Recovering a Failed Exchange 2003 Member Server Using the Disaster Recovery Switch

What could be worse than facing a seriously corrupted mailbox store? Yes you guessed right – facing a completely dead Exchange Server. In this article I’ll shine some light on the steps necessary in order to restore an Exchange 2003 Member Server, that has experienced a major hardware failure causing a complete loss of data.
In order to restore a failed Exchange 2003 Server, you can install a “new” one using the /DisasterRecovery switch, but there are several steps to it, and they need to be performed in the correct order. As I haven’t seen an easily digestive article covering this subject, I thought it was about time to write one.Note
If you’re the type of Exchange Admin who wants all the details, I suggest you start reading some of the splendid disaster recovery guides available at the Microsoft Exchange Server 2003 Technical Documentation Library. There are also some good guides in the Microsoft Exchange Server 2000 Technical Documentation Library where much of the content also applies to Exchange Server 2003, so that’s definitely worth checking out too. Making a Copy of the Database and Log filesDepending on the seriousness of the hardware crash and the time available for the restore, I highly recommend you try to make a copy of any accessible database and transaction log files from the server (these are good to have in hand should the databases we restore from backup later on fail), but of course this is only possible if the hard disks containing these files are in a useable state. Note
Before you can bring the Exchange Server to the state it was in just before the disaster occurred, you would need a copy of the most recent log files.Installing the New Exchange ServerServer Hardware
When you have received a replacement server or replacements for the failed hardware components, it’s important you configure and partition the disks in the new server, so they are identical to the way they were configured in the old one.Operating System
We can now install the operating system from the Windows 2003 Server media, also remember to install the Windows Components required by Exchange Server 2003 that is ASP.NET, NNTP, SMTP and the World Wide Web Service. After installing the Windows components we’re ready to apply any Windows 2003 Server Service Pack(s) and post-service pack HotFixes that were installed on the old server.It’s perfectly fine to give the new server the old server’s NetBIOS name and IP address etc. during the installation, but don’t make the server a member of the domain just yet, instead install it into a workgroup. As the Exchange Server 2003 computer account still exists in Active Directory, we need to reset it before we can make the new Server a member of the domain. This is done by logging on to one of your Domain Controllers (or from any other server or workstation that’s got the Windows 2003 Server Adminpak installed) and opening the Active Directory Users and Computers (ADUC) MMC snap-in, here you drill down and select the Computers container where you right-click the Exchange Server object in the right pane and select Reset Account as shown in Figure 1 below.
Figure 1: Resetting the Computer Account in Active DirectoryClick Yes as in Figure 2, then click OK.
Figure 2: Accepting Resetting the Computer AccountWhen the Computer Account has been reset you can add the “new” Exchange Server to the Active Directory domain by right-clicking My Computer and selecting Properties then clicking Computer Name > Change and specify the Active Directory domain as shown in Figure 3.
Figure 3: Adding the new Exchange Server to the AD domain using the same nameClick OK and specify an account with the permissions necessary to add the computer to the domain, then click OK twice and let the computer reboot. When the computer has rebooted you should logon using an account with the permissions required in order to install Exchange.Installing Exchange Using the Disaster Recovery SwitchNow that Windows 2003 Server has been configured and prepared, we can move on and start installing Exchange Server 2003 using the /DisasterRecovery switch. Note
The reason why we install Exchange 2003 Server using the /DisasterRecovery switch is because the configuration information for the Exchange Server still lives in Active Directory. Installing Exchange 2003 Server using the /DisasterRecovery switch will add all necessary Exchange binaries to the server, as well as restore the default Exchange registry settings and re-register the necessary DLL files etc. without touching the configuration information still held in Active Directory.To get going, insert the Exchange Server 2003 media then click Start > Run and type:<drive>:\Setup\I386\Setup.exe /DisasterRecoveryWhere drive is the CD-ROM drive or a mapped drive to a share containing the Exchange 2003 Server binaries. See Figure 4 below.
Figure 4: Running Exchange Server 2003 Setup with the Disaster Recovery SwitchClick Next > Accept the License Agreement then click Next one more time. We will now be presented with the Exchange Components screen shown in Figure 5 below.
Figure 5: Exchange Server 2003 Component SelectionIt’s important you specify the same Install Path as the Exchange binaries was installed in on the old server, when you have done so click Next. The Exchange Server 2003 Installation Wizard will now install Exchange in Disaster Recovery mode, see Figure 6 below.
Figure 6: Exchange Server 2003 Installation Wizard Running in Disaster Recovery ModeJust before the Post-installation kicks off you will get the dialog box shown in Figure 7, it reminds you that the Exchange databases need to be restored from backup after the installation of Exchange Server 2003 in Disaster Recovery mode has completed. Click OK and let the installation finish.
Figure 7: Information Box Reminding You to Restore the databases from BackupClick Finish.
Figure 8: Completing the Microsoft Exchange WizardWe now have to install any Exchange 2003 Service Packs that had been applied to the old server, and it’s important that the Service Pack is applied using the /DisasterRecovery switch just like the case with the Exchange Server installation. Similar to the installation of Exchange server this is done

by clicking Start > Run and typing:<drive>:\E2K3SP1\Setup\Update.exe /DisasterRecoveryWhere drive is the CD-ROM drive or drive mapped to the share containing the Exchange Server 2003 Service Pack 1 binaries.Note
If installing Exchange Server 2003 Service Pack 1 on a Windows 2003 Server without Service Pack 1 applied, you should apply the HotFix mentioned in MS KB article: 831464 - FIX: IIS 6.0 compression corruption causes access violations prior to installing Exchange Server 2003 Service Pack 1.
Figure 9: Applying Exchange Server 2003 Service Pack 1 using the Disaster Recovery SwitchClick OK then Next. Accept the Agreement and click Next. Verify the Install Path (Figure 10) then click Next.
Figure 10: Exchange Server 2003 Service Pack 1 Component SelectionNote
We will again be reminded that we have to restore the databases from backup after the Installation Wizard finishes off.Click OK and Finish when the installation has completed, but don’t reboot the server just yet.{mospagebreak title=Restoring Exchange Databases}Restoring the Exchange DatabasesWe can now begin restoring the Mailbox and Public Folder Stores from backup, in this article we use NT Backup, you should of course use the backup solution implemented in your Exchange messaging environment.

Before we do anything else let’s open the Exchange System Manager and drill down and expand the Mailbox and Public Folder Stores. Because we installed Exchange Server 2003 using the /DisasterRecovery switch, they should be in a dismounted state, which is also the case in Figure 11 below.
Figure 11: Dismounted Stores in the Exchange System ManagerNote
If you managed to take a copy of the Exchange databases and log files from the old server, now is the time to bring them back to their respective location(s) on the new server and have them mounted. Depending on the state of the stores, you may have to repair them before they can be mounted.Now start NT Backup by clicking Start > Run and type NTBackup then click the Restore and Manage Media tab. In order to restore the databases from backup right-click File in the left pane and select Catalog, then click Browse and locate the .BKF file or media containing the data that is to be restored. When it has been opened expand the Catalog then select the respective Mailbox and Public folder stores as shown in Figure 12.
Figure 12: Selecting the Mailbox and Public Folder Stores that are to be RestoredClick Start Restore. The box shown in Figure 13 will appear, here the server should already be specified in the Restore To: field, if not do so now. In the Temporary location for log and patch files: specify a temp folder such as the one in Figure 13. Make sure to enable the Last Restore Set (Log file reply will start after this restore completes.) checkbox if there are no additional log files to restore. Select the Mount Database After Restore checkbox depending on whether you want the stores to mount automatically after the restore. Note
There’s one important thing to have in mind when restoring one or more Mailbox Store(s) from backup after installing a new Exchange Server using the /DisasterRecovery switch, and that is if an Exchange Recovery Storage Group exists when doing the restore, all stores will be redirected to the Recovery Storage Group. This will make the restore job fail and an Event ID Error 9635 will be thrown to the Application log. In order to resolve this problem delete the Recovery Storage Group prior to doing the restore. If you for some reason don’t want to delete the Recovery Storage Group, you can add a DWORD value named Recovery SG Override under HKEY_LOCAL_MACHINE \System\CurrentControlSet\Services\MSExchangeIS\ParametersSystem. Make sure you enable it by specifying 1 in the Value Data box.Click OK and let the restore job complete.
Figure 13: Specifying the Server and Temp location of the Log filesClick Close.
Figure 14: The Restore is CompleteNow open the Exchange System Manager one more time and verify all Mailbox and Public Folder Stores have been mounted, if not mount them manually. When all the Stores have been mounted make sure you can see the mailboxes in the Mailboxes container under each Mailbox Store. Also verify all Public Folders are listed under in the Public Folder tree. If things show up as expected try to logon to a Mailbox and verify Mail flow, if successful we can call the restore a success – congratulations