



# PowerShell Cmdlets for Disaster Recovery

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## Connect-HXCluster Cmdlet

### Syntax

```
Connect-HXCluster [-ClusterIP] <string> [[-Username] <string>] [[-Password] <string>] [-Credential <PSCredential>] [<CommonParameters>]
```

### Description

Connects to the HyperFlex Cluster.

### Required Parameters

`-ClusterIP <string>`

Specify the IP address of the HyperFlex cluster.

Aliases	-Cluster <string>
Position?	0
Default Value	
Accept Pipeline Input?	False
Accept Wildcard Characters?	False

**-Cluster** <string>

Specify the IP address of the HyperFlex cluster.

Aliases	-ClusterIP <string>
Position?	0
Default Value	
Accept Pipeline Input?	False
Accept Wildcard Characters?	False

**Optional Parameters**

**-Credential** <PSCredential>

Specify the user credentials for the HyperFlex cluster.

Aliases	-cred <PSCredential>
Position?	Named
Default Value	
Accept Pipeline Input?	False
Accept Wildcard Characters?	False

**-cred** <PSCredential>

Specify the user credentials for the HyperFlex cluster.

Aliases	-Credential <PSCredential>
Position?	Named
Default Value	
Accept Pipeline Input?	False
Accept Wildcard Characters?	False

**-Username <string>**

Specify the username for the HyperFlex cluster.

Aliases	-user <string>
Position?	1
Default Value	
Accept Pipeline Input?	False
Accept Wildcard Characters?	False

**-user <string>**

Specify the username for the HyperFlex cluster.

Aliases	-Username <string>
Position?	1
Default Value	
Accept Pipeline Input?	False
Accept Wildcard Characters?	False

**-Password <string>**

Specify the password for the HyperFlex cluster.

Aliases	-pwd <string>
Position?	2
Default Value	
Accept Pipeline Input?	False
Accept Wildcard Characters?	False

**-pwd <string>**

Specify the password for the HyperFlex cluster.

Aliases	-Password <string>
Position?	2
Default Value	
Accept Pipeline Input?	False
Accept Wildcard Characters?	False

## Example

### Input

```
Connect-HXCluster -ClusterIP 10.198.14.227 -Username root -Password abc
```

### Output

```
10.198.14.227 is connected.
```

## Related Commands

Disconnect-HXCluster

Get-HXCluster

## Common Parameters

This cmdlet supports the common parameters: Verbose, Debug, ErrorAction, ErrorVariable, WarningAction, WarningVariable, OutBuffer, PipelineVariable, and OutVariable. For more information, see *About Common Parameters* in the [Microsoft PowerShell Core Guide](#).

# Disconnect-HXCluster Cmdlet

## Syntax

```
Disconnect-HXCluster [-ClusterIP] <string> [<CommonParameters>]
```

## Description

Disconnects from the HyperFlex cluster.

## Required Parameters

**-ClusterIP** <string>

Specify the IP address of the HyperFlex cluster.

Aliases	-Cluster <string>
Position?	0
Default Value	
Accept Pipeline Input?	False
Accept Wildcard Characters?	False

**-Cluster** <string>

Specify the IP address of the HyperFlex cluster.

Aliases	-ClusterIP <string>
Position?	0
Default Value	

Accept Pipeline Input?	False
Accept Wildcard Characters?	False

### Example

#### Input

```
Disconnect-HXCluster -ClusterIP 10.198.14.2
```

#### Output

10.198.14.227 is disconnected.

### Related Commands

Connect-HXCluster

Get-HXCluster

### Common Parameters

This cmdlet supports the common parameters: Verbose, Debug, ErrorAction, ErrorVariable, WarningAction, WarningVariable, OutBuffer, PipelineVariable, and OutVariable. For more information, see *About Common Parameters* in the [Microsoft PowerShell Core Guide](#).

# Get-HXCluster Cmdlet

### Syntax

```
Get-HXCluster [<CommonParameters>]
```

### Description

Gets the list of connected HyperFlex clusters.

### Example

#### Input

```
Get-HXCluster
```

#### Output

```
10.198.14.229  
10.198.14.227
```

### Related Commands

Connect-HXCluster

Disconnect-HXCluster

# Get-HXJobStatus Cmdlet

## Syntax

```
Get-HXJobStatus -ClusterIP <string> -VMName <string> [-Brief <SwitchParameter>] [-JobID <string>]
[-TaskName <string>] [-TaskState <string>] [<CommonParameters>]
```

```
Get-HXJobStatus -ClusterIP <string> -VMID <string> [-Brief <SwitchParameter>] [-JobID <string>]
[-TaskName <string>] [-TaskState <string>] [<CommonParameters>]
```

## Description

Gets the job status for the protected virtual machine.

## Required Parameters

**-ClusterIP <string>**

Specify the IP address of the HyperFlex cluster.

Aliases	-Server <string>
Position?	Named
Default Value	—
Accept Pipeline Input?	False
Accept Wildcard Characters?	False

**-Server <string>**

Specify the IP address of the HyperFlex cluster.

Aliases	-ClusterIP <string>
Position?	Named
Default Value	—
Accept Pipeline Input?	False
Accept Wildcard Characters?	False

**-VMID <string>**

Specify the virtual machine ID for which the jobs have to be displayed.

Aliases	-VM <string>
Position?	Named

Default Value	—
Accept Pipeline Input?	False
Accept Wildcard Characters?	False

**-VM <string>**

Specify the virtual machine ID for which the jobs have to be displayed.

Aliases	-VMID <string>
Position?	Named
Default Value	—
Accept Pipeline Input?	False
Accept Wildcard Characters?	False

**-VMName <string>**

Specify the name of the virtual machine for which the jobs have to be displayed.

Aliases	-name <string>
Position?	Named
Default Value	—
Accept Pipeline Input?	False
Accept Wildcard Characters?	False

**-name <string>**

Specify the name of the virtual machine for which the jobs have to be displayed.

Aliases	-VMName <string>
Position?	Named
Default Value	—
Accept Pipeline Input?	False
Accept Wildcard Characters?	False

### Optional Parameters

**-JobID <string>**

Indicates the job ID.

Aliases	-TaskID <string>
Position?	Named
Default Value	—
Accept Pipeline Input?	False
Accept Wildcard Characters?	False

**-TaskID <string>**

Indicates the job ID.

Aliases	-JobID <string>
Position?	Named
Default Value	—
Accept Pipeline Input?	False
Accept Wildcard Characters?	False

**-TaskName <string>**

Indicates the task name. Accepted values are All, Failover, TestFailover, PrepareFailover, PrepareReverseProtect, ReverseProtect.

Aliases	—
Position?	Named
Default Value	—
Accept Pipeline Input?	False
Accept Wildcard Characters?	False

**-TaskState <string>**

Indicates the task state. Accepted values are All, Running, Completed, Exception.

Aliases	—
Position?	Named
Default Value	—
Accept Pipeline Input?	False
Accept Wildcard Characters?	False

**-Brief <SwitchParameter>**

Indicates that the command will return the brief formatted output.



Aliases	—
Position?	Named
Default Value	—
Accept Pipeline Input?	False
Accept Wildcard Characters?	False

### Example 1

#### Input

```
Get-HXJobStatus -ClusterIP 10.198.14.227 -VMName DemoVM1 -TaskState All
```

#### Output

This command uses the VMName and TaskState parameter to get the job status for all the tasks that have been performed for the VM given.

### Example 2

#### Input

```
Get-HXJobStatus -ClusterIP 10.198.14.227 -VMName DemoVM1 -Brief
```

#### Output

```
State: COMPLETED
Method Name: prepareReverseProtectVm
Job ID: 8ae5d2d5-588e-46c1-95c6-08d4d271a5fa
Time Started: 7/15/2018 5:52:11 PM
Time Elapsed: 7/15/2018 5:52:12 PM
Time Submitted: 7/15/2018 5:52:11 PM
Lifetime After Exit: 1/8/1970 12:00:00 AM
Message: Successfully completed prepareReverseProtect for vm: %s
```

### Related Commands

- Invoke-HXFailover
- Invoke-HXPrepareFailover
- Invoke-HXPrepareGroupRecovery
- Invoke-HXPrepareReverseProtect
- Invoke-HXTestFailover
- Invoke-HXReverseProtect

## Get-HXProtectedVM Cmdlet

### Syntax

```
Get-HXProtectedVM -ClusterIP <string> [-Brief <SwitchParameter>] [-Direction <string>] [-State <string>] [-VMID <string>] [<CommonParameters>]
```

```
Get-HXProtectedVM -ClusterIP <string> [-Brief <SwitchParameter>] [-Direction <string>] [-State <string>] [-VMName <string>] [<CommonParameters>]
```

**Description**

Retrieves the virtual machines in the HyperFlex cluster.

**Required Parameters**

**-ClusterIP <string>**

Specify the IP address of the HyperFlex cluster.

Aliases	-Server <string>
Position?	Named
Default Value	—
Accept Pipeline Input?	False
Accept Wildcard Characters?	False

**-Server <string>**

Specify the IP address of the HyperFlex cluster.

Aliases	-ClusterIP <string>
Position?	Named
Default Value	—
Accept Pipeline Input?	False
Accept Wildcard Characters?	False

**Optional Parameters**

**-VMID <string>**

Specify the virtual machine ID for which the jobs have to be displayed.

Aliases	-id <string>
Position?	Named
Default Value	—
Accept Pipeline Input?	False
Accept Wildcard Characters?	False

**-id <string>**

Specify the virtual machine ID for which the jobs have to be displayed.

Aliases	-VMID <string>
Position?	Named
Default Value	—
Accept Pipeline Input?	False
Accept Wildcard Characters?	False

**-VMName <string>**

Specify the name of the virtual machine for which the jobs have to be displayed.

Aliases	-name <string>
Position?	Named
Default Value	—
Accept Pipeline Input?	False
Accept Wildcard Characters?	False

**-name <string>**

Specify the name of the virtual machine for which the jobs have to be displayed.

Aliases	-VMName <string>
Position?	Named
Default Value	—
Accept Pipeline Input?	False
Accept Wildcard Characters?	False

**-Direction <string>**

Specify the type of VM to limit the search. The valid values are All, Incoming, Outgoing.

Aliases	—
Position?	<del>Named</del>
Default Value	—
Accept Pipeline Input?	False
Accept Wildcard Characters?	False

**-State <string>**

Specify the state of VM to limit the search. The valid values are `Active`, `CreationInProgress`, `CreationFailed`, `FailoverStarted`, `FailoverFailed`, `FailoverCompleted`, `PrepareFailoverStarted`, `PrepareFailoverFailed`, `PrepareFailoverCompleted`, `PrepareReverseProtectStarted`, `PrepareReverseProtectFailed`, `PrepareReverseProtectCompleted`, `ReverseProtectStarted`, `ReverseProtectFailed`.

Aliases	-VMState <string>
Position?	Named
Default Value	—
Accept Pipeline Input?	False
Accept Wildcard Characters?	False

**-VMState <string>**

Specify the state of VM to limit the search. The valid values are `Active`, `CreationInProgress`, `CreationFailed`, `FailoverStarted`, `FailoverFailed`, `FailoverCompleted`, `PrepareFailoverStarted`, `PrepareFailoverFailed`, `PrepareFailoverCompleted`, `PrepareReverseProtectStarted`, `PrepareReverseProtectFailed`, `PrepareReverseProtectCompleted`, `ReverseProtectStarted`, `ReverseProtectFailed`.

Aliases	-State <string>
Position?	Named
Default Value	—
Accept Pipeline Input?	False
Accept Wildcard Characters?	False

**-Brief <SwitchParameter>**

Indicates that the command will return the brief formatted output.

Aliases	—
Position?	Named
Default Value	—
Accept Pipeline Input?	False
Accept Wildcard Characters?	False

### Example 1

#### Input

```
Get-HXProtectedVM -ClusterIP 10.198.14.227 -Brief
```

#### Output

```
VM Name: DemoVM1
```

```

VM ProtectionStatus: ACTIVE
VM ID: 421ffa79-7380-4b72-7bd8-6651b11def58
Source Cluster: skmsrc_711
Target Cluster: skmtgt_711
Replication Interval(in Minutes) : 5
Bios Uuid: 421ffa79-7380-4b72-7bd8-6651b11def58
Instance Uuid: 501ffa05-293f-0480-b4d3-3de146cb5d30
Start Time: 7/15/2018 12:33:58 PM
End Time: 7/15/2018 12:33:58 PM
BytesReplicated: 2446

```

## Example 2

### Input

```
Get-HXProtectedVM -ClusterIP 10.198.16.16 -VMName ash2 -Brief
```

### Output

```

VM Name: ash2
VM ProtectionStatus: PREPAREFAILOVERCOMPLETED
VM ID: 422a9cb5-0fef-b30f-ad2d-1004755c50b4
Source Cluster: Sample-source
Target Cluster: Sample-target
Replication Interval(in Minutes) : 5
Bios Uuid: 422a9cb5-0fef-b30f-ad2d-1004755c50b4
Instance Uuid: 502a615b-36db-d624-fc97-4de6dbe30daa
Start Time: 7/15/2018 12:33:58 PM
End Time: 7/15/2018 12:33:58 PM

```

## Example 3

### Input

```
Get-HXProtectedVM -ClusterIP 10.198.16.16 -VMName ash* -Brief
```

### Output

```

VM Name: ash1
VM ProtectionStatus: PREPAREFAILOVERCOMPLETED
VM ID: 422a9cb5-0fef-b30f-ad2d-1004755c50b4
Source Cluster: Sample-source
Target Cluster: Sample-target
Replication Interval(in Minutes) : 5
Bios Uuid: 422a9cb5-0fef-b30f-ad2d-1004755c50b4
Instance Uuid: 502a615b-36db-d624-fc97-4de6dbe30daa
Start Time: 7/15/2018 12:33:58 PM
End Time: 7/15/2018 12:33:58 PM
BytesReplicated: 2539
=====
VM Name: ash2
VM ProtectionStatus: ACTIVE
VM ID: 422a1745-5dc3-d1de-00f0-b50851bb970d
Source Cluster: Sample-source
Target Cluster: Sample-target
Replication Interval(in Minutes) : 5
Bios Uuid: 422a9cb5-0fef-b30f-ad2d-1004755c50b4
Instance Uuid: 502a615b-36db-d624-fc97-4de6dbe30daa
Start Time: 7/15/2018 12:33:58 PM
End Time: 7/15/2018 12:33:58 PM
BytesReplicated: 2539

```

## Related Commands

Get-HXProtectionGroup

# Get-HXProtectionGroup Cmdlet

## Syntax

```
Get-HXProtectionGroup -ClusterIP <string> [-Brief <SwitchParameter>] [-GroupID <string>]
[<CommonParameters>]
```

```
Get-HXProtectionGroup -ClusterIP <string> [-Brief <SwitchParameter>] [-GroupName <string>]
[<CommonParameters>]
```

## Description

Retrieves the protection groups in the HyperFlex cluster.

## Required Parameters

**-ClusterIP** <string>

Specify the IP address of the HyperFlex cluster.

Aliases	-Server <string>
Position?	Named
Default Value	—
Accept Pipeline Input?	False
Accept Wildcard Characters?	False

**-Server** <string>

Specify the IP address of the HyperFlex cluster.

Aliases	-ClusterIP <string>
Position?	Named
Default Value	—
Accept Pipeline Input?	False
Accept Wildcard Characters?	False

## Optional Parameters

**-GroupID** <string>

Specify the ID of specific protection group you want to retrieve.

Aliases	-Grpid <string>
Position?	Named
Default Value	—
Accept Pipeline Input?	False
Accept Wildcard Characters?	False

**-Grpid <string>**

Specify the ID of the specific protection group you want to retrieve.

Aliases	-Grpid <string>
Position?	Named
Default Value	—
Accept Pipeline Input?	False
Accept Wildcard Characters?	False

**-GroupName <string>**

Specify the specific protection group name you want to retrieve.

Aliases	-GrpName <string>
Position?	Named
Default Value	—
Accept Pipeline Input?	False
Accept Wildcard Characters?	False

**-GrpName <string>**

Specify the specific protection group name you want to retrieve.

Aliases	-GroupName <string>
Position?	Named
Default Value	—
Accept Pipeline Input?	False
Accept Wildcard Characters?	False

**-Brief <SwitchParameter>**

Indicates that the command will return the brief formatted output.

Aliases	—
Position?	Name
Default Value	—
Accept Pipeline Input?	False
Accept Wildcard Characters?	False

### Example

#### Input

```
Get-HXProtectionGroup -ClusterIP 10.198.14.227 -GroupName ABC -Brief
```

#### Output

```
Group Name: Group1
Group ID: 6ed3920a-7fc4-4f92-8da5-814f98f05f5c
Group ProtectionStatus: ACTIVE
Group Members:
VM Name: vml
VM ProtectionStatus: ACTIVE
VM ID: 421f57c4-ebbd-a64e-a32b-426a251f9f43
Source Cluster: skmsrc_711
Start Time: 7/15/2018 1:11:05 PM
End Time: 7/15/2018 1:11:06 PM
BytesReplicated: 2426
-----
Source Cluster: skmsrc_711
Target Cluster: skmtgt_711
Replication Interval(in Minutes): 5
```

### Example 2

#### Input

```
Get-HXProtectionGroup -ClusterIP 10.198.14.227 -Brief
```

#### Output

This example provides all the protection groups in the the cluster.

```
-----
Group Name: ABC
Group ID: 6ed3920a-7fc4-4f92-8da5-814f98f05f5c
Group ProtectionStatus: ACTIVE
Group Members:
VM Name: vml
VM ProtectionStatus: ACTIVE
VM ID: 421f57c4-ebbd-a64e-a32b-426a251f9f43
Source Cluster: skmsrc_711
Start Time: 7/15/2018 1:11:05 PM
End Time: 7/15/2018 1:11:06 PM
BytesReplicated: 2426
-----
Source Cluster: skmsrc_711
Target Cluster: skmtgt_711
Replication Interval(in Minutes): 5
=====
Group Name: Group1
Group ID: c2d26ade-7674-44ab-982e-3bc044292738
Group ProtectionStatus: ACTIVE
Group Members:
```



```

VM Name: shaz
VM ProtectionStatus: ACTIVE
VM ID: 421f57c4-ebbd-a64e-a32b-426a251f9f43
Source Cluster: skmsrc_711
Start Time: 7/15/2018 1:11:05 PM
End Time: 7/15/2018 1:11:06 PM
BytesReplicated: 2426
-----
Source Cluster: skmsrc_711
Target Cluster: skmtgt_711
Replication Interval(in Minutes): 5

```

**Related Commands**    Get-HXProtectedVM

## Invoke-HXTestFailover Cmdlet

### Syntax

```
Invoke-HXTestFailover -ClusterIP <string> -VMName <string> [-Async <SwitchParameter>] [-Brief <SwitchParameter>] [-FolderID <string>] [-FolderName <string>] [-NetworkMap <string[>] [-NewName <string>] [-PowerOn <SwitchParameter>] [-ResourcePoolId <string>] [-ResourcePoolName <string>] [-TestNetwork <string>] [<CommonParameters>]
```

```
Invoke-HXTestFailover -ClusterIP <string> -VMId <string> [-Async <SwitchParameter>] [-Brief <SwitchParameter>] [-FolderID <string>] [-FolderName <string>] [-NetworkMap <string[>] [-NewName <string>] [-PowerOn <SwitchParameter>] [-ResourcePoolId <string>] [-ResourcePoolName <string>] [-TestNetwork <string>] [<CommonParameters>]
```

### Description

Performs test failover of the protected virtual machine.

- Mutually exclusive optional parameters are ResourcePoolName/ResourcePoolId, FolderName/FolderId, and TestNetwork/Networkmap.
- If the source network map is invalid, the VM will failover to default network map setting(s).

### Required Parameters

**-ClusterIP <string>**

Specify the IP address of the HyperFlex cluster.

Aliases	-Server <string>
Position?	Named
Default Value	—
Accept Pipeline Input?	False
Accept Wildcard Characters?	False

**-Server <string>**

Specify the IP address of the HyperFlex cluster.

Aliases	-ClusterIP <string>
Position?	Named
Default Value	—
Accept Pipeline Input?	False
Accept Wildcard Characters?	False

**-VMID <string>**

Specify the virtual machine ID for which the jobs have to be displayed.

Aliases	-VM <string>
Position?	Named
Default Value	—
Accept Pipeline Input?	False
Accept Wildcard Characters?	False

**-VM <string>**

Specify the virtual machine ID for which the jobs have to be displayed.

Aliases	-VMID <string>
Position?	Named
Default Value	—
Accept Pipeline Input?	False
Accept Wildcard Characters?	False

**-VMName <string>**

Specify the name of the virtual machine for which the jobs have to be displayed.

Aliases	-Name <string>
Position?	Named
Default Value	—
Accept Pipeline Input?	False

Accept Wildcard Characters?	False
-----------------------------	-------

**-Name** <string>

Specify the name of the virtual machine for which the jobs have to be displayed.

Aliases	-VMName <string>
Position?	Named
Default Value	—
Accept Pipeline Input?	False
Accept Wildcard Characters?	False

### Optional Parameters

**-ResourcePoolName** <string>

Specify the name of the resource pool.

Aliases	-RPName <string>
Position?	Named
Default Value	—
Accept Pipeline Input?	False
Accept Wildcard Characters?	False

**-RPName** <string>

Specify the name of the resource pool.

Aliases	-ResourcePoolName <string>
Position?	Named
Default Value	—
Accept Pipeline Input?	False
Accept Wildcard Characters?	False

**-ResourcePoolId** <string>

Specify the ID of the resource pool.

Aliases	-RPId <string>
Position?	Named

Default Value	—
Accept Pipeline Input?	False
Accept Wildcard Characters?	False

**-RPIId <string>**

Specify the ID of the resource pool.

Aliases	-ResourcePoolId <string>
Position?	Named
Default Value	—
Accept Pipeline Input?	False
Accept Wildcard Characters?	False

**-FolderName <string>**

Specify the folder name.

Aliases	-FName <string>
Position?	Named
Default Value	—
Accept Pipeline Input?	False
Accept Wildcard Characters?	False

**-FName <string>**

Specify the folder name.

Aliases	-FolderName <string>
Position?	Named
Default Value	—
Accept Pipeline Input?	False
Accept Wildcard Characters?	False

**-FolderID <string>**

Specify the folder ID.

Aliases	-FId <string>
---------	------------------

Position?	Named
Default Value	—
Accept Pipeline Input?	False
Accept Wildcard Characters?	False

**-FId <string>**

Specify the folder ID.

Aliases	-FolderID <string>
Position?	Named
Default Value	—
Accept Pipeline Input?	False
Accept Wildcard Characters?	False

**-TestNetwork <string>**

Specify the network to test.

Aliases	-TestNw <string>
Position?	Named
Default Value	—
Accept Pipeline Input?	False
Accept Wildcard Characters?	False

**-TestNw <string>**

Specify the network to test.

Aliases	-TestNetwork <string>
Position?	Named
Default Value	—
Accept Pipeline Input?	False
Accept Wildcard Characters?	False

**-NetworkMap <string[]>**

Specify the network mapping.

Aliases	-NwMap <string[]>
Position?	Named
Default Value	—
Accept Pipeline Input?	False
Accept Wildcard Characters?	False

**-NwMap <string[]>**

Specify the network mapping.

Aliases	-NetworkMap <string[]>
Position?	Named
Default Value	—
Accept Pipeline Input?	False
Accept Wildcard Characters?	False

**-NewName <string>**

To change the name of the virtual machine after failover is successful, specify a new name for the VM.

Aliases	—
Position?	Named
Default Value	—
Accept Pipeline Input?	False
Accept Wildcard Characters?	False

**-PowerOn <SwitchParameter>**

Indicates if the VM will be powered On or Off after Test failover.

Aliases	—
Position?	Named
Default Value	—
Accept Pipeline Input?	False
Accept Wildcard Characters?	False

**-Async <SwitchParameter>**

Indicates that the command returns immediately without waiting for the task to complete. In this mode, the output of the cmdlet is a Job ID. To get the status of job, refer to the `Get-HXJobStatus` cmdlet.

Aliases	—
Position?	Name
Default Value	—
Accept Pipeline Input?	False
Accept Wildcard Characters?	False

**-Brief <SwitchParameter>**

Indicates that the command will return the brief formatted output.

Aliases	—
Position?	Name
Default Value	—
Accept Pipeline Input?	False
Accept Wildcard Characters?	False

### Example 1

#### Input

```
Invoke-HXTestFailover -VMName DemoVM2 -ClusterIP 10.198.14.229 -ResourcePoolName DemoRP -Brief
```

#### Output

```
Test Failover of VM Completed
State: COMPLETED
Summary Step State: NOTSTARTED
Job ID: 5b1cdaf6-bca9-42a3-b6a8-b1f7d16e7d29
Method Name: failoverVm
Time Submitted: 7/15/2018 5:39:08 PM
Time Started: 7/15/2018 5:39:09 PM
Time Elapsed: 7/15/2018 5:39:23 PM
Message: Successfully completed %s recovery for VM %s
```

### Example 2

#### Input

```
Invoke-HXTestFailover -VMName DemoVM2 -ClusterIP 10.198.14.229 -FolderName DemoFLDR -Async
```

#### Output

```
{"taskId":"d92559c6-2396-4757-a500-96ad11820bbd"}
```

### Related Commands

- Invoke-HXPrepareFailover
- Invoke-HXPrepareGroupRecovery
- Invoke-HXPrepareReverseProtect
- Invoke-HXReverseProtect
- Invoke-HXTestFailover
- Get-HXJobStatus

# Invoke-HXFailover Cmdlet

## Syntax

```
Invoke-HXFailover [[-NetworkMap] <string[]>] [[-PowerOn] <SwitchParameter>] -ClusterIP <string>
-VMID <string> [-Async <SwitchParameter>] [-Brief <SwitchParameter>] [-FolderID <string>]
[-FolderName <string>] [-ResourcePoolID <string>] [-ResourcePoolName <string>]
[<CommonParameters>]
```

```
Invoke-HXFailover [[-NetworkMap] <string[]>] [[-PowerOn] <SwitchParameter>] -ClusterIP <string>
-VMName <string> [-Async <SwitchParameter>] [-Brief <SwitchParameter>] [-FolderID <string>]
[-FolderName <string>] [-ResourcePoolID <string>] [-ResourcePoolName <string>]
[<CommonParameters>]
```

## Description

Performs test failover of the protected virtual machine.

- Mutually exclusive optional parameters are `ResourcePoolName/ResourcePoolId`, `FolderName/FolderId`, and `TestNetwork/Networkmap`.
- If the source network map is invalid, the VM will failover to default network map setting(s).

## Required Parameters

**-ClusterIP <string>**

Specify the IP address of the HyperFlex cluster.

Aliases	-Server <string>
Position?	Named
Default Value	—
Accept Pipeline Input?	False
Accept Wildcard Characters?	False

**-Server <string>**

Specify the IP address of the HyperFlex cluster.

Aliases	-ClusterIP <string>
Position?	Named
Default Value	—
Accept Pipeline Input?	False



Accept Wildcard Characters?	False
-----------------------------	-------

**-VMID** <string>

Specify the virtual machine ID for which the jobs have to be displayed.

Aliases	-VM <string>
Position?	Named
Default Value	—
Accept Pipeline Input?	False
Accept Wildcard Characters?	False

**-VM** <string>

Specify the virtual machine ID for which the jobs have to be displayed.

Aliases	-VMID <string>
Position?	Named
Default Value	—
Accept Pipeline Input?	False
Accept Wildcard Characters?	False

**-VMName** <string>

Specify the name of the virtual machine for which the jobs have to be displayed.

Aliases	-name <string>
Position?	Named
Default Value	—
Accept Pipeline Input?	False
Accept Wildcard Characters?	False

**-name** <string>

Specify the name of the virtual machine for which the jobs have to be displayed.

Aliases	-VMName <string>
Position?	Named
Default Value	—

Accept Pipeline Input?	False
Accept Wildcard Characters?	False

### Optional Parameters

**-ResourcePoolName** <string>

Specify the name of the resource pool.

Aliases	-RPName <string>
Position?	Named
Default Value	—
Accept Pipeline Input?	False
Accept Wildcard Characters?	False

**-RPName** <string>

Specify the name of the resource pool.

Aliases	-ResourcePoolName <string>
Position?	Named
Default Value	—
Accept Pipeline Input?	False
Accept Wildcard Characters?	False

**-ResourcePoolID** <string>

Specify the ID of the resource pool.

Aliases	-RPID <string>
Position?	Named
Default Value	—
Accept Pipeline Input?	False
Accept Wildcard Characters?	False

**-RPID** <string>

Specify the ID of the resource pool.

Aliases	-ResourcePoolID <string>
---------	-----------------------------

Position?	Named
Default Value	—
Accept Pipeline Input?	False
Accept Wildcard Characters?	False

**-FolderName <string>**

Specify the folder name.

Aliases	-FName <string>
Position?	Named
Default Value	—
Accept Pipeline Input?	False
Accept Wildcard Characters?	False

**-FName <string>**

Specify the folder name.

Aliases	-FolderName <string>
Position?	Named
Default Value	—
Accept Pipeline Input?	False
Accept Wildcard Characters?	False

**-FolderID <string>**

Specify the folder ID.

Aliases	-FID <string>
Position?	Named
Default Value	—
Accept Pipeline Input?	False
Accept Wildcard Characters?	False

**-FID <string>**

Specify the folder ID.

Aliases	-FolderID <string>
Position?	Named
Default Value	—
Accept Pipeline Input?	False
Accept Wildcard Characters?	False

**-NetworkMap** <string[]>

Specify the network mapping.

Format is SourceNetwork1:TargetNetwork1, SourceNetwork2:TargetNetwork2.

Aliases	-NwMap <string[]>
Position?	Named
Default Value	—
Accept Pipeline Input?	False
Accept Wildcard Characters?	False

**-NwMap** <string[]>

Specify the network mapping.

Format is SourceNetwork1:TargetNetwork1, SourceNetwork2:TargetNetwork2.

Aliases	-NetworkMap <string[]>
Position?	Named
Default Value	—
Accept Pipeline Input?	False
Accept Wildcard Characters?	False

**-PowerOn** <SwitchParameter>

Indicates if the VM will be powered On or Off after Test failover.

Aliases	—
Position?	Named
Default Value	—
Accept Pipeline Input?	False
Accept Wildcard Characters?	False

**-Async <SwitchParameter>**

Indicates that the command returns immediately without waiting for the task to complete. In this mode, the output of the cmdlet is a Job ID. To get the status of job, refer to the `Get-HXJobStatus` cmdlet.

Aliases	—
Position?	Named
Default Value	—
Accept Pipeline Input?	False
Accept Wildcard Characters?	False

**-Brief <SwitchParameter>**

Indicates that the command will return the brief formatted output.

Aliases	—
Position?	Named
Default Value	—
Accept Pipeline Input?	False
Accept Wildcard Characters?	False

**Example 1****Input**

```
Invoke-HXFailover -VMID 421ffa79-7380-4b72-7bd8-6651b11def58 -PowerOn -ClusterIP 10.198.14.229
-FolderName DemoFolder -NetworkMap "Storage Controller Data Network:VM Network" -Async
```

**Output**

```
{"taskId":"d92559c6-2396-4757-a500-96ad11820bbd"}
```

**Example 2****Input**

```
Invoke-HXFailover -VMName DemoVM3 -ClusterIP 10.198.14.229 -Brief
```

**Output**

```
Failover of VM Completed
State: COMPLETED
Summary Step State: NOTSTARTED
Job ID: 2c611807-260d-45cf-9294-4f93a84204a1
Method Name: failoverVm
Time Submitted: 7/15/2018 5:44:00 PM
Time Started: 7/15/2018 5:44:00 PM
Time Elapsed: 7/15/2018 5:44:05 PM
Message: Successfully completed %s recovery for VM %s
```

**Example 3****Input**

```
Invoke-HXFailover -ClusterIP 10.198.5.221 -VMName testvm2 -ResourcePoolName RPName -PowerOn
```

**Output**

```
Failover of VM Completed in the Resource Pool provided.
```

**Related Commands**

Invoke-HXPrepareFailover  
 Invoke-HXPrepareGroupRecovery  
 Invoke-HXPrepareReverseProtect  
 Invoke-HXReverseProtect  
 Invoke-HXTestFailover  
 Get-HXJobStatus

# Invoke-HXPrepareFailover Cmdlet

**Syntax**

```
Invoke-HXPrepareFailover -ClusterIP <string> -VMName <string> [-Async <SwitchParameter>]
[-Brief <SwitchParameter>] [<CommonParameters>]
Invoke-HXPrepareFailover -ClusterIP <string> -VMID <string> [-Async <SwitchParameter>] [-Brief
<SwitchParameter>] [<CommonParameters>]
```

**Description**

Prepares the protected VM for the failover on the protected site.

**Required Parameters**

**-ClusterIP** <string>

Specify the IP address of the HyperFlex cluster.

Aliases	-Server <string>
Position?	Named
Default Value	—
Accept Pipeline Input?	False
Accept Wildcard Characters?	False

**-Server** <string>

Specify the IP address of the HyperFlex cluster.

Aliases	-ClusterIP <string>
Position?	Named
Default Value	—
Accept Pipeline Input?	False

Accept Wildcard Characters?	False
-----------------------------	-------

**-VMID** <string>

Specify the virtual machine ID for which the jobs have to be displayed.

Aliases	-VM <string>
Position?	Named
Default Value	—
Accept Pipeline Input?	False
Accept Wildcard Characters?	False

**-VM** <string>

Specify the virtual machine ID for which the jobs have to be displayed.

Aliases	-VMID <string>
Position?	Named
Default Value	—
Accept Pipeline Input?	False
Accept Wildcard Characters?	False

**-VMName** <string>

Specify the name of the virtual machine for which the jobs have to be displayed.

Aliases	-name <string>
Position?	Named
Default Value	—
Accept Pipeline Input?	False
Accept Wildcard Characters?	False

**-name** <string>

Specify the name of the virtual machine for which the jobs have to be displayed.

Aliases	-VMName <string>
Position?	Named
Default Value	—

Accept Pipeline Input?	False
Accept Wildcard Characters?	False

**-Async <SwitchParameter>**

Indicates that the command returns immediately without waiting for the task to complete. In this mode, the output of the cmdlet is a Job ID. To get the status of job, refer to the `Get-HXJobStatus` cmdlet.

Aliases	—
Position?	Named
Default Value	—
Accept Pipeline Input?	False
Accept Wildcard Characters?	False

**-Brief <SwitchParameter>**

Indicates that the command will return the brief formatted output.

Aliases	—
Position?	Named
Default Value	—
Accept Pipeline Input?	False
Accept Wildcard Characters?	False

**Example 1****Input**

```
Invoke-HXPrepareFailover -ClusterIP 10.198.14.227 -VMID 421fcaff-8592-428a-61a7-0181bf0314a3
-Async
```

**Output**

```
{"taskId":"99a18c1d-23e8-4cf9-aedf-845dc9c832fb"}
```

**Example 2****Input**

```
Invoke-HXPrepareFailover -ClusterIP 10.198.14.227 -VMID 421f8bbb-540f-11e1-038a-4e66c2ebcc70
-Brief
```

**Output**

```
State: COMPLETED
Summary Step State: NOTSTARTED
Job ID: 2d6c7d49-1ac9-4bc1-9bb7-8a0efa112d1c
Method Name: prepareFailoverVm
Time Submitted: 7/15/2018 7:02:47 PM
Time Started: 7/15/2018 7:02:47 PM
Time Elapsed: 7/15/2018 7:02:53 PM
Message: Successfully completed prepareFailover for VMID %s
```

**Related Commands**

Invoke-HXFailover



Invoke-HXPrepareGroupRecovery  
 Invoke-HXPrepareReverseProtect  
 Invoke-HXReverseProtect  
 Invoke-HXTestFailover  
 Get-HXJobStatus

## Invoke-HXPrepareGroupRecovery Cmdlet

### Syntax

```
Invoke-HXPrepareGroupRecovery -ClusterIP <string> -GroupId <string> [<CommonParameters>]
```

```
Invoke-HXPrepareGroupRecovery -ClusterIP <string> -GroupName <string> [<CommonParameters>]
```

### Description

Prepares the protection group for recovery.

As the ProtectionGroup does not have a failover functionality, it first moves out the VMs from the protection group and then performs prepare group recovery on the individual protected VMs.

### Required Parameters

**-ClusterIP <string>**

Specify the IP address of the HyperFlex cluster.

Aliases	-Server <string>
Position?	Named
Default Value	—
Accept Pipeline Input?	False
Accept Wildcard Characters?	False

**-Server <string>**

Specify the IP address of the HyperFlex cluster.

Aliases	-ClusterIP <string>
Position?	Named
Default Value	—
Accept Pipeline Input?	False

Accept Wildcard Characters?	False
-----------------------------	-------

**-GroupId <string>**

Specify the group ID on which you want to perform prepare group recovery.

Aliases	-Id <string>
Position?	Named
Default Value	
Accept Pipeline Input?	False
Accept Wildcard Characters?	False

**-Id <string>**

Specify the group ID on which you want to perform prepare group recovery.

Aliases	-GroupId <string>
Position?	Named
Default Value	
Accept Pipeline Input?	False
Accept Wildcard Characters?	False

**-GroupName <string>**

Specify the group name on which you want to perform prepare group recovery.

Aliases	-Name <string>
Position?	Named
Default Value	
Accept Pipeline Input?	False
Accept Wildcard Characters?	False

**-Name <string>**

Specify the group name on which you want to perform prepare group recovery.

Aliases	-GroupName <string>
Position?	Named
Default Value	
Accept Pipeline Input?	False

Accept Wildcard Characters?	False
-----------------------------	-------

### Example

#### Input

```
Invoke-HXPrepareGroupRecovery -ClusterIP 10.198.14.229 -GroupId
6ed3920a-7fc4-4f92-8da5-814f98f05f5c
```

#### Output

```
ProtectionStatusV2 : FAILOVERCOMPLETED
Er : class EntityRef {
  Name: Group1
  Type: DPVMGROUP
  Id: 6ed3920a-7fc4-4f92-8da5-814f98f05f5c
  Idtype:
  Confignum: 0
}
Description :
PrimaryEr : class EntityRef {
  Name: skmsrc_711
  Type: CLUSTER
  Id: 316711787155901742:8013209598152688184
  Idtype:
  Confignum: 0
}
Members : {}
Schedule : {class ReplicationClusterErToSchedule {
  TargetClusterEr: class EntityRef {
    Name: skmtgt_711
    Type: CLUSTER
    Id: 196170859791797843:6439004119086246008
    Idtype:
    Confignum: 0
  }
  Schedule: class ReplicationSchedule {
    Enabled: True
    IntervalInMinutes: 5
    StartTime: 1531297344621
    QuiesceType: NONE
  }
}
}
```

**Related Commands**    Get-HXProtectionGroup

## Invoke-HXPrepareReverseProtect Cmdlet

### Syntax

```
Invoke-HXPrepareReverseProtect -ClusterIP <string> -VMName <string> [-Async <SwitchParameter>]
[-Brief <SwitchParameter>] [<CommonParameters>]
```

```
Invoke-HXPrepareReverseProtect -ClusterIP <string> -VMID <string> [-Async <SwitchParameter>]
[-Brief <SwitchParameter>] [<CommonParameters>]
```

**Description**

Prepares virtual machines for reverse protect on the primary site.

**Required Parameters**

**-ClusterIP** <string>

Specify the IP address of the HyperFlex cluster.

Aliases	-Server <string>
Position?	Named
Default Value	—
Accept Pipeline Input?	False
Accept Wildcard Characters?	False

**-Server** <string>

Specify the IP address of the HyperFlex cluster.

Aliases	-ClusterIP <string>
Position?	Named
Default Value	—
Accept Pipeline Input?	False
Accept Wildcard Characters?	False

**-VMName** <string>

Specify the name of the virtual machine on which Prepare Reverse Protect has to be performed.

Aliases	-name <string>
Position?	Named
Default Value	—
Accept Pipeline Input?	False
Accept Wildcard Characters?	False

**-name** <string>

Specify the name of the virtual machine on which Prepare Reverse Protect has to be performed.

Aliases	-VMName <string>
---------	---------------------

Position?	Named
Default Value	—
Accept Pipeline Input?	False
Accept Wildcard Characters?	False

**-VMID** <string>

Specify the virtual machine ID on which Prepare Reverse Protect has to be performed.

Aliases	-vm <string>
Position?	Named
Default Value	—
Accept Pipeline Input?	False
Accept Wildcard Characters?	False

**-vm** <string>

Specify the virtual machine ID on which Prepare Reverse Protect has to be performed.

Aliases	-VMID <string>
Position?	Named
Default Value	—
Accept Pipeline Input?	False
Accept Wildcard Characters?	False

### Optional Parameters

**-Async** <SwitchParameter>

Indicates that the command returns immediately without waiting for the task to complete. In this mode, the output of the cmdlet is a Job Id. To get the status of job, refer to Get-HXJobStatus.

Aliases	—
Position?	Named
Default Value	—
Accept Pipeline Input?	False
Accept Wildcard Characters?	False

**-Brief** <SwitchParameter>

Indicates that the command will return the brief formatted output.

Aliases	—
Position?	Name
Default Value	—
Accept Pipeline Input?	False
Accept Wildcard Characters?	False

### Example 1

#### Input

```
Invoke-HXPrepareReverseProtect -ClusterIP 10.198.14.227 -VMID
421f0f84-0b3f-fe3a-311c-763f409b3665 -Async
```

#### Output

```
{"taskId":"99a18c1d-23e8-4cf9-aedf-845dc9c832fb"}
```

### Example 2

#### Input

```
Invoke-HXPrepareReverseProtect -ClusterIP 10.198.14.227 -VMName DemoVM2 -Brief
```

#### Output

```
Method Name: prepareReverseProtectVm
Time Submitted: 7/15/2018 5:52:27 PM
Time Started: 7/15/2018 5:52:27 PM
Time Elapsed: 7/15/2018 5:52:28 PM
Message: Successfully completed prepareReverseProtect for vm: %s
```

### Related Commands

- Invoke-HXFailover
- Invoke-HXPrepareGroupRecovery
- Invoke-HXReverseProtect
- Invoke-HXTestFailover
- Get-HXJobStatus

## Invoke-HXReverseProtect Cmdlet

### Syntax

```
Invoke-HXReverseProtect -ClusterIP <string> -VMName <string> [-Async <SwitchParameter>] [-Brief
<SwitchParameter>] [<CommonParameters>]
```

```
Invoke-HXReverseProtect -ClusterIP <string> -VMID <string> [-Async <SwitchParameter>] [-Brief
<SwitchParameter>] [<CommonParameters>]
```

### Description

Reverse protects the virtual machines on the recovery site after the failover is complete.

**Required Parameters****-ClusterIP <string>**

Specify the IP address of the HyperFlex cluster.

Aliases	-Server <string>
Position?	Named
Default Value	—
Accept Pipeline Input?	False
Accept Wildcard Characters?	False

**-Server <string>**

Specify the IP address of the HyperFlex cluster.

Aliases	-ClusterIP <string>
Position?	Named
Default Value	—
Accept Pipeline Input?	False
Accept Wildcard Characters?	False

**-VMName <string>**

Specify the name of the virtual machine on which Reverse Protect has to be performed.

Aliases	-name <string>
Position?	Named
Default Value	—
Accept Pipeline Input?	False
Accept Wildcard Characters?	False

**-name <string>**

Specify the name of the virtual machine on which Reverse Protect has to be performed.

Aliases	-VMName <string>
Position?	Named
Default Value	—

Accept Pipeline Input?	False
Accept Wildcard Characters?	False

**-VMID <string>**

Specify the virtual machine ID on which Reverse Protect has to be performed.

Aliases	-id <string>
Position?	Named
Default Value	—
Accept Pipeline Input?	False
Accept Wildcard Characters?	False

**-id <string>**

Specify the virtual machine ID on which Reverse Protect has to be performed.

Aliases	-VMID <string>
Position?	Named
Default Value	—
Accept Pipeline Input?	False
Accept Wildcard Characters?	False

**Optional Parameters****-Async <SwitchParameter>**

Indicates that the command returns immediately without waiting for the task to complete. In this mode, the output of the cmdlet is a Job ID. To get the status of job, refer to Get-HXJobStatus.

Aliases	—
Position?	Named
Default Value	—
Accept Pipeline Input?	False
Accept Wildcard Characters?	False

**-Brief <SwitchParameter>**

Indicates that the command will return the brief formatted output.

Aliases	—
---------	---



Position?	Name
Default Value	—
Accept Pipeline Input?	False
Accept Wildcard Characters?	False

**Example 1****Input**

```
Invoke-HXReverseProtect -ClusterIP 10.198.14.229 -VMID 421f0f84-0b3f-fe3a-311c-763f409b3665
-Async
```

**Output**

```
{"taskId":"8d26dfba-ed64-4768-9960-62d40865e51e"}
```

**Example 2****Input**

```
Invoke-HXReverseProtect -ClusterIP 10.198.14.229 -VMName DemoVM1 -Brief
```

**Output**

```
Reverse Protect of VM Completed
State: COMPLETED
Summary Step State: NOTSTARTED
Job ID: 5d154cf0-ff85-482a-ae7c-252c0ca324b8
Method Name: reverseProtectVm
Time Submitted: 7/15/2018 5:57:49 PM
Time Started: 7/15/2018 5:57:49 PM
Time Elapsed: 7/15/2018 5:57:49 PM
Message: Successfully completed reverseProtect for vm: %s
```

**Related Commands**

```
Invoke-HXFailover
Invoke-HXPrepareFailover
Invoke-HXPrepareGroupRecovery
Invoke-HXPrepareReverseProtect
Invoke-HXTestFailover
Get-HXJobStatus
```

# New-HXProtectionGroup Cmdlet

**Syntax**

```
New-ProtectionGroup -ClusterIP <string> -GroupName <string> -Interval <string> [-QuiesceUsingTools
<SwitchParameter>] [-StartTime <string>] [<CommonParameters>]
```

**Description**

Creates the new HyperFlex protection group with a schedule.

**Required Parameters****-ClusterIP <string>**

Specify the IP address of the HyperFlex cluster.

Aliases	-Server <string>
Position?	Named
Default Value	—
Accept Pipeline Input?	False
Accept Wildcard Characters?	False

**-Server <string>**

Specify the IP address of the HyperFlex cluster.

Aliases	-ClusterIP <string>
Position?	Named
Default Value	—
Accept Pipeline Input?	False
Accept Wildcard Characters?	False

**-GroupName <string>**

Specify the group name for the protection group to be created. The group name parameter must not contain special characters.

Aliases	-Name <string>
Position?	Named
Default Value	—
Accept Pipeline Input?	False
Accept Wildcard Characters?	False

**-GrpName <string>**

Specify the group name for the protection group to be created. The group name parameter must not contain special characters.

Aliases	-GrpName <string>
Position?	Named

Default Value	—
Accept Pipeline Input?	False
Accept Wildcard Characters?	False

**-Interval <string>**

Specify the Interval after which the VM will be replicated. Valid values are "5 min", "15 min", "30 min", "1 hr", "90 min", "2 hr", "4 hr", "8 hr", "12 hr", and "24 hr".

Aliases	
Position?	
Default Value	
Accept Pipeline Input?	
Accept Wildcard Characters?	

**Optional Parameters****-QuiesceUsingTools <SwitchParameter>**

Specify the flag if the Quiesce has to be done using tools.

Aliases	—
Position?	<b>Name</b>
Default Value	False
Accept Pipeline Input?	False
Accept Wildcard Characters?	False

**-StartTime <string>**

Specify the Start Time after which the virtual machine will be protected. Valid format is M/d/yyyy HH:mm.

Aliases	—
Position?	<b>Name</b>
Default Value	—
Accept Pipeline Input?	False
Accept Wildcard Characters?	False

**Example 1****Input**

```
New-HXProtectionGroup -ClusterIP 10.198.14.227 -GroupName DemoGroup1 -Interval '1 hr'
```

**Output**

```
Protection Group has been created.
```

**Example 2****Input**

```
New-HXProtectionGroup -ClusterIP 10.198.14.114 -GroupName mittul -Interval '5 min' -StartTime
"08/05/2018 23:53
```

**Output**

```
Protection Group has been created.
```

---

**Related Commands**    Remove-HXProtectionGroup

# Protect-HXVM Cmdlet

**Syntax**

```
Protect-HXVM -ClusterIP <string> -Interval <string> -VMName <string[]> [-QuiesceUsingTools
<SwitchParameter>] [-StartTime <string>] [<CommonParameters>]
```

```
Protect-HXVM -ClusterIP <string> -GroupName <string> -VMName <string[]> [<CommonParameters>]
```

```
Protect-HXVM -ClusterIP <string> -GroupId <string> -VMName <string[]> [<CommonParameters>]
```

```
Protect-HXVM -ClusterIP <string> -Interval <string> -VMId <string[]> [-QuiesceUsingTools
<SwitchParameter>] [-StartTime <string>] [<CommonParameters>]
```

```
Protect-HXVM -ClusterIP <string> -GroupName <string> -VMId <string[]> [<CommonParameters>]
```

```
Protect-HXVM -ClusterIP <string> -GroupId <string> -VMId <string[]> [<CommonParameters>]
```

**Description**

Protects an independent virtual machine or a list of virtual machines by adding it to the protection group.

**Required Parameters**

**-ClusterIP <string>**

Specify the IP address of the HyperFlex cluster.

Aliases	-Server <string>
Position?	Named
Default Value	—
Accept Pipeline Input?	False
Accept Wildcard Characters?	False

**-Server <string>**

Specify the IP address of the HyperFlex cluster.

Aliases	-ClusterIP <string>
Position?	Named
Default Value	—
Accept Pipeline Input?	False
Accept Wildcard Characters?	False

**-VMName <string[]>**

Specify the VM Name to protect an independent VM or a list of VM Names to protect a group of VMs by adding them to a protection group.

Aliases	-Name <string>
Position?	Named
Default Value	—
Accept Pipeline Input?	False
Accept Wildcard Characters?	False

**-Name <string>**

Specify the VM Name to protect an independent VM or a list of VM Names to protect a group of VMs by adding them to a protection group.

Aliases	-VMName <string>
Position?	Named
Default Value	—
Accept Pipeline Input?	False
Accept Wildcard Characters?	False

**-VMID <string>**

Specify the virtual machine ID on which Reverse Protect has to be performed.

Aliases	-Id <string>
Position?	Named
Default Value	—
Accept Pipeline Input?	False
Accept Wildcard Characters?	False

**-Id <string>**

Specify the virtual machine ID on which Reverse Protect has to be performed.

Aliases	-VMID <string>
Position?	Named
Default Value	—
Accept Pipeline Input?	False
Accept Wildcard Characters?	False

**-GroupName <string>**

Specify the existing protection group name to which the list of virtual machines has to be added.

Aliases	-GrpName <string>
Position?	Named
Default Value	—
Accept Pipeline Input?	False
Accept Wildcard Characters?	False

**-GrpName <string>**

Specify the existing protection group name to which the list of virtual machines has to be added.

Aliases	-GroupName <string>
Position?	Named
Default Value	—
Accept Pipeline Input?	False
Accept Wildcard Characters?	False

**-GroupId <string>**

Specify the group ID on which you want to perform prepare group recovery.

Aliases	-GrpId <string>
Position?	Named
Default Value	
Accept Pipeline Input?	False

Accept Wildcard Characters?	False
-----------------------------	-------

**-GrpId <string>**

Specify the group ID on which you want to perform prepare group recovery.

Aliases	-GroupId <string>
Position?	Named
Default Value	
Accept Pipeline Input?	False
Accept Wildcard Characters?	False

**-Interval <string>**

Specify the Interval after which the VM will be replicated. Valid values are "5 min", "15 min", "30 min", "1 hr", "90 min", "2 hr", "4 hr", "8 hr", "12 hr", and "24 hr".

Aliases	—
Position?	Named
Default Value	—
Accept Pipeline Input?	False
Accept Wildcard Characters?	False

**Optional Parameters****-QuiesceUsingTools <SwitchParameter>**

Specify the flag if the Quiesce has to be done using tools.

Aliases	—
Position?	Named
Default Value	False
Accept Pipeline Input?	False
Accept Wildcard Characters?	False

**-StartTime <string>**

Specify the Start Time after which the virtual machine will be protected. Valid format is M/d/yyyy HH:mm.

Aliases	—
Position?	Named
Default Value	—

Accept Pipeline Input?	False
Accept Wildcard Characters?	False

**Example 1****Input**

```
Protect-HXVM -ClusterIP 10.198.14.227 -VMName DemoVM2 -Interval '12 hr'
```

**Output**

```
VM has been protected.
```

**Example 2****Input**

```
Protect-HXVM -ClusterIP 10.198.14.227 -VMId 421f0f84-0b3f-fe3a-311c-763f409b3665 -Interval '5 min'
```

**Output**

```
VM has been protected.
```

**Example 3****Input**

```
Protect-HXVM -ClusterIP 10.198.14.227 -VMId 421f0f84-0b3f-fe3a-311c-763f409b3665 -Interval '5 min' -QuiesceUsingTools -StartTime '08/07/2018 13:40'
```

**Output**

```
VM has been protected.
```

**Example 4****Input**

```
Protect-HXVM -ClusterIP 10.198.16.56 -VMName testvm3,testvm4 -GroupName Grp1
```

**Output**

```
VM has been protected.
```

**Related Commands**    Unprotect-HXVM

## Add-HXProtectedVMToGroup Cmdlet

**Syntax**

```
Add-HXProtectedVMToGroup -ClusterIP <string> -GroupId <string> -VMId <string[]> [-Brief <SwitchParameter>] [<CommonParameters>]
```

```
Add-HXProtectedVMToGroup -ClusterIP <string> -GroupName <string> -VMName <string[]> [-Brief <SwitchParameter>] [<CommonParameters>]
```

```
Add-HXProtectedVMToGroup -ClusterIP <string> -GroupName <string> -VMId <string[]> [-Brief <SwitchParameter>] [<CommonParameters>]
```

```
Add-HXProtectedVMToGroup -ClusterIP <string> -GroupId <string> -VMName <string[]> [-Brief <SwitchParameter>] [<CommonParameters>]
```



**Description**

Adds HyperFlex protected virtual machines to a specified group.

**Required Parameters**

**-ClusterIP <string>**

Specify the IP address of the HyperFlex cluster.

Aliases	-Server <string>
Position?	Named
Default Value	—
Accept Pipeline Input?	False
Accept Wildcard Characters?	False

**-Server <string>**

Specify the IP address of the HyperFlex cluster.

Aliases	-ClusterIP <string>
Position?	Named
Default Value	—
Accept Pipeline Input?	False
Accept Wildcard Characters?	False

**-GroupId <string>**

Specify the existing protection group ID to which you want to add the virtual machines.

Aliases	Group <string>
Position?	Named
Default Value	
Accept Pipeline Input?	False
Accept Wildcard Characters?	False

**Group <string>**

Specify the existing protection group ID to which you want to add the virtual machines.

Aliases	-GroupId <string>
---------	----------------------

Position?	Named
Default Value	
Accept Pipeline Input?	False
Accept Wildcard Characters?	False

**-GroupName <string>**

Specify the existing protection group name to which you want to add the virtual machines.

Aliases	—
Position?	Named
Default Value	
Accept Pipeline Input?	False
Accept Wildcard Characters?	False

**-VMName <string[]>**

Specify the list of virtual machine names you want to add to the protected group.

Aliases	-Name <string[ ]>
Position?	Named
Default Value	
Accept Pipeline Input?	False
Accept Wildcard Characters?	False

**-Name <string[]>**

Specify the list of virtual machine names you want to add to the protected group.

Aliases	-VMName <string[ ]>
Position?	Named
Default Value	
Accept Pipeline Input?	False
Accept Wildcard Characters?	False

**-VMID <string>**

Specify the list of virtual machine ID you want to add to the protected group.

Aliases	-Id <string>
---------	--------------

Position?	Named
Default Value	—
Accept Pipeline Input?	False
Accept Wildcard Characters?	False

**-Id** <string []>

Specify the list of virtual machine ID you want to add to the protected group.

Aliases	-VMID <string [ ]>
Position?	Named
Default Value	—
Accept Pipeline Input?	False
Accept Wildcard Characters?	False

### Optional Parameters

**-Brief** <SwitchParameter>

Indicates that the command will return the brief formatted output.

Aliases	—
Position?	Named
Default Value	—
Accept Pipeline Input?	False
Accept Wildcard Characters?	False

### Example 1

#### Input

```
Add-HXProtectedVMToGroup -ClusterIP 10.198.14.227 -GroupId
cc4d1fb0-ce87-4550-a32f-2ed28ead4dad -VMId 421f008c-ee7a-b74a-559c-ad481c119b72 -Brief
```

#### Output

```
Group Name: DemoGroup
Group ID: cc4d1fb0-ce87-4550-a32f-2ed28ead4dad
Group ProtectionStatus: ACTIVE
Group Members:
VM Name: 11
VM ProtectionStatus: ACTIVE
VM ID: 421fa002-e68b-a95c-9dbe-ae721b7b2112
Source Cluster: skmsrc_711
Start Time: 7/15/2018 7:11:54 PM
End Time: 7/15/2018 7:11:54 PM
BytesReplicated: 2421
-----
```

```

VM Name: 22
VM ProtectionStatus: ACTIVE
VM ID: 421f008c-ee7a-b74a-559c-ad481c119b72
Source Cluster: skmsrc_711
Start Time: 7/15/2018 7:11:54 PM
End Time: 7/15/2018 7:11:54 PM
BytesReplicated: 2505
-----
Source Cluster: skmsrc_711
Target Cluster: skmtgt_711
Replication Interval(in Minutes): 5
=====
BytesReplicated: 2446

```

### Example 2

#### Input

```
Add-HXProtectedVMToGroup -ClusterIP 10.198.5.221 -GroupName grp1 -VMName newvm1
```

#### Output

```
VM is added to the Group provided.
```

**Related Commands** Remove-HXProtectedVMFromGroup

## Remove-HXProtectedVMFromGroup Cmdlet

### Syntax

```
Remove-ProtectedVMFromGroup -ClusterIP <string> -GroupName <string> -VMName <string[]> [-Brief <SwitchParameter>] [<CommonParameters>]
```

```
Remove-ProtectedVMFromGroup -All <SwitchParameter> -ClusterIP <string> -GroupName <string> [-Brief <SwitchParameter>] [<CommonParameters>]
```

```
Remove-ProtectedVMFromGroup -ClusterIP <string> -GroupName <string> -VMId <string[]> [-Brief <SwitchParameter>] [<CommonParameters>]
```

```
Remove-ProtectedVMFromGroup -ClusterIP <string> -GroupId <string> -VMId <string[]> [-Brief <SwitchParameter>] [<CommonParameters>]
```

```
Remove-ProtectedVMFromGroup -All <SwitchParameter> -ClusterIP <string> -GroupId <string> [-Brief <SwitchParameter>] [<CommonParameters>]
```

```
Remove-ProtectedVMFromGroup -ClusterIP <string> -GroupId <string> -VMName <string[]> [-Brief <SwitchParameter>] [<CommonParameters>]
```

### Description

Removes HyperFlex protected virtual machines from a specified group.

### Required Parameters

```
-ClusterIP <string>
```

Specify the IP address of the HyperFlex cluster.

Aliases	-Server <string>
Position?	Named
Default Value	—
Accept Pipeline Input?	False
Accept Wildcard Characters?	False

**-Server <string>**

Specify the IP address of the HyperFlex cluster.

Aliases	-ClusterIP <string>
Position?	Named
Default Value	—
Accept Pipeline Input?	False
Accept Wildcard Characters?	False

**-GroupId <string>**

Specify the existing protection group ID to which you want to add the virtual machines.

Aliases	Group <string>
Position?	Named
Default Value	
Accept Pipeline Input?	False
Accept Wildcard Characters?	False

**-GroupName <string>**

Specify the existing protection group name to which you want to add the virtual machines.

Aliases	—
Position?	Named
Default Value	
Accept Pipeline Input?	False
Accept Wildcard Characters?	False

**-VMName <string[]>**

Specify the list of virtual machine names you want to add to the protected group.

Aliases	-Name <string[ ]>
Position?	Named
Default Value	
Accept Pipeline Input?	False
Accept Wildcard Characters?	False

**-Name <string[]>**

Specify the list of virtual machine names you want to add to the protected group.

Aliases	-VMName <string[ ]>
Position?	Named
Default Value	
Accept Pipeline Input?	False
Accept Wildcard Characters?	False

**-VMID <string>**

Specify the list of virtual machine ID you want to add to the protected group.

Aliases	-Id <string>
Position?	Named
Default Value	—
Accept Pipeline Input?	False
Accept Wildcard Characters?	False

**-Id <string []>**

Specify the list of virtual machine ID you want to add to the protected group.

Aliases	-VMID <string [ ]>
Position?	Named
Default Value	—
Accept Pipeline Input?	False
Accept Wildcard Characters?	False

**-All <SwitchParameter>**

Indicates that the command will remove all the VMs that exist in the protection group.

Aliases	—
Position?	Named
Default Value	—
Accept Pipeline Input?	False
Accept Wildcard Characters?	False

**Optional Parameters****-Brief <SwitchParameter>**

Indicates that the command will return the brief formatted output.

Aliases	—
Position?	Named
Default Value	—
Accept Pipeline Input?	False
Accept Wildcard Characters?	False

**Example****Input**

```
Remove-HXProtectedVMFromGroup -ClusterIP 10.198.14.227 -GroupName Group1 -All
```

**Output**

```
ProtectionStatus : ACTIVE
ProtectionStatusV2 : ACTIVE
Er : class EntityRef {
  Name: Group1
  Type: DPVMGROUP
  Id: 6ed3920a-7fc4-4f92-8da5-814f98f05f5c
  Idtype:
  Confignum: 0
}
Description :
PrimaryEr : class EntityRef {
  Name: skmsrc_711
  Type: CLUSTER
  Id: 316711787155901742:8013209598152688184
  Idtype:
  Confignum: 0
}
Members : {}
Schedule : {class ReplicationClusterErToSchedule {
  TargetClusterEr: class EntityRef {
  Name: skmtgt_711
  Type: CLUSTER
  Id: 196170859791797843:6439004119086246008
  Idtype:
```

```

    Confignum: 0
  }
  Schedule: class ReplicationSchedule {
    Enabled: True
    IntervalInMinutes: 5
    StartTime: 1531297344621
    QuiesceType: NONE
  }
}
}
}

```

**Related Commands** Add-HXProtectedVMToGroup

## Remove-HXProtectionGroup Cmdlet

### Syntax

```
Remove-HXProtectionGroup -ClusterIP <string> -GroupID <string> [<CommonParameters>]
```

```
Remove-HXProtectionGroup -ClusterIP <string> -GroupName <string> [<CommonParameters>]
```

### Description

Removes the protection group by deleting it. All the member virtual machines become unprotected.

### Required Parameters

**-ClusterIP <string>**

Specify the IP address of the HyperFlex cluster.

Aliases	-Server <string>
Position?	Named
Default Value	—
Accept Pipeline Input?	False
Accept Wildcard Characters?	False

**-Server <string>**

Specify the IP address of the HyperFlex cluster.

Aliases	-ClusterIP <string>
Position?	Named
Default Value	—
Accept Pipeline Input?	False



Accept Wildcard Characters?	False
-----------------------------	-------

**-GroupID <string>**

Specify the existing protection group ID to which you want to add the virtual machines.

Aliases	Grpid <string>
Position?	Named
Default Value	
Accept Pipeline Input?	False
Accept Wildcard Characters?	False

**-Grpid <string>**

Specify the existing protection group ID to which you want to add the virtual machines.

Aliases	-GroupID <string>
Position?	Named
Default Value	
Accept Pipeline Input?	False
Accept Wildcard Characters?	False

**-GroupName <string>**

Specify the existing protection group name to which you want to add the virtual machines.

Aliases	-GrpName <string>
Position?	Named
Default Value	
Accept Pipeline Input?	False
Accept Wildcard Characters?	False

**-GrpName <string>**

Specify the existing protection group name to which you want to add the virtual machines.

Aliases	-GroupName <string>
Position?	Named
Default Value	
Accept Pipeline Input?	False

Accept Wildcard Characters?	False
-----------------------------	-------

**Example 1****Input**

```
Remove-HXProtectionGroup -ClusterIP 10.198.14.227 -GroupName DemoGroup1
```

**Output**

This command deletes the Group and the member VMs are unprotected.

**Example 2****Input**

```
Remove-HXProtectionGroup -ClusterIP 10.198.14.227 -GroupID  
421f57c4-ebbd-a64e-a32b-426a251f9f43
```

**Output**

This command deletes the Group and the member VMs are unprotected.

**Related Commands**

New-HXProtectionGroup

# Unprotect-HXVM Cmdlet

**Syntax**

```
Unprotect-HXVM -ClusterIP <string> -VMName <string> [<CommonParameters>]
```

```
Unprotect-HXVM -ClusterIP <string> -VMID <string> [<CommonParameters>]
```

**Description**

Removes a standalone Protected virtual machine and makes it unprotected.

**Required Parameters**

**-ClusterIP** <string>

Specify the IP address of the HyperFlex cluster.

Aliases	-Server <string>
Position?	Named
Default Value	—
Accept Pipeline Input?	False
Accept Wildcard Characters?	False

**-Server** <string>

Specify the IP address of the HyperFlex cluster.

Aliases	-ClusterIP <string>
Position?	Named
Default Value	—
Accept Pipeline Input?	False
Accept Wildcard Characters?	False

**-VMName <string>**

Specify the name of the virtual machine which has to be removed or unprotected from the protection group.

Aliases	-Name <string[]>
Position?	Named
Default Value	
Accept Pipeline Input?	False
Accept Wildcard Characters?	False

**-Name <string>**

Specify the name of the virtual machine which has to be removed or unprotected from the protection group.

Aliases	-VMName <string[]>
Position?	Named
Default Value	
Accept Pipeline Input?	False
Accept Wildcard Characters?	False

**-VMID <string>**

Specify the name of the virtual machine which has to be removed or unprotected from the protection group.

Aliases	-Id <string>
Position?	Named
Default Value	—
Accept Pipeline Input?	False
Accept Wildcard Characters?	False

**-Id <string>**

Specify the name of the virtual machine which has to be removed or unprotected from the protection group.

Aliases	-VMID <string>
Position?	Named
Default Value	—
Accept Pipeline Input?	False
Accept Wildcard Characters?	False

### Example 1

#### Input

```
Unprotect-HXVM -ClusterIP 10.198.14.229 -VMName DemoVM1
```

#### Output

```
VM :DemoVM1 has been unprotected.
```

### Example 2

#### Input

```
Unprotect-HXVM -ClusterIP 10.198.14.227 -VMID 421f57c4-ebbd-a64e-a32b-426a251f9f43
```

#### Output

```
VM :DemoVM2 has been unprotected.
```

### Related Commands

Protect-HXVM