



Evaluator's Guide



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Introduction

SureSync is a powerful file replication & synchronization utility which can be used to ensure users on your network are always working off of the most recent version of critical files, for disaster recovery purposes, software distribution, and much more.

This evaluator's guide is designed to walk you through the initial setup of the SureSync product. The base SureSync product can perform one-way and multi-way synchronizations via UNC path or drive mappings. These synchronization jobs can then be run manually or on a scheduled basis. By reviewing this guide, you will become familiar with how to utilize SureSync to implement an efficient and powerful synchronization / replication infrastructure in your network.

System Requirements

SureSync's basic operating system and hardware requirements are:

- **Supported Operating Systems:** Windows Server 2008 R2; Windows Server 2008; Windows Server 2003; Windows Server 2003 R2; Windows Vista; Windows XP; Windows 7
- **Processor:** 400Mhz Pentium Processor or equivalent (Minimum); 1Ghz Pentium Processor or equivalent (Recommended)
- **RAM (total for system):** 256MB (Minimum); 1GB (Recommended)
- **Hard Disk:** 30MB for application files; 20MB+ for database
- **Display:** 800x600, 256 colors (Minimum); 1024x768 high color, 32-bit (Recommended)

SureSync can synchronize data to machines running operating systems such as Windows 95, Windows 98, Windows NT 4.0, Windows 2000 and non-Windows machines such as Macintosh and Linux machines via UNC path, but the software itself must be installed on one of the supported operating systems listed above.

SureSync requires a database which is used to store configuration information. The following formats are supported:

- Microsoft Access (default)
- MSDE 2000 / SQL Express 2005 / SQL Express 2008
- SQL Server 2000 / SQL Server 2005 / SQL Server 2008

To achieve optimal performance, a SQL database is strongly recommended for setups using multi-directional Rule types, environments with more than 50 Relations defined, or environments where hundreds of thousands of files will be processed.

SureSync requires a number of Microsoft components to be installed on the system. The SureSync installer will inspect your system for these components and offer to upgrade or install them as needed.

- Microsoft .NET Framework 3.5 with Service Pack 1
- Microsoft MDAC 2.8 Refresh with Service Pack 1
- Microsoft Visual C++ Runtime 9.0 with Service Pack 1
- Microsoft Windows Installer 3.1
- Microsoft XML Parser 6.0
- Microsoft Jet 4.0 with Service Pack 8

Contact Information

If you need further information about SureSync or need clarification on anything within this guide, please contact our support group and they will be happy to assist you with your evaluation.

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Technical support is available between 8:00AM and 5:00PM PST Monday through Friday.

SureSync Add-On Licenses

A number of Add-On licenses are available for SureSync which enhance the capabilities and performance of the software. The available Add-On licenses include:

SPIAgent Add-On

Ensure high availability and improved replication performance with SureSync's SPIAgent Add-On. SPIAgent provides the technology to perform real-time replication and more. Below is a list of features that are included when you license the SPIAgent Add-On.

- **Real-Time Monitors**
Real-Time replication increases data availability by continuously monitoring data for updates. By copying files immediately after they change, SureSync can avoid folder scans that are necessary for scheduled jobs.
- **Adaptive Delta Technology**
SureSync copies only the changes made to a file, reducing synchronization time and decreasing the consumption of network resources.
 - **Delta Processing to Non-Windows Machines**
If you map a non-Windows drive to a drive letter on a Windows machine you can process delta copies to that non-Windows machine. This in turn provides bandwidth savings between any machines, regardless of the OS.
- **File Compression**
Transmit files in a smaller package across your network by compressing them. File compression is particularly useful on slow network connections. SureSync also allows you to specify the level of compression to control the impact on your system.
- **TCP/IP Transmissions**
Transmissions across the Internet give you more options on how you connect to remote machines. Now it is even easier to keep office branches connected to the information they need.
- **Encryption**
Ensure your files are being transmitted securely by utilizing the option to encrypt each file transmission. This is an especially useful and necessary tool when transmitting sensitive data across the Internet.
- **Change Journal Support for Schedules**
When a Schedule is configured to run a Relation using the SPIAgent Add-On, SureSync

utilizes the NTFS Change Journal, which minimizes the amount of scanning a synchronization job must perform. Eliminating much of the scanning creates a significant performance improvement for Schedules.

Please consult the [SureSync with SPIAgent Add-On Evaluator's Guide](#) for further details.

SPIAgent File Locking Add-On

The SPIAgent File Locking Add-On requires the SPIAgent to be licensed and in turn gives you an additional benefit in file sharing environments. The SPIAgent File Locking Add-On eliminates the possibility that a file could be changed on multiple sides of a synchronization resulting in a more efficient synchronization with zero risk of lost changes. A user who attempts to open a file that is already in use will receive an indication from the application that the file is locked.

Please consult the [SureSync with SPIAgent File Locking Add-On Evaluator's Guide](#) for further details.

ArchiveSync Add-On

SureSync's ArchiveSync Add-On allows users to create versioned backup copies of files, providing an efficient disk-to-disk backup solution. Versioned file copies allow users to quickly restore files to a specified point-in-time, without sifting through tape backups. Additionally, when archiving or restoring, the ArchiveSync Add-On will allow you to backup and restore security privileges as well.

Archiving can be done in real-time to continuously protect data, effectively eliminating tight backup windows during the evening. ArchiveSync will also automatically thin out your archive to clean storage up.

Please consult the [SureSync with ArchiveSync Add-On Evaluator's Guide](#) for further details.

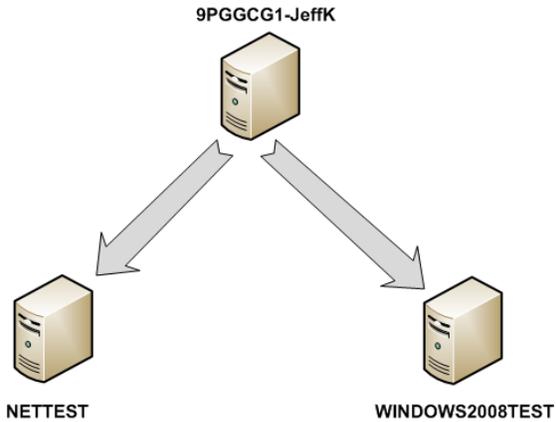
Our Scenario

This guide will walk you through the configuration of SureSync to accomplish a one-way distribution of files from a source server named *9PGGCG1-JeffK* to two destination servers named *NETTEST* and *WINDOWS2008TEST*.

In this scenario, SureSync will be used to mirror data from a staging server to two destination production machines. This is a common scenario for tasks such as web site publishing, updating templates or distributing application updates.

In this example, a folder C:\Web will be mirrored from *9PGGCG1-JeffK* to the [\\NETTESTWeb](#) and [\\WINDOWS2008TESTWeb](#) shares on a scheduled basis.

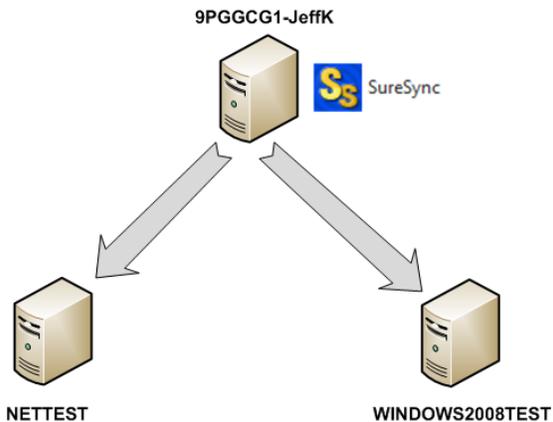
This guide will show you how to configure a one-way synchronization job using a Schedule to run the job on a clock basis. In this example, the job will run once an hour. SureSync also has the capability to run in real-time. When run in this mode, changes are synchronized as they occur. This functionality requires the SPIAgent Add-On license. Please consult the *SureSync with the SPIAgent Add-On Evaluator's Guide* for further details about configuring a Real-Time scenario.



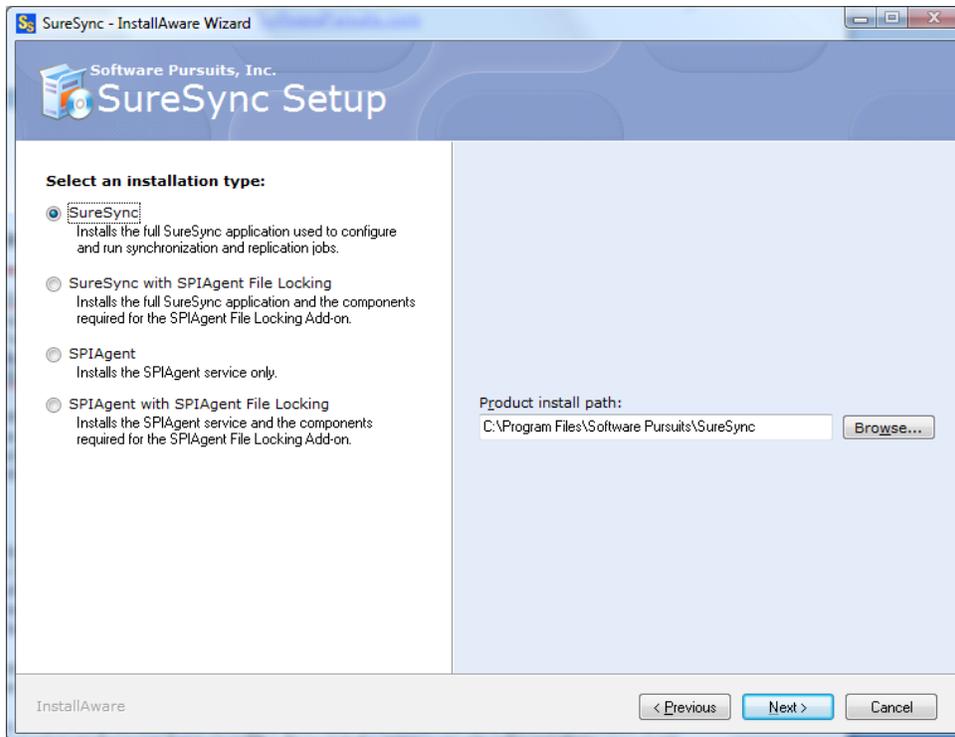
Installation

To begin your SureSync trial, you must install the correct SureSync components on the right machines. SureSync is installed using a Windows Installer (MSI) driven installation application. SureSync and all Add-On products are installed using the same installer.

For this scenario, the full SureSync application will be installed on one machine (*9PGGCG1-JeffK*). No software needs to be installed on the remote machines when performing a UNC or drive mapping based synchronization/replication.



On the *9PGGCG1-JeffK* machine, we will run *SureSyncSetup.exe* and select SureSync as the installation type in the installer. This will install the complete SureSync application and designate *9PGGCG1-JeffK* as the machine where we configure and run our synchronization job.



Launch SureSync for the First Time

Now that the required components have been installed, we can continue with the configuration. To launch SureSync for the first time, go to the Start menu, select the SureSync folder and click on the SureSync icon. This will launch the SureSync desktop application where you will perform your entire synchronization job configuration. On the first launch of the application, SureSync will create an Access database to store your configuration information.

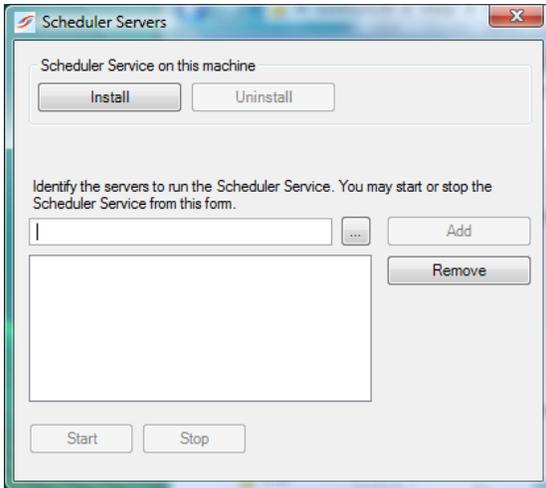
The default database format for SureSync is Microsoft Access. SureSync also supports Microsoft SQL and this database format is recommended for environments running many multi-way Rules or a large number of jobs to achieve optimal performance. Please refer to the [Upgrading from an Access to SQL Database](#) knowledge base topic for more information.

Once the database has been created and the SureSync desktop has loaded, you can proceed forward with your configuration.

Installing the SureSync Scheduler

The SureSync Scheduler is a Windows service that runs on the main SureSync machine. This service is responsible for launching Schedules at the correct times and for running Real-Time Monitors. You must have a Scheduler running in order for your Schedule to execute at the configured time.

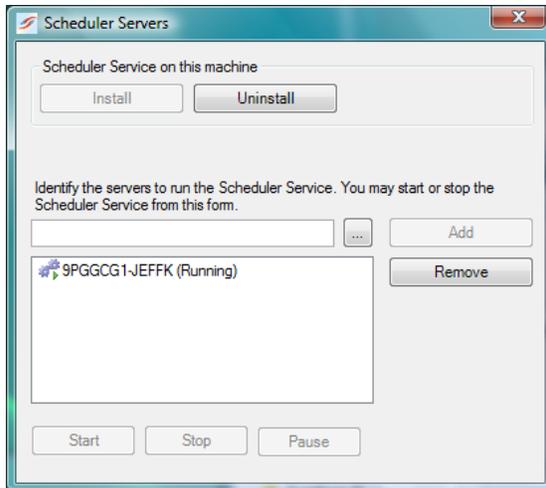
To install the SureSync Scheduler service, go to the Tools menu within SureSync and select "Schedulers...", which will launch a window like the one below.



To install the Scheduler, click the "Install" button, which will launch a window like the one below.



Enter the username formatted as *machinename\username* or *domainname\username*. This account must be an administrator on the machine. Click "OK" to install the service.



Once the service has been installed, click on the machine name and click "Start." The Scheduler will now be listed as Machine Name (Running).

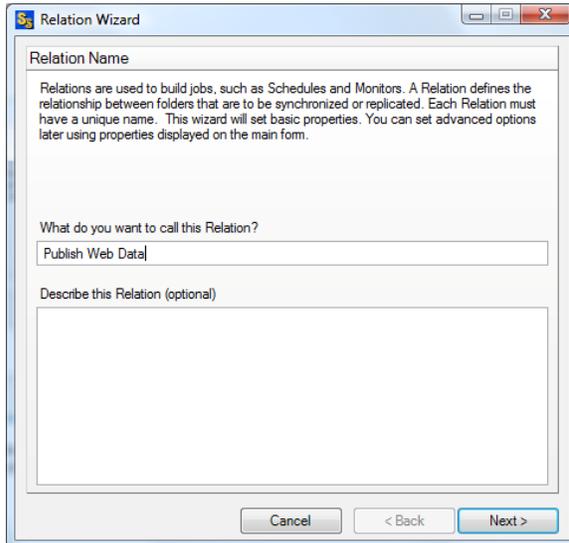
Creating the Relation

Relations are the basic building blocks of the SureSync application. Each Relation contains the root paths (source and destination paths) that apply to that Relation and options for the Relation. Each Relation also contains one or more Rules, which tell SureSync how to replicate & synchronize data. The Relation and the Rule are created together in one wizard.

The wizards are designed to quickly and easily configure the basic options needed to get a Relation up and running. SureSync is an extremely flexible product with many advanced options. Additional options can be specified on the properties panels for the Relation after it has been created.

To create your Relation, launch SureSync and then go to the "File" menu, select "New" and then select "Relation."

Name Your Relation



The first panel in the wizard allows you to name your Relation. Enter the name of the Relation and an optional description and click “Next” to continue. The Relation name used for this example will be “Publish Web Data.”

Specifying Root Paths

The next panel is used to specify the source and destination root paths that you want to synchronize. Later in the wizard you will specify which path is the source and which is the destination. In this dialog box, you are simply listing the source and destination paths that will be part of this synchronization.

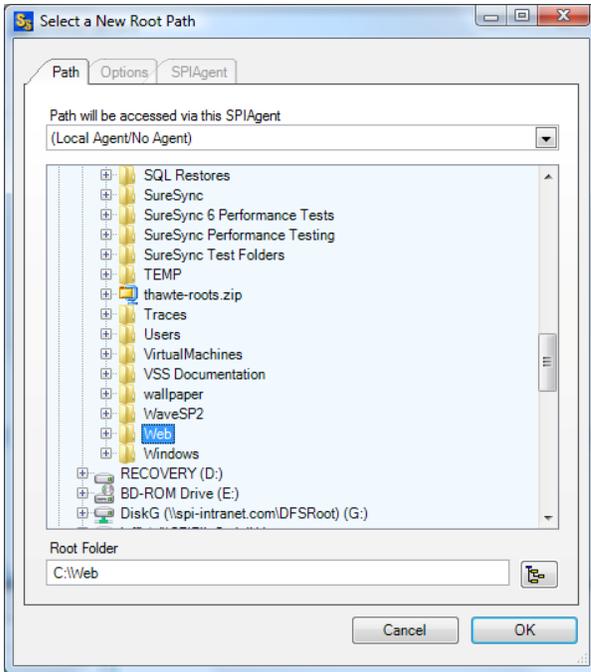
There must be at least two root paths specified (a source and a destination) to have all Rule types available. Later on in the wizard you will get to specify which path is the source and which is the destination. If you specify only one path then the only Rule methods available later in the wizard will be “Delete” and “Skip”.

Root paths are added by clicking the “Add” button at the bottom of the panel to display the “Select a new root path” panel shown below.

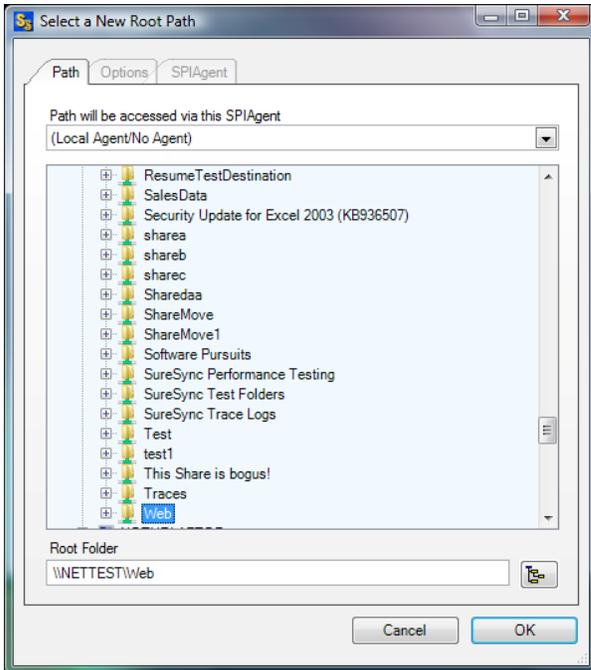
For this example, our root paths are:

- C:\Web on 9PGGCG1-JeffK
- [\\NETTEST\Web](#) on NETTEST
- [\\WINDOWS2008TEST\Web](#) on WINDOWS2008TEST

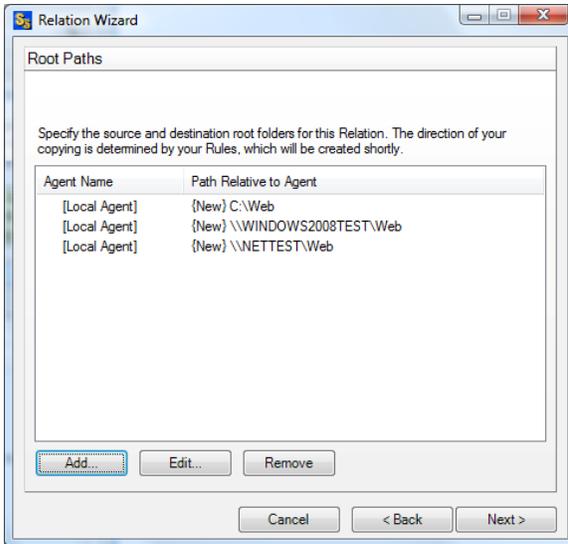
First, we will select the local path on 9PGGCG1-JeffK by browsing to that path through “My Computer,” highlighting the directory and clicking “OK.”



Once that path has been added, we must add the paths on the remote machines. Click the “Add” button again to add a new path. Then you can browse through “Network” to the remote machine and select the share, select the drive letter if using a drive mapping, or manually type the path into the “Root Folder” field. In this case, we have used the browse panel to select the UNC path.



Click “OK” to add the path. Continue clicking “New” and adding paths until all the paths involved in the synchronization are present.



Once all of the paths have been entered, press the “Next” button to continue.

Determining the Best Rule

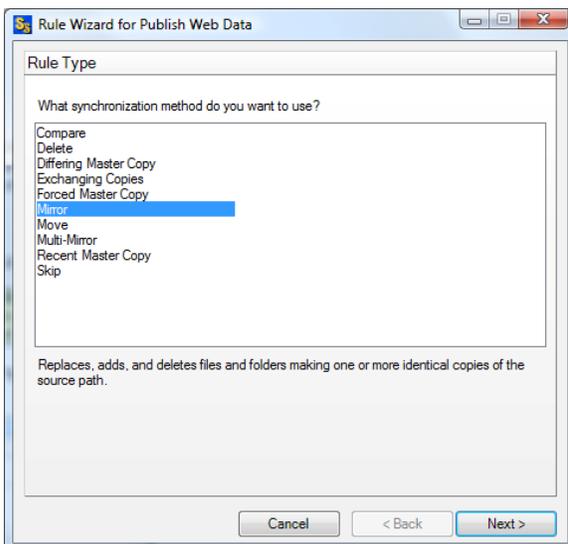
SureSync offers a number of different replication & synchronization methods, allowing a great deal of flexibility in how your data is handled. A chart detailing each of these Rules can be found in the help file under “Rule Methods Summary.”

Selecting Your Rule

On this next panel we will specify the Rule to use for this job.

If the panel indicates that only the "Delete" and "Skip" Rules are available, you have selected only one root path. You should use the "Back" button to return to the root path entry panel and add your other root path(s).

The type of Rule we will be using in this example is “Mirror.” Click on the Rule you wish to use.

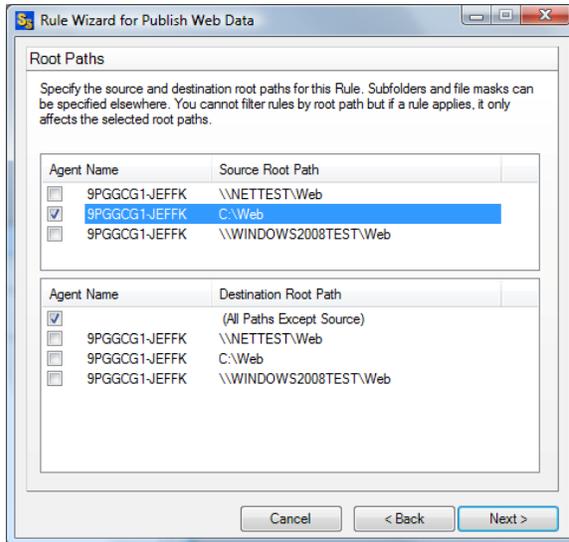


Click the "Next" button to continue.

Selecting Source and Destination

The next panel is where you indicate which root path is to be used as a source and which path(s) are destinations. In this example job, the source path is the C:\Web folder on 9PGGCG1-JEFFK.

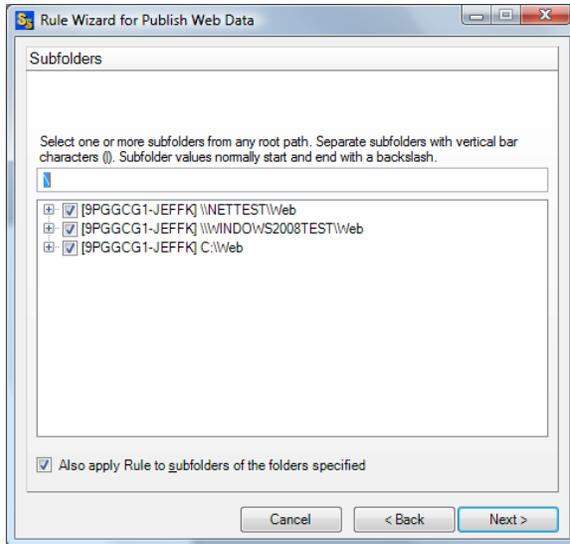
Your wizard panel should look like the one below:



Click the "Next" button to continue.

Filtering Subfolders

The next panel in the wizard allows you to include or exclude specific subfolders. The default "\" means to include all subfolders. You can enter subfolders into the text field or select them using the checkboxes in the browse dialog on the lower portion of the wizard panel. Folders are excluded by placing a minus character (-) in front of the folder name. Multiple folder entries are separated by the vertical bar character (|).



Examples

To synchronize only two subfolders named “FolderA” and “FolderB,” you would enter the following:

```
\FolderA\ | \FolderB\
```

To synchronize all subdirectories except for subfolders “FolderA” and “FolderB,” you would enter the following:

```
\ | -\FolderA\ | -\FolderB\
```

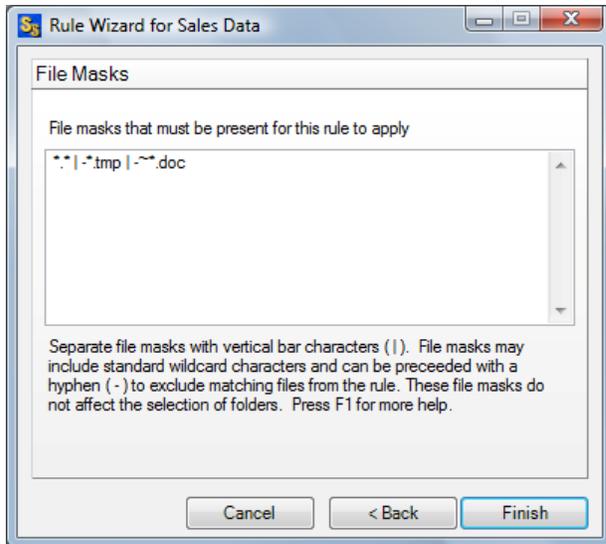
For our example scenario, the default “\” option will be used to process all subfolders.

To learn more about how to include and exclude subfolders, press the “F1” key on this panel.

Click the “Next” button to continue.

Filtering Based on File Masks

The next panel displayed will let you indicate the files to be included or excluded from the job. Each entry in this panel should be separated by a vertical bar (|) character. To exclude a file name or file type, place a minus sign (-) in front of the mask.



Examples

To synchronize only *.doc files and a file named "Test.txt," you would enter the following:

```
*.doc | Test.txt
```

To exclude *.tmp files, *.doc files, and a file named "Test.txt," you would enter the following:

```
-* .tmp | -* .doc | -Test.txt
```

The default setting for this panel is *.* | -*.tmp | ~*.doc | ~\$.doc? | ~\$.xls?. This tells SureSync to synchronize all files except *.tmp files and some commonly used Microsoft Office programs temporary files. This is the setting we will use for this example.

To learn more about how to include and exclude files based on file masks, press the "F1" key on this panel.

Clicking the "Finish" button will create your Relation. The Relation Wizard only displays a subset of essential options for a Relation. There are many other options which can be configured by modifying the properties of the Relation using the SureSync Desktop. Pressing the "F1" key on any tab in the application will display context sensitive help detailing the options on that tab.

Previewing Your Relation

Once the Relation has been created SureSync will prompt you to preview the newly created Relation. The preview displays the actions that SureSync would perform without actually executing them. This is a great way to determine if your Relation will perform as expected. You should *always* preview a Relation after making changes.

When prompted to preview, click on the "Yes" button.

There are different displays available for the preview by selecting options under the "View" menu. Please consult the SureSync Help File for more information about the preview window.

You may browse through the folders in this window and see how your files are affected. A legend can be accessed from the "Help" menu by selecting "Legend." This will detail what the various preview icons mean.

When you are done with the preview, close the preview window. This will perform no action. You can also click the “Run” button to run from the Preview.

Creating a Schedule

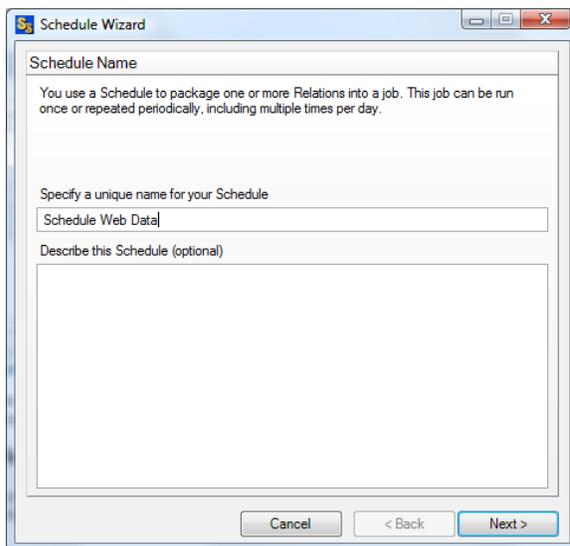
A Schedule is used to run a Relation or set of Relations on a clock/calendar basis. For example, you could run the Schedule once every hour, once a day, or once a week.

A Relation can only be active once at a given time. If you're planning to run a Relation with a Schedule you should not attempt to run the same Relation with a Real-Time Monitor. If you already are running a Relation in a Real-Time Monitor it cannot be run in a Schedule until the Real-Time Monitor is placed on hold and stopped.

To begin configuring your Schedule go to the File menu, select “New”, and then “Schedule.”

The wizards are designed to quickly and easily configure the basic options needed to get a Schedule up and running. SureSync is an extremely flexible product with many advanced options. Additional options can be specified on the properties panels for the Schedule after it has been created.

Name Your Schedule

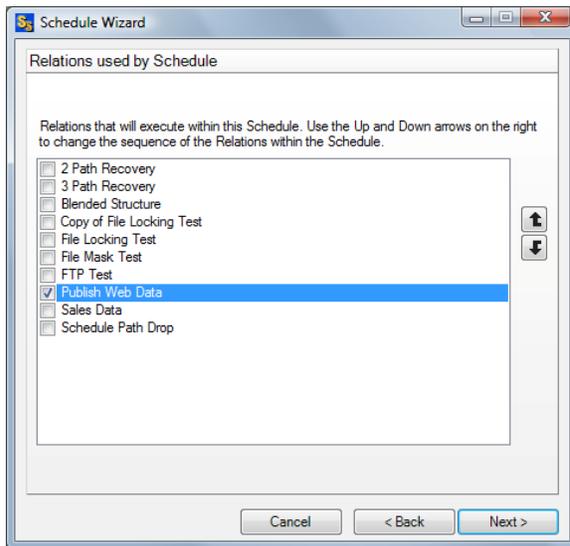


The first panel allows you to name your Schedule. Enter the name of the Schedule and an optional description. Then click “Next” to continue.

Selecting What Relation(s) to Run

The next panel is where you specify which Relation(s) you would like this Schedule to run. Specify these Relations by checking the box next to their name(s).

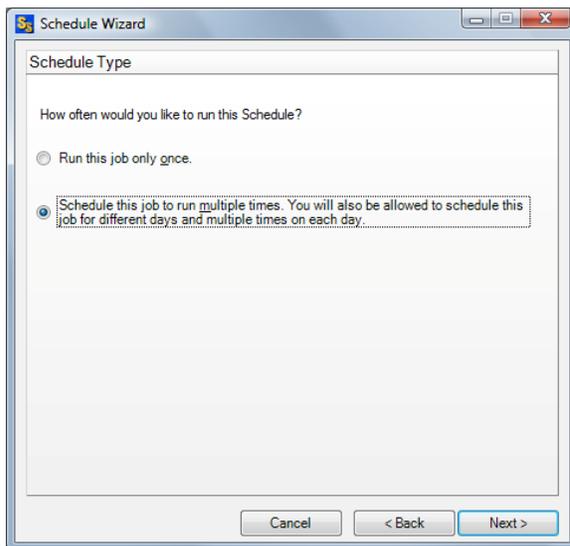
You can run multiple Relations under one Schedule. When doing so, the Relations are run in the order listed on this panel. To adjust the order, simply select a Relation and press the up or down arrows on the right side of the panel.



Click the "Next" button to continue.

Select the Schedule Type

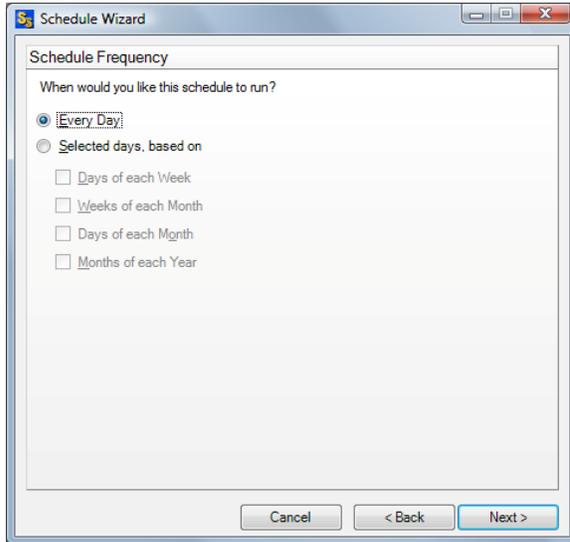
The next panel of the Schedule wizard determines the Schedule type. You can choose to create a Schedule that runs only once at a set time, or you can select a Schedule that runs multiple times. For this example, we will select "Schedule this job to run multiple times."



Click the "Next" button to continue.

Select the Schedule Frequency

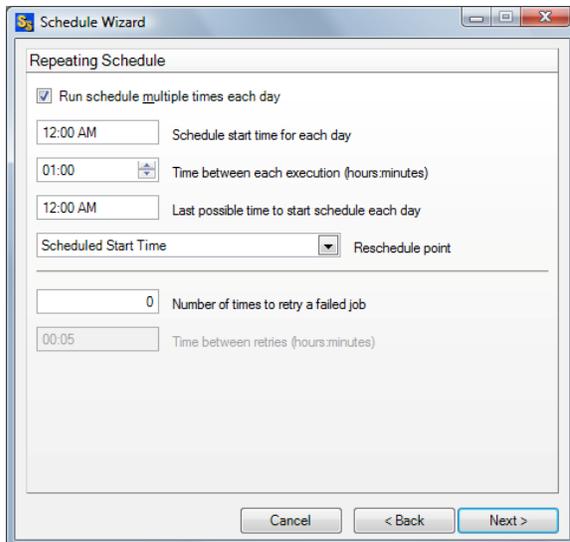
The next panel of the Schedule wizard determines the Schedule frequency. You can select to create a Schedule that runs every day, or that runs based on things such as Days of the Week, Weeks of Each Month and more. For this example, we will select “Every Day.”



Click the “Next” button to continue.

Configure Schedule Repeat Settings

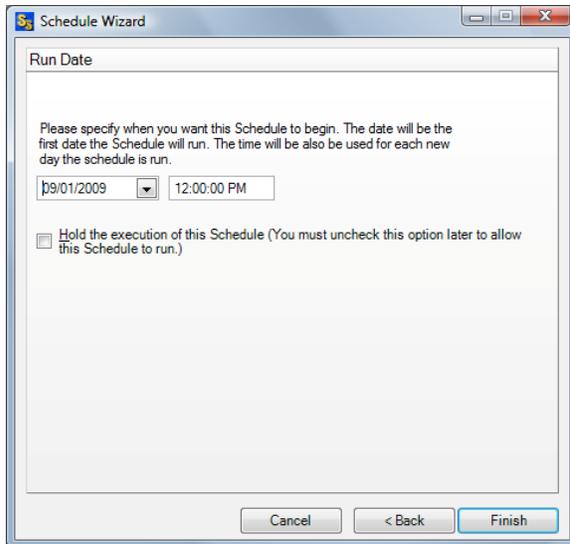
The next panel of the Schedule wizard determines how frequently the Schedule repeats. For our example, we want the Schedule to run every hour. To configure this, check “Run Schedule multiple times each day” and set “Time between each execution” (hours:minutes) to 01:00.



Click the “Next” button to continue.

Select the Schedule Run Date

The next panel of the Schedule wizard determines when the Schedule will be run the first time. For this example, we will use the default setting.



Click the "Finish" button to create the Schedule with the selected settings.

Modifying and Running Your Schedule

When the wizard is complete you will be returned to the SureSync desktop and the Schedule you created will be displayed.

You can make changes to the options for your Schedule in the main SureSync window by first clicking on the Schedule you wish to modify. You can then look through the tabs on the right side for options to change. Pressing "F1" while on any tab will bring up context sensitive help describing the options in detail.

The Schedule will automatically run at the time you selected during the wizard.

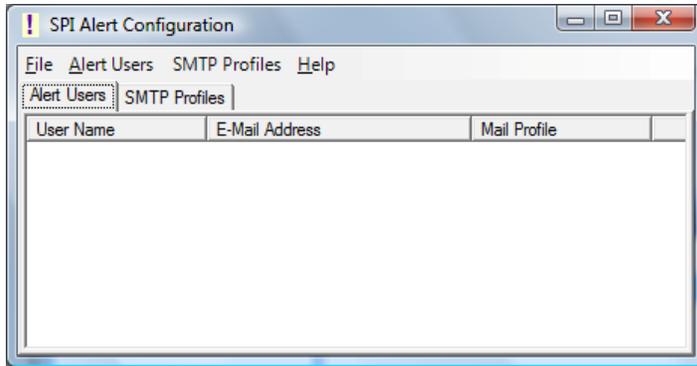
Configuring E-mail Alerts

E-mail alerts can be a useful way of notifying the SureSync administrator of a problem which should be investigated.

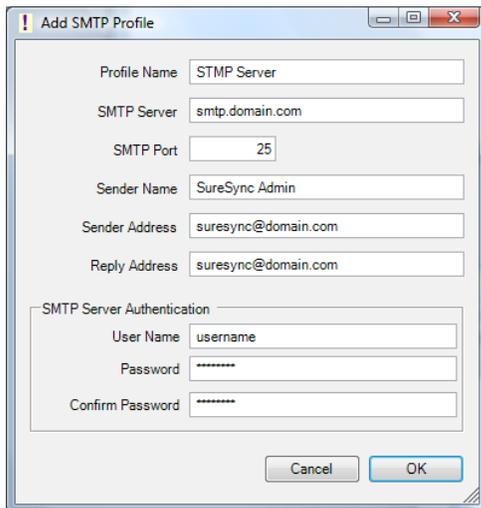
Configuring a SMTP Profile

To start the configuration of alerts, you must launch the SPIAgent Configuration utility and create a SMTP profile. The SMTP profile provides SureSync with the necessary details about your SMTP e-mail server so the program can send messages to you.

To launch the SPIAgent Configuration utility, open SureSync, go to the "Tools" menu and select "Alert user list..."



To create a SMTP Profile, go to the SMTP Profiles menu and select “Add New SMTP Profile...”



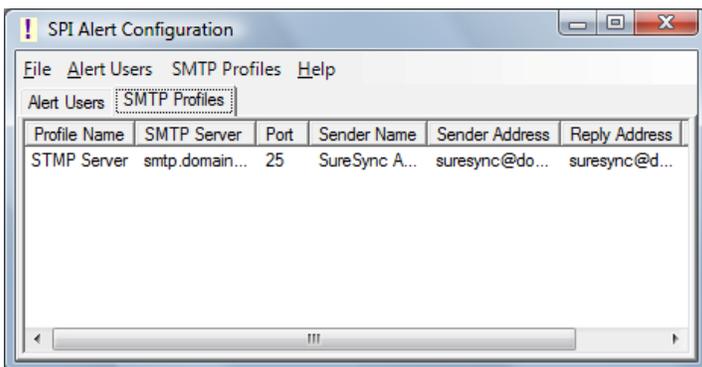
The “Add SMTP Profile” panel allows you to define the SMTP settings for your mail server. The following fields must be configured:

- **Profile Name:** The name of the profile that you are configuring. For example, you might use the name of the SMTP server.
- **SMTP Server:** The server address of the SMTP server. For example, smtp.mail.com.
- **SMTP Port:** The SMTP port for the SMTP server. The default SMTP port is 25.
- **Sender Name:** The name that will appear in the From: field of messages sent by SureSync.
- **Sender Address:** The e-mail address that will appear on messages sent by SureSync.
- **Reply Address:** The reply address that will appear on messages sent by SureSync.

You can also define SMTP Server Authentication settings if your SMTP server requires a valid logon to send messages (most do). The following fields can optionally be configured:

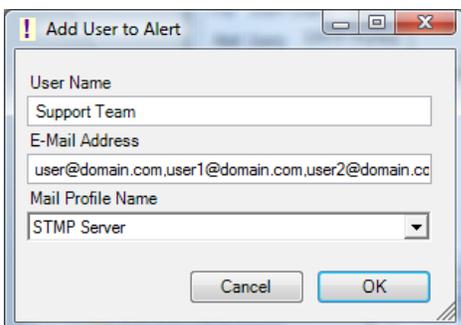
- **User Name:** The username that SureSync will log into this SMTP server with when sending an e-mail alert.
- **Password:** The password for the username defined in "User Name" should be entered here.
- **Confirm Password:** The password for the username defined in "User Name" should be confirmed here.

Click “OK” to create the SMTP Profile. Clicking on the SMTP Profile tab of the SPIAlert Configuration Utility will show the new profile.



Configuring an Alert User

The second part of configuring E-mail Alerts is to define an Alert User. The Alert User defines the e-mail address(s) that will be sent messages when errors occur. To configure an Alert User, click on the “Alert Users” menu and select “Add User...”



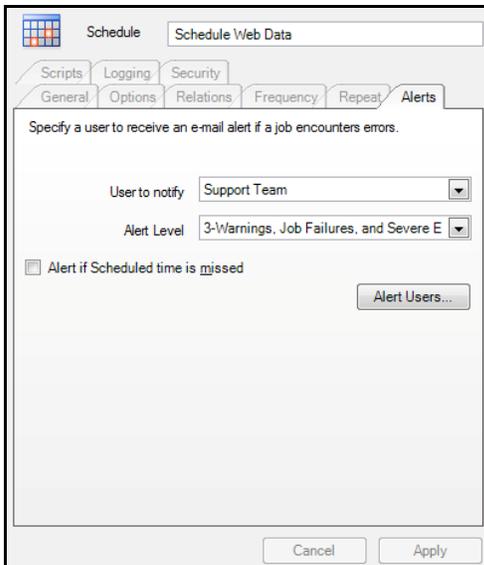
The “Add User to Alert” field has the following fields to be configured:

- **User Name:** The username that will be used in SureSync to represent this e-mail address.
- **E-mail Address:** The e-mail address that SureSync will send the alert messages to.
- **Mail Profile Name:** The SMTP profile that will be used to send the message.

Multiple e-mail addresses can be added by separating the addresses with commas (,) or semi-colons (;). This allows you to easily send messages to a group of SureSync administrators.

Configuring the Schedule to Send Alerts

The final step of the alerts configuration is to tell the Schedule to use the Alert User, and at what level of errors to send alerts. This is accomplished by clicking on the Schedule in the SureSync desktop, clicking on the Alerts tab, selecting the Alert User from the drop-down menu and then clicking “Apply.”



Additional details about the E-mail Alert levels available can be found by pressing “F1” while on the Alerts tab.

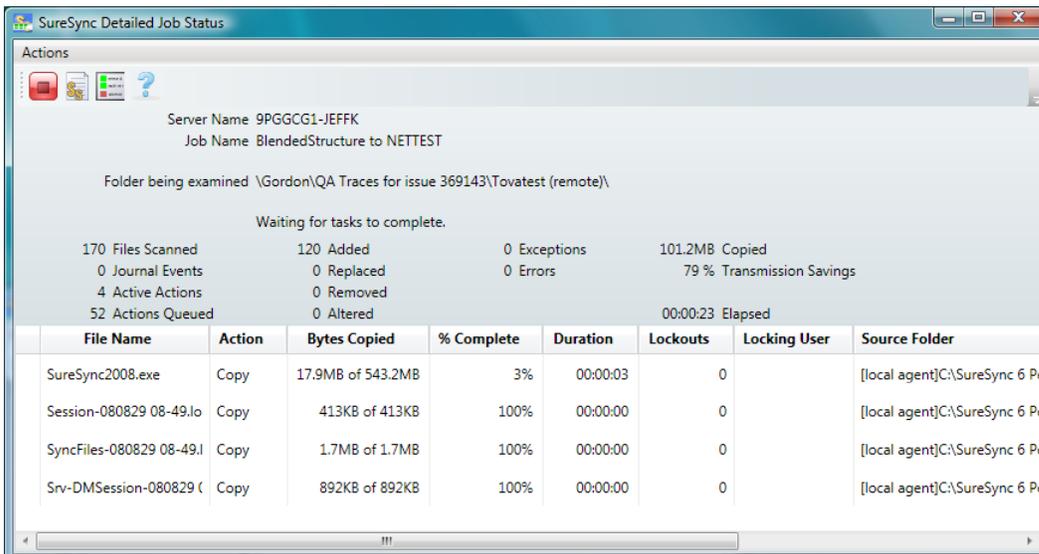
Monitoring the Synchronization

Monitoring your synchronization job is important, and SureSync makes this process easy through the use of two different status panels.

Detailed Status

The detailed status panel will show you file level activity for a current job as well as common counters such as files added and files deleted. If you want to take an in-depth look at a particular job, you will want to use Detailed Status.

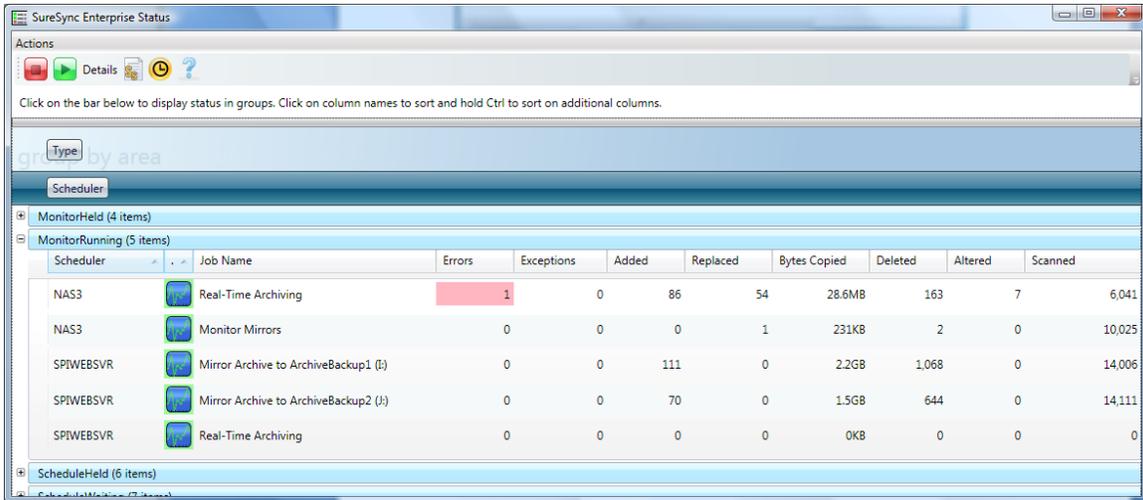
To launch Detailed Status, right click on the job and select “Job Status.” You can also select the job, go to the “View” menu and select “View Job Status.”



Enterprise Status

The Enterprise Status panel can be used to view the current status of jobs from SureSync installations anywhere on your network. To see detailed status, you can launch the Detailed Status panel for a particular job right from the Enterprise Status application. The Enterprise Status panel provides an easy way to stay current on the status of your jobs, no matter where they are running.

Enterprise Status can be launched by going to the Start menu, selecting SureSync and then "SureSync Enterprise Status." You can also click on the "View" menu and select "Enterprise Status," or click on the "Enterprise Status" button in the menu bar.



| Scheduler | Job Name | Errors | Exceptions | Added | Replaced | Bytes Copied | Deleted | Altered | Scanned |
|-----------|--------------------------------------|--------|------------|-------|----------|--------------|---------|---------|---------|
| NAS3 | Real-Time Archiving | 1 | 0 | 86 | 54 | 28.6MB | 163 | 7 | 6,041 |
| NAS3 | Monitor Mirrors | 0 | 0 | 0 | 1 | 231KB | 2 | 0 | 10,025 |
| SPIWEBSVR | Mirror Archive to ArchiveBackup1 (I) | 0 | 0 | 111 | 0 | 2.2GB | 1,068 | 0 | 14,006 |
| SPIWEBSVR | Mirror Archive to ArchiveBackup2 (J) | 0 | 0 | 70 | 0 | 1.5GB | 644 | 0 | 14,111 |
| SPIWEBSVR | Real-Time Archiving | 0 | 0 | 0 | 0 | 0KB | 0 | 0 | 0 |