Getting Started with Timbuktu for Windows, version 9.0

MOTOROLA

Contents

Chapter 1: Introduction and Feature Overview

Welcome to Timbuktu for Windows™, version 9.0!

Timbuktu gives you total access to your network. Computers across the country and around the world—Windows and Macintosh—are now as accessible to you as the computer sitting on your desk! You can use Timbuktu to control and observe other computers, transfer files, and send instant messages.

What Timbuktu Can Do for You

When you're at the office, Timbuktu runs over your organization's local network for easy conferencing and information sharing. When you're home or traveling, you can use Timbuktu to take direct control of your office computer.

Once you connect to a remote computer with Timbuktu, you can run software at its normal speed, dramatically decreasing network-related delays of applications such as relational databases and electronic mail. Timbuktu gives you full access to remote resources, but transfers only screen, keyboard, and mouse information—you don't have to move large amounts of data over slow network connections.

With Timbuktu, you can

* Save technical support time and money by taking control of a remote user's computer and solving the problem without leaving your desk.

* Train employees and customers alike for a fraction of the usual time and cost. Demonstrate the latest applications or products while a remote user watches. Then observe and help as the user practices. Provide individual attention for all remote trainees, and save the time and expense of travel.

* Work remotely from wherever you are. Harness the power of remote control to share information, transfer files, access databases, and send messages across your network. You'll discover many ways to work easier and smarter.

* Collaborate with remote colleagues in real time. Share screens, documents, and information with both Windows and Macintosh computers, and use text-based conferencing to confer with your colleagues as you work.

* Run "LAN-locked" network applications such as databases without the frustration of slow run-time over remote links. Applications run on the remote computer, not across your network, reducing processing time dramatically.

* Protect your own computer from unauthorized access. You can grant custom combinations of Timbuktu services to individual NT User and Registered User accounts, allow access only when you approve it, or prevent all incoming Timbuktu connections.

Timbuktu Features

New in Timbuktu for Windows, Version 9: The Timbuktu Host and Timbuktu Guest

Timbuktu for Windows, version 9 has been entirely rebuilt to provide native Timbuktu support on Windows Vista and Windows 7.

Windows Vista introduced several architectural changes that conflicted with Timbuktu's implementation of screen sharing and user management. Microsoft provided a compatibility shim that mitigated some of the Vista-related changes, but Timbuktu was unable to interact correctly with the User Account Control or Windows secure desktop. True compatibility required significant changes to the Timbuktu architecture. In particular, session-0 Isolation, User Account Control restrictions, and always-on and domain-aware Fast User Switching required an entirely new implementation of Timbuktu's screen sharing and user management.

Timbuktu for Windows, version 9 addresses these issues through one significant change: the single Timbuktu application is now two separate components, the Timbuktu Guest and the Timbuktu Host. The Timbuktu Host listens for and accepts incoming Timbuktu connections, and the Timbuktu Guest establishes outgoing connections to other Timbuktu computers.

The separation of the Timbuktu Host and the Timbuktu Guest has several important ramifications. The Timbuktu Guest can run with the permissions of the current Windows user, allowing it to sidestep many problematic architectural issues. The Timbuktu Host is comprised of several different executables, which resolves other architectural issues. Together, the Timbuktu Host and Timbuktu Guest provide a more secure, robust, and reliable system.

You will configure the Timbuktu Guest with the Preferences dialog box. Because the Timbuktu Host has no main application window, its settings are managed with the new Timbuktu Host Configuration Utility.

When you install Timbuktu, you will have the option to install the Timbuktu Host, the Timbuktu Guest, or both.

Timbuktu Services

The simple, powerful Timbuktu application includes multiple *services.* Each service provides you with a different way to access a remote computer, collaborate with its user, or enable incoming access to your own computer. Together, they help you make the most of your network.

- With the Control and Observe services, you can view another Timbuktu computer's desktop in the screen-sharing window on your computer. The window is continually updated as the other computer's desktop changes.

- With the Exchange service, you can copy and move files and folders in both directions between your computer and another Timbuktu computer.

- With the Send service, you can send text-based messages and attachments, similar to electronic mail, to other Timbuktu computers.

- With the Notify service, you can query another computer to determine whether its user is present.

Connecting with Timbuktu

Timbuktu communicates with other Timbuktu computers over TCP/IP networks using the same protocol as any basic Internet or intranet connection. If you have a wired or WiFi connection to the Internet, you can use Timbuktu services to collaborate with other Timbuktu users around the world.

Timbuktu Security

Timbuktu offers multiple levels of security that help you restrict access to the different Timbuktu services on your computer.

- Other Timbuktu user can connect to your computer with several different levels of user access privileges: Guest Users, Ask For Permission Users, NT Users, and Registered Users. You can grant different levels of access to each type of user. Whether you create user accounts that grant specific privileges or allow incoming access only when you actively approve it, no other Timbuktu user can access your computer without your permission.

- The Timbuktu Host and Timbuktu Guest applications can be installed separately. Install only the Timbuktu Host to allow the computer to receive Timbuktu connections, but not establish them. Install only the Timbuktu Guest to allow the computer to make Timbuktu connections, but not accept them.

- Timbuktu makes it easy for you to monitor and track the Timbuktu users who access your computer and the services they use. When remote users access your computer, the Timbuktu icon in the system tray on the taskbar alternates with a service icon indicating the presence of a remote user. You can disconnect remote users at any time. The activity log keeps a record of all remote computers that access your computer, along with the services used.

Timbuktu System Requirements

To run Timbuktu for Windows, your computer must meet the following hardware, software, and compatibility requirements.

Minimum Hardware Requirements

Timbuktu requires the same minimum hardware that is required by your Windows OS. In addition, you'll need

- 20 MB of available disk space; 50MB are required for the network installation process.
- To make Timbuktu connections, a TCP/IP network or WiFi connection to the Internet or the local network.

Minimum Software Requirements

- Windows 7, Windows Server 2008, Windows Vista, Windows Server 2003, Windows Server 2003 R2, and Windows XP SP2 or later.

    If you install Timbuktu on Windows Server 2008 or Windows Server 2003 with DEP enabled, you must disable DEP or set an exception for Timbuktu.

- Timbuktu is not fully supported on 64-bit operating systems, including Windows Server 2008 R2. If you wish to install Timbuktu on Windows Server 2008 R2, disable DEP or set an exception before you install Timbuktu.

- One copy of Timbuktu software on each computer that is to make or receive Timbuktu connections.

Compatibility

Timbuktu for Windows, version 9 is compatible with Timbuktu for Windows 8.0 and later, and Timbuktu for Macintosh 8.0 and later. Older versions of Timbuktu are not officially supported.

Chapter 2: Installing and Starting Timbuktu

This chapter will guide you as you install or remove Timbuktu on a local computer.

Installing Timbuktu

The MSI installer included in your distribution package will install, modify, and remove Timbuktu. When you have completed the installation, save the MSI installer in a safe location in case you need to modify or remove Timbuktu later.

To install Timbuktu on Windows XP, or on a Windows 7 or Windows Vista computer with UAC disabled, you must be logged on to Windows with Administrator privileges.

To install Timbuktu

1. Run the *Timbuktu.msi* file included in your distribution package.

2. In the Timbuktu Setup Wizard, click **Next**. Then accept the license agreement and click **Next** again.

3. On the **Custom Setup** screen, select the features to install. Note that you may install the Timbuktu Host, the Timbuktu Guest, or both.

   The Timbuktu Host and Timbuktu Guest are two separate applications that replace the single application that comprised previous versions of Timbuktu. The Timbuktu Host listens for and accepts incoming Timbuktu connections, and the Timbuktu Guest establishes outgoing connections to other Timbuktu computers.

4. When you have made your selections, click **Next**.

5. On the **Ready to Install** screen, click **Install**.

   The installation will proceed automatically. When it is complete, the Timbuktu Setup Wizard will notify you that the installation was successful. Click **Finish** to close the Setup Wizard.

Once you have completed the installation process,

- The Timbuktu Host application will start automatically.

  By default, the Timbuktu Host will not allow incoming connections. To configure the Timbuktu Host for incoming access, see chapter 4, "Configuring the Timbuktu Host."

- To establish Timbuktu connections to other computers, you must start the Timbuktu Guest application. From the Windows **Start** menu, choose **Programs ▶ Timbuktu for Windows ▶ Timbuktu Guest**.

Starting and Shutting Down Timbuktu

The Timbuktu Host will start automatically when you start Windows. Its icon is placed in the system tray on the taskbar. You will start the Timbuktu Guest yourself when you wish to make an outgoing Timbuktu connection.

When you wish to prevent all incoming connections or are finished working with Timbuktu, shut down the Timbuktu Host or Timbuktu Guest. The Timbuktu Host and Timbuktu Guest can run separately; you may shut down one or both.

Starting the Timbuktu Host

If the Timbuktu Host is shut down, you can manually start it at any time. From the Windows **Start** menu, choose **Programs ▸ Timbuktu for Windows ▸ Start Timbuktu Host**.

Starting the Timbuktu Guest

The Timbuktu Guest is not launched automatically when you start Windows. When you wish to make a Timbuktu connection, you will start the Timbuktu Guest as you would start any other application. From the Windows **Start** menu, choose **Programs ▸ Timbuktu for Windows ▸ Timbuktu Guest**. The Timbuktu Guest window opens.

Shutting Down the Timbuktu Host

When the Timbuktu Host is running, it listens for and accepts incoming Timbuktu connections. To prevent all incoming connections, shut down the Timbuktu Host. When you shut down the Timbuktu Host, it no longer runs in the background and users can no longer connect to your computer.

To shut down the Timbuktu Host, click the Timbuktu icon in the system tray on the taskbar. From the shortcut menu, choose **Shutdown Timbuktu Host**. Or, from the Windows **Start** menu, choose **Programs ▸ Timbuktu for Windows ▸ Shutdown Timbuktu Host**.

Shutting Down the Timbuktu Guest

The Timbuktu Guest functions as any other Windows application, and you do not need to leave it running when you are finished working with other computers. To shut down the Timbuktu Guest, open the **File** menu and click **Exit**.

Removing Timbuktu

Should you wish to remove Timbuktu from your computer, it is important to follow the correct removal procedure.

To remove Timbuktu

1. Run the *Timbuktu.msi* file included in your distribution package.
2. In the Timbuktu Setup Wizard, click **Next**.
3. On the Change, Repair, or Remove Installation screen, click **Remove**.
4. On the Ready to Remove Timbuktu screen, click **Remove**.

    The removal will proceed automatically. When it is complete, the Timbuktu Setup Wizard will notify you that the removal was successful. Click **Finish** to close the Setup Wizard.

Chapter 3: Configuring the Timbuktu Guest

Once you have installed Timbuktu, you can review and change your configuration settings. This chapter describes configuration options for the Timbuktu Guest. Timbuktu Host configuration is discussed in the following chapter, *"Configuring the Timbuktu Host."*

Configuration Options

The Timbuktu Guest establishes outgoing Timbuktu connections. In most cases, you can begin working with the Timbuktu Guest immediately, using its default settings. To best customize the Timbuktu Guest for your needs, however, you may wish to configure

- The appearance and behavior of the screen-sharing window, which you use when you establish a Control or Observe connection to a host computer. You can set options that may affect screen-sharing performance and security, as well as manage your personal preferences.

- Settings and access credentials for the LDAP (Lightweight Directory Access Protocol) server, which can allow you to locate other Timbuktu computers by searching their user information.

- Options for logging your Timbuktu activity locally or to a central server.

Setting Timbuktu Guest Preferences

The Preferences dialog box lets you specify a number of configuration options for the Timbuktu Guest. To open the Preferences dialog box, click the **Setup** menu and choose **Preferences**. The tabs in the Preferences dialog box are as follows:

- **General**—Sets the Timbuktu computer name. See page 14.

- **Remote Control**—Sets screen-sharing window preferences for when your computer acts as the guest computer for an outgoing Control or Observe connection. See page 15.

  Note that you may also set Timbuktu Host preferences for the Control and Observe connections you receive. Timbuktu Host preferences are managed with the Timbuktu Host Configuration Utility. See *"The Remote Control Tab" on page 25.*

- **LDAP**—Enables the LDAP integration and manages LDAP server connection settings. See page 16.

- **Logging**—Manages logging options. See page 17.

The following sections describe each of these tabs.

The General Tab

On the **General** tab, you can set the Timbuktu computer name. By default, Timbuktu uses your computer's Windows name as its computer name. However, you may set the computer name to anything that will help identify your computer to other Timbuktu users.
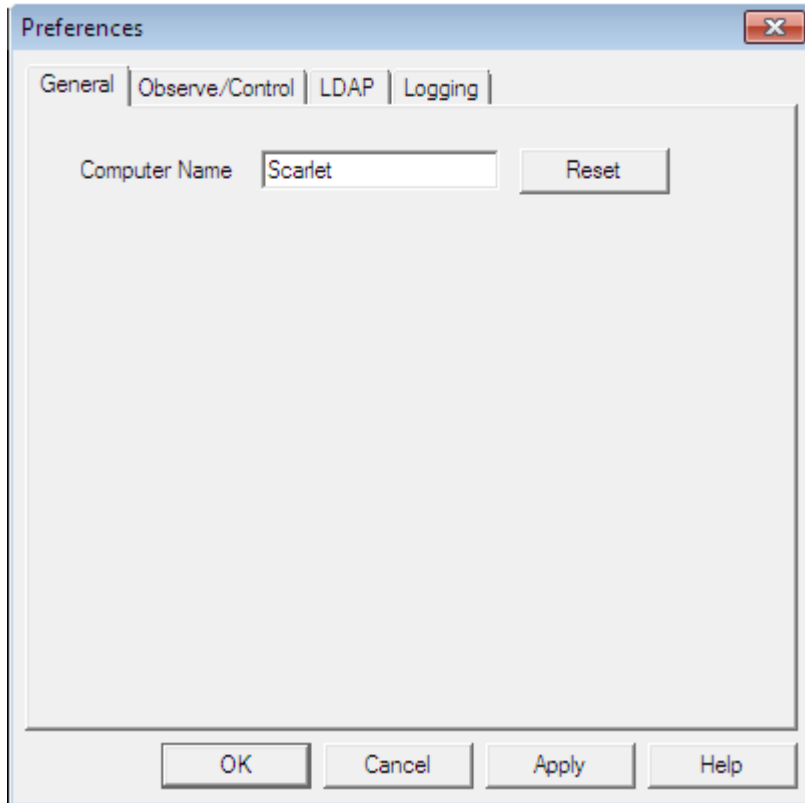
The Observe/Control Tab

Timbuktu Control and Observe sessions take place in a **screen-sharing window**, which displays the host computer's desktop on your screen. The **Observe/Control Guest** tab in the Preferences dialog box lets you control the appearance and behavior of the screen-sharing window. You can also specify options that may improve screen-sharing performance and security during screen-sharing sessions.

- In the **Window** area, you can specify a number of options for the screen-sharing window, including scrolling behavior and the size of the image of the remote desktop.

- Timbuktu supports secure screen blanking, which prevents unauthorized viewing of a computer's screen while it is being controlled by a remote Timbuktu user. Secure screen blanking is usually controlled by the host computer settings, but the **Blank the Screen** option allows you to request it (but not force it to occur) as the guest user.

  For more information about the security provided by secure screen blanking, see "Secure Screen Blanking" on page 25.

- The **Keyboard Handling** area includes options for how your keystrokes are translated by the host computer.

- Screen-sharing performance can be affected by the options you select in the **Capture Technique** and **Presentation** lists.
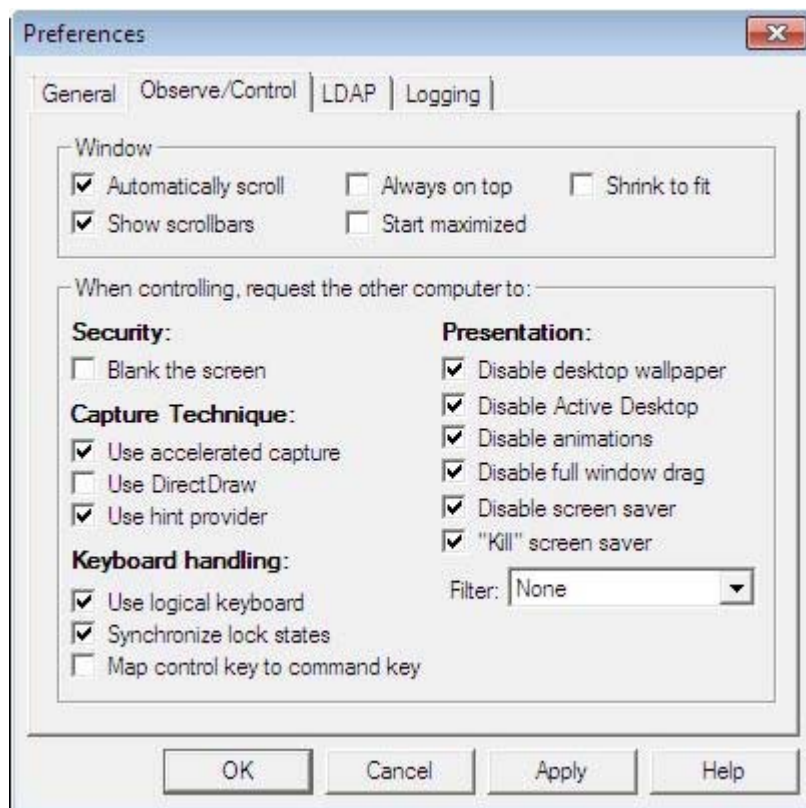
The LDAP Tab

Timbuktu's LDAP support allows Timbuktu users to find other Timbuktu computers without knowing their IP addresses. You can search for other LDAP-enabled Timbuktu computers by their user information, including the computer name, user name, email address, and location.

To use the LDAP server's search functionality, you must configure options on the **LDAP** tab. You can enable the LDAP functionality and specify LDAP server information.
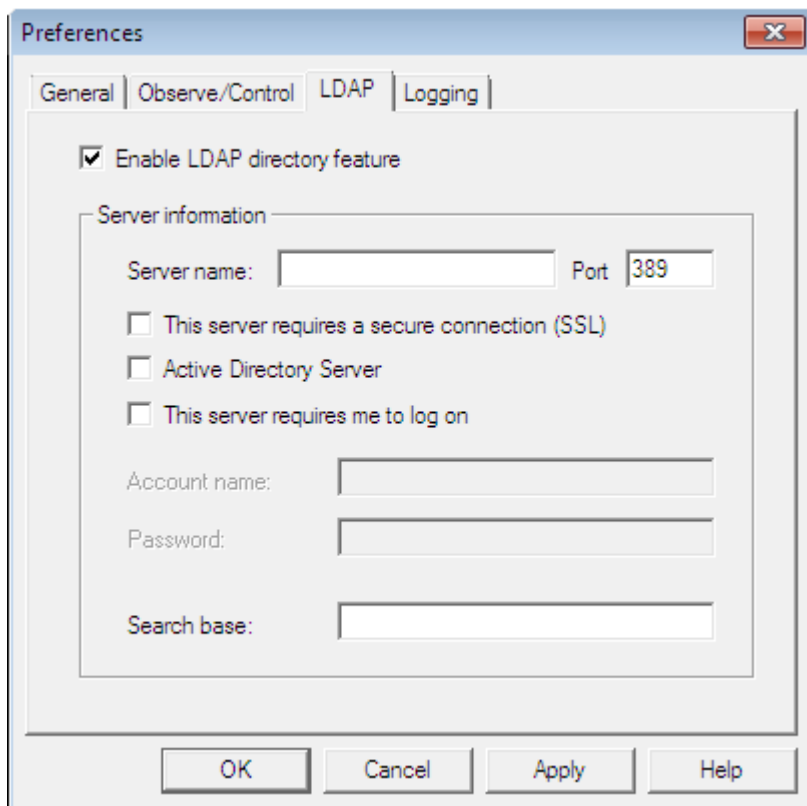
Note: If you wish to provide your own user information to the search tools on the server, you can do so with the Timbuktu Host Configuration Utility. See "The LDAP Tab" on page 29.

The Logging Tab

Timbuktu supports multiple options for local and centralized event logging.

Among other options, you may specify the maximum size for your log files. When the maximum size for a log file is reached, its contents are copied to a backup file and removed from the primary file. This allows the primary file to remain small, which may improve performance if you use centralized logging.
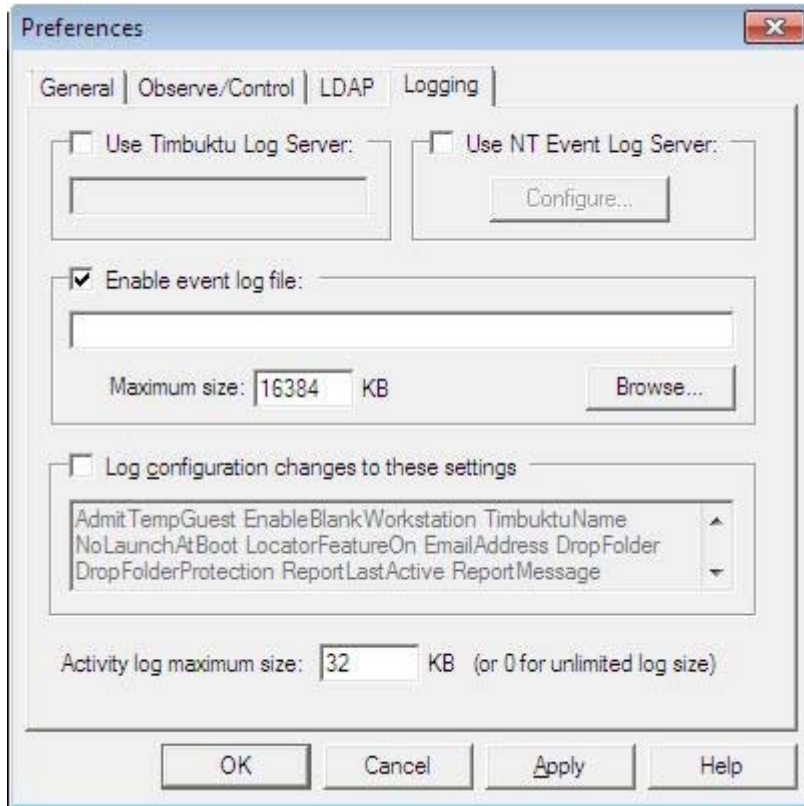
For information about logging options, see "Logging" on page 49.

Configuring Incoming Access

Because the Timbuktu Host is a separate application from the Timbuktu Guest, the Timbuktu Host settings are not available in the Timbuktu Guest application. Instead, Timbuktu Host settings are managed with the Timbuktu Host Configuration Utility. See chapter 4, "Configuring the Timbuktu Host."

Making Connections

When you have finished configuring the Timbuktu Guest or confirmed its default settings meet your needs, you are ready to make connections to other Timbuktu computers. For information about making connections and the Timbuktu services you can use, see chapter 5, "Making Connections," and chapter 6, "Timbuktu Services."

Chapter 4: Configuring the Timbuktu Host

Once you have installed Timbuktu, you can review and change your configuration settings. This chapter describes configuration options for the Timbuktu Host.

In Timbuktu for Windows, version 9, the Timbuktu Host is now a separate application from the Timbuktu Guest, and the Timbuktu Host settings are no longer available in the Timbuktu Guest application. Instead, Timbuktu Host settings are managed with the new Timbuktu Host Configuration Utility.

Configuration Requirements and Options

The Timbuktu Host listens for and accepts incoming Timbuktu connections. By default, the Timbuktu Host will not allow incoming connections. To fully enable incoming Timbuktu access, you must configure

- Discovery options. Other Timbuktu computers can search for your computer in several different ways: with the Scanner, the Internet Locator, and with an LDAP server. You can configure Internet Locator and LDAP options.

  If you do not configure the Internet Locator or LDAP, the Scanner may still discover your computer when the Timbuktu Host is running. Other Timbuktu users who know your computer's IP address, WINS name, or DNS name may also enter it directly on the **TCP/IP** tab in the Timbuktu Guest window.

- User accounts. No other Timbuktu computer can connect to your computer without your prior authorization. There are several levels of remote access: you may assign privileges to all Guest Users, allow remote users to ask for permission to use unassigned services, and create NT Users and Registered Users with specific privileges.

- Timbuktu service options. You can control certain aspects of how your Timbuktu handles incoming connections that use the Control, Observe, Send, and Notify services.

Setting Timbuktu Host Preferences

With the Timbuktu Host Configuration Utility, you can manage numerous configuration options for the Timbuktu Host. To open the Timbuktu Host Configuration Utility, click the Timbuktu icon in the system tray on the taskbar. From the shortcut menu, choose **Open Host Settings**.

The tabs in the Timbuktu Host Configuration Utility window are as follows:

- **General**—Sets the Timbuktu Host computer name and Internet Locator information. See .

- **Guest User**—Specifies the Timbuktu services that can be used by Guest Users, and whether Guest Users can ask for permission to use other services. See .

- **NT Users**—Creates and assigns access privileges to NT User accounts. Because NT Users are authenticated when they log on to Windows, they are not required to provide an additional password before connecting to your computer. See page 23.

- **Registered Users**—Creates and assigns access privileges to Registered User accounts. Registered Users must supply a user name and password to access your computer. See page 24.

- **Remote Control**—Sets screen-sharing window preferences for when your computer acts as the host computer for an incoming Timbuktu connection. See page 25.

  Note that you may also set Timbuktu Guest preferences for the Control and Observe sessions you initiate. These preferences are managed with the Preferences dialog box in the Timbuktu Guest. See "The Observe/Control Tab" on page 15.

- **Send**—Sets preferences for the Send service, including the way messages are treated when they arrive on your computer. See page 27.

- **Notify**—Sets preferences for the Notify service, including a message your computer will display on the remote computer in response to incoming Notify requests. See page 28.

- **LDAP**—Enables the LDAP integration, manages LDAP server connection settings, and sets user information for the LDAP server's search functionality. See page 29.

- **Logging**—Manages logging options. See page 30.

- **Sitekey**—Manages your Sitekey and allows you to manage Site Administrator privileges. Note that the **Sitekey** tab will appear only if your Timbuktu installation uses a Sitekey. See page 30.

Depending on your Timbuktu installation, some of these tabs may not appear in the Timbuktu Host Configuration Utility.

The General Tab

On the **General** tab, you can enter an email address for the Internet Locator, which allows other Timbuktu users to find your computer by entering your email address, and specify a computer name.

By default, Timbuktu uses your computer's Windows name as its computer name. However, you may set the computer name to anything that will help identify your computer to other Timbuktu users.

The Internet Locator

Timbuktu's Internet Locator feature allows Timbuktu users to locate and connect to other Timbuktu computers by entering the host computer's email address instead of its IP address. This can be particularly helpful when the host computer is connected to a network that assigns dynamic IP addresses.

To register your computer with the Internet Locator, enable the Internet Locator and enter an email address in the **Email Address** box. Every time the Timbuktu Host is started, the email address and your computer's current IP address are automatically sent to the Internet Locator server. When another Timbuktu user enters the email address on the **TCP/IP** tab, the Internet Locator server translates the email address to the correct IP address and Timbuktu completes the connection.

Motorola maintains an Internet Locator server for public use. (Its DNS name is **findme.netopia.com**.) Your Timbuktu administrator may also configure your Timbuktu installation to use a different server.

The Guest User Tab

Use the **Guest User** tab to assign Timbuktu service privileges to the Guest User account—a single Timbuktu account that does not require the user to supply access credentials, and whose access privileges are available to anyone who connects to your computer with Timbuktu. All Timbuktu users that do not have NT User or Registered User accounts are treated as Guest Users. Because no authentication is required, you should exercise caution when granting a service to Guest Users.
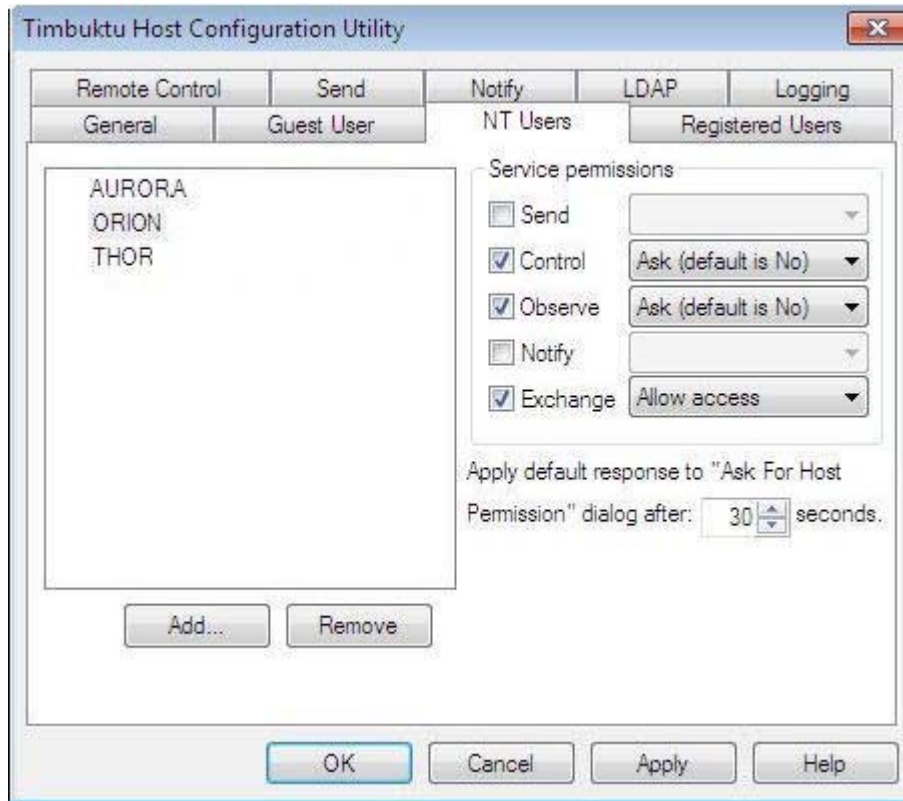
For more information about Guest Users and assigning access privileges, see "Guest Users and Ask for Permission Users" on page 31.
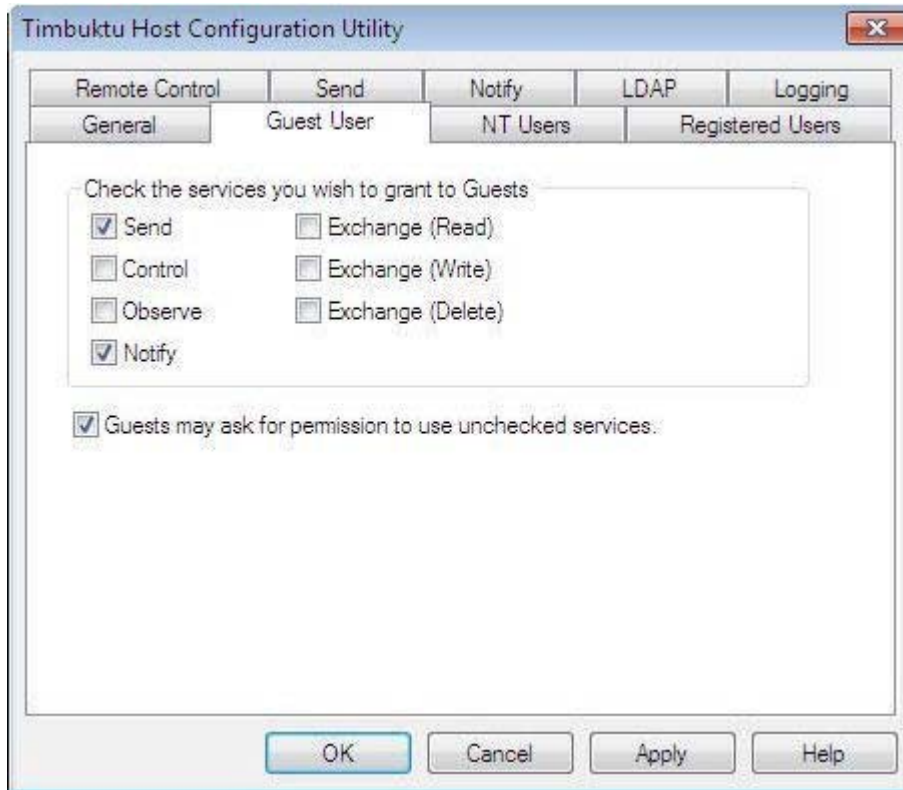
The NT Users Tab

On the **NT Users** tab, you can assign Timbuktu services to NT Users—users and members of user groups on your Windows network who have been authenticated by logging on to the Windows network. Because they have already been authenticated by the operating system, NT Users do not need an additional password to access your computer. If desired, you can require NT Users to ask for permission after they have been authenticated but before they can connect to your computer.

For more information about creating NT User accounts and assigning access privileges, see "NT Users" on page 32.

The Registered Users Tab

On the **Registered Users** tab, you can assign Timbuktu services to Registered Users—Timbuktu users who must supply a user name and password to access your computer. You can create Timbuktu accounts for as many Registered Users as you wish, and assign each user a specific set of access privileges. If desired, you can require Registered Users to ask for permission after they have been authenticated but before they can connect to your computer.

For more information about creating Registered User accounts and assigning access privileges, see "Registered Users" on page 32.
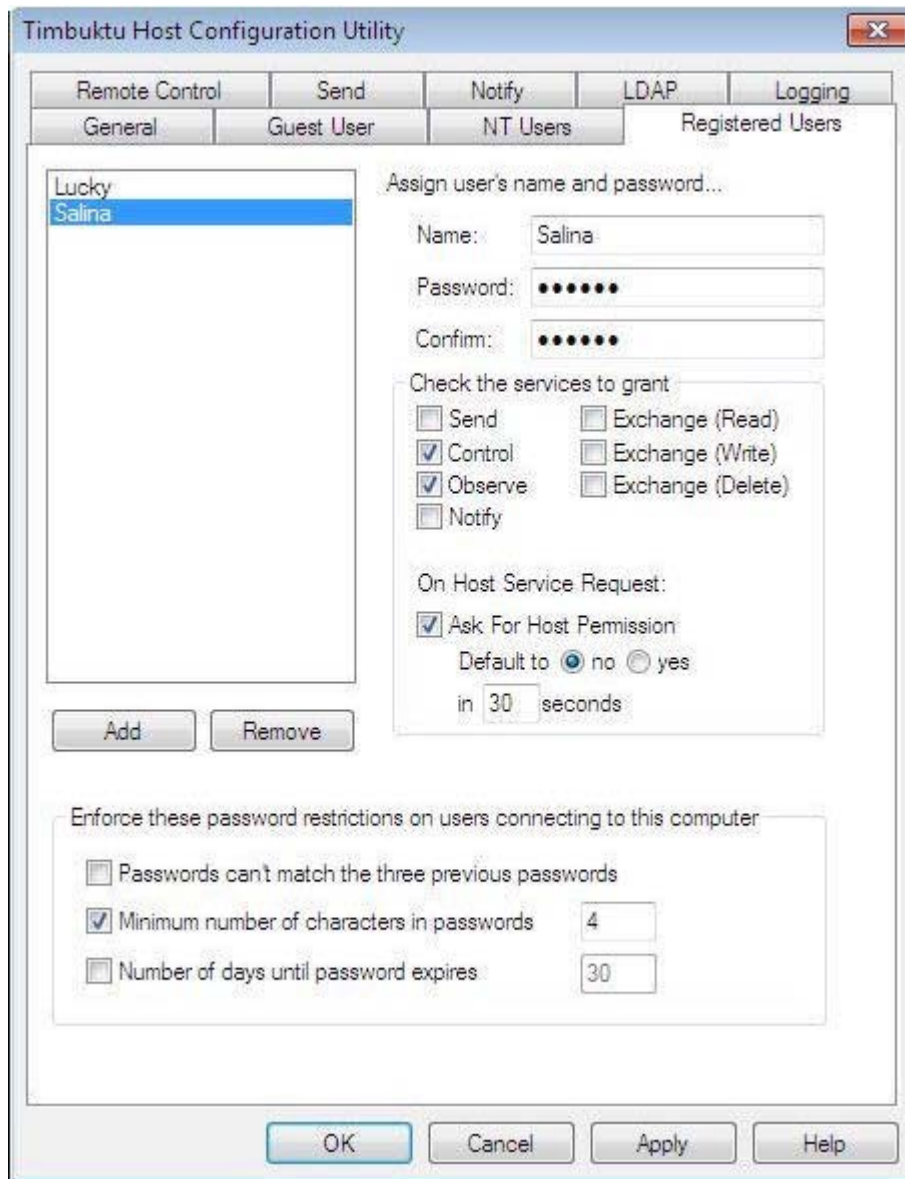
The Remote Control Tab

Timbuktu Control and Observe sessions take place in a **screen-sharing window**, which displays the host computer's desktop on the guest computer's screen. The **Remote Control** tab in the Timbuktu Host Configuration Utility lets you specify options that may improve security and screen-sharing performance when other Timbuktu users use the Control or Observe service with your computer.

- As a security enhancement, Timbuktu supports secure screen blanking during incoming Control and Observe sessions. Secure screen blanking is a Timbuktu security feature that prevents unauthorized viewing of your computer's screen while it is being controlled by a remote user. Set secure screen blanking options in the **Security** area on the **Remote Control** tab. For more information, see the following section, "Secure Screen Blanking."

- The remote-control Capture Frame is an additional security measure that allows you to restrict a remote user's view of your desktop to only the area you wish to share. See "Enabling the Capture Frame" on page 26 for details.

- Screen-sharing performance for the guest computer can be affected by the options you select in the **Capture Technique** and **Presentation** areas.

Secure Screen Blanking

Secure screen blanking is a Timbuktu security feature that prevents unauthorized viewing of your computer screen while a remote user is controlling your computer. When secure screen blanking is active, no one will be able to see what is happening on your computer's desktop. (Note than an observer may be able to see the cursor move and hear any audio the computer generates.)

Secure screen blanking works differently depending on whether you are working at your computer when the other user takes control.

- If you are working at your computer and another user controls it—for example, a member of your organization's technical support team takes control to troubleshoot a problem you're having—the screen will not blank. You will be able to watch the other user's actions and, if necessary, disconnect the user from your computer.

- If your computer is locked and another user controls it, the screen will blank. You will not be able to unlock your computer until the other user ends the Control session. When the other user disconnects, you can unlock your computer normally.

Enabling the Capture Frame

When you enable the **Use Capture Frame** option on the **Remote Control** tab in the Timbuktu Host Configuration Utility, the Capture Frame will open on your desktop when another Timbuktu user establishes a Control or Observe connection to your computer.

The screen-sharing session will begin when you click the **Play** button in the upper-left corner of the Capture Frame. This allows you to position the Capture Frame on your desktop before screen-sharing begins. During the screen-sharing session, only the portion of your desktop that appears in the Capture Frame is displayed in the screen-sharing window on the guest computer.

Note: Do **not** enable the **Use Capture Frame** option if anyone will need to use the Control or Observe service to access your computer when you are not present. Because you must click the **Play** button to allow the screen-sharing session to proceed, you must be physically present at the host computer.

For additional information about using the Capture Frame, see .

The Send Tab

The Send service lets Timbuktu users send messages to other Timbuktu computers. On the **Send** tab, you can control whether Timbuktu notifies you of an incoming message by displaying the message in a full-sized window or as a minimized icon on the taskbar. You can also designate how much of your disk space should be protected from temporary storage of messages and their enclosures and the directory in which they will be stored.
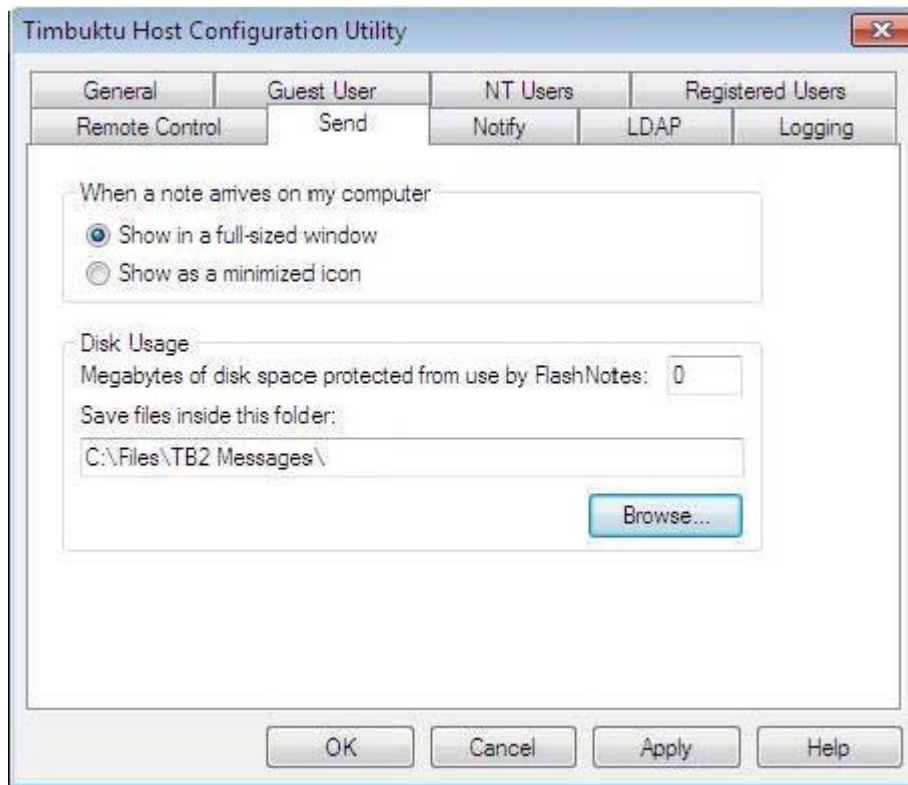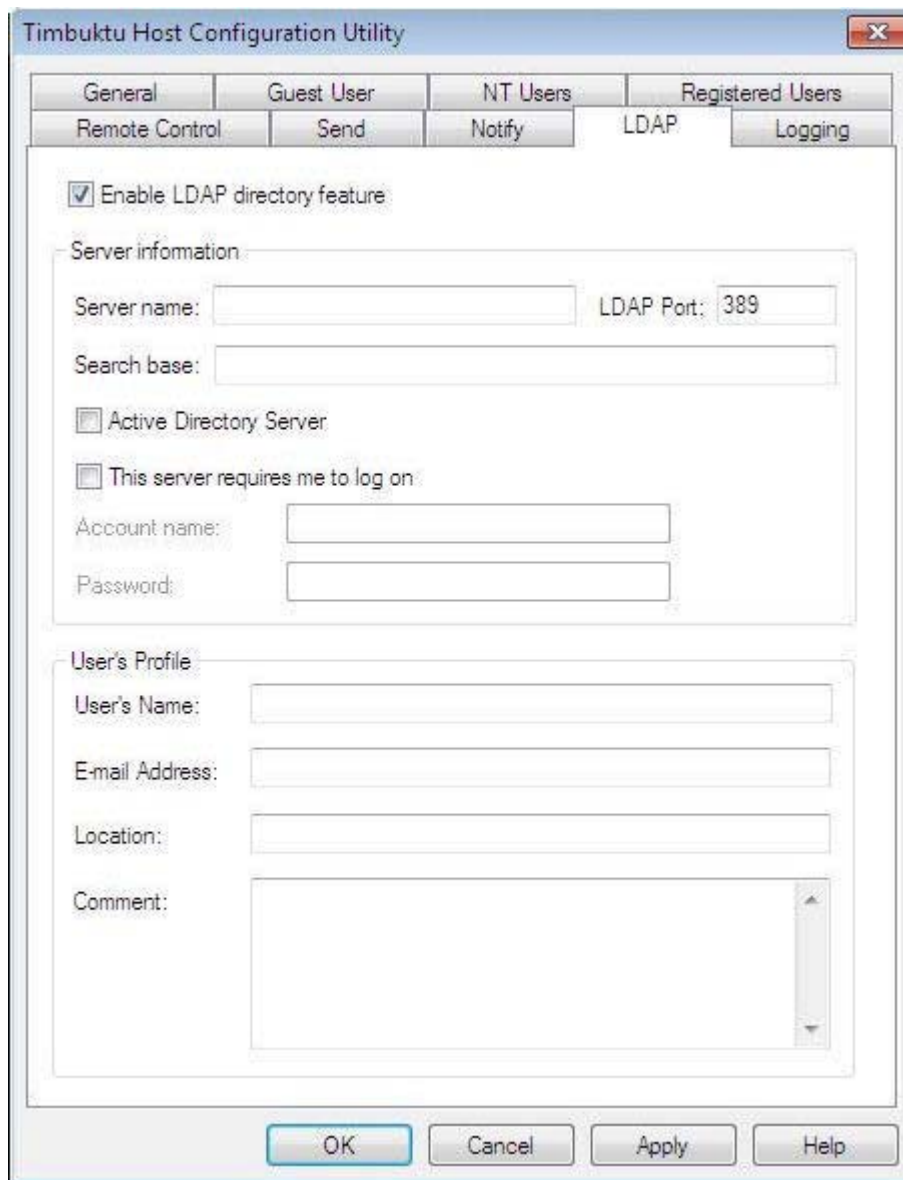
The Notify Tab

The Notify service lets Timbuktu users query another computer to determine whether its user is present. On the **Notify** tab, you can control how your computer responds when other Timbuktu users send notification requests.
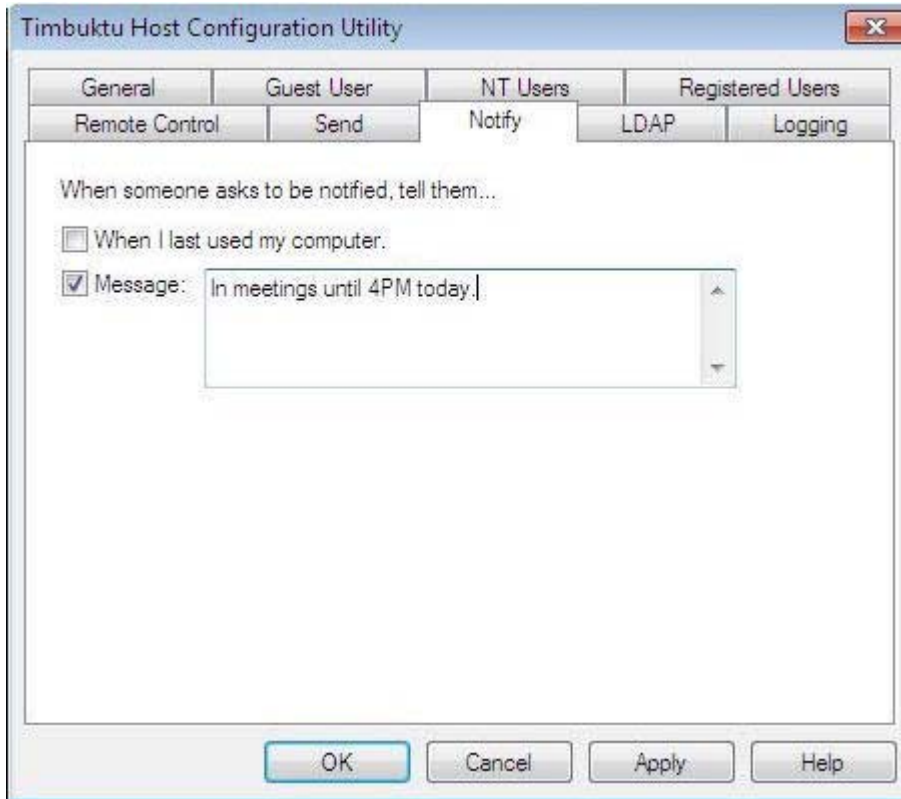
The LDAP Tab

Timbuktu's LDAP support allows Timbuktu users to find other Timbuktu computers without knowing their IP addresses. You can search for other LDAP-enabled Timbuktu computers by their user information, including the computer name, user name, email address, and location.

To use the LDAP server's search functionality, you must configure options on the **LDAP** tab. You can enable the LDAP functionality, specify LDAP server information, and provide your own user information to the search tools on the server.
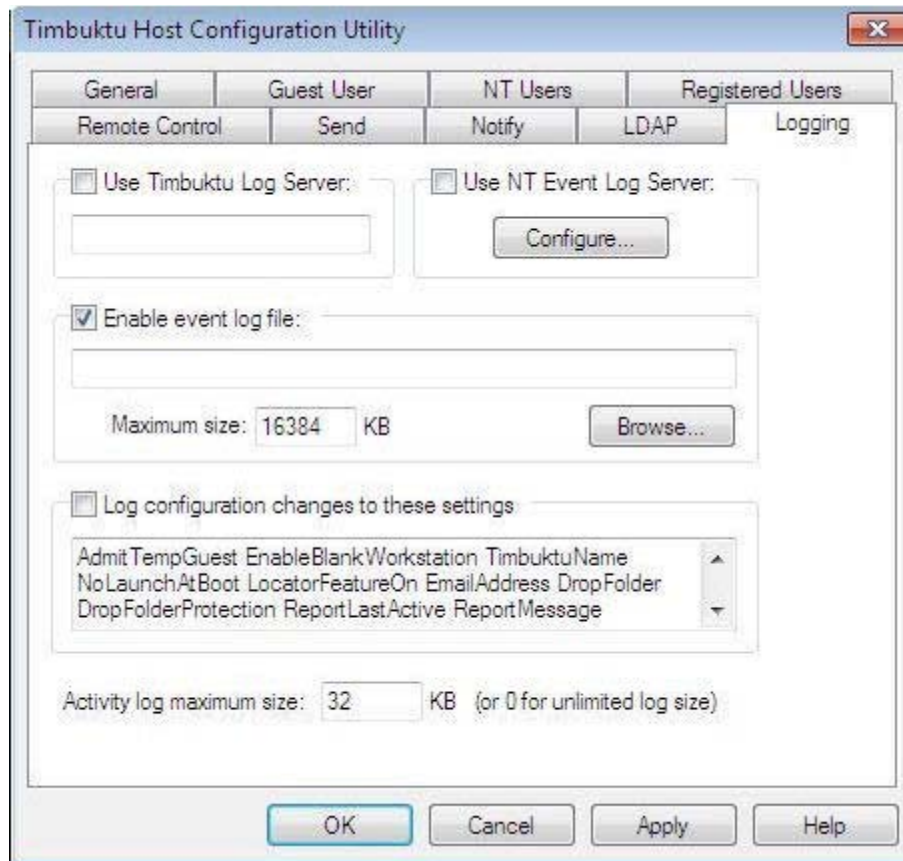
The Logging Tab

Timbuktu supports multiple options for local and centralized event logging. You can enable and disable logging options on the **Logging** tab.

Among other options, you may specify the maximum size for your log files. When the maximum size for a log file is reached, its contents are copied to a backup file and removed from the primary file. This allows the primary file to remain small, which may improve performance if you use centralized logging.

For information about logging options, see "Logging" on page 49.

The Sitekey Tab

The **Sitekey** tab displays information about your computer's Timbuktu Sitekey and allows you to manage Site Administrator privileges.

The **Sitekey** tab will appear only if your Timbuktu installation uses a sitekey.

Managing User Accounts

Before your computer will allow incoming Timbuktu connections, you must grant user access to one or more Timbuktu services. Use the **Guest User**, **NT Users**, and **Registered Users** tabs in the Timbuktu Host Configuration Utility to create user accounts and assign access privileges. You can allow one-time-only access by enabling the Ask for Permission feature, assign certain services to all Guest Users, and grant permanent access privileges to individual NT Users and Registered Users. You can add or remove access privileges or user accounts at any time.

Note that having a Timbuktu account on one computer does *not* give a user the ability to connect to any other Timbuktu computer. Each Timbuktu Host controls its own access permissions.

Before You Create User Accounts

As you configure the Guest User and individual user accounts, keep the following points in mind.

- The Control service allows the other Timbuktu user to perform any of the tasks that you can perform when you are logged on to your computer. This means that a user with the Control privilege may be able to run applications; create, modify, or delete files without restriction; and erase data from your computer. The Control privilege, therefore, should be granted with caution.

- If you grant Ask for Permission access to a user requesting the Exchange service, you automatically grant the user access to all three Exchange sub-services: Exchange (Read), Exchange (Write) and Exchange (Delete).

- If you decide that a certain service—for example, Control or Exchange—should not be available to any user at any time, you must remove that service from Guest User access and from the list of privileges for every user account. You may also disable the Ask for Permission feature.

- The services you assign to Guest Users are automatically assigned to NT Users and Registered Users as well. You cannot withhold a privilege from a NT User or Registered User if that privilege is assigned to Guest Users.

When you have finished configuring Timbuktu user accounts, shut down and restart the Timbuktu Host as described in "Starting and Shutting Down Timbuktu" on page 10. When it restarts, the Timbuktu Host will apply your new settings and resume listening for incoming connections.

Guest Users, NT Users, and Registered Users

Timbuktu allows you to specify many different levels of remote-user access. You can allow all Timbuktu users to access certain services, and limit other services to password-authenticated users or make them entirely inaccessible.

Guest Users and Ask for Permission Users

All Timbuktu users that do not have NT User or Registered User accounts are treated as *Guest Users*. The Guest User is a single account that does not require the user to supply access credentials, and whose access privileges are available to anyone who connects to your computer with Timbuktu. For this reason, Guest Users are usually assigned a limited range of Timbuktu services. Services such as Send and Notify, which allow minimal remote interaction with your computer, are often assigned to Guest Users. Services such as Control and Exchange, which may allow complete access to your computer, are almost never assigned to Guest Users. Exercise caution when granting a service to Guest Users.

If desired, assign Timbuktu services to Guest Users on the **Guest Users** tab. Recall that the services you assign to Guest Users are automatically assigned to NT Users and Registered Users as well. You cannot withhold a privilege from a NT User or Registered User if that privilege is assigned to Guest Users.

If you enable the **Guests May Ask for Permission to Use Unchecked Services** option, a Timbuktu user who does not have permission to use a particular Timbuktu service can request permission to use that service on a one-time-only basis. When a user asks for permission, the Ask for Permission dialog box will appear on your screen. (A similar dialog box will appear if you have enabled the **Ask for Host Permission** option for an NT User or Registered User.) You can allow or deny the request.

Note that when a Guest User has connected to your computer, the Timbuktu icon in the system tray will indicate that a user has connected to your computer (see "Monitoring Remote Connections" on page 49).

NT Users

NT Users are users, user groups, or security principals on your Windows network who have been granted permission to use specific Timbuktu services on your computer. Because NT Users are authenticated when they log on to the Windows network, Timbuktu does not require them to use an additional password when they connect to your computer. Note, however, that this does *not* grant Timbuktu access to all Windows users on your network. You still must create an NT User account and assign privileges for each Windows user you wish to allow.

To allow Windows-authenticated users access to your computer, create NT User accounts on the **NT Users** tab. Each account allows you to assign a unique set of Timbuktu privileges to a user or user group on your Windows network. You can create as many NT User accounts as you wish. An NT User can access the services you have assigned to the NT User account anytime the Timbuktu Host is running on your computer. However, you may require individual NT Users to ask for permission before they can connect to your computer. The ask for permission requirement can be enabled on a service-by-service basis, and you can choose whether the default response (if you are not present) is to allow or deny access.

Registered Users

Like NT Users, *Registered Users* have password-protected access to your computer, but they are not authenticated by Windows. Instead, they must supply a user name and password, which you assign, before they can connect to your computer.

Use the **Registered Users** tab to create Registered User accounts and assign Timbuktu services to each user. You can create Timbuktu accounts for as many Registered Users as you wish, and assign each user a different set of access privileges. A Registered User can access the services you have assigned to the Registered User account anytime the Timbuktu Host is running on your computer. However, you may require individual Registered Users to ask for permission before the Timbuktu connection is completed.

Registered Users may change their own passwords. When you create a Registered User account, you may also assign password restrictions to increase the security of the passwords your Registered Users can create.

Working with the Timbuktu Host

When you have finished configuring the Timbuktu Host, you can close the Timbuktu Host Configuration Utility. The Timbuktu Host itself will continue listening for incoming connections. For information about working with Timbuktu services as the host computer and monitoring incoming access, see chapter 7, "Managing the Timbuktu Host."
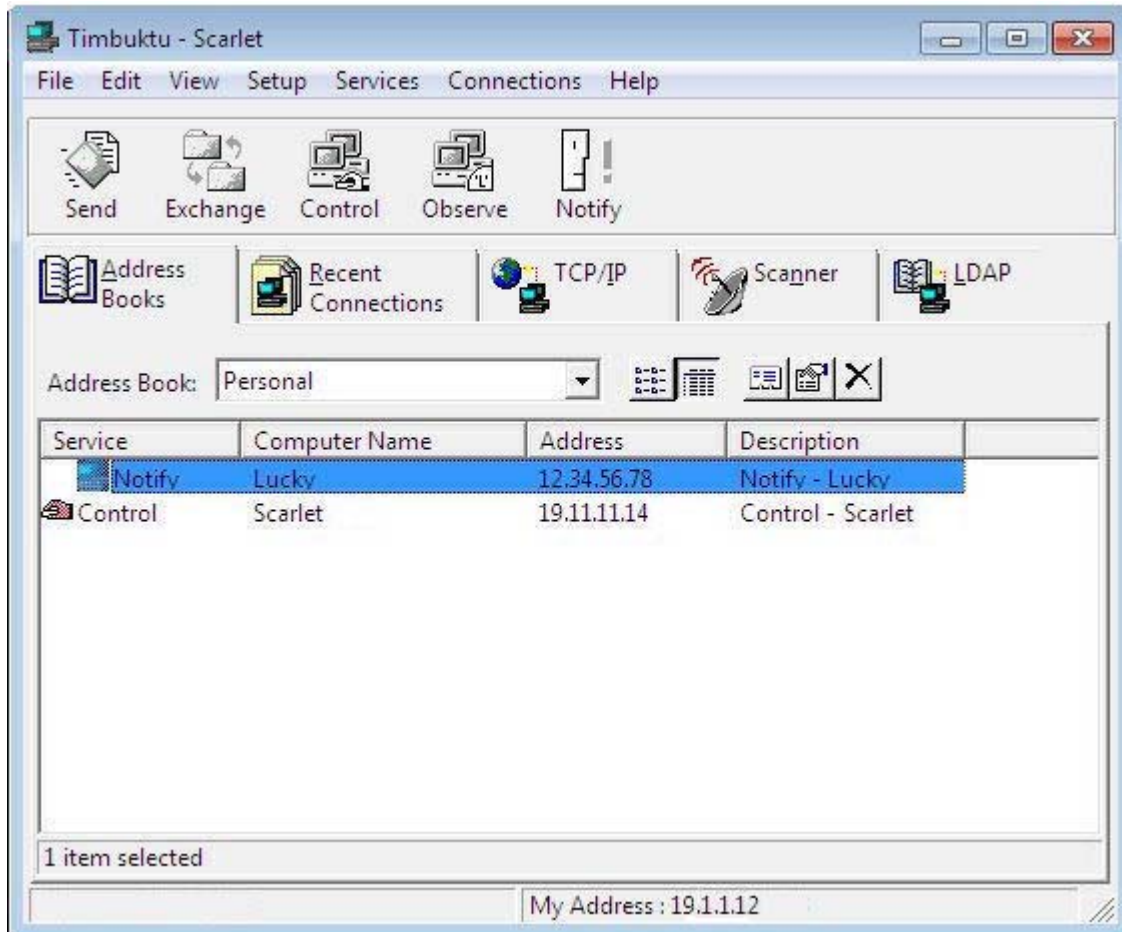
Chapter 5: Making Connections

This chapter discusses how you can use the connection tabs in the Timbuktu Guest window to connect to other Timbuktu computers.

The Timbuktu Guest Window

When you start the Timbuktu Guest, the Timbuktu Guest window opens on your desktop.

Timbuktu Menus

Use the menus at the top of the window to make connections, customize the Timbuktu Guest, and view the activity log.

Timbuktu Service Toolbar

Use the *service buttons* on the Timbuktu Service Toolbar, located below the menu bar, as shortcuts to launch the Timbuktu services listed in the **Services** menu. The service buttons will remain dimmed until you have entered or selected an address on one of the connection tabs.

Connection Tabs

You will use the *connection tabs* in the middle of the Timbuktu Guest window to specify or select the other Timbuktu computers to which you will connect. To bring a tab to the front, click it.

Note that when a computer is listed or displayed on one of the connection tabs, this does not automatically enable you to connect to that computer. Addresses remain visible in the **Address Books** and **Recent Connections** tabs even when the computers at those addresses are not running the Timbuktu Host or are shut down.

Status Bar

The *status bar* at the bottom of the Timbuktu Guest window contains two information panels. The panel on the right displays your computer's TCP/IP address. If the Timbuktu Host is installed on your computer, other Timbuktu users will use this address to connect to you.

The Timbuktu Connection Process

Before you can use any Timbuktu service with a remote computer, you must establish a connection with the computer. The connection process occurs in the following sequence.

1. Select or specify a remote computer.

    You may enter a computer's name or IP address on the **TCP/IP** tab or search for other Timbuktu computers with the Scanner or LDAP. You may also use an address book or re-establish a previous connection on the **Recent Connections** tab.

2. Choose a Timbuktu service.

    Once you have specified or selected the remote computer you want, you must choose the service you wish you use.

    •   Click a service button on the **Services** toolbar.

    •   Choose a service from the **Services** menu.

3. Provide access credentials.

   If required, you must enter your access credentials or ask for permission.

As long as you have been granted access as a Guest User, Ask for Permission User, Registered User, or NT User, you can connect to any Timbuktu computer on your TCP/IP network.

Step 1: Selecting the Remote Computer

Each connection tab in the Timbuktu Guest provides a different way for you to select or specify the remote computer. If you have not connected to the computer before, you will need to locate it.

You can establish a Timbuktu connection to a computer you haven't used before in a number of ways.

•   Enter the computer's IP address, WINS or DNS name, or email address on the **TCP/IP** Tab.
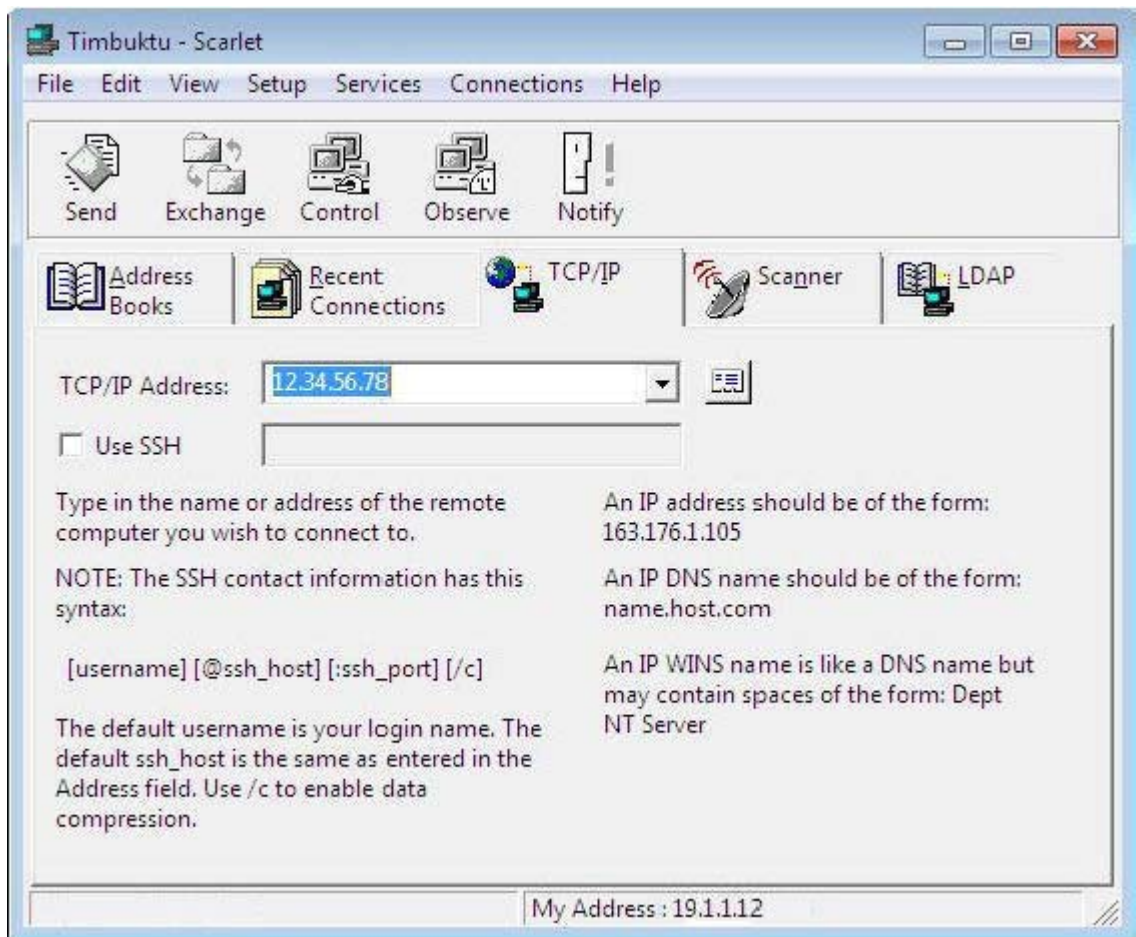
If you enter the computer's email address, the Internet Locator server will translate the email address to the computer's correct IP address. See "The Internet Locator" on page 21 for more information about the Internet Locator.

If you use the **TCP/IP** tab to specify the remote computer, you may use SSH to secure your connection. See "Connecting Securely with SSH" on page 38.

- Use the **Scanner** tab to search your network for active Timbuktu computers.
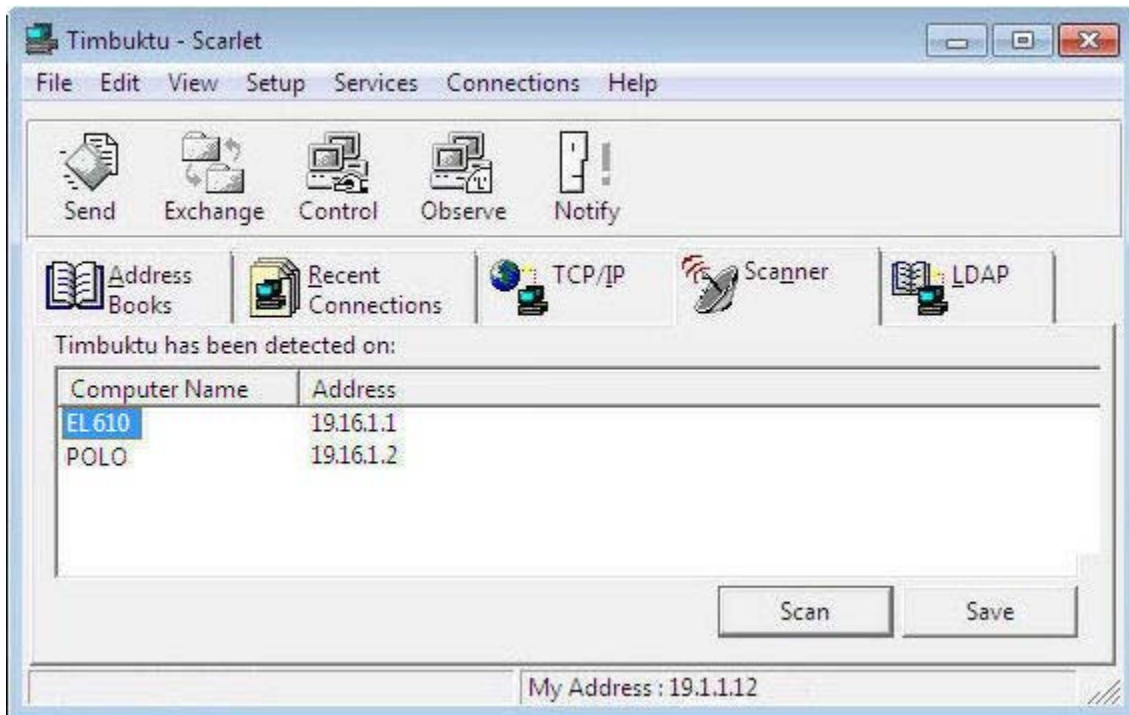
Timbuktu will scan your local network and return a list of the Timbuktu computers it finds. Select the desired computer to connect without leaving the **Scanner** tab.

Note: By default, the Scanner scans the local TCP/IP subnet. Your system administrator can customize and extend the range of the search.

- Search for remote computers meeting specific criteria on the **LDAP** tab.
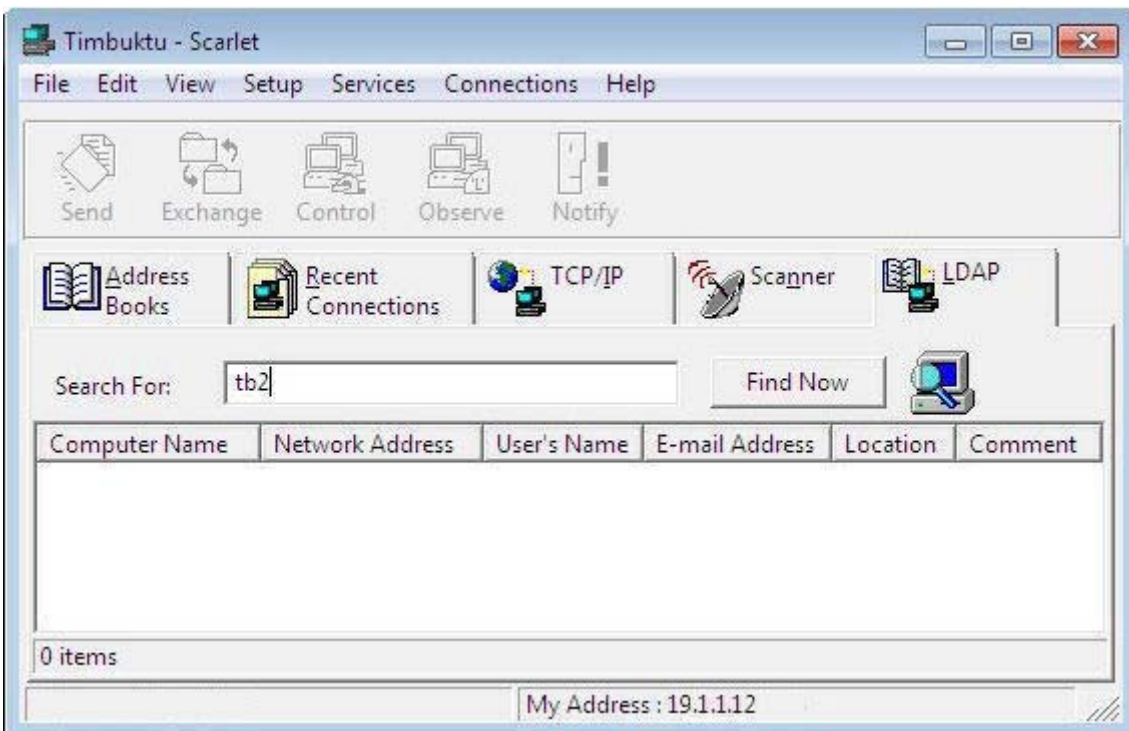
When you don't know a computer's IP address and it isn't located on a network the Scanner can access, enter search criteria on the **LDAP** tab. Select the desired computer to connect without leaving the **LDAP** tab.

If you have connected to the desired computer before, you have additional connection options:

• If you have saved the computer to an address book, open the address book on the **Address Books** tab and select the computer.
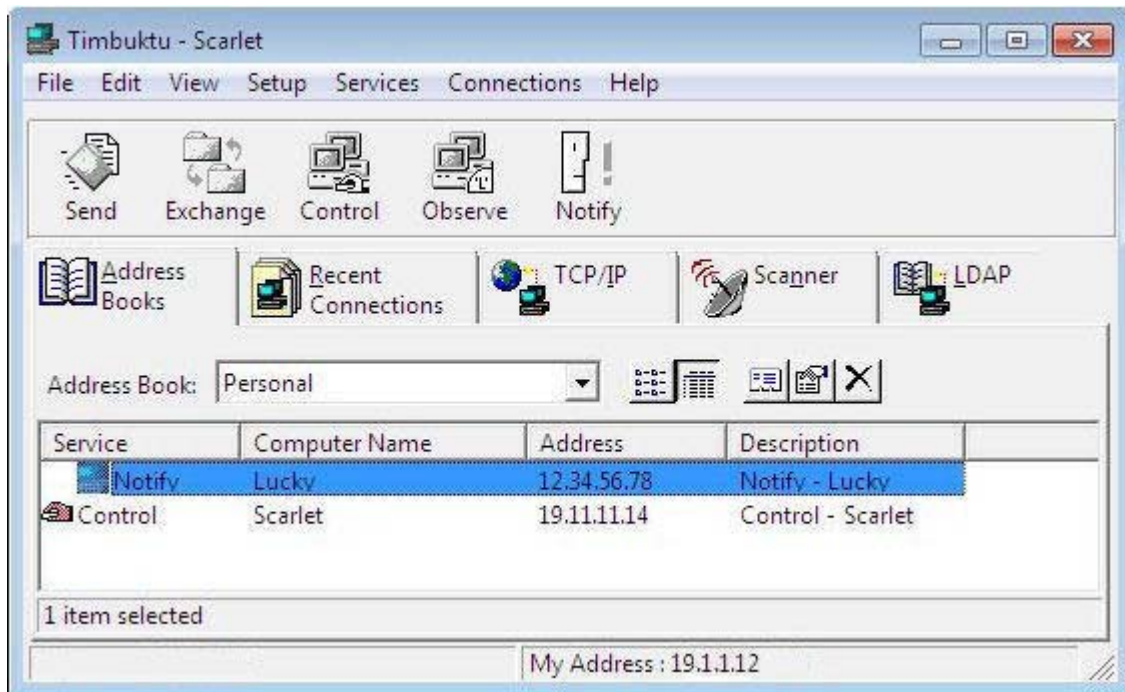
An address book is a collection of saved computers to which you can quickly establish a Timbuktu connection. Each saved address includes the computer name, its connection address, and a default service—the Timbuktu service that is used when you double-click the address. Once you have added an address to your address book, you don't have to re-enter the address each time you connect to that computer.

For more information about using address books and saving computers to them, see "Address Books" on page 38.

• The **Recent Connections** tab displays a record of your previous Timbuktu connections, including the date and time of the most recent connection and the Timbuktu service you used. You can establish the new connection using the same service as before, or you can select a new one.
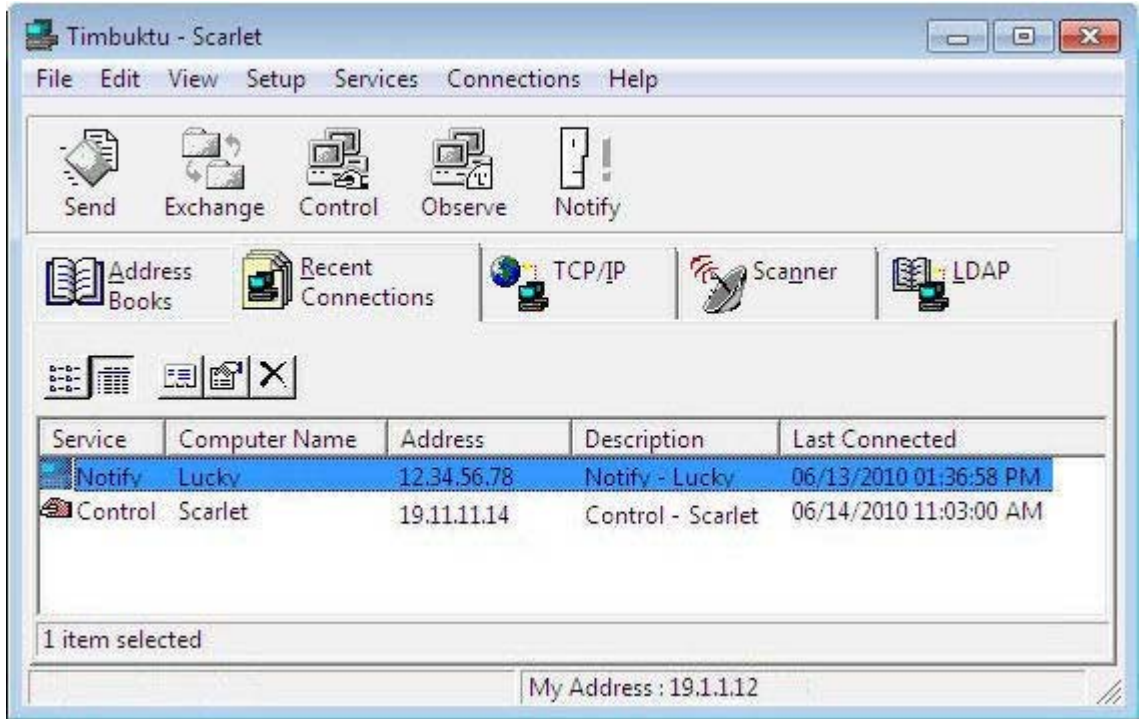
When you establish a connection from the **Recent Connections** tab, you can use the same Timbuktu service as before or select a different service.

• The **TCP/IP Address** drop-down list on the **TCP/IP** tab lists the 20 most recent connections you have made from the **TCP/IP** tab. (Connections made from other connection tabs are not listed.) Select the desired computer from the list to begin the connection process.

On most connection tabs, you can select multiple computers. When you select more than one computer, the same Timbuktu service will be invoked for each one.

Connecting Securely with SSH

If you use the **TCP/IP** tab to specify the remote computer, you may use SSH to secure your connection.

To complete an SSH connection, you must have operating-system-level access credentials—either Windows or Mac OS X—for the remote computer. If the remote computer is a Macintosh, the Mac's local user must also assign you a Mac OS X Registered User account that allows you access.

SSH connections use an SSH gateway to secure your Timbuktu connection. Note that the connection is encrypted **only** between your computer and the SSH gateway. The connection from your computer is decrypted at the SSH gateway, and the connection between the gateway and the host Timbuktu computer is **not** encrypted.

Address Books

A Timbuktu *address book* is a collection of saved computers to which you can quickly establish a Timbuktu connection. Once you have added a computer to your address book, you don't have to re-enter its address each time you connect.

By default, Timbuktu includes one address book, called **Personal**. You can create other address books to group addresses into convenient clusters: for example, business contacts, friends, and family. Use the

Address Books tab to view the contents of your address books and connect to the computers you have saved.

To save a computer to an address book, select it on the **TCP/IP** or **Recent Connections** tab and click the **Copy to Address Book** button. You may also save the list of computers found by the Scanner and copy addresses from one address book to another.

Note: In some situations, such as if your organization uses dynamic TCP/IP addressing, a remote computer's TCP/IP address may change frequently. In this situation, you may not want to store IP addresses in Timbuktu's address books. Use the Internet Locator email address instead.

Step 2: Selecting the Timbuktu Service

Once you have selected the computer to which you wish to connect, select a Timbuktu service from the **Services** menu or click a service button on the Timbuktu Service Toolbar to connect to the selected computer using that service. You may also right-click the target computer to open a shortcut menu, from which you can choose the service to launch.

If you have saved the remote computer to an address book, or if it appears on the **Recent Connections** tab, you can also connect to the computer by double-clicking it. The Timbuktu connection will then be established using the *default service.* In an address book, the default service is the service specified in the computer's connection properties. On the **Recent Connections** tab, the default service is the service used during the last connection.

Step 3: Entering Access Credentials and Completing the Connection

Once you have selected a computer and a Timbuktu service, the connection process will begin. If the service you have selected is assigned to your NT User account, the connection will be completed automatically. Otherwise, the Log In dialog box will appear on your screen.

- If you have a Registered User account on the other computer, select the **Log In as Registered User** radio button. Enter your user name and password and click **OK**. (You may also change your password if desired or if prompted to do so.)

- If the service you wish to use is available to the Guest User account, select the **Log In as Guest** radio button and click **OK**. (With some services, the Log In dialog box will not appear and the Guest User connection will be completed automatically.)

- If you do not have a Registered User account, you may be able to ask for permission to access the other computer. Select the **Ask for Permission** radio button and click **OK**. If the computer's local user grants your request, you will be admitted.

  The user of the other computer may also have chosen to disable the Ask for Permission option. If the **Ask for Permission** radio button is not available, you must use other means to contact the other user to be granted access.

Chapter 6: Timbuktu Services

This chapter introduces you to each of the many Timbuktu services: Control, Observe, Exchange, Send, and Notify. Each Timbuktu service allows you to interact with other computers and other users in a different way. Together, they help you make the most of your network.

This chapter focuses on using Timbuktu services with the Timbuktu Guest. For information about working with Timbuktu services as the host computer, see chapter 7, "Managing the Timbuktu Host."

The Control and Observe Services: Controlling or Observing Another Computer

With the Control and Observe services, you can view another computer's desktop in the *screen-sharing window* on your own computer. The window is continually updated as the other computer's desktop changes.

- When you *control* another computer, you can use your mouse and keyboard to work with the remote computer as if you were working locally. While you are controlling another computer, you can perform any of the tasks that you could perform on your own computer, including opening applications and creating, modifying, and deleting files.

- When you *observe* another computer, you can see the activity on its screen, but you cannot control it. This privilege may be useful for diagnosing problems on a remote computer or viewing a presentation.

The Control and Observe services are collectively known as Remote Control or screen-sharing services.

To control or observe another computer, select the computer on any of the connection tabs in the Timbuktu Guest window. Then click the **Control** or **Observe** service button on the main toolbar.

The Screen-Sharing Window

When you begin a Control or Observe session, the screen-sharing window opens on your desktop. If you are using the Control service, move your cursor into the screen-sharing window to begin working with the other computer. If you are using Observe, use the screen-sharing window to watch the other user's activity.

When the screen-sharing window is not maximized, you can choose whether the window will scroll automatically or only when you click scroll bars at the side and bottom of the window. Use the Preferences dialog box (see page 15) to choose the method you prefer for most situations; you can change your preference for the active screen-sharing session with the system menu (see the following section, "The Screen-Sharing Window System Menu").

When you maximize the screen-sharing window, your preferred behavior will occur unless the remote computer's screen resolution is higher than yours. In this case, the window will scroll automatically when your cursor reaches the edge of the window, enabling you to view the entire remote desktop.

The Screen-Sharing Window System Menu

During a screen-sharing session, the **Control** or **Observe** icon is shown in the upper-left corner of the screen sharing window. Click the icon to open the screen-sharing window's system menu, which includes a number of options to manage settings for the screen-sharing window and how keyboard input is sent to the host computer.

Changing Screen-Sharing Settings for the Current Session

If you wish to change your guest preferences during an active screen-sharing session, open the system menu and choose **Host Settings**. With the Host Settings dialog box, you can change your guest preferences for the current screen-sharing session. Changes you make in the Host Settings dialog box are not applied to subsequent screen-sharing sessions.

Sending CTRL+ALT+DEL to the Remote Computer

If you use the Control service to connect to a computer that is locked, or if you wish to log on as a different Windows user, you cannot display the logon screen by pressing the CTRL+ALT+DEL keys on your computer. Instead, open the system menu and choose **Send Ctrl+Alt+Del to Remote Computer**.

User Account Control, Fast User Switching, and the Secure Desktop

When you Control a Windows computer running Windows 7 or Windows Vista, Timbuktu fully supports User Account Control, Fast User Switching, and the secure desktop.

- When you run an application that requires User Account Control authorization, the UAC prompt is displayed normally in the screen-sharing window. You can use the Control service to interact with the UAC application.

- If you wish to log on to the host computer as a different Windows user, the Control service supports Fast User Switching. As described in the previous section, however, you cannot open the logon screen by pressing the CTRL+ALT+DEL keys on your computer. Instead, open the system menu and choose **Send Ctrl+Alt+Del to Remote Computer**. You can then enter the new user's logon credentials, and the Control session will continue normally.

- Similarly, if you wish to enter the Windows secure desktop, you must use the **Send Ctrl+Alt+Del to Remote Computer** command.

Using the Capture Frame

When the **Use Capture Frame** option is enabled on the host computer, the screen-sharing window on the guest computer displays only the portion of the host computer's desktop that appears within the Capture Frame on the host computer. (See "Enabling the Capture Frame" on page 26 for more information about the Capture Frame.)

Using the Capture Frame as a Guest

To begin any outgoing Control or Observe session, launch the service normally. If the **Use Capture Frame** option is enabled on the host computer, the screen-sharing window will be blank until the user of the host computer clicks the **Play** button in the Capture Frame. Once the session begins, the screen-sharing window will display only the portion of the host computer's desktop that appears inside the Capture Frame. The host user may move or resize the Capture Frame at any time.

When the Capture Frame is enabled, you will be able to use the Control and Observe services normally. The only exception is that you will not be able to move or resize the Capture Frame, even when you control the host computer.

Using the Capture Frame as a Host

When you have enabled the **Use Capture Frame** option on your computer, you must be present to allow the an incoming Control or Observe session to proceed. For details, see "Working with the Capture Frame" on page 48.

Controlling a Macintosh Computer

Controlling a Macintosh computer is usually the same as controlling a Windows computer. However, Windows and Mac keyboards are slightly different. If you need to send a Command (⌘) keystroke to the Macintosh, press the Window key on your Windows computer.

You may also use the **Map Ctrl-> Cmd** option, which appears on the screen-sharing window's system menu when you control a Macintosh. If you enable this option, press CTRL on your Windows keyboard to send the equivalent of a Command keystroke to the Macintosh. If you disable this option, pressing CTRL on your Windows keyboard will send CTRL to the Macintosh.

The Exchange Service: Copying and Moving Files Between Computers

Use the Exchange service to copy and move files and folders in both directions between your computer and another Timbuktu computer. Exchange provides more flexibility than Send, but it also allows the guest user to view and navigate the host computer's file system.

The full Exchange service is a combination of three sub-services: Exchange (Read), Exchange (Write) and Exchange (Delete). The user of the host computer may grant you any combination of these sub-services. For example, you may be able to view (Read) files on the remote computer or copy (Write) files to it, but may not have permission to delete files.
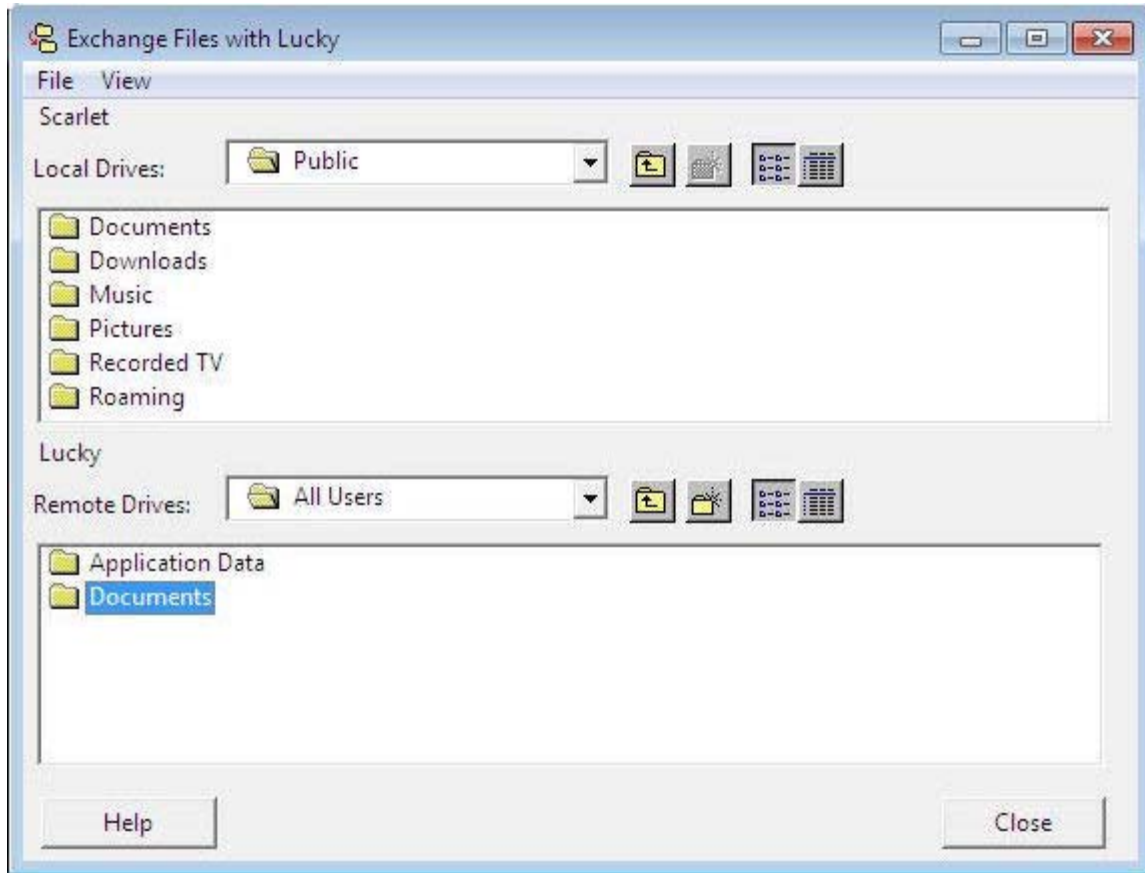
To copy files and folders between computers, select the computer on any of the connection tabs in the Timbuktu Guest window. Then click the **Exchange** service button on the main toolbar.

The Send Service: Sending Messages and Files to Another Computer

With the Send service, you can send messages similar to electronic mail to another computer. You can attach files and folders to your messages, making it possible for you to quickly transfer files much larger than your email system may be able to handle.

When you send a message, Timbuktu temporarily stores it, along with any files you send, in a specific folder on the remote computer. Likewise, the files that other Timbuktu users send you will be stored only in the folder you specify on the **Send** tab in the Timbuktu Host Configuration Utility (see page 27). Once you receive the files, you can save them to any directory you wish.

Unlike the Exchange file-transfer service, Send does **not** allow other Timbuktu users to view the file system on your computer.

To send a message to another computer, select the computer on any of the connection tabs in the Timbuktu Guest window. Then click the **Send** service button on the main toolbar.
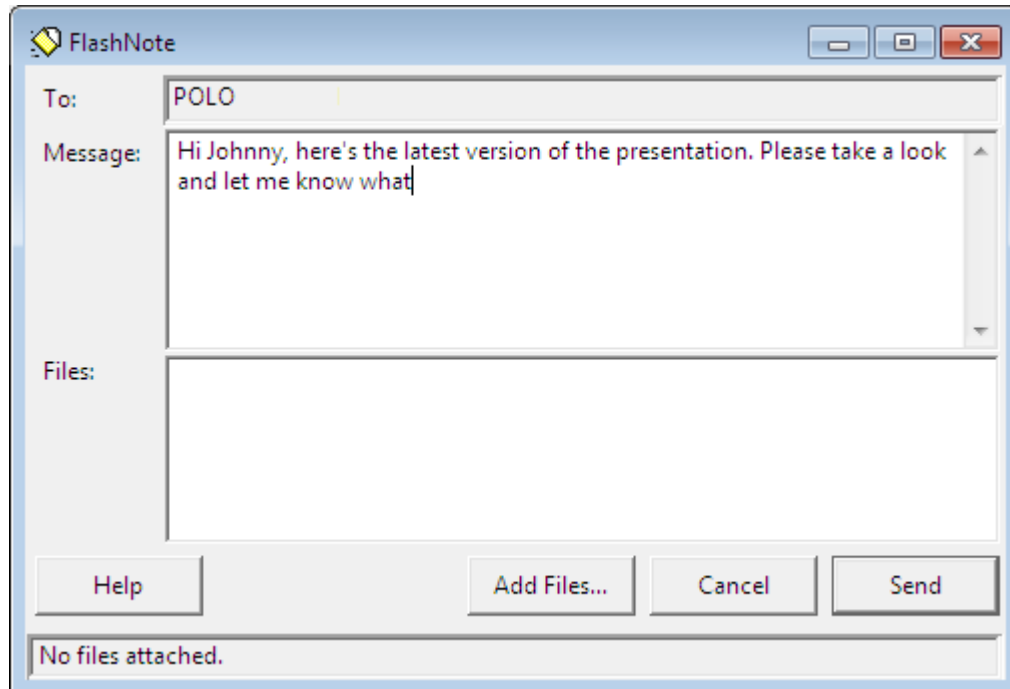
The Notify Service: Requesting Notification When Another User is Active

Timbuktu's Notify service lets you query another computer to determine whether its user is present. On the other Timbuktu computer, the Request for Notification dialog box opens to inform the user that you have requested notification. When the user acknowledges the request, the message in your Notify window changes to indicate that the user is present.

The Notify service is a useful way to find out when the person with whom you want to communicate is available, or when the user is present to grant incoming access for other Timbuktu services. Once you have been notified that the other user is present, you can close the Notify window and contact the other user or start a Timbuktu connection with the service that requires authorization.

To request notification of another user's presence, select the computer on any of the connection tabs in the Timbuktu Guest window. Then click the **Notify** service button on the main toolbar.
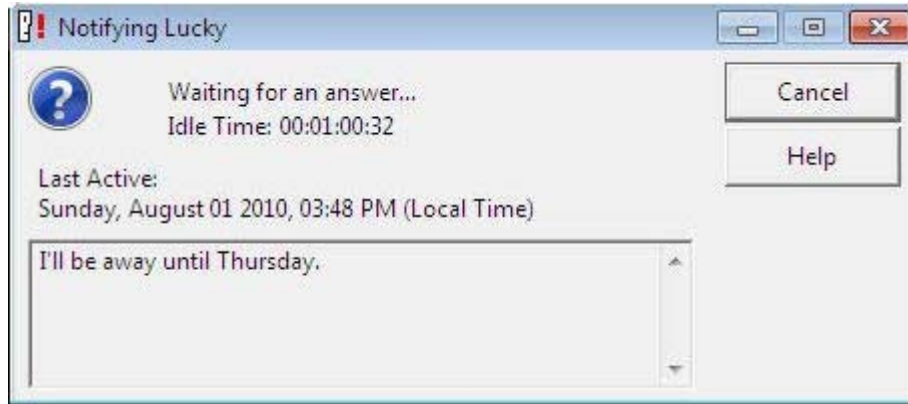
Chapter 7: Managing the Timbuktu Host

Most of your interactions with Timbuktu services will be as the guest computer, using services to connect to host computers. However, the host computer interacts with certain services as well. As the user of the host computer, you will also be able to monitor the activity of guest users on your computer.

Using Timbuktu Services as a Host

As the user of a host Timbuktu computer, you must at times grant access to other Timbuktu users or respond to their usage of Timbuktu services with your computer.

Responding to Ask for Permission Requests

If you enable the **Guests May Ask for Permission to Use Unchecked Services** option on the **Guests** tab in the Timbuktu Host Configuration Utility, other Timbuktu users can ask for permission to use services that you have not assigned them. When a user asks for permission, the Ask for Permission dialog box will open on your screen. (A similar dialog box will appear if you have enabled the **Ask for Host Permission** option for a specific NT User or Registered User.)

```
Ask For Permission

 The following user is waiting for admittance:          OK

 Scarlet                                              Cancel

 Address: 19.16.1.222                                  Help

 Service: Exchange

 Timeout and  refuse in 13 seconds.


WARNING!  You are about to let another user access your computer
via the above mentioned service.

Close any windows that contain confidential information before
allowing Control or Observe.

Exchange will allow the remote user to access the files on your
hard disk, as well as files on any network drives you are currently
logged into.
```

The Ask for Permission dialog box provides the name of the computer requesting the connection and the service that the remote user wishes to use. Click **OK** to accept the connection, or click **Cancel** to deny the remote user's request.

Using Screen-Sharing Services

Timbuktu's Control and Observe services allow the greatest interaction between the host and guest users. As the host of an incoming Observe session, you still have complete control of your own computer; you may be giving a presentation or performing a demonstration. As the host of a Control session, you may wish to closely monitor the activity of the incoming user on your computer. You still have the final level of control: you may disconnect the other user at any time. For additional security, however, you may also use the Capture Frame to constrain the other user's activity to only a certain area of your desktop.

If a remote user is controlling or observing your computer while Timbuktu is minimized, the regular Timbuktu icon in the system tray on the taskbar is replaced with an icon that alternates between the regular Timbuktu icon and a service icon that indicates the presence of an incoming user.

Working with the Capture Frame

When you enable the **Use Capture Frame** option on the **Remote Control** tab in the Timbuktu Host Configuration Utility, the Capture Frame will open on your desktop when another Timbuktu user establishes a Control or Observe connection to your computer.

The Capture Frame restricts the other user's view of your desktop. During the screen-sharing session, only the portion of your desktop that appears in the Capture Frame is displayed in the other user's screen-sharing window. Position and resize the Capture Frame as needed, and then click the **Play** button in the upper-left corner of the Capture Frame. (Until you click the **Play** button, the other user's screen-sharing window is blank.)

During the screen-sharing session, you may increase or decrease the size of the Capture Frame or move the Capture Frame around your computer's desktop. The remote user will not be able to move or resize the Capture Frame, even with the Control service.

To close the incoming connection, close the Capture Frame.

Note: Do **not** enable the **Use Capture Frame** option if anyone will need to use the Control or Observe service to access your computer when you are not present. Because you must click the **Play** button to allow the screen-sharing session to proceed, you must be physically present at your computer.

For information about using the Capture Frame when you are the guest, see "Using the Capture Frame as a Guest" on page 43.

Receiving Messages

With the Send service, you can send text-based messages, similar to electronic mail, to other Timbuktu computers. When another Timbuktu user sends a message or files to your computer, they are stored in the folder you specify on the **Send** tab in the Timbuktu Host Configuration Utility (see page 27). You can leave the message and files in this location or save them to any directory you wish.

When you receive a message, it will open in a full-sized window or appear as a minimized icon on the Windows taskbar. You can specify your preference with the **Send** tab in the Timbuktu Host Configuration Utility.

Responding to Notify Requests

When another user uses the Notify service to request notification of your presence at your computer, the Request for Notification dialog box opens on your computer. The dialog box indicates that the specified user is asking for notification and provides several options for you to respond. If you click the **Acknowledge** button, the other user is notified that your are working at your computer. If you click **Ignore**, the other user will not be notified that you are present or that you have returned to work.

Use the **Notify** tab in the Timbuktu Host Configuration Utility to specify a message that Timbuktu will display to other users when they request notification. See "The Notify Tab" on page 28.

Controlling and Monitoring Incoming Access

There are several ways of maintaining security and restricting access to your computer by other Timbuktu computers. First and foremost, one can connect to your computer without your prior authorization. There are several levels of remote access: you may assign privileges to all Guest Users, allow remote users to ask for permission to use unassigned services, and create NT Users and Registered Users with specific privileges. These options are discussed in "Managing User Accounts" on page 31.

To completely prevent any incoming connections, you can shut down the Timbuktu Host.

As an administrator, you may also use Active Directory Group Policies and Site Keys to control security settings on your entire network. Full documentation for Timbuktu with Active Directory is available.

Monitoring Remote Connections

There are a number of ways to keep track of and control Timbuktu connections to your computer.

When another computer connects to your computer, the Timbuktu icon in the system tray on the taskbar alternates between the application icon and a service icon that indicates the presence of an incoming user and the service being used. (For a list of icons, see "Icon Legend" on page 53.) Click the Timbuktu icon to display a a shortcut menu that includes a list of current users and the services they are using, as well as a list of previous users. To remove names from the Previous User list, click **Clear Previous User List**.

You can disconnect any or all users at any time. Open the shortcut menu and choose the specific user you wish to disconnect. Or choose **Disconnect All Users**.

Logging

Timbuktu supports a number of different logging features to allow you to track and record the Timbuktu activity on your computer.

• The Activity Log maintains a list of the all incoming and outgoing Timbuktu connections on your computer.

• The Event Log file is a text document which records the same information that Timbuktu records in the Windows Application Event Log.

• The Windows Application Event Log also logs guest and host service events.

Timbuktu also supports centralized logging for all the Timbuktu computers on your network: the **NT Event Log Server** allows you to copy information about Timbuktu events from your Windows Application Event Log to the Application Event Log on another Timbuktu computer.

You may specify the maximum size for your log files, and you may specify that certain configuration changes are recorded in the log files.

To set up your logging options, use the **Logging** tab in the Timbuktu Guest's Preferences dialog box (see) or the Timbuktu Host Configuration Utility (see). See the following sections for more information about each type of log.

The Activity Log

The activity log maintains a list of the all incoming and outgoing Timbuktu connections on your computer. The activity log is a useful record of Timbuktu activities. You can also use the activity log to diagnose problems you encounter when using Timbuktu.

Each line of the activity log contains a date, a time, and the activity that was carried out—for example, the Timbuktu application was launched. The activity log also contains the Timbuktu computer name and IP address of each remote user that connects to your computer, records when the user connected, and specifies which services the user accessed. For file transfers using the Send and Exchange services, the file name and the local directory involved in the transfer are logged on both computers. For Exchange file transfers, the guest computer also logs the remote directory.

Finally, the activity log reports when Timbuktu was loaded and shut down, and when previous users were cleared from the system tray shortcut menu.

To view the activity log, open the **Connections** menu and choose **Activity Log**. You may save the activity log to a TXT file at any time. The text document can then be opened and printed by a word processing application such as Notepad, or imported into a spreadsheet or database document.

The activity log can preserve up to 32K of activity information before it begins to discard its oldest records.

The Event Log File

The Event Log file is a text document which records the same information that Timbuktu records in the Windows Application Event Log. The text file format allows you to easily search the log for events you wish to review. You can specify the location and size of the Event Log file on the **Logging** tab in the Timbuktu Guest's Preferences dialog box (see) or the Timbuktu Host Configuration Utility (see).

The Windows Application Event Log

Timbuktu also logs guest and host service events to the Windows Application Event Log.

To see these events in the Windows Application Event Log, open the Windows **Start** menu.

- In Windows 7 and Windows Vista, choose **Control Panel ▸ System and Security ▸ Administrative Tools ▸ Event Viewer** and choose the **Applications and Services Logs** option.

- In Windows XP, open the Windows **Start** menu. Choose **Programs ▸ Administrative Tools ▸ Event Viewer** and choose the **Application** option.

Chapter 8: Getting Help

Timbuktu was designed to be as intuitive and easy to use as possible. This manual and the online Help should answer most of your questions. If you are still unable to solve your problem after referring to all the documentation, you may contact Motorola Technical Support.

Getting Help with Timbuktu

Timbuktu's comprehensive online Help provides a variety of ways to answer your questions, including step-by-step instructions for all common procedures. You can navigate through the online Help using the Table of Contents and hyperlinks between Help topics, and full-text Search is available.

You may also wish to view the Timbuktu Release Notes, which may contain feature and troubleshooting information that was not available at the time this document was created.

Opening Timbuktu's Online Help

In the main Timbuktu window, click the **Help** menu and choose **Contents**. Or press F1 from anywhere within Timbuktu for context-sensitive Help. If a **Help** button is available in a window or dialog box, click it to display the online Help topic associated with that area of the Timbuktu user interface.

Contacting Motorola

When you contact Motorola technical support, please provide the following information for both the host and guest computers to assist us.

- Timbuktu version and build number. To find the build number, open the **Help** menu and select **About Timbuktu**.
- Windows version, and any Service Packs installed.
- Error message or symptom.
- Steps to reproduce the error.
- Relevant system information:
    - PC manufacturer and model
    - Video card manufacturer and model
    - Video device driver version
    - CPU speed
    - Amount of RAM installed

Motorola's Timbuktu Web site is at *http://www.motorola.com/timbuktu*.

Appendix A: Key Mapping and Service Icons

Timbuktu Keyboard Mapping

Controlling a Macintosh computer is usually identical to controlling a Windows computer. However, Windows and Macintosh keyboards are slightly different. The following table shows how keys are mapped across platforms.

Cross-platform control keys	
Windows Keys	Macintosh Keys
ALT	Option
CTRL	Control
CTRL+ALT+DEL	Control+Option+Delete
Right-click (on mouse)	⌘ (Command)
Window	⌘ (Command)

When you control a Macintosh, the **Map Ctrl-> Cmd** option appears on the system menu in the screen-sharing window. (To open the system menu, click the **Control** icon in the upper-left corner of the screen-sharing window.) If you enable this option, pressing CTRL on your Windows keyboard will send the equivalent of a COMMAND keystroke to the Macintosh.

Note: If you type a keyboard shortcut while you are controlling another computer and the Control window is active, the shortcut is carried out only on the remote computer.

Icon Legend

Timbuktu's service icons allow you to quickly identify its many services.

The Timbuktu icon is displayed in the system tray on the Windows taskbar whenever Timbuktu is running. When another Timbuktu user connects to your computer, the standard Timbuktu icon alternates with a service icon indicating the service in use. If the service icon is in color, the Timbuktu connection is active. If the service icon is gray, the connection has been closed.

Timbuktu Icons	
User Icon	Meaning
	A remote user is using the Control service with your computer.
	A remote user is using the Observe service with your computer.

Timbuktu Icons	
User Icon	Meaning
	A remote user is using the Exchange service with your computer.
	A remote user is using the Send service with your computer.
	A remote user is using the Notify service with your computer.

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