Nox DB

Release Bulletin

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Overview

This Release Bulletin announces the first version of the **Nox DB,** a **database** solution from Nox Medical. **Nox DB** collects statistics from Nox sleep study data (T3/A1) on a local/networked sleep facility storage. After collecting statistics, the tool can filter and query data for export to Excel (.xlsx and .csv) data formats for further data processing or reporting.

The **Nox DB** runs as a Microsoft Windows application but requires Noxturnal 6.3.1 and an SQL database installed on the same computer. Information on the installation and use of the Nox DB can be found in this document.

The following three installs are required to complete the setup of the Nox DB:

- Noxturnal 6.3.1 or later
- SQL Server 2019
- SQL Server Management

Windows Administrative privileges are required for the installation of Nox DB.

Downloading Software

The software can be downloaded from different download locations and is available on the Nox Support Site.

The SQL Server and SQL Server Management Tool detailed below must be installed before Nox DB.

Nox DB
Nox DB - Using Dropbox

Nox DB - Using Watchdox

SQL Server 2019
The install file can be downloaded from the Microsoft download centre here.
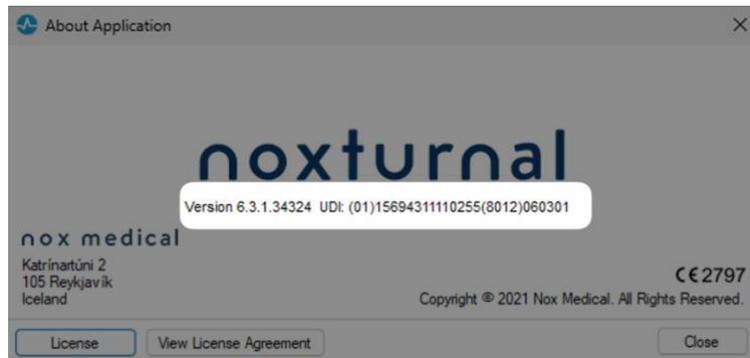
SQL Server Management Tool
Install SQL Server Management tool from Microsoft download center.

Install Instructions

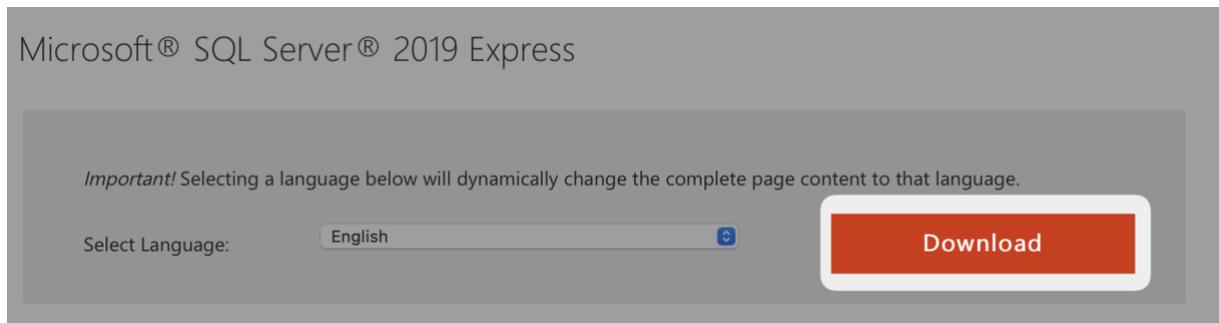## Minimum Required Noxturnal 6.3.1 and Later for Nox DB Install

Ensure a minimum Noxturnal or Noxturnal US 6.3.1.34324 is installed on the same PC or location where Nox DB will be installed. This is required to scan and extract data from Nox recording data sets. The version on your Noxturnal installation can be found in the Help Menu – About.
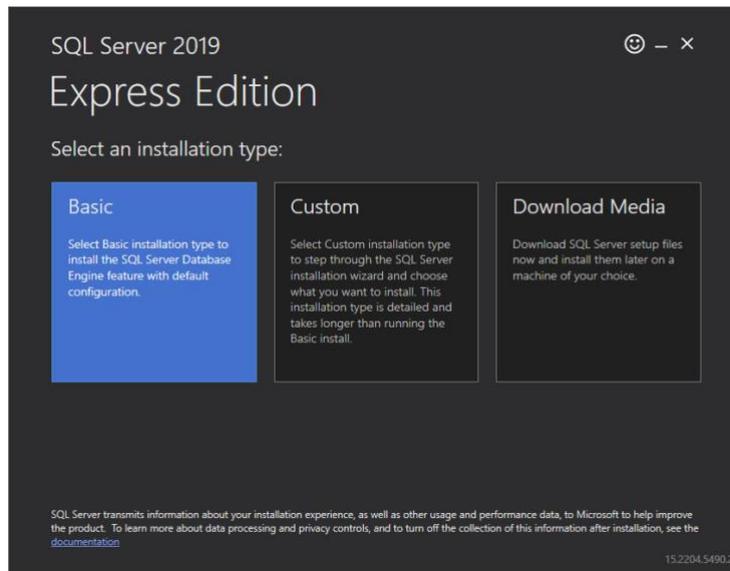

The Noxturnal software is available at www.noxmedical.com/download
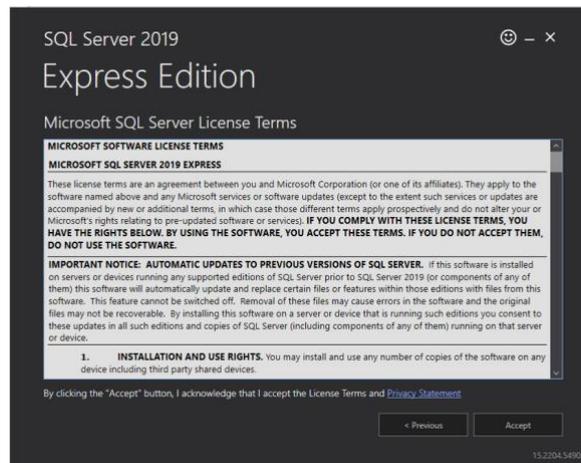
Install SQL Server 2019

SQL Server 2019 Express is required for the database functionality for the solution. The recommended SQL server is a free version. The install file can be downloaded from the Microsoft download center here. To install SQL Server 2019:
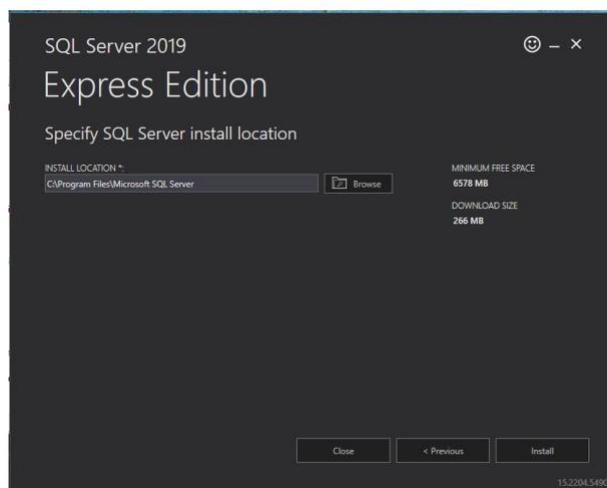

1. Run the install file (SQL2019-SSEI-Expr.exe)
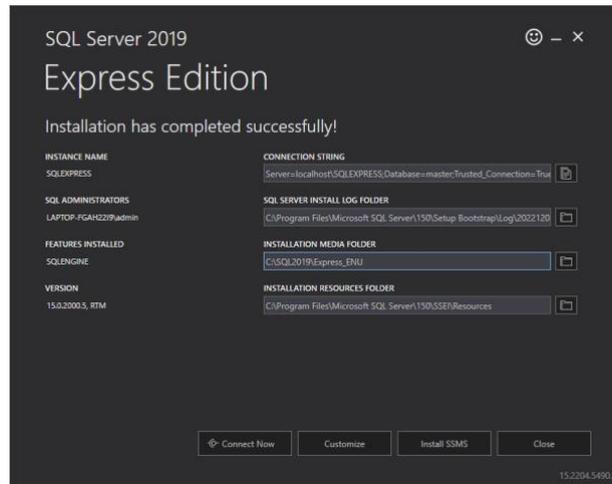2. Select the "Basic" installation type:

3. Accept the license agreement:

4. Select the default installation location:

5. The SQL Server 2019 Express edition has been successfully installed on the computer. Do not change the settings listed after the installation has been completed.
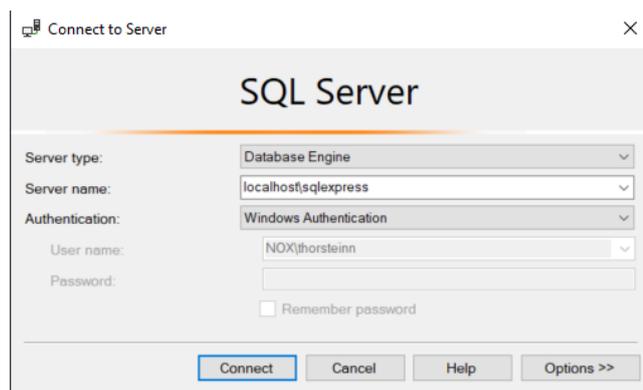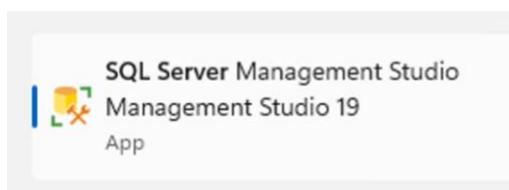

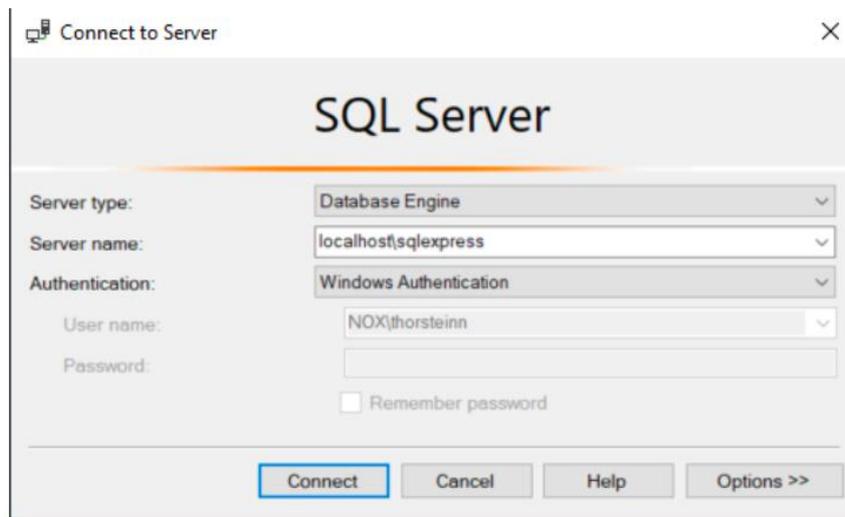6. Close SQL Server Installation

Install SQL Server Setup

Now it's time to set-up user access for the SQL server. This is the trickiest part of the installation depending on how user access is set-up on the PC. If it's a local PC with local user access, it's relatively easy to set up as per below.

- Install SQL Server Management tool from Microsoft . Note, scroll down to the **Download SSMS** section of the webpage. **Make sure you are logged into as a user with Admin privledges.**
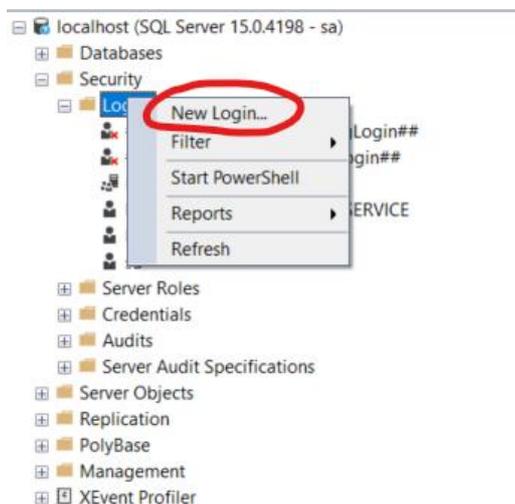

- Copy the server location specifier below in the Server name menu (This server name will differ between installations). Below is an example and your Server name will be different. Click **Connect** to connect to the server.
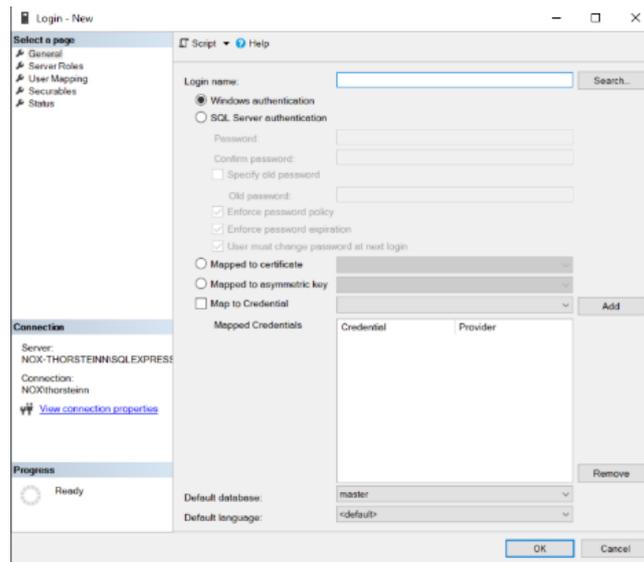
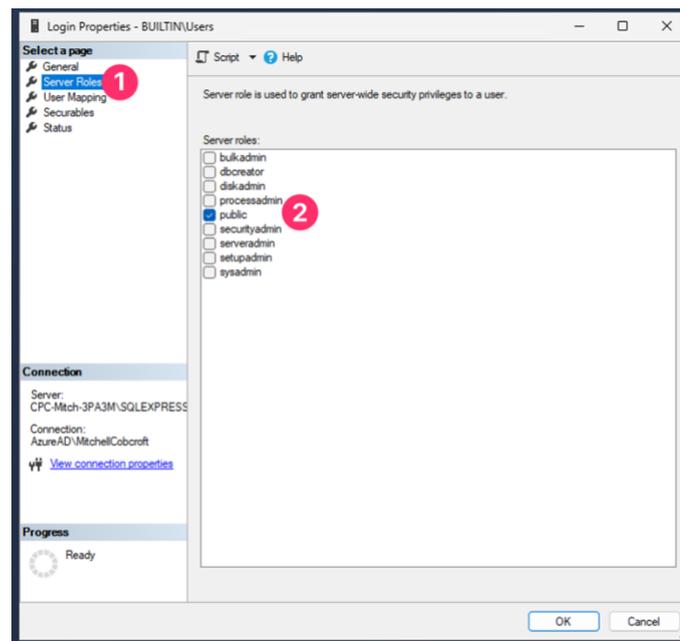### Create a new Login for users that will operate the Nox DB

- Next, we need to add security access for the user to access the server tools and database. To do this, we first need to give the user access to the server database. Navigate to "Security", go to Login, right click, and select "New Login" from the context menu.
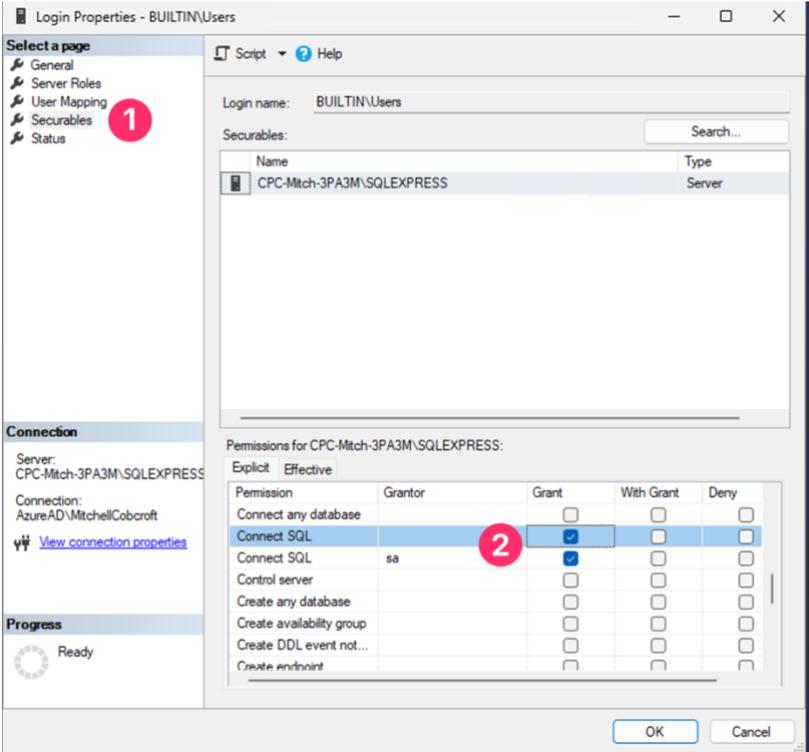

- Click Search, type in the user account name (Windows login username) for the Nox DB user and click OK.
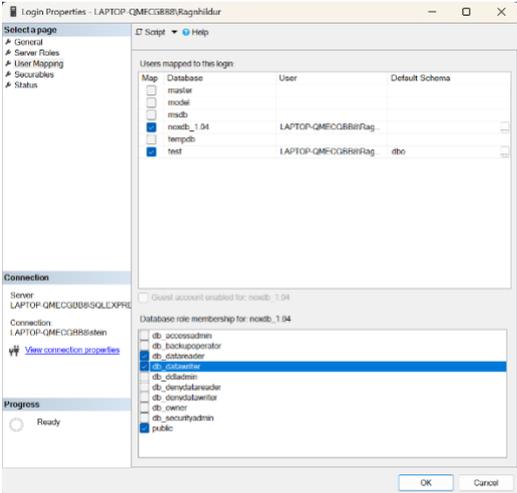
- Now we need to access to the server for the user. Go to server roles (1) in the left menu for the user and select public (2).

- Next, go to the Securables menu (1) and scroll through the permissions to find connect SQL and grant access.

Next, go to "User Mapping" menu and mark the checkbox next to the Nox DB database. In the role membership settings, check db_datareader and db_datawriter as shown below.
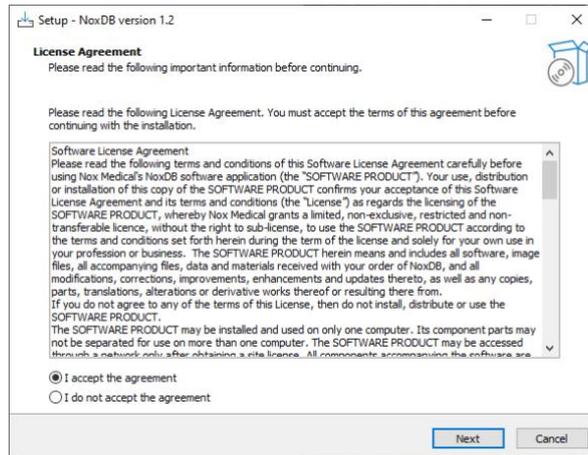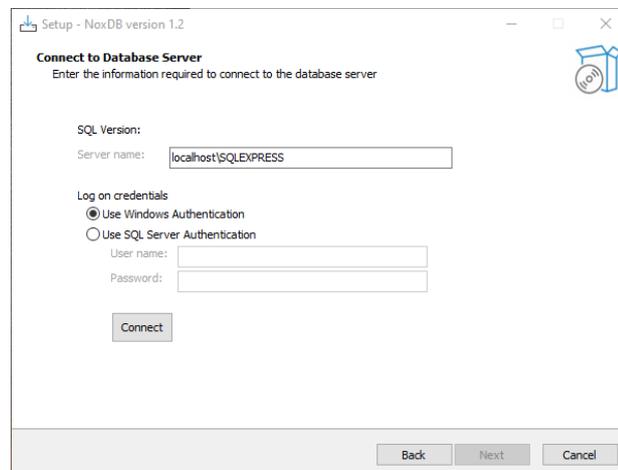
Install Nox DB

The final steps include downloading the Nox DB and completing the connection to the SQL Server. The Nox DB can be accessed from the download locations here:
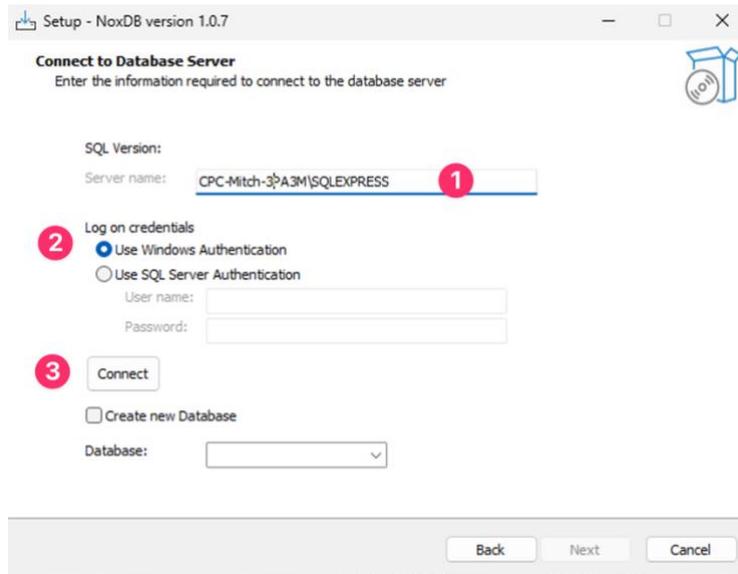
To install Nox DB:

1. Run the executable file (NoxDB_1.0.X.exe)
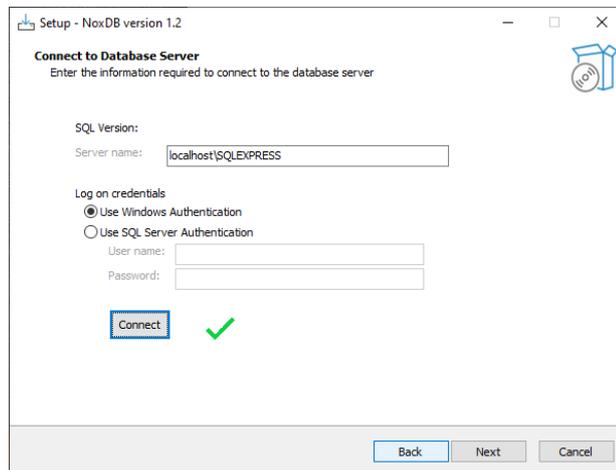2. Accept the license agreement.

3. Insert the server's name into the SQL Version field. The string snipped from the SQL Server 2019 Express install is an example below. The Windows Authentication will suffice to connect to the database.
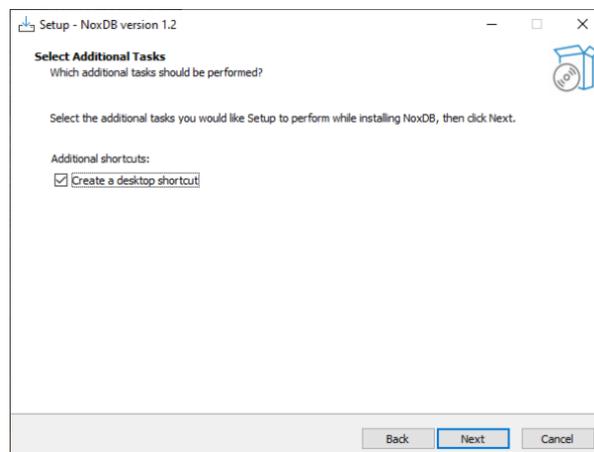

4. Paste the server's name into the server name section (1) and select Windows Authentication (2) and click Connect (3). A green tick will appear when the connection to the database is made.
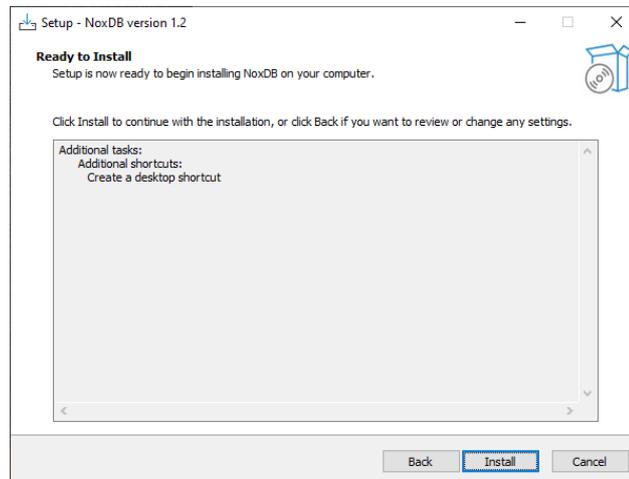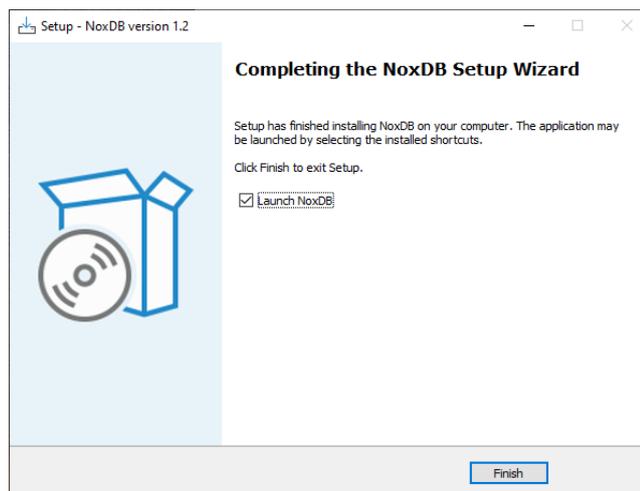
5. server as shown below.

6. Proceed to the next page using the default shortcut settings.

7. The settings have now been configured for connecting the Nox DB interface to the SQL Express database. Click Install to continue with the installation.

8. The software is now ready to be launched. **Note that Nox DB can take a while to load initially. It is recommended to wait and not try to load the program again, as two instances of the Nox DB program will eventually load.**
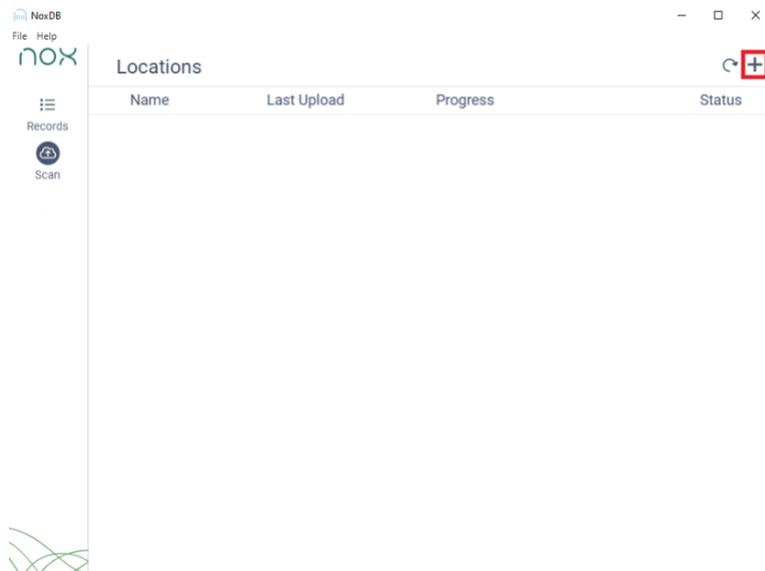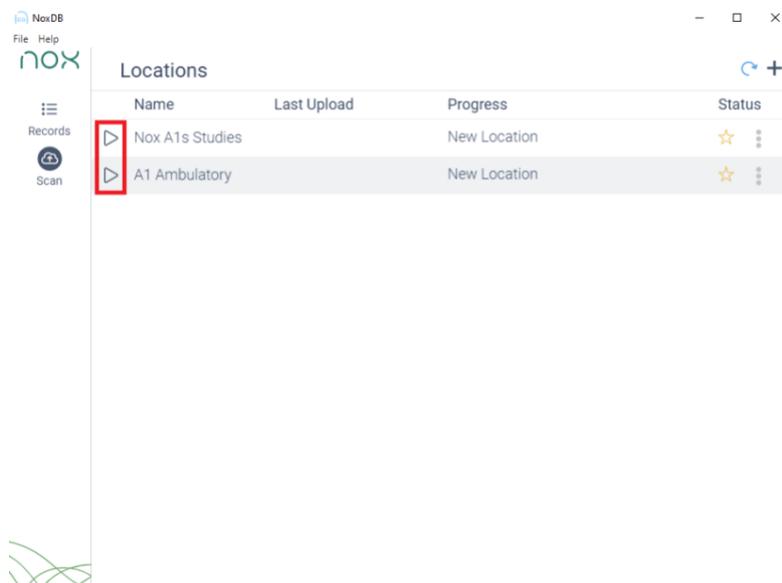
Getting Started with Nox DB

Below are the main steps for successfully operating the Nox DB.

Scan the data locations

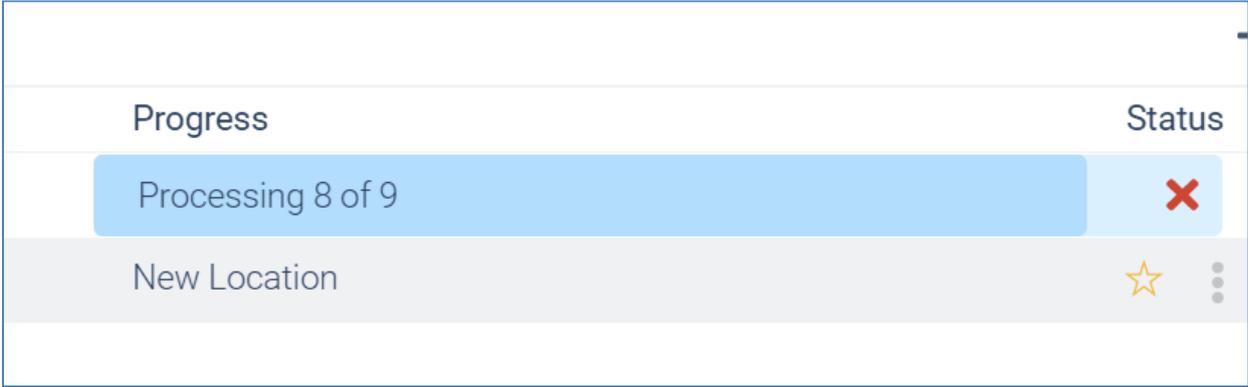The first step is to scan the data location with PSG studies that the user wants to extract statistical information. Multiple locations can be selected, and a new location can be added via the "plus" icon in the top right corner.

Scanning is initiated by pressing the Play icon, and the status is displayed in the "Progress" column.

After scanning has been initiated, a status bar will be displayed about the progress of scanning.
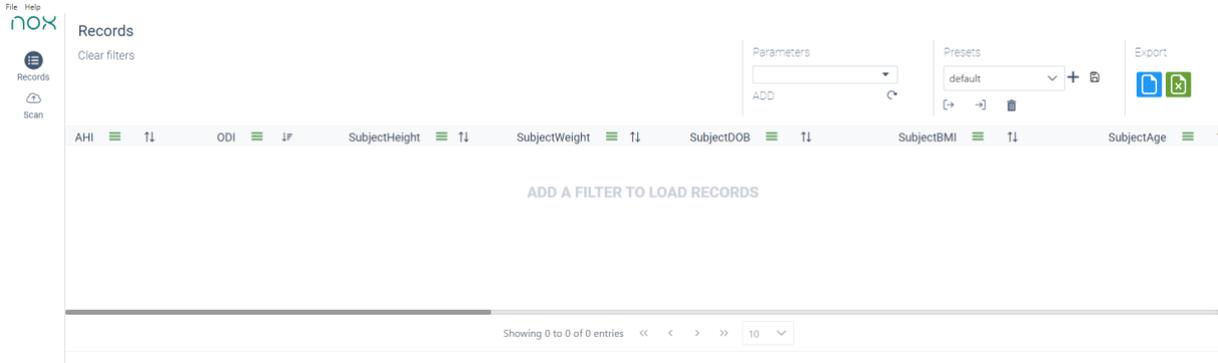
Note that each study scan will take about 4 seconds, so when scanning big data libraries, it can take quite some time to process as multiple parameters are being gathered. The Nox DB will scan all parameters and custom fields that are a part of the studies being scanned.

In some cases, the Nox DB is unable to process specific data folders, and that is displayed with a message if that is the case that a study is incomplete. Reasons can be empty study folders e.g.

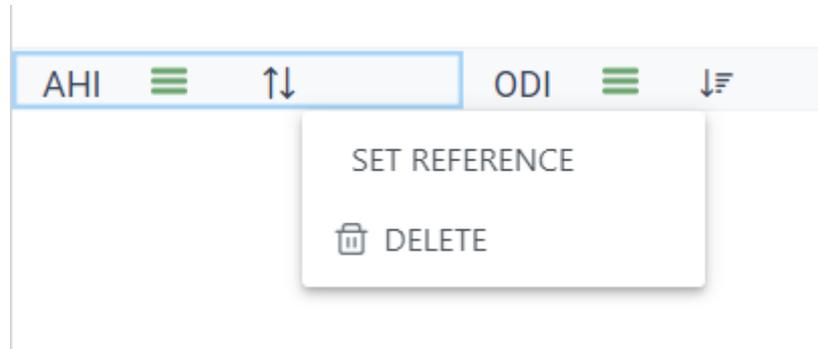## Working with statistical data and exporting

After scanning is completed, the "Records" tab will be populated with the information from the scanned locations. The "Records" tab is where the data is displayed, processed, and exported.

The "Records" tab pre-defines the most common parameters in the default Nox Medical reports. New Parameters can be added by selecting from the list in the top right of the "Records" sheet.

The order of the parameters can be changed by dragging the parameter labels, they can be removed by right-clicking on the label and selecting DELETE and as well as setting what parameter is a REFERENCE parameter. Setting the reference parameter will freeze that single parameter while scrolling through the records library.
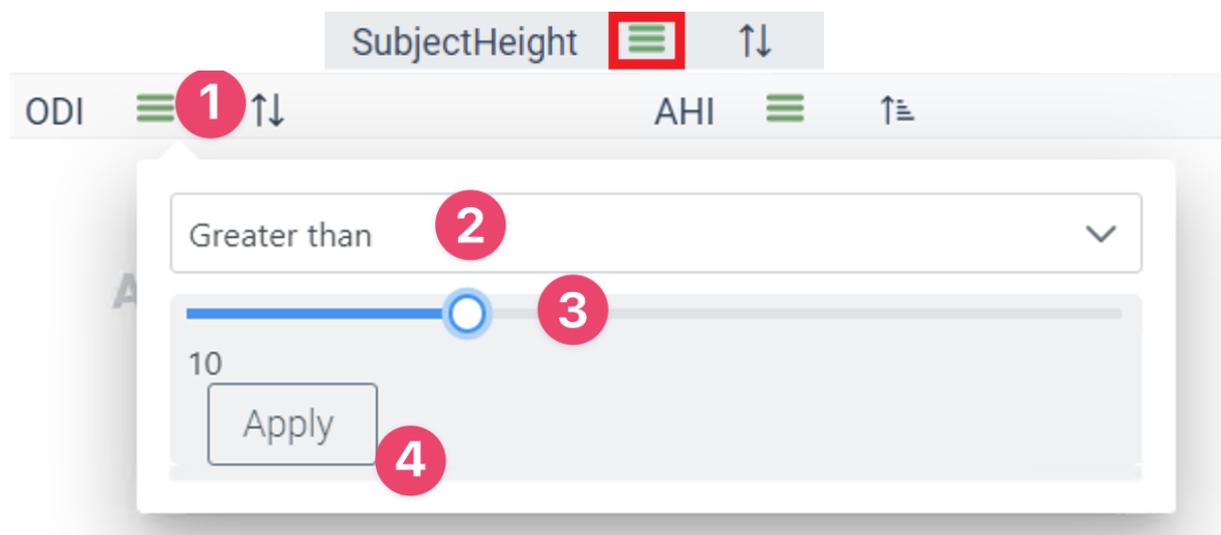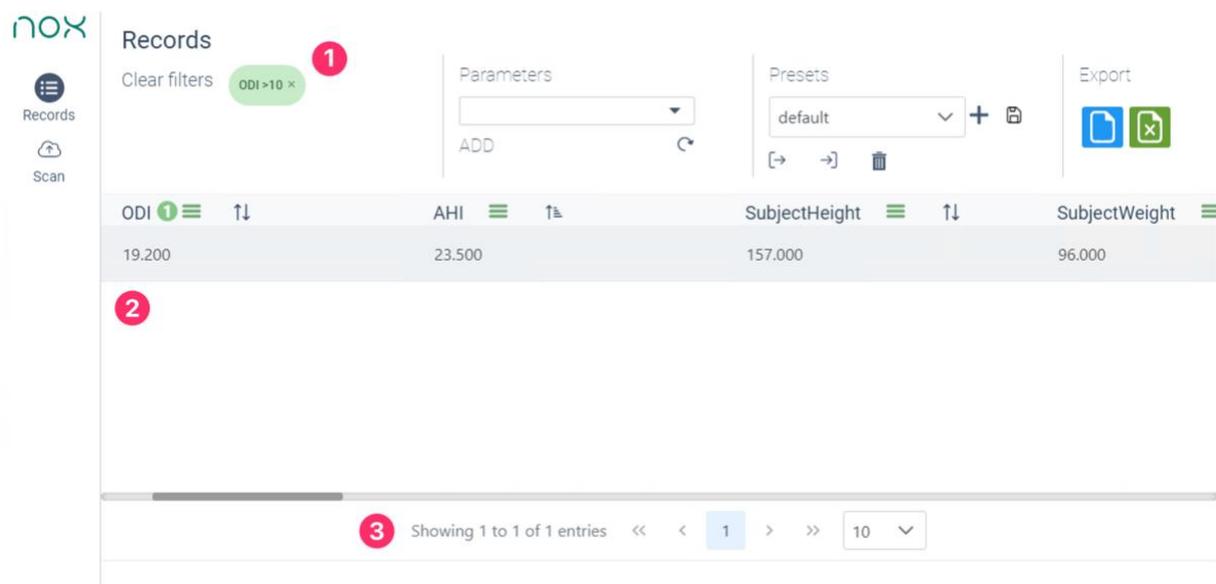

Displaying Data in Nox DB

To display data from the database, a filter needs to be applied. The filter can be activated by clicking the hamburger button and defining the filter.

For example, if you want to show all the studies in the database with an ODI greater than 10:
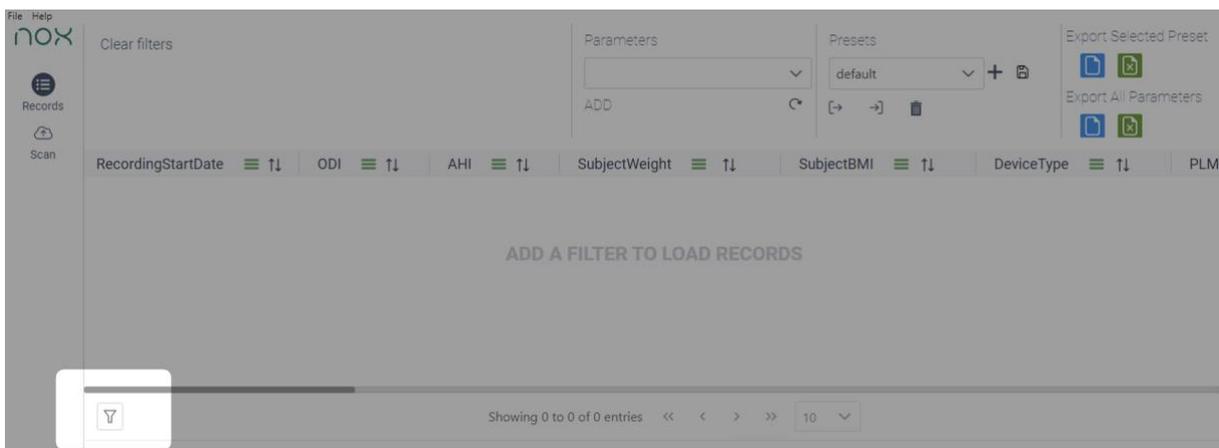
1. Click the green hamburger icon highlighted above (1 in the image above).
2. Set the parameter to Great than
3. Adjust the numeric value to 10
4. Click Apply

The filter is now shown in Nox DB (1) in the example below. The studies that meet the filter requirements are now in the database (2). The number of studies that meet the filter requirement is shown on the bottom of the database outline (3).
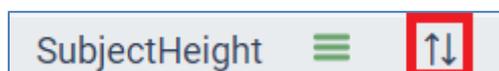
Note it is possible to show all data from a dataset without a filter. Click the show all button as shown below. This can be toggled on and off to display data.

The filters have different functionalities depending on if the data is numeric values, dates or text strings.

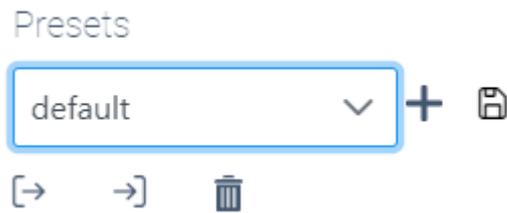The data can also be sorted using the shortcut below.

The active filters will be displayed at the top of the page.

A combination of filter setups can be saved for future use from the drop-down on the top right part of the page.

The "plus" icon allows you to create a new filter preset, while the "save" icon merges the changes done on the active filtering to the active filter presets.

The "arrow icons" allow the user to import and export filter presets from other users, and the "trash can" lets the user delete the active filter preset.

After completing the filter adjustments, the final step would be to export the data to either .csv format or .xlsx from the icons on the top right of the "Records" page for further statistical processing or reporting.