

# Intelligent Test Framework Server Setup Guide



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**Agilent Technologies**



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# ITF Server Setup Guide

The ITF Server Setup Guide is meant for IT departments and customers who wish to set up their own ITF Server.

This guide walks you through the stages of setting up a basic ITF Server. It includes instructions for installing and configuring software components associated with Agilent Intelligent Test Framework (ITF) servers.

- [Minimum System Requirements, 4](#)
- [Setting up the ITF Server, 6](#)

### CAUTION



It is essential that you follow the instructions exactly, in the order given.

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## Minimum System Requirements

The Agilent ITF Server requires the following minimum system requirements.

### NOTE

These requirements are provided as a guideline. The latest list of system requirement is available on <http://prdpre.home.agilent.com/USeng/nav/-24447.0/pc.html>. You need to be a valid Agilent Support Contract owner in order to login.

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### Hardware Requirements

The following are the hardware requirements for the ITF Server:

- Intel® Pentium® 4 processor 530 supporting HT Technology or higher; Dual Xeon® processors recommended
- 2 Gigabyte (GB) of RAM; 4 GB recommended

- All versions of the ITF software edition require the following storage capacity:
  - 2 GB for typical installation.
  - 70-700 GB for data storage depending on production data and data retention time.
  - There should be two separate hard disk drives, one for systems software and application software, and the other for data storage.

Please use the formula provided in the section, [Estimating size of required data storage](#), to determine the approximate data storage capacity required.

- 48x IDE CD-ROM or better.
- 17" SVGA or higher resolution monitor (19" or 21" recommended)
- 10/100-BasedT Network Interface Card
- Tape Drive for data backup (recommended)
- Uninterruptible Power Supply (recommended)

### Estimating size of required data storage

$$\begin{aligned} \text{Minimum Storage Space Required} &= [\text{Minimum disk space for Operating System} + \text{SQL Server} + \\ &\text{Intelligent Test Framework Software}] + [\text{Paging Memory}] + \\ &[\text{File Data} + \text{SQL DB}] \\ &= 3.5 \text{ GB} + 1 \text{ GB} + [\text{File Data} + \text{SQL database}] \end{aligned}$$

$$\begin{aligned} \text{Where } [\text{File Data} + \text{SQL DB}] &= \{ [\text{Number of Testers}] * [\text{Number of board/day}] \\ &* [\% \text{ of defective board/day}] * \\ &[\text{Average Defective Image/board}] * \\ &[\text{File Size} + \text{SQL database record}] \} \\ &* [\text{Data Retention Period in days}] * [\text{Safety Factor}] \end{aligned}$$

And

$$\begin{aligned} [\text{File Size}] &= 2 \text{ to } 3 \text{ MB (SSM image) or } 500 \text{ KB (JPEG image)} \\ &\text{for AOI-SJ/SP and } 1 \text{ MB (JPEG image) for AXI} \end{aligned}$$

$$[\text{SQL DB record}] = 2 \text{ KB}$$

$$[\text{Safety Factor}] = 1.05$$

### Software Requirements

The following are the software requirements for the ITF Server:

- Microsoft® Windows® Server 2003 Operating System (English/Chinese)
- Microsoft® SQL Server 2000 Standard Edition with Service Pack 3a (English/Chinese)
- Microsoft® Windows® Services for UNIX 3.5 (if you are using Agilent ICT UX test systems)

#### NOTE

If you intend to view ART in Chinese, you need to install the Chinese version of both Windows Server 2003 and SQL Server 2000.

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## Setting up the ITF Server

The setup process involves the following stages:

- 1 **Installing Microsoft Windows Server 2003**
- 2 **Installing the Display Adapter Driver (If Necessary)**
- 3 **Installing the Network Adapter Driver (If Necessary)**
- 4 **Checking Drive Assignments**
- 5 **Installing Microsoft SQL Server 2000 Standard Edition**
- 6 **Installing Microsoft SQL Server 2000 Service Pack 3a**
- 7 **Configuring the SQL Server**
- 8 **Installing Microsoft Services for UNIX 3.5**
- 9 **Changing the Local Security Policy for Microsoft Windows Server 2003**
- 10 **Installing ITF Software Components**

You will need the following items in order to complete the setup process:

- CD: Microsoft® Windows Server 2003 Standard Edition
- CD: Microsoft® SQL Server 2000 Standard Edition
- CD or Installation media: Microsoft® SQL Server 2000 Standard Edition SP3a
- CD or installation media: Microsoft® Windows Services for UNIX 3.5
- CD: Agilent ITF Software Solutions 3.1 Applications
- CD: Software and/or Utilities for Network Adapter and Graphics Adapter (if applicable).

## Installing Microsoft Windows Server 2003

- 1 Insert the Windows® Server 2003 CD into the CD-ROM drive on the ITF Server.
- 2 When the **Welcome to Microsoft Windows Server 2003** dialog box appears, click **Exit** and restart the computer.
- 3 When you see the words **Press any key to boot from CD**, press any key within 5 seconds to start the installation from the CD.  
  
Wait several minutes.
- 4 At the Windows Server 2003 Standard Edition **Setup** dialog box, press **Enter** to set up Windows® Server 2003.
- 5 Read the end-user license agreement. To agree to the license and continue the installation, press **F8**.
- 6 Press **Esc** to install a fresh copy of Windows® Server 2003 without repairing.
- 7 Partition the disk space as follows:
  - a Press **C** to create a partition in the unpartitioned space.
  - b Leave the partition at the maximum size for the desired partition size, and press **Enter**.
  - c Repeat steps a and b, and leave the second partition at the maximum partition size.
- 8 Press **Enter** to set up Windows Server 2003 on the selected drive (make sure the drive c: is selected).
- 9 Press **Enter** to format the partition using the NTFS file system.
- 10 Select **Format the partition using the NTFS file system**, and press **Enter**.  
  
Wait several minutes while the setup process copies files to the Windows Installation folder.
- 11 After the copying of the files is completed, press any key to restart the system or wait 15 seconds before the server automatically restarts.  
  
During the restart, do not press any key.
- 12 In the Windows Server 2003 **Setup Server Welcome** dialog box, click **Next >**.  
  
Wait several minutes while the system installs devices.
- 13 In the **Regional and Language Options** dialog box, click **Next >**.
- 14 In the **Personalize Your System** dialog box, enter the user details. If user details are not available, use the following details:  
  
User Name: **Agilent ITF Server**  
Company Name: **Agilent Preferred Customer**
- 15 Click **Next >**.

**16** In the **Your Product Key** dialog box, enter the 25-character product key located on the Windows® Server 2003 CD package, then click **Next >**.

**17** In the **Licensing Modes** dialog box, select **Per seat**. Each connection must have its own Client Access License.

Click **Next >**.

**18** In the **Computer Name and Administrator password** dialog box, enter the name assigned based on your company policy for the computer name and leave the Administrator password blank. If the computer name is not available, use **AITF**.

Click **Next >**.

**19** In the **Date and Time Settings** dialog box, enter the date, time and time zone, and then click **Next >**. Set the time zone to your time zone.


**20** In the Windows Server 2003 **Network Settings** dialog box, select **Typical Settings**, and click **Next >**. This keeps the default settings.

Wait several minutes while the system continues the installation process.

**21** When the installation is complete, remove the CD from the CD-ROM drive and click **Finish**.

The system will restart automatically.

**22** Press **Ctrl+Alt+Del** and log on to Windows Server 2003 with administrative privileges.

**23** In the Windows Server 2003 **Manage Your Server** dialog box, select **Don't display this page again on logon**. Close the dialog box by clicking the button  at the top right-corner of the window.

The installation for Microsoft Windows Server 2003 Server is complete.



## Installing the Display Adapter Driver (If Necessary)

If Windows® Server 2003 does not detect the display adapter driver automatically, you need to install it manually.

### NOTE

Depending on your hardware specifications, you may not need to install the drivers for the display adapter and/or the network adapter.

## Installing the Network Adapter Driver (If Necessary)

If Windows® Server 2003 does not detect the network adapter driver automatically, you need to install it manually.

### NOTE

You may see an **Update Driver** warning. If so, click **Continue Anyway** to continue.

## Checking Drive Assignments

1 Use Windows® Explorer to check that the following drives are present and assigned the proper drive letter on the ITF Server:

- **Local Disk (C:)**
- **Data (E:)**

### NOTE

Sometimes, the CD-ROM drive is assigned to the drive letter “E.” If this occurs, you need to reassign the CD-ROM drive to another letter and assign “E” to the Data drive.

2 Reassign the drives, if necessary, using the following steps.

- a Click **Start > My Computer**.
- b Right-click **My Computer**.
- c Click **Manage** on the menu.
- d Click **Storage**, and then double-click **Disk Management**.
- e Reassign the drive letter assigned to the CD-ROM drive. Right-click anywhere inside the **CD-ROM** box. Select **Change Drive Letter and Path**. Click **Change**.

- f** In the **Change Drive Letter or Path** dialog box, use the drop-down menu to assign a new drive letter to the CD-ROM drive. Click **OK**.
- g** Click **Yes** in the confirmation dialog box.
- h** Repeat the steps a through g to reassign the Data drive to **E:**
- i** Once the Data drive has been re-assigned to **E:**, re-format drive **E:** by right-clicking drive **E:** and selecting **Format**. Make sure **Perform a quick format for drive** is selected, and then click **OK**.

## Installing Microsoft SQL Server 2000 Standard Edition

- 1** Insert the Microsoft® SQL Server 2000 Standard Edition CD into the CD-ROM drive of the ITF Server.

The installation should start automatically. If it does not, use Windows® Explorer to browse to the CD drive and double-click the file, `autorun.exe`.

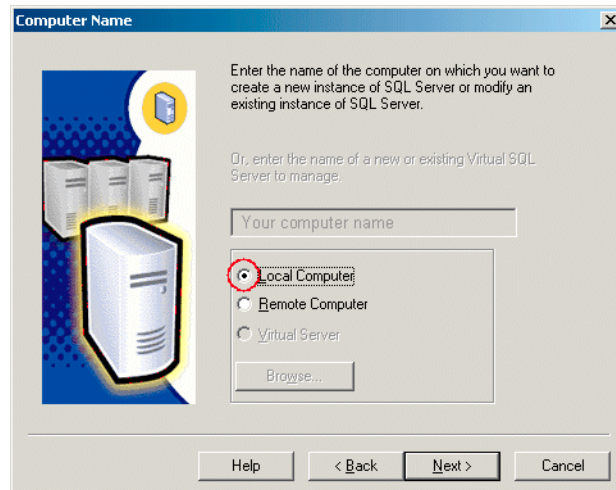
- 2** Click **SQL Server 2000 Components**.
- 3** Click **Install Database Server**.

### NOTE

If you are installing SQL Server 2000 SP2 or below, click **Continue**. Install Service Pack 3a immediately after installation of SQL Server 2000 is completed.

- 4** In the **Welcome** dialog box, click **Next >**.
- 5** In the **Computer Name** dialog box, select **Local Computer**, and click **Next >**.

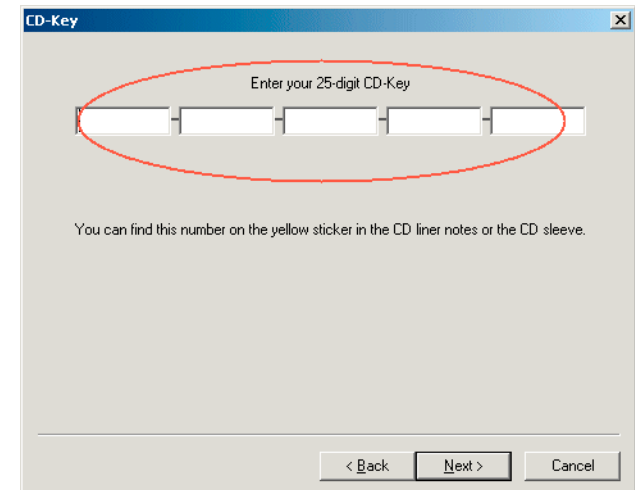
**Figure 1** Computer Name dialog box



- 6 In the **Installation Selection** dialog box, select **Create a new instance of SQL Server, or install Client Tools**, and click **Next >**.
- 7 In the **User Information** dialog box, enter the user details. If user details are not available, use the following:  
User Name: **Agilent ITF Server**  
Company Name: **Agilent Preferred Customer**
- 8 Click **Next >**.
- 9 Read the **SQL Server 2000 Components** software agreement. If you accept the agreement, click **Yes**.

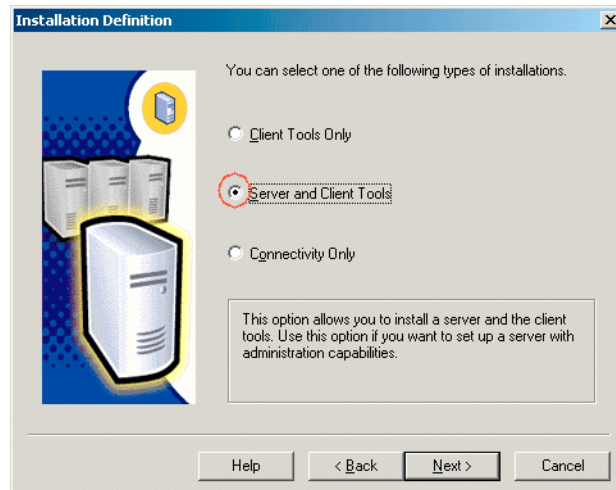
- 10 Enter the 25-digit CD-key listed on the SQL Server 2000 Standard Edition CD case, and click **Next >**.

**Figure 2** CD-Key dialog box



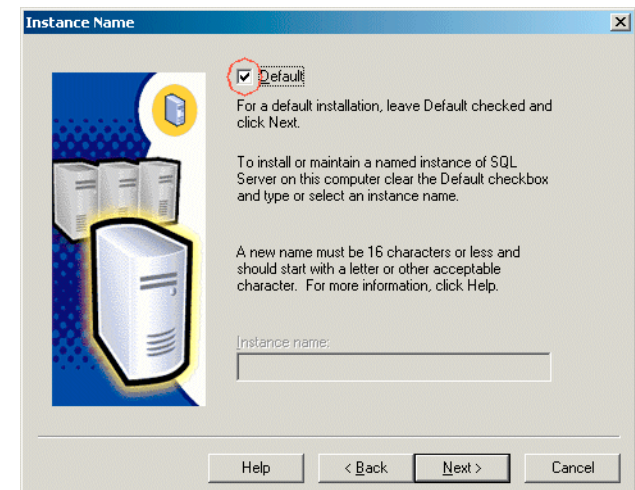
11 In the **Installation Definition** dialog box, select the **Server and Client Tools**, and click **Next >**.

**Figure 3** Installation Definition dialog box



12 In the **Instance Name** dialog box, select **Default**, and click **Next >**.

**Figure 4** Instance Name dialog box



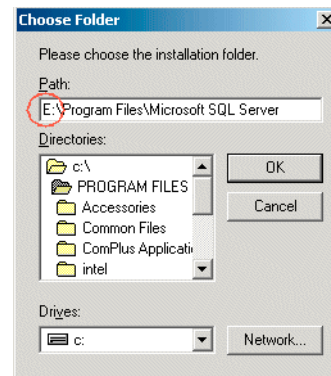
13 In the **Setup Type** dialog box, select **Typical**.

14 In the **Destination Folder** dialog box, leave the **Program Files** path as C:\Program Files\Microsoft SQL Server.

Change the **Data Files** path to E:\Program Files\Microsoft SQL Server by clicking the **Browse** button next to Data Files.

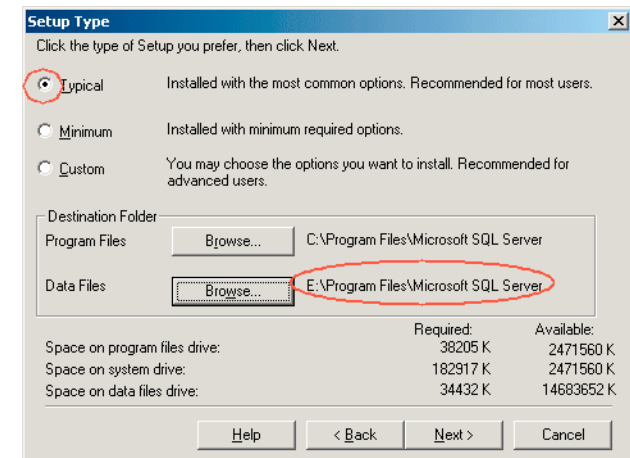
In **Choose Folder** dialog box, change c : in the **Path** box to E : . Click **OK** when you are done.

Figure 5 Choose Folder dialog box



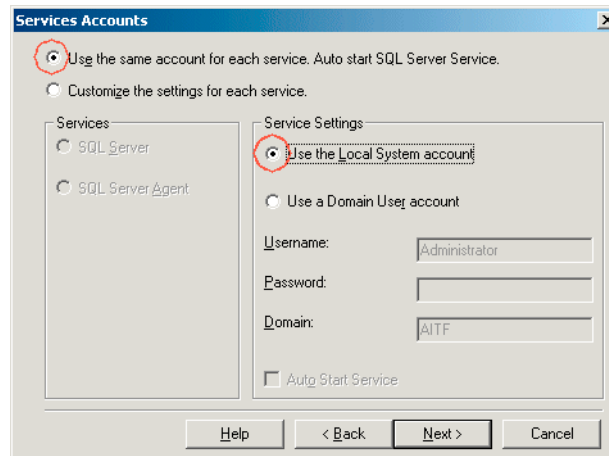
15 Notice the change in the **Setup Type** dialog box. Click **Next >** to continue.

Figure 6 Setup Type dialog box



- 16 In the **Services Account** dialog box, select **Use the same account for each service. Auto start SQL Server Service**. In the **Service Settings** box, select **Use the Local System account**. Click **Next >** when you are done.

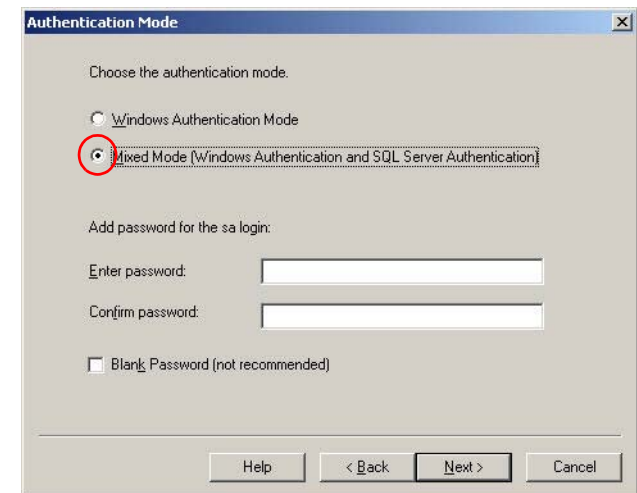
Figure 7 Services Account dialog box



- 17 In the **Authentication Mode** dialog box, select **Mixed Mode (Windows Authentication and SQL Server Authentication Mode)**.

Enter a password for the **sa login** or select **Blank Password (not recommended)**. Then, click **Next >**.

Figure 8 Authentication Mode dialog box



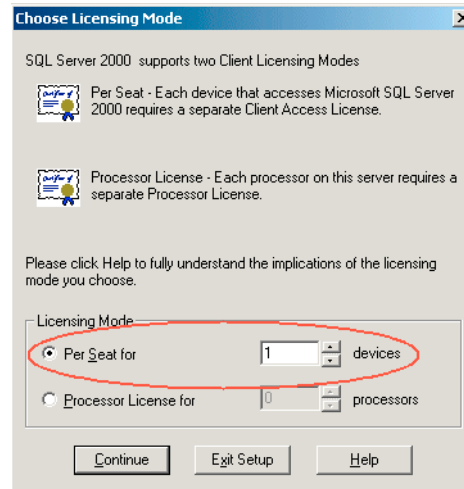
- 18 Click **Next >** to start copying files.

19 In the **Choose Licensing Mode** dialog box, select **Per seat for** and enter **1** in the device box. Click **Continue**.

20 In the **Setup Complete** dialog box, click **Finish**.

21 Remove the SQL Server 2000 Standard Edition CD from the CD-ROM drive.

**Figure 9** Choose Licensing Mode dialog box



#### NOTE

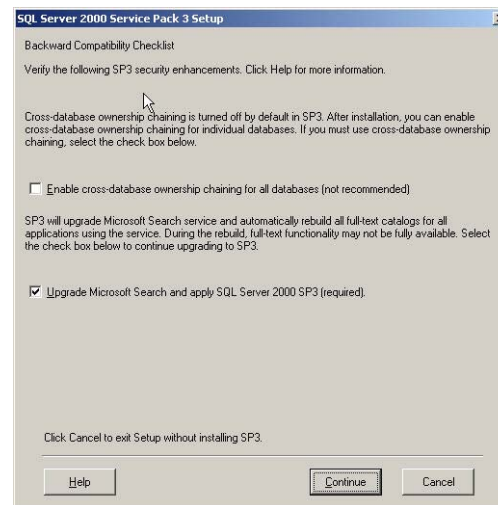
You may see an **MS Data Access Components Setup** dialog box. Click **Next >** to continue, then click **Finish**.

## Installing Microsoft SQL Server 2000 Service Pack 3a

- 1 Insert the SQL Server 2000 Service Pack 3a CD into the ITF Server CD-ROM drive.

The installation should start automatically. If it does not, browse to the CD drive and double-click the file, `setup.bat`.

Figure 10 SQL Server 2000 Service Pack 3a Setup



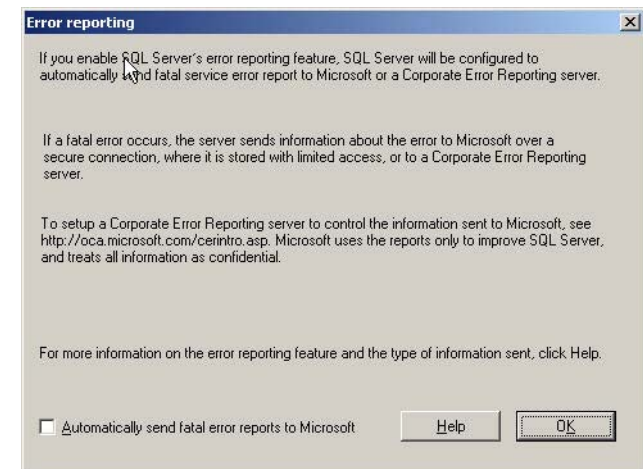
Alternatively, if the files are stored on the network, browse using Explorer to the network location where

the SQL Server 2000 Service Pack 3a is located. Double-click the file, `setup.bat`.

- 2 Click **Next >** all the way to take the default settings.
- 3 Select **Upgrade Microsoft Search and apply SQL Server 2000 SP3 (required)** and click **Continue**.

A dialog box similar to the one shown in **Figure 11**. Click **OK** to continue.

Figure 11 Error reporting dialog box



- 4 Once SQL Server 2000 Service Pack 3a has been installed, click **Finish** to restart the server.



## Configuring the SQL Server

To optimize the performance of the SQL Server, you need to change the size of the temporary database.

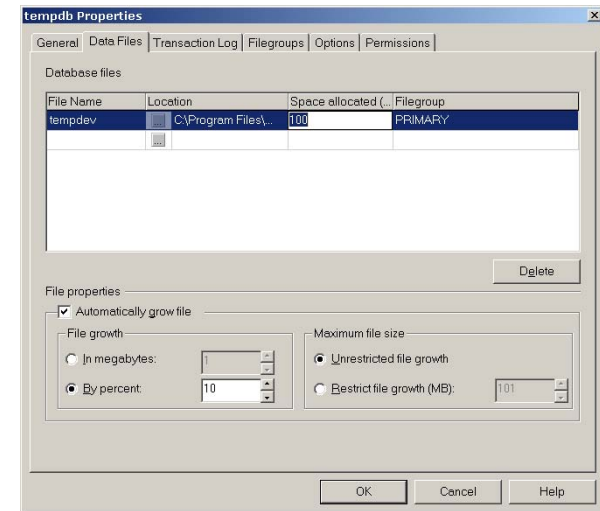
To change the size of the temporary database:

- 1 Click **Start > All Programs > Microsoft SQL Server > Enterprise Manager**.
- 2 In the console tree, select **Console Root > Microsoft SQL Servers > SQL Server Group > (local) (Windows NT)**.
- 3 Click **Databases** to expand it.
- 4 Right-click the database **tempdb**, and select **Properties**.

You will see the **tempdb Properties** dialog box.

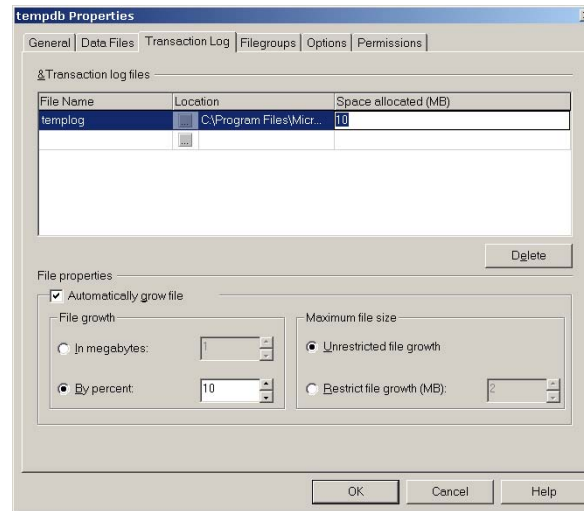
- 5 Click the **Data Files** tab.

Figure 12 Tempdb properties - Data Files



- 6 Click the column under **Space allocated (MB)**, and change the default value to 100.
  - 7 Click **OK** to save.
  - 8 Right-click the database **tempdb**, and select **Properties**.
- You will see the **tempdb Properties** dialog box.
- 9 Click the **Transaction Log** tab.

Figure 13 Tempdb properties - Transaction Log



- 10 Click the column under **Space allocated (MB)**, and change the default value to 10.
- 11 Close the **Enterprise Manager**.

## Installing Microsoft Services for UNIX 3.5

- 1 Press **Ctrl+Alt+Del** and log on to Windows Server 2003 with administrative privileges.
- 2 Insert the Microsoft Windows Services for UNIX 3.5 CD into the ITF Server CD-ROM drive.

The installation should start automatically. If it does not, browse to the CD drive and double-click the file, `setup.exe`.

- 3 In the **Welcome** dialog box, click **Next >**.
- 4 In the **Customer Information** dialog box, enter the user details. If it is not available, use the following:

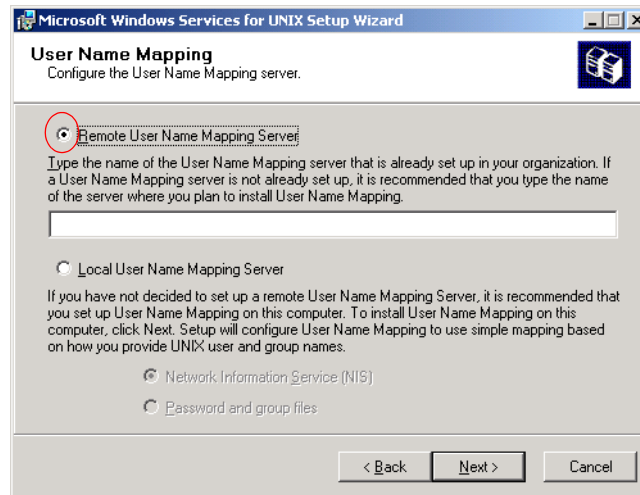
**User Name:** Agilent ITF Server  
**Organization:** Agilent Preferred Customer

Click **Next >**.

- 5 Read the license agreement. If you accept the agreement, select **I accept the agreement**.  
Click **Next >**.
- 6 In the **Installation Options** dialog box, select **Standard installation**, and click **Next >**.
- 7 At the **Security Settings** dialog box, make sure that **Enable setuid behavior for Interix programs** is not selected.  
Click **Next >**.

- Choose **Remote User Name Mapping Server**, and leave the text box blank.

**Figure 14** User Name Mapping dialog box

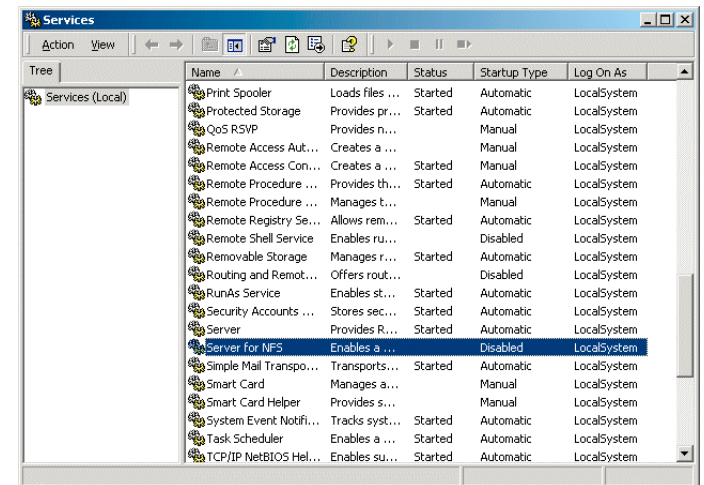


Click **Next >**.

- At the **User Name Mapping** dialog box, select **Remote User Name Mapping Server**, then click **Next >**.
- Wait several minutes for the installation to complete. Click **Finish** when done.
- Remove the Microsoft Windows Services for UNIX 3.5 CD from the CD-ROM drive of the ITF Server.

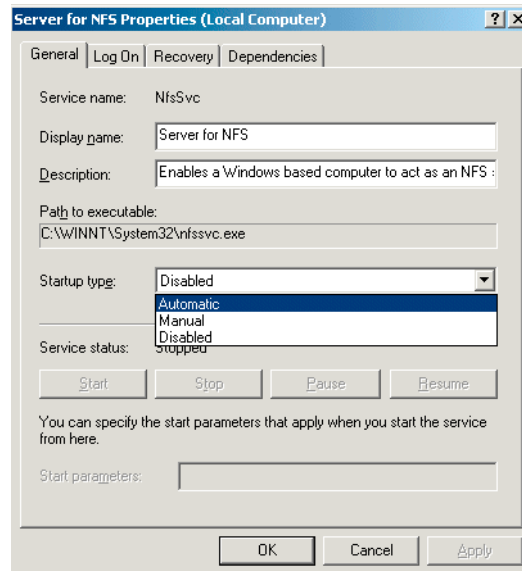
- Click **Yes** to restart the ITF Server.
- Press **Ctrl+Alt+Del** and log on to Windows Server 2003 with administrative privileges.
- Click **Start > Control Panel**.
- Double-click **Administrative Tools**.
- Double-click **Services**.
- In the list of services, right-click **Server for NFS** and click **Properties** on the menu.

**Figure 15** Services - Server for NFS



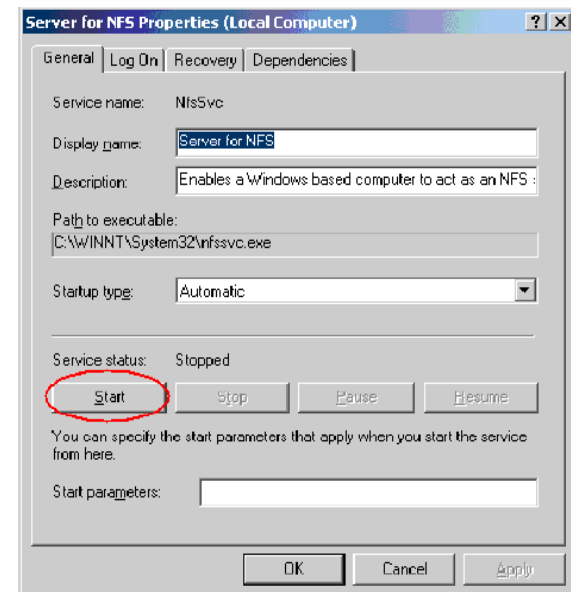
18 On the **General** tab, find the **Startup type**. Select **Automatic** from the drop-down menu. Click **Apply**.

Figure 16 Server for NFS Properties - General tab



19 Under the **Service Status** section of the **General** tab, click **Start**.

Figure 17 Server for NFS Properties - Service status



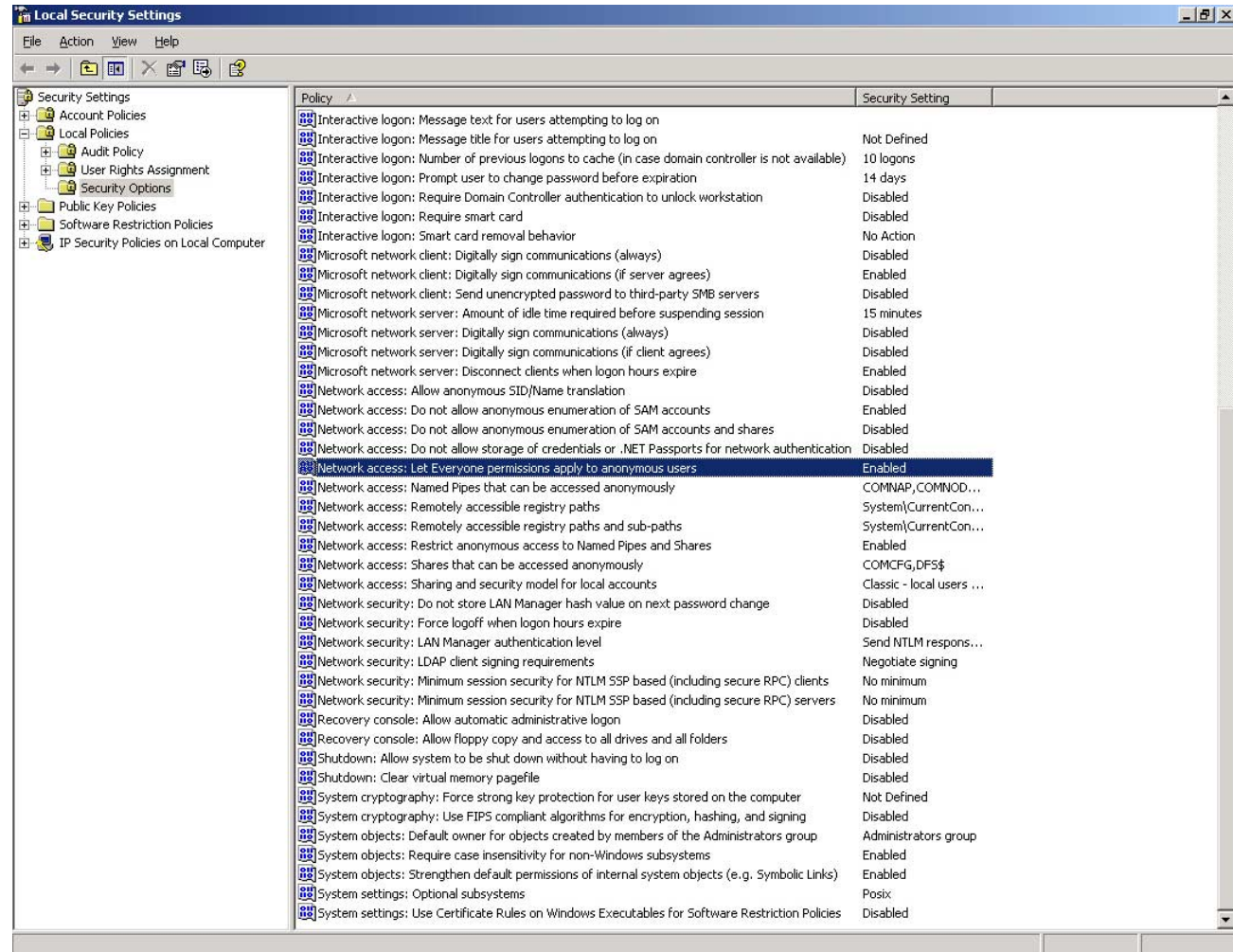
20 Click **OK** to close the dialog box.

## Changing the Local Security Policy for Microsoft Windows Server 2003

To mount a UNIX system volume to Microsoft Windows Server 2003, you need to do the following:

- 1 Log on to the ITF Server with administrative privileges.
- 2 Click **Start > All Programs > Administrative Tools > Local Security Policy**.
- 3 Change the setting for **Network access: Let Everyone permission apply to anonymous users** to **Enabled**. See [Figure 18](#).
- 4 Restart the ITF Server.

Figure 18 Local Security Settings dialog box



## Installing ITF Software Components

### NOTE

See Chapter 2, [Installing the ITF Server](#), of the *ITF Software Solutions Setup Guide* for information on installing the ITF Software Components.

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