



***Database Requirements***

***Software Version 1.7***

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If the UniPOC system is used in a manner differently than specified by Siemens Healthcare Diagnostics, the protection provided by the equipment may be impaired. Observe warning and hazard statements.

## Introduction

This document provides requirements and recommendations based on best practices for database administrators hosting UniPOC databases.

The UniPOC application uses two databases.

- A 'live' database (QCM3), which consists of current data that is needed for the daily operation of the product and recent historical data that may be needed to audit operator compliance, instrument quality control, and other test data. You can configure how long this data remains in this database based on your needs.
- An 'archive' database (QCM3\_Archive), which consists of historical data older than the configured cut-off point. This is data that must, in some cases, be retained for regulatory purposes. This data is removed from the 'live' database, ensuring a faster day-to-day production environment, and is no longer modifiable, but reports may be run on this data through the application.

## Requirements/Recommendations

The following is a list of requirements and recommendations that database administrators should be aware of when working with UniPOC databases:

### Authentication

- The preferred method of authentication for the application is SQL Authentication. Windows Authentication may be accommodated if necessary, however, additional considerations are required for the application.

### Database Creation and Restoration

Scenario #1: Migration of pre-existing populated UniPOC databases.

- You must restore two databases, one named **QCM3** and one named **QCM3\_Archive**.
- You must set the following on each database:
  - Grant permission to 'db\_owner' .
  - Set default collation to **Latin1\_General\_CS\_AS**.
  - Set Database Compatibility Level:
    - If UniPOC is installed on Windows Server 2016 – **SQL Server 2016 (130)**.
    - If UniPOC is installed on Windows Server 2019 – **SQL Server 2019 (150)**.

Scenario #2: New installation with empty UniPOC databases.

- The 'dbcreator' server role may be *temporarily* granted to the UniPOC SQL user prior to installation and the UniPOC Installation Wizard will create these databases.
- Alternatively, the database administrator must create empty databases manually.
  - You must create two databases, one named **QCM3** and one named **QCM3\_Archive**.
  - These databases must not contain any user created tables, views, or stored procedures.
  - Grant permission to 'db\_owner'.
  - Set default collation to **Latin1\_General\_CS\_AS**.
  - Set Database Compatibility Level:
    - If UniPOC is installed on Windows Server 2016 – **SQL Server 2016 (130)**.
    - If UniPOC is installed on Windows Server 2019 – **SQL Server 2016 (150)**.

### SQL Server Requirements

- The QCM3 and QCM3\_Archive databases must exist within the same SQL Server instance.

## Backup Requirements

- The QCM3 and QCM3\_Archive databases must be backed up.
- In accordance with database backup best practices, when the UniPOC application is to be updated to a newer version, you should take a backup of the database prior to the new version being installed.
- Transaction log backups should occur primarily on the QCM3 database and should happen with enough frequency to ensure storage space is maintained. The QCM3\_Archive database will have minimal to no writes occurring between archives.

**Important:** Siemens Healthineers is not responsible for any data loss due to your failure to back up your database.

## Archive Requirements

- The monthly archive process that moves data from the QCM3 and QCM3\_Archive databases is scheduled and will run on a certain day of the month at an off-peak hour (for example, the first Sunday at 3:30 AM.) In most cases, the archive process will take less than 15 minutes, however when a large database is imported that has never been archived previously, the first several archives may take additional time. It is important that no scheduled failovers or testing of failovers occurs during this process, as a failure of the database will result in an aborted archive transaction and the data not being archived until the next month.
- This schedule may be modified by Siemens Healthineers engineers upon request to accommodate your requirements.
- Siemens Healthineers recommends that a full backup of both databases be taken shortly after this process completes.

## Database Optimization

- The monthly archiving process also performs some basic database optimization functions by reindexing database tables. UniPOC will choose the proper method of reindexing tables based on the permissions granted to the user account.
- It is highly recommended that the 'View server state' permission be granted to the UniPOC database user. This will allow UniPOC to reindex tables and statistics more intelligently using the *IndexOptimize* stored procedure provided by Ola Hallengren. See <http://ola.hallengren.com> for more information.
- Optionally, you may execute the *spOptimizeIndexes* stored procedure as part of your maintenance plan. This procedure is provided by UniPOC and located within the QCM3 database. You only need to perform this procedure once per month after an archive.
- If 'View server state' permission is not grantable, the archive process will use the DBCC REINDEX function to reindex heavily utilized tables.