Technical Support Knowledge Base

Technical Support Knowledge Base

1 Hardware Recommendations

2 Technical Support

Hardware Recommendations

Hardware Recommendations

This lesson describes the hardware recommendations for the latest version of SOAPware.

Best Practice Recommendations for Using SOAPware

Competent local/on-site information technology support is highly stressed and extremely recommended.

Create and plan a 3 to 5 year replacement cycle for server and workstation computers. This is a common practice in industries where there exists a heavy reliance on digital technology.

Evaluate the existing technology infrastructure to determine where improvements may be needed.

The advanced requirements and complexities needed for a successful installation of these systems are such that it is recommended that the SOAPware Cloud Solution should be considered, in earnest, prior to committing to the conventional Client/Server model.

Recommended Specifications

Server

- Windows Server 2008 r2, Windows Server 2010, or Windows Server 2012 (any edition) server operating system. (It is not recommended to use a workstation operating system for the server.)
      - If a workstation operating system is substituted it must be Windows 7 Professional 64 bit or better. Further, it must be adjusted for best performance of Background Services and the Volume Shadow Copy service must be enabled and set to start automatically. Be aware that RAID 5 is **not** available in Windows 7 or later.

- Minimum 2.5Ghz Quad-core CPU or better.

- Minimum 8 GB RAM (It is highly recommended to install as much RAM as is feasible or affordable over the minimum requirement)

- 200+ GB free hard drive space on a "fast read" hard drive like SAS or Solid State for SOAPware DataServer installation and database growth formatted in NTFS. User must maintain this free space.

- The operating system should be installed on a separate physical drive. This can be any bus interface; SATA, SAS or SSD.

- Do **not** install the operating system and PostgreSQL database application on the same physical drive.

- If RAID is needed, use RAID 0+1 or 10 for the drives where PostgreSQL is installed. PostgreSQL advises **not** using RAID 5.

- An Uninterrupted Power Supply configured to provide the proper shutdown of the system in a power failure is a critical need.

- Minimum 100mbps wired local area network connection, firewalled at the gateway router with internet access for TCP ports 80, 443 and 5432.
     - If you have any 3rd-party firewall software installed on the server, either disable it or uninstall it. There is really no need for 3rd party firewalls on Windows XP and above, as the built-in firewall provided by Microsoft does an excellent job already. Some badly-written 3rd party firewalls do not uninstall correctly, it may be necessary to run the 'repair network settings' utility.
     - http://wiki.postgresql.org/wiki/Running_%26_Installing_PostgreSQL_On_Native_Windows#Postgre:

Any anti-virus/anti-malware software must be configured to exclude the PostgreSQL folders.

"If you have any antivirus software installed, you **must** exclude the data directories that are to be used by PostgreSQL and **must** exclude postgresql.exe process. If that still does not help, it may be required to completely uninstall the antivirus software from the machine. Antivirus software can interfere with PostgreSQL's operation, because PostgreSQL requires file access commands in Windows to behave exactly as documented by Microsoft, and many antivirus programs contain errors or accidental behavior changes that cause these commands to misbehave subtly. Most programs do not care because they access files in fairly simple ways. Because PostgreSQL is continuously reading from and writing to the same set of files from multiple processes, it tends to trigger programming and design mistakes in antivirus software, particularly problems related to concurrency. Such problems can cause random and unpredictable errors or even data corruption. Antivirus software is also likely to dramatically slow down PostgreSQL's operation. For that reason, you should at least exclude postgres.exe and the data directories so the scanner ignores them."
http://wiki.postgresql.org/wiki/Running_%26_Installing_PostgreSQL_On_Native_Windows#Postgre:

- Do **not** compress the PostgreSQL drive
- Do **not** defrag the PostgreSQL drive. (This is enabled as default in Server 2008 r2. It must be disabled for the PostgreSQL drive.)
- Do **not** ScanDisk PostgreSQL drive.
- The server computer must be a server class system, such as Dell PowerEdge or HP Proliant. These systems are built for continuous use over extremely long periods of time. They tend to be highly configurable and extremely robust. Their resource capacity tends to be rather large.
- This computer will be used for the database engine PostgreSQL and to store all the production data. This system should never be used for anything else other than PostgreSQL. The demands of the database are so great that using this computer for any other purpose is risking the integrity of the EPHI. This cannot be stressed enough, **DO NOT USE THIS MACHINE FOR ANYTHING BUT POSTGRESQL**.

Workstation

- Windows 8, Windows 7, or Windows Vista.
- Minimum 2.5 GHz processor.
- 4 GB RAM or more.
- 10 GB free hard drive space formatted in NTFS User should maintain this free space.
- Minimum 100mbps wired local area network connection, firewalled at the gateway router with internet access for TCP ports 80 and 5432.
- Constant Internet Connection for SOAPware activation, EPrescribing and other features. (Test against the list of site that need to accessed).
  - The following is a list of SOAPware features that will not function properly if the user does not have an internet connection:
    - Installing/Updating SOAPware
    - Downloading Licenses
    - EPrescribing
    - Medication Eligibility Retrieval
    - Drug Interactions
    - Faxing
    - Patient Portal
    - SOAPware Cloud Library (includes the ability to receive medications, ICD-9, CPT, and HCPCS updates)
    - Submitting Electronic Claims
    - Clinical Knowledge Feature
    - Editing Providers Security Access

- Help Menu Links to Training, Support and Resources

Any 100mbps wired or 802.11, a, b or n wireless local area network connection should be a secure connection to comply with HIPAA.

If an 802.11x wireless connection is used then that device should only employ a Remote Desktop Connection for SOAPware use.

SOAPware Features that Require Internet Access

The following is a list of SOAPware features that will not function properly if the user does not have an internet connection:

- Installing/Updating SOAPware
- Downloading Licenses
- ePrescribing
- Medication Eligibility Retrieval
- Drug Interactions
- Faxing
- Patient Portal
- SOAPware Cloud Library (includes the ability to receive medications, ICD-9, CPT, and HCPCS updates)
- Submitting Electronic Claims
- Clinical Knowledge Feature
- Editing Providers Security Access
- Help Menu Links to Training, Support and Resources

Technical Support

Installation Guides

Installation Guides

Please click the following link to view the SOAPware Installation Guides:

- **Installation Guides**

Backing Up SOAPware Data

The SOAPware DataManager is a database utility designed for the Postgres database. It uses existing, tried-and-true utilities provided by Postgres and Windows, but is wrapped up in a simple, easy-to-use interface.

The DataManager allows the user to create and schedule backups, schedule maintenance tasks and perform database restores. Before going live using SOAPware in a production environment, it is important to do a restore test on a different PC/server. Establish a schedule to perform regular test restores in the future and do them anytime there are changes in the system configurations.

SOAPware HIGHLY recommends that all users use Data Manager to create regular backups.

Installing Data Manager

To install Data Manager, see the link here: Installing Data Manager.

Data Manager Changes

The SOAPware Database Service is shut down during a backup - all users must be out of SOAPware before making a backup.

If a user previously scheduled a backup with any version **before** 2010, this scheduled backup will NO LONGER WORK with newer versions of the Data Manager. A user needs to create a new scheduled backup.

Start the SOAPware Data Manager

To start the SOAPware DataManager, Click Start > All Programs > SOAPware > SOAPware DataManager.

If users are running on Windows Vista or 7, users will need to right-click on the program name and choose "Run as administrator."

Log In
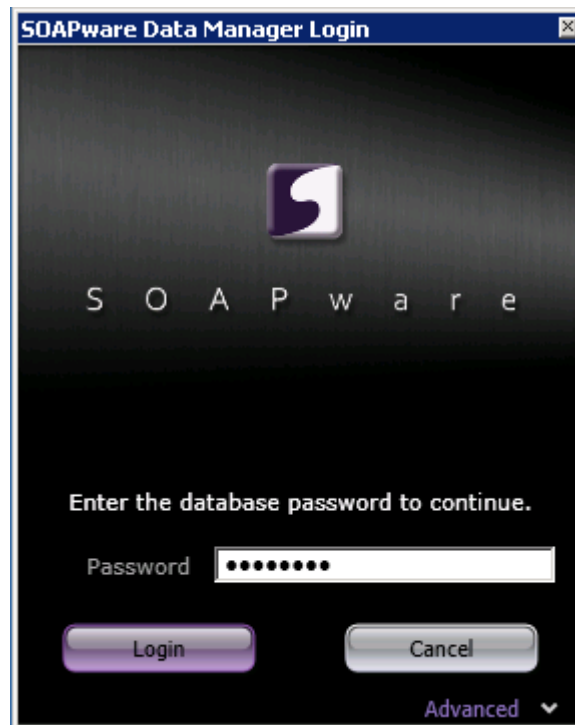
When a user starts DataManager, the user must log in with the database administrator password. This defaults to the PostgreSQL user account on the database. (This is the second set of passwords created during the SOAPware Data Server installation).

NOTE: The database administration password is NOT the same as the SOAPware Administration password. The database administration account only accesses the PostgreSQL database.

Only use the Advanced section if the server, port, or database administration user name is different than the default settings.

- **Server**: Host name or IP address where the database is running. The default is "localhost".
- **Port**: Port number where the database is listening. The default is port 5432.
- **User Name**: The administration user on the database. User must have administration privileges. The default setting is PostgreSQL.

Enter Backup Information

The backup routine creates a copy of the user's data folder. It contains all the user, tablespace, table and data information needed to restore the user's database completely.

Backup file sizes can range from about 50 MB to many Gigabytes, depending on database size and compression options.

It can take from 20 minutes to several hours for a backup to complete. SOAPware cannot be used while the backup is running. **Please plan to schedule backups to run nightly for the best results.**

1. **Backup Name:** Users should choose a meaningful backup name that can be easily remembered.
2. **Append Current Date:** This will attach a date stamp of when the backup was run. If checked, new backup files will be created each day, which in turn will create multiple backups. This helps ensure the user's data, but the user must also delete old backup files every so often to prevent the backups from taking all the space on the drive. If this is not checked, the backup will overwrite the last backup each time.
3. **Select Backup Save Location:** Choose the folder where the backup file will be placed.
4. **Set Backup Schedule:** This header is collapsible. Click it to view or hide scheduling options. See the Scheduling section below for more details on setting a backup schedule.
5. **Backup Now Button:** Click this button to run a backup using the settings on this tab.

Note: *A backup can be canceled. It will delete the current backup file, and the database will not be affected. If a backup is canceled, go to Start > Programs > PostgreSQL 8.x, and Click "Start Service".*
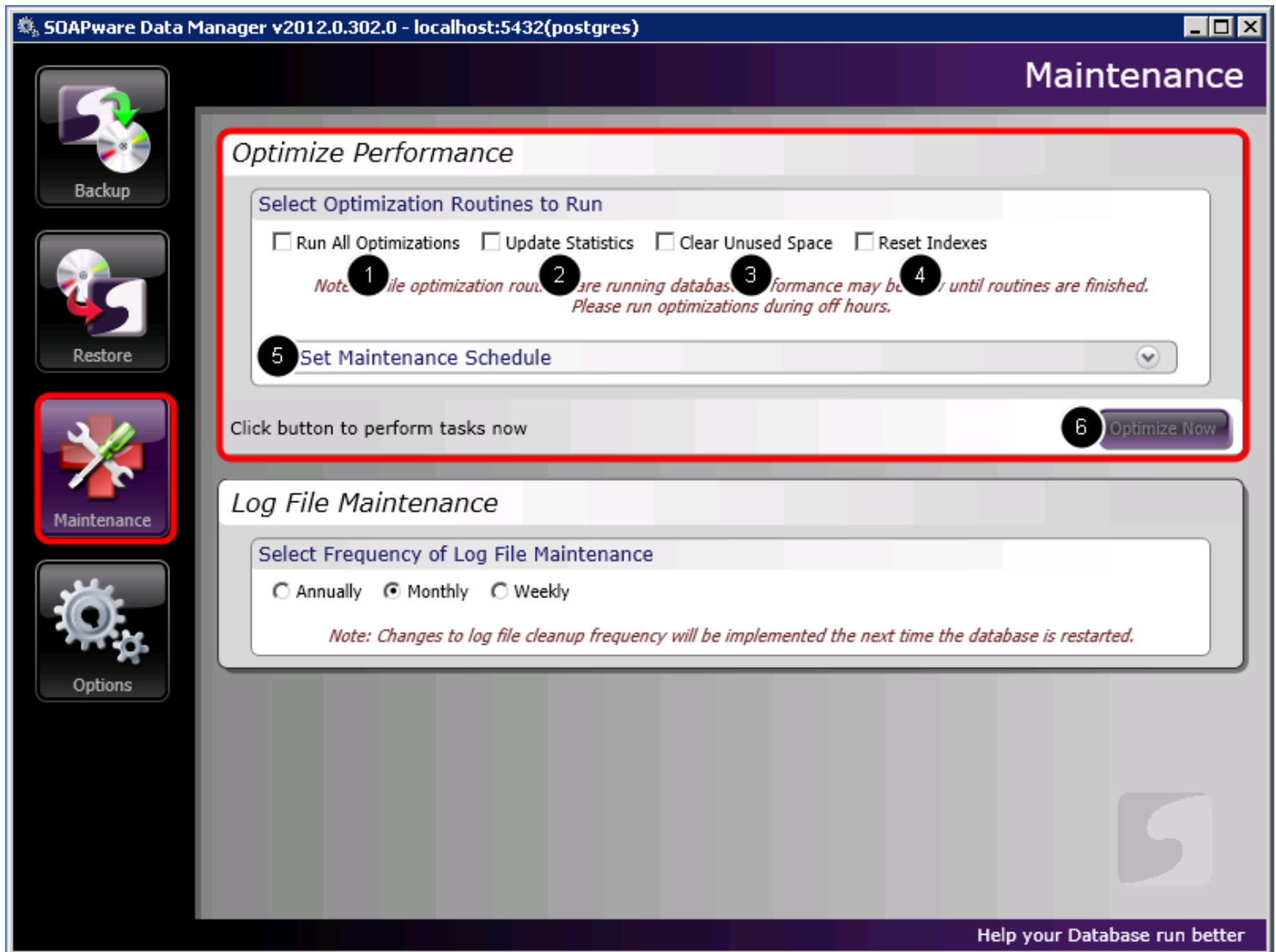
Databases need to be optimized and cleaned up routinely for maximum performance. Higher traffic databases should be optimized more often, sometimes daily. Lower traffic databases may only need to be optimized once a week or once a month.

Optimizations may take from 30 minutes to several hours to complete.

1. **Run All Optimizations:** Perform each optimization (Recommended)
2. **Update Statistics:** Resets all table statistics, row counts, etc.
3. **Clear Unused Space:** This is useful after multiple deletions to reclaim space left behind.

4. **Reset Indexes:** Refreshes table indexes to help data retrieval.
5. **Set Maintenance Schedule:** This header is collapsible. Click it to view or hide scheduling options. See the Scheduling section for more details on setting a maintenance schedule.
6. **Optimize Now Button:** Click button to perform selected optimizations.

Note: *Running optimizations may degrade database performance. We recommend setting a Maintenance schedule to run at night or weekends when database traffic is low.*

Maintenance: Log File Maintenance
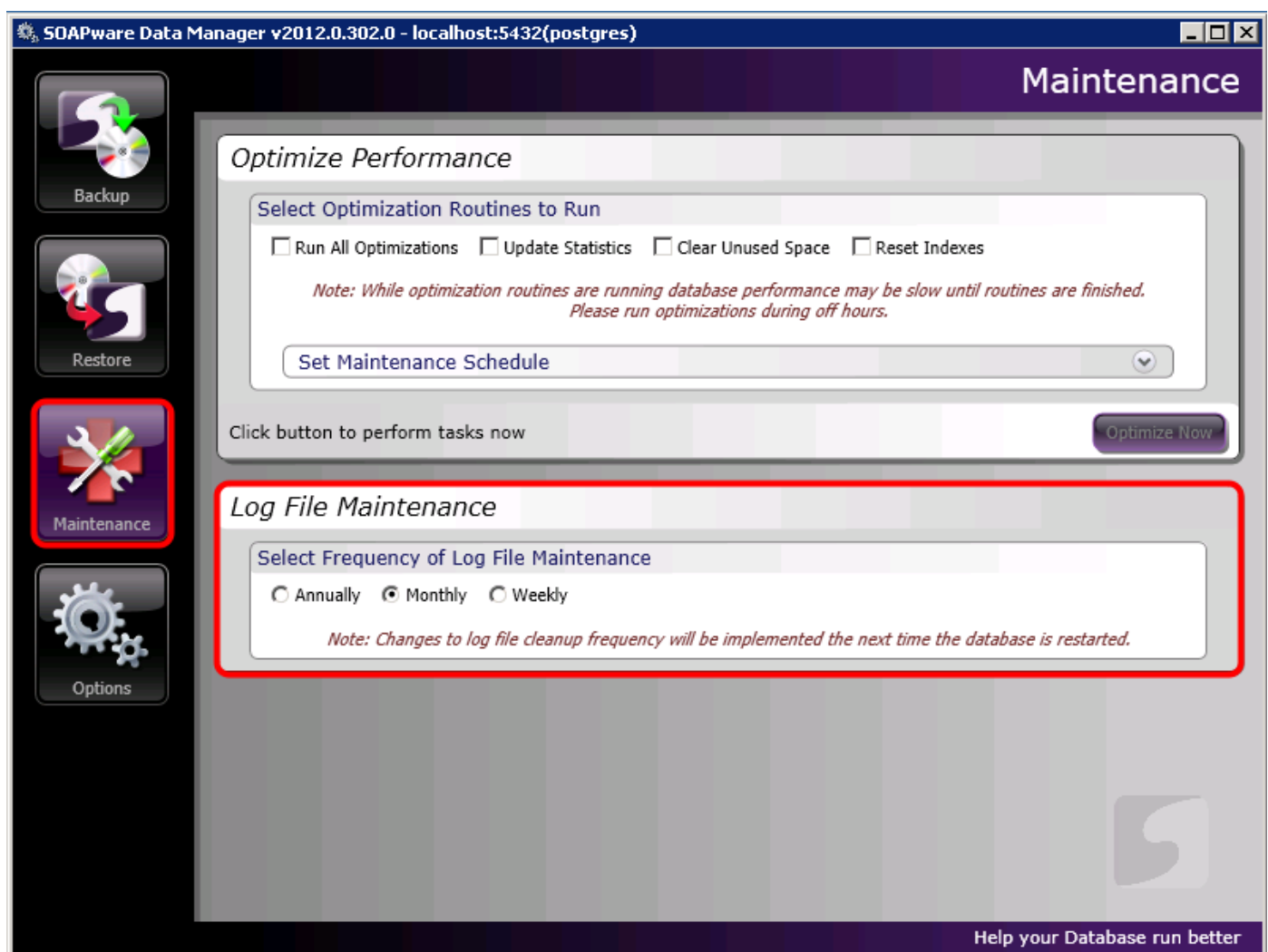
The Log File Maintenance feature within DataManager allows the user to effectively control the number of log files that will be stored in the "pg_log" folder.

The user can select the frequency of the log file maintenance by choosing annually, monthly, or weekly.

- **Weekly**: If the "weekly" option is selected, the files will be kept for up to one week before being overwritten with new files for the following week.
- **Monthly**: If the "monthly" option is selected, the files will be kept for 30 days before being overwritten with new files for the following month.
- **Annually**: If the "annually" option is selected, the files will be kept for 365 days before being overwritten with new files for the following year.

The user should choose whichever option will best suit the database. The default setting will be set to "Monthly".

Note: Please note that any changes to log file maintenance will be implemented the next time the database is restarted.

Options: Database Options

1. **Install Path:** The DataManager uses Postgres utilities for backup and restore. This path should not be changed unless the Postgres install path is different than listed.
2. **Data Path:** This section is used to point the DataManager to the location where the data is stored in order to backup. By default the path will be C:\Program Files (x86)\PostgreSQL\8.3\data.
3. **Service Name:** The service name is the name of the SOAPware PostgreSQL Data Server service. Typically, this will be pgsql-8.3. To check, go to Start > Programs > PostgreSQL 8.x, a user will see either PostgreSQL 8.3 or PostgreSQL 8.2. The service name will either be pgsql-8.3 or pgsql-8.2 depending on which version the user has.

4. **Service Account:** This is the windows user that starts the SOAPware PostgreSQL Data Server after the backup is complete. This should always be postgres.

5. **Compress Backup:** This option compresses the backup file as it is being written. Use this option to keep file sizes at a minimum.

6. **Data Manager Password:** Use this to change the database administration password.

Note: The database administration password is NOT the same as the SOAPware Administration password. The database administration account only accesses the PostgreSQL database.

Restore
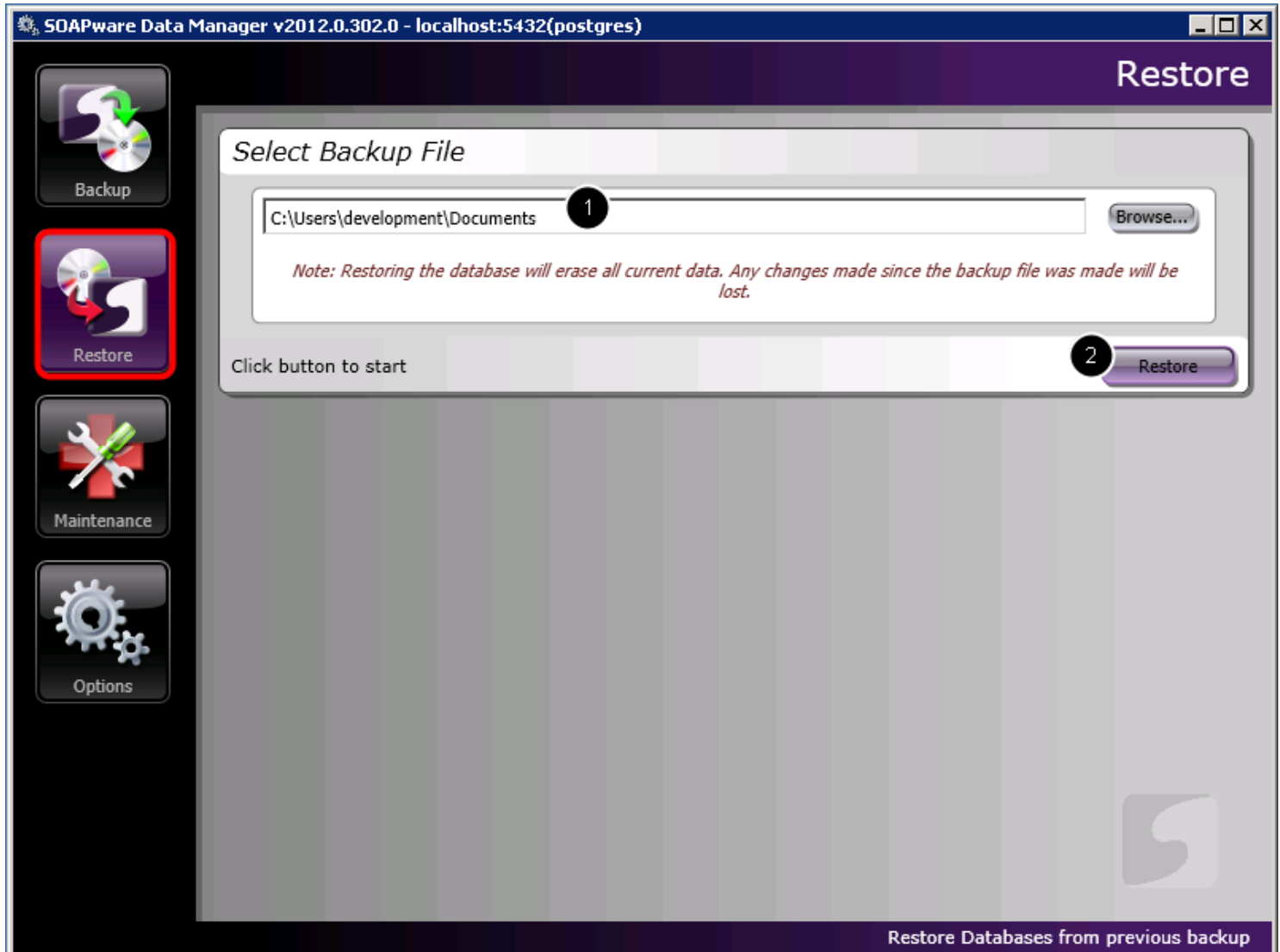
The DataManager can take a previously made backup file and restore the database to its original state.

*Note: After the restore is completed, any user passwords or preferences changed since the backup will be reset to previous state.

1. **Select Backup File:** Choose the backup file created by the DataManager to run a restoration.
2. **Restore Button:** Click this button to start the restoration.

If restoring a compressed backup file, the DataManager needs to decompress the backup to the PostgreSQL data directory. The data folder can take as much as seven times the compressed file size needed in hard drive space. For example, a 3GB compressed backup may need an extra 20GB of hard drive space to run the recovery.

If a restoration is attempted and there proves to be insufficient disk space, the process will fail and must be restarted. Simply make more room, or re-install the SOAPware PostgreSQL Data Server to another drive with more space and restore to that drive.

*Note: Users must wait 10 minutes between creating a backup and running a restore in order to clear out the connections.

WARNING: Running a restore will replace all the data and table structures within the database. The old database will be deleted. This process cannot be canceled.

Scheduling Backups and Maintenance

The DataManager provides an easy-to-use interface to create a Windows Task scheduled event to run a user's backup and maintenance routines. Simply setup a backup or maintenance task as outlined above, then choose the schedule frequency. When a user saves the schedule, a user's task will run at that time.

For advanced users, maintain existing tasks using the Windows Task scheduler. For more information, start here at the [Microsoft Task Knowledge Base.](#)

Create a New Scheduled Task
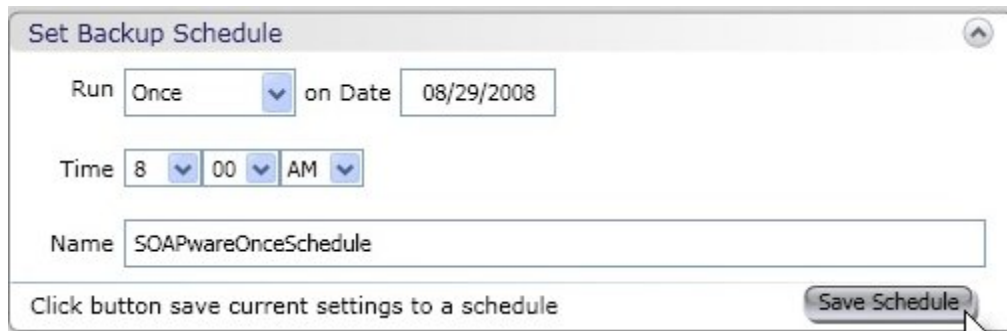

After setting the backup or maintenance information, click on the "Backup" button in the top left hand corner. Expand the "Set Backup Schedule" tab by clicking on the down arrow icon.

1. **Run:** Under the Run drop down, you may choose the schedule run type from Once, Daily, Weekly or Monthly. Different options will appear depending on the type of schedule selected.
2. **Time:** Set the time for the task to run. This should be a time when there is no database activity.
3. **Name:** Name the schedule so that it will be unique within the Windows Task Manager. If there is already a task with the same name, it will ask if you would like to overwrite the existing task.
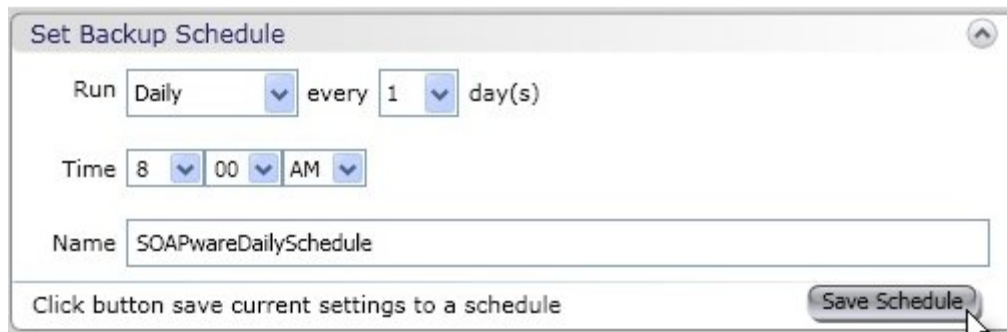
Run Once

This option will run the task only once on the specified day and time.
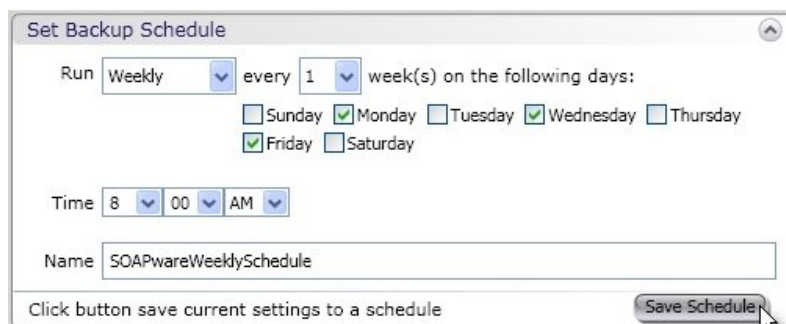
Run Daily

This option will run the task daily. A user can choose to skip a number of days.

Run Weekly
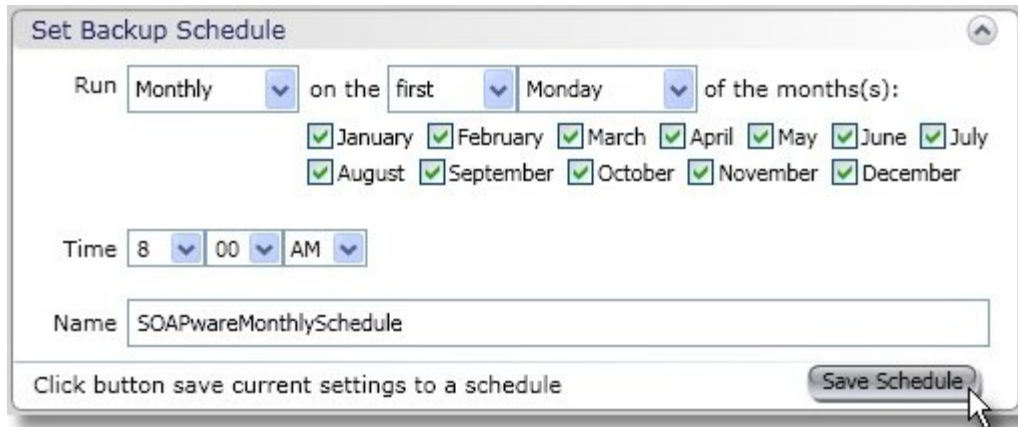
Running a task weekly allows a user to choose which days of the week to run. A user may also skip weeks.

Run Monthly

A monthly task allows a user to set the task to run once a month on a certain day. A user may check the months to run the task.
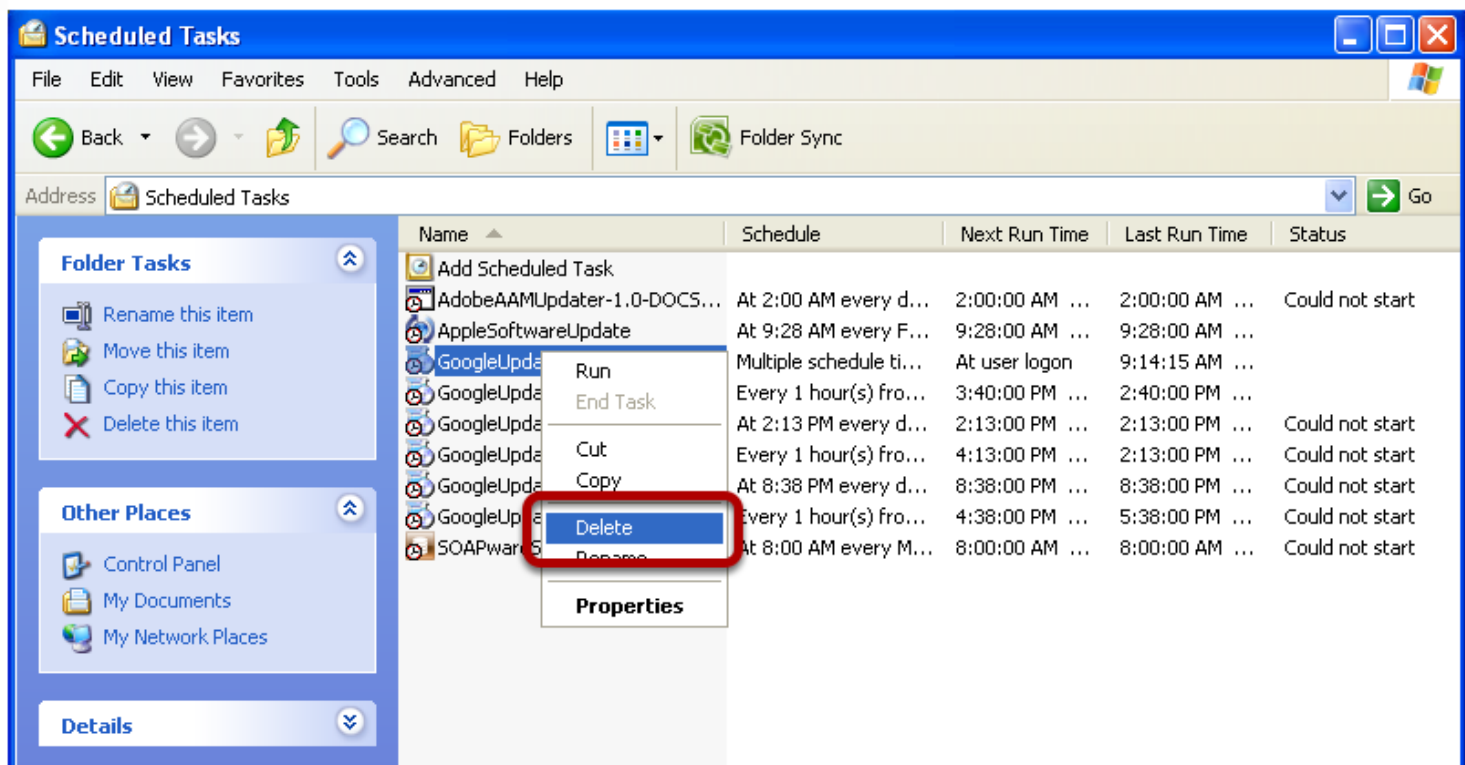
Change Existing Schedule
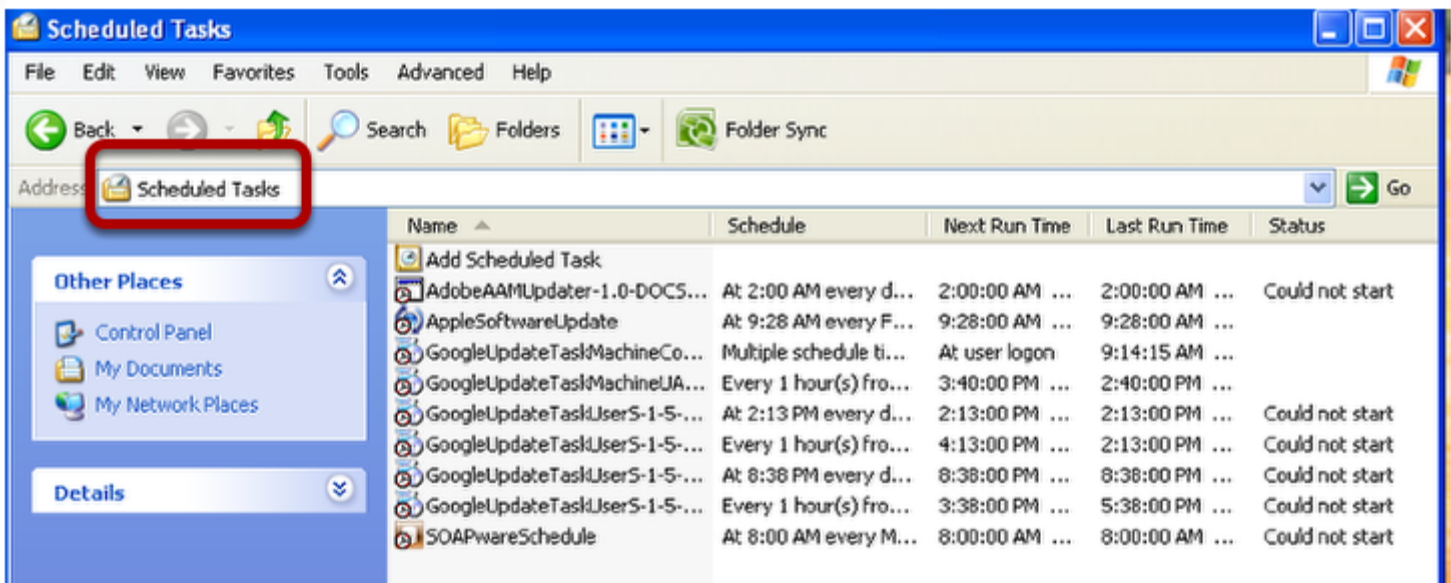
To change an existing schedule, a user would simply setup a new schedule with any new backup or maintenance or schedule data, and give the same schedule name as an existing task. This will overwrite the existing task with the new information.

To find a list of a user's existing schedules, look in the Windows Task Scheduler for the tasks. Go

to the Windows Start menu, then open the Control Panel. Open Scheduled Tasks, and it will list all the current tasks. A user may edit these directly to change the schedule, but to change the backup or maintenance parameters, a user must use the DataManager and overwrite one of the tasks.

Delete Existing Schedule

To delete an existing schedule, open the Scheduled Tasks control panel as mentioned above. Right click on the task and choose Delete.

Data Manager Log Files

Log files can give the user details on how tasks are running. They provide information about what tables were used and any warnings or errors which may have occurred. Each time the DataManager is used, either in the GUI or in a scheduled task, it will create a log file of the events.

Find the logs where DataManager is installed. The default install location is C:\Program Files (x86)\Soapware\DataManager\Logs.

The Logs directory will only keep the last 10 log files so there is no need to clean out this directory or to worry about it filling up. If a user plans to keep a log file for support or other needs, be sure to move it out of this directory, or it could be deleted as more log files are created.

SOAPwareXchangeHL7 and SOAPwareXchange

Users who are running either the SOAPwareXchangeHL7 or SOAPwareXchange, must NOT be running when a backup via Data Manager is running. If a user has a scheduled backup set, then both Xchange and XchangeHL7 must be not be running. This can be accomplished by using the SOAPwareXchangeHL7 & SOAPwareXchange Command Line article to both stop and start around a Data Manager scheduled backup.

IP Addresses and domains used by SOAPware

SOAPware uses several domains to go out and send ERXs, faxes, register your license, etc. Sometimes firewalls or proxy servers require allowing access to these domains for SOAPware to function normally.

Firewall Exceptions needed

Firewall exceptions can be made on a single entry (216.176.33.0/24) or all web services can be cleared one by one limited to port numbers.

IP's for all Web services used by the application itself will be on 216.176.33.0 – 216.176.33.255 (216.176.33.0/24) port 80 and 443.

IP's for all possible services would be 216.176.32.1 - 216.176.47.255. (216.176.32.0/20)

Single firewall exceptions

If single entries are needed see below list (current as of 11-1-2009).

#Electronic Prescriptions
216.176.33.119   swwebservice1.com   Port 443

#RxHub
216.176.33.171   rxhubpro.mysoapware.com Port 443

#Web site
216.176.33.123   www.soapware.com Port 80 and 443

#web site
216.176.33.123   soapware.com Port 80 and 443

#Faxing service
216.176.33. 219   fax.mysoapware.com Port 443

#Customizations Library
216.176.33.61   Lib.mysoapware.com Port 80 and 443

Drug Interactions
216.176.33.147   swwebservice4.com Port 80 and 443

Clinical Knowledge
216.176.33.107   proxy.mysoapware.com Port 80 and 443

#Licensing Server and Bug Reporting Port 80 and 443
216.176.33.27   lic.mysoapware.com

#Error reporting (FogBugz) Port 80 and 443
216.176.33.90   swwebservice2.com

#Bug Reports (HelpDesk) Port 80 and 443
216.176.33.118   helpdesk.mysoapware.com

#Swoogle (index for soap) Port 80
216.176.33.210   swoogle.mysoapware.com

Soapware CONNECTION FAILURE error upon login

Having problems with soapware opening just on ONE machine during login where as soon as you login it gives you an error stating, **"DetailMessage= 'CONNECTION FAILURE'".** In these cases it is usually a problem with a firewall setting most usually on that particular machine. If you are getting this error on most of the computers in your office then it is probably a different issue than this.
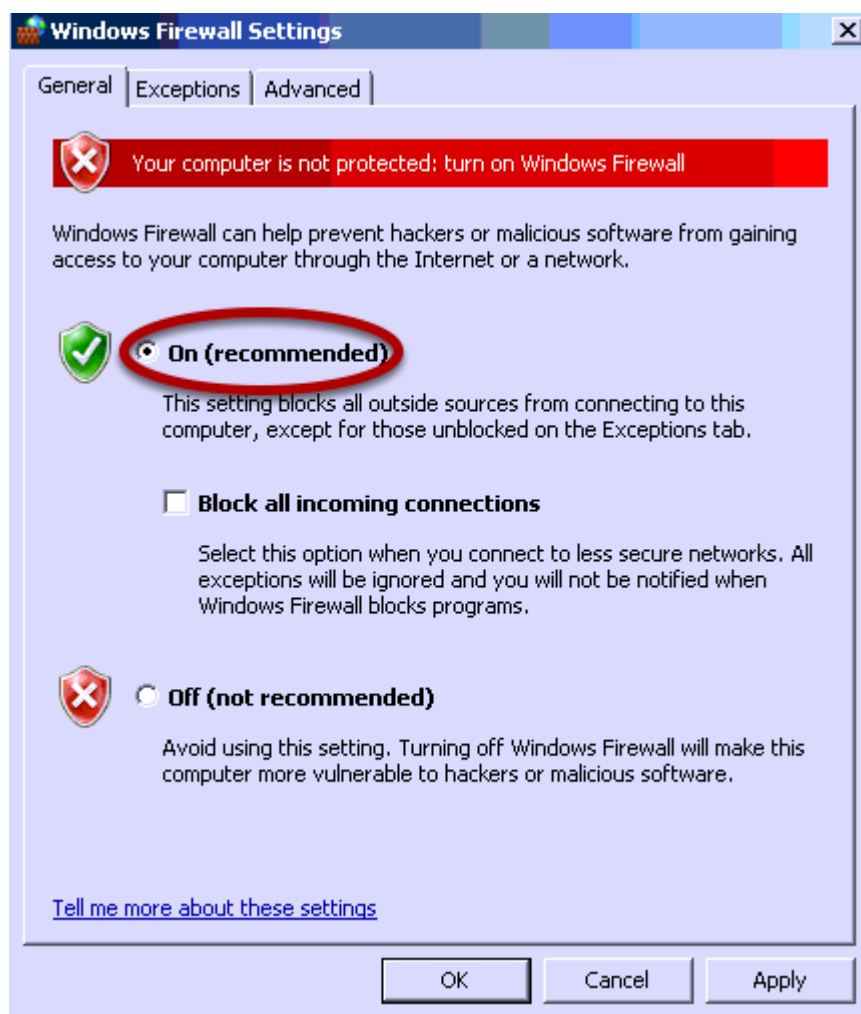
> **As soon as you login to SOAPware on this machine it quickly throws an error featured in the image below.**
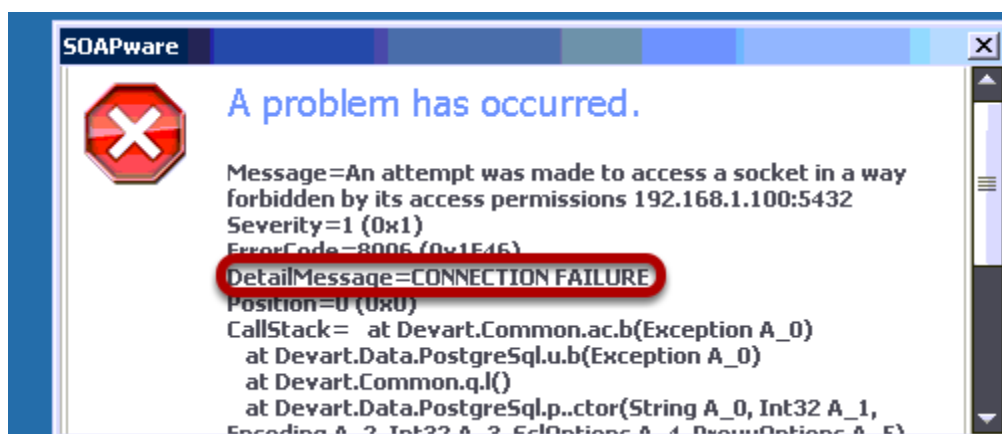
1) In most cases, this error is due to some type of firewall being set on the machine where you are experiencing the problem. What we'll need to do is go in and either turn off the firewall settings or add the soapware port to be allowed through the firewall.

There are multiple ways of getting into the windows firewall in order to configure it

1) Go under Start>Control Panel>Windows Firewall. It will then bring you to this screen

2) Go under Start>Run and type in firewall.cpl, then hit enter and it will bring you to the same dialog box

(Note that if you're on Windows Vista you may have to click 'Change Settings' first when using the first step before it brings you to this same screen.)

Configuring Windows Firewall
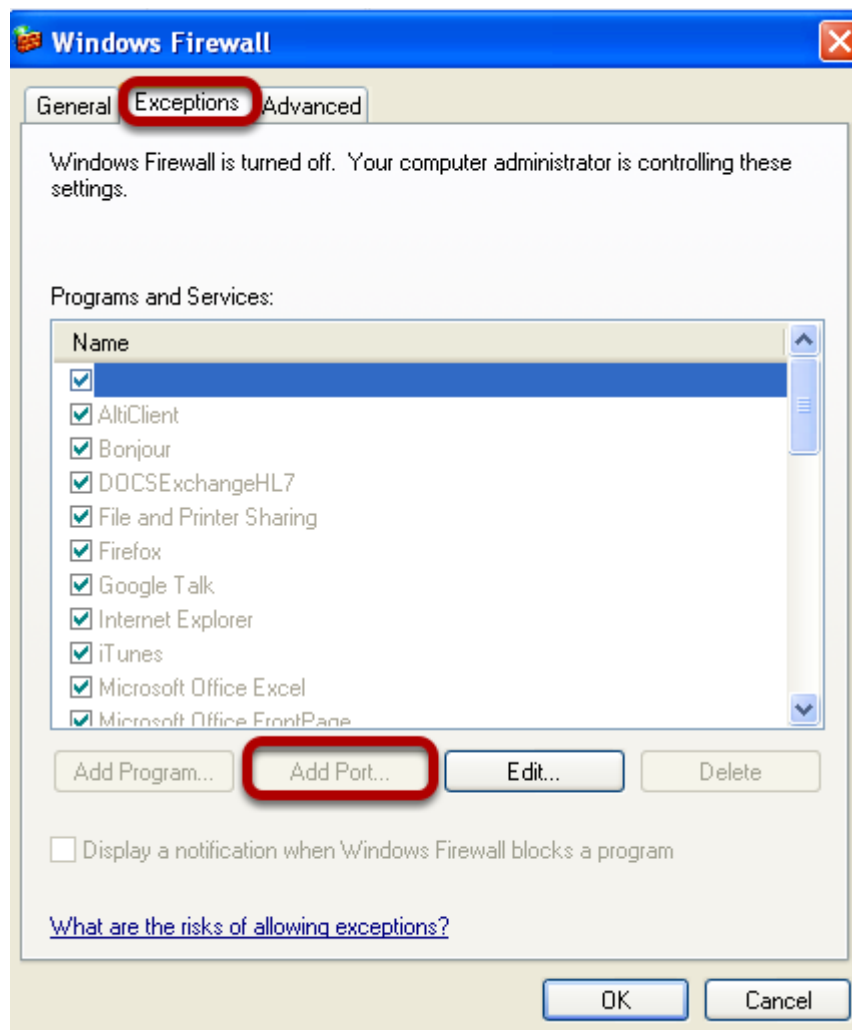
This Step is only required if the windows firewall is turned 'ON' from under the General tab.
Under the 'Exceptions' tab we will just want to add the TCP port that soapware runs on so that it can bypass the firewall.

1) From this screen we will want to hit "Add Port"

2) This will bring us to a screen that asks for a description and the port number. Any name for description will suffice (We usually use Soapware for description). The Port number by default is set to 5432 unless otherwise specified during the installation of the database.

3) We'll want to make sure that TCP is checked as opposed to UDP and then hit Okay

Other Firewalls That Could Be Causing the Problem

Other firewalls and things that we have seen that stop soapware from connecting include McAfee, Norton, and sometimes other anti-virus programs that include firewalls of their own. To get around this you can either turn off the firewall or we can add that same TCP port (5432) under the settings of the firewall. Settings differ depending on the anti-virus program that you're using.

If there are no firewalls turned on and you are still experiencing the same problem, please give support a call at 1-800-455-7627 extension 3 or you can email them at support@soapware.com.

Unable to Connect to SOAPware Server

There are two settings in PostgreSQL's configuration files that can affect SOAPware running on client computers. If you are not able to run SOAPware on your clients and connect to the server, it is possible that you need to make the proper changes in your PostgreSQL configuration files located on the server.

There are two places to look to make sure PostgreSQL is configured to allow connections from client computers. On your server computer, perform the following steps:

1. Check the pg_hba config file

```
host    all    all    127.0.0.1/32    md5
host    all    all    0.0.0.0/0       password
```

1. Click on Start, then All Programs, PostgreSQL 8.x, Configuration Files and Edit pg_hba.conf.

2. Scroll to the bottom of the file. You should see two lines under # IPv4 local connections that appears as shown in the image above. *Note: If you do not see the second line, type it in just like it is displayed in the image above.*

3. Click on File > Save. You can close the file now.

2. Check the pstgresql config file

```
# - Connection Settings -

listen_addresses = '*'
```

1. Click on Start, All Programs, PostgreSQL 8.x, Configuration Files and Edit postgresql.conf.

2. Scroll down just a little bit until you see the information as shown in the image above. Make sure the *listen_addresses* line appears exactly as shown in the image. If it has a pound sign (#) in front of it, remove the pound sign. If an asterisk (*) is not in between the two single quotes on

the right side, change it to an asterisk.

3. Click on File > Save. You can close the file now.

3. Restart the PostgreSQL Database Server (if changes were made)

If you made changes to either file, then you must restart the PostgreSQL Database Server to force the changes into effect.

1. Click on Start > All Programs > PostgreSQL 8.x > Stop Service

2. After the previous window closes, click on Start > All Programs > PostgreSQL 8.x > Start Service

Run SOAPware

After making the above changes, try running SOAPware on your clients.

If SOAPware still doesn't connect or these configuration files were already correct when you checked them, it is possible that a firewall could be preventing a successful connection. A firewall on your server or any of your client computers can prevent a connection, so make sure and check each computer. For SOAPware to function, it needs to communicate over port 5432. Make sure this port is open in your firewall settings.