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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.

Pontem Help Desk and Remote Support Software
A Pontem Technician will perform your initial installation remotely. This is a free service included in your active annual support subscription. Pontem Software training and support are also provided through a remote connection to your client or server pc.

Note: The software we use does **not** allow us to connect remotely **without you explicitly** launching the remote connection software and **providing us with the access code** to continue.

As of 2025, the remote connection software we are using is Splashtop SOS and to launch the application we will have you:
1. Open an internet browser and browse to pontemsoftware.com/join.
2. This will auto download the connection tool and give you the following instructions:
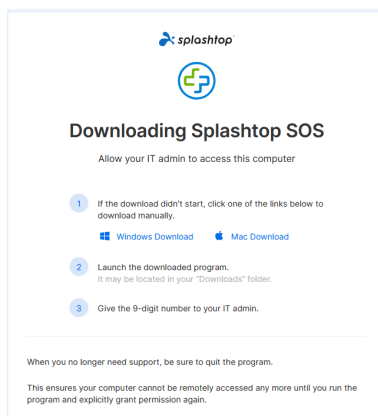
Firewall and Anti-Virus Consideration for your Remote Support Services

You will want to make sure your Firewall and/or Anti-Virus applications on the server and all clients do not block this application or the ability to browse to www.pontem.com

Server/PC Hardware Upgrades

Your Pontem software is not like most applications running on your server or your PC. It uses several complex services and software to manage your data and client requests. If you have GIS or Real-Time Updates, it also uses complex APIs to other applications and MS Windows services. Therefore, if you find a 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, so we can ensure all licensing and data is transferred and reconfigured correctly.

You can create a support request from our website. 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 the migration without our assistance.

Database Management Software Running as a Service

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 Pontem Tech must install the database and the database service must be on the same pc/server. Once installed, you will see two database services running on your pc/server. These services must remain on the data hosting server and must be running in order for the Pontem client applications to connect to the database.

- Firebird Server
- Firebird Guardian

If you have Online Burial Search hosting services or Online Property Tax Search hosting services, you will also see services specific to these applications. These are described in their respective sections in this document.

Firewall and Anti-Virus Considerations for Your Database Services

For your Pontem Applications to be able to connect to the database:

- _**All**_ database services _must_ run on _the pc/server where the data is located._
- If you have Anti-Virus or a Firewall running on your data server, you will need to ensure the following applications are not blocked:
  - fbguard.exe
  - fbserver.exe
- If you have a Firewall running on your data server, you will need to allow the use of ports 3050 and 3051.

NETWORK (CLIENT- SEVER) SPECIFICATIONS

This section will outline what is needed for us to install your software on a data server which client PCs 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.

Database server services used by Pontem must be allowed through the server's firewall. See notes in the "Database Management Software Running as a Service" section.

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

We discourage the use of Virtual Servers/Machines (VM) for the data server. Virtual servers experience a performance drop of 20% to 80% under high load. Any perceived benefit of using a VM-based Firebird Data Server will come at a significant cost to clients, who will face longer wait times to perform and complete their tasks.

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 2025, we recommend new installations on **Windows Server 2019 or greater**. Also, 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 difference in performance.

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 connecting client PCs to _**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_. **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 and the added overhead from a VPN, clients using a Pontem application to connect to remote data 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 a 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*** to 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.

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 running on the Data Host PC (Master), 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.

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.

- Hard Drive—5 GB or larger (Disk storage)

- CPU—Dual Core or greater

- Memory (RAM) 4 GB or greater

  - For ESRI based GIS Mapping
    o Video Card - 4 GB RAM
    - Hardware Transforming & Lighting
    - Pixel Shader version 5.0m
    - Vertex Shader 5.0
    o 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
  - Downloading Product Upgrades
  - Pontem Remote Backup
  - WebExport-FTP for Online Property Tax Search updates
  - Real-Time Updates Online Burial Search updates
  - Cemetery Administrator's Portal
  - Web API to partner applications

    (see Real-Time Update Recommendations)

macOS SUPPORT and Tablets

We currently do not offer 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 recommend the following:

- Your data server must 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 an outbound TCP connection on port 80 to api1.govern.com and api1.pontemsoftware.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.

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

If you need to schedule data server work which requires powering down the server, we recommend scheduling it during hours before your nightly synchronization scheduled task, or 3 hours after it. Your data server **must** be running for the Scheduled Task to successfully run and complete each night.

WARNING:

> 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 the FTP connection through your firewall.

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 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 connect using a Remote Desktop service, not 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. 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 login 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 or submit an online support request at: http://www.pontem.com/Support-1 or Email: support@pontem.com