Table of Contents

1. General

1.1. How does the StorState Data Vaulting System work, in brief?

1) New files and files updated since the last backup are cataloged
2) Each file is compressed, encrypted and securely backed up to the StorState Data Vaulting Center through a secure socket layer
3) Your backup data is then replicated to an additional Data Vaulting Center in another geographic region for maximum redundancy
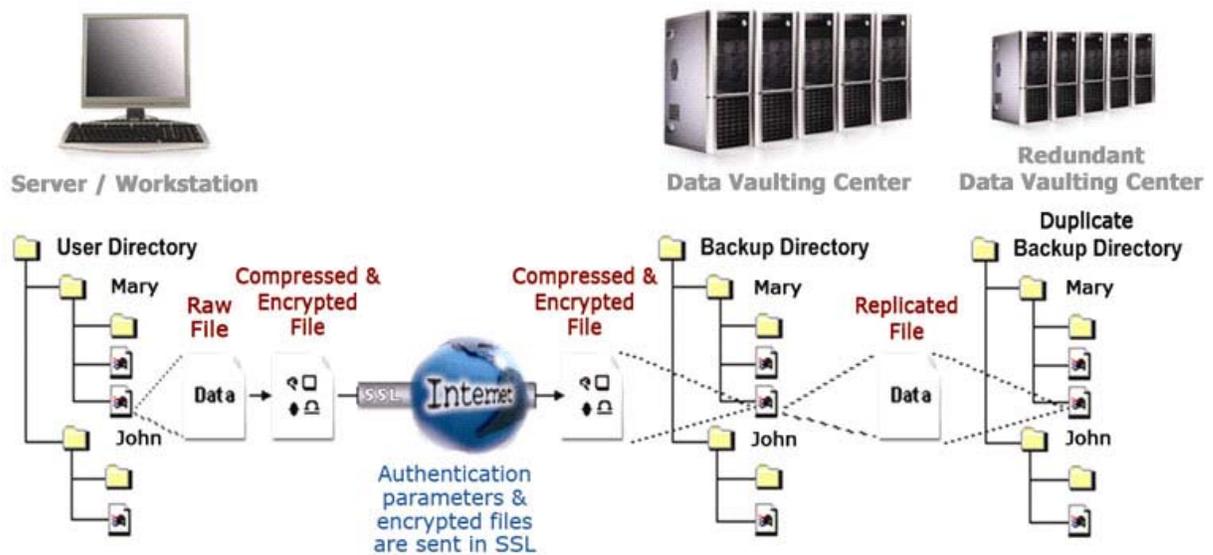
^Back to top

1.2. What is the recommended bandwidth?

It depends on the overall size of the data being backed up, how often the data is changed, and how much of the data actually changes.

^Back to top

1.3. How do I run StorState Pro with Microsoft ISA 2004?

To connect StorState Pro to the data vaulting center through Microsoft ISA Server, please do the following to enable [Web Proxy] service on the ISA Server:

1. Open [Start] -> [Programs] -> [Microsoft ISA Server] -> [ISA Server Management]
2. On the left panel, select [Microsoft Internet Security and Acceleration Server] -> [SERVER] -> [Configuration] -> [Networks]
3. On the top menu, select [Action] -> [New] -> [Network]. Enter a "Network Name" (e.g. Internal) and define the IP address range for your internal network (e.g. 192.168.1.0 - 192.168.1.255)
4. Double click the new network that should now be added to on the bottom panel
5. Select the [Web Proxy] tab

6. Check both [Enable Web Proxy clients] and [Enable HTTP] checkboxes and choose a [HTTP port] for the web proxy service

7. (Optional) Press the [Authentication] button, check the [Basic] checkbox and the [Require all users to authenticate] checkboxes if you want to enable and enforce proxy authentication

8. Press the [OK] button to make the changes and press the [Apply] button to apply the changes

9. Open [Online Backup Manager] from the system tray and press the [Options] button

10. In the [Proxy Seting] section, select the [Proxy] radio button

11. Enter the hostname/IP address of the ISA server in the [Proxy Address] text field and the TCP port for web proxy service on your ISA Server in the [Port] text field

12. Press the [OK] button to connect to the server

If you run into any problems connecting to the data vaulting center from StorState Pro using ISA Server, please do the following to check if your request is being blocked:

1. On the left panel of [ISA Server Management], select [Microsoft Internet Security and Acceleration Server] -> [SERVER] -> [Monitoring]

2. Then select the [Logging] tab that appears on the right panel3. Click the [Edit Filter] link and create a filter with the following values:

   ➢ [Log Record Type] equals [Web Proxy Filter]
   ➢ [Destination IP] equals [The IP address of the data vaulting center]

3. Press the [Start Query] button

4. Open StorState Pro again and try connecting to the data vaulting center using the same procedure above.

Check if there are any errors generated in the log table.

^Back to top

1.4. How do I install StorState Pro on FreeBSD?

You can either run StorState Pro on a Linux version of Sun Java JDK (performance might not be optimized) or on a FreeBSD native Java SDK.

Please do the following for the Linux version of Sun Java JDK option:

1. Install Linux binary compatible port to the FreeBSD machine

2. Install the Linux version of Sun Java 1.4.2 or above JDK onto the FreeBSD machine

3. Create a symbolic link from $OBM_HOME/jvm to $JAVA_HOME (installed in previous step)

4. Run $OBM_HOME/bin/RunBackupSet.sh [BACKUP_SET_NAME] to run your backup

5. Run $OBM_HOME/bin/Scheduler.sh to start the backup scheduler

Please do the following for the FreeBSD native Java SDK option:

1. Install Linux binary compatible port to the FreeBSD machine

2. Install the Linux version of Sun Java 1.4.2 or above JDK onto the FreeBSD machine

3. Compile the FreeBSD native Java 1.4.2 SDK using the JDK compiler installed in the previous step

4. Install the FreeBSD native Java 1.4.2 SDK onto the FreeBSD machine

5. Create a symbolic link from $OBM_HOME/jvm to $JAVA_HOME (installed in previous step)

6. Run $OBM_HOME/bin/RunBackupSet.sh [BACKUP_SET_NAME] to run your backup

7. Run $OBM_HOME/bin/Scheduler.sh to start the backup scheduler

^Back to top

1.5. How do I install StorState Pro on SCO Unix?

Please do the followings to install StorState Pro on SCO:

1. Install Java 1.4.x or above onto your SCO Unix box
2. Download obm-nix.tar.gz and expand it to $OBM_HOME (e.g. /usr/local/obm)
3. Delete $OBM_HOME/jvm and create a symbolic link from $OBM_HOME/jvm to the SCO Unix Java VM
4. Run $OBM_HOME/bin/BackupManager.sh to setup your backup set (or run $OBM_HOME/bin/Configurator.sh if you are under command line mode. Then use the OBS Management Console to setup your backup sources and other settings)
5. Run $OBM_HOME/bin/RunBackupSet.sh [BACKUP_SET_NAME] to run your backup
6. Run $OBM_HOME/bin/Scheduler.sh to start the backup scheduler

^Back to top

1.6. How do I install StorState Pro on AIX?

Please do the followings to install StorState Pro on AIX:

1. Install Java 1.3.x or above (Java 1.4.2 or above recommended) onto your AIX box
2. Download obm-nix.tar.gz and expand it to $OBM_HOME (e.g. /usr/local/obm)
3. Delete $OBM_HOME/jvm and create a symbolic link from $OBM_HOME/jvm to the AIX Java VM
4. Run $OBM_HOME/bin/BackupManager.sh to setup your backup set (or run $OBM_HOME/bin/Configurator.sh if you are under command line mode. Then use the web interface to setup your backup sources and other settings)
5. Run $OBM_HOME/bin/RunBackupSet.sh [BACKUP_SET_NAME] to run your backup
6. Run $OBM_HOME/bin/Scheduler.sh to start the backup scheduler

^Back to top

1.7. The Windows version of StorState Pro installer hangs, what could be the problem?

There are few things that could create errors during or after executing the installer.

1. Make sure there is enough disk space on the machine.
2. Make sure you do not have any anti virus software or PCanywhere running, as this may create problems with InstallAnywhere installers.
3. There are also problems with InstallAnywhere installers and Dell OpenManager. If OpenManager has installed on the target system, be sure to disable it before installing StorState Pro.
4. Hardware could cause errors as well, try set your [hardware acceleration display setting] to off. There are problems with certain versions of Java running along with certain video cards.
5. This may only be a Java problem.

Also, if you are transferring this file from one machine to another, please be sure the file size is valid and you are transferring the file in binary mode.

Java Testing

Please try running any of the Swing demos that came with the Java runtime in 1.4.X and see if it hangs on Windows. In order to fix this problem, some knowledge base on the Internet suggested updating DirectX to at least DirectX 8.1. Most machines got this problem had DirectX 7.0 installed. (You can use the "dxdiag" command to find out the directX version)

SUN recommended two workarounds for certain video card issues

1. The following will pass properties to the installer's Virtual Machine:
In Advanced Designer – Project -> Config -> Additional Arguments
set to "-Dsun.java2d.d3d=false -Dsun.java2d.noddraw=true" without the quotes.

2. Set the following lax property in your LaunchAnywhere for your application's JVM:
lax.nl.java.option.additional=-Dsun.java2d.d3d=false -Dsun.java2d.noddraw=true

Add the same line to the uninstaller lax file, using a modify file action in your installer in post-install.

^Back to top

1.8. The Installer doesn't seem to work. How can I manually install StorState Pro on Windows?

To manually install StorState Pro on Windows, you'll need to copy the program directory (e.g. C:\Program Files\StorState Pro) from another machine with StorState Pro installed. Then do the followings on the machine you wish to manually install:

1. Create the directory C:\Program Files\StorState Pro
2. Unzip the StorState Pro program directory archive to C:\Program Files\StorState Pro
3. Run C:\Program Files\StorState Pro\bin\install.bat
4. Run C:\Program Files\StorState Pro\bin\Install-Scheduler.bat

^Back to top

1.9. The Installer doesn't seem to work. How can I manually install StorState Pro on Mac?

Try manually installing StorState Pro on your Mac with the following instructions:

1. Download StorState Pro Backup Manager for Mac from your web management console, or from the link provided to you.
2. Expand obm-mac.zip into /Applications/StorStatePro
3. Run "chmod -R 755 /Applications/StorStatePro" using Terminal
4. Double-click the "StorState Pro Backup Manager" icon in /Applications/StorStatePro folder

^Back to top

1.10. Error occurred when Installing StorState Pro on Novell.

Some users would have problems when trying to install StorState Pro on Novell Netware Client version. (The machine had met all the system requirements: Netware v5.1 and Netware Java v1.3.1). User could receive the following error message during installation.

Exception in thread "main"
Java.lang.noclass def found error.obm
Java: class obm exited with status 1

Check the following

Please check if the OBM_HOME environment variable set in
SYS:\StorStatePro\bin\BackupManager.ncf are correct:

envset OBM_HOME=SYS:\StorStatePro

envset OBM_CLASSPATH=$OBM_HOME\bin;$OBM_HOME\bin\obm.jar;
  $OBM_HOME\bin\obm-lib.jar

envset LIB_PATH=$OBM_HOME\bin

  java -mx384m -Djava.library.path=$LIB_PATH -cp $obm_CLASSPATH obm SYS:\obm

Please change the SYS:\StorStatePro environment variable to your installation directory.

^Back to top

1.11. Are there any command line tools for StorState Pro?

Yes, there are scripts in [StorState Pro Program Home]\bin and they are described below:

Windows
- Decrypt.bat: decrypts the specified backup files
- install.bat: installs the StorState Pro icon to the System Tray and registers the Online Backup Scheduler as a service
- Install-Scheduler.bat: registers the Online Backup Scheduler as a service
- RegisterVSS.bat: re-registers Microsoft's Volume Shadow Copy service DLLs
- Remove-Scheduler.bat: un-registers the Online Backup Scheduler service
- Restore.bat: restores the specified snapshot of the backup set to the specified location
- RunBackupSet.bat: runs the specified backup set
- RunStorState Pro.bat: launches the Online Backup Manager user interface
- Run-Scheduler.bat: starts the Online Backup Scheduler service
- SeedLoad.bat: runs seed load for the specified backup set to the specified location
- Uninstall.bat: removes the StorState Pro icon from the System Tray and un-registers the Online Backup Scheduler service

Linux
- BackupManager.sh: launches the Online Backup Manager user interface
- Configurator.sh: configures client parameters such as Data vaulting center address, username/password, encrypting key, etc.
- Decrypt.sh: decrypts the specified backup files
- Restore.sh: restores the specified snapshot of the backup set to the specified location
- RunBackupSet.sh: runs the specified backup set
- Scheduler.sh: starts the Online Backup Scheduler service
- SeedLoad.sh: runs seed load for the specified backup set to the specified location
- StopScheduler.sh: stops the Online Backup Scheduler service

You may have to set some variables in these scripts and more instructions are provided.

^Back to top

1.12. How does StorState Pro detect changes in files? Does it use the Archive bit? Some tape backup software resets the Archive bit. Would this affect StorState Pro when backing up the same data?

StorState Pro compares timestamps of files on the server with the corresponding copies on client machine. Archive bit is not used as it does not detect relocated files. Therefore tape backup would not affect StorState Pro.

^Back to top

1.13. Does StorState Pro copy the same set of files regularly?

After the initial upload, subsequent backup jobs will only transfer the modified or new data to the data vaulting center. It depends on the nature of the data, but normally, less than 2% of all data is modified.

^Back to top

1.14. Transfer Block Size is 128Kb by default. Is there a reason for this?

Backup data is transferred in blocks (instead of file by file) to minimize connection negotiation roundtrips. It is not the TCP/IP block size. This setting is optimal for the backup operation.

^Back to top

1.15. How can I backup a huge data set over the Internet?

If you have a lot of data (e.g. 300GB+) to backup to the data vaulting center, it would take a considerable amount of time to perform the first full backup over the Internet. You can try the following method:

1. Use the **Seed Loading Utility** to backup your backup set to a local hard disk (instead of directly transferring to the data vaulting center)
2. Send the backup data, using a removable hard disk, to StorState support.
3. An administrator can then load all your backup files from your removable hard disk into your backup account. This could save you days (even weeks) of performing your first full backup.

In addition, subsequent backups are incremental (only new or updated files will be uploaded to the server), the amount of data transfer should be relatively small.

Please refer to the User Guide for details on the "**Seed Loading Utility**".

^Back to top

1.16. How can I restore a huge data set if I don't have time for the download?

A huge restore could take days or weeks over the internet. As an additional service, StorState support can overnight ship your data to you on an external hard drive. You can then use the "**Decypt Files Tool**" in StorState Pro to restore the backup data from the external media to its original format.

^Back to top

1.17. Does Byte-Level Delta backup require a temporary working directory?

StorState Pro requires a temporary storage area for the delta file before it gets sent to the data vaulting center.

For example:

If you have a 10GB file that has already been backed up and you have updated 10MB of this file. Then you need to have at least 10MB of free space in the temporary directory for the delta file.

Note: Certainly you do not need 10GB of free disk space.

Also, if you want to backup 5 x 10GB files in the same situation. You will only need 10MB of free space (not 5 x 10MB), because each delta file will be automatically deleted right after it has been backed up.

^Back to top

1.18. What is the average compression ratio?

All backup files are compressed and encrypted before uploading to the data vaulting center, the average compression ratio for text-based file is around 4:1. However, no further compression can be made on files that are already in compressed format (e.g. MPG, JPG, ZIP). In general, you can assume a 2:1 compression ratio when you are backing up a file set with a variety of types.

^Back to top

1.19. Can I change my encrypting key?

The encrypting key cannot be changed once you setup your Backup Set. This is necessary for the integrity of the Backup Set, making sure that backup data is only encrypted by one key.

You need to recreate your Backup Set if you want to change your encrypting key.

^Back to top

1.20. If the "Use Login Password as Encrypting Key" option was selected when creating the backup set. Why can't I restore the backup data with my most current login password?

By selecting the "User Login Password as Encrypting Key" option when creating a backup set, StorState Pro will set your login password as the encrypting key for the backup set. Once set, even if you change your login password afterward, the encrypting key will remain as your original password. In other words, if you have changed your login password, you still need to use the original password to decrypt and restore the backup set.

If the encrypting key is forgotten or lost, the backup set can never be restored. It is not possible to restore without the key.

^Back to top

1.21. What kind of encryption used by StorState Pro?

There are two encryptions being performed by StorState Pro:

1. **Encryption of backup data** - This is done by 128-bit or 256-bit symmetric key encryption (AES, TripleDES, or TwoFish algorithms). (128-bit is currently being used by most banks)
2. **Encryption of backup traffic** - This is being done by 1024-bit RSA public key encryption.

^Back to top

1.22. When selecting the backup option "local hard drive" to backup to external hard drive, it fails in the middle of the process, why?

Please check if the external hard drive is in FAT32 volume format.   Also check if there is any folder containing more than 32000 files and there is no file bigger than 4GB within your backup set. It is a FAT32 limitation; you may consider converting the FAT32 volume to NTFS.

^Back to top

1.23. Scheduled backup jobs are not running on my Windows machine, why?

Please try the followings:

1. Check if [Control Panel] -> [Administrative Tools] -> [Services] -> [Online Backup Scheduler] is available and started
2. Check if C:\Program Files\StorState Pro Backup Manager\home.txt contains the home directory for your backup account (e.g. C:\Documents and Settings\Administrator\.obm)
3. Check if C:\Program Files\StorState Pro Backup Manager\jvm\bin\SchedulerOBM.exe exists
4. Check if C:\Program Files\StorState Pro Backup Manager\log\Scheduler\info.log contains the startup loading entry, e.g.
   i. [2005/12/12 12:42:44] OS Name=Windows XP
   ii. [2005/12/12 12:42:44] OS Version=5.1

    iii.   [2005/12/12 12:42:44] Scheduler Version=5.0.1.3e

    iv.   [2005/12/12 12:42:44] Java Vendor=Sun Microsystems Inc. Version=1.4.2_10

    v.   [2005/12/12 12:42:44] [info] Starting Scheduler, User:'backup-account', Home:'C:\Documents and Settings\Administrator\.obm'

5.   Check if C:\Documents and Settings\Administrator\.obm\log\Scheduler\debug.log contains the debugging information for your scheduler

If your system settings are not the same as the above steps, please download a new installer from our website, uninstall your current version, and reinstall.

^Back to top

1.24.   I am having problems with my scheduled backup, why?

If you are backing up files from a network drive, please check if you have included the valid "Network Resources Authentication" information for the backup set. This is required for scheduled backups that access any network resources.

You can refer to the following screenshot:

http://www.storstate.com/docs/screenshots/Network_Resources_Authentication.JPG

^Back to top

1.25.   I cannot get proxy authentication to work with StorState Pro, why?

If you are using port 80, please check whether your proxy server accepts "HTTP CONNECT" calls on port 80. You may also want to try other ports like 443 to see if your proxy server accepts that.

^Back to top

1.26.   Can I backup an entire Operating System?

It is not possible to do hard disk imaging with StorState Pro, however you can still backup/restore the operating system by doing the followings:

To backup all files including the operating system, please do this:
1.   Add all files to your backup source
2.   Add a System State backup type to your backup account (Windows only)

To restore all files including the operating system, please do this:
1.   Re-install the operating system and applications (or, re-install a recent OS image)
2.   Restore the System State backup to your machine (Windows only)
    - To restore the System State data on a Windows domain controller, you must first start your computer in a special startup option called "Directory Services Restore Mode". To access "Directory Services Restore Mode", press F8 during startup and select it from the list of startup options.
3.   Restore all files to your machine

^Back to top

1.27.   When setting up a Microsoft SQL Backup Set, I cannot list the available SQL servers, what can I do?

You can try running "osql –L" in a command prompt, you should see the following:

Servers:
   (local)
   SQLSERVER1\INSTANCE1
   SQLSERVER2\INSTANCE2

If you have a firewall installed, please disable it. UDP Broadcast must be allowed.

^Back to top

1.28. Why are the Microsoft SQL Server databases missing from the backup source list?

If you have firewall installed on your network, please make sure UDP port 1434 is allowed on the SQL Server.

^Back to top

1.29. How to set the recovery model of a MS SQL database to FULL?

You can change the recovery model by running the following commands, run it along with each of the database that you want to run transaction log backup.
C:\> osql -E -S SQLSERVER1\INSTANCE1 -Q "ALTER DATABASE xxx SET RECOVERY FULL"
   Where
SQLSERVER1\INSTANCE1 = the SQL Server and the corresponding instance
xxx = the name of the database

^Back to top

1.30. Windows network map drive connections are not stable, why?

You may want to try editing a few Windows parameters.

SMB Size
When running applications that copy or move a large amount of data to a remote server, the speed of such action is determined by network speed and by the SMB (a protocal related to Windows map drive) size.
NT/2000 negotiates the SMB size and will generally set this to 4K blocks for applications that are moving or copying data to a remote server. By increasing this block size, you will allow the server to complete its file copies faster. This will increase the performance of the application making the copy/move calls.

HKEY_LOCAL_MACHINE\System\Current Control Set\Services\LanmanServer\Paramerters

"SizReqBuf"= REG_DWORD
Set Value To: 16000 = HEXDEC
Ref: http://support.microsoft.com/default.aspx?scid=kb;en-us;320829

Map Drive Auto Disconnect Settings
Reference: http://support.microsoft.com/kb/138365/EN-US/
   http://support.microsoft.com/default.aspx?scid=kb;en-us;297684

HKEY_LOCAL_MACHINE\System\Current Control Set\Services\LanmanServer\Paramerters

Autodisconnect to: fffffff

<u>Creating BAT file for better performance</u>

If you are still having problems, you may want setup a BAT file and schedule this file to run every 10 minutes, please setup the BAT file as follow:

BAT file settings:

```
-------------------------
    ping mapdrv
    ping 192.168.1.15
    net config server /autodisconnect:-1
    net use /persistent:yes
    net use "\\mapdrv\DATA STORAGE1"
    net use "\\192.168.1.15\DATA
    net use d: \\192.168.1.15\DATA STORAGE1
    net use e: "\\mapdrv\DATA STORAGE1"
    dir d:\
    dir e:\
-------------------------
```

- mapdrv = your NAS device network name
- 192.168.1.15 = mapdrv

In addition, create a host file on the server hosting the program, have the following entry in it:
- mapdrv = 192.168.1.15

And if you are on a 2003 server, refer to the following:
Reference: http://support.microsoft.com/default.aspx?scid=kb;en-us;890553

For Windows 2000, you may want to install the following Hotfix:
Windows2000-KB903237-x86-ENU
Reference: http://support.microsoft.com/default.aspx?scid=kb;en-us;903237

^Back to top

1.31. There is an error when backing up files on a remote NetWare server, what can I do?

If you want to backup \\SERVER\SHARE that is located on a NetWare server and you are getting "**Network drive is not accessible**" error message. Please try adding the following command as a [Pre-backup command]

net use \\SERVER\SHARE [PASSWORD] /USER:[DOMAIN | MACHINE_NAME]\[USERNAME]

This will authenticate the current process with the NetWare server and therefore allow your backup to run correctly.

^Back to top

1.32. Does the StorState Pro upgrade the installation of Java on a client machine, or does it install a separate copy for its own use?

StorState Pro uses its own copy of Java and leaves the system Java VM intact.

^Back to top

1.33. Is it possible to do incremental or differential backups with MySQL?

MySQL backup is done with SQL Dump file, and it generates a single file which is then uploaded. These backup files are usually very large size and it takes time to backup to the server. At this moment, it is not possible to do incremental dump with mysqldump. But our Byte-Level Delta feature

still ensures that, instead of the entire backup file, only the changed data blocks within the dump file are uploaded to the data vaulting center.

^Back to top

1.34. How does the "Remove retention files for overlap policy" under Advanced Retention Policy work?

In general, daily snapshots followed by a weekly snapshot or a monthly snapshot, etc. will be removed; weekly snapshots followed by a monthly snapshot or a quarterly snapshot, etc. will be removed; and so on. This is illustrated by the following example.

Assume today is 17Jan08, and the Advanced Retention Policy is as follows:

- Daily: retain for 7 days
- Weekly: retain for 4 weeks (the job will be performed on Saturday)
- Monthly: retain for 3 months (the job will be performed on 1st of each month)

If "**Remove retention files for overlap policy**" is NOT enabled:

Then a total of 14 snapshots (7+4+3) will be kept on the server accordingly, i.e.:
(*Daily*): 10Jan08, 11Jan08, 12Jan08, 13Jan08, 14Jan08, 15Jan08, 16Jan08
(*Weekly*): 24Dec07, 31Dec07, 7Jan08, 14Jan08
(*Monthly*): 1Nov07, 1Dec07, 1Jan08

If "**Remove retention files for overlap policy**" is enabled:

Then only the following snapshots are kept: 1Nov07, 1Dec07, 1Jan08, 14Jan08, 15Jan08, 16Jan08.

Specifically, the weekly policy overrides the daily policy so 10Jan08, 11Jan08, 12Jan08 and 13Jan08 will be removed. The monthly policy overrides the weekly policy, and 24Dec07, 31Dec07 and 7Jan08 will be removed as well.

^Back to top

1.35. What is incremental backup and how does Byte-Level Delta work?

In an incremental backup, only modified files will be uploaded to the Data vaulting center.

On the other hand, Byte-Level Delta is applicable to the physical files to be uploaded to the data vaulting center, does not matter whether it is a MS SQL database file, MS Exchange transaction log file or any normal file in a FileBackupSet. Specifically, only the changed blocks in comparison to the original file on the data vaulting center (delta file) will be uploaded.

For each modified file, StorState Pro would determine whether the entire file or only delta file should be uploaded. If the entire file is to be uploaded, the old version of the file will be moved to the Retention area. Otherwise if only the delta file is to be uploaded, the previous delta files will be moved to the Retention area and the Data area should contain the original full backup file, checksum file and the latest delta file of this file.

^Back to top

1.36. How does the "Auto" block size work under Byte-Level Delta settings?

If the block size is set to "**Auto**", the effective block size will be chosen from the following table based on the file size of the updated file:

File Size	Delta Block Size
0 - 500M	4k

500M - 2G	8k
2G - 8G	16k
8G - 15G	32k
> 15G	64k

^Back to top

1.37. What happens when we do Byte-Level Delta backup on a directory?

When you do a backup, StorState Pro will do the followings:

1. Check if any files are added, updated or deleted (the calculation of these files are based on files having the same filename).
2. New files will be uploaded to the server in whole.
3. Deleted files will be removed from Data area and placed into the Retention area in the data vaulting center.
4. Updated files will be processed by the Byte-Level Delta system (i.e. only changed data blocks within the files will be uploaded to the data vaulting center)

^Back to top

1.38. Does StorState Pro have to stop the application when doing online backups?

StorState Pro can backup application data while the application is still running. Particularly, we have special agents for MS Exchange Server, MS SQL Server, Oracle, Lotus Notes and MySQL, which allows these applications to be backed up while they are online. With the **Volume Shadow Copy** feature in Windows XP/2003, StorState Pro can backup other types of applications while they are online as well.

^Back to top

1.39. What are Off-line backup, Logout backup reminder and Local backup features?

Off-line Backup is basically designed for notebook users who might be off-line most of the time, or any system that cannot rely on backup schedule to backup regularly. The backup interval allows users to specify the interval that they would like their data to backup. If this interval has elapsed, backup will run automatically once this machine is online.

Logout Backup Reminder asks user if they would like to backup if they logout of the computer or shutdown their computer.

Local Backup allows an extra copy of backup file to be copied to local hard disk during backup.

^Back to top

1.40. Why is StorState Pro running a backup once every hour?

You might have "**Off-line backup**" enabled for every hour. Please do the following to disable that:

1. Logon to StorState Pro
2. Select the backup set that you want to disable the *Off-line backup* from the left panel
3. Select the [Extra Backup] node under the backup set node on the left panel
4. Uncheck the [Enable off-line backup] checkbox under the "Off-line Backup" section
5. If you want to do this to all backup sets, please repeat the previous step for each backup set

Press the [Save Setting] button from the toolbar

^Back to top

1.41. How do I disable "logout backup reminder"?

To disable the "**System Logout Backup Reminder**", please do the followings:

1.   Logon to StorState Pro
2.   Select the backup set that you want to disable the *Logout reminder* from the left panel
3.   Select the [Extra Backup] node under the backup set node on the left panel
4.   Uncheck the [Enable System Logout Backup Reminder] checkbox under the "System Logout Backup Reminder (Windows)" section
5.   If you want to do this to all backup sets, please repeat the previous step for each backup set

Press the [Save Setting] button from the toolbar

^Back to top

1.42. How do I change the .obm path for Novell?

Please take a look at SYS:\obm\home.txt. It contains the path to the .obm directory. You can do the followings to make the changes:

1.   Stop the scheduler
2.   Change the entry in SYS:\obm\home.txt to another directory
3.   Copy the .obm directory from existing location to new location
4.   Startup the scheduler again
5.   Also, open "SYS:\obm\bin\BackupManager.ncf" and append the updated .obm path to the end of the whole command line.

    Example

    java -mx384m -Djava.library.path=$LIB_PATH -cp $OBM_HOME_CLASSPATH obm
    SYS:\obm C:\[new location]\.obm

^Back to top

1.43. The MS SQL or MS Exchange database backup job stores 2 copies of the spooled database file in the "temporary directory" (tagged with different datetimes). This has taken up extra disk space, is this necessary?

If you have interrupted any of the backup jobs, the file tagged with the datetime of the corresponding backup job will be renamed to its original filename just before it is uploaded. This is necessary as we need to ensure that the snapshot of different dates would not overwrite each other.

If a backup job is still running, just let it runs to completion. If backup has been stopped already, just remove all files tagged with the corresponding datetime in the "temporary directory" and try to perform a **full database backup** again.

^Back to top

1.44. What do I have to do in order to backup open files?

You need open file support from the underlying OS. Windows XP, 2003, and Vista by default, come with **Volume Shadow Copy**, which allows backup open file. For older platforms, e.g. Windows 9x/ME/NT/2000 or NetWare, we would recommend adding a third party open file manager option (e.g. St. Bernard Open File Manager - http://www.stbernard.com/) which might cost around US$100 for each workstation and US$300 for each server if open file backup is required.   Other options may also be available.

Open file option is not required on Linux/Unix/Mac OS X because no files are held exclusively open by applications.

^Back to top

1.45. How does Volume Shadow Copy work?

Please refer to:
http://technet2.microsoft.com/WindowsServer/en/Library/2b0d2457-b7d8-42c3-b6c9-59c145b77
65f1033.mspx

^ Back to top

1.46. In Windows, when StorState Pro is creating a Shadow Copy Set, it gets the "[ERROR] E_UNEXPECTED" error, what can I do?

This is a Microsoft Volume Shadow Copy issue. Microsoft's recommendation is to try re-registering the Volume Shadow Copy Service. If you are on Win XP or 2003, you can simply run the batch file available in C:\Program Files\StorState Pro Backup Manager\bin\RegisterVSS.bat

^ Back to top

1.47. How to backup Oracle 7.3.4 on NetWare?

To backup Oracle 7.3.4 on NetWare 5.1, it is not possible to use the Oracle agent, you need to do the followings:

1. Backup all Oracle 7.3.4 datafiles, control files, and pfile.
2. Use "exp" (export utility) to dump Oracle database to a dump file (make this a pre-backup command)
3. Use StorState Pro to backup this file

When you need to restore the database, just restore all datafiles, control files, pfile to its original location and use "imp" (import utility) to put the data back into Oracle database.

^ Back to top

1.48. How do I backup NTFS permission?

NTFS permissions are backed up during the backup operation.

^ Back to top

1.49. How do I restore NTFS permission?

Backed up NTFS permission will be restored automatically.

^ Back to top

1.50. How do I backup file permission in Linux?

Linux file permissions are backed up during the backup operation.

^ Back to top

1.51. How do I restore file permission in Linux?

Backed up Linux file permissions will be restored automatically.

^ Back to top

1.52. How do I remove StorState Pro completely from my Windows machine?

If you want to completely remove StorState Pro from Windows, after uninstalling the software from [Control Panel] -> [Add or Remove Programs], please do the followings:

- Ensure that the StorState Pro installation directory is deleted (sometimes not removed when Windows holds some of the files)
- Remove the C:\Documents and Settings\administrator\.obm\ folder (intentionally left undeleted, as important information of the user and backup sets, such as the encryption keys, are stored here)

^Back to top

1.53. Does StorState Pro work with dial-up connections?

It makes no difference to StorState Pro if the connection is always on or dial-up.

If you want Windows to connect to the ISP automatically when a backup starts, you can go to [Control Panel] -> [Internet Options] -> [Connections] and select "Always dial my default connection".

^Back to top

1.54. StorState Pro crashes when opening [Backup Source] of a Lotus Domino/Notes backup set, what can I do?

1   Check to see if you can find a hs_err_pid????.log file under the [StorState Pro Home], and if it contains the error "Unable to complete restart processing, err = Recovery Manager: Error from Logging Subsystem", please do the followings:

2   Go to [Configuration], select [All Server Documents] and choose your corresponding server.

3   [Disable] Transactional logging at Basics

4   Go to [Control Panel] -> [Administrative Tools] -> [Services] and restart [Lotus Domain Server] Service

5   Go to [Configuration] -> select [All Server Documents] and enable Transaction logging

6   Make sure your logging style is "Archived"

7   Go to [Services] and restart Lotus Domain Server Service again

^Back to top

1.55. How do I restore a machine from my System State backup?

To recovery a machine from scratch, you have to do the followings:

1. Re-install the operating system
2. Re-install all applications installed (You can do both of these easily by backing up the system occasionally using Norton Ghost or other imaging software)
3. Restore the System State backup onto the recovered machine (This will update the recovered system with the latest configuration and settings)
4. Restore all data files onto the recovered system.

^Back to top

2. Common Error Messages

2.1. "Quota Exceeded"

This means that the backup account has run out of its allocated data storage quota. Please contact StorState support to increase your backup quota.

^Back to top

2.2. "Access is denied"

This means that the file is not accessible by StorState Pro. Please check if the SYSTEM account that StorState Pro uses has read access permission to the mentioned file.

StorState Pro uses the SYSTEM or ROOT account for scheduled or background backup jobs. StorState Pro uses the account of the current user for jobs run directly from the StorState Pro Backup Manager.

^Back to top

2.3. "Checksum incorrect" / "Uploaded file size incorrect"

This error occurs when the backup file uploaded to the server is corrupted. Corrupted backup files would not be stored on the data vaulting center but will be uploaded to the data vaulting center again in the next backup job.

If more than one backup job of the same backup set is being run on more than one computer at the same time, you might get this error. Please check if you have installed the client software (StorState Pro) with the same backup account on more than one computer.

Also, please check the file C:\Program Files\StorState Pro Backup Manager\home.txt and see if you have more than one ".obm" record (e.g. C:\Documents and Settings\Administrator\.obm) in this file that refers to the same backup account on the server. If you can find such entries, simply remove the redundant lines from this file and restart the computer.

Sometimes, this problem could be caused by network instability. If this only happens occasionally, you can safely ignore this error.

^Back to top

2.4. "C:\xxx\yyy\zzz.txt has been removed already"

There is latency between the backup agent with the list of files to be backed up and the time these files are actually backed up. If any of these files are removed between this latency, an informative message, "C:\xxx\yyy\zzz.txt has been removed already", will be logged in the backup log report. Under most condition, you don't need to worry about this since files created and then removed in this situation are usually temporary files. It is used by some other applications and it is not necessary to backup these files.

If you are using Byte-Level Delta, please make sure "Temporary directory for storing backup files" setting of your StorState Pro is pointing a writable directory with plenty of disk space.

^Back to top

2.5. "The process cannot access the file because another process has locked a portion of the file"

You get this message when backing up "C:\xxx\yyy\zzz.txt" because another application has held a read-exclusive lock on "C:\xxx\yyy\zzz.txt". The backup agent, therefore, is unable to open the file to read its content. Please try the followings to resolve this problem:

- Enable the Volume Shadow Copy option for the corresponding backup set if you are using Windows 2003 or XP.
- If you are on an older version for Windows, you may need to obtain a generic "Open File Manager" in order to backup the locked files.
- If the locked file is not important (e.g. C:\pagefile.sys), simply exclude the locked file from your backup source. By doing so, this message will not appear again.
- If the locked file is a database file held open by one of our supported applications (e.g. Microsoft SQL Server, Microsoft Exchange Server, Oracle, Lotus Domino/Notes, MySQL), simply use the corresponding add-on module provided to backup the database. This way, you can backup the database you want (using the application specific APIs) without accessing the database file directly.   You may need to contact StorState support to enable the agent.
- If the locked file is a file held open by some other third party applications, you can use the [Pre/Post Command Line Tool] to shutdown/restart the application that is locking the file before/after a backup job to make sure that no locks will be placed on files that you need to backup.

^Back to top

2.6. "The process cannot access the file because it is being used by another process"

This means that the file is currently locked by another process (or program). Please shutdown the program locking this file before running the online backup program again. You can also refer to "What do I have to do in order to backup open files" for more information (for file backup set only).

^Back to top

2.7. "Premature end of input"

It means that StorState Pro has a problem downloading the list of files to be backed up from the data vaulting center. It then retries getting the list again. This is usually due to network difficulties and corrects itself.

^Back to top

2.8. "Invalid XML Character" / "XML document structures must start and end within the same entity"

Please try the followings:

1. Logon to the web interface of this backup account
2. Go to the [File Explorer] page and browse to the directory reported that contain this problem (or some other directories)
3. Check if there are any filenames containing strange characters and delete them
4. Try backup again.

^Back to top

2.9.   "Incorrect Function"

Please check if you have any antivirus or personal firewall software installed. Please disable it from scanning the related data and traffic to see if the problem persists.

^Back to top

2.10.   "HTTP/1.1 502 Proxy Error"

The specified Secure Sockets Layer (SSL) port is not allowed. ISA Server is not configured to allow SSL requests from this port. Most Web browsers use port 443 for SSL requests.
Refer to http://support.microsoft.com/kb/283284

^Back to top

2.11.   " [Microsoft][ODBC SQL Server Driver][SQL Server]The statement BACKUP LOG is not allowed while the recovery model is SIMPLE"

You need to change the Recovery model to FULL. If you are using Microsoft SQL Server 7.0/2000/2005, please refer to the following screenshots:
1.   http://www.storstate.com/docs/screenshots/SQL7-TuncateLogOnCheckpoint.jpg
2.   http://www.storstate.com/docs/screenshots/SQL2000-FullModel.jpg

If you are using MSDE, please issue the following commands:
    osql -E -S [Server Name] -Q "ALTER DATABASE [Database Name] SET RECOVERY FULL"

These will enable transaction logging option for your MSDE databases and allow incremental/differential backup to be run with no problems.

^Back to top

2.12.   "CExBackup::backupService:HrESEBackupSetup: Error Number 0xc800020e: An incremental backup cannot be performed when circular logging is enabled"

You need to disable circular logging in MS Exchange. Please uncheck the [Enable circular logging] option as shown below and restart the "Microsoft Exchange Information Store" service after you are done.
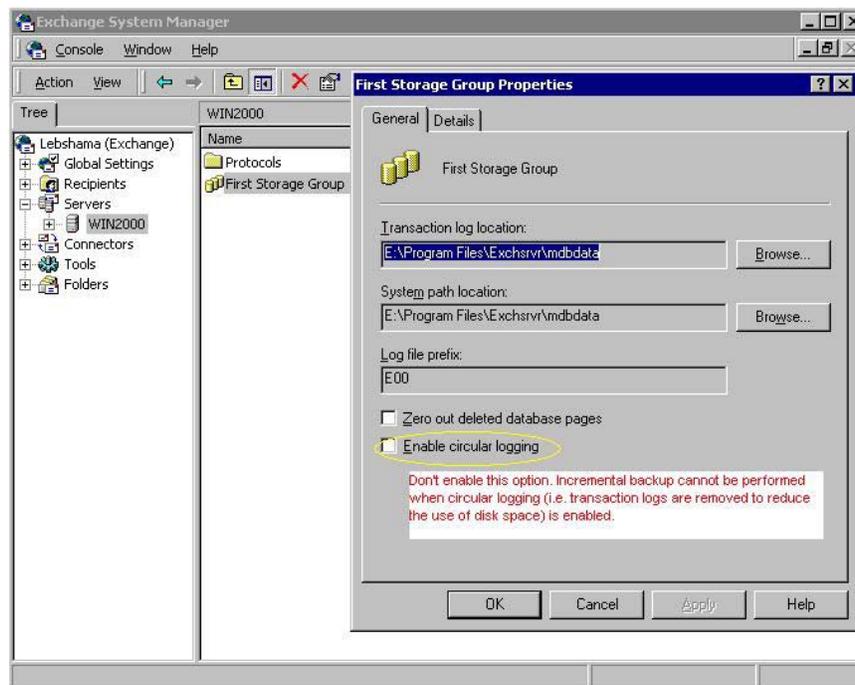
2.13. "CExBackup::backupStorageGroup:HrESEBackupTruncateLogs: Error Number 0xc7ff1004: (null) "

This is an error returned by the Microsoft API and is a Microsoft issue. Please try to restart the "Microsoft Exchange Information Store" service. If the problem persists, you may want to schedule the service to restart on a daily basis.

2.14. "CExBackup::backupStorageGroupLog:HrESEBackupGetLogAndPatch Files: Error Number 0xc8000232: Some log or patch files are missing"

If you have just disabled the MS Exchange circular logging option, please try running a full backup again, this should fix the problem.

2.15. "CExBackup::backupFile:WriteFile: Error Number 0x6: The handle is invalid"

This is the MS Exchange having problem in writing to the Temporary spooling directory. Please ensure that the system account running the MS Exchange has full access right to that directory. If it is a network drive, please use an UNC path (e.g. \\server\share), and the "Network Resources Authentication for Windows" is properly set for the corresponding backup set.

2.16. "Path 'C:\Temp\MSSQLServer\1137040769567' does not exist"

If you get this error while you are doing MS SQL or MS Exchange backup, please try to use an UNC path (e.g. //server/share) in "Temporary directory for storing backup files" under [Backup Source Settings]. Please make sure that your StorState Pro is on the same machine as your MS SQL or MS Exchange. Please also ensure that you have included the appropriate "**Network Resources Authentication for Windows**" information in the backup set.

For MS SQL Server, you may want to check whether if it can spool the database file correctly by running the following command:

(Windows Authentication mode)
osql -E -Q "DECLARE @dbname char(64) SET @dbname = 'xxx' BACKUP DATABASE @dbname TO DISK = '//server/share/abc.txt' WITH SKIP"

    OR

(SQL Server Authentication mode)
osql -U USERNAME -P PASSWORD -Q "DECLARE @dbname char(64) SET @dbname = 'xxx' BACKUP DATABASE @dbname TO DISK = '//server/share/abc.txt' WITH SKIP"

Note:
USERNAME/PASSWORD = the database username/password
xxx = the database that you would like to backup
//server/share/abc.txt = the location for the database spooling file

^Back to top

2.17. "Expect log sequence 'xxx' but found 'SERVERNAME\Microsoft Information Store\First Storage Group\E000xxx.log'"

This occurs when the log sequence of MS Exchange was altered by other backup software, e.g. NTBackup. Thus when the Backup Manager next performs a MS Exchange backup, the Exchange log sequence would not match the one that it is expecting. With the broken sequence, the Exchange server cannot be restored to its latest state.

To resolve this problem, you need to deactivate all other backup software that is operating on MS Exchange, and then you need to perform a Full MS Exchange database backup manually via the Backup Manager.

Alternatively, instead of backing up transaction logs during the weekdays, you can consider doing Full Exchange Database backup on a daily basis with the Byte-Level Delta option enabled. This should avoid interference from other backup software while keeping the amount of upload data to minimal.

^Back to top

2.18. "The last backup jobs of *.stm (2006-10-30-13-40-21) and *.edb (2006-11-04-03-05-00) don't match for database 'ServerX\Microsoft Information Store\First Storage Group\Mailbox Store (ServerX)'"

For MS Exchange backup, *.stm and *.edb are backed up in pairs, if this error occurs, it implies that during a previous backup, there was a problem with either the *.stm or *.edb file. If this happens, please perform a Full MS Exchange backup manually via the Backup Manger to resolve this problem.

^Back to top

2.19. "No *.stm found for database 'ServerX\Microsoft Information Store\First Storage Group\Mailbox Store (ServerX)'"

This suggests that the .stm file on server may have been corrupted or found missing. To resolve this error, please perform a Full MS Exchange backup manually via StorState Pro.

^Back to top

2.20. Exception in thread "main" java.lang.UnsatisfiedLinkError: /usr/local/obm/jvm/lib/i386/libawt.so: libXp.so.6: cannot open shared object file: No such file or directory…

This is caused by a missing library in Fedora Core 6. To resolve this, just open a terminal window. From here type in the command 'yum install libXp' (please note that the command is case sensitive), this will ask you if it is ok to download the package. Just type 'Y' and the libXp library will be installed. Once installed, just run the command

"sh $OBM_HOME/bin/RunBackupManager.sh"

You should find that the StorState Pro will open up and you should be able to create the backup set via the GUI interface.

When running the 'yun install' command, you may see the following error:

Loading "installonlyn" plugin
Existing lock /var/run/yum.pid: another copy is running. Aborting.

This is because the background YUM updater service is running. To stop it, run:

/etc/init.d/yum-updatesd stop

Once the process has been stop, you should be able to run the command 'yum install libXp' without any problems.

^Back to top