

# Automatic Deployment and Configuration of Online and Local Backup

May 2016

backup



## CONTENTS

Solution Overview .....	3
Deployment and configuration framework .....	3
Unique Usernames and Accounts .....	3
Creating new accounts .....	3
Account Management .....	4
Backup Software Install .....	4
Using the branded eFolder setup program: .....	5
Using your own installer .....	5
Backup Software Configuration .....	6
Settings Templates .....	6
Create a settings template .....	6
Changing Individual Settings .....	7
Folder Configuration .....	10
Example Deployment and Configuration Batch File .....	11
Backup Software Control .....	13
Questions? .....	13

## Important Note

This document only applies to partners who are provisioning 100 new customers at one time.

## Solution Overview

Customers with large numbers of computers to back up (or vendors integrating the backup system into their appliances and platforms) may need to deploy the backup client to thousands of computers without interaction from the user.

## Deployment and configuration framework

eFolder supports these scenarios via a four-part deployment and configuration framework:

1. Account Management	<ul style="list-style-type: none"><li>• Integrate Web APIs into your application to create/edit/delete customers and accounts</li><li>• Create lists of accounts without using APIs</li></ul>
2. Backup Software Installation	<ul style="list-style-type: none"><li>• Use installer options without interaction from the user</li><li>• Create your own installer</li></ul>
3. Backup Software Configuration	<ul style="list-style-type: none"><li>• Import/export configuration profiles</li><li>• Set credentials, add/remove folders, set schedule and options</li></ul>
4. Software Control	<ul style="list-style-type: none"><li>• Start and stop backups</li><li>• Check for and install software upgrades</li></ul>

## Unique Usernames and Accounts

- A key concept in the eFolder system is that each computer being backed up must be assigned a **unique username** (and thereby a unique account or sub-account).
- Monitoring and notifications are tracked on a **per-account** basis. This ensures that data from multiple computers is not mixed together simply because the same folder or file names used.

## Creating new accounts

Two methods are provided for creating new accounts:

1. Use our web services API
2. Submit a list of usernames to eFolder

Once new accounts are created, software is installed onto each computer using either the eFolder installer or your own. Then, your provisioning script should set the backup credentials unique to that computer and also configure common settings.

eFolder provides tools to silently provision, install, and configure eFolder Backup, but you will also need an automated provisioning tool (such as Kaseya, Nable, or Level Platforms) to run commands on any machine where software will be deployed.

In this document, we provide general directions that should be applicable to any platform. We will refer to the tool that allows you to copy files and run commands on any computer as the

**deployment tool.** If you have any questions about how to apply these general directions to your specific deployment tool, please contact us.

## 1. Account Management

The first step in automatic deployment is to assign each computer a unique username (and thus a unique eFolder account or sub-account). We recommend a standard naming scheme for the usernames of the deployed accounts.

For example, you could first assign a username prefix (such as 'mycust') to each customer who required automated deployment. The full username of each computer would then be formed by appending the 'mycust' prefix with the computer name. You could create a parent account using the main username prefix (such as 'mycust') and then each of the deployed backup computers could have a sub-account created for it with the appropriate username.

There are two mechanisms available to create large numbers of accounts or subaccounts without having to manually create each one:

1. The most flexible and robust method is to use the **eFolder web services API**. The API allows you to communicate programmatically with the eFolder web portal to create, delete, and update accounts and sub-accounts. Accounts can be automatically created and deleted as the backup solution is deployed and un-deployed from customer computers. More detailed information about the web services API is available in our [Knowledgebase](#) or by emailing us from the [Support page](#).
2. Another method to automatically create large numbers of accounts is to submit a list of usernames to us and we will create the accounts for you. You should indicate if the sub-accounts should share the same password as the parent account or if each of the subaccount passwords will be different. (If different subaccount passwords are required, please specify all passwords for all accounts). Inquire at [support@efolder.net](mailto:support@efolder.net) if you would like to use this method of batch account creation.

## 2. Backup Software Installation

The next step of automated deployment is installing the backup software onto each backup computer.

- If you will be backing up files that are open or need Microsoft VSS to backup (such as Exchange and SQL Server), or if the computer to be backed up is sometimes disconnected from the main corporate network (such as a laptop), **then the backup software must be installed onto the computer that is hosting those files.**
- Otherwise, you may install the backup software only onto one computer in the network and configure it to backup data on other computers using UNC paths.

Once you have determined where the backup software will be installed, you can silently install it, either using the branded eFolder setup program for your brand, or by using an

installer which you create yourself.

## Using the branded eFolder setup program:

1. Download the two installer executables for your brand by logging in to the eFolder Backup Portal (<https://backup.securewebportal.net/>) and then choosing **Support -> Download**. Download both the 32-bit and 64-bit versions.
2. Your deployment tool then copies the correct file onto the target computer (either 32 or 64-bit setup program), running the appropriate command line switches for a silent install.

**Note:** eFolder uses the Inno Setup engine to build our setup programs. The Inno Setup engine creates setup executables that support a variety of command line switches for automated installs.

(See <http://www.google.com/search?q=innosetup+command+line+switches>).

We recommend using the following command line switches.

```
/SP- /VERYSILENT /SUPPRESSMSGBOXES /NOCANCEL /NORESTART
```

Additionally, you can use the `/NOICONS` switch to avoid any menu icons from being created. To specify where the program should be installed, use the following switch:

```
/DIR="d:\program files\mybrand backup"
```

If you don't specify this option, the default is to install it to a subdirectory (named after your brand) of the standard program files directory for the computer (usually `c:\Program Files` but not always). You can test if the install was successful by checking to see if the exit code was 0.

## Using your own installer

The other option is to create your own custom installer using the tools of your choice. The custom installer only needs to copy the files located in the main program files directory for the program, and then, once all files have been copied, to run the following command:

```
(installdir)\(yourbrand)Manager.exe /INSTALL
```

If you provide an uninstaller, then **before** removing all of the files as part of the uninstall, run the commands:

```
(installdir)\(yourbrand)Manager.exe /EXIT  
(installdir)\(yourbrand)Manager.exe /UNINSTAL
```

This will not remove the settings and incremental backup cache. If you want to remove this

information as well, then use the `/UNINSTALL-FULL` switch instead of `/UNINSTALL`.

### 3. Backup Software Configuration

Once the backup software has been installed, it needs to be configured before anything can be backed up. The minimum configuration settings required for backups to start is:

- Username
- Password
- Pass phrase
- List of folders to backup
- Backup schedule (optional if you will start jobs programmatically, see below)

All configuration data can be controlled through the `cmdlinebackup.exe` tool. This tool is installed as part of the software and provides the `importconfig`, `exportconfig`, `set`, `get`, `importfolders`, and `deletefolders` commands to control configuration.

### Settings Templates

As a general strategy, we recommend that you configure a 'settings template' for any settings that remain the same across all computers (such as version settings, email notifications, bandwidth, scheduling options, and access control).

To complete an installation, your install script will import your settings template, randomizing or customizing the schedule, while also customizing (if different from the template) the username, password, pass phrase and folder list.

### Create a settings template

Use the backup manager on one computer to configure the settings as appropriate. Then export this settings template using the **File menu -> Export Settings Profile** command from within the backup manager user interface. This will create a "settings profile file" that can be imported with the `importconfig` command as follows:

```
(installdir)\cmdlinebackup.exe importconfig configfilename
```

**Importing a username:** By default, this command will **not** import the username. (Usually you do not want to import the username because each computer needs a **unique** username.) However, if you must import a username (for example, you previously backed up this individual computer's configuration with the `exportconfig` command and now you are re-importing the configuration for the same computer) then use the `--importusername` switch immediately after the `importconfig` command name and before the `configfilename`.

**Scheduling:** When importing a configuration, the default is to keep the same schedule that existed when you exported the configuration. If you want to automatically choose a random time in the evening or early AM after importing the configuration, use the `--`

randomschedule option. If you want to force the schedule frequency to be set to manual after importing, then use the `--clearschedule` option. **Note:** This setting does **not** change the time or days of the week. It just forces the frequency to be 'manual'.

When you are setting the schedule by importing a configuration, you must ensure that the **Use supervisor service for scheduling** option is checked when you exported the configuration or backups will not start as scheduled. A typical use of this command would be as follows:

```
(installdir)\cmdlinebackup.exe importconfig --randomschedule c:\settings.profile
```

## Changing Individual Settings

The `cmdlinebackup.exe` tool provides the ability to change individual setting values through the `set` command.

- Settings are organized into **sections**.
- Values have unique names within each section.
- The `set` command takes two or more arguments.
- Each argument is either a section name or a `valuenam=newvalue` pair.
- If the value contains spaces, you must put the entire name/value pair in double quotes.

A section name indicates that any name/value pairs that follow it are within that section.

Value Name	Description
<b>Section: Account</b>	
Username	The username. Must be unique for each computer.
Password	The text of the password associated with the username.
PassPhrase	The text of the pass phrase used to encrypt the data. <b>You must have the pass phrase to recover the data. Make sure that the pass phrase is stored in several places and known by multiple people to ensure that the pass phrase is available when data needs to be restored. Without your pass phrase it is impossible to restore your data.</b>
LocalDiskStoragePath	Required only for local disk backups. The full path of the directory where local backups should be stored. UNC paths are supported.
SecurityAuthLevel	0 or 1. Defaults to 0. If 1, in order for a user to be able to change any setting using the backup manager user interface they must first type the account password.
<b>Section: Account2 (only for local server backups)</b>	
ServerHostname	The network hostname of the computer running the local backup server that will receive locally backed up data.
ServerPort	The TCP/IP port where the local backup server is listening. Default is 5470.
EncryptData	0 or 1. Whether or not to encrypt data for local server backups.
<b>Section: Account3 (only for local disk backups)</b>	
EncryptData	0 or 1. Whether or not to encrypt data for local disk backups.

Value Name	
<b>Section: AppSpecific</b>	
ExchangeEseutilPath	The full path to Exchange's eseutil.exe program, which is needed only if you are enabling the verification of Exchange database files before they are backed up.
ExchangeVerifyMode	0 or 1. Set to 1 if you are backing up Microsoft Exchange databases.
<b>Section: Vss (used to safely backup open files)</b>	
VssMode	0 or 2. 0 means on (automatic). 2 means off.
VssRestrictConcurrentBackups	0 or 1. Must be set to 1 if you are backing up Exchange. If set to 1, then only one backup at a time (remote, local) is allowed to happen.
VssVolumeExclusions	(normally blank) The list of volumes to not include in VSS snapshots. E.g.: C:,D:
VssExclusions	(normally blank) The names of VSS writers to exclude. E.g.: MSDEWriter
VssProviderMap	(normally blank) Overrides which VSS provider to use. E.g.: *=Microsoft
VssPreinitActionScope	0 or 1. Defaults to 0. Specifies when the preinit and postinit actions should occur. 0 = before/after the VSS snapshot. 1 = before/after the backup job.
VssPreinitScripts	A comma-separated list of scripts to run before the backup/snapshot.
VssPreinitStopServices	A comma-separated list of services to stop before the backup/snapshot.
VssPostinitScripts	A comma-separated list of scripts to run after the backup/snapshot.
VssPostinitStartServices	A comma-separated list of services to start after the backup/snapshot.
<b>Section: Sync (configures versioning settings)</b>	
VersionLimitFlag	0 or 1 (default). If 0, then unlimited historical versions will be retained (as long as the service plan allows unlimited retention of historical data).
VersionLimitMaxDays	The number of days that historical versions of a file should be retained for. Defaults to 365 (one year). If you change this, you should also set PurgeDeletedMaxDays to the same value.
VersionLimitMinToKeep	Advanced setting. Normally you should leave at default of 1. Indicates the minimum number of historical versions of a file to keep. If a historical version is older than VersionLimitMaxDays but there is not yet this many historical versions, then the historical version will be kept.
VersionLimitMaxToKeep	Advanced setting. Normally you should leave at default of -1. Ensures that no matter what the value of any other settings, there is never more than this number of versions of a file.
PurgeDeletedFlag	0 or 1 (default). Whether or not to purge deleted files that are older than the retention policy.
PurgeDeletedMaxDays	The number of days for which a file that was backed up and later deleted should be retained for within the backup. Normally you should set this to have the same value as VersionLimitMaxDays so that a consistent point in time restore can be performed if necessary.
DestroyExcludedFiles	0 (default) or 1. Whether or not to destroy files that were previously backed up but are now excluded by the backup policy.
<b>Section: BHours (configures business hours)</b>	
StartDay	0 (Sunday) – 6 (Saturday). Day for start of work week. Defaults to 1 (Monday).
StartTime	HH:MM:SS – specifies when business hours begin each day. Value must be exactly 8 characters long. Defaults to 07:00:00
EndDay	0 (Sunday) – 6 (Saturday). Day for end of work week. Defaults to 5 (Friday).
EndTime	HH:MM:SS – specifies when business hours end each day. Defaults to 19:00:00



Value Name:	
Section: Bandwidth (configures business hours)	
UsageMode	0 (Unlimited), 1 (High), 2 (Medium), 3 (Low). Specifies which bandwidth level to use during off hours. Defaults to 1, which means High.
BHoursUsageMode	Same range of values as for UsageMode. Defaults to 2 (Medium).
HighUsage	The number of kilobits per second to use in High mode. Defaults to 1000.
MediumUsage	The number of kilobits per second to use in Medium mode. Defaults to 250.
LowUsage	The number of kilobits per second to use in Low mode. Defaults to 50.
LocalServerMultiplier	Sets bandwidth for local server backups as a multiple of the speed of remote backups. For example, set to 10.0 to indicate that local server backups should be 10 times as fast as remote backups. Defaults to -1, which means (unlimited).
LocalDiskMultiplier	Sets bandwidth for local disk backups as a multiple of the speed of remote backups. Defaults to -1 (unlimited).
Section: Notify (notifications at the start and end of backups)	
EmailFormat	0 (HTML w/ graph), 1 (HTML w/out graph), 2 (plain text)
EmailAddress	Normally leave blank, which means to use the current email address associated with this account as set in the web portal.
BeginBackup	0 (do nothing), 1 (popup window), 2 (send email). Action on start of backup.
EndBackupOK	0 (do nothing), 1 (popup window), 2 (send email), 3 (send email with logs). Action at end of a successful backup.
EndBackupWarn	0 (do nothing), 1 (popup window), 2 (send email w/ logs). Action at end of a backup with warnings but no errors.
EndBackupError	Same range of values as EndBackupWarn. Action at end of a backup with errors.
Section: Email (configure how notifications emails are sent)	
AllowUserSMTP	0 or 1 (default). Whether it will try to send emails via the user's SMTP server.
AllowDirectSMTP	0 or 1 (default). Whether it will try to send emails directly to the destination email server. Note that some ISPs / corporate networks block direct email delivery.
AllowMAPI	0 (default) or 1. Whether it will try to send emails via MAPI.
UserSMTPServer	The name of the user's SMTP server.
UserSMTPUsername	(optional) If required, the username to login to the SMTP server.
UserSMTPPassword	(optional) If required, the password associated with the SMTP username.
UserSMTPSecureConnectionMode	0 (automatic), 1 (unencrypted), 2 (require encryption), 3 (immediate TLS/SSL), 4 (negotiate TLS/SSL using STARTTLS). If automatic settings are used, encrypted will be attempted based on the port number (25=insecure, 465=immediate TLS/SSL, other ports=STARTTLS).
UserPOP3Server	(optional) Some mail servers require authenticating via POP3 before sending mail via SMTP. If this is required, this is the hostname of the POP3 server.
UserPOP3Username	(optional) Username to use to login to POP3 server.
UserPOP3Password	(optional) Password associated with the POP3 username.
UserPOP3SecureConnectionMode	Same range of values as UserSMTPSecureConnectionMode.
MAPIProfileName	If MAPI is enabled, name of MAPI profile to use to send email.
MAPIProfilePassword	If MAPI is enabled, the password associated with the MAPI profile.
ZipMinKB	Any log files larger than this number of kilobytes will automatically be zipped.

Value Name:	
Section: Schedule, Schedule2 (local server backups), Schedule3 (local disk backups)	
Frequency	0 (manual) or 2 (daily). How often to initiate scheduled backups.
DayList	If Frequency is set to daily, this is a series of seven 1s or 0s indicating whether or not to backup on each day of the week. The first 1 or 0 is for Sunday proceeding onto the last 1 or 0 for Saturday. For example, 1010010 means to backup on Sunday, Tuesday, and Friday. Defaults to 1111111.
Time	HH:MM:SS – when to start the scheduled backup. We recommend choosing a random time during the evening or early AM. To automatically choose a random time, use the /randomschedule option when importing a profile.
NumPerDay	The number of times to backup per day, evenly spread out. Defaults to 1.
DoNotStartDuringBH	0 or 1. If 1, backups will not be started during business hours.
CancelDuringBH	0 or 1. If 1, backups will be canceled if still running during business hours.
WakeComputer	0 or 1. If 1, computer can wake up from standby to initiate scheduled backup.
OnlyIfLoggedOn	0 or 1. If not using the supervisor service, backups only start if user is already logged on.
ViaNTService	0 or 1 (default). If 1, then eFolder's supervisor service will start the scheduled backups instead of the Windows task scheduler. We highly recommend leaving this value set to 1 to avoid scheduling problems.
OneTimeJob	YYYY-MM-DD HH:MM:SS – date/time to schedule a one-time backup job in the future. After the backup runs at the indicated time, this value will be reset
Section: Updater (configure the automatic software updater)	
Frequency	0 (daily), 1 (weekly), 2 (monthly), 3 (manually). When to check for updates.
AutoInstall	0 (default) or 1. Whether to automatically install software updates.
TreatMinorAsMajor	0 (default) or 1. If set to 1 and AutoInstall is 1, then minor software versions will be automatically installed. Otherwise only major software versions will be automatically installed and the user will be prompted before installing minor versions.

Here is an example of setting the credentials, the retention period, and bandwidth settings:

```
(installdir)\cmdlinebackup.exe set Account Username=mycust.desk1
Password=xyz PassPhrase=thisisaninsecurepassphrase3-92 Sync
VersionLimitMaxDays=365 PurgeDeletedMaxDays=365 Bandwidth
BHoursUsageMode=2 MediumUsage=1500
```

## Folder Configuration

The final step of configuring the backup software is to specify (a) the list of top-level folders to backup and (b) their corresponding backup policies.

- If the list of folders will be the same on all of the computers, configure that information on the **Folders** page in the backup manager **before** exporting the template settings profile. Then, when you import your settings profile, all of the policies and folders will be imported as well.
- The cmdlinebackup.exe tool provides the `importfolders` and `deletefolders` commands, should you need to customize the folders and policies further.

- The `deletefolders` command accepts one or more top level folder names to delete. By default it will delete the incremental backup cache and any backup policy associated with a folder (as long as that policy isn't being used by other folders).
- To keep the incremental backup cache, specify the `--keepcache` option after the `deletefolders` command and before any folder names.
- To prevent policies from being deleted, use the `--keeppolicy` option.

You can import additional policies and top-level folders into the configuration by first creating a text file (INI file) describing the policies and folders and then using the `importfolders` command. The command accepts a single argument: the path to the text file that describes the policies and folders. The text file has the same format as does the configuration file for the command line version of the backup product. For detailed documentation on this format, run:

```
(installdir)\cmdlinebackup.exe help config
```

Briefly, the text file is an INI file. An INI file is divided up into sections, with each section denoted by a line containing the section name in square brackets (such as `[SectionName]`). Within each section are `Name=Value` lines. In the INI file, specify one or more policies by creating special sections with the name `Policy.NAME` (where `NAME` is the actual name of the policy). **Rules** are described with values named `rule1`, `rule2`, and so on. **Folders** are specified by creating sections with the name `Folder.NAME` (where `NAME` is the actual folder name) containing two values: `Path` (the full path to the root directory of the folder), and `Policy` (name of the backup policy to use). Here is an example folder configuration file:

```
[Policy.testing Folder Policy]
rule1=include *.*
rule2=apply policy Default Policy
rule3=exclude *.mp3
[Folder.testing]
Path=C:\Users\Public\Testi
ng Policy=testing Folder
Policy
```

## Example Deployment and Configuration Batch File

In this section we give an example Windows batch (.BAT) file that will silently install and configure remote backups. We assume that

- The setup file for the appropriate platform (either the 32-bit or 64-bit setup program) has already been copied to `C:\temp\backup-setup.exe`
- A settings template file (with a common password and pass phrase) has been copied to `C:\temp\template.profile`
- An eFolder account has already been created for this computer using the convention of `mycust.computername`.

Also, you would normally write this using the scripting tools provided by your deployment tool, but we give a general example here.

## Contents of the C:\installbackup.bat file

```
@echo off

c:\temp\backup-setup.exe /SP- /VERYSILENT /SUPPRESSMSGBOXES
/NOCANCEL /NORESTART /DIR="d:\backuptool"

d:\backuptool\cmdlinebackup.exe importprofile --randomschedule
c:\temp\template.profile d:\backuptool\cmdlinebackup.exe set Account
"Username=mycust.%COMPUTERNAME%"

echo createifdoesnotexist >> c:\temp\backupfolders.ini del /Q
c:\temp\backupfolders.ini

echo [Policy.Users Folder Policy] >> c:\temp\backupfolders.ini echo
rule1=include *.* >> c:\temp\backupfolders.ini
echo rule2=apply policy Default Policy >> c:\temp\backupfolders.ini
echo rule3=exclude *.mp3 >> c:\temp\backupfolders.ini

echo [Folder.Users] >> c:\temp\backupfolders.ini echo Path=C:\Users
>> c:\temp\backupfolders.ini
echo Policy=Users Folder Policy >> c:\temp\backupfolders.ini

d:\backuptool\cmdlinebackup.exe importfolders
c:\temp\backupfolders.ini del /Q c:\temp\backupfolders.ini

d:\backuptool\cmdlinebackup.exe set Schedule Frequency=2
```

This script would then be run using the C:\installbackup.bat command.

**Note:** When setting the Username, a batch file expansion of environment variables is used, to include the actual name of the computer in the username. **In this way, the same batch file could be used to deploy the software on many different machines.** Your deployment tool may have a different syntax for expanding environment variables (such as COMPUTERNAME) or inserting special values (such as the name of the computer or the location of the directory that contains all of the users' profiles. For example: C:\Users)).

In this example we demonstrated how to add a new policy and folder (C:\Users) after importing the settings template. Note how we create a custom backup policy for the folder that first includes everything, then applies the default policy, and finally excludes MP3 files from being backed up.

Also, note that if it was known in advance that on all computers we wanted to add C:\Users, then this information could have been included as part of the settings template, instead of having to create a folder configuration file and import it as part of the deployment script.

Your exact deployment script will depend on your customer's environment, which data will be backed up, and which deployment tool you are using.

## 4. Backup Software Control

eFolder allows silent control of backup jobs and the installation of software upgrades.

- The `cmdlinebackup.exe` tool provides the `backup`, `preload`, `status`, `cancel`, `pause`, and `resume` commands to control backup jobs. More detailed information about each of these commands can be obtained by running:

```
(installdir)\cmdlinebackup.exe help commandname
```

- You can force the software to (silently) check for and install new versions by running the following command:

```
(installdir)\(yourbrand)Manager.exe /UPGRADENOW
```

- If you do not want to force upgrading to new versions marked as minor versions, then use this command:

```
/UPGRADENOW-IFNEEDED switch instead of /UPGRADENOW
```

## Questions?

For help with further specific questions about eFolder automatic deployment and the configuration of online and local backup, please contact us directly:

- Submit all eFolder questions to [support@efolder.net](mailto:support@efolder.net).
- Call us at 800-352-0248.
- Search the [Backup Portal](#).
- Browse our [Knowledgebase](#).

