



Installation and Configuration Guide



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INTRODUCTION

This guide is for individuals configuring a database for WinSPC and installing and configuring WinSPC on client stations. It consists of procedures to accomplish these tasks for the following database servers:

- Microsoft SQL Server 2005
- Microsoft SQL Server 2005 Express
- Microsoft SQL Server 2008
- Microsoft SQL Server 2008 Express
- Oracle 10g
- Oracle 11g

The four Microsoft SQL Server editions are all dealt with in **Chapter 1: Microsoft SQL Server 2005/2008**. A free download of Microsoft SQL Server 2005 Express as well as Microsoft SQL Server 2008 Express are available at: www.winspc.com/downloads. (To access this web page, enter the username and password included in the e-mail notifying you of the release of WinSPC Version 8.0. If you did not receive an e-mail notification, contact the DataNet Quality Systems Product Support Help Desk at 248-447-0140.)

WinSPC is certified to run in a traditional client/server environment and a Microsoft Terminal Services environment. The content in this guide applies to both except where marked by a *Terminal Services* marker, in which case the content applies uniquely to a Microsoft Terminal Services environment. The first appearance of the *Terminal Services* marker is to the right of the following paragraph.

When an implementation involves a Microsoft Terminal Services environment, WinSPC must be installed on the Microsoft Terminal Services server. If the implementation does not also involve a client/server environment, make the Microsoft Terminal Services



Terminal Services

server your first client. (*First client* simply refers to the first computer on which WinSPC is installed.) If the implementation also involves a client/server environment, it does not matter whether you make the Microsoft Terminal Services server the first client or an additional client. (*Additional client* means any computer on which WinSPC is installed other than the first client.) Electing to make the Microsoft Terminal Services server the first client means that the procedure for installing WinSPC on the Microsoft Terminal Services server is the procedure detailed in *Phase 2* of the chapter specific to the database server being used in your implementation. Electing to make the Microsoft Terminal Services server an additional client means that the procedure for installing WinSPC on the Microsoft Terminal Services server is the procedure detailed in **Chapter 5: Additional Client Installs and Configurations**.

For WinSPC's hardware requirements and recommended platforms, see **Appendix G: Hardware Requirements and Recommended Platforms**.

DataNet Quality Systems wants your installation and configuration to be a positive experience. Please do not hesitate to contact our Product Support Help Desk at (248)-447-0140 if you have questions concerning any of the information in this guide.

CHAPTER 1: MICROSOFT SQL SERVER 2005/2008

WinSPC is certified to run on the following editions of Microsoft SQL Server: Microsoft SQL Server 2005 Express, Microsoft SQL Server 2005, Microsoft SQL Server 2008 Express and Microsoft SQL Server 2008. This chapter applies to each of these editions.

The procedure to configure any of these four editions for use with WinSPC is nearly identical to that of the other three. Consequently, where images of Microsoft SQL Server prompts are used for illustration, they are exclusively from Microsoft SQL Server 2005 Express. In addition, where the text of this chapter applies to all four editions equally, edition-specific information is omitted in favor of generic titles such as *Microsoft SQL Server* or *SQL Server Management Studio*.

ASSUMPTIONS

The instructions in this chapter are based on the following assumptions:

- Microsoft SQL Server is installed on your database server machine.
- An instance of Microsoft SQL Server has been created for WinSPC and is running. (This instance may be named or unnamed.)
- During the creation of this instance, the authentication mode selected was **Mixed Mode (Windows Authentication and SQL Server Authentication)**. (WinSPC will not function if the default **Windows Authentication Mode** was accepted.)

- The management and configuration tools appropriate to your edition of Microsoft SQL Server are installed on your database server machine. At a minimum, these include **SQL Server Management Studio** and **SQL Server Configuration Manager**.
- Other than the **Mixed Mode** of authentication and where an exception is clearly noted, the default values presented by your Microsoft SQL Server edition during the setup process were accepted without modification.
- Firewalls between your database server and the client stations to be used for WinSPC are configured to permit database traffic.
- For implementations employing a Microsoft Terminal Services environment, Microsoft Terminal Services is properly installed and configured on the server designated as your Microsoft Terminal Services server and the client stations that will run WinSPC on this server can successfully establish a Remote Desktop Protocol (RDP) connection to the server.
- The operating system of your database server machine is Windows Server 2003.
- The operating system of the client machines to be used for WinSPC is either Windows Vista Business or Windows XP Pro. (Images of client machines included in this guide are from Vista Business.)

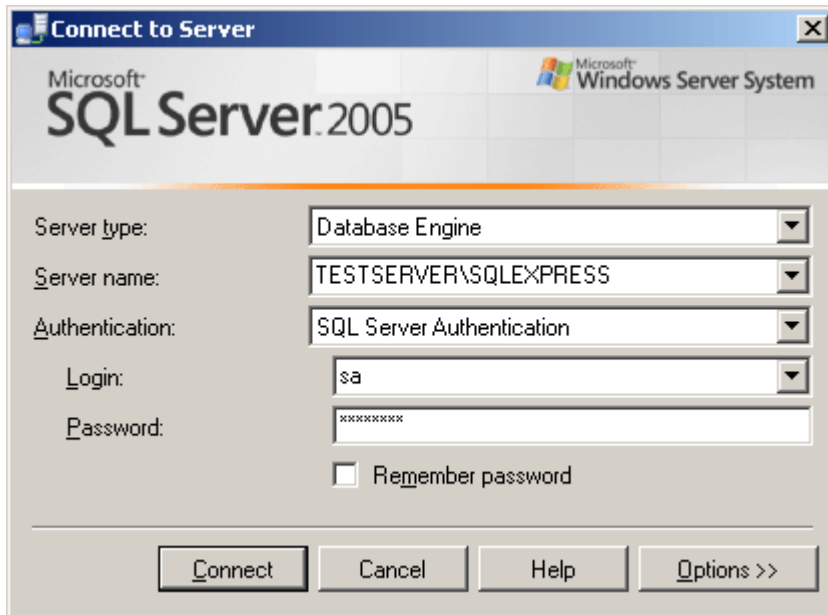


NOTE: If a default value was modified during the setup Microsoft SQL Server or an operating system is different from that stated here, adapt the instructions in this guide as needed to accommodate the modified value or differing operating system.

SERVER CONFIGURATION**Phase 1 of 4****Establish a Server Connection**

1. On the database server machine, launch **SQL Server Management Studio**, the default path for which is **Start > All Programs > Microsoft SQL Server > SQL Server Management Studio**.
2. In the **Connect to Server** prompt that appears:
 - a. At **Server Type**, accept the **Database Engine** default.
 - b. At **Server name**, if a name is not displayed or the name displayed is not the name of the machine on which the instance of Microsoft SQL Server to be used for WinSPC is created, select the correct name from the dropdown list. Depending on your edition of Microsoft SQL Server and the options selected during this edition's setup, the instance for your implementation may be *named* or *unnamed*. If your instance is named, the correct name for this **Server name** field consists of a combination of the server name and the instance name (e.g. TESTSERVER\SQLEXPRESS). If your instance is unnamed, the correct name for this **Server name** field consists of the server name alone (e.g. TESTSERVER). In the event the server name displayed is incorrect and the dropdown list does not contain the correct name:
 - i. From the **Server name** dropdown list, select **<Browse for more...>**.
 - ii. In the **Browse for Servers** prompt, click the **Network Servers** tab. This automatically initiates a search for servers on your network.

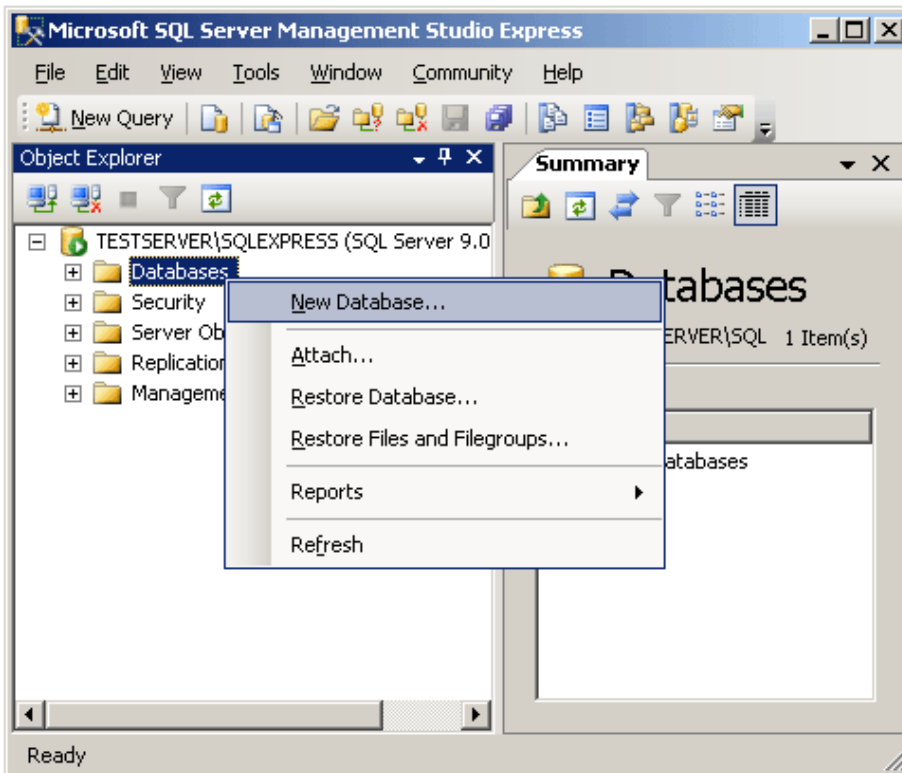
- iii. When the search completes, expand **Database Engine** and single-click the desired server name or server name\instance name combination.
- iv. Click **OK**.
- c. At **Authentication**, select **SQL Server Authentication**.
- d. At **Login**, enter **sa**.
- e. At **Password**, enter the password assigned to the **sa** login.
- f. Click **Connect**.



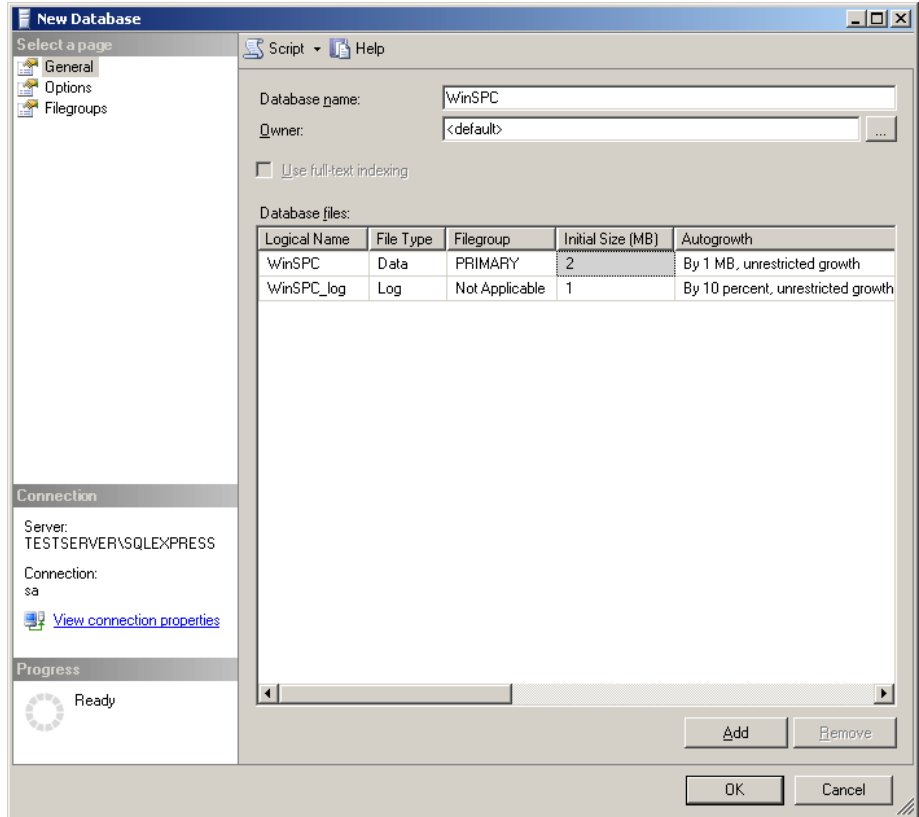
NOTE: If the **Connect to Server** prompt is not displayed, click **File > New > Database Engine Query** in **Microsoft SQL Server Management Studio** and complete the preceding substeps in the **Connect to Database Engine** prompt.

Create a Database

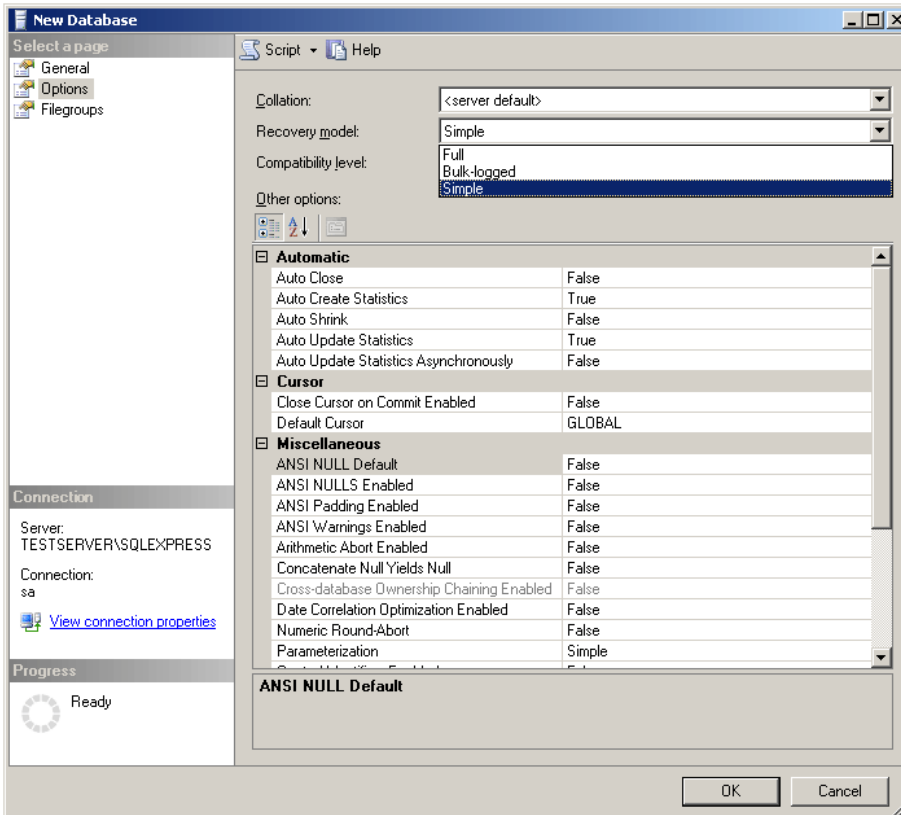
1. In the **Object Explorer** (i.e. the left pane) of **Microsoft SQL Server Management Studio**, right-click **Databases** and, from the shortcut menu, select **New Database**.



2. In the **New Database** prompt, at **Database name**, create and enter a name for the database. (The recommended database name is **WinSPC**.)



3. If you are configuring a full, as opposed to express, version of Microsoft SQL Server, you may want to consider changing the default **Recovery Model** from **Full** to **Simple**. This helps prevent Microsoft SQL Server's transaction log from growing to a point where it interferes with database performance. To change the **Recovery Model** to **Simple**, under **Select a page**, click **Options** and, at **Recovery model** select **Simple**.

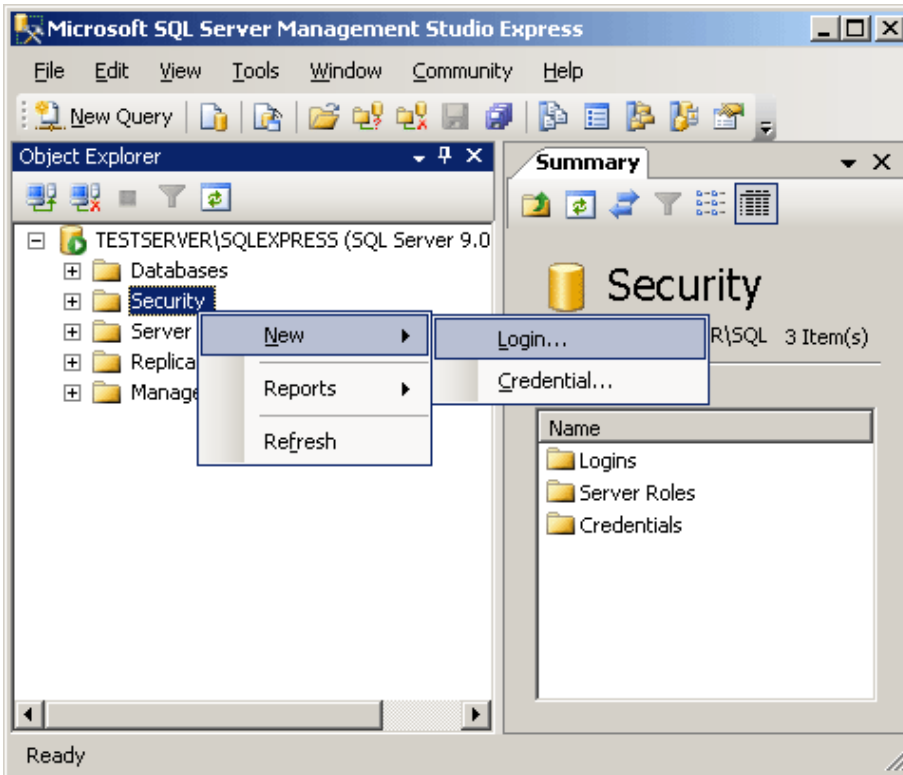


NOTE: According to Microsoft, with the **Recovery Model** set to **Simple**, a database can only be recovered to the time of the most recent backup. This means that data captured between the most recent backup and a failure which necessitates a recovery is lost. If this is an unacceptable risk for your organization, use the **Full** or **Bulk-logged** option and follow Microsoft's recommendations to control the size of your transaction log.

4. Click the **New Database** prompt's **OK** button.

Create a Server Login

1. In the **Object Explorer**, right-click the **Security** folder and select **New > Login**.



(The **Security** folder referred to here is the one in the root level of the folder for the server or server\instance you are configuring, not a **Security** sub-folder within a database folder under the root **Databases** folder.)

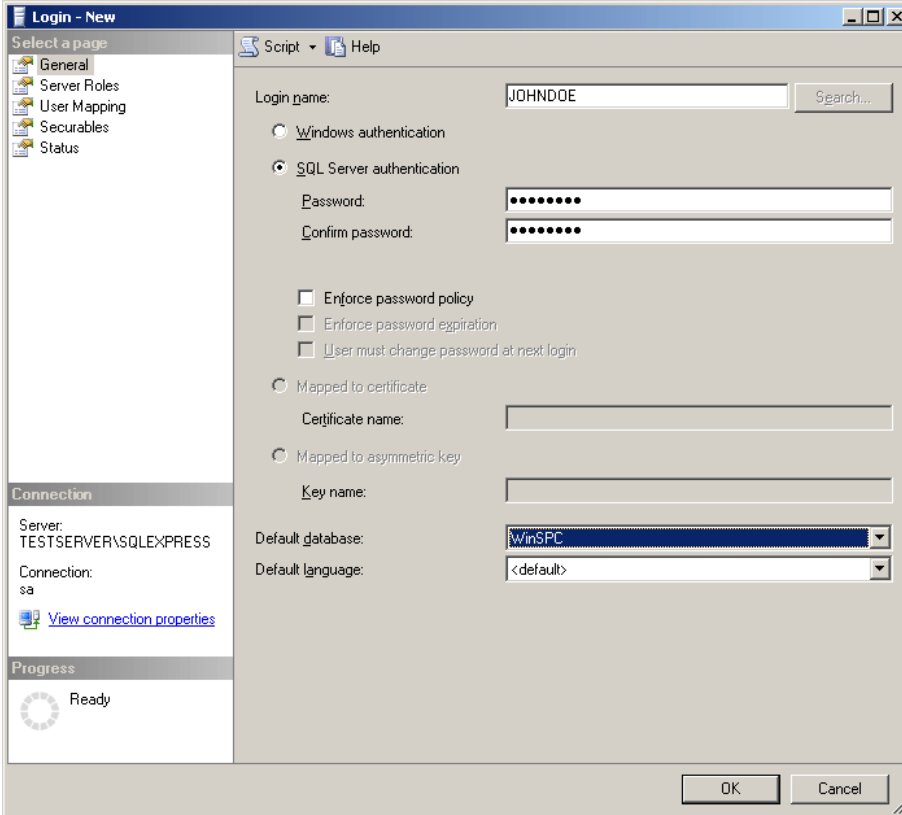
2. In the **Login - New** prompt:

- a. At **Login name**, create and enter a name for the login. (The recommended name is **JOHNDOE**.)
- b. Select **SQL Server authentication**.
- c. At **Password**, create and enter a sufficiently strong password for the login.
- d. At **Confirm password**, reenter the password.

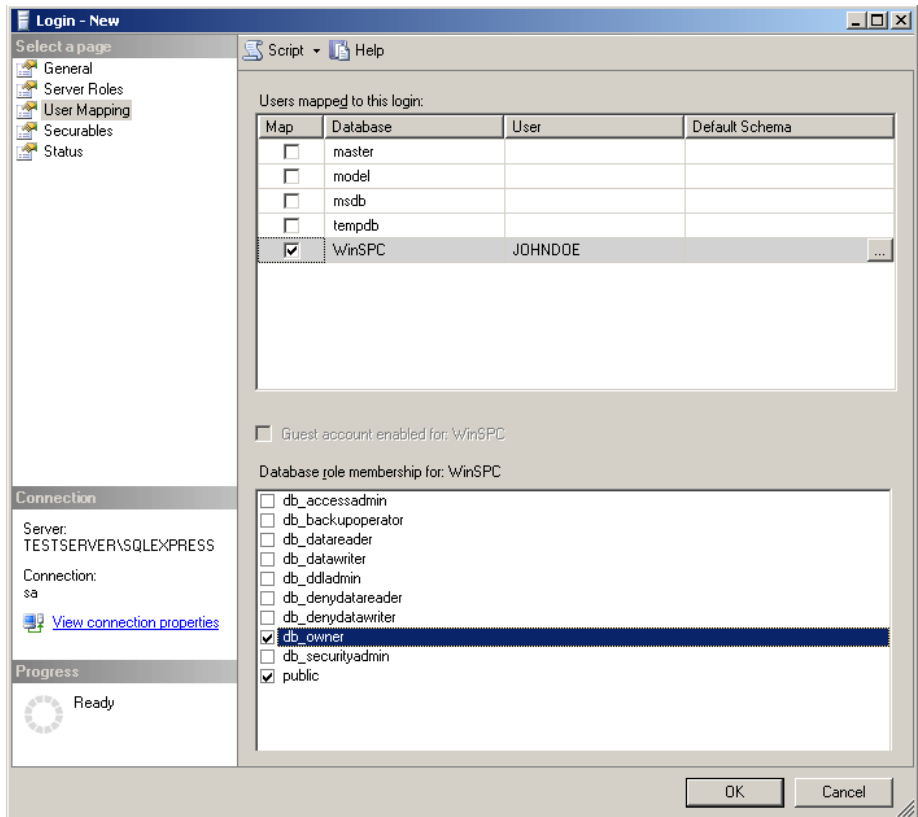
NOTE: The user name and password entered here will be used by Microsoft SQL Server to authentic WinSPC client stations and allow authenticated stations access to the WinSPC database. This user name and password combination is not directly used by WinSPC users. WinSPC users will, later, be assigned individual user IDs and passwords and will use these individual IDs and passwords to log into the WinSPC application on WinSPC client stations.

- e. Uncheck the **Enforce password policy** check box.

f. At **Default database**, select **WinSPC**.

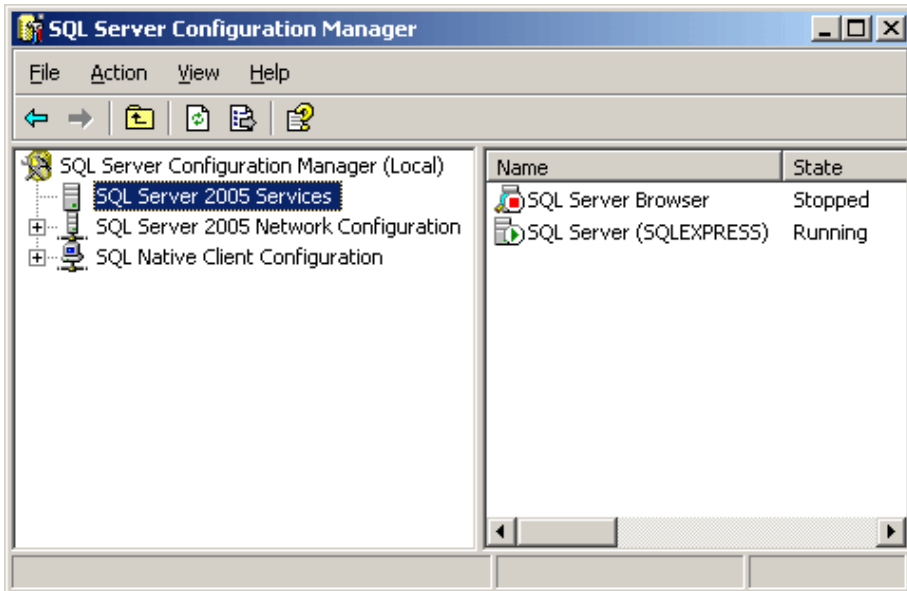


3. Under **Select a page** (top left pane), single-click **User Mapping** and then, in the right portion of the prompt:
 - a. Under **Users mapped to this login**, in the **Map** column, check the check box for the newly created WinSPC database.
 - b. Under **Database role membership for: <Database Name>**, check the **db_owner** check box.
 - c. Click **OK**.

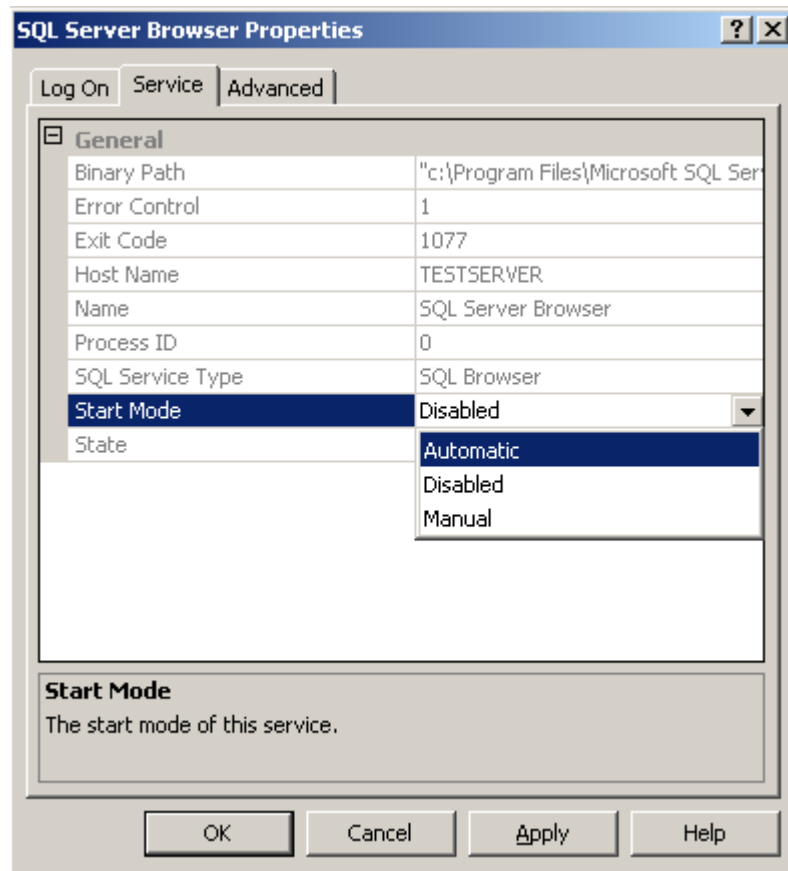


Configure the SQL Server Browser Service and Enable a Network Protocol

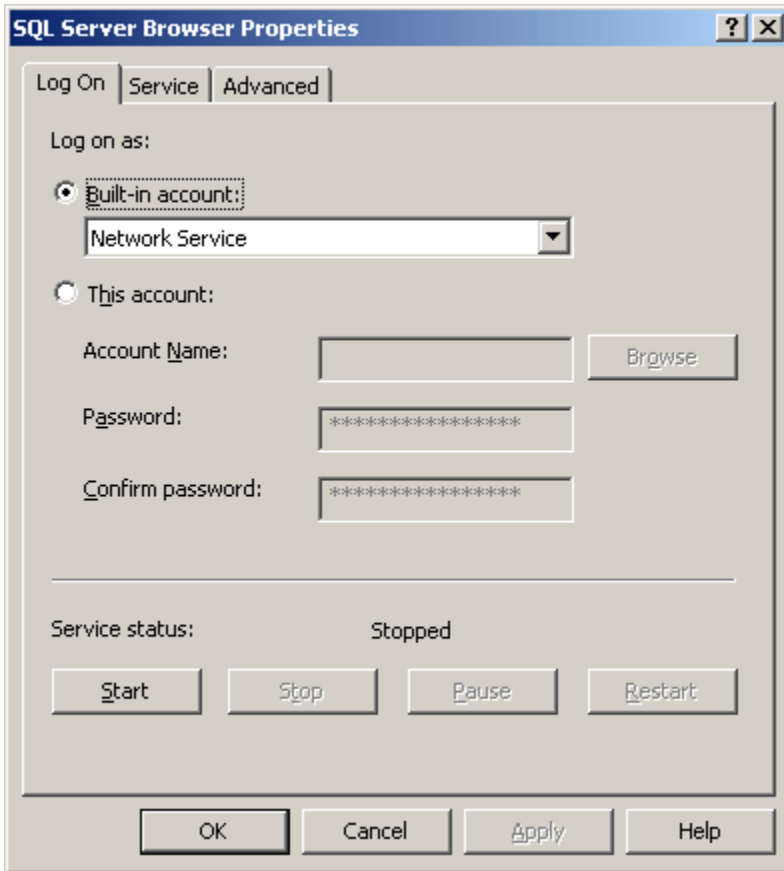
1. Without exiting **Microsoft SQL Server Management Studio**, launch **SQL Server Configuration Manager**, the default path for which is **Start > All Programs > Microsoft SQL Server > Configuration Tools > SQL Server Configuration Manager**.
2. If the Microsoft SQL Server instance you are working with *is not* a named instance, go to step 3. If the instance you are working with *is* a named instance, configure the **SQL Server Browser** service. (If you don't know whether the instance is named or unnamed, assume it is named.) To configure the **SQL Server Browser** service:
 - a. In the left pane of **SQL Server Configuration Manager**, click **SQL Server Services**.



- b. In the right pane, right-click **SQL Server Browser** and select **Properties**.
- c. In the **SQL Server Browser Properties** prompt, click the **Service** tab.
- d. On this tab, to the right of **Start Mode**, click **Disabled** and select **Automatic**.

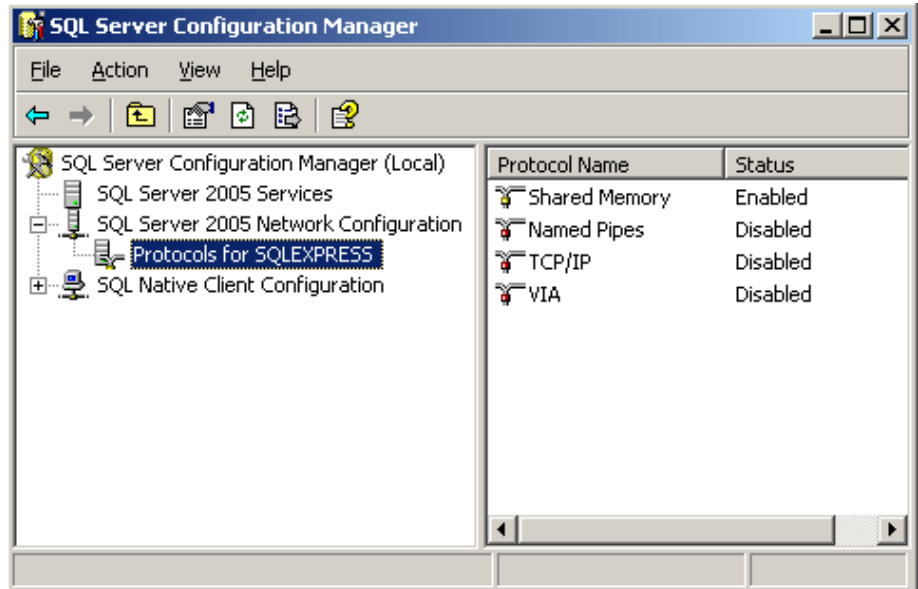


- e. Click the **Apply** button.
- f. Click the **Log On** tab and on this tab click the **Start** button.

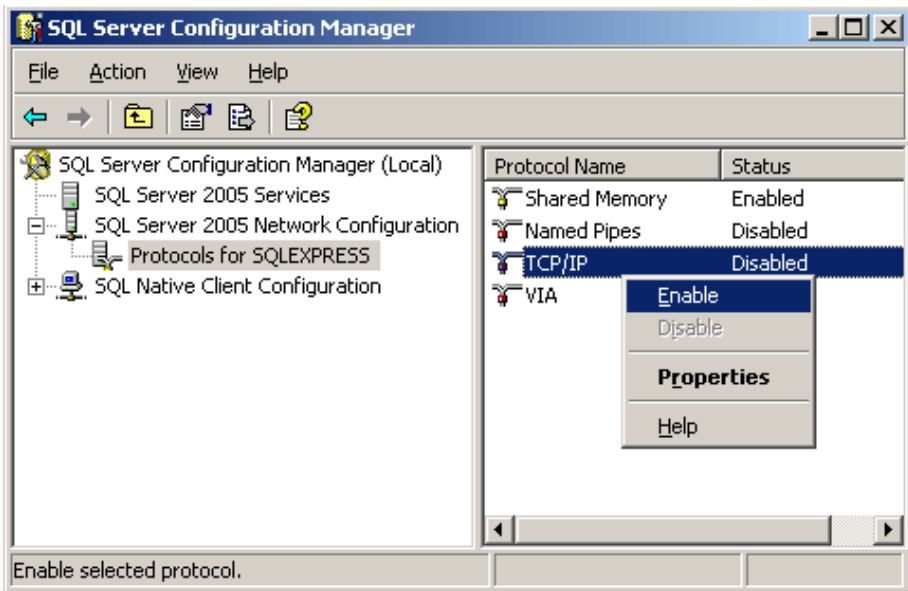


- g. Allow the progress bar that appears to complete.
- h. Click **OK**.

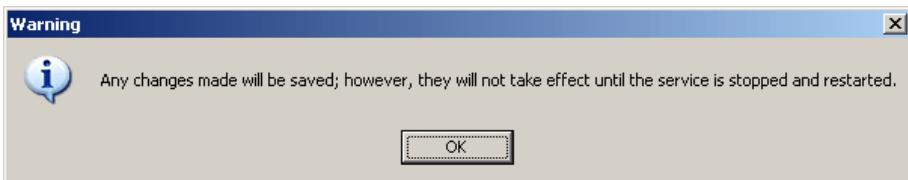
3. Enable a network protocol. To do this:
 - a. In the left pane of **SQL Server Configuration Manager**, expand **SQL Server Network Configuration** and single-click **Protocols for <SERVER OR INSTANCE NAME>**.



- b. In the right pane, right-click either **TCP/IP** or **Named Pipes** and click **Enable**. (WinSPC works with either of these options. If you are unsure of which option to choose, consult your network administrator.)

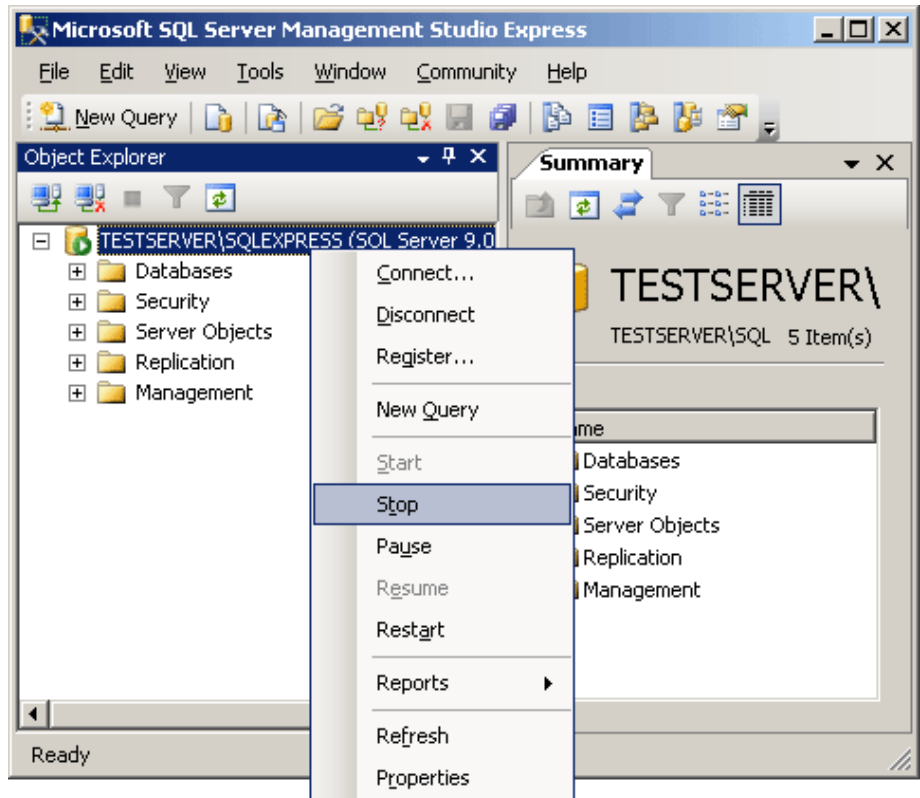


- c. In the warning indicating that changes will not take effect until the service is stopped and restarted, click **OK**.

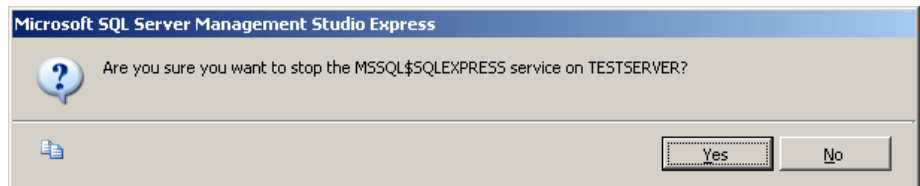


- d. Close **SQL Server Configuration Manager**.

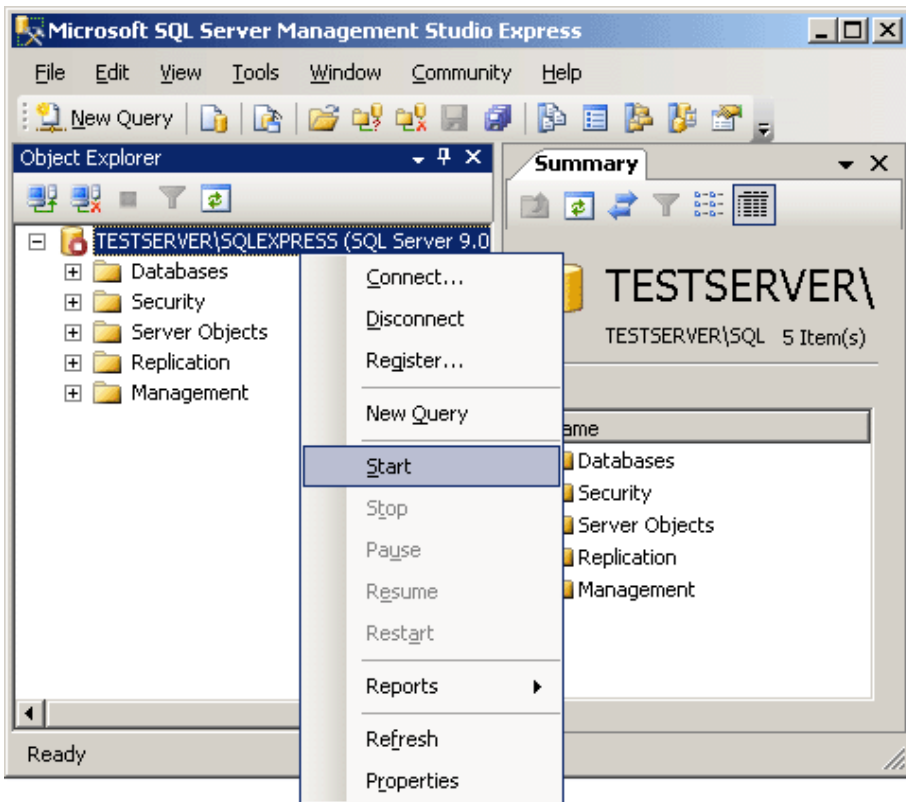
- e. In **Microsoft SQL Server Management Studio**, right-click the server you've been configuring and select **Stop**.



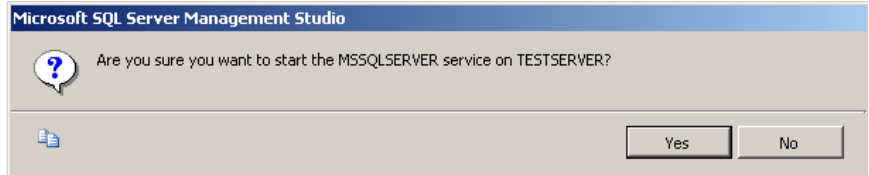
- f. In the message box that appears, click **Yes** to confirm you want to stop the service.



- g. When the message box closes, right-click the server again and select **Start**.



- h. In the message box that appears, click **Yes** to confirm you want to start the service.



- i. Click **File > Exit** to close **Microsoft SQL Server Management Studio**.

THIS COMPLETES PHASE 1 OF 4.
GO TO THE NEXT PAGE AND COMPLETE PHASE 2.

FIRST CLIENT INSTALL AND CONFIGURATION (INITIAL STEPS)

Phase 2 of 4

This section concerns the installation and configuration of WinSPC on the first WinSPC client. The first WinSPC client refers to the first computer on which you want to install WinSPC. This computer can be any computer on your network.

If your implementation employs Microsoft Terminal Services, see the discussion on page 1 of this guide for direction on whether to make your first client the Microsoft Terminal Services server or another computer.



Terminal Services

1. Create a folder on a network file server accessible by all client stations that will run WinSPC. This folder's primary purpose is to facilitate the installation and configuration of WinSPC on all clients other than the first client. (The recommended name for this folder is **WinSPCRemote**.)
2. Share this folder and grant domain administrators at least the minimum required permissions to it. For file servers running Windows Server 2003, the minimum *Share* permissions are **Change** and the minimum *Security* permissions are **Modify**. For file servers running Windows Server 2008, the minimum *Share* permissions are **Contributor** and the minimum *Security* permissions are **Modify**. (For a procedure on granting *Share* or *Security* permissions, see **Appendix D: Granting Share and Security Permissions**.)

NOTE: If your WinSPC implementation is part of a workgroup rather than a domain, grant these minimum permissions to the local administrator who will install and configure WinSPC on the first WinSPC client.

3. Log into Windows on the first WinSPC client as a domain administrator who also has local administrator privileges.

NOTE: If the first WinSPC client is part of a workgroup instead of a domain, log in as a local administrator.

4. If you downloaded **Install.exe** from winspc.com/downloads:
 - a. Transfer this file to the first WinSPC client if it was downloaded to a different computer.
 - b. Double-click the file.
 - c. If an **Open File – Security Warning** prompt appears, click **Run**.
 - d. Go to step 6.

5. If you have the WinSPC CD (whether as a result of receiving it from DataNet Quality Systems or burning it from the **WinSPC.iso** file at winspc.com/downloads) and you did not complete the preceding step:
 - a. Insert and run the CD.
 - b. On the **WinSPC Version 8.0** setup prompt that appears, click **Install or Upgrade**.



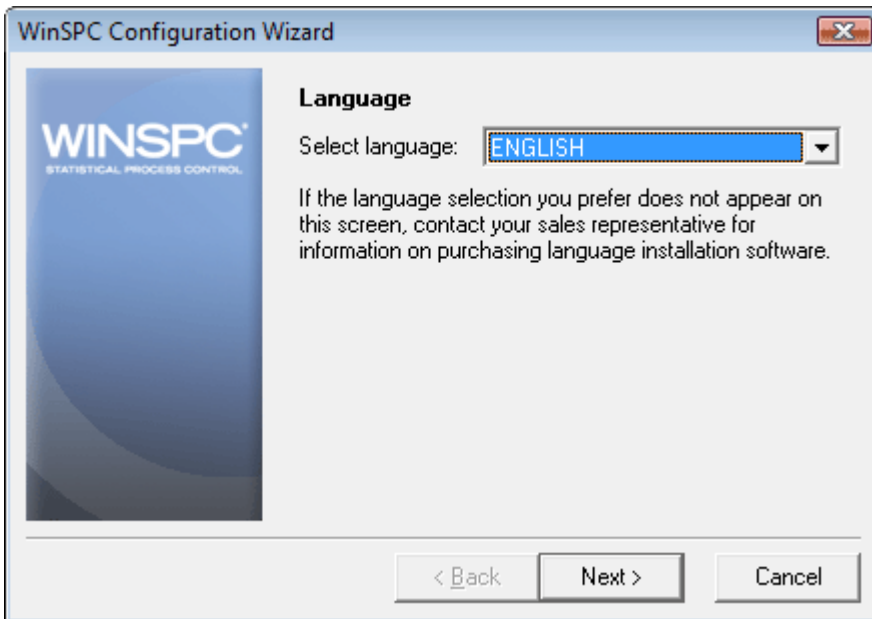
- c. Go to step 6.

6. Complete the WinSPC Installation Wizard.

NOTE: The prompts of this wizard are intended to be self-explanatory. Consequently, they are not detailed here. If you have a question about a prompt or want to be directed step-by-step through the wizard, see **Appendix A: The WinSPC Installation Wizard**.

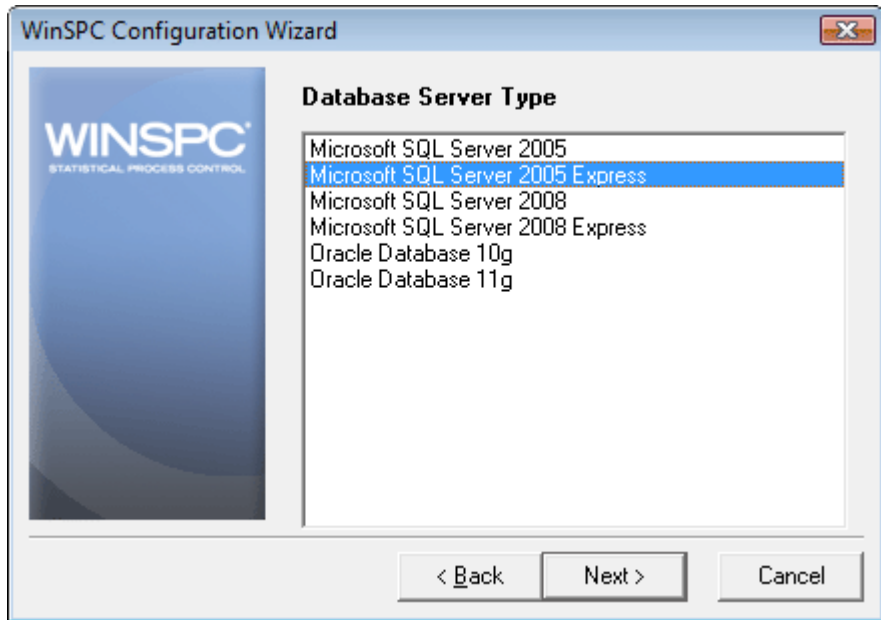
7. Complete **Appendix B: Installing NJWin for an Asian Language** if the first client will need to run WinSPC in an Asian language or you would like to run the WinSPC Configuration Wizard in an Asian language. (The WinSPC Configuration Wizard is the tool you will use next. As its name implies, it is the tool used to configure WinSPC.)
8. If you installed WinSPC from a CD, exit the **WinSPC Version 8.0** setup prompt by clicking **Close** in the upper right corner and remove the CD from the CD-ROM drive.
9. Click **Start > All Programs > WinSPC > WinSPC**. This launches the WinSPC Configuration Wizard.

10. On the **Language** prompt, from the **Select language** list, choose a language and click **Next**.



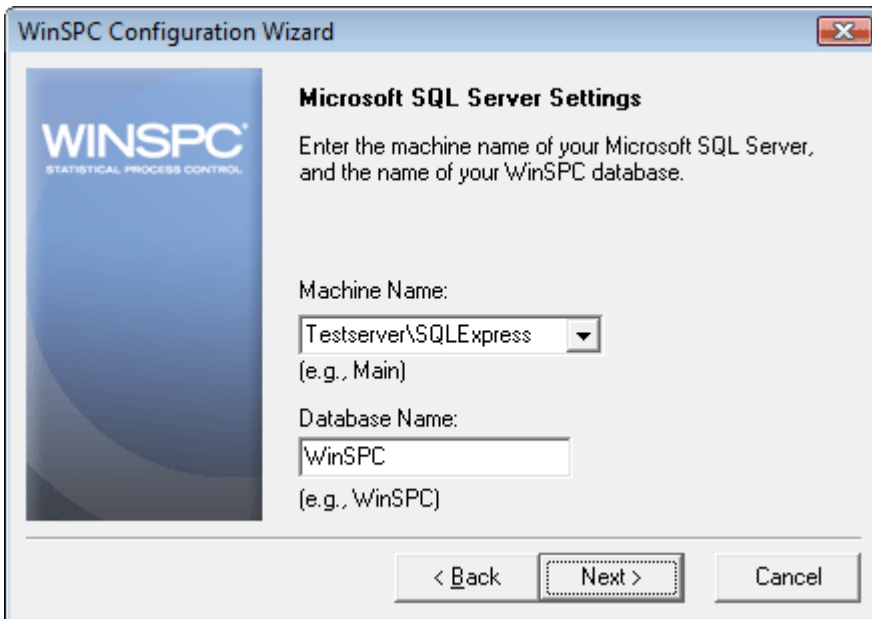
NOTE: The language selected here is the language in which the remainder of the WinSPC Configuration Wizard will run. It also becomes the system-wide default language for WinSPC. (This default language can be changed at any time following the completion of the WinSPC Configuration Wizard. Once the configuration of the first WinSPC client is complete, you can see the **WinSPC Help** for more information on default languages.)

11. On the **Database Server Type** prompt, select your **Microsoft SQL Server** edition and click **Next**.

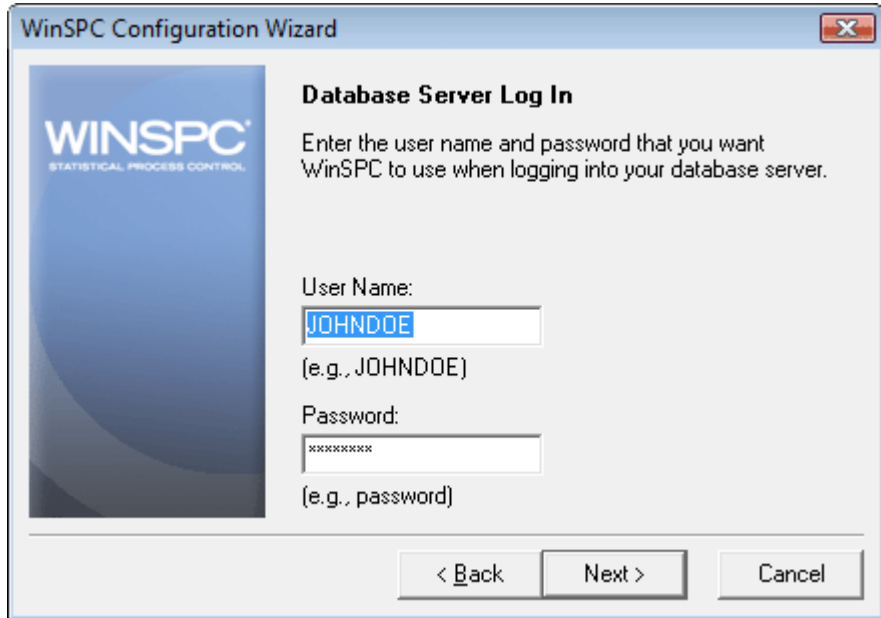


12. On the **Microsoft SQL Server Settings** prompt:

- a. At **Machine Name**, if the instance of Microsoft SQL Server designated for WinSPC is a named instance, enter the name of the machine on which the instance is created and the name of the instance, separating the two by a backslash (e.g. Testserver\SQLExpress). If the instance is an unnamed instance, enter the server name only. If you do not know whether the instance is named or unnamed or if you know the instance is named but are unsure of the name used, contact the server administrator.
- b. At **Database Name**, enter the database name you chose in step 2 of this chapter's **Create a Database** section.
- c. Click **Next**.



13. On the **Database Server Log In** prompt, enter the server **User Name** and **Password** created in step 2 of this chapter's **Create a Server Login** section and click **Next**.



14. On the **Database Communications Test** prompt, click **Next**.

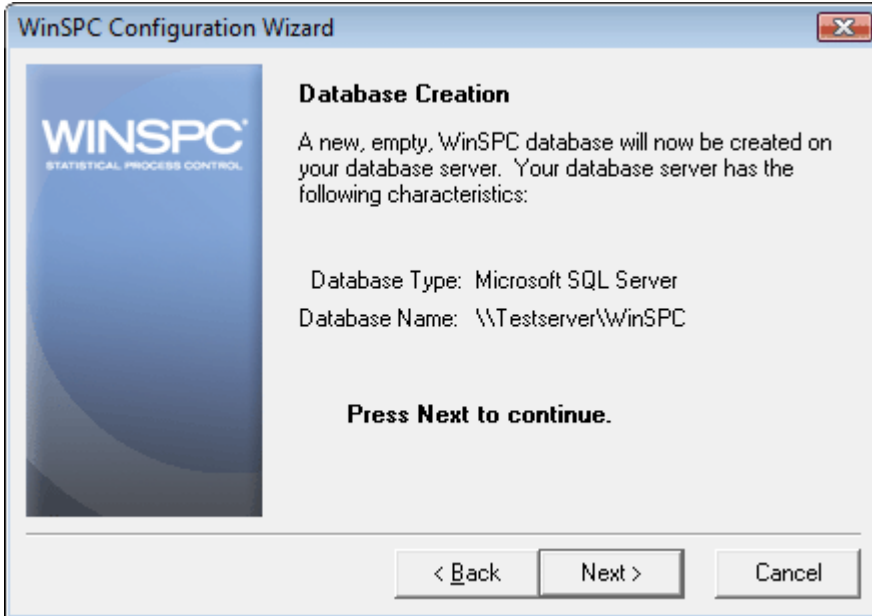


If you get a **Database Communications Error** indicating there is an *invalid connection string attribute*, the communication test failed. The most likely causes of the failure and their remedies are:

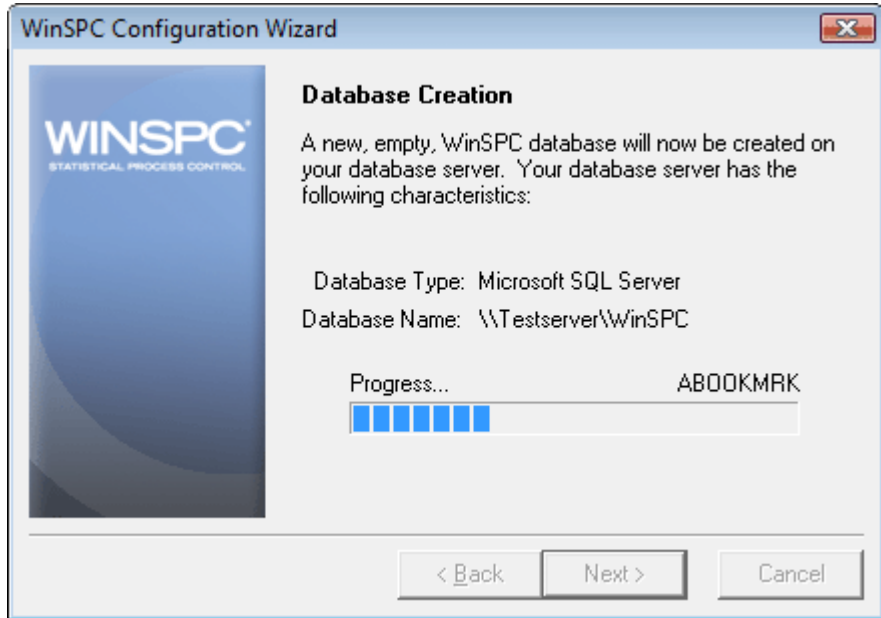
- *The database server login was entered incorrectly.* To remedy this, click the **Back** button two times and re-enter the user name and password, ensuring you have the correct user name and password and that these are spelled correctly. Also, since passwords are case sensitive, ensure appropriate capitalization is used for the password. Once you have re-entered the login, click **Next** and advance through the WinSPC Configuration Wizard again, verifying the information on each prompt as you do.

- *The machine name, instance name or database name was entered incorrectly.* To remedy this, click the **Back** button three times and re-enter the machine name, instance name (if you are working with a named instance) and database name, ensuring you have the correct names and that these are spelled correctly. Also, when entering an instance name, ensure it is properly separated from the machine name by a backslash (e.g. Testserver\SQLExpress.) Once you have re-entered the name(s), click **Next** and advance through the WinSPC Configuration Wizard again, verifying the information on each prompt as you do.
- *The instance being used for WinSPC is a named instance but the SQL Server Browser service is not configured.* To remedy this, complete steps 1 and 2 of the **Configure the SQL Server Browser Service and Enable a Network Protocol** section earlier in this chapter, then click the **Back** button in the WinSPC Configuration Wizard once and try the database communications test again.
- *A network protocol has not been enabled.* To remedy this, repeat steps 1 and 3 of the **Configure the SQL Server Browser Service and Enable a Network Protocol** section earlier in this chapter, then click the **Back** button in the WinSPC Configuration Wizard once and try the database communications test again.

- *A network protocol was enabled but the instance was not restarted afterwards.* To remedy this, repeat steps 1 and 3e-3h of the **Configure the SQL Server Browser Service and Enable a Network Protocol** section earlier in this chapter, then click the **Back** button in the WinSPC Configuration Wizard once and try the database communications test again.
15. On the **Database Creation** prompt, click **Next**. This creates the WinSPC schema within the WinSPC database.



16. Allow the prompt's progress bar to complete.



17. If you selected a language other than English in step 10 of this section, an **Add Language** prompt appears once the WinSPC schema is created. In this case:
- a. Insert the language disk for the selected language into your floppy drive and click the **OK** button. (Language disks are included in your WinSPC materials. If you didn't order a language disk and, consequently, did not receive one, click the **Cancel** button and complete the WinSPC Configuration Wizard without adding the language. Later, you can order the language disk and, once the disk arrives, add the language using the **Add Language** option on the **Administrator** window's **Tools** menu in WinSPC. Until the language is added, you'll be restricted to running WinSPC in English. The remainder of the WinSPC Configuration Wizard continues to run in the selected language whether or not a language is added from a language disk.)
 - b. In the message asking if you want to proceed with the addition of the detected language, click **OK**.
 - c. If a message indicating the detected language has already been installed appears, click **OK**.
 - d. Allow the **Adding New Language** progress bar to complete.
 - e. When the **You may now select the desired language in the System Settings, Station Setup, or User Setup** message appears, click **OK**.
 - f. If the **Add Language** prompt reappears, click **Cancel**.
 - g. Remove the language disk from the floppy drive.

THIS COMPLETES PHASE 2 OF 4.
GO TO **CHAPTER 4: FIRST CLIENT
CONFIGURATION (FINAL STEPS)** AND
COMPLETE PHASE 3.

CHAPTER 2: ORACLE 10g

ASSUMPTIONS

The instructions in this chapter are based on the following assumptions:

- Oracle Database 10g software is installed on your database server.
- An Oracle Database 10g global database of the **Enterprise Edition** installation type is created and running on your database server and you have been authorized to use part of this global database for WinSPC.
- Oracle Database 10g Client is installed on the first WinSPC client and that installation is of the **Administrator** type (as compared to the **Runtime** or **Custom** types). (The first WinSPC client refers to the first computer on which you want to install WinSPC. This computer can be any computer on your network. If the operating system of this client is Windows Vista Business, you must use the 10.2.0.3.0 edition of Oracle Database 10g Client. If the operating system is Windows XP Pro, you may use either the 10.2.0.3.0 edition or the earlier 10.2.0.1.0 edition.)
- The necessary Oracle Database 10g Client utilities are installed on all other clients. (If the operating system of an additional client is Windows Vista Business, the necessary utilities are **Oracle Provider for OLE DB** and **Oracle Net** from the 10.2.0.3.0 edition of Oracle Database 10g Client. If the operating system is Windows XP Pro, the necessary utilities vary with the edition of Oracle Database 10g Client being used. If that edition is 10.2.0.3.0, the necessary utilities are the same as those for Windows Vista Business. If that edition is 10.2.0.1.0, the necessary utilities consist only of **Oracle Provider for OLE DB**. Incidentally, regardless of the operating system or edition of Oracle Database 10g Client

installed on your clients, if your organization's intended use of WinSPC includes taking data stored in an Oracle ODBC data source and collecting it into the Oracle database you are configuring for WinSPC, **Oracle ODBC Driver** from Oracle Database 10g Client will need to be installed on each WinSPC client to be used in collecting that stored data. Since the presence of this driver presents no complication, DataNet Quality Systems recommends installing it even if the use of WinSPC to collect data from an Oracle ODBC data source is only a possibility. The **Administrator** type of client mentioned in the preceding assumption includes this driver and consequently does not need to be separately installed on the first WinSPC client.)

- The default values presented by Oracle Database 10g and Oracle Database 10g Client during the installation process were accepted without modification.
- Any firewalls between your database server and the client stations to be used for WinSPC are properly configured to permit database traffic.
- For implementations employing a Microsoft Terminal Services environment, Microsoft Terminal Services is properly installed and configured on the server designated as your Microsoft Terminal Services server.



Terminal Services

NOTE: You may find that users who don't have administrative permissions to the Microsoft Terminal Services server are unable to launch WinSPC via a Remote Desktop Protocol session. This is a circumstance specific to Oracle Database 10g and Oracle Database 11g. It can be remedied by changing the **Permission Capability** on the Microsoft Terminal Services server from **Full Security** to

Relaxed Security. Alternatively, consult your network administrator and/or Oracle DBA for other remedies.

- The operating system of your database server machine is Windows Server 2003.
- The operating system of the client machines to be used for WinSPC is either Windows Vista Business or Windows XP Pro. (Images of client machines included in this guide are from Vista Business.)

NOTE: If a default value was modified during the installation of Oracle Database 10g or an operating system is different from that stated here, adapt the instructions in this guide as needed to accommodate the modified value or differing operating system.

Prior to beginning this procedure, it's advised that you locate the hostname (or machine name) for the Oracle Database 10g machine and the Oracle Database 10g global database system identifier (SID), user name and password. Your database administrator should be able to provide this information.

Phase 1 of 4 SERVER CONFIGURATION



Create a Tablespace

1. On the first WinSPC client station, launch the **Enterprise Manager Console**. The default path for this is: **Start > All Programs > Oracle – OraClient10g_home1 > Enterprise Manager Console**. (See the third assumption at the beginning of this chapter for a definition of the first WinSPC client.)

NOTE: If the **Enterprise Manager Console** is not listed in the **Start** menu, it is probably because the **Administrator** installation type was not selected when Oracle Database 10g Client was installed. In this case, reinstall Oracle Database 10g Client, selecting **Administrator** in the **Select Installation Type** prompt and then return to this step.

2. In the **Add Databases To Tree** prompt:
 - a. At **Hostname**, enter the machine name of the Oracle Database 10g server.
 - b. At **Port Number**, accept the default value of 1521 unless your DBA has instructed you to use a different port number.
 - c. At **SID**, enter the system identifier for the Oracle global database to be used by WinSPC.
 - d. At **Net Service Name**, overwrite the net service name that is automatically created with a name you want to use to uniquely identify the WinSPC net service. (The recommended net service name is **WINSPC**.)

e. Click **OK**.

Add Databases To Tree

Add a database manually

Hostname: Testserver

Port Number: 1521

SID: ORCL

Net Service Name: WinSPC

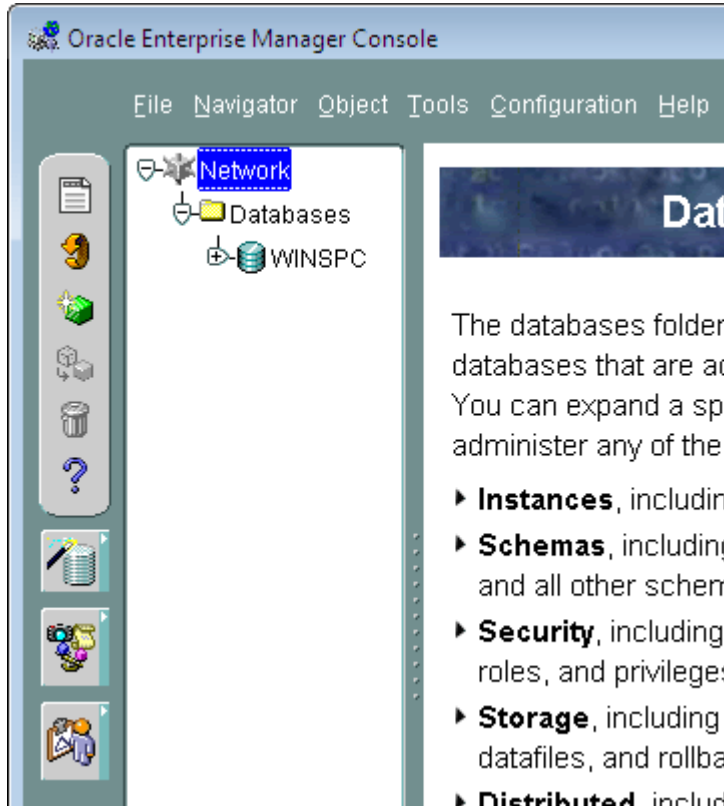
Add selected databases from your local tnsnames.ora file located in C:\oracle\product\10.2.0\client_1\NETWORKADMIN

Service Name

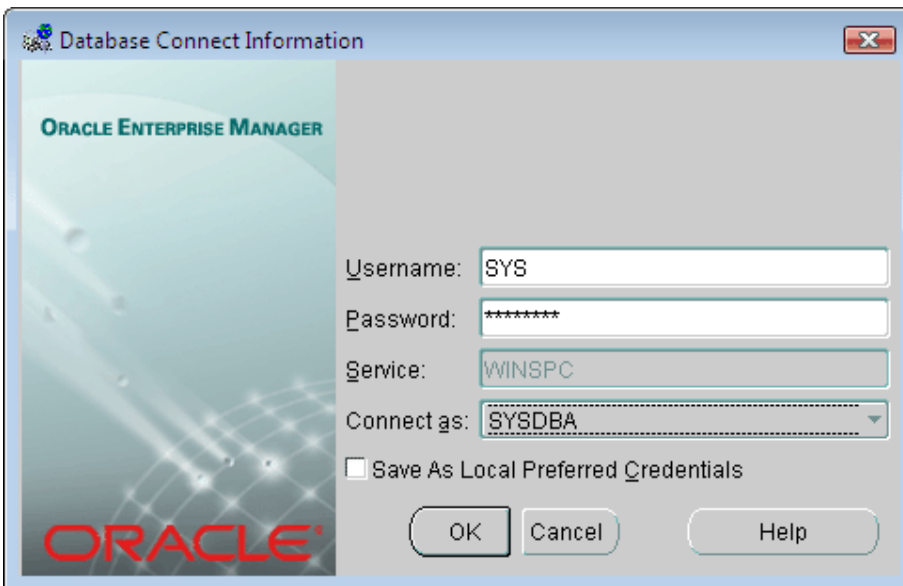
OK Cancel Help

NOTE: If the **Add Databases To Tree** prompt doesn't automatically appear after step 1, it can be displayed by selecting **Add Database To Tree** from the **Navigator** menu in the **Oracle Enterprise Manager Console**.

3. In the left pane of the **Oracle Enterprise Manager Console**, expand **Network > Databases** and click the plus sign to the left of the net service name from step 2d.

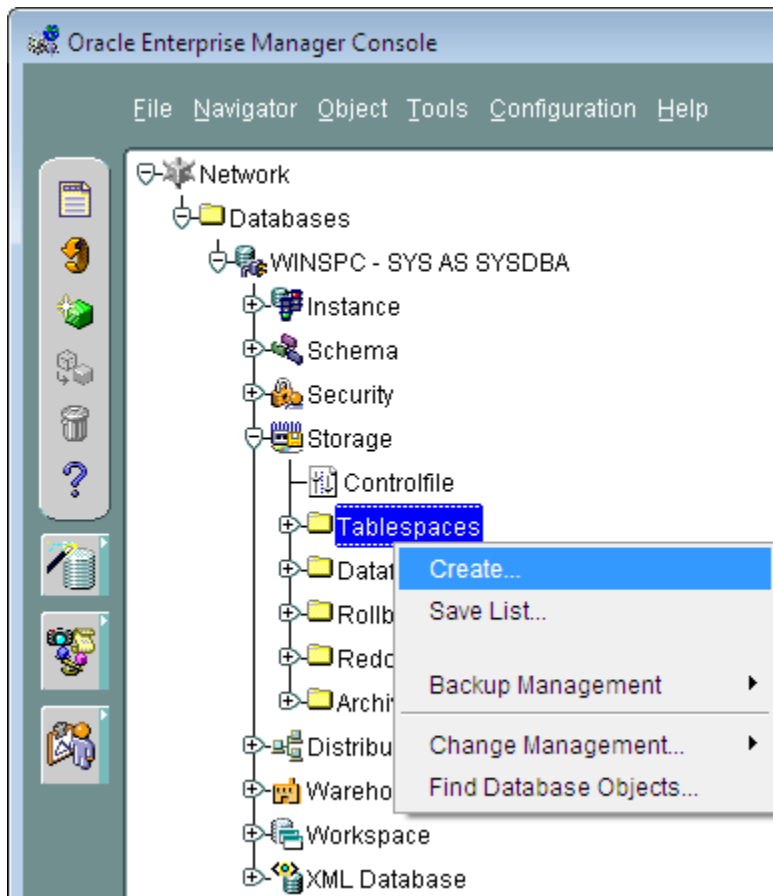


4. In the **Database Connect Information** prompt that is displayed:
 - a. At **Username**, enter the username for the global database.
 - b. At **Password**, enter the password associated with this user name.
 - c. At **Connect as**, select **SYSDBA** from the dropdown list.
 - d. Click **OK**.



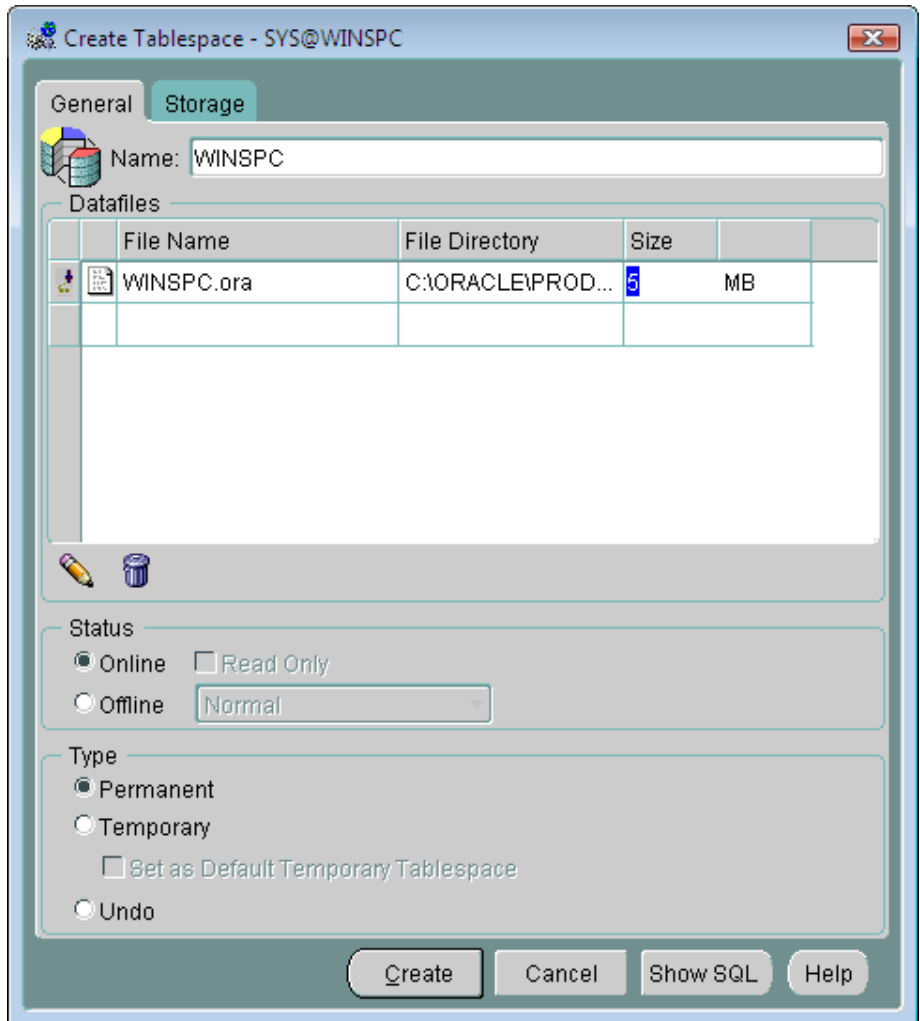
5. In the left pane, beneath the newly added net service name, expand **Storage**, right-click **Tablespaces** and, from the shortcut menu, select **Create**.

NOTE: If you do not see **Create** on the shortcut menu, press the **ESC** button to exit the menu and right-click **Tablespaces** again.

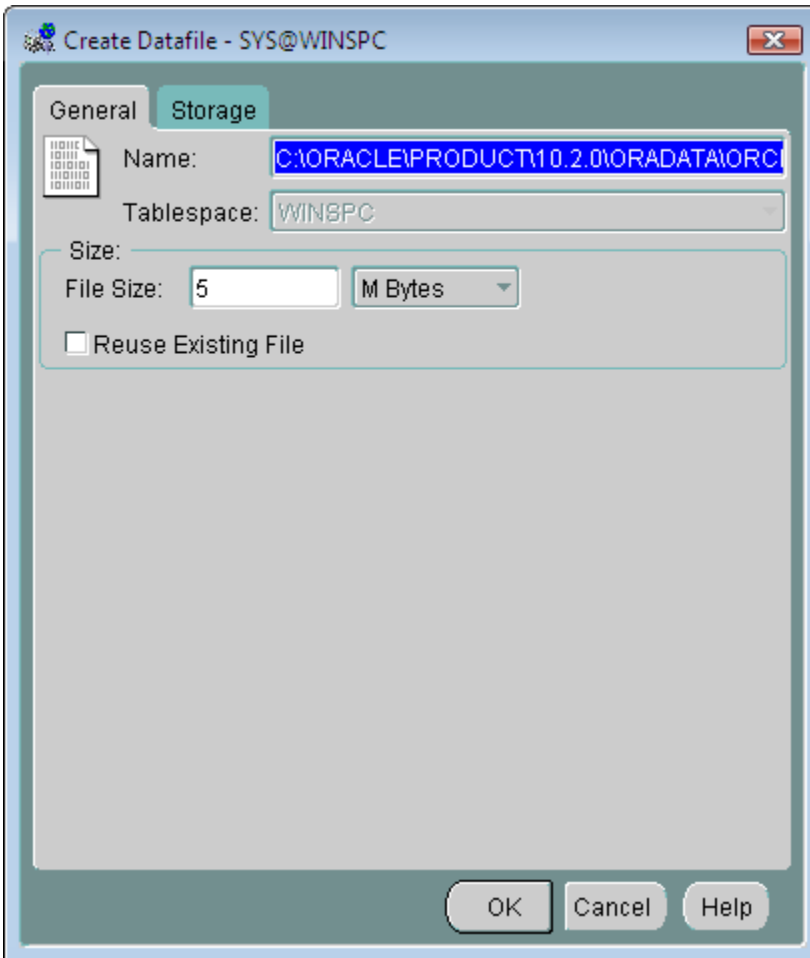


6. In the **Create Tablespace** prompt, on the **General** tab:
 - a. At **Name**, create and enter a name for the tablespace to be used for WinSPC. (Notice that, as you enter the name, it is automatically populated into the **Datafiles** section, forming a file name for the tablespace.)

b. At **Size**, double-click **5**.

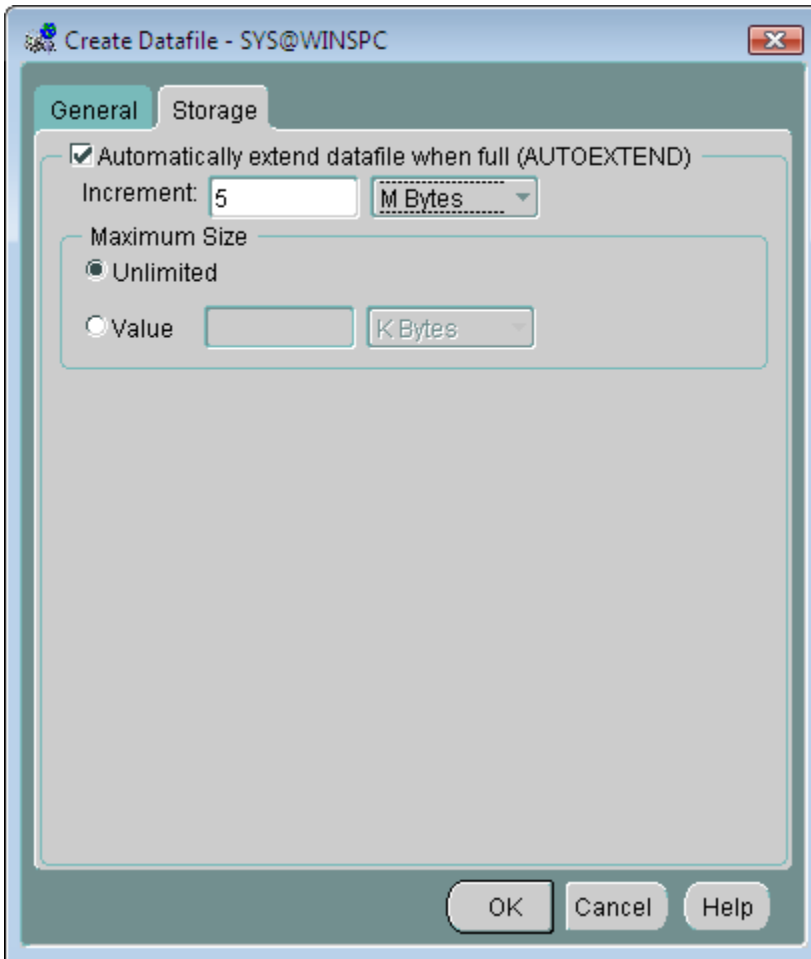


7. In the **Create Datafile** prompt that is displayed, click the **Storage** tab.

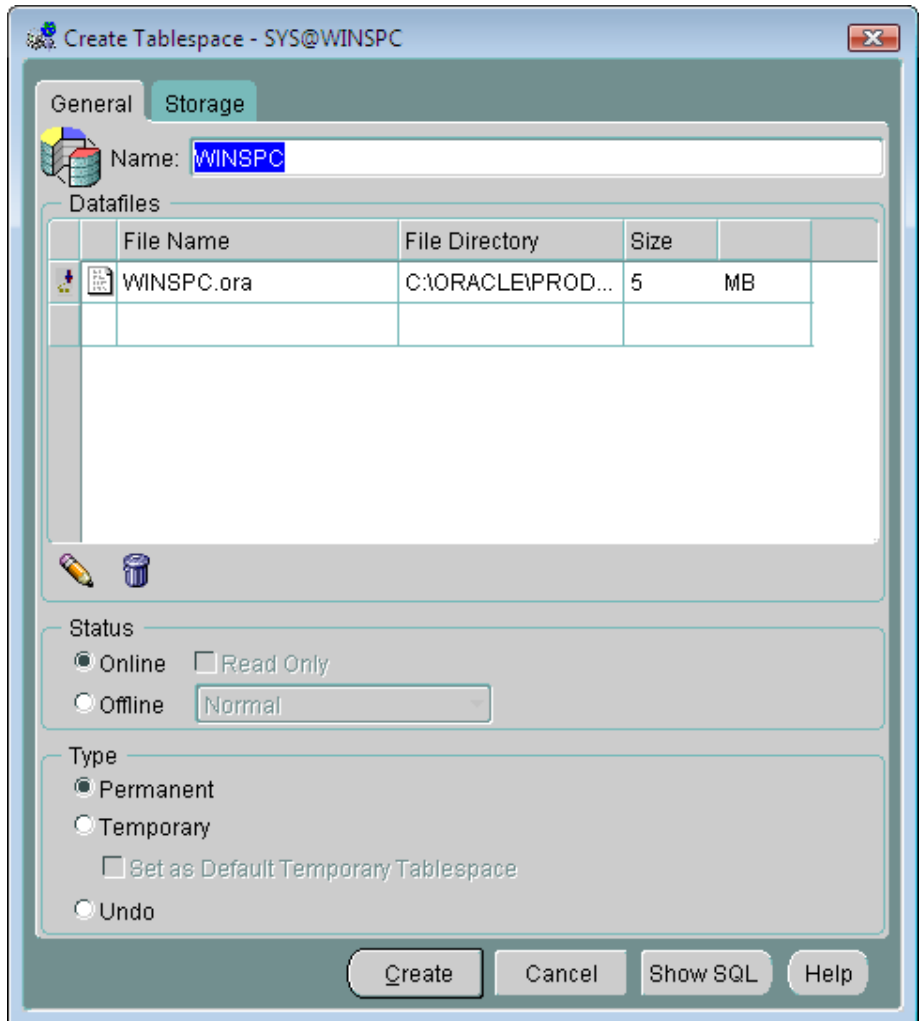


8. On the **Storage** tab:
 - a. Check the **Automatically extend datafile when full (AUTOEXTEND)** check box.
 - b. Specify **5 M Bytes** as the size by which the datafile should be incremented. (Your database administrator can monitor your database usage and tune this value as needed.)
 - c. At **Maximum Size**, accept the default **Unlimited**.

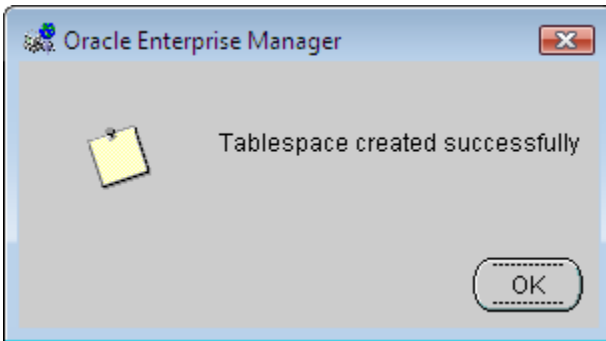
d. Click **OK**.



9. In the **Create Tablespace** prompt, click **Create**.

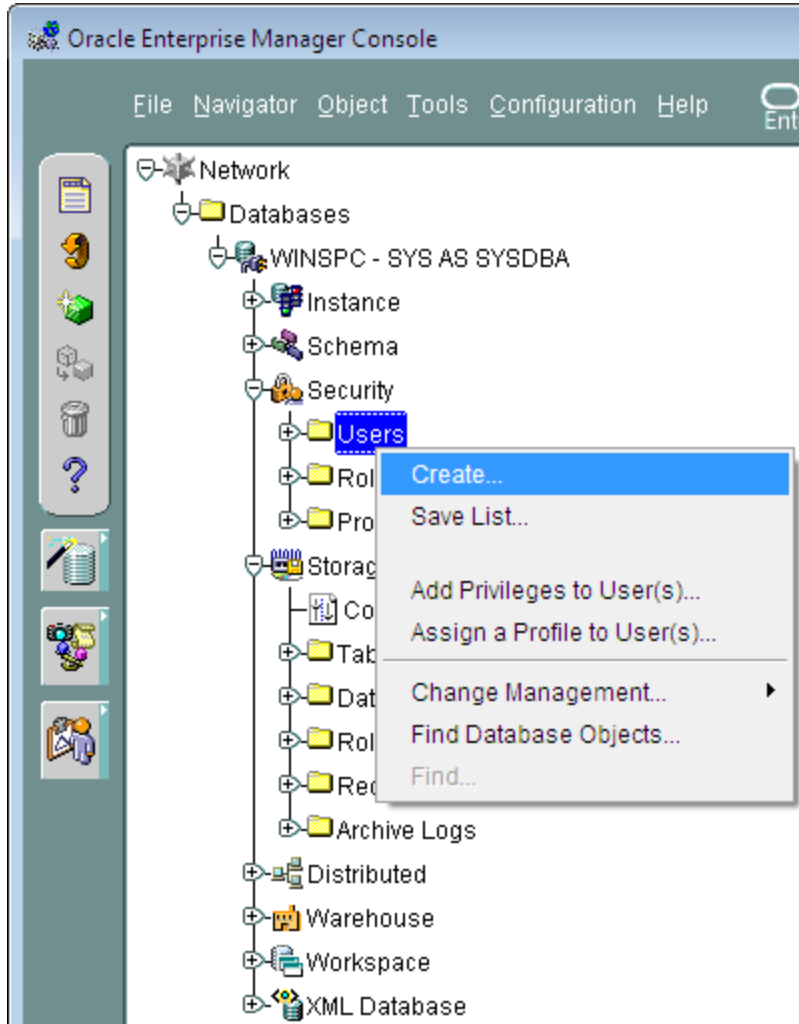


10. When the **Tablespace created successfully** message appears, click **OK**.



Create a Server Login

1. Still beneath the newly created net service name, expand **Security**, right-click **Users** and, from the shortcut menu, click **Create**.



2. In the **Create User** prompt, on the **General** tab:
 - a. At **Name**, create and enter a name for the login. (The recommended user name is **JOHNDOE**.)

- b. At **Enter Password**, create and enter a sufficiently strong password for the login.
- c. At **Confirm Password**, reenter the password.

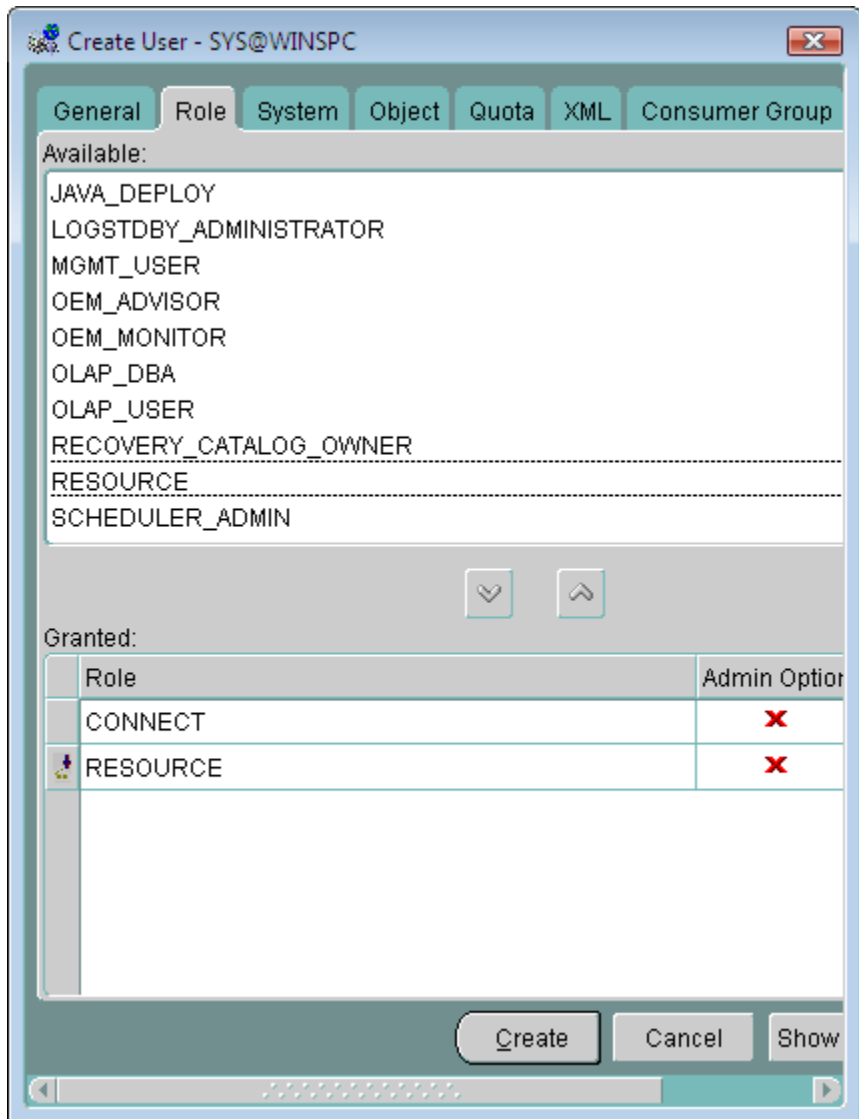
NOTE: The name and password entered here will be used by Oracle Database 10g to authentic WinSPC client stations and allow authenticated stations access to the WinSPC tablespace. This name and password combination is not directly used by WinSPC users. WinSPC users will, later, be assigned individual user IDs and passwords. They will use these individual user IDs and passwords to log into the WinSPC application on WinSPC client machines.

- d. In the **Tablespaces** section, at **Default**, select the tablespace name created in step 6a of this chapter's **Create a Tablespace** section.
- e. At **Temporary**, select **TEMP**.

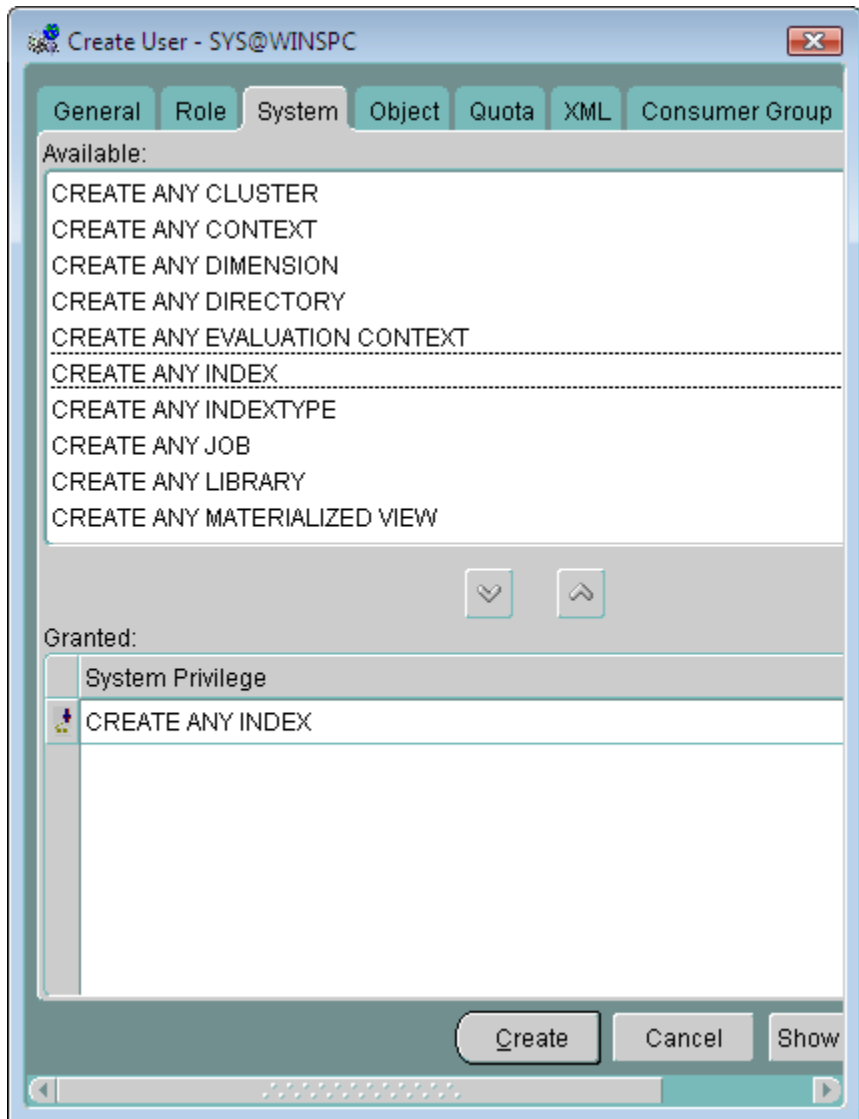
f. Leave **Status** as **Unlocked**.

The screenshot shows the 'Create User' dialog box in Oracle 10g. The dialog is titled 'Create User - SYS@WINSPC' and has several tabs: 'General', 'Role', 'System', 'Object', 'Quota', 'XML', and 'Consumer Group'. The 'General' tab is selected. The 'Name' field is filled with 'JOHNDOE' and the 'Profile' field is filled with 'DEFAULT'. Under the 'Authentication' section, the 'Authentication' dropdown is set to 'Password'. The 'Enter Password' and 'Confirm Password' fields are both filled with seven asterisks. There is an unchecked checkbox for 'Expire Password Now'. In the 'Tablespaces' section, the 'Default' tablespace is 'WINSPC' and the 'Temporary' tablespace is 'TEMP'. In the 'Status' section, the 'Unlocked' radio button is selected. At the bottom of the dialog, there are three buttons: 'Create', 'Cancel', and 'Show'.

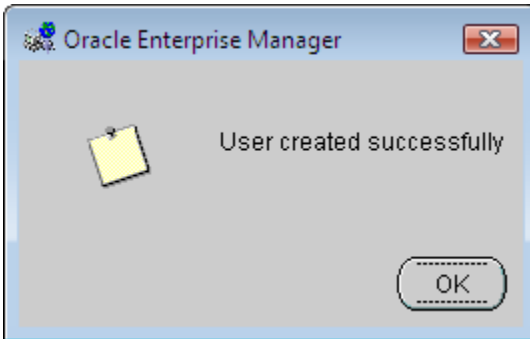
3. Without clicking **Create**, click the **Role** tab and, in the **Available** list, double-click **RESOURCE**. This copies **RESOURCE** to the **Granted** list.



4. Click the **System** tab and, in the **Available** list, double-click **CREATE ANY INDEX**. This copies **CREATE ANY INDEX** to the **Granted** list.



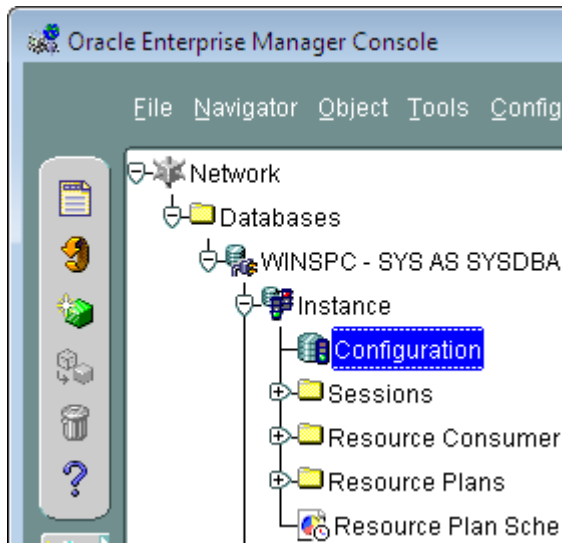
5. Click **Create**.
6. When the **User created successfully** message appears, click **OK**.



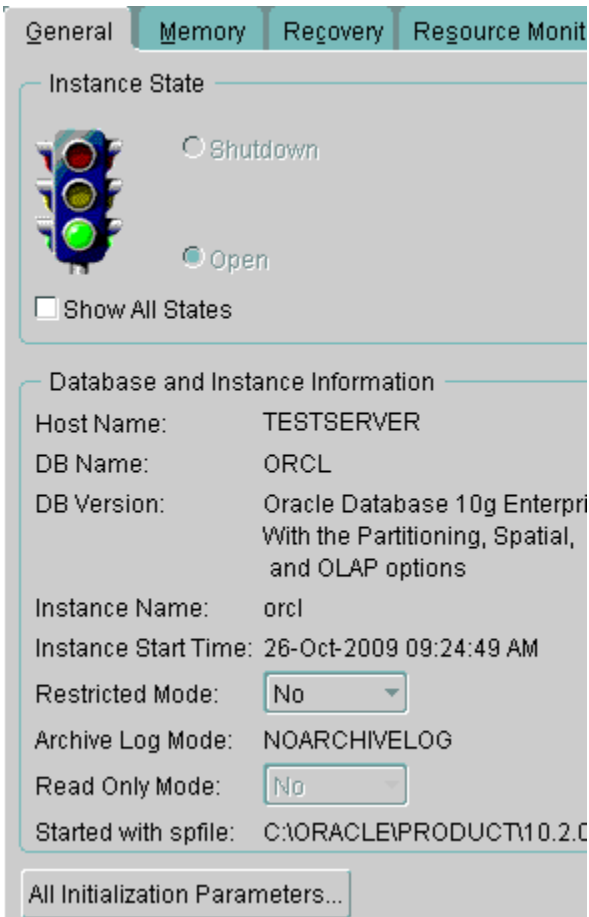
Set the Number of Open Cursors

1. Calculate the required number of open cursors using this formula:
$$\text{open_cursors} = \text{number of WinSPC licenses} * 50$$

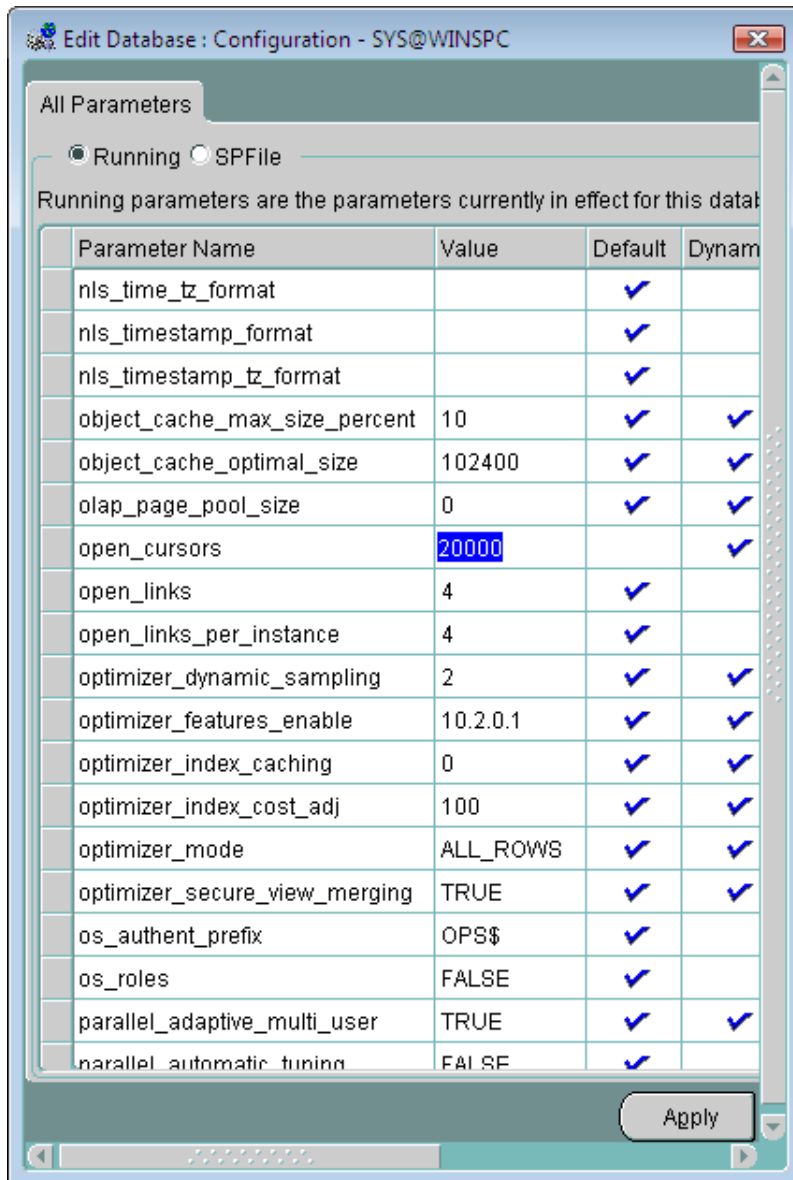
2. Still in the **Oracle Enterprise Manager Console**, in the left pane, expand **Instance** and click **Configuration**.



- In the right pane, click **All Initialization Parameters** toward the bottom of the **General** tab.



- In the **Edit Database: Configuration** prompt, scroll to **open_cursors**, replace the default number of open cursors in the **Value** column with the number you calculated in step 1 and click **Apply**.



5. When the **Parameters have been changed** message appears, click **OK**.

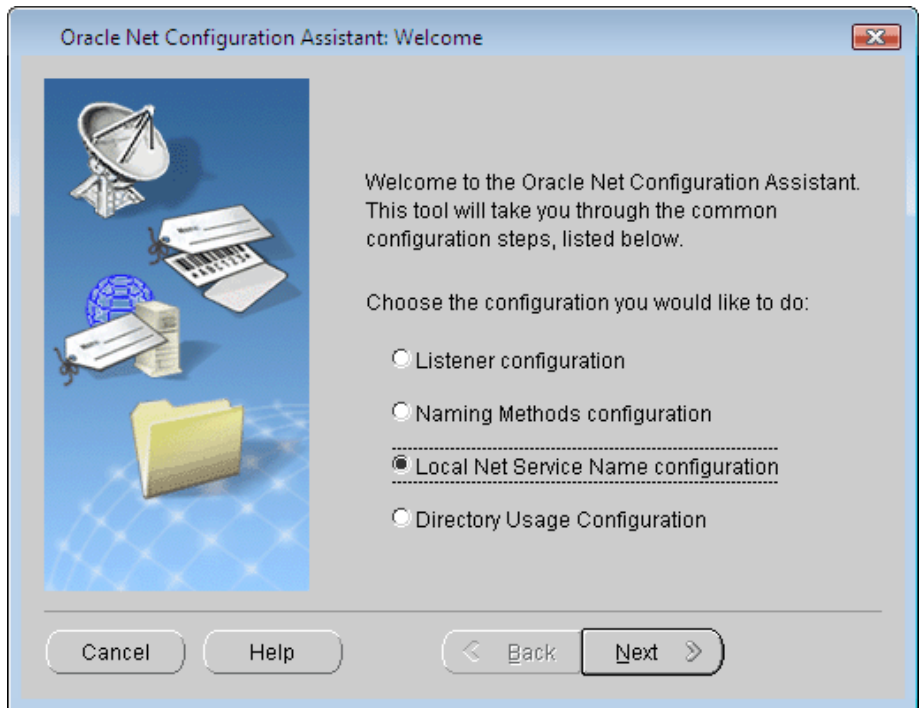


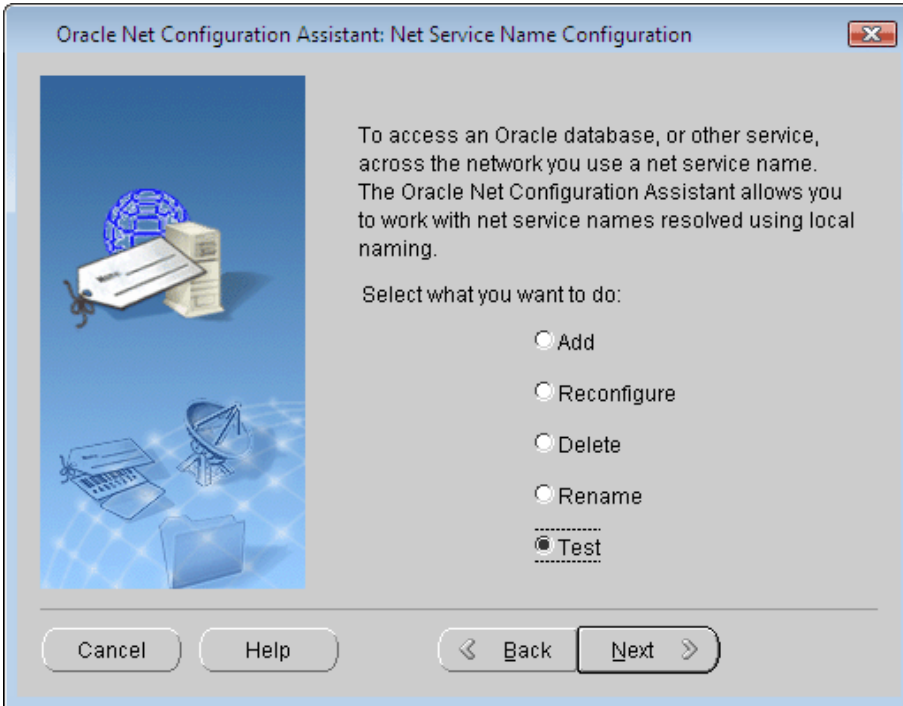
6. Close the **Oracle Enterprise Manager Console** by clicking **File > Exit**.

Test the Local Net Service Name

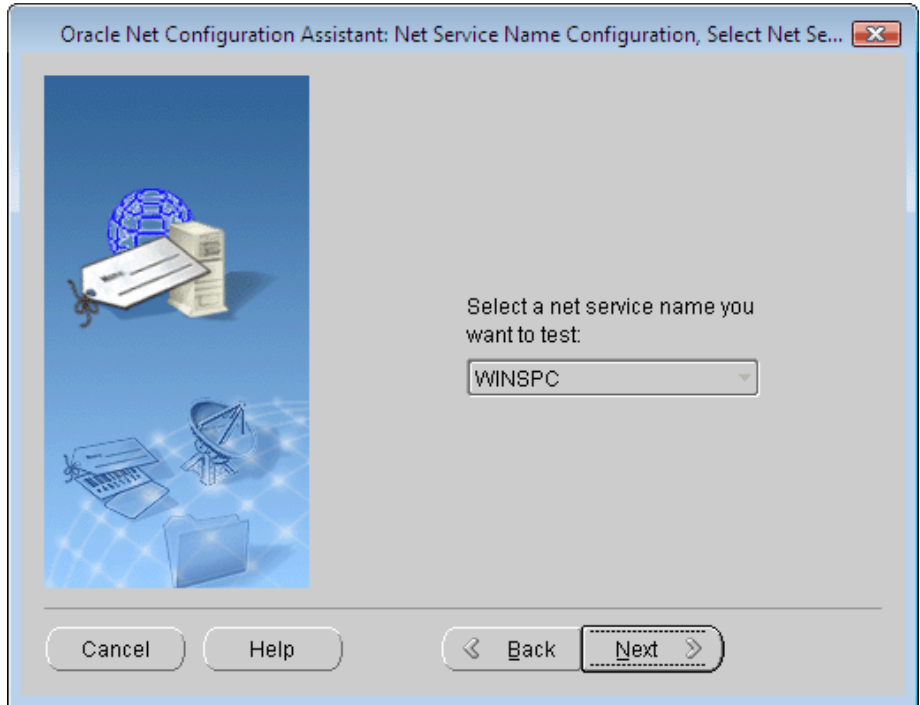
1. Still on the first client machine, click **Start > All Programs > Oracle – OraClient10g_home1 > Configuration and Migration Tools > Net Configuration Assistant**.

2. In the **Oracle Net Configuration Assistant: Welcome** prompt, select **Local Net Service Name configuration** and click **Next**.

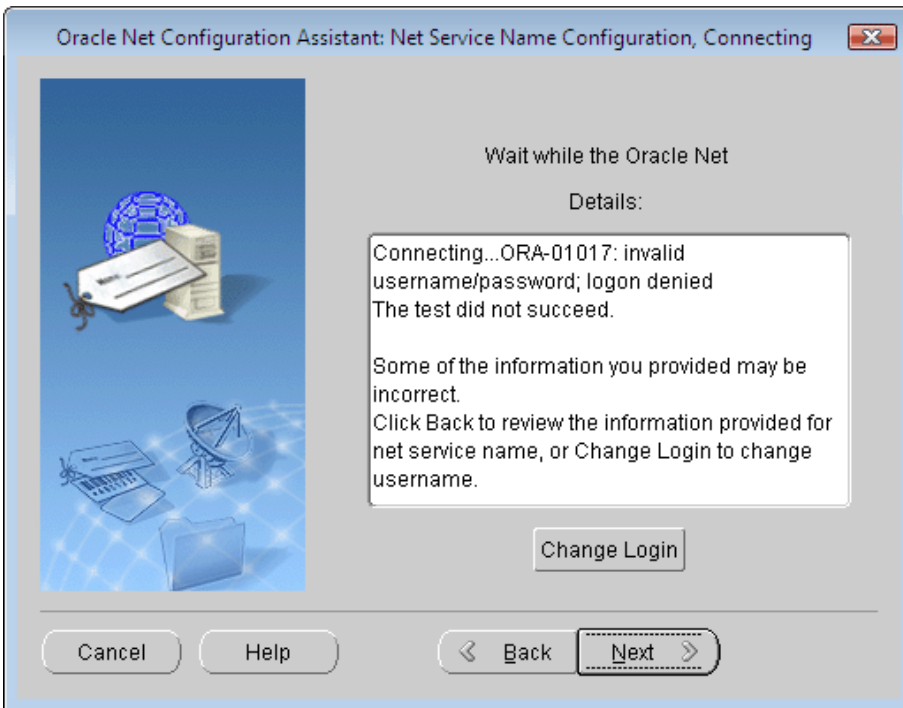


3. Select **Test** and click **Next**.

4. Select the net service name you specified in step 2d of this chapter's **Create a Tablespace** section, if it isn't already selected, and click **Next**.



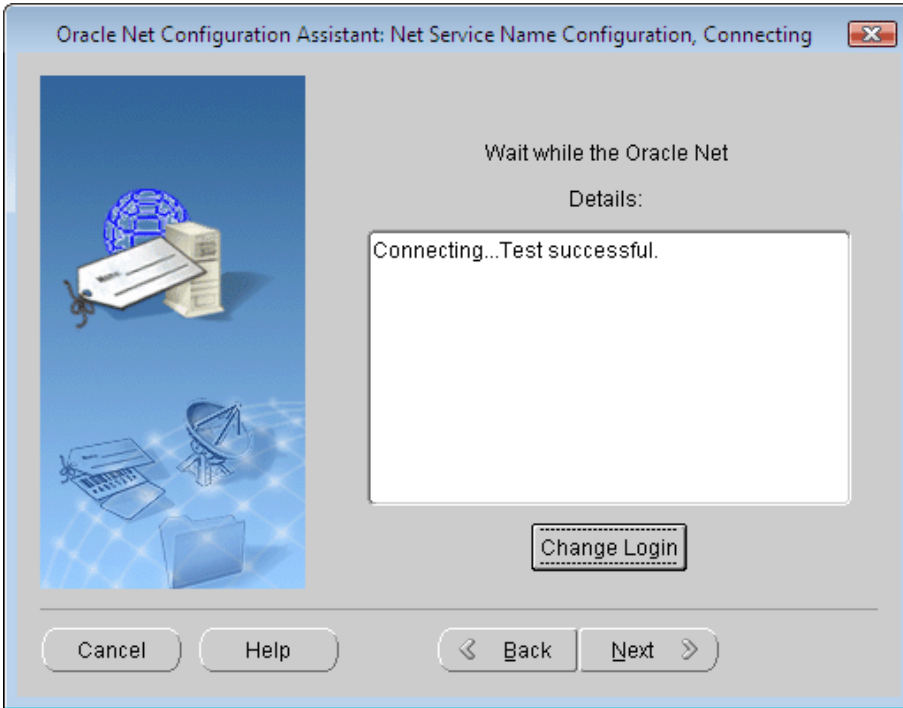
5. In the next prompt, which indicates the test did not succeed, click the **Change Login** button.



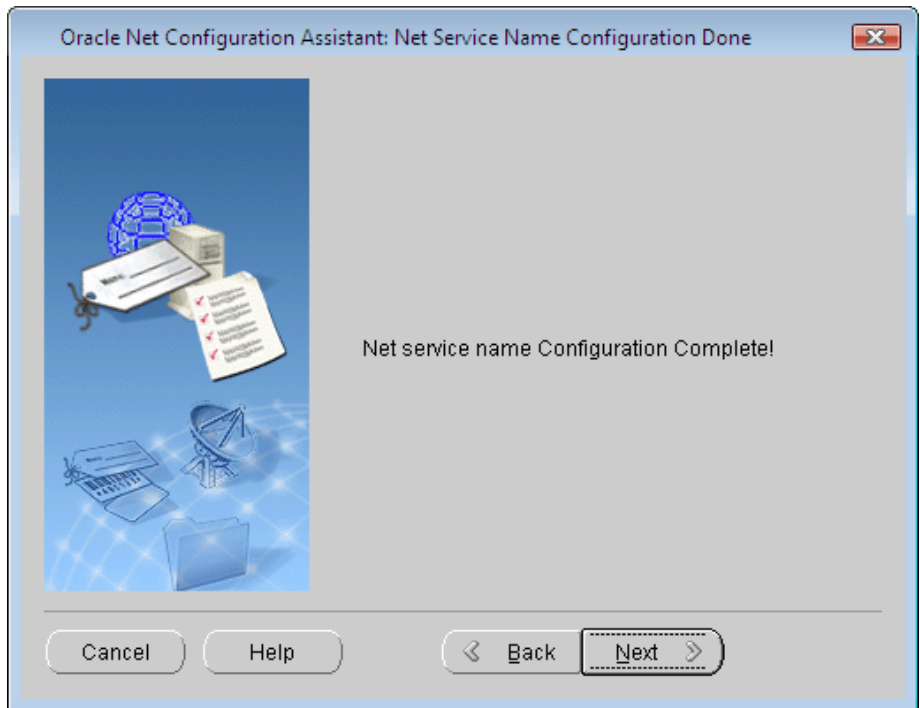
6. In the **Change Login** prompt, replace the default username and password with the username and password you created in step 2 of this chapter's **Create a Server Login** section and click **OK**.

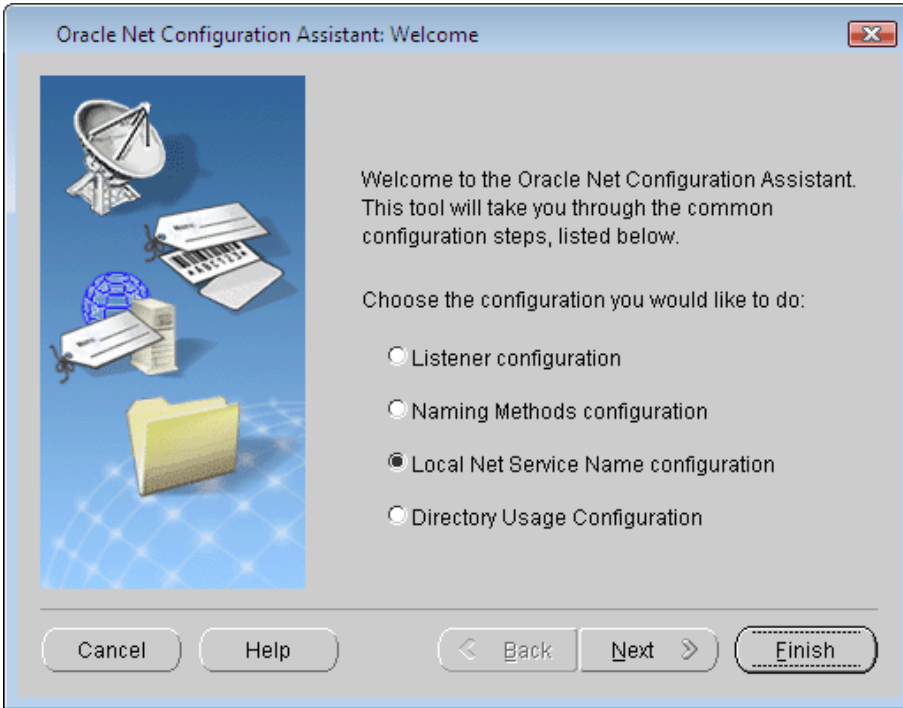


7. When the test is indicated as having succeeded, click **Next**.



8. Click **Next** when the net service name configuration is indicated as complete.



9. On the **Welcome** prompt, click **Finish**.

THIS COMPLETES PHASE 1 OF 4.
GO TO THE NEXT PAGE AND COMPLETE PHASE 2.

Phase 2 of 4 FIRST CLIENT INSTALL AND CONFIGURATION (INITIAL STEPS)



This section concerns the installation and configuration of WinSPC on the first WinSPC client. (See the third assumption at the beginning of this chapter for a definition of the first WinSPC client.)



Terminal Services

If your implementation employs Microsoft Terminal Services, see the discussion on page 1 of this guide for direction on whether to make your first client the Microsoft Terminal Services server or another computer.

1. Create a folder on a network file server accessible by all client stations that will run WinSPC. This folder's primary purpose is to facilitate the installation and configuration of WinSPC on all clients other than the first client. (The recommended name for this folder is **WinSPCRemote**.)
2. Share this folder and grant domain administrators at least the minimum required permissions to it. For file servers running Windows Server 2003, the minimum *Share* permissions are **Change** and the minimum *Security* permissions are **Modify**. For file servers running Windows Server 2008, the minimum *Share* permissions are **Contributor** and the minimum *Security* permissions are **Modify**. (For a procedure on granting *Share* or *Security* permissions, see **Appendix D: Granting Share and Security Permissions**.)

NOTE: If your WinSPC implementation is part of a workgroup rather than a domain, grant these minimum permissions to the local administrator who will install and configure WinSPC on the first WinSPC client station.

3. Log into Windows on the first WinSPC client station as a domain administrator who also has local administrator privileges.

NOTE: If the first WinSPC client is part of a workgroup instead of a domain, log in as a local administrator.

4. If you downloaded **Install.exe** from winspc.com/downloads:
 - a. Transfer this file to the first WinSPC client if it was downloaded to a different computer.
 - b. Double-click the file.
 - c. If an **Open File – Security Warning** prompt appears, click **Run**.
 - d. Go to step 6.

5. If you have the WinSPC CD (whether as a result of receiving it from DataNet Quality Systems or burning it from the **WinSPC.iso** file at winspc.com/downloads) and you did not complete the preceding step:
 - a. Insert and run the CD.
 - b. On the **WinSPC Version 8.0** setup prompt that appears, click **Install or Upgrade**.



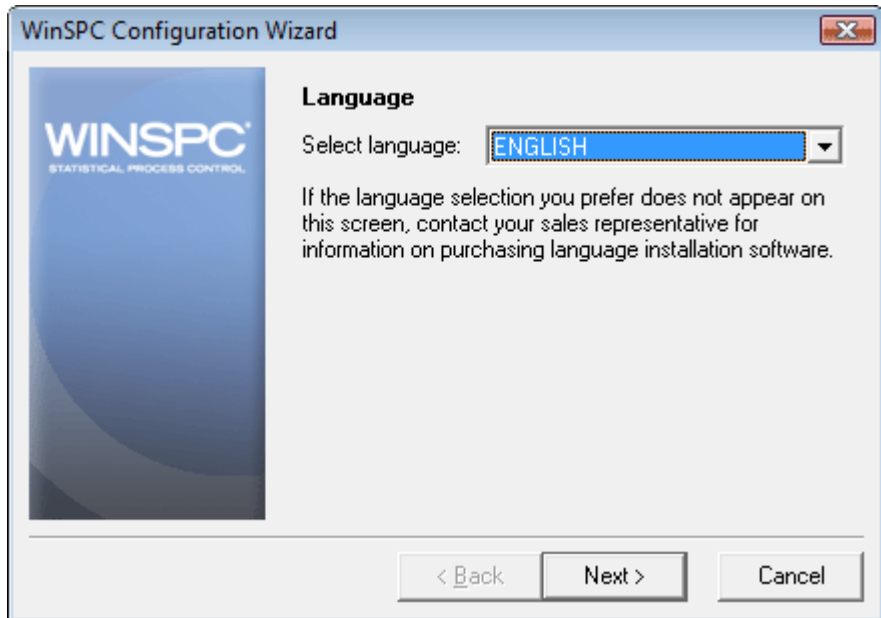
- c. Go to step 6.

6. Complete the WinSPC Installation Wizard.

NOTE: The prompts of this wizard are intended to be self-explanatory. Consequently, they are not detailed here. If you have a question about a prompt or want to be directed step-by-step through the wizard, see **Appendix A: The WinSPC Installation Wizard**.

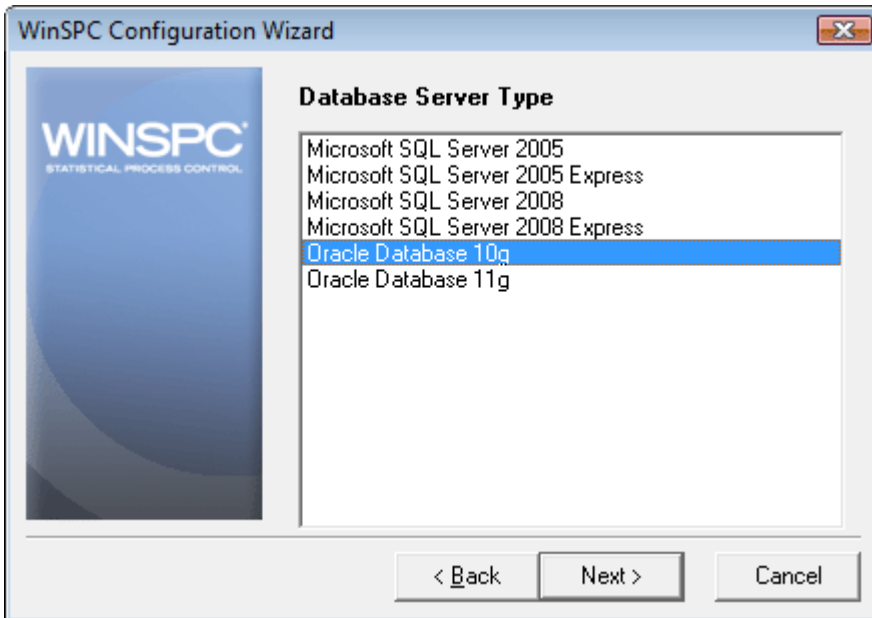
7. Complete **Appendix B: Installing NJWin for an Asian Language** if the first client station will need to run WinSPC in an Asian language or you would like to run the WinSPC Configuration Wizard in an Asian language. (The WinSPC Configuration Wizard is the tool you will use next in this first client configuration process.)
8. If you installed WinSPC from a CD, exit the **WinSPC Version 8.0** setup prompt by clicking **Close** in the upper right corner and remove the WinSPC CD from the CD-ROM drive.
9. Click **Start > All Programs > WinSPC > WinSPC**. This launches the WinSPC Configuration Wizard.

10. On the **Language** prompt, from the **Select language** list, choose a language and click **Next**.

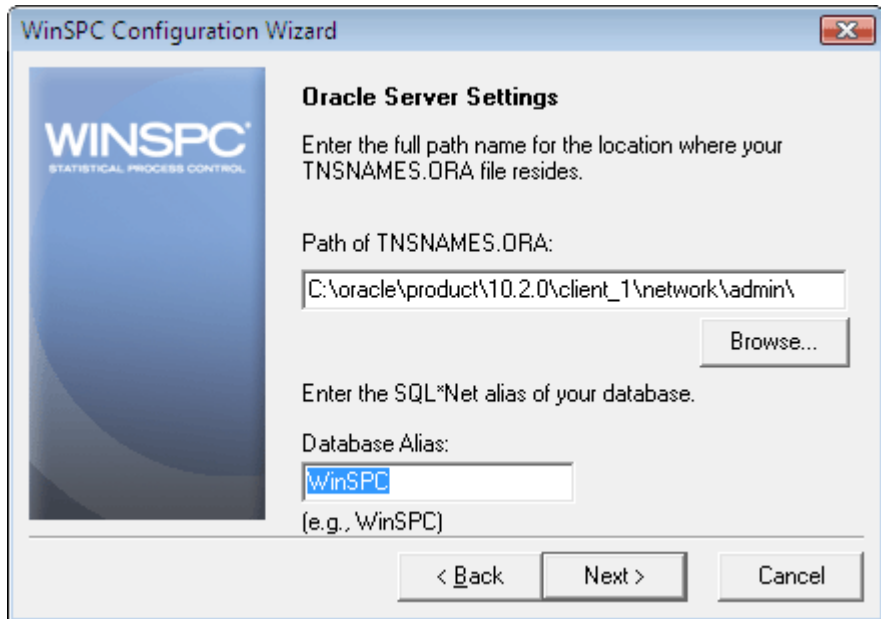


NOTE: The language selected here is the language in which the remainder of the WinSPC Configuration Wizard will run. It also becomes the system-wide default language for WinSPC. (This default language can be changed at any time following the completion of the WinSPC Configuration Wizard. Once the configuration of the first WinSPC client is complete, you can see the **WinSPC Help** for more information on default languages.)

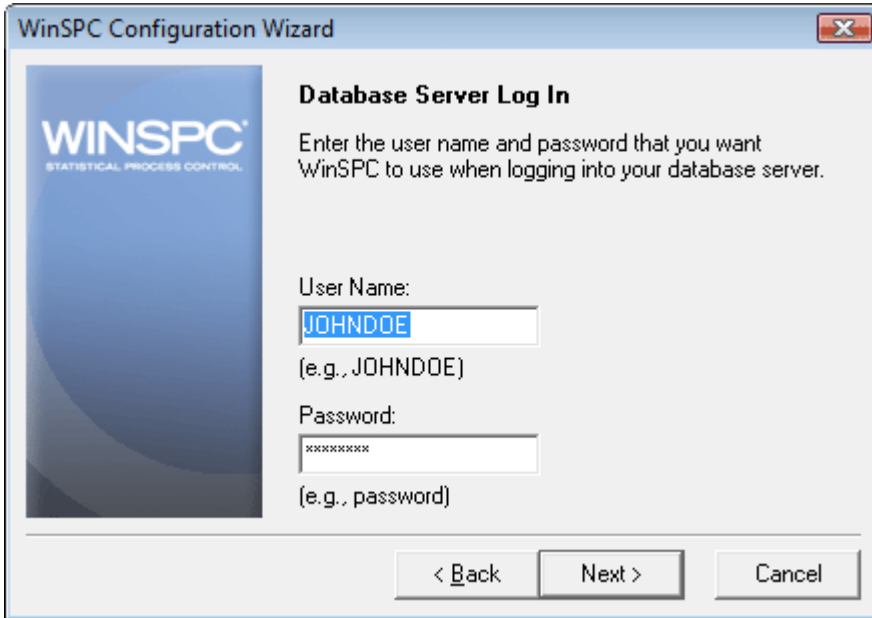
11. On the **Database Server Type** prompt, select **Oracle Database 10g** and click **Next**.



12. On the **Oracle Server Settings** prompt:
 - a. At **Path of TNSNAMES.ORA**, accept the default location.
 - b. In the **Database Alias** text box, enter the **Net Service Name** you chose in step 2d of this chapter's **Create a Tablespace** section.
 - c. Click **Next**.

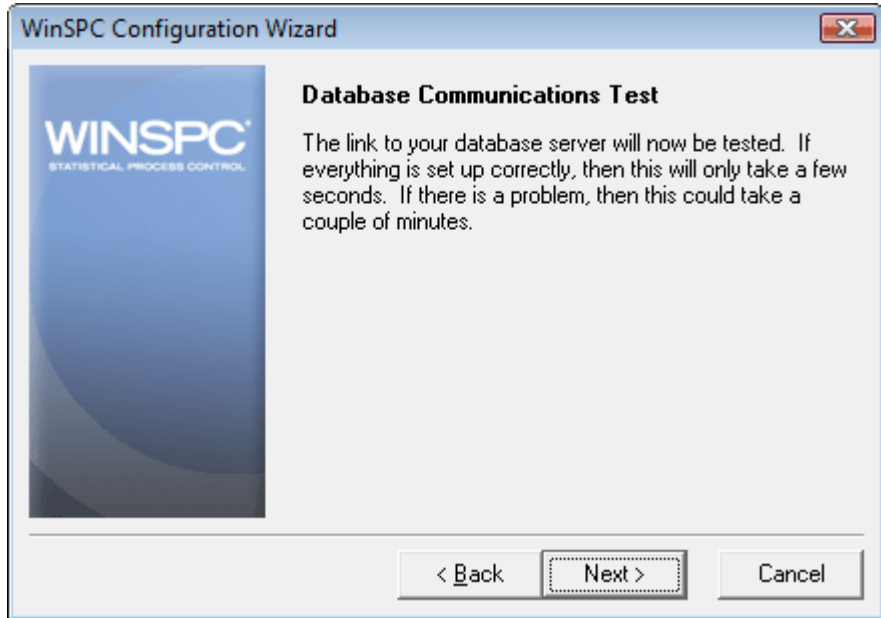


13. On the **Database Server Log In** prompt, enter the server **User Name** and **Password** created in step 2 of this chapter's **Create a Server Login** section and click **Next**.



The image shows a screenshot of the WinSPC Configuration Wizard window. The title bar reads "WinSPC Configuration Wizard". On the left side, there is a blue vertical banner with the "WINSPC" logo and the text "STATISTICAL PROCESS CONTROL" below it. The main area of the window is titled "Database Server Log In" and contains the following text: "Enter the user name and password that you want WinSPC to use when logging into your database server." Below this text are two input fields. The first is labeled "User Name:" and contains the text "JOHNDOE". Below the input field is the example "(e.g., JOHNDOE)". The second is labeled "Password:" and contains a series of asterisks "*****". Below the input field is the example "(e.g., password)". At the bottom of the window, there are three buttons: "< Back", "Next >", and "Cancel".

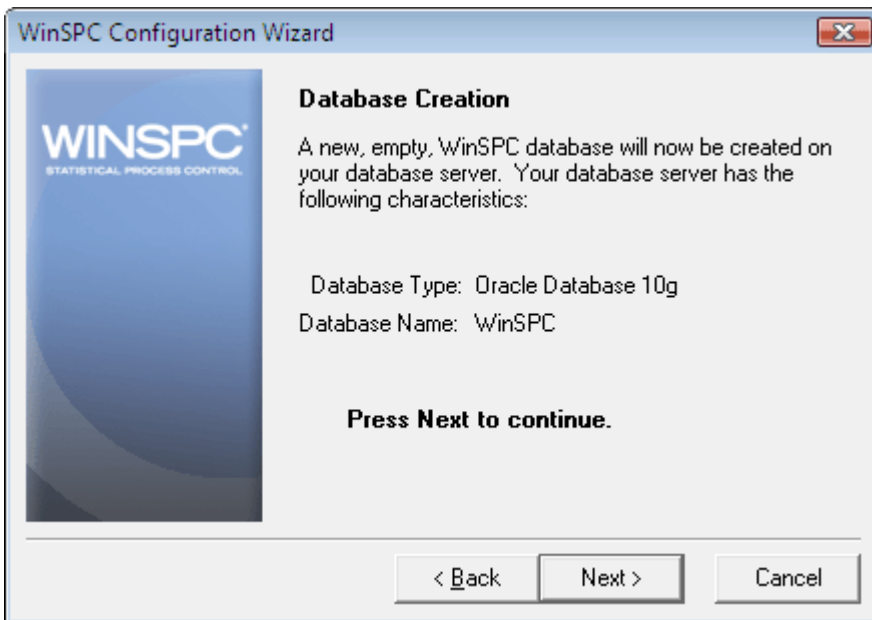
14. On the **Database Communications Test** prompt, click **Next**.



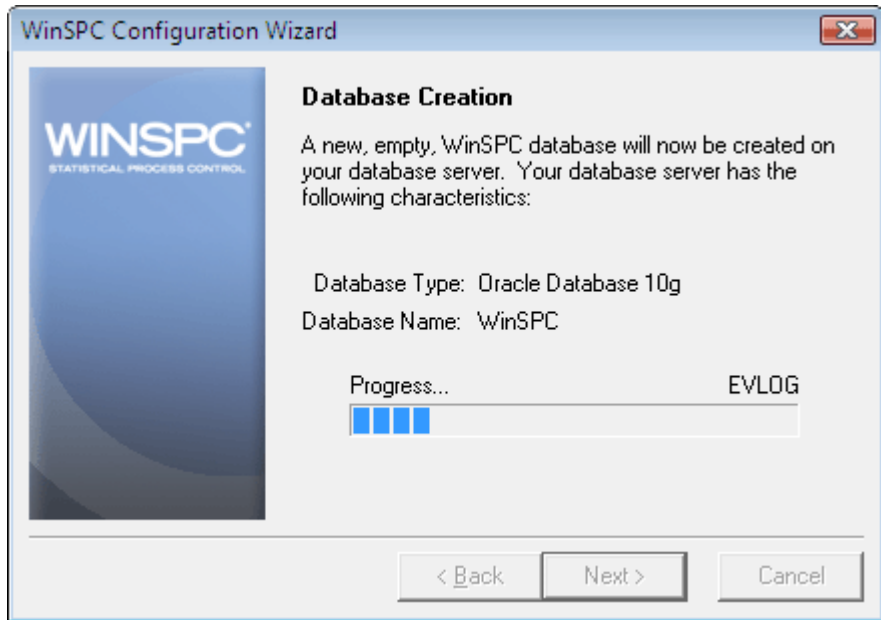
In the event the test fails:

- If the error message displayed reads **ORA-12154: TNS: could not resolve the connect identifier specified.**, click the **Back** button three times and reenter the database alias, ensuring you have the correct name and that it is spelled correctly. Once you've reentered this information, advance through the WinSPC Configuration Wizard again by clicking **Next**, verifying the information on each prompt as you do.

- If the error message reads **ORA-01017: invalid username/password; logon denied**, click the **Back** button twice and reenter the server user name and password, ensuring you have the correct user name and password and that these are spelled correctly. Also, since passwords are case sensitive, ensure the appropriate capitalization is used for the password. Once you've reentered this information, advance through the WinSPC Configuration Wizard again by clicking **Next**, verifying the information on each prompt as you do.
15. On the **Database Creation** prompt, click **Next**. This creates the WinSPC schema within the WinSPC database.



16. Allow the prompt's progress bar to complete.



17. If you selected a language other than English in step 10 of this section, an **Add Language** prompt appears once the WinSPC schema is created. In this case:
- a. Insert the language disk for the selected language into your floppy drive and click the **OK** button. (Language disks are included in your WinSPC materials. If you didn't order a language disk and, consequently, did not receive one, click the **Cancel** button and complete the WinSPC Configuration Wizard without adding the language. Later, you can order the language disk and, once the disk arrives, add the language using the **Add Language** option on the **Administrator** window's **Tools** menu in WinSPC. Until the language is added, you'll be restricted to running WinSPC in English. The remainder of the WinSPC Configuration Wizard continues to run in the selected language whether or not a language is added from a language disk.)
 - b. In the message asking if you want to proceed with the addition of the detected language, click **OK**.
 - c. If a message indicating the detected language has already been installed appears, click **OK**.
 - d. Allow the **Adding New Language** progress bar to complete.
 - e. When the **You may now select the desired language in the System Settings, Station Setup, or User Setup** message appears, click **OK**.
 - f. If the **Add Language** prompt reappears, click **Cancel**.
 - g. Remove the language disk from the floppy drive.

THIS COMPLETES PHASE 2 OF 4.
GO TO **CHAPTER 4: FIRST CLIENT
CONFIGURATION (FINAL STEPS)** AND
COMPLETE PHASE 3.

CHAPTER 3: ORACLE 11g

ASSUMPTIONS

The instructions in this chapter are based on the following assumptions:

- Oracle Database 11g software is installed on your database server and the installation type is **Enterprise Edition**.
- Oracle Database 11g's **Starter** database is created and running on your database server and you have been authorized to use this database for WinSPC.
- **Oracle Net** from Oracle Database 11g Client is installed on the first WinSPC client machine. (The first WinSPC client machine simply refers to the first computer on which you want to install WinSPC. This computer can be any client machine on your network.)
- **Oracle Provider for OLE DB** from Oracle Database 11g Client is installed on all client machines which are to run WinSPC (including the first client). (Incidentally, if your organization's intended use of WinSPC includes taking data stored in an Oracle ODBC data source and collecting it into the Oracle database you are configuring, **Oracle ODBC Driver** from Oracle Database 11g Client will need to be installed on each WinSPC client to be used in collecting that stored data. Since the presence of this driver presents no complication, DataNet Quality Systems recommends installing it even if the use of WinSPC to collect data from an Oracle ODBC data source is only a possibility.)
- The default values presented by Oracle Database 11g during the installation process were accepted without modification.



Terminal Services

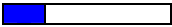
- Any firewalls between your database server and the client machines to be used for WinSPC are properly configured to permit database traffic.
- For implementations employing a Microsoft Terminal Services environment, Microsoft Terminal Services is properly installed and configured on the server designated as your Microsoft Terminal Services server.

NOTE: You may find that users who don't have administrative permissions to the Microsoft Terminal Services server are unable to launch WinSPC via a Remote Desktop Protocol session. This is a circumstance specific to Oracle Database 10g and Oracle Database 11g. It can be remedied by changing the **Permission Capability** on the Microsoft Terminal Services server from **Full Security** to **Relaxed Security**. Alternatively, consult your network administrator and/or Oracle DBA for other remedies.

- The operating system of your database server machine is Windows Server 2003.
- The operating system of the client machines to be used for WinSPC is either Windows Vista Business or Windows XP Pro. (Images of client machines included in this guide are from Vista Business.)

NOTE: If a default value was modified during the installation of Oracle Database 11g or an operating system is different from that stated here, adapt the instructions in this guide as needed to accommodate the modified value or differing operating system. Prior to beginning this procedure, it's advised that you locate the hostname (or machine name) for the Oracle Database 11g machine and the global database name and SYS account password assigned during the installation of Oracle Database 11g. Your database administrator should be able to provide this information.

Phase 1 of 4 SERVER CONFIGURATION



Create a Tablespace

1. On the database server machine, launch **Database Control** for the database to be used by WinSPC. The default path for this is **Start > All Programs > Oracle – OraDB11g_home1 > Database Control - orcl**.
2. On the **Oracle Enterprise Manager 11g** login page that is displayed:
 - a. At **User Name**, enter **SYS**.
 - b. At **Password**, enter the password for the **SYS** user name.
 - c. At **Connect As**, select **SYSDBA**.
 - d. Click **Login**.



- On the **Oracle Enterprise Manager 11g** page that appears, click **Server**.

ORACLE Enterprise Manager 11g Database Control

Database Instance: orcl

Home Performance Availability **Server** Schema Data Movement Software and Support

Latest Data Collected From Target: Jul 28, 2009 5:50:24 AM PDT Refresh View Data Automatically (60 sec)

General: Status Up, Up Since Jul 28, 2009 5:41:33 AM PDT, Instance Name orcl, Version 11.1.0.6.0, Host testserver.testdomain.oracle.com, Listener LISTENER_1, Testserver.testdomain...

Active Sessions: Bar chart showing Wait (2.8), User I/O (2.1), and CPU (1.4).

SQL Response Time: Bar chart showing Latest Collection (seconds) at 2.0 and Reference Collection (seconds) at 0.5.

Diagnostic Summary: ACDM Findings No ACDM run available, Alert Log No SQL errors, Active Incidents 0.

Space Summary: Database Size (GB) Unavailable, Problem Tablespaces 0, Segment Advisor Recommendations 0, Policy Violations 0, Dump Area Used (%) Unavailable.

High Availability: Instance Recovery Time (sec) 60, Last Backup n/a, Usable Flash Recovery Area (%) 100, Flashback Database Logging Disabled.

- On the **Server** page, under **Storage**, click **Tablespaces**.

ORACLE Enterprise Manager 11g Database Control

Database Instance: orcl

Home Performance Availability **Server** Schema Data Movement Software and Support

Storage: Control Files, Tablespaces, Temporary Tablespace Groups, Databases, Backup Sets, Backup Log Groups, Archive Logs, Migrate to ASM, Make Tablespace Local.

Database Configuration: Instance Address, Automatic Undo Management, Initialization Parameters, View Database Features Usage.

Oracle Scheduler: Jobs, Chains, Schedules, Programs, Job Classes, Windows, Window Groups, Global Job Roles, Automated Maintenance Tasks.

Statistics Management: Automatic Workload Repository, AWR Baselines.

Resource Manager: Getting Started, Consumer Groups, Consumer Group Mappings, Plans, Settings, Statistics.

Security: Users, Roles, Profiles, Audit Settings, Transparent Data Encryption, Virtual Private Database Policies, Application Contexts.

Query Optimizer: Manage Optimizer Statistics, SQL Plan Control.

Change Database: Add Instance, Delete Instance.

5. On the **Tablespaces** page, click **Create**.

ORACLE Enterprise Manager 11g Database Control

Database Instance: orcl > Tablespaces

Object Type: Tablespace

Search: Enter an object name to filter the data that is displayed in your results set.

Object Name:

By default, the search returns all uppercase matches beginning with the string you entered. To run an exact or case-sensitive match, double quote the search string. You can use the wildcard symbol (%) in a search string.

Selection Mode: Single

Select	Name	Allocated Size (MB)	Space Used (MB)	Allocated Space Used (%)	Allocated Free Space (MB)	Status	Datfiles	Type	Extent Management	Segment Management
<input type="radio"/>	EXAMPLE	100.0	77.4	77.4	22.6	✓	1	PERMANENT LOCAL	AUTO	
<input type="radio"/>	SYSTEM	605.0	577.5	95.5	27.5	✓	1	PERMANENT LOCAL	AUTO	
<input type="radio"/>	SYSTEM	690.0	662.4	98.9	7.6	✓	1	PERMANENT LOCAL	MANUAL	
<input type="radio"/>	TEMP	20.0	0.0	0.0	20.0	✓	1	TEMPORARY LOCAL	MANUAL	
<input type="radio"/>	UNDOTBS1	140.0	102.9	73.5	37.1	✓	1	UNDO LOCAL	MANUAL	
<input type="radio"/>	USERS	5.0	3.1	62.5	1.9	✓	1	PERMANENT LOCAL	AUTO	

Total Allocated Size (MB) 1,560.0
 Total Used (MB) 1,443.3
 Total Allocated Free Space (MB) 116.7

Database | Setup | Preferences | Help | Logout

6. On the **Create Tablespace** page, at **Name**, enter a name for the tablespace to be used by WinSPC and then, in the bottom right corner, click **Add**.

ORACLE Enterprise Manager 11g Database Control

Database Instance: orcl > Tablespaces > Create Tablespace

General | Storage

Name: WinSPC

Extent Management: Locally Managed Dictionary Managed

Name: WinSPC

Status: Offline

Encryption | Encryption Options

Temporary

Set as default temporary tablespace

Undo

Undo Retention Guarantee: Yes No

Datfiles

Use bigfile tablespace

Tablespace can have only one datfile with no practical size limit.

Add

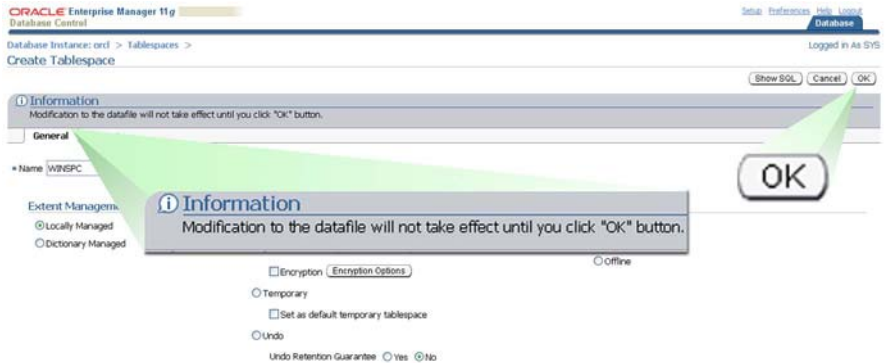
7. On the **Add Datafile** page:
 - a. At **File Name**, enter a name for the datafile to be used by WinSPC.
 - b. At **File Size**, enter **5 MB**.
 - c. At **Storage**, check the **Automatically extend datafile when full (AUTOEXTEND)** check box and specify an **Increment** amount of **5 MB**.
 - d. Click **Continue**.

The screenshot displays the 'Add Datafile' configuration page in Oracle Enterprise Manager 11g. The page is titled 'Add Datafile' and shows the following configuration details:

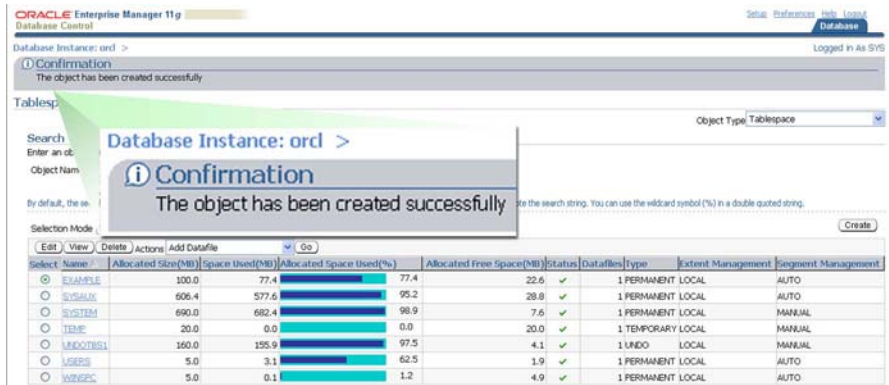
- File Name:** WinSPC
- File Directory:** C:\APP\ADMINISTRATOR\ORADATA\ORCL\
- Tablespace:** WINSPC
- File Size:** 5 MB
- Storage:**
 - Automatically extend datafile when full (AUTOEXTEND)
 - Increment:** 5 MB
 - Maximum File Size:** Unlimited

A green callout box highlights the Storage section, showing the 'Automatically extend datafile when full (AUTOEXTEND)' checkbox checked and the 'Increment' set to 5 MB. The page also includes 'Cancel' and 'Continue' buttons.

- On the **Create Tablespace** page, note the **Information** message that is displayed and click **OK**.



- On the **Tablespaces** page, note the **Confirmation** message that appears and, directly above it, click **Database Instance**.



Create a Server Login

1. Back on the **Server** page, under **Security**, click **Users**.

ORACLE Enterprise Manager 11g Database Control

Database Instance: orcl

Home Performance Availability **Server** Schema Data Movement Software and Support

Storage: Control Files, Tablespaces, Temporary Tablespace Groups, Callfiles, Rollback Segments, Redo Log Groups, Archive Logs, Migrate to ASM, Make Tablespace Locality Managed

Statistics Management: Automatic Workload Repository, AWR Baselines

Query Optimizer: Manage Optimizer Statistics, SQL Plan Control

Database Configuration: Memory Advisors, Automatic Undo Management, Initialization Parameters, View Database Feature Usage

Resource Manager: Getting Started, Consumer Groups, Consumer Group Mappings, Plans, Settings, Statistics

Change Database: Add Instance, Delete Instance

Oracle Scheduler: Jobs, Chains, Schedules, Programs, Job Classes, Windows, Window Groups, Global Actions, Automated Maintenance Tasks

Security: **Users**, Roles, Profiles, Audit Settings, Transparent Credentials, Virtual Private Database, Application Contexts

2. On the **Users** page, click **Create**.

ORACLE Enterprise Manager 11g Database Control

Database Instance: orcl >

Users

Search: Enter an object name to filter the data that is displayed in your results set. Object Name: [] Go

By default, the search returns all uppercase matches beginning with the string you entered. To run an exact or case-sensitive match, double quote the search string. You can use the [wildcard](#).

Selection Mode: Single

Table Columns: Select, Username, Account Status, Expiration Date, Default Tablespace, Temporary Tablespace, Profile, Created

Select	Username	Account Status	Expiration Date	Default Tablespace	Temporary Tablespace	Profile	Created
<input type="radio"/>	ANONYMOUS	EXPIRED & LOCKED	Jul 21, 2009 7:50:33 AM PDT	SYSAUX	TEMP	DEFAULT	Oct 15, 2007 10:36:34 AM PDT
<input type="radio"/>	APEX_PUBLIC_USER	EXPIRED & LOCKED	Jul 21, 2009 7:50:33 AM PDT	USERS	TEMP	DEFAULT	Oct 15, 2007 11:06:44 AM PDT
<input type="radio"/>	BI	EXPIRED & LOCKED	Jul 21, 2009 7:50:33 AM PDT	USERS	TEMP	DEFAULT	Jul 21, 2009 7:45:58 AM PDT
<input type="radio"/>	CTSYS	EXPIRED & LOCKED	Jul 21, 2009 7:50:33 AM PDT	SYSAUX	TEMP	DEFAULT	Oct 15, 2007 10:35:40 AM PDT
<input type="radio"/>	DEMANP	OPEN	Jan 17, 2010 7:51:49 AM PST	SYSAUX	TEMP	MONITORING_PROFILE	Oct 15, 2007 10:23:30 AM PDT
<input type="radio"/>	DIP	EXPIRED & LOCKED		USERS	TEMP	DEFAULT	Oct 15, 2007 10:11:17 AM PDT
<input type="radio"/>	EXFSYS	EXPIRED & LOCKED	Jul 21, 2009 7:50:33 AM PDT	SYSAUX	TEMP	DEFAULT	Oct 15, 2007 10:35:14 AM PDT
<input type="radio"/>	FLWSO (00000)	EXPIRED & LOCKED	Jul 21, 2009 7:50:33 AM PDT	SYSAUX	TEMP	DEFAULT	Oct 15, 2007 11:06:45 AM PDT
<input type="radio"/>	FLWSO_FILES	EXPIRED & LOCKED	Jul 21, 2009 7:50:33 AM PDT	SYSAUX	TEMP	DEFAULT	Oct 15, 2007 11:06:44 AM PDT
<input type="radio"/>	HR	EXPIRED & LOCKED	Jul 21, 2009 7:50:33 AM PDT	USERS	TEMP	DEFAULT	Jul 21, 2009 7:45:58 AM PDT
<input type="radio"/>	IX	EXPIRED & LOCKED	Jul 21, 2009 7:50:33 AM PDT	USERS	TEMP	DEFAULT	Jul 21, 2009 7:45:58 AM PDT

3. On the **Create User** page:
 - a. At **Name**, create and enter a name for the login. (The recommended user name is **JOHNDOE**.)
 - b. At **Enter Password**, create and enter a sufficiently strong password for the login.
 - c. At **Confirm Password**, reenter the password.

NOTE: The name and password entered here will be used by Oracle Database 11g to authentic WinSPC client machines and allow authenticated machines access to the WinSPC tablespace. This name and password combination is not directly used by WinSPC users. WinSPC users will, later, be assigned individual user IDs and passwords. They will use these individual user IDs and passwords to log into the WinSPC application on WinSPC client machines.

- d. At **Default Tablespace**, enter the tablespace name specified in step 6 of this chapter's **Create a Tablespace** section.
- e. At **Temporary Tablespace**, enter **TEMP**.

f. Without clicking **OK**, click the **Roles** tab.

ORACLE Enterprise Manager 11g Database Control

Database Instance: orcl > Users > Create User

Roles

Name: JOHNDOE
 Profile: DEFAULT
 Authentication: Password
 Enter Password: *****
 Confirm Password: *****

For Password choice, the role is authorized via password.
 Expire Password now

Default Tablespace: WINSFC
 Temporary Tablespace: TEMP
 Status: Locked Unlocked

Roles

Name: JOHNDOE
 Profile: DEFAULT
 Authentication: Password
 Enter Password: *****
 Confirm Password: *****

For Password choice, the role is authorized via password.
 Expire Password now

Default Tablespace: WINSFC
 Temporary Tablespace: TEMP
 Status: Locked Unlocked

4. On the **Roles** tab, click **Edit List**.

ORACLE Enterprise Manager 11g Database Control

Database Instance: orcl > Users > Create User

Roles

Role	Admins Option	Default	Edit List
CONNECT	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Edit List

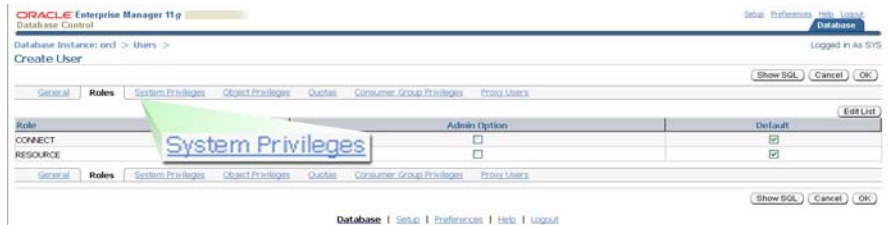
Edit List

5. On the **Modify Roles** page, from the **Available Roles** list, select **RESOURCE** and click **Move**.



This moves **RESOURCE** to the **Selected Roles** list.

6. Click **OK**.
7. Back on the **Create User** page, click **System Privileges**.



8. On the **System Privileges** tab, click **Edit List**.



9. On the **Modify System Privileges** page, from the **Available System Privileges** list, select **CREATE ANY INDEX** and click **Move**.

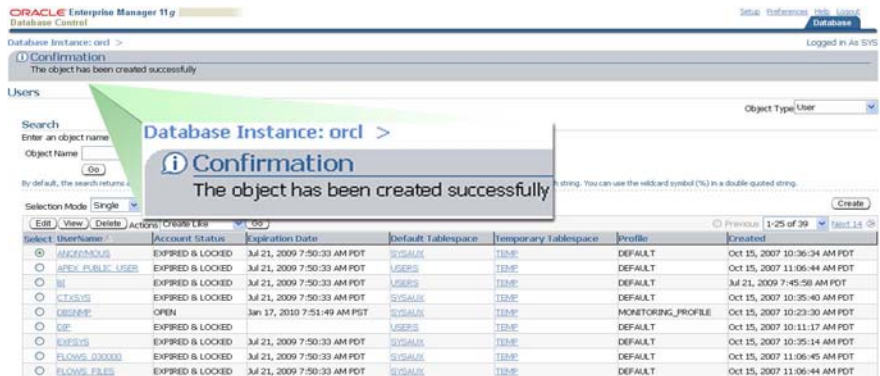


This moves **CREATE ANY INDEX** to the **Selected System Privileges** list.

10. Click **OK**.
11. Back on the **Create User** page, click **OK** again.



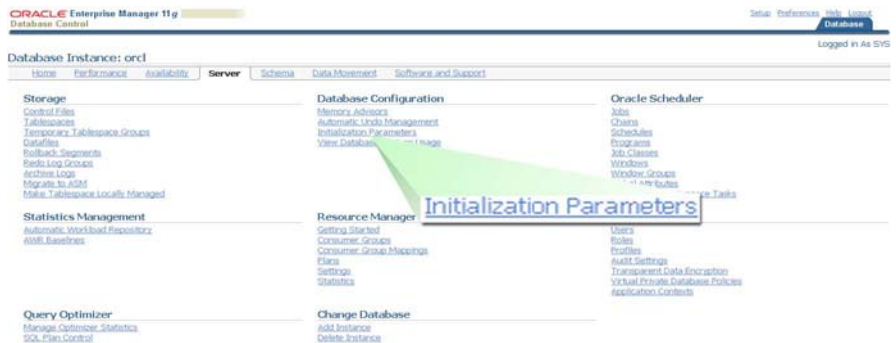
- On the **Users** page, note the **Confirmation** message that appears and, directly above it, click **Database Instance**.



Set the Number of Open Cursors

- Calculate the required number of open cursors using this formula:

$$open_cursors = number\ of\ WinSPC\ licenses * 50$$
- On the **Server** page again, under **Database Configuration**, click **Initialization Parameters**.



This causes the **Initialization Parameters** page to appear.

ORACLE Enterprise Manager 11g Database Control

Database Instance: orcl >

Initialization Parameters

Current SPFILE

The parameter values listed here are currently used by the running instance(s). You can change static parameters in SPFILE mode.

Name: Basic Modified Dynamic Category

Filter on a name or partial name

Apply changes in current running instance(s) mode to SPFILE. For static parameters, you must restart the database.

Name	log	Revisions	Value	Comments	Type	Basic	Modified	Dynamic	Category
audit_file_dest	ID		C:\APP\ADMINISTRATOR\ADN		String	✓	✓	✓	Security and Auditing
audit_trail	ID		DB		String	✓	✓	✓	Security and Auditing
diagnostic_dest	ID		C:\APP\ADMINISTRATOR		String	✓	✓	✓	Miscellaneous
dispatchers	ID		(PROTOCOL=TCP) (SERVICE=		String	✓	✓	✓	Shared Server
compatible	ID		11.1.0.0.0		String	✓	✓	✓	Miscellaneous
control_files	ID		C:\APP\ADMINISTRATOR\ORADATA\ORCL\CONTROL02.CTL; C:\APP\ADMINISTRATOR\ORADATA\ORCL\CONTROL03.CTL; C:\APP\ADMINISTRATOR\ORADATA\ORCL\CONTROL01.CTL		String	✓	✓	✓	File Configuration
db_block_size	ID		8192		Integer	✓	✓	✓	Memory
db_domain	ID				String	✓	✓	✓	Database Identification

- On this page, scroll down until, in the **Name** column, you see **open_cursors** and, in this row's **Value** column, enter the number you calculated in step 1 of this section above.

memory_target	ID		412M		Big Integer	✓	✓	✓	Memory
open_cursors	ID		300		Integer	✓	✓	✓	Cursors and Library Cache
processes	ID				Integer	✓	✓	✓	Processes and Sessions
remote_login_password_file	ID				String	✓	✓	✓	Security and Auditing
undo_tablespace	ID				String	✓	✓	✓	Undo Segment
cluster_database	ID				String	✓	✓	✓	File
db_create_file_dest	ID				String	✓	✓	✓	File Configuration
db_create_online_log_dest_1	ID				String	✓	✓	✓	File Configuration
db_create_online_log_dest_2	ID				String	✓	✓	✓	File Configuration
instance_number	ID		0		Integer	✓	✓	✓	Cluster Database
log_archive_dest_1	ID				String	✓	✓	✓	Archiving
log_archive_dest_2	ID				String	✓	✓	✓	Archiving
log_archive_dest_state_1	ID		enable		String	✓	✓	✓	Archiving
log_archive_dest_state_2	ID		enable		String	✓	✓	✓	Archiving
nls_language	ID		AMERICAN		String	✓	✓	✓	NLS
nls_territory	ID		AMERICA		String	✓	✓	✓	NLS
pga_aggregate_target	ID		0		Big Integer	✓	✓	✓	Hash Joins, Bitmap Indices
remote_listener	ID				String	✓	✓	✓	Network Registration
rollback_segments	ID				String	✓	✓	✓	Automatic Undo

4. Scroll back up to the top of the page and click **Apply**, noting the **Update Message** that appears as a result.

The screenshot shows the Oracle Enterprise Manager 11g Database Control interface. At the top, there is a navigation bar with 'Setup', 'References', 'Help', and 'Logout'. Below this, the 'Database Control' section is visible, showing the instance name 'orcl'. A green arrow points to the 'Apply' button in the top right corner. Below the 'Apply' button, an 'Update Message' box displays the text: 'The changes have been made successfully. It may take a while before the changes take effect.' Another green arrow points to this message box. Below the message box, there is a table of parameters with the following data:

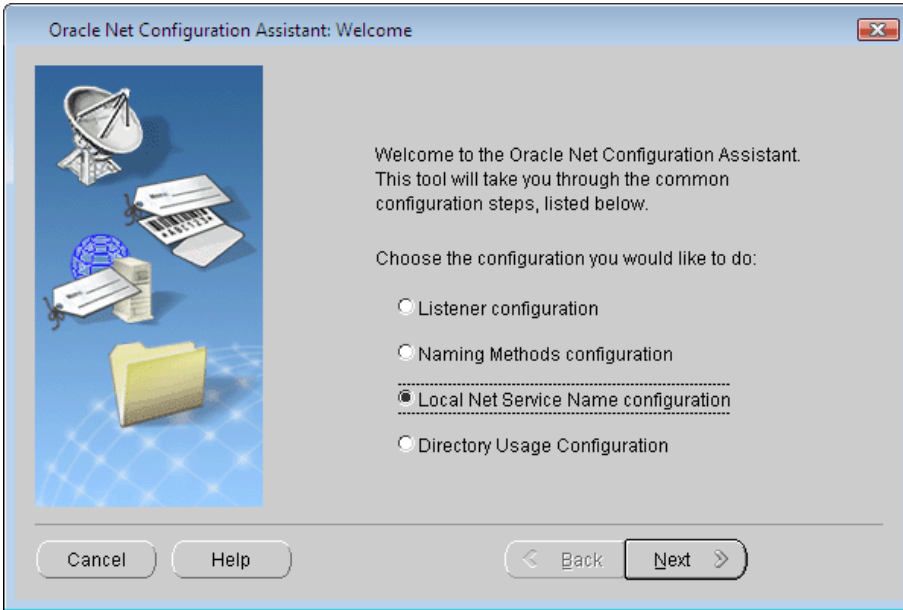
Name	Help	Revisions	Value	Comments	Type	Basic	Modified	Dynamic	Category
audit_file_dest	[?]		C:\APP\ADMINISTRATOR\AD		String	✓		✓	Security and Auditing
audit_trail	[?]		DB		String		✓		Security and Auditing
diagnostic_dest	[?]		C:\APP\ADMINISTRATOR		String		✓	✓	Miscellaneous
dispatchers	[?]		(PROTOCOL=TCP) (SERVICE=		String		✓	✓	Shared Server
compatible	[?]		11.1.0.0.0		String	✓		✓	Miscellaneous
control_files	[?]		C:\APP\ADMINISTRATOR\ORADATA\ORCL\CONTROL02.CTL, C:\APP\ADMINISTRATOR\ORADATA\ORCL\CONTROL03.CTL, C:\APP\ADMINISTRATOR\ORADATA\ORCL\CONTROL01.CTL		String		✓	✓	File Configuration

5. Click **Logout** in the top right corner of the **Oracle Enterprise Manager 11g** page.
6. Close your browser.

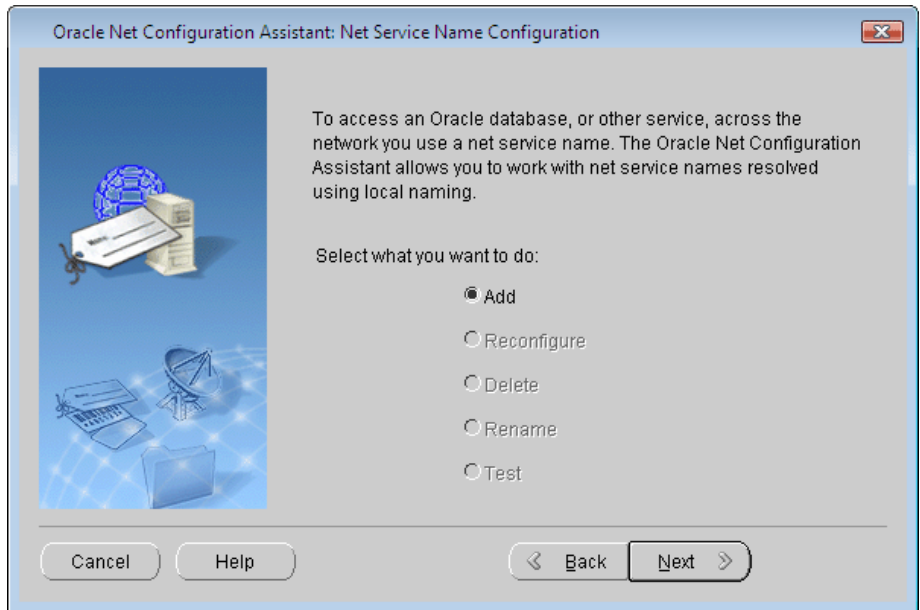
Add the Local Net Service Name

1. On the first client machine, launch **Net Configuration Assistant**, the default path for which is **Start > All Programs > Oracle – OraClient11g_home1 > Configuration and Migration Tools > Net Configuration Assistant**.

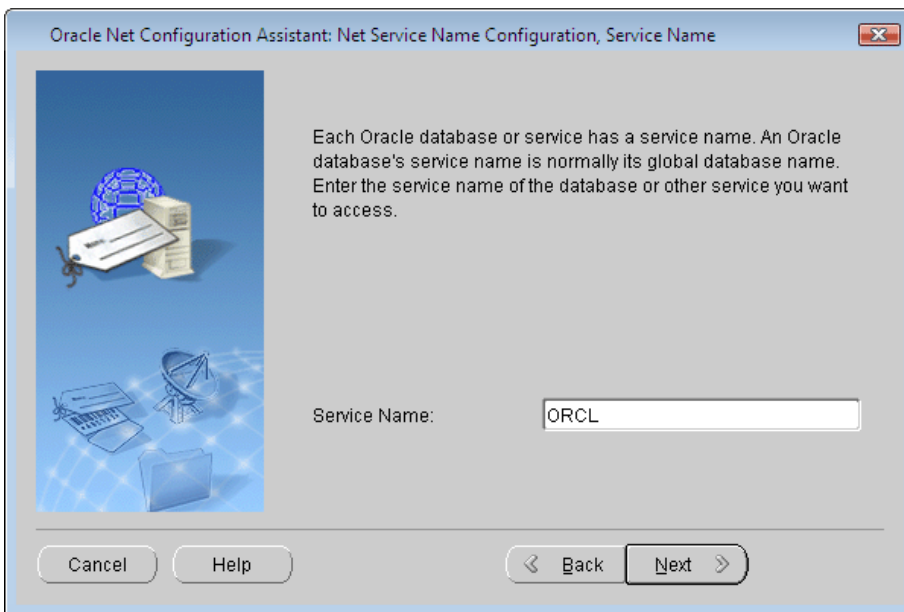
2. In the **Oracle Net Configuration Assistant** prompt, on the **Welcome** prompt, select **Local Net Service Name configuration** and click **Next**.



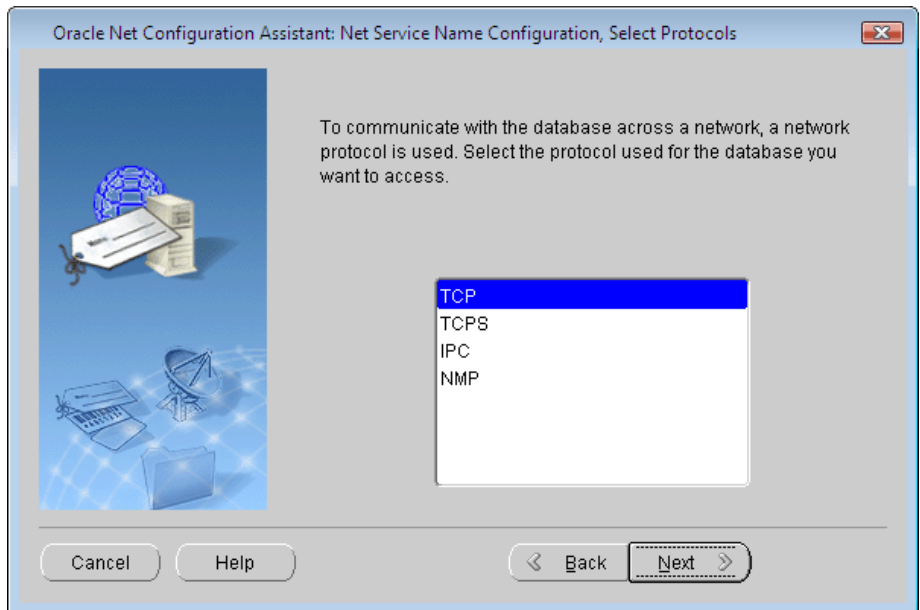
3. On the **Net Service Name Configuration** prompt, accept the **Add** default and click **Next**.



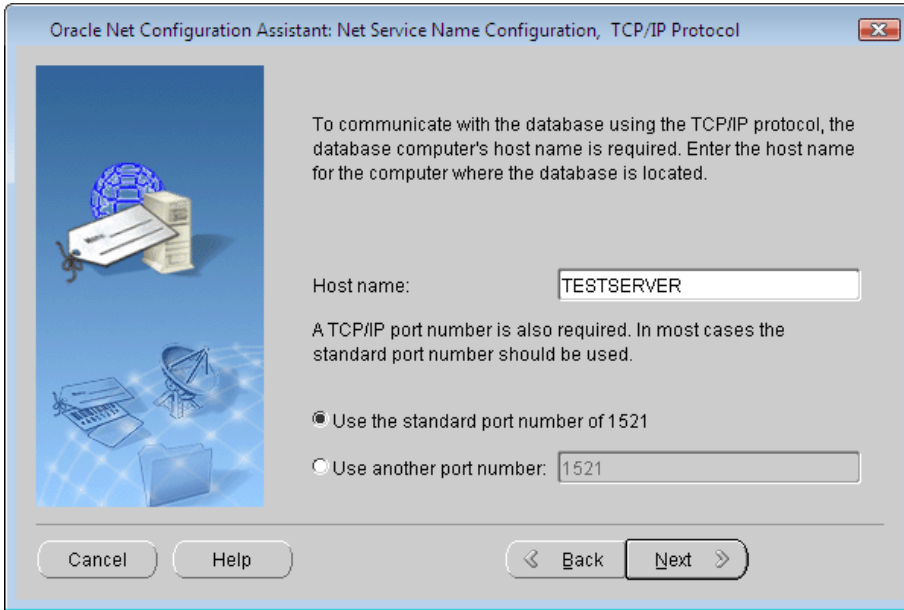
4. On the **Net Service Name Configuration, Service Name** prompt, at **Service Name**, enter the service name assigned during the setup of Oracle 11g Database—which, by default, is the same as the global database name—and click **Next**. (If the default global database name, **ORCL**, was accepted during the setup of Oracle 11g Database, enter **ORCL** as the service name.)



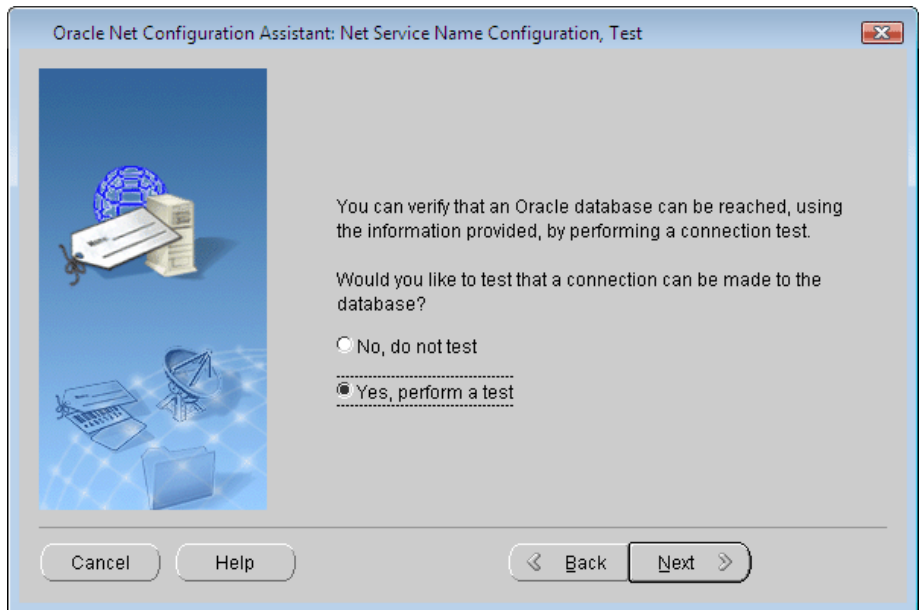
5. On the **Net Service Name Configuration, Select Protocols** prompt, select **TCP** and click **Next**.



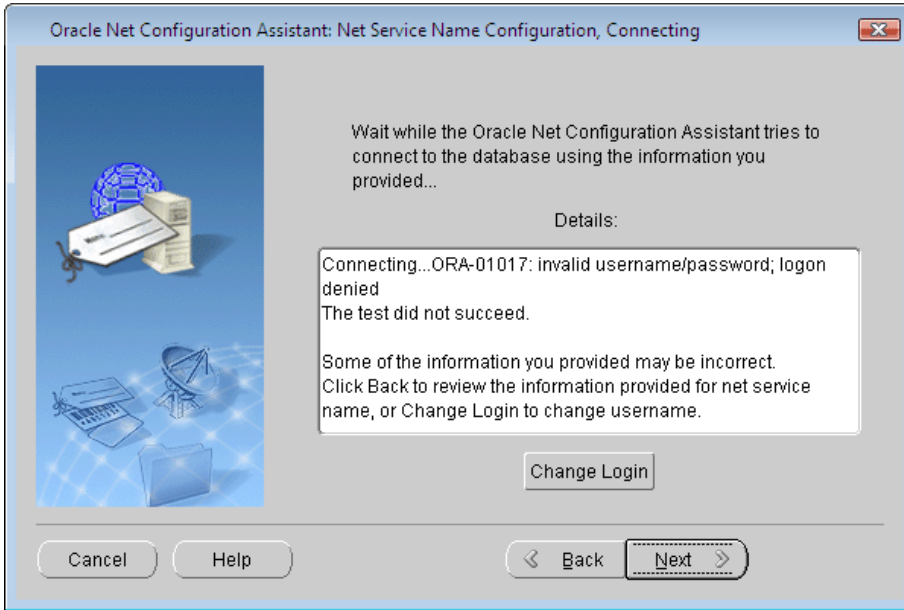
6. On the **Net Service Name Configuration, TCP/IP Protocol** prompt, at **Host Name**, enter the name of the database server machine and click **Next**.



7. On the **Net Service Name Configuration, Test** prompt, select **Yes, perform a test** and click **Next**.



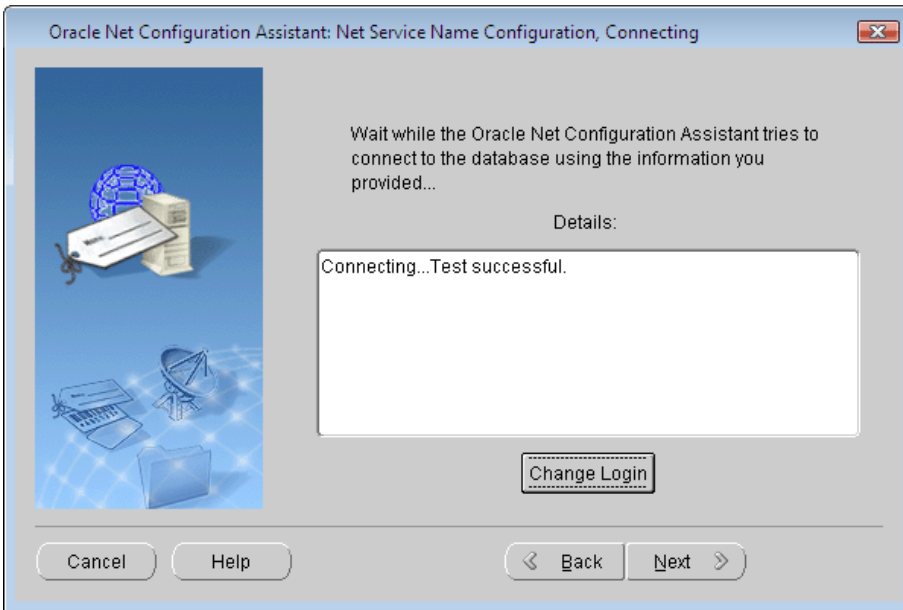
8. On the **Net Service Name Configuration, Connecting** prompt, which indicates the test did not succeed, click the **Change Login** button.



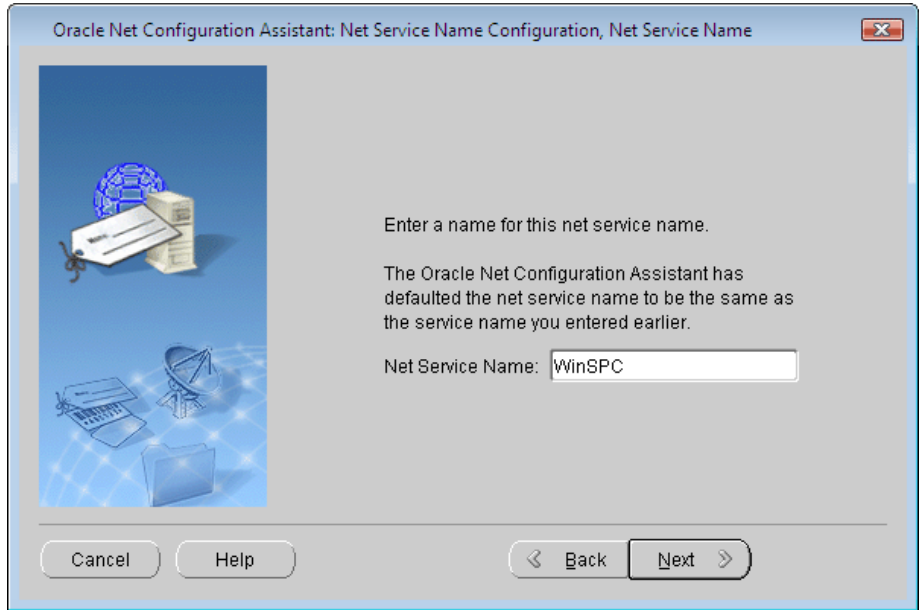
9. In the **Change Login** prompt, replace the default username and password with the username and password you created in step 3 of this chapter's **Create a Server Login** section and click **OK**.



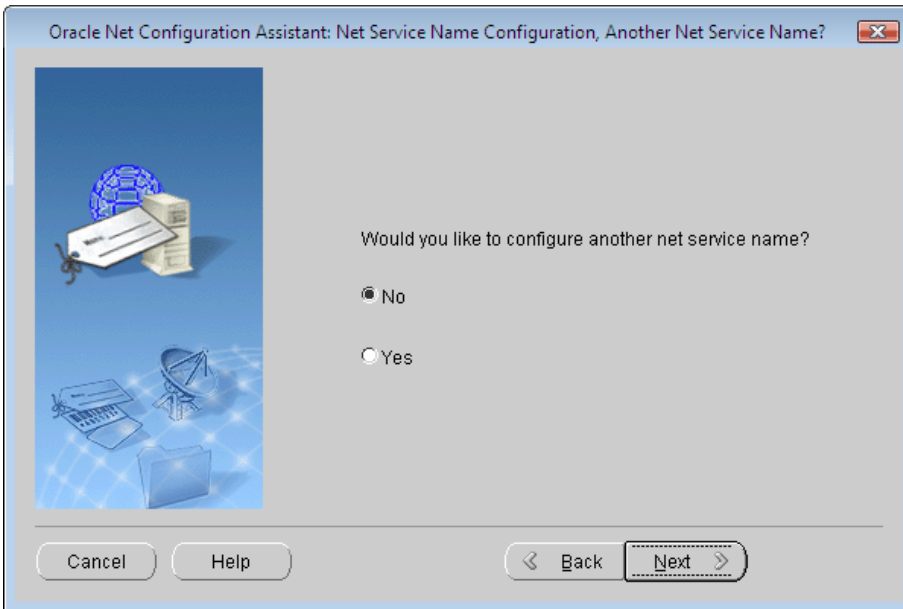
10. On the **Net Service Name Configuration, Connecting** prompt, when the test is indicated as having succeeded, click **Next**.



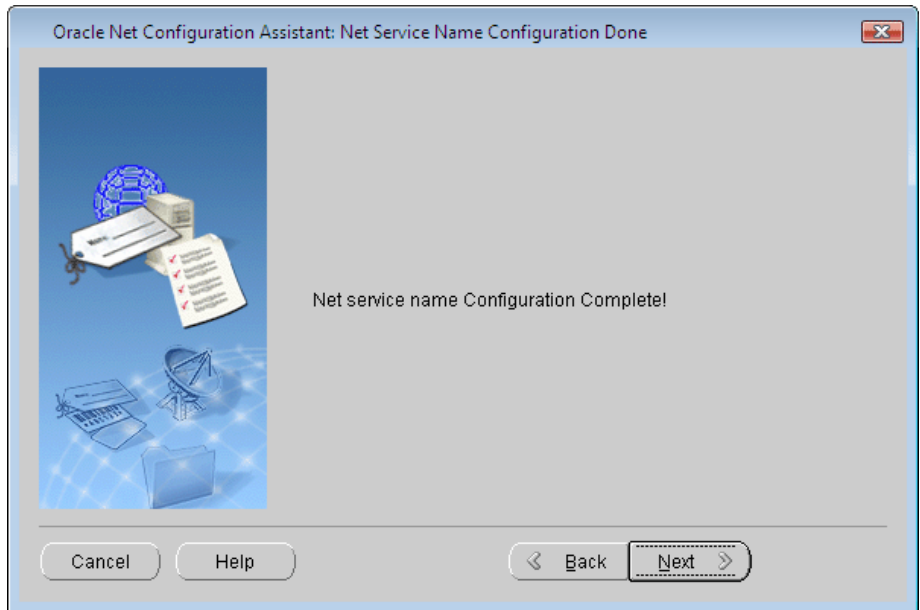
11. On the **Net Service Name Configuration, Net Service Name** prompt, at **Net Service Name**, rename the default net service name and click **Next**. (The suggested name is **WinSPC**.)



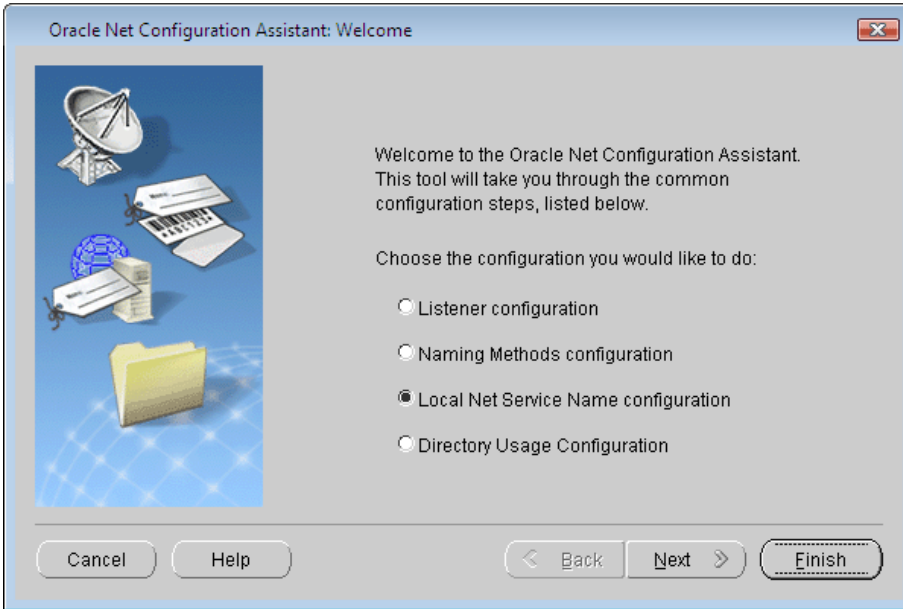
12. On the **Net Service Name Configuration, Another Net Service Name** prompt, accept the **No** default and click **Next**.



13. On the **Net Service Name Configuration Done** prompt, click **Next**.



14. On the **Welcome** prompt again, click **Finish**.



THIS COMPLETES PHASE 1 OF 4.
GO TO THE NEXT PAGE AND COMPLETE PHASE 2.

Phase 2 of 4 FIRST CLIENT INSTALL AND CONFIGURATION (INITIAL STEPS)

This section concerns the installation and configuration of WinSPC on the first WinSPC client. (See the third assumption at the beginning of this chapter for a definition of the first WinSPC client.)



Terminal Services

If your implementation employs Microsoft Terminal Services, see the discussion on page 1 of this guide for direction on whether to make your first client the Microsoft Terminal Services server or another computer.

1. Create a folder on a network file server accessible by all client stations that will run WinSPC. This folder's primary purpose is to facilitate the installation and configuration of WinSPC on all clients other than the first client. (The recommended name for this folder is **WinSPCRemote**.)
2. Share this folder and grant domain administrators at least the minimum required permissions to it. For file servers running Windows Server 2003, the minimum *Share* permissions are **Change** and the minimum *Security* permissions are **Modify**. For file servers running Windows Server 2008, the minimum *Share* permissions are **Contributor** and the minimum *Security* permissions are **Modify**. (For a procedure on granting *Share* or *Security* permissions, see **Appendix D: Granting Share and Security Permissions**.)

NOTE: If your WinSPC implementation is part of a workgroup rather than a domain, grant these minimum permissions to the local administrator who will install and configure WinSPC on the first WinSPC client machine.

3. Log into Windows on the first WinSPC client machine as a domain administrator who also has local administrator privileges.

NOTE: If the first WinSPC client machine is part of a workgroup instead of a domain, log in as a local administrator.

4. If you downloaded **Install.exe** from winspc.com/downloads:
 - a. Transfer this file to the first WinSPC client if it was downloaded to a different computer.
 - b. Double-click the file.
 - c. If an **Open File – Security Warning** prompt appears, click **Run**.
 - d. Go to step 6.

5. If you have the WinSPC CD (whether as a result of receiving it from DataNet Quality Systems or burning it from the **WinSPC.iso** file at winspc.com/downloads) and you did not complete the preceding step:
 - a. Insert and run the CD.
 - b. On the **WinSPC Version 8.0** setup prompt that appears, click **Install or Upgrade**.



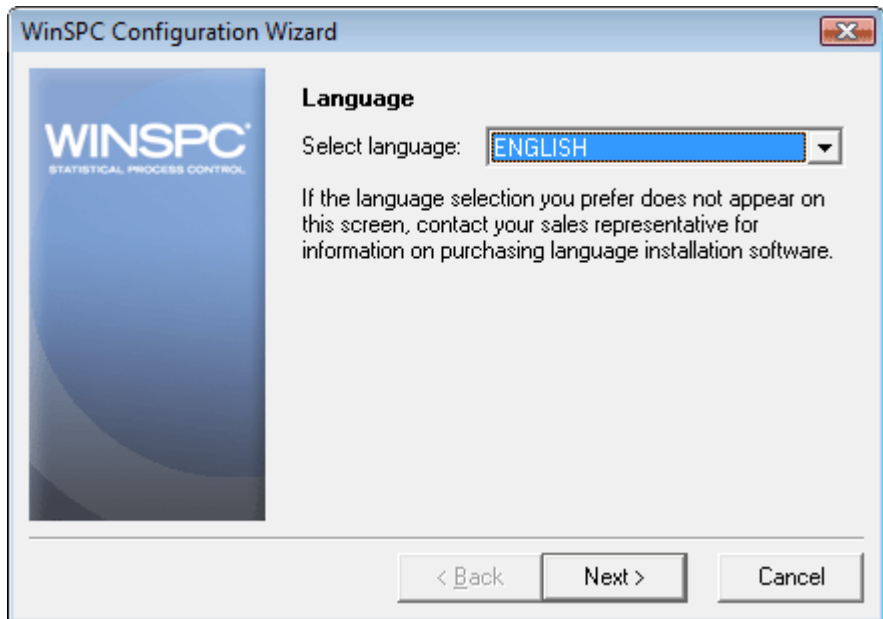
- c. Go to step 6.

6. Complete the WinSPC Installation Wizard.

NOTE: The prompts of this wizard are intended to be self-explanatory. Consequently, they are not detailed here. If you have a question about a prompt or want to be directed step-by-step through the wizard, see **Appendix A: The WinSPC Installation Wizard**.

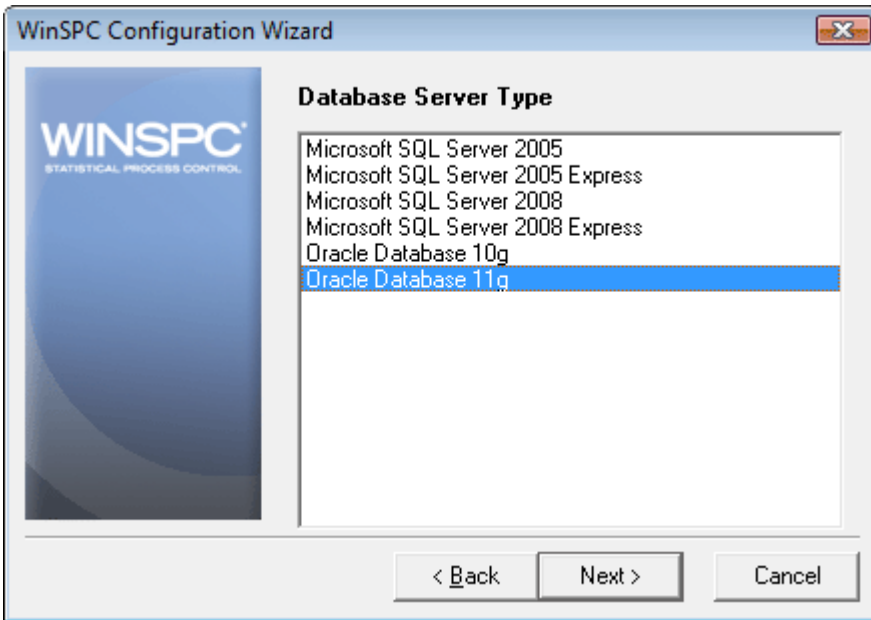
7. Complete **Appendix B: Installing NJWin for an Asian Language** if the first client machine will need to run WinSPC in an Asian language or you would like to run the WinSPC Configuration Wizard in an Asian language. (The WinSPC Configuration Wizard is the tool you will use next in this first client configuration process.)
8. If you installed WinSPC from a CD, exit the **WinSPC Version 8.0** setup prompt by clicking **Close** in the upper right corner and remove the WinSPC CD from the CD-ROM drive.
9. Click **Start > All Programs > WinSPC > WinSPC**. This launches the WinSPC Configuration Wizard.

10. On the **Language** prompt, from the **Select language** list, choose a language and click **Next**.

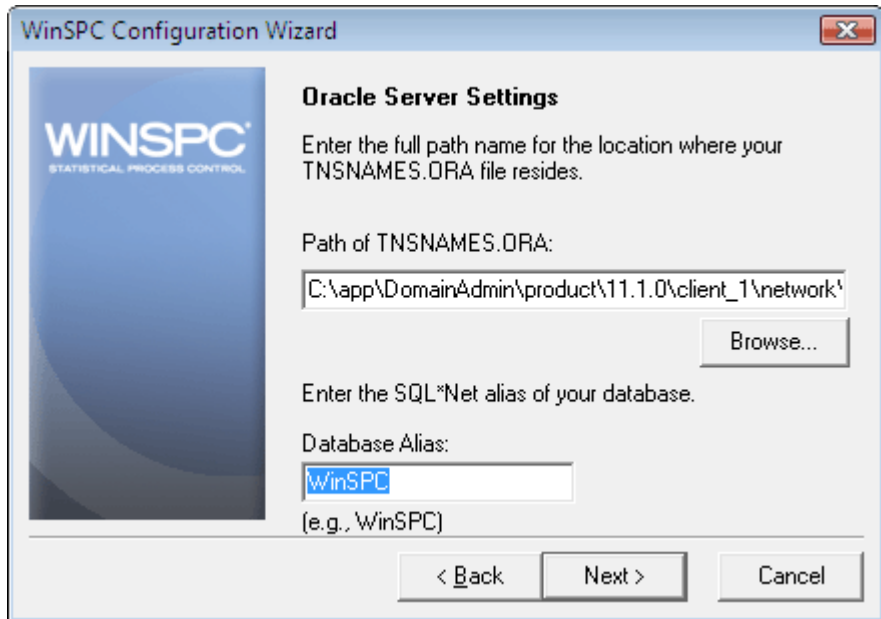


NOTE: The language selected here is the language in which the remainder of the WinSPC Configuration Wizard will run. It also becomes the system-wide default language for WinSPC. (This default language can be changed at any time following the completion of the WinSPC Configuration Wizard. Once the configuration of the first WinSPC client is complete, you can see the **WinSPC Help** for more information on default languages.)

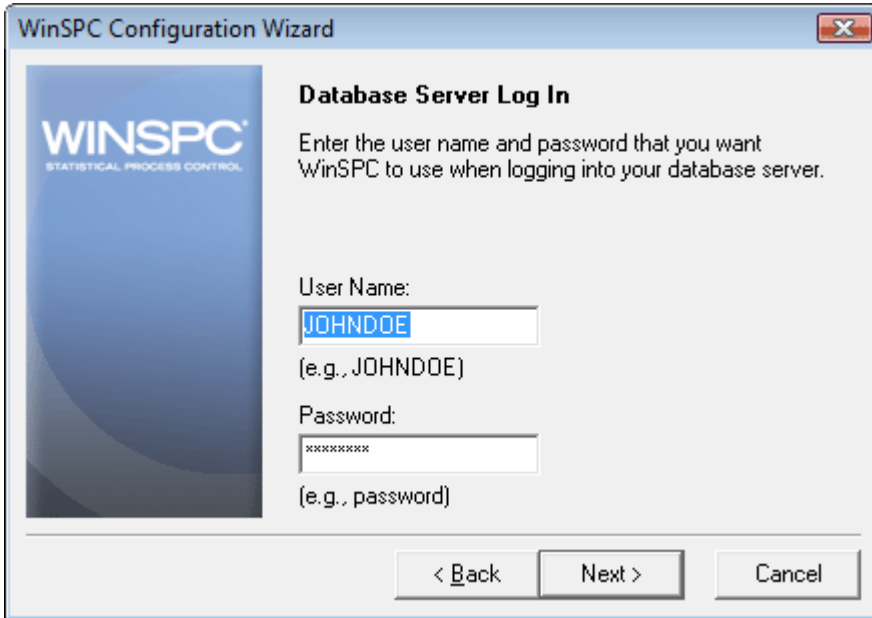
11. On the **Database Server Type** prompt, select **Oracle Database 11g** and click **Next**.



12. On the **Oracle Server Settings** prompt:
 - a. At **Path of TNSNAMES.ORA**, accept the default location.
 - b. In the **Database Alias** text box, enter the **Net Service Name** you chose in step 11 of this chapter's **Add the Local Net Service Name** section.
 - c. Click **Next**.

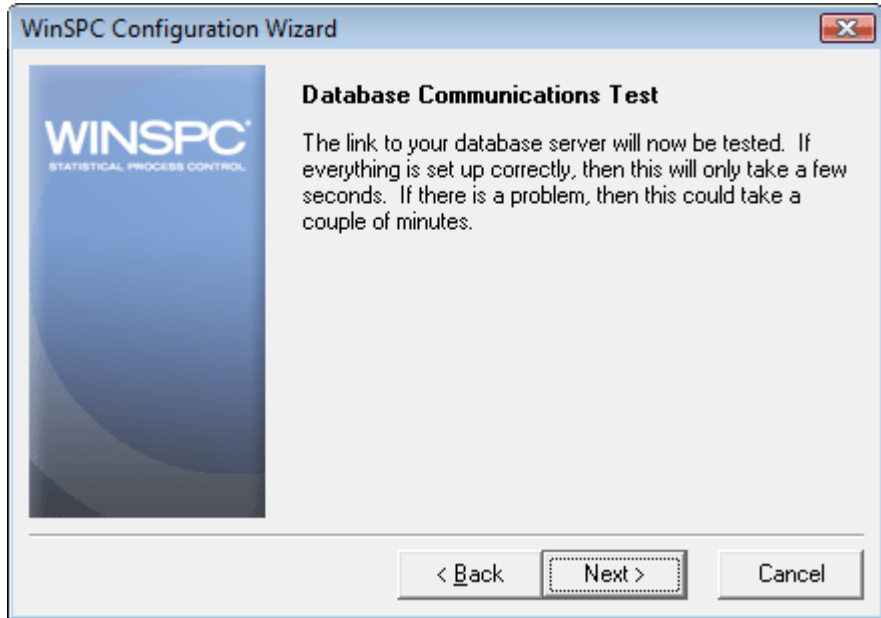


13. On the **Database Server Log In** prompt, enter the tablespace login **User Name** and **Password** created in step 3 of this chapter's **Create a Server Login** section and click **Next**.



The image shows a screenshot of the WinSPC Configuration Wizard window. The window title is "WinSPC Configuration Wizard" and it has a close button in the top right corner. On the left side, there is a blue vertical banner with the WinSPC logo and the text "STATISTICAL PROCESS CONTROL". The main area of the window is titled "Database Server Log In" and contains the following text: "Enter the user name and password that you want WinSPC to use when logging into your database server." Below this text are two input fields. The first is labeled "User Name:" and contains the text "JOHNDOE". Below the input field is the example "(e.g., JOHNDOE)". The second is labeled "Password:" and contains a series of asterisks "xxxxxxx". Below the input field is the example "(e.g., password)". At the bottom of the window, there are three buttons: "< Back", "Next >", and "Cancel".

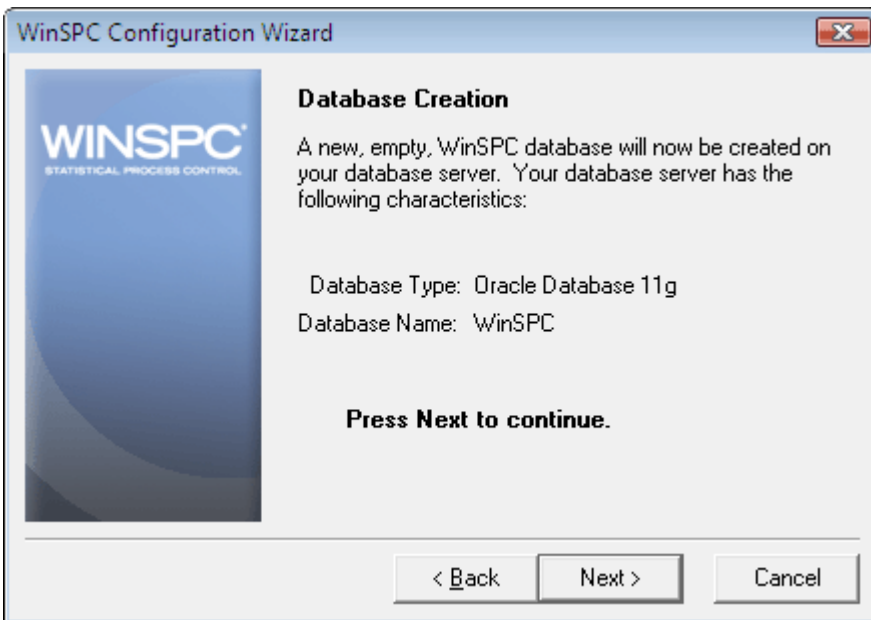
14. On the **Database Communications Test** prompt, click **Next**.



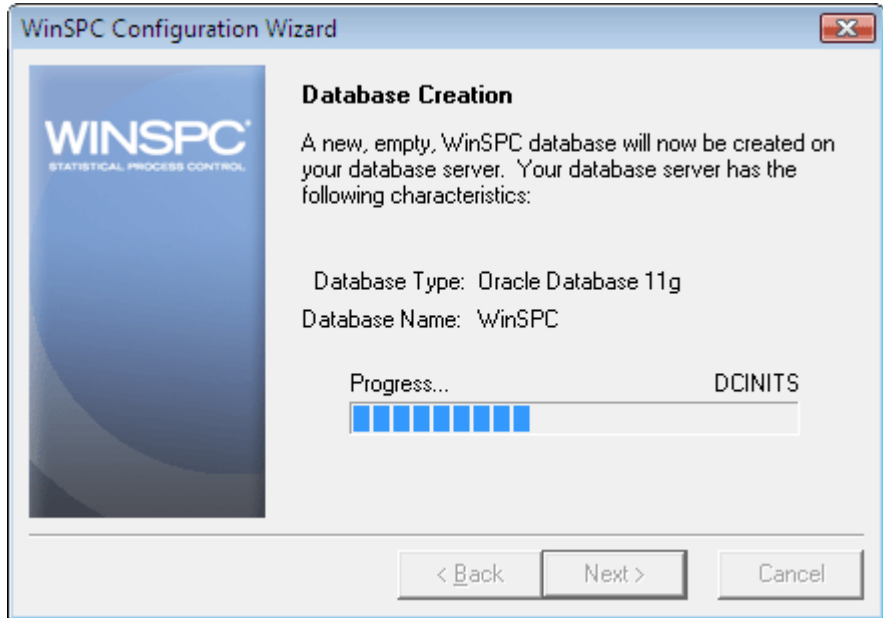
In the event the test fails:

- If the error message displayed reads **ORA-12154: TNS:could not resolve the connect identifier specified**, click the **Back** button three times and reenter the database alias, ensuring you have the correct name and that it is spelled correctly. Once you've reentered this information, advance through the WinSPC Configuration Wizard again by clicking **Next**, verifying the information on each prompt as you do.

- If the error message reads **ORA-01017: invalid username/password; logon denied**, click the **Back** button twice and reenter the server user name and password, ensuring you have the correct user name and password and that these are spelled correctly. Also, since passwords are case sensitive, ensure the appropriate capitalization is used for the password. Once you've reentered this information, advance through the WinSPC Configuration Wizard again by clicking **Next**, verifying the information on each prompt as you do.
15. On the **Database Creation** prompt, click **Next**. This creates the WinSPC schema within the WinSPC database.



16. Allow the prompt's progress bar to complete.



17. If you selected a language other than English in step 10 of this section, an **Add Language** prompt appears once the WinSPC schema is created. In this case:
- a. Insert the language disk for the selected language into your floppy drive and click the **OK** button. (Language disks are included in your WinSPC materials. If you didn't order a language disk and, consequently, did not receive one, click the **Cancel** button and complete the WinSPC Configuration Wizard without adding the language. Later, you can order the language disk and, once the disk arrives, add the language using the **Add Language** option on the **Administrator** window's **Tools** menu in WinSPC. Until the language is added, you'll be restricted to running WinSPC in English. The remainder of the WinSPC Configuration Wizard continues to run in the selected language whether or not a language is added from a language disk.)
 - b. In the message asking if you want to proceed with the addition of the detected language, click **OK**.
 - c. If a message indicating the detected language has already been installed appears, click **OK**.
 - d. Allow the **Adding New Language** progress bar to complete.
 - e. When the **You may now select the desired language in the System Settings, Station Setup, or User Setup** message appears, click **OK**.
 - f. If the **Add Language** prompt reappears, click **Cancel**.
 - g. Remove the language disk from the floppy drive.

THIS COMPLETES PHASE 2 OF 4.
GO TO **CHAPTER 4: FIRST CLIENT
CONFIGURATION (FINAL STEPS)** AND
COMPLETE PHASE 3.

CHAPTER 4: FIRST CLIENT CONFIGURATION (FINAL STEPS)

Phase 3 of 4

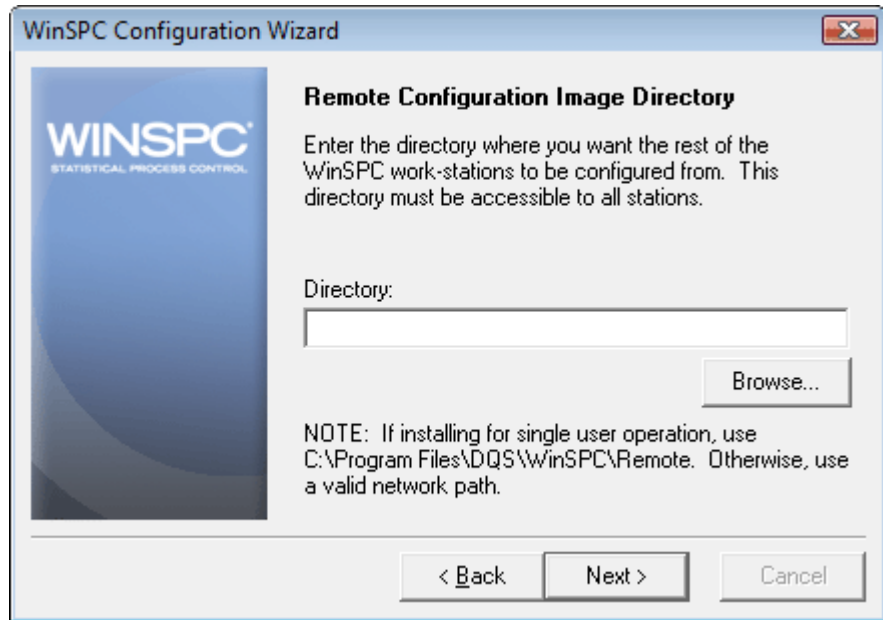


This chapter consists of the final steps to configure the first WinSPC client. With a few exceptions, these steps are common to all database servers. They begin midway through the WinSPC Configuration Wizard, just after the creation of the WinSPC schema.

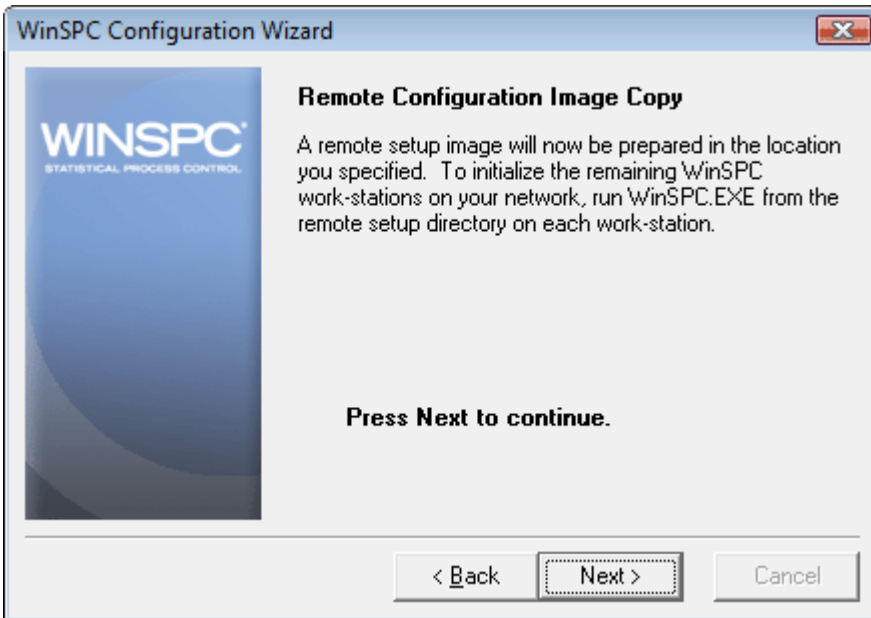
1. On the **Remote Configuration Image Directory** prompt:
 - a. Click the **Browse** button.
 - b. In the **Directory Selection** prompt that opens, navigate to and select the shared folder created for WinSPC, then click **OK**. This closes the **Directory Selection** prompt and populates the **Directory** text box of the **Remote Configuration Image Directory** prompt with the network path to the shared folder.

NOTE: The shared folder referred to here is the one created in step 1 of the **First Client Install and Configuration (Initial Steps)** section you completed prior to coming to this chapter.

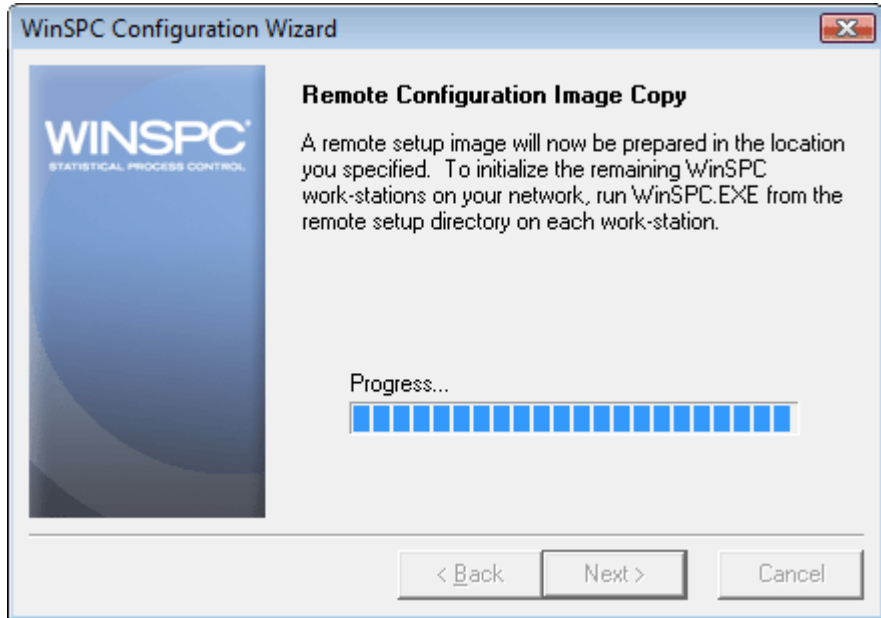
c. Click **Next**.



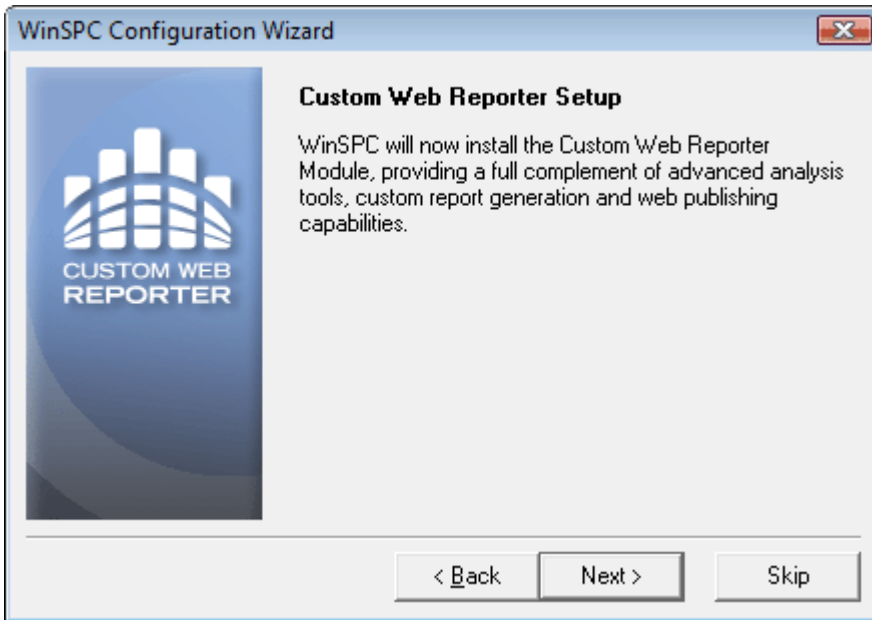
2. On the **Remote Configuration Image Copy** prompt, click **Next**. This copies the necessary files to the shared folder.



3. Allow the prompt's progress bar to complete.

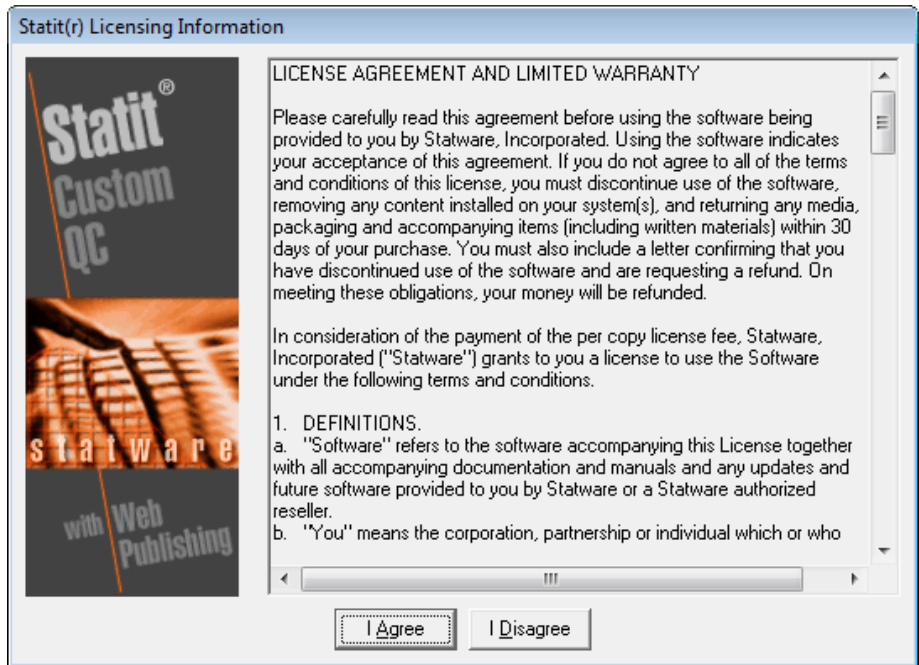


4. On the **Custom Web Reporter Setup** prompt, if you want to install Custom Web Reporter on the first client or you think you may, at some point, want to install and run it on an additional client, click **Next**. Otherwise, click **Skip** and advance to step 8 of this procedure.

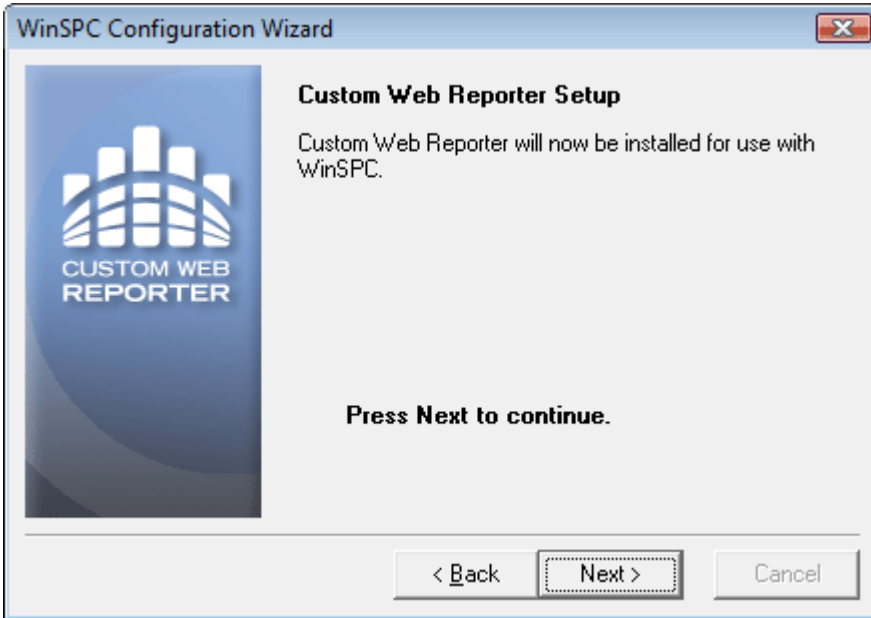


Custom Web Reporter is an advanced analytics and web reporting package that can be used with WinSPC. A free 60-day license for it comes with the purchase of WinSPC. For information on purchasing permanent licenses, contact DataNet Quality Systems at 1-866-4WINSPEC.

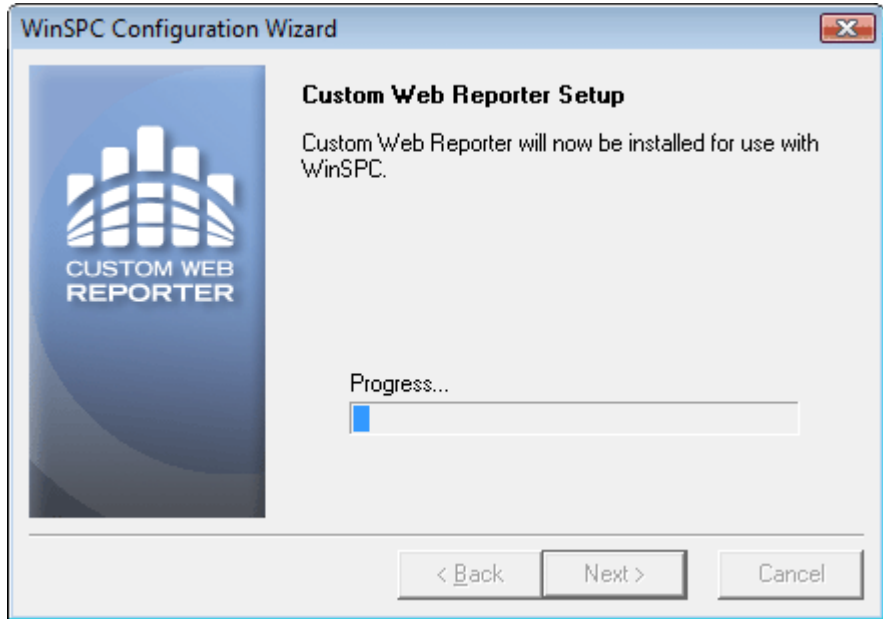
5. On the **Statit(r) Licensing Information** prompt, read the license agreement and, if you agree, click **I Agree**.



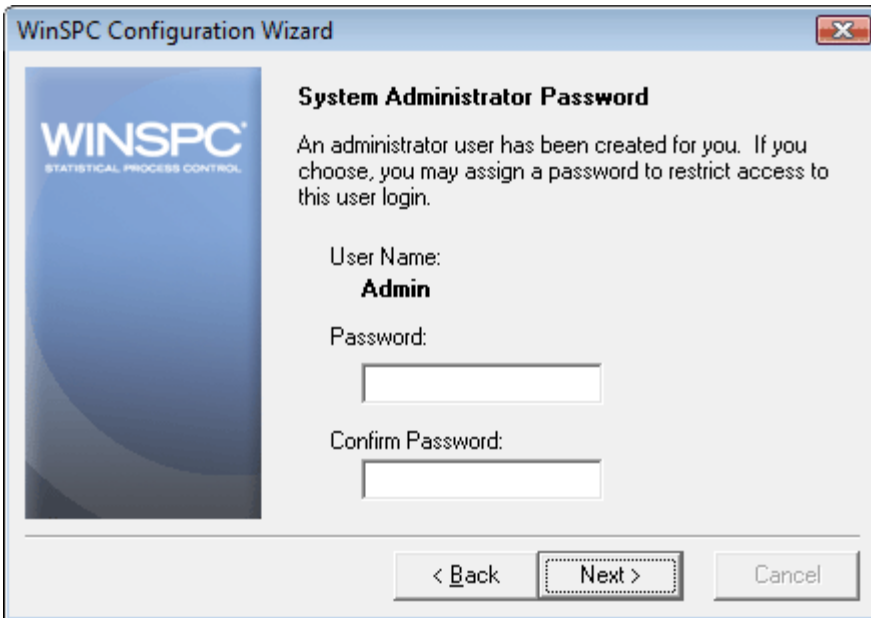
6. On this **Custom Web Reporter Setup** prompt, click **Next**. This installs Custom Web Reporter on the first client and copies the installation files for Custom Web Reporter to the shared folder.



7. Allow the prompt's progress bar to complete.

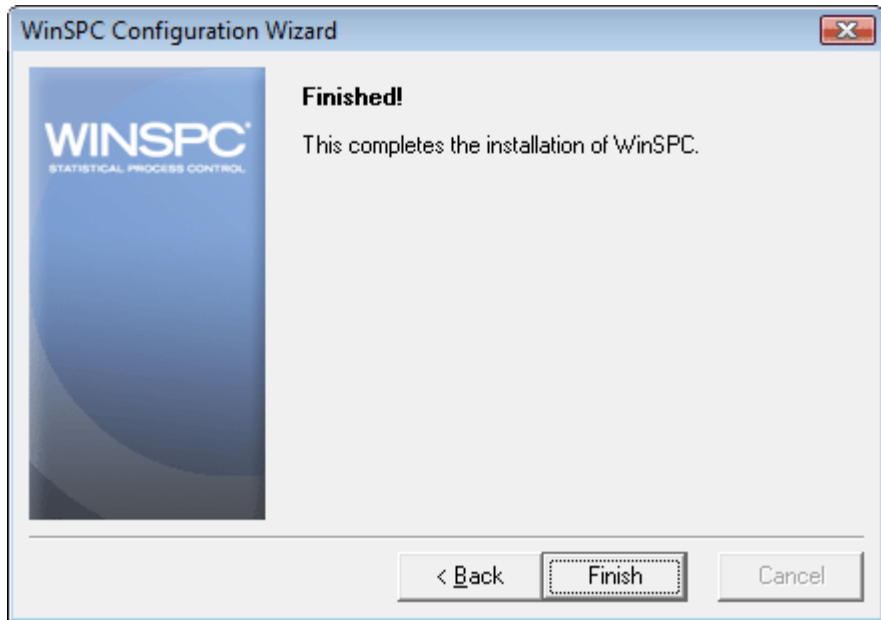


8. On the **System Administrator Password** prompt, create and enter a sufficiently strong, case-sensitive password for the WinSPC **Admin** user in both the **Password** and **Confirm Password** text boxes. Then, click **Next**.

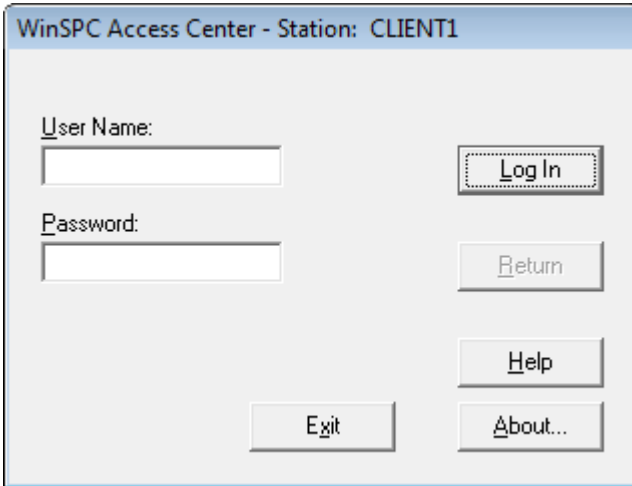


NOTE: This **Admin** user is the only user with complete WinSPC permissions.

9. On the **Finished** prompt that appears, click **Finish**. This causes the WinSPC Configuration Wizard to close.



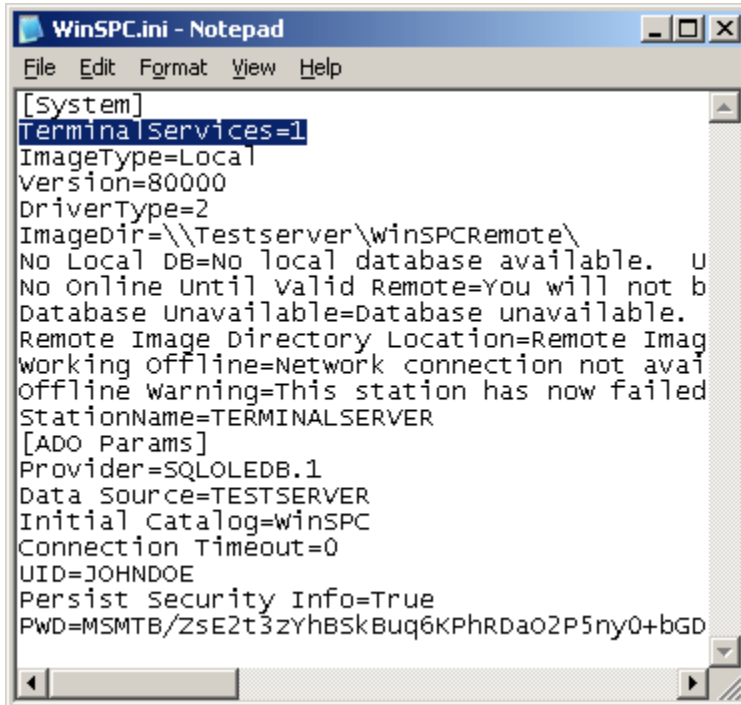
It also causes the **WinSPC Access Center** to open.



10. In the **Access Center**, click the **Exit** button.
11. If your first client is the Microsoft Terminal Services server:
 - a. Navigate to and double-click **winspc.ini**. The default installation location for this file is **C:\Program Files > DQS > WinSPC > winspc.ini**.
 - b. Insert a blank line directly below this file's **[System]** heading.



- c. On that line, enter **TerminalServices=1**. This informs WinSPC at startup that the environment is a Microsoft Terminal Services environment.



```
WinSPC.ini - Notepad
File Edit Format View Help
[System]
TerminalServices=1
ImageType=Local
Version=80000
DriverType=2
ImageDir=\\Testserver\winSPCRemote\
No Local DB=NO local database available. U
No Online Until Valid Remote=You will not b
Database Unavailable=Database unavailable.
Remote Image Directory Location=Remote Imag
working Offline=Network connection not avai
Offline warning=This station has now failed
StationName=TERMINALSERVER
[ADO Params]
Provider=SQLOLEDB.1
Data Source=TESTSERVER
Initial Catalog=winSPC
Connection Timeout=0
UID=JOHNDOE
Persist Security Info=True
PWD=MSMTB/ZsE2t3zyhBskBuq6KPhRDaO2P5ny0+bGD
```

- d. Indicate whether WinSPC is to name stations based on the connecting *station* or the connecting *user*. This is done by specifying either *station* mode or *user* mode as the mode in which WinSPC is to run. In station mode, WinSPC uses the ID of the station RDPing into the Microsoft Terminal Services server as the station name. In user mode, WinSPC uses the ID of the user (i.e. the login ID with which a user logs into Windows on the Microsoft Terminal Services server via a RDP session) as the station name. For example, say *Bob* logs into a

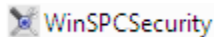
station named *Finishing* and then, via RDP, logs into the Microsoft Terminal Services server as *Sally*. With station mode enabled, WinSPC will use *Finishing* as the station name. With user mode enabled, WinSPC will use *Sally* as the station name. Station mode is the default mode in which WinSPC runs and, consequently, nothing needs to be done to enable it. To enable user mode, directly beneath the **TerminalServices=1** line entered in the preceding step, enter a **UserMode=1** line.

NOTE: To disable user mode in the future and have WinSPC run in station mode, delete the **UserMode=1** line or change it to **UserMode=0**.

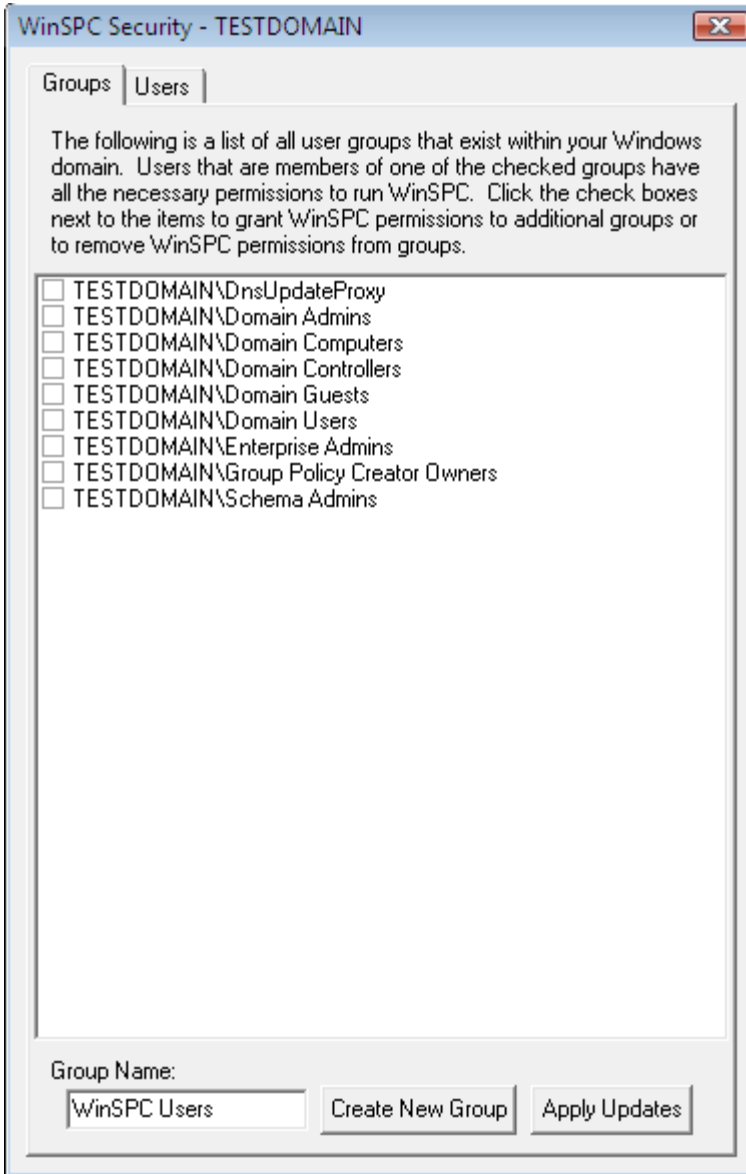
- e. If you enabled user mode in the preceding step, configure Microsoft Terminal Services to disallow simultaneous sessions from a user. To do this:
 - i. On the Microsoft Terminal Services server, launch **Terminal Services Configuration**, the default path for which in Windows Server 2003 is **Start > All Programs > Administrative Tools > Terminal Services Configuration**.
 - ii. In the left pane of the **Terminal Services Configuration** prompt, single-click the **Server Settings** folder.
 - iii. In the right pane, right-click **Restrict each user to one session** and, from the shortcut menu that appears, click **Yes**.
 - iv. Close **Terminal Services Configuration**.
- f. Save and close **winspc.ini**.

NOTE: The remaining steps of this procedure concern granting permissions for users of WinSPC on the first client. The permissions granted by these steps are the minimum permissions required to run WinSPC. These steps assume your WinSPC implementation employs network domains. If your implementation employs workgroups, instead of completing these steps, complete **Appendix C: WinSPC Security for Workgroups**.

12. If you are logged into Windows on the first WinSPC client machine as anything other than a domain administrator, log out and log back in as a domain administrator. (This is necessary because you will be creating a user group for WinSPC users on the domain controller.)
13. Navigate to the shared folder created for WinSPC and, within this folder's **Utility** folder, double-click **WinSPCSecurity**.



14. In the **WinSPC Security** utility that launches, toward the bottom of the **Groups** tab, at **Group Name**, enter a name for a user group that will consist of WinSPC users. (The recommended name for this user group is **WinSPC Users**.)

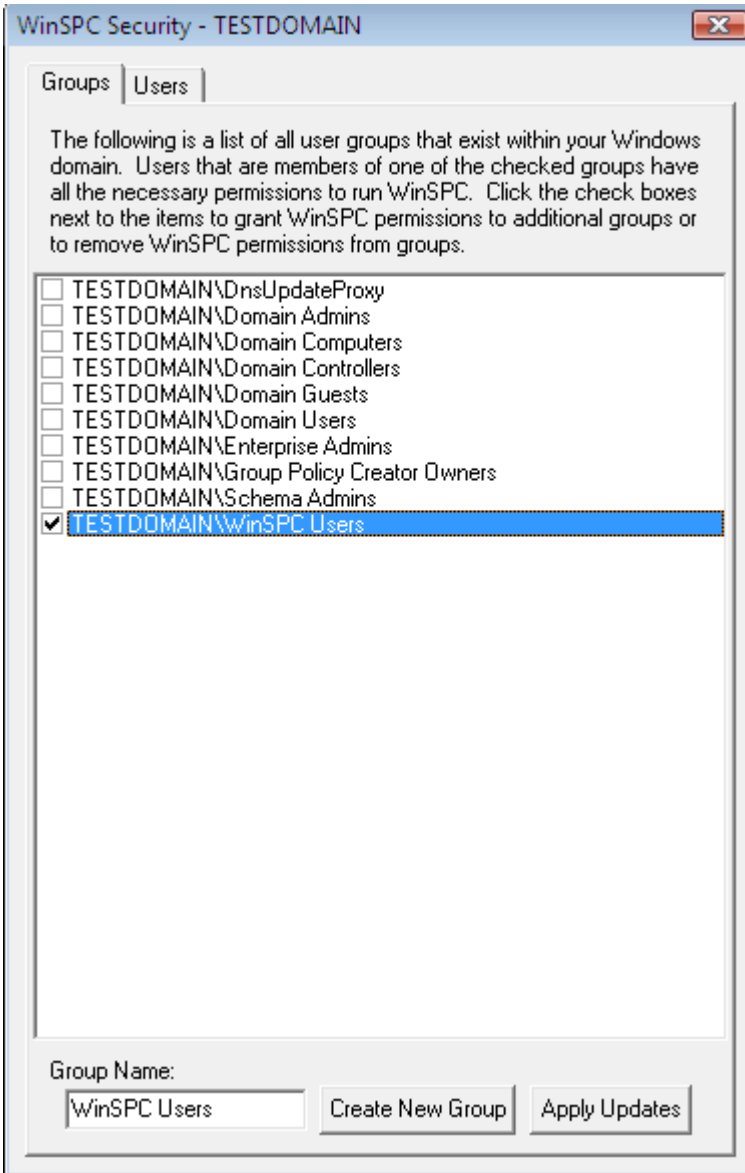


15. Click the **Create New Group** button.

A rectangular button with a light gray background and a thin black border. The text "Create New Group" is centered on the button in a black, sans-serif font.

This causes the user group to be added to the list of groups above and creates the user group on the domain controller.

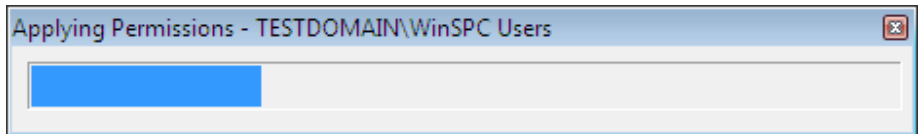
16. Check the check box for the new user group.



17. Click the **Apply Updates** button.



This causes an **Applying Permissions** progress bar to appear.



18. When the **Applying Permissions** progress bar closes, close the **Security Utility** by clicking the X in the upper right corner.
19. Close the window showing the contents of the **Utility** folder.
20. Grant the user group for WinSPC users at least the minimum required permissions to the shared folder. For file servers running Windows Server 2003, the minimum *Share* permissions are **Change** and the minimum *Security* permissions are **Modify**. For file servers running Windows Server 2008, the minimum *Share* permissions are **Contributor** and the minimum *Security* permissions are **Modify**. For a procedure on granting permissions, see **Appendix D: Granting Share and Security Permissions**.
21. On your domain controller, add all local administrators who will install and configure WinSPC on additional clients and all domain users who, on any client, will be running WinSPC to the newly created user group. For a procedure on adding users to a user group, see **Appendix E: Adding Users to a User Group**.

THIS COMPLETES PHASE 3 OF 4.

**GO TO CHAPTER 5: ADDITIONAL CLIENT
INSTALLS AND CONFIGURATIONS AND
COMPLETE PHASE 4.**

IF YOU DON'T NEED TO INSTALL AND
CONFIGURE WINSPC ON ADDITIONAL CLIENTS,
THIS CONCLUDES THE ENTIRETY OF THE SETUP
REQUIRED TO BEGIN USING WINSPC. FOR
INSTRUCTIONS ON LAUNCHING AND LOGGING
INTO WINSPC, SEE **APPENDIX F: LAUNCHING
AND LOGGING INTO WINSPC.**

CHAPTER 5: ADDITIONAL CLIENT INSTALLS AND CONFIGURATIONS

Phase 4 of 4

If your WinSPC implementation utilizes the conventional client/server architecture exclusively, meaning it does not employ Microsoft Terminal Services at all, complete the procedure in this chapter on each additional client station that is to run WinSPC.

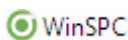
If your implementation utilizes Microsoft Terminal Services exclusively, meaning all client stations other than the Microsoft Terminal Services server connect to the WinSPC database through the Microsoft Terminal Services server, it is not necessary to complete the procedure in this chapter.



Terminal Services

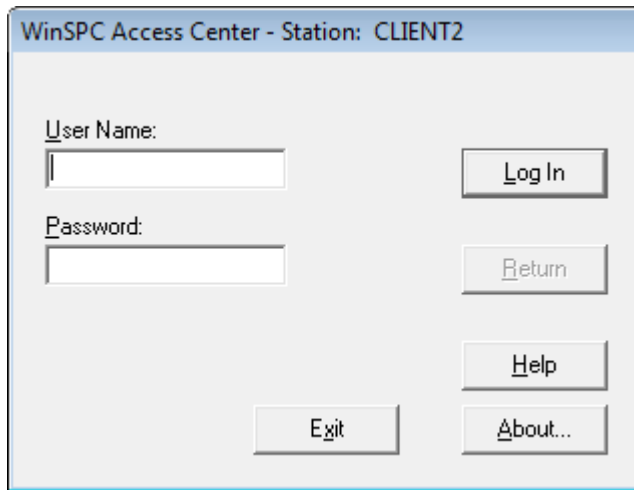
If your implementation employs a mix of the conventional client/server architecture and a Microsoft Terminal Services architecture, complete this chapter for any client station that will be connecting to the WinSPC database directly rather than through the Microsoft Terminal Services server. This includes completing the procedure on the Microsoft Terminal Services server itself if WinSPC was not installed on this server as part of the first client configuration.

1. Log into Windows on the additional client machine as a local administrator.
2. Using Windows Explorer, navigate to the shared folder created for WinSPC and double-click **WinSPC.exe**.

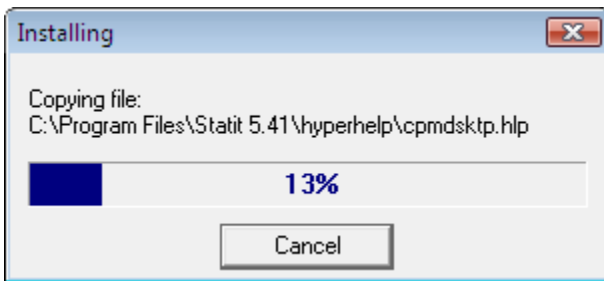


3. Complete the **WinSPC Installation Wizard**. For detailed information on this prompt, see **Appendix A: The WinSPC Installation Wizard**.

4. Launch and exit WinSPC once while logged into Windows as a local administrator. To do this:
 - a. Click **WinSPC**. The default path for this is **Start > All Programs > WinSPC**.
 - b. In the **WinSPC Access Center** that appears, click the **Exit** button.



5. If you don't want to install Custom Web Reporter on the additional client, go to step 6. If you want to install Custom Web Reporter:
 - a. Navigate to the shared folder for WinSPC.
 - b. In the shared folder's **STATIT** subfolder, double-click **CustomQC541OEM.exe**. When the **Installing** progress bar that appears closes, the Custom Web Reporter installation is complete.



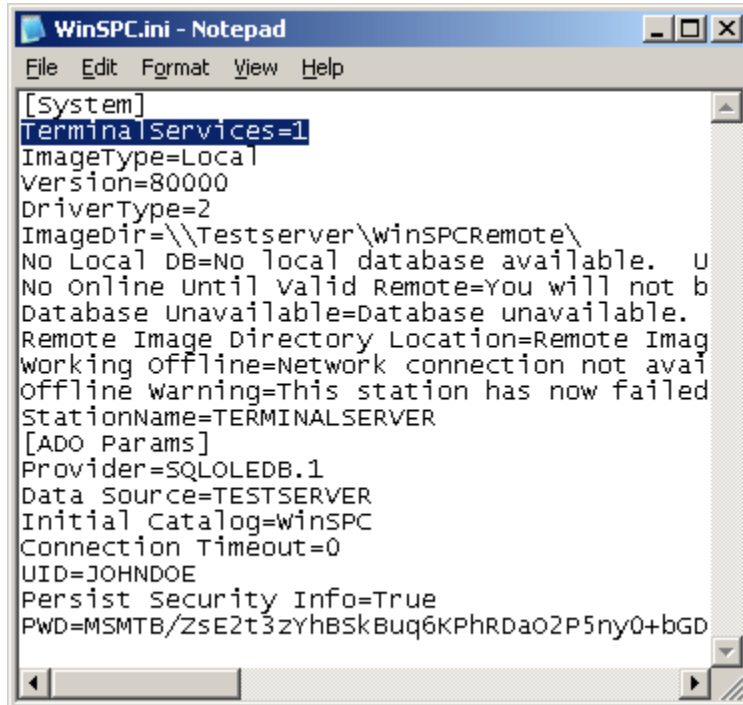
NOTE: For the **STATIT** subfolder to exist in the shared folder, Custom Web Reporter must have been installed during the first client configuration. If this was not the case and you want to install Custom Web Reporter on the additional client, contact DataNet Quality System's Product Support Help Desk at (248)-447-0140.

6. If the additional client is your Microsoft Terminal Services server:
 - a. Navigate to and double-click **winspc.ini**. The default installation location for this file is **C:\Program Files > DQS > WinSPC > winspc.ini**.
 - b. Insert a blank line directly below this file's **[System]** heading.



Terminal Services

- c. On that line, enter **TerminalServices=1**. This informs WinSPC at startup that the environment is a Terminal Services environment.



```
WinSPC.ini - Notepad
File Edit Format View Help
[System]
TerminalServices=1
ImageType=Local
Version=80000
DriverType=2
ImageDir=\\Testserver\winSPCRemote\
No Local DB=No local database available. U
No Online Until Valid Remote=You will not b
Database Unavailable=Database unavailable.
Remote Image Directory Location=Remote Imag
working Offline=Network connection not avai
Offline warning=This station has now failed
StationName=TERMINALSERVER
[ADO Params]
Provider=SQLOLEDB.1
Data Source=TESTSERVER
Initial Catalog=winSPC
Connection Timeout=0
UID=JOHNDOE
Persist Security Info=True
PWD=MSMTB/ZsE2t3zyhBskBuq6KPhRDaO2P5ny0+bGD
```

- d. Indicate whether WinSPC is to name stations based on the connecting *station* or the connecting *user*. This is done by specifying either *station* mode or *user* mode as the mode in which WinSPC is to run. In station mode, WinSPC uses the ID of the station RDPing into the Microsoft Terminal Services server as the station name. In user mode, WinSPC uses the ID of the user (i.e. the login ID with which a user logs into Windows on the Microsoft Terminal Services server via a RDP session) as the station name. For example, say *Bob* logs into a

station named *Finishing* and then, via RDP, logs into the Microsoft Terminal Services server as *Sally*. With station mode enabled, WinSPC will use *Finishing* as the station name. With user mode enabled, WinSPC will use *Sally* as the station name. Station mode is the default mode in which WinSPC runs and, consequently, nothing needs to be done to enable it. To enable user mode, directly beneath the **TerminalServices=1** line entered in the preceding step, enter a **UserMode=1** line.

NOTE: To disable user mode in the future and have WinSPC run in station mode, delete the **UserMode=1** line or change this line to **UserMode=0**.

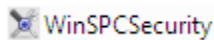
- e. If you enabled user mode in the preceding step, configure Microsoft Terminal Services to disallow simultaneous sessions from a user. To do this:
 - i. On the Microsoft Terminal Services server, launch **Terminal Services Configuration**, the default path for which in Windows Server 2003 is **Start > All Programs > Administrative Tools > Terminal Services Configuration**.
 - ii. In the left pane of the **Terminal Services Configuration** prompt, single-click the **Server Settings** folder.
 - iii. In the right pane, right-click **Restrict each user to one session** and, from the shortcut menu that appears, click **Yes**.
 - iv. Close **Terminal Services Configuration**.
- f. Save and close **winspc.ini**.

7. Complete **Appendix B: Installing NJWin for an Asian Language** if the additional client machine will need to run WinSPC in an Asian language.

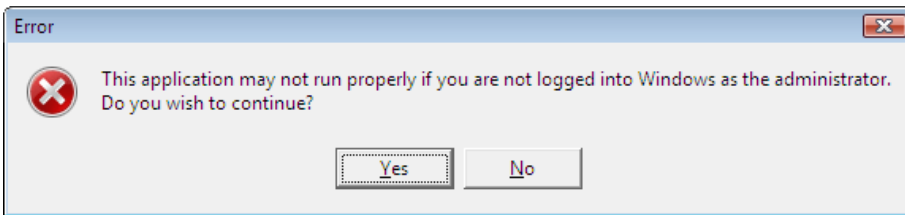
NOTE: The remaining steps of this procedure concern granting permissions for WinSPC users on the additional client machine. The permissions granted are the minimum permissions required to run WinSPC. These steps assume your WinSPC implementation employs network domains. If your implementation employs workgroups, instead of completing these steps, complete **Appendix C: WinSPC Security for Workgroups**.

(These steps and Appendix C can be disregarded if every user of the WinSPC client has local administrator privileges on the client machine. In such a case, close the WinSPC shared folder and see **Appendix F: Launching and Logging Into WinSPC** to begin using WinSPC.)

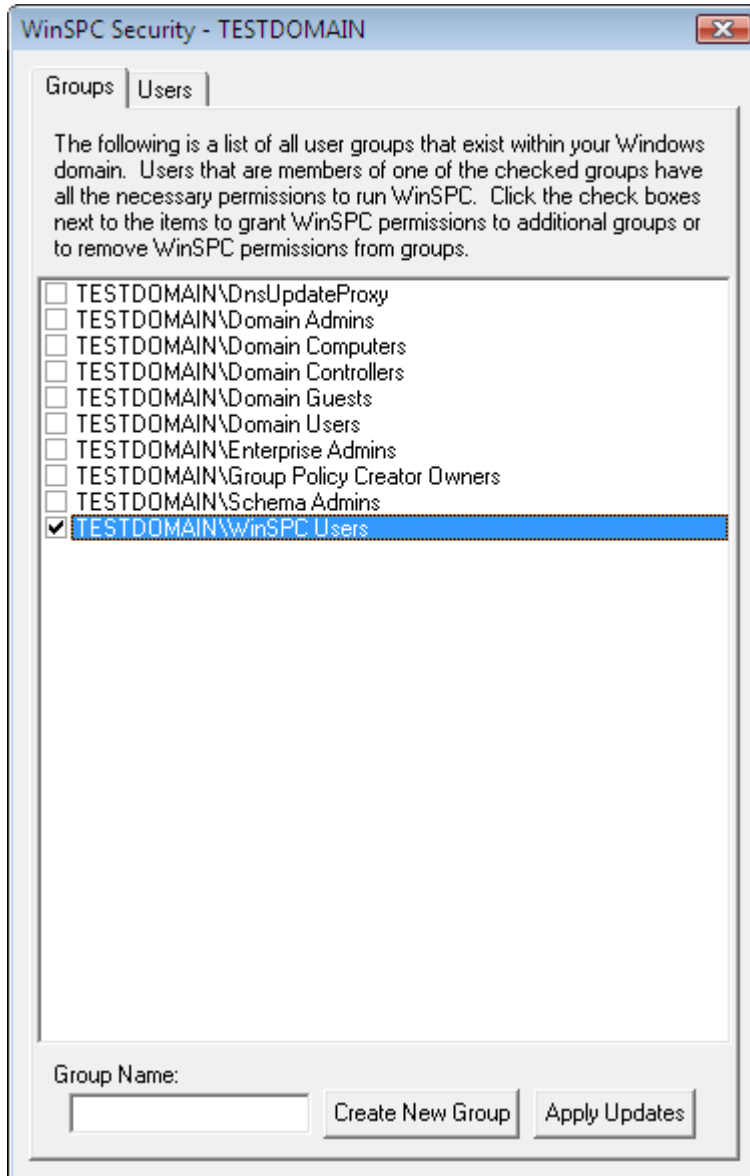
8. Within the WinSPC shared folder, double-click **Utility > WinSPCSecurity**.



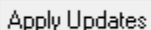
9. In the message indicating the application (i.e. security utility) may not run properly if you are not logged into Windows as an administrator, click **Yes**. (The administrator referred to in this message is a domain administrator. Being logged in as a local administrator, however, is sufficient for the remainder of this procedure.)



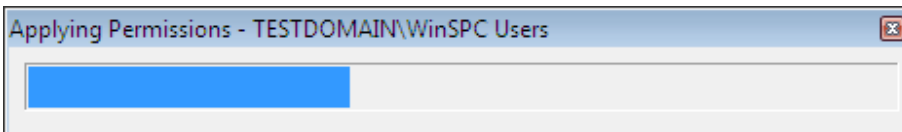
10. In the **WinSPC Security** utility, on the **Groups** tab, check the check box that corresponds to the name of the user group created for WinSPC users. This name was entered in step 14 of **Chapter 4: First Client Configuration (Final Steps)**.



11. Click the **Apply Updates** button.

A rectangular button with a light gray background and a thin border, containing the text "Apply Updates" in a standard sans-serif font.

This causes an **Applying Permissions** progress bar to appear.



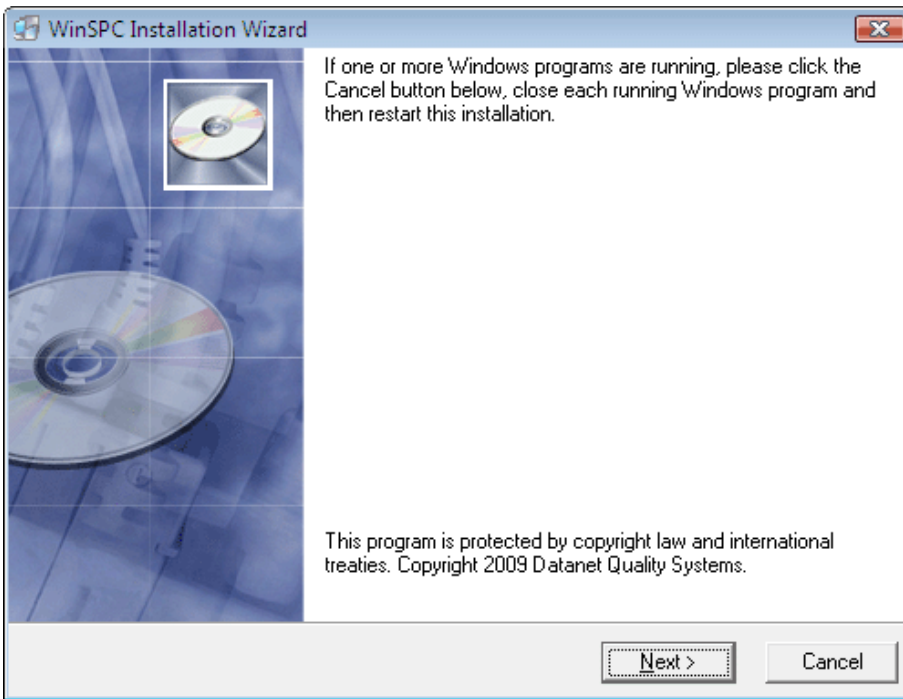
12. When the **Applying Permissions** progress bar closes, close the **Security Utility** by clicking the X in its upper right corner.
13. Close the window showing the contents of the **Utility** folder.
14. If the additional client station will be used by any users who were not added to the user group for WinSPC users created during the first client configuration process, go to the domain controller and add them. (For a procedure on adding users to a user group, see **Appendix E: Adding Users to a User Group.**)

THIS COMPLETES PHASE 4 OF 4.
NO FURTHER SETUP IS REQUIRED TO BEGIN
USING WINSPC. FOR INSTRUCTIONS ON
LAUNCHING AND LOGGING INTO WINSPC, SEE
**APPENDIX F: LAUNCHING AND LOGGING INTO
WINSPC.**

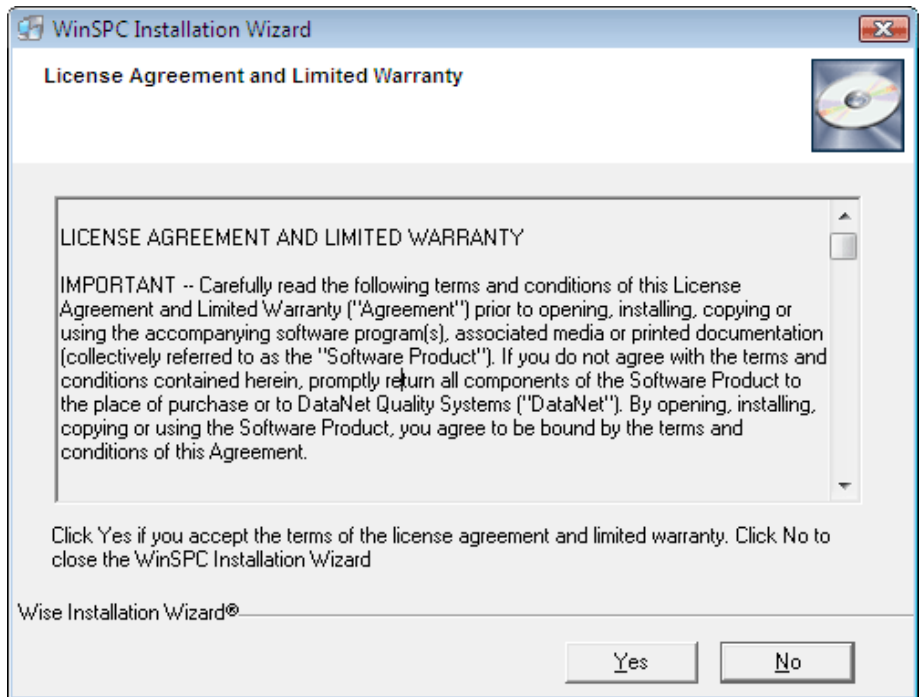
APPENDIX A: THE WINSPC INSTALLATION WIZARD

This appendix details the prompts encountered in the WinSPC Installation Wizard.

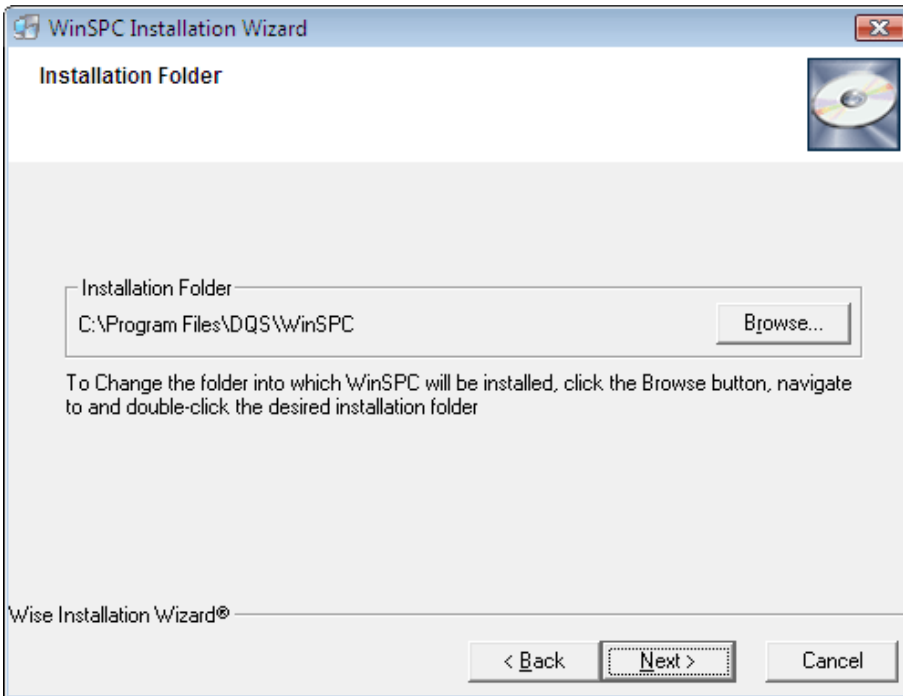
1. On the first prompt of the WinSPC Installation Wizard, click **Next**.



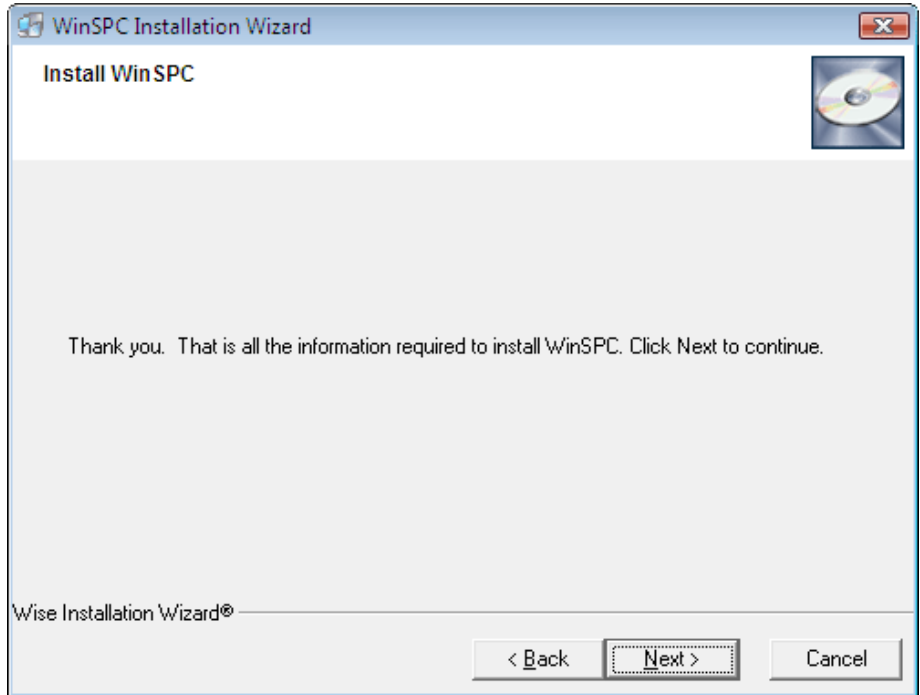
2. On the **License Agreement and Limited Warranty** prompt, read the agreement and, if you accept its terms, click **Yes**.



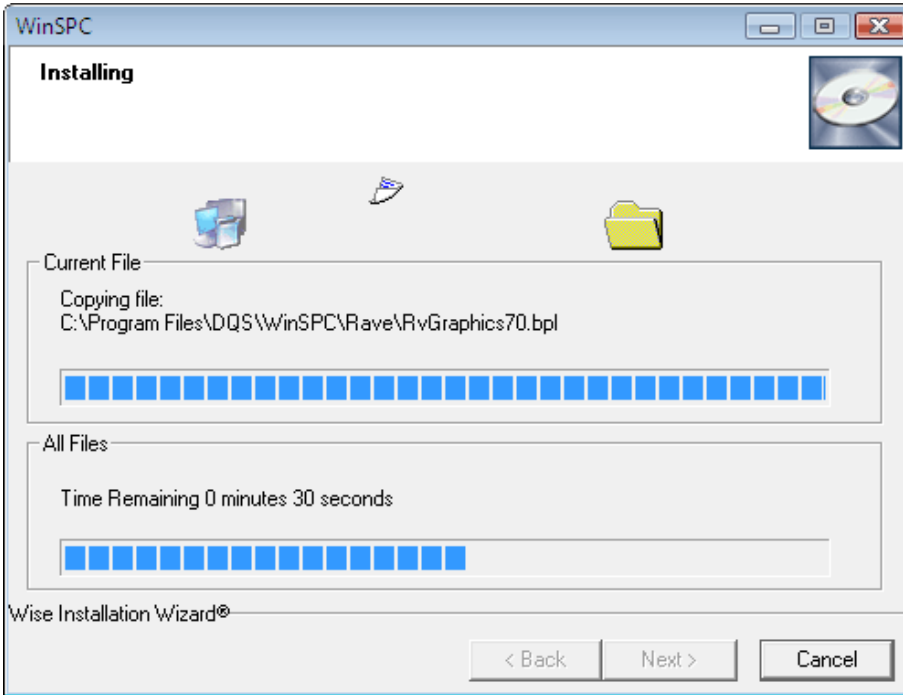
3. On the **Installation Folder** prompt, accept the default installation folder and click **Next** or click **Browse**, select a different folder and click **Next**. (The installation folder is the folder into which WinSPC will be installed.)



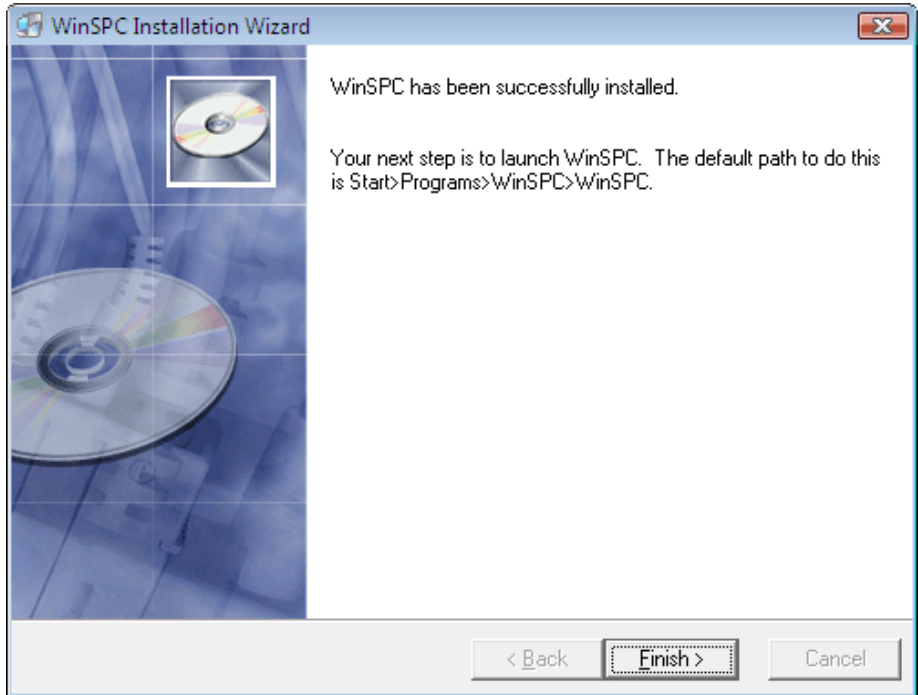
4. On the **Install WinSPC** prompt, click **Next**.



5. Allow the installation to occur.



6. When the installation completes, click **Finish**.



THIS COMPLETES APPENDIX A.
RETURN TO AND COMPLETE THE FIRST CLIENT
INSTALL AND CONFIGURATION (INITIAL
STEPS) SECTION OF THE CHAPTER YOU WERE ON
BEFORE COMING TO THIS APPENDIX.

APPENDIX B: INSTALLING NJWIN FOR AN ASIAN LANGUAGE

Complete this appendix if you want to run WinSPC or the WinSPC Configuration Wizard in an Asian language on a client machine that is running a Romance-language version of Microsoft Windows.

As you may know, Microsoft Windows is available in several sets of languages. One of these sets is the Romance set, a set which includes the English language. When some non-Romance language translations of WinSPC, Asian language translations particularly, are run on a Romance-language version of Windows, the characters of the WinSPC translation are improperly displayed. Installing and running NJWin remedies this for an Asian language. (The East Asian language set of Microsoft Windows may not require NJWin.)

For your convenience, a trial version of NJWin is included on the WinSPC CD. If you install and like this trial version, you can purchase a license at www.njstar.com.

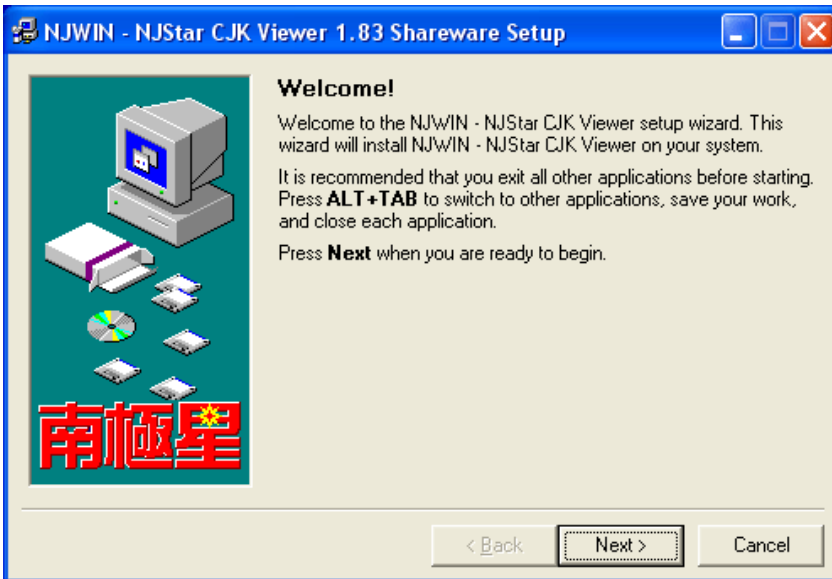
1. Copy the NJWin executable to the WinSPC shared folder. To do this:
 - a. If you downloaded your WinSPC Version 8 installation materials from www.winspc.com:
 - i. Right-click the downloaded zip file and select **WinZIP > Open with WinZIP**.
 - ii. In the **WinZIP** window that appears, single-click the **Name** heading at the top of the **Name** column. This lists the files in the column in descending alphabetical order.
 - iii. Scroll down the **Name** column until you locate the **njwin183.exe** file.

- iv. Right-click this file and select **Copy**.
- v. Navigate to the shared folder for WinSPC.
- vi. Right-click this folder and select **Paste**.
- b. If you received your WinSPC Version 8.0 materials on CD:
 - i. With the CD in your CD-ROM drive, right-click **Computer** (Vista) or **My Computer** (XP) and click **Explore**.
 - ii. In the window that appears, right-click your CD-ROM drive and click **Explore**.
 - iii. Double-click the **Extra Files** folder.
 - iv. Double-click the **NJWin** folder.
 - v. Right-click **njwin183.exe** and select copy.
 - vi. Navigate to the WinSPC shared folder.
 - vii. Right-click the shared folder and select **Paste**.

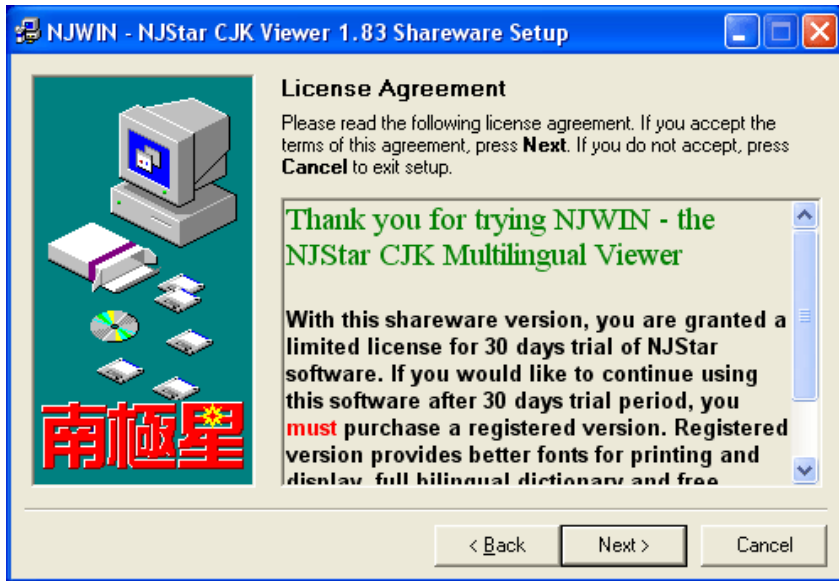
NOTE: Completing this step (i.e. 1a or 1b), which eliminates the need to bring the WinSPC CD to each client machine on which NJWin is to be installed, only needs to be done once.

2. From a client machine on which you want to install NJWin, navigate to the shared folder and double-click **njwin183.exe**.

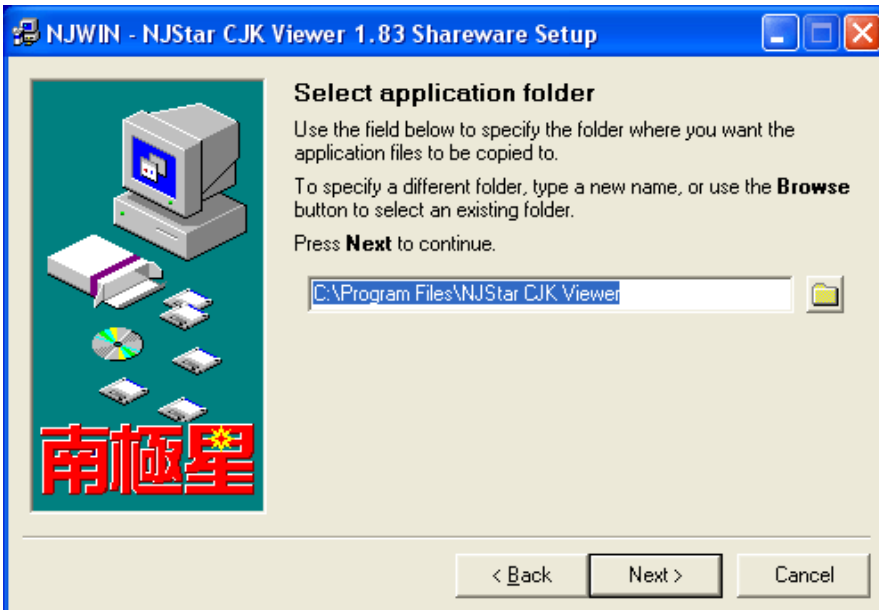
3. When the **Welcome** prompt of the NJWin setup wizard appears, click **Next**.



4. Read the **License Agreement** and, if you agree, click **Next**.



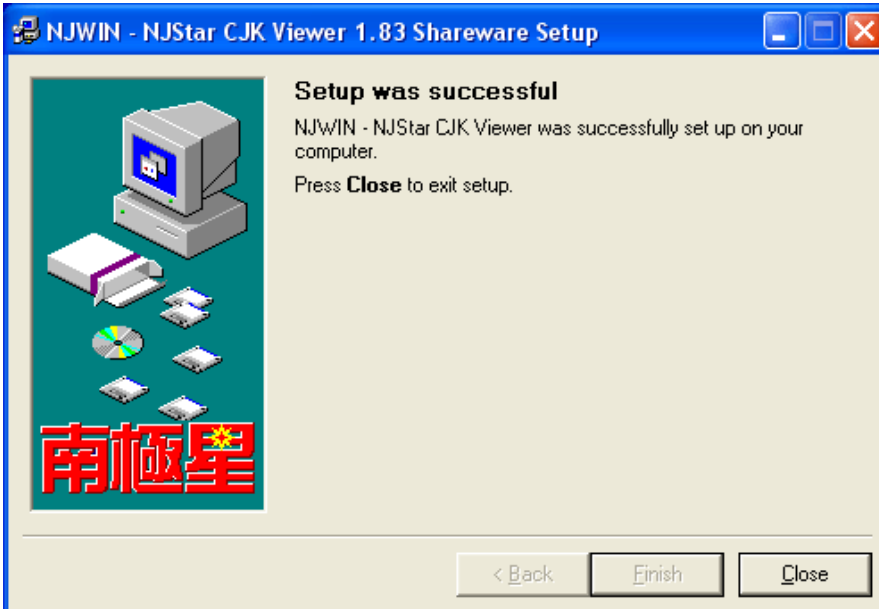
5. Specify the folder to which you want the NJWin application files copied and click **Next**.



6. When the **Ready** prompt appears, click **Next**. This installs NJWin.



7. On the **Setup was successful** prompt, click **Close**.



8. On the **NJWIN – NJStar CJK Viewer** prompt that is displayed, select the Asian language in which you intend to run WinSPC (or the WinSPC Configuration Wizard) and click **OK**. This closes the viewer and launches NJWin. (See the **First Client Install and Configuration (Initial Steps)** section of the chapter specific to your database server for information on the WinSPC Configuration Wizard.)



9. Close the **NJWin – NJStar CJK Viewer** folder.
10. Close the WinSPC shared folder.

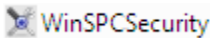
NOTE: NJWin must be running when WinSPC is running for WinSPC to properly display Asian language characters. If the operating system of the client machine on which NJWin is installed is Windows XP Pro and the default storage location was accepted during the installation procedure, NJWin can be launched by clicking **Start > All Programs > NJWIN – NJStar CJK Viewer > NJWIN – NJStar CJK Viewer**. Alternatively, WinSPC can be set up to launch NJWin automatically. This is accomplished through the **Use NJWin** check box, a check box found on the setup prompts for system settings, station groups, stations, user groups and users. See WinSPC's Help for more information on this check box. (If you're ever in doubt as to whether or not NJWin is running, press <**Ctrl+Alt+Del**> and check the **Applications** tab of the **Task Manager**.)

THIS COMPLETES APPENDIX B.
RETURN TO AND COMPLETE THE PROCEDURE
YOU WERE WORKING ON PRIOR TO COMING TO
THIS APPENDIX.

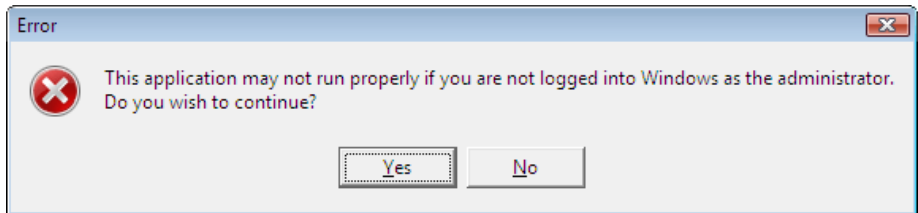
APPENDIX C: WINSPC SECURITY FOR WORKGROUPS

This appendix details the procedure for granting permissions to WinSPC users on a client machine that is part of a workgroup as opposed to a domain. The permissions granted are the minimum permissions required to run WinSPC. It is to be completed after step 11 of **Chapter 4: First Client Configuration (Final Steps)** or after step 7 of **Chapter 5: Additional Client Installs and Configurations**.

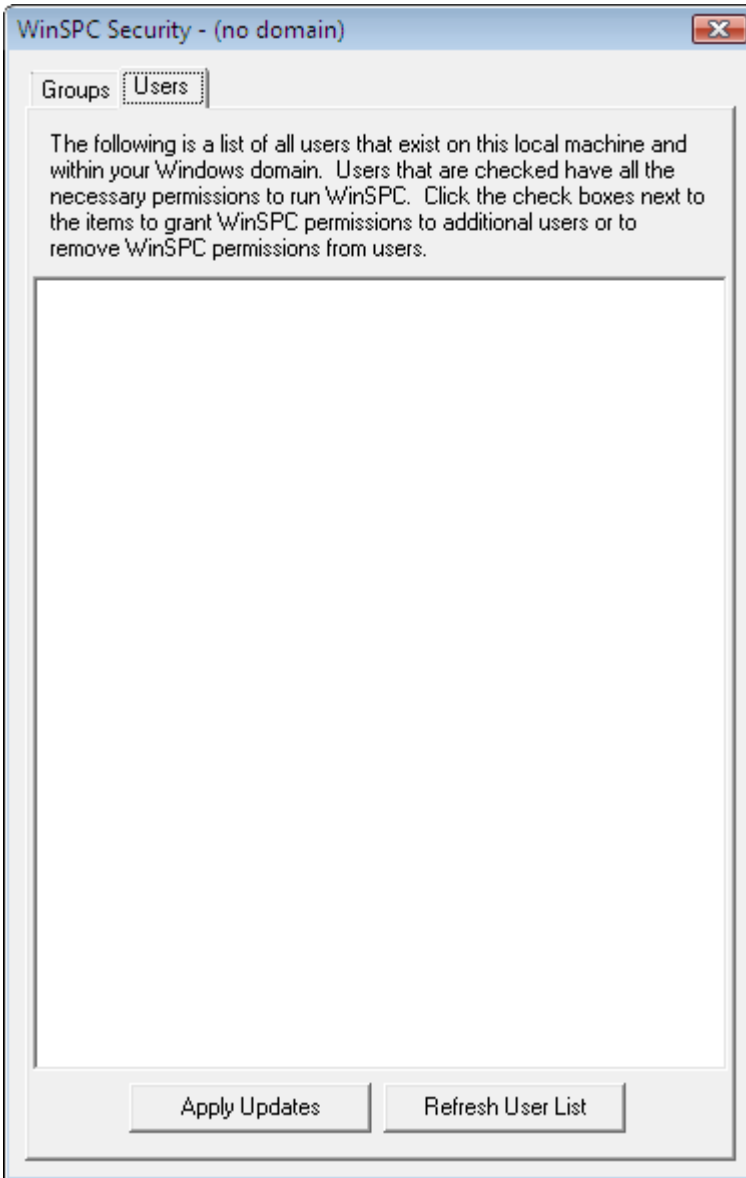
1. Navigate to the WinSPC shared folder created during the installation and configuration of the first WinSPC client.
2. Double-click the **Utility** folder.
3. Within the **Utility** folder, double-click the **WinSPCSecurity** icon.



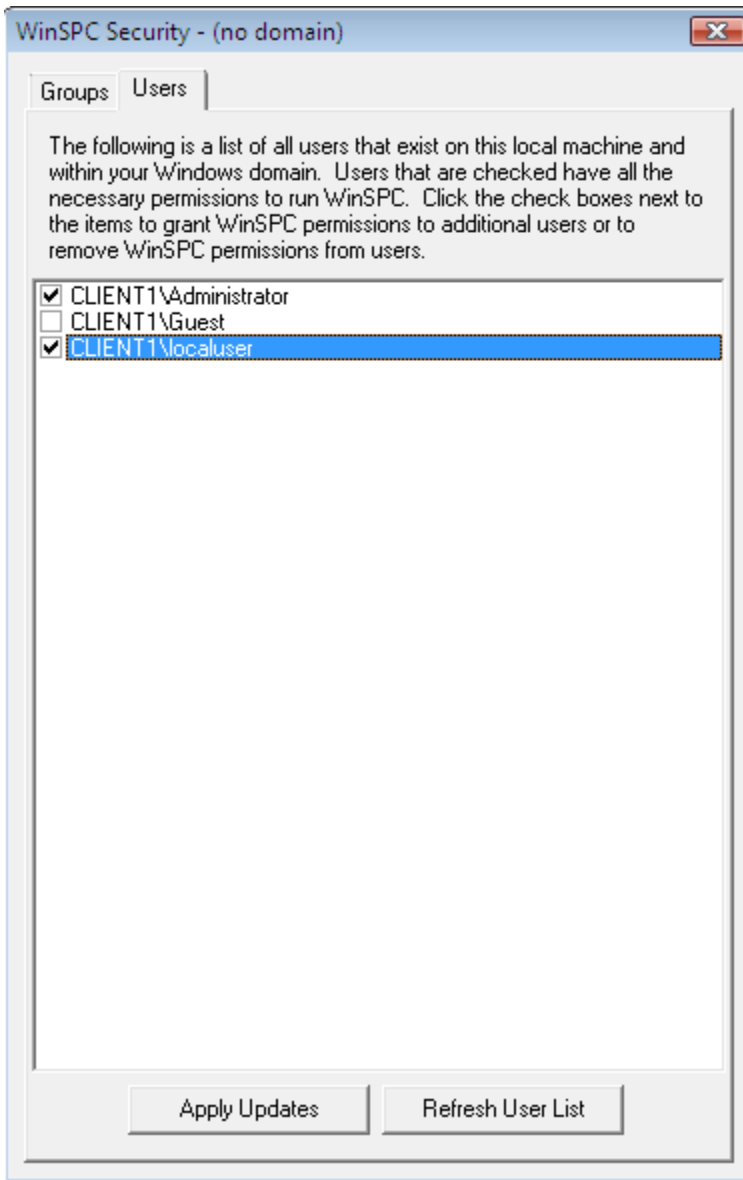
4. If an error message indicating the application (i.e. security utility) may not run properly if you are not logged into Windows as an administrator appears, click **Yes**. (The administrator referred to in this message is a domain administrator. Being logged in as a local administrator, however, is sufficient for this procedure.)



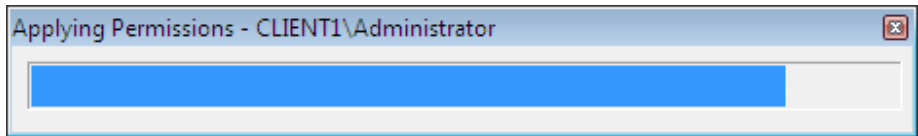
5. In the **WinSPC Security** utility that appears, on the **Users** tab, click the **Refresh User List** button.



6. Check the check box for each user you want to be able to run WinSPC on the client station.



7. Click the **Apply Updates** button. This causes a progress bar to appear.



8. Once permissions are applied to all selected users, exit the **WinSPC Security** utility by clicking the **X** in the upper right corner. (Later, if you wish to remove previously applied permissions, simply uncheck the appropriate check box and click the **Apply Updates** button.)
9. Close the **Utility** folder.

THIS COMPLETES APPENDIX C.
IF YOU NEED TO INSTALL AND CONFIGURE
ADDITIONAL CLIENTS, GO TO **CHAPTER 5:**
ADDITIONAL CLIENT INSTALLS AND
CONFIGURATIONS AND COMPLETE PHASE 4.

IF YOU DON'T NEED TO INSTALL AND
CONFIGURE ADDITIONAL CLIENTS, THIS
CONCLUDES THE ENTIRETY OF THE SETUP
REQUIRED TO BEGIN USING WINSPC. FOR
INSTRUCTIONS ON LAUNCHING AND LOGGING
INTO WINSPC, SEE **APPENDIX F: LAUNCHING**
AND LOGGING INTO WINSPC.

APPENDIX D: GRANTING SHARE AND SECURITY PERMISSIONS

This appendix details one method of granting a user or user group *Share* permissions to a folder and one method of granting a user or user group *Security* permissions to a file or folder. These methods are applicable to both Windows Server 2003 and Windows XP Pro.

TO GRANT SHARE PERMISSIONS TO A FOLDER

1. Log into Windows on the computer containing the folder to which you want to grant *Share* permissions as an administrator with sufficient privileges to grant permissions.
2. Using **Windows Explorer**, navigate to and right-click the file or folder to which you want to grant *Share* permissions and, from the shortcut menu, select **Sharing and Security**.
3. On the **Sharing** tab of the <Folder Name> **Properties** prompt that is displayed, select the **Share this Folder** option, if it isn't already selected.
4. Click the **Permissions** button.
5. In the **Permissions for <Folder Name>** prompt, click the **Add** button.
6. In the **Select Users, Computers, or Groups** prompt that appears, enter the first letter of the user or user group to whom you want to grant *Share* permissions and click **OK**.
7. If a **Multiple Names Found** prompt is displayed, locate and double-click the user or user group.

8. With the user or user group selected in the **Permissions for <Folder Name>** prompt, in the bottom pane, single-click the **Allow** check box for the desired permissions.
9. Click **OK**.
10. If you also want to grant *Security* permissions for the folder, click the **Security** tab in the **<Folder Name> Properties** prompt and, beginning at step 4 below, complete the **To Grant Security Permissions to a Folder or File** procedure.
11. If you don't want to grant *Security* permissions for the folder, click **OK** in the **<Folder Name> Properties** prompt.

TO GRANT SECURITY PERMISSIONS TO A FOLDER OR FILE

1. Log into Windows on the computer containing the folder or file to which you want to grant *Security* permissions as an administrator with sufficient privileges to grant permissions.
2. Using **Windows Explorer**, navigate to and right-click the folder or file to which you want to grant *Security* permissions and, from the shortcut menu, select **Properties**.
3. In the **<Folder Name> Properties** prompt that is displayed, click the **Security** tab.
4. On the **Security** tab, click the **Add** button.
5. In the **Select Users, Computers, or Groups** prompt that appears, enter the first letter of the user or user group to whom you want to grant *Security* permissions and click **OK**.
6. If a **Multiple Names Found** prompt is displayed, locate and double-click the user or user group.

7. With the user or user group selected in the top pane of the **Security** tab, single-click the **Allow** check box for the desired permissions in the bottom pane.
8. If it is a folder to which you've just granted *Security* permissions and you need to propagate those permissions to the folder's child folders and files:
 - a. On the **Security** tab, with the user or user group still selected, click the **Advanced** button.
 - b. Check the check box labeled **Replace permission entries on all child objects with entries shown here that apply to child objects**.
 - c. Click **Apply**.
 - d. In the **Security** warning that is displayed, click **Yes**. This initiates the propagation of permissions to child folders and files.
 - e. When the propagation completes, click the **Advanced Security Settings for <Folder Name>** prompt's **OK** button.
9. Click **OK** in the **<Folder Name> Properties** prompt.

THIS COMPLETES APPENDIX D.
RETURN TO AND COMPLETE THE PROCEDURE
YOU WERE WORKING ON PRIOR TO COMING TO
THIS APPENDIX.

APPENDIX E: ADDING USERS TO A USER GROUP

This appendix details one method of adding users to a user group on a domain controller. It applies to Windows Server 2003.

1. On your domain controller, click **Start > Administrative Tools > Active Directory Users and Computers**.
2. In the left pane of the **Active Directory Users and Computers** prompt that appears, expand the node for the domain used for your WinSPC implementation.
3. Single-click **Users**.
4. In the right pane:
 - a. Multi-select all users who will run WinSPC and all local administrators who will install and configure WinSPC.
 - b. Right-click any of the selected users and, from the shortcut menu, select **Add to a group**.
5. In the **Select Group** prompt, enter the first letter of the user group to which you want to add the users and click **OK**.
6. If a **Multiple Names Found** prompt appears, double-click the user group.
7. In the message indicating that the Add to Group operation was successfully completed, click **OK**.
8. Close the **Active Directory Users and Computers** prompt.

THIS COMPLETES APPENDIX E.

**GO TO CHAPTER 5: ADDITIONAL CLIENT
INSTALLS AND CONFIGURATIONS AND
COMPLETE PHASE 4.**

**IF YOU DON'T NEED TO INSTALL AND
CONFIGURE ADDITIONAL CLIENTS, THIS
CONCLUDES THE ENTIRETY OF THE SETUP
REQUIRED TO BEGIN USING WINSPC. FOR
INSTRUCTIONS ON LAUNCHING AND LOGGING
INTO WINSPC, SEE APPENDIX F: LAUNCHING
AND LOGGING INTO WINSPC.**

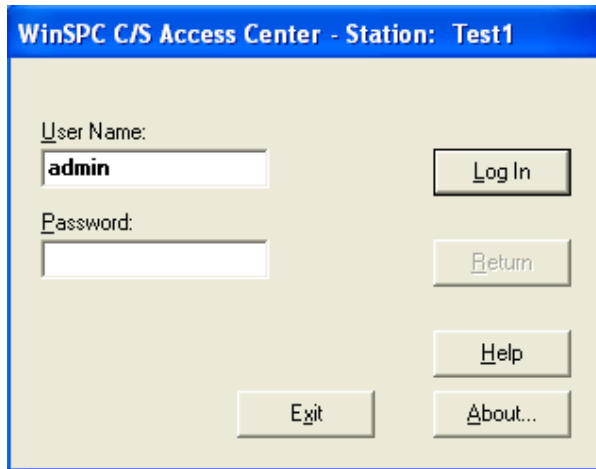
APPENDIX F: LAUNCHING AND LOGGING INTO WINSPC

If you are launching WinSPC in a Microsoft Terminal Services environment, connect to the Microsoft Terminal Services server using Remote Desktop before beginning this procedure.



1. From the client machine, run **WinSPC**. The default path for doing this is **Start > All Programs > WinSPC > WinSPC**.
2. In the **WinSPC Access Center** that is displayed:
 - a. At **User Name**, enter a valid user name
NOTE: If this is the first time WinSPC is being logged into, the only valid user name is **Admin**.
 - b. At **Password**, enter the password associated with the user name entered above.
NOTE: The password for the Admin user is the password created in step 8 of **Chapter 4: First Client Configuration (Final Steps)**.

- c. Click **Log In**.



- d. If a message appears indicating that you have one or more unread messages, click **OK**.

NOTE: For help on using WinSPC, see WinSPC's context sensitive Help system. This Help system can be accessed from within WinSPC by clicking a **Help** button wherever one appears, pressing the **F1** key or selecting **Contents** from the **Help** menu.

THIS COMPLETES APPENDIX F.

APPENDIX G: HARDWARE REQUIREMENTS AND RECOMMENDED PLATFORMS

This appendix is provided to assist companies in the selection of hardware, operating systems and a database server for their WinSPC implementation. It consists of two sections, one for each of the architectures that can be adopted for WinSPC. These architectures are:

- Conventional Client/Server Architecture
- Microsoft Terminal Services Architecture

NOTE: The absence of an operating system or database server from any of the below lists means that the operating system or database server is not tested in DataNet Quality Systems' lab. It does not mean that the operating system or database server is known to be incompatible with WinSPC or that DataNet Quality Systems will not do its best to support implementations using the operating system or database server.

CONVENTIONAL CLIENT/SERVER ARCHITECTURE

Minimum Hardware Requirements

Client Stations	Database Server
<ul style="list-style-type: none"> ▪ PC with Pentium II Class processor - 500MHz ▪ 512 MB RAM for a typical Windows Vista Business station* ▪ 256 MB RAM for a typical Windows XP Pro* ▪ 200MB available local hard disk space (beyond operating system recommended space) ▪ VGA monitor and video adapter ▪ Keyboard ▪ Mouse or other pointing device ▪ CD-ROM or DVD-ROM drive (if installing WinSPC from the WinSPC CD as opposed to the web download) <p>* By <i>typical</i> is meant a default operating system install and no other heavy RAM-consuming applications running.</p>	<ul style="list-style-type: none"> ▪ Server Class processor – 800MHz ▪ 512MB available RAM ▪ 10GB available local hard disk space (beyond operating system recommended space) ▪ VGA monitor and video adapter ▪ Keyboard ▪ Mouse or other pointing device ▪ CD-ROM or DVD-ROM drive <p>NOTE: For a method to estimate database storage needs based on data specific to your company, see the <i>How to Estimate Database Storage Requirements</i> section at the end of this appendix.</p>

Recommended Platforms

Server Operating System	Database Server	Client Operating System
Windows Server 2008	Microsoft SQL Server 2008	Windows Vista Business
Windows Server 2008	Microsoft SQL Server 2008	Windows XP Pro
Windows Server 2008	Microsoft SQL Server 2008 Express	Windows Vista Business
Windows Server 2008	Microsoft SQL Server 2008 Express	Windows XP Pro
Windows Server 2008	Microsoft SQL Server 2005	Windows Vista Business
Windows Server 2008	Microsoft SQL Server 2005	Windows XP Pro
Windows Server 2008	Microsoft SQL Server 2005 Express	Windows Vista Business
Windows Server 2008	Microsoft SQL Server 2005 Express	Windows XP Pro
Windows Server 2008	Oracle Database 11g	Windows Vista Business
Windows Server 2008	Oracle Database 11g	Windows XP Pro
Windows Server 2008	Oracle Database 10g	Windows Vista Business
Windows Server 2008	Oracle Database 10g	Windows XP Pro
Windows Server 2003	Microsoft SQL Server 2008	Windows Vista Business
Windows Server 2003	Microsoft SQL Server 2008	Windows XP Pro
Windows Server 2003	Microsoft SQL Server 2008 Express	Windows Vista Business
Windows Server 2003	Microsoft SQL Server 2008 Express	Windows XP Pro

Windows Server 2003	Microsoft SQL Server 2005	Windows Vista Business
Windows Server 2003	Microsoft SQL Server 2005	Windows XP Pro
Windows Server 2003	Microsoft SQL Server 2005 Express	Windows Vista Business
Windows Server 2003	Microsoft SQL Server 2005 Express	Windows XP Pro
Windows Server 2003	Oracle Database 11g	Windows Vista Business
Windows Server 2003	Oracle Database 11g	Windows XP Pro
Windows Server 2003	Oracle Database 10g	Windows Vista Business
Windows Server 2003	Oracle Database 10g	Windows XP Pro



Terminal Services

TERMINAL SERVICES ARCHITECTURE

Minimum Hardware Requirements

Same minimum client station and database server requirements as for *Conventional Client/Server Architectures*.

For the *Microsoft Terminal Services Server* itself, the primary limiting factor is RAM. Approximately 25MB of RAM are consumed by each *Remote Desktop* launch of WinSPC. If a *Microsoft Terminal Services* server has 2GB of available RAM, then, it could potentially host 80 simultaneous user sessions. Additional sessions could be hosted by increasing RAM or using server clusters.

Beyond RAM, the minimum hardware requirements for the *Microsoft Terminal Services* server are:

- Server Class processor – 800MHz

- 200MB available local hard disk space (beyond operating system recommended space)
- VGA monitor and video adapter
- Keyboard
- Mouse or other pointing device
- CD-ROM or DVD-ROM drive

NOTE: One matter that bears mention but doesn't qualify as a minimum requirement is the *Microsoft Terminal Services* server's number of CPU cores. It is possible that, even with sufficient RAM, server performance could degrade unacceptably once a certain volume of simultaneous sessions is reached. It isn't practical to state what this volume is because it depends in part on how active those sessions are. A reasonable starting allowance would be 10 sessions for each CPU core.

Recommended Platforms

The operating system for the *Microsoft Terminal Services* server *must* be *Windows Server 2003 (with Service Pack 1)* or newer. Other than this, the recommended platforms for a *Microsoft Terminal Services* architecture are the same as those listed above for a conventional client/server architecture.

HOW TO ESTIMATE DATABASE STORAGE REQUIREMENTS

This estimation procedure applies equally to conventional client/server and Microsoft Terminal Services architectures.

1. Multiply the average subgroup size by 37. (E.g. $5 \times 37 = 185$.)
2. Multiply the average percentage of subgroups in violation by 66. (E.g. $2\% \times 66 = 1.32$.)
3. Multiply the average number of tag values per subgroup by 17.4. (E.g. $4 \times 17.4 = 69.6$.)
4. Add the products from the above three steps. (E.g. $185 + 1.32 + 69.6 = 255.92$.)
5. Add 141.88 to the sum from step 4. (E.g. $141.88 + 255.92 = 397.80$.)
6. Multiply the sum from step 5 by the average number of subgroups collected per day. (E.g. $397.80 \times 10,000 = 3,978,000$.)
7. Divide the product from step 6 by 1,000,000. (E.g. $3,978,000 / 1,000,000 = 3.978$.)

The answer you get from step 7 is the number of MB of disk space you can expect to be consumed per day of WinSPC operation.

THIS COMPLETES APPENDIX G.

APPENDIX H: SPECIAL CONSIDERATIONS REGARDING VISTA BUSINESS

By taking three considerations into account, WinSPC can be deployed and fully used on client stations running Microsoft's Vista Business operating system. The first consideration concerns User Account Control and affects all Vista Business stations. The second consideration concerns archives and, similarly, applies to all Vista Business stations. The third consideration concerns database server connections and affects only implementations consisting of a Microsoft SQL Server 2005 database server on a Windows Server 2003.

CONSIDERATION REGARDING USER ACCOUNT CONTROL (UAC)

UAC is a security control in Vista Business. When enabled, it precludes WinSPC users from:

- Upgrading WinSPC.
- Exporting text files of data or specifications.
- Installing Custom Web Reporter.
- Collecting data from an OPC server when that server is running on a computer different from the WinSPC client using it to collect data *and* the WinSPC client has the **Use Data Advise** option enabled.

To be able to perform these functions, with the exception of the final one, UAC must be disabled. For the final function, while disabling UAC certainly permits it to be performed, it is also possible that your network administrator, depending on your network security, may be able to configure DCOM settings on your client and OPC server so that it can be performed with UAC enabled.

The procedure for disabling UAC is:

1. Log into the Vista Business client station as a local administrator.
2. From the Control Panel click **User Accounts**.
3. In the **User Accounts** prompt that appears, click **Turn User Account Control on or off**.
4. If a **Windows needs your permission to continue** message appears, click the **Continue** button.
5. In the **Turn User Account Control On or Off** prompt, uncheck the **Use User Account Control (UAC) to help protect your computer** check box.
6. Click **OK**.
7. When the message indicating your computer must be restarted, click **Restart Now**.

CONSIDERATION REGARDING MICROSOFT SQL SERVER 2005 DATABASE SERVER ON WINDOWS SERVER 2003

When a WinSPC client running Vista Business connects to a Microsoft SQL Server 2005 database server and that database server is running on a Windows Server 2003 operating system, WinSPC may on occasion display the following error:

General SQL error. Possible network error. Write to SQL Server failed. General network error. Check your documentation.

Modifying a particular registry key resolves this issue.

WARNING: Please consult your network administrator prior to completing the below procedure. Modifying the registry key referred to disables one of Windows Server 2003's security measures.

1. Log into Windows Server 2003 as an administrator.
2. Using the Regedit utility, Navigate to the following registry key:
HKEY_LOCAL_MACHINE\SYSTEM\CurrentControlSet\Services\Tcpip\Parameters.
3. To this key, add the following DWORD value:
 - Name: **SynAttackProtect**
 - Value: **0**
4. Restart the Windows Server 2003 machine.

THIS COMPLETES APPENDIX H.