

Veritas Backup and Restore for Cisco Unity (3.1.5, 4.0) on the ICS7750

Document ID: 28467

Introduction

Prerequisites

Requirements

Components Used

Conventions

Veritas Backup Topology

Veritas Installation

Veritas Installation on Cisco Unity Application SPE

Veritas Remote Agent for Windows NT Installation (Manual)

Backup Exec Main Installation Configuration

Veritas Backup

Backup Configuration

Veritas Restore for the Cisco Unity System

Cisco Unity Restore

Restore of the Master Database

Restore of the Cisco Unity Server and Exchange Server

Restore of the Cisco Unity Server MSDB Database

Troubleshoot

Related Information

Introduction

Backup Exec 8.6 is a backup and restore application from Veritas Software Corporation. Backup Exec can back up all data on the Cisco Unity server, including SQL Server/ Microsoft SQL Desktop Edition (MSDE), and Exchange databases and transaction logs. Backup Exec 8.6 differs from previous versions as it can support both network and tape backups. Previous versions only support tape backups. For the Cisco Integrated Communications System (ICS) 7750, network backups are the method encouraged. This guide is meant to fulfill the basic operations of backup and restore using Veritas Backup Exec 8.6 on a Cisco Unity server environment. It is recommended that more complicated operations or technical procedures be referred to the Veritas corporation.

Prerequisites

Requirements

There are no specific requirements for this document.

Components Used

The information in this document is based on these software and hardware versions.

- Cisco Unity versions 3.1(4.39) or 4.0(0.190).
- Veritas Backup Exec version 8.6, Veritas Backup Exec agent for Microsoft SQL Server, and Veritas Backup Exec agent for Microsoft Exchange Server.
- Exchange 2000 on an external Windows 2000 server with Veritas Remote Agent software.

- Active Directory and Domain Controller on an external Windows 2000 Server.
- SPE with Windows 2000 Server with ICS 2.4 core software and MSDE 2000.

The information presented in this document was created from devices in a specific lab environment. All of the devices used in this document started with a cleared (default) configuration. If you are working in a live network, ensure that you understand the potential impact of any command before using it.

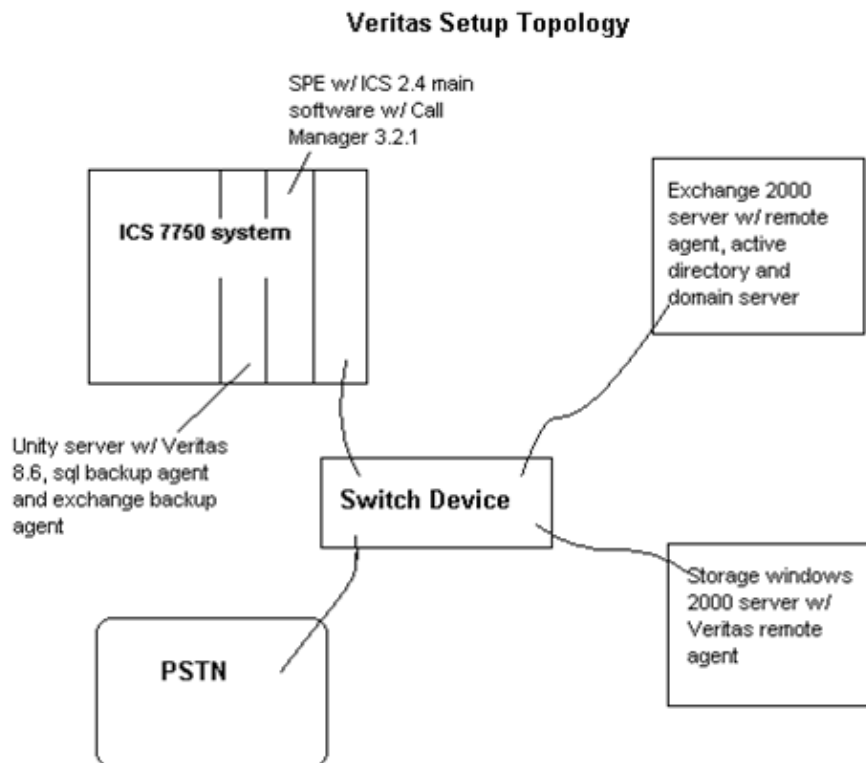
Note: Backup and restores are done using an external Windows server that resides on the same domain and has the Veritas Remote Agent software installed.

Conventions

For more information on document conventions, refer to the Cisco Technical Tips Conventions.

Veritas Backup Topology

This figure illustrates the Veritas backup topology.



Veritas Installation

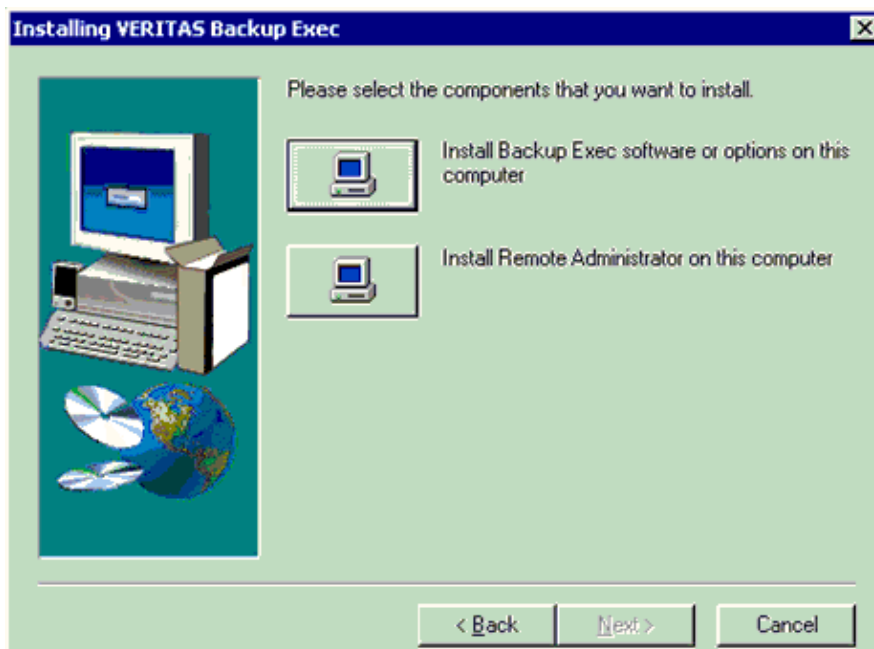
Veritas Backup Exec is installed on the target application SPE and the Veritas Remote Agent. Windows NT/2000 must be installed on all other involved systems. Veritas Remote Agent was installed on the Windows Exchange 2000 Server and the external Windows server that stores the backups.

Veritas Installation on Cisco Unity Application SPE

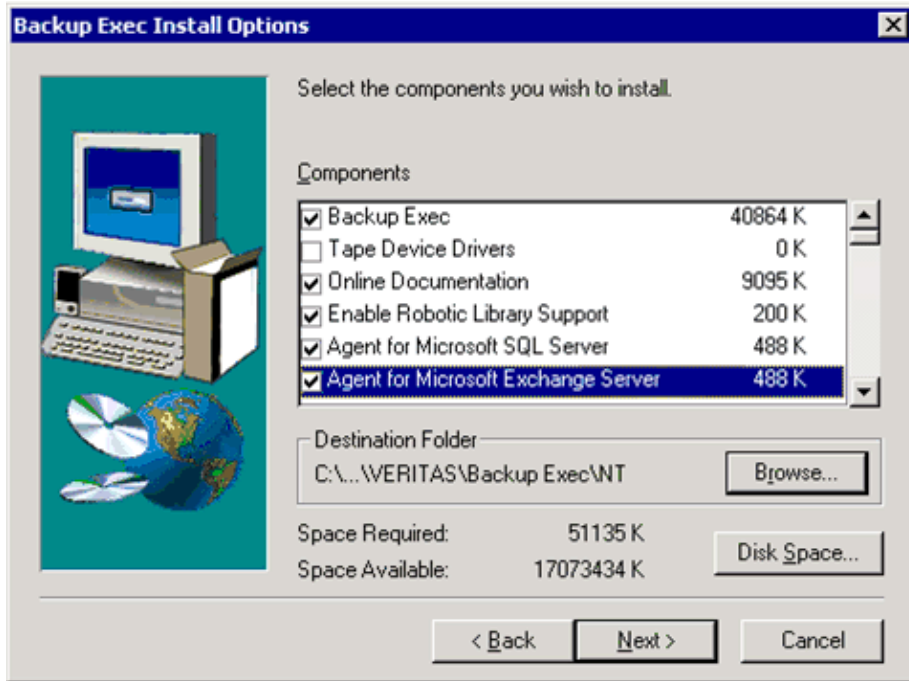
Complete these steps to install Veritas on the Cisco Unity application SPE.

Note: Before you start the Veritas installation, verify that SQL Enterprise Manager is installed on your Cisco Unity Application SPE by selecting **Start > Programs > Microsoft SQL Server 7.0 > Enterprise Manager**. Otherwise, the SQL backup agent does not function.

1. Download the Backup Exec 8.6 software from the Veritas website to your Cisco Unity application SPE server. The application file downloaded is zipped and needs to be extracted.
2. Extract the file to a designated temporary directory. After the extraction is completed, verify that the Agents folder, NetWare folder, and WINNT folder are created.
3. Double-click the **WINNT** folder, then double-click the **Install** folder.
4. Expand the **ENG** folder and launch the Setup.exe file.
5. From the Welcome screen, click **Next**. When the Software License Agreement screen appears, click **Yes**.
6. When the PLEASE READ window appears, click **Next**.
7. From the Installing VERITAS Backup Exec window, press the **Install Backup Exec software or options on this computer** button.



8. On the VERITAS Backup Exec Serial numbers window, enter the numbers and press **Next** if you have purchased the product. Otherwise, press **Next** and it initiates a 60 day trial offer with Veritas.



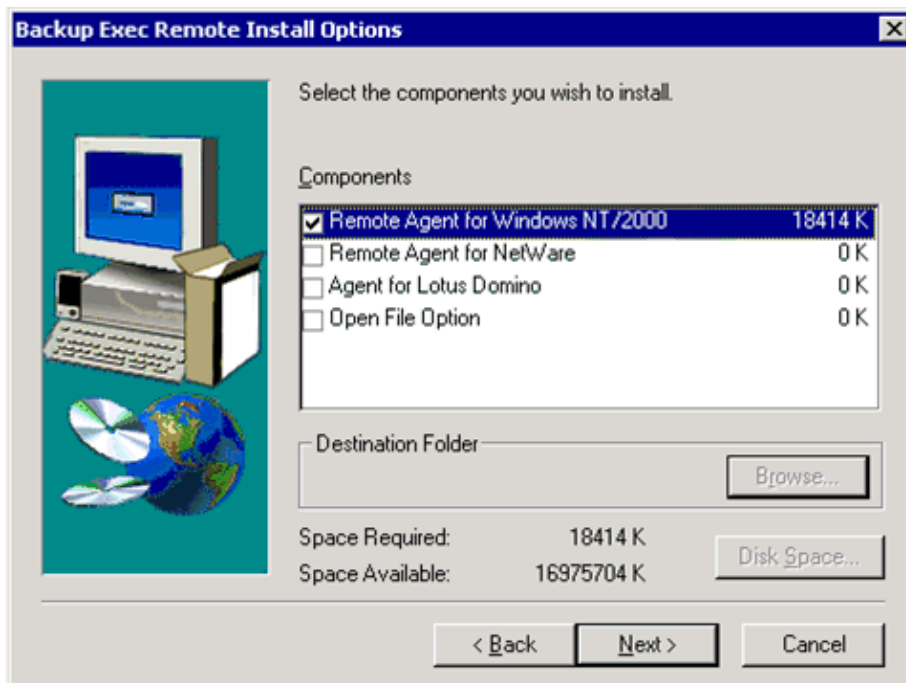
9. From the Device and Media Manager window, select **Claim that device for Backup Exec and disable it for use by** and click **Next**. On the screen that follows, click **Next**.
10. After the installation starts, a Service Account window appears. Under the Service account information, enter the correct user, select the correct domain account, and enter your password. Press **OK**.
11. From the Previous Backup Exec Installation window, press **OK**.
12. When the Program Group window appears, choose **Common Program Group** and click **Next**.
13. When you are asked if you wish to install the Remote Agent for Windows NT/2000 or other options on remote NT systems at this time, press **Yes** if you want to install the Remote Agent on other systems remotely. Press **No** if you want to install them manually.

Note: Veritas does not recommend that you install the Remote Agent on the application system that contains the main Veritas media program. If you see the pop up window that states "It is not recommended to install the Remote Agent for Windows 2000 on a media server", ignore the pop up if you know you are not installing the Remote Agent on the main Veritas media server. You can also go back and deselect the Remote Agent option for the main Veritas media server.

If you want to install them manually, proceed to the Veritas Remote Agent for Windows N/T Installation (Manual) procedure.

If you press Yes, the Veritas Backup Exec Serial Numbers window appears. If you have the serial number, enter it. Otherwise, press **Next** for the 60 day trial version.

14. When the Backup Exec Remote Install Options window appears, check the **Remote Agent for Windows NT/2000** and press **Next**.



15. When the Start Copy files window appears, click **Next**.
16. Select the correct Domain of your remote machine on the Select Domains for Remote Agent for Windows NT/2000 Installations and click **Next**.
17. On the Install Remote Agents for Windows NT/2000 window, select the correct destination systems and click **Next** (for multiple entries press the **CTRL** key and the items you wish to include).
18. On the Preview Remote Agent for Windows NT/2000 Installations window, click **Next** if the information is valid.
19. On the Enter Administrator Account Information window, enter the correct host and password and click **Next**.



20. Press **OK** once the Remote Agent is successfully installed.
21. On the Setup Complete window, click **Finish**.
22. Reboot the system and any Remote Agent machines that you have installed the Agent software.

If you added all the Remote Agents by the sub–installation method, proceed to the Veritas Remote Agent for Windows NT Installation (Manual) procedure.

Note: It is important to reboot the systems that have Remote Agent or the main Backup Exec so that the agents and program can reinitialize. Otherwise, backups fail.

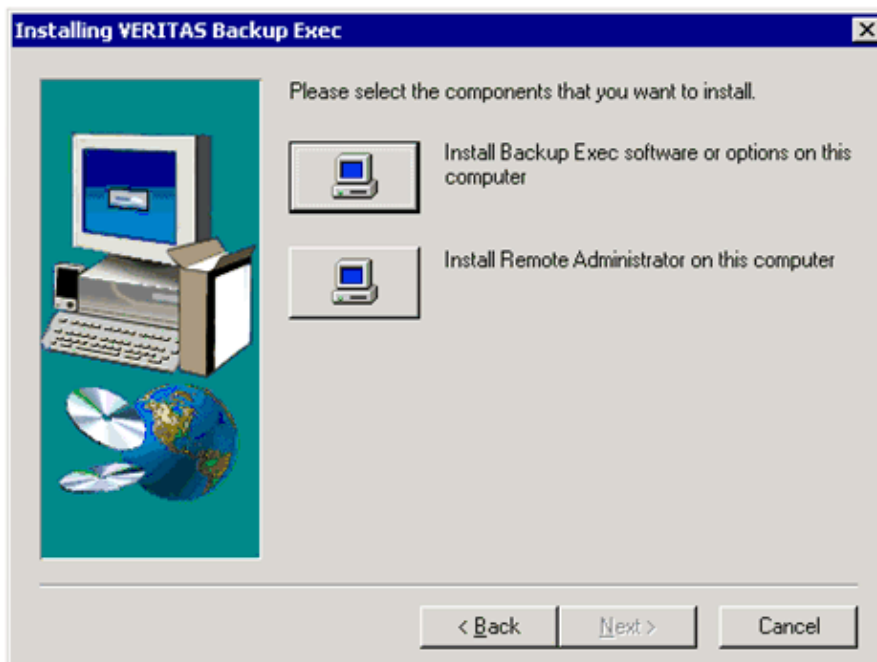
Veritas Remote Agent for Windows NT Installation (Manual)

The installation of the Remote Agent for Windows NT can be done both as a sub–installation of the main Veritas Backup Exec or as a separate entity. For the sub–installation of the main Veritas Backup Exec, refer to the Veritas Installation on Cisco Unity Application SPE procedure. This section deals with the manual installation for each server involved in the backup that is not the main Veritas Backup Exec.

For the independent installation, download the Backup Exec 8.6 software from the Veritas website to your Cisco Unity application SPE server. The application file downloaded is zipped up and needs to be extracted. Extract the file to a designated temporary directory. After the extraction is completed, verify that you have the Agents folder, NetWare folder, and the WINNT folder.

Complete these steps to install Veritas remote agent for Windows NT manually.

1. Double–click the **WINNT** folder, then double–click the **Install** folder.
2. Expand the **ENG** folder and launch the **Setup.exe** file.
3. On the Welcome window, click **Next**. When the Software License Agreement page appears, click **Yes**.
4. When the PLEASE READ page appears, click **Next**.
5. Press the **Install Remote Administrator on this computer** button.
6. On the Veritas Backup Exec Serial Numbers window, enter the numbers and press **Next** if you have purchased the product. Otherwise, press **Next** to initiate a 60 day trial offer with Veritas.



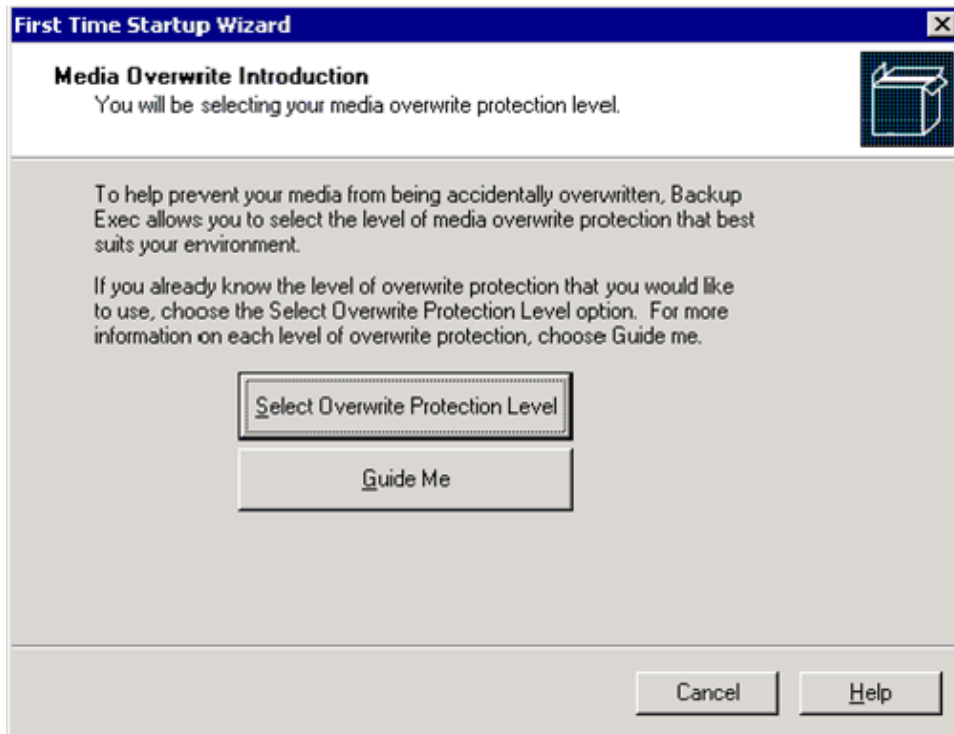
7. Follow the instructions and prompt to completion and then reboot the Remote Agent system.

Note: It is important to reboot the systems that have Remote Agent or the main Backup Exec in order that they can reinitialize. Otherwise backups fail.

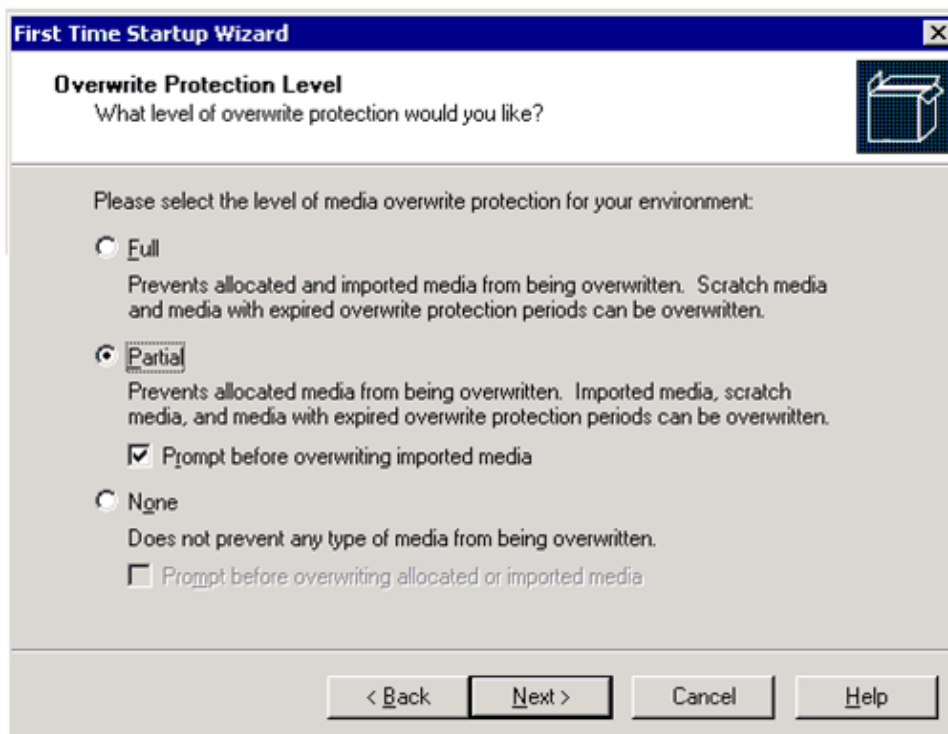
Backup Exec Main Installation Configuration

After the SPE system with Cisco Unity has come up, it is time to start the Veritas Backup Exec tool.

1. Select **Start > Programs > VERITAS Backup Exec**. The Registration Wizard pops up. You can register now or you can close the window to register later.
2. From the Registration Wizard and the First Time Startup Wizard box, press **Next**.
3. Click the **Select Overwrite Protection Level** button. If you want more help, press the **Guide Me** button.



4. Choose the default of **Partial** and click **Next**.



5. On the Preferred Overwrite Media Type window, leave it on the default of **Overwrite scratch media before** and press **Next** to continue.
6. On the Virus protection window, press **Next** and ignore Virus protection for now.
7. On the Backup Exec Windows Explorer Interface window, press **Finish**.
8. On the Welcome window, press **Cancel** unless you need extra help to configure the backup configurations. Otherwise proceed to the Veritas Backup section to perform a backup.

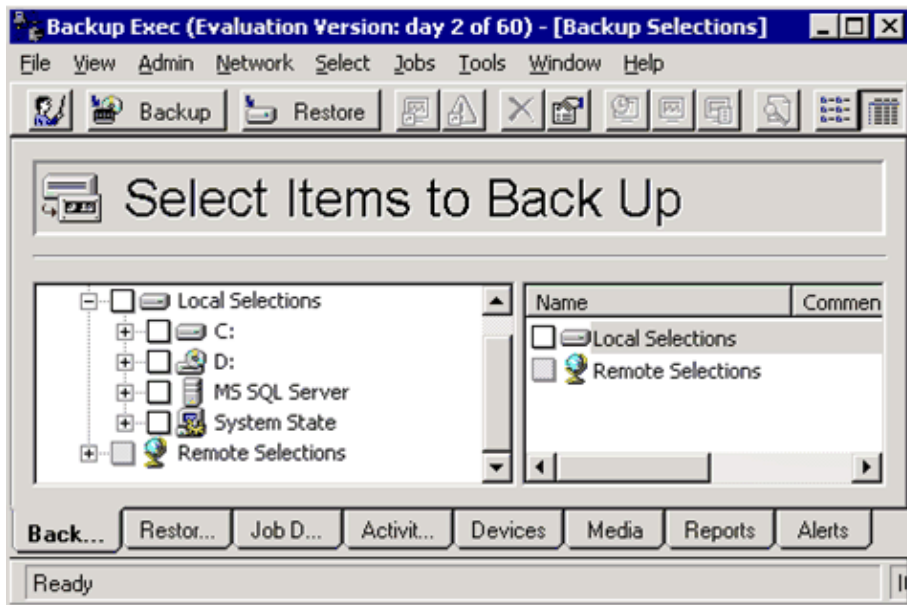
Veritas Backup

For a backup, there is no need to turn off services, applications, or Cisco Unity. The system can be left running while the backup is in progress.

Backup Configuration

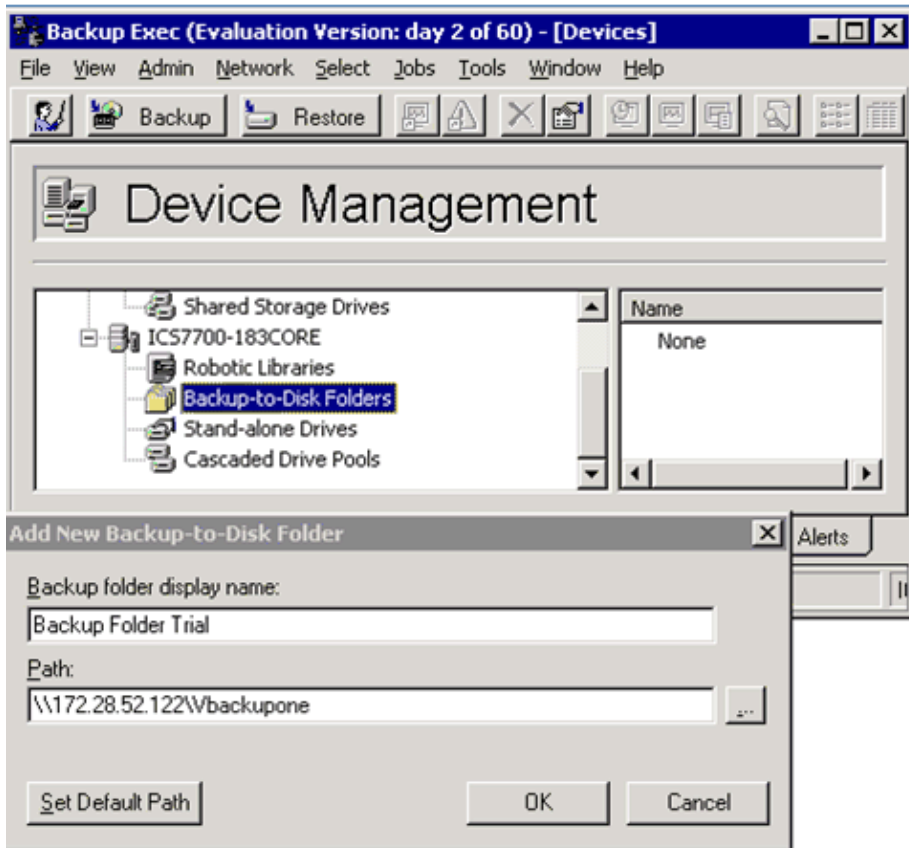
To configure the backup, Veritas has an assistance tool that can make things easier but this document uses the main tool that is shown here.

1. Click the **Devices** tab at the bottom to create a network location folder to store backups.

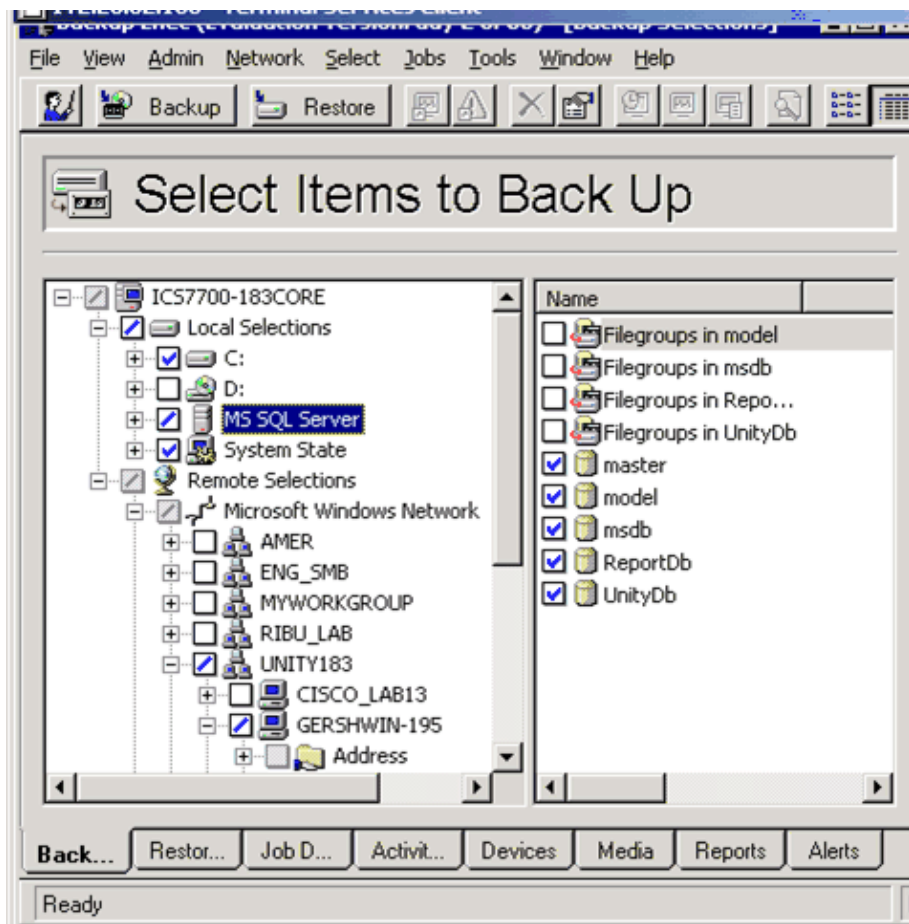


2. From the Device page, right-click on the **Backup-to-Disk Folders** and click on **New Backup Folder**. The bottom screen appears under the Backup folder display name. Enter a name for your folder, then either navigate or enter your path name. Press **OK** to continue.

Note: Sometimes, you check your backup to disk folder and it reads that it is off-line. You must delete the folder and recreate the folder again to bring it back on-line. One of the main reasons the folder may go off-line is that your destination storage server has run out of space on its hard drive.



3. Press the **Backup Selections** tab in the lower left hand. Select the items you need to backup.



4. On the SPE local drive, select the **C: drive**, **MS SQL Server** (file groups do not need to be selected),

just the databases), and the **System State**. On the Remote Selections, choose your Exchange 2000 server that is on the same domain. Also select the Microsoft Information Store to be backed up (not seen). If you have Microsoft Exchange Mailboxes, they can also be selected. Once the items have been selected, press the **backup** button on the upper left hand.

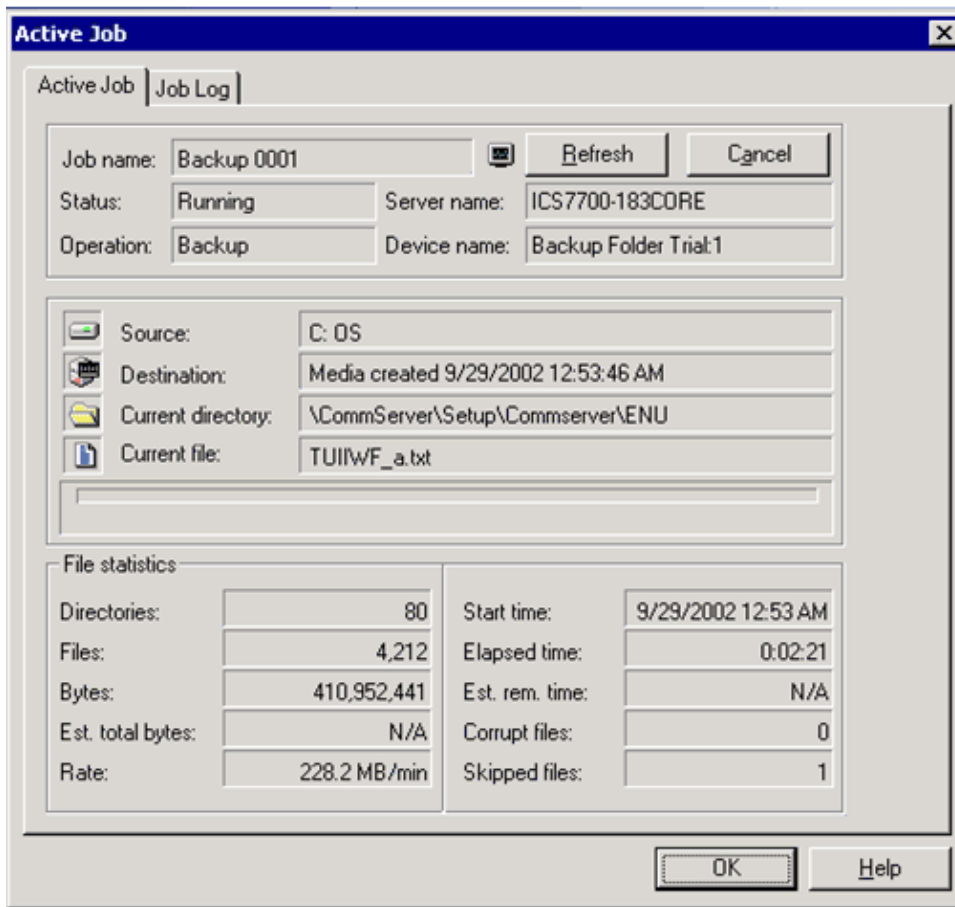
Veritas does not recommend to backup the C: drive and other components of the Exchange server. The method of recovery involves recreating the Exchange server and synchronizing the data with what was backed-up through a series of short steps (contact Veritas technical support).

5. On the bottom Destination area on the Device entry, scroll to the device folder you created earlier to backup. You can also add a different job name from the default. On the lower left side press **run** to start the backup.

The screenshot shows the 'Exchange' tab of a backup configuration window. The 'Job name' is 'Backup 0001'. Under 'When this job begins', the 'Append to media, overwrite if no appendable media is available' option is selected. The 'Media name' is 'Media created 9/29/2002 12:49:02 AM'. The 'Backup method for files' is set to 'FULL - Back Up Files - Reset Archive Bit'. The 'Files accessed in' is set to '30' days. In the 'Destination' section, the 'Device' is 'Backup Folder Trial:1' and the 'Media set' is 'Media Set 1'.

6. Press the **Activity** tab on the main menu to monitor your backup.

You can press the individual lines for a better detailed look at the progress. The screen appears similar to this one.



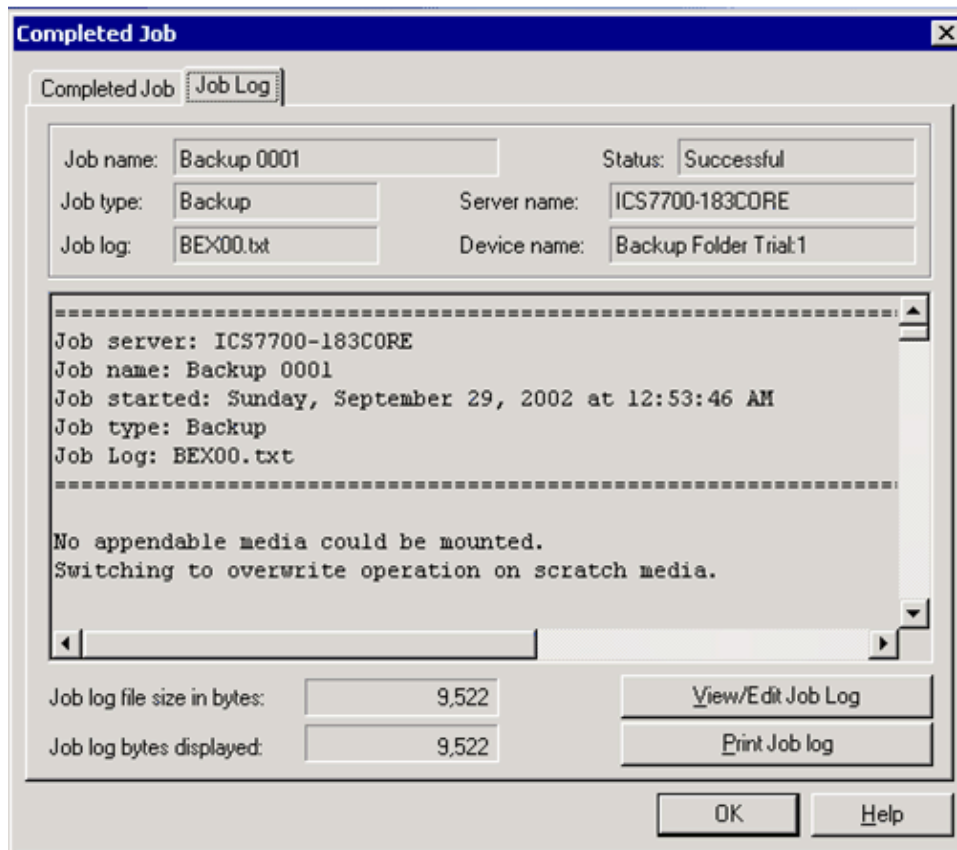
Note: Under the File statistics, the Bytes counter is an estimate and does not reflect the accurate bytes in the destination folder.



Warning: If your destination storage device runs out of space, the backup does not warn you.

The backup reads failed and the destination folder reads off-line in the devices screen. It is up to the user to provide enough storage space. When enough storage space is available again, the destination folder needs to be deleted and then recreated in order to be activated again.

7. Once the job is completed and the Job Status reads Successful, examine the job log for details.



You can scroll down to see the whole process of the backup. Some things to note are that the skipped files are not errors if they involve SQL and exchange files and directories. Veritas main Backup Exec engine skips these files on purpose to allow the SQL backup agent and Exchange backup agent to work. Also, any entries in the log that display the "^" means that an error has been detected.

In order to check what you need to back up on the Cisco Unity server, refer to Backups of the Cisco Unity Server.

Veritas Restore for the Cisco Unity System

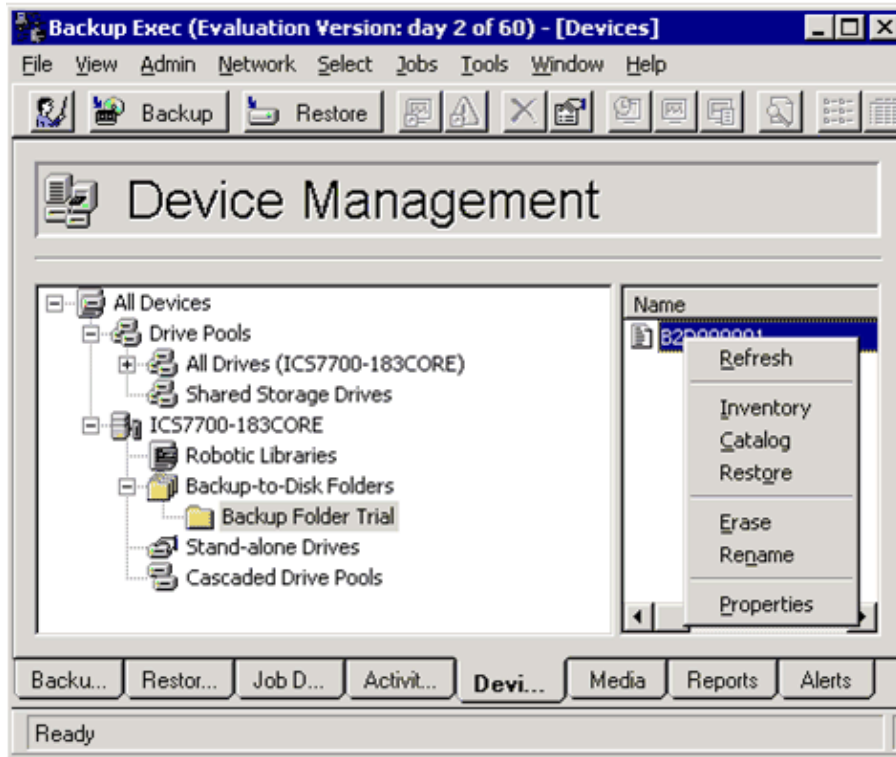
Cisco Unity Restore

A full recovery of the backup involves three separate restores. The first restore described is the restore of the master database. This restore is optional and is only necessary if your master database is corrupted or broken. It is necessary that this restore be separate because the other databases rely upon it and while restoring, all other access to this database needs to be cut off. The next restore involves the Cisco Unity server's C: drive, system state, four databases, and the Exchange server's information store. The last restore is of the MSDB database. This database is restored by itself in single user mode to prevent access while the restore is in process. After every restore, Cisco recommends that you reboot the system.

Restore of the Master Database

Complete these steps to restore the master database.

1. Verify that the destination folder is still intact by clicking the **Devices** tab.



2. Click on the **Backup-to-Disk Folders** and click on your destination device folder.

All of your destination backups appear on the right hand side in the Name box.

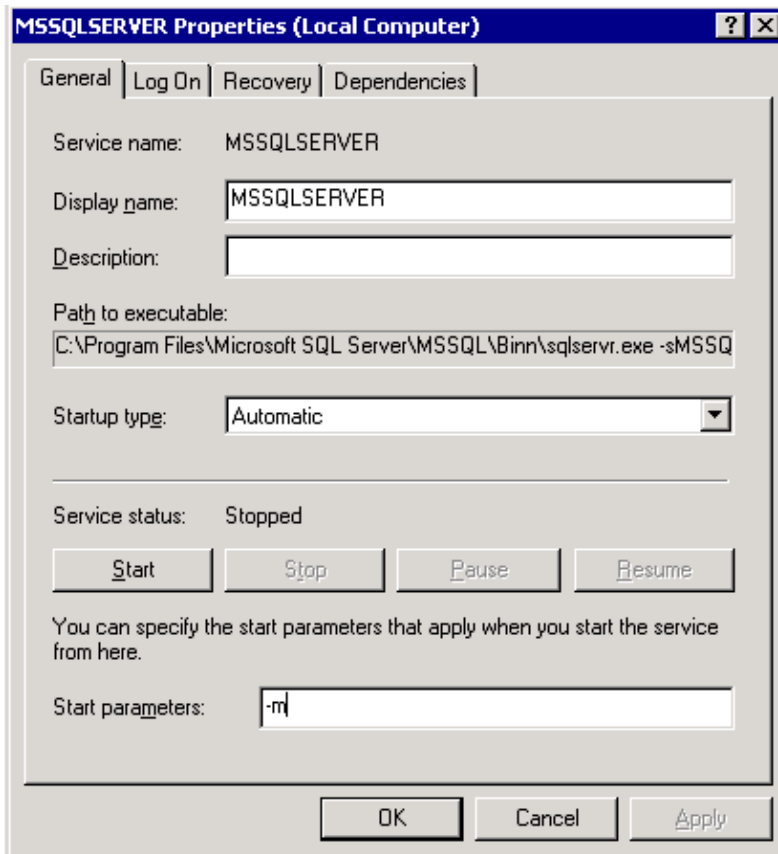
3. Right-click on a file. You may click Inventory or Catalog to organize the files.

This is especially useful if you have reconnected to the destination folder. Inventory mounts the media and reads the media label. For instance, if you recreate the backup destination folder, it appears empty until you initiate inventory to see the contents of that particular destination. Catalog is used to log media other than what the Backup Exec has created, or it can create a new catalog if the original does not exist anymore.

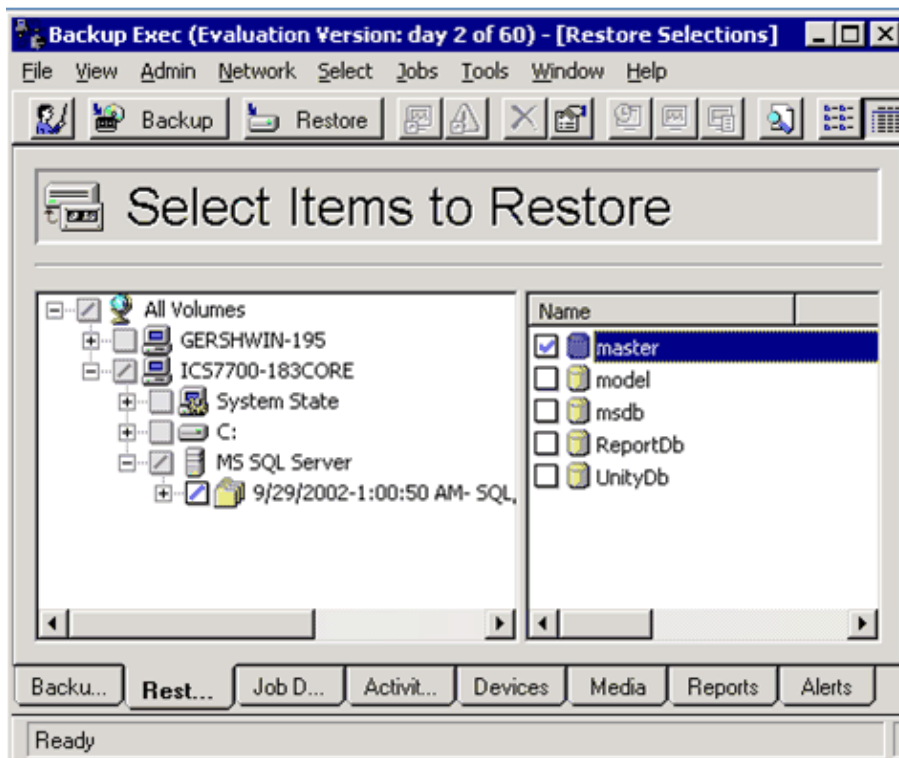
4. Go to the Services page by selecting **Start > Programs > Administrative Tools > Services**.
5. Shut down all Unity services (AvCsMgr, AvDirChangeWriter, AvDSAD, AvDSGlobalCatalog, AvGaenSvr, AvMsgStoreMonitorSvr, AvRepDirSvrSvc, AvTtsSvr, and AvUMRSyncSvr).

AvCsGateway (once stopped) restarts but this does not seem to affect the restore.

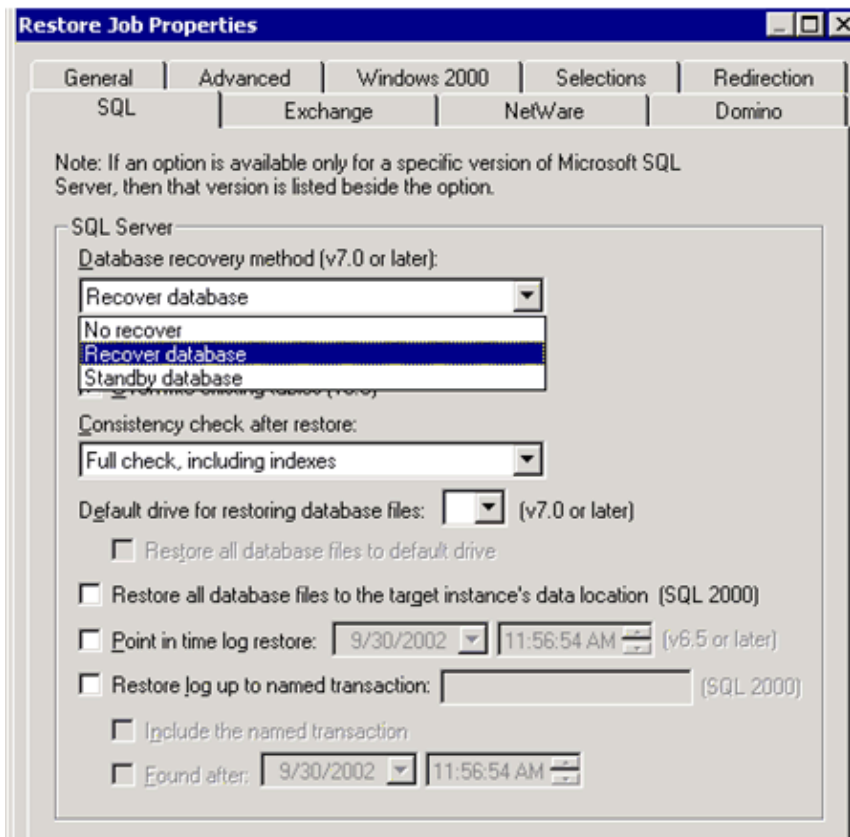
6. Stop the **MSSQLSERVER**.
7. Right-click **MSSQLSERVER** and access **Properties**.
8. Put the MSSQLSERVER in single user mode by inserting a **m** into the Start parameters. Press **Start** to restart MSSQLSERVER.



9. Press **Restore Selections** and navigate through the backup to choose the master database only as shown in this window.



10. Press the **Restore** tab. In the SQL tab, under the Database recovery method, choose **Recover database** as shown in this window.

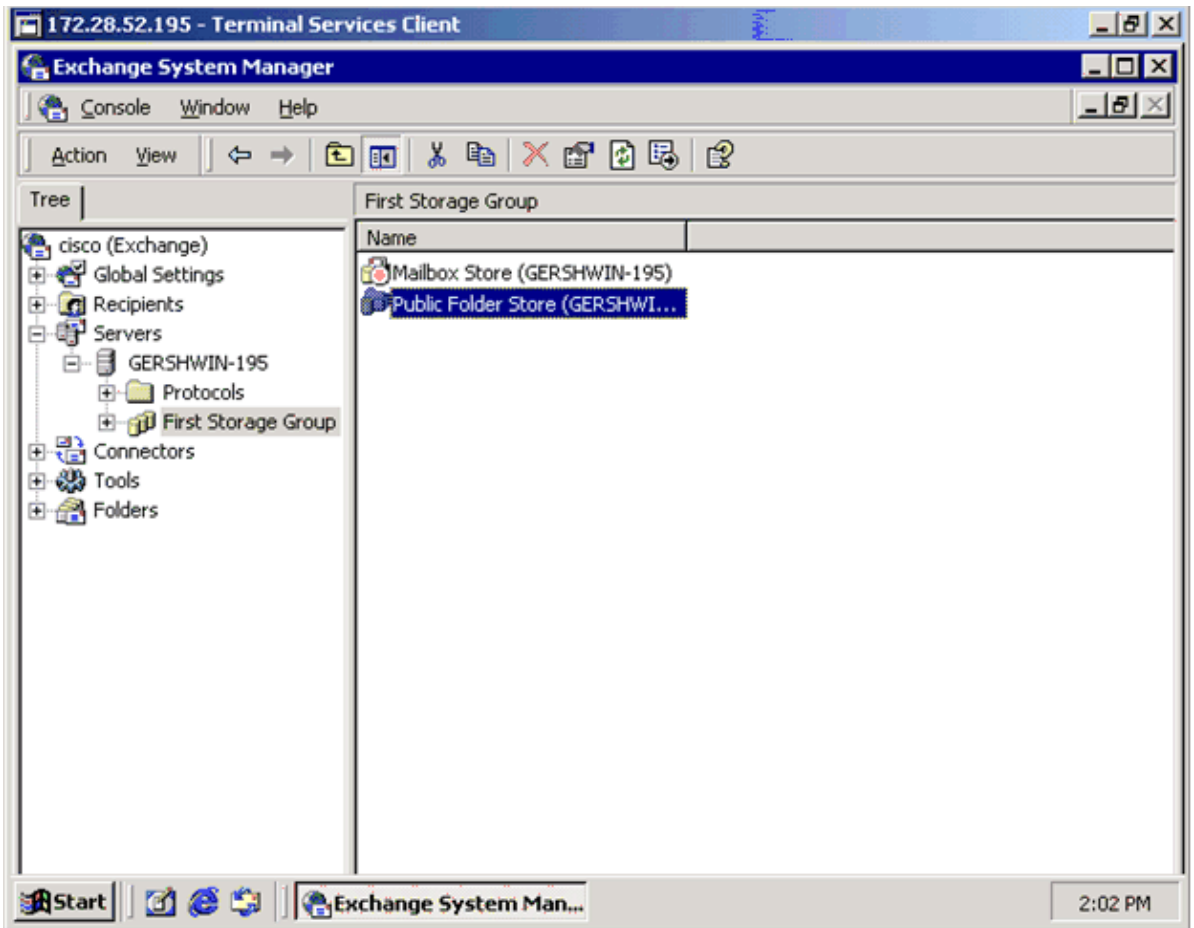


11. Since SQL MSDE is higher than version 7.0, check all that apply on the SQL page such as the tab for Replace databases or file groups (version 7.0 or later).
12. Choose the default drive for restoring database files and check the Restore all database files to default drive.
13. Click **run** to initiate the master restore job. At some point during the restore, the MSSQLSERVER will stop. When this happens, restart it and allow the restore to continue.
14. In the Activity tab, the job status of the restore should read successful. In the job log you can trace the progression of the restore. It should read that it restored one database.
15. Reboot the system.

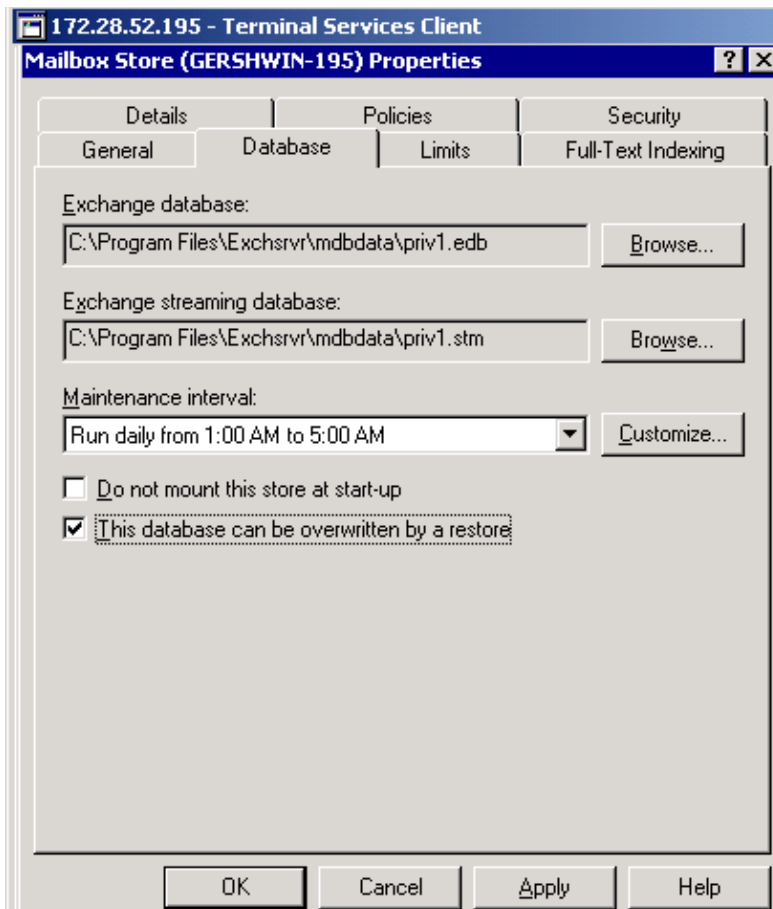
Restore of the Cisco Unity Server and Exchange Server

Complete these steps to restore the Cisco Unity and Exchange servers.

1. Dismount the Exchange server and set it to be able to accept an overwrite. This is accomplished by going to the desktop of the Exchange server by selecting **Start > Programs > Microsoft Exchange > System Manager**.
2. Expand the **Server** path, expand your **Exchange server** and click on the **First Storage Group**.
3. On the right side of the First Storage Group window, right-click each item store you wish to restore.
4. Click **Dismount Store**.
5. After the Store has been dismounted, right-click the item again and navigate to **Properties**.
6. From Properties, click on the Database tab and check **This database can be overwritten by a restore**.



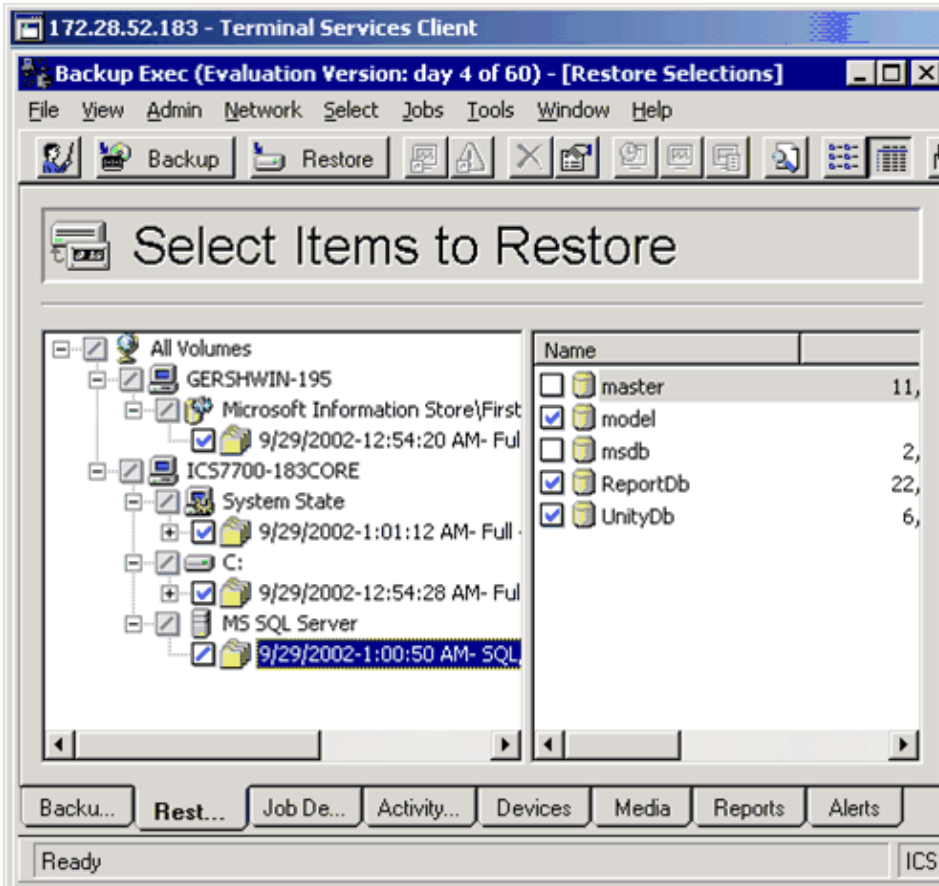
The properties window with the database tab entries are displayed in this window.



Note: Close the Exchange System Manager window. Otherwise, it locks out Veritas from restoring the data files.

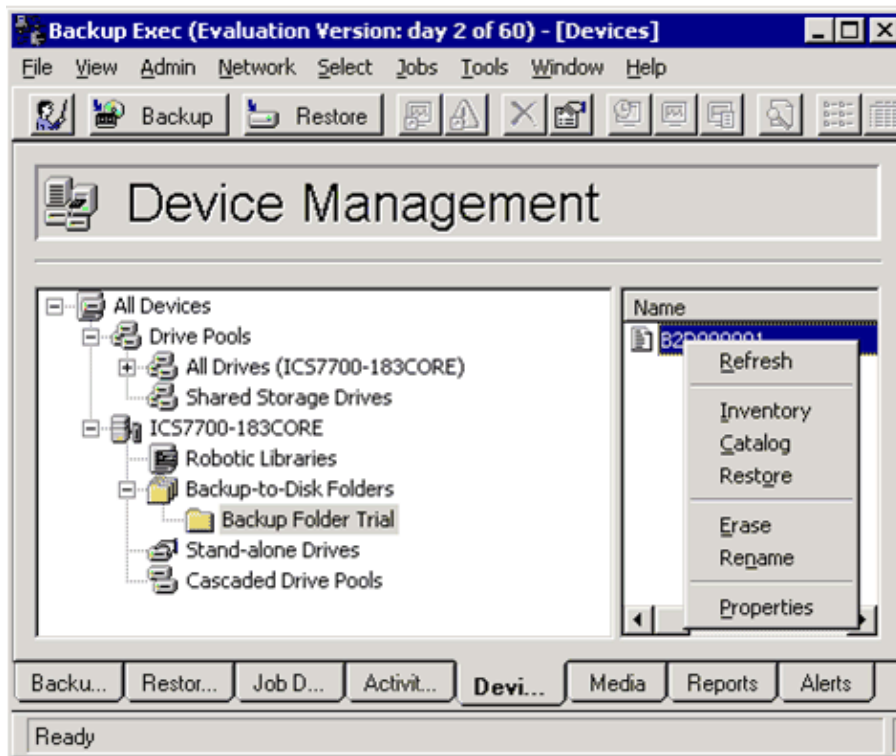
7. Verify that the destination folder is still intact by clicking the Devices tab.
8. Select all the components that you wish to restore. Make sure the date entries match up with each restore directory path choice.

Veritas shows its flexibility here as you can choose what components from a backup you want to restore. You can also pick and choose different items from different backups to restore together. This window shows an example of items chosen for the second restore. Make sure you do not choose to restore the master database and the MSDB database.



9. Click on the **Backup-to-Disk Folders** and click on your destination device folder. On the right-hand side in the Name box, all of your destination backups appear.
10. Right-click on a file. You may click Inventory or Catalog to organize the files.

This is especially useful if you have reconnected to the destination folder.



11. Go to the Services page by selecting **Start > Programs > Administrative Tools > Services**.

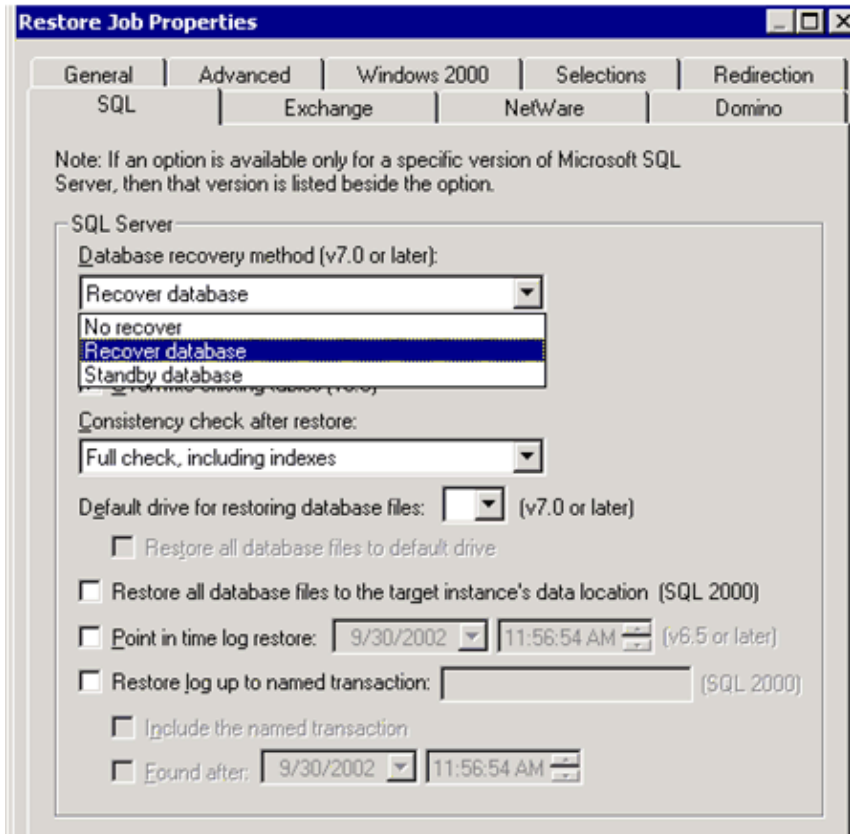
12. Shut down all Unity services (AvCsMgr, AvDirChangeWriter, AvDSAD, AvDSGlobalCatalog, AvGaenSvr, AvMsgStoreMonitorSvr, AvRepDirSvrSvc, AvTtsSvr, and AvUMRSyncSvr).

AvCsGateway restarts once it is stopped but it does not affect the restore.

13. Stop the **csBridgeConnector**.

This service needs to be stopped. Otherwise, the Unitydb database is locked and prevents the restore from succeeding.

14. Press the Restore tab.
15. Under the SQL tab and under the Database recovery method, choose **Recover database** as shown in this window.



16. Since SQL MSDE is higher than version 7.0, check all that apply on the SQL page such as the tab for Replace databases or filegroups (version 7.0 or later). Choose the default drive for restoring database files and check **Restore all database files to default drive**.
17. Close all open windows such as the Microsoft Exchange System Manager window and Microsoft SQL Enterprise Manager.
18. Click **Run** to initiate the second restore job.
19. When the restore is done, the Open Files Restored window opens. Press the **Respond OK** button.
20. In the Activity tab, verify that the job status of the restore reads successful. In the job log you can trace the progression of the restore. Any errors can be quickly distinguished by the "^" symbol.
21. Reboot the system.

There may be a problem with the resolution after you reboot. Veritas says that they cannot fully restore the windows settings of the graphic drivers and that you may need to reinstall them.

On the Microsoft Exchange 2000 Server, verify that the mailbox stores have been remounted.

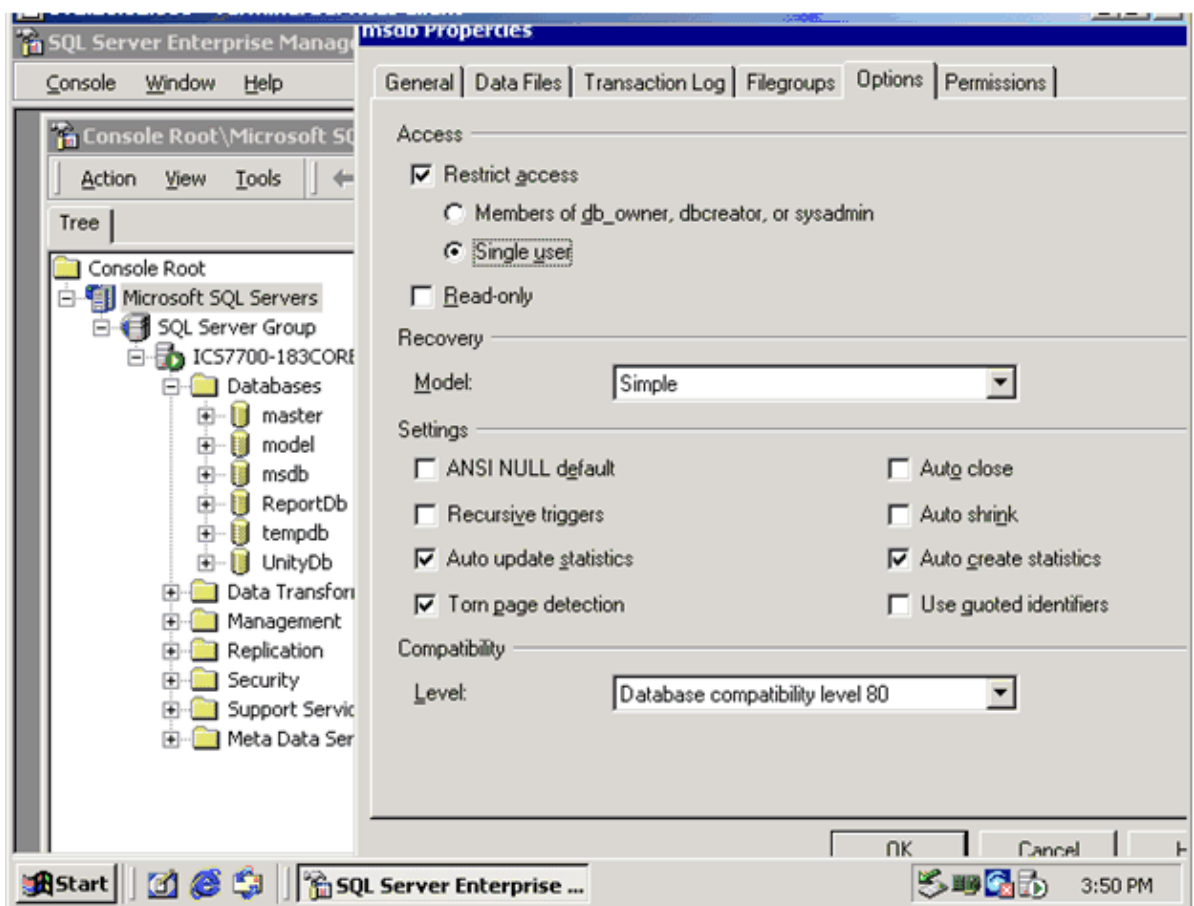
Restore of the Cisco Unity Server MSDB Database

The MSDB database is restored separately from the other databases because it needs to shut down the SQL server agent to unlock the database. It is also put in single user mode to prevent access by other processes during restore.

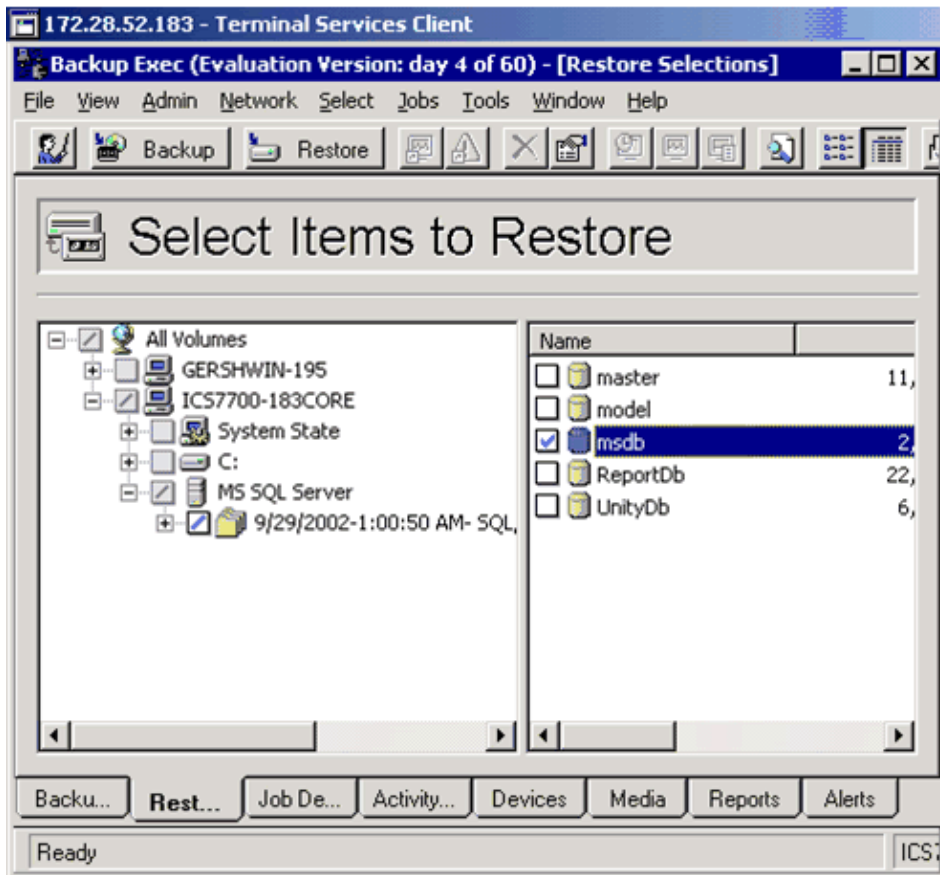
1. Verify that the destination folder is still intact by clicking the **Devices** tab (access earlier procedures in this document for further details).
2. Go to the Services page by selecting **Start > Programs > Administrative Tools > Services**.
3. Shut down all Cisco Unity services (AvCsMgr, AvDirChangeWriter, AvDSAD, AvDSGlobalCatalog, AvGaenSvr, AvMsgStoreMonitorSvr, AvRepDirSvrSvc, AvTtsSvr, and AvUMRSyncSvr).

AvCsGateway restarts once it is stopped but this does not seem to affect the restore.

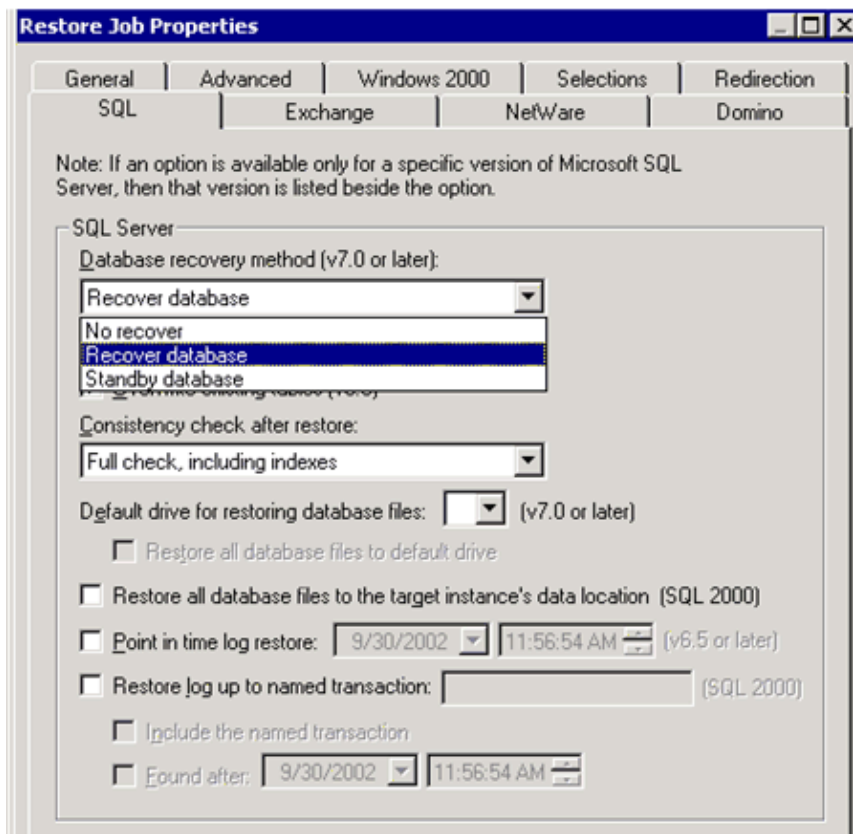
4. Stop the **SQLSERVERAGENT**.
5. Select **Start > Programs > Microsoft SQL Server > Enterprise Manager**.
6. Expand the path to the MSDB database as shown in this window and right-click **Properties**.



7. On the Properties window, click **Options**. Select the **Restrict access** tab and the **Single user mode** tab. Press **OK** to continue.
8. On the Backup Exec main window, choose **Restore selections** and only choose the **MSDB database** to restore as shown in this window.



9. Press the **Restore** tab.
10. In the SQL tab, under the Database recovery method, choose **Recover database** as shown in this window.



11. Since SQL MSDE is higher than version 7.0, check all that apply on the SQL page such as the tab for Replace databases or filegroups (version 7.0 or later). Choose the default drive for restoring database files and check the **Restore all database files to default drive**.
12. Close all open windows such as the Microsoft Exchange System Manager window and Microsoft SQL Enterprise Manager.
13. Click **Run** to initiate the restore job.
14. In the Activity tab, the job status of the restore reads successful. In the job log you can trace the progression of the restore. Any errors can be quickly distinguished by the "^" symbol.
15. At the end of the restore, verify that the MSDB database is no longer in single user mode.
16. Reboot the system.

Troubleshoot

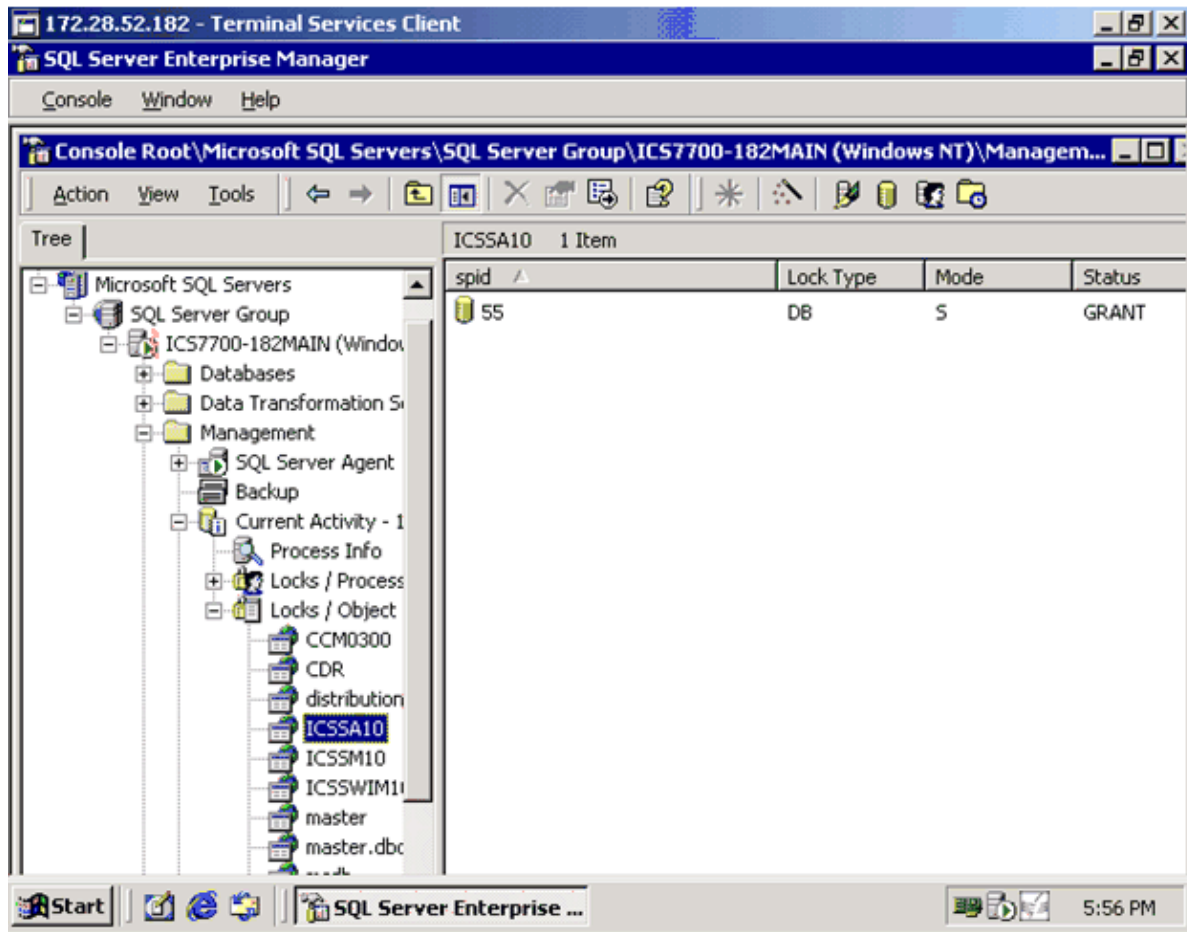
This section is meant to help users identify common problems in conjunction with the ICS 7750. Veritas has a large database of question and solutions on the Veritas web page . Users with technical support can also call them.

Program Seems to Stop Pause at 99 Percent

This problem exists because the user may have large remote mailbox data. The remote server, for example the Exchange server, takes time to write this information in its own files. The Veritas Main Exec has not crashed if the remote server hard drive light is on.

Database Recovery Fails Due to Unknown Lock

This problem exists if the user has some application program or service that locks the database from being able to be written on by the Veritas Exec program. To troubleshoot this program, the user needs to access the Enterprise Manager by selecting **Start > Programs > Microsoft SQL Server 7.0 > Enterprise Manager**. You can also access the Services window by selecting **Start > Programs > Administrative Tools > Services**.



Navigate from your server down to Management. From Management, open the Current Activity link and expand **Locks/Objects**. Below the Locks/Object window, there are a list of databases that are locked and currently in use. Select a locked database. On the right-hand window, the locked items appear. Unless you have query analyzer and can use SQL commands to isolate your choice, it is mainly a trial and error on the services page until the locked item disappears.

After every service that is stopped in the Services window, right-click **Current Activity** and press **Refresh** to refresh the window to update the status of the locks. You can also click on each locked item and kill the process. This is not recommended as the system may crash or become corrupted. Once the correct service has been stopped the database in the Locks/Objects window disappears. Before you start your restore, be sure to close the SQL Enterprise Manager. SQL Enterprise Manager, when accessing your databases, also locks them up too.

Related Information

- [Voice Technology Support](#)
- [Voice and Unified Communications Product Support](#)
- [Recommended Reading: Troubleshooting Cisco IP Telephony](#)
- [Technical Support & Documentation – Cisco Systems](#)

