

The PRO-MAIL[®] System
Fulfillment Hardware and Software Guidelines

Provided by Software Marketing Associates, Inc.

Fulfillment Hardware and Software Guidelines

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Version 5 is the first of a new generation of systems from Software Marketing Associates, Inc. (SMA). It utilizes advanced state of the art system tools that provide numerous benefits to you and your clients.

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- [Sample Network Configurations](#) on page 12
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Introduction

The purpose of this introduction is to present an overview of the client server environment that Version 5 utilizes and to review the evolution of The **PRO-MAIL**[®] System. This background information will assist you as you review the hardware and software guidelines.

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- [Internet Security](#) on page 7
- [General Comments on Software](#) on page 7
- [System Recovery/Redundancy](#) on page 7

Client / Server Architecture Overview

The client / server architecture has three components:

- **The Client / Server Model**
The client / server model is a concept for describing communications between service consumers (clients) and service providers (servers). A client initiates an interaction with a server by sending a message or by invoking an operation. The response of the servers is a message that is sent back to the client.

Example

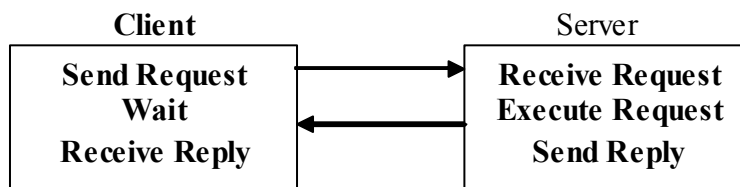


Illustration of the Client / Server Model

- **The Client / Server Application**
A client / server application is an application based on the client / server model. The client and the server roles involves processing designed to address one or more of the following functional needs:
 - **Presentation services**
Presenting data to and retrieving data from the end user.

- **Business logic**
Enforcement of business rules.
- **Data services**
Retrieving, adding, editing, and deleting the data managed by the application.
- **The Client / Server System**
A client / server system is a computing system based on the client / server model. Clients and servers are usually defined in terms of the hardware that is performing these roles. The following outlines the basic components of the system:
 - **Clients**
Consumers of services provided by servers.
 - **Servers**
Providers of services requested by clients.
 - **Middleware**
Technology that supports communication between clients and servers.

Internet Security

PRO-MAIL[®] Version 5 is a Web based program. Internet Security is extremely important. We strongly recommend that you protect your **PRO-MAIL**[®] Servers with a firewall. A firewall is a hardware or software device that protects your servers from the outside world. At SMA we use Microsoft's software Firewall ISA. The **PRO-MAIL**[®] System is compatible with basically any hardware or software firewall. You should speak with your local vendor or IT department to determine which solution is best for you.

General Comments on Software

The **PRO-MAIL**[®] System uses a mixture of Microsoft and Business Objects (formerly Crystal Decisions) products to give you the functionality that you need for you operation. We recommend that you use the most current Microsoft software possible and that you keep up-to-date with the software upgrades and service packs. Even though **PRO-MAIL**[®] may work on older platforms, we recommend that you use Windows 2003 or 2008.

System Recovery/Redundancy

When working with computers it is very important to be prepared for disaster. For this reason, we recommend that you have a way of backing up your systems and keeping them alive if the unexpected occurs.

We strongly urge you to back up your systems regularly (i.e. using a tape drive). We also recommend that you make your systems as redundant as possible (i.e. RAID5 or disk mirroring). You should also take power issues into account. Make sure that your system can withstand power surges and power failures (i.e. surge protectors and battery backup).

For more information on these subjects see your IT department or your local network services vendor.

System Components Overview

The **PRO-MAIL**[®] System needs several server and network components to run properly.

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- [Required Server Components](#) on page 9
- [Required Network Components](#) on page 10
- [Optional Components for The PRO-MAIL[®] Fulfillment Solution](#) on page 10

Required Server Components

The server components requirements are the same for both The **PRO-MAIL**[®] Fulfillment Solution and The **PRO-MAIL**[®] Business Management Solution.

Caution: **PRO-MAIL**[®] version 5.4xx does not support the 64 bit version of Windows 2003 or 2008 on the WEB server. The SQL server can run either the 32 bit or 64 bit version of Windows 2003 or 2008. If you are using the 64 bit version of Windows 2003 or 2008 on the SQL server then you must install the 64 bit version of SQL 2005.

- **Microsoft Internet Information Service (IIS)**
This service allows Web pages to be shared on the Intranet and the Internet. This is where **PRO-MAIL**[®] pages are stored so that they are accessible on you network and on the Internet. This should be on its own server (Web server). Windows 2003 Server comes with IIS version 6.0 and Windows 2008 Server comes with IIS version 7.0.
- **Microsoft Sequel Server (SQL) 2005**
This server is where the data is stored. This should also be on its own server (database (SQL) server).

Note: Microsoft SQL 2000 will no longer be supported with any release of **PRO-MAIL**[®] above version 5.4a2f.

- **Firewall software like Microsoft Internet Security and Acceleration Server (ISA)**
This component protects your internal network from the outside world. ISA server is a software solution that installs on a windows server. There are also hardware firewalls that can be used.

- **Crystal Reports 11.0 Developer or Crystal Reports 2008 (single user version)**

Crystal Reports allows **PRO-MAIL**[®] to create detailed reports that can be printed or displayed on the Web. Crystal reports need to be installed on the same machine as IIS.

- **E-mail Component**

E-mail is a fundamental part of The **PRO-MAIL**[®] System design that allows you to use E-mail notification. We suggest that you have some kind of E-mail service such as Microsoft Exchange. However, The **PRO-MAIL**[®] System is compatible with any Simple Mail Transport Protocol (SMTP) server. This E-mail service can be on its own machine or it can be a part of another server, like the Domain server, Web server, or File Storage server.

Required Network Components

The network components requirements are the same for both The **PRO-MAIL**[®] Fulfillment Solution and The **PRO-MAIL**[®] Business Management Solution.

- **Network Topology**

The **PRO-MAIL**[®] System places no specific requirements on how your network is connected. You and your IT department should determine what connections are best for you.

- **Internet Service Provider (ISP)**

Your ISP is the company that gives your network Internet access.

- **High Speed Data Communication**

For optimal performance we recommend that your network is connected to the Internet through a high-speed data line (i.e. fraction T1, ISDN, Cable, True 56k).

- **Printers**

The **PRO-MAIL**[®] System is compatible with any printer that can handle TrueType fonts.

- **File Transfer Protocol (FTP)**

This component allows you to transfer files over the Internet. Windows 2003 or 2008 comes with a basic FTP server program. This is important if you plan on uploading XML or Batch data to **PRO-MAIL**[®].

Optional Components for The **PRO-MAIL**[®] Fulfillment Solution

You may want to install optional components in order to take full advantage of features available in The **PRO-MAIL**[®] Fulfillment Solution.

- **Microsoft Office 2003 Professional (with Web components)**
Microsoft Word is used to create letters as part of order processing. The Office Web Components are used to produce graphs to display historical information. Office Web components will be installed with the SQL 2005 client utilities
- **File Upload Software**
PRO-MAIL® is compatible with SoftArtisans' FileUp Standard Edition for attaching a document to a fulfillment order. For more information see fileup.softartisans.com and click on the FileUp Standard link
- **Shipping Systems**
PRO-MAIL® is compatible with several different shipping systems. For a complete list see www.sma-promail.com/technology/technology.htm and click the Third Party Shipping System link.
- **Tax Calculation**
PRO-MAIL® is compatible with Certiax by CCH Sales Tax Solutions or you can manually enter sales tax tables in to the **PRO-MAIL**® software by state or zip code.
- **Credit Card Processing**
PRO-MAIL® is compatible with VeriSign's Pay Flow Pro for real-time credit card processing and IC Verify for batch processing. For more information on these product / companies see www.sma-promail.com/technology/technology.htm and click the Credit Card Processing Systems link.
- **Active Directory/ Primary Domain Controller**
This network component allows you to set-up network users, groups, and permission for your domain in one central location. A separate Domain Controller should be installed in your network.
- **Bar Coding**
PRO-MAIL® is compatible with many bar code scanners.
- **Radio Frequency Devices (RF)**
PRO-MAIL® is compatible with many Radio Frequency bar code scanners that use Windows CE. RF devices allow you to scan documents instead of keying in data results. This improves accuracy and minimizes mistakes. Using RF devices maximizes productivity by allowing your employees to complete their work remotely. We recommend the Symbol PPT 8846 Series RF device. For more information see www.sma-promail.com/technology/technology.htm and click the Radio Frequency (RF) System (Hand Held Units) link.
- **Scanning Work Station**
The Scanning Workstation allows you to scan images of products into the WMS and associate them with a specific Product ID in the WMS. For more information on this topic see [Scanning Workstation Requirements](#) on page 28.

Sample Network Configurations

The network configurations below are only examples that should be used as an aid in setting up your network. They are not requirements. You should use them for ideas only. Contact your IT department to determine the configuration that is best for your organization.

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- [Network Configurations For The PRO-MAIL® Fulfillment Solution](#) on page 13
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Network Configurations For The PRO-MAIL® Fulfillment Solution

There are four possible network configurations for The **PRO-MAIL®** Fulfillment Solution.

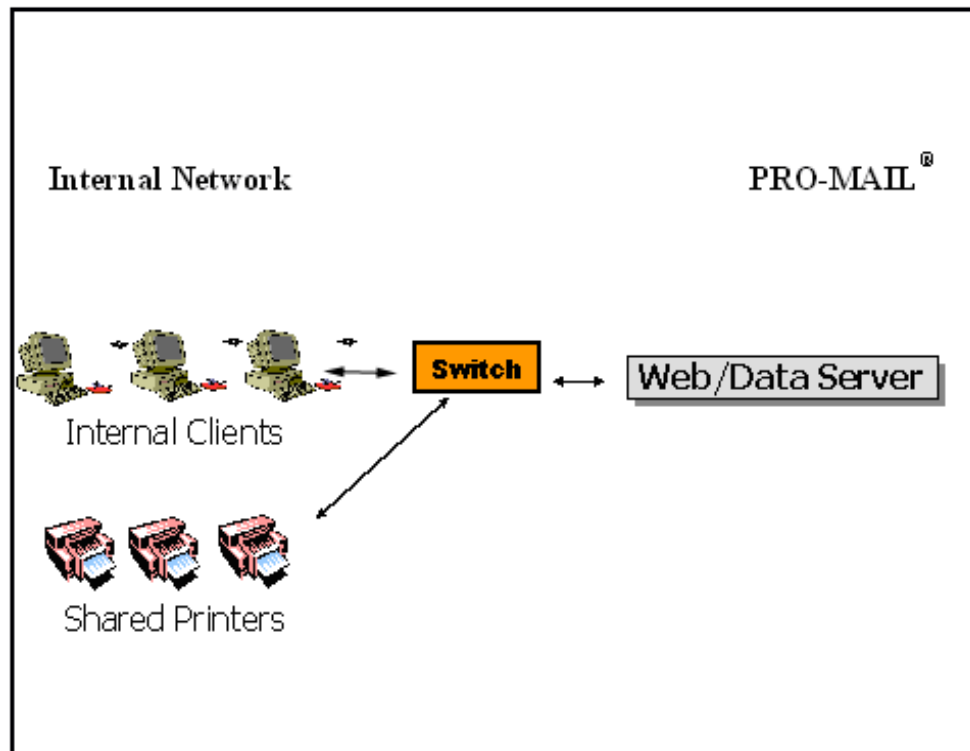
Section Topics

- [Network Configuration 1 for Fulfillment](#) on page 13
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- [Network Configuration 3 for Fulfillment](#) on page 16
- [Network Configuration 4 for Fulfillment](#) on page 17

Network Configuration 1 for Fulfillment

The following example illustrates one configuration you can use for your network.

Example



Fulfillment Configuration 1

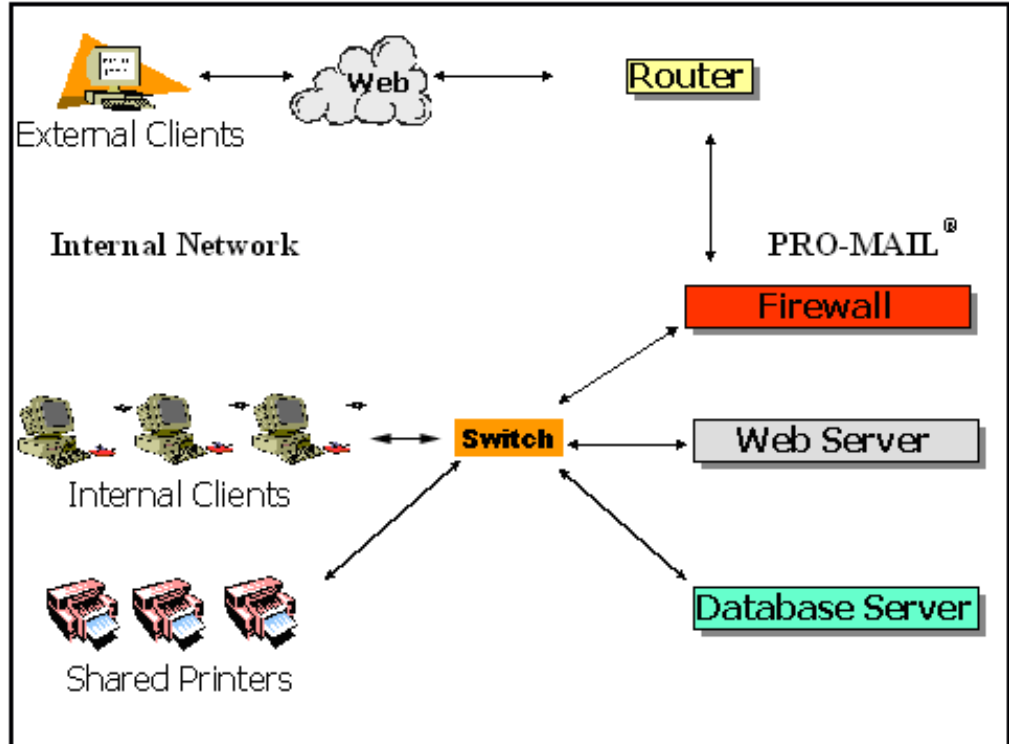
Using Fulfillment Configuration 1, you install the following on your Web/Data Server:

- **Windows 2003 or 2008 Server**
 - IIS
 - SQL 2005
 - Crystal Reports 11.0 Developer or Crystal Reports 2008
 - Microsoft Office 2003 Professional
 - SMTP Mail Service

Network Configuration 2 for Fulfillment

The following example illustrates a second configuration you can use for your network.

Example



Fulfillment Configuration 2

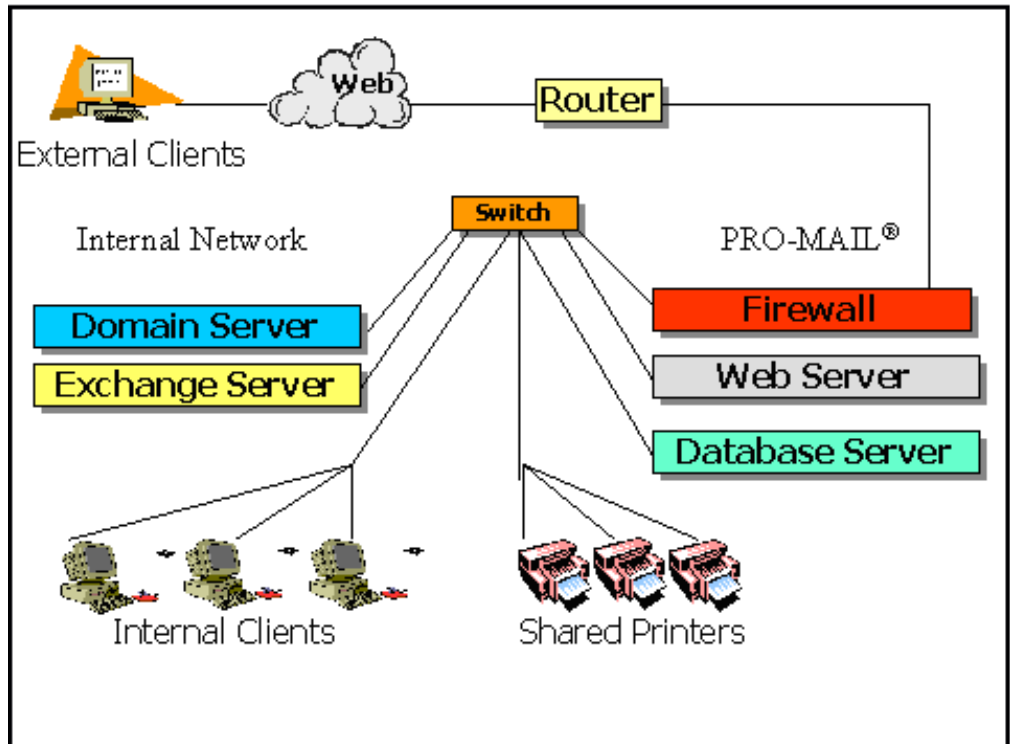
Using Fulfillment Configuration 2, you install the following:

- **On your Firewall:**
 - Windows 2003 or 2008 Server
 - ISA Server
- **On your Web Server**
 - Windows 2003 or 2008 Server
 - IIS
 - SQL 2005 client utilities
 - Crystal Reports 11.0 Developer or Crystal Reports 2008
 - Microsoft Office 2003 Professional
 - SMTP Mail Service
- **On your Database Server:**
 - Windows 2003 or 2008 Server
 - SQL 2005

Network Configuration 3 for Fulfillment

The following example illustrates a third configuration you can use for your network.

Example



Fulfillment Configuration 3

Using Fulfillment Configuration 2, you install the following:

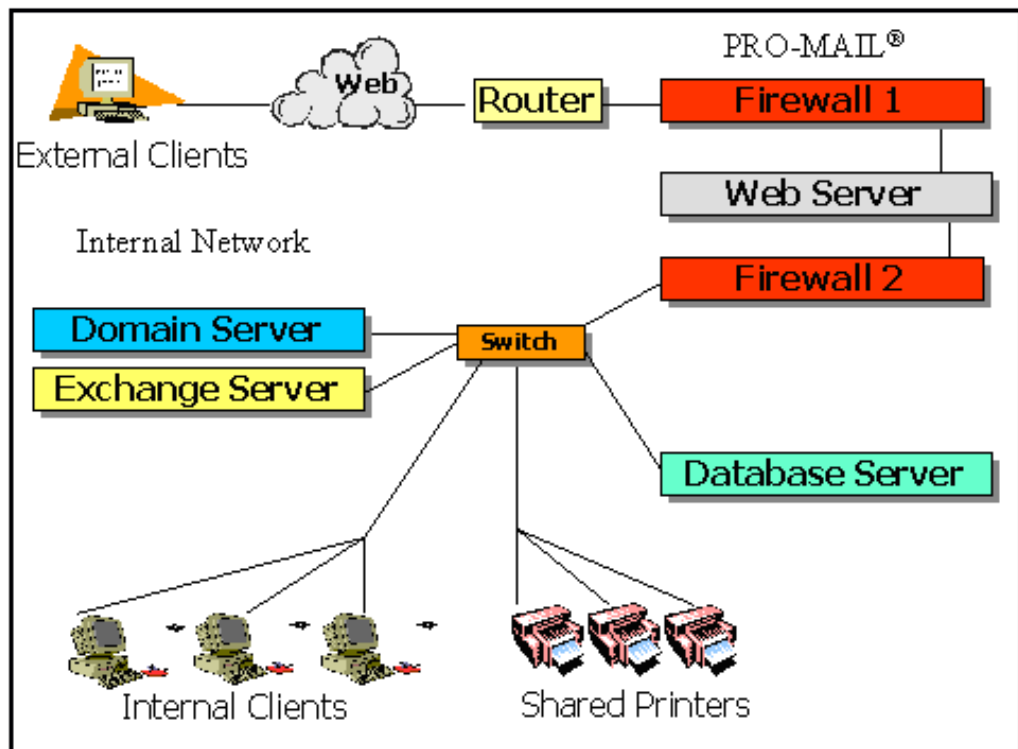
- **Domain Server**
 - Windows 2003 or 2008 Server
 - Active Directory
 - Tape Drive (Backup)
- **Exchange Server**
 - Windows 2003 or 2008 Server
 - Microsoft Exchange Server 2003 or higher
- **Firewall**
 - Windows 2003 or 2008 Server
 - ISA Server
- **Web Server**
 - Windows 2003 or 2008 Server

- IIS
- SQL 2005 client utilities
- Crystal Reports 11.0 Developer or Crystal Reports 2008
- Microsoft Office 2003 Professional
- **Database Server**
 - Windows 2003 or 2008 Server
 - SQL 2005

Network Configuration 4 for Fulfillment

The following example illustrates a forth configuration you can use for your network.

Example



Fulfillment Configuration 4

Using Fulfillment Configuration 4, you install the following:

- **Domain Server**
 - Windows 2003 or 2008 Server
 - Active Directory

- **Exchange Server**
 - Windows 2003 or 2008 Server
 - Microsoft Exchange Server 2003 or higher
- **Firewall 1**
 - Windows 2003 or 2008 Server
 - ISA Server
- **Web Server**
 - Windows 2003 or 2008 Server
 - IIS
 - SQL 2005 client utilities
 - Crystal Reports 11.0 Developer or Crystal Reports 2008
 - Microsoft Office 2003 Professional
- **Firewall 2**
 - Windows 2003 or 2008 Server
 - ISA Server
- **Database Server**
 - Windows 2003 or 2008 Server
 - SQL 2005

Server Configuration Requirements

We recommend that you use the best equipment that you can afford. **PRO-MAIL**[®] version 5.4a2 has worked smoothly with the minimum specifications below.

Note: If you already have older machines that are not as powerful as the ones below **PRO-MAIL**[®] may work, however, poor performance may occur.

Intel Celeron Processors will work, but they offer slower performance than AMD Atholon 64 and Intel Pentium D ,Xeon Processors and Core 2 duos.

Contact your IT department when deciding how to set up your servers.

Section Topics

- [Server Requirements for The PRO-MAIL[®] Fulfillment Solution](#) on page 25

Server Requirements for The PRO-MAIL[®] Fulfillment Solution

Minimum Requirements:

- **Web Server Hardware**
 - At least 2 Ghz rated processor (Do not use Intel Celeron Processors)
 - At least 1 gig of RAM
 - At least 80 GB 7200RPM hard drive w/ mirroring or RAID 5

Web Server Hardware if purchased new

- Dual Core Intel[®] Xeon[®] 3065, 2.33 GHz processor
- 2gig of Ram
- 250 Gig HD configured using RAID 1 (mirrored)

Note: On 3-17-2008 we configured a Dell PowerEdge R200 for \$1800 . This included \$780 instant savings from Dell. Prices will vary depending on when the server is purchased

- **SQL Server Hardware**
 - At least 2 Ghz rated processor (Do not use Intel Celeron processors)
 - At least 2 gig of RAM

- At Least 120GB 7200 RPM hard drive w/ mirroring or RAID 5

SQL Server Hardware if purchased new

- Quad Core Intel® Xeon® E5420 processor
- 4 gig of Ram
- 750 Gig of hard drive space configured using RAID 5

<p>Note: On 3-17-2008 we configured a Dell PowerEdge 2953 III for \$2900 . This included \$1230 instant savings from Dell. Prices will vary depending on when the server is purchased.</p>

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As a rule of thumb as your system grows and gets heavier loads, you should consider increasing to a faster processor, more and if possible faster RAM, and larger hard disks. The minimum requirements specified are for servers you may already have.

Scanning Workstation Requirements

In many organizations samples of new products arrive at the warehouse. They are then hand-delivered to a Customer Service Representative (CSR) for identification. This process is often cumbersome and untimely. The **PRO-MAIL**® System provides a solution for this scenario.

Warehouse personnel can scan images of products into the WMS. These images can be viewed on an Inquiry Screen in the WMS, thus potentially eliminating the need to distribute actual samples of a product. Additionally, these images can be viewed on Travel Tickets. At your discretion, you have the option to forward the image of the product to your clients via the E-mail Inventory Receipt Notification. This feature can help your organization prevent mistakes before they happen.

Compared to other transactions in The **PRO-MAIL**® System, the scanning process is time consuming. Because of this, the WMS has been designed to give you the flexibility of scanning products at your convenience either:

- Prior to the product being received into the system
- At the time of receipt
- After the product has been received

After you scan a product, a barcode and image ID print on a 1" X 4" pressure sensitive label. You affix this label to your product This ID is used later to associate the image to the corresponding Product ID. Once the ID is associated with a specific Product ID the image displays on the Travel Ticket, and Inquiry Screen.

The Scanning Workstation was designed so that the scanned image is stored in a shared directory on the SQL server. This design eliminates the need to tie-up another PC with the stored scanned images. This process also improves both performance and speed.

You should designate one computer in your warehouse as the Scanning Workstation. This computer should have the scanner attached to it. Its main purpose should be to scan images into the WMS.

In order to use the Scanning Workstation you need a computer designated to use as the Scanning Workstation, a scanner and a label printer.

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- [Required Hardware for the Scanning Workstation](#) on page 22
- [Required Software for the Scanning Workstation](#) on page 22

Required Hardware for the Scanning Workstation

- **Scanner**
The scanner must be TWAIN compliant. We recommend the HP ScanJet 5590 Digital Flatbed Scanner. Additional information on this scanner is available at www.hp.com.
- **Label printer (optional)**
The label printer must be compatible with Eltron's Programming Language (EPL2). We recommend the Zebra LP2844 Label printer. Additional information on this printer is available at www.zebra.com.
- **Computer (minimum configuration for an existing system):**
 - Pentium-class Processor
 - 512 Meg Ram or more
 - 40 GB of hard disk space or more
- **Computer (for a new PC):**
 - 2 Ghz processor
 - 1 gig of Ram
 - 80 Gig HD

Required Software for the Scanning Workstation

- **PRO-MAIL® 5** Release CD
- Adobe Acrobat Writer 5.05 or higher
- Antivirus Software such as Norton Antivirus or McAfee
- Microsoft Data Access Components 2.6 or higher (located on the **PRO-MAIL® 5** Release CD)
- Internet Explorer 6.0 or higher
- Windows XP Professional Operating system
 - E-mail Client
- **Other suggested software:**
 - Microsoft Office (Word, Excel)

Software Availability and Pricing

Like all aspects of computers, software prices fluctuate daily. You should contact your local software reseller for software availability and pricing. You may want to contact one of the many online software re-sellers as well, a few are listed below.

- www.cdw.com
- www.pcconnection.com
- www.tigerdirect.com

Microsoft bases the price of their server software on the number of Central Processing Units (CPU) that you plan to use. We have found that a single processor is adequate for SQL servers; therefore a “1 Processor license” is appropriate. For more information on Processor Licensing contact the Microsoft Web site at www.microsoft.com/licensing/.

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