RMH and SQL Server FAQs

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Introduction

This guide provides answers to frequently asked questions about the relationship between the Retail Management Hero (RMH) apps and Microsoft SQL Server.

The RMH apps use SQL Server for data storage. SQL Server Express, a free edition of SQL Server, is usually sufficient for single-store implementations. Stores will normally upgrade to a paid edition of SQL Server, such as Standard, when they reach the database size or resource usage limits for SQL Server Express.

This guide provides general information about SQL Server and how the RMH apps use SQL Server. It does not explain how to install, license, configure, or maintain SQL Server. You should always follow Microsoft guidelines and instructions for SQL Server.

What are the limitations of SQL Server Express?

SQL Server Express is a free edition of SQL Server. However, like most free apps, it does have some limitations. The most important limitation is the **maximum database size** of **10 GB**. It also places the following scale limitations on hardware resources:

- **Memory (RAM):** maximum of 1.4 GB

- **Processor (CPU):** limited to 1 socket or 4 cores

Note: For a complete list of SQL Server Express scale limits, please refer to [Editions and supported features of SQL Server 2022](#).

What contributes to RMH database growth?

The biggest contributor to store database growth is the number of POS transactions. In general, as the number of POS transactions (or orders) grows, the more the store's database grows.

However, transactions are not the only cause of database growth. Adding large numbers of items to Store Manager or Central Manager can also contribute to the store's database growth. Basically, the store's database grows as data is added to RMH.

When should I upgrade from SQL Server Express?

You should consider upgrading a store from SQL Server Express to a paid edition of SQL Server, such as Standard, when:

- The store's database approaches - or has reached - the 10 GB size limit.
- The store requires a more powerful processor (CPU) to handle the volume of transactions from the store's POS lanes or the demands of back office tasks in Store Manager or Central Manager (such as loading item lists, managing inventory, generating reports, etc).

If the store is using SQL Server Express, a best practice is to document the size of the store database at the time of the initial RMH implementation and on an annual basis after that. (You can discover the size of the store's database by creating a backup of the database using SQL Server.)

If a store's database approaches - or has reached - the 10 GB size limit for SQL Server Express, you will need to purge or archive unused data from the store's database if you want to continue using SQL Server Express.

Similarly, you should monitor hardware resource usage by SQL Server Express over time and document whether the store is consistently getting close to the memory or processor limits. If resource usage peaks during the store's operating hours, this can result in slower POS performance which can negatively impact the shopping experience of the store's customers.

By tracking database growth and resource usage over time, you can anticipate when the store may need to upgrade from SQL Server Express to a paid edition of SQL

Server. The data you collect will also help you initiate a discussion about database size and resource limits with the store's owner(s) and present a business case for upgrading to SQL Server (Standard).

Where can I get SQL Server pricing and licensing information?

Start by visiting the **SQL Server 2022 Pricing** page on the Microsoft website. Download the Microsoft SQL Server Licensing Guide, which explains SQL Server licensing in detail, or download the SQL Server 2022 Licensing Datasheet, which provides a 2-page summary of SQL Server licensing. You are strongly encouraged to contact a Microsoft Certified Partner for details on SQL Server pricing and licensing.

How do SQL Server CALs work with RMH?

One of the licensing models available for SQL Server is the CAL licensing model. In this model, stores purchase a server license for each server running SQL Server or its components. In addition, they purchase a client access license (CAL) for each device (Device CAL) or user (User CAL) that accesses SQL Server or its components.

The number of CALs the store needs to purchase depends on how SQL Server and the RMH apps are implemented in the store. A CAL is required for all computers running an RMH app that connects to SQL Server, such as POS terminals and back-office workstations running Store Manager or Central Manager. A CAL is not required for the computer running SQL Server, as long as there are no RMH apps installed on the computer.

> **Warning! The information in the table below is provided as an example only.**

Device and apps	CALs required
A stand-alone server running SQL Server	None

Device and apps	CALs required
A computer running SQL Server plus any RMH app (POS, Store Manager, Central Manager)	1
5 POS terminals running POS	5
2 back office workstations running Store Manager	2
1 back office workstation running Central Manager	1

Does installing SQL Server on a dedicated computer improve performance?

Yes. If you install SQL Server on a stand-alone, dedicated computer it has full access to all of the computer's system resources. If you install SQL Server and the RMH apps on the same computer, the RMH apps will utilize some of the computer's system resources.

> **Note:** Installing SQL Server on a stand-alone, dedicated computer is also advantageous because it is easier to perform updates or maintenance on the computer if it is not being used as a POS terminal or back office work-station.

How can I configure SQL Server on a remote computer?

While you can configure SQL Server to run on a remote computer, you should only do this if you are an advanced SQL user.

If you install SQL Server on a remote computer, there two things you will need to con-figure differently from a local computer:

- Enable TCP/IP for your SQL instance; and

- Open port 1433 on your firewall.

Follow the configuration instructions provided by Microsoft or your Microsoft Certified Partner to configure TCP/IP and open port 1433.

Conclusion

Microsoft SQL Server is a critical component of any RMH implementation. SQL Server Express is usually adequate for most store implementations. However, store may need to upgrade to SQL Server if their store database grows too large or if they require more memory or processing power to optimize system performance.

If you are new to using SQL Server, we highly recommend that you learn more about installing and maintaining SQL Server so you can provide an exceptional experience for your RMH customers. Microsoft has excellent learning materials on their learning portal.