

## PONTTEM SOFTWARE SYSTEM REQUIREMENTS

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The following specifications apply to ALL Pontem software product lines, including:

- Pontem Fund Accounting Suite
- Pontem Property Tax Suite
- Pontem Cemetery Management Suite

## APPLICATION INSTALLATION TYPES AND CONSIDERATIONS

### Installation Types

Your software can be installed on any one of the following hardware configurations:

- Standalone PC with one or more users who work at the same PC at different times.
- Peer-To-Peer connected PCs, with one Master PC acting as the data host.
- Client-Server Network where the Client PCs connect to a data server.

### Database Management Software

For all installation types your Pontem data is maintained in a relational database that is managed by Firebird Database Server applications. These applications run as a service on the pc/server where the data is stored/hosted. Your database and the database service must be installed on the same pc/server. Once installed, you will see two services running on your pc/server:

- Firebird Server
- Firebird Guardian

Both services *must* be running on the pc/server where the data is located for your Pontem Applications to be able to connect to the database.

### Hardware Upgrades

If you find a benefit or need to move/migrate your data and software to a new data server after the initial installation, we ask that you schedule an appointment with a Pontem Technician to assist with this. This is a free service included in your active annual support subscription. Attempting to perform the **migration without the assistance of a Pontem Technician will invalidate your support agreement**, and you may incur additional charges for support/assistance if you or your IT Technician start it without our assistance.

## NETWORK (CLIENT- SEVER) SPECIFICATIONS

This section will outline what is needed for installing your software on a data server which client PCs on a LAN will connect to.

### Dedicated Data Server

To ensure maximum performance, your **Firebird database server should be a dedicated server** and should only be responsible for the Firebird database service.

FBGUARD and FBSERVER, services used by Pontem, must be allowed through the server's firewall.

### Virtual Data Server / Virtual Machine (VM) are not Recommended

We recommend against the use of Virtual Servers\Machines (VM) for the data server. Virtual servers lose between 20% and 80 % of their speed under a high load. Any advantage of a VM-based Firebird Server will be paid for dearly by all clients waiting additional time to carry out and complete their jobs.

### Data Server Minimum Specifications

#### *Operating System*

We do have legacy customers with our applications on data servers running older versions of Windows Server, however as of 2024, we recommend new installations on **Windows Server 2012 or greater**.

We recommend you never purchase and install any new operating system before it has been on the market for more than one year.

#### *Hardware*

We recommend the following minimum hardware specifications:

- CPU—Dual Core or greater
- Memory (RAM)—4 GB (more users = more memory needed)
- Hard Drive—100 GB or greater
- Screen Resolution—1024 x 768

Most of the data processing will be done on the data server so more memory and a faster CPU will make a noticeable performance difference.

### Client PC Recommendations

#### *Wired LAN Connection*

Unlike simple file editing/desktop applications, Pontem applications require a client pc to maintain a **persistent connection** to the database server, where the relational database service (Firebird) is running. Pontem recommends client PCs connected on a **wired LAN**, for optimal performance. A wired LAN provides the reliable, persistent connection needed.

### *Wireless Networking (WIFI)*

A WIFI connection cannot provide a persistent connection and therefore is not supported under your annual support agreement.

Due to the nature of **Wireless Networking (WIFI)**, it cannot provide the required persistent connection to the data server. With WIFI, clients commonly experience frequent disconnects/interruptions that lead to **performance issues and data loss**. Therefore, your support agreement does not cover assistance with client database connecting via WIFI.

### *Client Connections Via VPN*

Due to the nature of TCP connections, remote clients connected **directly from the Pontem application via a VPN** will experience poor performance and disconnects when sending and receiving data.

Therefore, your support agreement does not cover assistance with client database connections through a VPN.

### *Remote Client Connections*

For users working remotely from PC **we recommend**:

- **Use Windows Remote Desktop on the PC** to connect to their LAN\Office PC, from which they can run the Cemetery application as if they were at the office.
- **Set up a Terminal Services Server with the Cemetery application installed** for the remote clients to connect to, using Windows Remote Desktop (RDP).
- In either of these cases, you can run a VPN on the remote client, but you need to always **use RDP to connect the client to a PC or Terminal Server that is wired** on the LAN, where the data server is installed.

## SERVER-LESS / PEER-TO-PEER NETWORKS

Peer-to-peer networking is a server-less networking technology that allows several network devices to share resources and communicate directly with each other. This technology is available for Windows clients that run the Advanced Networking Pack for the peer-to-peer infrastructure. Pontem applications can be run on a peer-to-peer network.

Follow the **Standalone** guidelines for PC Hardware requirements.

In order to obtain the greatest level of success and satisfaction from a peer-to-peer network when using Pontem Software products, we recommend the following:

- Data Host PC (Master) is NEVER turned off; logging off is okay.
- Data Host PC (Master) is more capable than client PC, i.e. it has more memory, dual-core processor, and large hard drive.
- Use hard-wired network cables rather than wireless (WIFI) connections between PCs. A WIFI connection cannot provide a persistent connection and therefore is not supported under your annual support agreement.
- Data Host PC must have a login account created; PC cannot go straight to the desktop when booted. This is required to facilitate Sharing capabilities.
- FBGUARD and FBSERVER, services used by Pontem, must be allowed through the host's firewall.

NOTE: If the host PC is shut down, you must start it before starting the client PC. If the host PC is not powered on first, then the database file will not be visible to the client PCs.

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## STANDALONE (ONE PC) INSTALLATION

### RECOMMENDED SPECIFICATIONS

- Operating System—Windows 10 or 11 – Business or Professional – 64-bit
- Please note Windows XP and older are NOT supported.
- Screen Resolution (minimum) —1920 x 1080.
  - For clients with GIS Mapping, Pontem strongly encourages the use of a second monitor for the optimal user experience.
- Hard Drive—5 GB or larger (Disk storage)
- CPU—Dual Core or greater
- Memory (RAM)—4 GB or greater
  - **For ESRI based GIS Mapping**
    - Video Card - 4 GB RAM
      - Hardware Transforming & Lighting
      - Pixel Shader version 5.0m
      - Vertex Shader 5.0
    - Microsoft .NET Framework 3.5
- Backup—CD-R/CD-RW/DVD drive for backup to CD or DVD or use of Pontem’s Remote Backup Service
- Internet Access—High-Speed Internet required for:
  - Remote Training & Support
  - Product Upgrade downloads
  - Pontem Remote Backup
  - Real-Time Updates for public records viewing
    - Cemetery Administrator’s Portal
    - Web API to partner applications (see Real-Time Update Recommendations) □  
WebExport-FTP for Online Property Tax Search

### macOS SUPPORT and Tablets

We currently do not offer set up assistance or application support for macOS and Tablets.

### MONITOR RECOMMENDATIONS—**With ESRI based GIS Mapping**

Pontem recommends using a dual-monitor array for optimal viewing, or a 24” monitor or larger.

### PRINTER/SCANNER RECOMMENDATIONS

To take advantage of report printing and document scanning features, you can utilize any printer and scanner that is compatible with the computer’s operating system and has a WIA driver available. We recommend you do NOT use a TWAIN driver; you will likely experience issues with TWAIN drivers.

## CEMETERY MANAGEMENT SPECIFIC

### Online Burial Search (OBS) with Real-Time Updates/Sync (RTU)

If you are licensed for any Pontem applications that use an online database with Real-Time Updates (RTU), you will see a Windows Service named *Pontem Queue Manager* (CMQueueService.exe) running on your data server. These licensed Pontem applications include:

- Public Online Burial Search
- Cemetery Administrator's Portal
- Pontem web application interfaces for vendor partnerships

### Data Server on 24/7 for OBS-RTU Service

When the Pontem Queue Manager /RTU service is installed and running we recommended the following:

- Your data server remain powered on 24/7 and only rebooted for maintenance.
- Your power settings should be set so the server does not sleep or hibernate.

Failure to keep the Pontem Queue Manager /RTU service running 24/7 will prevent the changes you make in your Pontem Cemetery Application throughout the day from being reflected in the copy of your public-facing database on the web.

If your firewall requires an Allowed Application list (whitelist), you will need to let your Firewall Administrator know:

- RTU sends outbound requests via the CMQueueService.exe program (Windows service)
- RTU requires outbound TCP packets to port 80 on api1.govern.com
- A Secure RTU connection is an optional feature you can enable. It requires outgoing connections on port 443 for govern.com domain and subdomains.
- A 64-bit processor is required to run RTU

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## PROPERTY TAX MANAGEMENT SPECIFIC

### Online Property Tax Search (OPTS) with Nightly Data Sync

If you subscribe to Pontem's Online Property Tax service, we will also install and configure Web Export-Sync software on your data server. We will set up a Scheduled Task on your data server to run this synchronization each night after working hours, seven (7) days a week.

### Data Server Requirements for OPTS Synchronization

We recommend you schedule all data service work which requires powering down the server, during hours before or 3 hours after your nightly scheduled synchronization task. Your data server must be running for the Scheduled Task to successfully run and complete each night. If the data server is turned off during the time of this scheduled task, the synchronization for that day will not happen until the next day when the data server is on during the scheduled task time, and the public will not see the current changes or payments. If the data server is turned off after the synchronization was started but not yet completed, some synchronization of changes will be lost, and will require the assistance of a Pontem Technician to resync the entire database.

Additionally, your data server will need to allow for a passive FTP connection; this is how the nightly Web Export-Sync sends the data to Pontem's secured remote server, where the online data is hosted. You will also need to be sure your server will allow this through your firewall.



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## TROUBLESHOOTING

### Pontem Software is Slow, Other Software and/or PCs Runs Fine

Keep in mind; your Pontem software is not like most applications running on your server or your PC. It uses a complex relational database service to manage transactions on your data server, sending and receiving large volumes of data for each request. If you have GIS or Real-Time Updates, it also uses complex APIs to other applications and MS Windows services to complete transactions. Your Pontem application is likely the extreme use of the bandwidth and resources on the network connection. Many performance cases prove out to be a hardware issue that only surfaces in an extreme use case.

#### Tips for troubleshooting

- Make sure your database services are not running on a VM
- For remote clients, make sure you are connecting using a Remote Desktop service, not directly using a VPN
- Use benchmarking and speed testing tools to validate performance expectations
- Validate the performance of your connections and communicators
  - o Cabling is working correctly
  - o Do a swap out test for cabling or other equipment
  - o Check that your routers, managed switches, and their ports are configured properly
  - o Nic card is functional, compatible, and power settings are sufficient
  - o Validate the PC itself by swapping out for equipment with proven acceptable performance (working on another connection)
- Check for malware, pending Windows updates, anti-virus software
- Review Windows Task Manager for other applications with high CPU usage
- Review the Power Saving settings on the PC and Monitor

### Client PC Cannot Connect to Data on the server

#### Tips for troubleshooting

- On the Pontem Login dialog, check the Server Name and Location path. If your data is on a remote server, the Server Name should not be <local>; <local> is for stand-alone installations only.
- Verify file and folder access rights for user and the PC
- Verify your firewall blocks and rights
- For GIS, verify ESRI licensing is installed on the client PC and Pontem Preferences are configured for the correct version

- On the server, confirm FBGUARD and FBSERVER services are running and allowed through the firewall.

### Peer Client Cannot Connect to Master PC

#### Tips for troubleshooting

- The Master PC must be powered on and logged in
- Same checks as client PC above
- FBGUARD and FBSERVER, services used by Pontem, must be allowed through the host's firewall.

### One Client PC Receives Pontem Application Errors, and others do not

#### Tips for troubleshooting

- Check the Pontem Log In dialog settings for Server name (not <local>) and Location path
- Verify file and folder access rights for the specific user and PC
- Verify your firewall blocks and rights
- For GIS, verify ESRI licensing is installed on the client PC and Pontem Preferences are configured for the correct version

### Terms and References in this Troubleshooting Section are unfamiliar – now what?

Setting up a network can be complex and involve many variables; it requires much time and patience on site. Pontem recommends you hire an experienced, professional IT Technician to set up and/or troubleshoot your network. They will understand the terms being used in this document and can efficiently run through the process of elimination to pinpoint issues.

If your IT Technician, after ruling out the common issues, finds the issue to be obscure, you can submit a Pontem Technician Consultation request, which will be billed at our hourly rate and must be scheduled in advance.

### Contact Pontem Help Desk

Call 888.237.8531 toll-free

Submit an online support request at: <http://www.pontem.com/Support-1>

Email: [support@pontem.com](mailto:support@pontem.com)