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Introduction

Using this Installation Guide

Welcome to the Patterson EagleSoft installation guide. This guide is designed to assist individuals with the installation of the EagleSoft software. The intent is to document all past research and findings to facilitate a quality installation of software and hardware.

The single-user versions of EagleSoft are for front office and/or operatory use. This simple setup enables easy walk-outs, account adjustments, and more. With the multi-user version of these applications, you will be able to utilize these same features from your front office desk, your treatment rooms, and even your business office. This enables you to access and maintain your critical data from several different areas at any time.

This guide was developed to help acquaint you with the installation process, and to provide you with the information on the procedures involved. Before installing the EagleSoft software, we encourage you to read the entire manual.

For more information on the various features of EagleSoft, please review the corresponding EagleSoft User’s Guide.

Below is an outline of the manual:

- Hardware Requirements
- Multi-User Section
- Troubleshooting Steps and Technical Bulletins
- Installing Multi-User and Single-User
- Backups and Storing Files
Requirements

Minimum System Requirements

Operating System

Server

- Windows 98
- Windows NT Server/Workstation 4.0 with service pack 6 or higher
- Windows 2000
- Windows XP Professional

If you plan on using a Windows NT based network, please see the section that outlines Windows NT installation requirements.

We recommend using a dedicated server with a network of 6 or more workstations.

Workstations

- Windows 98
- Windows NT 4.0 (service pack 6 or higher)
- Windows 2000
- Windows XP Professional

Minimum Requirements

For more information, read the EagleSoft Hardware Requirements sheet.

These requirements are for all EagleSoft users.

- **Dedicated Server** – IBM–compatible Pentium 400 MHz; 256 MB of RAM; 4GB hard drive; backup device
- **Server/Workstation** – IBM–compatible Pentium 400 MHz; 256 MB of RAM; 4GB hard drive; backup device
- **Workstation** – IBM-compatible Pentium 350 MHz; 128 MB of RAM
- **Monitor** – Super VGA color monitor; 800x600; 24 bit color
Input Devices – mouse; keyboard
• 3.5” disk drive
• CD-ROM drive
• Modem
• PCAnywhere

Note: If you store images on the server, we recommended that you have a 10 to 20GB hard drive.

Windows NT Network Requirements

For multi-user *EagleSoft* to operate properly in a Windows NT environment, the following requirements must be met:

- Microsoft Windows NT Server or Workstation version 4.0 (service pack 6 or higher) must be installed. Beta, Beta-Test, or any other non-full release versions of any operating system will not be supported.
- Any Windows NT machine must include at least 128 MB RAM.
- Backup device must be installed on the server.

*These requirements are only for multi-users running on a Windows NT network.*

For more information, read the *EagleSoft Hardware Requirements* sheet located at [www.eaglesoft.net](http://www.eaglesoft.net).
Hardware and Software to Avoid

This section details items known to perform poorly with EagleSoft. To ensure a stable installation and efficient support, we recommend that these be avoided.

If these are encountered while a support technician is troubleshooting an area of concern, this area cannot be serviced until these items are removed.

Hardware Not Supported

- Any hardware that deviates from the mandated list
- Multi–functional units (Copier + Fax + Printer)
- Analog image printers

Hardware and Software Configurations to Avoid

- Backup tape scheduler software can interfere with server software, resulting in backup error.
- Fax software that runs all of the time diminishes system resources.
- All programs in startup group.

Configurations Not Supported

- Compressed hard drives.
- Microsoft Terminal Server, Citrix Metaframe or any 'thin client' network.
- Novell, LANtastic, or other non-Windows networks.
- Energy Star compliant system power saver setup will disconnect a workstation from the EagleSoft database.
Determining Your Server Machine

Additional Server Requirements

Before beginning the software installation, it is necessary to decide which machine on your network should be designated as the server. Because all other workstations will be connecting to and accessing this machine for data, the server machine has additional specifications.

With this in mind, we have provided some requirements:

- **Do not attach a printer to the server.**
  Attaching a printer to the server on a large network will slow down your overall performance. Since there is a lot of network traffic to and from the server, a printer on the server could create even more congestion.

- **The server must be the least used machine on the network.**
  If the server is a regularly used workstation, the network performance will be affected. Most of the server’s processing power is already spent transmitting data back and forth between workstations, so using the server as a workstation on a large network could increase performance problems.

- **Install the backup device on the server.**
  Installing the backup device on the server enables you to make the backup process quicker and more convenient. If the backup device is installed on a workstation, you will have to back up across the network, which is time-consuming and often difficult.

*For more information, see the EagleSoft Hardware Requirements sheet at [www.eaglesoft.net](http://www.eaglesoft.net).*
Performance Tuning

Multi-User Only

Packet and Cache Size

The packet size setting is used to establish the size of the data packets being sent across the network. *EagleSoft* enables each user to customize the packet size utilized by their network to better meet their unique configurations.

If you think that the speed of *EagleSoft* is unusually slow, changing the packet and/or cache size may improve performance.

The packet and cache sizes are automatically established on your server. To view the setting, click on **Start** and selecting **Programs | EagleSoft | Technical Reference**.

Once the *EagleSoft Technical Support Aid* window has appeared, click **Database Setup**.

It is important to note that the settings of the network packets and/or cache size will only have an effect on *EagleSoft* products. These changes will not effect network performance in other applications.
**Packet Size**

The packet size will appear as (AUTO). This means that the software will adjust the packet size according to the function being processed, processor speed and available RAM.

**Cache Size**

The cache size will appear as (AUTO). This means that the software will adjust the cache size according to the function being processed, processor speed and available RAM.
Multi-User Guide

A Brief Overview

What Is a Network?

Networks consist of two or more computers connected, usually by cable, and running software allowing them to communicate with one another.

Users on a network can share computer resources, such as hard drives, printers, modems, CD–ROM drives, and even processors. The efficient sharing of resources saves time in transferring data from one computer to another. It also saves money by sharing expensive equipment such as printers. This all leads to increased productivity for your office.

When the computers connected to the network are all close together, such as in the same building, the network is called a local area network (LAN).

Definitions

Before beginning, it is necessary to define some network-related terms.

Workstation – a computer that utilizes EagleSoft software. Also referred to as a “Client.”

Server – the computer that stores the database accessed by all workstations. On smaller networks, one computer can serve as both a workstation and a server.

Hub – the hardware component used to connect all the computers on the network. A cable from each computer is plugged into a socket, or connector receptacle, in the hub.

Components of a LAN

The minimum hardware components required to build a LAN include:

- At least one computer that can act as a server to share its resources.
- At least one computer, also known as a workstation or client, that will access the shared resources.
- A network adapter (card) for each computer.
- Cabling to connect the two computers.
- A hub that allows the computers to communicate with each other.
The minimum software components required to build a LAN include:

- A network operating system or a network-aware operating system (Microsoft Windows 98, Windows 2000, Windows XP, or Windows NT 4.0 service pack 6 or higher).
  
  *Note: Operating systems in their beta test phases are not supported.*

- Appropriate network protocol drivers.

- Network-aware applications (any application that has the ability to accept data or send data across the network is considered network-aware).

  *EagleSoft is a network-aware application.*

**Server and Workstation**

In any network configuration, at least one of the computers on the network is configured to share resources. Computers that make resources available to other machines on the network are called *servers*. The process of making a resource available to other computers is called *sharing* the resource.

*In terms of EagleSoft, the resource being shared is the data that is contained in the DENTAL.DB, DENTAL.LOG, AUDIO, IMAGES, VOICE, INDICATORS, XML, and METAFILES. Contrary to many File-Server/Slave network configurations, it is not necessary to share hard drives or map network drives for the workstation to connect to the database.*

With *Practice Management* and *Clinical*, these files are normally stored in *c:\program files\eaglesoft\data*.

**Network Adapter**

Network adapter cards are installed into each computer on the LAN. These cards do the actual work of moving data from computer to computer over the network. This happens through translation of digital personal computer signals into electrical and optical signals for the network’s cables. The cards also assemble data into packets for transmission and verify source-to-destination transmissions.

A twisted-pair Ethernet network (10BaseT or 100BaseT) connection uses an RJ-45 connector. The RJ-45 connector is similar to an RJ-11 telephone connector but has more conductors.

**Cabling**

*Twisted-Pair Cable*

Twisted-pair cable consists of two insulated strands of copper wire twisted together. A number of twisted-pair wires are often grouped together and enclosed in a protective sheath to form a cable.

*Unshielded twisted-pair*

Unshielded twisted-pair cable is commonly used for telephone systems and is already installed in most office buildings.

*Shielded twisted-pair*

A shielded twisted-pair cable is less susceptible to electrical interference and supports higher transmission rates over longer distances than unshielded twisted-pair cable. This cable medium can carry a signal for 100 meters (about 328 feet).
Network Operating System

When setting up your multi–user network for use with the **EagleSoft** system, you are required to set up Windows 98, Windows XP, Windows NT Server/Workstation 4.0, or Windows 2000 (depending on the size of the network) as the operating system on the server.

Network Protocols

A protocol is a set of rules governing communications between two stations. Just as two people need to understand the same language in order to speak to each other, workstations need to be running the same protocol driver in order to communicate on the same network. A network protocol, or protocol driver, is generally responsible for the packaging and routing of data and application messages on the network.

Network Protocol

**TCP/IP**

This protocol is an industry standard protocol providing communications between dissimilar end systems.

*EagleSoft* requires this protocol for all networks.

Network Application

The main network application you will be using is **EagleSoft**. This application has been designed to operate over a Windows 98, Windows NT, Windows XP and a Windows 2000 network.
# Network Cables

## Connecting Your Computer to the Network

When you are finished installing and configuring your network card, the next step is to connect the cables that link your computer to the other computers on your network. The section that follows describes twisted-pair networking.

### Twisted-Pair Ethernet

The advantages of a twisted-pair Ethernet system are that the cable is generally less expensive than thick Ethernet systems, and it is also relatively easy to install and maintain.

The following table describes the hardware components.

<table>
<thead>
<tr>
<th>Item</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Network card with RJ-45 connector receptacle</td>
<td>The connector receptacle on the back of your network card connects the card to the network cable.</td>
</tr>
<tr>
<td>RJ-45 connector</td>
<td>An RJ-45 connector is located at each end of the twisted-pair cable. To connect the cable to the card, align the connector so the small plastic tab is in line with the slot in the receptacle. Push in the connector until you hear a click. (The connector is similar to the plastic plug used to connect a telephone cord to a wall outlet.)</td>
</tr>
<tr>
<td>Concentrator (Hub)</td>
<td>The computers on a twisted-pair system are connected to each other by using a concentrator or hub. The cable from each computer is plugged into a socket (connector receptacle) in the hub.</td>
</tr>
</tbody>
</table>
Network Configuration

Introduction

After the network hardware components are in place, it is necessary to configure the network for your operating system. There is one network configuration we have fully tested and support:

♦ TCP/IP protocol

It is necessary to use this network configuration according to your operating system. If this configuration is not followed, *EagleSoft* will not support any performance problems that may occur with your program.

*This chapter will explain in detail how to set up the following:*

- Windows 98 Network Setup
- Windows NT Network Setup
- Windows 2000 Network Setup
- Windows XP Network Setup
Windows 98 Network Setup for TCP/IP

For offices NOT using Patterson branded hardware, EagleSoft requires that a network administrator set up the TCP/IP network. The person who sets up the network needs to be familiar with TCP/IP, including IP addresses, subnet masks, gateways, and so on.

To Examine and Confirm the Configuration

1. From the desktop, double-click the My Computer icon.

2. Double-click the Control Panel icon.

3. Double-click the Network icon. The network configuration window appears next.
Your **Network Components Installed** should match those listed in the sample above.

You must have the following:

* Client for Microsoft Networks
* 3Com or Intel network driver
* TCP/IP
* File and Printer Sharing for Microsoft Networks

## Adding Network Components

If you are missing these components, follow the instructions below to installing them.

### Client

Follow these instructions to add a client:

1. Click **Add** in the **Network Configuration** window.
2. Select **Client**, then click **Add**.
3. Under **Manufacturers**, click **Microsoft**.
4. Select **Client for Microsoft Networks** on the right.
5. Click **OK**.

### Adapters

Follow these instructions to install an adapter if the 3Com card did not install the default driver:

1. Click **Add** in the **Network Configuration** window.
2. Select **Adapters**, then click **Add**.
3. Under Manufacturers, select 3Com.

4. Select the listed 3Com network adapter that matches your installed 3Com network adapter card. If you are using Intel, then select the Intel network adapter that matches your Intel network adapter card.

5. Click OK.

**TCP/IP Protocol**

Follow these instructions to add and set up the TCP/IP protocol.

1. Select Protocol from the Select Network Component Type window.
2. Choose Microsoft under the Manufacturers list.
3. From the Protocol list, select TCP/IP.
4. Click OK.

TCP/IP will appear in your network configuration.

*Note: When using EagleSoft, you cannot have IPX/SPX or NetBEUI bound to your network card. This will cause network connection problems.*

**Setting the TCP/IP Protocol Properties**

The next step involves setting the IP address and subnet masks for this computer.

1. From the Network Configuration window, select TCP/IP and click Properties.
2. To set the IP address and subnet mask, click on the **IP Address** tab.

3. Enter the requirements listed below:

* **Requirements for IP addresses and subnet masks**
  * Specific IP addresses *(see the following example)*
  * Subnet mask must be **255.255.255.0** *(same for all computers)*
  * A unique IP address for each computer

* An example of an IP address setup for three workstations and a server:
  * Server: **10.0.0.1**
  * Workstation 1: **10.0.0.2**
  * Workstation 2: **10.0.0.3**
  * Workstation 3: **10.0.0.4**

The **IP Address** window is displayed on the next page.
4. Click **OK** when you are finished.

**When All Necessary Network Components Have Been Installed**

Click the tab for **Identification**. The following window will appear:

The **Computer Name** must be unique on the network. It can be up to 15 characters long, with no blank spaces. The computer name can contain only alphanumeric characters and any of the following: `! @ # $ % ^ & ( ) – _ ~`
EagleSoft suggests naming each computer with a basic name that will be easy to understand (for example, Eagle Server, Operatory, FrontDesk).

**Warning:** Please do not use a single quote or apostrophe (left of Enter key on your keyboard) in your computer name. This has been known to cause problems when running EagleSoft programs.

The Workgroup name uses the same naming conventions as the computer name. We recommend that you use WORKGROUP as your network workgroup name.

The Computer Description is displayed as a comment next to the computer name when users are browsing the network.

Next, click the Access Control tab.

We recommend that you have Share-Level Access Control selected (see the following image).

![Access Control Tab](image)

When you have changed your settings for configuration, identification and access control, click OK.

---

**Windows NT Network Setup for TCP/IP**

For offices NOT using Patterson branded Hardware, we recommend a professional trained in installation and maintenance of a Windows NT system be employed to set up machines running Windows NT server or Windows NT workstation. It is also recommended that the professional be experienced with TCP/IP network setup on Windows NT.

Before using Windows NT, Service Pack 4 or higher must be installed. If any changes are made to the network configuration, the service pack must be reinstalled.
To Review and Confirm Windows NT Configuration

1. Double-click the My Computer icon.
2. Double-click the Control Panel icon.
3. Double-click the network icon. The Network window will appear.

To Change the Identification of the Server

1. Click on the Identification tab.

2. Click the Change button.
3. Click in the Computer Name text box and edit the computer name.
4. Click in the Workgroup text box to edit the Workgroup name.
5. Click OK when changes are finished.

To Add Network Components

If they are not already installed, the following services need to be added:

* Computer Browser
* RPC Configuration
* Server
* Workstation

Services

1. To add a service, click the Services tab.
2. Click **Add**.

   A list of available services is displayed.

3. Select the service you wish to add and click **OK**.

**Protocols**

TCP/IP should be the only protocol listed in *Network Protocols*.

1. Click the **Protocols** tab. *(see the following image.)*
2. If the protocol is not there, click **Add**.
   
   A list of available services is displayed.

3. Select the service you wish to add and click **OK**.

   **To Edit a Protocol**

   1. To edit the TCP/IP protocol, select the protocol.
2. Click Properties.

3. Click the IP Address tab.

4. Enter the IP address and subnet mask.

**TCP/IP requirements for Windows NT.**

**Requirements for IP addresses and subnet masks**

* Specific IP addresses (see example below)
* Subnet mask must be **255.255.255.0** (same for all computers)
* A unique IP address for each computer

*An example of an IP address setup for 3 workstations and a server:*

* Server: **10.0.0.1**
* Workstation 1: **10.0.0.2**
* Workstation 2: **10.0.0.3**
Workstation 3: **10.0.0.4**

The IP Address window is displayed below.

5. Click **OK** when finished.

**Adapters**

1. Click on the **Adapters** tab if the **Adapters** window is not already visible.

2. Click **Add** to display the available adapters.
3. Select the name of the adapter you wish to add and click **OK**.

**To Remove a Specific Network Adapter**

Choose the adapter you want to remove so it is highlighted.

Click the **Remove** button.

**To Verify Bindings**

1. Click on the **Bindings** tab if the **Bindings** window is not already visible. (see the following image.)

2. Verify that your setup matches the window above. If it does not, review your protocol and services lists.
Windows 2000 Network Setup for TCP/IP

For offices NOT using Patterson branded hardware, we recommend a professional trained in installation and maintenance of a Windows 2000 system be employed to set up machines running Windows 2000 server or Windows 2000 workstation. TCP/IP network setup is required on Windows 2000.

To Review and Confirm Windows 2000 Configuration

1. Double-click the **My Computer** icon.
2. Double-click on the **Control Panel** icon.
3. Double-click the **Network and Dial-up Connections** icon.
4. If your ethernet network card is installed and configured properly, a **Local Area Connection** icon will appear.

To Change the Identification of the Server/Workstation

1. From the **Control Panel**, double-click **System** icon.
2. Click the **Network Identification** tab and click **Properties**.
3. Click in the **Computer Name** box to edit the computer name.
4. Select the **Workgroup** radio button. Click in the **Workgroup** box to edit the **Workgroup** name.
5. Select the **Workgroup** radio button. Click in the **Workgroup** box to edit the **Workgroup** name.

Network Components

When the ethernet card is installed, all network components should automatically be configured by Windows 2000 (see the following image).
Editing a Protocol

1. To edit the TCP/IP protocol, select the protocol.
2. Click the **Properties** button.
3. From the **IP Address** window, select the **Specify an IP Address** radio button.
4. Enter the IP Address and subnet mask.

Requirements for IP Addresses and subnet masks

* Specific IP addresses (see example below)
* Subnet mask should be **255.255.255.0** (same for all computers)
* A unique IP address for each computer

An example of an IP Address setup for 3 workstations and a server

* Server: **10.0.0.1**
* Workstation 1: **10.0.0.2**
* Workstation 2: **10.0.0.3**
* Workstation 3: **10.0.0.4**

The **IP Address** window is displayed below. (see the following image.)
5. Click OK when finished.

Network Settings using Windows XP

For offices NOT using Patterson branded hardware, we recommend a professional trained in installation and maintenance of a Windows XP system be employed to set up machines running Windows XP server or Windows XP workstation. TCP/IP network setup is required on Windows XP.

To Review and Confirm Windows XP Configuration

5. Double-click the My Computer icon.
7. Double-click the Network and Dial-up Connections icon.
8. If your ethernet network card is installed and configured properly, a Local Area Connection icon will appear.

To Change the Identification of the Server/Workstation

6. From the Control Panel, double-click System icon.
7. Click the Network Identification tab and click Properties.
8. Click in the Computer Name box to edit the computer name.
9. Select the Workgroup radio button. Click in the Workgroup box to edit the Workgroup name.
Network Components

1. Go to Start | Settings | Control Panel and double click on **Network Connections**.

2. Right click Local Area Connection and choose Properties.

![Local Area Connection Properties](image)

1. You will be able to add your Adaptor, Client, Services, and Protocols from this screen.

2. Hit OK when you are finished.

3. In the Control Panel, double click on System and choose the Computer Name.

![System Properties](image)
3. To change your computer name, click the Change button.

4. Click OK. You will be prompted to restart your computer.

5. Once you have restarted your computer, you can check your network connection by going to My Network Places, double click on Entire Network | Microsoft Windows Network | Eaglesoft.

**Editing a Protocol**

6. To edit the TCP/IP protocol, select the protocol.

7. Click the Properties button.

8. From the IP Address window, select the Specify an IP Address radio button.

9. Enter the IP Address and subnet mask.

**Requirements for IP Addresses and subnet masks**

* Specific IP addresses (see example below)
* Subnet mask should be 255.255.255.0 (same for all computers)
* A unique IP address for each computer

**An example of an IP Address setup for 3 workstations and a server**

* Server: 10.0.0.1
* Workstation 1: 10.0.0.2
* Workstation 2: 10.0.0.3
* Workstation 3: 10.0.0.4

The IP Address window is displayed below. (see the following image.)
10. Click **OK** when finished.
Single-User Installation

Instructions

These instructions assume your floppy disk drive is configured to be recognized by your computer as the a:\ drive.

To Install *EagleSoft* on Windows 98, Windows NT, Windows 2000, Windows XP from CD

1. Turn on your computer (if it is not already on)
2. Exit all running programs.
3. Insert your license disk into the computer’s floppy drive (usually a:\).
4. Insert the *EagleSoft* compact disc into the CD-ROM drive tray.
5. After a few moments, the installation window will appear. Click on *Install Eaglesoft*. If the installation window does not appear, click on Start and choose Run. Type ?:setup.exe where ? is the drive letter of your CD-ROM drive (usually D:) and click OK.
6. Read the on-screen instructions and follow them carefully.
Multi-User Installation Instructions

Installing *EagleSoft* on a Multi–User System

This text refers to your system’s 3.5” floppy drive as the a:\ drive. Be aware that some systems may actually be set up such that the 3 1/2” floppy drive is the b:\ drive.

Once you have your Microsoft Windows Network set up and operational, it is time to install the *EagleSoft* multi-user software. The following is a brief overview of how the software installation process will work. Depending on what version of *EagleSoft* that is being installed, the instructions may not always be exactly the same.

More detailed instructions will be provided with each version of *EagleSoft* you receive.

The first screen of the installation contains the names of the software you may install. Simply click once on Install *EagleSoft* and follow the on-screen instructions.

Installing *EagleSoft*

These four steps will take place when installing the software.

1. Insert your license disk into the a:\ drive on the machine that has been designated as the server.

2. Insert the *EagleSoft* compact disc into the CD-ROM tray on the server. Click the phrase Install *EagleSoft*.

3. When asked to designate whether the installation is Server Only, Server Workstation or Workstation Only, choose the appropriate option.

4. Most users will accept all of the default settings by clicking Next throughout the short installation process. When the installation asks if it can “create the directory for you,” choose Yes. The software will then begin to install.

Installing the *EagleSoft* (if a CD–ROM is not present)

The following steps will take place on all machines on the network where *EagleSoft* will be used. These instructions assume there is a machine on the network with a CD-ROM drive shared with the rest of the network, and the *EagleSoft* compact disc is in that computer’s CD-ROM drive.

For more information on sharing a CD-ROM drive, see the "Sharing the CD–ROM Drive" section later in this chapter.
1. Verify that the license disk is in the floppy drive of the machine you are installing.

2. At the machine, click on Start | Run, and then Browse.

3. In the box entitled Look In, choose Network Neighborhood.

4. Browse across the network to the machine that has the shared device.

5. Select the file setup.exe located in the root directory of the compact disc and click OK.

6. An installation menu similar to the one listed above will appear. Click on Install EagleSoft.

7. After a moment, Setup will ask you what drive your license disk is in. The default is a:\.

8. Follow the on-screen instructions.

Sharing the CD-ROM Drive

If you need to install the program on a computer that does not have a CD-ROM drive, you will need to share the CD-ROM of a computer in the office that has a CD-ROM. To do this, use the following instructions:

**Do not put the EagleSoft compact disc in the CD-ROM drive yet.**

1. On the computer with the CD-ROM drive, double-click the My Computer icon. A window similar to the one below will appear:
2. Click one (1) time on the CD-ROM drive so that it is highlighted. Then, click File | Sharing.

3. Click the Shared As radio button. Leave the share name as it is. It will most likely match your CD-ROM drive letter.

4. Under Access Type, click on Full. Do not enter a password.

5. Click the Apply button at the bottom of the window. Click OK.

6. The CD-ROM drive is now shared and the icon for your CD-ROM drive should now have a picture of a hand under it.

**Upon Completion of Installation**

Upon completion of installation, please do the following:

- Store new license disk(s) and program compact disc(s) in a safe place at the office
- Read the product documentation to gain better understanding of the many features and benefits available to you
What You Need To Know

Multi-User

When installing the multi-user software, you were prompted to load the server upon startup of your computer system. If you do this, the database will be accessible to all other workstations once the server is turned on and logged into your Windows network. If this is the case, please disregard the rest of this section.

To view the available EagleSoft modules, click on Start | Programs | EagleSoft. A box similar to the one below will display the available options.

If you chose not to start the EagleSoft database engine upon startup of your server computer, you will need to go through the daily process of starting the server before any workstation will be able to access the data.

Included in the example shown above is the highlighted option called Start EagleSoft Server. After selecting this option, the database server will be started and all workstations on the network will be able to access the data contained within the EagleSoft database. This process must be performed before starting EagleSoft on any workstation.

To Start the Server

From the Windows 98/NT/XP or 2000 desktop, click on Start | Programs | EagleSoft | Start EagleSoft Server. An icon, normally labeled as EAGLESOFT, will appear in the system tray once the engine has started successfully. This indicates
your practice database is now available for all workstations. At this time, you can start **EagleSoft** from any workstation.

*Note: The **EagleSoft** icon should always appear in the system tray when you’re using **EagleSoft**. It should not be closed.*

**To Shut Down the Server**

Once you have finished your work for the day, you will want to make sure all computer workstations are properly shut down and turned off. Also, you will want to go through the process of shutting down the server. To shut down the server, do the following:

1. Exit from **EagleSoft** on all workstations.
2. From the Windows 98/NT/XP or 2000 desktop on the server, click on **Start** | **Programs** | **EagleSoft** | **Stop EagleSoft Server**. To verify that the database engine is shut down, make sure that there is not an **EAGLESOFT** icon in the system tray.

*Note: Backups should be made after shutting down the server, not before.*

**Single-User**

Shutting down a single-user version of **EagleSoft** is the same as above, except there is no server to shut down. To start **EagleSoft**, simply go to **Start** | **Programs** | **EagleSoft** and click **EagleSoft**.

To shut the program down, click on **File** and **Exit**. Click **Yes** if you want to exit the program.

*Note: Make sure you have exited **EagleSoft** before making backups.*
Making Backups

Backups

Making a backup is one of the most important things you can do for your office. Backups are a form of insurance against fire, power outages, theft and other misfortunes. If you lose all of your data in a fire, but you have a recent backup, you have just saved your office staff time and money. This section provides information on what to back up, how often to back up, and where to store a backup.

Both single and multi-user backup procedures involve backing up the same files and folders: The Data folder containing – custom draw types, dental.db, dental.log, audio, images, indicators, and metafiles. Single-users, however, will back up at the same computer they use to do all their work. They also need to exit EagleSoft.

The backup process for a multi-user involves a few more steps. Since the data on your multi-user system is located on your server machine, it is necessary to perform your daily data backups from your server machine.

Remember: This process can only occur once you have completed the shutdown procedures explained in the previous section.

Making Backups

The log file in the program directory (most often this is c:\program files\eaglesoft\data) is auto-archived when necessary. The archived file is renamed to reflect the date of archiving and appear in the Data directory as such:

- 9-12-2002.log

It is important that ALL pertinent data is backed up including these archived files.

If you are using EagleSoft Clinical along with Practice Management, there are 4 subdirectories that should be backed up along with aforementioned files. Usually the files are located in c:\Program Files\eaglesoft, (seen in the following example), but in some earlier installations they are located in the following path: c:\eaglsoft... If you are having problems making backups, verify that your path is set up correctly.

The default paths are:

- c:\program files\eaglesoft\data\audio
- c:\program files\eaglesoft\data\images
• c:\program files\eaglesoft\data\metafile
• c:\program files\eaglesoft\data\custom draw types
• c:\program files\eaglesoft\data\data*

* IMPORTANT NOTE *

The EagleSoft database engine must be shut down before a successful backup can be performed. Failure to shut down the EagleSoft server will result in corruption of backed up data. If you are unsure of these steps, please refer to the Shutdown Procedure section.

When to Make Backups

It is the office’s responsibility to make backups consistently. The more backups your office makes, the more your data is protected and insured against catastrophe.

We recommend the following for backup frequency:

1. Daily backup – A separate tape should be used for each day the office is open and rotated weekly.

Note: A separate tape should be used for each type of backup.

More Tips on Your Backups

Where to Store Backups

It is a good idea to store your backup in a safe, fire/waterproof location, such as a safe deposit box. More importantly, keep your backups at an off-site location.

Make Sure You are Making a Correct Backup

To verify that you are making the backup correctly, restore it at least once a month. If you have questions on this procedure or need assistance, contact your hardware provider.
Multi-User Image Storage

Storing Images Using a Multi-User Setup

The purpose of this section is to detail the steps involved with saving and accessing images from all workstations in your network. Please make sure that your backup procedure includes backing up your images, audio, voice, indicators and metafile directories.

The following are steps required to have your network configured properly.

Step 1: Locate Where Your Images are Stored.

When EagleSoft software is installed as a server or server/workstation, it creates three folders within the c:\program files\eaglesoft\data directory: audio, images, and metafile, custom draw types.

Step 2: Share That Data Directory with All Workstations.

The Data directory must be shared to all EagleSoft workstations. Share this directory with all stations on the network. Refer to your operating system manual for more information.

Step 3: Identify the Shared Directory Through EagleSoft.

After you have shared your data directory, start the EagleSoft program on one of the workstations. A window similar to the following will appear.
Browse the network to find the data directory.

Once you have found the data directory, click OK.

Your images will now be stored in the data directory from all workstations.
Steps for Moving the Location of the Server

To Move the EagleSoft Server to a Different Computer

1. Make a backup of the Data directory including dental.db and dental.log files, as well as the images, audio, metafile, indicators and voice directories.

2. Set up the new hardware and make sure the network is functioning properly.

3. Install the EagleSoft as a server or a server/workstation on the new machine.

4. Restore your backup to the correct directories on the new computer and verify that the database engine starts successfully. The database engine must start with your database successfully before you proceed with #5.

5. Use the uninstall feature and then delete all dental.db, dental.log, audio, images, metafile and voice directories or files on the old server. Remove any shortcuts for EagleSoft programs.

6. Reinstall EagleSoft as a workstation only on the old server.
Appendix

Checklist for Multi-User Installations

To Ensure a Quality Installation

Please use the following checklist to ensure a quality multi-user installation:

☐ The majority of the printing should be done from the workstations and not the server machine.

☐ The backup device has been installed on the server.

☐ If the network has more than six workstations, a machine has been dedicated to operate only as the database server.

☐ All EagleSoft client programs have been installed onto each workstation.

☐ The program dental.exe is being executed from each local machine. It is not being executed by accessing a shared drive on the network.

☐ Each workstation on the network is utilizing the same network workgroup or Workgroup.

☐ Each workstation on the network has a unique computer name.

☐ Unsupported hardware or configurations are not being utilized. See section on hardware and software to avoid.

☐ The server machine is not operating on a compressed hard drive.

☐ The Startup and Shutdown procedures within this manual have been read and understood. The underlying principles have also been communicated to the office staff.

☐ An initial backup of files dental.db and dental.log, including the indicators, images, audio, voice, and metafile directories, has been completed with no errors.

See the Backup section for more information

☐ The TCP/IP protocol has been established for each computer on the network.

☐ The computer name and any shared printer names do not contain any spaces or periods.

☐ No additional network (for example, Novell, LANtastic) has been included on this Windows network.

☐ Coaxial cable is not being used.
Technical Bulletins

Before Troubleshooting Networking Concerns

Before proceeding with any troubleshooting steps, consider the following:

- Has this configuration ever worked before, or did this just start happening? If it just started, what has changed between the time this configuration was working and the time it stopped working?

- Has new hardware, cabling, or software been added? If this new addition is removed, does the problem go away?

- Is this problem occurring on one computer, several, or all of them?

- Is the connection to the computer active? Is there a light on the hub which corresponds to the computer that you are troubleshooting?

- Do any error messages appear when the computer is booting up?

- Can you see the other computers through Network Neighborhood?

- Run SCANDISK on the drive where Windows is installed. If Windows system files are corrupted, Windows is unstable and may need to be reinstalled.

- It may be necessary to reroute network cabling away from sources of electrical interference (such as fluorescent lights).
Disabling the Power Saver Option

Through our research, we determined that automatic suspending of the computer by Windows 98 or NT can cause *EagleSoft* products to lose their database connection. This results in a lockup of the workstation and requires a reboot to proceed.

**In Windows NT**

Here are the steps to disable this feature in Windows NT.

1. Open the **Control Panel** by clicking on *Start* | *Settings* | *Control Panel*.

   ![Control Panel](image)

   *If the Power icon does not appear in the control panel, you do not have this feature installed.*

2. Double-click on the **Power** icon.

   ![Power Properties](image)
3. Make sure the **Power Management** is set to **Off**, as in the picture above.

4. Click the **OK** button to save your changes.

These features will also have to be shut off in your system BIOS.

*Note: Consult your system documentation and hardware technician before making changes to your BIOS.*

**In Windows 98**

When Windows 98 is installed, the Power Management feature is automatically set to **On**. This feature should be disabled when using *EagleSoft Select* and/or *ChairSide*.

Here are the steps to disable this feature in Windows 98.

1. Open the **Control Panel** by clicking on **Start | Settings | Control Panel**.

2. Double-click on the **Power Management** icon.

3. **Turn off hard disks** should be set to **Never**. Click **OK** to save your changes.

**In Windows 2000**

Here are the steps for disabling power management in Windows 2000.

1. Open the **Control Panel** by clicking on **Start | Settings | Control Panel**.

2. Double-click the **Power Management** icon.
3. Set the following areas to Never: Turn off Monitor, Turn off hard disks, and System standby.

4. Click OK to save your changes.

To disable the standby function when shutting off your computer, follow these instructions.

1. From the Power Option Properties window, click the Advanced tab.

2. Make sure the drop-down list box under When I press the power button on my computer is set to Power Off.

3. Click OK to save your changes and exit.
To disable the **Hibernate Support** function, follow these instructions:

1. From the **Power Option Properties** window, click the **Hibernate** tab.

![Power Options Properties](image)

2. If checked, deselect the **Enable hibernate support** check box.
3. Click **OK** to save your changes and exit.

**In Windows XP**

To disable the Power Management feature in Windows XP,

1. Open the **Control Panel** by clicking on **Start**
2. Click the **Power Schemes** icon.

![Power Options Properties](image)

3. Set the following areas to **Never**: Turn off Monitor, Turn off hard disks, and System standby.
4. Click **OK** to save your changes.

To disable the standby function when shutting off your computer, follow these instructions.

4. From the **Power Option Properties** window, click the **Advanced** tab.

![Power Options Properties dialog box]

5. Make sure the drop-down list box under **When I press the power button on my computer** is set to **Shut Down**.

6. Click **OK** to save your changes and exit.

To disable the **Hibernate Support** function, follow these instructions:

4. From the **Power Option Properties** window, click the **Hibernate** tab.

5. If checked, deselect the **Enable hibernate support** check box.

6. Click **OK** to save your changes and exit.

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**An Office’s Responsibility to Its Hardware**

An automobile requires routine maintenance in the same manner that a network does. In fact, automobiles and networks are analogous in several important ways. For example, an oil change is needed every 3000 miles, and the tires must be rotated and
balanced every 10,000 miles. It might even get washed once or twice a week. This type of tight maintenance schedule is also important to a computer network. If an automobile owner never changed his oil, could he blame his mechanic if his engine burned up? Certainly not. The driver is responsible for the maintenance of his own automobile.

The same is true of computer networks. Having a hardware technician inspect a network does cost money, but it is necessary, and should be considered part of normal maintenance. Many computer problems can be avoided by a good maintenance regimen. Think of it not as an unnecessary or frivolous expense, but as a prophy for your network.

There are several points that might be covered by such an inspection. General system performance and reliability might be discussed and weighed against installing updated drivers for system devices such as printers or network cards. Often, hardware manufacturers re–write drivers as part of their own problem-resolution process. In most cases, they post their updated drivers on the Internet.

**Keeping disk drives clean.**

Keeping the 3.5" disk drive clean is also important, especially around software–update time. However, even if all installations are executed from CD, the use of a license disk during installation still necessitates keeping the disk drive clean. Since the CPU cooling fan inside the computer keeps the air circulating, the interior quickly becomes coated with a thin film of dust. Dirty surfaces within the disk drive are directly related to the inability to read disks, and in some cases might actually damage the disk being read.

You should also have the hardware tech delete any unnecessary files. Uninstalling old or unused programs is part of this process. This helps to speed up the following two maintenance chores: SCANDISK and DEFRAG. Fewer programs and files to scan or defragment will speed the process of running those utilities. Running SCANDISK on your hard disk drive will ensure that the file system of the disk is free of errors or defects. Heavy use over a long period of time may sometimes lead to deterioration of both the storage surfaces themselves and the mechanical portions of the drive as well.

Running DEFRAG will help your computer run more efficiently in some cases. When files are deleted, or programs are installed or uninstalled, files become fragmented. That means that instead of being arranged on the disk drive in a contiguous, consecutive manner, files are scattered about piecemeal, or in fragments. This slows down the hard drive because it must now make several stops in order to get an entire file that it might need.

**The importance of a backup.**

One of the most important responsibilities in maintaining your hardware is examining your backup process. A hardware professional can watch the procedure and verify that a good, restorable backup tape is being produced every night. Backups are important for two reasons. First, and most importantly, a backup can be restored in the event of theft, natural disaster or data corruption. Secondly, in unique support situations a backup tape could be restored by an EagleSoft support technician for further data analysis.

A computer network requires at least yearly inspections by a local hardware expert, just as a vehicle merits an occasional tune-up. Observing a strict maintenance schedule will benefit a dental office many times over in network stability and reliability, and furthermore could avert an untimely breakdown in the future.
Understanding and Troubleshooting Illegal Operations

OUTLOOK CAUSED AN INVALID PAGE FAULT IN MODULE KERNEL32.DLL AT 0137:BFF782B8.

We have all seen this message or others like it before. What does it mean? I encountered this particular message as I sent an e-mail to a colleague. Errors similar to this can cause great distress in a dental office. Chicken Little once said “The sky is falling! The sky is falling!” But that is not necessarily the case here.

So what exactly is a IPF? In simplest terms, a IPF is a condition created when one program writes information to an area previously reserved for a different program. If the person sitting next to you reached over and started writing in your notebook, you’d get mad too! In essence, that’s what is happening in the above example. Simply stated, I had so many programs running at the same time that the computer’s resources had depleted to the point that the operating system (KERNEL32, at least in part) did not have enough overhead left to address the task at hand (OUTLOOK). As a result my e-mail program crashed.

Most of the time, an INVALID PAGE FAULT (IPF) is precipitated by the familiar message that THIS PROGRAM HAS PERFORMED AN ILLEGAL OPERATION AND WILL BE SHUT DOWN. This is Windows way of telling you to pay attention, that it is about to make a very important statement. To view that statement, press the DETAILS button and observe the first two lines. The syntax you’ll note is as follows:

X CAUSED AN INVALID PAGE FAULT IN MODULE Y AT Z:Z,

The good news is that although inconvenient, these errors are easily recovered from. In almost every case, exiting out of all the programs running and turning off the computer for a few moments will clear the problem from the computer’s memory.

But what causes these errors? Given the number of files used by the operating system, combined with the number of software programs out there, figuring that out can be a daunting task. Luckily, there are several places to start looking.

The first item that must be addressed when dealing with IPFs is what might be causing them. There could be several possible culprits, such as corrupt files or a file with a version number different from what the program that uses them expects to see. Sometimes the installation process unintentionally alters files that are shared by other programs. It is in this manner that installing or uninstalling one program might affect the operation of yet a third program.

Reinstalling the affected program is something that might prove useful, particularly if the affected program’s files were corrupted as the result of the operation of another program. When considering the possibility that corrupt files are causing the errors, the logical thing to do is to uninstall and reinstall the software associated with the error codes. Reloading the program will refresh all of the files pertinent to that program and restore them to their working state.
Running SCANDISK and DEFRAG in conjunction with the re-installation process is a healthy measure. The logical order to execute this process is to first uninstall the affected program. Then, running SCANDISK will attempt to isolate any damaged files on the hard disk. Second, DEFRAG will make sure that all of the files on the hard disk drive are stored in consecutive sectors of the disk drive itself. This allows Windows to avoid encountering problems trying to read one file, then finding out that another unrelated file has somehow gotten stuck right in the middle of it. The last step in the process is to reinstall the original program on a freshly scanned disk drive. Due to their time-consuming nature, these are not procedures performed by EagleSoft support technicians. Please consult your local hardware expert for further details.

Another item to consider is the display adapter the computer uses. Video drivers and hardware acceleration for video can also sometimes push a computer to its limits. Chronic IPFs that occur without any discernible pattern can occasionally be attributed to an incompatible video driver.

Other possible points of contention are the presence of extra programs that run and stay in the computer’s memory. These programs have probably been added to the computer’s startup menu but are not required to run continuously. Before removing any items from startup, please check with your hardware technician.

Another option is to have a qualified professional remove any temporary files (*.tmp) from the computer. When Windows runs programs, explores the Internet, or performs other daily operations, temporary files are created. Think of it as the computer scribbling notes to itself. Sometimes, when a computer is not naturally shut down (such as a crash caused by an IPF) these notes are not deleted as they ordinarily are by the shut down process. Therefore, when the computer is used next, the operating system runs the risk of using the temporary files again for normal operation.

Most of all, don’t worry when faced with a Windows error message. Everyone who uses a computer will receive them from time to time. A Windows error message is an annoying fact of life, just like potholes or taxes. Most can be easily recovered from by simply rebooting the computer. Various things specific to the setup of a computer, such as old or corrupt files, outdated drivers, or remnants of uninstalled programs could inject enough variables to create problems. Remember this though: effective troubleshooting measures begin with recording and reporting the message to those who can help.