



Scholastic ONLINE Information System
for the Web

Installation

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If your institution has chosen the SONISWEB® Hosted Solution, the installation is done for you as part of that service. You may find the network setup and security on pages 45 through 46 useful. Otherwise, you don't need to use this manual.

This text tells you how to install SONISWEB® for the very first time. If you have SONISWEB® installed and are upgrading to a new version, this is not the manual for you. Use the "Administration" manual for upgrading.

This text focuses on the work done by your information technology professionals. Since you install SONISWEB®, ColdFusion™, SQL Server™, and Report Builder you need guides for installing them. This text covers SONISWEB® with some hints for installing the other two. ColdFusion™ and Report Builder installation information is found at www.macromedia.com/software.

After installation you configure SONISWEB® with your user security profiles, your name and address, your financial transaction codes and grading standards, etc. This is covered in separate documents. See "Companion Texts" on page 6.

June 2006

Systems, Inc.

The logo for RJM Systems, Inc. It features the letters 'R', 'J', and 'M' in a stylized, overlapping blue font. To the right of the letters, the words 'Systems, Inc.' are written in a blue, italicized serif font.

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(Installation.doc - 06/02/06 1:25 PM)

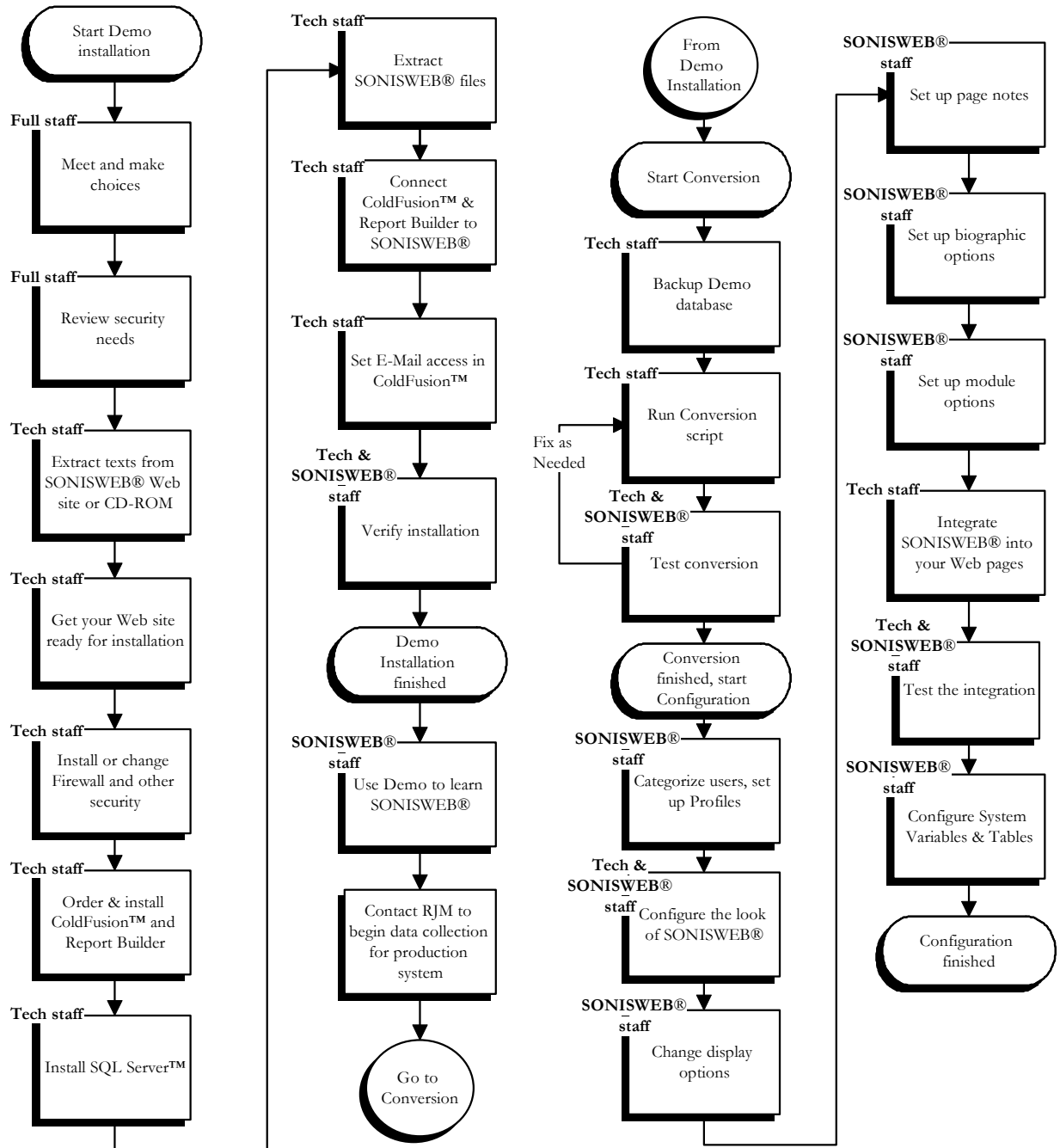
NEW IN THIS EDITION

June 2006 Change

- Correction to Figure 27 “ColdFusion™ Administrator”, page 22. The ODBC driver not the SQL Server should be selected.

March 2006 Original Release

- This edition is for SONISWEB® version 2.0. A few of these changes were also added to version 1.4.
- Figure 60 Login Displays and Figure 61 Typical SONISWEB® Page, page 41.
- There is no longer a requirement for Crystal Enterprise unless you want to use the old reports. The reports have been rewritten in the ColdFusion™ Report Builder. Those have “(RB)” following their names. The older Crystal Reports™-Enterprise reports (without the “RB”) are still available in most cases, but you need to buy Crystal Enterprise to use them.
- “Setting E-Mail Access in Cold Fusion” page 25.
- “Setting the Report Builder Connection”, page 26.
- “System Requirements”, page 43.
- Table 1 “Recommended Hardware and Software”, page 44.



• Figure 1 Demo Installation (left) and Conversion to Production (right)

SETTING UP SONISWEB®

Installing a New Version vs. Your First Installation of SONISWEB®

If you already have SONISWEB® installed and running and you are upgrading to a new version, this is not the text to use. Use “Administration” and “Installing Notes” for the new version instead. This “Installation” text may be useful to you if you are making significant changes, but it is primarily for totally new installations of SONISWEB®, not for version changes.

If you are using the SONISWEB® Hosted Solution, the RJM Systems support staff installs the system for you on that server. You do not need this manual.

Your First Installation of SONISWEB®

Before beginning installation, contact SONIS support at 800-353-9093 or by e-mail at

support@sonis.com.

Ask for any new tips, software, or documents, and schedule consultation time with the RJM staff.

Installation Summary

Figure 1 is a visual summary of the process.

1. Prepare your server to install SONISWEB®. This includes setting up security, allocating disk space, and buying and installing the software.
2. Install the Demo (demonstration) database. Part of this is downloading the files from the SONISWEB® site, getting the texts, and installing the software.
3. Use the Demo database to become familiar with SONISWEB®. You should add people, courses, sections, do registration, etc.
4. Work with the RJM Systems staff to define your needs. Their knowledge of SONISWEB® is joined with your knowledge of your institution to set your configuration parameters.
5. Convert the Demo database to your production database (Figure 1). This cleans out the demo database leaving only a few “seed” records and required default values in the tables.
6. Configure the numerous SONISWEB® tables to contain the values needed by your school.
7. Enter your faculty, staff, course and student data into your production database.

Companion Texts

This text leads you through installation. The texts are in the documentation folder that you extract, see “Downloading”, page 9.

For diagnosing:

- “Messages, Errors and Diagnosis” (MessagesErrorsDiagnosis.pdf)

For installing and configuring, you use these texts:

- “Browser Settings” (Browser Settings.pdf)
- “Security Checklist” (SecurityTips.pdf)
- “System Variables Configuration & Maintenance” (SystemVariablesConfiguration-Maintenance.pdf)
- “Table Configuration and Maintenance” (TableConfigurationMaintenance.pdf)

For customizing, you use these texts:

- “Custom Fields, Web Pages, and Colors” (CustomWeb.pdf)
- “Report Customization” (ReportCustomization.pdf)

Security and Privacy of SONISWEB® Records

In your offices and on your local area network (LAN), you control security by controlling who can attach to your LAN and who has access to your offices.

Review the SONISWEB® text “Security Checklist”. It covers the need to protect your SONISWEB® directories, locking down your internet software (e.g., IIS), and using SQL authentication to control database software. You should review all the guidance in that text.

Once the system is accessed from the Web, you have put private student, faculty and staff records in a very public – and occasionally unfriendly – place. In “Getting Your Web Site Ready for SONISWEB®” (page 7) and “Typical System, Security, and Firewall Placement” (page 45) we discuss some of the choices you make to assure the security of your records. Think of your records as access to your bank account and secure them accordingly. There are secure systems that support financial transactions over the Internet, so there is lots of knowledge on how to do it.

RJM Systems, Inc. is not responsible for your security. You are expected to employ or contract with people who can knowledgeably advise you on your security needs and see to their implementation. This includes periodic tests of your system to see that it remains secure. By installing this system, you agree to hold RJM Systems, Inc. harmless in this regard.

Decisions Before Installation

The good news is that SONISWEB® gives you lots of options. You can use any Web server¹ hardware and software that supports ColdFusion™, SQL Server, and Report Builder (see www.macromedia.com/software/ and www.microsoft.com/sql). If you don’t already use

¹ See “System Requirements” on page 43 for the systems used in testing SONISWEB®.



them, you'll typically install a server version of Windows™ and SQL Server™. You decide how you want to use firewalls and other security measures.

We recommend that you meet with the technical staff and the administrators of SONISWEB® to make those decisions before installing SONISWEB® . Since some of these decisions affect security and privacy of records, we suggest including those people in your organization with security responsibility.

Installing and Setting Up the SONISWEB® Demo System

As shown in Figure 1, the first process of installing is to get your Web site ready, acquire and install ColdFusion™ and the Report Builder then link them to SONISWEB® databases.

Getting Your Web Site Ready for SONISWEB®

SONISWEB® allows access to your databases of important and – in some cases – sensitive information. You need to set up access and security to your Web site before installing SONISWEB® .

1. Select or train a staff member or hire a contractor with the skills needed to install new functions, build database links and manage a Web server.
2. Set up LAN, server, server software (e.g., IIS) security using the text “Security Checklist” as a guide.
3. Set up and/or check your Firewall, login and other standard security for your Web site. If you do not have Web access to a working school database now, you will with SONISWEB®. For advice on placement see “Typical System, Security, and Firewall Placement” on page 45. See also “Internet Explorer” page 8.

SONISWEB® depends on up-to-date Web security to prevent accidental or malicious attacks on your SONISWEB® databases.
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4. If you do not have a Web server for SONISWEB®, install the server software including IIS or its equivalent. This becomes the “Web space” in which SONISWEB® is installed and operates.
5. Check your installed Web support software against the requirements for ColdFusion™ MX and Report Builder. Go to www.macromedia.com/software/ or www.macromedia.com/support/ for the requirements. If necessary, change your installed Web software and/or hardware to meet those requirements. SONISWEB® uses ColdFusion™ as the link between the Web user and the databases.
6. Map your drives and paths as required by your Web server.
7. Set up your permissions in your Web server and/or Web server operating system.

Internet Explorer Web Browser

Internet Explorer 5.1 or later is the only Web browser² supported for administrative users. There's a problem though; it has an "autocomplete" feature that saves passwords for you. Once you save the password, the next person using that computer can enter your social security number and any PIN and get your records. This defeats the privacy protection for those using lab or other shared computers. The computer looks at your ID, checks its saved password list for your PIN and then overrides the PIN that was entered on the form with the saved version.

Web browsers can cause you to see old data rather than the most recent changes you've made to the database. You can solve that by proper setting of the cache options.

See "Browser Settings for Internet Explorer" on page 31 and the SONISWEB® manual "Browser Settings" to get your browser properly set up.

Ordering and Installing ColdFusion™ and Report Builder

You must have administrator permissions to do most of the tasks that follow.

1. Order ColdFusion™ MX³. With a credit card you can download it from <http://www.macromedia.com/software/>. You can also order it from a mail order source or local software store.
2. Download a copy of ColdFusion™ Report Builder to view and/or modify reports. It's available at no additional cost from the Web site.
3. Install ColdFusion™ using the instructions that come with the package.
4. Check for the latest installation notes at <http://www.macromedia.com/software/>
5. Test the successful installation of ColdFusion™ using the advice and methods recommended by Macromedia.

These instructions are based on our installation under Windows™ NT with Service Pack (SP) 4, Windows™ 2000 Server with Service Level 2 fixes, and Windows™ 2003 Server with the latest fixes running Microsoft® IIS with SQL Server™ 2000 as the database. If your system runs under a different operating system, uses an Internet package other than IIS or a different database system, you need to interpret this guide to fit your system.

RJM uses the Microsoft's SQL Server™, standard SQL statements, and stored procedures so other SQL-compatible database managers may work, but we have tested only SQL Server.

² Students, Faculty, Alumni/ae, Applicants, etc. can use other browsers. Although IE is the only browser formally tested, less extensive tests have been made with Netscape® 6.2 and 7.1, Firefox™ 1.0, Opera 7.0. and Mac OSX Safari. In these limited tests they work reliably but with some anomalies in color rendering and initial table setting. See the SONISWEB® manual "Browser Settings" for more information.

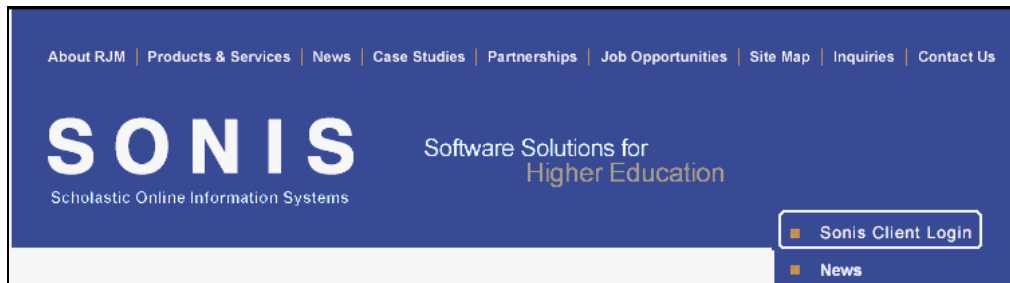
³ See "System Requirements" on page 43.

Downloading and Installing SONISWEB® Databases and Software

Downloading

You download the programs, database, and texts from RJM Systems' download site using the User Name (ID) and Password issued to you. Access the SONISWEB® file download Web site:

www.sonis.com

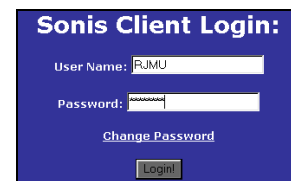


• Figure 2 SONIS Web Site with Login Choice

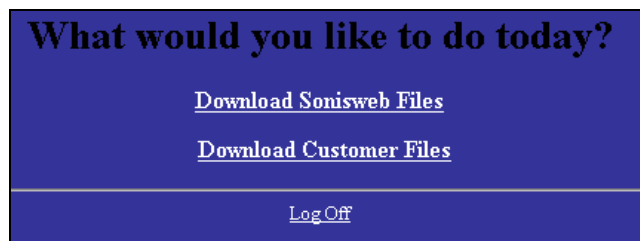
You see Figure 2 on the top right. Click the login phrase.

Enter your User Name and Password then click the Login button in Figure 3.

You see a display like Figure 4. Your list may be longer or shorter than this, depending on what you need.



• Figure 3 Login for Download



• Figure 4 Download choices

From a note or a telephone call, RJM Systems staff tells you which files to download.

<u>File Name:</u>	<u>File Size:</u>	<u>File Date:</u>
IRS1098T.pdf	425576	01/18/2006 05:09:13 PM
Readme1st.pdf	198546	08/25/2004 04:18:10 PM
SONISWEB_Described.pdf	588383	01/24/2005 01:32:07 PM
SONISWEB_Version_2_0_Release.pdf	1245261	03/03/2006 04:43:43 PM
SW200.zip	9142674	04/21/2006 10:04:20 AM
SW200CFC.zip	155588	04/21/2006 12:19:10 PM
SW200CFCPatch.zip	13215	04/18/2006 10:37:51 AM
SW200Det.zip	3995753	04/21/2006 11:34:21 AM
SW200Patch.zip	1371673	04/21/2006 12:53:59 PM
SW200Docs.zip	15541801	04/05/2006 04:21:55 PM
SW200TechDocs.zip	4231149	04/21/2006 01:34:51 PM

[Back](#) [Delete Files](#)

• Figure 5 Files to Download

The files in Figure 5 are the typical files to be downloaded. Click a file and your browser will download it. They're downloaded one at a time. Be patient, some are quite large and take several minutes to download even with a fast Internet connection. The files are:

- [Readme1st.pdf](#).
- [SW200Docs.zip](#)⁴; this contains the non-technical texts and other documents in PDF form. You need Adobe Reader 6.0 or newer⁵ to view and print these.
- [SW200TechDocs.zip](#)⁴; this contains the technical texts in PDF form. You need Adobe Reader 6.0 or newer⁵ to view and print these.
- [SW200.zip](#)⁴; this contains the SONISWEB® programs.
- [SW200CFC.zip](#)⁴; these are also SONISWEB® programs.
- [SW200Det.zip](#)⁴ is the demonstration database. If you already have a working database, you won't need this. (The database file inside this zipped file has a different name.)
- Patch or incremental change files suitable to your installation. [SW200Patch.zip](#)⁴ or [SW200CFCPatch.zip](#)⁴ are examples.

You need a "zip" file program to unzip or decompress the files. Two popular programs for Windows are WinZip® and PKZIP®. PKZIP® has a Linux version. You can download evaluation copies from these sites.

www.winzip.com

www.pkware.com

⁴ 200 is the version as in "Version 2.0". 140 is "Version 1.4", etc.

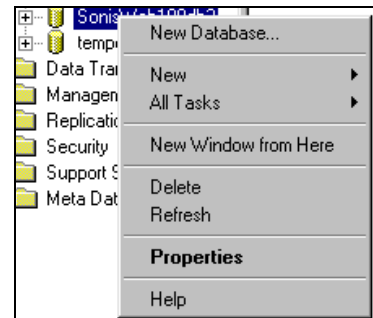
Installing the Demo Database

Review the SONISWEB® text “Security Checklist” to make sure you pick the right options to secure the database from inadvertent and malicious access.

If you currently have a database named SonisWeb200.mdf, back it up (“Demo Database Backup - Optional” on page 16), then delete it before installing this new version of it. To check, start SQL’s Enterprise Manager⁶ and navigate to your databases. Figure 12 is an example.

You cannot delete a database that’s being used. SQL will refuse – with an error message – to delete a database in use. See the procedure on page 18.

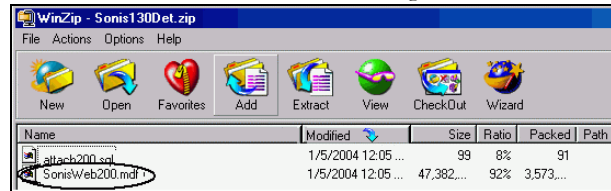
To delete it, click the name of the database with the right mouse button; you get a prompt like Figure 6. Click Delete. A confirming message will tell you that both the database and its log have been deleted. Both must be deleted. If the database is in use, Enterprise Manager will not let you delete it.



• Figure 6 Delete Database⁷

Follow these steps to install the database you downloaded.

1. You select only the database; see Figure 7.
2. Click Extract. You get a prompting display like Figure 8.
3. Navigate to the SQL Data folder. It is likely that the exact path to your Data folder of Microsoft SQL will differ from this example. The typical path is:



• Figure 7 Typical Contents of the Compressed (zip) Demo Database

`x:\Program Files\Microsoft SQL\MSSQL\Data` (see Figure 10)

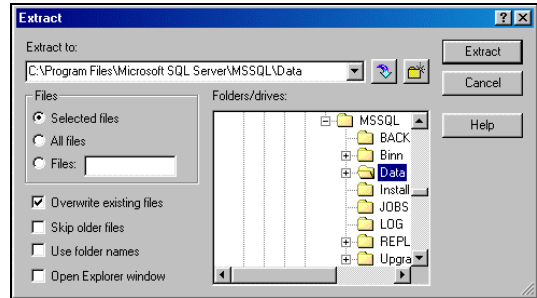
where *x*: is your root drive and *MSSQL* is your server name.

⁵ You can use Adobe Reader 4.0 or 5.0 to view and print them but they don’t have the search function for terms and words found in 6.0 and newer.

⁶ This is usually found by clicking the Windows Start button then selecting Microsoft SQL Server and picking the program from the list.

⁷ See “SQL Help” on page 43 for assistance.

4. Make a note of your SQL Server name since you will need it later.
5. The Selected Files button in Figure 8 is turned on by selecting only the database in Figure 7. If it is not on, return to the prior step and select only the database. The other file will be extracted later.



• Figure 8 Extracting Database7

6. Click the “Overwrite existing files” check box and remove the checks from the others as shown in Figure 8.
7. Click the Extract button in Figure 8.

Attaching Databases to SQL

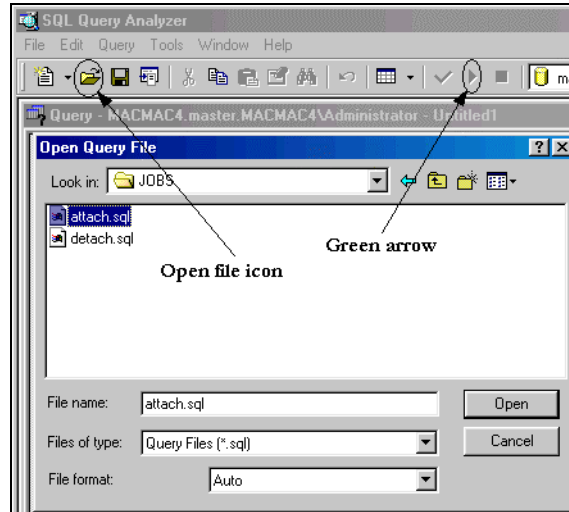
An “attach” script is included in the file Sonis200Det.zip as illustrated in Figure 7. It too needs to be extracted.

1. Select only the “attach” file.
2. Click Extract. You get a prompting display like Figure 8.
3. The Selected files button should be on. If it is not on, return to the prior step and select only the “attach” file.
4. Click the “Overwrite existing files” check box and remove the checks from the others as shown in Figure 8.
5. Navigate to the SQL Jobs folder. This is where Query Analyzer – the next step – expects to find it. Typically it is:

```
x:\Program Files\Microsoft SQL\MSSQL\Jobs
```

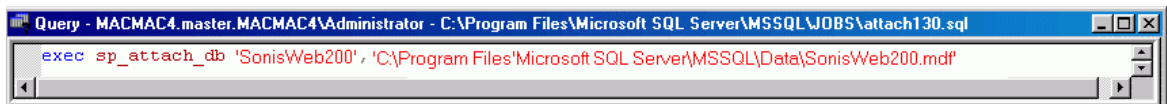
where *x:* is your root drive and *MSSQL* is your server name.

6. Click the Extract button in Figure 8.



• Figure 9 Query Analyzer File Open and Green Arrow

7. Start the SQL program Query Analyzer⁶. Open the attach script as illustrated in Figure 9.



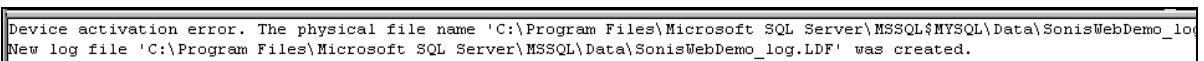
• Figure 10 Query Analyzer

Figure 10 shows what an attach script looks like. The syntax is:

```
exec sp_attach_db 'your-name-for-the-database', 'your-path-to-the-unzipped-database'
```

'your-name-for-the-database' is the name within the SQL server. Use the name SonisWeb200.

'your-path-to-the-unzipped-database' is the name of the file you just unzipped. SonisWeb200.MDF is typical.



• Figure 11 Query Analyzer Error Message

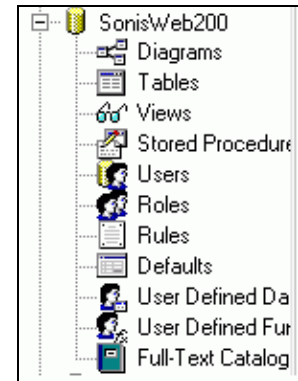
Click the green arrow (see Figure 9) for the attachment to be made. Normally you get a confirming message with a “Device activation error” referring to the log file. It is more a warning than a true error.

Other “Device activation error” messages are truly errors:

- The SQL Server name is not correct. That is the *MSSQL* entry in the path name: `x:\Program Files\Microsoft SQL\MSSQL`. Change the *MSSQL* entry to your SQL Server’s name and try it again.

- If the .MDF file was not successfully extracted to the Data folder, Query Analyzer cannot find it resulting in an error. Run the unzip process again.
- If you did not delete an existing copy of the SonisWeb200.mdf file and its log, you receive an error. You must delete the database and its log before attempting an attach.

To verify that the database is present, start Enterprise Manager⁶. If Enterprise Manager is already open, close and re-open it so it loads the new database. The SONISWEB® database appears in a list like Figure 12. If you do not see the database, check your use of Query Analyzer above. Make sure your path is correct in the attach script.



• Figure 12 Enterprise Manager List

As a further test, click Tables. You will see a list of the SONISWEB® tables.

Dual Servers: Linking an SQL Database on One Server to SONISWEB®-ColdFusion™ on a Separate Server

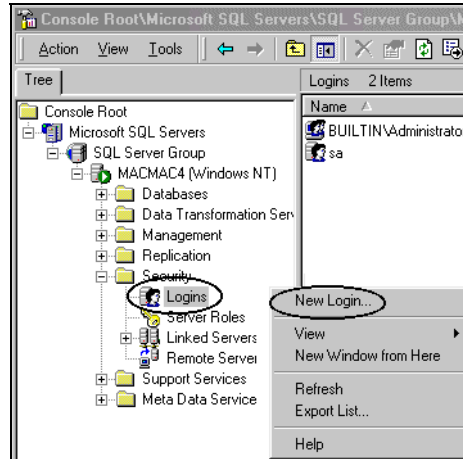
If you chose to put the SQL database on a different server from the one that serves SONISWEB® and ColdFusion™, you must set up a password and ID to link them⁸. That is done in three places:

- “Setting up the Database as an ODBC Source” on page 20 and in Figure 25. You deal with two files, SonisWeb200.mdf (the database) and SonisWeb200_log.ldf (the log).
- “Connecting ColdFusion™ Access to the Demo Database” on page 22.
- “Setting the Report Builder Connection”, page 26.

Once you have verified that the database is installed and accessible, set up the ID and password for it.

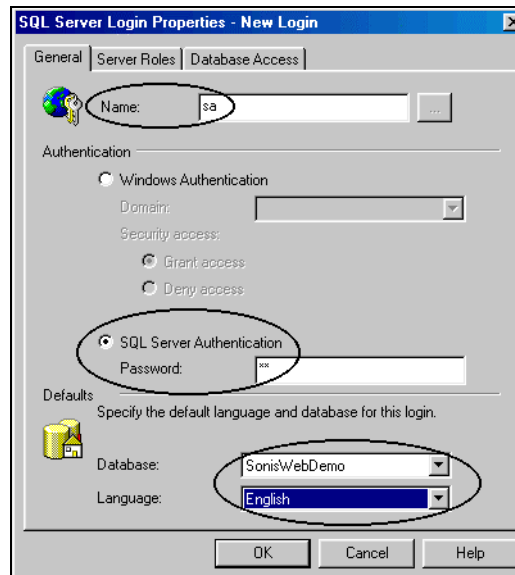
1. Restart Enterprise Manager if it is not already open.

⁸ IDs and Passwords can be used even if you have a single server. For a single server it is an option that adds some security. You must use them for separate servers.



• Figure 13 New Login for ID and Password

2. As shown in Figure 13, click the Logins icon with the right mouse button, then click New Login with the left mouse button. You get Figure 14.



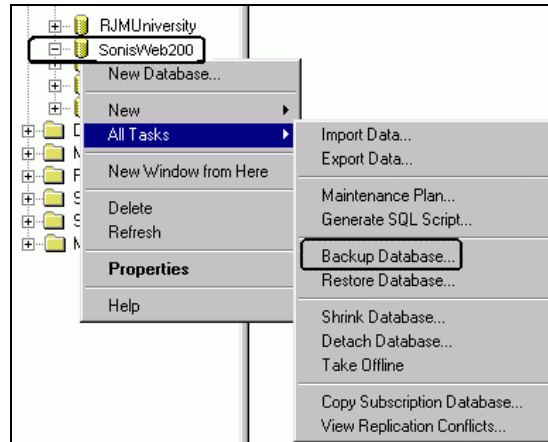
• Figure 14 SQL Server Login Properties

3. In Figure 14, enter the Name (later called a Login ID and Username), select the SQL Server Authentication radio button, enter the Password, use the pulldown to pick the name of the SONISWEB® database, and select the Language.
4. Remember the Name and the Password. You will use it later to link server access.
5. Click the OK button. If you receive no error messages, close Enterprise Manager. If you receive an SQL error message, follow its directions to resolve the error.

Demo Database Backup - Optional

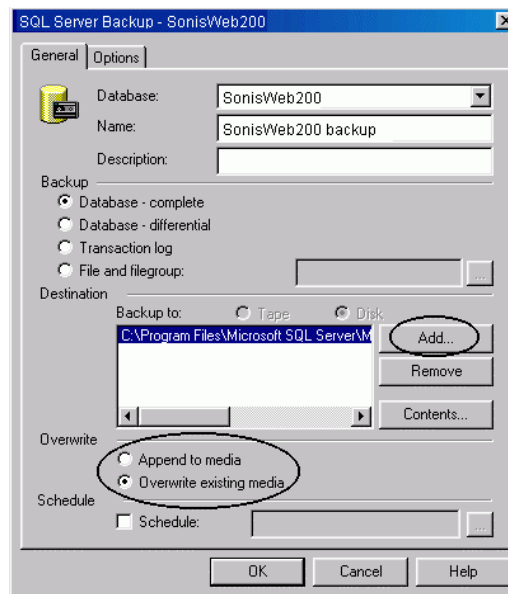
If you wish, you can backup the database you just downloaded. This is a typical process.

1. Select the database you just attached, SonisWweb200 (Figure 12). It will be highlighted.



• Figure 15 Backup Database

2. As illustrated in Figure 15, click the database with your right mouse button to get the list of functions.
3. Select Backup Database. You get Figure 16.



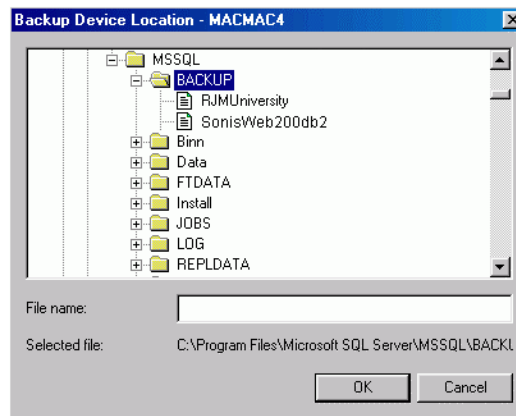
• Figure 16 Backup Location Display

4. Click Overwrite existing media.
5. Click the Add button. You get Figure 17.



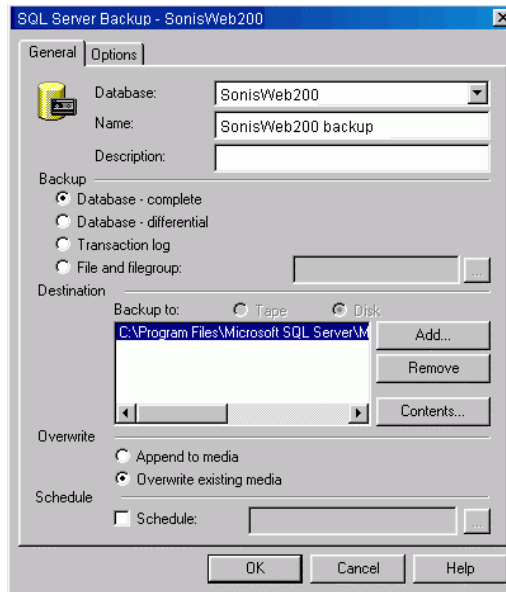
• Figure 17 Backup Destination Navigation

6. Navigate to the place you want the backup copy saved as illustrated in Figure 18.



• Figure 18 Backup Path

7. Figure 18 shows the nominal path. If you traditionally put your backups in another directory or device, you can change it to suit you.
8. Enter the backup name and path such as SonisWeb200BU_021506. You can click one in the list (Figure 10) but that will replace it. Make sure you'll never need the older version before you replace it.
9. Click the OK button. You see a progress display followed by a confirming message. You return to Figure 19.



• Figure 19 Backup Location

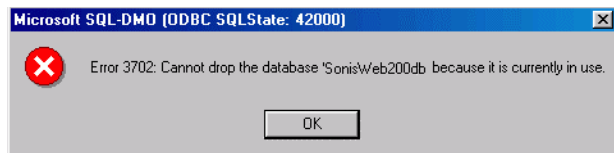
10. Figure 19 is like Figure 16 but with the backup path filled in. Click the OK button. You see a progress display followed by a confirming message.

Detaching a Database

This is an example of detaching the current database so it can be replaced by restoring its replacement. Your system may function slightly differently.

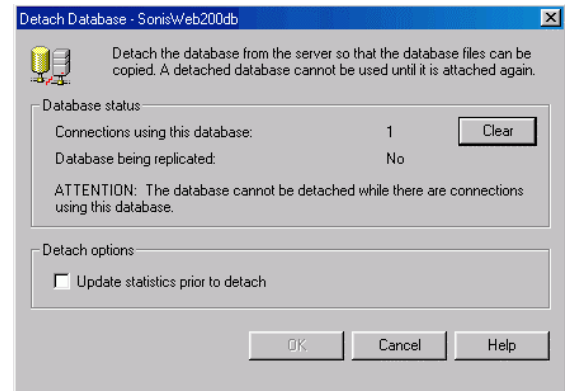
You attempt to restore and get Figure 20 as your reward. To continue you do the following:

1. Either wait until the day's work is done and no one is using the system or tell the users – either by e-mail or telephone – that you need to stop the system.
2. Click the database (Figure 15) with your right mouse button and select Detach.



• Figure 20 Cannot Delete Database

3. You get a display like Figure 21.
4. Click the Clear button to shut down the users currently using the system.
5. You get a display asking whether or not you want the users notified. Since you already contacted them by telephone or e-mail, click the No button.



• Figure 21 Detach Database

The “users” are actually the programs which may or may not send a note to those using them, so your e-mail or telephone call is the best way to inform the humans using SONISWEB®.

6. With “Connections ... 1” in Figure 21 replaced by “Connections ... 0”, you click the OK button and you get a detached-successfully message.

Setting up the Database as an ODBC Source

The process differs slightly if your SQL database is on a different server from your ColdFusion™ and SONISWEB® server. The added steps are shown on page 21.

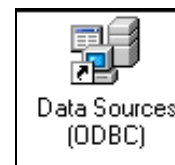
The database you installed now needs to be set up as an ODBC data sources with a name, commonly called a “System DSN”.

1. From the Start Menu, select the server administration or control panel. You know you have found it when you see the icon shown in Figure 22.
2. Select “Data Sources (ODBC)”; see Figure 22.
3. Select the “System DSN” tab.
4. Click the “ADD” button.
5. Select “SQL Server”. If you do not find these options, your ODBC driver is probably out of date. Check your version of WindowsNT, 200x⁹, or XP against the Microsoft Web site for recent updates.
6. Click the “Finish” button.
7. As shown in Figure 24 enter these values:

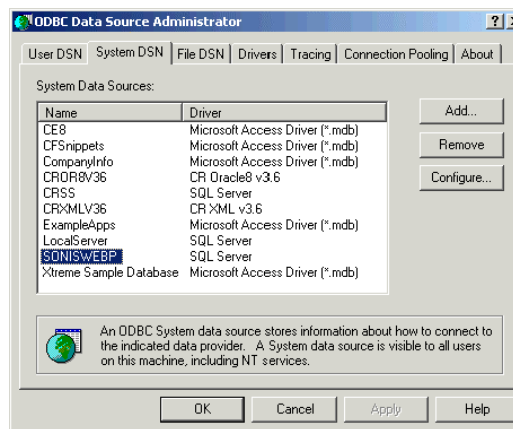
“SONISWEBP” in the “Data Source Name” field.

Enter your description such as “SONISWEB database tables” in the “Description” field.

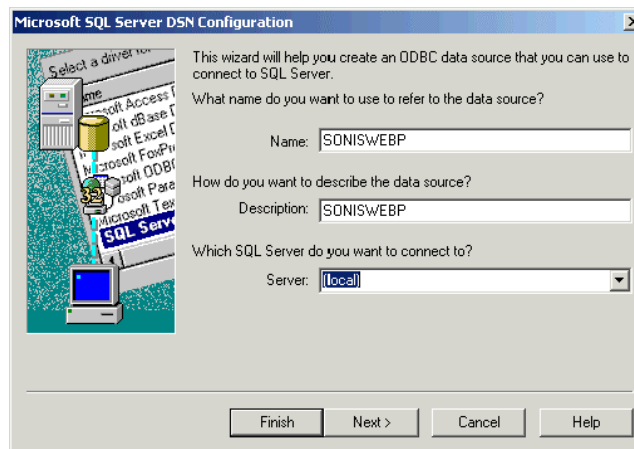
Select your SQL server from the drop-down list.



• Figure 22 ODBC Data Sources



• Figure 23 Database Connection

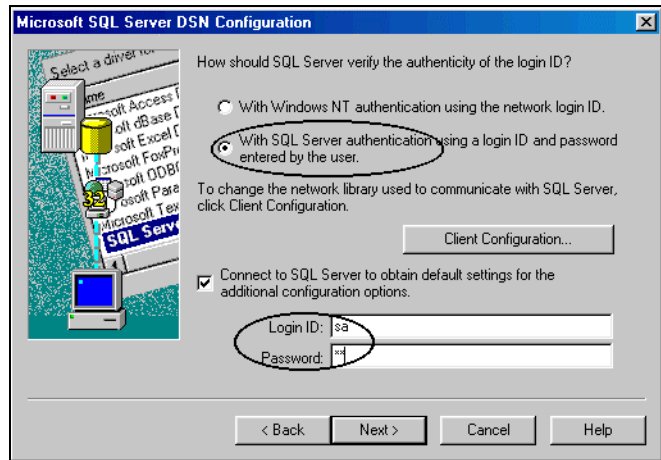


• Figure 24 Create New Data source - Select Driver

⁹ “200x” means the version of the server software as in “2000”, “2003”, etc.

Where SONISWEB® and ColdFusion™ reside on a the same server with your SQL database, go to the verification steps below. If they are on different servers, follow these steps.

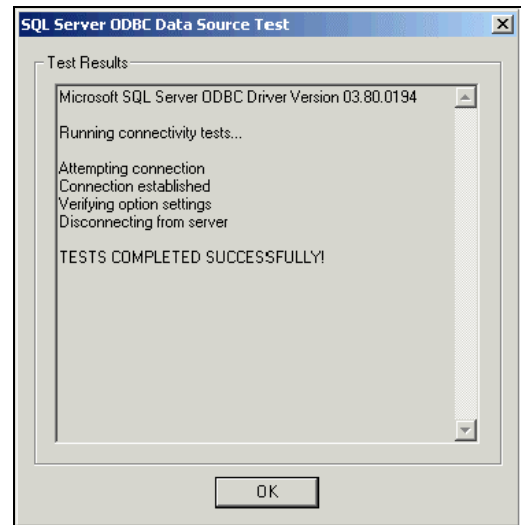
8. For separate servers⁸, click next in Figure 24. You see Figure 25.
9. For separate servers⁸, click the “SQL Authentication” radio button, then enter the Login ID and the Password in Figure 25. These must be exactly the same ID (called “Name”) and the same password you used in Figure 14 (page 15).



• Figure 25 Separate Server Authentication

10. Continue to click the Next and Finish buttons so that Windows runs a brief connectivity test.
11. You get a display like Figure 26 to confirm your connection.

The system account (Windows NT, 200x⁴, and XP only) must have “change” permission to the directories.

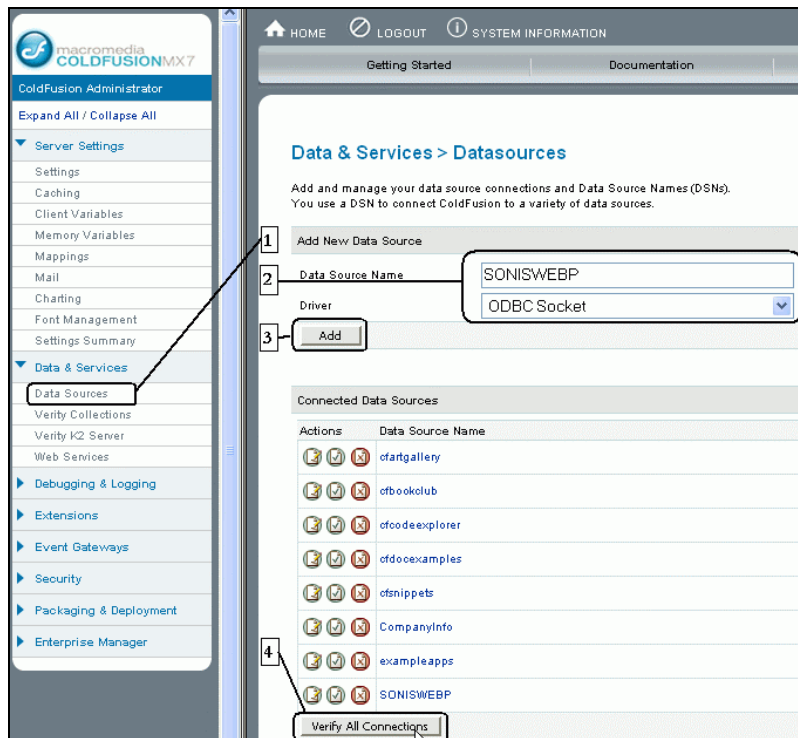


• Figure 26 DSN Connectivity Test Results

Connecting ColdFusion™ Access to the Demo Database

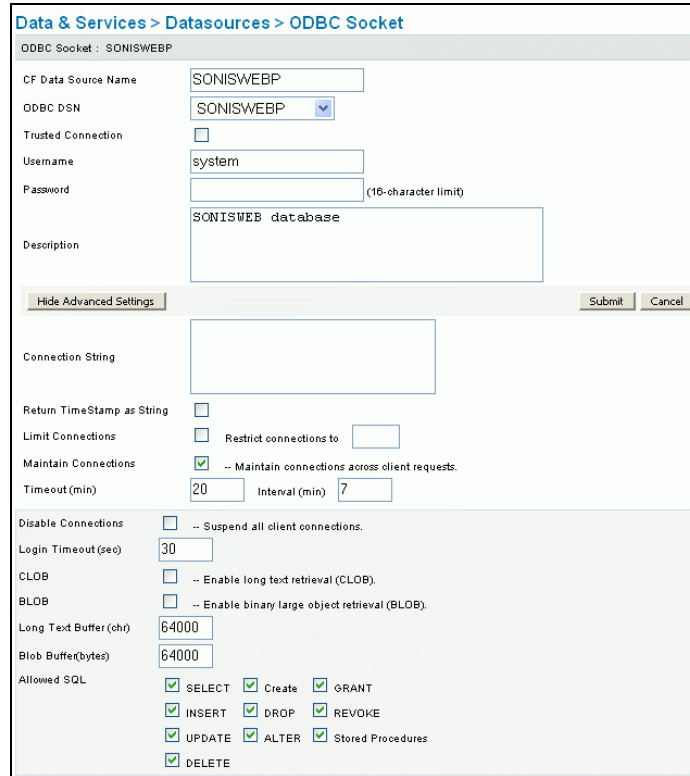
With ColdFusion™ and the SONISWEB® database installed, you connect the two and test the connection.

1. Start the ColdFusion™ Administrator. It is a server function so you access it via a browser. A common address for it is <http://127.0.0.1/CFIDE/Administrator/index.cfm>.



• Figure 27 ColdFusion™ Administrator

2. The sequence of buttons and entries is shown in Figure 27. Pick Data Sources from the function list on the left of Figure 27, see Figure 28.

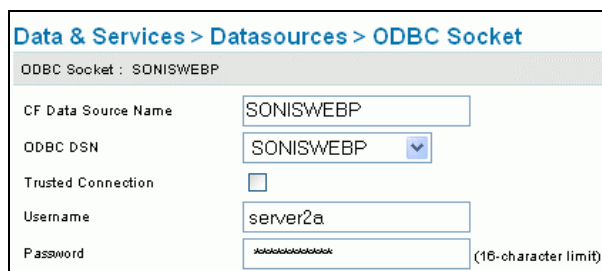


• Figure 28 Enter Data Source and Database Name

3. The Data Source Name must be SONISWEBP. Fill in the form and the check marks as shown in Figure 28.

Where you use separate servers for your SQL database and for SONISWEB®-ColdFusion™, follow these additional steps.

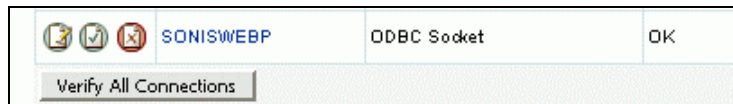
4. For separate servers¹⁰, click the “Show Advanced Settings” button in Figure 28.



• Figure 29 ColdFusion™ Username and Password Settings

5. For separate servers¹⁰, enter the Username and Password as shown in Figure 29 which is the center portion of Figure 28.
6. Click the Submit button in Figure 28.

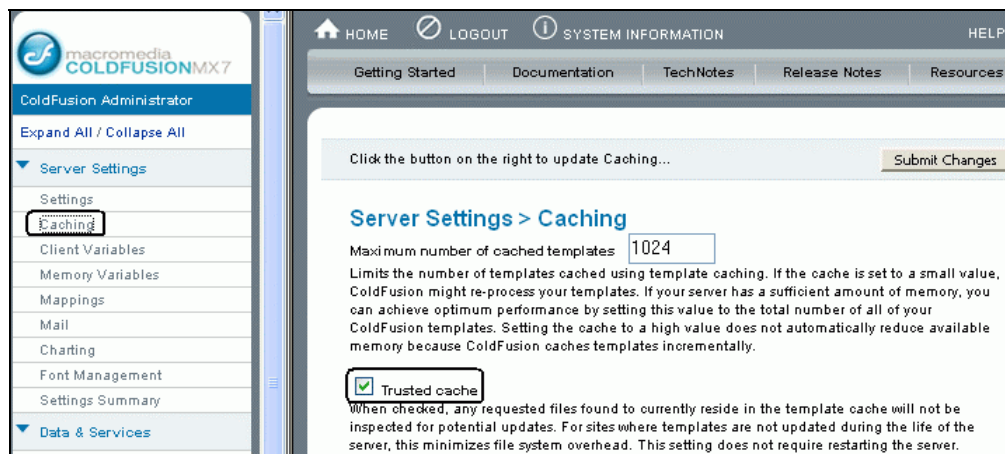
¹⁰ You can put SONISWEB® on one server and SQL and your databases on a different server. If you want to move from a shared server to separate servers, see the description in the SONISWEB® manual “Installation”.



• Figure 30 SONISWEB® Database Access Verification

7. After you click the Submit button, you get a list of data sources like that shown in Figure 27. They are in alphabetical order. You see the initial table with an OK for the SONISWEBP row in the table as shown on the right in Figure 30. If you get the dreaded Failed in the row, check your setting for the database and the setting in Figure 28.
8. The OK indication means that ColdFusion™ was able to verify connection to the SONISWEBP database.

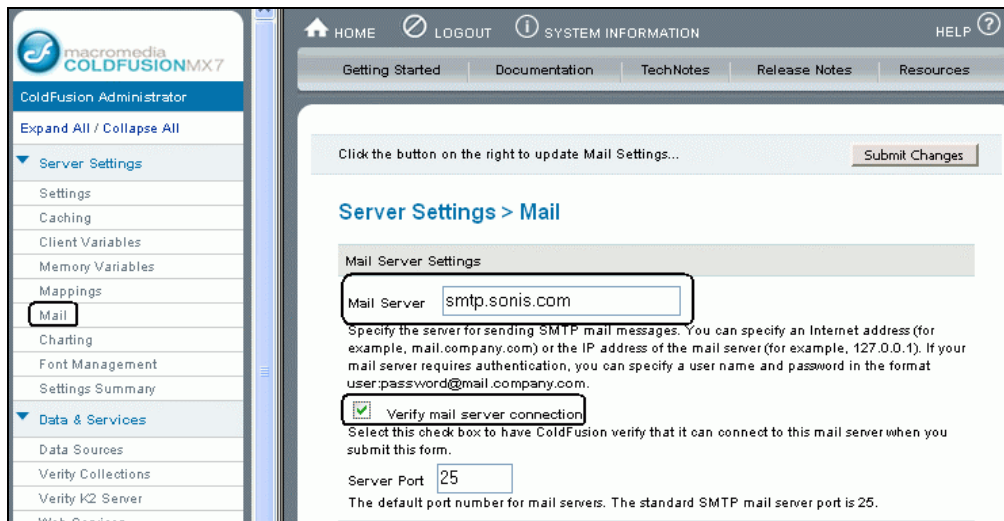
Setting ColdFusion™ Caching



• Figure 31 ColdFusion™ Cache Setting

ColdFusion™ has a caching option that can improve performance by keeping recently used SONISWEB® functions in a memory cache so it does not have to retrieve the function from disk storage. However, when you add new SONISWEB® functions they often do not work. ColdFusion™ continues to use the old, cached function. You turn caching on and off as shown in Figure 31. We recommend you turn caching off and leave it off. However, if you choose to use caching, remember to turn it off for several days after you add new functions. Otherwise, you will get telephone calls from your users saying “the new functions don’t work.”

Setting E-Mail Access in Cold Fusion



• Figure 32 ColdFusion™ E-Mail Access Settings

In order for e-mail to work you must use the Administrator options of the ColdFusion™ Server to set up e-mail. In the function list on the left of Figure 32, pick Mail, then enter your mail server address. You can also set various logging options. Use the details described in the ColdFusion™ documentation. Once set, the e-mail address the SONISWEB® administrator enters while configuring will be effective.

Setting the Report Builder Connection

An optional part of ColdFusion™, Report Builder needs to be “pointed” to the database tables it should use.

Full installation information comes with the download of Report Builder from the Macromedia Web site.

Click the Server Setup Wizard. You see Figure 33 where you click the highlighted plus icon to add a new “RDS Server” connection. Click the Next button for Figure 34.

In Figure 34 enter a description and the Host Name as defined for your system¹¹.

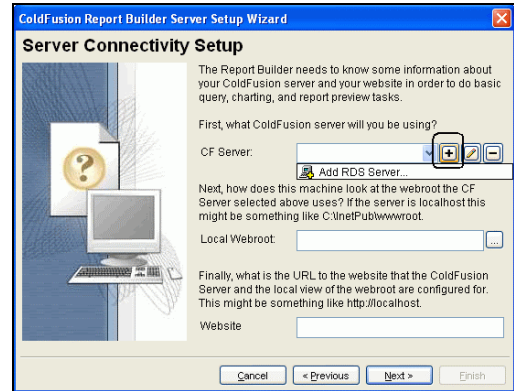
“RDS Security” should follow your security rules. “Prompt for Password” is usually left blank since your login to SONISWEB® covers your security. However your security rules may not permit that. If it is checked, every time you click a report, you’ll be asked to enter the password.

Click the “Test Connection” button to verify that the Report Builder is connected to the server. You see Figure 35.

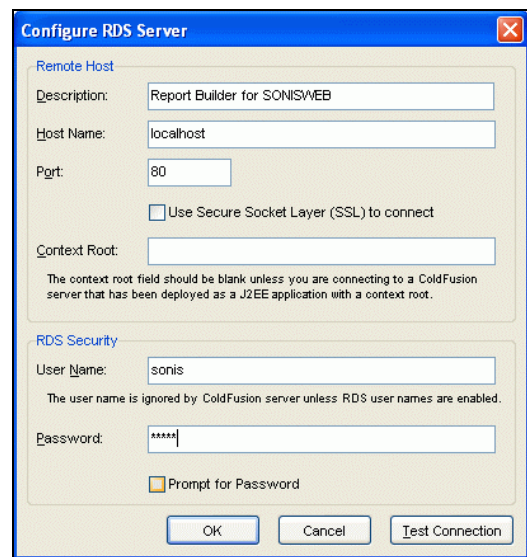
In Figure 34 you connected to the server but you’re not yet connected to ColdFusion™ and the database managed by that server.

Figure 35 is where you connect to the SONISWEB® database tables. Use either the browse button (highlighted in Figure 35) or type in the “LocalWebroot” name.

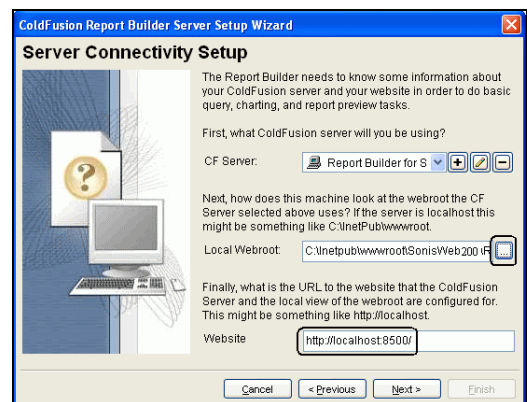
If not already present, enter the URL¹¹ for the Website you’ll be connecting to. For editing, adding, and testing reports, this is often



• Figure 33 Server Setup Wizard Step 1



• Figure 34 Server Setup Wizard Step 2



• Figure 35 Server Setup Wizard Step 3

¹¹ This is defined by the Information Technology staff. See them if you don’t know what to enter here.



`http://localhost:8500/.`

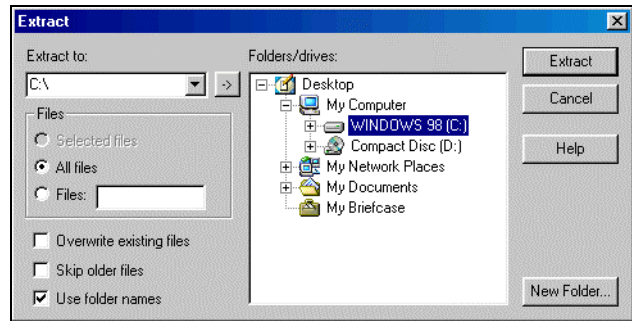
You can change this connection by clicking Edit and then Preferences while using Report Builder.

EXTRACTING THE SONISWEB® APPLICATIONS AND DOCUMENTS

Primary Applications (CFM)

The applications and texts go in the Windows server root (base) directories. That is built into the zipping of the files.

1. To store the applications in that standard location, start your unzip program, select extract and “point” to the root drive. In Figure 36 that was the C drive but your root drive will probably be different.



• Figure 36 Extracting Applications

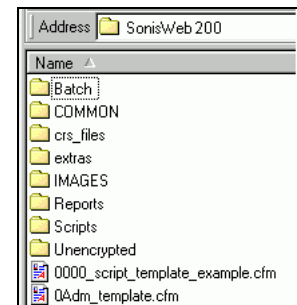
2. Make sure that All Files and Use folder names are selected as seen in Figure 36.
3. Click Extract to unzip the files and place them in the standard location.

The result is a folder structure that looks like Figure 37.

After extracting, the path to the applications and the documents will be:

```
x:\inetpub\wwwroot\SonisWeb200
```

where *x* is your root drive.



• Figure 37 SonisWeb Folder Structure

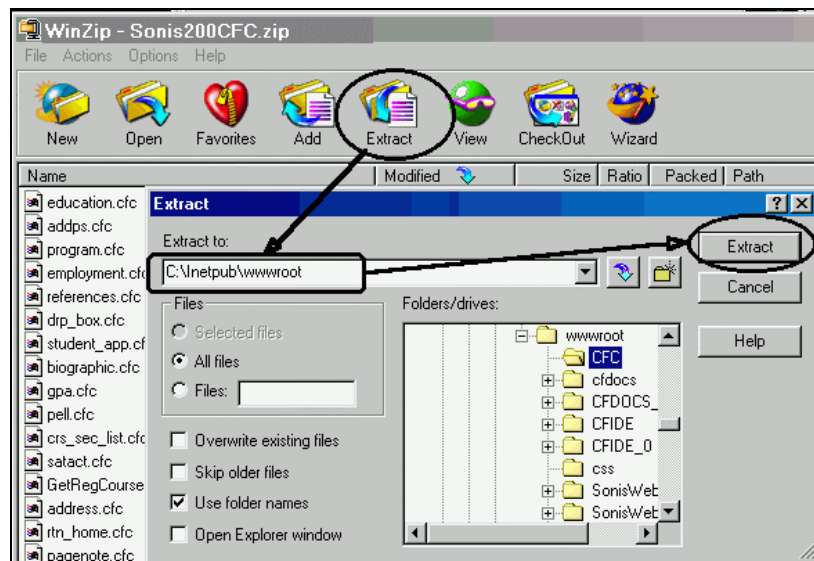
Supporting Applications (CFC)

CFCs¹² provide supporting functions for the base applications you installed above.

1. Extract SW200CFC.zip to the root directory. The extract process will create a CFC directory in your “wwwroot” directory.
2. Extract SW200CFCPatch.zip to the CFC directory. The typical path is:

```
x:\inetpub\wwwroot\CFC
```

where *x* is your root drive.



• Figure 38 Extract CFCs

1. Extract Sonis200CFC.zip pointing to *x*:\inetpub\wwwroot (where *x* is your root drive) as illustrated in Figure 38. This establishes the CFC directory and stores the CFC files in it.
2. If SW200CFCPatch.zip was part of your download, extract it pointing to *x*:\inetpub\wwwroot\CFC. Note the addition of “CFC” to the path. Since the CFC directory was established in the prior step, you have to point to it when extracting the patches.

¹² CFC = Cold Fusion Functions



Verifying Access to SONISWEB® Programs

Make sure that the prior verifications on pages 18 and 26 are done. If these applications are not running, you cannot verify that SONISWEB® is running.

You access SONISWEB® from a browser. Unless you have changed the initial page accesses during configuration, the initial page is:

sonisweb200/index.cfm

A local server connection would have this URL for the browser:

<http://127.0.0.1/sonisweb200/index.cfm>

Your initial display looks like Figure 39.



• Figure 39 Initial SONISWEB® Display

Click **For Administrators**. You get a login prompt like that shown in Figure 60 (page 41). SONISWEB® is delivered with a “superuser” login ID and password of:

super1


You will be logged in with full privileges. Try a few functions to make sure that SONISWEB® is functioning.

Remember that RJM Systems, Inc. provides telephone and e-mail assistance should you need it.

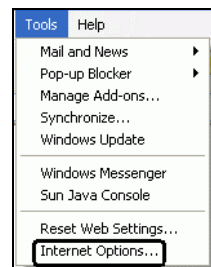
BROWSER SETTINGS FOR INTERNET EXPLORER

If you are an administrative user, make sure you are using the Internet Explorer 5.1 or higher as your browser. No other browsers² are supported for administrative users since there are differences in how they react to HTML and JavaScript that are difficult to debug.

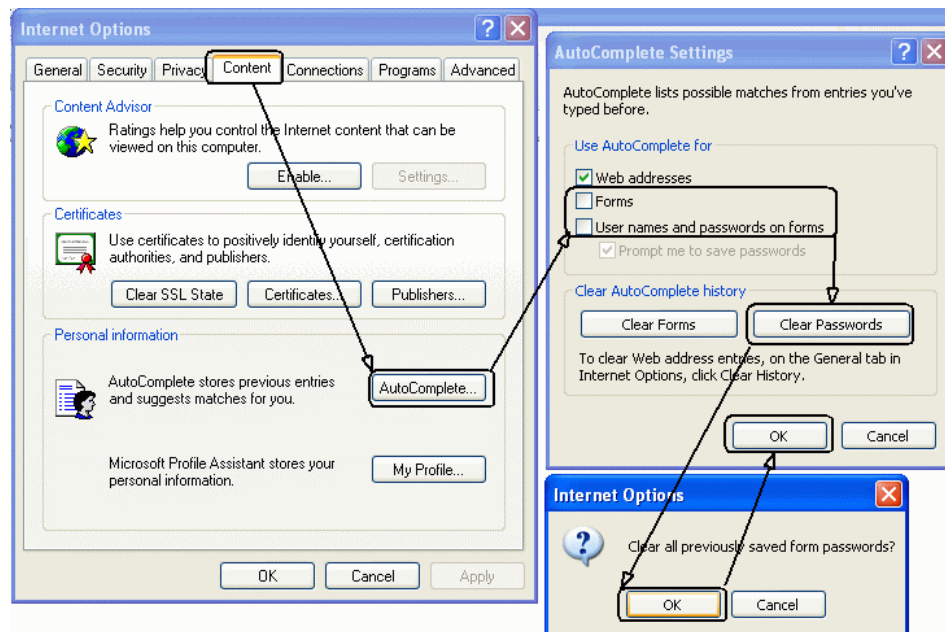
In addition to the correct browser, administrative users need a computer display set to at least 1024 by 768 and 256 or more colors. More is better since administrators' Web pages are dense and full of information.

To access the  settings, start the browser and click **Tools** then **Internet Options** as illustrated in Figure 40.

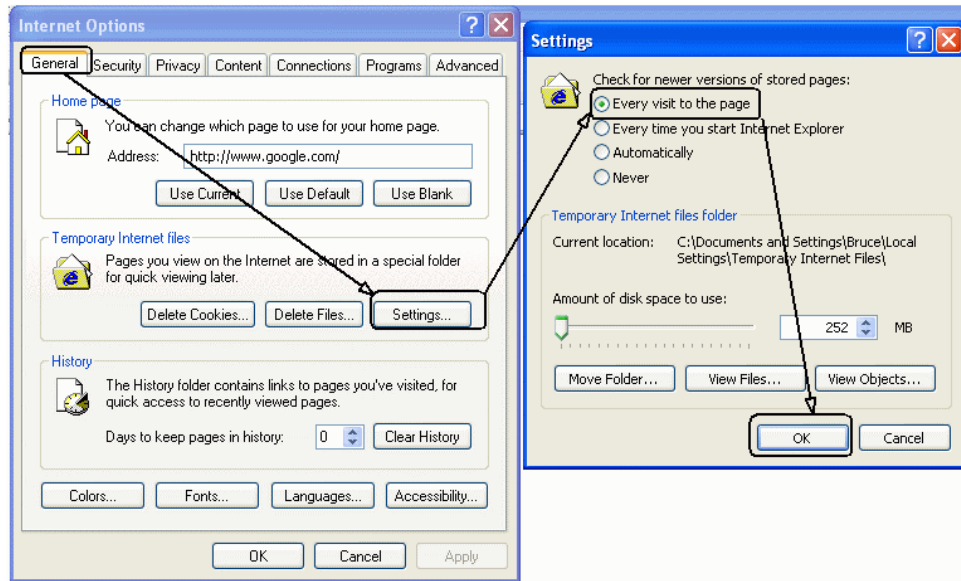
Set the security in Figure 41 so that others cannot inadvertently access your password and data.



• Figure 40 IE Settings

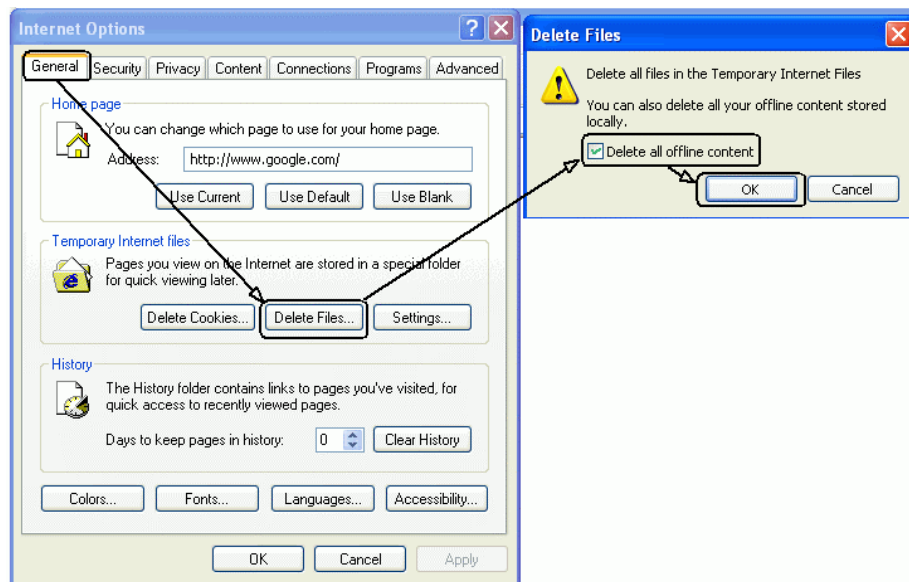


• Figure 41 IE Security Setting



• Figure 42 IE Caching Controls

Turn off caching – the saving of old Web pages for reuse – to prevent old pages from being redisplayed when what you want are the most recently updated pages. Figure 42 shows how to do it.



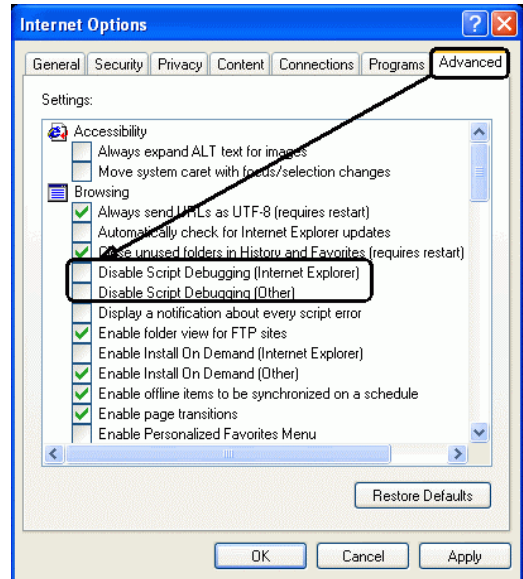
• Figure 43 IE Emptying Cache

As shown in Figure 43, empty the current cache so that you do not get an old Web page.

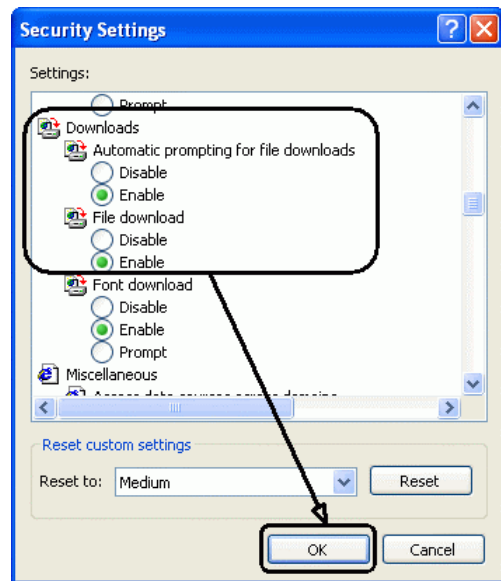
Turn off debugging functions that find “errors” where there are none. Figure 44 illustrates the steps.

Set up file download permissions for the report options as shown in Figure 45.

During testing some unexpected interactions occurred when downloading. In some cases Excel or Adobe® Reader (for a PDF) opened and the file had to be saved from those displays. In other cases, a prompt was given asking where the file should be stored. Check your version of Internet Explorer to see how the settings in Figure 45 affect your choices.



• Figure 44 IE Debugging Controls



• Figure 45 IE Download Controls

CONVERTING TO YOUR PRODUCTION DATABASE

You have used the demonstration database Sonis200 to become familiar with SONISWEB®. You have tested to be certain that you can access the system from the LAN and from the Web. You have logged in as a faculty member, a student, etc. You have worked with the RJM staff to document the configuration you need. You have the list of tables that must be configured to suit your needs. Now it is time to convert the demonstration database to your production database.

Put the original version of Sonis200Det.zip in a safe place before conversion. That way, if you want to restart conversion, you have the original to start from.

As shown in Figure 1, this is the process in summary:

1. Back up the demo database if you have made any changes you want to keep. See “Demo Database Backup - Optional” (page 16) for the backup process.

Caution: all data you entered into the demo database is lost when you convert it to your production database.

2. Run the conversion application.
3. Set up User IDs for the SONISWEB® administrator(s) and technical support staff.
4. Test to make certain that the conversion is successful.
5. Begin configuration using the texts listed in “Companion Texts” on page 6.

Running the Conversion Application

With the backups done:

1. Start SONISWEB® from your browser as normal.

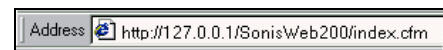
Note the title at the top of Figure 39. The change in that name will indicate conversion has occurred.

2. Log on to SONISWEB® with a master ID. It is the ID assigned as your master ID that is updated with the Master Profile under **Systems**. Unless you have changed it, it is SUPER1.

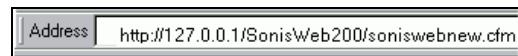
3. Once logged on, change the Web address in the browser (Figure 46) to soniswebnew as shown in Figure 47. Press the Enter key so the browser gets that address.

If you see Figure 48, it means you did not log on with a master ID before entering soniswebnew in Figure 47.

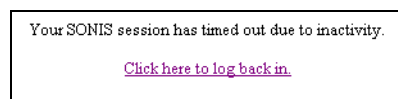
4. Where you are correctly logged on, you get Figure 49.



• Figure 46 SONISWEB® with Demo Database



• Figure 47 soniswebnew address



• Figure 48 Error Message for Failure to Log on

ADMINISTRATION ACCESS

SONISWEBNEW: Changing The Demo To Production

Warning: This utility deletes all records from your SONISWeb database.

Back-up your database before proceeding.

Options:

Full SONIS Web
Administration Only
Admissions Only

• Figure 49 SONISWEBNEW Choices

5. Pick the option in Figure 49 that applies to you:
 - Full SONISWEB** means you ordered and installed the full system, administrative, student, faculty, applicant, etc. access.
 - Administrative Only** is for those who ordered and installed the administrative parts of the system but did not install the student, faculty, applicant, etc. access.
 - Admissions Only** is for those who ordered and installed only the admissions portion of SONISWEB®.
6. Click the Submit button after choosing the option.
7. You see a significant delay as conversion takes place. You can follow the progress by looking at the progress bar on the bottom of the browser.
8. When conversion finishes, you get a confirming message as illustrated in Figure 50.

Your Production Database Is Ready.

• Figure 50 Display after Conversion

Verifying Conversion

A few simple tests verify that the conversion cleared out all of the demo data and inserted a few required “seeds” in your new production database.

- You should be able to log in to SONISWEB® using only the “super1” ID and password. No other ID should work.
- The home page should have at the top Figure 51. Compare that to the top of Figure 39.
- When you log in as super1, click **Courses** and the Search button, there will be no courses, since the demos versions were erased above.

Your Production Database

• Figure 51 New Database Name on Home Page

- When you log in as super1, click **Names**, then the Search button. You get a display like Figure 52.

Name Search				
Record 1 - 7 of 7				
Name	Social Security Number	Status	Division	Campus
<input checked="" type="radio"/> SysAdmin, SysAdmin	000000000	Alumni	TBD	To Be Determined
<input type="radio"/> SysAdmin, SysAdmin	000000000	Applicant	TBD	To Be Determined
<input type="radio"/> SysAdmin, SysAdmin	000000000	Constituen	TBD	To Be Determined
<input type="radio"/> SysAdmin, SysAdmin	000000000	Faculty	TBD	To Be Determined
<input type="radio"/> SysAdmin, SysAdmin	000000000	Prospect	TBD	To Be Determined
<input type="radio"/> SysAdmin, SysAdmin	000000000	Staff	TBD	To Be Determined
<input type="radio"/> SysAdmin, SysAdmin	000000000	Student	TBD	To Be Determined

• Figure 52 Post-Conversion "Persons"

These “persons” are present as seeds to get you started.

Setting up Your Production Database

1. Backup your new production database. SonisWeb200 is no longer the demo database but a mostly-empty version on which you build your records.
2. Restore the backup you just made. Restore it with the new database name you want for your production system. In the examples, we used “RJMUProduction”.

Backing Up the Converted Database

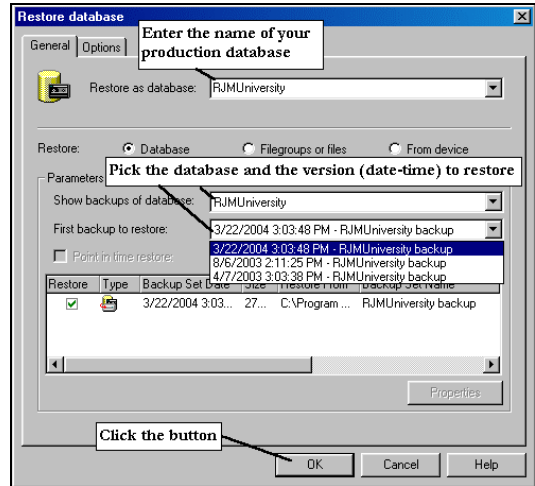
You follow the process in “Demo Database Backup” on page 16.

Restoring to Create Your New Production Database

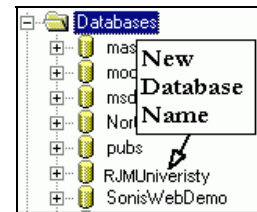
Now you restore the database you just backed up (“Backing Up the Converted Database” above). You can, if you wish, give your production database a new name as part of the restoration.

1. Begin as in “Demo Database Backup - Optional” on page 16.
2. Click Restore in Figure 15 instead of backup. You get Figure 53.

3. Use the pulldown menu in Figure 53 to pick name of the “Restore as database”. (Optionally, you can give your database a different name. In that case enter it here.)
4. Pick which database backup you want to restore. Typically you’ll have several with different backup times and dates.
5. Click OK. You see a progress window then get a confirmation window that the restoration is complete.
6. Enterprise Manager shows the new database name as illustrated in Figure 54.
7. Unless you changed the name of the database, you proceed with the checking below. If you’ve changed the name of the database, you must change operating system’s pointers and the passwords. That’s covered in “Database Name-Change Process” on page 39.



• Figure 53 Restore with New Name?



• Figure 54 Database List with Production Database

Checking the Connection to the Production Database

Start the SONISWEB®. At the top left of the display you see Figure 55, the new name you entered in Figure 58.



• Figure 55 New Database Attach

Depending on the version of operating system and/or SQL server you sometimes you get Figure 56 instead of Figure 55. It's a rare occurrence. If you get this error, see the text "Messages, Errors, and Diagnosis". It shows you how to correct it.

```
Error Occurred While Processing Request
Error Executing Database Query.

[MERANT][SequeLink JDBC Driver][ODBC Socket][Microsoft][ODBC
SQL Server Driver][Shared Memory]ConnectionWrite (WrapperWrite
()).

The Error Occurred in C:\inetpub\wwwroot\SonisWeb100
\Application.cfm: line 6
4 :      select * from webopts
5 : </cfquery>
6 : <CFIF Isdefined("webopt.sonistimeout") EQ 0>
7 :      <CFSET sto = 30>
8 : <CFELSE>

SQL          select * from webopts
DATASOURCE   soniswebp
VENDORERRORCODE 4
SQLSTATE     01000
```

• Figure 56 New Database Name Error

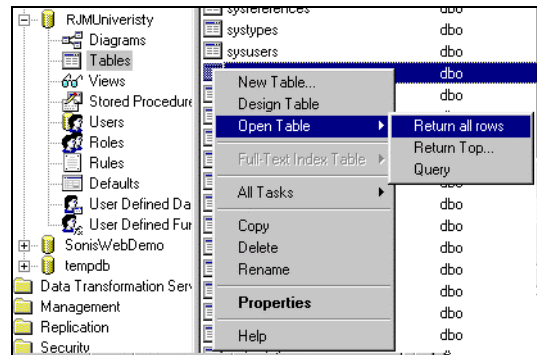
Database Name-Change Process

These steps are only necessary if you changed the name of the database when you restored it.

1. Go to “Setting up the Database as an ODBC Source” on page 18 and set SONISWEBP so it points to your new production database.
2. Go to “Connecting ColdFusion™ Access to the Demo Database” on page 22 to check that ColdFusion™ “sees” the new database.
3. Go to “Setting the Report Builder Connection” on page 26 to check that the Report Builder “sees” the new database tables.

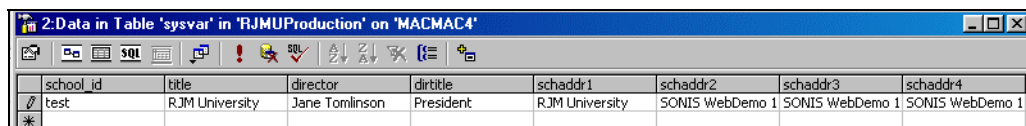
Optionally, you can verify that your new production database is indeed the active database by modifying the value of the Sysvar table with the name of your institution.

1. Click the plus (+) sign beside the name of your production database. This gives you a list of contents.
2. Click Tables shown in Figure 57.
3. Scroll down the list of tables until you find “sysvar”. This “System Variables” table includes the name that appears at the top of the displays like Figure 50.



• Figure 57 Database Table Selection

4. With your right mouse button click sysvar. You get a list like Figure 57. Choose Open Table and Return all Rows (Figure 57). You get Figure 58.



school_id	title	director	dirtitle	schaddr1	schaddr2	schaddr3	schaddr4
test	RJM University	Jane Tomlinson	President	RJM University	SONIS WebDemo 1	SONIS WebDemo 1	SONIS WebDemo 1

• Figure 58 Sysvar Entry

5. In the schaddr1 column enter the name of your institution as you want it to appear on the SONISWEB® displays.
6. Close the table in Figure 58 to save your change. Exit Enterprise Manager.
7. Follow the procedure in “Checking the Connection to the Production Database” on page 38.

Depending on the version of software you use, when you log on after you change the name, you might get an error saying the database cannot be accessed. Figure 56 is an example. See the text “Messages, Errors, and Diagnosis” to correct that error.



INTEGRATING SONISWEB® INTO YOUR WEB PAGE

SONISWEB® is designed to be integrated into your Web page or pages. To do that, you either design a new page(s) for those accessing SONISWEB® via the Web or you put the link(s) in your existing page(s).

There is a single common access point into SONISWEB® named “index.cfm”. This allows your webmaster to create one link from your website into SONISWEB® .

<i>Link</i>	<i>SONISWEB® Module</i>
Admnsect.cfm	Administration Processing
Alumsect.cfm	Alumni Information
Appsect.cfm	Applicant Information
Facsect.cfm	Faculty Processing
Genprg.cfm	University Programs
Gensrcs.cfm	General Course Information
Gensrsc.cfm	General Course Section Listing
Index.cfm	Common Access point to SONISWEB®
Studsect.cfm	Student Information
Webiqent.cfm	Inquiry (Prospective Student) Page

Figure 59 Security Entry Points Table

If you prefer individual links connecting your Web page(s) to SONISWEB® and more flexibility in allowing and/or restricting access, use the entries in Figure 59 Security Entry Points Table.

There’s lots more integration you can do. The subject is covered in detail in the SONISWEB® manual “Custom Fields, Web Pages, and Colors” (CustomWeb.pdf).

GETTING STARTED - LOG IN AND THE USE OF TABS, BUTTON AND FIELDS

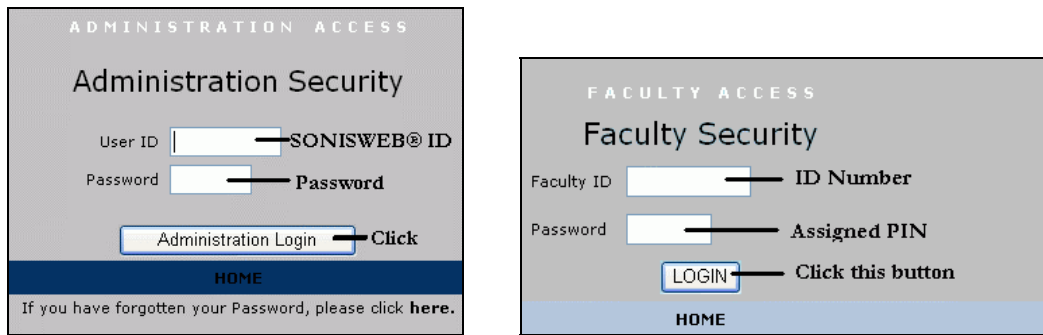
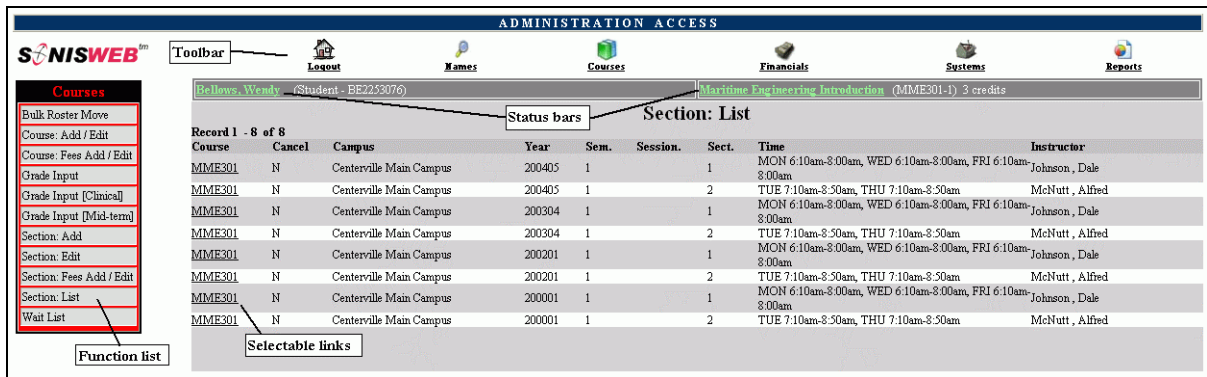


Figure 60 Login Displays

To log in as an administrator, select that option from your Web page. The standard SONISWEB® login pages look like Figure 60.



• Figure 61 Typical SONISWEB® Page

Figure 61 is a typical SONISWEB® page. The actions authorized in your profile appear at the top, called the **Toolbar**.

When you make a selection from the **Toolbar**, the applicable **Function List** appears on the left. Only the functions authorized in your assigned profile and your individual limits and privileges appear. Some might have only **Courses** in the toolbar and only **Course: Add/Edit** for functions.

Not apparent on the display is whether or not the profile permits editing or changing the information. Once the you select a function from the list on the left, you will see a Submit or similar button at the bottom of the display if you have the permissions to add, edit, or delete the data.

By clicking a **Status Bar** you quickly return to the “person” or the “course” you were processing even if you left it temporarily to look at a financial display or a report. Of course, if you have not selected a person with **Names** or a course with **Courses**, there will be no **Status Bars** at the top.

In Figure 61 click an underlined **Selectable Link** and you go to that record.

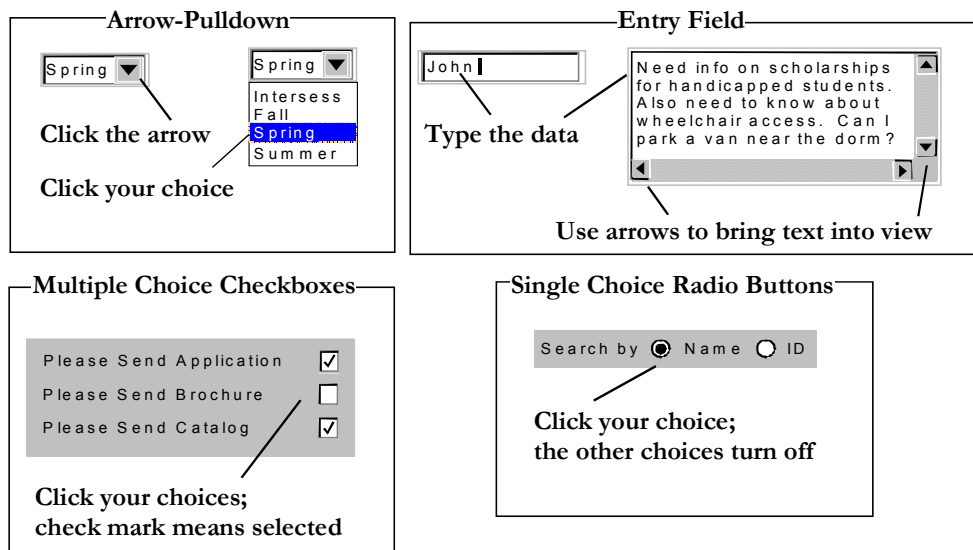


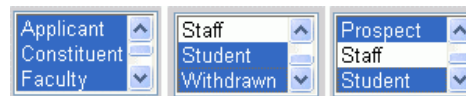
Figure 62 Arrows, Fields, Checkboxes and Buttons

SONISWEB® prompts you for information with windows like those in Figure 62. Use your mouse to click your selection.

- Once you have made your selection(s), you must click an action button; usually it is Submit, Delete, Reset, etc.
- For Entry Fields, click the beginning of the field so you don't get any blanks inserted in front of your entry.
- With Multiple Choice Checkboxes, each time you click a box it goes from selected (check mark) to unselected (no check mark). Click it again and it is selected, etc.
- Radio Buttons allow only one to be selected; when you click one, all the others are turned off.

Some SONISWEB® lists permit you to make multiple choices. It works just like most PC spread sheet software.

- To pick two or more in a series, click the top selection, hold down the **Shift** key on the keyboard and click the bottom item in the series. Release the shift key and they are selected as shown on the left and middle of Figure 63.
- To pick two or more that are not adjacent, click the first item, hold the **Ctrl** key on the keyboard, select the next item and the next, etc. When you have picked the last item you want, release the **Ctrl** key and you see the selections like those on the right of Figure 63.

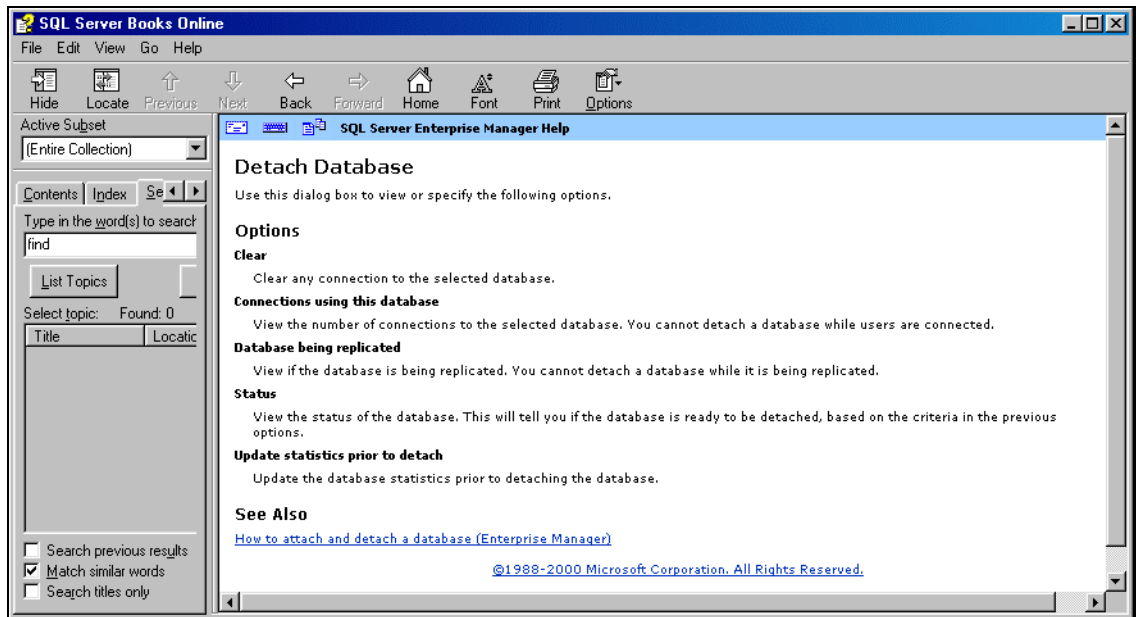


• Figure 63 Selecting Multiple Choices

DIAGNOSING AND FIXING PROBLEMS

See the text “Messages, Errors and Diagnosis” for this information.

SQL Help



• Figure 64 SQL Server Help Display Example

SQL Server™ provide its “manuals” as help text. Click the Help button on SQL windows (Figure 16 for example) and you get help displays such as Figure 64.

System Requirements

Please contact RJM Systems for recent changes in these requirements.

Browser Requirements for Administrative Users

- A computer display set to at least 1024 by 768 and 256 or more colors. More is better since the administrator’s Web pages are dense and full of information.
- Internet Explorer 5.1 browser or newer. No other browsers are supported for administrative users since there are significant differences in how they react to HTML and JavaScript.
- A computer capable of supporting the browser and the network selected.
- Connection to the server either by a local area network (LAN) or the Internet.



Installation Requirements

The server recommendations are in Table 1 below.

The network recommendations are in “Typical Server Configuration” on page 45 and “Typical Local Area Network” on page 45.

• Table 1 Recommended Hardware and Software

SONISWEB®: Recommended Hardware and Software as of January 2006 Estimated Cost: \$10,000.00 USD; Not Provided by RJM Systems	
Hardware: RJM Systems recommends two separate servers, one as the web-server and the second as the database server	
Server(s)	
Server for the Web:	
Dell PowerEdge 1800 Server: 2.8 GHz Dual Processors, 2GB Memory, Raid 1 (2-80gig drives), Internal tape backup with Veritas backup suite, Watch guard external, Firewall (Bundled Price through Small Business Division at Dell)	
Server for the Database:	
Dell PowerEdge 1800 Server: 2.8 GHz Dual Processors, 2GB Memory, Raid 1 (2-80gig drives), Internal tape backup with Veritas backup suite, Watch guard external, Firewall (Bundled Price through Small Business Division at Dell)	
Software: Software needed to run SONISWEB 2.0	
Software for the Web Server:	
Microsoft® Windows 2003 Server/IIS 6.0	
Cold Fusion® Server MX 7.0 with Report Builder	
Symantec Gateway Security 320 (firewall)	
Software for the Database Server:	
Microsoft® Windows 2003 Server/IIS 6.0	
Microsoft® SQL 2000 Standard	
Symantec Gateway Security 320 (firewall)	

TYPICAL SYSTEM, SECURITY, AND FIREWALL PLACEMENT

The SONISWEB® manual “Security Checklist” (SecurityTips.pdf) is the place to go for fuller coverage of this subject. This give some examples of typical configurations.

SONISWEB® Without Internet Connection

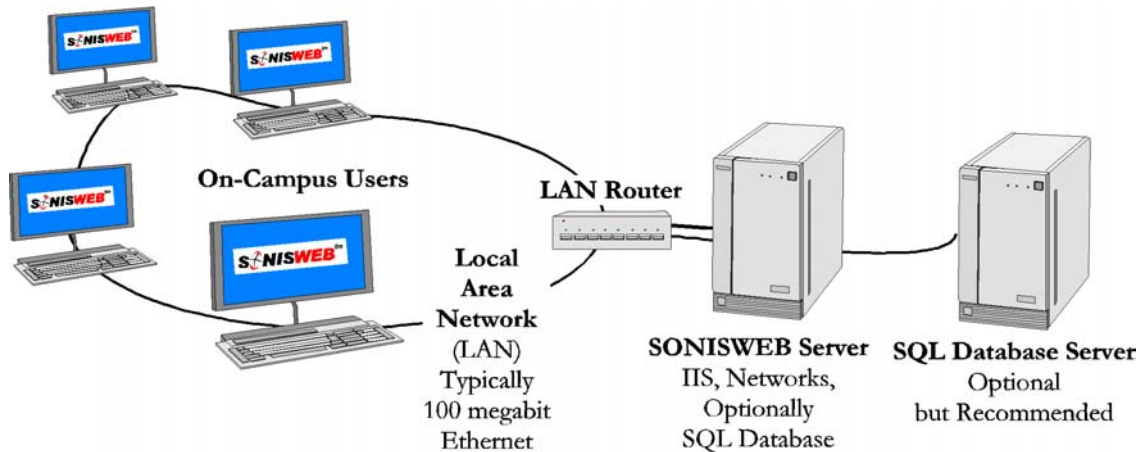


Figure 65 SONISWEB® Configuration without Internet Connection

You don't have to connect to the Internet. If all of your users are connected by a campus local area network (LAN), you can connect it as shown in Figure 65.

SONISWEB® can be installed on a single server (“SONISWEB Server” in Figure 65). However RJM recommends that two servers be used. One hosts the SONISWEB® software, IIS, ColdFusion™, the connection to the LAN, and the Report Builder. The second contains the SQL database. Separating these two functions improves the performance of SONISWEB® as seen by your users.

Typical Server Configuration

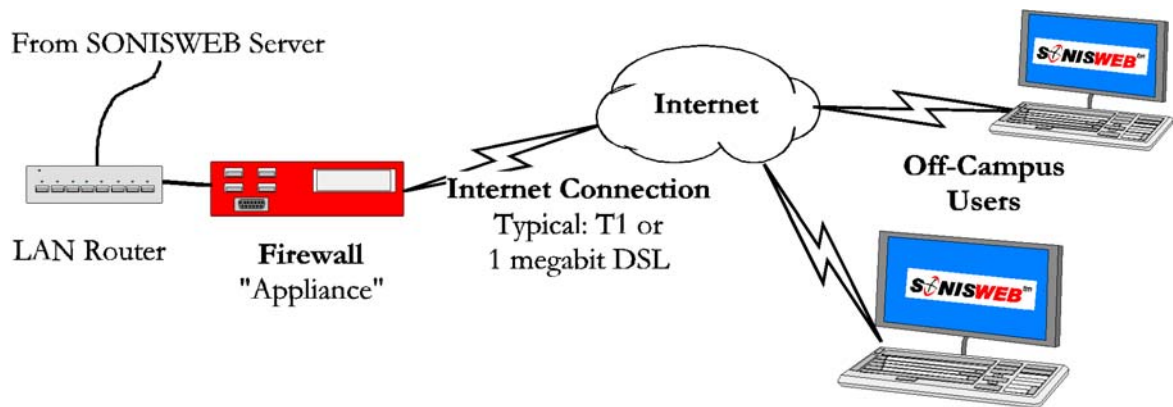
See Table 1, page 44.

Typical Local Area Network

- A 100-megabit Ethernet; it should suffice as long as it isn't shared with students downloading videos! Currently 1000-megabit (1-gigabit) networks are available and routers for them will often accommodate both 1-gigabit and 100-megabit connections so you can reserve the 1-gigabit connections for your connection to the “SQL Database Server” and your heaviest users.
- One or more routers to connect your on-campus users. As noted above, it can be a dual 1-gigabit, 100-megabit router.
- Proper security settings on the router such as network address translation and/or MAC layer address limits to exclude those who shouldn't access the system.
- Alerting your user community to the security issues described in the separate SONISWEB® text “Browser Settings”. This prevents unauthorized users from accessing SONISWEB® from a connected computer while the user is absent.

SONISWEB® Internet Connection

An Internet connection simply adds to the system shown in Figure 65.



• Figure 66 SONISWEB® Internet Connection

A typical configuration illustrated in Figure 66:

- Connection to the LAN router shown in Figure 65.
- A Firewall to prevent unauthorized access from the Internet. Usually this is a “fire-wall appliance”, a small, separate special-purpose computer that serves that single function. You can use firewall software on your SONISWEB® server instead. That can absorb significant capacity, so it isn’t advised unless you expect the user load on that server to be low to moderate.
- Proper setting of the Firewall “policies” to assure you keep out those who should not connect to SONISWEB®.
- An Internet connection furnished by your telephone company or other Internet service provider. One (1) megabit DSL or equivalent service is usually sufficient. However, if you use distance-learning, video transmission, or other high volume traffic in addition to SONISWEB®, a faster connection may be needed.
- A “Static IP Address” with the Internet connection above. Some providers furnish a dynamic IP address if you don’t specify otherwise. The static address (unchanging) is required for your users to connect via the Internet.
- A secure socket link (SSL) from a company like VeriSign®. In this method, Internet traffic (page requests) are passed through the Firewall using port 443.
- Alerting your Internet users to the security issues described in the separate SONISWEB® text “Browser Settings”. This prevents unauthorized users from accessing SONISWEB® from a connected computer while the user is absent.