# Table of Contents

General Statement

Difference between Server and Workstation Roles

Backup and Recovery Requirements

Important Information about Memory and SQL

Microsoft SQL Requirements

Small Business Servers Server Foundation, Server Essentials

Domain Controllers, Terminal Services, RDS, Citrix and VPN

Server Operating System Platforms

Server Processors

Network Information

Remote Site Connectivity and Printing

Virtualization and Cloud Servers

General Requirements for all Configurations

---

SQL RFMS SYSTEM SPECIFICATIONS AND RECOMMENDATIONS

Single User

Workgroup (For 2 - 5 User configurations only)

Server

Dedicated File Server (For 5 – 15 User Configurations only)

Printers (All Systems)

Printer Specifics
General Statement

For more than 15 users or a database is larger than 1GB in size, please consult RFMS and your Local IT Professional.

These Recommendations are for a Server Running SQL Express for RFMS and do not take in consideration any other SQL Instances or SQL Programs. Please follow these recommendations at your own risk. They are designed to provide you with the best performance in RFMS as possible; however, they to not guarantee optimum performance as program speed can be affected by multiple environmental variables.

RFMS recommends having a SQL Certified Technician and access to a SQL DBA
See (Server Recommendation.PDF)

Difference between Server and Workstation Roles

RFMS Core is comprised of two parts: 1. RFMS Program Files (exe’s, dll’s, etc.) 2. Microsoft SQL database (your orders, customers, suppliers, inventory, etc.) The program and the database both run wholly off of the server. The server needs to have the hardware capabilities to support the inbound and outbound network connections, as well as the memory requirements for database usage. There is NO CLIENT SOFTWARE on the workstations. The workstations simply use a shortcut mapped to the networked server.

Backup and Recovery Requirements

If using SQL Standard, we recommend utilizing SQL Maintenance Plans. For SQL Express, see below:

SQL Backup Process
SQL Manual Database Backup Restore

Important Information about Memory and SQL

The amount of memory required for Microsoft SQL is determined by the size of the database. Typically Memory will be a 1:1 ratio (DB Size to Memory), however, SQL can take more if needed. This can actually be a 1:2 ration (DB Size to Memory).

For more information, please see our “Database Management and Maintenance Document” located here: Document
Microsoft SQL Requirements

If you have SQL installed already you will need to set it to mixed mode (Windows Authentication and SQL Authentication) and supply a password for the SA Account. If SQL is used for another function or program, please confirm that it will not be detrimental to change SQL to Mixed Mode if it is not already set. If you are unable to change to mixed mode on the existing instance, then you will need to install a separate instance of SQL that is set to mixed mode.

The latest fully tested version of Microsoft SQL is SQL 2012 R2. The Express edition (limited to less than 15 users and a database smaller than 1GB)

We have been testing with SQL 2014. However, in our testing, as well as clients who have tested, we are recommending holding off on this version until there have been some Service Packs released.

Note: SQL 2000 will NOT work with RFMS v12 and is no longer supported and SQL 2005 support is determined by Microsoft’s LifeCycle for this.

Small Business Servers Server Foundation, Server Essentials

These Servers are not recommended. RFMS Recommends Standard Edition Server Software

We have seen issues running the SQL version of RFMS on servers other than Standard Edition Platform. The biggest issue lies in the way that they allocate memory. Instead of allowing each program to use the amount of memory that it needs, they take all of the memory and allocate specific quantities to each program as it sees fit. This causes major issues when it comes to SQL database caching. An issue relating to SBS is that SBS has a large array of services functioning simultaneously and is usually being used to support multiple roles of the business. This can cause issues when Exchange, Terminal Services, Microsoft SQL, and all the other services are competing for memory and other resources.

Therefore, WE DO NOT RECOMMEND SBS servers. If you have an SBS server and are experiencing performance issues, we will only be able to provide you with limited hardware support.

Domain Controllers, Terminal Services, RDS, Citrix and VPN

MICROSOFT DOES NOT RECOMMEND RUNNING SQL ON A DOMAIN CONTROLLER RUNNING SQL AND TS (or Citrix) ON THE SAME SERVER IS NOT RECOMMENDED.

Because of memory, networking, and resource conflicts between SQL and Terminal Services, we recommend that you have Microsoft SQL located on a separate, dedicated server, and not on your Terminal Server.

RUNNING RFMS LOCALLY THROUGH A VPN CONNECTION IS NOT RECOMMENDED.
While technically RFMS will run locally when connected to a VPN, this is not recommended and the performance will be extremely poor. If you need to use a VPN either for security or to access your network remotely, you would need to then remote into a workstation or terminal server to run RFMS.

### Server Operating System Platforms

RFMS will function on both 32 bit Operating Systems and 64 bit Operating Systems. However, we recommend 64 bit server operating systems to allow for more memory capacity. If you use a 64 bit Operating System make sure that you have the appropriate version of SQL for this Operating System. The installer file will usually contain an "x64" in the name if it is designed for the 64 bit architecture.

### Server Processors

We recommend going with a higher end processor for your server, such as the new second or third generation Intel ‘Core i7’ or Xeon series quad-core processors.

### Network Information

**Wireless Networks are NOT recommended.** When you are using RFMS over a local wireless connection, you will experience performance issues. SQL database calls do not work well over wireless, and the program files often “drop” because of the instability inherent with wireless connections. It is advantageous to use Gigabit switches and NICs. For information on VPNs, please see “Small Business Servers, Terminal Services (RDS), and VPNs” above.

### Remote Site Connectivity and Printing

#### Remote Connectivity

For Remote Site Connectivity, Terminal Server or Citrix is required. Because of the complex nature of Wide Area Networking and the many variables you will want to contact your Terminal Server or Citrix specialist for assistance in the network design and setup prior to the installation of RFMS.

#### Remote Printing

Printers can be setup two different ways:

1. UPD/Easy Print: Universal Printer Drivers on the Terminal Server. If setup and configured, any printer not native to the Terminal Server will be assigned to the Universal Printer Driver.

2. Installing actual Printer Drivers on the Terminal Server. This must match exact (driver, PCL type, etc…)

**Note:** Make sure that the printer is a Terminal Server or Citrix Certified Printer. Installing a non-Terminal Server or Citrix Certified Printer can be problematic.
Virtualization and Cloud Servers

RFMS can be run on a virtual server. If going with a virtualized server make sure that the host server has enough resources to support the virtual and that the virtual server meets the system requirements outlined below for physical servers.

RFMS can be run in a “cloud” (offsite) environment. The server should have the appropriate hardware to support SQL. A remote connection client like Citrix or RDS would be needed to connect to a “cloud” server. Please contact your IT Professional for more information.

General Requirements for all Configurations

• Internet connection for procuring RFMS Downloads from the RFMS Website. High speed internet connection (i.e. Cable Modem or DSL) required.

• At least one printer either networked or cabled. See the PRINTERS section for detailed specifications.

• Provision for doing daily backups (Tape Drive, External Drive, Online Backup, etc…). We recommend a media rotation system for backup. Contact RFMS Inc. for details. CD-ROM & DVD-ROM BACKUPS ARE NOT SUFFICIENT.

• An uninterruptible power supply (UPS) is required. This UPS is a battery-backup unit. A simple surge-suppressor is NOT sufficient.

• **Wired** Ethernet Network hardware and cabling system (Cable Modem, Switch, etc.)

• CD-ROM drive, video card capable of at least 1600x900 resolution at 16 bit color depth.

• Monitor resolution: Minimum size 1600x900 (If you run RFMS at a lower resolution, you may have screen bleed issues and you may not be able to view all fields or buttons.)


Note:  *SQL 2000 will NOT work with RFMS v12 and is no longer supported. Windows Server 2000, 2003 and XP do not meet our memory requirements and have reached end-of-life with Microsoft. Therefore, we no longer support these Operating Systems.*
SQL RFMS System Specifications and Recommendations

Single User

Intel Core i7 2.0GHz or faster computer, 16 GB or greater RAM, with a 7200RPM SATA hard drive (Minimum required: Intel Core i5, 8 GB RAM, with a 7200RPM SATA hard drive.)  

Note: Amount of memory is determined by the size of the Database. See “Important Information about Memory and SQL” above.


Workgroup (For 2 - 5 User configurations only)

Server

Intel Core i7 3.0 GHz or faster computer, 16 GB or greater RAM, with a 7200RPM SATA hard drive (Minimum required: Intel Core i5, 8 GB RAM, with a 7200RPM SATA hard drive.)  

Note: Amount of memory is determined by the size of the Database. See “Important Information about Memory and SQL” above.

- For the Server Operating System we recommend Windows Server 2008 (or 2008 R2), Windows Server 2012, Windows 7 Professional, Windows 8.1 Professional, or Windows 10 Professional. For peer to peer networks over 5 users, a Server Operating System is required (Server 2008R2 or Server 2012)

Workstation Computers

- Intel Core i7 2.0GHz or faster computer, 8 GB or greater RAM, with a 7200RPM SATA hard drive (Minimum required: Intel Core i5, 8 GB RAM, with a 7200RPM SATA hard drive.)


Dedicated File Server (For 5 – 15 User Configurations only)

Server

Xeon 3.0 Hz or faster computer, 8 GB or greater RAM, with a 7200RPM SATA or SAS hard drive  

Note: Amount of memory is determined by the size of the Database. See “Important Information about Memory and SQL” above.

- For the Server Operating System we recommend Windows Server 2008 R2 or Windows Server 2012.
**Workstation Computers:**

- Intel Core i7 2.0GHz or faster computer, 8 GB or greater RAM, with a 7200RPM SATA hard drive (Minimum required: Intel Core i5, 8 GB RAM, with a 7200RPM SATA hard drive.)

*If you have more than 15 users or if your database is larger than 1GB in size, please consult RFMS and your Local IT Professional.*

These Recommendations are for a Server Running SQL Express for RFMS and do not take in consideration any other SQL Instances or SQL Programs. Please follow these recommendations at your own risk. They are designed to provide you with the best performance in RFMS as possible; however, they to not guarantee optimum performance as program speed can be affected by multiple environmental variables.

---

**Printers (All Systems)**

**• MULTIFUNCTION PRINTERS ARE NOT RECOMMENDED.** Multifunction printers are printers that combine printing functions with features such as, built in scanning, faxing and copying.

- When printing is desired via network printers and not local printers on every workstation, Windows Print Sharing is not sufficient. A JetDirect or compatible print server or network printer will be required.

- RFMS Does NOT SUPPORT the use of Dot-Matrix Printers with the RFMS for Windows Software. Certain reports will not print correctly on these printers, since they are designed to print landscape on Legal Paper.

- We have had clients have issues with the HP 1000 and HP 1020 Series Printers due to a Formatting issue on the Printer Driver itself.

---

**Printer Specifics**

**Laser Printers:**

RFMS recommends Hewlett-Packard laser printers in the LaserJet 4 series and later. But any Printer that can print in Windows should print from RFMS Windows.

Laser printers must be:
- 100% compatible with the Hewlett-Packard LaserJet 4 series or later
- Capable of using PCL5 or PCL 5e
- Capable of PC-8 symbol-set support
- Capable of condensing or scaling print to 19cpi or smaller
• Capable of printing on Legal-size paper (8.5x14) as well as Letter-size paper (8.5x11)

• Can be parallel, USB, or Network

**Inkjet Printers:**

RFMS recommends Hewlett-Packard Inkjet Printers. But any Printer that can print in Windows should print from RFMS Windows.

Inkjet printers must be:
• Capable of using PCL5 or PCL 5e

• Capable of condensing or scaling print to 18cpi or smaller

• Capable of printing on Legal-size paper (8.5x14) as well as Letter-size paper (8.5x11)

• Can be parallel, USB, or Network