

BreezeSuite™ Cardiorespiratory Diagnostic Software

Version 8.6

Network (MultiUser) Server Installation Manual



Contact

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INTRODUCTION

Purpose of this Manual

This manual provides instructions on how to install the BreezeSuite v8.6 Network SQL Database on your SQL Server Instance.

The Installation Process

Obtain all of the required resources before upgrading. These include: BreezeSuite software installation file(s), network and local SQL Server configuration information, etc.

- Follow these instructions carefully and completely to ensure a successful upgrade.

Professional Installation Service

MGCD Diagnostics offers professional installation service (service fees apply).

Professional service installation benefits include:

- Remote or onsite installation service
- Scheduled and reliable software installation for minimal downtime
- Software configuration assistance
- Report customization assistance
- Predicted set configuration assistance
- Diagnostics testing screen customization assistance
- Application security configuration guidance
- Data conversion assistance
- Device communication verification

Please contact MGC Diagnostics to discuss the installation service options available.

Phone: 800-333-4137

Email: Support@MGCDiagnostics.com

NETWORK SQL DATABASE SERVER SPECIFICATION

Required Operating System	Windows Server 2012 or 2012 R2 Windows Server 2016 Windows Server 2019
Required SQL Versions Supported	SQL Server 2012 (Standard, Enterprise) SQL Server 2014 (Standard, Enterprise) SQL Server 2016 (Standard, Enterprise) SQL Server 2017 (Standard, Enterprise) SQL Server 2019 (Standard, Enterprise)
Processor	2.0 Ghz or faster recommended
Hard Disk	250+ GB Recommended
Memory	16+ GB Recommended
System Type	x64 (64-Bit) Recommended
Virtual Server Support	Yes
SQL Server Cluster Support	Yes

SYSTEM SECURITY CONSIDERATIONS

Data at Rest Encryption

BreezeSuite 8.6 software supports the use of commercial off the shelf (COTS) Full Disk Encryption technology including Bitlocker configured for Federal Information Processing Standards (FIPS) Publication 140-2 compliance. BreezeSuite 8.6 Network SQL database supports the use of SQL Transparent Data Encryption (TDE).

Data in Transit Encryption

BreezeSuite 8.6 software supports the use of TLS 1.2 encrypted SQL Server connections. MGC Diagnostics recommends configuring your Network SQL Server and client for TLS 1.2 encryption with SQLNCL11 version 11.3+.

SQL Database Connection Information Encrypted

BreezeSuite 8.6 software stores SQL database connection information in an encrypted file on the client workstation to prevent viewing by unauthorized users. Connection information can only be viewed by an authenticated user using the BreezeSuite DBTools client application.

SQL Database Naming

BreezeSuite 8.6 software supports customizing the name(s) of the BreezeSuite application SQL Databases. This allows for additional database security as well as allows for hosting both Test/Development and Production BreezeSuite databases within the same SQL Instance.

Authentication in SQL Server

BreezeSuite 8.6 software supports use of Windows Authentication for BreezeSuite database SQL Logins/Users. MGC Diagnostics recommends using Windows authentication wherever possible.

BreezeSuite 8.6 software also supports the use of customized SQL Authentication usernames and passwords. MGC Diagnostics strongly recommends changing all default SQL Authentication user names and passwords to unique user names and strong customized passwords.

Anti-Virus and Anti-Malware Software Policy

MGC Diagnostics has an open policy regarding customer's use of commercial off the shelf (COTS) antivirus and anti-malware software. Customers may install, update and patch anti-virus and anti-malware software without pre-approval from MGCD Diagnostics.

Operating System and SQL Server Update Policy

MGC Diagnostics recommends applying Operating System and SQL Server updates and patches on a regular basis. MGC Diagnostics does not provide a release schedule or list of approved updates and recommends installing updates as they are made available from the operating system and software manufacturer.

BREEZESUITE V8.6 NETWORK DATABASE INSTALLATION

Important: Before proceeding with the networked database installation, the following prerequisites must be complete:

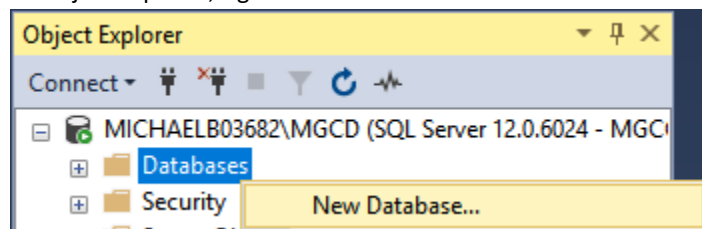
- ✓ A supported version of SQL Server must be installed on the database server
- ✓ You must know the Server Name where SQL Server is installed
- ✓ You must know the SQL Server Instance Name or whether the Default Instance will be used for installation
- ✓ You must know if SQL or Windows authentication will be used for Client / Server application connectivity. MGC Diagnostics recommends Windows Authentication
- ✓ If Windows Authentication will be used, you must know Windows user(s) and/or group(s) who will require access to the SQL Database
- ✓ You must have access to the SQL Server through Microsoft SQL Server Management Studio (MSSMS)
- ✓ You must have access to SQL Server with System Administrator permissions
- ✓ You must have access to the BreezeSuite v8.6 installation media
- ✓ If a Named Instance will be used, the SQL Browser Service must be enabled and running
- ✓ SQL Server TCP Port 1433 must be open in the Firewall settings
- ✓ If a Named Instance will be used, SQL Server UDP Port 1434 must be open in the Firewall settings

Note: The BreezeSuite Network Database may be installed one of two ways. The first method involves creating an empty database and running the SQL Script provided with the installation media to create the necessary database contents. The second method involves restoring an empty database (.bak) file provided with the installation media. Please select the appropriate option based on your facilities best practices and follow the necessary procedure below.

BreezeSuite Network Database Installation Procedure using SQL Script

Important: Only users with **CREATE DATABASE, CREATE ANY DATABASE or ALTER ANY DATABASE** permission on the server or membership in the **dbcreator** fixed server role can create logins

1. Open Microsoft SQL Server Management Studio (MSSMS) on the SQL Database Server or on a Client with connectivity to the SQL Database Server
2. Login/Connect to the Server using either Windows or SQL Authentication
3. Within Object Explorer, right click on the Databases folder and select 'New Database'

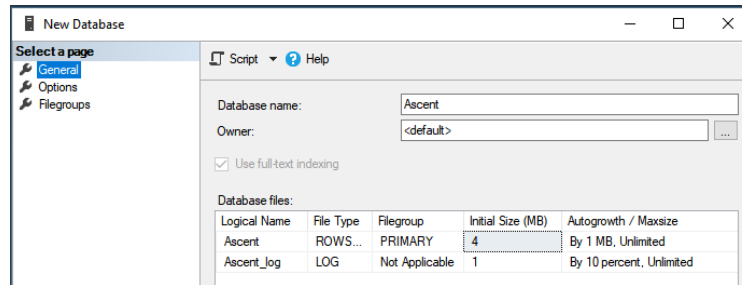


Note: You can also create a database using the following SQL statement

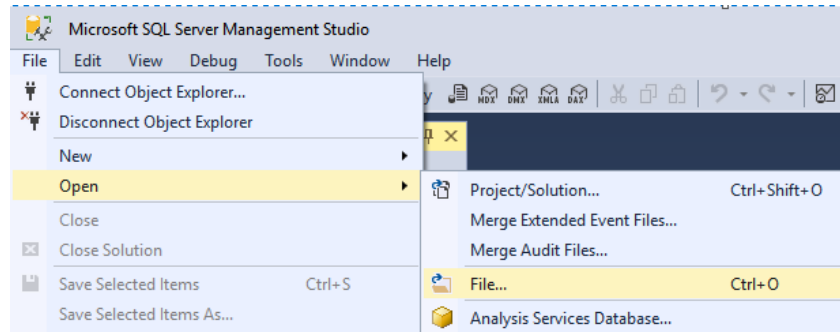
```
CREATE DATABASE databasename;
```

4. Enter a Database Name and select **OK** 'OK'

Note: Document the database name as the name is required for network client installation.

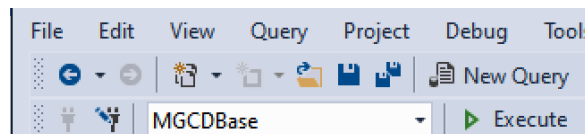


5. Select File > Open > File

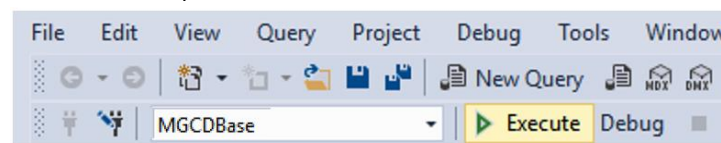


6. Browse to the "MGCDbase.sql" file located in the \Multi User Install\Setup\MGCDBase folder in the BreezeSuite software installation media and select **Open** 'Open'

7. Change the Database selected to execute the SQL Script against to the new database created in Step #4 above.




8. Execute the SQL Script on the Server



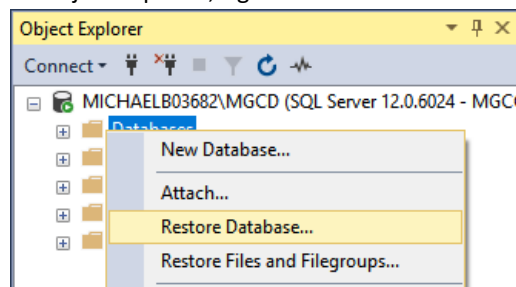
9. Verify **Query executed successfully.** message appears at bottom of Query window in MSSMS.



10. Proceed to “Creating Network Database SQL Login and Users” section on page 11 to finish the Network Database Installation.

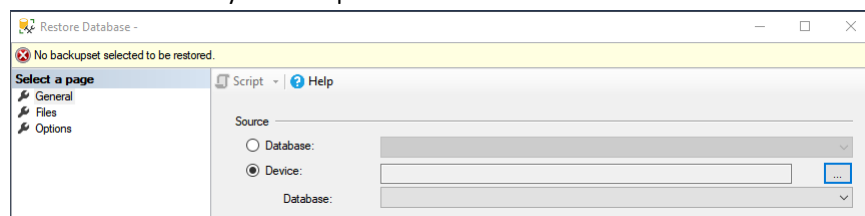
BreezeSuite Network Database Installation Procedure using SQL .BAK

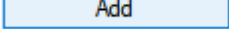
 **Note:** It is recommended to copy the EmptyMGCDBase.bak file from the BreezeSuite 8.6 installation media \Multi User Install\Setup\MGCDBase folder to the default SQL Backup folder (C:\Program Files\Microsoft SQL Server\MSSQL...\MSSQL\Backup) or a location on your server designated for SQL database backups.

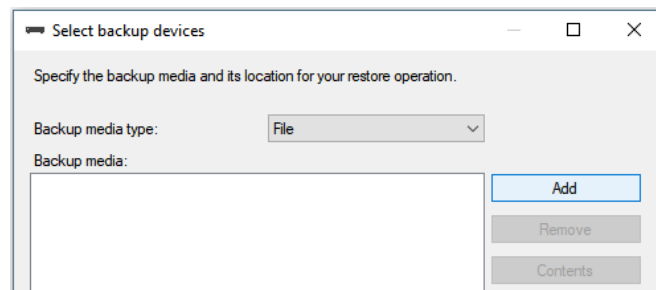
1. Open Microsoft SQL Server Management Studio (SSMS) on the Server or on a Client with connectivity to the SQL Database Server
2. Connect to the Server using either Windows or SQL Authentication, ensuring your user permissions are adequate to create a new database and create server/database users.
3. Within Object Explorer, right click on the Databases folder and select ‘Restore Database’



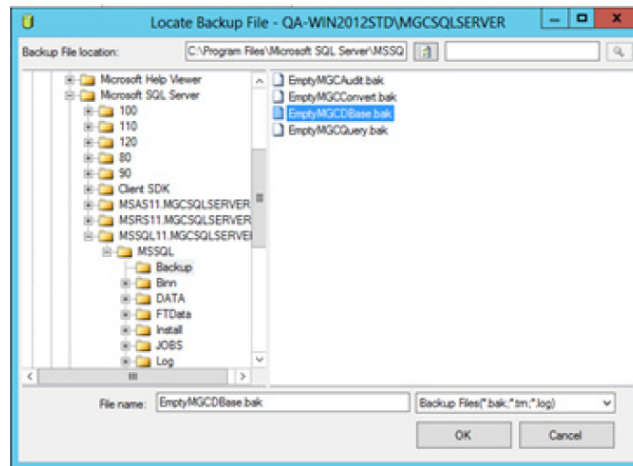
4. Within the Restore Database window, select the  **Device** radio button and select the  browse button to select your backup media file



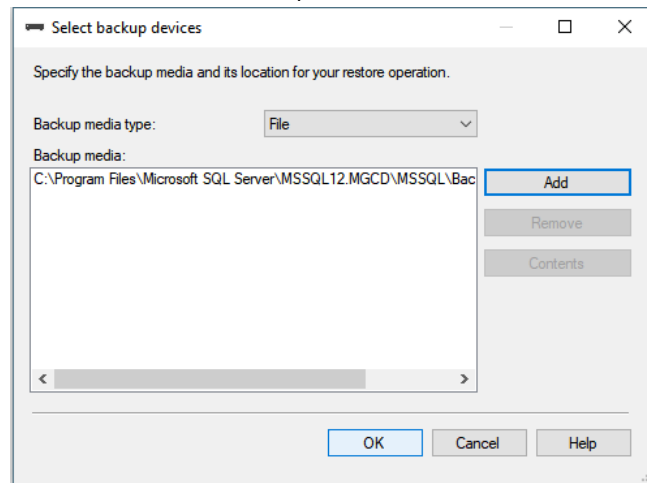
5. Select the  **Add** button within the “Select Backup Devices” window



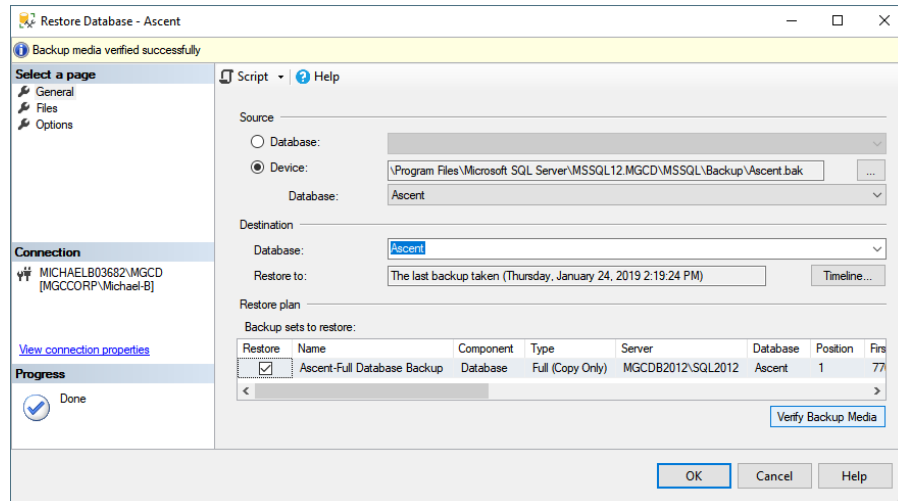
6. Browse to the location of the “EmptyMGCDbase.bak” file provided with the BreezeSuite software installation media. Select the “EmptyMGCDbase.bak” file and select **OK** ‘OK’

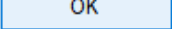


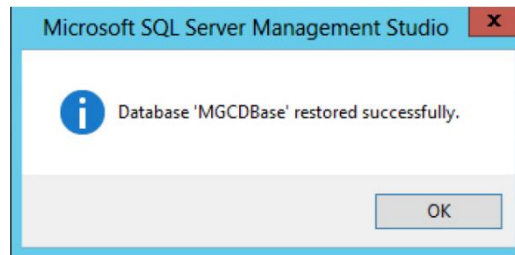
7. Select ‘OK’ on the Select Backup Devices window



8. Select **Verify Backup Media** ‘Verify Backup Media’ and upon successful verification select **OK** ‘OK’ to restore the database





9. Select  'OK' on the Database 'MGCDBase' restored successfully' window



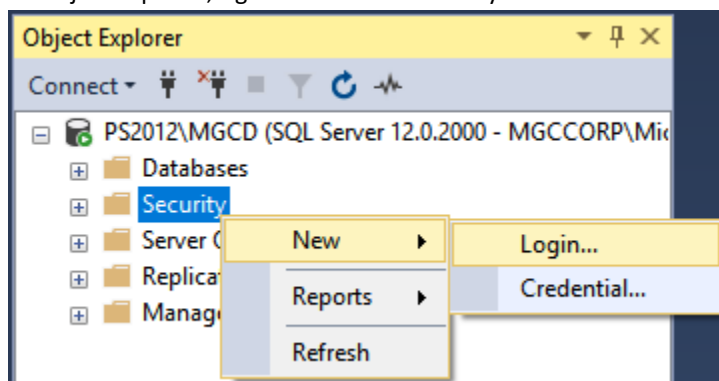
10. Proceed to "Creating Network Database SQL Login and Users" section on page 11 to finish the Network Database Installation.

Creating Network Database SQL Login and Users


 **Note:** The BreezeSuite Network Database connection supports use of Windows or SQL Authentication modes. Using Windows Authentication allows use of Windows groups created at the domain level, and a login can be created on SQL Server for the entire group. Managing access from the domain level can simplify account administration. When possible use Windows Authentication.

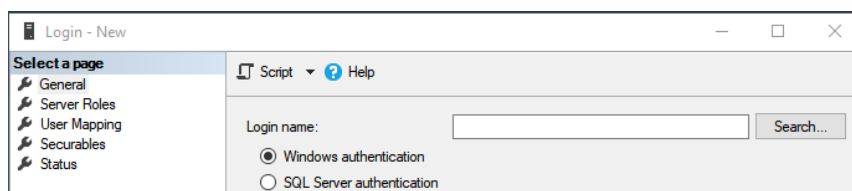
 **Important:** Only users with **ALTER ANY LOGIN** permission on the server or membership in the **securityadmin** fixed server role can create logins

1. Open Microsoft SQL Server Management Studio (MSSMS) on the Server or Client with connectivity to the SQL Database Server
2. Connect to the Server using either Windows or SQL Authentication ensuring your user permissions are adequate to create server/database users.
3. Within Object Explorer, right click on the 'Security' folder and select 'New > Login'



4. Select the desired authentication type for use with the BreezeSuite software

 **Note:** Windows Authentication recommended



4.1 Windows Authentication Setup Instructions (Skip to Section 4.2 for SQL Authentication Setup)

- 4.1.1 Select the 'Search' button next to the Login Name entry box.



- 4.1.2 Select the 'Search' button next to the Login Name entry box.

Login name: Search...

☒ Windows authentication

4.1.3 Select the 'Object types' button and

Select User or Group

Select this object type:

User or Built-in security principal

Object Types...

4.1.4 Verify the 'Groups' Object Type is selected and click 'OK'

Object Types

Select the types of objects you want to find.

Object types:

- ☒ Other objects
- ☒ Built-in security principals
- ☒ Groups
- ☒ Users

OK Cancel

4.1.5 Select the 'Locations' button

Select User, Service Account, or Group

Select this object type:

User, Group, or Built-in security principal

Object Types...

From this location:

mgccorp.int

Locations...

4.1.6 Browse to the location and select the Domain where the Group is located and select 'OK'

Locations

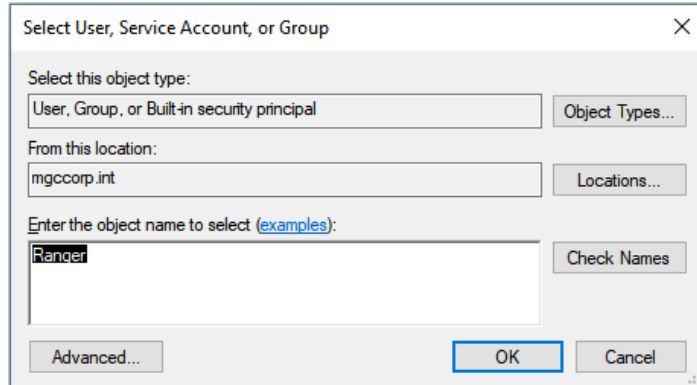
Select the location you want to search.

Location:

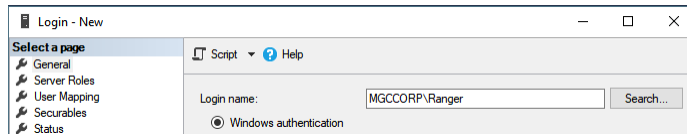
- PS2012
- Entire Directory
- mgccorp.int

OK Cancel

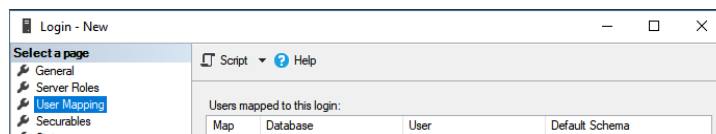
4.1.7 Enter the group name, select 'Check Names' and select 'OK'



4.1.8 Verify the Login name contains the correct Group name

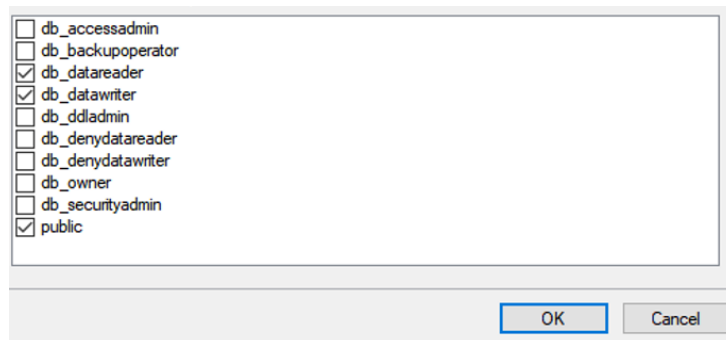


4.1.9 Under the “Select a page” section, select ‘User Mapping’



4.1.10 Under the “Users mapped to this login” section, select the MGCDbase database (or your custom database name for the BreezeSuite application)

4.1.11 Under the “Database role membership for: ... “ section, select ‘db_datawriter’ and ‘db_datareader’ roles and select the ‘OK’ button



4.1.12 Repeat Steps 4.1.11 and 4.1.12 above for the MGCAudit and MGCQuery database if the BreezeSuite application Security and Patient Query options will be installed on the clients.

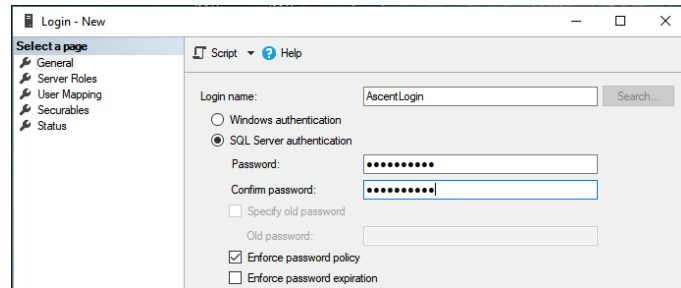
You may now proceed to the BreezeSuite v8.6 Network Client Installation

4.2 SQL Authentication Setup Instructions

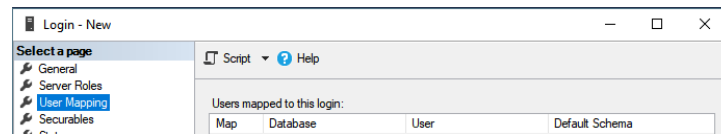
4.2.1 Enter the 'Login Name' and Password desired for your organizations Server / Client connection.

Important: The Login Name and Password must be securely stored with person(s) responsible for application administration and security. Client installation will require knowledge of the SQL Login Name and Password.

Important: Ensure the password meets your organizations password policy and verify the 'Enforce password expiration' feature is disabled. ☐ Enforce password expiration

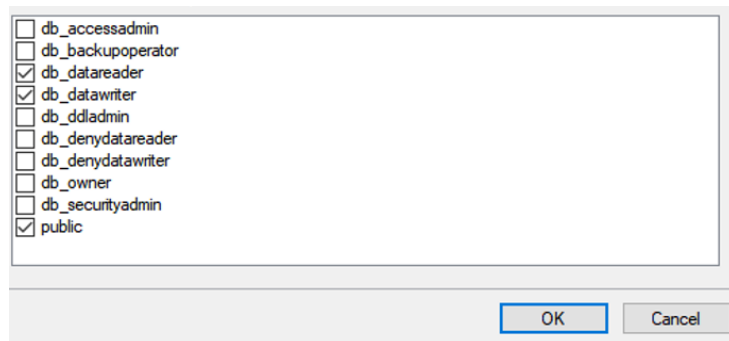


4.2.2 Under the "Select a page" section, select 'User Mapping'



4.2.3 Under the "Users mapped to this login" section, select the MGCDBase database (or your custom database name for the BreezeSuite application)

4.2.4 Under the "Database role membership for: ..." section, select 'db_datawriter' and 'db_datareader' roles and select the 'OK' button



4.2.5 Repeat Steps 4.2.3 and 4.2.4 above for the MGCAudit and/or MGCQuery database if the BreezeSuite application Security and Patient Query options will be installed on the clients.

You may now proceed with the BreezeSuite v8.6 Network Client Installation