

# TimeForce II

## Hardware and Software Specifications (Required & Recommended)

Concurrent Web Users*	Server Hardware Required Minimum			Server Hardware Recommended		
	Server(s)	CPU Speed	Memory	Server(s)	CPU Speed	Memory
1 - 50	1 Combined Web/DB	2GHz	1GB	Combined Web/DB	3GHz	1GB
51 - 200	1 Combined Web/DB	3GHz	1GB	Dedicated Web	P4 3GHz	2GB
				Dedicated DB	P4 3GHz	2GB
201 - 500	1 Dedicated Web	P4 2GHz	1GB	Dedicated Web	P4 3GHz	2GB
	1 Dedicated DB	P4 2GHz	2GB	Dedicated DB	P4 3GHz	3GB
501 - 1000	1 Dedicated Web	2x Xeon @ 3GHz ea.	2GB	2 Dedicated Web**	2x Xeon @ 3GHz ea.	2GB
	1 Dedicated DB	2x Xeon @ 3GHz ea.	2GB	Dedicated DB	2x Xeon @ 3GHz ea.	4GB
1001 - 3000	2 Dedicated Web**	2x Xeon @ 3GHz ea.	2GB	3 Dedicated Web**	2x Xeon @ 3GHz ea.	2GB
	1 Dedicated DB	2x Xeon @ 3.7GHz ea.	4GB	Dedicated DB	2x Xeon @ 3.7GHz ea.	4GB

\* Concurrent Web Users are any users who may be logged into the system simultaneously at the highest peak time. This includes any Employee/Supervisor/Customized Role Self Service Users, program administrators, or Network Time Clock instances. \*\* Multiple web servers requires the use of a hardware/software-based load balancer. Note: Actual requirements vary based on your system configuration and the applications and features you choose to install.

### Other Hardware Requirements & Recommendations

CD ROM drive  
UPS back up power supply recommended  
Internet access strongly recommended

### Operating System:

Microsoft .NET Framework 3.5  
Microsoft Internet Explorer 7.0 SP1 or later  
FireFox 2.0 or later

Windows 7 (recommended)  
Internet Information Services  
Windows 7 CD required to install  
No limit on concurrent users

Windows Vista *Business, Home Premium, or Ultimate Editions (32 or 64 bit architecture)*  
Windows Vista CD required to install  
No limit on concurrent users

Windows 2008 Server  
Internet Information Services  
Windows 2008 CD required to install  
No limit on concurrent users

Windows 2003 32 bit  
Internet Information Services  
Windows 2003 CD required to install  
No limit on concurrent users

Windows 2003 Server 64 bit  
Internet Information Services  
Windows 2003 CD required to install  
No limit on concurrent users

Windows XP Professional 32 bit  
Home Edition is not supported.  
Internet Information Services  
Windows XP CD required to install  
Maximum of 10 concurrent users

**Database:**  
The TimeForce System uses a SQL 2005 database.  
SQL Server 2005 Express (included)  
SQL 2005 / 2 GB of RAM required.  
Computer must be a dedicated SQL Server 2005 machine

### All Operating Systems:

The following steps must be performed on all Operating Systems.

- From the Windows Start Menu, go to Control Panel | Administrative Tools and select "Services."
- Right-click on the "Distributed Transaction Coordinator" service and select Properties.
- From the Startup Type drop-down menu, select "Automatic." Click on the [OK] icon.

### Internet Information Services (IIS)

**Settings:**  
IIS settings vary slightly depending on the Operating System in use:

### Windows Vista

From the Windows Start Menu, go to Control Panel | Programs and Features | Internet Information Services.

# Specifications

...continued from previous page

Under “World Wide Web Services” select “Application Development Features” and select the following options:

- .NET Extensibility
- ASP.NET
- ISAPI Extensions
- ISAPI Filters
- Server-Side Includes

Under “Common HTTP Features” select the following options:

- Default Document
- Static Content

From the Windows Start Menu, go to Control Panel > System and Maintenance > Administrative Tools > Internet Information Services (IIS) Manager.

- Expand [Server Machine Name]->Sites->Default Web Site->TimeForcell
- The TimeForcell icon will look like a folder. Right-click on the TimeForcell icon and select ‘Convert to Application’ from the pop-up menu.
- Click ‘OK’ on the dialog box that pops up.
- You should now be able to open the TimeForce II site with a browser without error.

Click on the [OK] icon to save the changes that you have made.

## Windows 2008 Server

From the Windows Start Menu, go to “Administrative Tools” and select “Server Manager.”

Scroll down to the Roles section of the screen and select the “Add a Role” option.

- Select “Web Server (IIS),” and select to “Add Required Features.”
- Click on the [NEXT] icon repeatedly until a screen appears asking which role services you would like to install for IIS.
- Under Application Development, select “ASP.net.” Ensure that the “Add Required Features” option is selected. This will add the ISAPI Extensions and Filters.
- Select [NEXT] and then choose [INSTALL].

## TCP/IP Port Numbers Used by the TimeForce System

The TimeForce system and its hardware and utilities use various ports for communication. You may need to open/forward the proper ports to ensure the systems ability to communicate with your clocks, ClockLink, Live Lookup, etc.

The following is a list of port numbers and their uses in the TimeForce system.

**80** - This port is used by IIS on the Default Website to host TimeForce II

**5402** - This port is used by ClockLink and Clock Server to communicate with your time clocks.

**5405** - This port is used by ClockLink and Clock Server to communicate with the “TimeForce Punches Service” on the TimeForce II web server.

**5704** - This port is used by ClockLink to communicate with the “TFNClockFacadeServer” service on the TimeForce II web server.

## Domain Controllers

Installing TimeForce II on a domain controller is not recommended.

## Client Computer Requirements

A client computer accesses the TimeForce program and database via a web browser. No program or database files are installed on client machines.

- Pentium 4 1.3 GHz or faster processor
- 1GB of RAM
- Internet Explorer 7.0 SP1 or higher
- Internet access strongly recommended
- The computer must be able to access the TimeForce II web server over the network
- TimeForce is a web application. However, for most web server configurations and firewall/router setups, the default configurations will not allow TimeForce II to be available outside your Local Area Network via the Internet.

## Time Clock Punch Retrieval Options & Requirements

Refer to the list of requirements for the type of clock that you are using.

### Local (Serial) Clocks

- Dedicated serial port required, or a Qquest provided USB to Serial Cable Kit.
- From the Master time clock to the computer there is a maximum 250 feet cable length.
- There is a maximum of 4000 feet total cable length for concurrent clocks.
- The USB to Serial Cable Kit is only compatible with Windows 2000 or better.

### Modem Clocks

- The time clock requires a dedicated analog phone line (digital phone lines are not compatible with the clock’s analog modem).
- The desktop PC requires a 28.8kbs or faster modem.

### Ethernet Clocks

- TCP/IP networks only
- The clock uses TCP port 5402.
- A static IP address is required.
- A minimum 56k LAN/WAN/Dial-up networking connection for the computer that is to download the clock.
- The clock requires a 10MB or 100MB Ethernet connection.
- Cat 5 cable or better, with a maximum cable length of 300 feet.
- Cat 3 cable is not recommended and may be unreliable.

## TimeForce II Hosted System Requirements

If you choose to use our hosted solution instead of installing the TimeForce II servers in-house, the following are the minimum requirements for the client computer used to access TimeForce II over the internet.

- Pentium 4 1.3 GHz or faster processor.
- Internet Explorer 7.0 SP1 or higher, or FireFox 2.0 or later.
- 56K or faster Internet connection