

Recoverable Autodesk Vault Server Build Instructions

1 General

Operating System

Windows Server 2003 or Windows XP

Partition Table

C: Approx 50Gb for OS & Programs (Label: OS)
D: Enough space for Autodesk Vault data (Label: DATA)

Z: Bootable CD

Required Software

DriveImageXML (dixmlsetup.exe) from <http://www.runtime.org/>
CD Burner XP (cdbxp_setup_4.1.2.694.exe) from <http://cdburnerxp.se/>
.Net Framework 3 (dotnetfx3.exe) from <http://microsoft.com/>

BartPE/DriveImageXML (DriveImageXML_BartPE.iso) from
System Rescue CD (systemrescuecd-x86-1.0.4.iso) from

Bart PE is from <http://www.nu2.nu/pebuilder/>
System Rescue CD is from <http://www.sysresccd.org/>

Burn the ISOs to CD

Required Hardware

An external USB Hard disk, at least as big as the size of C:

Plenty of CD-Rs

Suitable backup media for your chosen backup device

2 Installation

IMPORTANT: Before you start this procedure, ensure that you can boot from the BartPE/DriveImageXML CD. Some new Dell PC's need BIOS settings changed before you can boot from a either a Windows XP CD or a BartPE/DriveImageXML CD (which is based on XP code).

Install the OS

Install the OS as normal
Load Control Panel | Add or Remove Programs | Add/Remove Windows Components
Install Internet Information Services (IIS)
Get to your base OS level (SPs etc)
Install DriveImageXML (dixmlsetup.exe)
Install .Net Framework (dotnetfx3.exe)
Install CD Burner XP (cdbxp_setup_4.1.2.694.exe)

Recoverable Vault Server

Do a test backup/restore

Use DriveImageXML to backup the C Drive to an image on E:

Choose Backup
Select OS
Click Next
Click Next
Select the root of DATA as the backup location
Ensure that Split Large Files is checked
Ensure that Compressed is checked
Ensure that Try Volume Locking First is checked
Click Next
Click Finish

Boot the System Rescue CD, and use GParted to format C: as NTFS

Halt the system, remove the System Rescue CD, and reboot
The system will fail to boot

Boot BartPE/DriveImageXML CD, and use DriveImageXML to restore the backups created above to the C Drive. You may need to use Tools->Set new Disk ID to make it bootable.

Halt the system, remove the BartPE/DriveImageXML CD, and reboot
The system should now boot

Install Autodesk Vault

Erase any files & folders on D:

Install Autodesk Vault to the default location on C:\Program Files

Configure the Vault databases to be stored in D:\Vault\Db

Configure the Autodesk Vault Filestores to be stored in D:\Vault\Filestores

Create a backup directory D:\Backups

Install the vaultbackup scripts to C:\Program Files\vaultbackup

Edit D:\ptc\wtbackup\sitewtbackup.properties & change the following lines

```
#####  
#Email options  
#####  
mailhost=mailserver  
#Single address  
from.address=Autodesk Vault@domain  
#Comma delimited list  
#to.addresses=recipient1@domain,recipient3@domain,recipient3@domain  
to.addresses=recipient1@domain
```

Also change the relevant lines from the following, depending on the backup method you are using.

```
#####  
#External backup options  
#Note: paths must bespecified with /  
#####  
externalbackup.tapedevice=HL-DT-ST DVD-RAM GSA-H20L  
externalbackup.bksfile=D:/ptc/wtbackup/wtbackup.bks  
externalbackup.xcopyfolder=E:/xcopybackup  
externalbackup.robocopyfolder=E:/robocopybackup  
externalbackup.tarfile=E:/tarbackup/wtbackup.tar  
externalbackup.tgzfile=E:/tarbackup/wtbackup.tgz
```

Edit D:\ptc\wtbackup\wtbackup.bat & enable one of the following lines, depending on the backup method you are using.

```
rem call ant -f externalbackup.xml ntbackup -lib .  
rem call ant -f externalbackup.xml tar -lib .  
rem call ant -f externalbackup.xml tgz -lib .  
rem call ant -f externalbackup.xml xcopy -lib .  
rem call ant -f externalbackup.xml robocopy -lib .
```

You can delete the local backup files aftr they have been copied to an external device by adding the -Dbackup.deleteaftercopytoexternal=true switch, as in

```
call ant -f externalbackup.xml ntbackup -  
Dbackup.deleteaftercopytoexternal=true -lib .
```

Use the Autodesk Vault Shell to test D:\ptc\wtbackup\wtbackup.bat, and ensure that all Autodesk Vault processes shutdown & restart, and that a valid backup file is produced.

Use the Windows Task Scheduler to regularly run D:\ptc\wtbackup\wtbackup.bat. Test the scheduled task by right-clicking on it and choosing "Run". Ensure that all Autodesk Vault processes shutdown & restart, and that a valid backup file is produced.

3 Preparation for Recovery

Backup the partition table

Boot the System Rescue CD, and use GParted to identify the Linux device for E: (DATA). It is likely to be /dev/sda3

Use the following command to mount the DATA partition read/write

ntfs-3g /dev/sda3 /mnt/windows

Replace /dev/sda3 with your device if it is different

Check to see whether a Backups folder exists on DATA

ls -l /mnt/windows

If you see a line like this ...

```
drwxrwxr-x  5 root root   4096 Jan 30  2006 Backups
```

...skip the next step

Make a Backups folder exists on DATA

mkdir /mnt/windows/Backups

Save the partition table details on DATA

parted --list > /mnt/windows/Backups/partitiontable.txt

Make images of the partitions

Halt the system, and remove the System Rescue CD

Attach the USB Hard disk, and reboot with the BartPE/DriveImageXML CD

Use DriveImageXML to backup the OS, Autodesk Vault & DATA Drives to images on your USB disk.

Choose Backup

Select OS, Autodesk Vault & DATA

Click Next

Click Next

Select the Backups Folder of the USB disk as the backup location

NOTE: If the directory does not exist, you can create it using

Go | Programs| A43 File Management Utility

Name the backups OS, Autodesk Vault & DATA

Ensure that Split Large Files is checked

Ensure that Compressed is checked

Ensure that Try Volume Locking First is checked

Click Next

Click Finish

Use Go | Programs| A43 File Management Utility to copy
(DATA)\Backups\partitiontable.txt to (USB disk)\Backups

Burn Backup CDs

Halt the system, and remove the BartPE/DriveImageXML CD

Reboot the system

Use CDBurner XP to burn the contents of (USB disk)\Backups to CDs. The .DAT & .001, 002 etc files should each fit onto a single CD. The rest of the files .XML & .TXT will all fit onto a single CD together.

Disconnect the USB drive, and store it safely.

Store the CDs safely as well. It's a good idea to keep them in a different place to the USB drive.

4 Regular Backup

If the instructions have been followed, a regular scheduled backup of the Autodesk Vault data should be produced. Remember to check that the backup has run, and regularly try

to read the tapes or disks that you back up to.

If you make any significant* changes to your server configuration, you should update the backups describe in Section 3, Preparation for Recovery. Note that the DATA drive ***should*** only contain data that is being backed up by the scheduled backup, and could be skipped.

* Note: Your definition of significant, and mine may differ considerably.

5 Recovering from a Disaster

Restore the partition table

The first thing you will need is the list of the partitions (partitiontable.txt), which we copied to \Backups to your USB disk. We only need the numbers from it so you can read this on any computer.

The output will look like this

```
Disk geometry for /dev/hda: 0kB - 523GB
Disk label type: msdos
Number  Start   End     Size    Type     File system  Flags
1       32kB    51GB    51GB    primary  ntfs         boot
2       51GB    91GB    40GB    primary  ntfs
3       91GB    523GB   432GB   primary  ntfs
```

Boot the System Rescue CD, and use GParted to partition your disks roughly this way.* Then use GParted to format your partitions as NTFS, and name them as before (OS, Autodesk Vault & DATA).

Restore the data to your OS disk

Halt the system, and remove the System Rescue CD

Attach the USB Hard disk, and reboot with the BartPE/DriveImageXML CD

Use DriveImageXML to restore the OS Drives from the image on your USB disk.

- Choose Restore
- Select OS
- Click Next
- Navigate to the relevant backup file (\Backups\OS.xml) on your USB disk, click OK
- Click Next
- Click Next
- Click Next
- Type in the code as prompted (case-sensitive)
- Click OK
- Click Finish

Repeat the above restoring the Autodesk Vault backup to partition 2, and DATA backup to partition 3.

Halt the system, and remove the System Rescue CD

Reboot your PC and restore the latest data backup

Before you restore your data backup, you will need to restore your backup data from the external device. The method of doing this will depend on what you have used to backup the data (ntbackup, tar, tgz, xcopy, robocopy).

NOTE: This is mostly lifted from "Autodesk Vault Offline Backup and Recovery Tool" (Version 3.2 5th June-08) by David Davidson (dxd@ptc.com)

The batch file wtrestore.bat is provided to automate the recovery from a backup made by this script.

Before using, set the following lines in D:\ptc\wtbackup\sitewtbackup.properties

```
#####
```

```
#Restore options
```

```
#####
```

```
#This is the directory containing the backup that will be restored from
```

```
restore.source.dir=D:/ptc/wt8/backups/2005Nov17_101226
```

```
#this will restore all backed up Autodesk Vault config files, like wt,properties,  
site.xconf etc.
```

```
restore.config.files=true
```

```
restore.source.dir
```

```
This is the directory that contains the backup that will be restored, e.g. D:/  
ptc/backups/2006Jun06_155914
```

```
restore.config.files
```

```
It may not be desirable to recover all of the Autodesk Vault configuration  
files (.xconf, .properties etc). e.g. if you have been testing some xconf  
changes you may want to rollback the database but retain the xconf files. In  
this case set this property to "false", otherwise "true"
```

* NOTE: The partitions must be the same size or larger. so you will have to restore to a disk of the same size or larger, unless you want to spend a lot of time messing about resizing the disks. It is possible though, but easier to put it on a bigger disk.