

EPDM: Backup/Restore

TITLE:	Backing up and Restoring File Vaults
DATE:	December 26, 2013
SUBJECT:	Enterprise Backup and Restore Procedures
ABSTRACT:	Guide on how to backup and restore a file vault in EPDM

File vault backups should be part of the daily management of SolidWorks Enterprise PDM. They are highly recommended before you upgrade your Enterprise PDM components.

You can use the SQL Maintenance Wizard to schedule a planned backup.

When backing up the vault, the latest updates in files that are still checked out and modified on client workstations are not included since they are stored in the local file vault view (cache) of the client. To ensure that the latest information of all files is always included in a backup, the files should be checked in.

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Backing Up the File Vault Database

Back up the file vault database hosted on the SQL Server using professional backup software such as Veritas Backup Exec with SQL agent. You can also perform the backup using the SQL Management tools that are included with the SQL Server.

- 1. Open SQL Server Management Studio.
- 2. Expand the Databases folder.
- 3. Right-click the database to be backed up, and select **Tasks** > **Back Up**.



4. In the Back Up Databases dialog box, under Source:

- a) For Backup type, select Full.
- b) For Backup component, select Database.
- 5. Under **Destination**, click **Add**.

6. In the Select Backup Destination dialog box, enter a destination path and filename for the backed up database and click **OK**.

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General	Script 🔻 📑 Help			
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	Recovery model:		FULL	
	Backup type	\rightarrow	Full	
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_	Backup component:			
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	Name:	newbackupte	st-Full Database Backup	
	Description:			
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Server:	On:	1/10/2014		
(local)	Back up to:	Disk	Tape	
sa	C:\Program Files\Microsoft SQ	_ Server\MSSQL10	0 50.MSSQLSERVER\MSSG	
View connection properties				Add
Progress				Remove
Ready				Castanta
Housy			4	Contents
			ОК	Cancel

- 7. Click **OK** to start the backup.
- 8. When the backup completes, click **OK**.
- 9. Repeat the backup procedure for any additional file vault databases.
- 10. Exit SQL Server Management Studio.



Backing Up the Enterprise PDM Master Database

In addition to the file vault database(s), the Enterprise PDM master database called **ConisioMasterDb** must be backed up.



To back up this database, follow the same instructions used for backing up the file vault database.



Backing Up the Archive Server Settings

The archive server contains file vault settings such as passwords and defined login types. It is also the physical location of the Enterprise PDM vault archive files. Backing up the archive server settings does not back up the archive files.

After backing up the archive server settings, include the backup file in your normal file backup.

To backup the archive server settings:

1. On the archive server, open the SolidWorks Enterprise PDM Archive Server dialog box by doing one of the following:

• On Windows 7 and Windows Server systems prior to Windows Server 2012, from the Windows Start menu, select All Programs > SolidWorks Enterprise PDM > Archive Server Configuration.

G SolidWork	is Ent	terprise PD	M Archive Server					
File View	Тоо	ls Help						
;		Start Serve	er					
🕀 🖳 This (Stop Serve	er	D	atabase Server	Database Name	Description	
		Restart Se	rver					
		New Root	Folder					
		Delete Fol	lder					
		Default Se	ettings					
		Backup Se	ettings 🔸					
Set backup se	tting	s						

• On Windows 8 and Windows Server 2012 or later, on the **Apps** screen, under **SolidWorks Enterprise PDM**, click **Archive Server Configuration**.

2. Select **Tools** > **Backup settings**.



- 3. In the Backup Settings dialog box:
 - a) Select Include all vaults. (preferred setting)

Alternatively, you can select **Include selected vaults** and specify the file vaults for which settings will be backed up.

b) Specify or select the **Backup location**.

The default location is the archive root folder.

- c) To schedule an automatic backup, click **Schedule** and specify the schedule.
- d) Type and confirm a password for the backup file.

This password is required to restore settings.

- e) Do one of the following:
 - To perform the backup immediately, click **Launch backup**. When a message confirms the backup, click **OK**.
 - To perform the backup at the scheduled time, click **OK**.
- 4. Close the SolidWorks Enterprise PDM Archive Server dialog box.

The backup file is saved in the specified location and called Backup.dat.

Backup Settings	8 22			
Options This tool does NOT backup file vault archives, set your directories stored under the This backup tool handles th The default settings are alw	the vault archives. To backup the normal backup routine to include the archive root folder. e archive server settings and logins. ays included in a backup.			
 Include all vaults. Include selected vaults 	✓ 1 ✓ AutoPilot ✓ Enterprise PDM ✓ Patrick123 ✓ test ✓ test1 ✓ TEST123456 ✓ test2			
Backup location:				
U:\Program Files\SolidWorks Enterpri	ise PDM\Data			
Schedule Occurs every 1 day	y(s), at 00:00:00.			
Password Password: meneoexected	Confirm password:			
Load backup	Launch backup			
DK Cancel				



Backing Up the Archive Files

The file vault archives contain the physical files that are stored in a file vault. A file added to the vault is stored in the archive folder specified by the archive server.

1. Locate the archive folder with the same name as the file vault.

This folder is stored under the defined root folder path on the archive server. If you are uncertain where the file vault archives are stored, view the registry key

HKEY_LOCAL_MACHINE\SOFTWARE\SolidWorks\Applications\PDMWorks Enterprise\ ArchiveServer\Vaults*vaultname*\ArchiveTable.

C:\Program Files\SolidWorks E	nterprise PDM		- + y	Search SolidWorks	Enterprise PD	м р
2. Use a backup application	such as Back	up Exec to b	ack up this fo	lder and its	conten	ts.
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Organize 👻 Include in library 👻 Sha	re with 🔻 🛛 Burn	New folder				
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	1		12/12/2013 11:05	File folder		
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- Music	3		12/12/2013 11:05	File folder		
	🔒 A		12/12/2013 11:05	File folder		
Videos	🗼 B		12/12/2013 11:05	File folder		
	📙 C		12/12/2013 11:05	File folder		
🔍 Computer	🍌 D		12/12/2013 11:05	File folder		
Local Disk (C:)	E E		12/12/2013 11:05	File folder		
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HP_RECOVERY (G:)						
🖵 networkshares (\\epdmvault) (H						
🗣 Network						
16 items						
10 items						



Scheduling Database Backups Using a Maintenance Plan

To set up a recurring automatic backup of the file vault SQL databases, you can use the SQL Server Management Studio maintenance plans.

A maintenance plan lets you create complete backups of the databases, which you can include in your normal file backup routine.

Before scheduling database backups:

• The SSIS (Integration Services) must be installed on the SQL Server. The Integration

Services are normally included as part of the Workstation Components step in the SQL Server install wizard.

For more information, see: http://support.microsoft.com/kb/913967

• The SQL Server Agent must be running.

Install SQL Server 2005 SP2 or higher if you have trouble setting up or using the maintenance plans.

Starting the SQL Server Agent

If the SQL Server Agent is not running, you could see a message that the 'Agent XPs' component is turned off as part of the security configuration of your computer.

- 1. Open the SQL Server Configuration Manager.
- 2. In the left pane, select **SQL Server Services**.
- 3. If the state of SQL Server Agent is **Stopped**, right-click it and select **Start**.



Sql Server Configuration Manager				
File Action View Help				
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SQL Server Configuration Manager (Local) SQL Server Services SQL Server Network Configuration (32bit) SQL Server Network Configuration (32bit) SQL Server Network Configuration SQL Native Client 10.0 Configuration	Name SQL Server Integration Services 10.0 SQL Server (MSSQLSERVER) SQL Server Browser SQL Server Agent (MSSQLSERVER)	State Running Running Stopped Start Resur Resur Help	Start Mode Automatic Automatic Automatic ent erties	Log On As LocalSystem NT AUTHORF LocalSystem
Start selected service.				

Ensure that the **Start Mode** of the agent is set to **Automatic**. If it is not, right-click the agent and select **Properties**, then configure the **Start Mode** on the Services tab.



🚟 Sql Server Configuration Manager				
File Action View Help				
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	Name SQL Server Integration Services 10.0 SQL Server (MSSQLSERVER) SQL Server Browser SQL Server Agent (MSSQLSERVER)	State Running Running Running Running	Start Mode Automatic Automatic Automatic Manual	Log On As LocalSystem LocalSystem NT AUTHORI LocalSystem
SQL Server Ag	ent MSSQLSERVER) Properties	ft SQL S SERVER		
	<			4

4. Exit the SQL Server Configuration Manager.



Setting Up a Maintenance Plan for Database Backup

The easiest way to set up a backup maintenance plan is using the SQL Maintenance wizard.

When the backup maintenance plan is run, the file vault databases are backed up and placed in a folder you specify. Include the backup folder in your normal daily backup procedure.

To set up a backup maintenance plan:

- 1. Open Microsoft SQL Server Management Studio and click **Connect**.
- 2. In the left pane, under the SQL Server, expand Management.

3. Right-click Maintenance Plans and select Maintenance Plan Wizard.



Ready



Select Plan Properties

- 1. Enter a name and description for the maintenance plan.
- 2. Click **Change** to set up a schedule.

In the Job Schedule Properties dialog box, specify a name for the schedule and choose the recurring times to run the database backups. Set the times close to the start time of the normal daily file backups. The backup of a database to a hard drive usually completes within minutes.

Microsoft SQL Server N	Management Studio			_ 0 X
File Edit View Deb	oug Tools Window (Community Help	🕼 Maintenance Plan Wizard	
Diject Explorer	• • • • • • • • • • • • • • • • • • •		Select Plan Properties How do you want to schedule your maintenance tasks?	
□ Connect □ □ □ □ □ Colline C	10.50.2500 - sa)	tier - Maintenanre01an	Name: MaintenancePlan	
Gerver Objects Gerver Objects Gerver Objects Gerver Objects Gerver Objects	Name:	MaintenancePlan Jobs in Schedule	Description:	A
Management Management	Schedule type:	Recurring		
 	One-time occurrence	1/10/2014 • Time: 3.46.22 PM	 Separate schedules for each task Single schedule for the entire plan or no schedule 	
Database N	Occurs	W-14.		
Egacy	Recurs every:	1 ek(s) on	Schedule: Not scheduled (On Demand)	Change
SQL Server Age		Monday Wednesday Friday Saturday		
		📄 Tuesday 📄 Thursday 😨 Sunday	Help < Back Next >	Finish Cancel
	Daily frequency			
	Occurs once at:	12:00:00 AM		
	Occurs every:	1 ☆ hour(s) ▼ Starting at: 12:00:00 AM ☆ Ending at: 11:59:59 PM ☆		
Output	Duration		-	~ ₽ ×
	Start date:	1/10/2014 🗐 🗸 💿 End date: 1/10/2014 🗐 👻		
		No end date:		
	Summary		-	
	Description:	Occurs every week on Sunday at 12:00:00 AM. Schedule will be used starting on 1/10/2014.	A	
Ready		UK Cancel Help		

3. Click OK.

4. Click Next.



Select Maintenance Tasks

1. Select Back Up Database (Full).

🗃 Maintenance Plan Wizard		×
Select Maintenance Tasks Which tasks should this plan perform?		
Select one or more maintenance tasks:		
 Check Database Integrity Shrink Database Reorganize Index Rebuild Index Update Statistics Clean Up History Execute SQL Server Agent Job Ø Back Up Database (Full) Back Up Database (Differential) Back Up Database (Transaction Log) Maintenance Cleanup Task 		
The Back Up Database (Full) task allows you to specify the source datab files or tapes, and overwrite options for a full backup.	oases, destii	nation
Help < Back Next > Finish	Cano	el

If you rely on daily backups, you can select **Back Up Database (Differential)** as well. You should create at least one full backup set each week.

2. Click **Next**.

Select Maintenance Task Order

- 1. Ensure that the backup task is listed.
- 2. Click Next.



Define Back Up Database (Full) Task

- 1. Expand the **Databases** list.
- 2. Select **All user databases**.

🛐 Maintenance Plan Wizar	d 🗆 🖂 🕅		
Define Back Up Da Configure the maintenand	tabase (Full) Task ce task.		
Backup type:	Full		
Database(s):	<select more="" one="" or=""></select>		
Backup component Database Files and filegroups:			
Backup set will expire:	All databases		
○ On Back up to:	 System databases All user databases (excluding master, model, msdb, tempdb) 		
 Back up databases acros If backup files exist: Create a backup file for er Create a sub-directory Folder: 	 These databases: 1 5678 AutoPilot ConisioMasterDb Ignore databases where the state is not online 		
Backup file extension:	OK Cancel		
Verify backup integrity Back up the tail of the log Set backup compression:	, and leave the database in the restoring state lse the default server setting v		
Schedule:			
Not scheduled (On Demand)	Change		
Help	< Back		



This selects all Enterprise PDM databases and excludes the SQL system databases, which are not required by Enterprise PDM. To select databases individually, select **These databases** and make your selections. Be sure to select the file vault database(s) and the **ConisioMasterDb** database.

3. Click **OK**.

4. Select **Backup set will expire** and define how many days the existing backup set files should be kept.

5. Select **Back up to Disk**.

6. Select Create a backup file for every database.

7. For **Folder**, enter a local path on the SQL Server to an existing folder where the backup files should be created.

🛐 Maintenance Plan Wizar	d	- • ×
Define Back Up Da Configure the maintenan	t abase (Full) Task ce task.	· Ju
Backup type:	Full	
Database(s):	All databases	-
Backup component Introduction Database	· 	
 Files and filegroups: 		
Backup set will expire:	14 📥 days	
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Back up to: () Disk ()	Гаре	
Back up databases acros	s one or more files:	
		Add
		Remove
		Contente
If backup files exist:	Append	CONTENTES
Oreste a backup file for e	very database	
Create a sub-directory	for each database	
Folder	:\Program Files\Microsoft SQL Server\MSSQL1	10_50.MSSQLS
Backup file extension:		bak
Verify backup integrity		
Back up the tail of the log	, and leave the database in the restoring state	
Set backup compression:	lse the default server setting	•
Schedule:		
Not scheduled (On Demand)		Change
Help	<back next=""> Finish >> </back>	Cancel

8. Click Next.



Select Report Options

1. For backup task report, select **Write a report to a text file** or **E-mail report**, and specify where it should be saved or sent.

🛐 Maintenance Plan Wizard			x	
Select Report Options Select options for saving or distributing a report of the maintenance plan actions.				
Write a report to a text file				
Folder location:	C:\Program Files\Microsoft SQL Server	MSSQL10		
E-mail report				
To:			-	
Help < B	ack Next > Finish >>	Can	icel	

2. Click Next.

Complete the Wizard

Click Finish.

Maintenance Plan Wizard Progress

When all tasks have been completed, click **Close**.

4. Exit Microsoft SQL Server Management Studio.



Restoring a File Vault

Restoring a file vault requires recent backups of the file vault databases, ConisioMasterDb database, archive server configuration settings, and file vault archive files.

Restoring the SQL Server File Vault Databases

- 1. Install the SQL Server:
 - a) Configure the SQL login type to mixed mode.
 - b) Select to install the management tools.
- 2. Apply the latest SQL service pack.
- 3. Restore the SQL database backup files to a temporary folder on the SQL Server.
- 4. Open Microsoft SQL Server Management Studio and click **Connect**.
- 5. In the left pane, right-click **Databases** and select **Restore Database**.

Microsoft SQL Se	erver Management Studio
File Edit View	Debug Tools Window Community Help
🕴 <u>)</u> New Query 🛛	🐌 🔁 🔁 📭 🗁 🖃 🧀 🚟 🖕
Object Explorer	→ ‡ ×
Connect 🕶 📑 📑	= Y 🛃 📓
😑 🐻 (local) (SQL	Server 10.50.2500 - sa)
Databar	New Database
Dention	Attach
H Manac	Restore Database
🗉 📸 SQL Se	Restore Files and Filegroups
	Start PowerShell
	Reports >
	Refresh



6. In the Restore Database dialog box, in the **To database** field, enter the name of the file vault database exactly as it was named when backed up.

7. Under **Source for restore**, select **From device** and click the **Browse** button.

8. In the Specify Backup dialog box, click Add.

9. In the Locate Backup File dialog box, select the database backup file and click **OK** twice to return to the Restore Database dialog box.

间 Restore Database - test						
Select a page	Script 🔻 🖪 Help					
General						
C Dptions	Destination for restore			$- \ $		
	Select or type the name of a new or e	xisting database for your rest	ore operation.			
	To database: 🛛 🛁 🚽	test		•		
	To a point in time:	Most recent possible				
s	Source for restore			_		
	Specify the source and location of ba	ckup sets to restore.				
	From database:			-		
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	Select the backup sets to restore:		Specify Backup			x
🚺 Locate Backup File - N	MTV-JAMESHP	base				
Connect Select the file:			Specify the backup me	dia and its l	location for your restore operation.	
Server: Program Files ((x86)	A	Backup media:		File	
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SYSTEM.SAV						
la lemp						
test 1						
TEST123456						
i⊞ fest2						пер
Users						
						1

10. Under Select the backup sets to restore, click Restore for the database to restore.

11. In the left pane, select **Options**.



📔 Restore Database - test							x
Select a page General	Script 🔻 🛐 Help						
Options	Destination for restore						
	Select or type the name of a new or existing database for your restore operation.						
•	To databa	To database:		test			
	To a point	To a point in time:		Most recent possible			
	Source for restore						
	Specify the source and location of backup sets to restore.						
	From database:						-
	From device:		C:\SQLbackup123.bak				
	Select the backup sets to restore:						
	Restore	Name		Component	Туре	Server	Databa
Connection		Patrick 123-Full Database	Backup	Database	Full	MTV-JAMESHP	Patrick
Server:							
Connection:							
sa							
View connection properties							
Progress							
Ready	•	III					Þ
						OK Car	icel

12. In the right pane, verify that the paths to the database files are correct. SQL defaults to the paths used when backing up the database.

- 13. Click **OK** to start the restore.
- 14. Repeat this procedure for additional file vault databases, including the

ConisioMasterDb database.

15. Exit Microsoft SQL Server Management Studio.



Verifying the ConisioMasterDb Restore

After you restore the **ConisioMasterDb** database, ensure that information in the **VaultName** and **DatabaseName** columns of the **FileVaults** table is correct. If either entry is missing, notifications cannot be processed.

- 1. Open Microsoft SQL Server Management Studio and click Connect.
- 2. Expand Databases > ConisioMasterDb > Tables > dbo.FileVaults.
- 3. Click **Columns**, and verify the **VaultName** and **DatabaseName**.



4. Exit Microsoft SQL Server Management Studio.



Restoring the Archive Server and File Vault Archives

Use this procedure to restore the archive server setting to the previous settings, including all login settings and user information.

1. On the new archive server, restore the physical vault archives from the backup (folders 0-F) to the same location as before the backup.

2. Install the archive server.

Use the settings you used in the original install. If unsure, use the default options. Define the root folder path as you defined it originally.

- 3. Restore the archive server configuration settings backup file Backup.dat to the archive root folder.
- 4. Open the SolidWorks Enterprise PDM Archive Server dialog box by doing one of the following:

• On Windows 7 and Windows Server systems prior to Windows Server 2012, from the Windows Start menu, select All Programs > SolidWorks Enterprise PDM > Archive Server Configuration.

• On Windows 8 and Windows Server 2012 or later, on the **Apps** screen, under **SolidWorks Enterprise PDM**, click **Archive Server Configuration**.

- 5. Select **Tools** > **Backup settings**.
- 6. In the Backup Settings dialog box, click **Load Backup**.

Backup Settings	<u> ? x</u>					
C Options						
This tool does NOT backup file vault archives, set your n directories stored under the	This tool does NOT backup the vault archives. To backup the file vault archives, set your normal backup routine to include the directories stored under the archive root folder.					
This backup tool handles the archive server settings and logins. The default settings are always included in a backup.						
Include all vaults.						
C Include selected vaults	AutoPilot Enterprise PDM Patrick123 test test TEST123456					
Backup location:	LIVI fest/					
C:\Program Files\SolidWorks Enterprise PDM\Data						
Schedule Occurs every 1 day(s), at 00:00:00.						
Password Password:	Confirm password					
********	*****					
Load backup Launch backup						
OK						



- 7. Locate the archive server settings backup file Backup.dat and click **Open**.
- 8. In the Enter Password dialog box, type the backup file password.
- 9. When the settings are restored, click **OK**.
- 10. Close the SolidWorks Enterprise PDM Archive Server dialog box.

Reference:

2014 SolidWorks Enterprise PDM Installation guide pp 88-94