Failover Clustering

Windows Server 2012 R2 Failover Clustering Cmdlet

Hope.pe.kr

김준범

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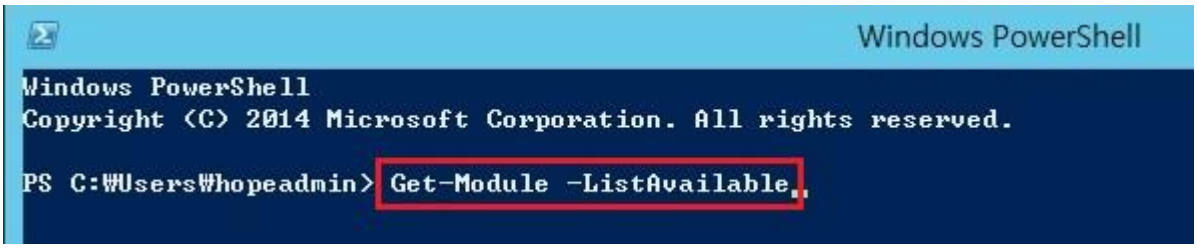
Module 확인 및 가져오기

다음 cmdlet 으로 현재 Powershell 에서 가져오기 가능한 module 을 확인 합니다.

Get-Module -ListAvailable



가져오기 가능한 Module 목록이 표시 됩니다.

Windows PowerShell

```
Windows PowerShell
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PS C:₩Users₩hopeadmin> Get-Module -ListAvailable


    디렉터리: C:₩Windows₩system32₩WindowsPowerShell₩v1.0₩Modules


ModuleType Version    Name                                ExportedCommands
---------- -------    ----                                ----------------
Manifest   2.0.0.0    AppLocker                           {Get-AppLockerFileInformation, Get-AppLockerPolicy, New-Ap...
Manifest   2.0.0.0    Appx                                {Add-AppxPackage, Get-AppxPackage, Get-AppxPackageManifest...
Manifest   1.0        BestPractices                       {Get-BpaModel, Get-BpaResult, Invoke-BpaModel, Set-BpaResult}
Manifest   1.0.0.0    BitsTransfer                        {Add-BitsFile, Complete-BitsTransfer, Get-BitsTransfer, Re...
Manifest   1.0.0.0    BranchCache                         {Add-BCDataCacheExtension, Clear-BCCache, Disable-BC, Disa...
Manifest   1.0.0.0    CimCmdlets                          {Get-CimAssociatedInstance, Get-CimClass, Get-CimInstance,...
Binary     2.0.0.0    ClusterAwareUpdating                {Get-CauPlugin, Register-CauPlugin, Unregister-CauPlugin, ...
Manifest   1.0.0.0    DirectAccessClientComponents        {Disable-DAManualEntryPointSelection, Enable-DAManualEntry...
Script     3.0        Dism                                {Add-AppxProvisionedPackage, Add-WindowsDriver, Add-Window...
Manifest   1.0.0.0    DnsClient                           {Resolve-DnsName, Clear-DnsClientCache, Get-DnsClient, Get...
Manifest   2.0.0.0    FailoverClusters                    {Add-ClusterCheckpoint, Add-ClusterDisk, Add-ClusterFileSe...
Manifest   2.0.0.0    International                       {Get-WinDefaultInputMethodOverride, Set-WinDefaultInputMet...
Manifest   1.0.0.0    iSCSI                               {Get-IscsiTargetPortal, New-IscsiTargetPortal, Remove-Iscs...
Manifest   2.0.0.0    IscsiTarget                         {Add-ClusteriSCSITargetServerRole, Add-IscsiVirtualDiskTar...
Script     1.0.0.0    ISE                                 {New-IseSnippet, Import-IseSnippet, Get-IseSnippet}
Manifest   1.0.0.0    Kds                                 {Add-KdsRootKey, Get-KdsRootKey, Test-KdsRootKey, Set-KdsC...
Manifest   3.0.0.0    Microsoft.PowerShell.Diagnostics    {Get-WinEvent, Get-Counter, Import-Counter, Export-Counter...
Manifest   3.0.0.0    Microsoft.PowerShell.Host           {Start-Transcript, Stop-Transcript}
Manifest   3.1.0.0    Microsoft.PowerShell.Management     {Add-Content, Clear-Content, Clear-ItemProperty, Join-Path...
Manifest   3.0.0.0    Microsoft.PowerShell.Security       {Get-Acl, Set-Acl, Get-PfxCertificate, Get-Credential...}
Manifest   3.1.0.0    Microsoft.PowerShell.Utility        {Format-List, Format-Custom, Format-Table, Format-Wide...}
Manifest   3.0.0.0    Microsoft.WSMan.Management          {Disable-WSManCredSSP, Enable-WSManCredSSP, Get-WSManCredS...
Manifest   1.0        MMAgent                             {Disable-MMAgent, Enable-MMAgent, Set-MMAgent, Get-MMAgent...
Manifest   1.0.0.0    MsDtc                               {New-DtcDiagnosticTransaction, Complete-DtcDiagnosticTrans...
Manifest   2.0.0.0    NetAdapter                          {Disable-NetAdapter, Disable-NetAdapterBinding, Disable-Ne...
Manifest   1.0.0.0    NetConnection                       {Get-NetConnectionProfile, Set-NetConnectionProfile}
Manifest   1.0.0.0    NetEventPacketCapture               {New-NetEventSession, Remove-NetEventSession, Get-NetEvent...
Manifest   2.0.0.0    NetLbfo                             {Add-NetLbfoTeamMember, Add-NetLbfoTeamNic, Get-NetLbfoTea...
Manifest   1.0.0.0    NetNat                              {Get-NetNat, Get-NetNatExternalAddress, Get-NetNatStaticMa...
Manifest   2.0.0.0    NetQos                              {Get-NetQosPolicy, Set-NetQosPolicy, Remove-NetQosPolicy, ...
Manifest   2.0.0.0    NetSecurity                         {Get-DAPolicyChange, New-NetIPsecAuthProposal, New-NetIPse...
Manifest   1.0.0.0    NetSwitchTeam                       {New-NetSwitchTeam, Remove-NetSwitchTeam, Get-NetSwitchTea...
Manifest   1.0.0.0    NetTCPIP                            {Get-NetIPAddress, Get-NetIPInterface, Get-NetIPv4Protocol...
Manifest   1.0.0.0    NetworkConnectivityStatus           {Get-DAConnectionStatus, Get-NCSIPolicyConfiguration, Rese...
Manifest   1.0.0.0    NetworkTransition                   {Add-NetIPHttpsCertBinding, Disable-NetDnsTransitionConfig...
Manifest   1.0        NFS                                 {Get-NfsMappedIdentity, Get-NfsNetgroup, Install-NfsMappin...
Manifest   1.0.0.0    PcsvDevice                          {Get-PcsvDevice, Start-PcsvDevice, Stop-PcsvDevice, Restar...
Manifest   1.0.0.0    PKI                                 {Add-CertificateEnrollmentPolicyServer, Export-Certificate...
Manifest   1.1        PrintManagement                     {Add-Printer, Add-PrinterDriver, Add-PrinterPort, Get-Prin...
Manifest   1.0        PSDesiredStateConfiguration         {Set-DscLocalConfigurationManager, Start-DscConfiguration,...
Script     1.0.0.0    PSDiagnostics                       {Disable-PSTrace, Disable-PSWSManCombinedTrace, Disable-WS...
Binary     1.1.0.0    PSScheduledJob                      {New-JobTrigger, Add-JobTrigger, Remove-JobTrigger, Get-Jo...
Manifest   2.0.0.0    PSWorkflow                          {New-PSWorkflowExecutionOption, New-PSWorkflowSession, nwsn}
Manifest   1.0.0.0    PSWorkflowUtility                   Invoke-AsWorkflow
Manifest   2.0.0.0    RemoteDesktop                       {Get-RDCertificate, Set-RDCertificate, New-RDCertificate, ...
Manifest   1.0.0.0    ScheduledTasks                      {Get-ScheduledTask, Set-ScheduledTask, Register-ScheduledT...
```

```
Windows PowerShell
Manifest   2.0.0.0   International                    {Get-WinDefaultInputMethodOverride, Set-WinDefaultInputMet...
Manifest   1.0.0.0   iSCSI                            {Get-IscsiTargetPortal, New-IscsiTargetPortal, Remove-Iscs...
Manifest   2.0.0.0   IscsiTarget                      {Add-ClusteriSCSITargetServerRole, Add-IscsiVirtualDiskTar...
Script     1.0.0.0   ISE                              {New-IseSnippet, Import-IseSnippet, Get-IseSnippet}
Manifest   1.0.0.0   Kds                              {Add-KdsRootKey, Get-KdsRootKey, Test-KdsRootKey, Set-KdsC...
Manifest   3.0.0.0   Microsoft.PowerShell.Diagnostics {Get-WinEvent, Get-Counter, Import-Counter, Export-Counter...
Manifest   3.0.0.0   Microsoft.PowerShell.Host        {Start-Transcript, Stop-Transcript}
Manifest   3.1.0.0   Microsoft.PowerShell.Management  {Add-Content, Clear-Content, Clear-ItemProperty, Join-Path...
Manifest   3.0.0.0   Microsoft.PowerShell.Security    {Get-Acl, Set-Acl, Get-PfxCertificate, Get-Credential...}
Manifest   3.1.0.0   Microsoft.PowerShell.Utility     {Format-List, Format-Custom, Format-Table, Format-Wide...}
Manifest   3.0.0.0   Microsoft.WSMan.Management       {Disable-WSManCredSSP, Enable-WSManCredSSP, Get-WSManCredS...
Manifest   1.0       MMAgent                          {Disable-MMAgent, Enable-MMAgent, Set-MMAgent, Get-MMAgent...
Manifest   1.0.0.0   MsDtc                            {New-DtcDiagnosticTransaction, Complete-DtcDiagnosticTrans...
Manifest   2.0.0.0   NetAdapter                       {Disable-NetAdapter, Disable-NetAdapterBinding, Disable-Ne...
Manifest   1.0.0.0   NetConnection                    {Get-NetConnectionProfile, Set-NetConnectionProfile}
Manifest   1.0.0.0   NetEventPacketCapture            {New-NetEventSession, Remove-NetEventSession, Get-NetEvent...
Manifest   2.0.0.0   NetLbfo                          {Add-NetLbfoTeamMember, Add-NetLbfoTeamNic, Get-NetLbfoTea...
Manifest   1.0.0.0   NetNat                           {Get-NetNat, Get-NetNatExternalAddress, Get-NetNatStaticMa...
Manifest   2.0.0.0   NetQos                           {Get-NetQosPolicy, Set-NetQosPolicy, Remove-NetQosPolicy, ...
Manifest   2.0.0.0   NetSecurity                      {Get-DAPolicyChange, New-NetIPsecAuthProposal, New-NetIPse...
Manifest   1.0.0.0   NetSwitchTeam                    {New-NetSwitchTeam, Remove-NetSwitchTeam, Get-NetSwitchTea...
Manifest   1.0.0.0   NetTCPIP                         {Get-NetIPAddress, Get-NetIPInterface, Get-NetIPv4Protocol...
Manifest   1.0.0.0   NetworkConnectivityStatus        {Get-DAConnectionStatus, Get-NCSIPolicyConfiguration, Rese...
Manifest   1.0.0.0   NetworkTransition                {Add-NetIPHttpsCertBinding, Disable-NetDnsTransitionConfig...
Manifest   1.0       NFS                              {Get-NfsMappedIdentity, Get-NfsNetgroup, Install-NfsMappin...
Manifest   1.0.0.0   PcsvDevice                       {Get-PcsvDevice, Start-PcsvDevice, Stop-PcsvDevice, Restar...
Manifest   1.0.0.0   PKI                              {Add-CertificateEnrollmentPolicyServer, Export-Certificate...
Manifest   1.1       PrintManagement                  {Add-Printer, Add-PrinterDriver, Add-PrinterPort, Get-Prin...
Manifest   1.0       PSDesiredStateConfiguration      {Set-DscLocalConfigurationManager, Start-DscConfiguration,...
Script     1.0.0.0   PSDiagnostics                    {Disable-PSTrace, Disable-PSWSManCombinedTrace, Disable-WS...
Binary     1.1.0.0   PSScheduledJob                   {New-JobTrigger, Add-JobTrigger, Remove-JobTrigger, Get-Jo...
Manifest   2.0.0.0   PSWorkflow                       {New-PSWorkflowExecutionOption, New-PSWorkflowSession, nwsn}
Manifest   1.0.0.0   PSWorkflowUtility                Invoke-AsWorkflow
Manifest   2.0.0.0   RemoteDesktop                    {Get-RDCertificate, Set-RDCertificate, New-RDCertificate, ...
Manifest   1.0.0.0   ScheduledTasks                   {Get-ScheduledTask, Set-ScheduledTask, Register-ScheduledT...
Manifest   2.0.0.0   SecureBoot                       {Confirm-SecureBootUEFI, Set-SecureBootUEFI, Get-SecureBoo...
Script     1.0.0.0   ServerCore                       {Get-DisplayResolution, Set-DisplayResolution}
Script     2.0.0.0   ServerManager                    {Get-WindowsFeature, Install-WindowsFeature, Uninstall-Win...
Cim        1.0.0.0   ServerManagerTasks               {Get-SMCounterSample, Get-SMPerformanceCollector, Start-SM...
Manifest   2.0.0.0   SmbShare                         {Get-SmbShare, Remove-SmbShare, Set-SmbShare, Block-SmbSha...
Manifest   2.0.0.0   SmbWitness                       {Get-SmbWitnessClient, Move-SmbWitnessClient, gsmbw, msmbw...
Manifest   2.0.0.0   SoftwareInventoryLogging         {Get-SilComputer, Get-SilComputerIdentity, Get-SilSoftware...
Manifest   1.0.0.0   StartScreen                      {Export-StartLayout, Import-StartLayout, Get-StartApps}
Manifest   2.0.0.0   Storage                          {Add-InitiatorIdToMaskingSet, Add-PartitionAccessPath, Add...
Manifest   2.0.0.0   TLS                              {New-TlsSessionTicketKey, Enable-TlsSessionTicketKey, Disa...
Manifest   1.0.0.0   TroubleshootingPack              {Get-TroubleshootingPack, Invoke-TroubleshootingPack}
Manifest   2.0.0.0   TrustedPlatformModule            {Get-Tpm, Initialize-Tpm, Clear-Tpm, Unblock-Tpm...}
Manifest   1.0.0.0   UserAccessLogging                {Enable-Ual, Disable-Ual, Get-Ual, Get-UalDns...}
Manifest   2.0.0.0   VpnClient                        {Add-VpnConnection, Set-VpnConnection, Remove-VpnConnectio...
Manifest   1.0.0.0   Wdac                             {Get-OdbcDriver, Set-OdbcDriver, Get-OdbcDsn, Add-OdbcDsn...}
Manifest   2.0.0.0   Whea                             {Get-WheaMemoryPolicy, Set-WheaMemoryPolicy}
Manifest   1.0.0.0   WindowsDeveloperLicense          {Get-WindowsDeveloperLicense, Show-WindowsDeveloperLicense...
Script     1.0       WindowsErrorReporting            {Enable-WindowsErrorReporting, Disable-WindowsErrorReporti...
Manifest   1.0.0.0   WindowsSearch                    {Get-WindowsSearchSetting, Set-WindowsSearchSetting}

PS C:WUsersWhopeadmin>
```

다음 cmdlet 으로 FailoverClusters 모듈을 갸져 옵니다.

Import-Module FailoverClusters

```
Windows PowerShell

PS C:WUsersWhopeadmin> Import-Module FailoverClusters
```

바로 프롬프트가 떨어집니다.

```
Windows PowerShell

PS C:₩Users₩hopeadmin> Import-Module FailoverClusters
PS C:₩Users₩hopeadmin>
```

사용 가능 cmdlet 확인

다음 cmdlet 으로 FailoverClusters 에서 사용 가능한 cmdlet 을 확인 합니다.

Get-Command -Module FailoverClusters

사용 가능한 cmdlet 목록이 나타납니다.

Windows PowerShell

```
PS C:\Users\hopeadmin> Get-Command -Module FailoverClusters

CommandType     Name                                               ModuleName
-----------     ----                                               ----------
Alias           Add-VMToCluster                                    FailoverClusters
Alias           Remove-VMFromCluster                               FailoverClusters
Cmdlet          Add-ClusterCheckpoint                              FailoverClusters
Cmdlet          Add-ClusterDisk                                    FailoverClusters
Cmdlet          Add-ClusterFileServerRole                          FailoverClusters
Cmdlet          Add-ClusterGenericApplicationRole                  FailoverClusters
Cmdlet          Add-ClusterGenericScriptRole                       FailoverClusters
Cmdlet          Add-ClusterGenericServiceRole                      FailoverClusters
Cmdlet          Add-ClusterGroup                                   FailoverClusters
Cmdlet          Add-ClusteriSCSITargetServerRole                   FailoverClusters
Cmdlet          Add-ClusterNode                                    FailoverClusters
Cmdlet          Add-ClusterPrintServerRole                         FailoverClusters
Cmdlet          Add-ClusterResource                                FailoverClusters
Cmdlet          Add-ClusterResourceDependency                      FailoverClusters
Cmdlet          Add-ClusterResourceType                            FailoverClusters
Cmdlet          Add-ClusterScaleOutFileServerRole                  FailoverClusters
Cmdlet          Add-ClusterServerRole                              FailoverClusters
Cmdlet          Add-ClusterSharedVolume                            FailoverClusters
Cmdlet          Add-ClusterVirtualMachineRole                      FailoverClusters
Cmdlet          Add-ClusterVMMonitoredItem                         FailoverClusters
Cmdlet          Block-ClusterAccess                                FailoverClusters
Cmdlet          Clear-ClusterDiskReservation                       FailoverClusters
Cmdlet          Clear-ClusterNode                                  FailoverClusters
Cmdlet          Get-Cluster                                        FailoverClusters
Cmdlet          Get-ClusterAccess                                  FailoverClusters
Cmdlet          Get-ClusterAvailableDisk                           FailoverClusters
Cmdlet          Get-ClusterCheckpoint                              FailoverClusters
Cmdlet          Get-ClusterGroup                                   FailoverClusters
Cmdlet          Get-ClusterLog                                     FailoverClusters
Cmdlet          Get-ClusterNetwork                                 FailoverClusters
Cmdlet          Get-ClusterNetworkInterface                        FailoverClusters
Cmdlet          Get-ClusterNode                                    FailoverClusters
Cmdlet          Get-ClusterOwnerNode                               FailoverClusters
Cmdlet          Get-ClusterParameter                               FailoverClusters
Cmdlet          Get-ClusterQuorum                                  FailoverClusters
Cmdlet          Get-ClusterResource                                FailoverClusters
Cmdlet          Get-ClusterResourceDependency                      FailoverClusters
Cmdlet          Get-ClusterResourceDependencyReport                FailoverClusters
Cmdlet          Get-ClusterResourceType                            FailoverClusters
Cmdlet          Get-ClusterSharedVolume                            FailoverClusters
Cmdlet          Get-ClusterSharedVolumeState                       FailoverClusters
Cmdlet          Get-ClusterVMMonitoredItem                         FailoverClusters
Cmdlet          Grant-ClusterAccess                                FailoverClusters
Cmdlet          Move-ClusterGroup                                  FailoverClusters
Cmdlet          Move-ClusterResource                               FailoverClusters
Cmdlet          Move-ClusterSharedVolume                           FailoverClusters
Cmdlet          Move-ClusterVirtualMachineRole                     FailoverClusters
Cmdlet          New-Cluster                                        FailoverClusters
Cmdlet          Remove-Cluster                                     FailoverClusters
Cmdlet          Remove-ClusterAccess                               FailoverClusters
Cmdlet          Remove-ClusterCheckpoint                           FailoverClusters
Cmdlet          Remove-ClusterGroup                                FailoverClusters
Cmdlet          Remove-ClusterNode                                 FailoverClusters
```

```
Windows PowerShell
Cmdlet          Get-ClusterNetwork                          FailoverClusters
Cmdlet          Get-ClusterNetworkInterface                 FailoverClusters
Cmdlet          Get-ClusterNode                             FailoverClusters
Cmdlet          Get-ClusterOwnerNode                        FailoverClusters
Cmdlet          Get-ClusterParameter                        FailoverClusters
Cmdlet          Get-ClusterQuorum                           FailoverClusters
Cmdlet          Get-ClusterResource                         FailoverClusters
Cmdlet          Get-ClusterResourceDependency               FailoverClusters
Cmdlet          Get-ClusterResourceDependencyReport         FailoverClusters
Cmdlet          Get-ClusterResourceType                     FailoverClusters
Cmdlet          Get-ClusterSharedVolume                     FailoverClusters
Cmdlet          Get-ClusterSharedVolumeState                FailoverClusters
Cmdlet          Get-ClusterVMMonitoredItem                  FailoverClusters
Cmdlet          Grant-ClusterAccess                         FailoverClusters
Cmdlet          Move-ClusterGroup                           FailoverClusters
Cmdlet          Move-ClusterResource                        FailoverClusters
Cmdlet          Move-ClusterSharedVolume                    FailoverClusters
Cmdlet          Move-ClusterVirtualMachineRole              FailoverClusters
Cmdlet          New-Cluster                                 FailoverClusters
Cmdlet          Remove-Cluster                              FailoverClusters
Cmdlet          Remove-ClusterAccess                        FailoverClusters
Cmdlet          Remove-ClusterCheckpoint                    FailoverClusters
Cmdlet          Remove-ClusterGroup                         FailoverClusters
Cmdlet          Remove-ClusterNode                          FailoverClusters
Cmdlet          Remove-ClusterResource                      FailoverClusters
Cmdlet          Remove-ClusterResourceDependency            FailoverClusters
Cmdlet          Remove-ClusterResourceType                  FailoverClusters
Cmdlet          Remove-ClusterSharedVolume                  FailoverClusters
Cmdlet          Remove-ClusterVMMonitoredItem               FailoverClusters
Cmdlet          Repair-ClusterSharedVolume                  FailoverClusters
Cmdlet          Reset-ClusterVMMonitoredState               FailoverClusters
Cmdlet          Resume-ClusterNode                          FailoverClusters
Cmdlet          Resume-ClusterResource                      FailoverClusters
Cmdlet          Set-ClusterLog                              FailoverClusters
Cmdlet          Set-ClusterOwnerNode                        FailoverClusters
Cmdlet          Set-ClusterParameter                        FailoverClusters
Cmdlet          Set-ClusterQuorum                           FailoverClusters
Cmdlet          Set-ClusterResourceDependency               FailoverClusters
Cmdlet          Start-Cluster                               FailoverClusters
Cmdlet          Start-ClusterGroup                          FailoverClusters
Cmdlet          Start-ClusterNode                           FailoverClusters
Cmdlet          Start-ClusterResource                       FailoverClusters
Cmdlet          Stop-Cluster                                FailoverClusters
Cmdlet          Stop-ClusterGroup                           FailoverClusters
Cmdlet          Stop-ClusterNode                            FailoverClusters
Cmdlet          Stop-ClusterResource                        FailoverClusters
Cmdlet          Suspend-ClusterNode                         FailoverClusters
Cmdlet          Suspend-ClusterResource                     FailoverClusters
Cmdlet          Test-Cluster                                FailoverClusters
Cmdlet          Test-ClusterResourceFailure                 FailoverClusters
Cmdlet          Update-ClusterIPResource                    FailoverClusters
Cmdlet          Update-ClusterNetworkNameResource           FailoverClusters
Cmdlet          Update-ClusterVirtualMachineConfiguration   FailoverClusters

PS C:₩Users₩hopeadmin> _
```

그리고 다음 cmdlet 으로 Clusters 에서 사용 가능한 cmdlet 을 확인 합니다.

Get-Command | findstr Clusters

```
Windows PowerShell
PS C:₩Users₩hopeadmin> Get-Command | findstr Cluster_
```

사용 가능한 cmdlet 목록이 나타납니다.

Windows PowerShell

```
PS C:\Users\hopeadmin> Get-Command | findstr Cluster
Alias           Add-VMToCluster                                FailoverClusters
Alias           Remove-VMFromCluster                           FailoverClusters
Function        Add-DtcClusterTMMapping                        MsDtc
Function        Get-ClusteredScheduledTask                     ScheduledTasks
Function        Get-DtcClusterDefault                          MsDtc
Function        Get-DtcClusterTMMapping                        MsDtc
Function        Get-SMServerClusterName                        ServerManagerTasks
Function        Get-SupportedClusterSizes                      Storage
Function        Register-ClusteredScheduledTask                ScheduledTasks
Function        Remove-DtcClusterTMMapping                     MsDtc
Function        Set-ClusteredScheduledTask                     ScheduledTasks
Function        Set-DtcClusterDefault                          MsDtc
Function        Set-DtcClusterTMMapping                        MsDtc
Function        Unregister-ClusteredScheduledTask              ScheduledTasks
Cmdlet          Add-CauClusterRole                             ClusterAwareUpdating
Cmdlet          Add-ClusterCheckpoint                          FailoverClusters
Cmdlet          Add-ClusterDisk                                FailoverClusters
Cmdlet          Add-ClusterFileServerRole                      FailoverClusters
Cmdlet          Add-ClusterGenericApplicationRole              FailoverClusters
Cmdlet          Add-ClusterGenericScriptRole                   FailoverClusters
Cmdlet          Add-ClusterGenericServiceRole                  FailoverClusters
Cmdlet          Add-ClusterGroup                               FailoverClusters
Cmdlet          Add-ClusteriSCSITargetServerRole               FailoverClusters
Cmdlet          Add-ClusteriSCSITargetServerRole               IscsiTarget
Cmdlet          Add-ClusterNode                                FailoverClusters
Cmdlet          Add-ClusterPrintServerRole                     FailoverClusters
Cmdlet          Add-ClusterResource                            FailoverClusters
Cmdlet          Add-ClusterResourceDependency                  FailoverClusters
Cmdlet          Add-ClusterResourceType                        FailoverClusters
Cmdlet          Add-ClusterScaleOutFileServerRole              FailoverClusters
Cmdlet          Add-ClusterServerRole                          FailoverClusters
Cmdlet          Add-ClusterSharedVolume                        FailoverClusters
Cmdlet          Add-ClusterVirtualMachineRole                  FailoverClusters
Cmdlet          Add-ClusterVMMonitoredItem                     FailoverClusters
Cmdlet          Block-ClusterAccess                            FailoverClusters
Cmdlet          Clear-ClusterDiskReservation                   FailoverClusters
Cmdlet          Clear-ClusterNode                              FailoverClusters
Cmdlet          Disable-CauClusterRole                         ClusterAwareUpdating
Cmdlet          Enable-CauClusterRole                          ClusterAwareUpdating
Cmdlet          Export-CauReport                               ClusterAwareUpdating
Cmdlet          Get-CauClusterRole                             ClusterAwareUpdating
Cmdlet          Get-CauPlugin                                  ClusterAwareUpdating
Cmdlet          Get-CauReport                                  ClusterAwareUpdating
Cmdlet          Get-CauRun                                     ClusterAwareUpdating
Cmdlet          Get-Cluster                                    FailoverClusters
Cmdlet          Get-ClusterAccess                              FailoverClusters
Cmdlet          Get-ClusterAvailableDisk                       FailoverClusters
Cmdlet          Get-ClusterCheckpoint                          FailoverClusters
Cmdlet          Get-ClusterGroup                               FailoverClusters
Cmdlet          Get-ClusterLog                                 FailoverClusters
Cmdlet          Get-ClusterNetwork                             FailoverClusters
Cmdlet          Get-ClusterNetworkInterface                    FailoverClusters
Cmdlet          Get-ClusterNode                                FailoverClusters
Cmdlet          Get-ClusterOwnerNode                           FailoverClusters
Cmdlet          Get-ClusterParameter                           FailoverClusters
Cmdlet          Get-ClusterQuorum                              FailoverClusters
```

선택 Windows PowerShell

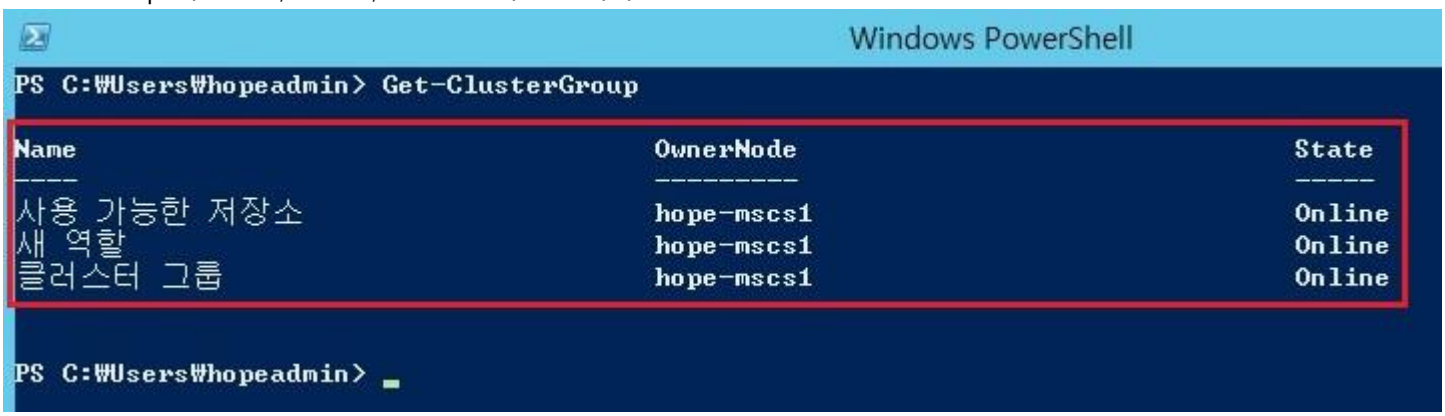
```
Cmdlet          Get-ClusterResource                                FailoverClusters
Cmdlet          Get-ClusterResourceDependency                      FailoverClusters
Cmdlet          Get-ClusterResourceDependencyReport                FailoverClusters
Cmdlet          Get-ClusterResourceType                            FailoverClusters
Cmdlet          Get-ClusterSharedVolume                            FailoverClusters
Cmdlet          Get-ClusterSharedVolumeState                       FailoverClusters
Cmdlet          Get-ClusterVMMonitoredItem                         FailoverClusters
Cmdlet          Grant-ClusterAccess                                FailoverClusters
Cmdlet          Invoke-CauRun                                      ClusterAwareUpdating
Cmdlet          Invoke-CauScan                                     ClusterAwareUpdating
Cmdlet          Move-ClusterGroup                                  FailoverClusters
Cmdlet          Move-ClusterResource                               FailoverClusters
Cmdlet          Move-ClusterSharedVolume                           FailoverClusters
Cmdlet          Move-ClusterVirtualMachineRole                     FailoverClusters
Cmdlet          New-Cluster                                        FailoverClusters
Cmdlet          Register-CauPlugin                                 ClusterAwareUpdating
Cmdlet          Remove-CauClusterRole                              ClusterAwareUpdating
Cmdlet          Remove-Cluster                                     FailoverClusters
Cmdlet          Remove-ClusterAccess                               FailoverClusters
Cmdlet          Remove-ClusterCheckpoint                           FailoverClusters
Cmdlet          Remove-ClusterGroup                                FailoverClusters
Cmdlet          Remove-ClusterNode                                 FailoverClusters
Cmdlet          Remove-ClusterResource                             FailoverClusters
Cmdlet          Remove-ClusterResourceDependency                   FailoverClusters
Cmdlet          Remove-ClusterResourceType                         FailoverClusters
Cmdlet          Remove-ClusterSharedVolume                         FailoverClusters
Cmdlet          Remove-ClusterVMMonitoredItem                      FailoverClusters
Cmdlet          Repair-ClusterSharedVolume                         FailoverClusters
Cmdlet          Reset-ClusterVMMonitoredState                      FailoverClusters
Cmdlet          Resume-ClusterNode                                 FailoverClusters
Cmdlet          Resume-ClusterResource                             FailoverClusters
Cmdlet          Save-CauDebugTrace                                 ClusterAwareUpdating
Cmdlet          Set-CauClusterRole                                 ClusterAwareUpdating
Cmdlet          Set-ClusterLog                                     FailoverClusters
Cmdlet          Set-ClusterOwnerNode                               FailoverClusters
Cmdlet          Set-ClusterParameter                               FailoverClusters
Cmdlet          Set-ClusterQuorum                                  FailoverClusters
Cmdlet          Set-ClusterResourceDependency                      FailoverClusters
Cmdlet          Start-Cluster                                      FailoverClusters
Cmdlet          Start-ClusterGroup                                 FailoverClusters
Cmdlet          Start-ClusterNode                                  FailoverClusters
Cmdlet          Start-ClusterResource                              FailoverClusters
Cmdlet          Stop-CauRun                                        ClusterAwareUpdating
Cmdlet          Stop-Cluster                                       FailoverClusters
Cmdlet          Stop-ClusterGroup                                  FailoverClusters
Cmdlet          Stop-ClusterNode                                   FailoverClusters
Cmdlet          Stop-ClusterResource                               FailoverClusters
Cmdlet          Suspend-ClusterNode                                FailoverClusters
Cmdlet          Suspend-ClusterResource                            FailoverClusters
Cmdlet          Test-CauSetup                                      ClusterAwareUpdating
Cmdlet          Test-Cluster                                       FailoverClusters
Cmdlet          Test-ClusterResourceFailure                        FailoverClusters
Cmdlet          Unregister-CauPlugin                               ClusterAwareUpdating
Cmdlet          Update-ClusterIPResource                           FailoverClusters
Cmdlet          Update-ClusterNetworkNameResource                  FailoverClusters
Cmdlet          Update-ClusterVirtualMachineConfiguration          FailoverClusters
PS C:¥Users¥hopeadmin>
```

Get-ClusterGroup

다음 cmdlet 으로 ClusterGroup 목록을 확인 합니다.

Get-ClusterGroup

GlusterGroup 의 Name, Owner, State 를 확인 합니다.



Stop-ClusterGroup

다음 cmdlet 으로 "새 역할" ClusterGroup 의 State 를 Offline 시킬 수 있습니다.

Stop-ClusterGroup "새 역할"

```
Windows PowerShell
PS C:₩Users₩hopeadmin> Stop-ClusterGroup "새 역할"
```

"새 역할" ClusterGroup 의 State 가 Offline 되였습니다.

```
Windows PowerShell
PS C:₩Users₩hopeadmin> Stop-ClusterGroup "새 역할"

Name                                OwnerNode                           State
----                                ---------                           -----
새 역할                             hope-mscs1                          Offline

PS C:₩Users₩hopeadmin>
```

Get-ClusterGroup cmdlet 으로 전체 ClusterGroup 에서 "새 역할" ClusterGroup 의 State 가 Offline 임을 확인 합니다.

```
Windows PowerShell
PS C:₩Users₩hopeadmin> Get-ClusterGroup

Name                                OwnerNode                           State
----                                ---------                           -----
사용 가능한 저장소                  hope-mscs1                          Online
새 역할                             hope-mscs1                          Offline
클러스터 그룹                       hope-mscs1                          Online

PS C:₩Users₩hopeadmin>
```

Start-ClusterGroup

다음 cmdlet 으로 "새 역할" ClusterGroup 의 State 를 Online 시킵니다..

Start-ClusterGroup "새 역할"

```
Windows PowerShell
PS C:₩Users₩hopeadmin> Start-ClusterGroup "새 역할"
```

"새 역할" ClusterGroup 의 State 가 Online 되였습니다.

```
Windows PowerShell
PS C:₩Users₩hopeadmin> Start-ClusterGroup "새 역할"

Name                                OwnerNode                           State
----                                ---------                           -----
새 역할                             hope-mscs1                          Online


PS C:₩Users₩hopeadmin>
```

Get-ClusterGroup cmdlet 으로 전체 ClusterGroup 에서 "새 역할" ClusterGroup 의 State 가 Online 임을 확인 합니다.

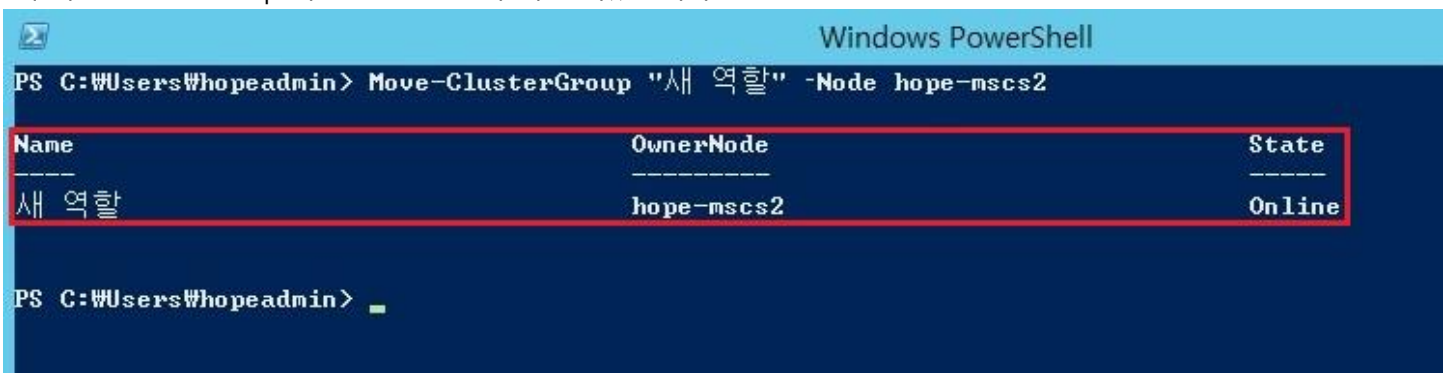
```
Windows PowerShell
PS C:₩Users₩hopeadmin> Get-ClusterGroup

Name                                OwnerNode                           State
----                                ---------                           -----
사용 가능한 저장소                  hope-mscs1                          Online
새 역할                             hope-mscs1                          Online
클러스터 그룹                       hope-mscs1                          Online


PS C:₩Users₩hopeadmin>
```

Move-ClusterGroup

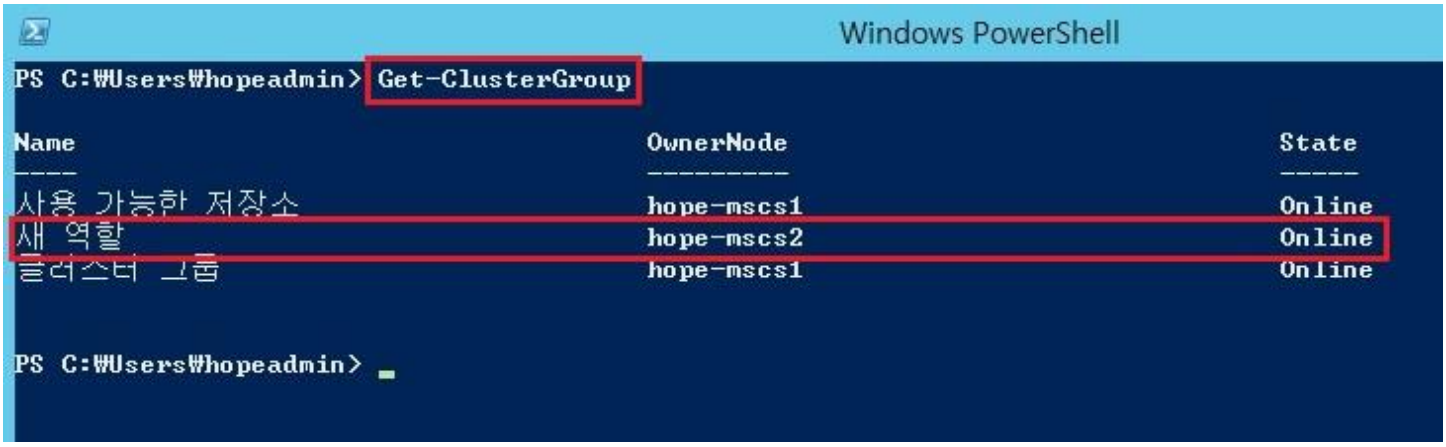
다음 cmdlet 으로 "새 역할" ClusterGroup 의 Owner Node 를 이동 시킬 수 있습니다.

Move-ClusterGroup "새 역할" -Node "NodeName"

"새 역할" ClusterGroup 의 OwnerNode 가 이동 되였습니다.



Get-ClusterGroup cmdlet 으로 전체 ClusterGroup 에서 "새 역할" ClusterGroup 의 OwnerNode 가 이동 되였음을 확인 합니다.

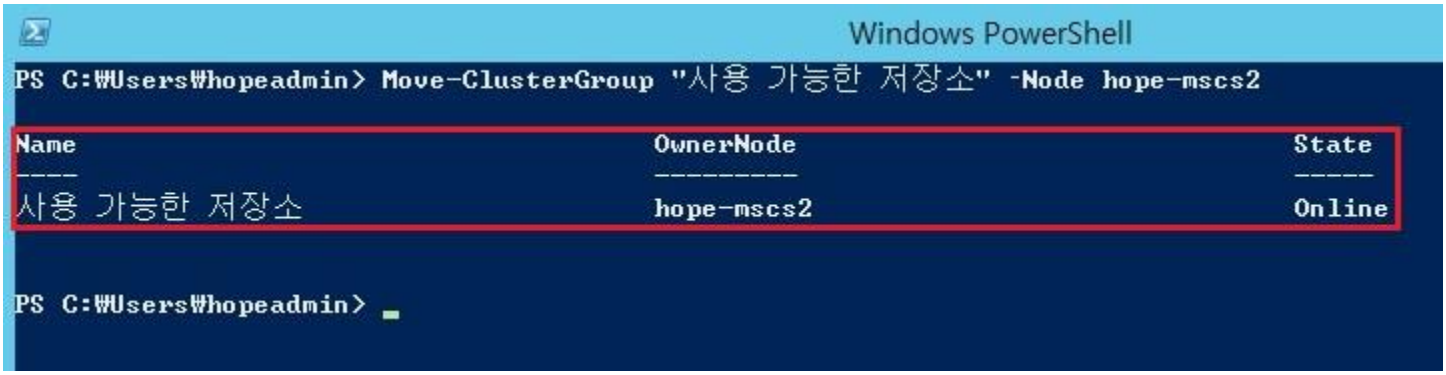


장애 조치(Failover) 클러스터 관리자 의 역할 메뉴 에서 "새 역할" GlusterGroup 이 다른 노드로 이동 되였음을 확인 합니다.

다음 cmdlet 으로 "사용 가능한 저장소" ClusterGroup 의 Owner Node 를 이동 시킬 수 있습니다.

Move-ClusterGroup "사용 가능한 저장소" -Node "NodeName"

"사용 가능한 저장소" ClusterGroup 의 OwnerNode 가 이동 되였습니다.



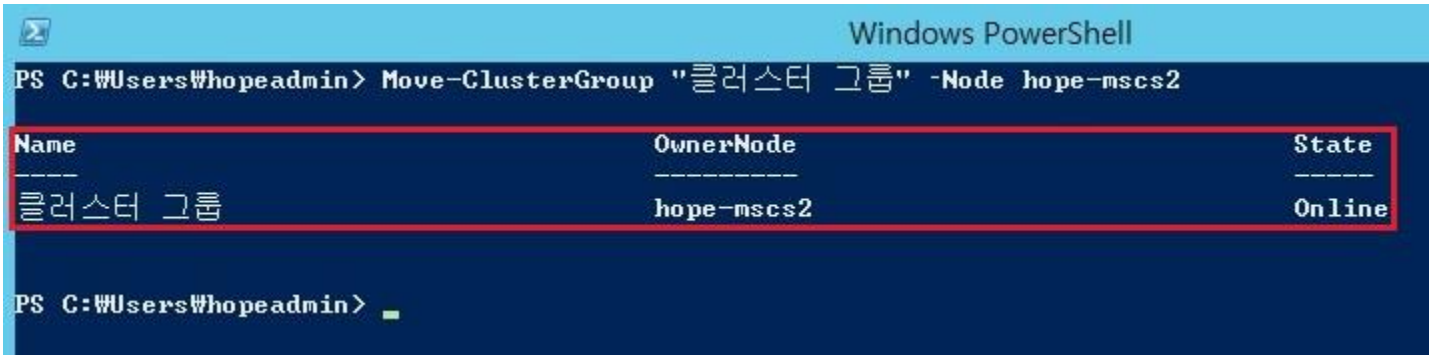
장애 조치(Failover) 클러스터 관리자 의 디스크 메뉴 에서 "Data" 디스크가 다른 노드로 이동 되였음을 확인 합니다.

cf) "사용 가능한 저장소" ClusterGroup 에는 Data 디스크가 포함 되여 있음을 유추할 수 있습니다.

다음 cmdlet 으로 "클러스터 그룹" ClusterGroup 의 Owner Node 를 이동 시킬 수 있습니다.

Move-ClusterGroup "클러스터 그룹" -Node "NodeName"

"클러스터 그룹" ClusterGroup 의 OwnerNode 가 이동 되였습니다.



장애 조치(Failover) 클러스터 관리자 의 MSCS Name (MSCS.hope.pe.kr) 메뉴 에서 현재 호스트 서버 가 다른 노드로 이동 되였음을 확인 합니다.

그리고 디스크 메뉴 에서 Quorum 디스크 가 다른 노드로 이동 되였음을 확인 합니다.

cf) "클러스터 그룹" ClusterGroup 에는 Quorum 디스크 가 포함 되어 있음을 유추할 수 있습니다.

Move-ClusterGroup cmdlet 을 이용하여 ClusterGroup 을 hope-mscs1 로 전부 이동 시킵니다.

```
Windows PowerShell
PS C:₩Users₩hopeadmin> Get-ClusterGroup

Name                                OwnerNode                           State
----                                ---------                           -----
사용 가능한 저장소                  hope-mscs1                          Online
새 역할                             hope-mscs1                          Online
클러스터 그룹                       hope-mscs1                          Online


PS C:₩Users₩hopeadmin>
```

Get-ClusterNode

다음 cmdlet 으로 "hope-mscs1" ClusterNode 가 OwnerNode 인 ClusterGroup 을 확인 합니다.

Get-ClusterNode -Name hope-mscs1 | Get-ClusterGroup

```
Windows PowerShell
PS C:₩Users₩hopeadmin> Get-ClusterNode -Name hope-mscs1 | Get-ClusterGroup
```

hope-mscs1 이 OwnerNode 인 ClusterGroup 을 확인할 수 있습니다.

```
Windows PowerShell
PS C:₩Users₩hopeadmin> Get-ClusterNode -Name hope-mscs1 | Get-ClusterGroup

Name                                OwnerNode                           State
----                                ---------                           -----
사용 가능한 저장소                  hope-mscs1                          Online
새 역할                             hope-mscs1                          Online
클러스터 그룹                       hope-mscs1                          Online

PS C:₩Users₩hopeadmin>
```

다음 cmdlet 으로 "hope-mscs2" ClusterNode 가 OwnerNode 인 ClusterGroup 을 확인 합니다.

Get-ClusterNode -Name hope-mscs2 | Get-ClusterGroup

```
Windows PowerShell
PS C:₩Users₩hopeadmin> Get-ClusterNode -Name hope-mscs2 | Get-ClusterGroup
```

"hope-mscs2" ClusterNode 의 OwnerNode 인 ClusterGroup 이 없음을 확인 합니다.

```
Windows PowerShell
PS C:₩Users₩hopeadmin> Get-ClusterNode -Name hope-mscs2 | Get-ClusterGroup
PS C:₩Users₩hopeadmin>
```

Get-ClusterResource

다음 cmdlet 으로 ClusterResource 목록을 확인 합니다.

Get-ClusterResource

```
Windows PowerShell
PS C:₩Users₩hopeadmin> Get-ClusterResource
```

GlusterResource 의 Name, State, OwnerGroup, ResourceType 을 확인 합니다.

```
Windows PowerShell
PS C:₩Users₩hopeadmin> Get-ClusterResource

Name                    State      OwnerGroup          ResourceType
----                    -----      ----------          ------------
Data                    Online     사용 가능한 저장소      Physical Disk
Quorum                  Online     클러스터 그룹           Physical Disk
클러스터 IP 주소        Online     클러스터 그룹           IP Address
클러스터 이름           Online     클러스터 그룹           Network Name

PS C:₩Users₩hopeadmin>
```

다음 cmdlet 으로 "새 역할" ClusterGroup 의 ClusterResource 를 확인 합니다.

Get-clusterGroup "새 역할" | Get-ClusterResource

```
Windows PowerShell
PS C:₩Users₩hopeadmin> Get-ClusterGroup "새 역할" | Get-ClusterResource
```

"새 역할" ClusterGroup 에는 ClusterResource 가 아무것도 없습니다.

```
Windows PowerShell
PS C:₩Users₩hopeadmin> Get-ClusterGroup "새 역할" | Get-ClusterResource
PS C:₩Users₩hopeadmin>
```

다음 cmdlet 으로 "클러스터 그룹" ClusterGroup 의 ClusterResource 를 확인 합니다.

Get-clusterGroup "클러스터 그룹" | Get-ClusterResource

```
Windows PowerShell
PS C:₩Users₩hopeadmin> Get-ClusterGroup "클러스터 그룹" | Get-ClusterResource
```

"클러스터 그룹" ClusterGroup 에는 "Quoroum, 클러스터 IP 주소, 클러스터 이름"C lusterResource 가 속해 있음을 확인합니다.

```
Windows PowerShell
PS C:₩Users₩hopeadmin> Get-ClusterGroup "클러스터 그룹" | Get-ClusterResource

Name                    State      OwnerGroup     ResourceType
----                    -----      ----------     ------------
Quorum                  Online     클러스터 그룹  Physical Disk
클러스터 IP 주소        Online     클러스터 그룹  IP Address
클러스터 이름           Online     클러스터 그룹  Network Name

PS C:₩Users₩hopeadmin>
```

Get-ClusterParameter

다음 cmdlet 으로 "Quorum" ClusterResource 의 세부 Parameter 를 확인 합니다.

Get-clusterResource "Quorum" | Get-ClusterParameter

```
Windows PowerShell
PS C:₩Users₩hopeadmin> Get-ClusterResource "Quorum" | Get-ClusterParameter

Object                  Name                        Value                   Type
------                  ----                        -----                   ----
Quorum                  DiskIdType                  0                       UInt32
Quorum                  DiskSignature               0xE84F026B              UInt32
Quorum                  DiskIdGuid                                          String
Quorum                  DiskRunChkDsk               0                       UInt32
Quorum                  DiskUniqueIds               {16, 0, 0, 0...}        ByteArray
Quorum                  DiskVolumeInfo              {1, 0, 0, 0...}         ByteArray
Quorum                  DiskArbInterval             3                       UInt32
Quorum                  DiskPath                                            String
Quorum                  DiskReload                  0                       UInt32
Quorum                  MaintenanceMode             0                       UInt32
Quorum                  MaxIoLatency                1000                    UInt32
Quorum                  CsvEnforceWriteThrough      0                       UInt32
Quorum                  EnableBlockCache            1                       UInt32
Quorum                  SnapshotDiffSize            0                       UInt32
Quorum                  PoolId                                              String
Quorum                  VirtualDiskId                                       String
Quorum                  VirtualDiskName                                     String
Quorum                  VirtualDiskDescription                              String
Quorum                  VirtualDiskHealth           0                       UInt32
Quorum                  VirtualDiskState            0                       UInt32
Quorum                  VirtualDiskProvisioning     0                       UInt32
Quorum                  VirtualDiskResiliencyType   0                       UInt32
Quorum                  VirtualDiskResiliencyColumns 0                      UInt32
Quorum                  VirtualDiskResiliencyInter... 0                     UInt32


PS C:₩Users₩hopeadmin>
```

다음 cmdlet 으로 "클러스터 IP 주소" ClusterResource 의 세부 Parameter 를 확인 합니다.

Get-clusterResource "클러스터 IP 주소" | Get-ClusterParameter

```
Windows PowerShell
PS C:₩Users₩hopeadmin> Get-ClusterResource "클러스터 IP 주소" | Get-ClusterParameter

Object                    Name                      Value                     Type
------                    ----                      -----                     ----
클러스터 IP 주소          Network                   Public                    String
클러스터 IP 주소          Address                   [redacted]                String
클러스터 IP 주소          SubnetMask                255.255.255.0             String
클러스터 IP 주소          EnableNetBIOS             2                         UInt32
클러스터 IP 주소          OverrideAddressMatch      0                         UInt32
클러스터 IP 주소          EnableDhcp                0                         UInt32
클러스터 IP 주소          ProbePort                 0                         UInt32
클러스터 IP 주소          ProbeFailureThreshold     0                         UInt32
클러스터 IP 주소          LeaseObtainedTime         0001-01-01 오전 12:00:00  DateTime
클러스터 IP 주소          LeaseExpiresTime          0001-01-01 오전 12:00:00  DateTime
클러스터 IP 주소          DhcpServer                255.255.255.255           String
클러스터 IP 주소          DhcpAddress               0.0.0.0                   String
클러스터 IP 주소          DhcpSubnetMask            255.0.0.0                 String

PS C:₩Users₩hopeadmin>
```

다음 cmdlet 으로 "클러스터 이름" ClusterResource 의 세부 Parameter 를 확인 합니다.

Get-clusterResource "클러스터 이름" | Get-ClusterParameter

```
Windows PowerShell
PS C:₩Users₩hopeadmin> Get-ClusterResource "클러스터 이름" | Get-ClusterParameter

Object                    Name                      Value                     Type
------                    ----                      -----                     ----
클러스터 이름             Name                      MSCS                      String
클러스터 이름             DnsName                   MSCS                      String
클러스터 이름             Aliases                                             String
클러스터 이름             RemapPipeNames            0                         UInt32
클러스터 이름             HostRecordTTL             1200                      UInt32
클러스터 이름             RegisterAllProvidersIP    0                         UInt32
클러스터 이름             PublishPTRRecords         0                         UInt32
클러스터 이름             ResourceData              {1, 0, 0, 0...}           ByteArray
클러스터 이름             StatusNetBIOS             0                         UInt32
클러스터 이름             StatusDNS                 0                         UInt32
클러스터 이름             StatusKerberos            0                         UInt32
클러스터 이름             CreatingDC                ₩₩hope-ad.hope.pe.kr      String
클러스터 이름             LastDNSUpdateTime         2016-12-15 오전 9:49:38   DateTime
클러스터 이름             ObjectGUID                5db35879a25bba41a20db14f8e... String
클러스터 이름             DnsSuffix                 hope.pe.kr                String
클러스터 이름             ADAware                   1                         UInt32

PS C:₩Users₩hopeadmin>
```