Using Microsoft SQL Server as a database server for the Men and Mice Suite

This article describes how to connect an M&M Central to Microsoft SQL Server instance.

> ⚠ We recommend that the network latency between the SQL server and M&M Central is no more than 5 ms. Otherwise, the performance of M&M in conjunction with SQL Server can't be guaranteed to be acceptable

Setting up the Database

Men & Mice requires that a blank database is created on the database server, with the collation *SQL_Latin1_General_CP1_CS_AS,* and a login (Windows or SQL server authenticated) that has db_owner access to that database and an effective default schema of mmCentral.

The attached CreateDatabase.sql is a suggestion for the database and database server setup. Please note that this script also configures the SQL server itself, which is unnecessary and undesirable in most cases. *Therefore, review the script with your database administrator and only run appropriate parts of it.*

> ⚠ We recommend that the SQL Server database is managed and maintained by a database administrator (DBA)

Before you run the script please go through the script and change the necessary entries accordingly. This includes path strings (default C:/Data) and very important also the password, which is set by default to "1234" in the script!

Please note that the script is preconfigured for an 8 core processor machine, i.e. as a best practice we recommend to create for each processor core one temp file. If you have only a two core machine please comment out the last 6 temp file creation commands in the script.

> ⊘ The script will drop an existing database with the name "mmsuite", so take care when running the script.

Subsequent it will create an empty database with the name "mmsuite" and the following collation

```
COLLATE SQL_Latin1_General_CP1_CS_AS
```

It will also create a user mmSuiteDBUser with the password that you have inserted in the script.
For details please have a look into the CreateDatabase.sql script.

Configuring the connection parameters

If it's a dedicated server please don't forget to enable the TCP/IP protocol with the SQL Configuration Manager:
technet.microsoft.com/en-us/library/ms191294.aspx

> ⚠ Please note that the following needs to be run from the data directory, i.e. the same directory that contains the preferences file for Central. Otherwise the connection information for SQL Server will not be appended to the preferences file.

1. Download the M&M mmdbprefs.exe tool: ftp://ftp.menandmice.com/pub/mmsuite/misc/dbprefstool/mmdbprefs.exe
2. Copy the mmdbprefs.exe into the data directory of the M&M Central.
   Usually:
   c:\Program Files\Men and Mice\Central\Data
   or
   c:\Program Files(x86)\Men and Mice\Central\Data
   or on Windows Server 2008 R2 and later
   c:\ProgramData\Men and Mice\Central
3. Then start the mmdbprefs.exe tool by double-click. It will ask you a few questions

```
Choose database provider to use:

        1. SQLite
        2. MSSQL
```

For MS SQL Server please enter "2" and confirm with Enter.

```
Enter database server:
>
```

Please type in the database server in the following format:

```
<ip/dns name of SQL server><,port>\<Instance name>@<Database name>
```

For example

```
192.168.2.12\INSTANCENAME@databasename
or
192.168.2.12,1433@databasename
```

Confirm your input by pressing the Enter key.

```
Enter database user name:
>
```

Type in the username, default in the script is "mmSuiteDBUser", that will be used to connect to your database instance on the specified SQL server. Then press Enter. If you let the database user name empty Windows Authentication will be used instead of a user based connection (this requires to run the M&M Central service under credentials that have access by Windows Authentication to the database).

```
Enter database password:
>
```

Finally you need to provide the password (it will not be displayed in the shell) and then press Enter.

Now the preferences.cfg file in the data directory contains beside the fingerprint of Central (i.e. the "password" XML-tag) four additional XML tags: database, databaseserver, databaseusername and databasepassword

The preferences.cfg file for normal user/password authentication should look like:

```
<password value="the fingerprint hash"/>
<database value="MSSQL"/>
<databaseserver value="<name or ip of the SQL server>\<name of instance, e.g.
SQLEXPRESS>@,<name of database, e.g. mmsuite"/>
<databaseusername value="mmSuiteDBUser"/>
<databasepassword value="password hash"/>
```

An example preferences.cfg file for the Windows Authentication method should look like (databaseusername tag must be present and the value attribute must be set to empty string):

```
<password value="the fingerprint hash"/>
<database value="MSSQL"/>
<databaseserver value="<name or ip of the SQL server>\<name of instance, e.g.
SQLEXPRESS>@,<name of database, e.g. mmsuite"/>
<databaseusername value=""/>
```

Establishing a connection to Men & Mice Central

Restarting the Men & Mice Central service with the new preferences file should connect the M&M Central to your freshly created database. The Men and Mice Central creates the database schema (tables...) during the first connection.

Since the database was freshly created you can now follow the normal installation procedure. Please see the installation guide and the user manual of the M&M Suite for further information.

Mirrored SQL Server instances

Men & Mice Central (v6.3.0.6 and above) can be made aware of mirrored instances of the database. In case a failover occurs, M&M Central will try to talk to the new principal server, i.e. the failover partner, if specified.

1. Change the databaseservername attribute in the preferences.cfg or rerun mmdbprefs.exe and provide the value:
   "serverA@mmsuite;Failover_Partner=serverB"

Where "serverA" and "serverB" are the principal and mirror SQL servers, and "mmsuite" is the name of the database

2. If the machine running M&M Central does not have SQL Server installed, install the Microsoft SQL Server Native Client tools (http://www.micro soft.com/download/en/confirmation.aspx?id=16978)

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