# EMCAP Pilot

# Version 1.5 Installation Guide

North Carolina Department of Cultural Resources

Government Records Branch

E-mail Capture and Preservation Tool Grant

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# Contents

**Purpose for the Guideline**

This guideline provides detailed instructions for installing EMCAP, the E-mail Capture and Preservation software. For more information about how this software functions and its design considerations as well as the project's background, please see our web site at http://www.records.ncdcr.gov/emailpreservation

**Brief Overview of EMCAP**

EMCAP runs on the Windows Server platform and requires Microsoft SQL Server. EMCAP is at its core an IMAP accessible e-mail store where the store is implemented using a set of XML document, one for each account. Each message is stored as real XML in the actual XML document. The body of each message and its attachments can also be stored within the XML document, but are often stored as external files referenced by the XML document. In addition, a set of industry standard mbox files are kept for each account, one per folder.

Since the amount of work required to convert e-mail messages in their native *Internet Message Format* to XML can be large, the conversion is achieved through a batch process that can be scheduled to run nightly.

**Requirements Prior to Installation**

Prior to the installation of EMCAP, the server must be configured properly. This will ensure the appropriate environment exists to undertake the installations and then run the installed programs effectively and efficiently. It will be necessary to ask your IT department to set up the proper environment.

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| *Operating System* | Recommended: Windows Server 2003 Service Pack 2 (32-bit x86) (http://www.microsoft.com/downloads/details.aspx?FamilyId=95AC1610-C232-4644-B828-C55EEC605D55&displaylang=en)<br><br>When you install a new service it's a good rule of thumb to install any critical Windows updates to make sure that the operating system is up to date. This is something you would get from Microsoft. In addition, make sure that the server has some type of RAID (Redundant Array of Independent Disks) storage.<br><br>Note: Windows XP is an operating system that is not quite up to the task of running a server service which you can rely on like EMCAP. It is recommended that this OS not be used. |
| *Prerequisite Software* | • Microsoft SQL Server or Express, 2005 or later. The compact version is not recommended. (http://www.microsoft.com/Sqlserver/2005/en/us/express.aspx)<br><br>• Microsoft SQL Server Management Studio (Express or full version). The full version is recommended. |

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| | • Microsoft .NET Framework 2.0 (http://www.microsoft.com/downloads/details.aspx?FamilyID=0856EACB-4362-4B0D-8EDD-AAB15C5E04F5&displaylang=en).<br>• Microsoft Core XML Services (MSXML) 6.0 Service Pack 1 (http://www.microsoft.com/DOWNLOADS/details.aspx?FamilyID=d21c292c-368b-4ce1-9dab-3e9827b70604&displaylang=en)<br>• IIS (Internet Information Services) 5.1 or better. Using Add or Remove Programs, select the Add/Remove Windows Components icon. Make sure that the Internet Information Services (IIS) is installed. The typical installation settings are fine. |
| *Internet Requirements* | Microsoft Internet Explorer 6.0 SP1 or later (prerequisite for .NET Framework) |
| *RAM* | At least 2 GB of system RAM, 4 GB preferred |
| *Hard Disk Space* | At least 20 GB of free disk space.<br>Note: The amount of disk space required depends on:<br>• the number of users for whom you will be collecting archival e-mail messages,<br>• the number of years that you want to store this mail at the collection point,<br>• the average number of messages each user will be archiving,<br>• the average size of each message being archived.<br>Typically this will be 200-500 MB per user, per year. |
| *Processor* | 2.0 GHz Pentium 4 processor or better. |
| *Domain Name* | In order for an e-mail client to connect to the archival server, the archival server must be reachable via the World Wide Web or your local area network by its DNS (Domain Name System). The archival server's Internet Protocol (IP) address must be registered with your local DNS servers or with the set of public DNS servers that are used with the World Wide Web. |

**EMCAP Installation Instructions**

Step 1: Download the EMCAP Version 1.5 .zip file from the EMCAP website and extract the files to a corresponding folder on the computer's desktop. Double click setup to start the installation.

Step 2: The Welcome to the Emcap Installer Setup Wizard appears. Click **Next**.

Step 3: On the next screen, you will be asked to confirm the folder where you want to install the Emcap Installer. Make note of this location. You can keep the default or click the browse button to select a new location. At the bottom of the screen, choose either "Everyone" if you want the Emcap installer for anyone who uses the computer or "Just Me" if you're installing Emcap for yourself. Click **Next**.

Step 4: Click **Next** to start the installation of the Emcap Installer.

Step 5: The next screen will confirm success of the installation. Click **Close** at the bottom of the screen to exit this wizard.

Step 6: The MainForm of the Emcap Installer will appear. You will need to follow the order of Emcap Installer for a successful installation of version 1.5. To begin, select the **1. Install hMailServer** button.

Note: You may see a message indicating that the hMailServer Setup has detected another email server. This is most likely due to the fact that the Microsoft SMTP server was installed as part of IIS, therefore this message can be safely ignored. Click **OK**.


*It is strongly recommended that the EMCAP software does not use the underlying hMailServer for its SMTP service (it is very likely that your institution already has such a server as part of its normal e-mail service). Although the underlying hMailServer's SMTP service could be used, the best practice is to disable this service to eliminate the chance that any of your customers will configure their e-mail clients in such a way as to enable the sending of mail from their archival account.*

Step 7: The Welcome to the hMailServer Setup Wizard will appear. This screen verifies that you are about to install hMailServer 5.0-B 326 on your computer. Click **Next**.

Step 8: The next screen will ask whether or not you accept the hMailServer license terms. Select "I accept the agreement" and then click **Next**.

Step 9: On the Select Destination Location page (Figure 1), you can keep the default location or select **Browse** for another location to install the hMailServer. Make note of this location. Click **Next**.

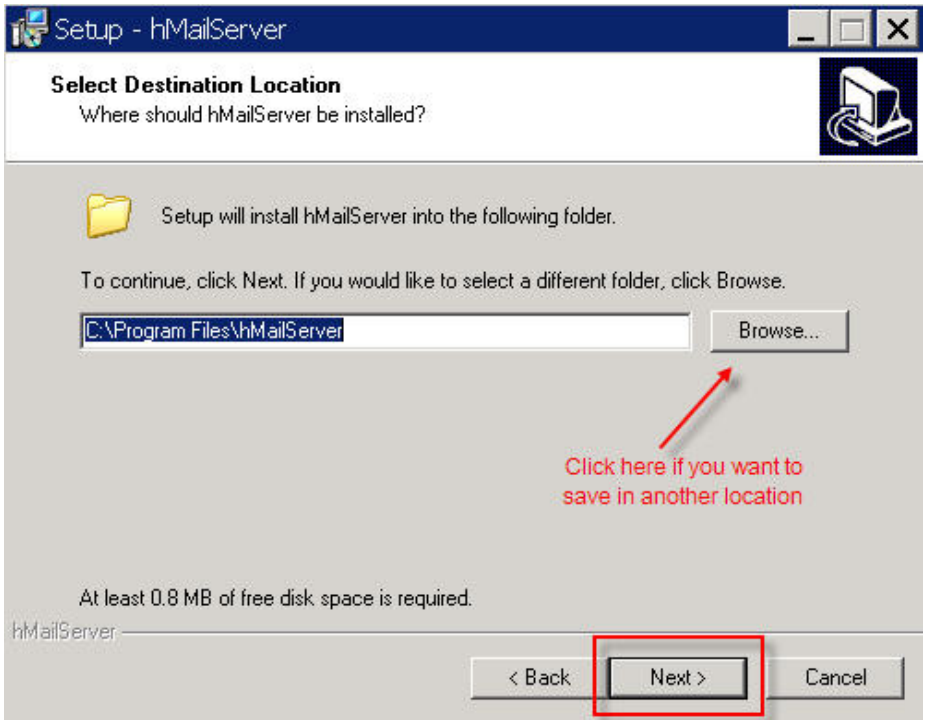
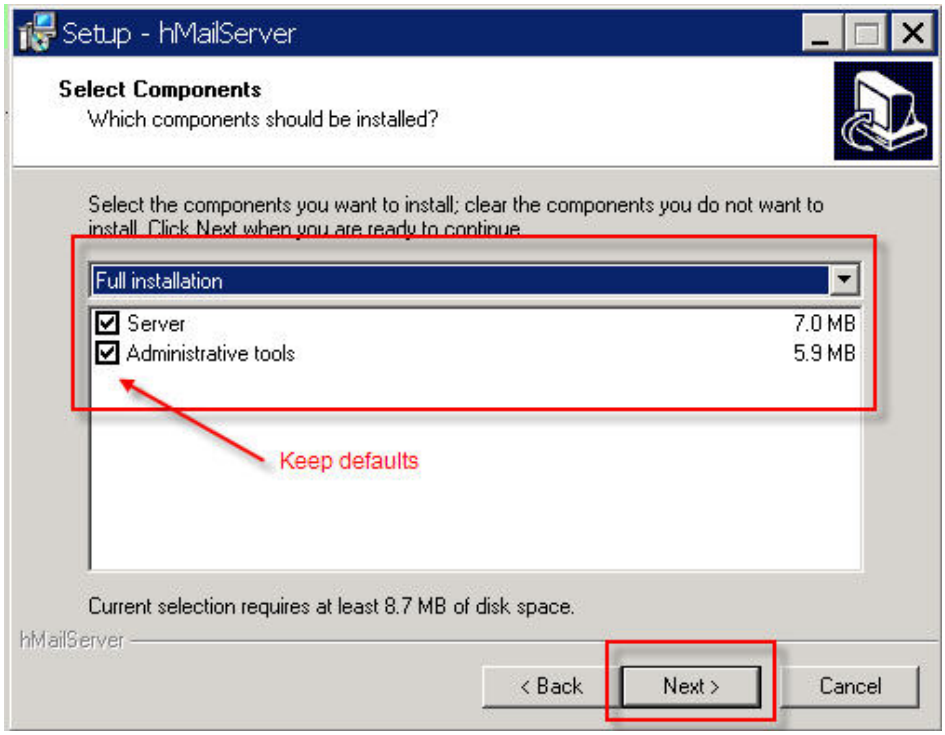


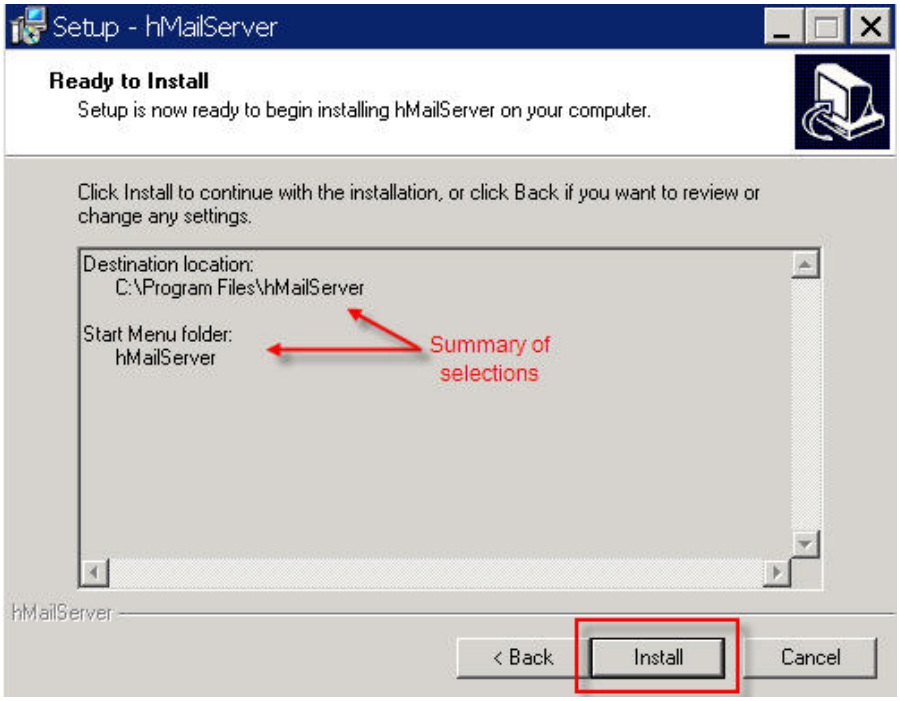

**Figure 1.**

Step 10: On the next screen, select the components you wish to install. The Server and Administrative tools are default selections. Keep these defaults. Click **Next**.



Step 11: On the Select Start Menu Folder page, use the default Start Menu Folder “hMailServer”. At the bottom of the screen, keep “Don’t create a Start Menu folder” unchecked. Click **Next**.

Step 12: The Ready to Install page appears. This essentially is a review of your selections. If you are satisfied with these selections, click the **Install** button.




Step 13: Prior to the finalizing the installation, you will be prompted to enter a hMailServer Security password. Make note of this password. Re-enter the password to confirm and click **Next**.

Step 14: On the Completing the hMailServer Setup Wizard, uncheck “Run hMailServer Administrator” and then click **Finish**.

Step 15: A Database Setup window will appear (Figure 2), which will walk you through the steps of setting up the database. Click **OK**.

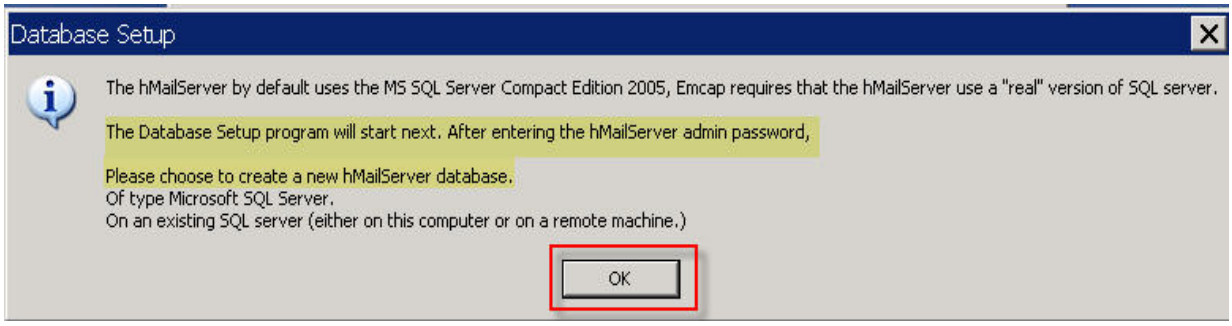
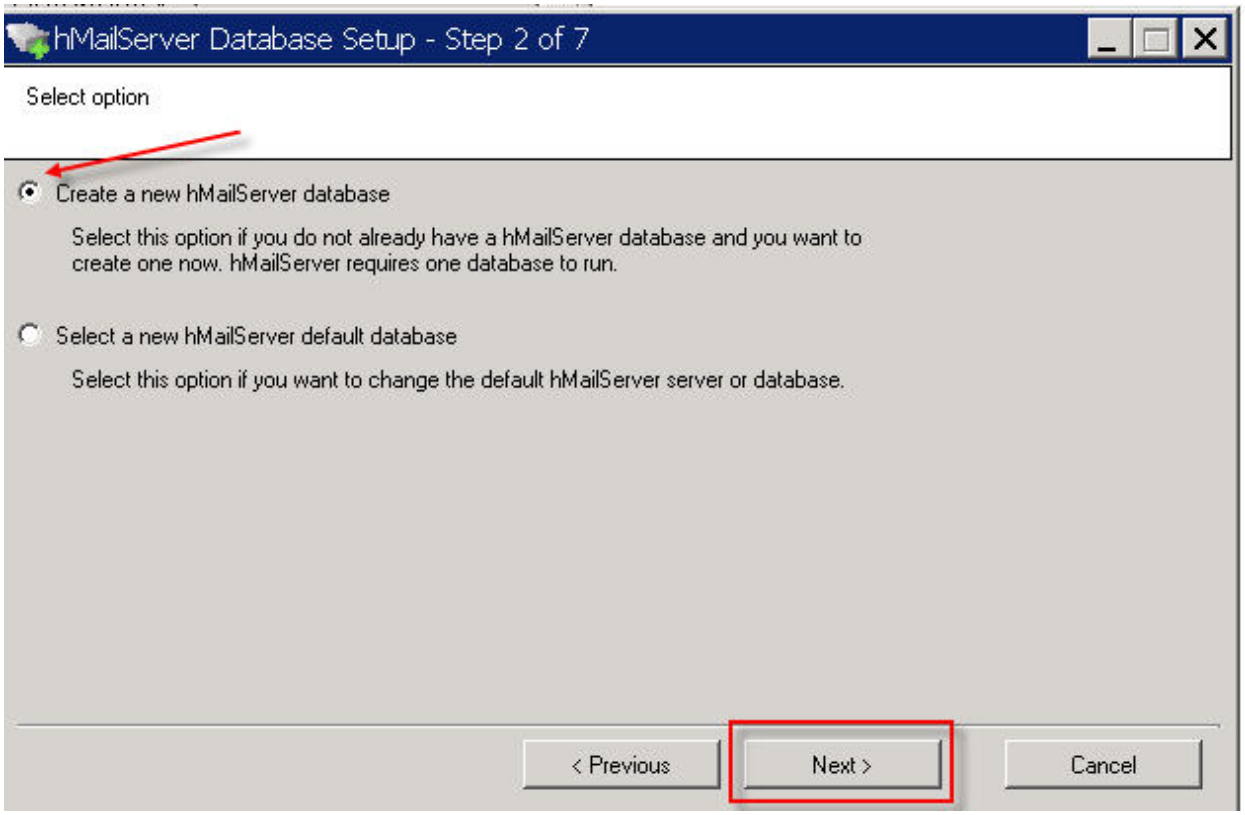



**Figure 2.**

Step 16: Enter the password you created in Step 13 and click **OK**.

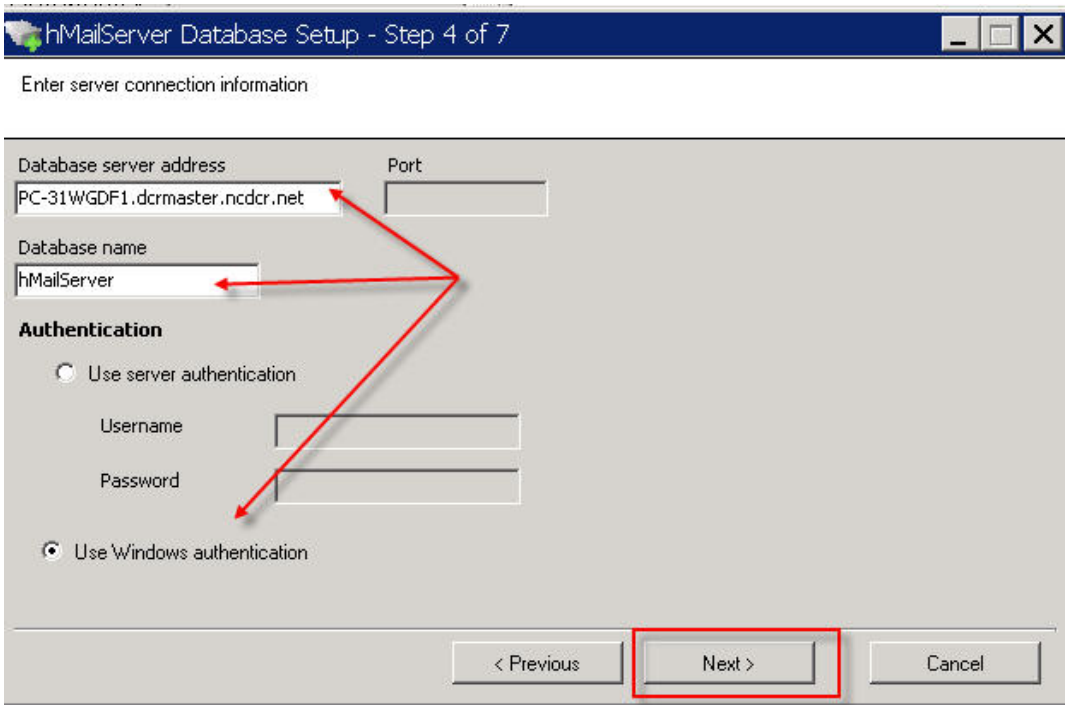
Step 17: The hMailServer Database Setup wizard will appear. Using this wizard, you can create a new hMailServer database and select a new default database. Click **Next**.

Step 18: On the next page, select "Create a new hMailServer database", and then click **Next**.



Step 19: On the next page, keep the default “Microsoft SQL Server” as the database server type. Click **Next**.

Step 20: On the next page, type in the full DNS name in the Database server address field. For Database name use “hMailServer” and then check “Use Windows authentication”. Click **Next**.




Step 21: On the next screen (Figure 3) you will need to select the hMailServer dependency from the drop down list. Select the first in the list that begins with “SQL Server”. Click **Next**.

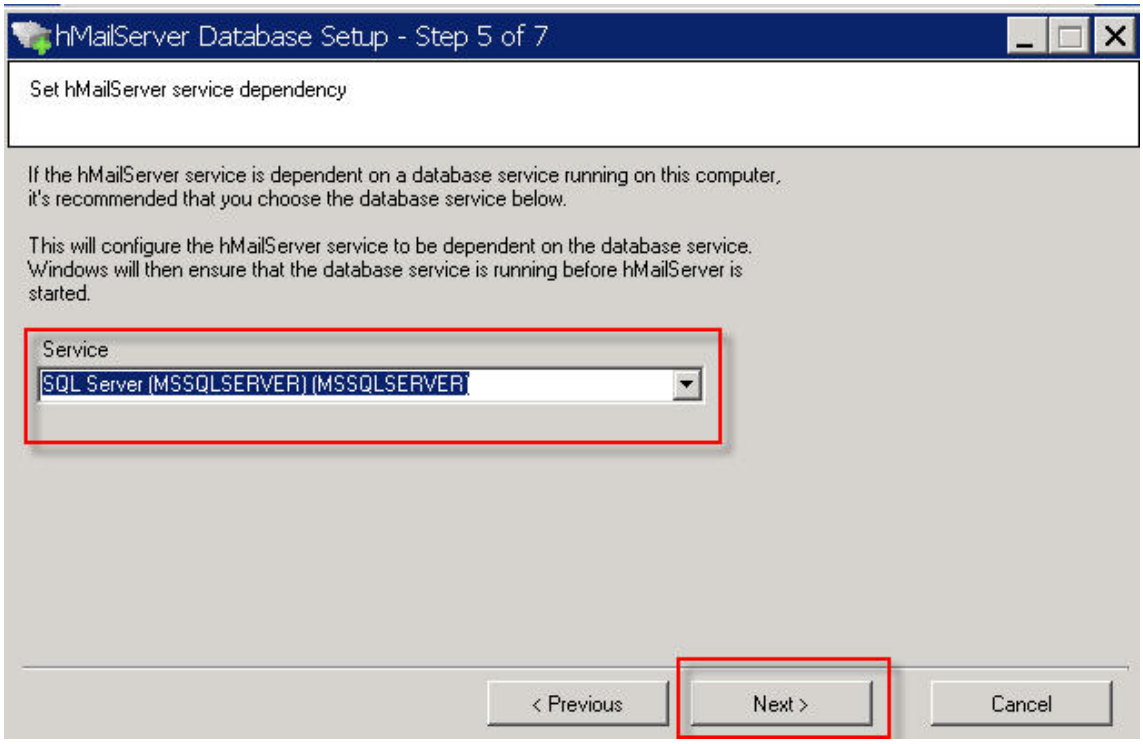



**Figure 3.**

Step 22: On the next screen, click **Next** to perform the scheduled tasks. Select **Close** to exit the wizard.

Step 23: Back on the main form of the Emcap Installer, select the **2. Modify hMailServer** button.

Step 24: On the Modify hMailServer window (Figure 4), check “Use Windows Integrated Security”, the hMailServer Administrator Password, and the select **Make Modifications**. A success pop-up window will appear. Click **OK**.


**Figure 4.**

Step 25: Back on the main form of the Emcap Installer, select the **3. Create Emcap Database** button.

Step 26: The Create/Update EMCAP Database window will appear (Figure 5). From the drop down box in the Install database in folder field, select the appropriate folder. Keep all other defaults on the window and select **Create Database.** You must choose a location to store the SQL files.

The database can be installed on a remote server; however the remote server must have a folder named either C:\SQLData or D:\SQLData. If neither of these folders is the desired final location, the database can be moved to another location on the local server via the SQL Management Studio by detaching the database, moving the data and log files and then reattaching. The database can be moved to another SQL server similarly, but the connection strings must be updated to reflect the new location. For information on how to update the connection strings see the last section of this document entitled “Troubleshooting."

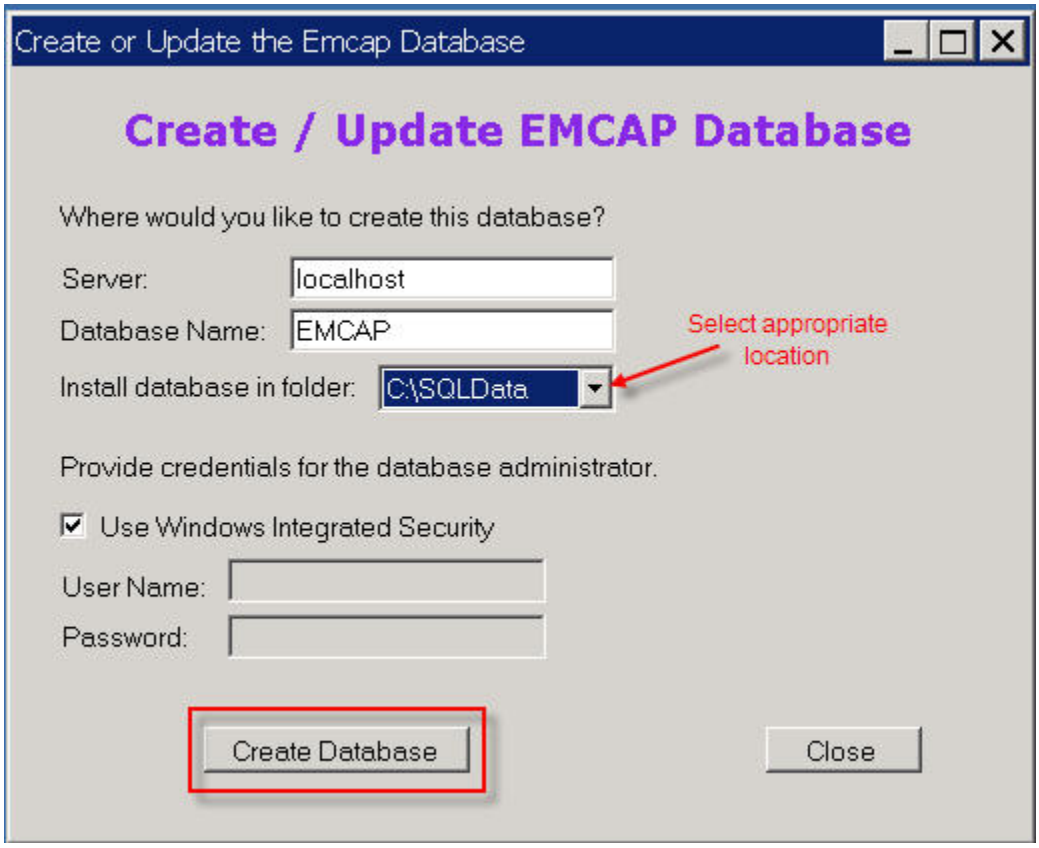



**Figure 5.**

Step 27: A pop-up will appear verifying that the EMCAP database has been created will appear. Click **OK**.

Step 28: A success pop-up will appear verifying that the EMCAP database has been updated. Click **OK**. Click the **Close** button on the Create /Update EMCAP Database window.

Step 29: Back on the main form of the Emcap Installer, select the **4. Choose SMTP Settings** button.

Step 30: The Send Mail Settings window will appear (Figure 6). Enter the name or IP address of the server to which SMTP traffic will be routed. The Account Name and Account Password fields can be left blank if the SMTP server does not require a user account for authentication. In the Sender's Address field, type in the e-mail address of the primary contact for EMCAP. The Recipient's address will automatically be populated; however you can change this if necessary. Click **Save** to save the information entered.


**Figure 6.**

Step 31: Back on the main form of the Emcap Installer, select the **5. Install Emcap Software** button.

Step 32: The Install Emcap Software window will appear (Figure 7). You can keep all defaults on this; however you will need to type in the hMailServer Administrator Password you previously created. Select **Install** at the bottom of the window.

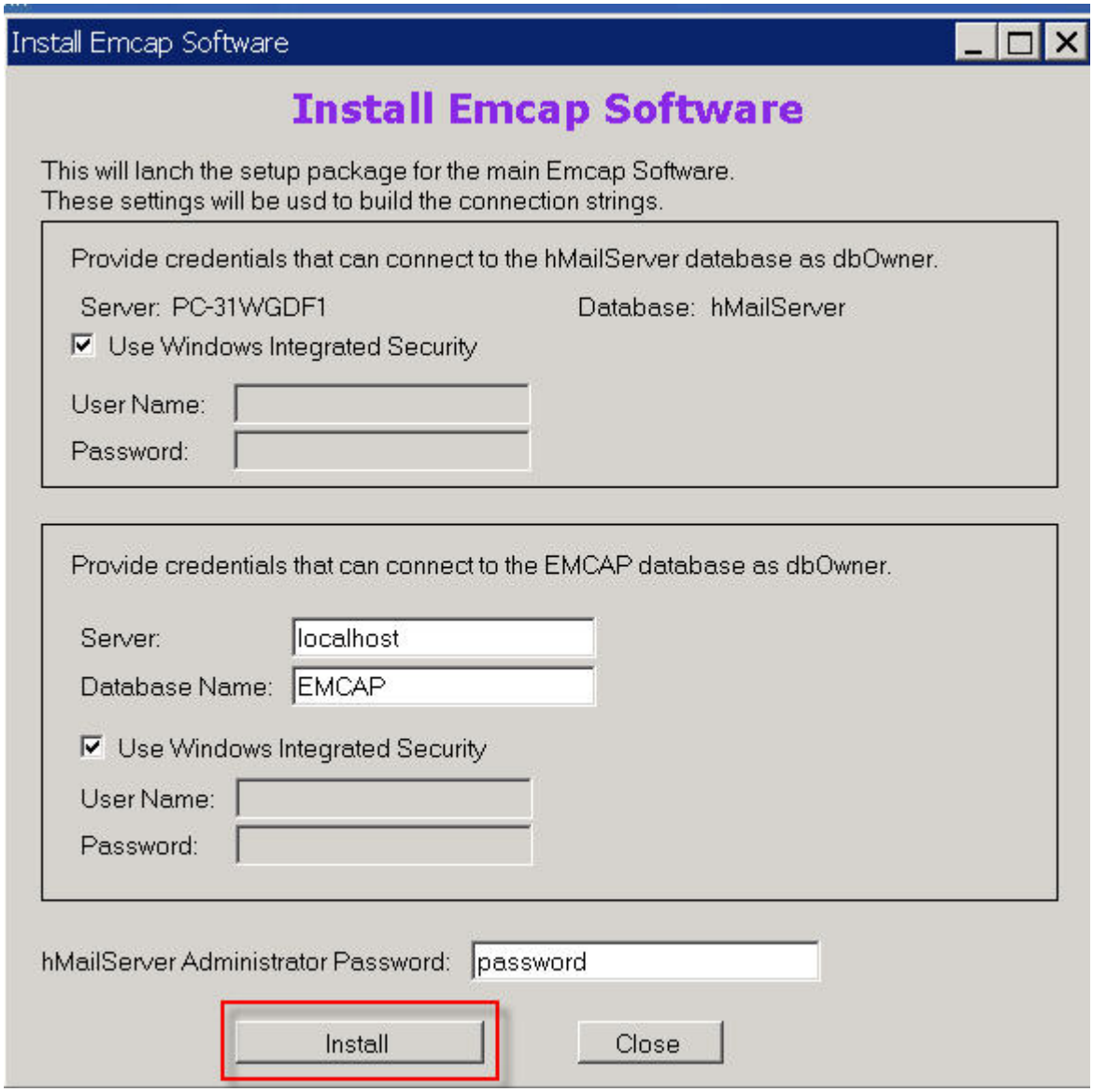



**Figure 7.**

Step 33: The Emcap Setup Wizard will appear, which will guide you through the steps required to install Emcap on your computer. Click **Next**.

Step 34: On the Select Installation Folder, you can keep the default location or select **Browse** for another location to install Emcap. Make note of this location. At the bottom of the screen, choose either "Everyone" if you want Emcap installed for anyone who uses the computer or "Just Me" if you're installing Emcap for yourself. Click **Next**.

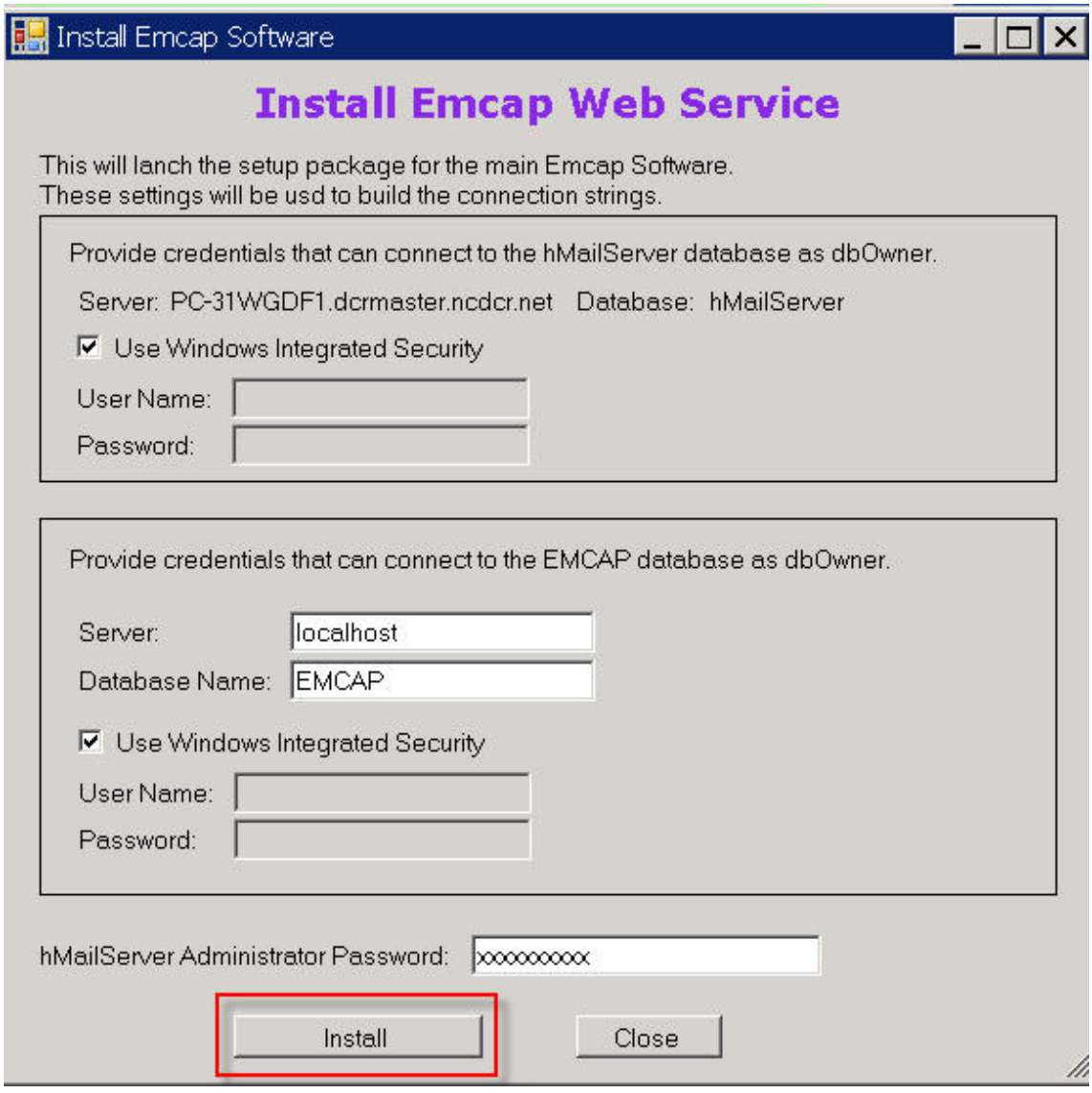
Step 35: Click **Next** to start the installation.

Step 36: An Installation Complete window will verify that Emcap has been successfully installed. Click **Close** to exit the wizard.

Step 37: An additional pop-up window will appear verifiying the success of the installation. Click **OK**. You will see an **Admin Console** icon on your desktop.

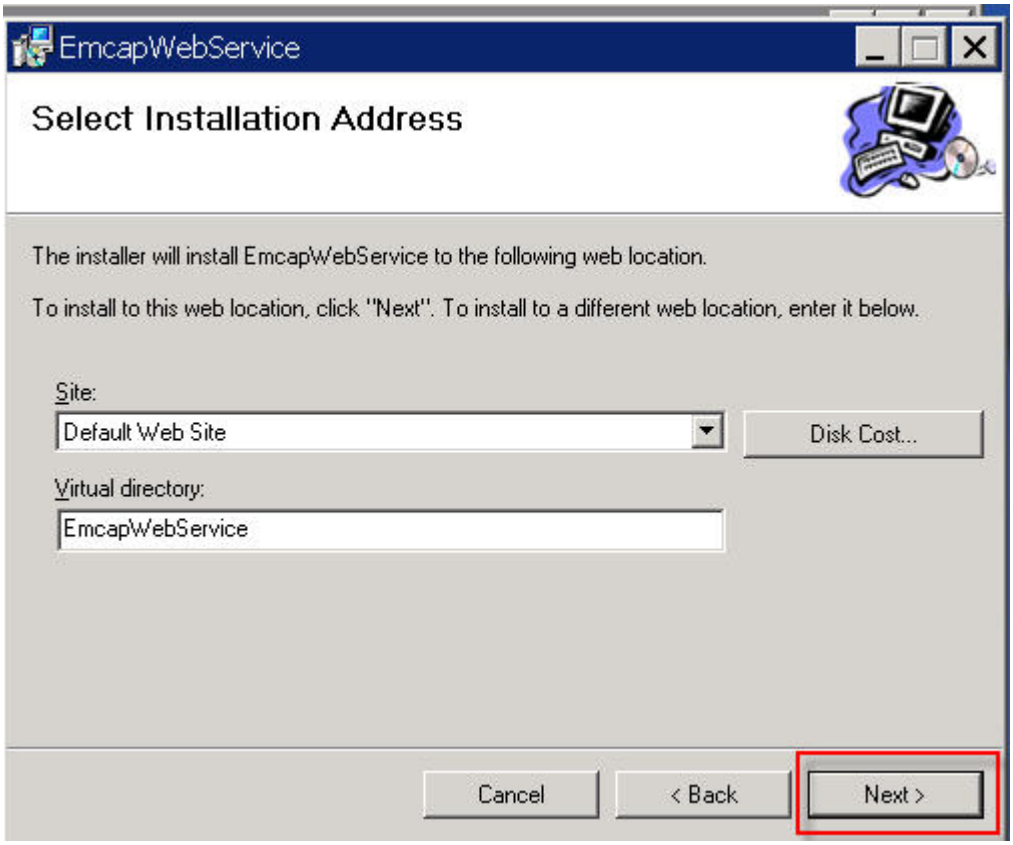
Step 38: Back on the main form of the Emcap Installer, select the **6. Install Web Service** button.

Step 39: The Install Emcap Web Service window will appear, which launches the setup package for the main Emcap software. Click **Install**.



Step 40: The EmcapWebService Setup Wizard will appear, which will guide you through the steps required to install EmcapWebService on your computer. Click **Next**.

Step 41: On the Select Installation Address screen, keep all the defaults and click **Next**.




Step 42: Click **Next** to start the installation.

Step 43: The Installation Complete screen verifies that the EmcapWebService has been successfully installed. Click **Close** to exit the wizard.

Step 44: An additional pop-up window will appear verifying the success of the installation. Click **OK**.

Step 45: Back on the main form of the Emcap Installer, select the final step **7. Install Web Site** button.

Step 46: A pop-up window will appear, verifying whether or not to install the web site on public facing server or the server you are currently using (Figure 8). Select **Yes** or **No** depending on your setup. If you decide to install the Web Site on a different server, you will need to install the Emcap Installer on that server and only perform **Step 7**.

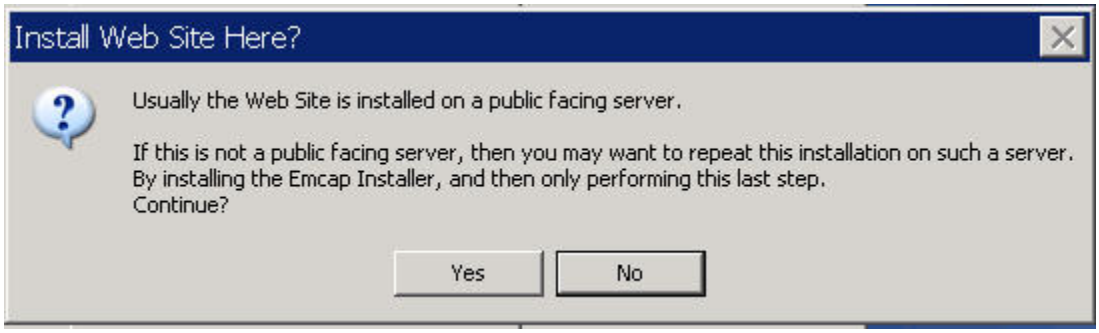
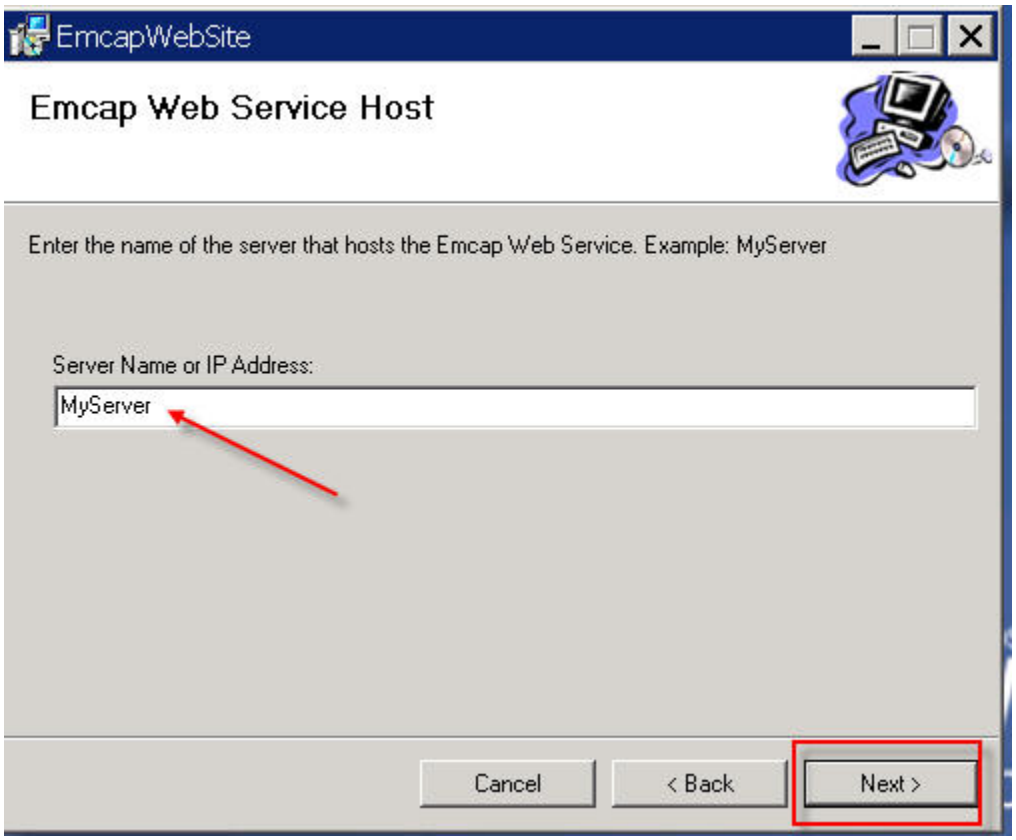



**Figure 8.**

Step 47: If you selected **Yes**, an EmcapWebSite Setup Wizard will appear, which will guide you through the steps required to install EmcapWebSite on your computer. Click **Next**.

Step 48: On the Select Installation Address screen, keep all the defaults and click **Next**.

Step 49: On the next screen, enter the name of the server or IP address of the server that will be hosting the Emcap Web Service. Click **Next**.



Step 50: On the next page, enter your Institution Name. This Institution Name will appear on several of the web pages. Click **Next**.

Step 51: Click **Next** to start the installation.

Step 52: The Installation Complete screen verifies that the EmcapWebSite has been successfully installed. Click **Close** to exit the wizard.

Step 53: An additional pop-up window will appear verifying the success of the installation. Click **OK**.

Step 54: You are now finished with installing Emcap. To exit the Emcap Installer main form, click the **Close** button.

## EMCAP Post Installation Steps

**Part 1: Configure the hMailServer**

The hmailserver will work just fine “out of the box” but there are a couple of steps that can be taken to make it more secure.

Step 1: Start the hMailServer administration program.

Step 2: Select "Protocols" from the left panel, and unchecked both SMTP Server and POP3 Server, and pressed the save button. (This leaves only the IMAP protocol.)

Step 3: Select "Status" from the left panel, then stop and restart the server.

Step 4: Close the administration program.

The hMailServer supports Secure Sockets Layer (SSL) which will protect the mail sent to, and read from, the EMCAP server from anyone that may attempt to “sniff the wire.” For more information please see the documentation on the hMailServer’s web site. http://www.hmailserver.com/documentation/?page=feature_ssl

**Part 2: Configure the EmcapWebService and EmcapWebSites**

Until these steps are completed, the Emcap WebSite will not function correctly. All other parts of the Emcap server are ready and can be used before these steps have been completed.

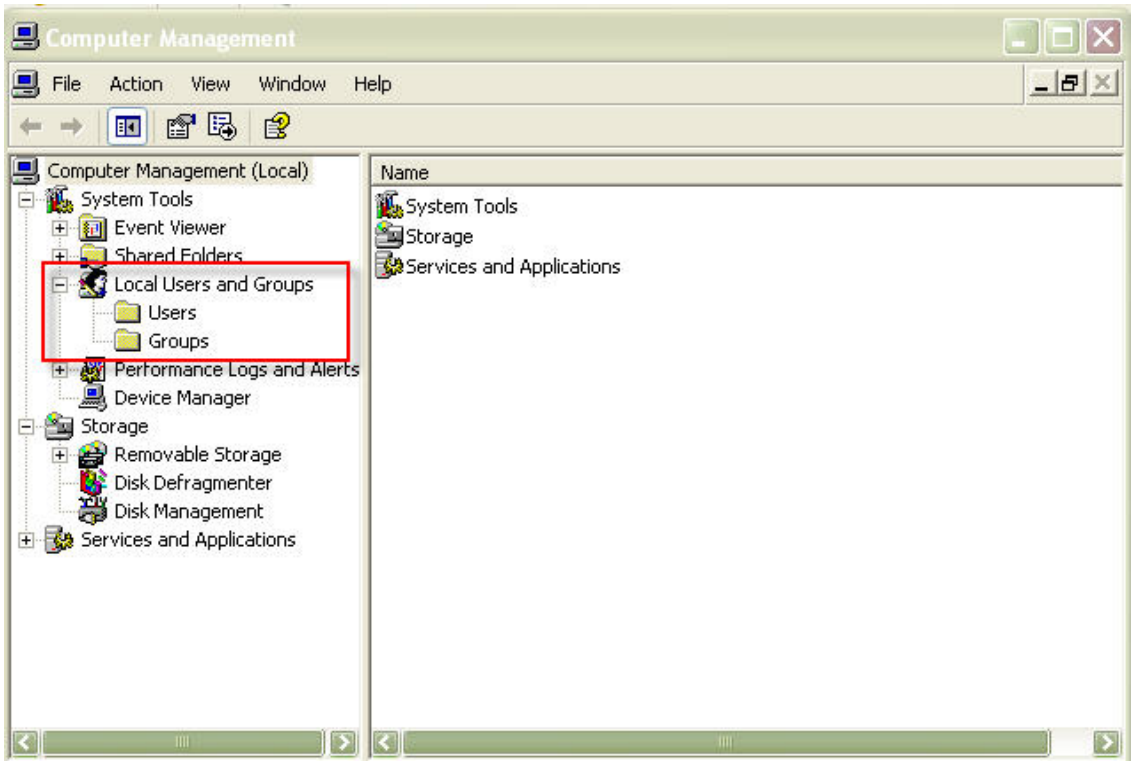
These instructions assume that both the web service and the web site are on the same computer. If this is not the case then you must make sure that the web site is configured to use an account that can be authenticated by the web service. If the database is on a different server than the web service then additional care must be

taken to make sure that the web service uses an account that can be authenticated by the database. If these servers share a common Active Directory domain, then you should probably use domain accounts instead of local accounts.

Step 1: Create a new local user account on the server named EmcapWebUser. This will be the user account that the User Support Web Site will use when logging on to the Web Service.

To do this, from the desktop, select the **Start** button → **Control Panel** → **Administrative Tools** → **Computer Management.**

The Computer Management window will appear. Expand **Local Users and Groups,** and highlight the **User** folder.




From the toolbar, select **Action** → **New User**.

A New User window will appear (Figure 9). Type "EmcapWebUser" in both the *User Name* and *Full Name* fields. Enter a description if needed. Type in a password and confirm it in the next field. **Uncheck** "User must change password at next logon" and then **check** both "User cannot change password" and "Password never expires". Click **Create** to save the user account.

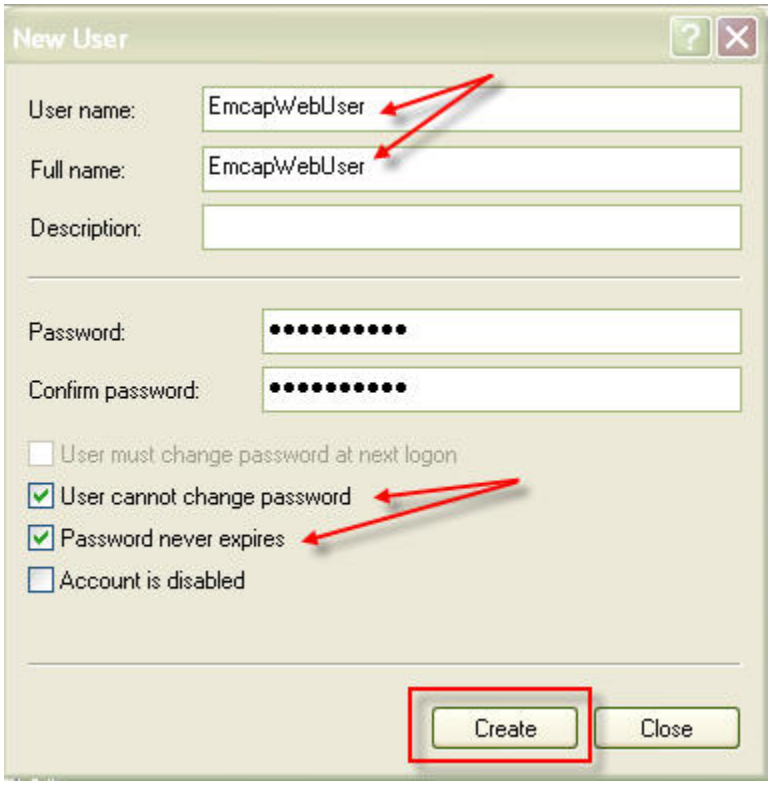



**Figure 9.**

*Note: if the User Support Web Site is installed on a "front-end" server, then this user should be created on both servers. If both servers are part of the same domain, then this should be a domain user account.*

Step 2: The New User window will be cleared so that another new account can be created. Create a new local user account on the server named EmcapUser. This will be the user account that the Web Service will use when logging on to the SQL database.

Type "EmcapUser" in both the User Name and Full Name fields. Enter a description if needed. Type in a password and confirm it in the next field. **Uncheck** "User must change password at next logon" and then **check** both "User cannot change password" and "Password never expires". Click **Create** to save the user account. Click **Close** to exit this window.

Exit out of the Computer Management window.

Step 3: To give the EmcapUser the ability to access the temporary asp.net folder, from the desktop, select the **Start** button → **Run.** In the Open field, type *cmd* and click **OK** to bring up a DOS window. At the DOS command prompt, **type** in the following command:

*C:\Windows\Microsoft.net\Framework\v2.0.50727\aspnet_regiis –ga EmcapUser,* and then press **Enter**.

If successful, you will receive the following message:

*"Start granting emcapuser access to the IIS metabase and other directories used by ASP.NET. Finished granting emcapuser access to the IIS metabase and other directories used by ASP.NET".*

Step 4: To give the EmcapWebUser the ability to access the temporary asp.net folder, at the DOS command prompt **type** in the following command:

*C:\Windows\Microsoft.net\Framework\v2.0.50727\aspnet_regiis -ga EmcapWebUser*, and then press **Enter**.

If successful, you will receive the following message:

*"Start granting EmcapWebUser access to the IIS metabase and other directories used by ASP.NET. Finished granting EmcapWebUser access to the IIS metabase and other directories used by ASP.NET".*

Note that this should be performed on the server on which the User Support Web Site was installed.

Step 5: To give the Network Service the ability to access the temporary asp.net folder, at the DOS command prompt **type** in the following command:

*C:\Windows\Microsoft.net\Framework\v2.0.50727\aspnet_regiis –ga NetworkService,* and then press **Enter**.

If successful, you will receive the following message:

*"Start granting NetworkService access to the IIS metabase and other directories used by ASP.NET. Finished granting NetworkService access to the IIS metabase and other directories used by ASP.NET".*

Note that this should be performed on both the main server and the server on which the User Support Web Site was installed if they are not one and the same

**Close** the DOS window.

Step 6: In SQL Server Management Studio (Figure 10), create a new login for the new user by opening the **Security** folder → **Logins** folder. Right click on Logins and select **New Login**.

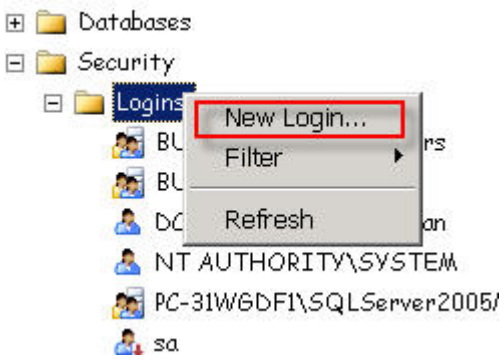



**Figure 10.**

A Login – New window will appear. Type in "<<server name>>\EmcapUser" in the Login Name field, and set the user's default database to be EMCAP.

On the left panel, select **User Mapping**. This will bring up the user mapping page (Figure 11). On this page:

- Check "Map" for *EMCAP* on the top screen.
- Check db_owner on the bottom screen.
- Check "Map" for *hMailServer* on the top screen.
- Check public on the bottom of the screen.

Click **OK** to save.

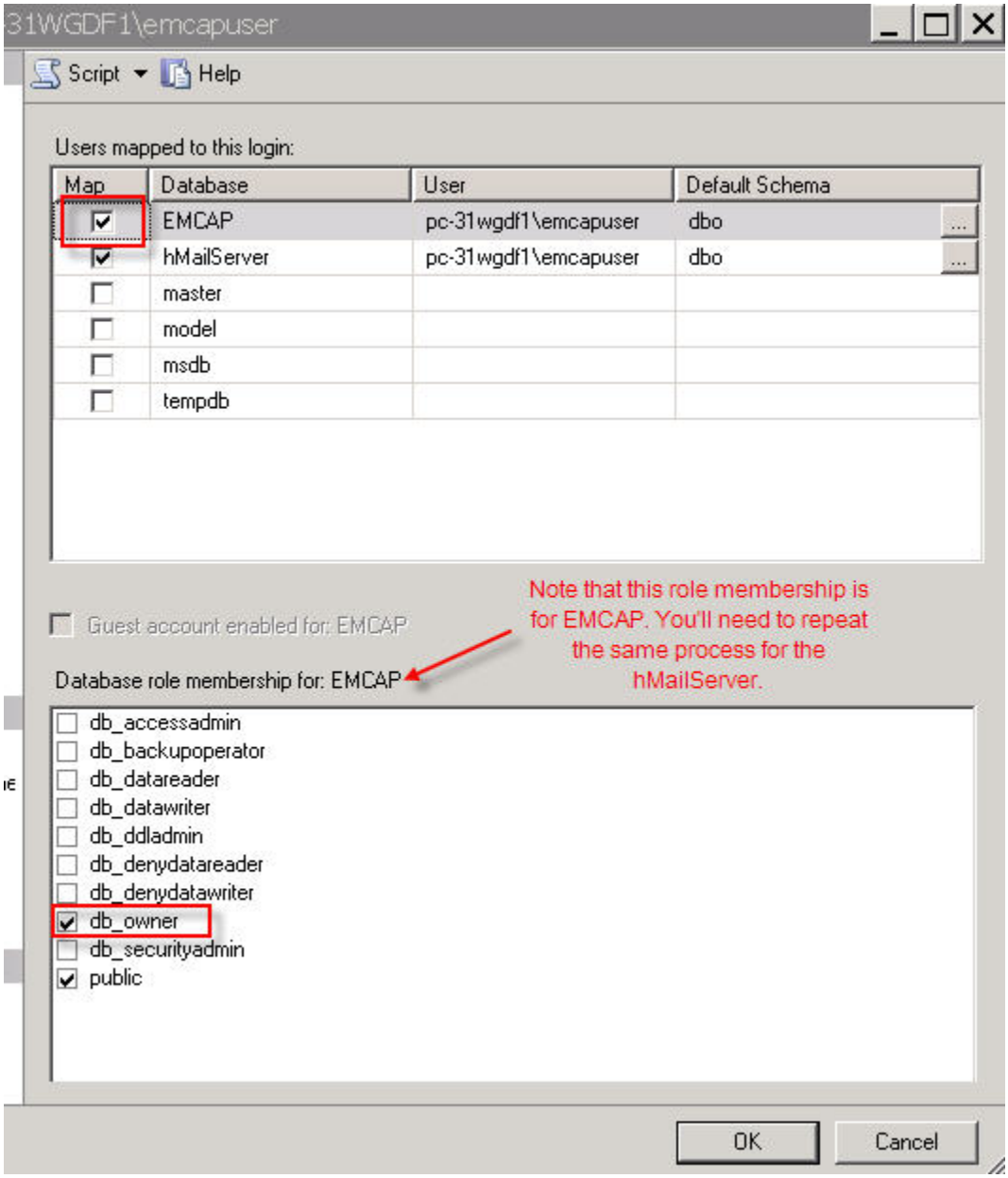


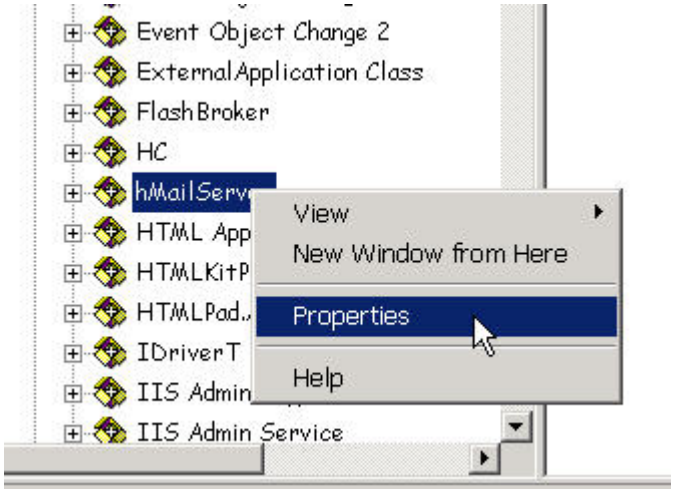

**Figure 11.**

Step 7: Next you will need to give the Network User permission to launch the hMailServer COM api. If the IIS Application Pool that the EmcapWebService uses runs under an identity other than Network Server, then change the following directions to use that user instead of the Network Service account.

From the desktop, select the **Start** button → **Run**. At the command line type: *dcomcnfg* and click **OK**. This will bring up the Component Services console.

Expand **Components Services** → **Computers** → **My Computer** → **DCOM Config**.

Find hMailServer. Right click on the icon and select **Properties**.




This will bring up the hMailServer Properties window (Figure 12).

Select the Security tab, and enter the following information

- For Launch and Activation Permissions, select “Customize” and press the **Edit** button. A Launch Permission window will appear. Select the **Add** button to add the Network Services user, and allow it Local Launch and Local Activation permissions. Click **OK**.

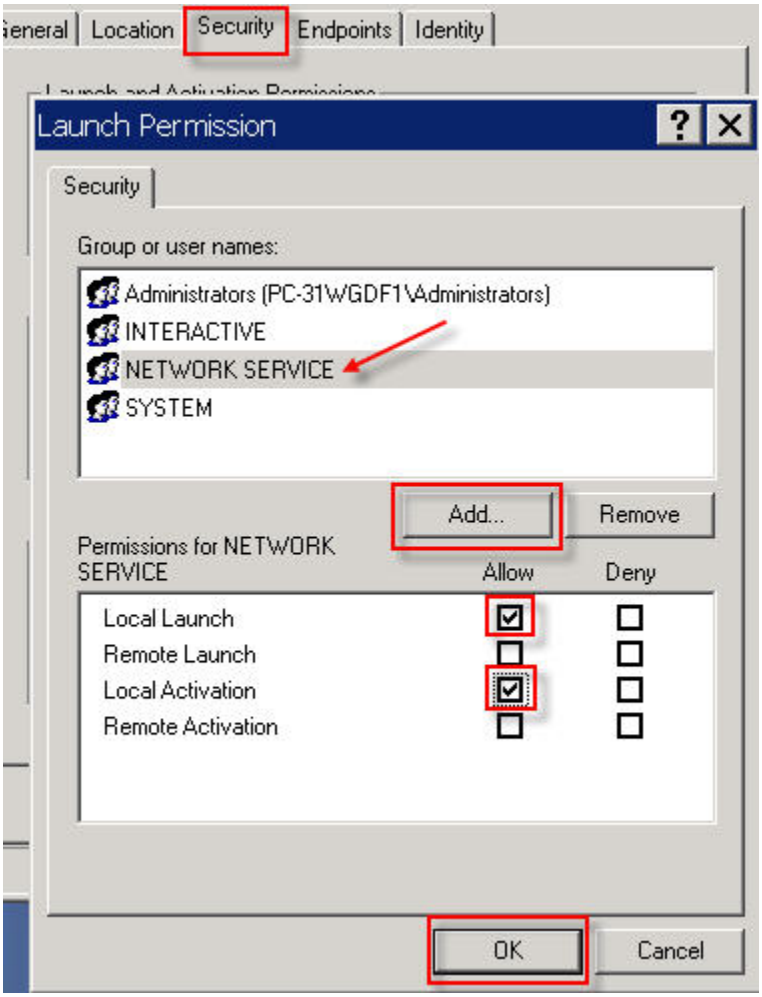



**Figure 12.**

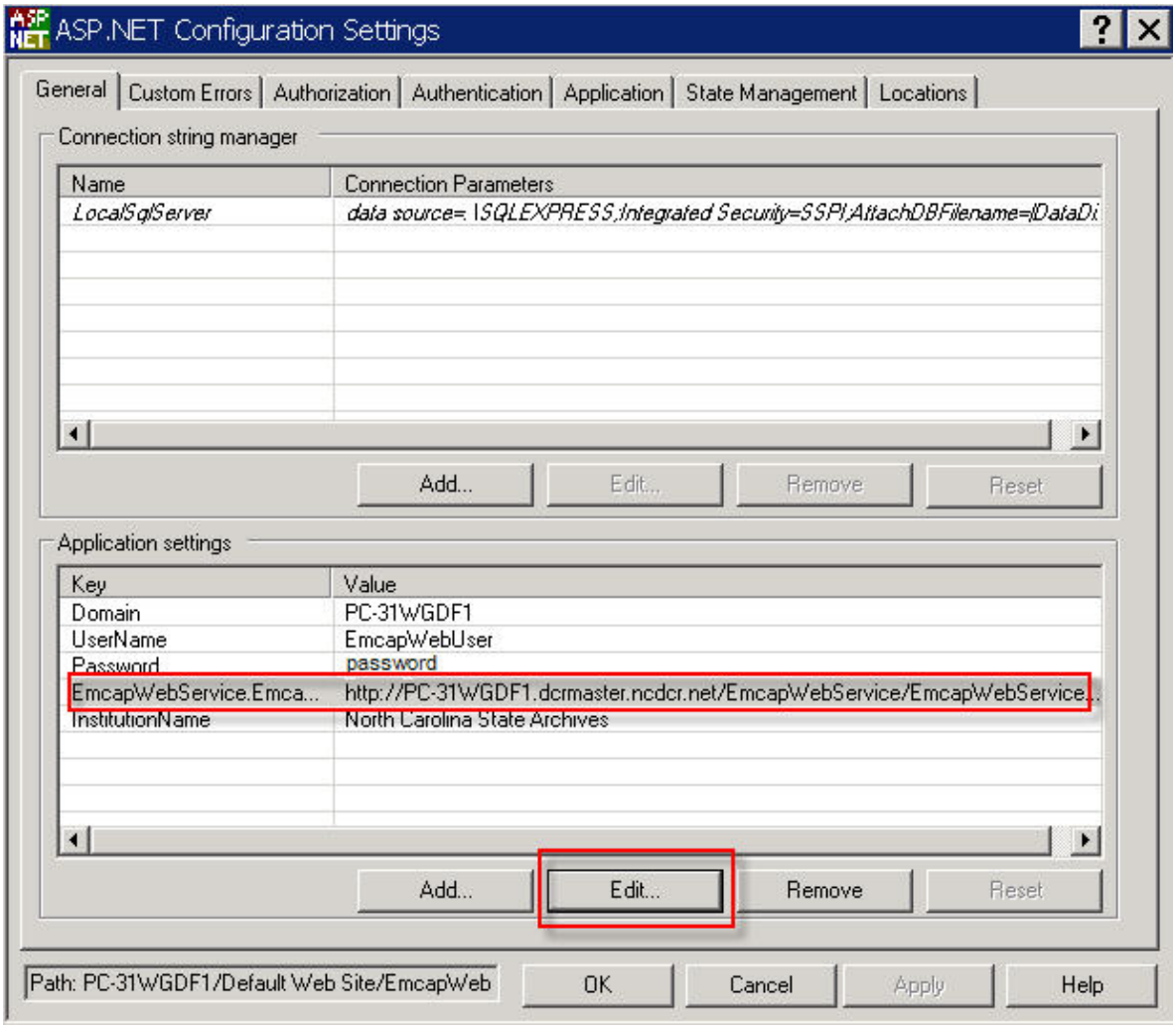
- For Access Permissions, select "Customize" and press the **Edit** button. An Access Permission window will appear. Select the **Add** button to add the Network Services user. Give it Local Access only. Click **OK**.

- Configuration Permissions will be defaulted to "Customize". Keep this default. Click **Apply** and then **OK**. Exit the Component Services widow.

Step 8: Open the Internet Information Services (IIS) and select **Web Sites** folder → **Default Web Site** → **EmcapWebSite**. Right click on the icon and select Properties.

On the ASP.NET tab, select the **Edit Configuration** button. On the General tab, update the domain and password settings to match those for the EmcapWebUser. Click **Apply**, and then **OK**. Click **OK** to exit the EmcapWebSite Properties window.

If you are experiencing problems with this step, you can troubleshoot by making sure that the Value for the EmcapWebServices can be copied and pasted into a web browser. Highlight the appropriate key and then select the **Edit** button.




From the Edit/Application Settings window, copy and paste the value into a web browser. You should see a list of operations supported by EmcapWebServ. If you do not see this list, you will need to review previous steps to determine the issue.

Step 9: While still in IIS, select EmcapWebService. Right click on the icon and select Properties.

On the **Directory Security** tab, select the **Edit** button for Anonymous access and authentication control. In the Authenticated Methods window, **uncheck** "Anonymous access" at the top of the screen and select "Integrated Windows authentication" at the bottom of the screen. Click **OK**.

On the **ASP.NET** tab, select the **Edit Configuration** button. On the Application tab, at the bottom of the screen in the Identity Settings panel, check “Local impersonation”. Type “EmcapUser” in the User Name field, and then the password that you assigned in Step 1. Click **OK**. Click **OK** to exit the EmcapWebService Properties window.

On the **General** tab, verify that the database connection strings in the Connection string manager panel have a value very similar to:

Data Source=localhost;Initial Catalog=EMCAP;Integrated Security=True;Application Name=EMCAP for the EmcapConnection string.

AND

Data Source=localhost;Initial Catalog=hMailServer;Integrated Security=True;Application Name=EMCAP for the hMailServer connection string

Note that Data Source in each case is replaced with the name of the database server or its IP Address.

Exit both windows and then exit IIS.

As a final step, open the following files in notepad and verify the database connection strings as described above:

- C:\Program Files\DCR\Emcap\ EmcapCore.exe.config
- C:\Program Files\DCR\Emcap\ AdminConsole.exe.config

**Close** out notepad.

Step 10: To test the Emcap Web Site; from IIS select the EmcapWebsite from the left panel. Right-click on the test.aspx page from the right panel and select **Browse**.

An Emcap Test page will appear. Click the **Go** button. After a brief pause, “Success” should be displayed at the top left of the screen.

To test the EmcapWebService; from IIS select the EmcapWebService from the left panel. Right-click on the EmcapWebService.asmx page from the right panel and select **Browse**. This should produce a page listing the available operations. From that list choose Test Connection. When **invoked**, it should return true, if not then the web service is not authenticating with the database server.