



MILLENNIUM SYSTEM REQUIREMENTS

PC QUALIFICATION SUMMARY AND TECHNICAL OVERVIEW

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INTRODUCTION

Millennium workstations run the Millennium user interface, and optionally a local process server. Almost any hardware can be used for the Millennium workstations, although the faster and better the hardware, the better Millennium will run. Windows NT 2000 and XP provide many advanced features that Millennium can take advantage of. XP Service Pack 2 is supported (permit/allow ProcessServer.EXE when prompted).

NOTE: Windows 95, 98 and ME are NOT supported for client workstations.

Some software components must be installed in addition to Millennium. These include MDAC, Internet Explorer and Adobe Acrobat Viewer, all freely available. You may download these at <http://www.trupay.com/downloads.htm>, although our install CD-ROMs also include this for your convenience. For additional information, please refer to Appendix A - Required Installation Components.

PC REQUIREMENTS

Below are the minimum and recommended requirements for running Millennium. M3 is a program written in C++ against a SQL Server 2000 database and is considered to be a rigorous application. Certain functions, such as dynamically computing payroll checks during data entry are very processor intensive. Therefore, the faster the PC the better these advanced features will run and the less hindrance they will be to the user experience.

NOTE: We strongly advise our clients use the recommended configuration even if it means upgrading their computers because in the end, it will provide a better experience and fewer problems.

Component		Minimum Required	Recommended	Setup Notes
Processor	▶	Pentium III 600 MHz	Pentium 4 1.0Ghz	
Memory	▶	256 MB RAM	512 MB RAM	See note below
Disk Storage	▶	200 MB free	200 MB free	
Network	▶	TCP/IP	TCP/IP	For Sync Server
Operating System	▶	Windows XP Pro Note: will not run on Win 95. Win 98, ME, NT 4.0 are not supported. Win 2000 is supported.	Windows XP Pro SP 2	Users should upgrade to Win XP Pro before installation.
Data Access	▶	MDAC 2.7	MDAC 2.7	For attaching to SQL Server
Web Browser	▶	IE 5.5	IE 6.0	Needed for script support and web
PDF Viewer	▶	Adobe Acrobat 5.0	Adobe Acrobat 6.0	To view and email reports
Report Writer	▶	None	Optional	Optional

NOTES: *If your organization has a Windows Server 2000 or 2003 server and SQL server is running in a server environment, then the above configuration is adequate. However, if one of the workstations will be hosting the database (MSDE/SQL Server 2000) then that workstation must have a minimum of 512MB of RAM and we recommend 1GB for performance reasons.*

COMMUNICATIONS REQUIREMENTS

When Millennium is being used at a remote location, there must be a communications method that allows for the client computer to send and receive updates to TruPay's servers. All communications is performed over the Internet using the HTTP protocol.

NOTE: Security is built-in to the process as binary data replication packets (not clear text, ASCII) are encrypted using a Triple-DES 192-bit algorithm—widely used by the U.S. Military and other organizations. This level of strength far exceeds the SSL encryption found in many web applications that only have 128-bit encryption strength. Additionally, the synchronization process uses the MD5 checksum algorithm to insure data flows between both systems without corruption.

If your company has a LAN (network) and your computer is part of a domain that permits web access, then you should have a very easy process to connect with us and transmit data. However, if you are used to connecting over the Internet via your ISP (Internet Services Provider) via dial-up modem then you must first establish and authenticate the connection prior to synchronizing the database with TruPay. The process is really no different than when you wish to surf the web.

NOTE: TruPay does not use the antiquated point-to-point dial-in modem pool approach. Therefore, if you can get to the Internet via your LAN/WAN connection from your workstation, or you are able to dial-up your modem to connect to the Internet, you should be fine.

PROXY SERVERS AND/OR FIREWALLS

To distinguish between web traffic and sync server traffic, TruPay requires that your company support port 81 in addition to port 80. The sync server is referenced in the HTTP session as follows:

<http://sync.trupay.com:81>

If you can enter this URL into your browser and you receive the response from our server illustrated on the next page, then you know you're good to go. However, if you do not receive this screen, then you must contact your company's technical support staff and/or administrator to insure you are authenticated for port 81 through your proxy server or firewall.

NOTE: Many companies do not restrict port 81. However, for those that have, it is not necessarily creating another security hole in the firewall to open up port 81 if you assign the valid (internal) IP number of the machine that is allowed to access the Internet on port 81 explicitly in the firewall policy. In other words, you can lock down port 81 to only be used by the one computer within your company that requires access to the synchronization process with TruPay. This type of policy greatly reduces the problems of managing a new open port.

Enter: <http://sync.trupay.com:81> into your browser and see if the screen returns the following message – along with the current date and time, of course.

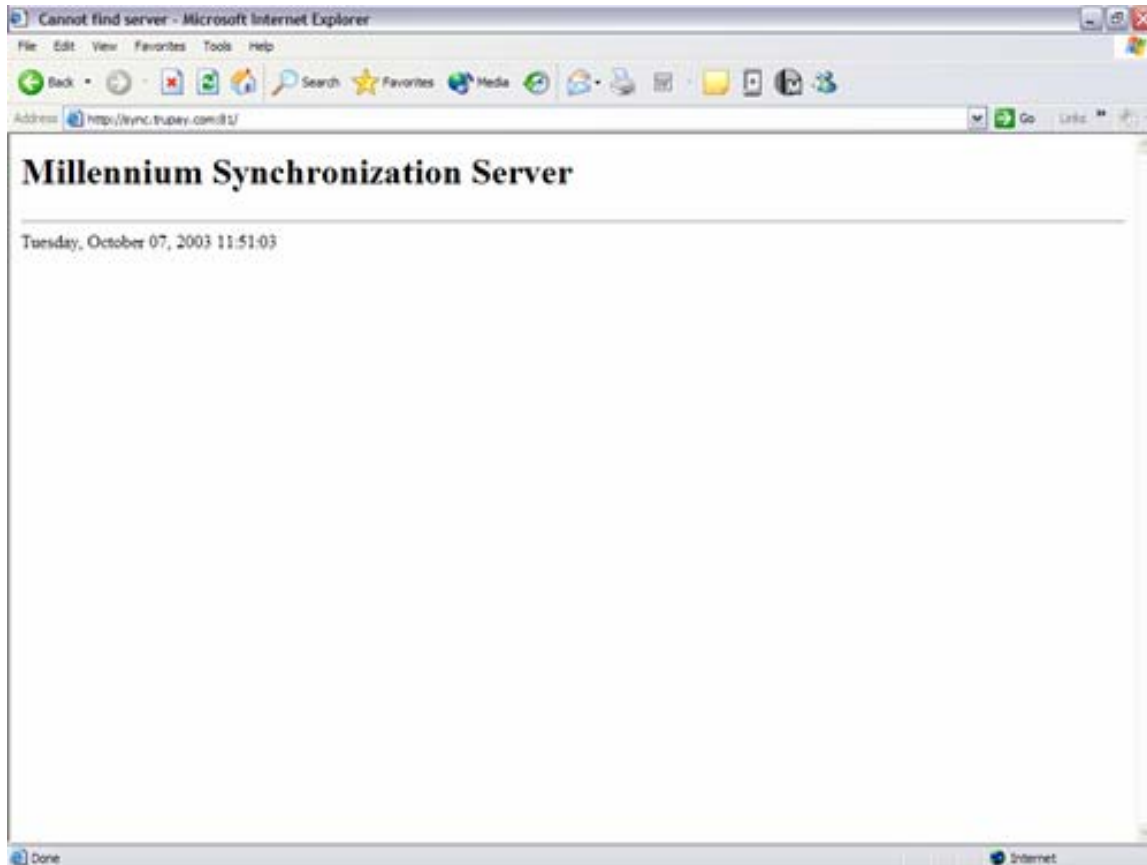


Figure 1 – What your screen should look like if your firewall permits port 81 access.

CONNECTION SPEEDS AND PERFORMANCE

Because Millennium is using the HTTP protocol over an Internet connection, and because we are sending bi-directional binary database replication updates between your client computer and our TruPay servers, communications performance is quite important.

Generally speaking, we highly recommend that clients have a T-1, ISDN, Cable modem, or DSL connection. Dial-up modems, even when they run 56kbps are going to take a lot longer to perform the same amount of data transfer. If your company has been considering upgrading to a broadband connection for Internet access, this would be an excellent time to push that forward to implementation.

Typical synchronization times (based on 100 employees, using a broadband connection):

- Sync during the submit payroll process1 min
- Sync after payroll process (download data).....3-4 min
- Sync to backup data1-2 min

YOUR COMPUTER'S CONFIGURATION

Please fill in the blanks and submit this page by fax to your customer service representative at (574) 256-5829 for review prior to installation. Complete one for each computer that requires an M3 installation.



IT Contact Name	Title	Phone Number/Extension
Computer Name	Computer Location	Primary User Name

NOTE: You can find the computer name when you right click the My Computer icon and select properties. Navigate to the Computer Name tab and view the Full Computer Name entry.

Component		Recommended	Your PC's Configuration
Processor		Pentium 4 1.0Ghz	
Memory		512MB RAM(1GB if MSDE/SQL)	
Disk Storage		200 MB free	
Network		TCP/IP	
Operating System		Windows XP Pro SP 2	
Data Access		MDAC 2.7	
Web Browser		IE 6.0	
PDF Viewer		Adobe Acrobat 6.0	
Existing Report Writer		Does C:\[Windows Dir]\System32\crpe32.dll exist? If so, what version? (*)	
Communications		Recommended	Your PC's Configuration
Connection Type		T-1, ISDN, DSL, Cable	
Firewall		Open port 80, 81	
Test Sync Server		Do you see the sample from the screen shot above?	
Will you have multiple locations transmitting to us?		Contact your customer service person to discuss your requirements.	

*NOTE: Internally Millennium uses Crystal Reports version 9 components. Potential conflicts may exist if there is/was software installed on this computer that uses Crystal components other than version 9.

Reviewed By: _____ Date: _____

Approved By: _____ Date: _____

PC SECURITY ROLES

Administrative Role:

The Administrative role is based on an executive that would have full rights to the payroll functions listed below. This role was developed for the executive, human resource officer, or senior payroll manager that requires full access to all available functions.

Payroll Role:

The Payroll role is defined for those within your company that requires access to employee maintenance and pay entry, but that do not have authorization to perform company level maintenance. The thought is that company maintenance, such as setting up new earnings and deduction types require a fairly extensive knowledge of the system and therefore are restricted in this role.

Data Entry Role:

The Data Entry role is used when a company wants to give rights to enter payroll transaction detail (hours and/or dollars) but not allow the individual access to company and employee maintenance screens.

No Rates Role:

The no rates role is reserved for individuals that are allowed to work with payroll, but that are restricted from seeing or changing any pay rate information. This security role is highly restricted because Millennium, by design, allows the user to view pay check results as they are being keyed into the system. This functionality is harshly removed for this type of user—and results in warning messages in the pay entry screen because “no base rates information is found”. As you may agree, it is difficult to calculate a pay check on a screen without access to pay rates.

But, there are other ramifications to the “no rates” role, they are as follows:

1. Report navigation tree has been removed. A user that cannot see rates must not be allowed to access the reporting area to view a check register, for example.
2. Millennium Report Writer is not available. Understandably, if a user is unable to see rates, then they are not allowed to create any reports that may include pay history, rates, or other sensitive data.
3. As previously mentioned, the ability to see dynamically calculated pay checks is removed. A user with this role will not be able to properly verify that pay checks are calculating correctly.
4. Control Totals are available for this role to use for balancing purposes. There are some important ramifications. First, if the batch contains salaried individuals, they will have access to see the company totals applicable to any auto-paid salary individuals in that batch.
5. However, Batch Balancing is removed. This prevents the user from accessing the ability to print a pre-process payroll register that would otherwise allow a user to view pay rates and other confidential information.

View Only Role:

This role is provided for executives within the company that are allowed to see payroll information but not add, update, or delete records at the company or employee level. They are allowed to print, view, or create reports as needed.

ROLE ASSIGNMENT FORM

(Please Xerox if more copies are needed)

Role Assignments are ways to protect security and confidentiality requirements for a client. The top portion of this form must be completed by the user and signed by a decision maker at the bottom. A new form must be submitted to TruPay Corporation each time there is a new employee to add, a change to an existing employee or you wish to change the rights of an individual user. In addition, notification of terminated users must be made by completing and returning this form.

TO BE COMPLETED BY NEW USER:

Client Name:	Client #:	If Multiple Client #'s, access is granted to Client # ('s):
User Name:	Title:	E-mail Address:
Telephone Number:	Password <u>(Must be 8 characters – Alpha and Numeric):</u>	Basic Role to be assigned (please check one): <input type="checkbox"/> Administrative Role <input type="checkbox"/> Payroll Role <input type="checkbox"/> Data Entry Role <input type="checkbox"/> No Rates Role <input type="checkbox"/> View Only Role
Role Status (please check one): <input type="checkbox"/> New Role <input type="checkbox"/> Change Existing Role <input type="checkbox"/> Delete Current Role	Describe any other Security Requirements below:	

TO BE COMPLETED BY CLIENT:

<input type="checkbox"/> New <input type="checkbox"/> Change Existing Are any files to be sent via e-mail to you or a third party vendor? Please supply e-mail addresses and respective passwords for: <input type="checkbox"/> 401k <input type="checkbox"/> General Ledger <input type="checkbox"/> Payroll Reports	<u>(Passwords must be 8 characters – Alpha and Numeric).</u> Client E-Mail Address: Password: <u>(Passwords must be 8 characters – Alpha and Numeric).</u> Vendor E-Mail Address: Password:
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All files being e-mailed from TruPay Corporation are encrypted and password protected to ensure client confidentiality.

FOR TruPay Corporation USE:

Program Platform: <input type="checkbox"/> Windows <input type="checkbox"/> Web	Check Type: <input type="checkbox"/> Client <input type="checkbox"/> OBC (Official Bank Check)	Security Roles Set up: Date: _____ Logged: <input type="checkbox"/> Yes <input type="checkbox"/> No
Org Level Security Requirements? CC1: _____ CC2: _____ CC3: _____ CC4: _____ CC5: _____	Screen Level Access: Allow: _____ Allow: _____ Deny: _____ Deny: _____	Customer Service Representative: <input type="checkbox"/> Miriam Shaffer <input type="checkbox"/> Brenda Yeo <input type="checkbox"/> Lisa Hare <input type="checkbox"/> Kim Stout <input type="checkbox"/> Daneen Pope <input type="checkbox"/> _____ <input type="checkbox"/> _____

Client Approval: _____
 (Must be signed by Authorized Representative)

Date: _____

Print Name: _____

Title: _____

SCREEN ACCESS RIGHTS BY ROLE

Screen Description	Admin Role	Payroll Role	Data Entry
Company Setup			
• Agency Checks	√		
• Auto Post	√		
• Calendar	√		
• Departments	√		
• EE User Fields	√		
• Jobs	√		
• Miscellaneous	√		
• Position	√		
• Work Comp	√		
Reporting	√	√	√
Employees			
• Add New Employee	√	√	
• 401(k)	√	√	
• Accruals	√	√	
• Auto Pays	√	√	
• Deductions	√	√	
• Demographics	√	√	
• Dependents	√	√	
• Direct Deposit	√	√	
• Education	√	√	
• Emergency	√	√	
• Events	√	√	
• Fringe Benefits	√	√	
• Information	√	√	
• Insurance	√	√	
• Labor Allocation	√	√	
• Miscellaneous	√	√	
• Pay History	√	√	
• Picture	√	√	
• Previous Employment	√	√	
• Rates/Reviews	√	√	
• Skills	√	√	
• Status/Position	√	√	
• Taxes	√	√	
Payroll			
• Set Check Date	√	√	√
• Start Payroll	√	√	√
• Auto Post	√	√	√
• Payroll Entry	√	√	√
• Batch Control Totals	√	√	√
• Batch Totals	√	√	√
• Submit Payroll	√	√	√
• Check Calculator	√	√	√
System			
• Job Queue	√	√	√
• Synchronize	√	√	√

DATABASE REQUIREMENTS

Millennium has the ability to run the SQL Server database from a self-standing workstation, a workstation attached to a business network, or on a server. If your installation requires multiple users accessing Millennium at the same time, then you should install MDAC and MSDE on a centralized server so that more than one individual can access it.

What your IT staff need to know:

1. Millennium requires MDAC v2.7.
2. We use Microsoft SQL Server 2000 desktop engine with service pack 3. It does not need to run on a dedicated server. It is capable of running on the user's desktop computer providing there is enough RAM (we require a minimum of 512MB and recommend 1GB).
3. The number of simultaneous connections allowed is 5-users. If more are needed, then you should implement the full SQL Server 2000 database on a dedicated server. In this case, client access licenses (CALs) determine how many users can connect to the database. Or, optionally, if you license SQL Server 2000 by the number of processors, you may have unlimited access.
4. The SQL database (in MSDE form) is limited to 2 Gigabyte in size. A fully licensed SQL Server 2000 database can store up to 1 Terabyte—and more if special extensions are installed. Even at 2GB a MSDE database is estimated to be capable of storing 10,000 employees for 5 years worth of data before needing to scale up to the full SQL Server database. Again, if you believe your database size requirements will exceed this threshold, then you should implement the full SQL Server database on a dedicated server.
5. The database name is typically Millennium.
6. The application uses a ODBC connection through a system DSN named Millennium.

We strongly recommend at if your company currently has an existing SQL Server platform, that you incorporate the Millennium database into the current infrastructure. In this case your company must provide the password to the 'sa' SQL user account created when SQL Server was installed. Have your SQL Server DBA (database administrator) analyze performance criteria for your organization and to insure the database becomes part of the normal backup and recovery methodology for your business. If you are planning a new SQL Server instance on a new server, please insure that your Active Directory Services are setup correctly and that the new database is included in your backup and recovery strategy.

NOTE: Security of your payroll data is of utmost importance. When you install a SQL Server database on a centralized server, you become responsible for maintaining security rights to the database as this is out of TruPay Corporations control. Please contact us if there is any question or concern.

BACKUP AND RECOVERY

Local backup and recovery of your computers is the responsibility of the administrator of your organization. However, unlike many other applications running within your organization, Millennium has an interesting recovery mechanism since we house your data simultaneously on our servers at TruPay Corporation via on-demand data replication built in to our synchronization process.

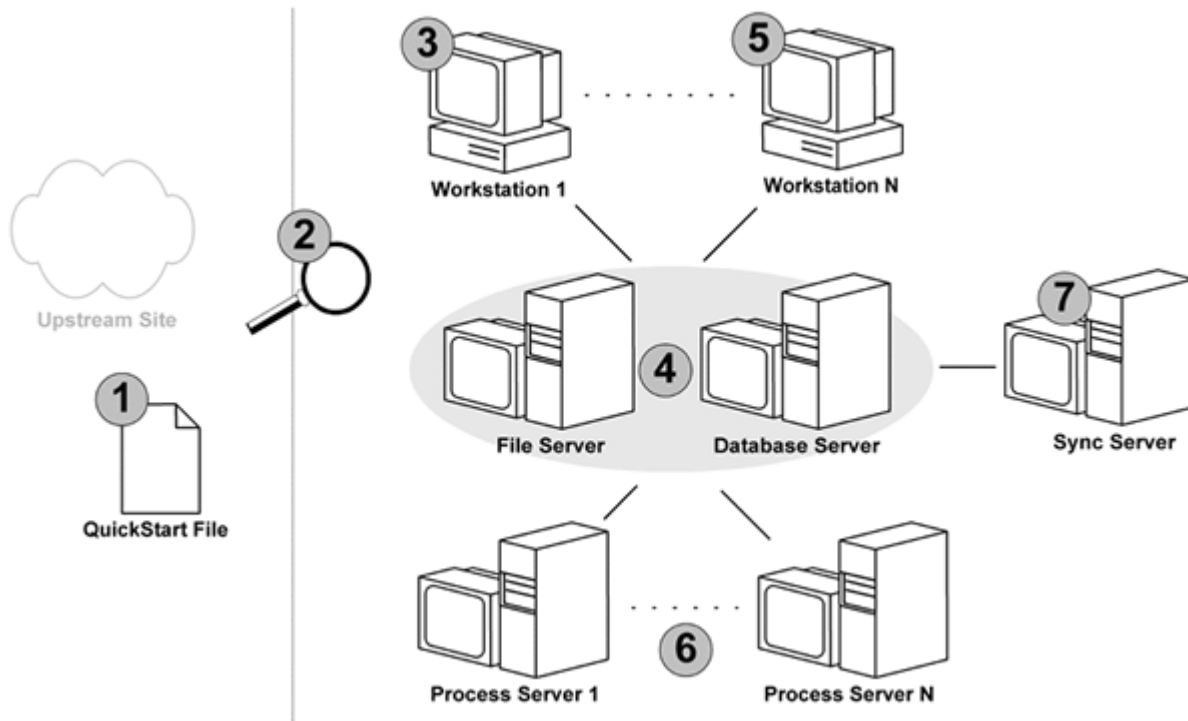
For instance, if the computer you use for data entry is disabled for whatever reason (hard drive failure, power supply issue, etc.) then we can install Millennium on a new computer and simply re-initialize all the data for your company stored on our servers. Although a time consuming process, this does provide you with the ability to capture most of your data *up to the point of your last synchronization with TruPay*. Please contact your customer service representative for more information.

*NOTE: There are two exceptions to what TruPay has the ability to backup for you. They include (a) custom reports that you have created, since reports do not synchronize back and forth; and (b) items in the Employee Documents screen. These items can include video clips, photographs, Excel or Word documents, and many more mixed-media types stored as BLOBs (binary large objects) within your **local** database. It is the client's responsibility to backup such documents as these do not synchronize to TruPay's servers.*

REMOTE LOCATION SYNCHRONIZATION

The following diagram illustrates some of the advanced capability we support if you require multiple sites (divisions or separate locations) to update your corporate headquarters *prior to* closing the payroll and synchronizing with TruPay Corporation.

For the purposes of the diagram below, the upstream site is TruPay Corporation if you are transmitting from one location to us. The upstream site is your corporate headquarters if you will be using multiple installations of Millennium at different locations throughout the country. In which case, TruPay would be the upstream site of your corporate headquarters.



The steps indicated on the diagram are explained in general:

- **Step 1 - Create QuickStart file at Upstream Site** – Create a Quick Start file (QSF) at the upstream site that will contain all the necessary data to initialize the new downstream site. Because the downstream site syncs only its changes with the upstream site, a full copy of the data from the upstream site is needed to initialize the downstream site. In this case, TruPay creates the first instance of the QSF at the corporate headquarters. Subsequently, we create QSFs for the remote location from the corporate headquarter instance of Millennium.
- **Step 2 – Verify Prerequisites and Gather Information** -- All prerequisites listed in the Installation Requirements must be satisfied. This includes installing MSDE if no SQL Server is already available.
- **Setup 3 – Install First Workstation.** Install Millennium on the first workstation. This only installs the Millennium program on the workstation, which includes the capability to setup the database and file servers.
- **Step 4 - Setup Database and File Servers.** The install process sets up the database and file server on the first workstation. Note the database server and file server computers do NOT need to have Millennium installed on them. Any Millennium workstation has the capability to setup the database and file server computers remotely.
- **Step 5 - Install Remaining Workstations.** Install Millennium on any additional workstations and connect them to the database via the installation program.
- **Step 6 - Install Dedicated Process Server(s).** Dedicated process servers are initially installed as Millennium workstations. If your company has massive compute requirements, we may recommend using a dedicated process server to offload processing from each workstation.
- **Step 7 - Install Synchronization Server.** We must install a sync server if you are intending to have remote locations sync with the corporate headquarters. The sync server is a NT Service that coordinates HTTP traffic between a remote client and the corporate database.

NOTE: Installing outlying locations may not be a necessity if your organization uses a remote access tool such as Remote Desktop Protocol (RDP, using Terminal Services), MetaFrame (from Citrix), or PC Anywhere. In this instance, the remote locations will be running local instances of Millennium at the corporate LAN environment.

APPENDIX A

Required Installation Components

The following are required installation components to run Millennium.

MDAC – Microsoft Data Access Components. This is a suite of underlying programs that are a part of the operating system. Millennium requires MDAC version 2.7 (the most current release). It is difficult to discover the version number of MDAC installed on a computer, because there is no user-interface and it is buried deeply within MS Windows. However, if you know how to use the RegEdit utility, you may perform a search for the keyword: "MDAC" (in caps) in the Registry Editor and after hitting the next button a few times, you'll come across the version number.

It is nested within the following key:

HKEY_CLASSES_ROOT

CLSID

ProgID

REG_SZ – Data Value: MDACVer.Version.2.71



If you see anything over 2.70 then your system is okay.

We need to mention that if you don't have at least version 2.70 we will be installing the Microsoft Data Access Component upgrade package which is freely distributable from Microsoft. For your convenience, this is available on our installation CD.

NOTE: An upgrade to MDAC usually (but not always) requires a reboot process.

IE 5.0 – Internet Explorer. Because some of the screen functionality within Millennium uses a web page, the program needs the ability to execute scripts. An example of screens that are web-based are the Employee Information screen, the Employee New Hire screen, the Pay History screen, the Payroll Pay Entry screens make extensive use of HTML pages. IE 5.0 contains the script functionality required to make these screens work correctly. Because lower version of IE 5.0, such as IE 4.0 were not Y2K compliant, it is unlikely that this is an issue for our clients. However, we do have IE 6.0 available on our installation CD, or you may download it from Microsoft.

NOTE: A new browser, FireFox, is gaining popularity with users because it is perceived to have better functionality and fewer security risks. Although you may use FireFox as a web browser, we still require the components of IE 5.0 or higher to be installed.

Adobe Acrobat Reader – This is what makes printing and viewing reports possible within Millennium. When you preview a report, the report engine (Crystal Reports 9.0) creates the report in PDF format so that it may be viewed on your screen. Although we function great with version 5.0, we recommend upgrading to version 6.0 or higher. As a convenience, our install CD contains a freely distributable copy, or you may download it directly from Adobe.