

#### SAFE™ HighLights: Schloss & Co, LLC

Always-on, Continuous Data Protection.

Point-and-Click File Backup and Restoration.

Real-time Fully Automated, Unattended Backups.

Compresses and Encrypts Data before storing it on off-site servers for disaster recovery.

Backup Agents specifically designed to allow Schloss & Co, LLC to have a 24x7x365 data retrieval capability.

Restoration from Anywhere at Anytime features to allow for continuous data access.

## Benefits

- Easy Backup of
- Microsoft Exchange Server 2000 / 2003
- Microsoft SQL Server 7.0 / 2000
- Lotus Domino/Notes 5.0 or above
- Oracle 8i or above
- MySQL 3.2.4 or above
- Windows System State
- Outlook and Outlook Express (i.e. \*.pst, \*.dbx and \*.wab)
- Important personal settings, e.g. Desktop, Favorite, My Documents and History etc
- Other common files (e.g. \*.doc, \*.xls)
- Support of backing up only changes within a file (using in-file delta technology)
- Support of backing up of open files on Windows XP/2003 (Volume Shadow Copy)
- (New in 5.1.0.6) Support of backing up of Windows NTFS access privileges, Linux access privilege and mode, Mac OS X metadata and resource forks
- Easy to use, deploy and maintain

## Features

- User configurable incremental / differential in-file delta backup mode (i.e. backing up only changes within a file since last incremental backup (or last full backup) according to each user's preferences)
- Allow in-file delta backup mode to be overridden by each user individually according to backup time (e.g. enforcing full (or incremental or differential) backup of all files on every Sunday or the 1st day of every month)
- Single mail level exchange backup (brick level exchange backup)
- Volume Shadow Copy backup (i.e. backing up files even when they are exclusively open, e.g. Outlook.pst)
- Bandwidth Throttling at backup account level (new) In-File Delta backup (i.e. backing up only changes within files)
- Off-line backup mode and logout backup reminder
- Real time backup server replication allows backup server to be easily backup

- Customizable backup schedule allows backup to be scheduled at any time
- Compress and encrypt data automatically before sending them to the server (server stores only encrypted data)
- Increment backup strategy ensures that only new or updated files (or changes with last backup file) are sent to backup server
- Support both full backup (database backup) and incremental backup (transaction log backup) for Microsoft SQL Server 7.0/2000, Microsoft Exchange Server 2000/2003, Lotus Domino/Notes 5.0 and Oracle 8i or above
- Can integrate with external "Open File Manager" to provide open file backup support to all open files
- Access backup data anytime, anywhere by using a browser
- Comprehensive backup report lists all files being backup. Backup report will be delivered to user automatically via email when each backup job completed.
- Backup data are CRC validated before they are stored on server.
- Fully user customizable data retention policy allows users to have access to deleted files using the least possible storage space on server
- Select files to be backed up easily by using backup filter, e.g. selecting all \*.doc and \*.xls in your computer in a single operation
- Run any custom OS commands before/after a backup job.
- Run on Windows, Mac OS X, Linux, NetWare, Unix and all other platforms supporting a Java2 Runtime Environment.
- LiveUpdate allows patches to be deployed to hundreds of clients easily
- System activity report, showing all backup system information, will be delivered to system administrator via email everyday.
- Complete set of external APIs allow system integration with external systems (e.g. billing/payment system) to be done easily
- Periodic backup files validation on backup server ensures backup files are 100% valid and fully restorable when needed.

## Security

- 128-bit point-to-point SSL communication between server and client
- Support HTTP/HTTPS Proxy and Socks v4/v5 firewall
- Data are 128-bit encrypted when stored on backup server
- Choice of different encryption algorithms, e.g. Twofish, Triple DES, Advanced Encryption Standard (AES)
- Choice of different encryption modes, e.g. Electronic Cook Book (ECB) and Cipher Block Chaining (CBC)
- An random initializing vector, salt and iteration count will be generated by the software automatically for each file when encrypting your data
- Each backup user can restrict online access to his files to his pre-defined list of IP addresses

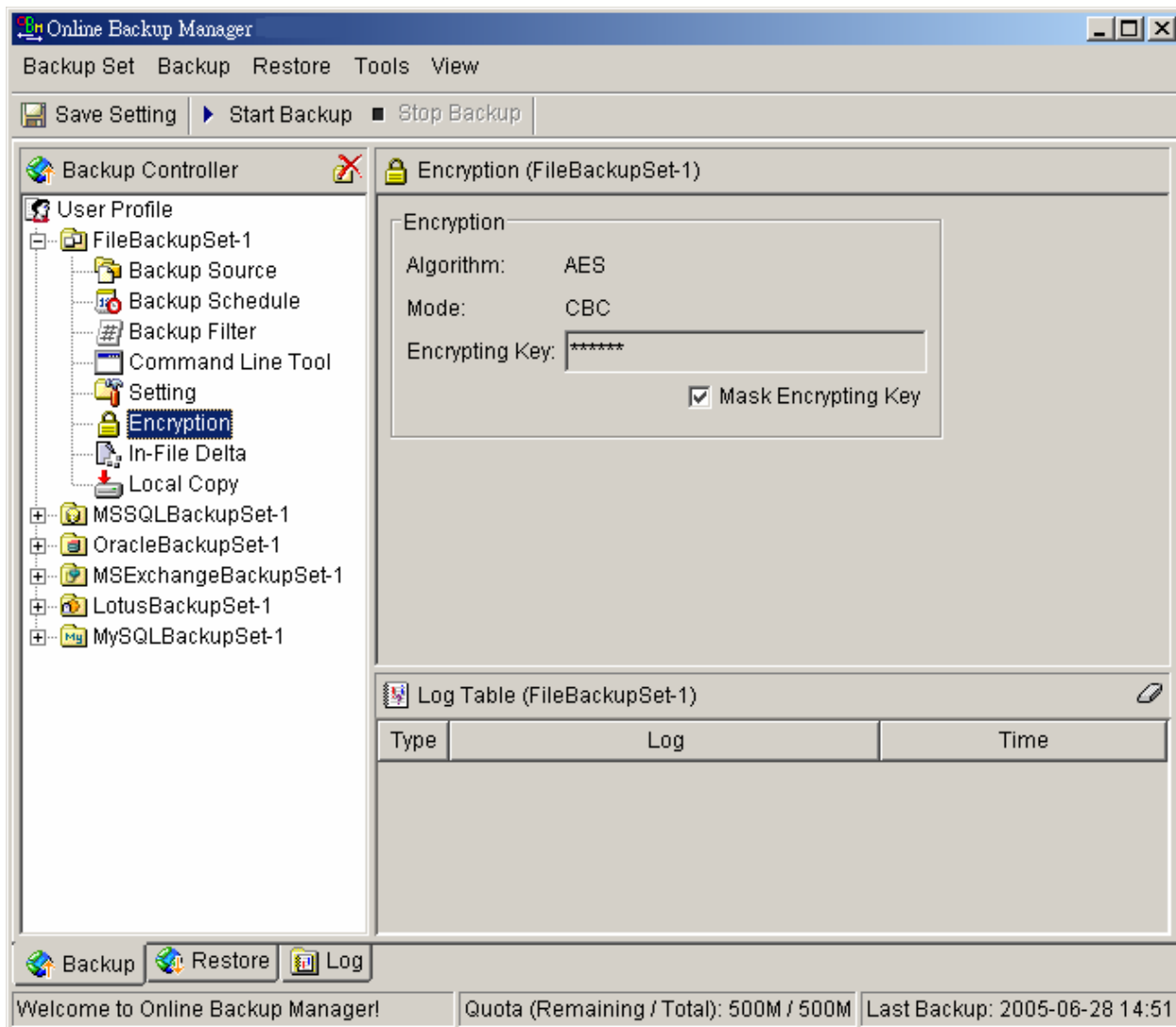
## Encryption

Before our files are sent to the SAFE™ Offsite Backup Server, the files are compressed and encrypted by our choice of encrypting algorithm, mode and key.

### Compress and encrypt data automatically

Data is compressed and encrypted before they are uploaded to the server. Not only does it reduce the storage space to keep our backup files, it also ensures the privacy of our data.

See the chart on the next page for available Encryption Options:



#### Parameter Description

Encryption Algorithm: It defines the encrypting algorithm used to encrypt our backup files.

There are three encryption algorithms available:

[AES] Advanced Encryption Standard algorithm

[DESeed] Triple DES algorithm

[Twofish] Twofish algorithm

**Schloss & Co, LLC uses AES** as it has been chosen as the encryption standard for commercial use.

Encryption Mode: It defines the encrypting mode used to encrypt your backup files. There are two encryption modes available:

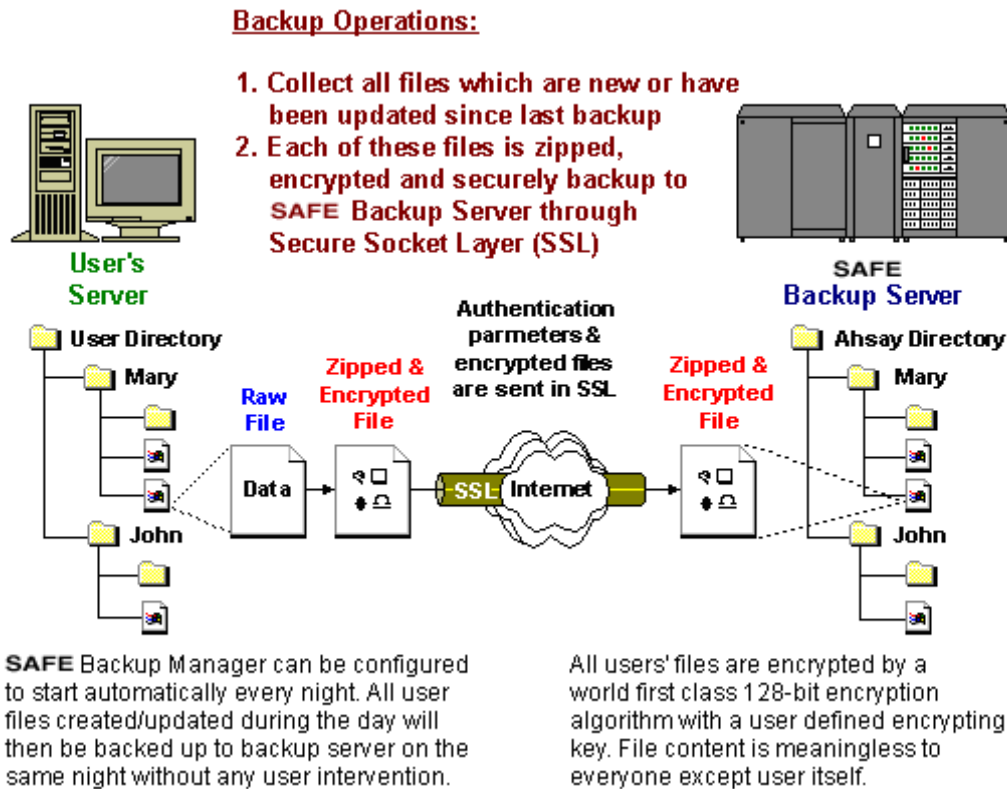
[ECB] Electronic Cook Book Mode

[CBC] Cipher Block Chaining Mode

**Schloss & Co, LLC uses CBC mode** as it offers better security.

## How files are backed up

The diagram below describes how SAFE™ OBM backups our files.



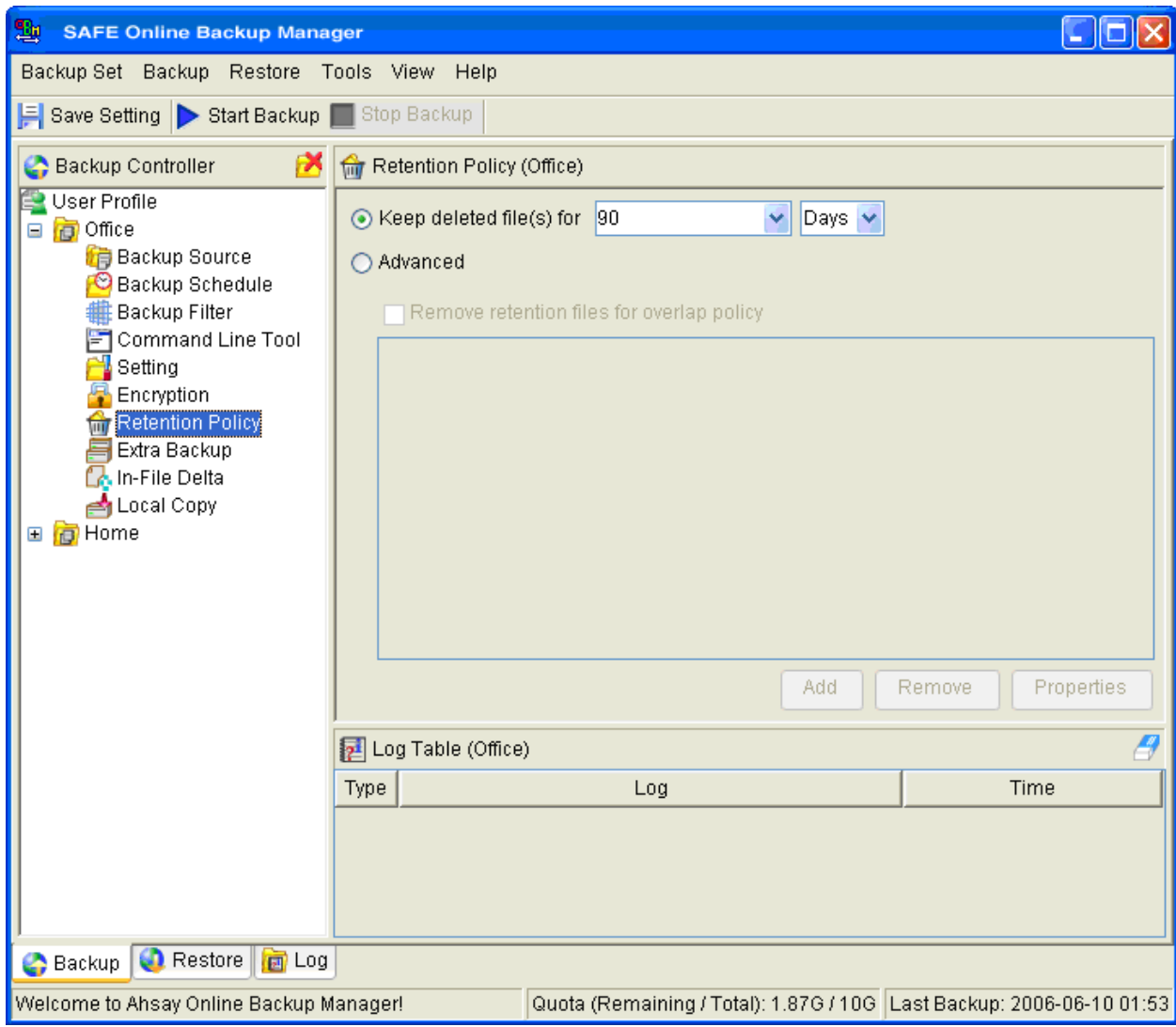
## Retention Policy

During backup, if SAFE™ OBM finds out that you have deleted a file (or updated a file) on your computer, it will put the corresponding deleted (or updated) file already backed up on the backup server into a retention area. The retention policy setting defines how long files inside the retention area will be kept on the backup server before they are deleted automatically from the server.

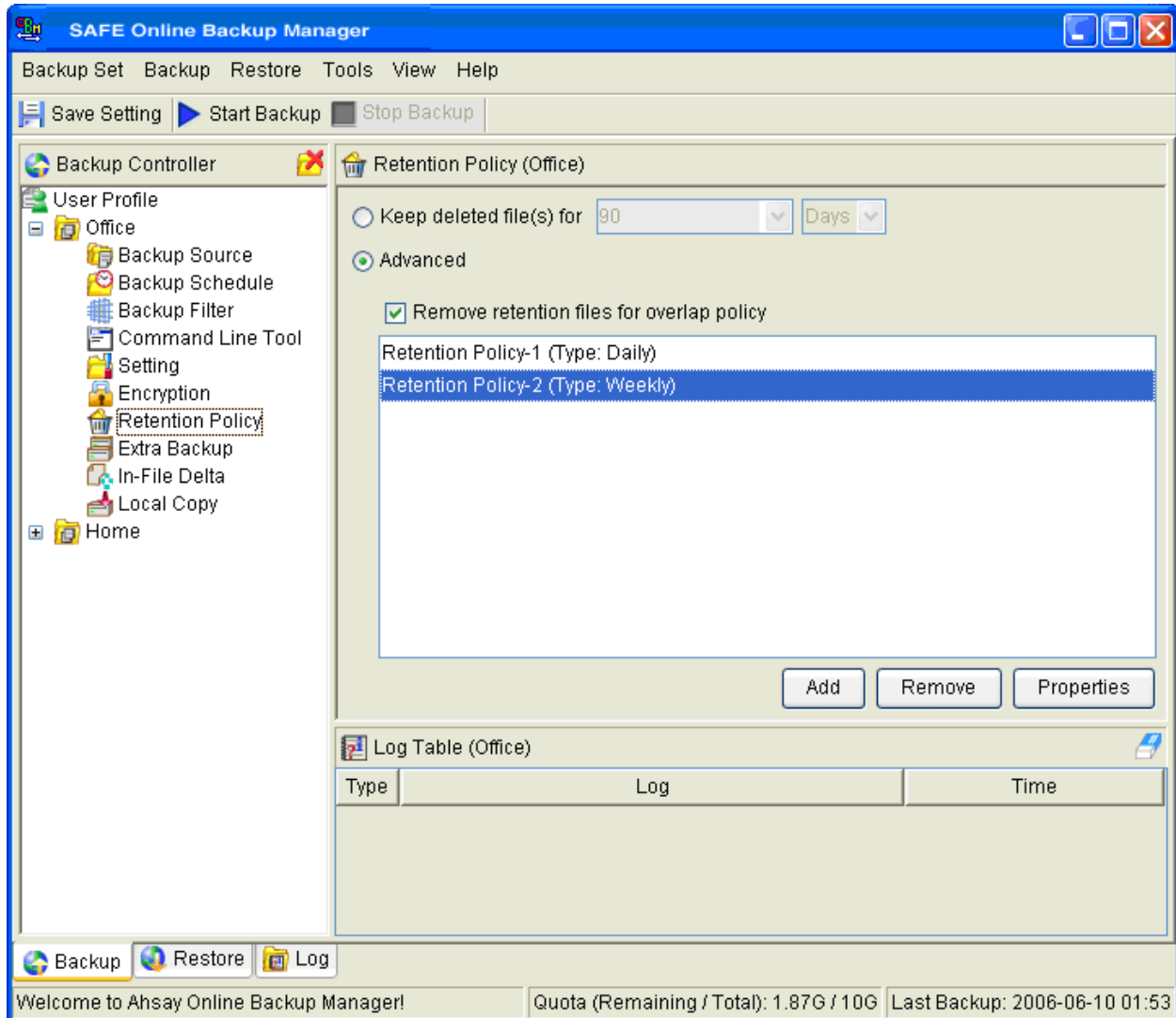
Retention policy will only affect "retained" file (i.e. files that have already been deleted or updated on your computer and thus are moved to the retention area of the backup server). For those files that have not been updated on your computer, the backup of these files is kept in the data area on the backup server and won't be affected by the setting of retention policy. These backup files of unchanged files will stay on the backup server forever until the original files are removed (or updated) from your computer.

### Standard Retention Policy

The [Standard] retention policy allows you to delete [retained] files automatically after a user defined number of days or after a user defined number of backup jobs. To change the retention policy setting of any backup set, please select the [Retention Policy] node on the left panel. You can then make changes to your retention policy under the [Retention Policy] section. After you have made your changes, just press the [Save Setting] button on the toolbar.



## Advanced Retention Policy



The [Advanced] retention policy allows you to configure a more flexible retention policy. It allows you to keep a set of snapshots of all backup files based on the time of the backup jobs. For example, you can configure the advanced retention policy to keep the following sets of backup files to mimic the retention policy back from the old days when you were still doing tape rotations:

- All files available within the last 7 days
- All files available on the last 4 Sundays within the last 28 days
- All files available on the 1st day of each month within the last 3 months
- All files available on the 1st day of each quarter within the last 12 months
- All files available on the 1st day of each year within the last 7 years

To do so, you need to setup your advanced retention policy as follows:

- Type = Daily; Number of copy to keep = 7
- Type = Weekly; Frequency = Sunday; Number of copy to keep = 4
- Type = Monthly; Frequency = Day 1; Number of copy to keep = 3
- Type = Quarterly; Frequency = Day 1 of Jan, Apr, Jul, Oct; Number of copy to keep = 4
- Type = Yearly; Frequency = Date 01-01; Number of copy to keep = 7

Assuming today is 17-Jan-2009, if [Remove retention files for overlap policy] is NOT enabled, a total of 25 snapshots (7+4+3+4+7, provided you have run backup daily for more than 7 years already) will be kept on the

server accordingly, i.e.:

- Daily: 10-Jan-2009, 11-Jan-2009, 12-Jan-2009, 13-Jan-2009, 14-Jan-2009, 15-Jan-2009, 16Jan-2009
- Weekly: 24-Dec-2008, 31-Dec-2008, 7-Jan-2009, 14-Jan-2009
- Monthly: 1-Nov-2008, 1-Dec-2008, 1-Jan-2009
- Quarterly: 1-Jan-2008, 1-Apr-2008, 1-Jul-2008, 1-Oct-2008
- Yearly: 1-Jan-2004, 1-Jan-2003, 1-Jan-2002, 1-Jan-2001, 1-Jan-2000, 1-Jan-1999

If [Remove retention files for overlap policy] is enabled, only the following snapshots are kept:

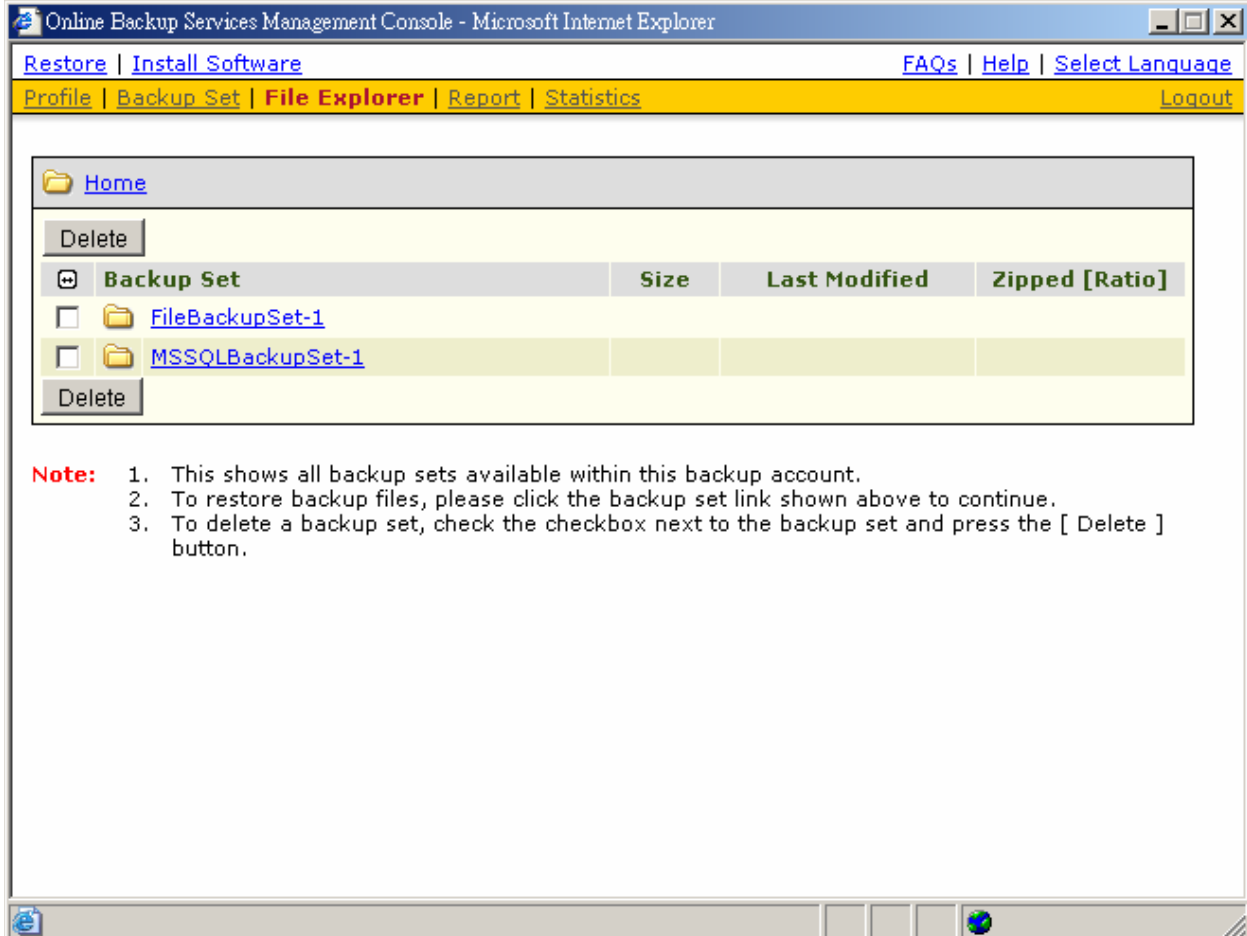
- Daily: 14-Jan-2009, 15-Jan-2009, 16-Jan-2009
- Weekly: 7-Jan-2009
- Monthly: 1-Nov-2008, 1-Dec-2008, 1-Jan-2009
- Quarterly: 1-Jan-2008, 1-Apr-2008, 1-Jul-2008, 1-Oct-2008
- Yearly: 1-Jan-2004, 1-Jan-2003, 1-Jan-2002, 1-Jan-2001, 1-Jan-2000, 1-Jan-1999

The weekly policy overrides the daily policy so the snapshots of 10-Jan-2009, 11-Jan-2009, 12-Jan-2009 and 13-Jan-2009 are removed. The monthly policy overrides the weekly policy so the snapshots of 24-Dec-2008, 31-Dec-2008 and 7-Jan-2009 are removed as well. The same applies to the quarterly and yearly policy but because there is no other overlapping of the dates above, the snapshots of dates specified by the monthly, quarterly and yearly policy remains the same.

## Using the web interface

We can backup your data to the SAFE™ Offsite Backup Server by following instructions below.

- i. Logon to the SAFE™ Offsite Backup Server web interface
- ii. From the top menu, click [File Explorer]



Online Backup Services Management Console - Microsoft Internet Explorer

[Restore](#) | [Install Software](#) [FAQs](#) | [Help](#) | [Select Language](#)

[Profile](#) | [Backup Set](#) | **File Explorer** | [Report](#) | [Statistics](#) [Logout](#)

Home

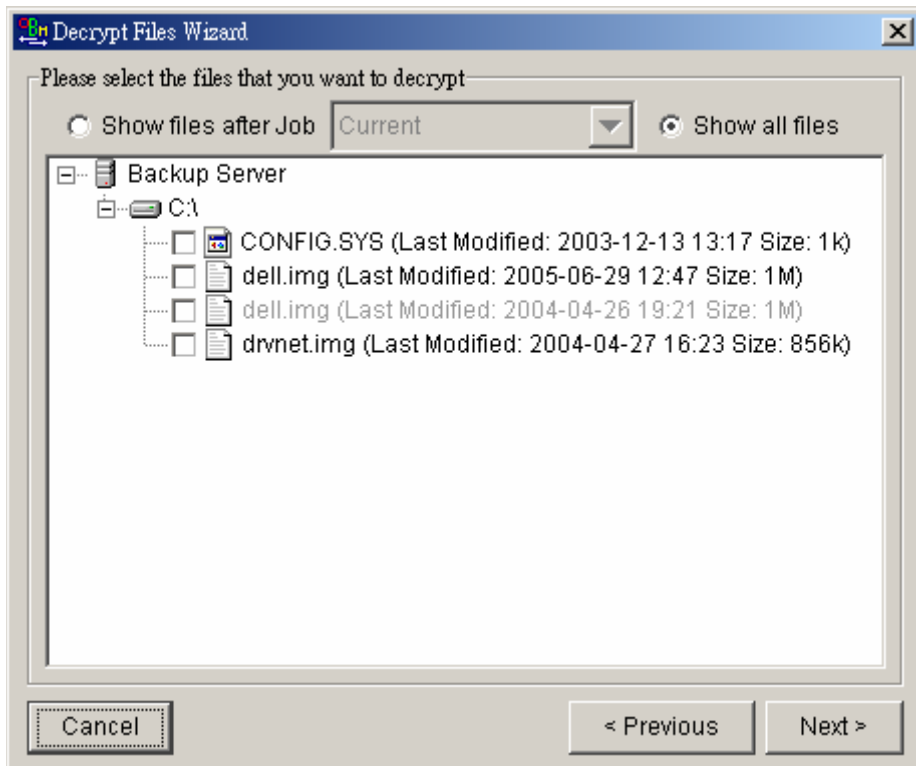
Delete

<input type="checkbox"/>	Backup Set	Size	Last Modified	Zipped [Ratio]
<input type="checkbox"/>	<a href="#">FileBackupSet-1</a>			
<input type="checkbox"/>	<a href="#">MSSQLBackupSet-1</a>			

Delete

**Note:**

1. This shows all backup sets available within this backup account.
2. To restore backup files, please click the backup set link shown above to continue.
3. To delete a backup set, check the checkbox next to the backup set and press the [ Delete ] button.



Enter the directories to which you want backup files to be restored in the [Decrypt Files to] section and enter the [Decrypting Key] (the same as the encrypting key of this backup set):

Decrypt Files

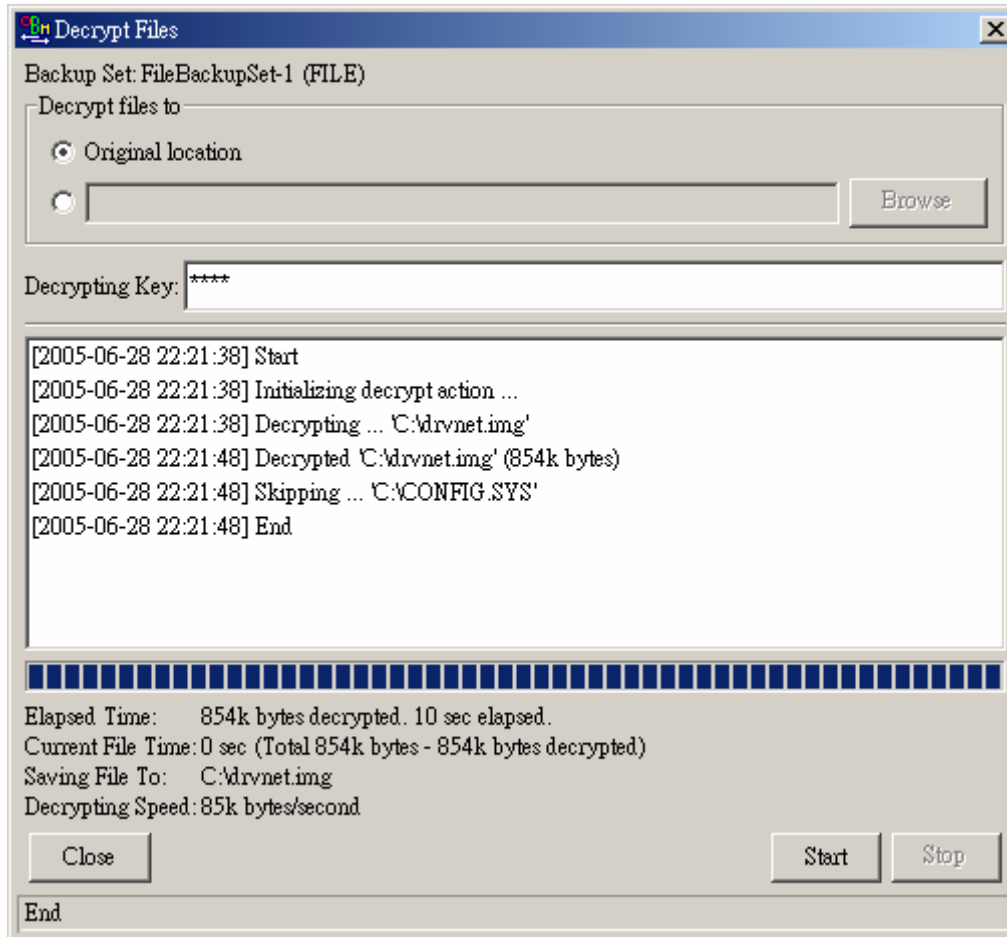
Backup Set: FileBackupSet-1 (FILE)

Decrypt files to

Original location

Decrypting Key:

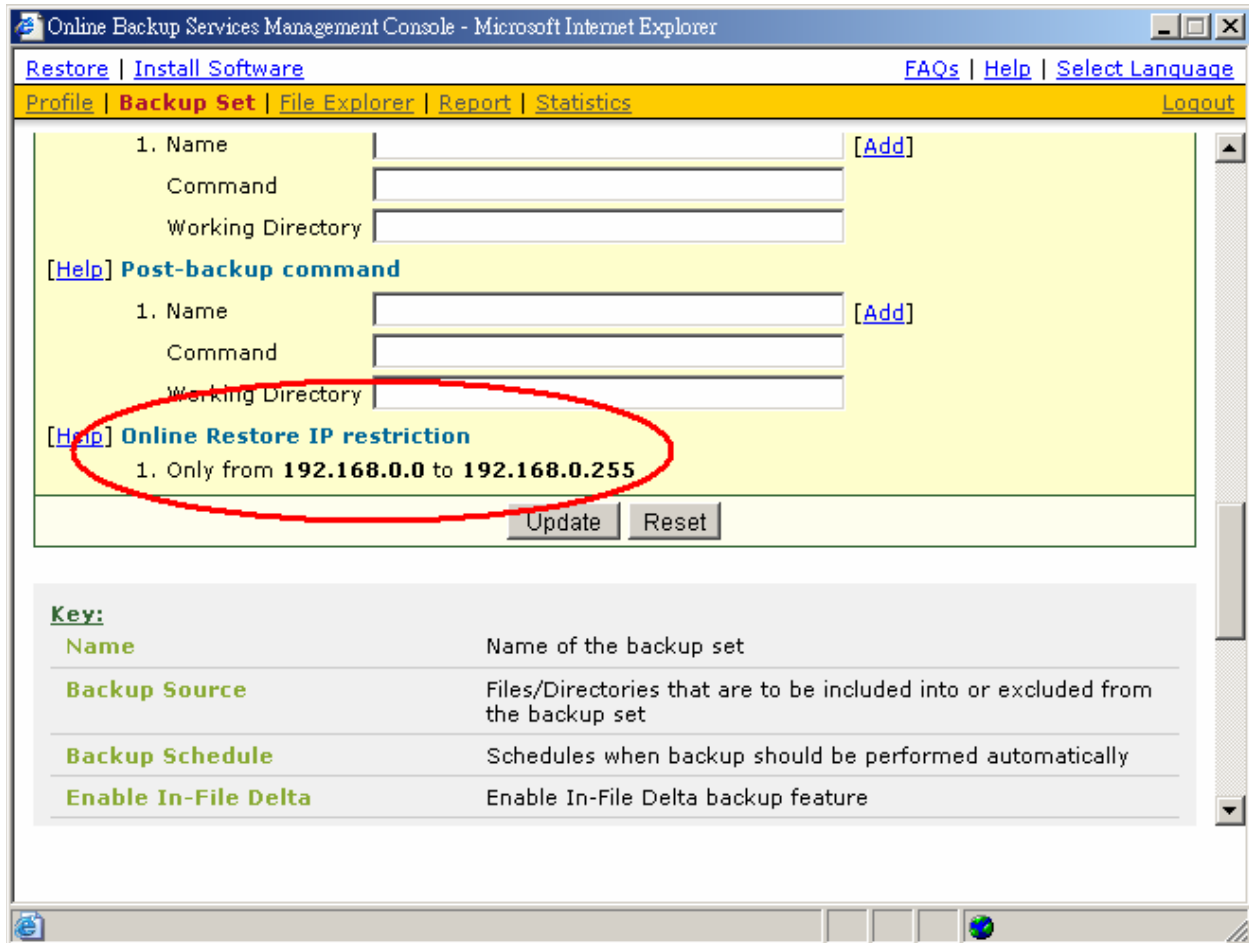
Elapsed Time:  
Current File Time:  
Saving File To:  
Decrypting Speed:



## Restrict restoring files by IP addresses

Online file restoring operation can be restricted by IP addresses. You can ask your backup provider to restrict online file restoring for your backup sets by IP addresses to allow people from authorized IP addresses to restore files from the backup server. To check if online file restore of any backup set is restricted this way, please take a look at the web interface of SAFE™ OBS, [Online Backup Services Management Console] -> [Backup Set] -> [Online Restore IP restriction] (shown below).

Users are not allowed to update the [Online Restore IP restriction] directly. Please ask your backup services provider to do the changes for you.



## Email Reporting

SAFE™ Offsite Backup Server makes use of the email system to keep you informed with the status of your backup activities. Please make sure your contact information within the backup system is correct to receive the reports described in this chapter.

### 15.1 New User Report

When a new backup account is added to the backup server, a new user report will be delivered to the contact email(s) of the new account. The New User Report contains the following information.

## Welcome to Online Backup Services

Generated at: Sat Jun 21 09:32:36 HKT 2003

### Getting started:

1. [Login](#) to our homepage
2. Follow the "[User's Guide](#)" to start using our backup services

### Further Information:

If further assistance is necessary, please refer to the [FAQs](#) section.

### User Setting

Login Name	: <a href="#">NewAccount</a>
Password	: <b>pwd</b>
Alias	: <a href="#">New Testing Account Name</a>
Language	: <a href="#">English</a>
Contact	: <a href="#">user@your-company.com</a>
Backup Quota	: <b>50M</b>
Backup Server	: <a href="#">backup.your-company.com</a>

# Full Backup Report

Generated at: Sat Jun 21 10:00:05 HKT 2003

## Backup Job Summary

Backup Set	:	BackupSet-0
Backup Job	:	2003-06-21 (09:58)
Backup Status	:	<b>Backup finished successfully</b>
Backup Time	:	2003-06-21 09:57 - 2003-06-21 09:57

## Backup Job Statistics

New files*	1 [9k bytes]
Updated files*	1 [9k bytes]
Deleted files*	1 [4k bytes]
Moved files*	1 [3k bytes]

\* Unit = Number of files [Total file size]

## Backup Logs

No.	Type	Timestamp	Backup Logs
1	Info	2003-06-21 09:57	Start running pre-commands
2	Info	2003-06-21 09:57	Finished running pre-commands
3	Info	2003-06-21 09:57	Start running post-commands
4	Info	2003-06-21 09:57	Finished running post-commands

## New Files

\*compressed

No.	Files	Size*	Last Modified
1	C:\Test\lib\New DANIEL.DOC	9k	2003-06-21 09:57

## Updated Files

\*compressed

No.	Files	Size*	Last Modified
1	C:\Test\lib\DANIEL.DOC	9k	2003-06-21 09:57

## Deleted Files

\*compressed

No.	Files	Size*	Last Modified
1	C:\Test\lib\DANIEL_A.BAK	4k	1996-11-29 18:45

## Moved Files

\*compressed

No.	Files	Size*	Last Modified
1	C:\Test\KING1.BAK -> C:\Test\lib\KING1.BAK	3k	2003-06-05 12:35

## Web Features:

The web interface of SAFE™ Offsite Backup Server provides you access to some additional features that are not available in SAFE™ OBM:

Online Backup Services Management Console - Microsoft Internet Explorer

[Restore](#) | [Install Software](#) [FAQs](#) | [Help](#) | [Select Language](#)

**Profile** | [Backup Set](#) | [File Explorer](#) | [Report](#) | [Statistics](#) [Logout](#)

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**User Summary**

Quota	Data Area*	Retention Area*	Total Upload*	Total Restore*
500M	861k [ 3 ]	1.4M [ 1 ]	2.2M [ 4 ]	5.2M [ 5 ]

\* Unit : Compressed Size [Total No. of Files]

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**User Profile [ demo ]**

**Alias** :

**Language** :  ▼

**Timezone** :  ▼

**Contact** :

- 1. Name  [\[Remove\]](#)  
Email
- 2. Name  [\[Add\]](#)  
Email

**Add-on Modules** : Microsoft Exchange Server (Enable) , Microsoft SQL Server (Enable)  
Oracle Database Server (Enable) , MySQL Database Server (Enable)  
Lotus Domino (Enable) , Lotus Notes (Enable) In-File Delta (Enable)