

Evaluator's Guide









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Introduction

SureSync is a powerful file replication & synchronization application that 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 synchronizations can be run manually or on a scheduled basis. By reviewing this guide, you will become familiar with how to use 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 2012 R2; Windows Server 2012; Windows Server 2008 R2; Windows Server 2008; Windows Server 2003 R2; Windows Server 2003 with SP1 or later; Windows 8.1; Windows 8; Windows 7; Windows Vista; and Windows XP with SP2 or later
- **Processor:** Minimum: 1Ghz (x86 processor) or 1.4Ghz (x64 processor). Recommended: 2Ghz or faster processor (x86 or x64 processor)
- RAM (total for system): 1GB (Minimum); 2GB (Recommended)
- Hard Disk: 30MB for application files; 20MB+ for database
- **Display:** 1024x768 high color, 32-bit (Minimum)

SureSync can synchronize data to and from 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 can be run on Windows operating systems hosted in virtualization software such as VMWare or Hyper-V without issue. Each virtual machine involved in the synchronization / replication requires appropriate licensing.

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

- Microsoft Access (default)
- MSDE 2000 / SQL Express 2005 / SQL Express 2008 / SQL Express 2012 / SQL Express 2014
- SQL Server 2000 / SQL Server 2005 / SQL Server 2008 / SQL Server 2012 /SQL Server 2014

To achieve optimal performance, a SQL database is strongly recommended for setups using multi-directional Rule types, environments with more than 50 Jobs 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 installer will inspect your system for these components and offer to upgrade or install them as needed.

Microsoft .NET Framework 4.5.2 (Windows 2008/Vista and newer)

- Microsoft .NET Framework 4.0 (Windows 2003/XP)
- Microsoft MDAC 2.8 Refresh with Service Pack 1
- Microsoft Visual C++ Runtime 12.0
- 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.

Software Pursuits, Inc.

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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 that enhance the capabilities and performance of the software. The available Add-On licenses include:

Communications Agent Add-On

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

Real-Time Monitors

Real-Time processing increases data availability by continuously monitoring data for updates. By processing files immediately after they change, SureSync can avoid folder scans that are necessary for scheduled jobs.

Remote Differential Compression (RDC)

RDC copies only the changes made to a file, reducing synchronization time and decreasing the consumption of network resources.

RDC 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.

• 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 encrypting each file transmission. Multiple FIPS certified encryption algorithms are available. This is an especially useful and necessary option when transmitting sensitive data across the Internet.

Change Journal Support for Schedules

When a Schedule is configured to run a Job using the Communications Agent Add-On, SureSync uses the NTFS Change Journal to minimize the amount of scanning performed. Eliminating much of the scanning creates a significant performance improvement for Schedules.

Please consult the <u>SureSync with Communications Agent Add-On Evaluator's Guide</u> for further details.

File Locking Add-On

The File Locking Add-On requires the Communications Agent to be licensed and gives you an additional benefit in collaborative file sharing environments. The 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 <u>SureSync with File Locking Add-On Evaluator's Guide</u> 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.

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.

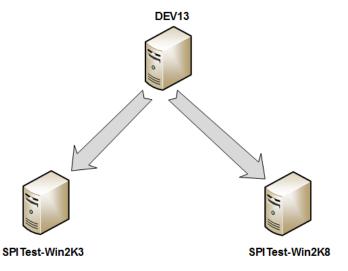
Our Scenario

This guide will walk you through the configuration of SureSync to accomplish a one-way distribution of files from a source server named *DEV13* to two destination servers named *SPITest-Win2K3* and *SPITest-Win2K8*.

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 *DEV13* to the \\SPITestWin2K3\Web and \\SPITestWin2K8\Web shares on a scheduled basis.

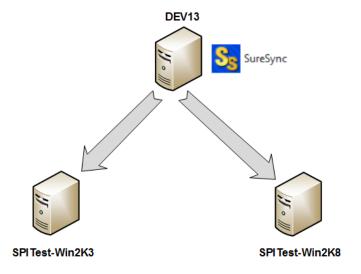
This guide will show you how to configure a one-way synchronization job using a Schedule run on a clock basis. In this example, the Schedule will run once an hour. SureSync also has the capability to run in real-time. When run in this mode, changes are synchronized as they occur. This functionality requires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



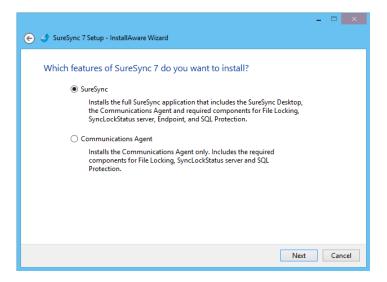
Installation

To begin your SureSync trial, you must install the correct SureSync components on the right machines. SureSync is installed using a Windows Installer (MSI) installer. 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 (*DEV13*). No software needs to be installed on the remote machines when performing a UNC or drive mapping based synchronization/replication.



On the *DEV13* 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 *DEV13* as the machine where we configure and run our synchronization.



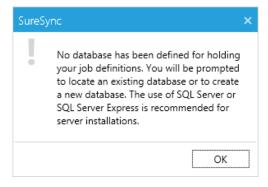
Launch SureSync for the First Time

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 Desktop icon. This will launch the SureSync Desktop where you will perform your entire synchronization job configuration.

On the first launch of the application, SureSync will present you with a series of questions to aide in completing the initial configuration.

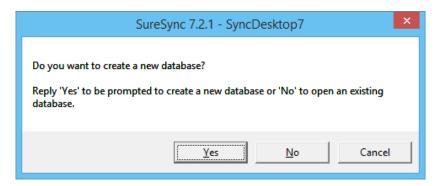
Creating a SureSync Database

The prompt displayed below informs you that a SureSync database needs to be created. The SureSync database is used to store all of your synchronization/replication configuration and related information. This database can be either an Access or SQL database.

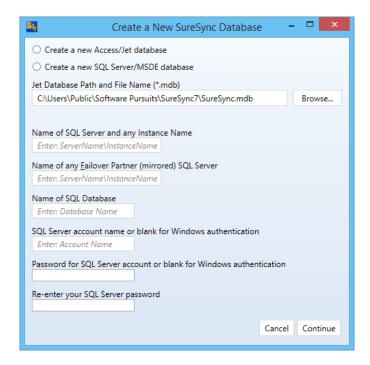


Click "OK" to continue on with the creation of the database.

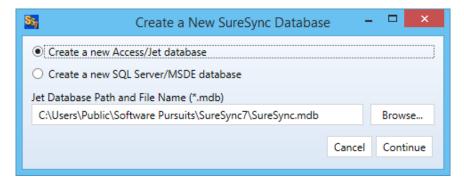
The next dialog box allows you to select an existing SureSync database to open with the new installation or allows the creation of a new database. For our example, this is a new installation and "Yes" should be selected to create a new database.



On the next panel, the type of database is selected. For our example, we will select "Create a new Access/Jet database".

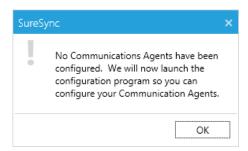


The form will change to show the path to the Access/Jet Database. We will select the default location of C:\Users\Public\Software Pursuits\SureSync7\SureSync.mdb.



Configuring the Local Communications Agent

The next step in the initial configuration involves defining a credential for the local Communications Agent to run under.



Click "OK" and the Communications Agent Configuration panel will be launched.

The local Communications Agent must be given a credential for SureSync to function properly. We recommend this account be either a local administrator on the machine or a domain administrator to ensure rights to all the files and folders being synchronized. The local Communications Agent must be configured even if you're not licensed for the Communications Agent Add-on. The Add-on functionality is enabled by a license but the Communications Agent on the SureSync machine is responsible for all the basic I/O as well.

The only exception to the need to configure the local agent is if no paths of any kind, including UNC paths are referenced from the local machine. This scenario is extremely rare.



When the Communications Agent Configuration panel loads, click on the "Computers" tab. From the "[Please select a machine from this list]" dialog, select your local machine. In this case, the machine is "DEV13".

Check the "Run a Communications Agent on this machine" option and enter your credential in the "Login Name" and "Password" fields. The "Login Name" field should be in the format of domain\user or machinename\user. Click the "Save" button to save the credential.

When a Communications Agent configuration is saved, a default connection for TCP port 9033 is created automatically. In most environments, only the default connection is used.



If you want to test the configuration, click the "Test TCP Connection" button. Click the red X on the upper right hand corner of the Software Pursuits Communications Agent Configuration panel when done to close the panel and move on with the configuration process.

Importing a License

The SureSync installer does not contain a license file. To enable functionality, you must import a trial license or your purchased license obtained from Software Pursuits.

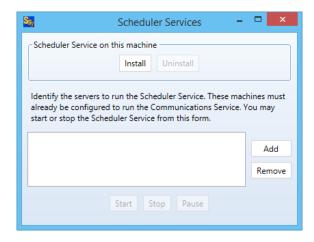
If you are new to SureSync, you should request a trial license from http://www.softwarepursuits.com/suresync/download_trial.asp. A license file will be generated and sent to you via e-mail. You can also call our sales team at 1-800-367-4823.

Once a license file has been provided to you, click the "Licenses" button () in the ribbon bar of the SureSync Desktop and click the "Import License..." button to import the updated file.

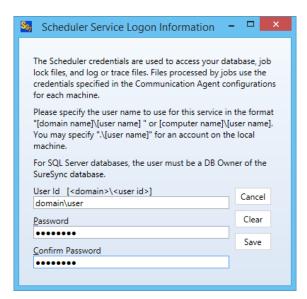
Installing the SureSync Scheduler

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, click on the Home button in the upper left hand corner of the SureSync Desktop and click on "Scheduler Services."



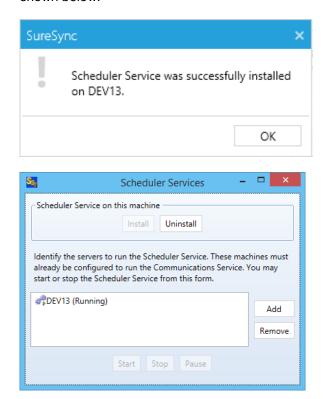
To install the Scheduler, click the "Install" button, which will launch a window like the one below.



The user account the Scheduler service runs under must be a member of the local administrators group on the SureSync machine. If using SQL, the account must also be a DBOwner on the SureSync database.

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.

You will receive a confirmation dialog box that the Scheduler service was installed successfully as shown below.



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

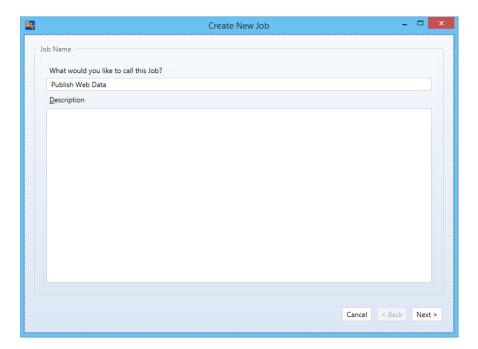
Creating the Job

Jobs are the basic building blocks of SureSync. Each Job contains the root paths (source and destination paths) that apply to that Job and options for the Job. Each Job also contains one or more Rules that tell SureSync how to replicate & synchronize data. The Job 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 Job up and running. SureSync is an extremely flexible product with many advanced options. Additional options can be specified on the properties panels for the Job after it has been created.

Click on the Job button (Job) in the ribbon bar to launch the Job Wizard. The Job Wizard will be used to configure your synchronization / replication.

Name Your Job

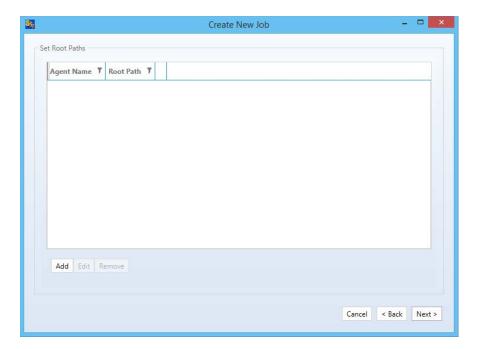


The first panel in the wizard allows you to name your Job. Enter the name of the Job and an optional description and click "Next" to continue. The Job name used for this example will be "Publish Web Data."

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 the source path for the one-way Rule we are creating. In this dialog box, you are simply listing the source and destination paths that will be part of this synchronization.

If you do not define at least two root paths on this panel, the only Rule methods available later in the wizard will be "Delete" and "Skip."

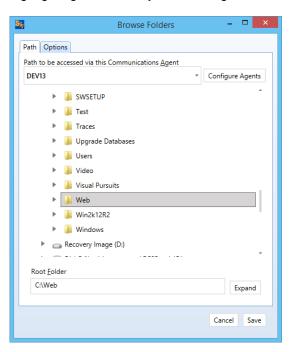


Root paths are added by clicking the "Add" button at the bottom of the panel.

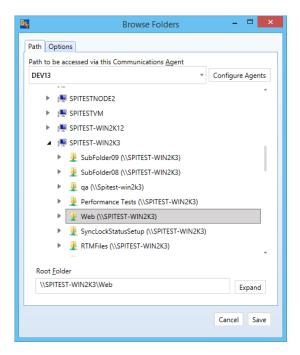
For this example, our root paths are:

- C:\Web on DEV13
- \\SPITEST-WIN2K3\Web on SPITEST-WIN2K3
- \\SPITEST-WIN2K8\Web on SPITEST-WIN2K8

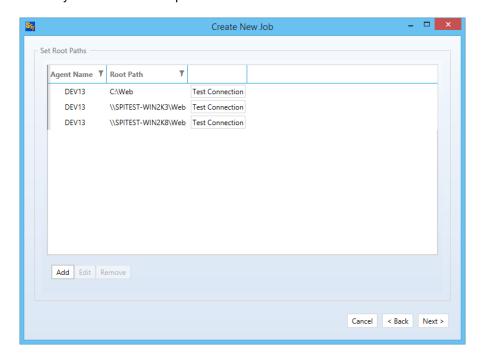
First, we will select the local path on DEV13 by browsing to that path through "My Computer," highlighting the directory and clicking "OK."



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

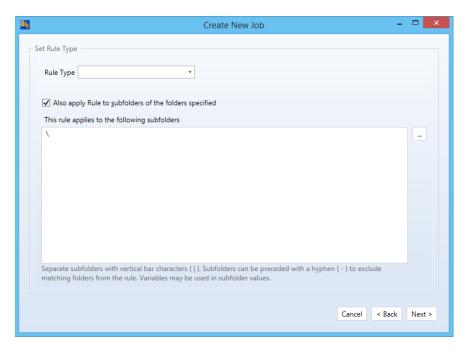
SureSync offers a number of different replication & synchronization methods, allowing a great deal of flexibility in how your data is handled. A chart detailing each of these Rules can be found in the help file under "Rule Methods Summary."

Selecting Your Rule & Defining Folder Exclusions

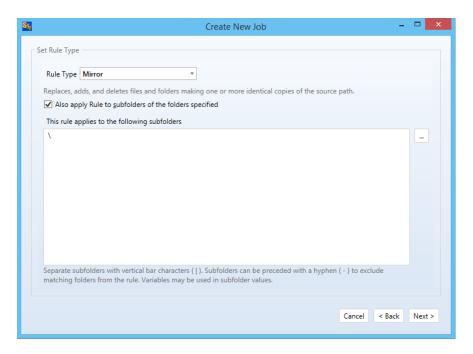
On this next panel we will specify the Rule to use for this job.

If the panel indicates that only the "Delete" and "Skip" Rules are available, you have selected only one root path. To correct the problem you should cancel the wizard, delete the partially created Job, and launch the Job wizard again. Be sure to define both source and destination paths on the Root Paths panel to enable all Rules.

The type of Rule we will be using in this example is "Mirror." The panel will load looking like the screenshot below.



To select the Rule type, pull down the "Rule Type" drop-down and select "Mirror."



The "This rule applies to the following subfolders" section of the panel 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:

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

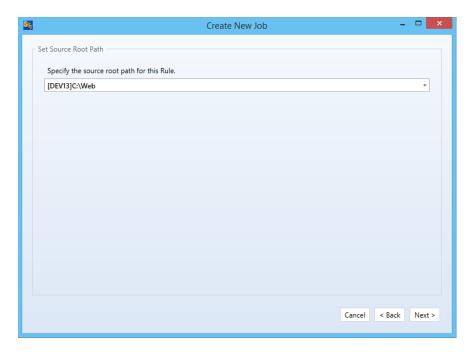
To learn more about how to include and exclude subfolders, press the "F1" key on this panel.

Click the "Next" button to continue.

Selecting the Source Path

The next panel is where you indicate the source root path. This is done by selecting the path from the drop-down menu. All other paths are configured as destinations. In this example, the source path is the C:\Web folder on DEV13.

Your wizard panel should look like:

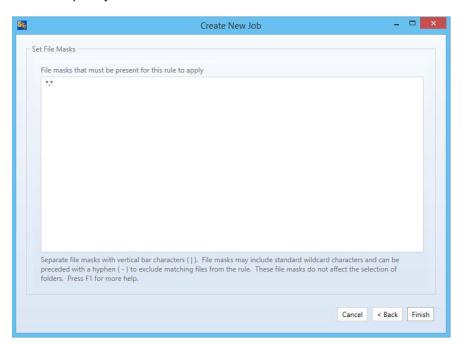


Click the "Next" button to continue.

Filtering Based on File Masks

The next panel displayed will let you indicate the files to be included or excluded from the synchronization. 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.

The default file mask is *.* which includes all files. Some common exclusions you could consider adding are: -*.tmp | -~*.doc | -~\$.doc? | -~\$.xls?. This excludes tmp files and some Microsoft Office temporary files.



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

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 Job. The Job Wizard only displays a subset of essential options for a Job. There are many other options that can be configured by modifying the properties of the Job 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 Job

SureSync provides two methods to preview the actions that will be performed by a Job. The first option is the Preview that provides a graphical user interface display of all actions that would be performed without actually doing them. To launch a Preview, click on the Job in the SureSync Desktop and click on the Preview button in the Ribbon Bar. Further details about Preview are available in the SureSync help file.

The second option is called a Trial Run. This method produces a tab delimited file containing the actions that would be performed. This file can easily be opened in Microsoft Excel to be viewed. To run a Trial Run, right click on the Job and select "Trial Run." Further details about Trial Run are available in the SureSync help file.

Creating a Schedule

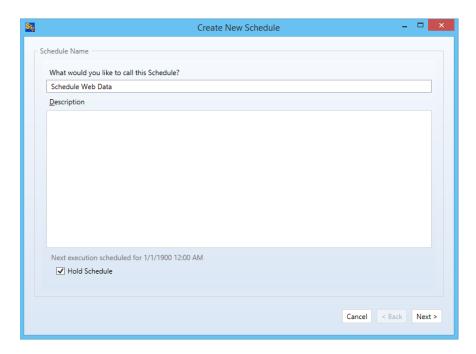
A Schedule is used to run a Job or set of Jobs on a clock/calendar basis. For example, you could run the Schedule once every hour, once a day, or once a week.

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

To create a Schedule to run your Job automatically click on the "Create Schedule" button (Schedule on the ribbon bar. This will launch the appropriate wizard.

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.

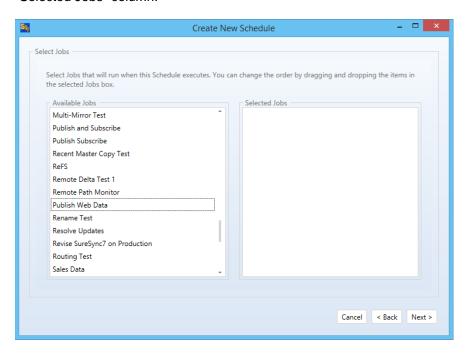
Name Your Schedule



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

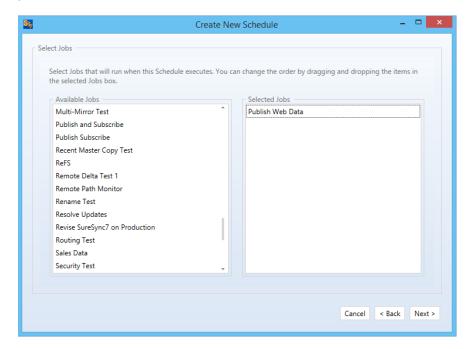
Selecting What Job(s) to Run

The next panel is where you specify the Job(s) you would like this Schedule to run. Jobs are selected by performing a drag and drop operation from the "Available Jobs" column to the "Selected Jobs" column.



Multiple Jobs can be run under one Schedule. To do so, add all the Jobs you want this Schedule to run under the "Selected Jobs" column. The Jobs will be run in the order listed. To modify the order of execution simply click on one of the Jobs and drag it up or down the list to change the order.

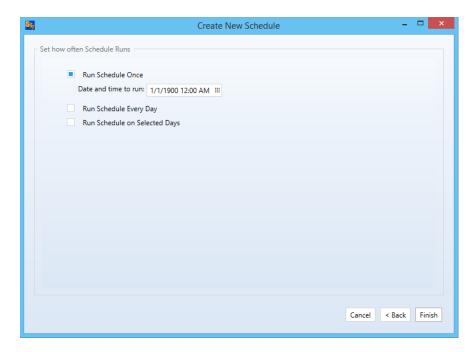
For our example, drag and drop the "Publish Web Data" Job into the "Selected Jobs" column. The panel should now look like this:



Click the "Next" button to continue.

Configure Scheduling Options

The next panel of the wizard determines the scheduling options for the Schedule.



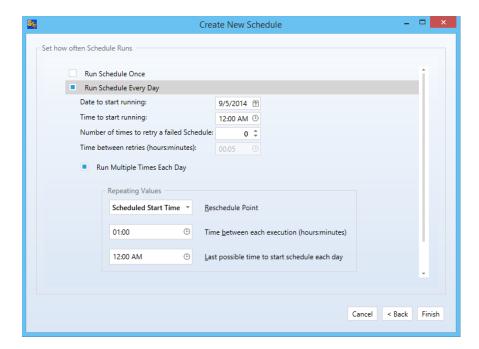
From this panel, you can configure a Schedule to be run once, run every day, or run on selected days.

For our example, we want the Schedule to run every day of the week and execute once an hour.

To do so, select "Run Schedule every day." This option tells the Schedule to execute once a day every day. You can also configure a start date and time using the "Date to start running" and "Time to start running" options. For this example, we will leave those at default.

To configure the Schedule to run multiple times in a single day, like the once an hour we desire for this example, you should check "Run Multiple Times Each Day." For the "Time between each execution (hours:minutes)" option enter "01:00." This configures the Schedule to run once every hour.

The completed panel should look like this:



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.

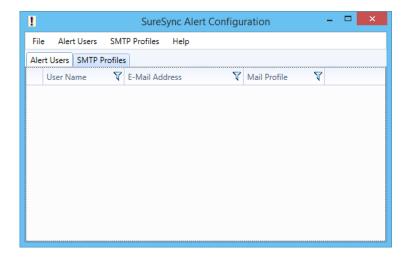
Configuring E-mail Alerts

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

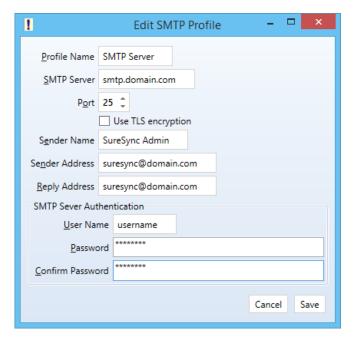
Configuring a SMTP Profile

To start the configuration of alerts, you must launch the SureSync Alerts 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 SureSync Alerts Configuration utility, open SureSync, click on the "Home" button and click on "Alert User List"



To create a SMTP Profile, go to the SMTP Profiles menu and select "New SMTP Profile"



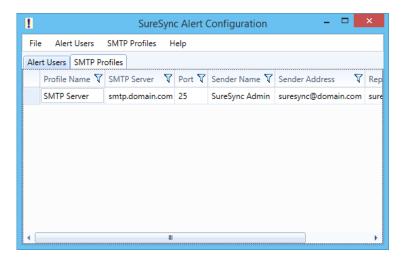
The "Add SMTP Profile" panel allows you to define the SMTP settings for your mail server. The following fields must be configured:

- 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.
- Port: The SMTP port for the SMTP server. The default SMTP port is 25.
- Use TLS Encryption: If your SMTP server requires encryption, check this box.
- 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:

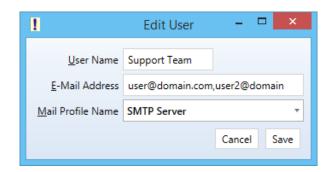
- User Name: The username that SureSync will log into this SMTP server with when sending an e-mail alert.
- **Password:** The password for the username defined in "User Name" should be entered here.
- Confirm Password: The password for the username defined in "User Name" should be confirmed here.

Click "Save" to create the SMTP Profile. Clicking on the SMTP Profile tab of the SureSync Alert 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 "New Alert User"



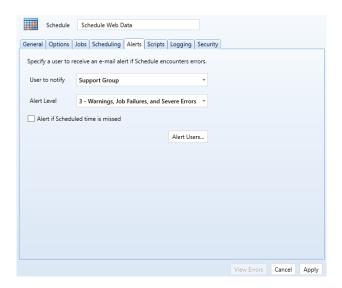
The "Add User to Alert" field has the following fields to be configured:

- 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.

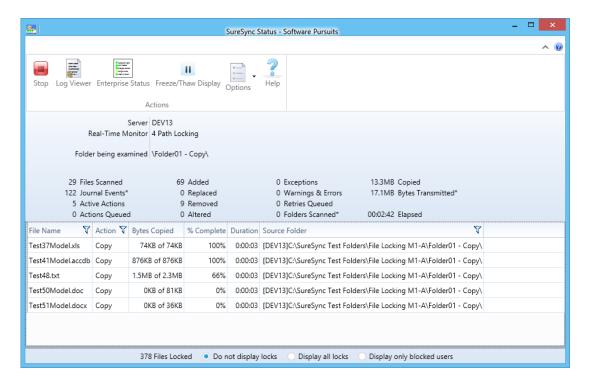
Detailed Status

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 and click on the "Status" button (Status) in the Ribbon Bar.



Enterprise Status

The Enterprise Status panel can be used to view the current status of jobs from SureSync installations anywhere on your network. 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 7 and then "SureSync Enterprise Status."

You can also click on the "Ent Status" button (Ent Status) in the Ribbon Bar.

