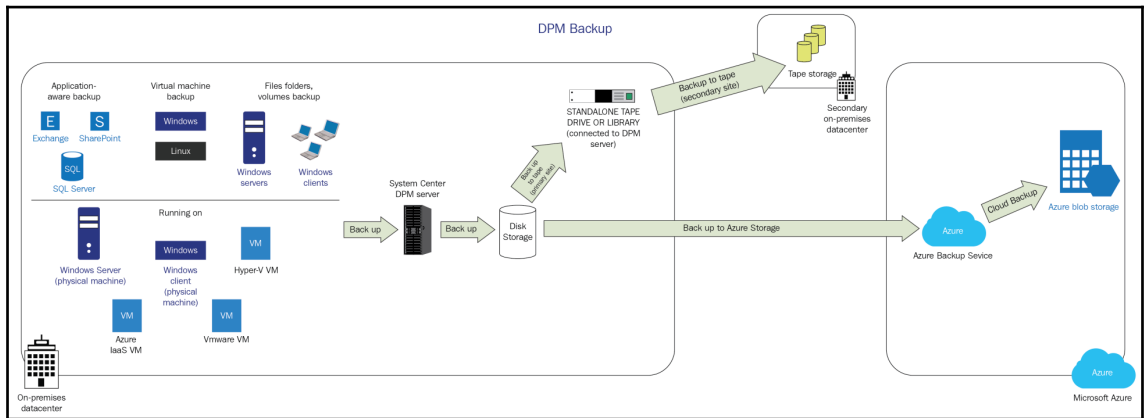
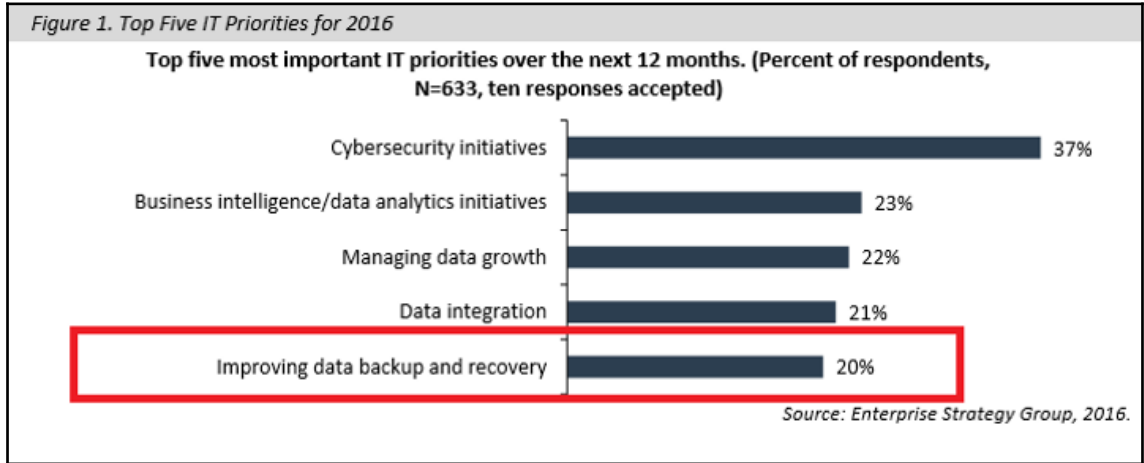


# Chapter 1: Installing and Upgrading DPM

Figure 1. Top Five IT Priorities for 2016



## Management OS

Management

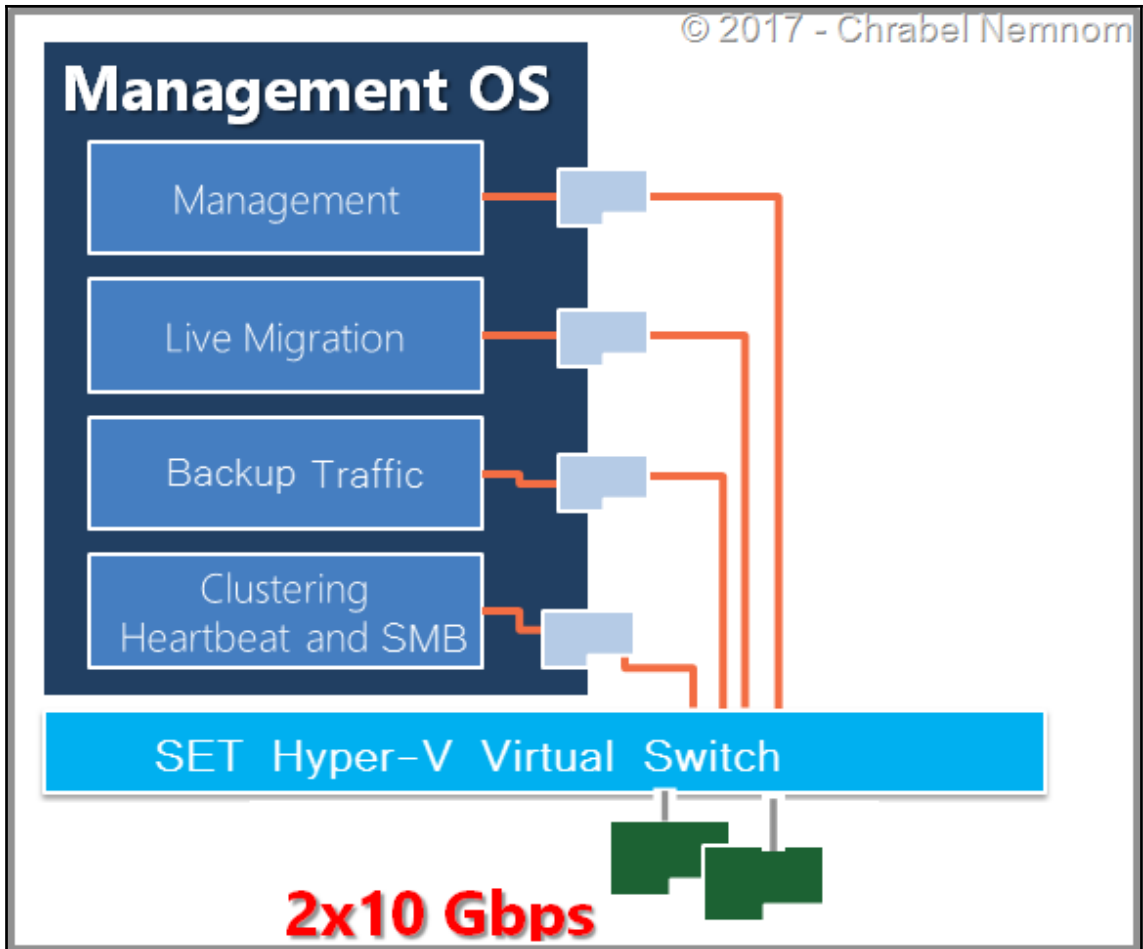
Live Migration

Backup Traffic

Clustering  
Heartbeat and SMB

SET Hyper-V Virtual Switch

**2x10 Gbps**





SQL Server 2016 Setup

## Product Updates

Always install the latest updates to enhance your SQL Server security and performance.

- Product Key
- License Terms
- Global Rules
- Microsoft Update
- Product Updates**
- Install Setup Files
- Install Rules
- Feature Selection
- Feature Rules
- Feature Configuration Rules
- Ready to Install
- Installation Progress
- Complete

Include SQL Server product updates

Name	Size (MB)	More Information
Critical Update for SQL Server 2016 MSVCRT Prerequisites KB3164398	37	<a href="#">KB 3164398</a>

1 updates (37 MB) found online.  
The Setup updates (37 MB) will be installed when you click Next.

[Read our privacy statement online](#)

[Learn more about SQL Server product updates](#)

< Back      Next >      Cancel

SQL Server 2016 Setup

## Feature Selection

Select the Standard features to install.

**Install Rules**

- Feature Selection
- Feature Rules
- Instance Configuration
- Server Configuration
- Database Engine Configuration
- Reporting Services Configuration
- Feature Configuration Rules
- Ready to Install
- Installation Progress
- Complete

**Features:**

**Instance Features**

- Database Engine Services
- SQL Server Replication
- R Services (In-Database)
- Full-Text and Semantic Extractions for Search
- Data Quality Services
- PolyBase Query Service for External Data
- Analysis Services
- Reporting Services - Native

**Shared Features**

- Reporting Services - SharePoint
- Reporting Services Add-in for SharePoint Products
- Data Quality Client

**Feature description:**

The configuration and operation of each instance feature of a SQL Server instance is isolated from other SQL Server instances. SQL Server instances can operate side-by-side on the same server.

**Prerequisites for selected features:**

Already installed:

- Windows PowerShell 3.0 or higher
- Microsoft Visual Studio 2010 Redistributable

**Disk Space Requirements**

Drive C: 454 MB required, 35876 MB available  
Drive D: 1868 MB required, 61210 MB available

Select All    Unselect All

Instance root directory: D:\Program Files\Microsoft SQL Server\ ...

Shared feature directory: D:\Program Files\Microsoft SQL Server\ ...

Shared feature directory (x86): D:\Program Files (x86)\Microsoft SQL Server\ ...

< Back    Next >    Cancel

## Instance Configuration

Specify the name and instance ID for the instance of SQL Server. Instance ID becomes part of the installation path.

Install Rules

Feature Selection

Feature Rules

**Instance Configuration**

Server Configuration

Database Engine Configuration

Reporting Services Configuration

Feature Configuration Rules

Ready to Install

Installation Progress

Complete

Default instance

Named instance:

DPMDB

Instance ID:

DPMDB

SQL Server directory:

D:\Program Files\Microsoft SQL Server\MSSQL13.DPMDB

Reporting Services directory:

D:\Program Files\Microsoft SQL Server\MSRS13.DPMDB

Installed instances:

Instance Name	Instance ID	Features	Edition	Version
---------------	-------------	----------	---------	---------

< Back

Next >

Cancel

SQL Server 2016 Setup

## Server Configuration

Specify the service accounts and collation configuration.

Install Rules  
Feature Selection  
Feature Rules  
Instance Configuration  
**Server Configuration**  
Database Engine Configuration  
Reporting Services Configuration  
Feature Configuration Rules  
Ready to Install  
Installation Progress  
Complete

Service Accounts Collation

Microsoft recommends that you use a separate account for each SQL Server service.

Service	Account Name	Password	Startup Type
SQL Server Agent	VIRT\sqlrpm	●●●●●●●●	Automatic ▾
SQL Server Database Engine	VIRT\sqlrpm	●●●●●●●●	Automatic ▾
SQL Server Reporting Services	VIRT\sqlrpm	●●●●●●●●	Automatic ▾
SQL Full-text Filter Daemon Launc...	NT Service\MSSQLFDLa...		Manual
SQL Server Browser	NT AUTHORITY\LOCAL ...		Automatic ▾

Grant Perform Volume Maintenance Task privilege to SQL Server Database Engine Service

This privilege enables instant file initialization by avoiding zeroing of data pages. This may lead to information disclosure by allowing deleted content to be accessed.

[Click here for details](#)

< Back    Next >    Cancel

## Database Engine Configuration

Specify Database Engine authentication security mode, administrators, data directories and TempDB settings.

- Install Rules
- Feature Selection
- Feature Rules
- Instance Configuration
- Server Configuration
- Database Engine Configuration**
- Reporting Services Configuration
- Feature Configuration Rules
- Ready to Install
- Installation Progress
- Complete

Server Configuration | **Data Directories** | TempDB | FILESTREAM

Specify the authentication mode and administrators for the Database Engine.

Authentication Mode \_\_\_\_\_

- Windows authentication mode
- Mixed Mode (SQL Server authentication and Windows authentication)

Specify the password for the SQL Server system administrator (sa) account. \_\_\_\_\_

Enter password: \_\_\_\_\_

Confirm password: \_\_\_\_\_

Specify SQL Server administrators \_\_\_\_\_

- VIRT\DPM Admins (DPM Admins)

SQL Server administrators have unrestricted access to the Database Engine.

Add Current User

Add...

Remove

< Back

Next >

Cancel

# System Center 2016

## Data Protection Manager

### Install

- [Data Protection Manager](#)
- [DPM Central Console](#)
- [DPM Protection Agent](#)
- [DPM Remote Administration](#)
- [DPM Self Service Recovery](#)
- [DPM Remote SQL Prep](#)



### Before you begin

- [View Release Notes](#)
- [Read Installation Guide](#)
- [Run the Prerequisite Checker](#)

### Additional Resources

- [Review License Terms](#)
- [Visit DPM Web Site](#)

2016

© 2016 Microsoft Corporation. All rights reserved.

[Exit](#)

### System Center 2016 DPM Support Files



System Center 2016 DPM Support Files installation has completed successfully.

OK

```
CharbelNemnom.com #> Get-WindowsFeature NET*
```

Display Name	Name	Install State
[X] .NET Framework 3.5 Features	NET-Framework-Features	Installed
[X] .NET Framework 3.5 (includes .NET 2.0 and 3.0)	NET-Framework-Core	Installed
[ ] HTTP Activation	NET-HTTP-Activation	Available
[ ] Non-HTTP Activation	NET-Non-HTTP-Activ	Available
[X] .NET Framework 4.6 Features	NET-Framework-45-Fea...	Installed
[X] .NET Framework 4.6	NET-Framework-45-Core	Installed
[ ] ASP.NET 4.6	NET-Framework-45-ASPNET	Available
[X] WCF Services	NET-WCF-Services45	Installed
[ ] HTTP Activation	NET-WCF-HTTP-Activat...	Available
[ ] Message Queuing (MSMQ) Activation	NET-WCF-MSMQ-Activat...	Available
[ ] Named Pipe Activation	NET-WCF-Pipe-Activat...	Available
[ ] TCP Activation	NET-WCF-TCP-Activati...	Available
[X] TCP Port Sharing	NET-WCF-TCP-PortShar...	Installed

The screenshot shows the Windows Registry Editor window. The left pane displays a tree view of the registry structure, with the following path expanded: SecurityProviders > SCHANNEL > Protocols > TLS 1.2 > Server. The right pane shows the registry values for the selected key:

Name	Type	Data
(Default)	REG_SZ	(value not set)
DisabledByDefault	REG_DWORD	0x00000000 (0)
Enabled	REG_DWORD	0x00000001 (1)

The status bar at the bottom of the window displays the full path: Computer\HKEY\_LOCAL\_MACHINE\SYSTEM\CurrentControlSet\Control\SecurityProviders\SCHANNEL\Protocols\TLS 1.2\Server.

# System Center 2016

---

## Data Protection Manager

### Install



[Data Protection Manager](#)

[DPM Central Console](#)

[DPM Protection Agent](#)

[DPM Remote Administration](#)

[DPM Self Service Recovery](#)

[DPM Remote SQL Prep](#)

### Before you begin

[View Release Notes](#)

[Read Installation Guide](#)

[Run the Prerequisite Checker](#)

### Additional Resources

[Review License Terms](#)

[Visit DPM Web Site](#)



**Data Protection Manager Setup** [Close]

**Prerequisites Check**  
Please wait while the wizard checks for required hardware and software.

**Installation Stages**

- Welcome
- Prerequisites check**
- Product registration
- Installation settings
- Microsoft Update Opt-In
- Summary of settings
- Installation

DPM requires a database. You can use a local or remote instance of SQL Server that already exists.

Use stand-alone SQL Server.  
SQL Server is not clustered.

Use clustered SQL Server  
SQL Server is clustered

Instance of SQL Server  
(Example: SQLSERV or SQLSERV\MYSQLINSTANCE):  
WS16-SQL16-01\DPMDB

User Name:  Password:

Domain:

Select the appropriate option and click on the button to perform the prerequisite check and install the missing Windows components.

**Check and Install**

Details

**i** Setup will use the current user's credentials for this SQL instance.

< Back   Next >   Cancel   Help



### Installation Settings

Specify installation locations for the DPM program files and settings for SQL Server.

#### Installation Stages

- Welcome
- Prerequisites check
- Product registration
- Installation settings
- Microsoft Update Opt-In
- Summary of settings
- Installation

#### DPM Files

Program files:

D:\Program Files\Microsoft System Center 2016\DPM

[Change...](#)

#### Space requirements

	Required	Available
System drive:	1000 MB	27026 MB
Program files drive:	3650 MB	59656 MB

For more details on storage requirement click on the link below.  
<http://go.microsoft.com/fwlink/?linkid=820915>

**Data Protection Manager Setup** [Close]

**Prerequisites Check**  
Please wait while the wizard checks for required hardware and software.

**Installation Stages**

- Welcome
- Prerequisites check**
- Product registration
- Installation settings
- Microsoft Update Opt-In
- Summary of settings
- Installation

DPM requires a database. You can use a local or remote instance of SQL Server that already exists.

Use stand-alone SQL Server.  
SQL Server is not clustered.

Use clustered SQL Server  
SQL Server is clustered

Instance of SQL Server  
(Example: SQLSERV or SQLSERV\MYSQLINSTANCE):  
WS16-SQL16-02

User Name: SuperVirt Password: ●●●●●●

Domain: VIRT

Select the appropriate option and click on the button to perform the prerequisite check and install the missing Windows components.

**Check and Install**

< Back   Next >   Cancel   Help



### Prerequisites Check

Please wait while the wizard checks for required hardware and software.

#### Installation Stages

- Welcome
- Prerequisites check
- Product registration
- Installation settings
- Microsoft Update Opt-In
- Summary of settings
- Installation

DPM requires a database. You can use a local or remote instance of SQL Server that already exists.

Use stand-alone SQL Server.

SQL Server is not clustered.

Use clustered SQL Server

SQL Server is clustered.

Instance of SQL Server  
(Example: SQLSERV or SQLSERV\MYSQLINSTANCE):

WS16-SQL16-02

User Name: SuperVirt Password: ●●●●●●

Domain: VIRT

Instance of SQL Server Reporting Service  
(Example: SQLSERV or SQLSERV\MYREPORTINGINSTANCE):

WS16-SQL16-03

User Name: SuperVirt Password: ●●●●●●

Domain: VIRT

Select the appropriate option and click on the button to perform the prerequisite check and install the missing Windows components.

Check and Install



```
Administrator: C:\Windows\system32\cmd.exe
E:\>Setup.exe /Q /ACTION=install /IACCEPTSQLSERVERLICENSETERMS /FEATURES=SQLEngine,RS /INSTANCENAME=DPMINSTANC
E /INSTANCEDIR="D:\Program Files\Microsoft SQL Server" /INSTALLSHAREDWOWDIR="D:\Program Files (x86)\Microsoft
SQL Server" /INSTALLSHAREDDIR="D:\Program Files\Microsoft SQL Server" /SQLSVCACCOUNT="VIRT\sqlrpm" /SQLSYSADMI
NACCOUNTS="VIRT\sqlrpm" /SQLSVCPASSWORD="dpm2016+1" /RSSVCACCOUNT="VIRT\sqlrpm" /RSSVCPASSWORD="dpm2016+1" /AG
TSVCACCOUNT="VIRT\sqlrpm" /AGTSVCPASSWORD="dpm2016+1" /SECURITYMODE=SQL /SAPWD="dpm2016+1" /SQLTEMPDBDIR="D:\P
rogram Files\Microsoft SQL Server\TempDB\" /SQLUSERDBDIR="D:\Program Files\Microsoft SQL Server\SQLData\" /S
QLUSERDBLOGDIR="D:\Program Files\Microsoft SQL Server\SQLLog\"

Microsoft (R) SQL Server 2016 13.00.1601.05
Copyright (c) 2016 Microsoft Corporation. All rights reserved.

Microsoft .NET Framework CasPol 4.6.1586.0
for Microsoft .NET Framework version 4.6.1586.0
Copyright (C) Microsoft Corporation. All rights reserved.

WARNING: The .NET Framework does not apply CAS policy by default. Any settings shown or modified by CasPol
will only affect applications that opt into using CAS policy.

Please see http://go.microsoft.com/fwlink/?LinkId=131738 for more information.

Success
Microsoft .NET Framework CasPol 4.6.1586.0
for Microsoft .NET Framework version 4.6.1586.0
Copyright (C) Microsoft Corporation. All rights reserved.

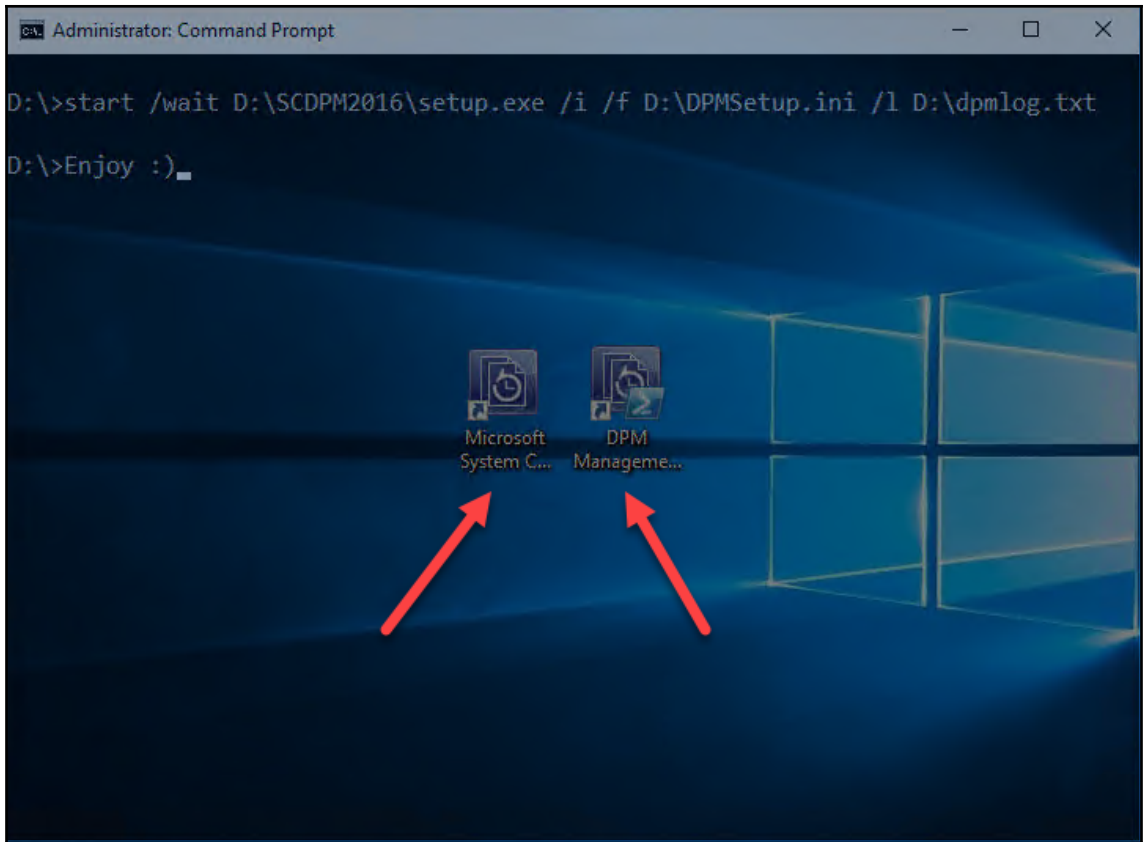
WARNING: The .NET Framework does not apply CAS policy by default. Any settings shown or modified by CasPol
will only affect applications that opt into using CAS policy.

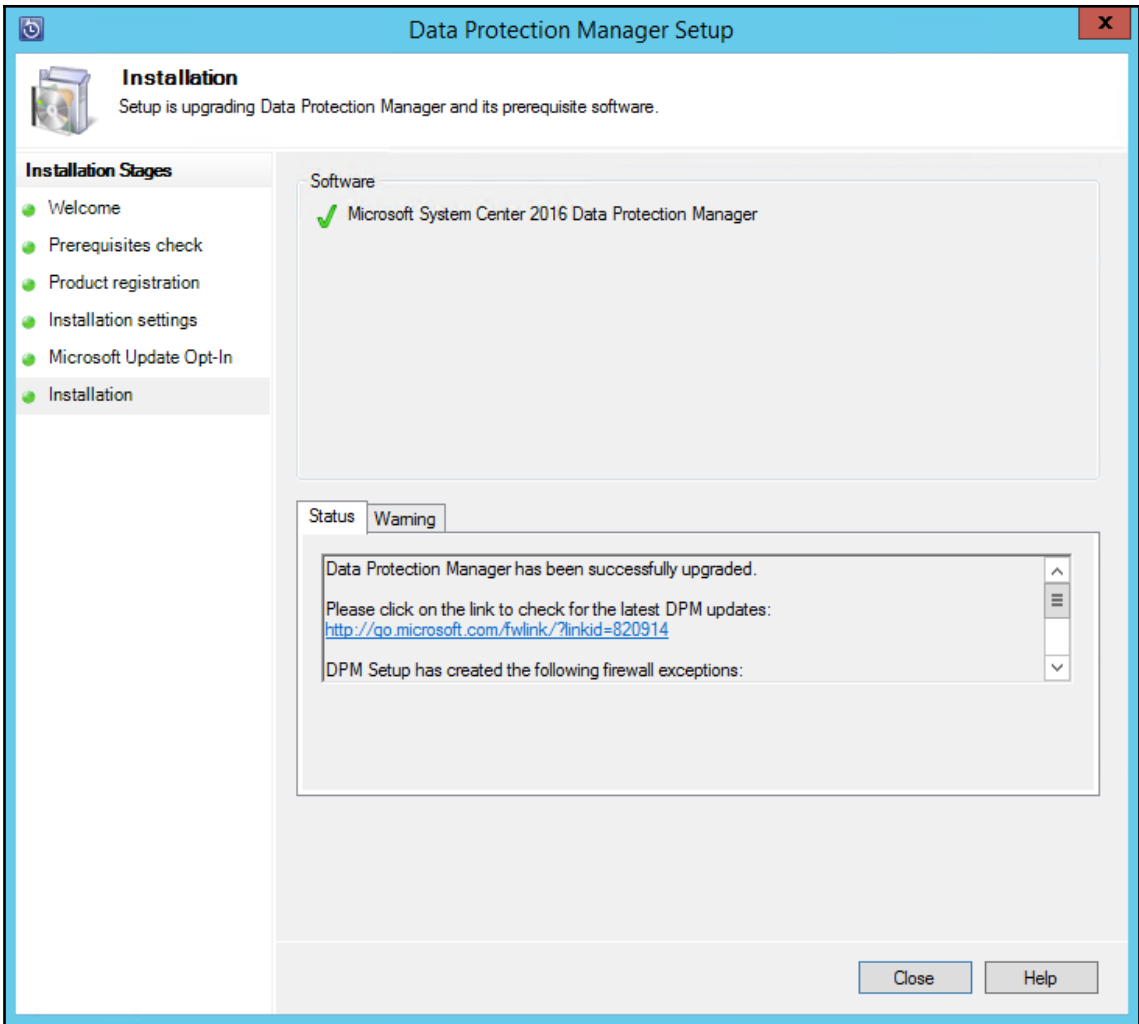
Please see http://go.microsoft.com/fwlink/?LinkId=131738 for more information.

Success
```

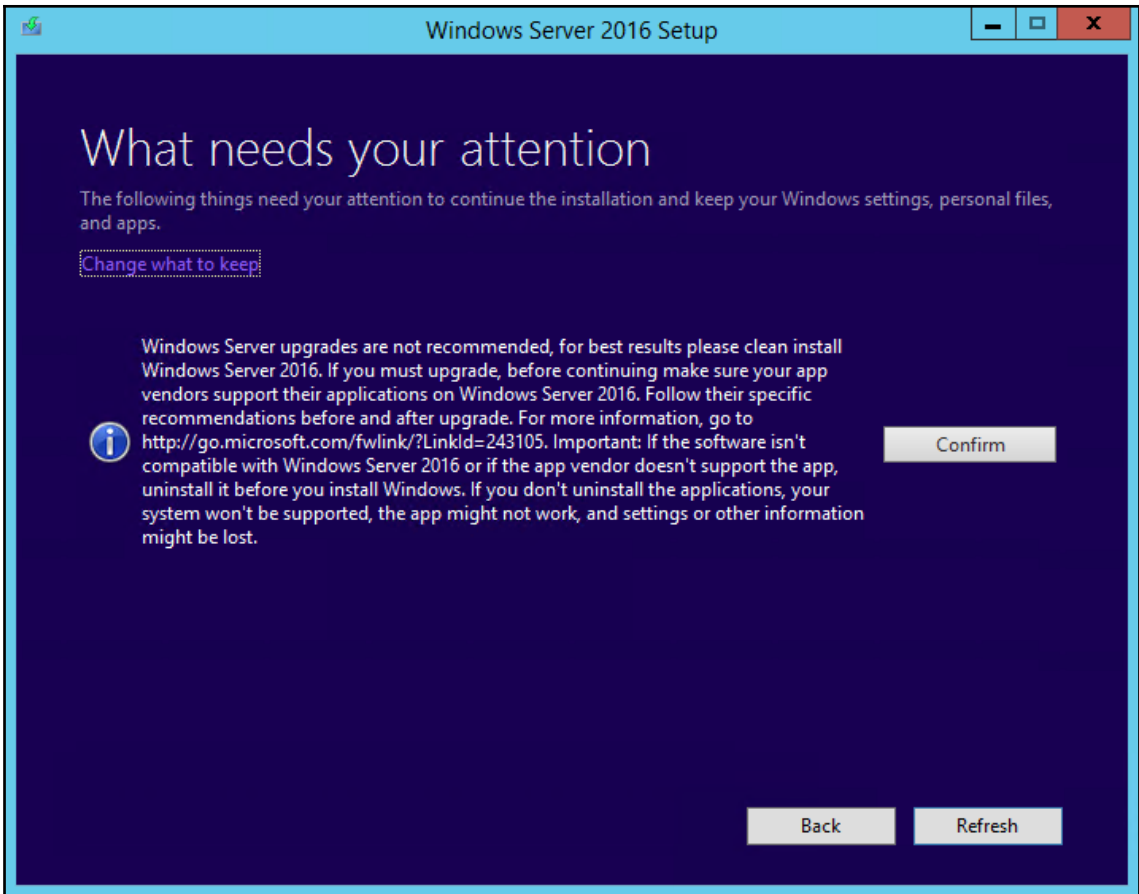
```
dpmsetup.ini - Notepad
File Edit Format View Help

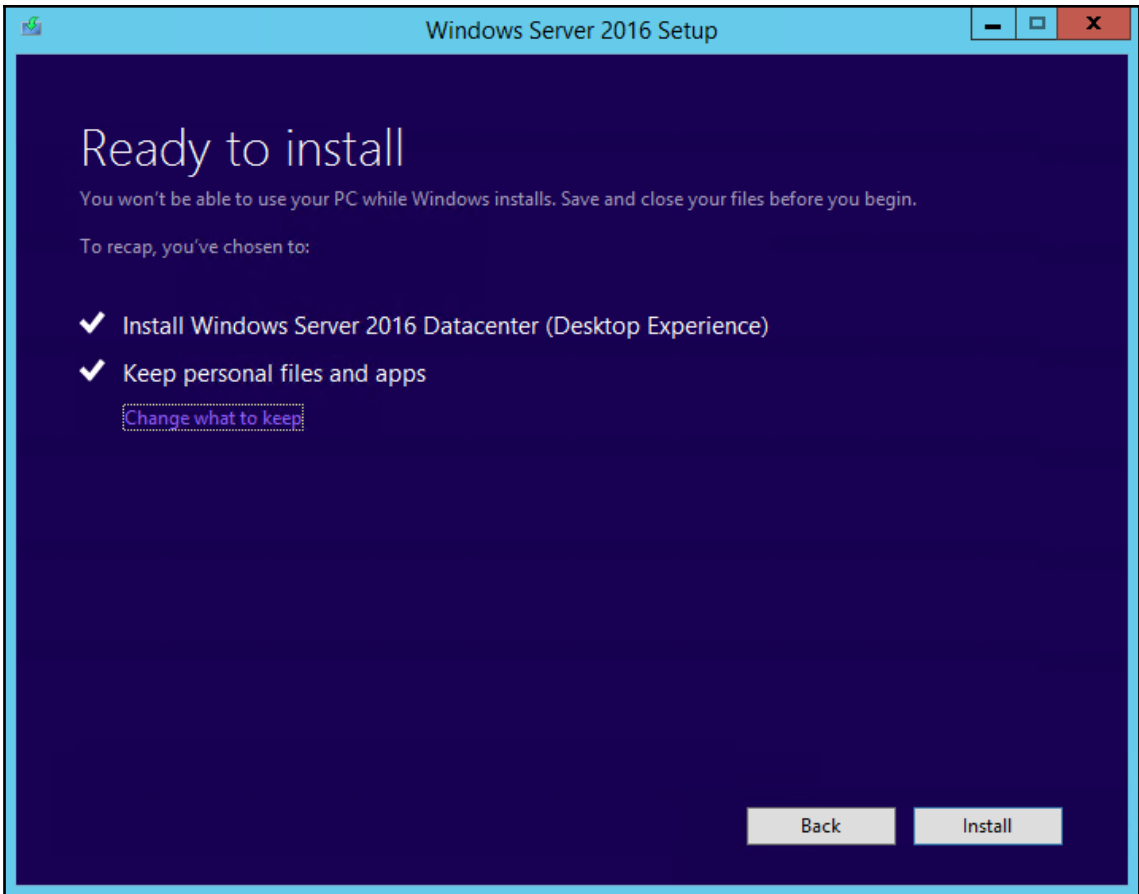
[OPTIONS]
UserName=[redacted]
CompanyName=The Power MVP Elite
ProductKey=[redacted]
SqlAccountPassword=[redacted]
ProgramFiles = D:\Program Files
DatabaseFiles = D:\Program Files
IntegratedInstallSource = D:\SCDPM2016
SQLMachineName=DPM2016-DC
SQLInstanceName=DPMINSTANCE
SQLMachineUserName=[redacted]
SQLMachinePassword=[redacted]
SQLMachineDomainName=[redacted]
ReportingMachineName=DPM2016-DC
ReportingInstanceName=DPMINSTANCE
ReportingMachineUserName=[redacted]
ReportingMachinePassword=[redacted]
ReportingMachineDomainName=[redacted]
```











Windows Server 2016 Setup

# Ready to install

You won't be able to use your PC while Windows installs. Save and close your files before you begin.

To recap, you've chosen to:

- ✓ Install Windows Server 2016 Datacenter (Desktop Experience)
- ✓ Keep personal files and apps

[Change what to keep](#)

Back

Install

System Center 2016 DPM Administrator Console

File Action View Help

Add Rescan Check updates Options About DPM Help

Disk Storage Options Help

Agents

Protected: 1  
Unprotected: 0  
Upgrade available: 0

Disk Storage

Number of disks: 1  
Number of volumes/folders: 1  
Total capacity: 599.68 GB

48.94 GB  
550.74 GB

Online

Registration status: Unknown

Search list below

Search in details also (Slow)

Status	Name /	Friendly Name	Type	Preferred Datasour...	Total Capacity	% Un...
<b>DPM Storage Pool Disks (Total: 1)</b>						
✓	Disk 2 (Microsoft Virtual Disk)	-	Disk	-	299.87 GB	85 %
<b>DPM Storage Pool Volumes and Folders (Total: 1)</b>						
✓	F:\	MBS01	Volume	All	299.81 GB	98 %

System Center 2016 DPM Administrator Console

File Action View Help

New Consistency check Recovery point Remove Disk Online Tape Self service recovery Disk allocation Tape catalog retention Recovery point status Check updates Options About DPM

Protected... Data source operations Resume backups Manage Reports Options Help

Group by:  Protection group  Computer

Search list below

Search in details also (Slow)

Protection Group Member /	Type	Protection Status
<b>Protection Group: Web Servers - Protection Group (Total members: 1)</b>		
Computer: WS2016-HV02.VIRT.LAB		
RCTWS2016-IIS02	Microsoft Hyper-V	OK

Perform consistency check ...  
Create recovery point...  
Stop protection of member...  
Remove inactive protection...  
Switch disaster protection  
Modify disk allocation...  
Resume disk backups...  
Resume azure backups...  
Resume tape backups...  
Recovery point status...

Details: RCTWS2016-IIS02

Status: OK

Replica path: [Click to view details](#)

Latest recovery point: 8/13/2017 8:00:11 PM

Oldest recovery point: 8/13/2017 2:58:04 PM

Total recovery points: 3

Disk allocation: Replica volume: 36.42 GB allocated, 15.54 GB used | Recovery point volume: 7.64 GB allocated, 2.01 GB used

Monitoring

Protection 1

Recovery

Reporting

Management

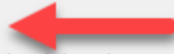
Stop Protection - Web Servers - Protection Group



You have chosen to stop protecting Web Servers - Protection Group.

You are removing members from a protection group. Do you want to delete associated replicas and tapes (if applicable) by expiring the data sets stored in them?

Retain protected data



Retains the replica on the disk with associated recovery points and tapes for the specified

Delete protected data

Deletes the replica on disk (if replica is on custom volume then custom volume will be deleted) and marks the tape data as expired. The tapes will be marked as free and available for use by

Protected data details

Replica on Disk

Disk space used by selected data sources: 44.05 GB  
Current free disk space in the DPM storage pool: 550.74 GB

Details of disk space used by replica:

Source	Disk Space Used in DPM
RCT\WS2016-IIS02 on WS2016-HV02.VIRT.LAB	44.05 GB

Stop Protection

Cancel

Help

System Center 2016 DPM Administrator Console

File Action View Help

New  
 Consistency check  
 Recovery point  
 Remove  
 Disk  
 Online  
 Tape  
 Self service recovery  
 Tape catalog retention  
 Recovery point status  
 Check updates  
 Options  
 About DPM  
 Help

Protecti...  
 Data source operations  
 Resume backups  
 Manage  
 Reports  
 Options  
 Help

4 Data Source Health  
 Critical (0)  
 OK (1)  
 Warning (0)

4 All Protection Groups  
 MBS Protection Group

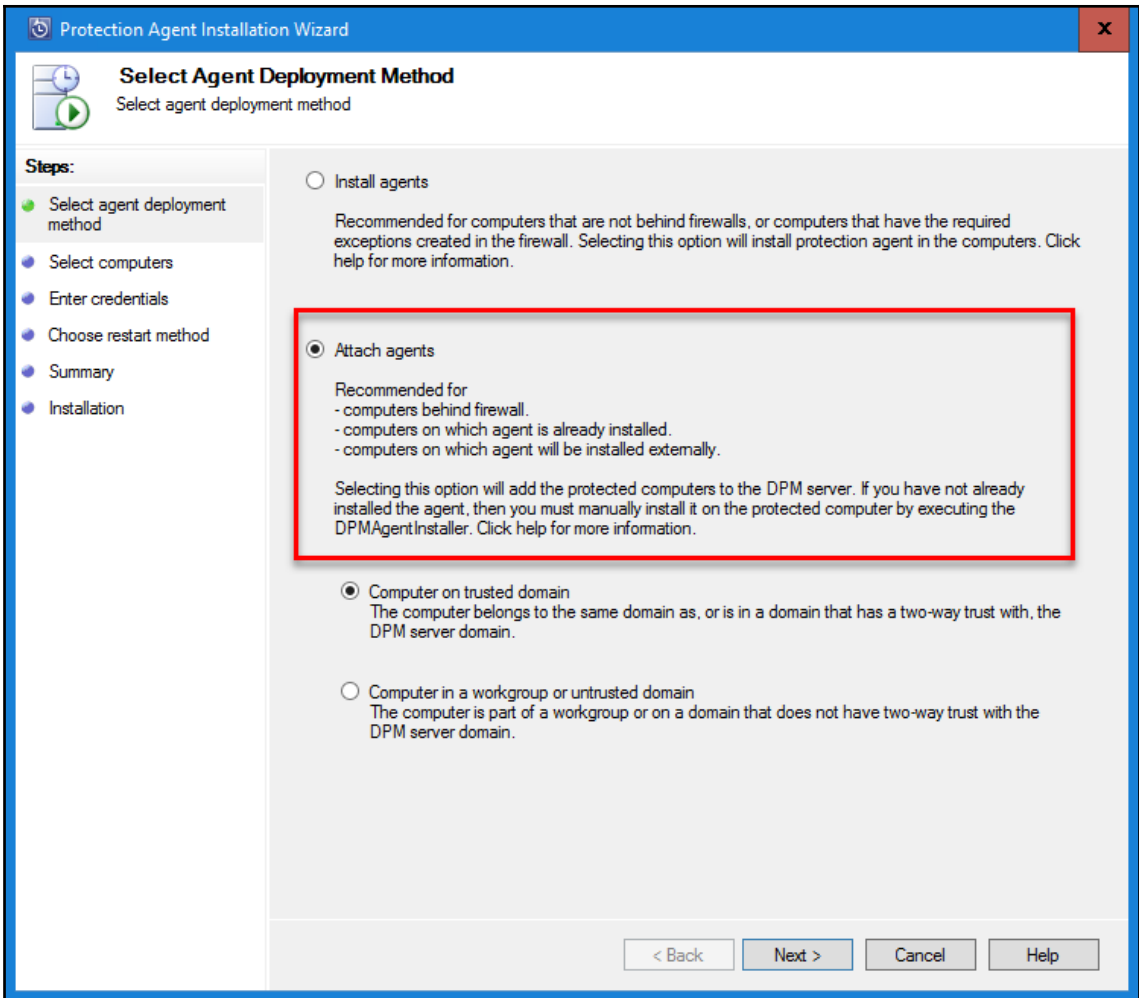
Monitoring  
**Protection**  
 Recovery  
 Reporting  
 Management

Group by:  Protection group  Computer  
 Search list below    Search in details also (Slow)

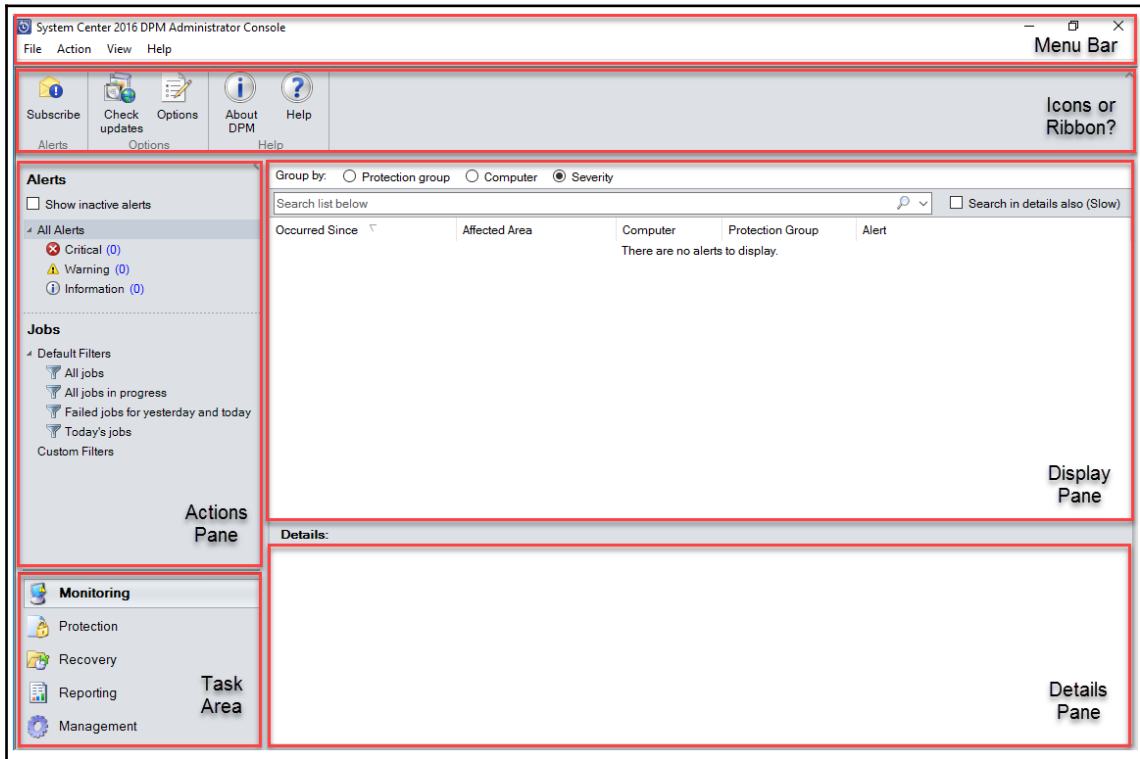
Protection Group Member /	Type	Protection Status
<b>Protection Group: MBS Protection Group</b> (Total members: 1)		
<b>Computer: WS2016-HV02.VIRT.LAB</b>		
RCTWS2016-IIS02	Microsoft Hyper-V	OK

**Details: RCTWS2016-IIS02**

**Status:** OK  
**Replica path:** [Click to view details](#)  
**Latest recovery point:** 8/14/2017 8:00:41 AM  
**Oldest recovery point:** 8/13/2017 2:58:04 PM  
**Total recovery points:** 4  
**Storage consumed:** 12.82 GB



# Chapter 2: DPM Post-Installation and Management Tasks



Server Manager

File and Storage Services > Volumes > Storage Pools

Servers  
Volumes  
Disks  
**Storage Pools**  
Shares  
iSCSI  
Work Folders

**STORAGE POOLS**  
All storage pools | 1 total

Filter

Name	Type	Managed by	Available to	Read-Write Server	Capacity	Free Space
Windows Storage (1)						
Primordial	Available Disks	DPM01	DPM01	DPM01		

Last refreshed on 23/07/2017 15:20:58

**VIRTUAL DISKS**  
No related data is available.

No related virtual disks exist.

To create a virtual disk, start the New Virtual Disk Wizard.

**PHYSICAL DISKS**  
Primordial on DPM01

Filter

Slot	Name	Status	Capacity	Bus	Use
	Mfst Virtual Disk (DPM01)		200 GB	SAS	Aut

File and Storage Services > Volumes > Storage Pools

Servers  
Volumes  
Disks  
**Storage Pools**  
Shares  
iSCSI  
Work Folders

**STORAGE POOLS**  
All storage pools | 1 total

Filter

Name	Type	Managed by	Available to	Read-Write Server	Capacity	Free Space
Windows Storage (1)						
MBS	Storage Pool	DPM01	DPM01	DPM01	199 GB	198 GB

Last refreshed on 23/07/2017 16:46:28

**VIRTUAL DISKS**  
MBS on DPM01

Filter

Name	Status	Layout	Provisioning	Capacity	Allocated	Volume
MBS	Simple	Thin		200 GB	1.00 GB	F:

**PHYSICAL DISKS**  
MBS on DPM01

Filter

Slot	Name	Status	Capacity	Bus	Use
	Mfst Virtual Disk (DPM01)		200 GB	SAS	Aut



Management console interface showing the "Add Disk Storage" dialog box. The interface includes a top navigation bar with "Add", "Rescan", "Check updates", "Options", "About DPM", and "Help". The left sidebar contains sections for "Agents", "Disk Storage", "Online", "Libraries", "Monitoring", "Protection", "Recovery", "Reporting", and "Management".

The "Add Disk Storage" dialog box is open, displaying the following information:

Search list below

Stat... Name / Friendly Na... Ty... Allowed Datasource T... Total Capacity % Unused

There are no disks to display. To add a disk to storage pool, click "Add..."

Select volumes to add to storage pool.  
DPM will format these volumes and use them to store backed up data.

Available volumes:

Volume	Capacity
F:\	199.87 GB

Selected volumes:

Volume /	Friendly Name	Capacity
----------	---------------	----------

Buttons: Add >, < Remove, OK, Cancel, Help

Details:

Activate Windows  
Go to Settings to activate Windows.

Throttle ✕

Specify the network bandwidth usage throttle setting for the selected protected computer. This setting applies for both protection and recovery.

Ensure that 'QoS Packet Scheduler' is installed in the local area connection properties of both protected and DPM server. The QoS Packet Scheduler is not automatically installed with Windows Server 2003. For details, refer to Help.

Enable network bandwidth usage throttling

Settings

On non-work days the throttling will be as per non-work hours for whole day.

Work hours:

Non-work hours:

Work Schedule

Work hours use the local time zone of the protected computer.

Work hours:  to

Work days:  Sunday  Monday  Tuesday  
 Wednesday  Thursday  Friday  
 Saturday

Optimize Performance ×

Network Express Full Backup

Network

Enable on-the-wire compression

Synchronization start time

Synchronization start time can be used to optimize performance of a protection group and secondary protection of another DPM server. Click Help to learn more.

By default synchronization jobs in DPM start everyday at 12 AM and repeat as per the specified synchronization frequency throughout the day.


Offset 12 AM start time by:  hours

minutes

Offset cannot be greater than synchronization frequency.

Synchronization frequency: Every 120 minutes

Synchronization starts at: 01:00 Everyday

 You can enable network bandwidth usage throttling in the Management task area on the Agents tab. You must enable throttling for each computer.

OK Cancel Help

System Center 2016 DPM Administrator Console

File Action View Help

Create Refresh Modify Delete Check updates Options About DPM Help

Filters

**Alerts**

Show inactive alerts

All Alerts  
 Critical (2)  
 Warning (0)  
 Information (0)

**Jobs**

Default Filters  
 All jobs  
 All jobs in progress  
 Failed jobs for yesterday and today  
 Today's jobs  
 Custom Filters

Monitoring

Group by:  Protection group  Computer  Status  Type

Search list below  Search in details also (Slow)

Source	Computer	Protection Group	Type	Start Time	Time Elapsed	Data Transferred
<b>Scheduled (Total jobs: 13)</b>						
C:\	dc01.virt.lab	Domain Controllers Pr...	Synchronization	29/07/2017 23:00:00	-	-
E:\	dc01.virt.lab	Domain Controllers Pr...	Synchronization	29/07/2017 23:00:00	-	-
C:\	dc01.virt.lab	Domain Controllers Pr...	Synchronization	29/07/2017 21:00:00	-	-
E:\	dc01.virt.lab	Domain Controllers Pr...	Synchronization	29/07/2017 21:00:00	-	-
Computer\Sy...	dc01.virt.lab	Domain Controllers Pr...	Recovery point	29/07/2017 20:00:00	-	-
C:\	dc01.virt.lab	Domain Controllers Pr...	Synchronization	29/07/2017 19:00:00	-	-
E:\	dc01.virt.lab	Domain Controllers Pr...	Synchronization	29/07/2017 19:00:00	-	-
C:\	dc01.virt.lab	Domain Controllers Pr...	Recovery point	29/07/2017 18:04:00	-	-
E:\	dc01.virt.lab	Domain Controllers Pr...	Recovery point	29/07/2017 18:04:00	-	-
C:\	dc01.virt.lab	Domain Controllers Pr...	Synchronization	29/07/2017 17:00:00	-	-
E:\	dc01.virt.lab	Domain Controllers Pr...	Synchronization	29/07/2017 17:00:00	-	-
C:\	dc01.virt.lab	Domain Controllers Pr...	Synchronization	29/07/2017 15:00:00	-	-
E:\	dc01.virt.lab	Domain Controllers Pr...	Synchronization	29/07/2017 15:00:00	-	-

Details:

Filter ×

Filter name:

Time from:

Time to:

Filter options

Define the filter parameters on the tab below. Click Preview to view the filter results. After you save the filter it is added to the Jobs tab in the Monitoring task area.

Jobs Protection Other

Type:

- Detailed inventory
- Disk recovery
- Drive cleaning
- Fast inventory
- Library rescan
- Post-recovery operation
- Recoverable items recatalog
- Recovery point
- Replica creation
- SharePoint Catalog Task
- SharePoint export and import task
- Synchronization

Status:

- All
- Completed
- Failed
- In progress
- Scheduled

Preview Save Cancel Help

Options ×

End-user Recovery	Auto Discovery	
SMTP Server	Notifications	Alert Publishing

Specify the SMTP server settings to e-mail reports and notifications.

SMTP server name:

SMTP server port :

"From" address:

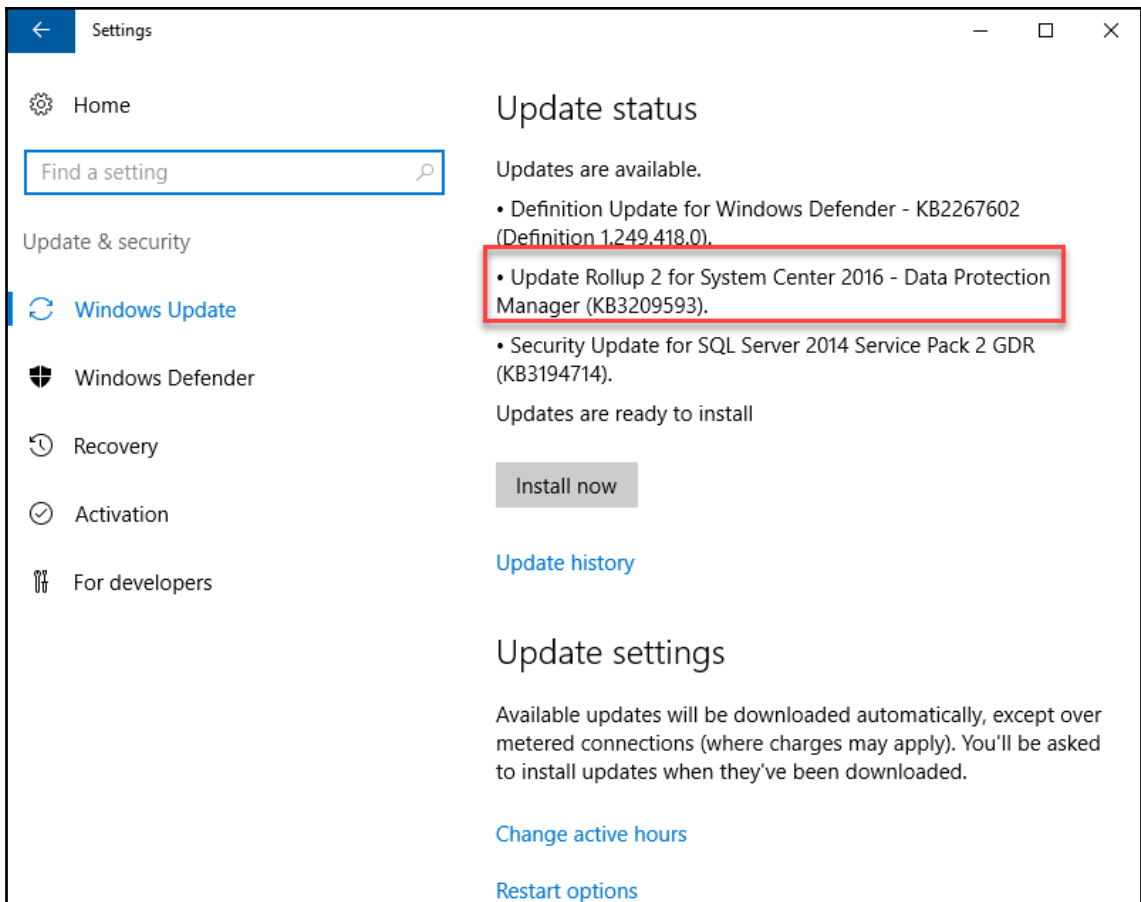
(Must be a valid e-mail address on the SMTP server specified.)

Authenticated SMTP server

The username entered should be domain account name of person whose "From" address is mentioned above, otherwise notification delivery will fail.

Username:

Password:



```
CharbelNemnom.com #> $vol = Get-DPMDiskStorage -Volumes
CharbelNemnom.com #> $vol

Name AccessPath Tag TotalSpace LogicalUsedSpace
-----
G:\ All 107307073536
F:\ All 107307073536
E:\ All 107307073536

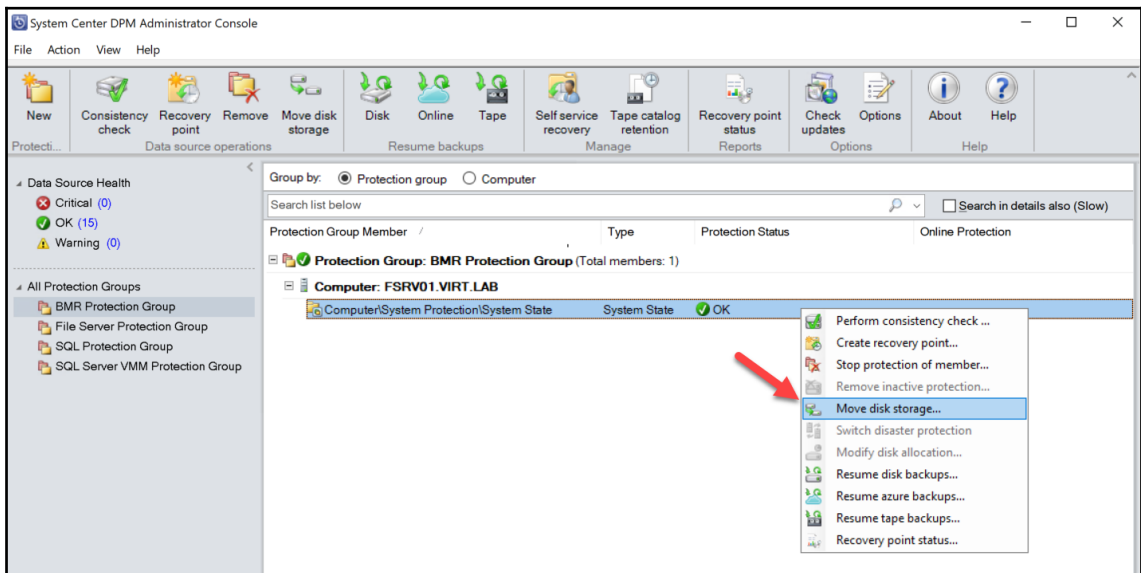
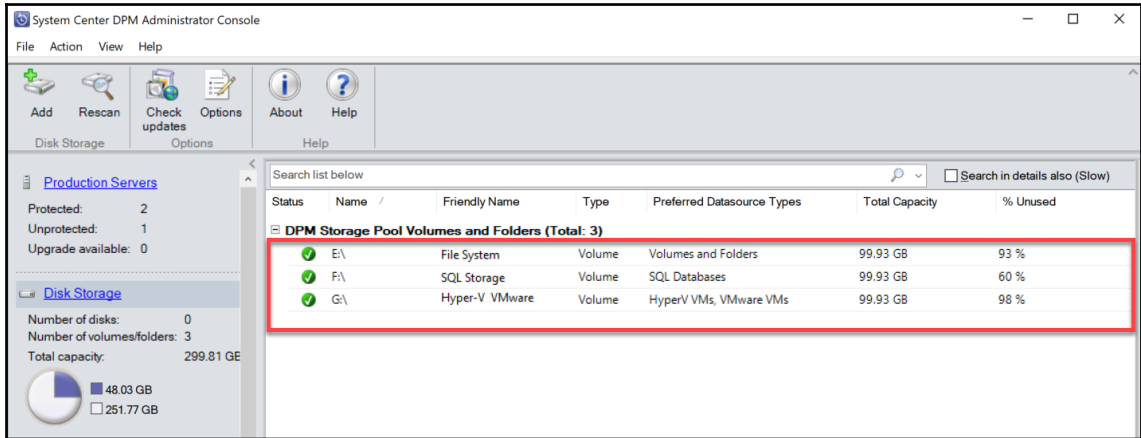
CharbelNemnom.com #> █
```

```

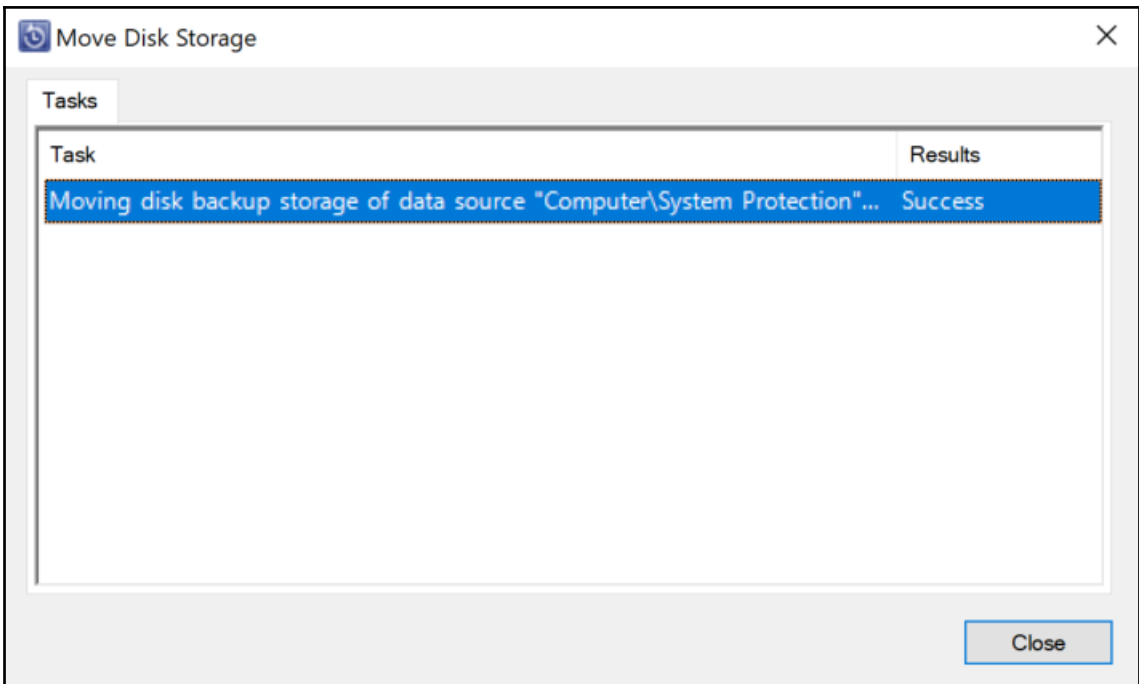
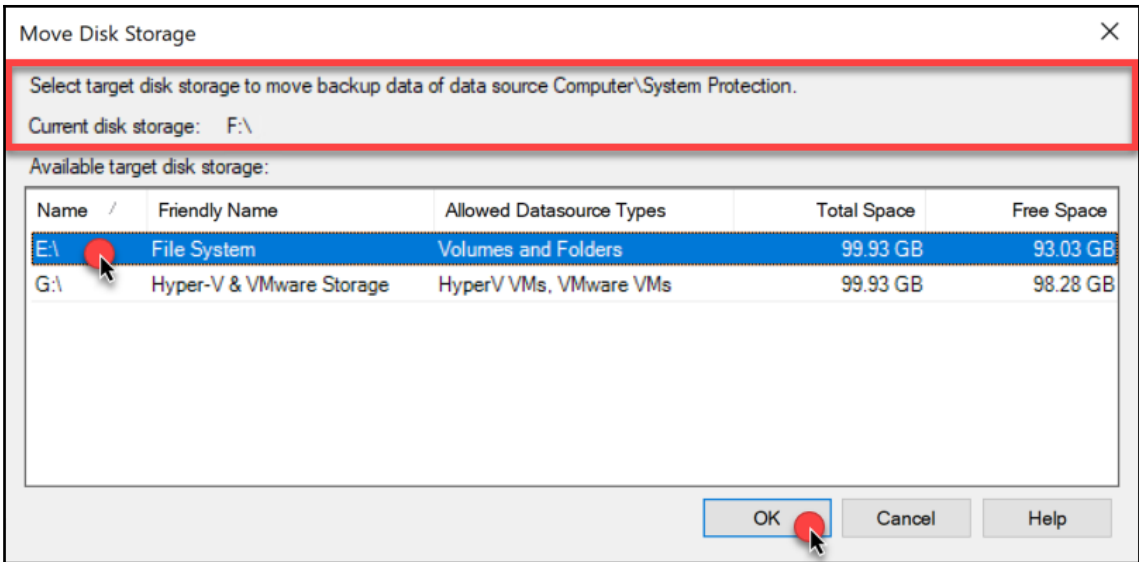
CharbelNemnom.com #> Update-DPMDiskStorage -Volume $vol[0] -DatasourceType HyperV, VMware -FriendlyName "Hyper-V & VMware Storage"
CharbelNemnom.com #> Update-DPMDiskStorage -Volume $vol[1] -DatasourceType SQL -FriendlyName "SQL Storage"
CharbelNemnom.com #> Update-DPMDiskStorage -Volume $vol[2] -DatasourceType FileSystem -FriendlyName "File System"
CharbelNemnom.com #> Get-DPMDiskStorage -Volumes

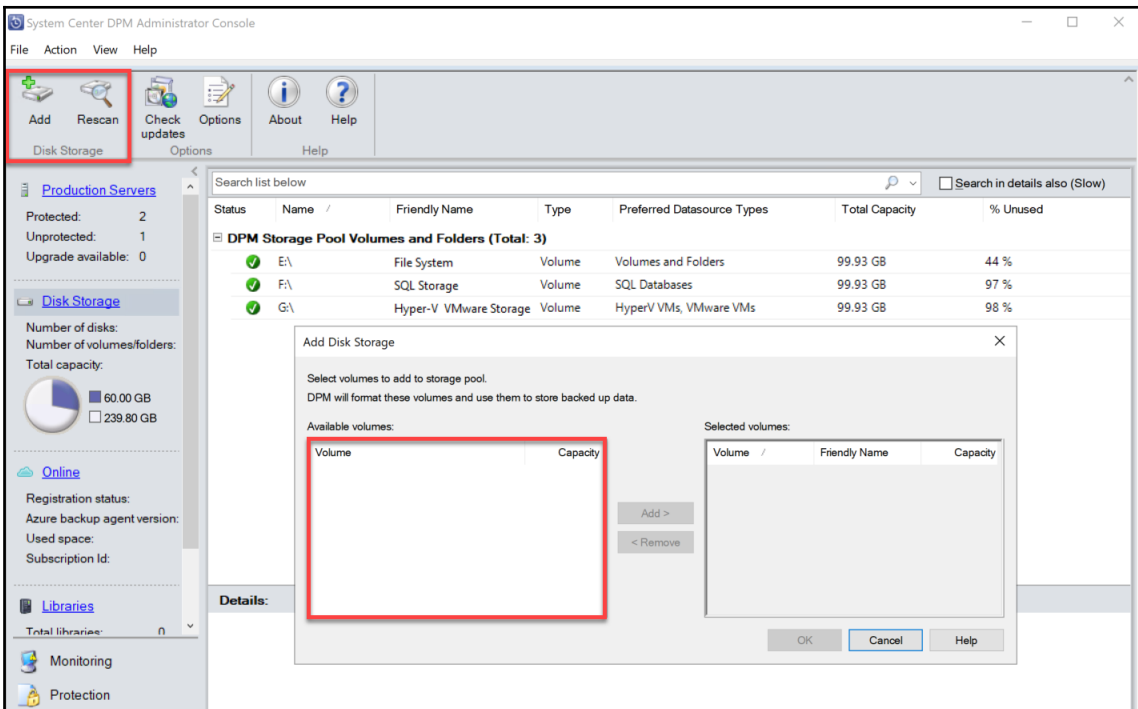
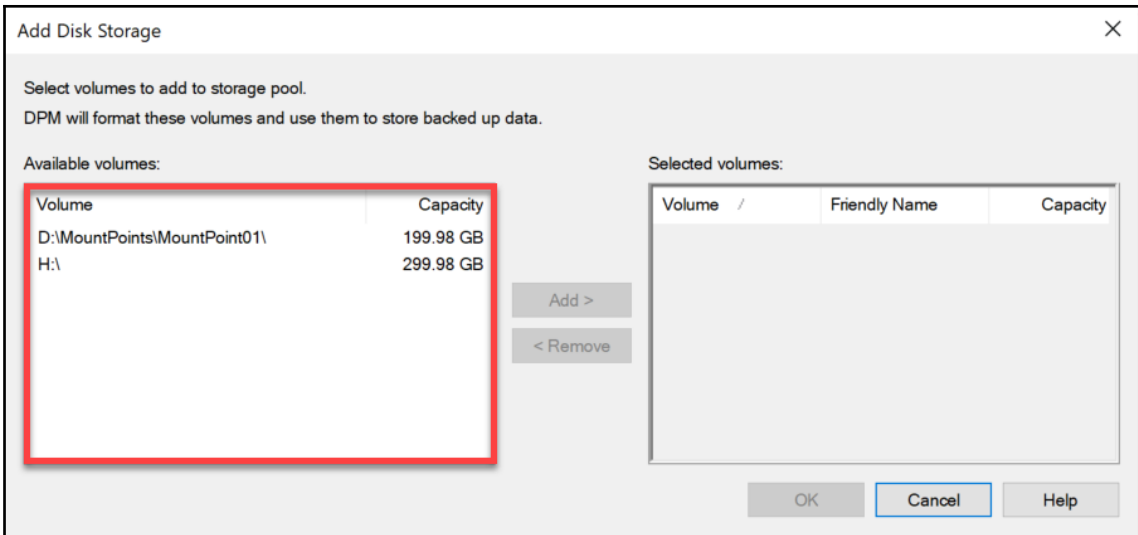
```

Name	AccessPath	Tag	TotalSpace	LogicalUsedSpace
Hyper-V & VMware Storage	G:\	HyperV, VMware	107307073536	
SQL Storage	F:\	SQL	107307073536	
File System	E:\	FileSystem	107307073536	









### Create New Protection Group

#### Choose Replica Creation Method

To protect the data you have selected, you must initially copy the selected data to the Data Protection Manager computer.

**Steps:**

- Welcome
- Select protection group type
- Select group members
- Select data protection method
- Select short-term goals
- Review disk storage allocation
- Choose replica creation method**
- Choose consistency check options
- Summary
- Status

DPM must create a replica to copy the selected data to the DPM server. How do you want to create the replica?

Replica in DPM Server

Automatically over the network

Manually

You must transfer the data using removable media.  
For large amounts of data, this operation may be faster than replica creation across the network.

11/18/2018 12:03:46 PM

< Back Next > Cancel Help

Data Source Health

- Critical (0)
- OK (14)
- Warning (0)

All Protection Groups

- BMR Protection Group
- File Server Protection Group
- SQL Protection Group
- SQL Server VMM Protection Group

Group by:  Protection group  Computer

Search list below  Search in details also (Slow)

Protection Group Member	Type	Protection Status	Online Protection
<b>Protection Group: File Server Protection Group</b> (Total members: 4)			
<b>Computer: FSRV01.VIRT.LAB</b>			
D:\Backup	Folder	Manual replica creation pending	-
D:\DATA-02	Folder	Manual replica creation pending	-
D:\DATA-03	Folder	Manual replica creation pending	-
D:\MountPoints\MountPoint-FSRV01	Volume	Manual replica creation pending	-

Protection Group Member	Type	Protection Status	Online Protection
<b>Protection Group: File Server Protection Group</b> (Total members: 4)			
<b>Computer: FSRV01.VIRT.LAB</b>			
D:\Backup	Folder	Manual replica creation pending	-
D:\DATA-02	Folder	Manual replica creation pending	-
D:\DATA-03	Folder	Manual replica creation pending	-
D:\MountPoints\MountPoint-FSRV01	Volume	Manual replica creation pending	-

**Details: D:\MountPoints\MountPoint-FSRV01**

<b>Status:</b>	Manual replica creation pending
<b>Replica path:</b>	<a href="#">Click to view details</a>
<b>Latest recovery point:</b>	-
<b>Oldest recovery point:</b>	-
<b>Total recovery points:</b>	0
<b>Storage consumed:</b>	0 KB

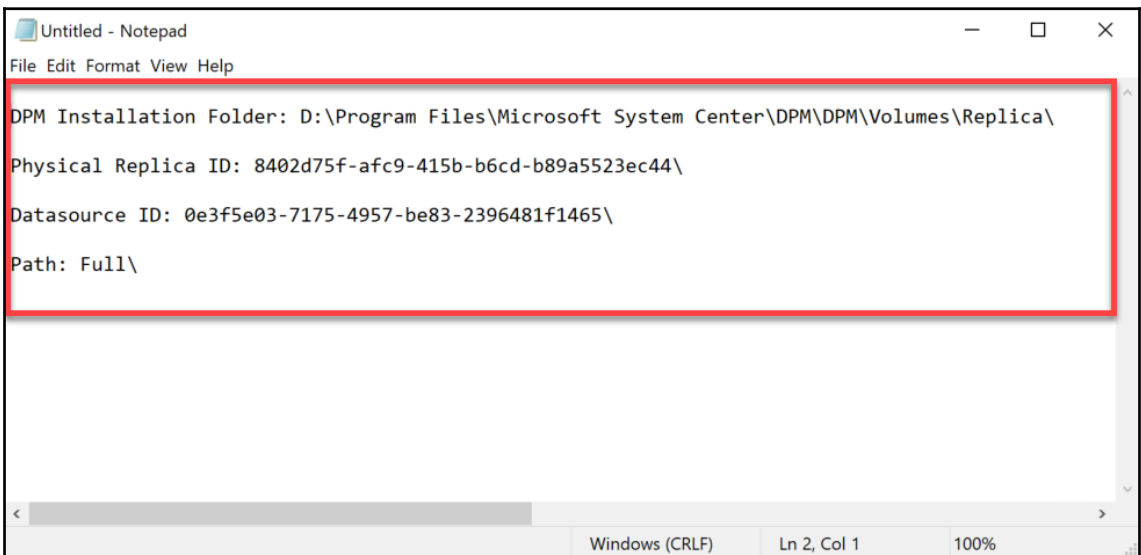
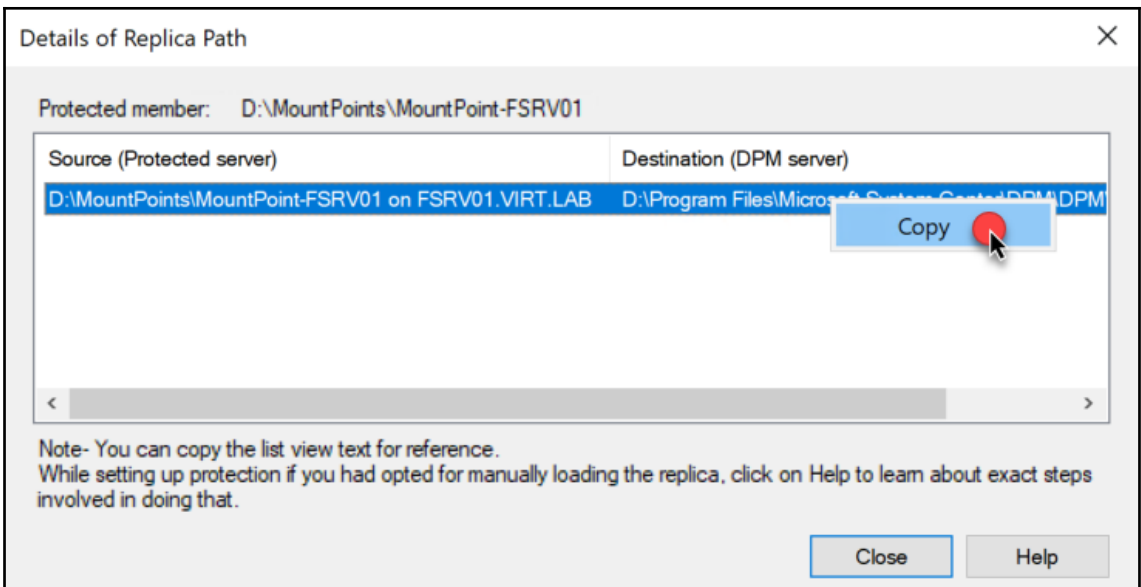
Details of Replica Path

Protected member: D:\MountPoints\MountPoint-FSRV01

Source (Protected server)	Destination (DPM server)
D:\MountPoints\MountPoint-FSRV01 on FSRV01.VIRT.LAB	D:\Program Files\Microsoft System Center\DPM\DPM

Note- You can copy the list view text for reference.  
 While setting up protection if you had opted for manually loading the replica, click on Help to learn about exact steps involved in doing that.

Close Help



```
CharbelNemnom.com #> $PG = Get-DPMProtectionGroup | Where-Object Name -like "*File Server*"
CharbelNemnom.com #> $PG

Name                                ProtectionMethod
----                                -
File Server Protection Group        Short-term using disk

CharbelNemnom.com #> █
```

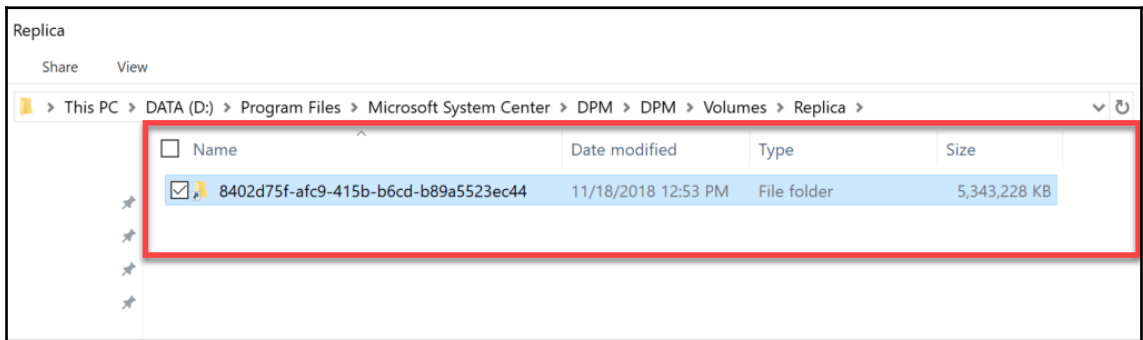
```
CharbelNemnom.com #> Get-DPMDatasource -ProtectionGroup $PG

Computer Name                                ObjectType
-----
FSRV01    D:\MountPoints\MountPoint-FSRV01 Volume
FSRV01    D:\                               Volume

CharbelNemnom.com #> $DS = Get-DPMDatasource -ProtectionGroup $PG | Where-Object Name -Like "*MountPoints*"
CharbelNemnom.com #> $DS

Computer Name                                ObjectType
-----
FSRV01    D:\MountPoints\MountPoint-FSRV01 Volume
```

```
CharbelNemnom.com #> Start-DPMManualReplicaCreation -Datasource $DS
Replica volume for datasource D:\MountPoints\MountPoint-FSRV01 has been mounted at D:\Program Files\Microsoft System Center\DPM\DPM\Volumes\Replica\8402d75f-afc9-415b-b6cd-b89a5523ec44. Copy the datasource's data on the volume and then run Stop-DPMManualReplicaCreation cmdlet.
CharbelNemnom.com #> █
```



```
Administrator: Command Prompt

D:\Program Files\Microsoft System Center\DPM\DPM\Volumes\Replica>tree
Folder PATH listing for volume DATA
Volume serial number is 902A-21E4
D:
├── 8402d75f-afc9-415b-b6cd-b89a5523ec44
│   └── 0e3f5e03-7175-4957-be83-2396481f1465
│       └── Full
D:\Program Files\Microsoft System Center\DPM\DPM\Volumes\Replica>
```

```
CharbelNemnom.com #> Get-ChildItem -Recurse -Path D:\MountPoints\MountPoint-FSRV01\ | FT FullName

FullName
-----
D:\MountPoints\MountPoint-FSRV01\Sub-mountpoint
D:\MountPoints\MountPoint-FSRV01\BRK1000 - What's new in Microsoft Project.mp4
D:\MountPoints\MountPoint-FSRV01\BRK1001 - Driving success with Project Online.mp4
D:\MountPoints\MountPoint-FSRV01\BRK1025 - Preparing for IoT in IT- Microsoft's IoT Vision and Roadmap.mp4
D:\MountPoints\MountPoint-FSRV01\BRK1026 - Getting started with Microsoft Azure and Azure Portal.mp4

CharbelNemnom.com #>
```

Name	Date modified	Type	Size
Sub-mountpoint	11/18/2018 1:28 PM	File folder	
BRK1000 - What's new in Microsoft Project.mp4	9/28/2018 9:33 PM	MP4 Video	217,266 KB
BRK1001 - Driving success with Project Online.mp4	9/28/2018 7:09 PM	MP4 Video	291,939 KB
BRK1025 - Preparing for IoT in IT- Microsoft's IoT Vision and Roadmap.mp4	10/5/2018 10:14 PM	MP4 Video	149,791 KB
BRK1026 - Getting started with Microsoft Azure and Azure Portal.mp4	9/28/2018 7:12 PM	MP4 Video	368,733 KB


```
CharbelNemnom.com #> Stop-DPMManualReplicaCreation -Datasource $DS
Replica volume for datasource D:\MountPoints\MountPoint-FSRV01 dismantled successfully. Run a consistency check job to s
tart scheduled backups.
CharbelNemnom.com #>
```

Protection Group Member	Type	Protection Status	Online Protection
<b>Protection Group: File Server Protection Group</b> (Total members: 4)			
<b>Computer: FSRV01.VIRT.LAB</b>			
D:\Backup	Folder	Manual replica creation pending	-
D:\DATA-02	Folder	Manual replica creation pending	-
D:\DATA-03	Folder	Manual replica creation pending	-
D:\MountPoints\MountPoint-FSRV01	Volume	OK	-

Details: D:\MountPoints\MountPoint-FSRV01	
Status:	OK
Replica path:	<a href="#">Click to view details</a>
Latest recovery point:	11/18/2018 1:38:20 PM
Oldest recovery point:	11/18/2018 1:38:20 PM
Total recovery points:	1
Storage consumed:	1.13 GB

### Report Manager URL


 Configure a URL to access Report Manager. Click Advanced to define multiple URLs, or to specify additional parameters on the URL.

Report Manager Site Identification

Virtual Directory:

URLs: <http://DPM01:80/Reports>





## New Data Source

Name:

Description:

Hide in tile view

Enable this data source

Data source type:

Connection string:

Connect using:

Credentials supplied by the user running the report

Display the following text to prompt user for a user name and password:

Use as Windows credentials when connecting to the data source

Credentials stored securely in the report server

User name:

Password:

Use as Windows credentials when connecting to the data source

Impersonate the authenticated user after a connection has been made to the data source

Windows integrated security

Credentials are not required

Connection created successfully.

Design a query

Build a query to specify the data you want from the data source.

Edit as Text Import... Run Query

Database view

- vw\_DPM\_RecoveryStatus
- vw\_DPM\_Replica
- vw\_DPM\_Server
  - ServerId
  - ServerName
  - NetbiosName
  - DomainName
  - IsRG
- vw\_DPM\_TapeRecoveryPoints
- vw\_DPM\_TapeStat

Selected fields

Field	Aggregate
ServerId	(none)
ServerName	(none)

Relationships

Auto Detect Edit Fields

Applied filters

Field name	Operator	Value	Parameter
------------	----------	-------	-----------

Query results

ServerId	ServerName	NetbiosName	DomainName
fa2af885-8306-...	DPM01.virt.lab	DPM01	virt.lab

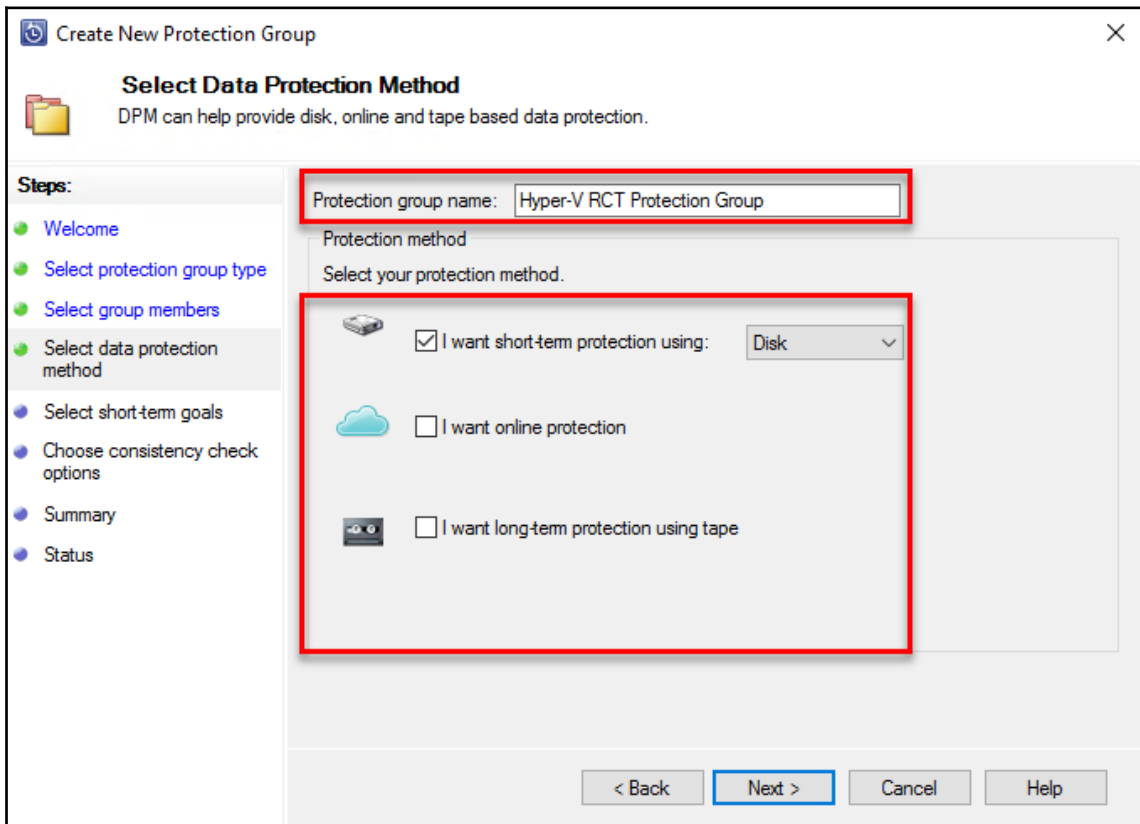
Help

< Back

Next >

Cancel

# Chapter 3: Protecting Hyper-V VMs



Create New Protection Group

### Specify Short-Term Goals

DPM will create a protection plan using your short-term recovery goals.

**Steps:**

- Welcome
- Select protection group type
- Select group members
- Select data protection method
- Select short-term goals
- Review disk storage allocation
- Choose replica creation method
- Choose consistency check options
- Summary
- Status

Specify your short-term recovery goals for disk-based protection.

Retention range: 7 days

Application recovery points  
For applications the recovery point is as per synchronization frequency when they support incremental, otherwise the recovery point is as per express full backup.

Recovery points: Based on express full schedule (5:00 PM Mon, Tue, Wed, Thu, Fri, Sat)

Express Full Backup: 5:00 PM Mon, Tue, Wed, Thu, Fri, Sat [Modify ...](#)

< Back   Next >   Cancel   Help

**Create New Protection Group** [Close]

### Review Disk Storage Allocation

Review disk space allocated in the storage pool for this protection group.

**Steps:**

- Welcome
- Select protection group type
- Select group members
- Select data protection method
- Select short-term goals
- Review disk storage allocation**
- Choose replica creation method
- Choose consistency check options
- Summary
- Status

Review target storage assigned for each data source and change if need be.

Disk storage allocation for new members

Total data size: 24.27 GB

Disk storage to be provisioned on DPM: 30.08 GB

Disk storage allocation details:

Data Source /	Data Size	Space To...	Target Storage
RCT\WS2016-IIS02 on WS2016-HV02.VIRT.LAB	24.27 GB	30.08 GB	MBS-All - 165.76 G ▾

Available disk storage:

Name /	Friendly ...	Allowed Datas...	Total Sp...	Free Sp...	Underpr...
D:\	MBS-All	All	199.81 GB	165.76 GB	0 KB
E:\DPMMountPoints\Mou...	SQL-Workloa...	SQL Databases	299.81 GB	294.92 GB	0 KB

< Back   **Next >**   Cancel   Help

Create New Protection Group

### Consistency check options

Select how you want to run consistency check on inconsistent replicas.

**Steps:**

- Welcome
- Select protection group type
- Select group members
- Select data protection method
- Select short-term goals
- Review disk storage allocation
- Choose replica creation method
- Choose consistency check options**
- Summary
- Status

Running a consistency check on a replica that has become inconsistent allows DPM to continue protecting the data source. You can start a consistency check manually or allow DPM to run it automatically. Use the methods below to customize how DPM can run a consistency check.

Run a consistency check if a replica becomes inconsistent

Select this method if you want DPM to automatically run a consistency check when it finds a replica in an inconsistent state. This method may require DPM to use additional CPU and disk resources.

Run a daily consistency check according to the following schedule

Select this method if you want DPM to check for inconsistent replicas at a specified time every day and then run a consistency check if it finds one. This method may require additional CPU and disk resources during the specified hours.

Start time: 12:00 AM

Maximum duration: 480 hours

Cannot exceed 480 hours (20 days).

< Back   Next >   Cancel   Help

Create New Protection Group

### Summary

DPM is ready to create the Hyper-V RCT Protection Group protection group.

**Steps:**

- Welcome
- Select protection group type
- Select group members
- Select data protection method
- Select short-term goals
- Review disk storage allocation
- Choose replica creation method
- Choose consistency check options
- Summary**
- Status

Review the settings, and then click Create Group to create the Hyper-V RCT Protection Group protection group.

Protection group members:

RCT\WS2016-IIS02

Protection group settings:

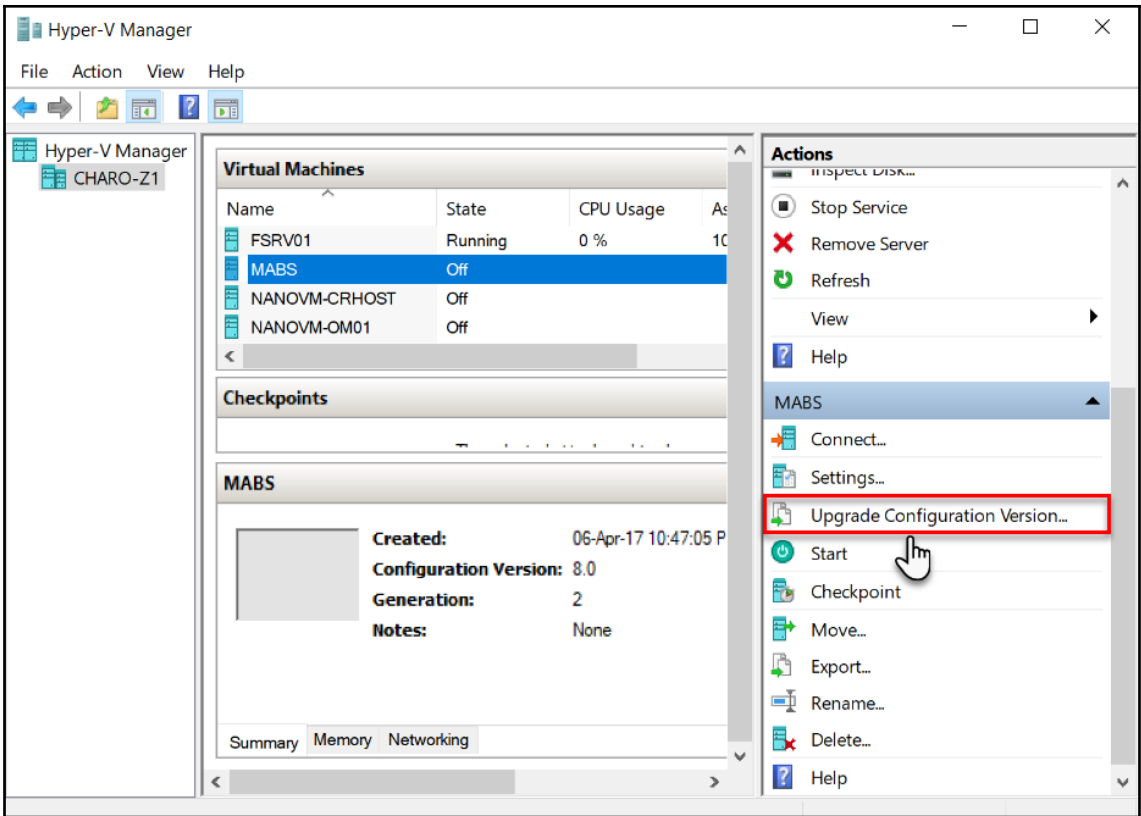
Setting	Details
Short-term retention range	7 Day(s)
Recovery points (applications)	5:00 PM Mon, Tue, Wed, Thu, Fri, Sat
Replica creation	Now

*i* You can [optimize performance](#) of this protection group now or you can do it later from the actions pane.

*w* Important: Installation of hardware snapshot providers on each node of the protected CSV (Cluster Shared Volume) cluster is recommended for optimal performance. Click [here](#) for details.

*w* Item level recovery is supported for disk protection based recovery points only. For these, item level recovery will work only if the base VHD and differencing VHDs are on the same volume.

< Back   **Create Group**   Cancel   Help





Create New Protection Group X

**Select Group Members.**  
Select the data that you want to protect.

**Steps:**

- Welcome
- Select protection group type
- Select group members
- Select data protection method
- Select short-term goals
- Choose consistency check options
- Summary
- Status

To choose the data to protect, select the check boxes in the Available members section. To exclude a folder, expand the folder if you do not see the data source you want to protect in the tree below, click the following link for a list of unsupported [Unsupported configurations](#)

**Available members**

- NINJA-S2D-HV01
- NINJA-S2D-HV02
- SCDPM2016
- WS2016-HV02
  - All Shares
  - All Volumes
  - HyperV
    - Host Component
      - RCT.NANOVM-AV01
      - RCT.NANOVM-CRHOST
      - RCT.NANOVM-DNS
      - RCT.NANOVM-IIS
      - RCT.NANOVM-MPIO
      - RCT.NANOVM-OM01
      - RCT.NANOVM-OM02
      - RCT.NANOVM-OM03
      - RCT.NANOVM-OM04
      - RCT.NANOVM-OM05
      - RCT.NANOVM-UPAV
      - RCT.WS2016-IIS02
  - System Protection

**Selected members**

Selected Members	Computer
RCT.WS2016-IIS02	WS2016-HV02.VIRT.LAB

Update data sources  
Refresh to clear the cache and retrieve the latest data

Excluded folders: 0   
Excluded file types: 0

Backup Operators Properties



General



Backup Operators

Description:

Backup Operators can override security restrictions for the sole purpose of backing up or restoring files

Members:

Empty list box for members

Add...

Remove

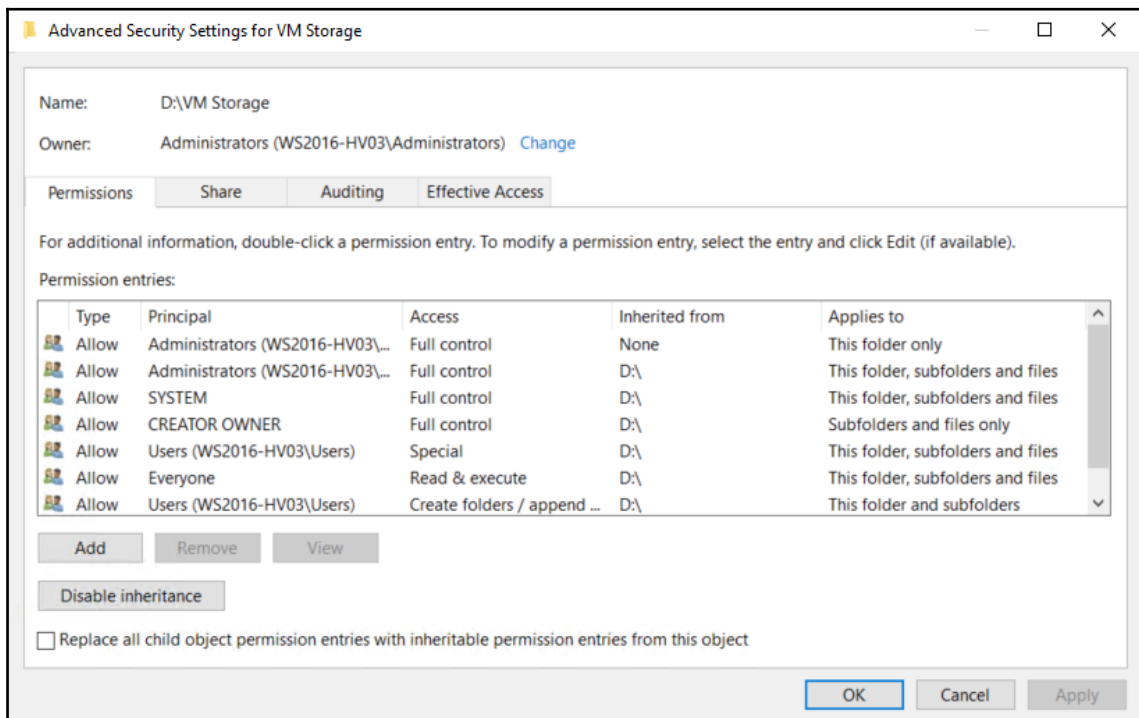
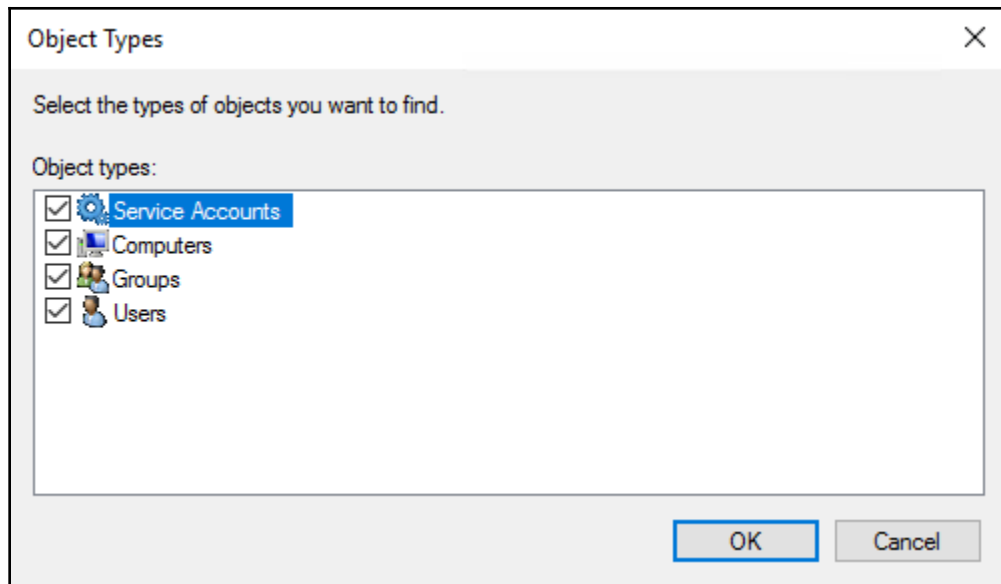
Changes to a user's group membership are not effective until the next time the user logs on.

OK

Cancel

Apply

Help



Advanced Security Settings for VM Storage


Name: D:\VM Storage  
Owner: Administrators (WS2016-HV03\Administrators) [Change](#)

Permissions Share Auditing Effective Access

To modify share permissions, select the entry and click Edit.

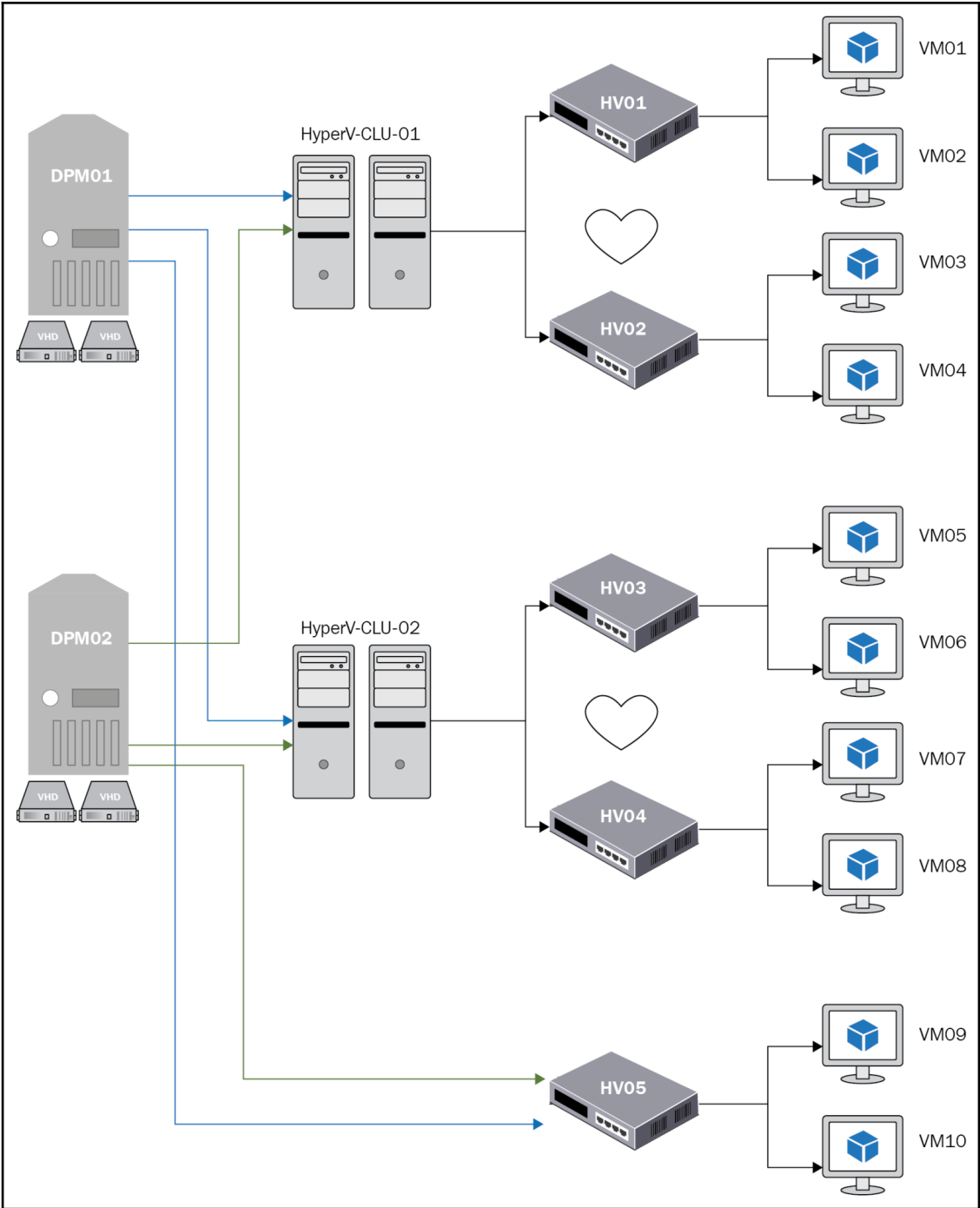
Network location for this share: \\WS2016-HV03.VIRT.LAB\VM Storage

Permission entries:

Type	Principal	Access
 Allow	NINJA-S2DCLU (VIRT\NINJA-S2DCLU\$)	Full Control

[Add](#) [Remove](#) [Edit](#)

[OK](#) [Cancel](#) [Apply](#)



System Center 2016 DPM Administrator Console

File Action View Help

Recover Show all versions Add External DPM End-user recovery Check updates Options About DPM Help

**Browse**

Filter servers

- Local DPM Data
  - VIRT.LAB
    - WS2016-HV02
      - All Protected HyperV Data
        - RCTWS2016-IIS02

**Search**

- Search Recovery Points
  - Files and folders
  - Exchange mailboxes
  - SharePoint
- Monitoring
- Protection
- Recovery**
- Reporting
- Management

**Recovery points for: RCT\WS2016-IIS02**

Available recovery points are indicated in bold on the calendar.

Select the date from the calendar and the time from the drop down list for the recovery points that you want. Click recover in the Actions pane to open the Recovery Wizard.

September 2017

Sun	Mon	Tue	Wed	Thu	Fri	Sat
					1	2
3	4	5	6	7	8	9
10	11	12	13	14	<b>15</b>	16
17	18	19	20	21	22	23
24	25	26	27	28	29	30

Recovery date: 9/15/2017

Recovery time: 5:40 PM

Recover from: Disk


**Path:** All Protected HyperV Data

Search list below

Search in details also (Slow)


Recoverable Item	Last Modified	Size
RCTWS2016-IIS02		-


Recovery Wizard ×


 **Select Recovery Type**  
Select the type of recovery you want to perform.


**Steps:**


- Review recovery selection
- Select recovery type**
- Specify destination
- Specify recovery options
- Summary
- Recovery status

 Recover to original instance  
The current files will be overwritten during recovery.  
RCT\WS2016-IIS02 on WS2016-HV02.VIRT.LAB

 Recover as virtual machine to any host

 Copy to a network folder

 Copy to tape  
This option copies the files to tape in a DPM library.

 Restoring the virtual machine to the original server will overwrite an existing instance of the same virtual machine present on the server.

Recovery Wizard

### Specify Destination

Specify where you want to recover the virtual machine.

Destination host uses remote storage.

All the files will be copied inside a folder named 'WS2016-IIS02\_9-16-2017\_17.0.10' in the copy destination.

Destination host:

Destination path:

Space required: 15.25 GB

Space available: 365.88 GB

< Back   Next >   Cancel   Help

Recovery Wizard

### Recovery Status

Recovery status: Successful

Start time: 9/16/2017 10:51:57 PM

End time: 9/16/2017 10:52:50 PM

Data transferred: 15,436.25 MB

Close



System Center 2016 DPM Administrator Console

File Action View Help

Recover Add External DPM End-user recovery Check updates Options About DPM Help

**Browse**

Filter servers

- Local DPM Data
  - VIRT.LAB
    - WS2016-HV02
      - All Protected HyperV Data
        - RCTWS2016-IIS02**

**Search**

- Search Recovery Points
  - Files and folders
  - Exchange mailboxes
  - SharePoint

Monitoring  
Protection  
**Recovery**  
Reporting  
Management

**Recovery points for: RCTWS2016-IIS02**

Available recovery points are indicated in bold on the calendar.

Select the date from the calendar and the time from the drop down list for the recovery points that you want. Click recover in the Actions pane to open the Recovery Wizard.

September 2017

Sun	Mon	Tue	Wed	Thu	Fri	Sat
					1	2
3	4	5	6	7	8	9
10	11	12	13	14	<b>15</b>	<b>16</b>
<b>17</b>	18	19	20	21	22	23
24	25	26	27	28	29	30

Recovery date: 9/17/2017

Recovery time: 5:00 PM

Recover from: Disk

**Path:** All Protected HyperV Data

Search list below

Recoverable Item

D:\VirtualMachines\WS2016-RTM01\Virtual Hard Disks\WS2016-Datacenter_C.vhdx	-
D:\VirtualMachines\WS2016-IIS02_D.vhdx	-
D:\VirtualMachines\WS2016-IIS02_Paging.vhdx	-

Show all recovery points  
Recover...

Recovery Wizard

### Review Recovery Selection

Review the information for the items that you chose to recover.

**Steps:**

- Review recovery selection
- Select recovery type
- Specify recovery options
- Summary
- Recovery status

Review your recovery selections.


Recovery point: 9/17/2017 5:00:10 PM

Recover from: Disk

Item details

Recovery item: D:\VirtualMachines\WS2016-RTM01\Virtual Hard Disks\WS2016-IIS02\_D.vhdx

Recovery source: RCT\WS2016-IIS02 on WS2016-HV02.VIRT.LAB

 Note that the selected recovery element is a VHD and not the virtual machine.

< Back   Next >   Cancel   Help

Recovery Wizard

**Summary**  
Review your recovery settings.

**Steps:**

- Review recovery selection
- Select recovery type
- Specify destination
- Specify recovery options
- Summary
- Recovery status

Recovery point: 9/17/2017 5:00:10 PM

Recovery media: Disk

Source: RCT\WS2016-IIS02 on WS2016-HV02.VIRT.LAB

Destination: WS2016-HV03.VIRT.LAB

Notification: No

Recovery items

Recovery item: RCT\WS2016-IIS02\D:\VirtualMachines\WS2016-RTM01\Virtual Hard Disks\WS20...

Details:

Recovery Items	Size /
D:\VirtualMachines\WS2016-RTM01\Virtual Hard Disks\WS2016-IIS02_D.vhdx	-

< Back Recover Cancel Help

System Center 2016 DPM Administrator Console

File Action View Help

Recover Add External DPM End-user recovery Check updates Options About DPM Help

**Browse**

Filter servers

- Local DPM Data
  - VIRT.LAB
    - WS2016-HV02
      - All Protected HyperV Data
        - RCTWS2016-IIS02

**Search**

- Search Recovery Points
  - Files and folders
  - Exchange mailboxes
  - SharePoint
- Monitoring
- Protection
- Recovery**
- Reporting
- Management

**Recovery points for: RCT\WS2016-IIS02**

Available recovery points are indicated in bold on the calendar.  
 Select the date from the calendar and the time from the drop down list for the recovery points that you want. Click recover in the Actions pane to open the Recovery Wizard.

September 2017

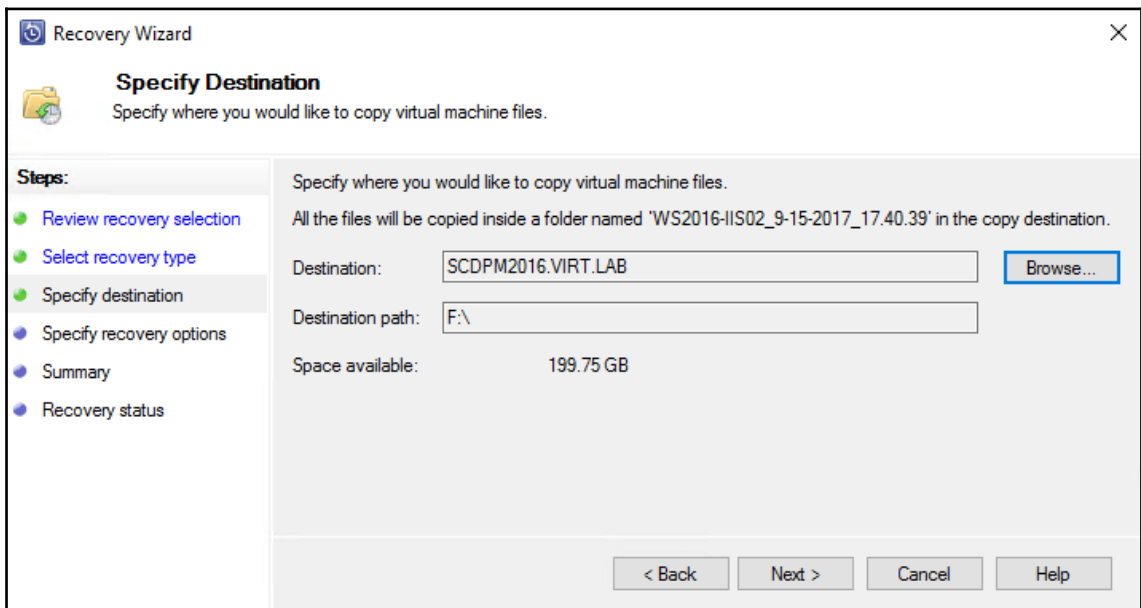
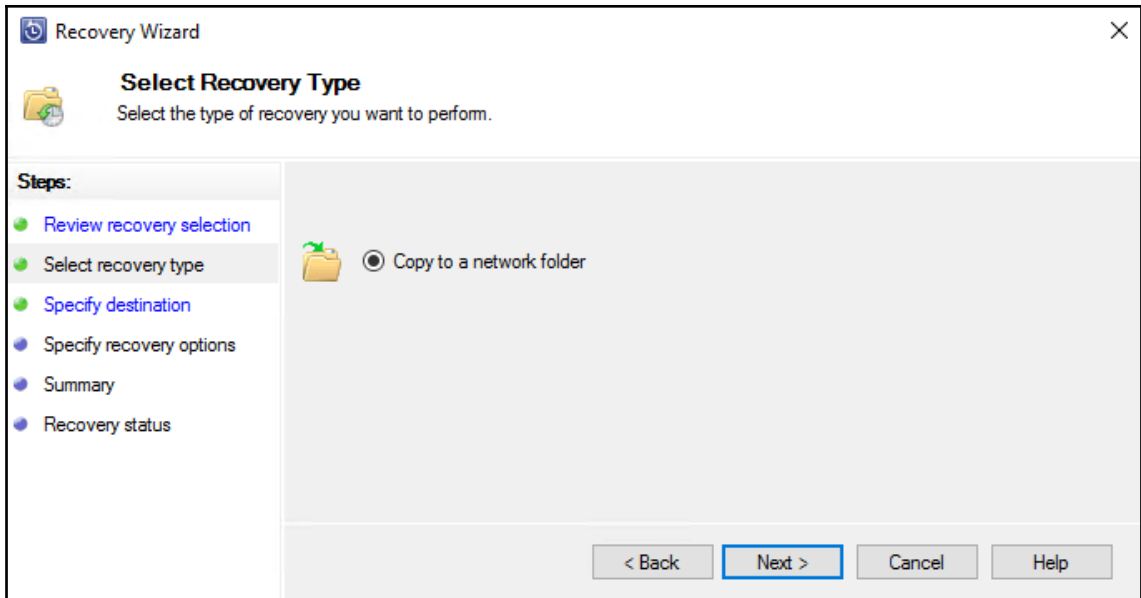
Sun	Mon	Tue	Wed	Thu	Fri	Sat
					1	2
3	4	5	6	7	8	9
10	11	12	13	14	<b>15</b>	<b>16</b>
17	18	19	20	21	22	23
24	25	26	27	28	29	30

Recovery date: 9/15/2017  
 Recovery time: 5:40 PM  
 Recover from: Disk


**Path:** All Protected HyperV Data

Search list below

Recoverable Item	L...
D:\VirtualMachines\WS2016-RTM01\Virtual Hard Disks\WS2016-Datacenter_C.vhdx	-
D:\VirtualMachines\WS2016-RTM01\Virtual Hard Disks\WS2016-IIS02_D.vhdx	-
D:\VirtualMachines\WS2016-RTM01\Virtual Hard Disks\WS2016-IIS02_Paging.vhdx	-



Recovery Wizard ×

 **Specify Recovery Options**  
Specify the options to apply to the recovery.

**Steps:**

- Review recovery selection
- Select recovery type
- Specify destination
- **Specify recovery options**
- Summary
- Recovery status

**Restore security**

Apply security settings of the destination computer  
 Apply the security settings of the recovery point version

**Network bandwidth usage throttling**

Status: Disabled [Modify...](#)

**SAN Recovery**

Enable SAN based recovery using hardware snapshots  
Click on [Help](#) to learn about the prerequisite steps

**Notification**

Send an e-mail when this recovery completes

Recipients:

Separate e-mail addresses with comma.  
Example: Kim@Contoso.com, Terry@Adventure-works.com

Recovery Wizard

### Summary

Review your recovery settings.

**Steps:**

- Review recovery selection
- Select recovery type
- Specify destination
- Specify recovery options
- Summary**
- Recovery status

Recovery point: 9/15/2017 5:40:39 PM

Recovery media: Disk

Source: RCT\WS2016-IIS02 on WS2016-HV02.VIRT.LAB

Destination: SCDPM2016.VIRT.LAB

Notification: No

Recovery items

Recovery item: RCT\WS2016-IIS02\Recovery

Details:

Recovery Items	Size /
Recovery	-

< Back   Recover   Cancel   Help



Recovery Wizard



## Recovery Status

### Steps:

- Review recovery selection
- Select recovery type
- Specify destination
- Specify recovery options
- Summary
- Recovery status

Recovery status: Successful  
Start time: 9/15/2017 7:15:16 PM  
End time: 9/15/2017 7:15:24 PM  
Data transferred: 302.75 MB

Close



# Chapter 4: Monitoring DPM and Configuring Role-Based Access

Options

End-user Recovery      Auto Discovery

**SMTP Server**      Notifications      Alert Publishing

Specify the SMTP server settings to e-mail reports and notifications.

SMTP server name:

SMTP server port:

"From" address:

(Must be a valid e-mail address on the SMTP server specified.)

Authenticated SMTP server

The username entered should be domain account name of person whose "From" address is mentioned above, otherwise notification delivery will fail.

Username:

Password:

Options



End-user Recovery

Auto Discovery

SMTP Server

Notifications


Alert Publishing

To monitor DPM status using the DPM Microsoft Operations Manager (MOM) Pack, you must publish DPM alerts as Windows events. To publish DPM alerts as Windows events, click Publish Active Alerts.

Publish Active Alerts

To publish DPM backup jobs that succeeded or failed as Windows events, click Publish Backup Events

Publish Backup Events

 Depending on the number of backup events, this may take up to several minutes to complete.

OK

Cancel

Help

Select Management Packs from Catalog

Select one or more management packs in the catalog list and click Add.

Find : [View connection certificate](#)

data protection manager

View : All management packs in the catalog

Search

Management packs in the catalog [Properties ...](#)

Name	Status	Version	Release Date	Information
▶ Microsoft Corporation				

Add

Selected management packs :

Name	Status	Version	Release Date
System Center 2012 R2 Data Protection Manager Discovery And Monitoring	Not installed	4.2.1276.0	30/05/2017
System Center 2012 R2 Data Protection Manager Library	Not installed	4.2.1276.0	14/08/2015
System Center 2012 R2 Data Protection Manager Reporting	Not installed	4.2.1279.0	14/08/2015

Remove

OK Cancel



## Central Console Opt-in

### Installation Stages

- Welcome
- Central Console Opt-In
- Prerequisites check
- Installation settings
- Microsoft Update Opt-In
- Installation

The DPM Central Console is built on top of Operations Manager. It requires few components to be installed both on the Operations Manager Server and also the machine where the Operations Manager Console will be launched.

- Install Central Console server-side Components  
The server-side components should be installed on the Operations Manager Server.
- Install Central Console client-side Components  
The client-side components should be installed on the machine where you will be launching the Operations Manager Console.
- Install Central Console server-side and client-side Components  
Choose this option if you are planning to run the Operations Manager console on the Operations Manager server itself. This will install both the server-side and client-side components.

< Back

Next >

Cancel

Help



### Prerequisites Check

Please wait while the wizard checks for required software.

#### Installation Stages

- Welcome
- Central Console Opt-In
- Prerequisites check**
- Installation settings
- Microsoft Update Opt-In
- Installation

#### Prerequisites

- ✓ Basic components
- ✓ System attributes

Check Again

This computer meets the software and hardware requirements for DPM Central Console.

Click Next to continue.

#### Details:

##### Message

- i** DPM Central Console setup will create the following registry key to optimize Operations Manager Server performance: HKLM\SOFTWARE\Microsoft\Microsoft Operations Manager\3.0\Modules\Global\PowerShell "QueueMinutes"=dword:00000077.
- i** DPM Central Console setup will automatically import the 'System Center 2016 Data Protection Manager Scale Override' management pack to optimize Operations Manager Server performance.

< Back

Next >

Cancel

Help

System Center 2016 DPM Scoped Console

Alerts

Source : Computer\System Protection(DC01.virt.lab) DPM server : dpm01.virt.lab  
Alert monitor : DPM: Replica is inconsistent (3106)

Group by:  Protection group  Computer  Severity

Search list below

Occurred Since	Affected Area	Computer	Protection Group	Alert
Critical (Total alerts: 1)				
04/10/2017 13:08:01	Computer\System Protection	dc01.virt.lab	Domain Controllers Protection...	Replica is inconsistent

Details:

```

Administrator: Command Prompt - DefaultRoleConfigurator.exe

C:\Program Files\Microsoft DPM\bin>DefaultRoleConfigurator.exe
----DPM Centralized Management Default Role Configurator ----

Skip list:
Skipping create role: DPM Reporting Operator
Skipping create role: DPM Read-Only Operator
Skipping create role: DPM Tier-1 Support
Skipping create role: DPM Tape Admin
Skipping create role: DPM Tier-2 Support
Skipping create role: DPM Admin
Skipping create role: DPM Recovery Operator
Skipping create role: DPM Tape Operator

Updating default roles in SCOM:
Updated role:DPM Reporting Operator
Updated role:DPM Read-Only Operator
Updated role:DPM Tier-1 Support
Updated role:DPM Tape Admin
Updated role:DPM Tier-2 Support
Updated role:DPM Admin
Updated role:DPM Recovery Operator
Updated role:DPM Tape Operator

---- END ----
If you want this tool to create the default roles again, delete the role from SCOM first
Hit Return to Exit!!

```

# Chapter 5: Protecting Microsoft Workloads with DPM

The screenshot displays the System Center DPM Administrator Console interface. The top menu bar includes 'File', 'Action', 'View', and 'Help'. Below the menu is a toolbar with several icons and labels: 'New' (highlighted with a red box), 'Self service recovery', 'Tape catalog retention', 'Recovery point status', 'Check updates', 'Options', 'About', and 'Help'. The main content area is divided into two panes. The left pane shows 'Data Source Health' with 0 Critical, 6 OK, and 0 Warning items, and 'All Protection Groups' with one 'SQL Protection Group'. The right pane shows a search bar and a table of protection group members.

Protection Group Member	Type	Protection Status
<b>Protection Group: SQL Protection Group</b> (Total members: 6)		
<b>Computer: SC-DPM-1807.VIRT.LAB</b>		
SC-DPM-1807\DPMDB_SC_DPM_1807	SQL Data	OK
SC-DPM-1807\master	SQL Data	OK
SC-DPM-1807\model	SQL Data	OK
SC-DPM-1807\msdb	SQL Data	OK
SC-DPM-1807\ReportServer	SQL Data	OK
SC-DPM-1807\ReportServerTempDB	SQL Data	OK

**Create New Protection Group** [Close]

**Select Group Members.**  
Select the data that you want to protect.

**Steps:**

- Welcome
- Select protection group type
- Select group members
- Select data protection method
- Select short-term goals
- Choose consistency check options
- Summary
- Status

To choose the data to protect, select the check boxes in the Available members section. To exclude a folder, expand the directory structure. If you do not see the data source you want to protect in the tree below, click the following link for a list of unsupported configurations. [Unsupported configurations](#)

**Available members**

VIRT.LAB

- FSRV01
  - All Shares
    - MTATempStore\$
    - Users Documents
  - All Volumes
    - C:\
    - D:\
      - \$RECYCLE.BIN
      - Backup
      - DATA-02
      - DATA-03
      - MountPoints
        - MountPoint-FSRV01
        - MountPoint-FSRV02
        - MountPoint-FSRV03
      - Users Documents

- E:\

System Protection  
SC-DPM-1807

**Selected members**

Selected Members	Computer
\\FSRV01.VIRT.LAB\Users Documents	FSRV01.VIRT.LAB
D:\Backup	FSRV01.VIRT.LAB
D:\DATA-02	FSRV01.VIRT.LAB
D:\DATA-03	FSRV01.VIRT.LAB
D:\MountPoints\MountPoint-FSRV01	FSRV01.VIRT.LAB

Remove

**Update data sources**  
Refresh to clear the cache and retrieve the latest data

Refresh

Excluded folders: 0 [View](#)

Excluded file types: 0 [Exclude Files...](#)

< Back
Next >
Cancel
Help



Create New Protection Group ×

### Select Data Protection Method

DPM can help provide disk, online and tape based data protection.

**Steps:**

- Welcome
- Select protection group type
- Select group members
- Select data protection method
- Select short-term goals
- Choose consistency check options
- Summary
- Status

Protection group name:

Protection method

Select your protection method.

I want short-term protection using:

I want online protection

I want long-term protection using tape  
Protection using tape options are disabled as no tape libraries were detected or the protection group contains data sources that cannot be protected on tape.

< Back   Next >   Cancel   Help


Create New Protection Group X

### Specify Short-Term Goals

DPM will create a protection plan using your short-term recovery goals.

**Steps:**

- Welcome
- Select protection group type
- Select group members
- Select data protection method
- Select short-term goals**
- Review disk storage allocation
- Choose replica creation method
- Choose consistency check options
- Specify online protection data
- Specify online backup schedule
- Specify online retention policy
- Choose online replication
- Summary
- Status

 Specify your short-term recovery goals for disk-based protection.

Retention range:  days

Synchronization frequency:  Every 15 minutes  Just before a recovery point

**File recovery points**

Specify recovery points for file members.

Recovery points for files:

Create New Protection Group

### Review Disk Storage Allocation

Review disk space allocated in the storage pool for this protection group.

**Steps:**

- Welcome
- Select protection group type
- Select group members
- Select data protection method
- Select short-term goals
- Review disk storage allocation**
- Choose replica creation method
- Choose consistency check options
- Specify online protection data
- Specify online backup schedule
- Specify online retention policy
- Choose online replication
- Summary
- Status

Review target storage assigned for each data source and change if need be.

Disk storage allocation for new members

Total data size:	3.00 GB
Disk storage to be provisioned on DPM:	5.15 GB
Average disk space allocated for change journal on protected volumes:	300.00 MB <a href="#">Modify...</a>

Disk storage allocation details:

Data Source /	Data Size	Space To Be Provisioned	Target Storage
D:\ on FSRV01.VIRT.LAB	1.03 GB	1.77 GB	All Workloads - 89.30 GB
D:\MountPoints\MountPoint-FSRV01 o...	1.97 GB	3.38 GB	All Workloads - 89.30 GB

Available target disk storage:

Name /	Friendly Name	Allowed Datasource Types	Total Space	Free Space	Underprovisioned Space
E:\	All Workloads	All	99.93 GB	89.30 GB	0 KB

< Back   Next >   Cancel   Help

Create New Protection Group X

**Choose Replica Creation Method**

To protect the data you have selected, you must initially copy the selected data to the Data Protection Manager computer.

**Steps:**

- Welcome
- Select protection group type
- Select group members
- Select data protection method
- Select short-term goals
- Review disk storage allocation
- **Choose replica creation method**
- Choose consistency check options
- Specify online protection data
- Specify online backup schedule
- Specify online retention policy
- Choose online replication
- Summary
- Status

DPM must create a replica to copy the selected data to the DPM server. How do you want to create the replica?

Replica in DPM Server

Automatically over the network

Now       Later

11/10/2018      10:11:57 PM

Manually

You must transfer the data using removable media.  
For large amounts of data, this operation may be faster than replica creation across the network.

< Back   Next >   Cancel   Help

Create New Protection Group X

### Consistency check options

Select how you want to run consistency check on inconsistent replicas.

**Steps:**

- Welcome
- Select protection group type
- Select group members
- Select data protection method
- Select short-term goals
- Review disk storage allocation
- Choose replica creation method
- Choose consistency check options
- Specify online protection data
- Specify online backup schedule
- Specify online retention policy
- Choose online replication
- Summary
- Status

Running a consistency check on a replica that has become inconsistent allows DPM to continue protecting the data source. You can start a consistency check manually or allow DPM to run it automatically. Use the methods below to customize how DPM can run a consistency check.

Run a consistency check if a replica becomes inconsistent

Select this method if you want DPM to automatically run a consistency check when it finds a replica in an inconsistent state. This method may require DPM to use additional CPU and disk resources.

Run a daily consistency check according to the following schedule

Select this method if you want DPM to check for inconsistent replicas at a specified time every day and then run a consistency check if it finds one. This method may require additional CPU and disk resources during the specified hours.

Start time: 12:00 AM

Maximum duration: 8 hours

Cannot exceed 480 hours (20 days).

< Back Next > Cancel Help

Create New Protection Group X

### Specify Online Protection Data

Specify the data that you would like DPM to help protect online.

**Steps:**

- Welcome
- Select protection group type
- Select group members
- Select data protection method
- Select short-term goals
- Review disk storage allocation
- Choose replica creation method
- Choose consistency check options
- Specify online protection data**
- Specify online backup schedule
- Specify online retention policy
- Choose online replication
- Summary
- Status

Select the data source you want to protect online.

Protect auto protected SQL DBs, VMs to disk to cloud automatically

Selected members	Computer
<input checked="" type="checkbox"/> D:\ (Users Documents, Backup, DATA-02, DATA-03)	FSRV01.VIRT.LAB
<input type="checkbox"/> D:\MountPoints\MountPoint-FSRV01	FSRV01.VIRT.LAB

Create New Protection Group ✕

### Specify Online Backup Schedule

Specify online backup schedule which DPM will use to generate your protection plan

**Steps:**

- Welcome
- Select protection group type
- Select group members
- Select data protection method
- Select short-term goals
- Review disk storage allocation
- Choose replica creation method
- Choose consistency check options
- Specify online protection data
- Specify online backup schedule**
- Specify online retention policy
- Choose online replication
- Summary
- Status

☁ Define the schedule when you want to create a backup copy

Schedule a backup every

Day     Week     Month     Year

At following times (Maximum allowed is two times a day)

9:00 PM    None

**i** DPM will create an online recovery point using the latest DPM replica on disk. No new data will be transferred from the protected computers. If you would like DPM to help protect the latest computer data online, please create a new recovery point on disk before creating an online recovery point.

< Back    Next >    Cancel    Help

Create New Protection Group X

### Specify Online Retention Policy

Specify online backup schedule which DPM will use to generate your protection plan

**Steps:**

- Welcome
- Select protection group type
- Select group members
- Select data protection method
- Select short-term goals
- Review disk storage allocation
- Choose replica creation method
- Choose consistency check options
- Specify online protection data**
- Specify online backup schedule
- Specify online retention policy
- Choose online replication
- Summary
- Status

Specify the retention policy which DPM will use to generate your protection plan

Daily Retention policy  
Retain backup copies taken on \_\_\_\_\_ At 9:00 PM for 180 Days

Weekly Retention Policy  
Retain backup copies taken on Saturday At  9:00 PM for 104 Weeks

Monthly Retention Policy  
Retain backup copies taken on  Last Saturday At  9:00 PM for 60 Months   
 Day(s) 1

Yearly Retention Policy  
Retain backup copies taken on  Last Saturday of March At  9:00 PM for 10 Years   
 Day(s) 1 of March




Create New Protection Group X

### Choose Online Replication

To Protect the data you have selected, you must initially copy the selected data to Azure Backup Storage

**Steps:**

- Welcome
- Select protection group type
- Select group members
- Select data protection method
- Select short-term goals
- Review disk storage allocation
- Choose replica creation method
- Choose consistency check options
- Specify online protection data
- Specify online backup schedule
- Specify online retention policy
- Choose online replication**
- Summary
- Status

 DPM must create initial backup copy to the Azure Backup storage. How do you want to create the initial backup?

Automatically over the network

Offline Backup

To create an offline backup, please read the instructions for the Import Workflow [here](#)

Staging Location  
Enter local folder or network share to which the initial backup copy needs to be staged

Azure Publish Settings  
Select Azure Publish Settings file for the Azure account where the initial backup copy would be shipped


Azure Import Job Name  
Define a name for the Azure Import Job which would be used as a reference to ship the initial copy of disk

Azure Subscription ID  
Enter Azure Subscription ID associated with the Azure Import Job mentioned above

Azure Storage Account  
Enter Azure Storage Account associated with the Azure Import Job mentioned above

Azure Storage Container  
Enter destination blob storage container to which the files will be imported

Create New Protection Group X

 **Summary**  
DPM is ready to create the File Server Protection Group protection group.

**Steps:**

- Welcome
- Select protection group type
- Select group members
- Select data protection method
- Select short-term goals
- Review disk storage allocation
- Choose replica creation method
- Choose consistency check options
- Specify online protection data
- Specify online backup schedule
- Specify online retention policy
- Choose online replication
- **Summary**
- Status


Review the settings, and then click Create Group to create the File Server Protection Group protection group.

Protection group members:

\\FSRV01.VIRT.LAB\Users Documents  
D:\Backup  
D:\DATA-02  
D:\DATA-03  
D:\MountPoints\MountPoint-FSRV01

Protection group settings:

Setting	Details
Short-term retention range	7 Day(s)
Synchronization	Every 15 minutes
Recovery points (files)	8:00 AM, 12:00 PM, 6:00 PM Everyday
Replica creation	Now
Online backup members	1 of 2
Online backup frequency	Daily
Online backup schedule	9:00 PM Sunday, Monday, Tuesday, Wednesday, Thursday, Friday, ...

 You can [optimize performance](#) of this protection group now or you can do it later from the actions pane.

< Back Create Group Cancel Help

Create New Protection Group

**Status**

**Steps:**

- Welcome
- Select protection group type
- Select group members
- Select data protection method
- Select short-term goals
- Review disk storage allocation
- Choose replica creation method
- Choose consistency check options
- Specify online protection data
- Specify online backup schedule
- Specify online retention policy
- Choose online replication
- Summary
- Status

**Tasks**

Task	Results
Create protection group: File Server Protection Group	Success
Allocate replica for D:\	Success
Allocate replica for D:\MountPoints\MountPoint-FSRV01	Success
Update online backup policy for D:\	Success

**i** DPM does not protect reparse points found in file systems, except for deduplication reparse points, which are protected. If you have selected volumes or folders in this protection group, all data is protected except for the unprotected reparse points. Read [this link](#), page of DPM 2016 Help for more details on unsupported data.

Close

System Center DPM Administrator Console

File Action View Help

New Consistency check Recovery point Remove Move disk storage Disk Online Tape Self service recovery Disk allocation Tape catalog retention Recovery point status Check updates Options About

Protection Group Member / Type Protection Status Online Protection

Search list below Search in details also (Slow)

**Protection Group: File Server Protection Group** (Total members: 5)

Protection Group Member	Type	Protection Status	Online Protection
<b>Computer: FSRV01.VIRT.LAB</b>			
WFSRV01.VIRT.LAB\Users Documents	Share	OK	Enabled
D:\Backup	Folder	OK	Enabled
D:\DATA-02	Folder	OK	Enabled
D:\DATA-03	Folder	OK	Enabled
D:\MountPoints\MountPoint-FSRV01	Volume	OK	-

**Details: WFSRV01.VIRT.LAB\Users Documents**

**Status:** OK  
**Replica path:** [Click to view details](#)  
**Latest recovery point:** 11/11/2018 8:54:45 AM  
**Oldest recovery point:** 11/11/2018 8:54:45 AM  
**Total recovery points:** 1  
**Storage consumed:** 273.13 MB

Monitoring Protection

System Center DPM Administrator Console

File Action View Help

New Modify Add online protection Delete Optimize

Protection group

Data Source Health

- Critical (0)
- OK (10)
- Warning (0)

All Protection Groups

- File Server Protection Group
- SQL Protection Group

Monitoring

**Protection**

Recovery

Reporting

Management

Stop Protection - File Server Protection Group

You have chosen to stop protecting File Server Protection Group.  
 You are removing members from a protection group. Do you want to delete associated replicas and tapes (if applicable) by expiring the data sets stored in them?

Retain protected data  
 Retains the replica on the disk with associated recovery points and tapes for the specified retention range.

Delete protected data  
 Deletes the replica on disk (if replica is on custom volume then custom volume will be deleted) and marks the tape data as expired. The tapes will be marked as free and available for use by other protection

Delete data source replicas from disk

Delete storage online  
 Deleted backup data will be retained for 14 days. After that time, backup data will be permanently deleted.

Protected data details

Replica on Disk Online

Disk space used by selected data sources: 1.27 GB  
 Current free disk space in the DPM storage pool: 93.41 GB

Details of disk space used by replica:

Source	Disk Space Used in DPM
D:\MountPoints\MountPoint-FSRV01 on FSRV01.VIRT.LAB	1.01 GB
D:\ on FSRV01.VIRT.LAB	273.50 MB

Stop Protection Cancel Help

Recovery point status reports Options

Check updates Options

Search in details also (Slow)

Online Protection

Enabled

Enabled

Enabled

-

-

-

-

-

-

System Center DPM Administrator Console

File Action View Help

New
 Consistency check
 Recovery point
 Remove point
 Move disk storage
 Disk
 Online
 Tape
 Self service recovery
 Disk allocation
 Tape catalog retention
 Recovery point status
 Check updates
 Options
 About

Protection...      Data source operations      Resume backups      Manage      Reports      Options      Help

Data Source Health  
 Critical (0)  
 OK (10)  
 Warning (0)

All Protection Groups  
 File Server Protection Group  
 SQL Protection Group

Monitoring  
**Protection**  
 Recovery  
 Reporting  
 Management

Group by:  Protection group  Computer

Search list below

Protection Group Member	Type	Protection Status	Online Protection
<b>Protection Group: File Server Protection Group</b> (Total members: 4)			
<b>Computer: FSRV01.VIRT.LAB</b>			
\\FSRV01.VIRT.LAB\Users Documents	Share	OK	Enabled
D:\DATA-02	Folder	OK	
D:\DATA-03	Folder	OK	
D:\MountPoints\MountPoint-FSRV01	Volume	OK	
<b>Protection Group: SQL Protection Group</b> (Total members: 6)			
<b>Computer: SC-DPM-1807.VIRT.LAB</b>			
SC-DPM-1807\DPMDB_SC_DPM_1807	SQL Data	OK	
SC-DPM-1807\master	SQL Data	OK	
SC-DPM-1807\model	SQL Data	OK	
SC-DPM-1807\msdb	SQL Data	OK	
SC-DPM-1807\ReportServer	SQL Data	OK	
SC-DPM-1807\ReportServerTempDB	SQL Data	OK	

Context menu for D:\DATA-02:  
 Perform consistency check ...  
 Create recovery point...  
 Stop protection of member...  
 Remove inactive protection...  
**Move disk storage...**  
 Switch disaster protection  
 Modify disk allocation...  
 Resume disk backups...  
 Resume azure backups...  
 Resume tape backups...  
 Recovery point status...

**Details:** D:\DATA-02  
**Status:** OK  
**Replica path:** [Click to view details](#)  
**Latest recovery point:** 11/11/2018 8:54:45 AM  
**Oldest recovery point:** 11/11/2018 8:54:45 AM

System Center DPM Administrator Console

File Action View Help

Recover Show all versions Add External DPM End-user recovery Check updates Options About Help

**Browse**

Filter servers

- Local DPM Data
  - VIRT.LAB
    - FSRV01
      - All Protected Shares
        - Users Documents
      - All Protected Volumes
        - D:\
          - D:\MountPoints\MountPoint-FSRV01
        - SC-DPM-1807

**Search**

- Search Recovery Points
  - Files and folders
  - Exchange mailboxes
  - SharePoint
- Monitoring
- Protection
- Recovery**
- Reporting
- Management

**Recovery points for: D:\**

Available recovery points are indicated in bold on the calendar.

Select the date from the calendar and the time from the drop down list for the recovery points that you want. Click recover in the Actions pane to open the Recovery Wizard.

November 2018

Recovery date: 11/11/2018

Recovery time: 8:54 AM

Recover from: Disk

**Path: D:\**

Search list below

Recoverable Item	Last Modified	Size
Users Documents	10/25/2018 7:55:39 AM	-
DATA-03	10/25/2018 7:55:36 AM	-
DATA-02	10/25/2018 7:55:34 AM	-
Backup	9/5/2018 8:41:59 PM	-

Registry Editor

File Edit View Favorites Help

Computer\HKEY\_LOCAL\_MACHINE\SOFTWARE\Microsoft\Microsoft Data Protection Manager\Configuration\DiskStorage

Name	Type	Data
(Default)	REG_SZ	(value not set)
DuplicateExtentBatchSizeInMB	REG_DWORD	0x00000064 (100)
EnableCustomAllocationOnReFSStorage	REG_SZ	1

Create New Protection Group X

### Review Disk Storage Allocation

Review disk space allocated in the storage pool for this protection group.

**Steps:**

- Welcome
- Select protection group type
- Select group members
- Select data protection method
- Select short-term goals
- Review disk storage allocation**
- Choose replica creation method
- Choose consistency check options
- Summary
- Status

Review target storage assigned for each data source and change if need be.

Disk storage allocation for new members

Total data size:	3.75 GB
Disk storage to be provisioned on DPM:	6.43 GB
Average disk space allocated for change journal on protected volumes:	300.00 MB <a href="#">Modify...</a>

Disk storage allocation details:

Data Source /	Data Size	Space To Be Provisioned	Target Storage
D:\ on FSRV01.VIRT.LAB	<input type="text" value="1.48"/> GB	2.54 GB	File System - 37.60 GB ▾
D:\MountPoints\MountPoint...	<input type="text" value="2.27"/> GB	3.89 GB	File System - 37.60 GB ▾

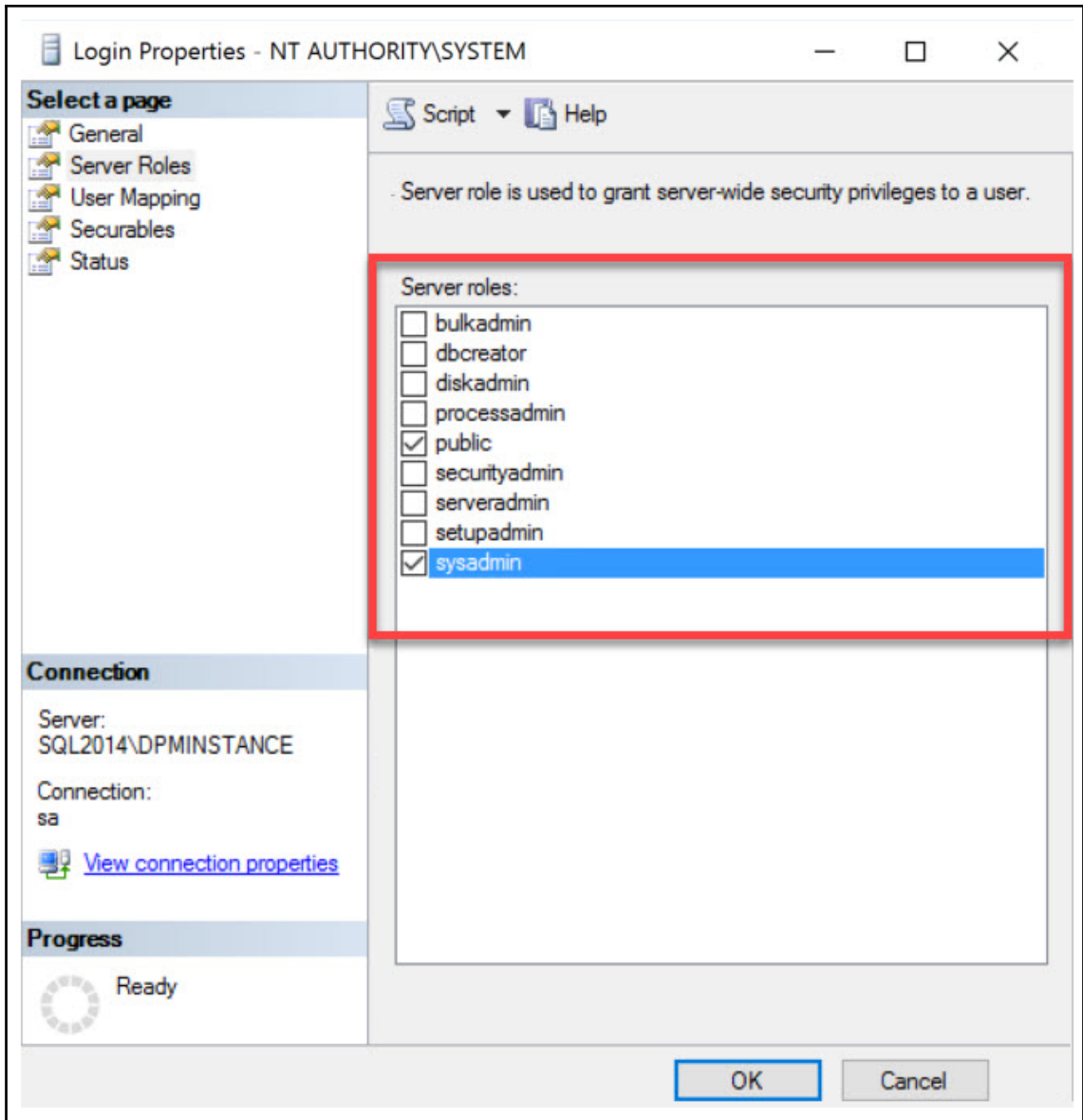
Available target disk storage:

Name /	Friendly Name	Allowed Datasource Types	Total Space	Free Space	Und...
E:\	File System	Volumes and Folders	99.93 GB	37.60 GB	0 KB
F:\	SQL Storage	SQL Databases	99.93 GB	98.28 GB	0 KB
G:\	Hyper-V & VMware...	HyperV VMs, VMware VMs	99.93 GB	98.28 GB	0 KB

**i** For certain data sources like File folders, System State and Bare Metal Recovery, approximate sizes are considered. You can update data size (and target storage if need be) of the corresponding data source above if actual size is known.

[< Back](#) [Next >](#) [Cancel](#) [Help](#)





Protection Group: SQL Server VMM Protection Group (Total members: 4)			
Computer: SC-VMM-1807.VIRT.LAB			
SC-VMM-1807\master	SQL Data	✗	Unable to configure protection
SC-VMM-1807\model	SQL Data	✗	Unable to configure protection
SC-VMM-1807\msdb	SQL Data	✗	Unable to configure protection
SC-VMM-1807\VirtualManagerDB	SQL Data	✗	Unable to configure protection

Create New Protection Group

### Select Group Members.

Select the data that you want to protect.

**Steps:**

- Welcome
- Select protection group type
- Select group members
- Select data protection method
- Select short-term goals
- Choose consistency check options
- Summary
- Status

To choose the data to protect, select the check boxes in the Available members section. To exclude a folder, expand the directory. If you do not see the data source you want to protect in the tree below, click the following link for a list of unsupported configurations. [Unsupported configurations](#)

**Available members**

- VIRT.LAB
  - FSRV01
  - SC-DPM-1807
  - SC-VMM-1807
    - All Shares
    - SQL
      - All SQL Servers
        - SC-VMM-1807
          - master
          - model
          - msdb
          - VirtualManagerDB
  - All Volumes
  - System Protection
  - VMM Express Writer

**Selected members**

Selected Members	Computer
SC-VMM-1807\VirtualManagerDB	SC-VMM-1807...

Remove

Excluded folders: 0 View

Excluded file types: 0 Exclude Files ...

Update data sources  
Refresh to clear the cache and retrieve the latest data

Refresh

< Back   Next >   Cancel   Help

**Create New Protection Group** [Close]

**Select Group Members.**  
Select the data that you want to protect.

**Steps:**

- Welcome
- Select protection group type
- Select group members
- Select data protection method
- Select short-term goals
- Choose consistency check options
- Summary
- Status

To choose the data to protect, select the check boxes in the Available members section. To exclude a folder, expand the directory. If you do not see the data source you want to protect in the tree below, click the following link for a list of unsupported configurations: [Unsupported configurations](#)

**Available members**

- FSRV01
- SC-DPM-1807
- SC-VMM-1807
- All Shares
- All SQL Servers
  - (Auto) SC-VMM-1807
    - master
    - model
    - msdb
    - VirtualManagerDB
- All Volumes
- System Protection
- VMM Express Writer

Update data sources  
Refresh to clear the cache and retrieve the latest data

**Selected members**

Selected Members	Computer
SC-VMM-1807\VirtualManagerDB	SC-VMM-1807...
SC-VMM-1807\master	SC-VMM-1807...
SC-VMM-1807\model	SC-VMM-1807...
SC-VMM-1807\msdb	SC-VMM-1807...

Excluded folders: 0

Excluded file types: 0

Create New Protection Group X

### Select Data Protection Method

DPM can help provide disk, online and tape based data protection.


**Steps:**


- Welcome
- Select protection group type
- Select group members
- Select data protection method
- Select short-term goals
- Choose consistency check options
- Summary
- Status


Protection group name:

Protection method

Select your protection method.

  I want short-term protection using:

  I want online protection

  I want long-term protection using tape

Protection using tape options are disabled as no tape libraries were detected or the protection group contains data sources that cannot be protected on tape.

< Back   Next >   Cancel   Help


Create New Protection Group X

### Specify Short-Term Goals

DPM will create a protection plan using your short-term recovery goals.

**Steps:**

- Welcome
- Select protection group type
- Select group members
- Select data protection method
- Select short-term goals
- Review disk storage allocation
- Choose replica creation method
- Choose consistency check options
- Summary
- Status

 Specify your short-term recovery goals for disk-based protection.

Retention range:  days


Synchronization frequency:  Every   Just before a recovery point

**Application recovery points**

For applications the recovery point is as per synchronization frequency when they support incremental, otherwise the recovery point is as per express full backup.

Recovery points: Based on synchronization frequency (Every 60 minutes)

Express Full Backup:

 Recovery points will be created for some members in the protection group based on the express full backup schedule. To view members for which full backup is supported, click [view members](#). This list includes Exchange Servers for which copy backup is specified.

Create New Protection Group X

### Review Disk Storage Allocation

Review disk space allocated in the storage pool for this protection group.

Review target storage assigned for each data source and change if need be.

Disk storage allocation for new members

Total data size: 0.18 GB

Disk storage to be provisioned on DPM: 260.00 MB

Disk storage allocation details:

Data Source /	Data Size	Space To Be Provisioned	Target Storage
SC-VMM-1807\master on SC-VMM...	0.01 GB	10.00 MB	All Workloads - 93.41 GB
SC-VMM-1807\model on SC-VMM...	0.02 GB	30.00 MB	All Workloads - 93.41 GB
SC-VMM-1807\msdb on SC-VMM...	0.02 GB	30.00 MB	All Workloads - 93.41 GB
SC-VMM-1807\VirtualManagerDB...	0.14 GB	190.00 MB	SQL Workloads SSD - 98.09 GB

Available target disk storage:

Name /	Friendly Name	Allowed Datasource Types	Total Space	Free Space	U...
E:\	All Workloads	All	99.93 GB	93.41 GB	0 KB
F:\	SQL Workloads SSD	All	99.93 GB	98.09 GB	0 KB

< Back
Next >
Cancel
Help

- Steps:**
- Welcome
  - Select protection group type
  - Select group members
  - Select data protection method
  - Select short-term goals
  - Review disk storage allocation
  - Choose replica creation method
  - Choose consistency check options
  - Summary
  - Status

Create New Protection Group

## Choose Replica Creation Method

To protect the data you have selected, you must initially copy the selected data to the Data Protection Manager computer.

**Steps:**

- Welcome
- Select protection group type
- Select group members
- Select data protection method
- Select short-term goals
- Review disk storage allocation
- Choose replica creation method**
- Choose consistency check options
- Summary
- Status

DPM must create a replica to copy the selected data to the DPM server. How do you want to create the replic

Replica in DPM Server

Automatically over the network

Now  Later

11/12/2018 9:53:03 AM

Manually

You must transfer the data using removable media.  
For large amounts of data, this operation may be faster than replica creation across the network.

< Back Next > Cancel Help

Create New Protection Group

## Consistency check options

Select how you want to run consistency check on inconsistent replicas.

**Steps:**

- Welcome
- Select protection group type
- Select group members
- Select data protection method
- Select short-term goals
- Review disk storage allocation
- Choose replica creation method
- Choose consistency check options**
- Summary
- Status

Running a consistency check on a replica that has become inconsistent allows DPM to continue protecting the data source. You can start a consistency check manually or allow DPM to run it automatically. Use the methods below to customize how DPM can run a consistency check.

Run a consistency check if a replica becomes inconsistent

Select this method if you want DPM to automatically run a consistency check when it finds a replica in an inconsistent state. This method may require DPM to use additional CPU and disk resources.

Run a daily consistency check according to the following schedule

Select this method if you want DPM to check for inconsistent replicas at a specified time every day and then run a consistency check if it finds one. This method may require additional CPU and disk resources during the specified hours.

Start time: 12:00 AM

Maximum duration: 8 hours

Cannot exceed 480 hours (20 days).

< Back Next > Cancel Help

Create New Protection Group

### Summary

DPM is ready to create the SQL Server VMM Protection Group protection group.

**Steps:**

- Welcome
- Select protection group type
- Select group members
- Select data protection method
- Select short-term goals
- Review disk storage allocation
- Choose replica creation method
- Choose consistency check options
- Summary**
- Status

Review the settings, and then click Create Group to create the SQL Server VMM Protection Group protection group.

Protection group members:

- SC-VMM-1807\master
- SC-VMM-1807\model
- SC-VMM-1807\msdb
- SC-VMM-1807\VirtualManagerDB

Protection group settings:

Setting	Details
Short-term retention range	7 Day(s)
Synchronization	Every 60 minutes
Recovery points (Config 1)	Every 60 minutes
Recovery points (Config 2)	8:00 PM Everyday
Replica creation	Now

**i** You can [optimize performance](#) of this protection group now or you can do it later from the actions pane.

< Back   Create Group   **Cancel**   Help



### Create New Protection Group

**Status**

**Steps:**

- Welcome
- Select protection group type
- Select group members
- Select data protection method
- Select short-term goals
- Review disk storage allocation
- Choose replica creation method
- Choose consistency check options
- Summary
- Status**

**Tasks**

Task	Results
Create protection group: SQL Server VMM Protection Group	Success
Allocate replica for SC-VMM-1807\master	Success
Allocate replica for SC-VMM-1807\model	Success
Allocate replica for SC-VMM-1807\msdb	Success
Allocate replica for SC-VMM-1807\VirtualManagerDB	Success

**Info:** DPM does not protect reparse points found in file systems, except for deduplication reparse points, which are protected. If you have selected volumes or folders in this protection group, all data is protected except for the unprotected reparse points. Read [this link](#) page of DPM 2016 Help for more details on unsupported data.

**Close**

### System Center DPM Administrator Console

File Action View Help

Protection Group Member / Type / Protection Status / Online Protection

**Protection Group: SQL Server VMM Protection Group** (Total members: 4)

Protection Group Member	Type	Protection Status	Online Protection
<b>Computer: SC-VMM-1807.VIRT.LAB</b>			
SC-VMM-1807\master	SQL Data	OK	-
SC-VMM-1807\model	SQL Data	OK	-
SC-VMM-1807\msdb	SQL Data	OK	-
SC-VMM-1807\VirtualManagerDB	SQL Data	OK	-

**Details: SC-VMM-1807\VirtualManagerDB**

**Status:** OK  
**Replica path:** [Click to view details](#)  
**Latest recovery point:** 11/12/2018 10:09:07 AM  
**Oldest recovery point:** 11/12/2018 10:09:07 AM  
**Total recovery points:** 1  
**Storage consumed:** 153.00 MB  
**Parent instance:** SC-VMM-1807

Monitoring  
 Protection

Create New Protection Group

### Welcome to the New Protection Group Wizard

This wizard helps you create a new protection group that DPM will use to protect data.

**Steps:**

- Welcome
- Select protection group type
- Select group members
- Specify protection rules
- Select data protection method
- Select short-term goals
- Choose consistency check options
- Summary
- Status

You can create two kinds of protection groups. Select one of them below

Servers  
Select this option for backing up file servers and application servers. Before selecting this option, ensure that the DPM protection agent is already installed on the target server. These computers must be online at the time of configuring protection. You will need to select the specific resources you want to backup.

Clients  
Select this option for backing up data from laptops and desktops. You can install the DPM protection agent after completing the configuration on the DPM server.  
**i** To configure secondary protection for laptops and desktops, select the Servers option.

< Back   Next >   Cancel   Help

Create New Protection Group

### Select Group Members.

Select the data that you want to protect.

**Steps:**

- Welcome
- Select protection group type
- Select group members
- Select data protection method
- Select short-term goals
- Choose consistency check options
- Summary
- Status

To choose the data to protect, select the check boxes in the Available members section. To exclude a folder, expand the If you do not see the data source you want to protect in the tree below, click the following link for a list of unsupported [Unsupported configurations](#)

**Available members**

- VIRT.LAB
  - FSRV01
    - All Shares
    - All Volumes
    - System Protection
      - Bare Metal Recovery
      - System State
    - SC-DPM-1807
    - SC-VMM-1807

**Update data sources**  
Refresh to clear the cache and retrieve the latest data  
Refresh

**Selected members**

Selected Members	Computer
Computer\System Protection\...	FSRV01.VIRT.LAB
Computer\System Protection\...	FSRV01.VIRT.LAB

Remove

Excluded folders: 0 View  
Excluded file types: 0 Exclude Files ...

< Back   Next >   Cancel   Help

Create New Protection Group
✕

### Select Data Protection Method

DPM can help provide disk, online and tape based data protection.

**Steps:**

- Welcome
- Select protection group type
- Select group members
- **Select data protection method**
- Select short-term goals
- Choose consistency check options
- Summary
- Status

Protection group name:

**Protection method**

Select your protection method.

I want short-term protection using: Disk

I want online protection

I want long-term protection using tape  
Protection using tape options are disabled as no tape libraries were detected or the protection group contains data sources that cannot be protected on tape.

< Back
Next >
Cancel
Help

Create New Protection Group
✕

### Specify Short-Term Goals

DPM will create a protection plan using your short-term recovery goals.

**Steps:**

- Welcome
- Select protection group type
- Select group members
- Select data protection method
- Select short-term goals
- **Review disk storage allocation**
- Choose replica creation method
- Choose consistency check options
- Summary

Specify your short-term recovery goals for disk-based protection.

Retention range:  days

**Application recovery points**

For applications the recovery point is as per synchronization frequency when they support incremental, otherwise the recovery point is as per express full backup.

Recovery points: Based on express full schedule (8:00 PM Everyday)

Express Full Backup: 8:00 PM Everyday Modify ...

< Back
Next >
Cancel
Help

Create New Protection Group X

**Review Disk Storage Allocation**  
Review disk space allocated in the storage pool for this protection group.

**Steps:**

- Welcome
- Select protection group type
- Select group members
- Select data protection method
- Select short-term goals
- **Review disk storage allocation**
- Choose replica creation method
- Choose consistency check options
- Summary
- Status

Review target storage assigned for each data source and change if need be.

Disk storage allocation for new members

Total data size: 20.00 GB

Disk storage to be provisioned on DPM: 34.24 GB

Disk storage allocation details:

Data Source /	Data Size	Space To B...	Target Storage
Computer\System Protection on FSRV01...	20.00 GB	34.24 GB	SSD Volume - 63.70 GB

Available target disk storage:

Name /	Friendly Na...	Allowed Datasource ...	Total Space	Free Space	Underprovi...
E:\	All Workloads	All	99.93 GB	93.36 GB	0 KB
F:\	SSD Volume	All	99.93 GB	63.70 GB	0 KB

Create New Protection Group X

**Choose Replica Creation Method**  
To protect the data you have selected, you must initially copy the selected data to the Data Protection Manager computer.

**Steps:**

- Welcome
- Select protection group type
- Select group members
- Select data protection method
- Select short-term goals
- Review disk storage allocation
- **Choose replica creation method**
- Choose consistency check options
- Summary
- Status

DPM must create a replica to copy the selected data to the DPM server. How do you want to create the replica?

Replica in DPM Server

Automatically over the network

Now  Later

11/14/2018  9:12:15 AM

Manually  
You must transfer the data using removable media.  
For large amounts of data, this operation may be faster than replica creation across the network.

Create New Protection Group

### Consistency check options

Select how you want to run consistency check on inconsistent replicas.

**Steps:**

- Welcome
- Select protection group type
- Select group members
- Select data protection method
- Select short-term goals
- Review disk storage allocation
- Choose replica creation method
- Choose consistency check options**
- Summary
- Status

Running a consistency check on a replica that has become inconsistent allows DPM to continue protecting the data source. You can start a consistency check manually or allow DPM to run it automatically. Use the methods below to customize how DPM can run a consistency check.

Run a consistency check if a replica becomes inconsistent

Select this method if you want DPM to automatically run a consistency check when it finds a replica in an inconsistent state. This method may require DPM to use additional CPU and disk resources.

Run a daily consistency check according to the following schedule

Select this method if you want DPM to check for inconsistent replicas at a specified time every day and then run a consistency check if it finds one. This method may require additional CPU and disk resources during the specified hours.

Start time: 12:00 AM

Maximum duration: 8 hours

Cannot exceed 480 hours (20 days).

< Back Next > Cancel Help

Create New Protection Group

### Summary

DPM is ready to create the BMR Protection Group protection group.

**Steps:**

- Welcome
- Select protection group type
- Select group members
- Select data protection method
- Select short-term goals
- Review disk storage allocation
- Choose replica creation method
- Choose consistency check options
- Summary**
- Status

Review the settings, and then click Create Group to create the BMR Protection Group protection group.

Protection group members:

Computer\System Protection\Bare Metal Recovery  
Computer\System Protection\System State

Protection group settings:

Setting	Details
Short-term retention range	21 Day(s)
Recovery points (applications)	8:00 PM Everyday
Replica creation	Now

*i* You can [optimize performance](#) of this protection group now or you can do it later from the actions pane.

< Back Create Group Cancel Help



System Center DPM Administrator Console

File Action View Help

Inactivate Subscribe Check updates Options About Help

Alerts Options Help

**Alerts**

Show inactive alerts

All Alerts

- Critical (1)
- Warning (1)
- Information (6)

**Jobs**

Default Filters

- All jobs
- All jobs in progress
- Failed jobs for yesterday and today
- Today's jobs

Custom Filters

- Azure Recovery

Monitoring

- Protection
- Recovery

Group by:  Protection group  Computer  Severity

Search list below    Search in details also (Slow)

Occurred Since	Affected Area	Computer	Protection Group	Alert
<b>Information (Total alerts: 6)</b>				
11/14/2018 9:22:13 AM	Computer\System Protection	fsv01.virt.lab	BMR Protection Group	Replica creation in progress
11/12/2018 5:29:10 PM	SC-VMM-1807\VirtualManagerDB	sc-vmm-180...	SQL Server VMM Prote...	Recovery success
11/11/2018 2:36:53 PM	D:\MountPoints\MountPoint-FSRV01	fsv01.virt.lab	File Server Protection...	Recovery success
11/11/2018 2:35:39 PM	D:\MountPoints\MountPoint-FSRV01	fsv01.virt.lab	File Server Protection...	Recovery success
11/11/2018 11:59:46 AM	D:\MountPoints\MountPoint-FSRV01	fsv01.virt.lab	File Server Protection...	Recovery success
11/11/2018 11:57:40 AM	D:\MountPoints\MountPoint-FSRV01	fsv01.virt.lab	File Server Protection...	Recovery success

**Details: Computer\System Protection**

**Affected area:** Computer\System Protection

**Occurred since:** 11/14/2018 9:22:13 AM

**Description:** The replica of System Protection Computer\System Protection on FSRV01.VIRT.LAB is being created. After the initial replica is created, only incremental changes are synchronized. (ID 3105)

[More information](#)

**Recommended action:** No action required.

**Resolution:** To dismiss the alert, click below [Inactivate](#)

System Center DPM Administrator Console

File Action View Help

New Consistency check Recovery point Remove Move disk storage Disk Online Tape Self service recovery Tape catalog retention Recovery point status Check updates Options About Help

Protecti... Data source operations Resume backups Manage Reports Options Help

**Data Source Health**

- Critical (0)
- OK (16)
- Warning (0)

**All Protection Groups**

- BMR Protection Group
- File Server Protection Group
- SQL Protection Group
- SQL Server VMM Protection Group

Group by:  Protection group  Computer

Search list below    Search in details also (Slow)

Protection Group Member	Type	Protection Status	Online Protection
<b>Protection Group: BMR Protection Group (Total members: 2)</b>			
<b>Computer: FSRV01.VIRT.LAB</b>			
Computer\System Protection\Bare Metal Recovery	Bare Metal Recovery	OK	-
Computer\System Protection\System State	System State	OK	-

**Details: Computer\System Protection\Bare Metal Recovery**

**Status:** OK

**Replica path:** [Click to view details](#)

**Latest recovery point:** 11/14/2018 10:15:44 AM

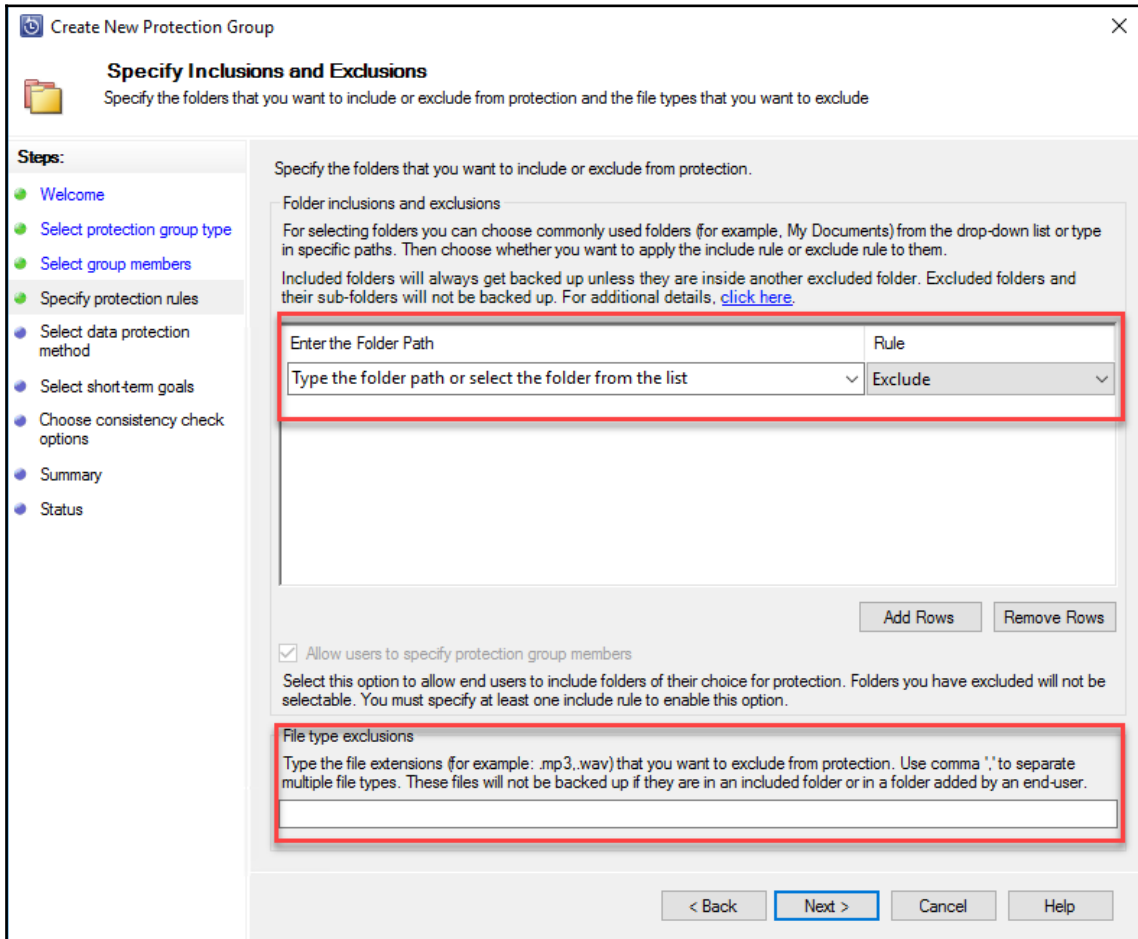
**Oldest recovery point:** 11/14/2018 10:15:44 AM

**Total recovery points:** 1

**Storage consumed:** 23.18 GB

```
<Size>1024</Size>
<UseDRWithCC>true</UseDRWithCC>
- <DatasourceCapabilities ExtendedCapabilityFlags="0" WaitForDatasourceServerTypeLock="false"
  DisplayTypeField="Disconnected Client" DisplayNameField="ComponentName"
  SupportedBackupType="Full">
  <DatasourceInfo xmlns="http://schemas.microsoft.com/2003/dls/DatasourceCapability.xsd"
    ValidateComponentFlags="15" Version="01.00.0000.00" WriterId="7b2e4c3d-876f-4535-b5c9-
    b344d4f05120"/>
  <OverlappedOperations
    xmlns="http://schemas.microsoft.com/2003/dls/DatasourceCapability.xsd"
    BackupRecovery="false" Recovery="false" Backup="0"/>
  </DatasourceCapabilities>
</DatasourceConfig>
- <DatasourceConfig>
  <WriterId>8c3d00f9-3ce9-4563-b373-19837bc2835e</WriterId>
  <Version>01.00.0000.00</Version>
  <VssWriterInvolved>false</VssWriterInvolved>
  <LogicalPath>Computer</LogicalPath>
  <ComponentName>System Protection</ComponentName>
  <FilesToProtect>E:\WindowsImageBackup\* </FilesToProtect>
  <Size>51200</Size>
  <UseDRWithCC>true</UseDRWithCC>
  - <DatasourceCapabilities ExtendedCapabilityFlags="0" WaitForDatasourceServerTypeLock="false"
    DisplayTypeField="System Protection" DisplayNameField="ComponentName"
    SupportedBackupType="Full">
    <DatasourceInfo xmlns="http://schemas.microsoft.com/2003/dls/DatasourceCapability.xsd"
      ValidateComponentFlags="15" Version="01.00.0000.00" WriterId="8c3d00f9-3ce9-4563-b373-
      19837bc2835e"/>
    <OverlappedOperations
      xmlns="http://schemas.microsoft.com/2003/dls/DatasourceCapability.xsd"
      BackupRecovery="false" Recovery="false" Backup="0"/>
    </DatasourceCapabilities>
  </DatasourceConfig>
```

# Chapter 6: Securing Windows Client with DPM





Create New Protection Group

### Specify Short-Term Goals

DPM will create a protection plan using your short-term recovery goals.

**Steps:**

- Welcome
- Select protection group type
- Select group members
- Select protection rules
- Select data protection method
- Select short-term goals
- Review disk storage allocation
- Summary
- Status

Specify your short-term recovery goals for disk-based protection.

Retention range: 5 days

Synchronization frequency: Every 4 hour(s)

Client computer recovery points  
Specify recovery points for client computers.

Recovery points: 08:00, 12:00, 18:00 Everyday

Alerting option  
If you are protecting frequently disconnected computers like for which there would be lot of failures when they are not connected, you can specify when do you get alerted.

Alert me when the recovery points fail for: 14 days

< Back Next > Cancel Help

Options

SMTP Server Notifications Alert Publishing

End-user Recovery Auto Discovery

If you enable end-user recovery, users at client computers can recover files and folders from shares that are protected by Data Protection Manager.

Enable end-user recovery

To enable end-user recovery, you must configure Active Directory so that Data Protection Manager can access it. If this is the first Data Protection Manager computer in your domain on which you are enabling end-user recovery, the Active Directory schema will also be extended.

Configure Active Directory...

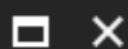
[Learn how to install the shadow copy client software.](#)

OK Cancel Help

# **Chapter 7: Protecting Microsoft Azure Stack with DPM**



## Backup controller settings



\* Backup storage location ⓘ

\\server\backups ✓

\* Username

Administrator ✓

\* Password

..... ✓

\* Confirm Password

..... ✓

\* Backups frequency in hours ⓘ

12 ✓

\* Retention period in days ⓘ

7 ✓

\* Encryption Key ⓘ

..... ✓

OK

▶ Backup now

🕒 Enable Automatic Backups

## Backup now

This backup process will take more than 15 minutes to complete and cannot be paused or stopped. Do you want to continue?

Yes

No

Create New Protection Group


### Welcome to the New Protection Group Wizard

This wizard helps you create a new protection group that DPM will use to protect data.

**Steps:**

- Welcome
- Select protection group type
- Select group members
- Select data protection method
- Select short-term goals
- Choose consistency check options
- Summary
- Status

A protection group is a collection of data sources that share the same protection configuration. You use this wizard to specify your recovery goals that are defined by retention range, synchronization and recovery point schedules.



**How data protection works:**

- DPM creates a replica of the selected data sources on the DPM server.
- DPM synchronizes the replica with the data sources and creates recovery points on a recurring schedule.
- Backups are performed as follows:
  - Disk-based and tape-based protection. DPM stores the replica of the data on disks and periodic full backups are created on tape from the recovery points on disk.
  - Tape-based protection. DPM performs periodic incremental and full backups of the protected data on tapes.
  - Online protection. DPM performs periodic backups of the protected data to Azure Backup.

Do not show this Welcome page again

< Back   Next >   Cancel   Help

Create New Protection Group X

**Welcome to the New Protection Group Wizard**  
This wizard helps you create a new protection group that DPM will use to protect data.

**Steps:**

- Welcome
- **Select protection group type**
- Select group members
- Select data protection method
- Select short-term goals
- Choose consistency check options
- Summary
- Status

You can create two kinds of protection groups. Select one of them below

Servers  
Select this option for backing up file servers and application servers. Before selecting this option, ensure that the DPM protection agent is already installed on the target server. These computers must be online at the time of configuring protection. You will need to select the specific resources you want to backup.

Clients  
Select this option for backing up data from laptops and desktops. You can install the DPM protection agent after completing the configuration on the DPM server.

**i** To configure secondary protection for laptops and desktops, select the Servers option.

**Steps:**

- Welcome
- Select protection group type
- **Select group members**
- Select data protection method
- Select short-term goals
- Choose consistency check options
- Summary
- Status

To choose the data to protect, select the check boxes in the Available members section. To exclude a folder, expand the folder. If you do not see the data source you want to protect in the tree below, click the following link for a list of unsupported configurations [Unsupported configurations](#)

**Available members**

- azurestack.local
  - s-cluster (Cluster)
  - [redacted].VM

**Update data sources**  
Refresh to clear the cache and retrieve the latest data

**Selected members**

Selected Members	Computer

Excluded folders: 0

Excluded file types: 0

# Chapter 8: Protecting Workgroups and Untrusted Domains

```
Administrator: Command Prompt
C:\DPMAgent\agents\RA\5.1.375.0\amd64\1033>DPMAgentInstaller_KB4293623_AMD64.exe
C:\DPMAgent\agents\RA\5.1.375.0\amd64\1033>_
```

```
C:\Program Files\Microsoft Data Protection Manager\DPM\bin>SetDpmServer.exe -DPMServerName SC-DPM-1807 -isNonDomainServer -Username dpmworkgroup
Make sure that this computer is not part of a perimeter network. DPM does not support protection of computers on a perimeter network.
Enter the password for 'dpmworkgroup' to connect to 'SC-DPM-1807':
Retype the password to confirm:
Enter the password for 'dpmworkgroup' to connect to 'SC-DPM-1807':
Configuring dpm server settings and firewall settings for dpm server =[SC-DPM-1807]

The following firewall exceptions has been added:
- Exception for DPMRA.exe in all profiles.
- Exception for Windows Management Instrumentation service.
- Exception for DCOM communication on port 135 (TCP and UDP) in all profiles.
Configuration completed successfully!!!
C:\Program Files\Microsoft Data Protection Manager\DPM\bin>_
```

Production Server Addition Wizard

### Select Agent Deployment Method

Select agent deployment method

**Steps:**

- Select Production Server type
- Select agent deployment method
- Select computers
- Enter credentials
- Choose restart method
- Summary
- Installation

Recommended for computers that are not behind firewalls, or computers that have the required exceptions created in the firewall. Selecting this option will install protection agent in the computers. Click help for more information radio button

Attach agents

Recommended for

- computers behind firewall.
- computers on which agent is already installed.
- computers on which agent will be installed externally.

Selecting this option will add the protected computers to the DPM server. If you have not already installed the agent, then you must manually install it on the protected computer by executing the DPMAgentInstaller. Click help for more information.

Computer on trusted domain

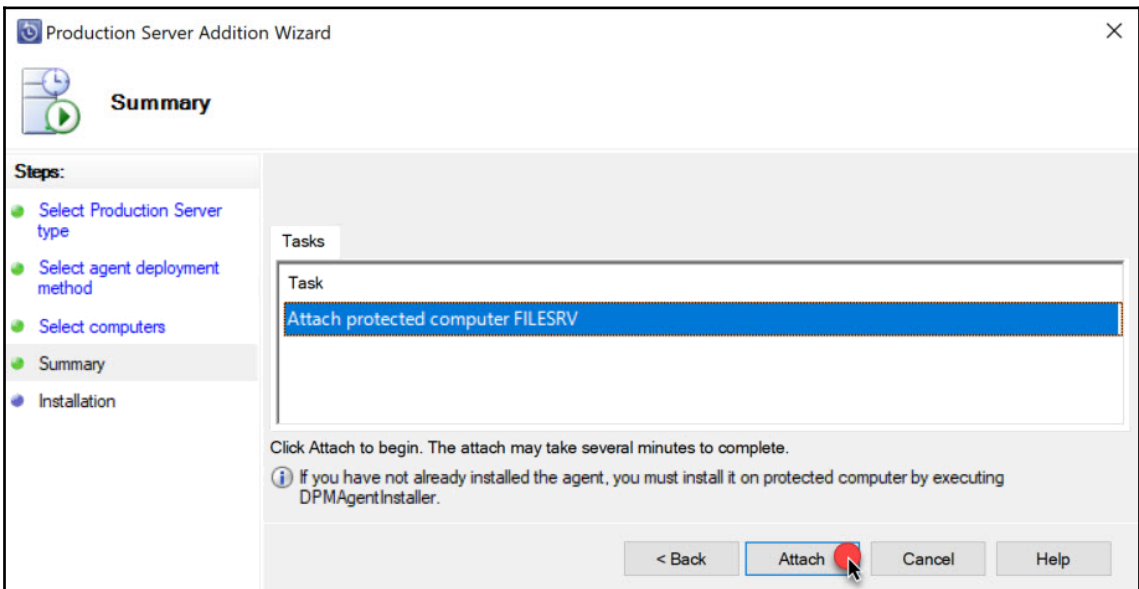
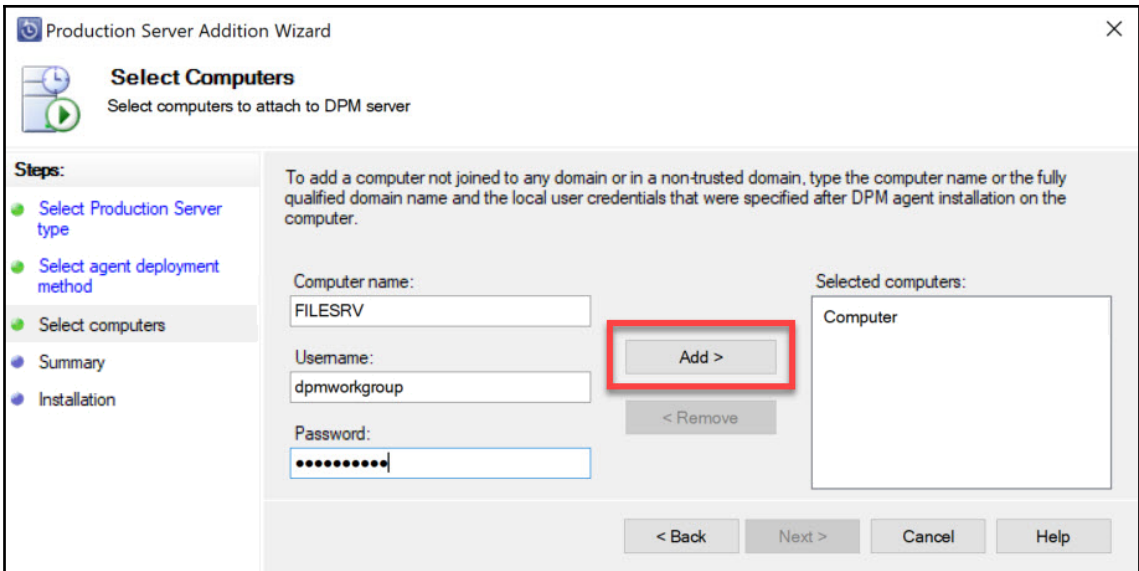
The computer belongs to the same domain as, or is in a domain that has a two-way trust with, the DPM server domain.

Computer in a workgroup or untrusted domain

The computer is part of a workgroup or on a domain that does not have two-way trust with the DPM server domain.

< Back   Next >   Cancel   Help







### Installation

You have successfully installed the agent on the selected servers.

#### Steps:

- Select Production Server type
- Select agent deployment method
- Select computers
- Summary
- Installation

#### Tasks

Task	Results
Attach protected computer FILESRV	Success

Close

Create New Protection Group X

**Select Group Members.**  
Select the data that you want to protect.

**Steps:**

- Welcome
- Select protection group type
- Select group members
- Select data protection method
- Select short-term goals
- Choose consistency check options
- Summary
- Status

To choose the data to protect, select the check boxes in the Available members section. To exclude a folder, expand the folder. If you do not see the data source you want to protect in the tree below, click the following link for a list of unsupported [Unsupported configurations](#)

**Available members**

- VIRT.LAB
  - FSRV01
  - SC-DPM-1807
  - SC-VMM-1807
  - WS2016-WDS
- Workgroup
  - FILESRV
    - All Volumes
    - System Protection

**Selected members**

Selected Members	Computer

Update data sources  
Refresh to clear the cache and retrieve the latest data

Refresh

Remove

Excluded folders: 0 View  
Excluded file types: 0 Exclude Files ...

< Back    Next >    Cancel    Help

Iusmgr - (Local Users and Groups (Local))\Users

File Action View Help

Local Users and Groups (Local)

Name	Full Name	Description
Administrator		Built-in account for administering the computer/domain
DefaultAccount		A user account managed by the system.
dpmworkgroup	dpmworkgroup	DPM backup account
Guest		Built-in account for guest access to the computer/domain

System Center DPM Administrator Console

File Action View Help

Add Disable protection Throttle computer Refresh Manage VMware Check updates Options About Help

Servers

Credenti... Options Help

Production Servers

Protected: 2  
Unprotected: 2  
Upgrade available: 0

Disk Storage

Number of disks: 0  
Number of volumes/folders: 3  
Total capacity: 349.81 GE

12.42 GB  
337.38 GB


Search list below

Computer Name	Type	Cluster Name	Domain	Agent Status
<b>Protected computers with protection agent: (2 Computers)</b>				
FSRV01	Windows Server	-	VIRT.LAB	OK
SC-VMM-1807	Windows Server	-	VIRT.LAB	OK
<b>Unprotected computers with protection agent: (2 Computers)</b>				
FILESRV	Windows Server	-	Workgroup	OK
WS2016-WDS	Windows Server	-	VIRT.LAB	OK

```
Administrator 64 bit D:\Program Files\Microsoft System Center\DPM\DPM\bin
CharbelNemnom.com #> .\Attach-NonDomainServer.ps1 -DPMServerName SC-DPM-1807 -PSName FILESRV -UserName dpmworkgroup
Password:: *****
WARNING: Connecting to DPM server: SC-DPM-1807
Attached Non Domain Server successfully
CharbelNemnom.com #> .\Update-NonDomainServerInfo.ps1 -DPMServerName SC-DPM-1807 -PSName FILESRV
New Password:: *****
WARNING: Connecting to DPM server: SC-DPM-1807
Updated Non Domain Server password successfully
CharbelNemnom.com #> .\Remove-ProductionServer.ps1 -DPMServerName SC-DPM-1807 -PSName FILESRV
WARNING: Connecting to DPM server: SC-DPM-1807
Removed ProductionServer successfully
CharbelNemnom.com #>
```

dpmworkgroup Properties ? X

Remote control	Remote Desktop Services Profile		Dial-in	
General	Member Of	Profile	Environment	Sessions

 dpmworkgroup

---

Full name:

Description:

User must change password at next logon

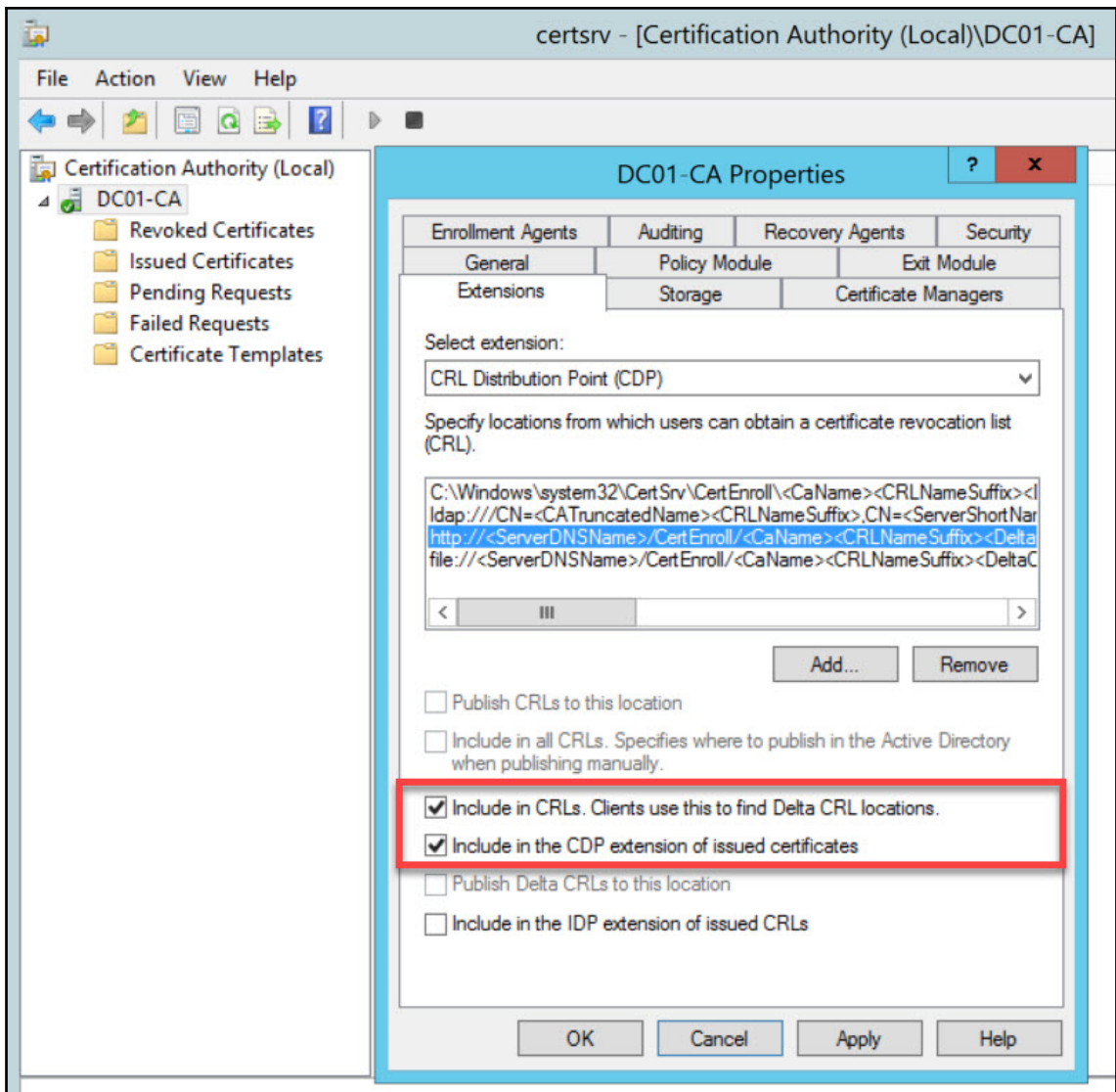
User cannot change password

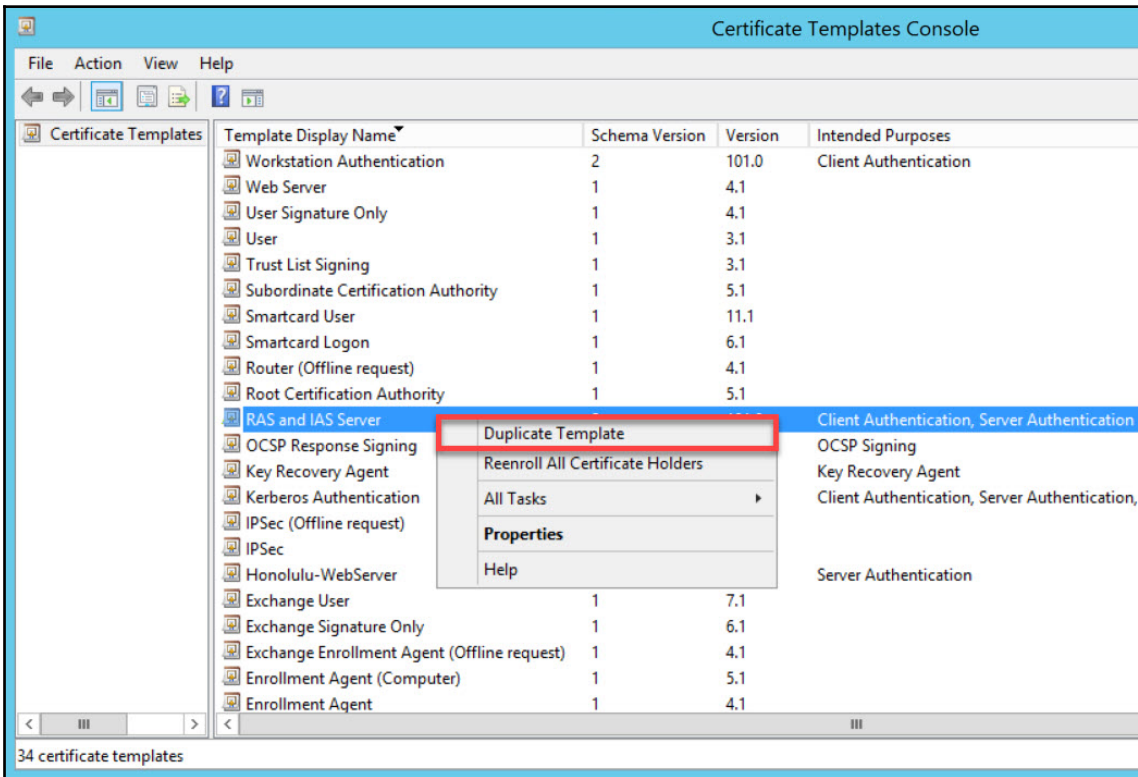
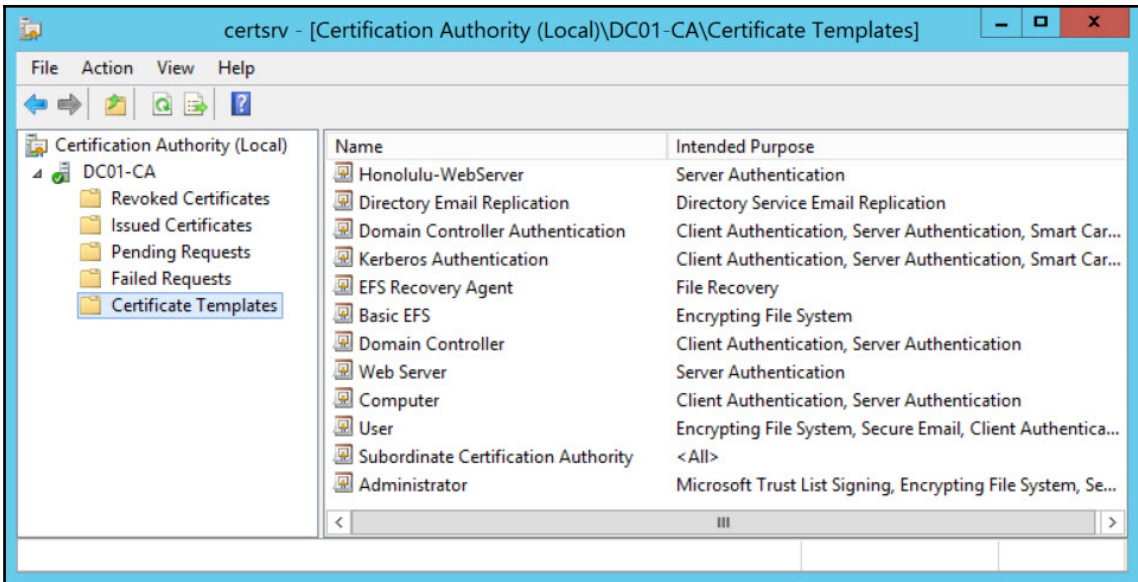
Password never expires

Account is disabled

Account is locked out

OK Cancel Apply Help





## Properties of New Template



Subject Name	Server	Issuance Requirements	
Superseded Templates		Extensions	Security
Compatibility	General	Request Handling	Cryptography
Key Attestation			

The template options available are based on the earliest operating system versions set in Compatibility Settings.

Show resulting changes

Compatibility Settings

Certification Authority  
Windows Server 2003 ▼

Certificate recipient  
Windows 8.1 / Windows Server 2012 R: ▼

These settings may not prevent earlier operating systems from using this template.

OK

Cancel

Apply

Help



## Properties of New Template



Subject Name	Server	Issuance Requirements	
Superseded Templates		Extensions	Security
Compatibility	General	Request Handling	Cryptography
Key Attestation			

Template display name:

Template name:

Validity period:

 years

Renewal period:

 weeks

Publish certificate in Active Directory

Do not automatically reenroll if a duplicate certificate exists in Active Directory

OK

Cancel

Apply

Help

## Properties of New Template



Subject Name		Server		Issuance Requirements	
Superseded Templates			Extensions		Security
Compatibility	General	Request Handling	Cryptography	Key Attestation	

Purpose:

Signature and encryption

- Delete revoked or expired certificates (do not archive)
- Include symmetric algorithms allowed by the subject
- Archive subject's encryption private key

Authorize additional service accounts to access the private key (\*)

Key Permissions...

Allow private key to be exported

Renew with the same key (\*)

For automatic renewal of smart card certificates, use the existing key if a new key cannot be created

Do the following when the subject is enrolled and when the private key associated with this certificate is used:

- Enroll subject without requiring any user input
- Prompt the user during enrollment
- Prompt the user during enrollment and require user input when the private key is used

\* Control is disabled due to [compatibility settings](#).

OK

Cancel

Apply

Help

## Properties of New Template



Subject Name		Server		Issuance Requirements	
Superseded Templates			Extensions		Security
Compatibility	General	Request Handling	Cryptography		Key Attestation

Provider Category: Legacy Cryptographic Service Provider

Algorithm name: Determined by CSP

Minimum key size: 2048

Choose which cryptographic providers can be used for requests

- Requests can use any provider available on the subject's computer
- Requests must use one of the following providers:

Providers:

<input checked="" type="checkbox"/> Microsoft RSA SChannel Cryptographic Provider	^	
<input type="checkbox"/> Microsoft DH SChannel Cryptographic Provider	≡	
<input type="checkbox"/> Microsoft Enhanced Cryptographic Provider v1.0		
<input type="checkbox"/> Microsoft Enhanced DSS and Diffie-Hellman Cryptographic Pr		
<input type="checkbox"/> Microsoft Enhanced RSA and AES Cryptographic Provider	v	

Request hash: Determined by CSP

Use alternate signature format

OK

Cancel

Apply

Help

## Properties of New Template



Superseded Templates		Extensions		Security	
Compatibility	General	Request Handling	Cryptography	Key Attestation	
Subject Name		Server	Issuance Requirements		

Supply in the request

Use subject information from existing certificates for autoenrollment renewal requests

Build from this Active Directory information

Select this option to enforce consistency among subject names and to simplify certificate administration.

Subject name format:

None

Include e-mail name in subject name

Include this information in alternate subject name:

E-mail name

DNS name

User principal name (UPN)

Service principal name (SPN)

OK

Cancel

Apply

Help

## Properties of New Template



Compatibility	General	Request Handling	Cryptography	Key Attestation
Subject Name		Server	Issuance Requirements	
Superseded Templates		Extensions	Security	

Group or user names:

- Authenticated Users
- Domain Admins (VIRT\Domain Admins)
- Enterprise Admins (VIRT\Enterprise Admins)
- RAS and IAS Servers (VIRT\RAS and IAS Servers)

Add...

Remove

Permissions for Authenticated Users

Allow

Deny

Full Control  
Read  
Write  
Enroll  
Autoenroll

For special permissions or advanced settings, click Advanced.

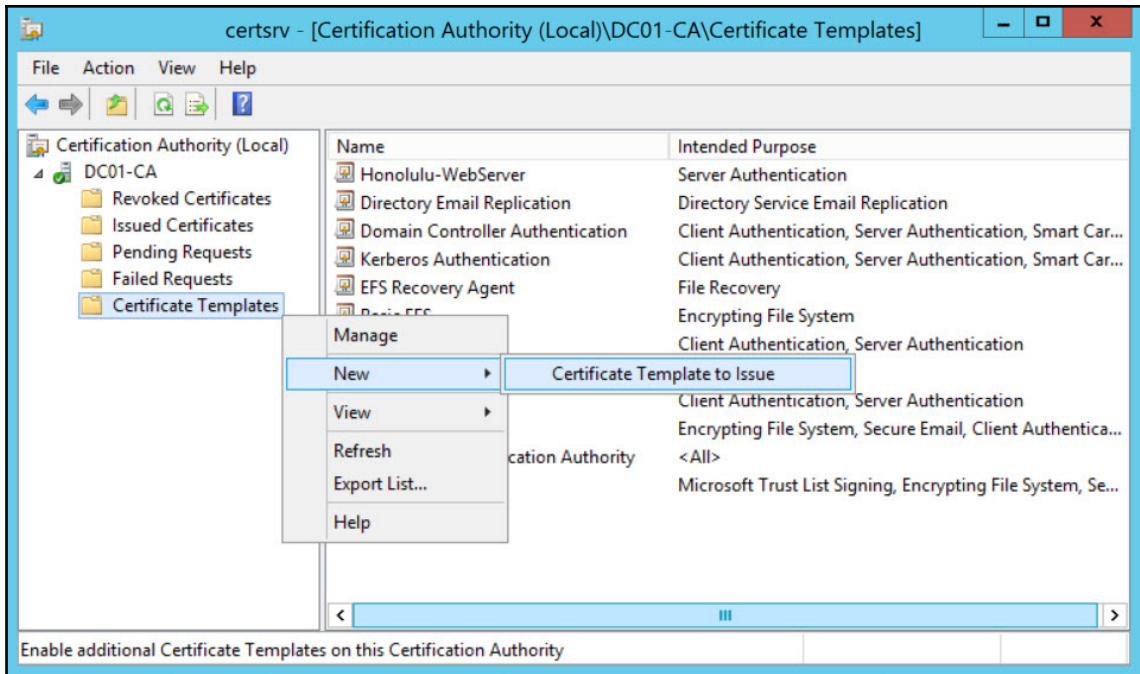
Advanced

OK

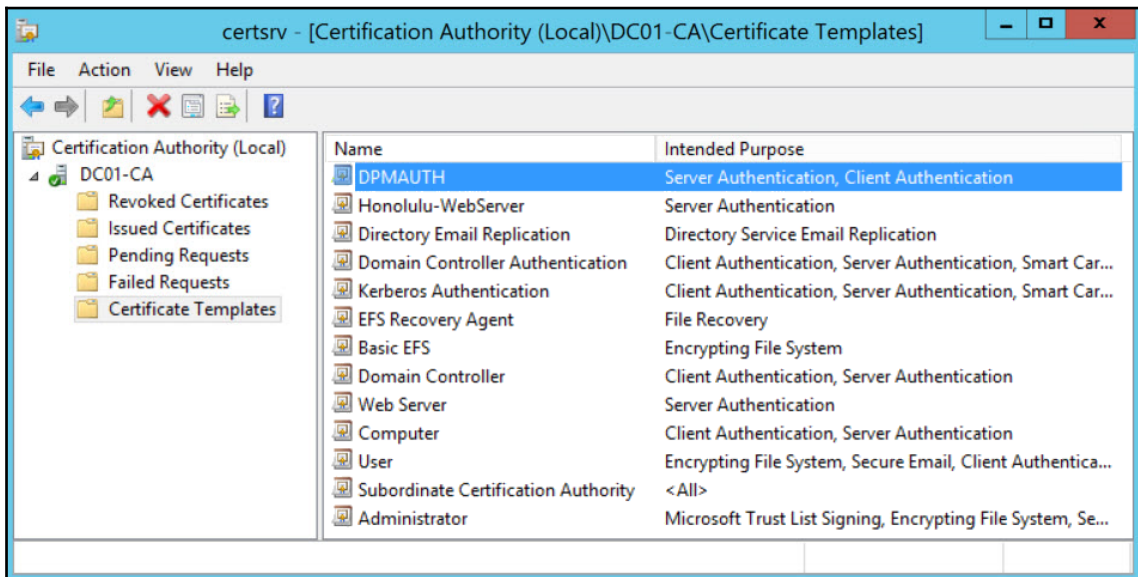
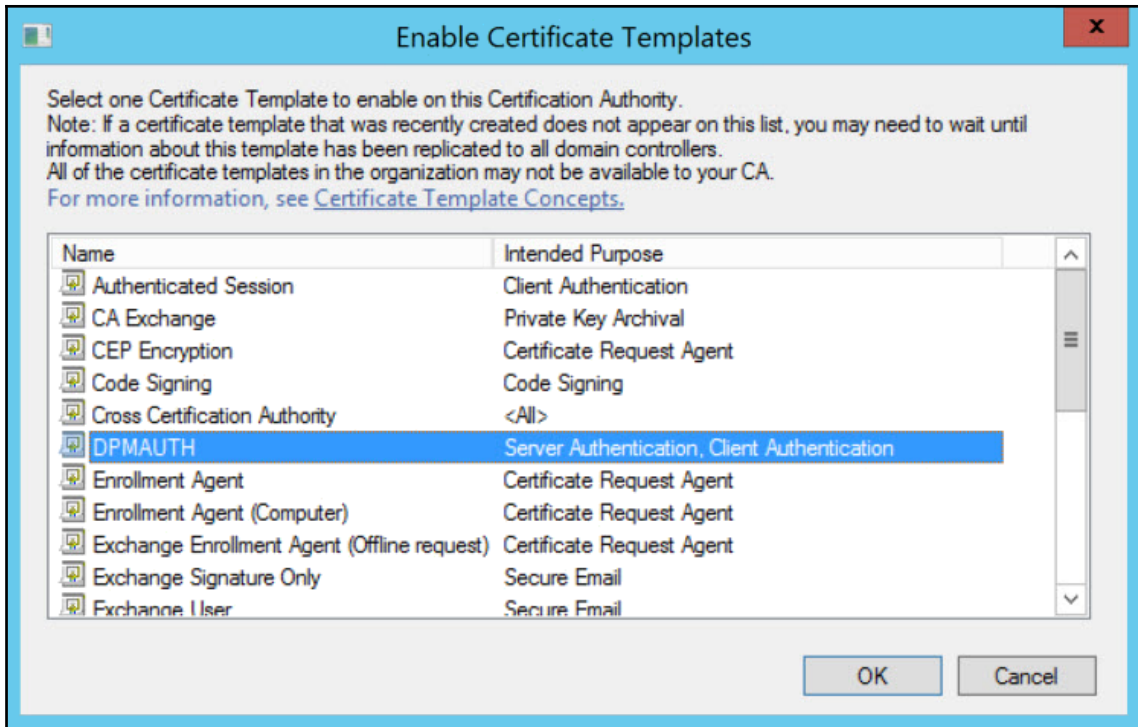
Cancel

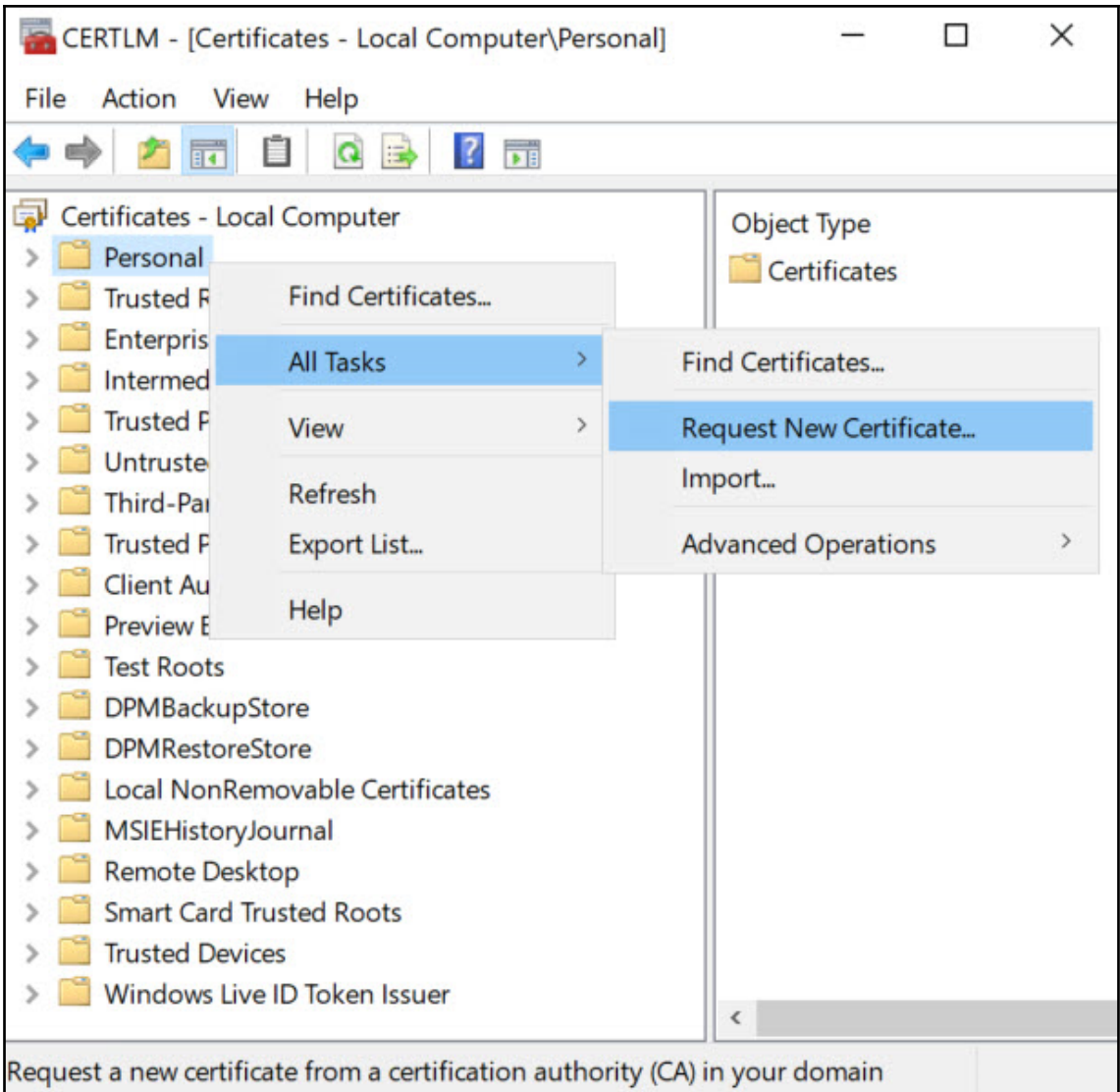
Apply

Help

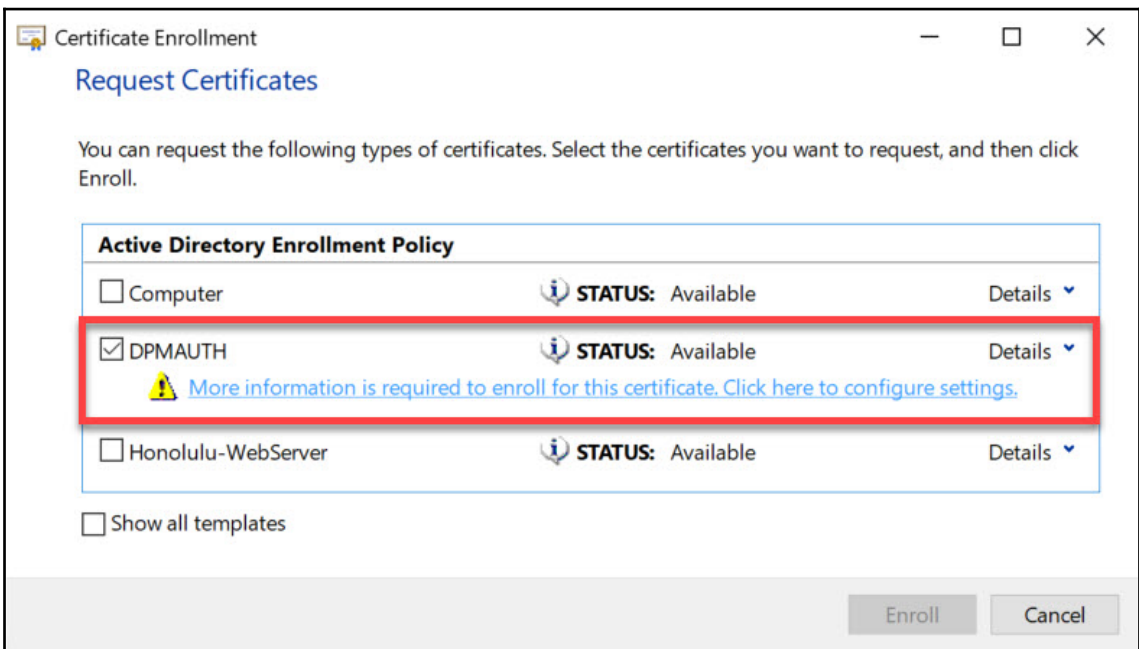
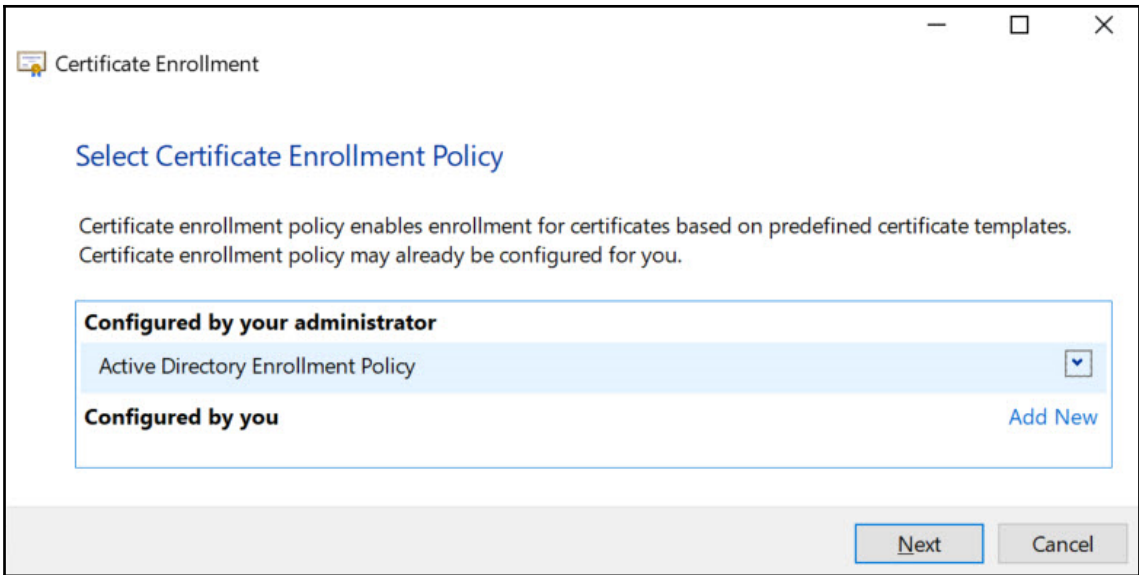












# Certificate Properties



Subject

General

Extensions

Private Key

Certification Authority

Signature

The subject of a certificate is the user or computer to which the certificate is issued. You can enter information about the types of subject name and alternative name values that can be used in a certificate.

Subject of certificate

The user or computer that is receiving the certificate

Subject name:

Type:

Common name

Add >

CN=SC-DPM-1807.VIRT.LAB

Value:

< Remove

Alternative name:

Type:

DNS

Add >

DNS

SC-DPM-1807.VIRT.LAB

Value:

< Remove

OK

Cancel

Apply

Certificate Properties

General Subject Extensions Private Key Certification Authority Signature

A friendly name and description will make it easier to identify and use a certificate.

Friendly name:

SRV-DPM-CERT

Description:



DPM Server Certificate

OK Cancel Apply

Certificate Enrollment

### Certificate Installation Results

The following certificates have been enrolled and installed on this computer.

Active Directory Enrollment Policy		
<input checked="" type="checkbox"/> DPMAUTH	 <b>STATUS:</b> Succeeded	Details 

Finish

CERTLM - [Certificates - Local Computer\Personal\Certificates]

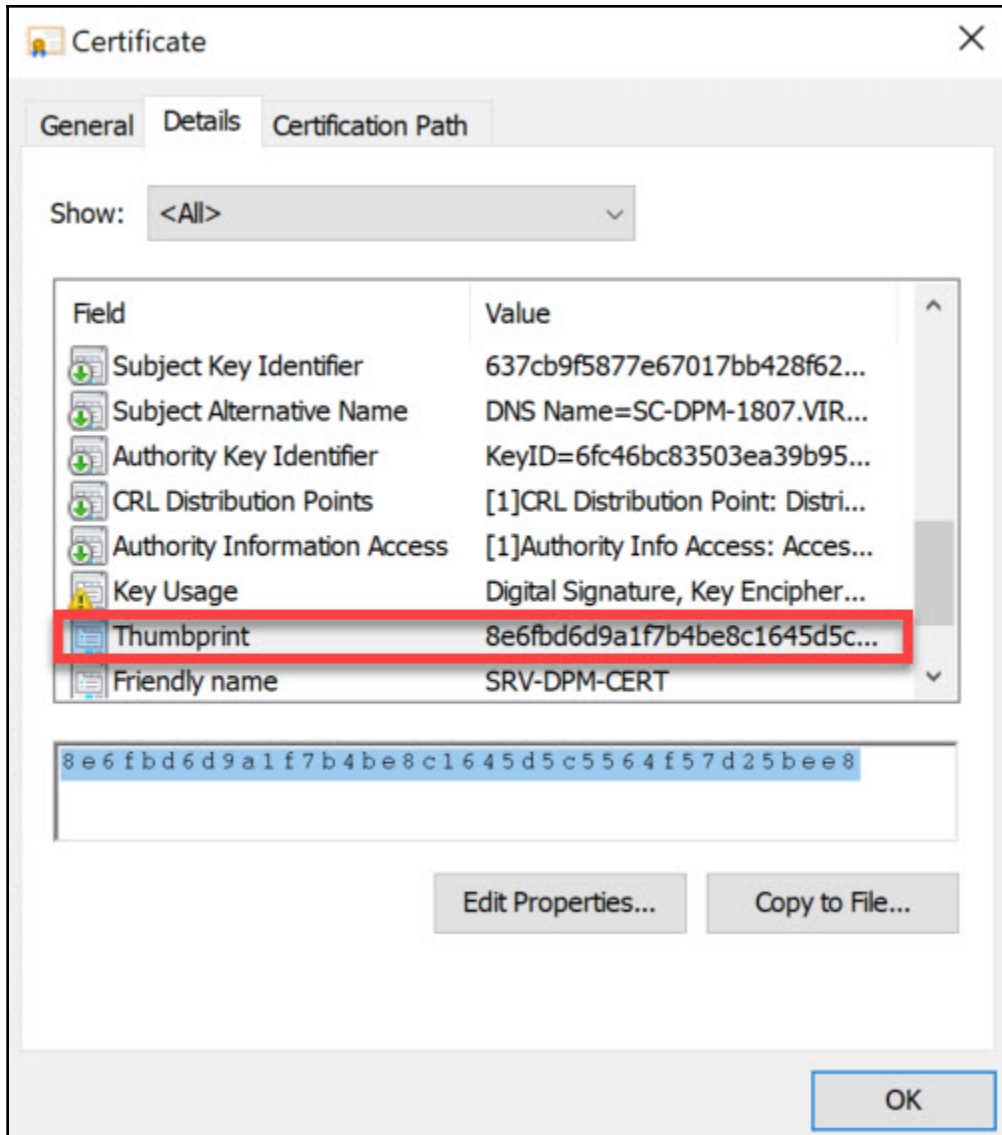
File Action View Help

Certificates - Local Computer

- Personal
  - Certificates
  - Trusted Root Certification Authorities
  - Enterprise Trust
  - Intermediate Certification Authorities
  - Trusted Publishers
  - Untrusted Certificates
  - Third-Party Root Certification Authorities
  - Trusted People
  - Client Authentication Issuers
  - Preview Build Roots
  - Test Roots
  - DPMBackupStore
  - DPMRestoreStore
  - Local NonRemovable Certificates
  - MSIEHistoryJournal
  - Remote Desktop
  - Smart Card Trusted Roots
  - Trusted Devices
  - Windows Live ID Token Issuer

Issued To	Issued By	Expiration Date	Intended Purposes	Friendly Name
SC-DPM-1807.VIRT.LAB	DC01-CA	11/26/2020	Server Authentication,...	SRV-DPM-CERT
Windows Azure Tools	Windows Azure Tools	11/8/2018	Client Authentication	SC-DPM-18074c789...
Windows Azure Tools	Windows Azure Tools	11/8/2018	Client Authentication	SC-DPM-18074c789...
Windows Azure Tools	Windows Azure Tools	11/8/2018	Client Authentication	SC-DPM-18074c789...
Windows Azure Tools	Windows Azure Tools	11/7/2018	Client Authentication	SC-DPM-18074c789...
Windows Azure Tools	Windows Azure Tools	11/7/2018	Client Authentication	SC-DPM-18074c789...
Windows Azure Tools	Windows Azure Tools	11/7/2018	Client Authentication	SC-DPM-18074c789...
Windows Azure Tools	Windows Azure Tools	11/7/2018	Client Authentication	SC-DPM-18074c789...
Windows Azure Tools	Windows Azure Tools	11/7/2018	Client Authentication	SC-DPM-18074c789...
Windows Azure Tools	Windows Azure Tools	11/7/2018	Client Authentication	SC-DPM-18074c789...
Windows Azure Tools	Windows Azure Tools	10/16/2018	Client Authentication	SC-DPM-RSV4c7893...
Windows Azure Tools	Windows Azure Tools	9/14/2018	Client Authentication	SC-DPM-18074c789...
Windows Azure Tools	Windows Azure Tools	9/14/2018	Client Authentication	SC-DPM-18074c789...
Windows Azure Tools	Windows Azure Tools	9/12/2018	Client Authentication	SC-DPM-18074c789...
Windows Azure Tools	Windows Azure Tools	9/11/2018	Client Authentication	SC-DPM-18074c789...
Windows Azure Tools	Windows Azure Tools	9/11/2018	Client Authentication	SC-DPM-18074c789...
Windows Azure Tools	Windows Azure Tools	9/11/2018	Client Authentication	SC-DPM-18074c789...
Windows Azure Tools	Windows Azure Tools	9/11/2018	Client Authentication	SC-DPM-18074c789...
Windows Azure Tools	Windows Azure Tools	9/10/2018	Client Authentication	SC-DPM-18074c789...

Personal store contains 46 certificates.



```
Path
----
D:\Program Files\Microsoft System Center\DPM\DPM\bin

CharbelNemnom.com #> Set-DPMCredentials -DPMServerName SC-DPM-1807 -Type Certificate -Action Configure -Output
FilePath C:\DPMCERT\ -Thumbprint 8e6fbd6d9a1f7b4be8c1645d5c5564f57d25bee8 -Verbose
WARNING: Connecting to DPM server: SC-DPM-1807
VERBOSE: Configures DPM server SC-DPM-1807 for certificate-based authentication.
Configuration completed successfully.
Firewall exception for DPMCPWrapperService communication has been added on port 6076 (TCP and UDP) in all prof
iles.
CharbelNemnom.com #> █
```

```
Administrator: Command Prompt

C:\DPMAgent\agents\RA\5.1.375.0\amd64\1033>DPMAgentInstaller_KB4293623_AMD64.exe

C:\DPMAgent\agents\RA\5.1.375.0\amd64\1033> █
```

Microsoft Active Directory Certificate Services -- DC01-CA Home

## Welcome

Use this Web site to request a certificate for your Web browser, e-mail client, or other program. By using a certificate, you can verify your identity to people you communicate with over the Web, sign and encrypt messages, and, depending upon the type of certificate you request, perform other security tasks.

You can also use this Web site to download a certificate authority (CA) certificate, certificate chain, or certificate revocation list (CRL), or to view the status of a pending request.

For more information about Active Directory Certificate Services, see [Active Directory Certificate Services Documentation](#).

**Select a task:**

- [Request a certificate](#)
- [View the status of a pending certificate request](#)
- [Download a CA certificate, certificate chain, or CRL](#)

Microsoft Active Directory Certificate Services -- DC01-CA Home

## Advanced Certificate Request

The policy of the CA determines the types of certificates you can request. Click one of the following options to:

- [Create and submit a request to this CA.](#)
- [Submit a certificate request by using a base-64-encoded CMC or PKCS #10 file, or submit a renewal request by using a base-64-encoded PKCS #7 file.](#)
- [Submit a certificate request by using a base-64-encoded CMC or PKCS #10 file, or submit a renewal request by using a base-64-encoded PKCS #7 file.](#)

← → https://dc01.virt.lab/certs Microsoft Active Directory C... x Home

**Microsoft Active Directory Certificate Services -- DC01-CA** [Home](#)

---

## Advanced Certificate Request

---

**Certificate Template:**

DPMAUTH ▾

**Identifying Information For Offline Template:**

Name:  x

E-Mail:

Company:

Department:

City:

State:

Country/Region:

**Key Options:**

Create new key set  Use existing key set

CSP:  ▾

Key Usage:  Exchange

Key Size:  Min: 2048 Max: 16384 (common key sizes: [2048](#) [4096](#) [8192](#) [16384](#))

Automatic key container name  User specified key container name

Mark keys as exportable

Enable strong private key protection

**Additional Options:**

Request Format:  CMC  PKCS10

Hash Algorithm:  ▾  
*Only used to sign request.*

Save request

Attributes:

Friendly Name:


---



Microsoft Active Directory Certificate Services -- DC01-CA Home

### Certificate Issued

The certificate you requested was issued to you.

 [Install this certificate](#)

**This CA is not trusted.** To trust certificates issued from this certification authority, [install this CA certificate](#)

Save response

Do you want to open or save **certnew.cer** (1.24 KB) from **dc01.virt.lab**? Open Save Cancel

Certificate Details Certification Path

#### Certificate Information

**This CA Root certificate is not trusted. To enable trust, install this certificate in the Trusted Root Certification Authorities store.**

**Issued to:** DC01-CA

**Issued by:** DC01-CA

**Valid from** 9/21/2017 **to** 9/21/2027

Install Certificate... Issuer Statement

OK

Certificate Import Wizard

### Welcome to the Certificate Import Wizard

This wizard helps you copy certificates, certificate trust lists, and certificate revocation lists from your disk to a certificate store.

A certificate, which is issued by a certification authority, is a confirmation of your identity and contains information used to protect data or to establish secure network connections. A certificate store is the system area where certificates are kept.

Store Location

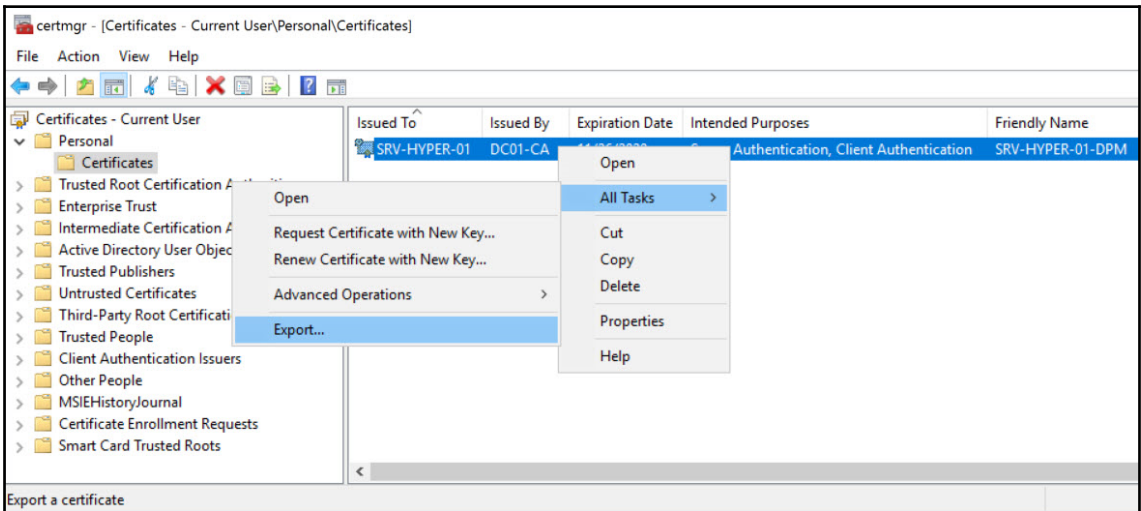
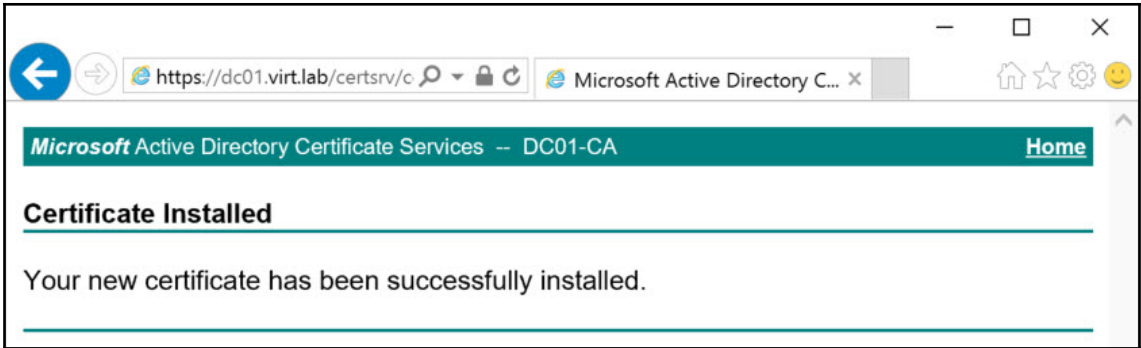
Current User

Local Machine

To continue, click Next.

Next Cancel







Certificate Export Wizard



### Export Private Key

You can choose to export the private key with the certificate.

Private keys are password protected. If you want to export the private key with the certificate, you must type a password on a later page.

Do you want to export the private key with the certificate?

Yes, export the private key

No, do not export the private key

Next

Cancel



## Certificate Export Wizard



### Export File Format

Certificates can be exported in a variety of file formats.

Select the format you want to use:

- DER encoded binary X.509 (.CER)
- Base-64 encoded X.509 (.CER)
- Cryptographic Message Syntax Standard - PKCS #7 Certificates (.P7B)
  - Include all certificates in the certification path if possible
- Personal Information Exchange - PKCS #12 (.PFX)
  - Include all certificates in the certification path if possible
  - Delete the private key if the export is successful
  - Export all extended properties
  - Enable certificate privacy
- Microsoft Serialized Certificate Store (.SST)

Next

Cancel

**Security**

To maintain security, you must protect the private key to a security principal or by using a password.

Group or user names (recommended)

Add

Remove

Password:

●●●●●●●●

Confirm password:

●●●●●●●●

Next

Cancel



Certificate Import Wizard



### Private key protection

To maintain security, the private key was protected with a password.

Type the password for the private key.

Password:

••••••••••

Display Password

Import options:

- Enable strong private key protection. You will be prompted every time the private key is used by an application if you enable this option.
- Mark this key as exportable. This will allow you to back up or transport your keys at a later time.
- Include all extended properties.

Next

Cancel

certlm - [Certificates - Local Computer\Personal\Certificates]

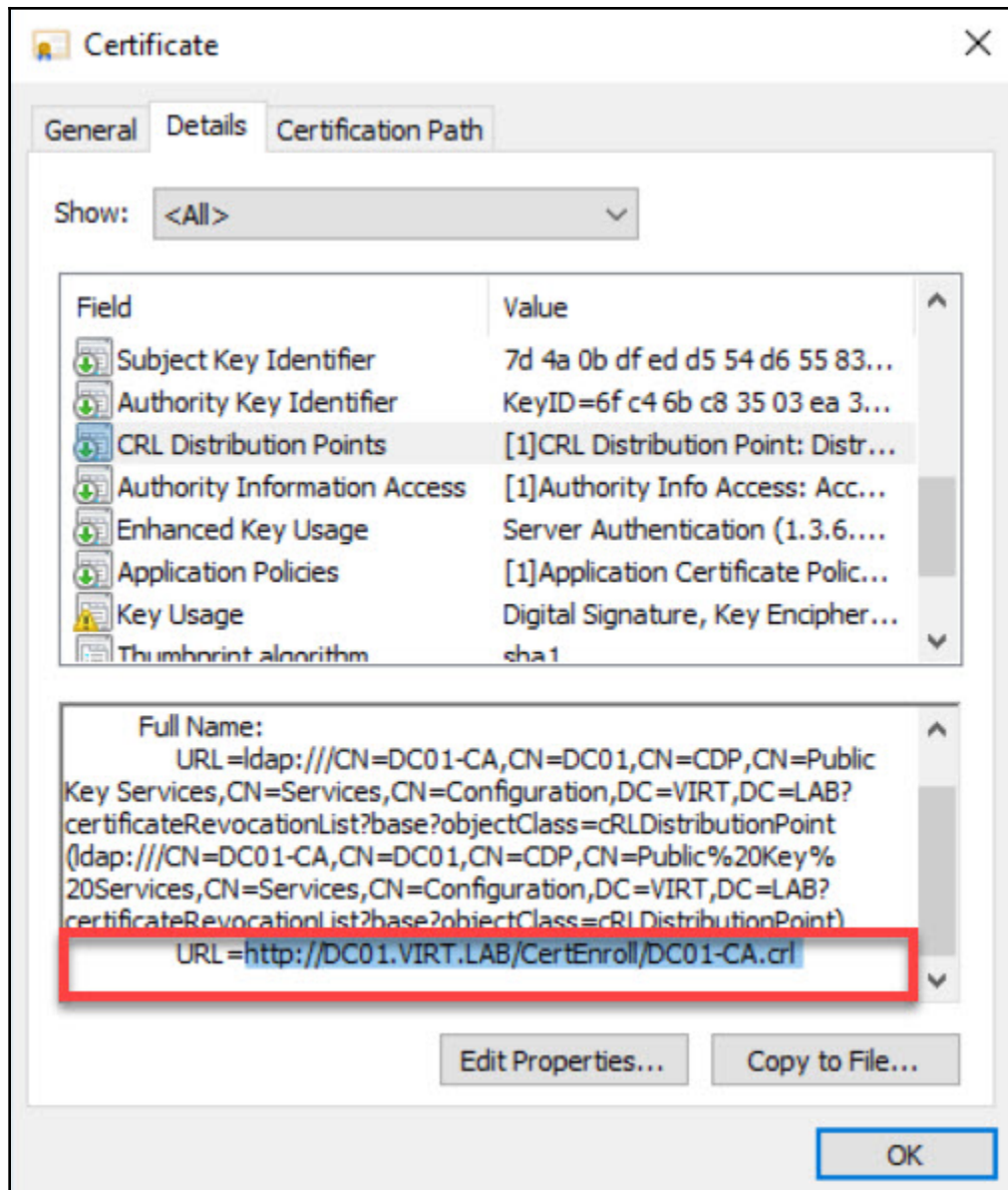
File Action View Help

Certificates - Local Computer

- Personal
  - Certificates
  - Trusted Root Certification Authorities
  - Enterprise Trust
  - Intermediate Certification Authorities
  - Trusted Publishers
  - Untrusted Certificates
  - Third-Party Root Certification Authorities
  - Trusted People
  - Client Authentication Issuers
  - Preview Build Roots
  - Other People
  - MSIEHistoryJournal
  - Remote Desktop
  - Certificate Enrollment Requests
  - Smart Card Trusted Roots
  - Trusted Devices
  - Windows Live ID Token Issuer

Issued To	Issued By	Expiration Date	Intended Purposes	Friendly Name
DC01-CA	DC01-CA	9/21/2027	<All>	<None>
SRV-HYPER-01	DC01-CA	11/26/2020	Server Authentication, Client...	SRV-HYPER-01-DPM

Personal store contains 2 certificates.



```
Administrator: Command Prompt

C:\Program Files\Microsoft Data Protection Manager\DPM\bin>SetDpmServer.exe -DPMCredential CertificateConfiguration_DPM-1807.VIRT.LAB.bin -OutputFilePath C:\DPMCERT -Thumbprint e5d3728eedf4a924ebdc6158aaa82f4d8e8283b4

The following firewall exceptions has been added:
- Exception for DPMRA.exe in all profiles.
- Exception for Windows Management Instrumentation service.
- Exception for DPMCPWrapperService communication on port 6076 (TCP) in all profiles.
Configuration completed successfully!!!
C:\Program Files\Microsoft Data Protection Manager\DPM\bin>
```

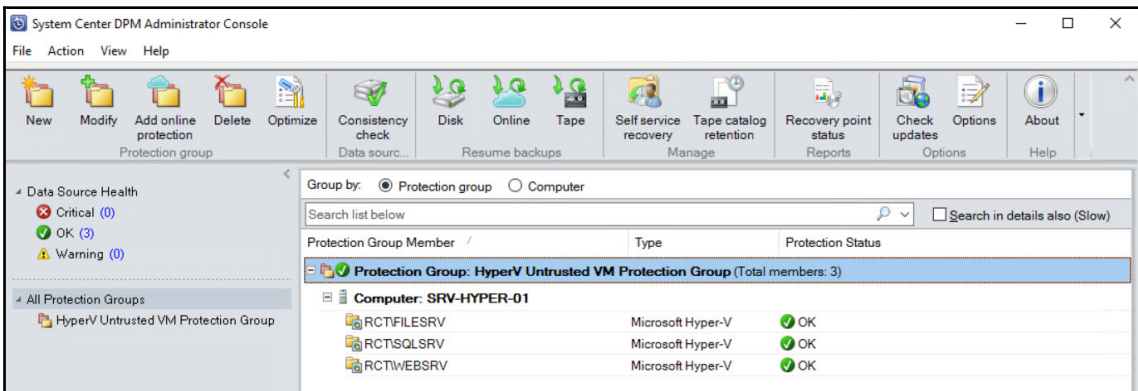
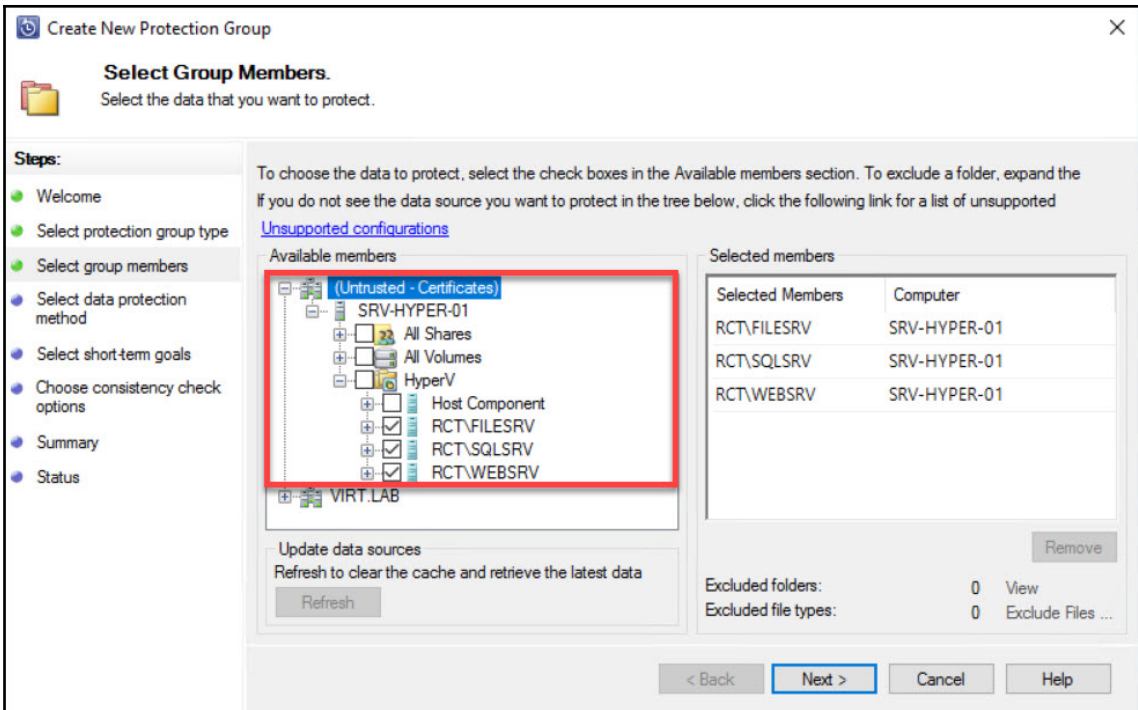
```
Path
----
D:\Program Files\Microsoft System Center\DPM\DPM\bin

CharbelNemnom.com #> .\Attach-ProductionServerWithCertificate.ps1 -DPMServerName DPM-1807.VIRT.LAB -PSCredential CertificateConfiguration_SRV-HYPER-01.bin -Verbose
WARNING: Connecting to DPM server: DPM-1807.VIRT.LAB
Attached Production Server with certificates successfully
CharbelNemnom.com #>
```

The screenshot shows the System Center DPM Administrator Console interface. On the left, there are summary statistics for Production Servers and Disk Storage. The main area displays a table of unprotected computers with protection agents. A red arrow points to the 'SRV-HYPER-01' entry, which is highlighted in blue. The table columns are Computer Name, Type, Cluster Name, Domain, Agent Status, Agent Updates, and Throttling.

Computer Name	Type	Cluster Name	Domain	Agent Status	Agent Updates	Throttling
<b>Unprotected computers with protection agent: (4 Computers)</b>						
FSRV01	Windows Server	-	VIRT.LAB	OK	-	-
SC-VMM-1807	Windows Server	-	VIRT.LAB	OK	-	-
SRV-HYPER-01	Windows Server	-	(Untrusted - Certificates)	OK	-	-
WS2016-WDS	Windows Server	-	VIRT.LAB	OK	-	-





# Chapter 9: Recovering Data from Backup

```
CharbelNemnom.com #> $PGroup = Get-DPMProtectionGroup
```

```
CharbelNemnom.com #> $PGroup
```

Name	ProtectionMethod
SQL Protection Group	Short-term using disk
File Server Protection Group	Short-term using disk   Online protection

```
CharbelNemnom.com #> $PObjects = Get-DPMDataSource -ProtectionGroup $PGroup[1]
```

```
CharbelNemnom.com #> $PObjects
```

Computer Name	ObjectType
FSRV01 D:\MountPoints\MountPoint-FSRV01	Volume
FSRV01 D:\	Volume

```
CharbelNemnom.com #> Get-DPMRecoveryPoint -DataSource $PObjects[0] | Sort -Property RepresentedPointInTime -Descending
```

Name	BackupTime	DataSource
D:\MountPoints\MountPoint-FSRV01	11/11/2018 11:37:13 AM	D:\MountPoints\MountPoint-FSRV01 on comp...
D:\MountPoints\MountPoint-FSRV01	11/11/2018 8:53:59 AM	D:\MountPoints\MountPoint-FSRV01 on comp...

```
CharbelNemnom.com #> $RecoveryPoint = Get-DPMRecoveryPoint -DataSource $PObjects[0] | Sort -Property RepresentedPointInTime -Descending | Select-Object -First 1
```

```
CharbelNemnom.com #> $RecoveryPoint
```

Name	BackupTime	DataSource
D:\MountPoints\MountPoint-FSRV01	11/11/2018 11:37:13 AM	D:\MountPoints\MountPoint-FSRV01 on comp...

```
CharbelNemnom.com #> $RecoverItem = Get-DPMRecoverableItem -RecoverableItem $RecoveryPoint -BrowseType Child
```

```
CharbelNemnom.com #> $RecoverItem
```

Name	BackupTime	DataSource
\$RECYCLE.BIN	11/11/2018 11:37:13 AM	D:\MountPoints\Moun...
BRK1000 - What's new in Microsoft Project.mp4	11/11/2018 11:37:13 AM	D:\MountPoints\Moun...
BRK1001 - Driving success with Project Online.mp4	11/11/2018 11:37:13 AM	D:\MountPoints\Moun...
BRK1025 - Preparing for IoT in IT- Microsoft's IoT Vision and Roadmap.mp4	11/11/2018 11:37:13 AM	D:\MountPoints\Moun...
BRK1026 - Getting started with Microsoft Azure and Azure Portal.mp4	11/11/2018 11:37:13 AM	D:\MountPoints\Moun...
Sub-mountpoint	11/11/2018 11:37:13 AM	D:\MountPoints\Moun...

```
CharbelNemnom.com #> $RecoverItem = Get-DPMRecoverableItem -RecoverableItem $RecoveryPoint -BrowseType Child | Where-Object {$_.Name -like "*BRK1026*"}  
CharbelNemnom.com #> █
```

```

CharbelNemnom.com #> $RecoveryOption = New-DPMRecoveryOption -TargetServer "SC-DPM-1807.virt.lab" -RecoveryLocation Copy
ToFolder `
>> -FileSystem -AlternateLocation "D:\Copytofolder" -OverwriteType Overwrite -RestoreSecurity -RecoveryType Restore
CharbelNemnom.com #> $RecoveryOption

DsmProperties           : Microsoft.Internal.EnterpriseStorage.Dls.XsdClasses.MTA.DsmPropertiesType
AlternateLocation      : D:\Copytofolder
LibraryId              : 00000000-0000-0000-0000-000000000000
SourceServer           :
TargetServer           : SC-DPM-1807.VIRT.LAB
RecoverToReplicaFromTape : False
IsSANRecovery          : False
ReferencedRecoveryOptions :

```

```

CharbelNemnom.com #> # Item-Level Recovery (ILR) single item Restore
CharbelNemnom.com #> Restore-DPMRecoverableItem -RecoverableItem $RecoverItem -RecoveryOption $RecoveryOption

JobCategory      Status      ProtectionGroupName      DataSources
-----
RestoreAsFilesFromSC InProgress File Server Protection Group D:\MountPoints\MountPoint-FSRV01

```

This PC > DATA (D:) > Copytofolder

Name	Date modified	Type	Size
BRK1026 - Getting started with Microsoft Azure and Azure Portal	9/28/2018 7:12 PM	MP4 Video	368,733 KB

System Center DPM Administrator Console

File Action View Help

New
Consistency check
Recovery point
Remove
Move disk storage
Disk
Online
Tape
Self service recovery
Tape catalog retention
Recovery point status
Check updates
Options

Protection Group Member / Type Protection Status

Protection Group: **SQL Server VMM Protection Group** (Total members: 4)

Computer: **SC-VMM-1807.VIRT.LAB**

SC-VMM-1807\master	SQL Data	OK
SC-VMM-1807\model	SQL Data	OK
SC-VMM-1807\msdb	SQL Data	OK
SC-VMM-1807\VirtualManagerDB	SQL Data	OK

Create New Role ×

## Welcome to the DPM Role Configuration Wizard

This wizard helps you configure DPM Roles through which self service recovery can be enabled for SQL Server users.

**Steps:**

- Getting started
- Specify security groups
- Specify recovery items
- Specify recovery targets
- Summary

This wizard helps you configure roles to enable self-service recovery for SQL Server users.

To create a role for SQL Server self service recovery, you must identify the following:

- Security groups that represent the set of SQL Server users.
- SQL Server databases and instances of SQL Server that will be allowed for recovery.
- Instances of SQL Server that can be used as targets for recovery.

Create New Role ×

## Specify Security Groups

Specify security groups that represent the set of SQL Server users.

**Steps:**

- Getting started
- Specify security groups
- Specify recovery items
- Specify recovery targets
- Summary

Specify a name which will be used to uniquely identify this role.

Role Name   
Example: SQL Admins

Description

**Security Groups**

Specify the security groups that represent the set of SQL Server users that will be included in this role.

Security Group
VIRT\SQL_Self-Service_Recovery

Create New Role ×

### Specify Recovery Items

Specify the SQL Server databases and instances of SQL Server

**Steps:**

- Getting started
- Specify security groups
- Specify recovery items**
- Specify recovery targets
- Summary

Specify the SQL server databases and instances of SQL Server that you want users of this role to be allowed to recover.

To allow all databases in an instance of SQL Server, clear the text in the Database Name column for that instance of SQL Server.

SQL Server Instance or Availability Group	Database Name
SC-VMM-1807]	VirtualManagerDB

Create New Role ×

### Specify Recovery Target Locations

Specify the instances of SQL Servers that can be used as recovery targets.


**Steps:**

- Getting started
- Specify security groups
- Specify recovery items
- Specify recovery targets**
- Summary

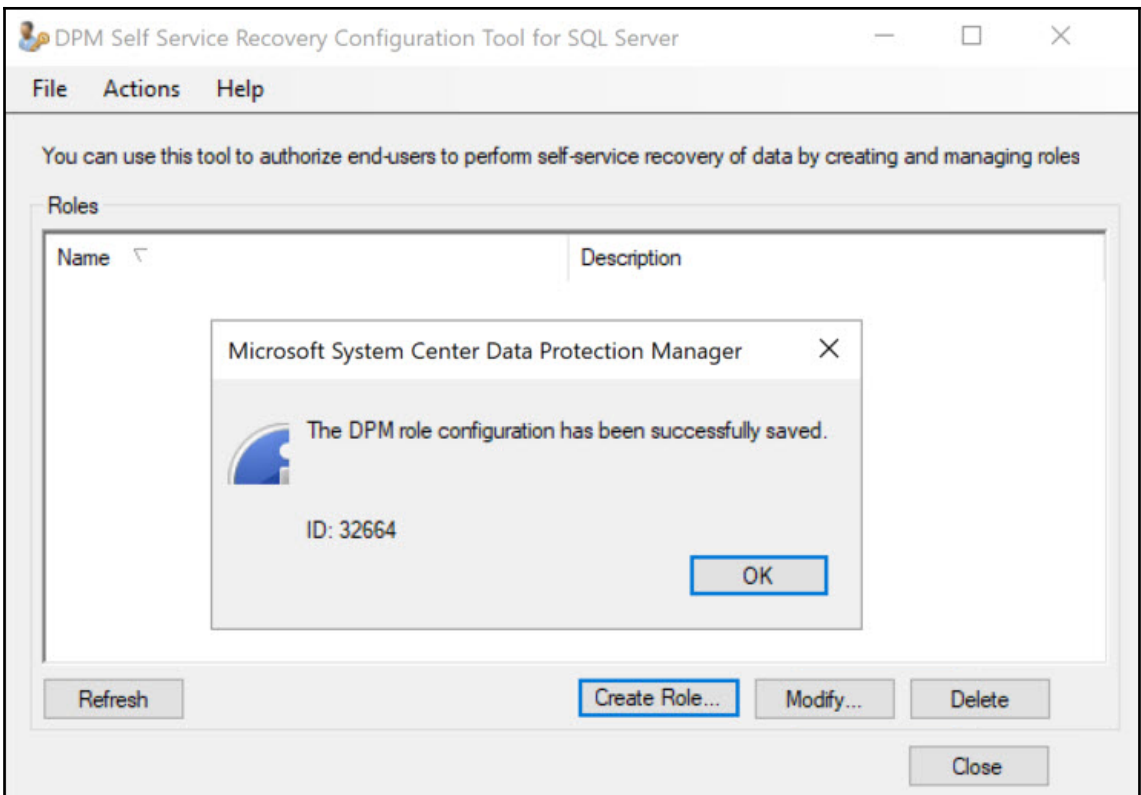
To allow users to recover the database as files, you do not need to configure recovery targets. At the time of recovery, users can specify any location where they have permissions to write

**Recovery Target Locations**

Allow users to recover the databases to another instance of SQL Server

 Users are not allowed to overwrite the original database.

[Learn more about configuring recovery targets ...](#)



# System Center Data Protection Manager



Version 1801

---

## Install

[Data Protection Manager](#)

[DPM Central Console](#)

[DPM Protection Agent](#)

[DPM Remote Administration](#)

[DPM Self Service Recovery](#)

[DPM Remote SQL Prep](#)

## Before you begin

[View Release Notes](#)

[Read Installation Guide](#)

[Run the Prerequisite Checker](#)

## Additional Resources

[Review License Terms](#)

[Visit DPM Web Site](#)



## Microsoft Software License Terms



To install Data Protection Manager, you must accept the Microsoft Software License Terms. These license terms apply for DPM, and each of its prerequisite software products.

You may use any number of instances of this supplemental software ("Supplement") in physical or virtual operating system environments on any number of devices with Microsoft server software or online service ("Microsoft Product"). You may use this Supplement only with a Microsoft Product directly, or indirectly through other Microsoft software. Refer to your Microsoft Product's license terms to identify the entity licensing this Supplement to you and for support information. You may not use the Supplement if you do not have a license for the underlying Microsoft Product.

To print a copy of the license terms, select the text, copy it into a document, and then print it. To view the license terms after the installation is complete, open DPM Administrator Console and click About DPM.

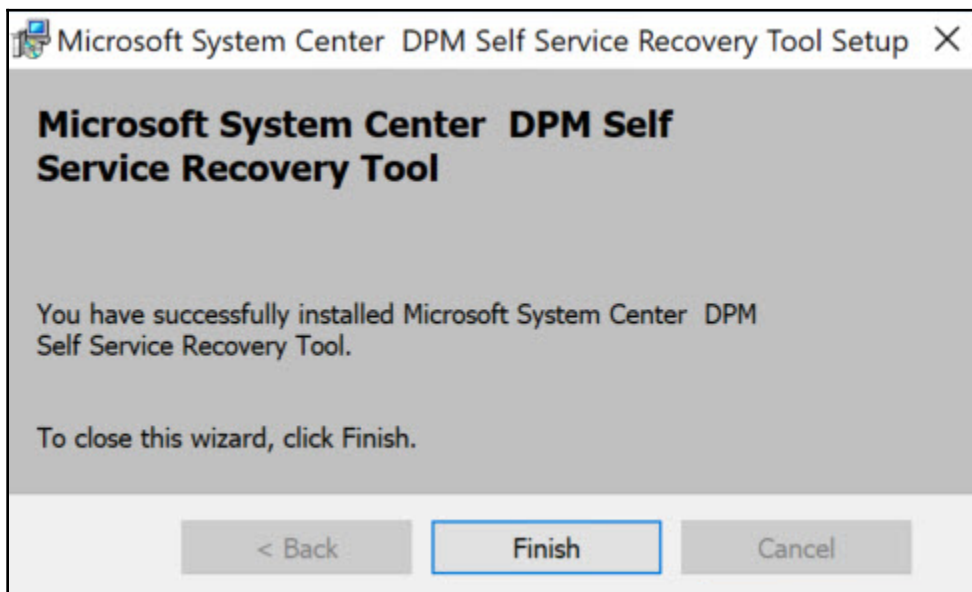
[Privacy Statement Link](#)

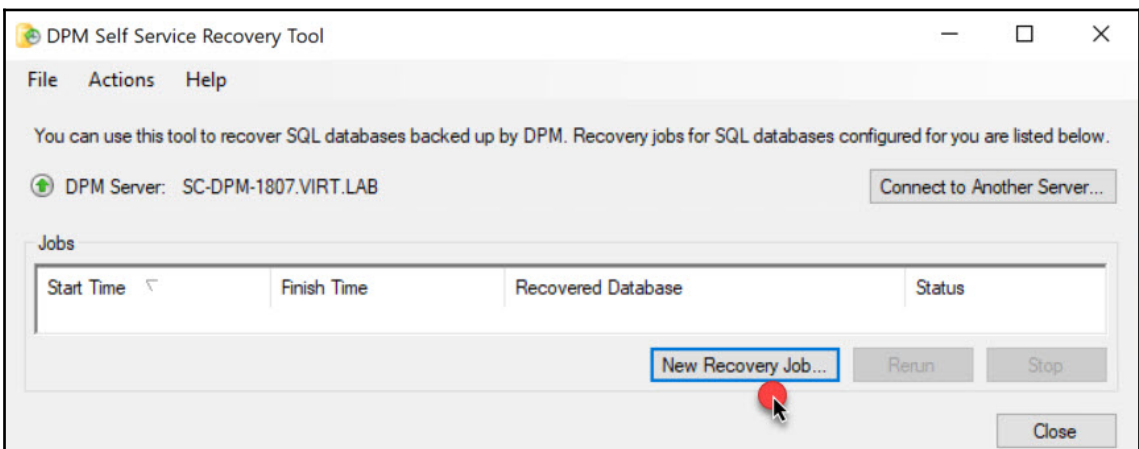
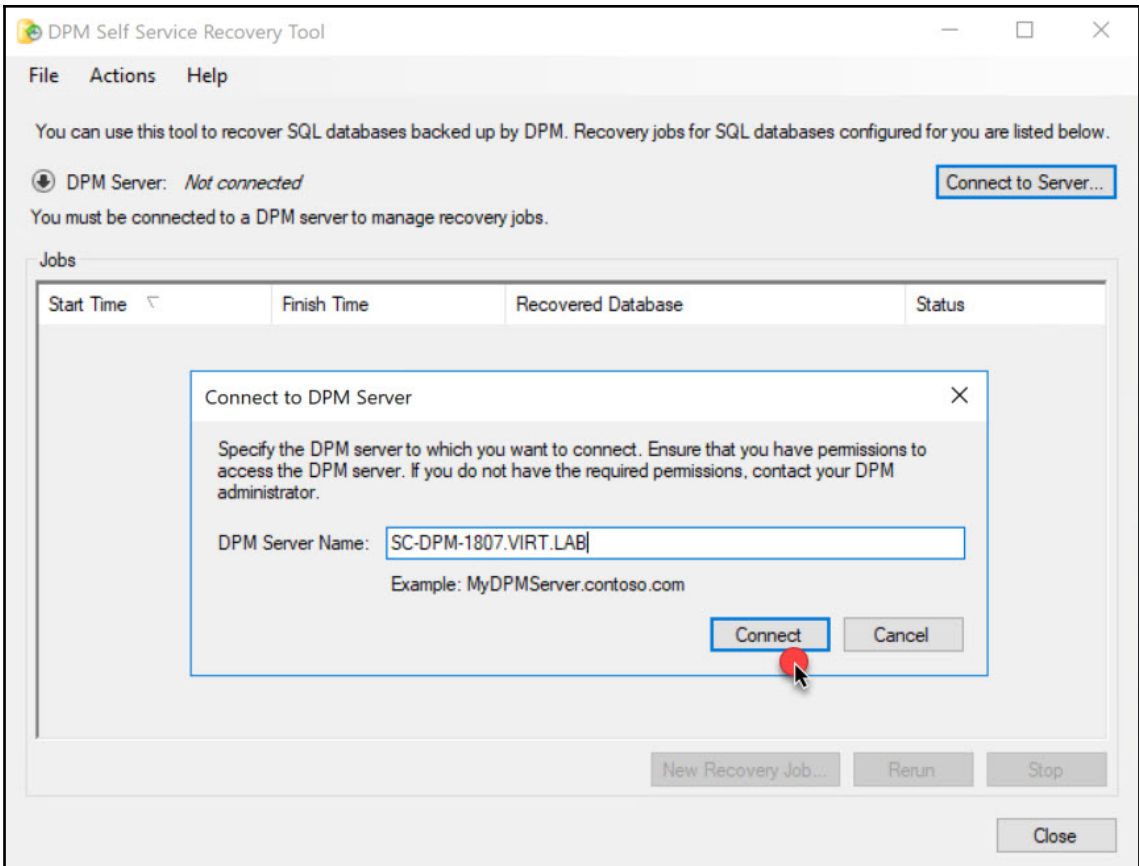
Accept

Decline

Help









### Welcome to the Start New Recovery Job Wizard

This wizard helps you start a recovery job to recover a database that is backed up by DPM.

**Steps:**

- Welcome
- Specify database details
- Specify recovery point
- Select recovery type
- Specify database state
- Specify recovery options
- Summary



Do not show this Welcome page again

< Back    Next >    Cancel    Help

Recovery Wizard

### Specify Database Details

Specify details about the database you want to recover and where it resides.

**Steps:**

- Welcome
- Specify database details**
- Specify recovery point
- Select recovery type
- Specify database state
- Specify recovery options
- Summary

Specify the details of the database you want to recover.

SQL Server Instance Name or Availability Group: SC-VMM-1807

Database Name: VirtualManagerDB

< Back   Next >   Cancel   Help

Recovery Wizard

## Specify Recovery Point

Specify which recovery point to use for recovery.

**Steps:**

- Welcome
- Specify database details
- Specify recovery point
- Select recovery type
- Specify database state
- Specify recovery options
- Summary


Please select the recovery point to use for performing the recovery.

Available recovery points are indicated in bold on the calendar. Select the date from the calendar and the time from the drop down list for the recovery points that you want and then proceed.

Sun	Mon	Tue	Wed	Thu	Fri	Sat
					1	2
4	5	6	7	8	9	10
11	<b>12</b>	13	14	15	16	17
18	19	20	21	22	23	24
25	26	27	28	29	30	

Recovery date: November 12 2018

Recovery time: 4:00 PM

Recover from: Disk 

< Back   Next >   Cancel   Help


Recovery Wizard


## Select Recovery Type

Select the type of recovery you want to perform.

**Steps:**

- Welcome
- Specify database details
- Specify recovery point
- Select recovery type
- Change recovery point
- Specify destination
- Specify recovery options
- Summary

  Recover to any instance of SQL Server  
This option allows you to recover to any instance of SQL Server on same or alternate server which has been preconfigured by your DPM administrator.

  Copy to a network folder

< Back   Next >   Cancel   Help

Recovery Wizard

### Change Recovery Point

Specify a recovery point which has Full backup.

**Steps:**

- Welcome
- Specify database details
- Specify recovery point
- Select recovery type
- Change recovery point
- Specify destination
- Specify recovery options
- Summary

**Warning:** The database files for 11/12/2018 4:00:03 PM cannot be copied.  
DPM can only copy files from a recovery point associated with an express full backup. Select one of the following recovery points associated with an express full backup or click Back to change the recovery type selection.

Alternate recovery points:

	Recovery points	Size
<input checked="" type="radio"/>	11/12/2018 10:09:07 AM	166.80 MB

Click Help to know more on express full backup.

< Back   Next >   Cancel   Help

Recovery Wizard

### Specify Destination

Specify the network folder to store the recovered files.

**Steps:**

- Welcome
- Specify database details
- Specify recovery point
- Select recovery type
- Change recovery point
- Specify destination
- Specify recovery options
- Summary

Specify where you would like to copy the database files.  
All the files will be copied inside a folder named 'DPM\_11-12-2018\_10.9.7' in the copy destination.

Destination server (FQDN):   
Example: MyServer.contoso.com

Destination folder:   
Example: E:\Recovered\Database 1

Space required: 166.80 MB

< Back   Next >   Cancel   Help



## Specify Recovery Options

Specify the options to apply to the recovery.

### Steps:

- Welcome
- Specify database details
- Specify recovery point
- Select recovery type
- Change recovery point
- Specify destination
- Specify recovery options**
- Summary

#### Restore Security

- Apply security settings of destination computer
- Apply security settings of the recovery point version

#### Notification

Specify the list of people to notify when this recovery completes

- Send an e-mail when this recovery completes

Recipients:

Separate e-mail addresses with comma.

Example: kim@contoso.com, tery@adventure-works.com

< Back

Next >

Cancel

Help

Recovery Wizard

### Summary

Review your recovery settings.

**Steps:**

- Welcome
- Specify database details
- Specify recovery point
- Select recovery type
- Change recovery point
- Specify destination
- Specify recovery options
- Summary

Recovery point: 11/12/2018 10:09:07 AM  
Recovery media: Disk  
Source: SC-VMM-1807\VirtualManagerDB on SC-VMM-1807.VIRT.LAB  
Destination: D:\SQL db Recovery on FSRV01.VIRT.LAB  
Notification: No


Recovery items

Recovery item: VirtualManagerDB

Details:

Database files	Destination
VirtualManagerDB.mdf	D:\SQL db Recovery\Program Files\Microsoft SQ...
VirtualManagerDB_log.ldf	D:\SQL db Recovery\Program Files\Microsoft SQ...

DPM Self Service Recovery Tool

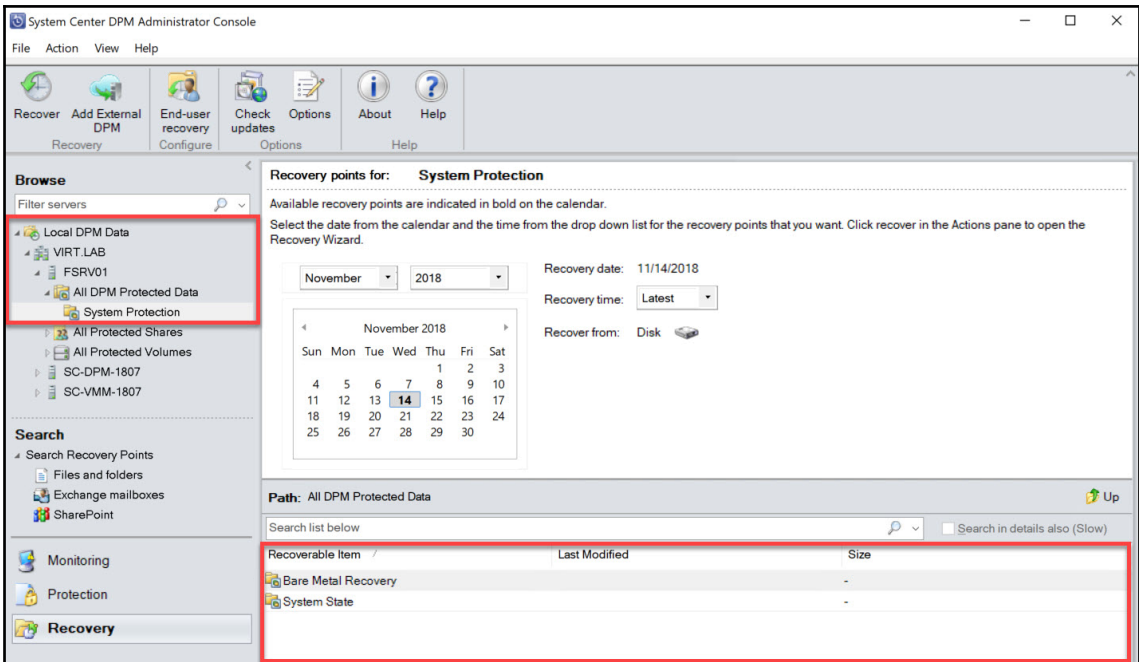
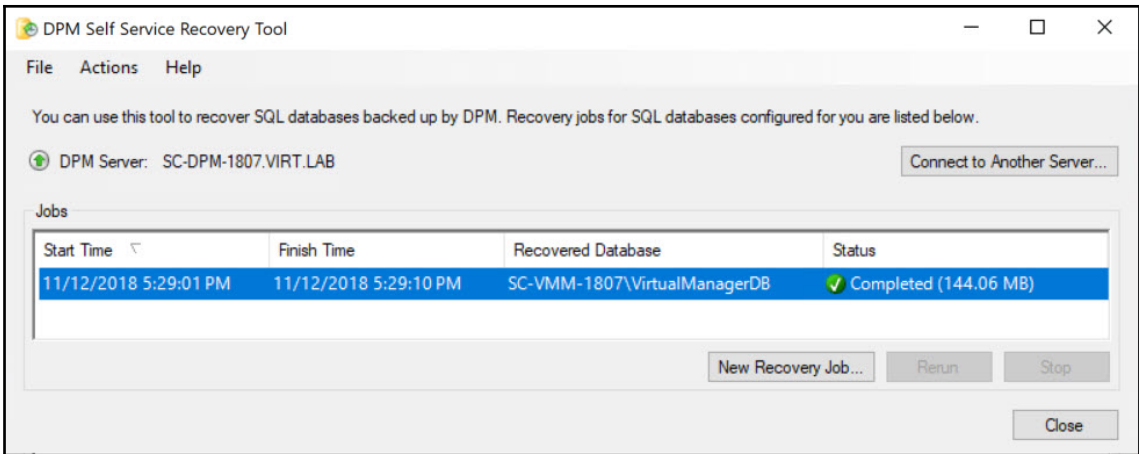
 A recovery job with the specified settings was started successfully.  
You can monitor the job progress from the main console.

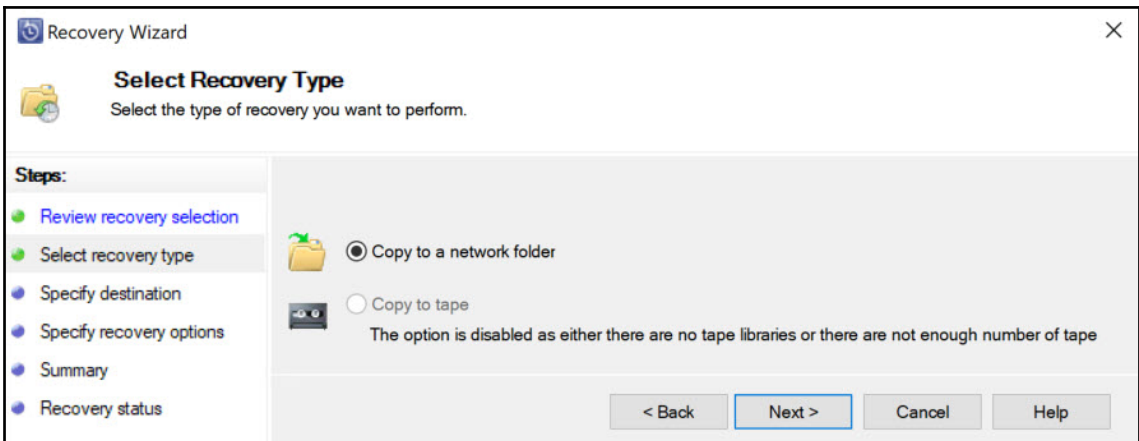
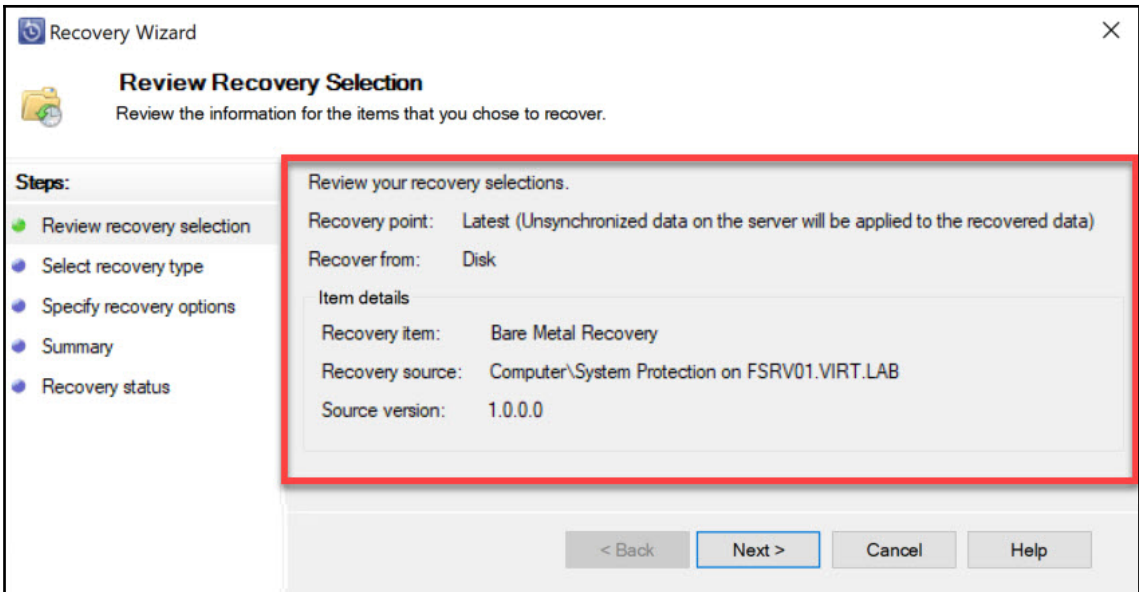
ID: 33102

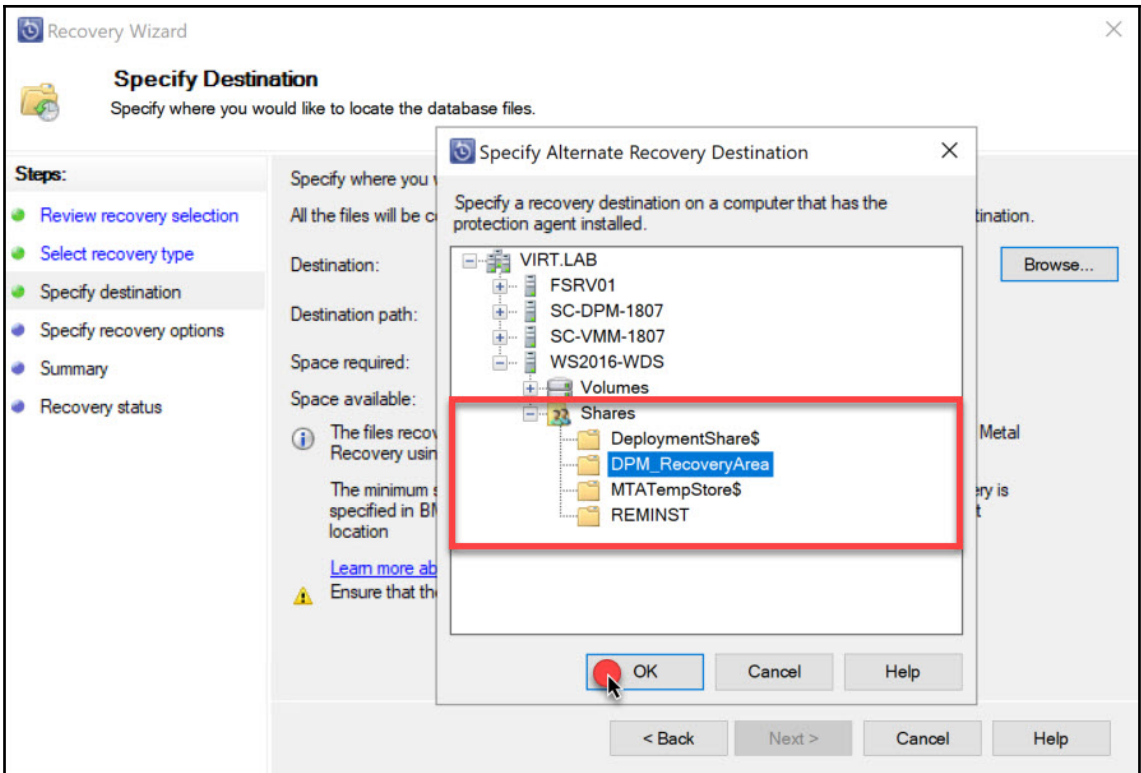
OK

< Back Recover Cancel Help









Recovery Wizard

## Specify Destination

Specify where you would like to locate the database files.

**Steps:**

- Review recovery selection
- Select recovery type
- Specify destination**
- Specify recovery options
- Summary
- Recovery status

Specify where you would like to copy database files.

All the files will be copied inside a folder named 'DPM\_11-14-2018\_17.0.51' in the copy destination.

Destination:

Destination path:

Space required: 24.41 GB

Space available: 39.86 GB

**i** The files recovered by DPM can be used to perform a System State Recovery or Bare Metal Recovery using Windows Server Backup application.

The minimum system requirements required to perform a successful Bare Metal Recovery is specified in BMRSystemRequirements.txt file which can be found in the recovery target location

[Learn more about System State and Bare Metal Recovery...](#)

**w** Ensure that the selected host has appropriate access privileges for the SMB share.

< Back    Next >    Cancel    Help

Recovery Wizard

## Specify Recovery Options

Specify the options to apply to the recovery.

**Steps:**

- Review recovery selection
- Select recovery type
- Specify destination
- Specify recovery options**
- Summary
- Recovery status

**Restore security**

Apply security settings of the destination computer

Apply the security settings of the recovery point version

**Network bandwidth usage throttling**

Status: Disabled [Modify...](#)

**SAN Recovery**

Enable SAN based recovery using hardware snapshots

Click on [Help](#) to learn about the prerequisite steps

**Notification**

Send an e-mail when this recovery completes

**Recipients:**

Separate e-mail addresses with comma.  
Example: Kim@Contoso.com, Teny@Adventure-works.com

< Back   Next >   Cancel   Help

Recovery Wizard

**Summary**  
Review your recovery settings.

**Steps:**

- Review recovery selection
- Select recovery type
- Specify destination
- Specify recovery options
- Summary**
- Recovery status

Recovery point: Latest (Unsynchronized data on the server will be applied to the recovered data)

Recovery media: Disk

Source: Computer\System Protection on FSRV01.VIRT.LAB

Destination: WS2016-WDS.VIRT.LAB

Destination Host

Notification: No

Recovery items

Recovery item: System Protection\Bare Metal Recovery

Details:

Database Files	Destination	Size /
Bare Metal Recovery	D:\DPM_RecoveryArea	-

< Back   Recover   Cancel   Help

DPM\_RecoveryArea > DPM\_11-14-2018\_17.0.51 > DPM\_Recovered\_At\_11-14-2018\_21.3.13 > WindowsImageBackup > FSRV01 >

Name	Date modified	Type	Size
Backup 2018-11-14 144905	11/14/2018 5:00 PM	File folder	
Catalog	11/14/2018 5:00 PM	File folder	
SPPMetadataCache	11/14/2018 5:00 PM	File folder	
Mediald	11/14/2018 3:49 PM	File	1 KB

Windows Setup

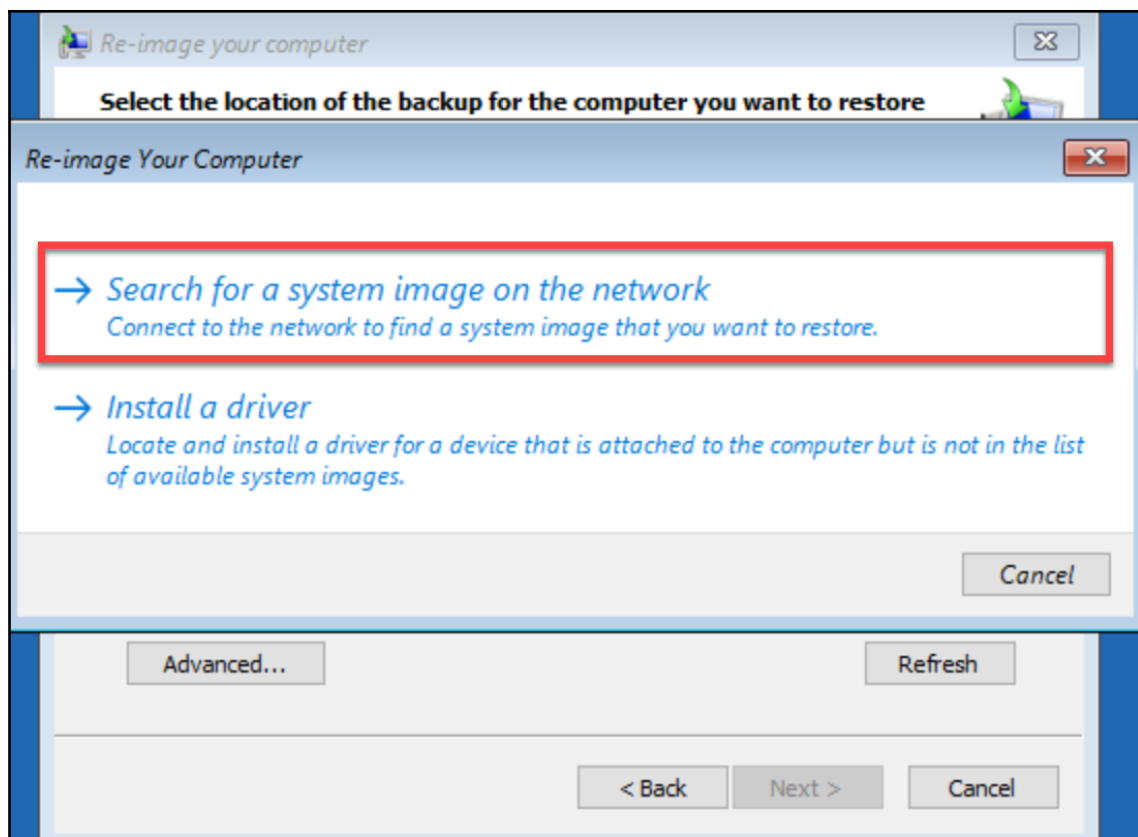


 Windows Server 2016


Install now

Repair your computer

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 *Re-image your computer*



**Select the location of the backup for the computer you want to restore**

If the system image is on an external device, attach the device to this computer, and then click Refresh.



*Re-image Your Computer*



Specify the location of the system image.

Network folder:

Example: \\server\share

OK

Cancel

Advanced...

Refresh

< Back

Next >

Cancel



Re-image your computer



**Select the location of the backup for the computer you want to restore**

If the system image is on an external device, attach the device to this computer, and then click Refresh.



If the system image is on a DVD, insert the last DVD from the system image backup. Click Advanced to add a network location or install a driver for a backup device if it does not show up in the list below.

Current time zone: GMT-8:00

Location	Most recent system image	Computer
\\172.16.20.12\DPM_BMR_Recovered\	11/14/2018 6:49:05 AM	FSRV01

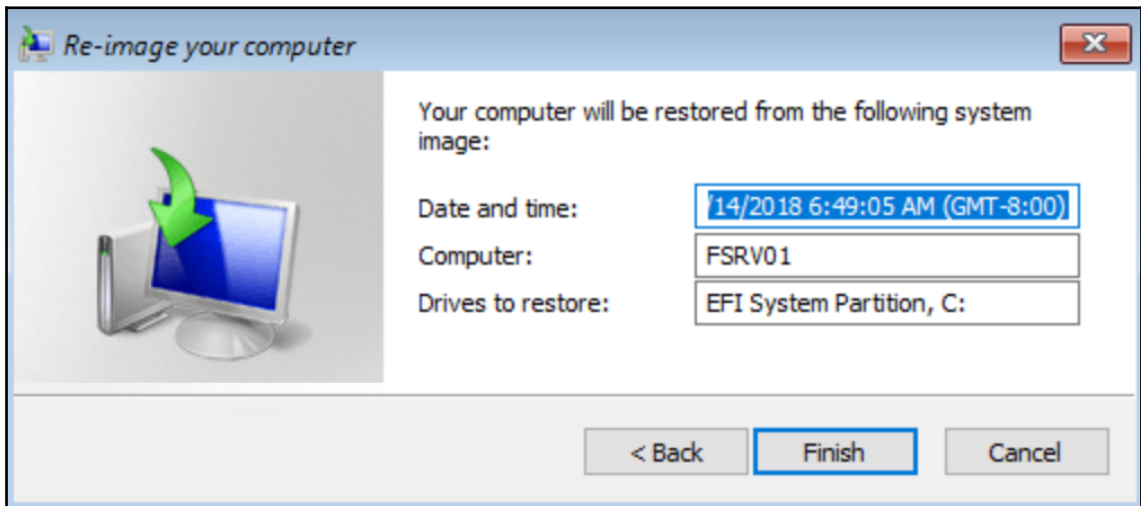
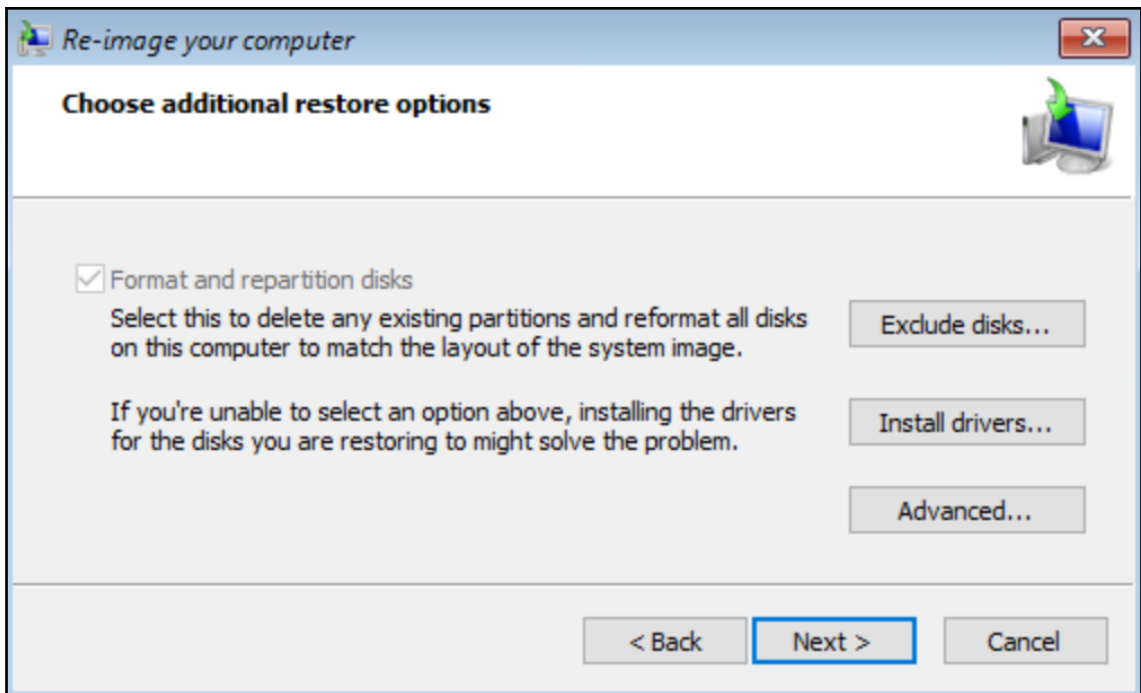
Advanced...

Refresh

< Back

Next >

Cancel



System Center DPM Administrator Console

File Action View Help

Manage subscription Register Configure Check updates Options About azure backup Help

Online Protection Options Help

Search list below   Search in details also (Slow)

Stat... Name / Used Space

**Online subscriptions:**

✓	Azure Backup	550.16 MB
---	--------------	-----------

Number of disks: 0  
 Number of volumes/folders: 1  
 Total capacity: 99.93 GB

4.02 GB  
 95.91 GB

Online

Registration status: Registered  
 Azure backup agent version: 2.0.9145.0  
 Used space: 550.16 MB  
 Subscription Id:

System Center DPM Administrator Console

File Action View Help

Recover Show all versions Add External DPM End-user recovery Check updates Options About Help

Recovery Configure Options Help

**Browse**

Filter servers

- Local DPM Data
  - VIRT LAB
    - FSRV01
      - All Protected Volumes
        - D:\
  - SC-DPM-1807
    - All Protected SQL Instances
      - SC-DPM-1807

**Recovery points for: D:\**

Available recovery points are indicated in bold on the calendar.  
 Select the date from the calendar and the time from the drop down list for the recovery points that you want. Click recover in the Actions pane to open the Recovery Wizard.

October 2018

Sun	Mon	Tue	Wed	Thu	Fri	Sat
	1	2	3	4	5	6
7	8	9	10	11	12	13
14	15	16	17	18	19	20
21	22	<b>23</b>	<b>24</b>	25	26	27
28	29	30	31			

Recovery date: 10/23/2018

Recovery time: 6:04 PM

Recover from: 3:41 PM(Disk)  
 3:41 PM(Online)  
 6:04 PM

Path: D:\

Search list below   Search in details also (Slow)

Recoverable Item /	Last Modified	Size
Backup	9/5/2018 8:41:59 PM	-

**Search**

- Search Recovery Points
  - Files and folders
  - Exchange mailboxes
  - SharePoint
- Monitoring
- Protection
- Recovery**

**Browse**

Filter servers

- Local DPM Data
  - VIRT.LAB
    - FSRV01
      - All Protected Volumes
        - D:\
          - SC-DPM-1807
            - All Protected SQL Instances
              - SC-DPM-1807

**Search**

- Search Recovery Points
  - Files and folders
  - Exchange mailboxes
  - SharePoint
- Monitoring
- Protection
- Recovery**

**Recovery points for: D:\**

Available recovery points are indicated in bold on the calendar.

Select the date from the calendar and the time from the drop down list for the recovery points that you want. Click recover in the Actions pane to open the Recovery Wizard.

Recovery date: 10/23/2018  
 Recovery time: 3:41 PM(C)  
 Recover from: Online

October 2018

Sun	Mon	Tue	Wed	Thu	Fri	Sat
	1	2	3	4	5	6
7	8	9	10	11	12	13
14	15	16	17	18	19	20
21	22	<b>23</b>	<b>24</b>	25	26	27
28	29	30	31			

Path: D:\ Up

Search list below

Recoverable Item	Last Modified	Size
Backup	9/5/2018 8:41:59 PM	

Show all recovery points  
 Recover...

**Recovery Wizard**

**Review Recovery Selection**

Review the information for the items that you chose to recover.

**Steps:**

- Review recovery selection
- Select recovery type
- Specify recovery options
- Summary
- Recovery status

Review your recovery selections.

Recovery point: 10/23/2018 3:41:07 PM  
 Recover from: Online

Item details

Name	Size
Backup	-

Recovery source: D:\ on FSRV01.VIRT.LAB

< Back Next > Cancel Help



## Review Recovery Selection

Review the information for the items that you chose to recover.

### Steps:

- Review recovery selection
- Select recovery type
- Specify recovery options
- Summary
- Recovery status



Recover to the original location

Original location: D:\ on FSRV01.VIRT.LAB



Recover to an alternate location

Alternate location:

Browse...

< Back

Next >

Cancel

Help

Recovery Wizard

## Specify Recovery Options

Specify the options to apply to the recovery.

**Steps:**

- Review recovery selection
- Select recovery type
- Specify recovery options**
- Summary
- Recovery status

**Existing version recovery behavior**

Create copy    Skip    Overwrite

**Restore security**

Apply security settings of the destination computer  
 Apply the security settings of the recovery point version

**Network bandwidth usage throttling**

Status: Disabled [Modify...](#)

**SAN Recovery**

Enable SAN based recovery using hardware snapshots

Click on [Help](#) to learn about the prerequisite steps

**Notification**


Send an e-mail when this recovery completes

**Recipients:**

[Separate e-mail addresses with comma.](#)  
Example: Kim@Contoso.com, Terry@Adventure-works.com

< Back   Next >   Cancel   Help

Recovery Wizard ×

 **Specify Recovery Options**  
Specify the options to apply to the recovery.


**Steps:**

- Review recovery selection
- Select recovery type
- Specify recovery options
- Summary
- Recovery status


Recovery point: 10/23/2018 3:41:07 PM  
 Recovery media: Online  
 Source: D:\ on FSRV01.VIRT.LAB  
 Destination: D:\ on FSRV01.VIRT.LAB  
 Destination Host  
 Notification: No

Recovery items


Details:

Recovery Items	Size /
 Backup	-

Total size:

 Any synchronization job for the selected recovery server will be cancelled while the recovery is in progress.

Recovery Wizard ×

 **Recovery Status**

**Steps:**

- Review recovery selection
- Select recovery type
- Specify recovery options
- Summary
- Recovery status

Recovery status: In progress...  
 Start time: 10/23/2018 9:40:21 PM  
 End time: -  
 Data transferred: 125.21 MB  
 Recovering...

You can now close the Recovery Wizard and view the recovery status in the Monitoring task area.



### Alerts

Show inactive alerts

All Alerts  
 Critical (1)  
 Warning (0)  
 Information (1)

### Jobs

Default Filters  
 All jobs  
 All jobs in progress  
 Failed jobs for yesterday and today  
 Today's jobs  
 Custom Filters  
 Azure Recovery

---

**Monitoring**

Protection

Recovery

Group by:  Protection group  Computer  Status  Type

Search list below  Search in details also (Slow)

Source	Computer	Protection Group	Type			
<b>Scheduled</b> (Total jobs: 4)						
<b>Completed</b> (Total jobs: 187)						
SC-DPM-1807\model	sc-dpm-1807.virt.lab	SQL Protection Group	Recovery point	10/...	00:0...	0.19...
SC-DPM-1807\Report...	sc-dpm-1807.virt.lab	SQL Protection Group	Recovery point	10/...	00:0...	0.19...
D:\	fsv01.virt.lab	-	Recovery from staging area	10/...	00:0...	249...
D:\	sc-dpm-1807.virt.lab	-	Online recovery	10/...	00:0...	260...
SC-DPM-1807\Report...	sc-dpm-1807.virt.lab	SQL Protection Group	Recovery point	10/...	00:0...	0.19...

Details: D:\

**Type:** Recovery from staging area

**Status:** Completed

**End time:** 10/23/2018 9:42:30 PM

**Start time:** 10/23/2018 9:41:23 PM

**Time elapsed:** 00:01:06

**Data transferred:** 249.38 MB (261488640 bytes)

**Source details:** D:\

**Target details:** D:\ on FSRV01.VIRT.LAB

**Cluster node:** -

System Center 2016 DPM Administrator Console

File Action View Help

Add External DPM  
Recovery

End-user recovery  
Configure

Check updates  
Options

About DPM

Help

### Browse

Filter servers

- Local DPM Data
  - VIRT.LAB
    - SCDPM2016
      - All Protected SQL Instances
      - WS2016-HV03

### Recovery points for: Local DPM Data

Available recovery points are indicated in bold on the calendar.

Select the date from the calendar and the time from the drop down list for the recovery points that you want. Click recover in the Actions pane to open the Recover

November 2018

Sun	Mon	Tue	Wed	Thu	Fri	Sat
				1	2	3
4	5	<b>6</b>	7	8	9	<b>10</b>
11	12	13	14	15	16	17
18	19	20	21	22	23	24
25	26	27	28	29	30	

Recovery date: Not applicable

Recovery time:

Select External DPM for Recovery



**Vault Credential**

VaultCredentials

Browse

**DPM Server**

- sc-dpm-1807.virt.lab
- sc-dpm-1807.virt.lab

**Encryption Passphrase**

To decrypt the backup data for recovery, from an external server, specify the passphrase that was used to encrypt it

.....

OK

Cancel

System Center 2016 DPM Administrator Console

File Action View Help

Clear External DPM Recovery End-user recovery Configure Check updates Options About DPM Help

**Browse**

Filter servers

- External DPM Online Data
  - sc-dpm-1807.virt.lab
    - VIRT.LAB
      - SC-DPM-1807
        - All Protected SQL Instances
          - SC-DPM-1807
- Local DPM Data
  - VIRT.LAB
    - SCDPM2016
      - All Protected SQL Instances
        - WS2016-HV03

**Search**

- Search Recovery Points
  - Files and folders
  - Exchange mailboxes
  - SharePoint
- Monitoring
- Protection
- Recovery**
- Reporting
- Management

**Recovery points for: No database selected**

Available recovery points are indicated in bold on the calendar.

Select the date from the calendar and the time from the drop down list for the recovery points that you want. Click recover in the Actions pane to open the Recover

Recovery date: Not applicable (no database selected)

Recovery time: [Dropdown]

November 2018

Sun	Mon	Tue	Wed	Thu	Fri	Sat
		<b>6</b>	7	8	9	<b>10</b>
4	5	13	14	15	16	17
11	12	20	21	22	23	24
18	19	27	28	29	30	
25	26					

**Path:** SC-DPM-1807

Search list below

Recoverable Item	Last Modified
DPMDB_SC_DPM_1807	

Production Server Addition Wizard

### Select Computers

Select computers to attach to DPM Server

**Steps:**

- Select Production Server type
- Select agent deployment method
- Select computers
- Enter credentials
- Summary
- Installation

Recommended for computers that are not behind firewalls, or computers that have the required exceptions created in the firewall. Selecting this option will install protection agent in the computers. Click help for more information radio button

**Attach agents**

Recommended for

- computers behind firewall.
- computers on which agent is already installed.
- computers on which agent will be installed externally.

Selecting this option will add the protected computers to the DPM server. If you have not already installed the agent, then you must manually install it on the protected computer by executing the DPMAgentInstaller. Click help for more information.

**Computer on trusted domain**

The computer belongs to the same domain as, or is in a domain that has a two-way trust with, the DPM server domain.

**Computer in a workgroup or untrusted domain**

The computer is part of a workgroup or on a domain that does not have two-way trust with the DPM server domain.

< Back   Next >   Cancel   Help

**Create New Protection Group** [Close]

**Select Group Members.**  
Select the data that you want to protect.

**Steps:**

- Welcome
- Select protection group type
- Select group members
- Select data protection method
- Select short-term goals
- Choose consistency check options
- Summary
- Status

To choose the data to protect, select the check boxes in the Available members section. To exclude a folder, expand the folder. If you do not see the data source you want to protect in the tree below, click the following link for a list of unsupported [Unsupported configurations](#)

**Available members**

- VIRT.LAB
  - DPM-1807
    - All Shares
    - All SQL Servers
    - All Volumes
    - HyperV
    - Protected Servers
      - FSRV01.VIRT.LAB
      - SC-VMM-1807.VIRT.LAB
      - SRV-HYPER-01
      - SRV-HYPER-01.VIRT.LAB
    - System Protection
    - DPM-1807-SEC

**Selected members**

Selected Members	Computer
	Computer

Update data sources  
Refresh to clear the cache and retrieve the latest data  
[Refresh]

Remove

Excluded folders: 0 View  
Excluded file types: 0 Exclude Files ...

[< Back] [Next >] [Cancel] [Help]

Create New Protection Group

### Specify Short-Term Goals

DPM will create a protection plan using your short-term recovery goals.

**Steps:**

- Welcome
- Select protection group type
- Select group members
- Select data protection method
- Select short-term goals
- Review disk storage allocation
- Choose replica creation method
- Choose consistency check options
- Summary
- Status

Specify your short-term recovery goals for disk-based protection.

Retention range: 7 days

Synchronization frequency:  Every 24 hour(s)

[Modify synchronization start time](#)

File recovery points

Specify recovery points for file members.

Recovery points for files: 6:00 PM Everyday [Modify...](#)

#### Optimize Performance

Network

Enable on-the-wire compression

Synchronization start time

Synchronization start time can be used to optimize performance of a protection group and secondary protection of another DPM server. Click Help to learn more.

By default synchronization jobs in DPM start everyday at 12 AM and repeat as per the specified synchronization frequency throughout the day.

Offset 12 AM start time by: 0 hours  
0 minutes

Offset cannot be greater than synchronization frequency.

Synchronization frequency: Every 1440 minutes

Synchronization starts at: 12:00 AM Everyday

You can enable network bandwidth usage throttling in the Management task area on the Agents tab. You must enable throttling for each computer.

OK Cancel Help

Next > Cancel Help

System Center DPM Administrator Console

File Action View Help

Recover Show all versions End-user recovery Check updates Options About Help

Recovery Configure Options Help

**Browse**

Filter servers

- Local DPM Data
  - VIRT.LAB
    - DPM-1807
      - DPM-1807-SEC
        - SRV-HYPER-01
          - All Protected HyperV Data
            - RCTFILESRV
            - RCTSQLSRV
            - RCTWEBSRV**
          - Workgroup

**Recovery points for: RCTWEBSRV**

Available recovery points are indicated in bold on the calendar.

Select the date from the calendar and the time from the drop down list for the recovery points that you want. Click recover in the Actions pane to open the Recovery Wizard.

December 2018

Recovery date: 12/9/2018

Recovery time: 3:20 PM

Recover from: Disk

Sun	Mon	Tue	Wed	Thu	Fri	Sat
						1
2	3	4	5	6	7	8
<b>9</b>	10	11	12	13	14	15
16	17	18	19	20	21	22
23	24	25	26	27	28	29
30	31					

**Search**

Search Recovery Points

- Files and folders
- Exchange mailboxes
- SharePoint

Monitoring

Protection

**Recovery**

Reporting

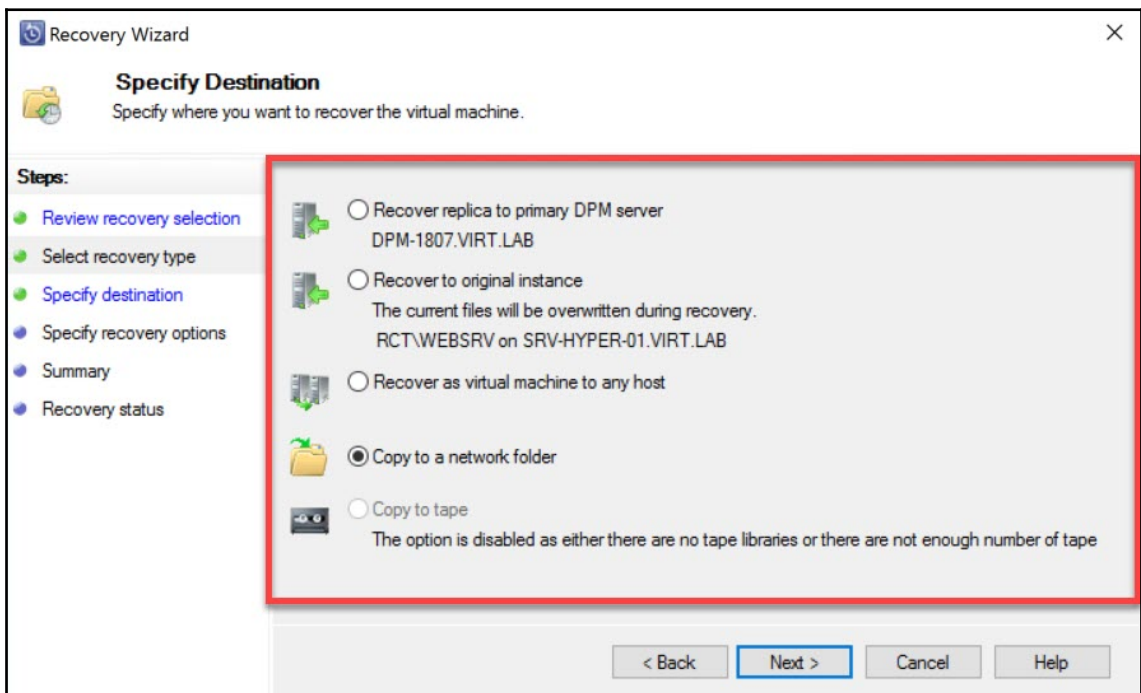
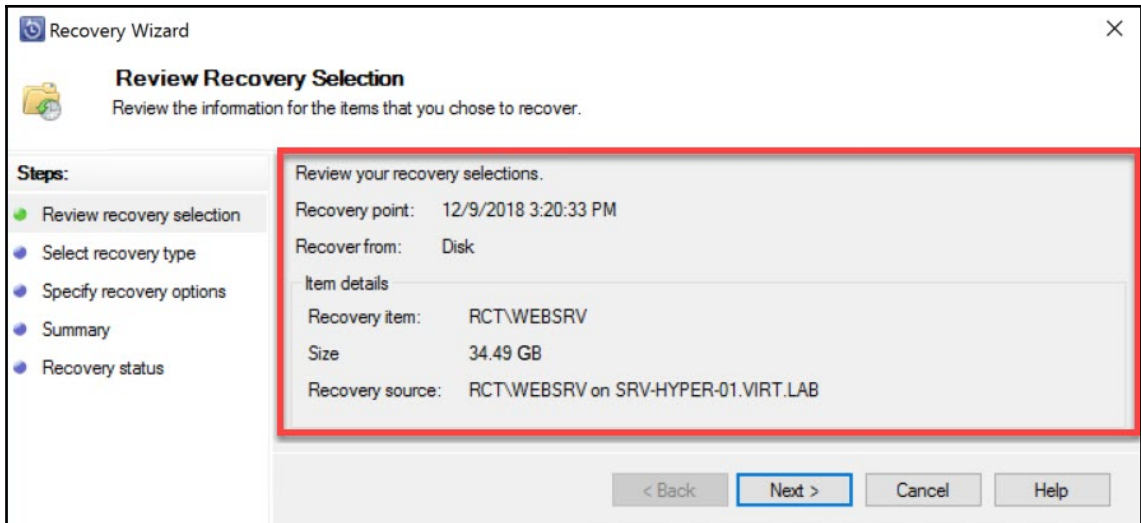
Management

**Path:** All Protected HyperV Data

Search list below

Search in details also (Slow)

Recoverable Item	Last Modified	Size
RCTFILESRV		-
RCTSQLSRV		-
<b>RCTWEBSRV</b>		-





Recovery Wizard

## Specify Destination

Specify where you want to recover the virtual machine.

**Steps:**

- Review recovery selection
- Select recovery type
- Specify destination**
- Specify recovery options
- Summary
- Recovery status

Specify where you want to recover the virtual machine.

All the files will be copied inside a folder named 'DPM\_12-9-2018\_15.20.33' in the copy destination.

Destination:  [Browse...](#)

Destination path:

Space required: 34.49 GB

Space available: 187.35 GB

< Back   Next >   Cancel   Help

Recovery Wizard

## Specify Destination

Specify where you want to recover the virtual machine.

**Steps:**

- Review recovery selection
- Select recovery type
- Specify destination
- Specify recovery options**
- Summary
- Recovery status

**Restore security**

Apply security settings of the destination computer

Apply the security settings of the recovery point version

**Network bandwidth usage throttling**

Status: Disabled [Modify...](#)

**SAN Recovery**

Enable SAN based recovery using hardware snapshots

Click on Help to learn about the prerequisite steps

**Notification**


Send an e-mail when this recovery completes

Recipients:

Separate e-mail addresses with comma.  
Example: Km@Contoso.com, Terry@Adventure-works.com

< Back   **Next >**   Cancel   Help

Recovery Wizard X

 **Summary**  
Review your recovery settings.




**Steps:**

- Review recovery selection
- Select recovery type
- Specify destination
- Specify recovery options
- Summary**
- Recovery status

Recovery point: 12/9/2018 3:20:33 PM  
Recovery media: Disk  
Source: RCT\WEBSRV on SRV-HYPER-01.VIRT.LAB  
Destination: DPM-1807-SEC.VIRT.LAB  
Destination Host  
Notification: No

Recovery items  
Recovery item: RCT\WEBSRV

Details:

Database Files	Destination	Size /
 005F9BC0-2AB3-4958-9B09-65C9B804F645.vmcx	D:\	-
 005F9BC0-2AB3-4958-9B09-65C9B804F645.VMRS	D:\	-
 WEBSRV.vhdx	D:\	-

Total size: 34.49 GB

Protection Group Member	Type	Protection Status
<b>Protection Group: DPMDDB SQL Protection Group (Primary)</b> (Total members: 9)		
<b>Protection Group: DPMDDB SQL Protection Group (Secondary)</b> (Total members: 6)		
<b>Protection Group: Hyper-V Protection Group (Secondary)</b> (Total members: 2)		
<b>Computer: DPM-1807.VIRT.LAB</b>		
RCTFILESRV on SRV-HYPER-01.VIRT.LAB	Microsoft Hyper-V	OK
RCTSQLSRV on SRV-HYPER-01.VIRT.LAB		OK

**Details:** RCTSQLSRV

**Status:** OK

**Replica path:** [Click to view details](#)

- Perform consistency check ...
- Create recovery point...
- Stop protection of member...
- Remove inactive protection...
- Move disk storage...
- Switch disaster protection**
- Modify disk allocation...
- Resume disk backups...
- Resume azure backups...
- Resume tape backups...
- Recovery point status...

Microsoft System Center Data Protection Manager X

You cannot recover data to its original location from a secondary DPM server without switching protection of the protected computer to the secondary DPM server.

To switch protection, right-click the data source, select 'Switch disaster protection', and then retry the operation.

ID: 31213

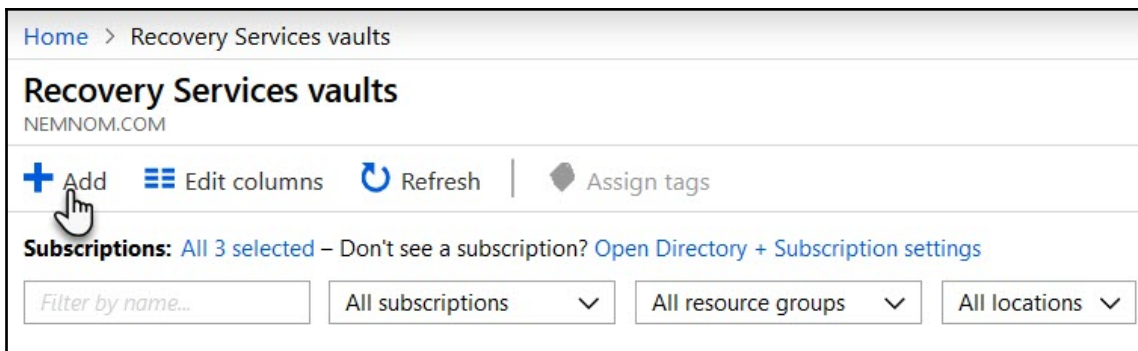
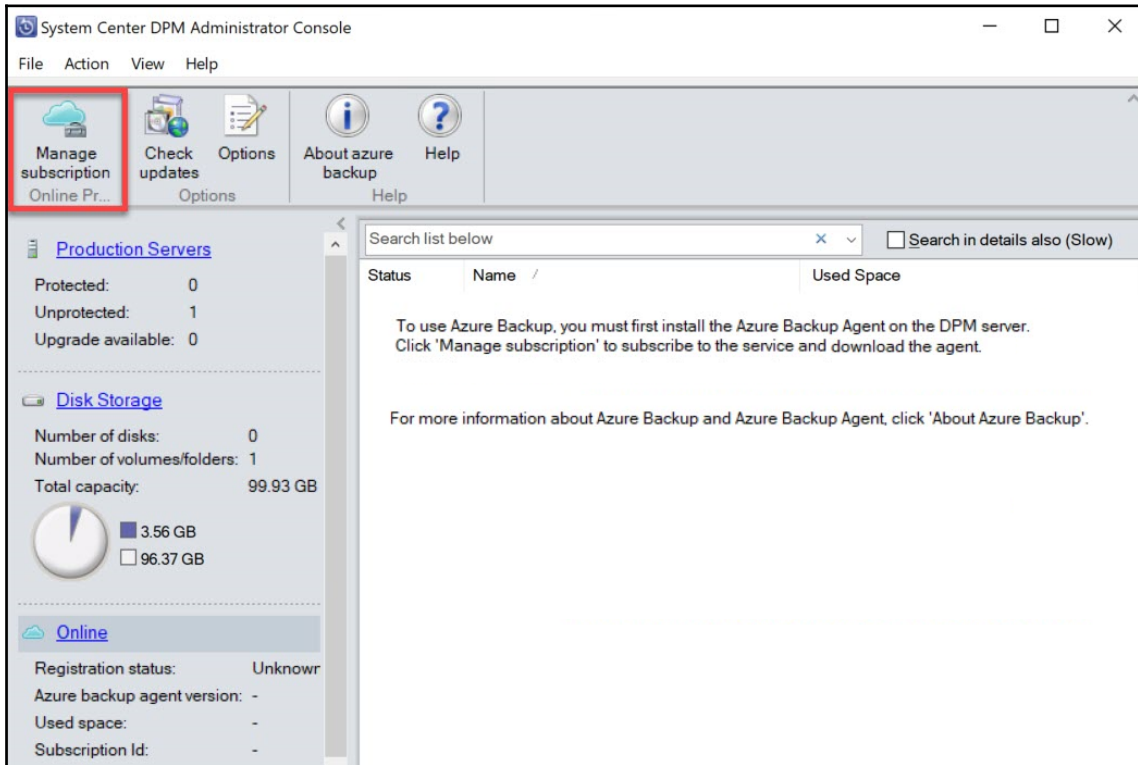
[More information](#)

Close

Copy Text

Cancel

# Chapter 10: Integrating DPM with Azure Backup



## Recovery Services vault



Recovery Services vault

\* Name

SC-DPM-RSV



\* Subscription

Microsoft Azure Sponsorship



\* Resource group

backup-dpm-rg



[Create new](#)

\* Location

West Europe



Create

[Automation options](#)

**SC-DPM-RSV - Backup Infrastructure**  
Recovery Services vault

Search (Ctrl+/)

**Protected items**

- Backup items
- Replicated items

**Manage**

- Site Recovery Infrastructure
- Backup Infrastructure**
- Recovery Plans (Site Recovery)

**Support + troubleshooting**

- New support request

Filter settings

**GENERAL**

- Backup Configuration**

**MANAGEMENT SERVERS**

- Backup Management Servers
- Protected Servers

**AZURE STORAGE ACCOUNTS**

- Storage Accounts

**Backup Configuration**

SC-DPM-RSV

Save Discard Refresh

Storage replication type

Locally-redundant Geo-redundant



# SC-DPM-RSV - Properties

Recovery Services vault

Search (Ctrl+)

- Overview
- Activity log
- Access control (IAM)
- Tags
- Diagnose and solve problems

## Settings

- Properties**
- Locks
- Automation script

## Getting started

- Backup
- Site Recovery

## Monitoring and reports

- Backup Jobs

## DIAGNOSTICS SETTINGS

[Update](#)

## BACKUP

Security Settings  
[Update](#)

Security PIN  
[Generate](#)

Recovery Services Agent  
[Download](#)

VM backup stack  
[Upgrade](#)

Backup Credentials

Already using the [latest Recovery Services Agent](#)

[Download](#)



## Installation Settings

### Installation Stages

- Installation Settings
- Proxy Configuration
- Installation

#### Installation Folder

Microsoft Azure Recovery Services Agent will be installed in the following folder. To choose a different installation folder, click Browse. The location specified must have at least 1 GB of free space.

D:\Program Files\Microsoft Azure Recovery Services Agent

Browse

#### Cache Location

Microsoft Azure Recovery Services Agent can use this to keep track of files being backed up from your computer. The location specified must have free space which is atleast 5% of the backup data.

D:\Program Files\Microsoft Azure Recovery Services Agent\Scratch

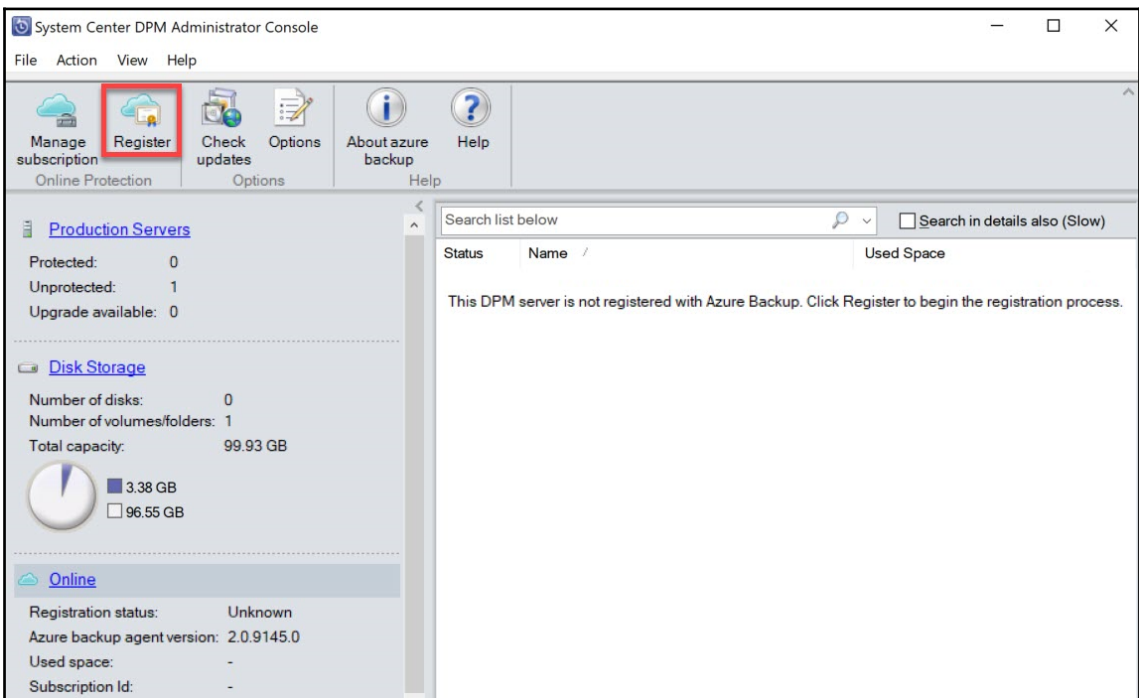
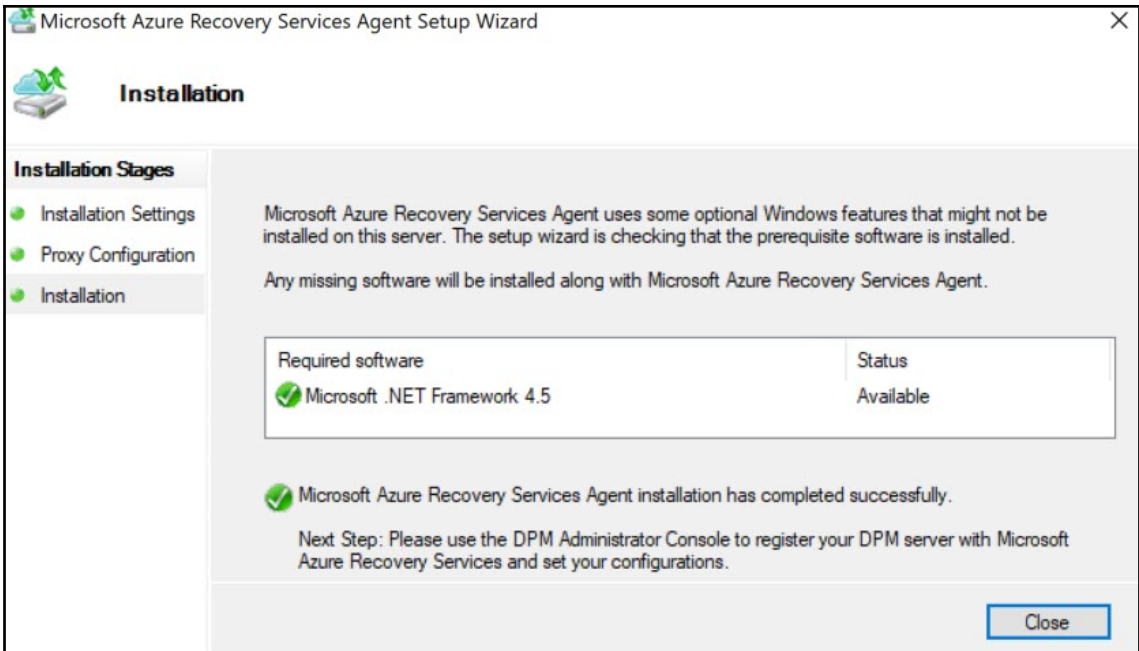
Browse

< Back

Next >

Cancel





Register Server Wizard

### Backup Vault

Select Backup Vault

**Steps:**

- Proxy Configuration
- Backup Vault
- Throttling Setting
- Recovery Folder Settings
- Encryption Setting
- Register server for azure backup

Select the vault credentials downloaded from the quick start page in the Microsoft Azure Backup Vault.

Vault Credential:

Backup Vault: SC-DPM-RSV

Region: westeurope

Subscription Identifier:

< Back   Next >   Cancel   Help

Register Server Wizard

### Throttling Setting

Configure Throttling Settings

**Steps:**

- Proxy Configuration
- Backup Vault
- Throttling Setting
- Recovery Folder Settings
- Encryption Setting
- Register server for azure backup

Enable internet bandwidth usage throttling for backup operations

Work hours:

Non-work hours:

Work hours:

Work days:  Sunday  Monday  Tuesday  Wednesday  Thursday  Friday  Saturday

< Back   Next >   Cancel   Help

Register Server Wizard

### Recovery Folder Settings

Recovery Folder Settings

**Steps:**

- Proxy Configuration
- Backup Vault
- Throttling Setting
- Recovery Folder Settings**
- Encryption Setting
- Register server for azure backup

During recovery, backup data from the Azure Backup needs to be temporarily downloaded to a local staging area before it is recovered to the final recovery destination. The staging folder is automatically cleaned up after recovery.

Enter a folder location with sufficient space to hold the recoverable items you anticipate to recover in parallel. You can estimate the space requirement (in GBs) by adding up the maximum size of those recoverable items that you anticipate recovering in parallel.

For example, if you want to recover up to 10 virtual machine backups (from online protection) in parallel and the size of each VM backup can be up to 100GB, select a folder which can hold 1000GB of data.

[More Information](#)

Register Server Wizard

### Encryption Setting

Encryption Setting

**Steps:**


- Proxy Configuration
- Backup Vault
- Throttling Setting
- Recovery Folder Settings
- Encryption Setting**
- Register server for azure backup

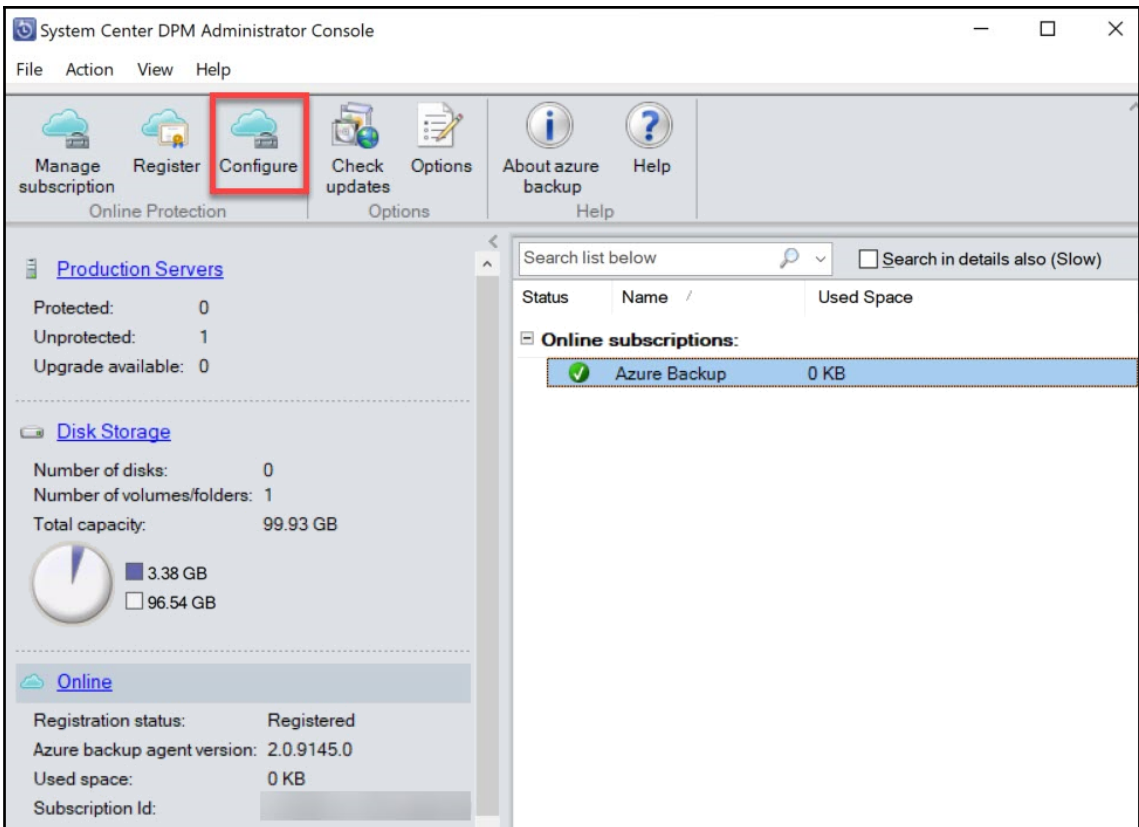
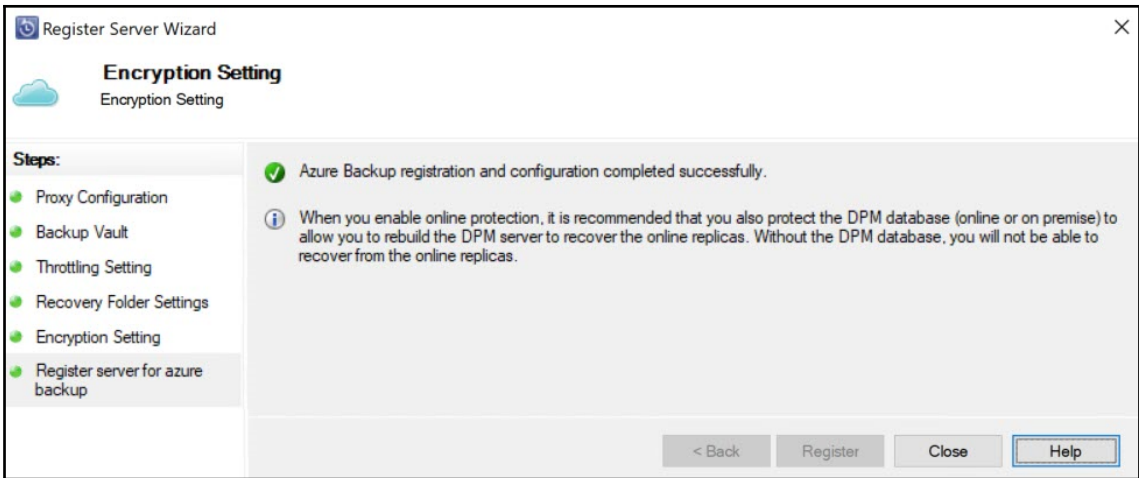
Enter a passphrase to encrypt all backups from this server. Note that your existing backups will still be accessible after this change.

- Passphrase must be 16 characters long.
- Use strong password guidelines.
- Do not use recognizable words or phrases.

Enter passphrase (minimum 16 characters)

Confirm passphrase

 Please make sure to keep a copy of your passphrase in a safe location. If the passphrase is lost or forgotten, customer support will not be able to assist you in recovering access to your backed up data.



Modify Group - SQL Protection Group

### Select Data Protection Method

DPM can help provide disk, online and tape based data protection.

**Steps:**

- Select group members
- Select data protection method
- Select short-term goals
- Choose consistency check options
- Specify online protection data
- Specify online backup schedule
- Specify online retention policy
- Choose online replication
- Summary
- Status

Protection group name:

Protection method

Select your protection method.

I want short-term protection using:

I want online protection

I want long-term protection using tape

Protection using tape options are disabled as no tape libraries were detected or the protection group contains data sources that cannot be protected on tape.

< Back   Next >   Cancel   Help

Modify Group - SQL Protection Group

### Specify Short-Term Goals

DPM will create a protection plan using your short-term recovery goals.

**Steps:**

- Select group members
- Select data protection method
- Select short-term goals
- Choose consistency check options
- Specify online protection data
- Specify online backup schedule
- Specify online retention policy
- Choose online replication
- Summary
- Status

Specify your short-term recovery goals for disk-based protection.

Retention range: 14 days

Synchronization frequency:  Every 15 minutes  Just before a recovery point

Application recovery points

For applications the recovery point is as per synchronization frequency when they support incremental, otherwise the recovery point is as per express full backup.

Recovery points: Based on synchronization frequency (Every 15 minutes)

Express Full Backup: 8:00 PM Everyday

**i** Recovery points will be created for some members in the protection group based on the express full backup schedule. To view members for which full backup is supported, click [view members](#). This list includes Exchange Servers for which copy backup is specified.

< Back **Next >** Cancel Help



### Specify Online Protection Data

Specify the data that you would like DPM to help protect online.

#### Steps:

- Select group members
- Select data protection method
- Select short-term goals
- Choose consistency check options
- Specify online protection data**
- Specify online backup schedule
- Specify online retention policy
- Choose online replication
- Summary
- Status



Select the data source you want to protect online.

Protect auto protected SQL DBs, VMs to disk to cloud automatically

Selected members	Computer
<input type="checkbox"/> SC-DPM-1807\ReportServerTempDB	SC-DPM-1807.VIRT.LAB
<input checked="" type="checkbox"/> SC-DPM-1807\DPMDB_SC_DPM_1807	SC-DPM-1807.VIRT.LAB
<input type="checkbox"/> SC-DPM-1807\msdb	SC-DPM-1807.VIRT.LAB
<input type="checkbox"/> SC-DPM-1807\master	SC-DPM-1807.VIRT.LAB
<input type="checkbox"/> SC-DPM-1807\ReportServer	SC-DPM-1807.VIRT.LAB
<input type="checkbox"/> SC-DPM-1807\model	SC-DPM-1807.VIRT.LAB

Select All

Deselect All

< Back

Next >

Cancel

Help

Modify Group - SQL Protection Group

### Specify Online Backup Schedule

Specify online backup schedule which DPM will use to generate your protection plan

**Steps:**

- Select group members
- Select data protection method
- Select short-term goals
- Choose consistency check options
- Specify online protection data
- Specify online backup schedule**
- Specify online retention policy
- Choose online replication
- Summary
- Status

Define the schedule when you want to create a backup copy

Schedule a backup every

Day     Week     Month     Year

At following times (Maximum allowed is two times a day)

11:00 PM    None

*DPM will create an online recovery point using the latest DPM replica on disk. No new data will be transferred from the protected computers. If you would like DPM to help protect the latest computer data online, please create a new recovery point on disk before creating an online recovery point.*

< Back    Next >    Cancel    Help



Modify Group - SQL Protection Group

### Specify Online Backup Schedule

Specify online backup schedule which DPM will use to generate your protection plan

**Steps:**

- Select group members
- Select data protection method
- Select short-term goals
- Choose consistency check options
- Specify online protection data
- Specify online backup schedule**
- Specify online retention policy
- Choose online replication
- Summary
- Status

Specify the retention policy which DPM will use to generate your protection plan

- Daily Retention policy  
Retain backup copies taken on \_\_\_\_\_ At 11:00 PM for 180 Days
- Weekly Retention Policy  
Retain backup copies taken on Saturday At  11:00 PM for 104 Weeks
- Monthly Retention Policy  
Retain backup copies taken on  Last Saturday At  11:00 PM for 60 Months  
 Day(s) 1
- Yearly Retention Policy  
Retain backup copies taken on  Last Saturday of March At  11:00 PM for 10 Years  
 Day(s) 1 of March

< Back   Next >   Cancel   Help


Modify Group - SQL Protection Group

### Summary

DPM is ready to update the SQL Protection Group protection group.

**Steps:**

- Select group members
- Select data protection method
- Select short-term goals
- Choose consistency check options
- Specify online protection data
- Specify online backup schedule
- Specify online retention policy
- Choose online replication
- Summary**
- Status

 DPM must create initial backup copy to the Azure Backup storage. How do you want to create the initial backup?

**Automatically over the network**

**Offline Backup**

To create an offline backup, please read the instructions for the Import Workflow [here](#)

**Staging Location**  
Enter local folder or network share to which the initial backup copy needs to be staged

**Azure Publish Settings**  
Select Azure Publish Settings file for the Azure account where the initial backup copy would be shipped

**Azure Import Job Name**  
Define a name for the Azure Import Job which would be used as a reference to ship the initial copy of disk

**Azure Subscription ID**  
Enter Azure Subscription ID associated with the Azure Import Job mentioned above

**Azure Storage Account**  
Enter Azure Storage Account associated with the Azure Import Job mentioned above

**Azure Storage Container**  
Enter destination blob storage container to which the files will be imported

### Modify Group - SQL Protection Group

**Summary**  
DPM is ready to update the SQL Protection Group protection group.

**Steps:**

- Select group members
- Select data protection method
- Select short-term goals
- Choose consistency check options
- Specify online protection data
- Specify online backup schedule
- Specify online retention policy
- Choose online replication
- Summary
- Status

Review the settings, and then click Update Group to create the SQL Protection Group protection group.

Protection group members:

- SC-DPM-1807/ReportServerTempDB
- SC-DPM-1807/DPMDB\_SC\_DPM\_1807
- SC-DPM-1807/msdb
- SC-DPM-1807/master
- SC-DPM-1807/ReportServer
- SC-DPM-1807/model

Protection group settings:

Setting	Details
Short-term retention range	14 Day(s)
Synchronization	Every 15 minutes
Recovery points (Config 1)	Every 15 minutes
Recovery points (Config 2)	8:00 PM Everyday
Online backup members	1 of 6
Online backup frequency	Daily
Online backup schedule	11:00 PM Sunday, Monday, Tuesday, Wednesday, Thursday, Friday,...

You can [optimize performance](#) of this protection group now or you can do it later from the actions pane.

⚠ Modifying the protection group will cancel some jobs for this protection group. For more information, click [Help](#).

After you modify the protection group, refresh the Jobs tab in the Monitoring task area to view the new jobs.

< Back    Update Group    Cancel    Help

### System Center DPM Administrator Console

File Action View Help

New    Modify    Add online protection    Delete    Optimize    Consistency check    Disk    Online    Tape    Self service recovery    Tape catalog retention    Recovery point status    Check updates    Options    About

Protection group    Data source...    Resume backups    Manage    Reports    Options    Help

Group by:  Protection group     Computer

Search list below    Search in details also (Slow)

Protection Group Member	Type	Protection Status	Online Protection
<b>Protection Group: SQL Protection Group (Total members: 6)</b>			
<b>Computer: SC-DPM-1807.VIRT.LAB</b>			
SC-DPM-1807/DPMDB_SC_DPM_1807	SQL Data	OK	Enabled
SC-DPM-1807/master	SQL Data	OK	-
SC-DPM-1807/model	SQL Data	OK	-
SC-DPM-1807/msdb	SQL Data	OK	-
SC-DPM-1807/ReportServer	SQL Data	OK	-
SC-DPM-1807/ReportServerTempDB	SQL Data	OK	-

Modify Group - SQL Protection Group

### Choose Online Replication

To Protect the data you have selected, you must initially copy the selected data to Azure Backup Storage

**Steps:**

- Select group members
- Select data protection method
- Select short-term goals
- Choose consistency check options
- Specify online protection data
- Specify online backup schedule
- Specify online retention policy
- Choose online replication**
- Summary
- Status

DPM must create initial backup copy to the Azure Backup storage. How do you want to create the initial backup?

Automatically over the network

Offline Backup

To create an offline backup, please read the instructions for the Import Workflow [here](#)

Staging Location  
Enter local folder or network share to which the initial backup copy needs to be staged

Azure Publish Settings  
Select Azure Publish Settings file for the Azure account where the initial backup copy would be shipped

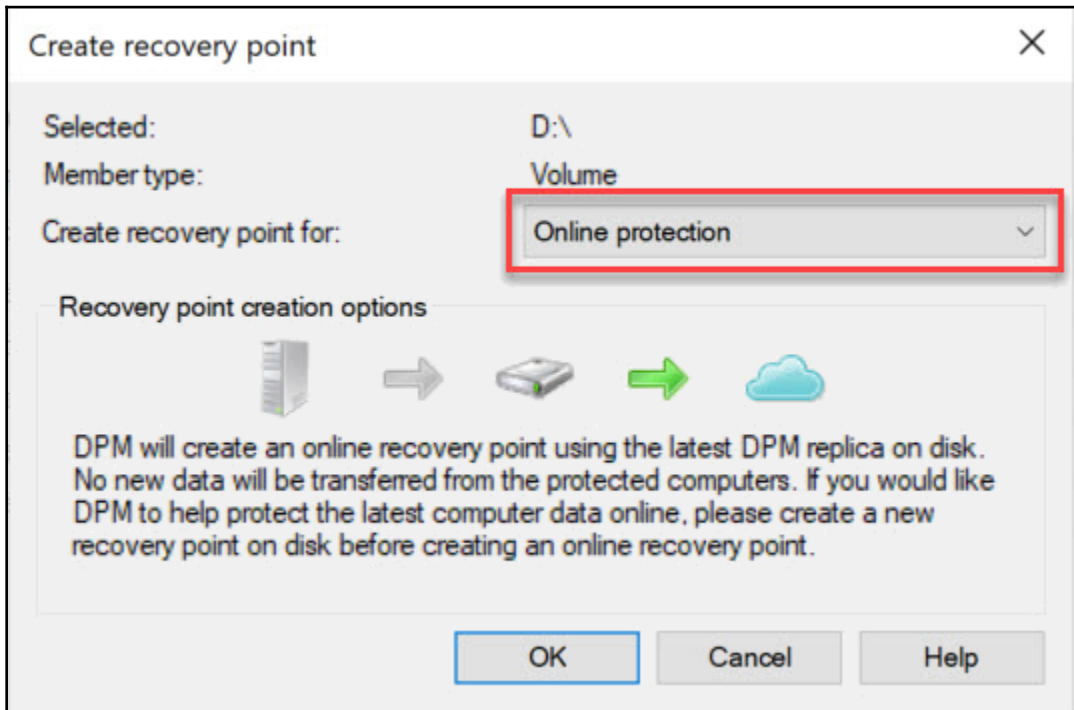
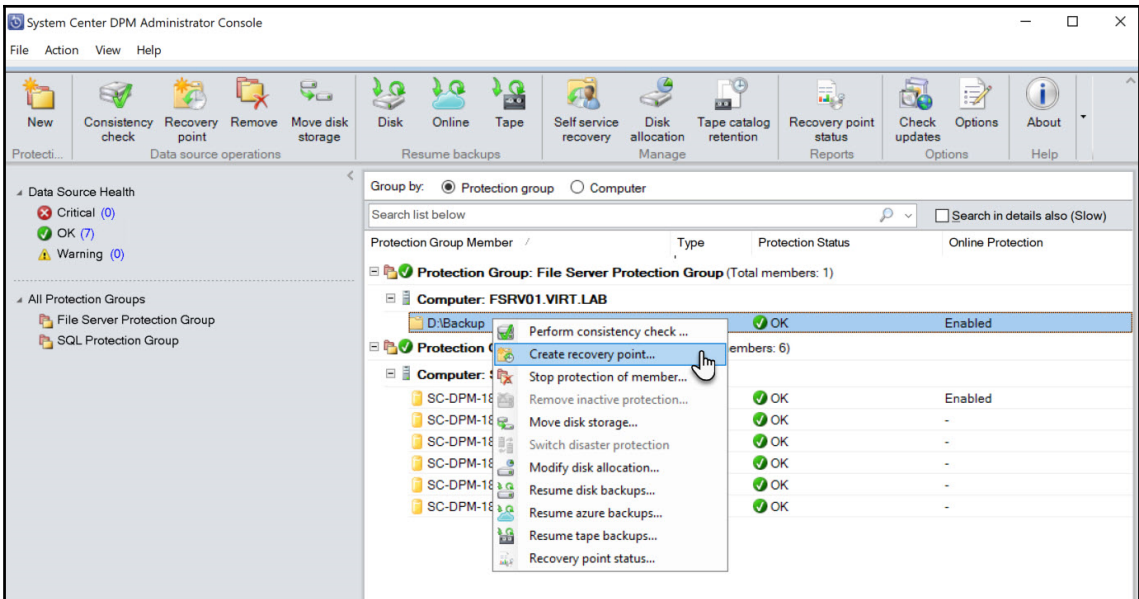
Azure Import Job Name  
Define a name for the Azure Import Job which would be used as a reference to ship the initial copy of disk

Azure Subscription ID  
Enter Azure Subscription ID associated with the Azure Import Job mentioned above

Azure Storage Account  
Enter Azure Storage Account associated with the Azure Import Job mentioned above

Azure Storage Container  
Enter destination blob storage container to which the files will be imported

< Back   Next >   Cancel   Help



Create Recovery Point



Progress details of recovery point creation is shown below.  
You may close this dialog and view the progress in the Jobs tab in Monitoring view.

Tasks

Task	Results
Creating online recovery point for D:\	Transferring 281.12 MB

Close

## Create storage account

[Basics](#) [Advanced](#) [Tags](#) [Review + create](#)

Azure Storage is a Microsoft-managed service providing cloud storage that is highly available, secure, durable, scalable, and redundant. Azure Storage includes Azure Blobs (objects), Azure Data Lake Storage Gen2, Azure Files, Azure Queues, and Azure Tables. The cost of your storage account depends on the usage and the options you choose below. [Learn more](#)

### PROJECT DETAILS

Select the subscription to manage deployed resources and costs. Use resource groups like folders to organize and manage all your resources.


\* Subscription  


 \* Resource group  

[Create new](#)


### INSTANCE DETAILS


The default deployment model is Resource Manager, which supports the latest Azure features. You may choose to deploy using the classic deployment model instead. [Choose classic deployment model](#)

\* Storage account name ⓘ  

\* Location  

Performance ⓘ  Standard  Premium

Account kind ⓘ  

Replication ⓘ  

Access tier (default) ⓘ  Cool  Hot

[Review + create](#)

[Previous](#)

[Next : Advanced >](#)

**SC-DPM-RSV - Backup Reports**  
Recovery Services vault

Search (Ctrl+/)

- Backup
- Site Recovery

Protected Items

- Backup items
- Replicated items

Manage

- Backup policies
- Backup Infrastructure
- Site Recovery Infrastructure
- Recovery Plans (Site Recovery)
- Backup Reports**

Monitoring

- Alerts

### Backup Reports (Preview)

You can use **Power BI** to view report dashboard, download reports and create custom reports

#### Step 1. Add Diagnostics Setting

Add Diagnostics Setting by going to Properties > Diagnostics Settings > Update and select storage account to get Azure Backup Reports

Link to [Diagnostics Settings](#)

Backup Reports data will be fully available in the storage account after 24 hours from configuration. Wait until that time before connecting to the Azure Backup Content Pack.

#### Step 2. Sign in to Power BI and connect to Azure Backup Content Pack

Navigate to Get Data > Services > Azure Backup

Use storage account details configured in Step 1 to connect to Content Pack

[Learn more](#) about how to connect to Content Pack

Home > Recovery Services vaults > SC-DPM-RSV - Backup Reports > Diagnostics settings

## Diagnostics settings

Refresh

\* Subscription ⓘ Microsoft Azure Sponsorship

Resource group ⓘ backup-dpm-rg

Microsoft Azure Sponsorship > backup-dpm-rg > SC-DPM-RSV

[Turn on diagnostics](#) to collect the following data.



## Diagnosics settings



Save



Discard



Delete



You'll be charged normal data rates for storage and transactions when you send diagnostics to a storage account.

\* Name

DPM Backup Reports



Archive to a storage account

Storage account

dpmcentralizedreporting



Stream to an event hub

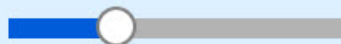
Send to Log Analytics

LOG



AzureBackupReport

Retention (days) ⓘ



120



AzureSiteRecoveryJobs

Retention (days) ⓘ



0



AzureSiteRecoveryEvents

Retention (days) ⓘ



0

## Diagnostics settings

Refresh

\* Subscription ⓘ Resource group ⓘ

Microsoft Azure Sponsorship backup-dpm-rg

Microsoft Azure Sponsorship > backup-dpm-rg > SC-DPM-RSV

NAME	STORAGE ACCOUNT	EVENT HUB	LOG ANALYTIC	EDIT SETTING
DPM Backup Reports	dpmcentralizedreporting	-	-	<a href="#">Edit setting</a>

[+ Add diagnostic setting](#)

- Home (preview)
- Favorites >
- Recent >
- Apps
- Shared with me
- Workspaces >
- My Workspace v

Get Data

## Get Data

Need more guidance? [Try this tutorial](#) or [watch a video](#)

### Discover content

#### My organization

Discover apps published by other people in your organization.

[Get](#)

#### Services

Choose apps from online services that you use.

[Get](#)

### Create new content

#### Files

Bring in your reports, workbooks, or data from Excel, Power BI Desktop or CSV files.

[Get](#)

#### Databases

Use Power BI Desktop to connect to data in Azure SQL Database and more.

[Get](#)

More ways to create your own content

[Samples](#)      [Organizational Content Packs](#)  
[Solution Templates](#)      [Service Content Packs](#)  
[Partner Showcase](#)



Apps (1)

My organization (0)

Other apps ▾

Azure Backup



### Azure Backup

By Microsoft  
Power BI

Gain insights and create custom reports for protected data assets to drive key business decisions

Get it now



## Connect to Azure Backup

### Storage Account

Enter your storage account configured for Azure Backup Reports

Next

Cancel



## Connect to Azure Backup



account

domain

Authentication method

Account key

Need help connecting? [Learn more](#)

Sign in

Cancel

- Home (preview)
- Favorites >
- Recent >
- Apps
- Shared with me
- Workspaces >
- My Workspace >

Search content...

**Azure Backup**  
OCT 25, 2018

Get more apps from Microsoft  
AppSource

## Backup Items

BackupManagementType  
 All v

---

Number of Backup Items

# 19

---

Number of Protected Containers

# 3

---

Number of Backup Management Servers

# 3

---

Number of Vaults

# 2

Backup Items by Backup Management Type

Backup Items by Backup Item Type

Top 5 Backup Items by Jobs created in period

BackupItemFriendlyName	#JobsCreatedInPeriod
SQLDB1	2
VM1	1
<b>Total</b>	<b>3</b>

Top 5 Backup Items by Alerts created in period

BackupItemFriendlyName	#AlertsCreatedInPeriod
SQLDB1	1
VM1	2
<b>Total</b>	<b>3</b>

Top 5 Backup Items by Failed Jobs in Period

BackupItemFriendlyName	#JobsCreatedInPeriod
SQLDB1	2
VM1	1
<b>Total</b>	<b>3</b>

Top 5 Backup Items by Critical Alerts in period

BackupItemFriendlyName	#AlertsCreatedInPeriod
SQLDB1	1
VM1	2
<b>Total</b>	<b>3</b>

Overview
Billing Details
Compliance
Storage
Backup Items
Alerts
Jobs

Home > Storage accounts > dpmcentralizedreporting - Blobs > insights-logs-azurebackupreport

### insights-logs-azurebackupreport

Container

Search (Ctrl+F)

Upload Refresh Delete Acquire lease Break lease

Azure now supports using Role-Based Access Control (RBAC) to manage access to blobs. Learn more. →

Location: insights-logs-azurebackupreport / resourceId= / SUBSCRIPTIONS / / RESOURCEGROUPS / BACKUP-DPM-RG / PROVIDERS / MICROSOFT.RECOVERYSERVICES / VAULTS / SC-DPM-RSV / y=2018 / m=10 / d=25 / h=00 / m=00

Search blobs by prefix (case-sensitive)  Show deleted blobs

NAME	MODIFIED	ACCESS TIER	BLOB TYPE	SIZE	LEASE STATE
[.]					
PTIH.json	10/25/2018, 2:53:10 AM	Hot (Inferred)	Block blob	20.63 KiB	Available

### Diagnostics settings

Save Discard Delete

**i** You'll be charged normal data rates for storage and transactions when you send diagnostics to a storage account.

\* Name  
DPM Backup Reports ✓

Archive to a storage account

Storage account  
dpmcentralizedreporting >

Stream to an event hub

Send to Log Analytics

Log Analytics  
Configure >

### OMS Workspaces

Create New Workspace

- DefaultWorkspace-4c78931... westeurope
- oms-azurebootcamp westeurope
- WEU-AzureBackup-LA westeurope

# OMS Monitoring solution for Azure Backup

Azure quickstart template

## TEMPLATE



101-backup-oms-monitoring

1 resource



Edit template



Edit parameters



Learn more

## BASICS

- \* Subscription
- \* Resource group    
[Create new](#)
- \* Location

## SETTINGS

- Workspace Location
- Workspace Name

## TERMS AND CONDITIONS

[Template information](#) | [Azure Marketplace Terms](#) | [Azure Marketplace](#)

By clicking "Purchase," I (a) agree to the applicable legal terms associated with the offering; (b) authorize Microsoft to charge or bill my current payment method for the fees associated the offering(s), including applicable taxes, with the same billing frequency as my Azure subscription, until I discontinue use of the offering(s); and (c) agree that, if the deployment involves 3rd party offerings, Microsoft may share my contact information and other details of such deployment with the publisher of that offering.

I agree to the terms and conditions stated above

[Purchase](#)





WEU-AzureBac...

Log Analytics

Search (Ctrl+/)

- Overview
- Activity log
- Access control (IAM)
- Tags
- Diagnose and solve problems
- Settings
  - Locks
  - Automation script
  - Advanced settings
- General
  - Quick Start
  - Workspace summary

## Overview

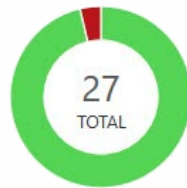
weu-azurebackup-la

Refresh Add Analytics

Last 24 hours

Filter by name...

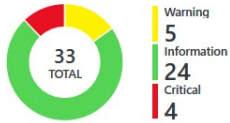
Azure Backup Monitoring Solution



Completed 26  
Failed 1

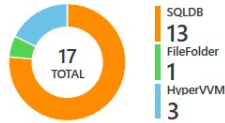
ACTIVE ALERT DISTRIBUTION

Active Alert Distribution



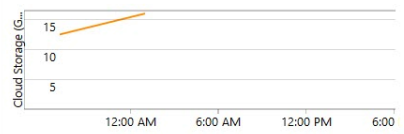
ACTIVE DATASOURCES PROTECTED

Active Datasources Protected



CLOUD STORAGE IN GB

Cloud storage in GB



DATA SO...	VAULT	ALERTSEV...	COUNT
E\	DPM-18...	Warning	3
DPM-1...	DPM-18...	Informa...	1
DPM-1...	DPM-18...	Informa...	1
DPM-1...	DPM-18...	Informa...	1
DPM-1...	DPM-18...	Informa...	1
DPM-1...	DPM-18...	Informa...	1
DPM-1...	DPM-18...	Informa...	1
DPM-1...	DPM-18...	Informa...	1
DPM-1...	DPM-18...	Informa...	1
E\	DPM-18...	Critical	1
<a href="#">See all...</a>			

DATASOURCES	NO OF JOBS RUN
E\	13
RCT\WEBSRV	3
RCT\SQLSRV	3
DPM-1807\DPMINSTANCE\DP...	3
RCT\FILESRV	2
DPM-1807\DPMINSTANCE\ma...	2
DPM-1807\DPMINSTANCE\ms...	2
DPM-1807\DPMINSTANCE\Re...	2
DPM-1807\DPMINSTANCE\Re...	2
DPM-1807\DPMINSTANCE\DP...	2
<a href="#">See all...</a>	

TOP 5 DATA SOURCES	CLOUD DATA IN GB
SC-VMM-1807\VirtualManager...	1
DPM-1807\DPMINSTANCE\DP...	0.7
DPM-1807\DPMINSTANCE\DP...	0.7
SC-VMM-1807\VirtualManager...	0.4
E\	0.3
<a href="#">See all...</a>	