

Networking and Database Connectivity in Shortcuts Version 7

This document is intended to serve as a basic primer to networking, and provides step-by-step instructions on how to setup and configure a network environment for use by Shortcuts.

- ❖ *Due to networking limitations in Windows Home operating systems, using Windows Home as a Shortcuts network server will cause installation difficulties when attempting to install network clients. For this reason we do not support and strongly recommend using Windows XP Pro, Vista Business or Windows 7 Pro as the operating system for your Shortcuts server (and for all machines in your network, if possible).*

Installing a Shortcuts Network

During the installation of a networked client machine, Shortcuts uses the login information provided by the user when they logged on to Windows to gain administrative access to the database server. It needs to do this in order to create the SQL Server account that will be used when operating the program, described later.

Windows has two common network/security configurations:

- The most common configuration at POS sites will be workgroup-based networking. All computers in a workgroup join the workgroup simply by specifying the name of the workgroup in the Computer Name tab of System Properties (right-click on My Computer, select Properties)
 - The simplest to use, but most complicated to set up, is a domain-based network. In a domain, usernames and passwords are maintained centrally and can be used on any machine that is part of the domain. In a domain-based network, the user account used to install the client terminals must have administrator privileges on the server machine.
- ❖ *If a client is using a domain environment, they will need their System Administrator to configure the network and troubleshoot any installation issues. If Shortcuts is required to configure this environment, there may be charges involved.*

All machines must be able to communicate with each other via Windows Explorer and DOS ping; that is, each computer must be visible to any other computer on the shortcuts server in Windows Explorer, and each computer must be able to ping any other computer on the server via DOS.

For installation purposes, being on the network is not sufficient for a client machine to gain access to SQL Server on the server machine. For a client installation to succeed on a workgroup-based network, the following conditions must be met:

- All machines must belong in the same workgroup (see “Changing a Computer Name” for more information)
- All machines must have the Windows Firewall turned on (see “Activating Windows Firewall” for more information)
- The client machine Windows user account used to log in to the client must have a non-empty password (see “Setting a Windows User Account Password” for more information)
- The client machine user account must be of the Administrator account type
- The Windows user account and password used on the client machine must be added to the server machine with the Administrator account type (see “Adding a User Account to the Administrator Group” on for more information)

If you are running Windows XP Pro, also check the following:

- Simple File Sharing must be switched off on all machines.
- ❖ *The Shortcuts installer will do the above step for you automatically.*

- The Guest account must be disabled on both server and client PCs.

Network Setup Checklist

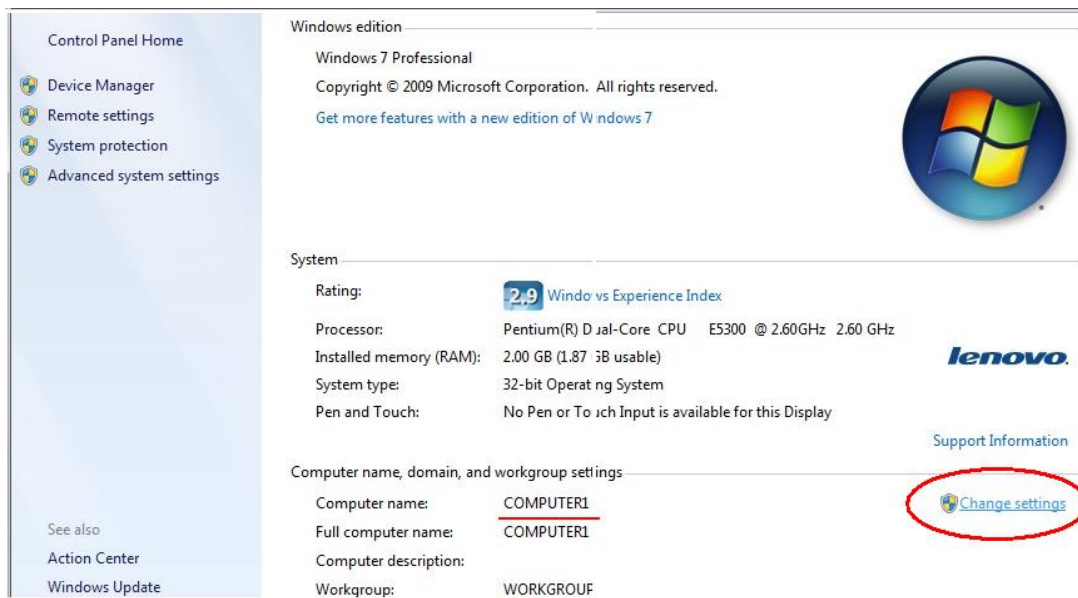
Use the following checklist to determine if you have completed all the steps necessary to get your network setup for Shortcuts:

- Step 1: Change the computer names (i.e. main system scserver). See page 2.
- Step 2: Activate the Windows Firewall. See page 3.
- Step 3: Set up the same user accounts on all computers (i.e. Shortcuts) See page 4.
- Step 4: Set up a password for all user accounts. See page 4.
- Step 5: Give all Shortcuts users Administrator rights. See page 5.
- Step 6: Disable the Guest Account. See page 6.
- Step 7: Network Sharing. See page 6.
- Step 8: Setting up a static IP address. See page 9.

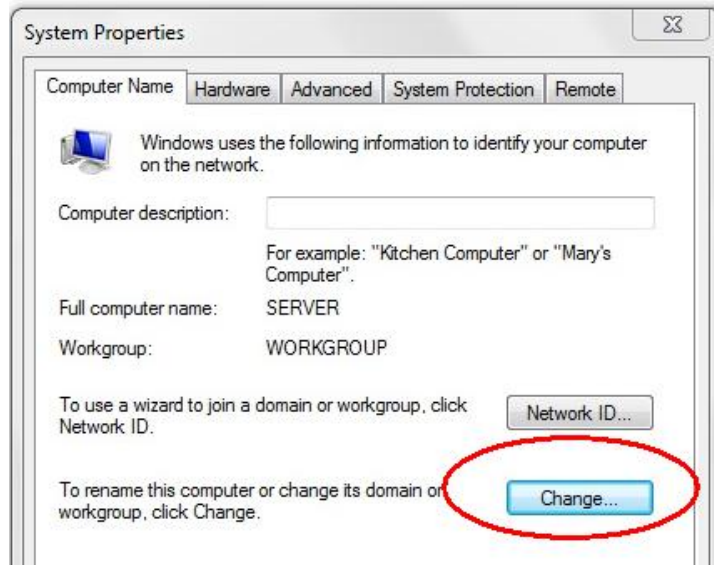
Changing a Computer Name

To change a Computer or Workgroup name, use the following procedure:

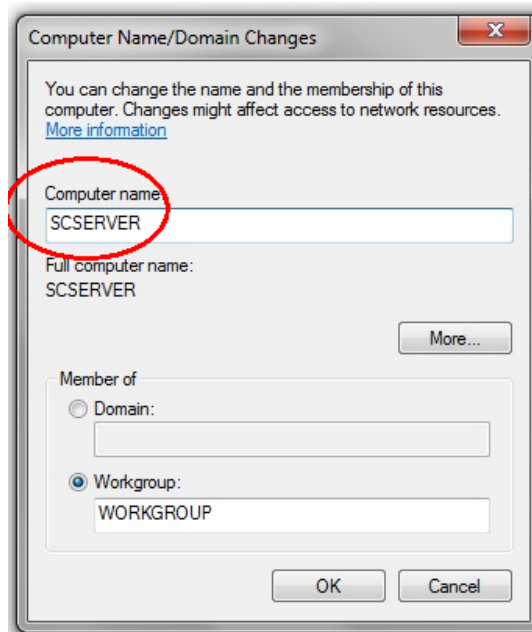
1. On your Windows Desktop, right-click on the **My Computer** or **Computer** icon and select the **Properties** option from the popup menu that appears.
2. Look under the heading “Computer name” to find out the computer’s current name. We recommend naming the Shortcuts main computer (server) “SCServer”.
3. To change the computer name or workgroup, click on the **Change Settings** link. The System Properties window will appear.



- Click on the **Change** button. The Computer Name/Domain Changes window will appear.



- Rename the computers accordingly (i.e. name the main computer "SCServer" and the client computers "client1", "client2", "client3" etc.) Ensure that the Workgroup name is consistent on every single computer.

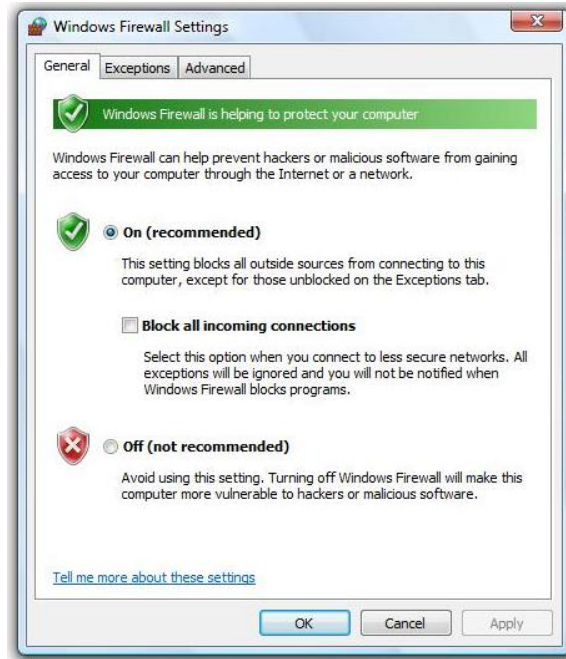


- Once you have renamed all the computers, click the **OK** button. The computer(s) will require a re-boot to finalise the name change(s).

Activating Windows Firewall

Windows Firewall must be turned on for each machine connected to the Shortcuts network. To turn on Windows Firewall on a Windows machine, perform the following steps:

- Click on the **Start** button in the taskbar and select **Control Panel**. The Control Panel window will appear.
- Double-click on the **Windows Firewall** icon. The Windows Firewall window will appear.



- In Windows XP - Click to select the **On (recommended)** option.
- In Windows Vista – Click the **Change Settings** button.
- In Windows 7 – Click the **Turn Windows Firewall on or off** button.

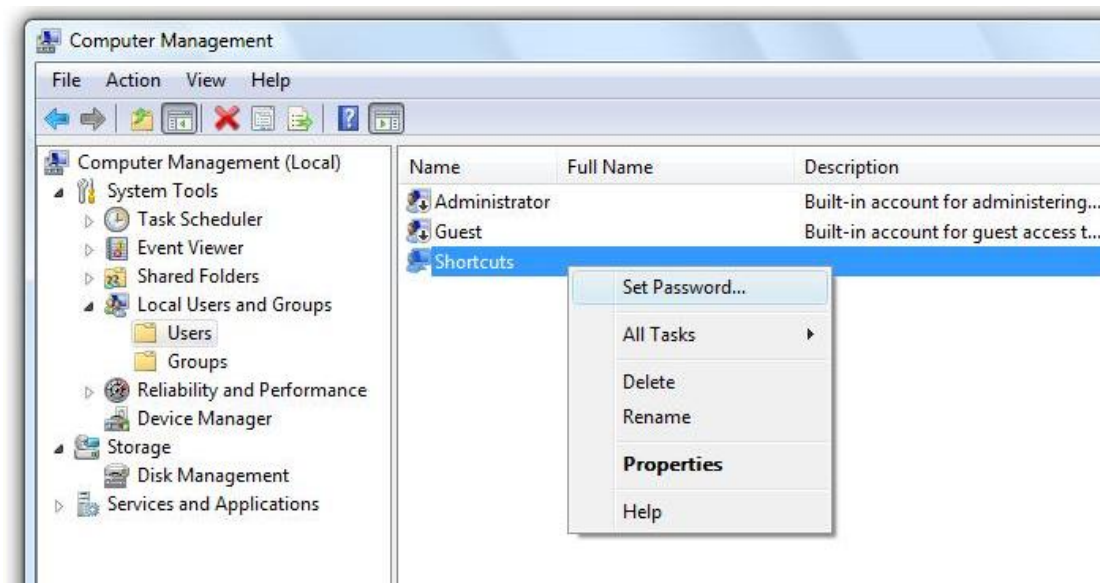
Setting a Windows User Account Password

In order for the network setup to work, the user account on the client machine must have a non-empty password (that is, they must have a password set on their account).

❖ *The above user account must also be setup on the server, and must be a part of the Admin group.*

To set a Windows user account password on a Windows machine, perform the following steps:

1. On your Windows Desktop, right-click on the **My Computer** or **Computer** icon and select the **Manage** option from the popup menu that appears. The Computer Management application screen will appear.



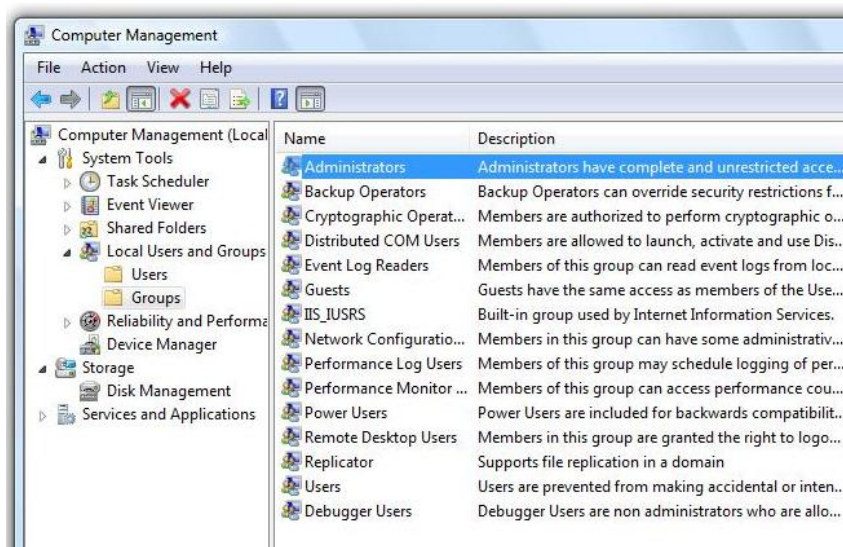
2. Click on the '+' symbol next to the **Local Users and Groups** option to expand it.
3. Select the **Users** folder. A list of user accounts will appear in the right-hand screen.

4. Right-click on the relevant username and select the **Set Password** option from the popup menu that appears.
5. If you see a security warning window appear, click **Proceed** to continue
6. Type in the new password into the **New Password** and **Confirm Password** fields, then click **OK** to continue. The user account's password will be changed.

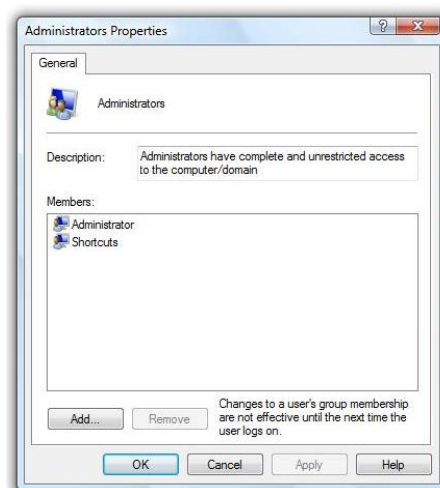
Adding a User Account to the Administrator Group

A user account on the Shortcuts network must be a member of the Administrator group. To check if your Windows user account is part of the Administrator group, perform the following steps:

1. On your Windows Desktop, right-click on the **My Computer** or **Computer** icon and select the **Manage** option from the popup menu that appears. The Computer Management application screen will appear.
2. Click on the '+' symbol next to the **Local Users and Groups** option to expand it.
3. Select the **Groups** folder. A list of groups will appear in the right-hand screen.



4. Double-click on the **Administrators** group. The Administrators Properties window will appear.
5. If your user account can be found in the list, then you are a member of the Administrators group.



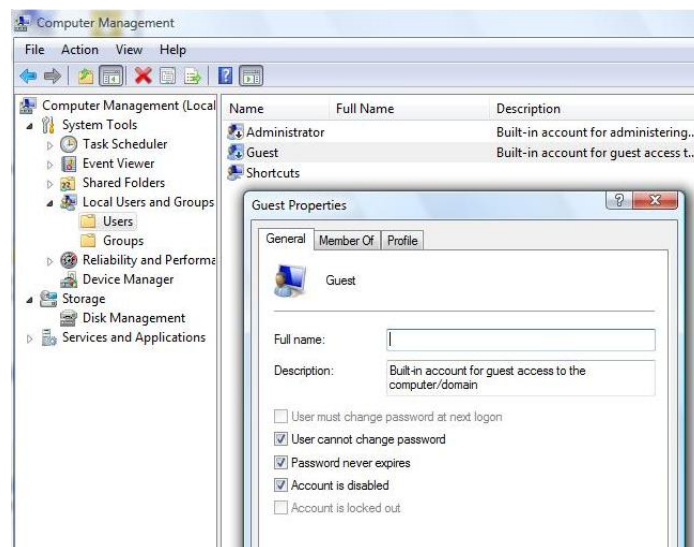
If your user account is not a member of the Administrators group, you can add your account to the group by performing the additional following steps:

6. In the Administrators Properties window, click on the **Add** button. The Select Users, Computers or Groups window will appear.
7. Type in your user name into the **Enter object names to be selected** field, then click the **Check Names** button. You should see your user account appear in the field.
8. Click **OK** to continue. Your user account will be added to the Administrator group.

Disabling the Guest Account

You must disable the Guest account on a Shortcuts network. This prevents access by unauthorised users. To check if the Guest account is disabled, perform the following steps:

1. On your Windows Desktop, right-click on the **My Computer** or **Computer** icon and select the **Manage** option from the popup menu that appears. The Computer Management application screen will appear.



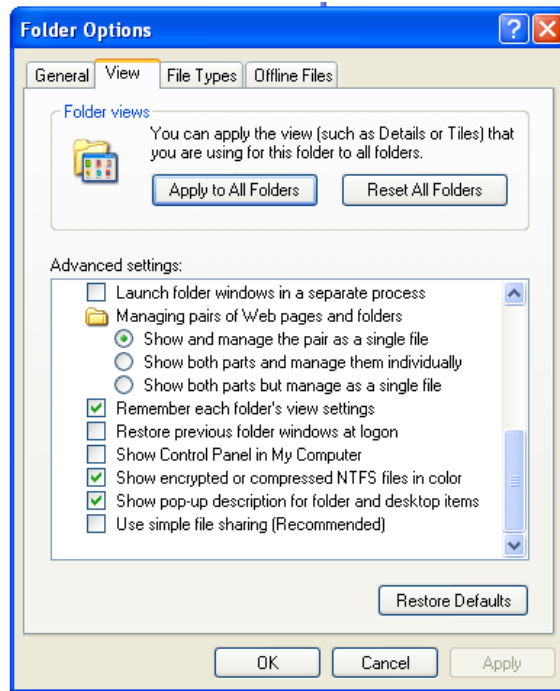
2. Click on the **+** symbol next to the **Local Users and Groups** option to expand it.
3. Select the **Users** folder. A list of user accounts will appear in the right-hand screen.
If the Guest account has a red cross on it, it has been disabled. If the Guest account has not been disabled, you can disable it by performing the additional following steps:
4. Double-click on the **Guest** user account. The Guest Properties window will appear.
5. Place a tick in the **Account is disabled** option, then click the **OK** button. The Guest account will now be disabled.

Turn on Network Sharing Options

Windows XP Pro Users - Switching off Simple File Sharing

Each machine connected to the Shortcuts network must have Simple File Sharing switched off. To switch off Simple File Sharing on a machine, perform the following steps:

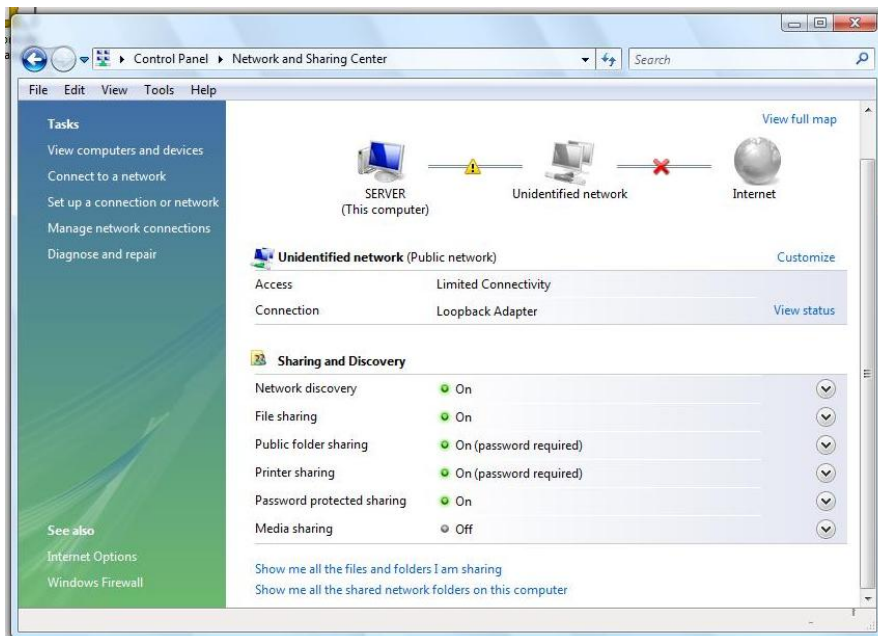
1. On your Windows Desktop, right-click on the **My Computer** icon and select the **Explore** option from the popup menu that appears. The Windows Explorer screen will appear.
2. Click on the **Tools** menu and select the **Folder Options** option. The Folder Options window will appear.



3. Click to select the **View** tab. In the Advanced Settings section, ensure that the **Use simple file sharing (recommended)** option is unticked. You may need to scroll down to see this option. The machine is now set not to use Simple File Sharing.

Vista Business Users – Network and File Sharing

1. Click on the Windows **Start** button, then click on **Control Panel** (or **Settings** then **Control Panel**). The Control Panel window will appear.
2. Click on the **Network and Sharing Centre**. The Network and Sharing Center window will appear.



3. Make sure all **Sharing** options are turned on.

Windows 7 Pro – Network and File Sharing

1. Click on the Windows **Start** button, then click on **Control Panel** (or **Settings** then **Control Panel**). The Control Panel window will appear.
2. Click on the **Network and Sharing Centre**. The Network and Sharing Center window will appear.
3. Make sure all **Sharing** options are turned on.
4. Click on the **Change Advanced Sharing Settings** option. The Change sharing options for different network profiles window will appear.
5. Make sure all the below settings are changed:
 - **Turn on network discovery**
 - **Turn on file and printer sharing**
 - **Turn on sharing to anyone with network access can read and write files in the Public folders**

Change sharing options for different network profiles

Windows creates a separate network profile for each network you use. You can choose specific options for each profile.

Home or Work _____

Network discovery _____

When network discovery is on, this computer can see other network computers and devices and is visible to other network computers. [What is network discovery?](#)

Turn on network discovery
 Turn off network discovery

File and printer sharing _____

When file and printer sharing is on, files and printers that you have shared from this computer can be accessed by people on the network.

Turn on file and printer sharing
 Turn off file and printer sharing

Public folder sharing _____

When Public folder sharing is on, people on the network, including homegroup members, can access files in the Public folders. [What are the Public folders?](#)

Turn on sharing so anyone with network access can read and write files in the Public folders
 Turn off Public folder sharing (people logged on to this computer can still access these folders)

Media streaming _____

When media streaming is on, people and devices on the network can access pictures, music, and videos on this computer. This computer can also find media on the network.

Media streaming is off.
[Choose media streaming options...](#)

File sharing connections _____

Windows 7 uses 128-bit encryption to help protect file sharing connections. Some devices don't

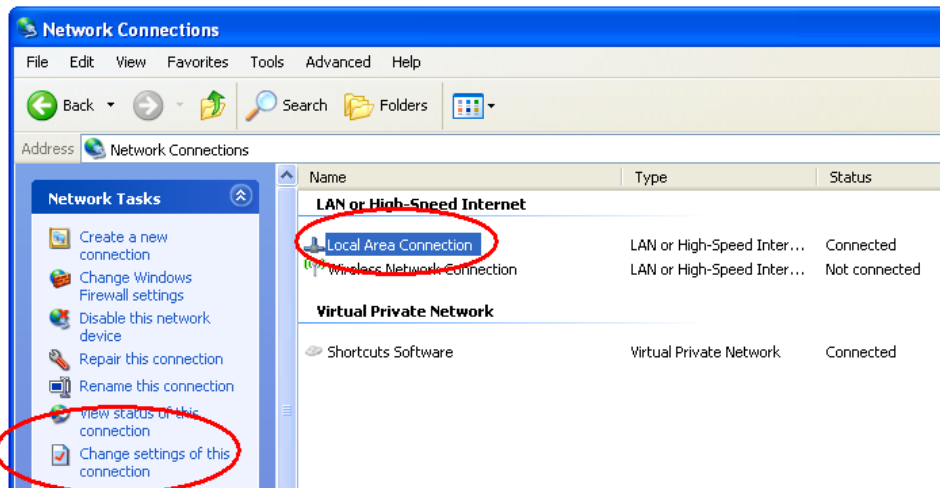
6. Click the **Save Changes** button.

Setting Up a Static IP Address

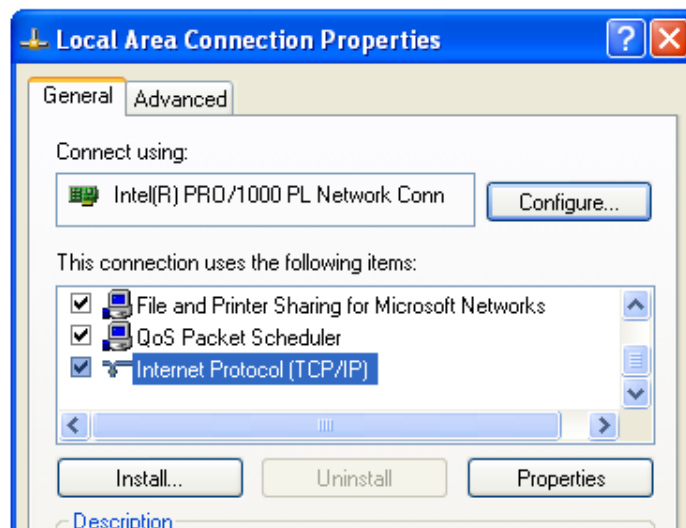
A static IP address is a number that is assigned to a computer(s) to be its permanent address on the Internet. Computers use IP addresses to locate and talk to each other, much the same way people use phone numbers to locate and talk to one another on the telephone.

Windows XP Pro

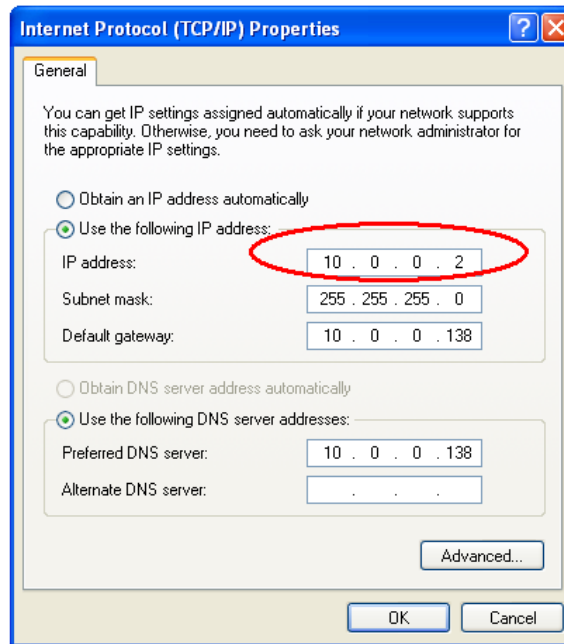
1. Click on the Windows **Start** button, then click on **Control Panel**. The Control Panel window will appear.
2. Click on **Network Connections**. The Network Connections window will appear.
3. Click on **Local Area Connection**. It will become highlighted.



4. Click on **Change settings of this connection**. The Local Area Connection Properties window will appear.
5. Double-click on the **Internet Protocol (TCP/IP)** option. The Internet Protocol (TCP/IP) Properties window will appear.



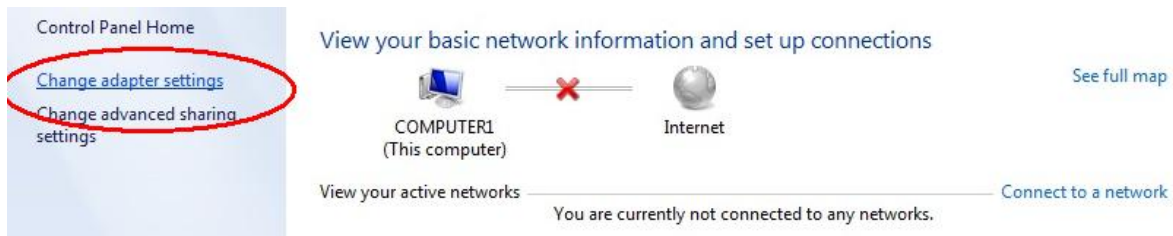
6. You will need to setup each computer with a different IP address. If you have an internet connection, the gateway address and primary DNS server address is your modem's IP address.
 - ❖ To find out these values, in the DOS prompt type the command "ipconfig", and copy the default gateway address. Each computer **MUST** have a different IP address. i.e. 10.0.0.2 then 10.0.0.3, 10.0.0.4 etc. The Subnet mask, Default gateway and DNS server addresses remain identical.



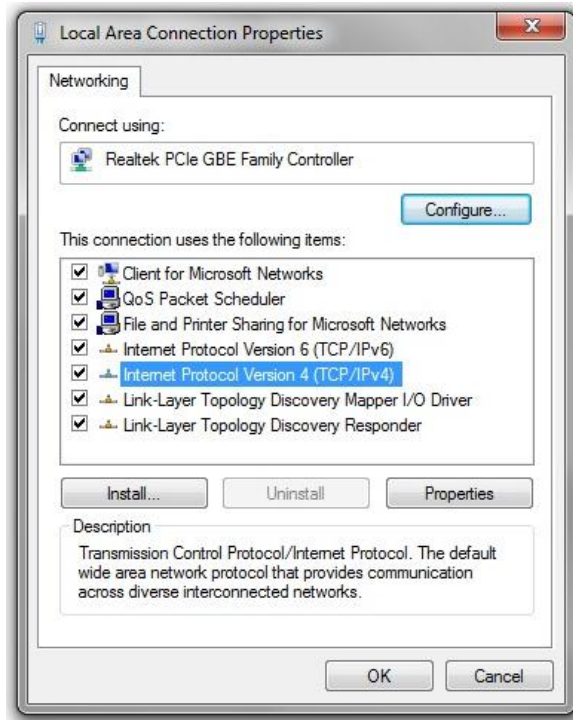
7. Click the **OK** button.

Vista Business and Windows 7 Pro

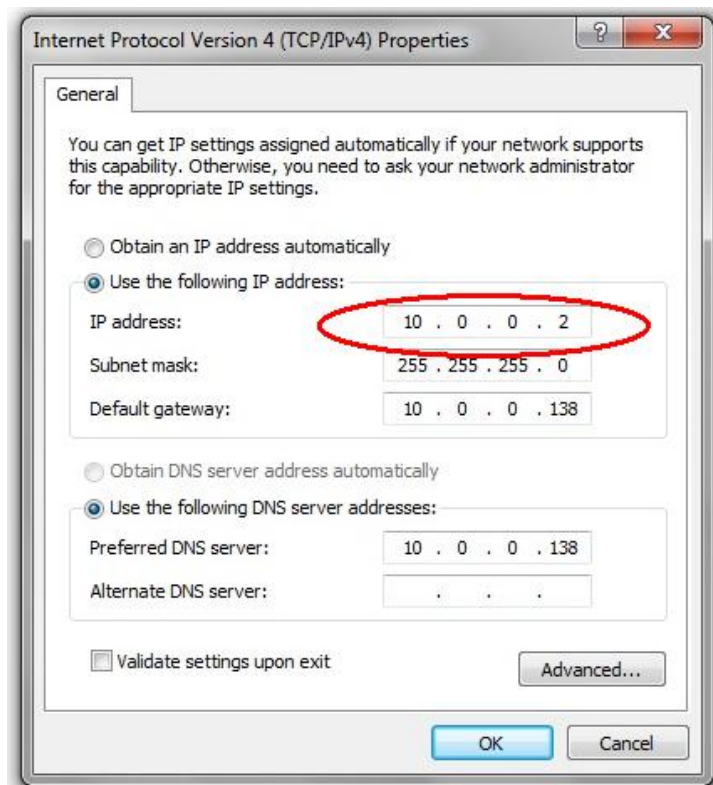
1. Click on the Windows **Start** button, then click on **Control Panel** (or **Settings** then **Control Panel**). The Control Panel window will appear.
2. Click on the **Network and Sharing Centre**. The Network and Sharing Center window will appear.
3. Click on **Change adapter settings** (in Vista, this is called **Manage Network Connections**).



4. Double-click on **Local Area Connection**. The Local Area Connection Properties window will appear.
5. Double-click on **Internet Protocol Version 4 (TCP/IPv4)**. The Internet Protocol Version 4 (TCP/IPv4) Properties window will appear.



6. You will need to setup each computer with a different IP address. If you have an internet connection, the gateway address and primary DNS server address is your modem's IP address.
- ❖ *To find out these values, in the DOS prompt type the command "ipconfig", and copy the default gateway address. Each computer MUST have a different IP address. i.e. 10.0.0.2 then 10.0.0.3, 10.0.0.4 etc. The Subnet mask, Default gateway and DNS server addresses remain identical.*



7. Click the **OK** button.

General Information

Point of Sale

During installation, Shortcuts utilises Windows Security permissions. Once installation has been completed, SQL Server security becomes the primary mechanism by which Shortcuts POS accesses the database. The user account generated for the terminal during installation has its username and encrypted password stored in the registry, which Shortcuts uses when accessing the database.

The generated account is given a random username based on the terminal, and a randomised password. It should never be necessary for a user or support person to use these credentials.

Although this SQL Server account has access to data that may not be available to all users, the Shortcuts Point of Sale security framework uses its own access control to restrict data access.

Because data access during regular operation is independent of the Windows credentials provided for logon, the Point of Sale can be run day-to-day within a non-administrative account. This provides enormous security benefits and should be the standard environmental setup.

Running Auxiliary Applications outside Shortcuts POS

When the Backup, Restore and Support applications are run outside of the POS application (i.e. from the Start menu) they cannot use the login framework and access control provided by the POS. In this case Windows authentication is used, and so the conditions required for installation are necessary for these applications to run.

Administering the Database

The MSDE instance installed by the POS installer has both Windows and SQL Server security enabled; however, the SA account is by default given a randomised strong password that is not recorded. Administrative access to the database is only possible from a Windows account with administrative privileges on the server machine.