# HP Data Protector for PCs – Policy Server migration

Technical white paper

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## Abstract

The purpose of this document is to describe the steps needed to migrate an HP Data Protector for PCs (previously called HP Data Protector Notebook Extension) Policy Server from one operating system version to another (for example, if you have a HP Data Protector for PCs Policy Server running on a Windows Server 2003 system and you would like to migrate to Windows Server 2008). HP Data Protector for PCs can be migrated from any supported platform to any other supported platform.

This white paper describes the detailed steps for successfully migrating the operating system (OS) without loss of backup data, and without interrupting service for the attached clients.

HP Data Protector for PCs architecture is fault-tolerant by design. This means that if the Policy Server is not available for some time, end-users can still use HP Data Protector for PCs on their client PCs to perform backups, or to restore data from the Data Vault. This is possible even during a Policy Server OS migration.

In the following scenarios we assume that you will reuse the same hardware. If you are going to replace the hardware, the procedures are identical.

## Important:

We do not recommend migrating the OS directly on a running HP Data Protector for PCs installation. This could lead to an unstable HP Data Protector for PCs system and potentially data loss.

Instead we recommend migrating the HP Data Protector for PCs Policy Server to a fresh installed "clean" server. The steps in the following sections describe the procedures in detail.

**Note:** This document is valid also for previous versions of HP Data Protector for PCs (called HP Data Protector Notebook Extension).

## Introduction

HP Data Protector for PCs software is an expansion of HP's high performance backup and recovery software (Data Protector), which is designed specifically for notebooks and desktops. HP Data Protector for PCs ensures the availability of business data on PCs without compromising productivity or mobility. It provides the ability to enforce central protection policies and optimize bandwidth and storage capacity for all notebooks and desktops in the organization.

As an important component of HP's Data Protector product portfolio, HP Data Protector for PCs is an integral part of a complete backup and recovery strategy. Appropriate for companies in any industry, it is the ideal solution for increasing productivity of your employees and avoiding the business risks and costs associated with PC data loss.

# Policy Server migration procedures

Depending on the chosen architecture, the steps are slightly different. Please choose the appropriate procedure for your environment.

## Prerequisites

- If the server address (IP address) will change, you must request the renewal of the licenses to the new IP address. Make sure you have the new license available *prior to any update activity*.
- If your new server will have a new server name, you must update all connected agents. Depending on the number of connected agents, this might be a cumbersome process. In such cases we recommend *not to change the server name*.
- If you choose to change the server name, please follow the recommendations in the section <u>Policy</u> <u>Server Name change</u>.
- Make sure that there is no Data Vault Cleanup scheduled during migration time.

## Configuration 1: External Policy Server database

In this configuration the Policy Server database resides on a dedicated SQL host. This architecture is the ideal situation in which to migrate the Policy Server to a new operating system. The change can be fully transparent to the connected agents.

## Figure 1: Configuration 1



## Prerequisites

- The HP Data Protector for PCs Policy Server version should be the same *before and after* the operating system migration. This means you may need to upgrade HP Data Protector for PCs Policy Server to the latest version *before* migrating the operating system.
- Make sure you have administrative access to the external SQL Server Database.

- As a safety precaution make sure you have a recent, valid backup (using your backup software of choice, such as Data Protector) of:
  - HP Data Protector for PCs Policy Server
  - HP Data Protector for PCs SQL Server Database
  - HP Data Protector for PCs Data Vault

## Shut down the Policy Server

Use the regular server shutdown procedure.

## Install the new operating system

- 1. Install the new operating system using the Microsoft installation procedures.
- 2. Configure the same hostname and IP address as before.
- 3. Install the latest OS patches.

## Install HP Data Protector for PCs

Follow the standard procedures for installing HP Data Protector for PCs.

When asked for the Policy Server database, make sure you select "Use an existing instance of Microsoft SQL Server" as shown in Figure 2.

#### Figure 2: Select external database

HP Data	Protector for PC	s Policy Serve	r Installatio	on Wizard		
Sele	ct Databa	se				C) DP
The HP policies install a	Data Protector for and agent informati DataProtectorNE ir	PCs Policy Serve on. You can use istance of the fre	er requires a S an existing in e Microsoft S	QL Server databa: stance of SQL Ser QL Server Express	se to store wer or you can	
्) Inst. • Use	all DataProtectorNE an existing instanc	instance of Mici	rosoft SQL Se QL Server	erver Express		
			Cancel	Kack	Next >	_

## Configuration 2: Internal database and external Data Vault

In this configuration the Policy Server database and the Policy Server itself reside on the same host. This architecture needs some more care and more manual steps.

#### Figure 3: Configuration 2



## **Prerequisites**

- Microsoft Management Studio Express is needed to migrate the SQL database. You can download the freeware from: <a href="http://www.microsoft.com/downloads/details.aspx?FamilyID=C243A5AE-4BD1-4E3D-94B8-5A0F62BF7796&displaylang=en">http://www.microsoft.com/downloads/details.aspx?FamilyID=C243A5AE-4BD1-4E3D-94B8-5A0F62BF7796&displaylang=en</a> It must be installed before and after the OS migration on the server. Make sure you download the required versions.
- The HP Data Protector for PCs Policy Server version must be the same *before and after* the operating system migration. Make sure you upgrade HP Data Protector for PCs Policy Server to the latest version *before* migrating the operating system.
- Make sure you have administrative access to the external SQL Server Database.
- As a safety precaution make sure you have a recent, valid backup (using your backup software of choice, such as Data Protector) of:
  - HP Data Protector for PCs Policy Server
  - HP Data Protector for PCs Data Vault

## Stop the IIS webserver

- 1. Start the IIS manager (Windows 2003: Control Panel/Administrative Tools/IIS Manager).
- 2. Stop the web site "Default Web Site" as shown in Figure 4.

Figure 4: IIS Manager (Windows 2003)

🐌 Internet Information Service	es (IIS) Manager		
🐚 Eile <u>A</u> ction <u>V</u> iew <u>W</u> indow	, Help		_ <b>8</b> ×
(= -> ) 🗈 💽 🗙 😭 🖸	В 🕄 🖬 💂 🕨 🔳 🛛		
Internet Information Services	Name	Path	Status
E VMW37041 (local computer	to a service the s	c:\Inetpub\wwwroot\dpnepolicyservice	
Application Pools	the second secon	c:\Inetpub\wwwroot\dpnepolicy	
🖃 📁 Web Sites	📁 aspnet_client		
Uerault web Site	Copy of dpnepolicy		
	🧾 iisstart.htm		
	🧾 pagerror.gif		
	11		

## Create a full backup of the dpnepolicydb database

1. Open Microsoft Management Studio Express:

## Figure 5: Microsoft Management Studio Express (MMSE)

K Microsoft SQL Server Management Studio Expre	ss
<u>File Edit View T</u> ools <u>W</u> indow <u>C</u> ommunity <u>H</u>	elp
🔢 <u>N</u> ew Query   🛅   📂 🔛 🍠   📴 🕮 🥬	🚰 🖕
Object Explorer 🛛 🗸 🕂 🗙	Summary
27 22 = 의 T	🔁 🗟 🦨 🍸 🕅 List 🗸
<ul> <li>WMW37041\DATAPROTECTORNE (SQL Server 9.0)</li> <li>Databases</li> <li>System Databases</li> <li>dpnepolicydb</li> <li>Database Diagrams</li> <li>Tables</li> <li>Views</li> <li>Synonyms</li> <li>Programmability</li> <li>Security</li> <li>Security</li> <li>Server Objects</li> </ul>	Mame  Database Diagrams  Tables  Synonyms  December 201
<ul> <li></li></ul>	Security

- 2. Select "Databases/dpnepolicydb".
- 3. Right-click "Tasks/Back Up...". The Back Up Database window appears:

Figure	6:	MMSE:	Back	Up	Database	window
--------	----	-------	------	----	----------	--------

🧊 Back Up Database - dpnepo	licydb	
Select a page	<u>S</u> Script 👻 📑 Help	
General		
	Source	
	Da <u>t</u> abase:	dpnepolicydb
	Recovery <u>m</u> odel:	SIMPLE
	Bac <u>k</u> up type:	Full
	Backup component:	
	O Database	
	C Files and filegroups:	
	Backup set	
	<u>N</u> ame:	pnepolicydb-Full Database Backup
	De <u>s</u> cription:	
	Backup set will expire:	
	After: 0	days
	O <u>O</u> n: 5/20/2010	
Connection	Destination	
Server: VMW37041\DATAPROTECTORI	Back up to: 💿 Dj	sk O Tage
Connection:	c:\Program Files\Microsoft SQL Serv	er\MSSQL.1\MSSQL\Backup\dpnepolicyd
VMW37041 (tester		<u>R</u> emove
		Contents
Progress		
Ready		
The set		
		OK Cancel

- 4. "Add" a backup destination.
- 5. Click **OK** to create the backup.
- 6. Make sure you save the backup that you have just created in a safe place for use later (for example, to a network drive, CD, and so on).

## Shut down the Policy Server

Use the regular server shutdown procedure.

## Install new operating system

- 1. Install the new operating system using the Microsoft installation procedures.
- 2. Configure the same hostname and IP address as before.
- 3. Install Microsoft IIS.
- 4. Install the latest OS patches.

## Install HP Data Protector for PCs

**Important:** Shut down IIS before installing HP Data Protector for PCs. This ensures agents do not connect to HP Data Protector for PCs Policy Server in a premature condition.

During the installation procedure make sure you select "**Install a new instance of SQL Server Express**" (see Figure 2).

## Replacing the database: Delete the newly installed database

- 1. Open Microsoft Management Studio Express (see Figure 5).
- 2. Select "Databases/dpnepolicydb".
- 3. Right-click **Delete**. The Delete Object window appears (see Figure 7).

#### Figure 7: MMSE: Delete Object window



#### Replacing the database: Restore the backed-up database

- 1. Open Microsoft Management Studio Express, if it is not still open (see Figure 5).
- 2. Select Databases.
- 3. Right-click **Restore Database...**. The Restore Database window appears (see Figure 8):

🧊 Restore Database - dpnepo	licydb					_ 🗆 >			
Select a page	🔄 Script 👻 [	Help							
General	Destination fo	r restore	w or existing datab	base for your rea	store op	eration.			
	To database: donenolicy/db								
		ise:	Masterest	-:		Ľ			
	i o a point	in time:	Imost recent pos	sible					
	Source for rea	store							
	Specify th	e source and location	of backup sets to	restore.					
	C From d	atabase:				Y			
	From d	evice:	C:\temp\bac	:kup.bak					
	Select the	backup sets to restor	, e:						
	Restore	Name	<u>.</u>	Component	Туре	Server			
		dpnepolicydb-Full D	atabase Backup	Database	Full	VMW37041\DATAPROTE			
Connection									
Server: VMW37162\DATAPROTECTOR!									
Connection: VMW37162\tester									
View connection properties									
Progress									
Ready									
	•					Þ			
						OK Cancel			

- 4. Specify the backup file as defined Create Full Backup of dpnepolicydb Database
- 5. Click **OK**, to start the restore.
- 6. If you moved your database from a 32-bit to a 64-bit system, the standard location of the databases will have changed and the following error message appears:

Figure 9: MMSE: Error message on 64-bit operating system

Microsoft	SQL Server Management Studio Express	×
	Restore failed for Server 'VMW37162\DATAPROTECTORNE'. (Microsoft.SqlServer.Express.Smo)	
$\mathbf{\mathbf{O}}$	Additional information:	
	System.Data.SqlClient.SqlError: Directory lookup for the file "c: \Program Files\Microsoft SQL Server\MSSQL.1\MSSQL\DATA\dpnepolicydb.mdf" failed with the operating system error 3(The system cannot find the path specified.). (Microsoft.SqlServer.Express.Smo)	
<b>0</b> - I		ОК

If this happens, change the Restore Location using the "**Options**" dialog, and add " **(x86)**" to the "**Program Files**" path.

## Figure 10: MMSE: Change the restore location

📙 Restore Database - dpnepo	licydb								
Select a page	🔄 Script 👻 📑 Help								
General									
Options	Restore options								
	Uverwrite the existing database								
	Preserve the replicati	on settings							
	Prompt before restorir	ng each backup							
	Restrict access to the	e restored database							
	Restore the database file	es as:							
	Original File Name	Restore As							
	dpnepolicydb	c:\Program Files (x86)\Microsoft SQL Server\MSSQL.1\M							
	dpnepolicydb_log	c:\Program Files (x86)\Microsoft SQL Server\MSSQL.1\M							
	Recovery state								
Connection									
Server: VMW37162\DATAPROTECTOR!	<ul> <li>Leave the database r transaction logs cann</li> </ul>	eady to use by rolling back uncommitted transactions. Additional to be restored.(RESTORE WITH RECOVERY)							
Connection: VMW37162\tester	C Leave the database r	non-operational, and do not roll back uncommitted transactions. Additional							
	uunaddionnoga cun i								
view connection properties									
Decemen	actions in a standby f	ile so that recovery effects can be reversed. (RESTORE WITH STANDBY)							
Frogress									
Executing (100%)	Standby file:								
Stop action now									
		OK. Cancel							

## Resolve the orphaned users issue

When a SQL Server database is restored, there is a so-called "orphaned user" issue. This must be resolved, or the database cannot be used by the HP Data Protector for PCs system. When opening the Policy Server Console, users see an error.

Figure	11:	Possible erre	or in H	P Data	Protector	for PC	Cs Policy	Server	Console
--------	-----	---------------	---------	--------	-----------	--------	-----------	--------	---------

	nsole
Error	
We are unable to complete the req the following error Internal error.	uested operation
Detailed technical information	
Error building the navigation tree ec: Failed to find a license key. S HPAutopassLicenseKey, HPLice Expires, xData, Entered, xTSL = License ORDER BY Entered DES System.Data.SqlClient.SqlExcep was denied on the object 'Licen schema 'dbo'. at System.Data.SqlClient.SqlCon exception, Boolean breakConne at System.Data.SqlClient.SqlInte (SqlException exception, Boolea at	e. SQL command we enseDescription, I convert(bigint, x' SC'> tion: The SELECT se', database 'dp enection.OnError( ction) rnalConnection.O an breakConnection
System.Data.SqlClient.TdsParse (TdsParserStateObject stateObj at System.Data.SqlClient.TdsPar runBehavior, SqlCommand cmdł dataStream BulkConySimpleRes	r.ThrowExceptio
TdsParserStateObject stateObj at System.Data.SqlClient.SqlData at System.Data.SqlClient.SqlData at System.Data.SqlClient.SqlCon (SqlDataReader ds, RunBehavio	aReader.Consum aReader.get_Meta nmand.FinishExec or runBehavior, Si

In order to resolve this, execute the following commands using SQL Server Management Studio Express (see Figure 10):

```
use dpnepolicydb
go
exec sp_change_users_login Update_One, 'dpnepolicy', 'dpnepolicy'
exec sp_change_users_login Update_One, 'dpnepolicyservice', 'dpnepolicyservice'
```

Figure 12: MMSE: Resolve orphaned users



# Policy Server name change

We do not recommend that you change the server name after the migration, but if you choose to do so, please follow these steps after you requested the new license from HP Password Delivery Center.

## Install the new license obtained from HP

If you have chosen also to set a new IP address, you must install the new licenses:

- 1. Open the Policy Server Console.
- 2. Navigate to the "License Management/Licensing" section.
- 3. Click Add License to enter the license key that you received from HP.

## **Migrate Data Vaults**

If your centrally-defined Data Vault is located directly on the Policy Server, make sure you change the configuration according to your new server.

It is assumed you have followed steps described in <u>Configuration 1: External Policy Database</u> or <u>Configuration 2: Internal Database and External Data Vault</u> to back up your Data Vault data.

- 1. Restore your Data Vault data to a location on the server.
- 2. Open the Policy Server Console.
- 3. Navigate to "Policies/Data Vaults/Data Vault Policies" and select your Data Vault.
- 4. Adjust the following values according to the new server name (see Figure 13 and Figure 14):
  - Share Path
  - Domain
  - Username/Password
  - Folder Path
  - Cleanup Computer Name
- 5. Do not forget to click Save Data Vault Policy.
- 6. Click Test Data Vault Share to make sure the Data Vault is working.

Fiqure	13:	Migrate	Data	Vault	name	(A)

Policy Server Console		User: VMW37162\tester
Policies Pol	File Server Share path Account credentials	Disable this Data Vault  r - This network share will be used to store files backed up from user computers.  Nvmw37162.deu.hp.com/dv001 Use UNC format, e.g., \\server\share  Domain  Domain  or  or  VMW37162  A domain or computer name is usually necessary.  Username tester  Password  Confirm password
	< <u> </u>	Folder path on file server c:\dv001 Create Data Vault Share Optionally create and share a folder to be used for the Data Vault, e.g., C:\folder. Rec will be applied. Test Data Vault Share The results of the Data Vault share test will appear in a popup window. Please make

## Figure 14: Migrate Data Vault name (B)

	A blank or 0 quota allows each machine unlimited space on this Data Vault. Increasing existing quota limit will get active after next data vault cleanup for clients quota. For clients under quota, the changes will be active immediately.
Copy Policy	y - Specify the Copy Policy to use for this Data Vault.
Copy policy	Default  Force Background Update
Cleanup - D	esignate one computer to clean up this Data Vault.
Computer name	VMW37162 NETBIOS name
	Save Data Vault Policy

#### Update all Agents with the new Policy Server name

On every Agent and Cleanup Agent:

- 1. Open a command line interface (**cmd**).
- 2. Execute the command:

**32-Bit:** "C:\Program Files\Hewlett-Packard\HP Data Protector for PCs\DPNEUtility - FKEA [newserver]"

**64-Bit:** "C:\Program Files (x86)\Hewlett-Packard\HP Data Protector for PCs\DPNEUtility -FKEA [newserver]"

3. Upgraded systems:

**32-Bit:** "C:\Program Files\Hewlett-Packard\Data Protector Notebook Extension\DPNEUtility -FKEA [newserver]"

**64-Bit:** "C:\Program Files (x86)\Hewlett-Packard\Data Protector Notebook Extension\DPNEUtility -FKEA [newserver]"

Figure 15: Migrate Agents to new Policy Server

III HP Data Protect	or for PCs Control Panel
É	Health
Health	Summary Policies Data Vaults Local Repository Log Support
Data Vaults	The policies and HP Data Protector for PCs Agent licenses are managed by your company's HP Data Protector for PCs Policy Server. This is a central computer system that is used by your HP Data Protector for PCs Administrators to determine what operations this computer should perform. This computer obtains policies from that system and also reports operations that are performed and regular health conditions.
N 19 1	Test Connection to Server
Recover Files	Last time this computer updated policies: Fr, 3. Jun 2011 09:06:37
File Protection Policies	Last time policies were changed: Mo, 23. Mai 2011 15:28:12 Update Policies Click the button below to request the latest policies from the Policy
	Server.

# For more information

To read more about HP Data Protector for PCs, go to <u>www.hp.com/go/dppc</u>.

Microsoft Management Studio Express download: http://www.microsoft.com/downloads/details.aspx?FamilyID=C243A5AE-4BD1-4E3D-94B8-5A0F62BF7796&displaylang=en



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