIPsecMainModeCryptoSet -Full***

### NAME

Copy-NetIPsecMainModeCryptoSet

### SYNOPSIS

Copies an entire main mode cryptographic set to the same or to a different policy store.

### SYNTAX

```
Copy-NetIPsecMainModeCryptoSet [-All] [-AsJob] [-CimSession <CimSession[]>] [-Confirm] [-GPOSession <String>]
[-NewGPOSession <String>] [-NewName <String>]
```

```
[-NewPolicyStore <String>] [-PassThru] [-PolicyStore <String>] [-ThrottleLimit <Int32>] [-TracePolicyStore] [-WhatIf]
[<CommonParameters>]
```

```
Copy-NetIPsecMainModeCryptoSet [-AsJob] -AssociatedNetIPsecMainModeRule <CimInstance> [-CimSession
<CimSession[]>] [-Confirm] [-GPOSession <String>] [-NewGPOSession
```

```
<String>] [-NewName <String>] [-NewPolicyStore <String>] [-PassThru] [-PolicyStore <String>] [-ThrottleLimit <Int32>]
[-TracePolicyStore] [-WhatIf]
```

```
[<CommonParameters>]
```

```
Copy-NetIPsecMainModeCryptoSet [-AsJob] [-CimSession <CimSession[]>] [-Confirm] [-Description <String>] [-Force] [-
```

```
[-DisplayGroup <String[]>] [-ForceDiffieHellman <Boolean[]>]
[-GPOSession <String>] [-Group <String[]>] [-MaxMinutes <UInt32[]>] [-MaxSessions <UInt32[]>] [-NewGPOSession
<String>] [-NewName <String>] [-NewPolicyStore <String>]
[-PassThru] [-PolicyStore <String>] [-PolicyStoreSource <String[]>] [-PolicyStoreSourceType {None | Local | GroupPolicy |
Dynamic | Generated | Hardcoded}]
[-PrimaryStatus {Unknown | OK | Inactive | Error}] [-Status <String[]>] [-ThrottleLimit <Int32>] [-TracePolicyStore] [-WhatIf]
[<CommonParameters>]
```

```
Copy-NetIPsecMainModeCryptoSet [-AsJob] [-CimSession <CimSession[]>] [-Confirm] -DisplayName <String[]>
[-GPOSession <String>] [-NewGPOSession <String>] [-NewName
<String>] [-NewPolicyStore <String>] [-PassThru] [-PolicyStore <String>] [-ThrottleLimit <Int32>] [-TracePolicyStore]
[-WhatIf] [<CommonParameters>]
```

```
Copy-NetIPsecMainModeCryptoSet [-Name] <String[]> [-AsJob] [-CimSession <CimSession[]>] [-Confirm] [-GPOSession
<String>] [-NewGPOSession <String>] [-NewName
<String>] [-NewPolicyStore <String>] [-PassThru] [-PolicyStore <String>] [-ThrottleLimit <Int32>] [-TracePolicyStore]
[-WhatIf] [<CommonParameters>]
```

```
Copy-NetIPsecMainModeCryptoSet [-AsJob] [-CimSession <CimSession[]>] [-Confirm] -InputObject <CimInstance[]>
[-NewGPOSession <String>] [-NewName <String>]
[-NewPolicyStore <String>] [-PassThru] [-ThrottleLimit <Int32>] [-WhatIf] [<CommonParameters>]
```

## DESCRIPTION

The Copy-NetIPsecMainModeCryptoSet cmdlet copies a main mode cryptographic set to a policy store, making a complete clone. When a new policy store is not specified,

it is copied to the same policy store with a new name specified by the user.

This cmdlet gets one or more cryptographic sets to be duplicated with the Name parameter (default), the DisplayName parameter, set properties, or by the associated

filters and objects. The resulting queried set is copied to a new policy store using the NewPolicyStore parameter, a new GPO session using the NewGPOSession

parameter, or to the same policy store using the NewName parameter. Only one main mode cryptographic set can be

copied at a time when copying to the same policy

store. This is because only a single cryptographic set can use the unique identifier, or name, specified by the `NewName` parameter.

When copying a set to a new policy store, the unique name of the set is preserved. This means that if the same set is attempted to be copied twice, then an error is

displayed for the second attempt that the object already exists. To overwrite the target set, run the `Remove-NetIPsecMainModeCryptoSet` cmdlet first. If it is possible

that the object may already exist, then specify the `ErrorAction` parameter to silently ignore these errors instead of running the `Remove-NetIPsecMainModeCryptoSet` cmdlet.

## PARAMETERS

### `-All [<SwitchParameter>]`

Indicates that all of the main mode cryptographic sets within the specified policy store are copied.

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

### `-AsJob [<SwitchParameter>]`

Runs the cmdlet as a background job. Use this parameter to run commands that take a long time to complete.

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

### `-AssociatedNetIPsecMainModeRule <CimInstance>`

Gets the main mode cryptographic sets that are associated, via the pipeline, with the input main mode rule to be copied. This parameter represents a main mode

rule, which alters the behavior of main mode authentications. Main mode negotiation establishes a secure channel between two computers by negotiating a set of

cryptographic protection suites, exchanging keying material to establish a shared secret key, and authenticating computer and user identities. See the

Get-NetIPsecMainModeRule cmdlet for more information.

Required?	true
Position?	named
Default value	None
Accept pipeline input?	True (ByValue)
Accept wildcard characters?	false

-CimSession <CimSession[]>

Runs the cmdlet in a remote session or on a remote computer. Enter a computer name or a session object, such as the output of a New-CimSession

(<https://go.microsoft.com/fwlink/p/?LinkId=227967>) or

[Get-CimSession](<https://go.microsoft.com/fwlink/p/?LinkId=227966>)cmdlet. The default is the current session on the local computer.

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

-Confirm [<SwitchParameter>]

Prompts you for confirmation before running the cmdlet.

Required?	false
Position?	named
Default value	False

Accept pipeline input? False

Accept wildcard characters? false

#### -Description <String[]>

Specifies that matching main mode cryptographic sets of the indicated description are copied. Wildcard characters are accepted. This parameter provides information about the main mode cryptographic sets. This parameter specifies a localized, user-facing description of the object.

Required? false

Position? named

Default value None

Accept pipeline input? False

Accept wildcard characters? false

#### -DisplayGroup <String[]>

Specifies that only matching main mode cryptographic sets of the indicated group association are copied. Wildcard characters are accepted. The Group parameter

specifies the source string for this parameter. If the value for this parameter is a localizable string, then the Group parameter contains an indirect string.

Rule groups can be used to organize rules by influence and allows batch rule modifications. Using the Set-NetIPsecMainModeCryptoSet cmdlet, if the group name is

specified for a set of rules or sets, then all of the rules or sets in that group receive the same set of modifications. It is good practice to specify the Group

parameter with a universal and world-ready indirect @FirewallAPI name. This parameter cannot be specified upon object creation using the

New-NetIPsecMainModeCryptoSet cmdlet, but can be modified using dot notation and the Set-NetIPsecMainModeCryptoSet cmdlet.

Required? false

Position? named

Default value None

Accept pipeline input? False

Accept wildcard characters? false

#### -DisplayName <String[]>

Specifies that only matching main mode cryptographic sets of the indicated display name are copied. Wildcard characters are accepted. This parameter specifies

the localized, user-facing name of a single main mode cryptographic sets. When creating a set this parameter is required. This parameter value is

locale-dependent. If the object is not modified, this parameter value may change in certain circumstances. When writing resilient scripts, the Name parameter

should be used instead, where the default value is a randomly assigned value. This parameter value cannot be All.

Required? true

Position? named

Default value None

Accept pipeline input? False

Accept wildcard characters? false

#### -ForceDiffieHellman <Boolean[]>

Indicates that matching main mode cryptographic sets of the indicated value are copied. If this parameter is set to True, then IPsec uses Diffie-Hellman

exchanges to protect the main mode key exchange when AuthIP is used. AuthIP is specified by KeyModule. This provides stronger security for the key exchange. The

default value is False.

Required? false

Position? named

Default value None

Accept pipeline input? False

Accept wildcard characters? false

#### -GPONSession <String>

Targets the network GPO from which to retrieve the sets to be copied. This parameter is used in the same way as the PolicyStore parameter. When modifying Group

Policy Objects (GPOs) in Windows PowerShell, each change to a GPO requires the entire GPO to be loaded, modified, and saved back. On a busy Domain Controller

(DC), this can be a slow and resource-heavy operation. A GPO Session loads a domain GPO onto the local computer and makes all changes in a batch, before saving

the domain GP back. This reduces the load on the DC and speeds up the Windows PowerShell cmdlets. To load a GPO Session, use the Open-NetGPO cmdlet. To save a GPO

Session, use the Save-NetGPO cmdlet.

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

`-Group <String[]>`

Specifies that only matching main mode cryptographic sets of the indicated group association are copied. Wildcard characters are accepted. This parameter

specifies the source string for the DisplayGroup parameter. If the DisplayGroup parameter value is a localizable string, then this parameter contains an indirect

string. Rule groups organize rules by influence and allows batch rule modifications. Using the Set-NetIPsecMainModeCryptoSet cmdlet, if the group name is

specified for a set of rules or sets, then all of the rules or sets in that group receive the same set of modifications. It is a good practice to specify this

parameter with a universal and world-ready indirect @FirewallAPI name. The DisplayGroup parameter cannot be specified upon object creation using the

New-NetIPsecMainModeCryptoSet cmdlet, but can be modified using dot notation and the Set-NetIPsecMainModeCryptoSet cmdlet.

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

-InputObject <CimInstance[]>

Specifies the input object that is used in a pipeline command.

Required? true

Position? named

Default value None

Accept pipeline input? True (ByValue)

Accept wildcard characters? false

-MaxMinutes <UInt32[]>

Specifies that matching main mode cryptographic sets of the indicated maximum lifetime, in minutes, are copied. This parameter specifies the number of minutes

established for a main mode security association before it expires and must be renegotiated. The acceptable values for this parameter are: 0 through 2879. The default value is 4800 minutes (eight hours).

Required? false

Position? named

Default value None

Accept pipeline input? False

Accept wildcard characters? false

-MaxSessions <UInt32[]>

Specifies that matching main mode cryptographic sets of the indicated maximum lifetime, in sessions, are copied. This parameter specifies the number of sessions

established for a main mode security association before it expires and must be renegotiated. The acceptable values for this parameter are: 0 through 2147483647.

- A value of zero (0) indicates that there should be no maximum session lifetime.

- A non-zero value specifies the desired session number.



The default value is zero (0) sessions.

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

-Name <String[]>

Specifies that only matching main mode cryptographic sets of the indicated name are copied. Wildcard characters are accepted. This parameter acts just like a

file name, in that only one rule with a given name may exist in a policy store at a time. During group policy processing and policy merge, rules that have the

same name but come from multiple stores being merged, will overwrite one another so that only one exists. This overwriting behavior is desirable if the rules

serve the same purpose. For instance, all of the firewall rules have specific names, so if an administrator can copy these rules to a GPO, and the rules will

override the local versions on a local computer. GPOs can have precedence. So, if an administrator has a different or more specific rule the same name in a

higher-precedence GPO, then it overrides other rules that exist. The default value is a randomly assigned value.

When the defaults for main mode encryption need

to be overridden, specify the customized parameters and set this parameter, making this parameter the new default setting for encryption.

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

-NewGPOTSession <String>

Specifies the new GPO session for one or more main mode cryptographic sets.

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

**-NewName <String>**

Specifies the new name for one or more main mode cryptographic sets.

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

**-NewPolicyStore <String>**

Specifies the policy store for the main mode cryptographic sets.

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

**-PassThru [<SwitchParameter>]**

Returns an object representing the item with which you are working. By default, this cmdlet does not generate any output.

Required?	false
Position?	named
Default value	False

Accept pipeline input? False

Accept wildcard characters? false

**-PolicyStore <String>**

Targets the policy store from which to retrieve the sets to be copied. A policy store is a container for firewall and IPsec policy. The acceptable values for

this parameter are: - PersistentStore: Sometimes called static rules, this store contains the persistent policy for the local computer. This policy is not from

GPOs, and has been created manually or programmatically, during application installation, on the computer. Rules created in this store are attached to the

ActiveStore and activated on the computer immediately. - ActiveStore: This store contains the currently active policy, which is the sum of all policy stores that

apply to the computer. This is the resultant set of policy (RSOP) for the local computer (the sum of all GPOs that apply to the computer), and the local stores

(the PersistentStore, the Static Windows Service Hardening (WSH), and the Configurable WSH). ---- GPOs are also policy stores. Computer GPOs can be specified as

follows. ----- ``-PolicyStore hostname``. ---- Active Directory GPOs can be specified as follows. ----- ``-PolicyStore domain.fqdn.com\GPO_Friendly_Namedomain.fqdn.comGPO_Friendly_Name``. ----- Such as the following. ----- ``-PolicyStore localhost`` ----- ``-PolicyStore`

`corp.contoso.com\FirewallPolicy`` ---- Active Directory GPOs can be created using the New-GPO cmdlet or the Group Policy Management Console. - RSOP: This

read-only store contains the sum of all GPOs applied to the local computer.

- SystemDefaults: This read-only store contains the default state of firewall rules that ship with Windows Server 2012.

- StaticServiceStore: This read-only store contains all the service restrictions that ship with Windows Server 2012.

Optional and product-dependent features are considered part of Windows Server 2012 for the purposes of WFAS. - ConfigurableServiceStore: This read-write store

contains all the service restrictions that are added for third-party services. In addition, network isolation rules that are created for Windows Store application

containers will appear in this policy store. The default value is PersistentStore. The Set-NetIPsecMainModeCryptoSet cmdlet cannot be used to add an object to a

policy store. An object can only be added to a policy store at creation time with this cmdlet or the New-NetIPsecMainModeCryptoSet cmdlet.

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

**-PolicyStoreSource <String[]>**

Specifies that the main mode cryptographic sets that match the indicated policy store source are copied. This parameter contains a path to the policy store where

the rule originated if the object is retrieved from the ActiveStore with the TracePolicyStoreSource option set. This parameter value is automatically generated

and should not be modified. The monitoring output from this parameter is not completely compatible with the PolicyStore parameter. This parameter value cannot

always be passed into the PolicyStore parameter. Domain GPOs are one example in which this parameter contains only the GPO name, not the domain name.

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

**-PolicyStoreSourceType <PolicyStoreType[]>**

Specifies that the main mode cryptographic sets that match the indicated policy store source type are copied. This parameter describes the type of policy store

where the rule originated if the object is retrieved from the ActiveStore with the TracePolicyStoreSource option set. This parameter value is automatically

generated and should not be modified. The acceptable values for this parameter are:

- Local: The object originates from the local store.

- GroupPolicy: The object originates from a GPO.

- Dynamic: The object originates from the local runtime state.

This policy store name is not valid for use in the cmdlets, but may appear when monitoring active policy. - Generated:  
The object was generated automatically.

This policy store name is not valid for use in the cmdlets, but may appear when monitoring active policy. - Hardcoded:  
The object was hard-coded. This policy  
store name is not valid for use in the cmdlets, but may appear when monitoring active policy.

Required? false

Position? named

Default value None

Accept pipeline input? False

Accept wildcard characters? false

-PrimaryStatus <PrimaryStatus[]>

Specifies that the main mode cryptographic sets that match the indicated primary status are copied. This parameter describes the overall status of the rule. -

OK: Specifies that the rule will work as specified.

- Degraded: Specifies that one or more parts of the rule will not be enforced.

- Error: Specifies that the computer is unable to use the rule at all.

See the Status and StatusCode fields of the object for more detailed status information.

Required? false

Position? named

Default value None

Accept pipeline input? False

Accept wildcard characters? false

**-Status <String[]>**

Specifies that the main mode cryptographic sets that match the indicated status are copied. This parameter describes the status message for the specified status

code value. The status code is a numerical value that indicates any syntax, parsing, or runtime errors in the rule. This parameter value should not be modified.

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

**-ThrottleLimit <Int32>**

Specifies the maximum number of concurrent operations that can be established to run the cmdlet. If this parameter is omitted or a value of `0` is entered, then

Windows PowerShell calculates an optimum throttle limit for the cmdlet based on the number of CIM cmdlets that are running on the computer. The throttle limit applies only to the current cmdlet, not to the session or to the computer.

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

**-TracePolicyStore [<SwitchParameter>]**

Indicates that the main mode cryptographic sets that match the indicated policy store are copied. This parameter specifies that the name of the source GPO is queried and set to the PolicyStoreSource parameter value.

Required?	false
Position?	named

Default value            False  
Accept pipeline input?    False  
Accept wildcard characters? false

#### -WhatIf [<SwitchParameter>]

Shows what would happen if the cmdlet runs. The cmdlet is not run.

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.Management.Infrastructure.CimInstance#root\StandardCimv2\AssociatedNetIPsecMainModeCryptoSet[]

The `Microsoft.Management.Infrastructure.CimInstance` object is a wrapper class that displays Windows Management Instrumentation (WMI) objects. The path after the pound sign (`#`) provides the namespace and class name for the underlying WMI object.

Microsoft.Management.Infrastructure.CimInstance#root\StandardCimv2\MSFT\_NetMainModeRule[]

The `Microsoft.Management.Infrastructure.CimInstance` object is a wrapper class that displays Windows Management Instrumentation (WMI) objects. The path after the pound sign (`#`) provides the namespace and class name for the underlying WMI object.

## OUTPUTS

Microsoft.Management.Infrastructure.CimInstance#root\StandardCimv2\AssociatedNetIPsecMainModeCryptoSet[]

The `Microsoft.Management.Infrastructure.CimInstance` object is a wrapper class that displays Windows Management Instrumentation (WMI) objects. The path after the pound sign (`#`) provides the namespace and class name for the underlying WMI object.

## NOTES

### ----- EXAMPLE 1 -----

```
PS C:\>Copy-NetIPsecMainModeCryptoSet -DisplayName "Main Mode Crypto Set" -NewName "Alternate Main Mode Crypto Set"
```

This example copies a main mode cryptographic set, found using the localized name, to the current policy store under a new unique identifier. The localized

DisplayName parameter value remains the same.

### ----- EXAMPLE 2 -----

```
PS C:\>$mMrule = Get-NetIPsecMainModeRule -DisplayName "Main Mode Rule: P1Auth + Crypto" -PolicyStore domain.contoso.com\GPO_name
```

```
PS C:\>Copy-NetIPsecPhase1AuthSet -InputObject $mMrule -NewPolicyStore domain.contoso.com\new_GPO
```

```
PS C:\>Copy-NetIPsecMainModeCryptoSet -InputObject $mMrule -NewPolicyStore domain.contoso.com\new_GPO
```



```
PS C:\>Set-NetIPsecMainModeRule -InputObject $mMrule -Phase1AuthSet $CopiedCryptoSet.Name
```

The following cmdlets accomplish the same task but take advantage of caching the GPO to apply the changes locally.

```
PS C:\>$mMrule = Get-NetIPsecMainModeRule -DisplayName "Main Mode Rule: P1Auth + Crypto" -PolicyStore  
domain.contoso.com\GPO_name
```

```
PS C:\>$newGPO = Open-NetGPO -PolicyStore domain.contoso.com\new_GPO
```

```
PS C:\>Copy-NetIPsecPhase1AuthSet -InputObject $mMrule -GPOSession $newGPO
```

```
PS C:\>Copy-NetIPsecMainModeCryptoSet -InputObject $mMrule -GPOSession $newGPO
```

```
PS C:\>Copy-NetIPsecMainModeRule -InputObject $mMrule -GPOSession $newGPO
```

```
PS C:\>Save-NetGPO -GPOSession $newGPO
```

This example copies an entire IPsec main mode rule and the associated authentication and cryptographic sets to a new policy store. There is no need to link the newly

copied sets to the newly copied rule since the set fields of the rule maintain the Name parameter value of the source.

[https://learn.microsoft.com/powershell/module/netsecurity/copy-netipsecmainmodecryptoset?view=windowsserver2022-ps&wt.mc\\_id=ps-gethelp](https://learn.microsoft.com/powershell/module/netsecurity/copy-netipsecmainmodecryptoset?view=windowsserver2022-ps&wt.mc_id=ps-gethelp)

Copy-NetIPsecMainModeRule

Copy-NetIPsecPhase1AuthSet

Get-NetIPsecMainModeRule

Open-NetGPO

Remove-NetIPsecMainModeCryptoSet

Save-NetGPO

Set-NetIPsecMainModeRule