BRAHMS

Management of natural history

Installation, Login and Upgrading

Updated May 2025

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For licensing enquiries, contact brahms@innovation.ox.ac.uk
For technical enquiries, contact brahms@biology.ox.ac.uk
http://herbaria.plants.ox.ac.uk/bol/brahms/software/v8

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Pre-checks

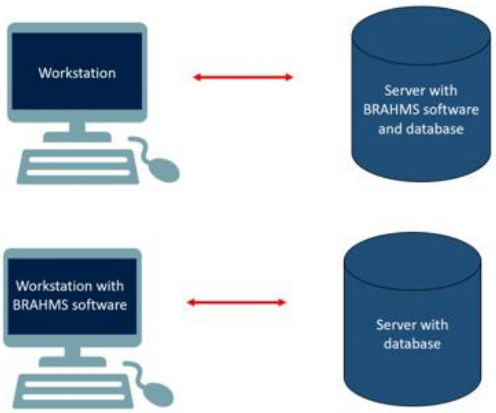
Prerequisites and .NET

BRAHMS operates under Windows or on Macs with Parallels, Virtual Box, Boot Camp or equivalent. Your installed Windows .NET framework version needs to be v4.7.2 or later. Most PCs will have this already. If not, BRAHMS prompts you to upgrade. If you do have to upgrade .NET, it will be best to restart your PC after. NB. From v8.7.2 onwards, BRAHMS uses .Net 4.8.1 which is the latest version. This will work on almost all Windows 10/11 PCs. However, we also offer a BRAHMS compiled with .Net v4.7.2. See notes on https://herbaria.plants.ox.ac.uk/bol/brahms/software/revisions For v8.7.2 (21st March 2025).

Disk space and memory requirements

For the complete system installation (including the ArcGIS and reporting runtime libraries and other system components) you will need about 250 MB of disk space. The demo conifer database requires about 200 MB. For all projects, we recommend you have plenty of free disk space to allow growth and improve performance.

As with most database systems, the more RAM you have, the more efficiently things operate. This applies to the server (if you are using one) and/or to your PC. A server database, independently from the BRAHMS software, will utilize available RAM for indexing, caching and querying. If you are using a server to run PostgreSQL or MSSQL, make sure the database has access to as much RAM as possible. For a large database with many users, under-resourcing your server is not a good plan. More details are given in the main guide.



Whether the software is on the server or on your local PC, both will benefit from being well resourced.

Evaluations and license keys?

To test BRAHMS for up to 60 days, contact Oxford University Innovation (OUI) and they will send you a link to the software. No activation key is required (unless for an evaluation extension). To run BRAHMS as a live management system, you need an activation key.

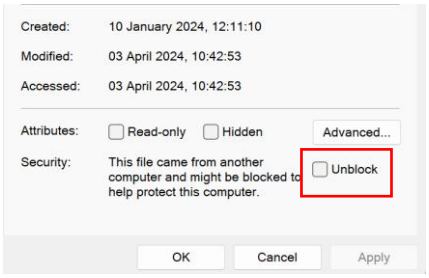
- Apply for evaluations: https://process.innovation.ox.ac.uk/software/p/14165t/brahms-trial/1
- Apply for full license and key: https://process.innovation.ox.ac.uk/software/p/14165/brahms/1

Your key, if required, is copied into the log in screen prompt.

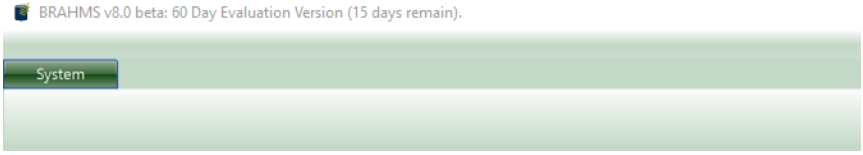
Installation

Opening BRAHMS install zip

Downloaded zips that contain certain types of software files are blocked for security reasons. If you right-click on the brahms.zip file and choose **Properties > Security**, you can see if it is blocked. If so, select the **Unblock** tick box. Once unblocked, you can open the zip using any extraction software. If you have any issues running BRAHMS after opening the software (for example, you might only see the System menu), we recommend opening the software zip with 7z rather than Windows extraction. 7z is free software and can be downloaded from https://www.7-zip.org/download.html. Also refer to the troubleshooting section.



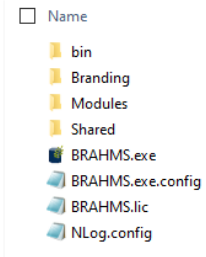
You can check the zip file Properties > Security tab to make sure it is not blocked.



An example menu indicating the BRAHMS zip was not unblocked.

NB: If you have already extracted the zip file without unblocking, delete the extracted files, unblock the zip and re-extract.

The BRAHMS software folder can be located on any drive or folder. This may be on a server that you have access to or on your local PC. There are no restrictions on the location or name of the installation folder.



After opening the install zip, you will have a software folder similar to that shown here. This folder also has a BRAHMS license file. Evaluation versions do not have the BRAHMS.lic file.

Software folder

Files/Folders	Notes
bin	Core application DLL and ArcGIS runtime files.
Branding	Branding banner image and other branding items as available.
Logs	Daily log files and any application error files. Created after login and system use.
Modules	Application DLL files linked to specific modules.

Shared	Shared data connection files and some other shared files.
BRAHMS.exe BRAHMS.exe.config NLog.config	The main application exe file. System configuration files.
BRAHMS.lic	The BRAHMS license file (evaluation systems do not have a license file).

Logging in

Brahms.exe and creating desktop shortcut

The top-level folder includes the file brahms.exe which you run to start the application. You can create a shortcut to this in the normal way.

Login to the personal data store

After a first installation, log into BRAHMS using the *Personal* Data Location. The system will initially default to **Windows Authentication** using your Windows identity and thus you do not need to add a password.

After installation, logging in using Window Authentication to the Personal database, no password will be needed.

When you first log in, the system auto-creates an empty data store called brahms.db in a folder named Documents/BRAHMS. This may be on your physical PC or on a network drive with roaming user profiles. In the latter case, you will be able to access it from different workstations. Brahms.db file is an SQLite file.

If you have a problem with Windows Authentication, change to BRAHMS Authentication. Choose any username and a password. You must remember your BRAHMS username and (case sensitive) password.

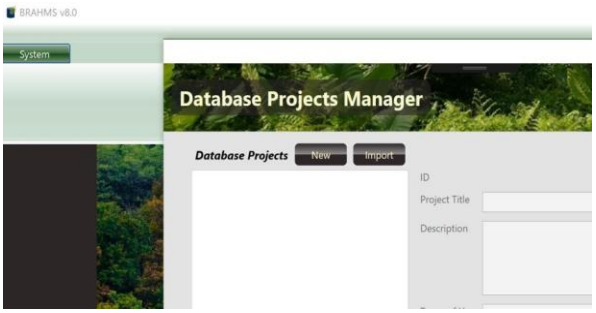
Logging in using BRAHMS Authentication.

First log in and database ownership

The first log in to a newly created database assigns ownership to that database. Thus, if you login using Windows Authentication, your windows account will initially be the only way to open the database. Adding or editing different users is discussed in the **Users and Permissions section** of the guide.

The Database Projects Manager form

Initially, the default personal data store has no database projects. Thus, the first log in will auto-open the **Database Projects Manager** screen with options **New** and **Import**.



This form auto-opens when there are no database projects available in the current data store.

At this stage, you have two choices:

- Use **New** to create an empty database project in your newly created brahms.db store.
- Use **Import** to import data from the XML folder downloaded from https://herbaria.plants.ox.ac.uk/bol/brahms/support/conifers. See below.

Linking to the conifer database

Introduction

The conifer database includes all published conifer names as well as specimen data across the group, almost all referenced for mapping. You can download the database as a ready to open SQLite database file or download the XML files that can be imported to SQLite, MSSQL Server or PostgreSQL.

Importing and/or connecting to sample database

XML import option

The import option imports data in BRAHMS XML format to a new, empty data store of your choice. The XML data for conifers is downloaded from https://herbaria.plants.ox.ac.uk/bol/brahms/support/conifers. These data can then be imported into a new SQLite, PostgreSQL or MSSQL Server database.

The XML data is provided as a series of files in a single folder. One of the files is named *DatabaseProject.xml*, When you select **Import**, as shown in the **Database Projects Manager** screen above, you will be asked to locate this file. The XML import process pulls in the data from the XML files to create the new database. The process is described in more detail in the BRAHMS guide.

Ready to open SQLite file

- Download the SQLite database zip file from https://herbaria.plants.ox.ac.uk/bol/brahms/support/conifers
- Open the zip to create the file brahms.db
- Copy this file to your Documents\BRAHMS folder overwriting the default brahms.db file

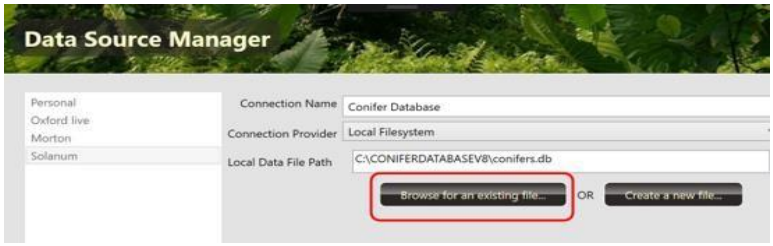
- Log into Personal using the credentials as below:

  Authentication: BRAHMS Authentication
  User name: Demo
  Password: demo (lower case)

Note that you must initially use these default log in credentials.

Note: you can also connect to this brahms.db conifer database file in a different location including on a shared drive. It does not have to be located in your Documents\BRAHMS folder. Follow these steps:

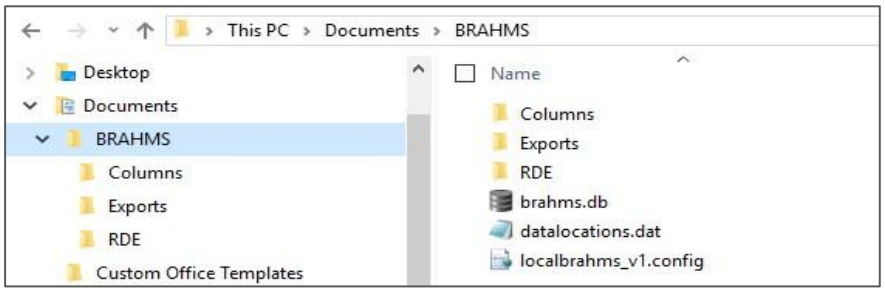
- Copy the downloaded demo database brahms.db file to any folder location. You could also rename the file from brahms.db, for example to conifers.db.
- Select **System > Manage Data Connections…** then **New** and enter a connection name such as *Conifer Database.* The Connection Provider will be the default *Local Filesystem*.
- Use **Browse for an existing file** to navigate to the database file and then select **Save** and then **Done**.
- Sign out. When you next log in, select 'Conifer database' on the log in form Data Locations drop down.



Browse to locate the downloaded conifer.db sample database - then save.

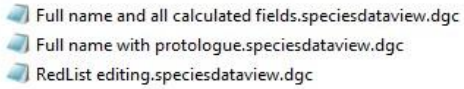
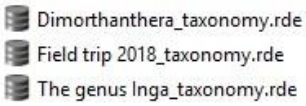
Your Documents/BRAHMS folder

When you first log in to any datastore/database, a folder called BRAHMS is created in your Documents folder. This is used for the default location of the empty brahms.db data store and various setup files.



If you delete the BRAHMS folder, it will be recreated when you next log in.

File/Folder	Notes
brahms.db	The default SQLite datastore, initially empty.
datalocations.dat	Encrypted binary file storing connection strings (connections to data stores). All database project details (their names and descriptions) are stored in the data store itself. Once you connect to a data store, the database project(s) within the store are listed allowing you to choose a log in – unless there is only one database project in which case, it logs you directly in.

localbrahms_v1.config	User specific configuration file holding background image mode, tag highlight colours and a few other settings. Data are stored in JSON format.
Columns	Visible column definitions are stored here as in the species file examples listed here. The .dgc extension refers to Data Grid Column. These files can be exchanged with other v8 users. Also stored are files with .lcv extensions. These store your used last column view per table. Examples: 
Exports	Any files exported from BRAHMS are stored here. This includes Excel and CSV files.
RDE	RDE files are stored here by default – but you can set up separate RDE storage folders. Examples:  Each .rde file is a self-contained SQLite database with the RDE file metadata, the data itself, image links and edit history.

Upgrading BRAHMS software

(NB this section is also available as a one-page PDF 'Upgrading BRAHMS')

Introduction

This section explains how to upgrade BRAHMS software and any databases you have when you receive a software revision update. The BRAHMS project publishes software updates periodically. Each revision has a new version and build number, as an example: *BRAHMS v 8.5.2.13029 (18 August 2023)*. Revision features and fixed bugs are documented on https://herbaria.plants.ox.ac.uk/bol/brahms/software/revisions.

Typically, when a new revision is published, there are changes to the database structure (*e.g.* some new fields, tables or indexes added). When you open a database for the first time with the new software, BRAHMS checks if your data store requires updating. This process is automated and will only occur the first time you login into a given data location with the new software.

To be able to upgrade BRAHMS, your license key must be valid for updates issued during your key validity period. If your license period has expired, you will not be able to update to new versions.

Installation - replace or overwrite the software folder?

The strongly recommended update process is as follows:

- Rename your existing software folder, *e.g.* add a date or an 'x' or something to the folder name. This also has the advantage of ensuring no-one is currently using that software.
- Unzip the software using 7-Zip. NB. Windows default file decompression may lead to file security blocks.
- Copy your license file (brahms.lic) from the old to new folder.
- Move or copy the Shared folder from the old to the new folder (accept overwrite if asked).
- If using branding (customised banner image), copy the Branding folder from old to new (accept overwrite if asked).

- Finally rename the new folder to the correct name as you may require.
- Optionally, delete your old software folder to save on disk space.

If you are using overwrite to update your software folder, you should delete the Startup.Profile file from the folder root. Also, if ArcGIS is updated, remove the old ArcGIS version. One reason we recommend replacing the software folder is to avoid file potential version conflicts.

Log in to new system and auto-upgrade the data location

As your saved data connections are held either in your Documents\BRAHMS folder or shared to the Share folder, your new version log in screen will have the same Data location options to choose from.

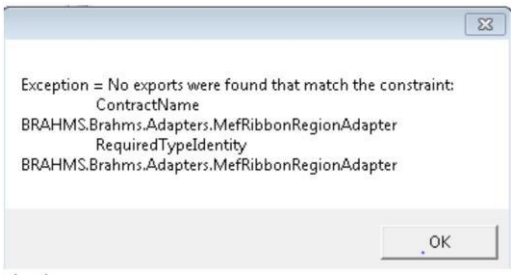
When you first log in to your data location, you may see a message similar to that below:

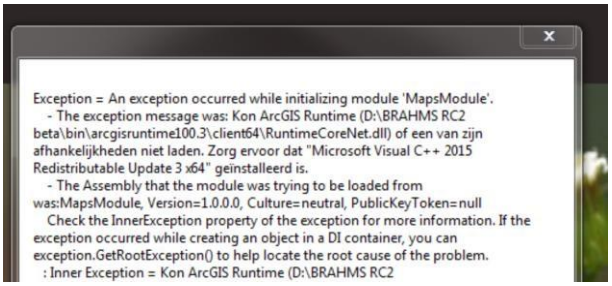
This above form shows the version number of the database (not software). Select Yes to proceed to update the database. Updating is usually completed in a few minutes or less – but this depends on the size of your database and the nature of the changes BRAHMS is going to make.

Cleaning up

After successfully updating and checking your log in, you should archive or delete the old software version to avoid a build-up of unnecessary files on your PC or server.

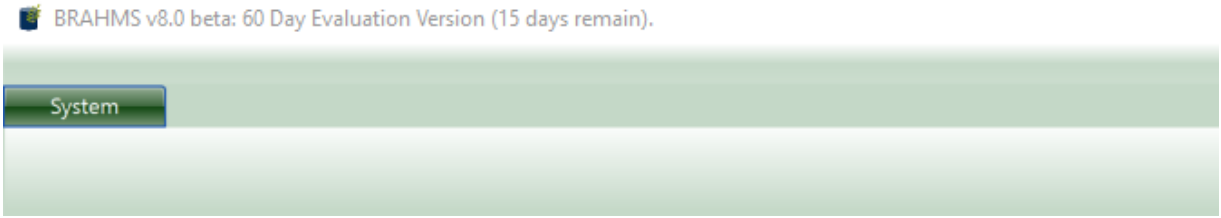
Troubleshooting on logging in or upgrading





Menu error

If your BRAHMS installation zip is opened using the Windows default extraction, this may block access to some BRAHMS files. When logging in, you may only see the **System** menu as shown below and be unable to proceed. You may also see some additional error messaging.



An example menu usually indicating the software DLL files have been blocked by using Windows Extraction. The solution is to first unblock the zip file (see section Opening install zip*) or to use 7z or a similar tool to open the install zip.*

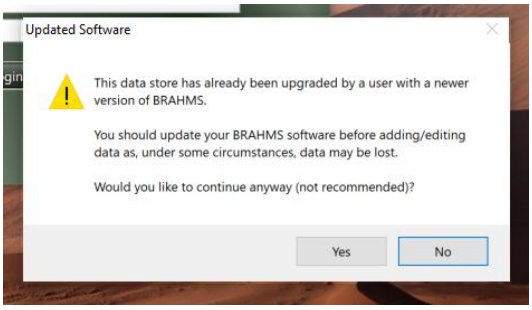
The solution is to delete your BRAHMS software folder and then again open the zip file you have downloaded using 7z https://www.7-zip.org/download.html or another utility. Another possible explanation is your security system (e.g. anti-virus) requires you to include brahms.exe as a trusted exception.

Map error

If you see the error mentioning 'arcgisruntime' and the 'MapsModule' – you should download and install the Microsoft Visual c++ 2017 redistributable as on: https://social.msdn.microsoft.com/Forums/vstudio/en-US/e653a57a-bc32-4134-87bf-df33058f0531/downloadmicrosoft-visual-c-2017-redistributable

Using an older software version to log into an already updated data location

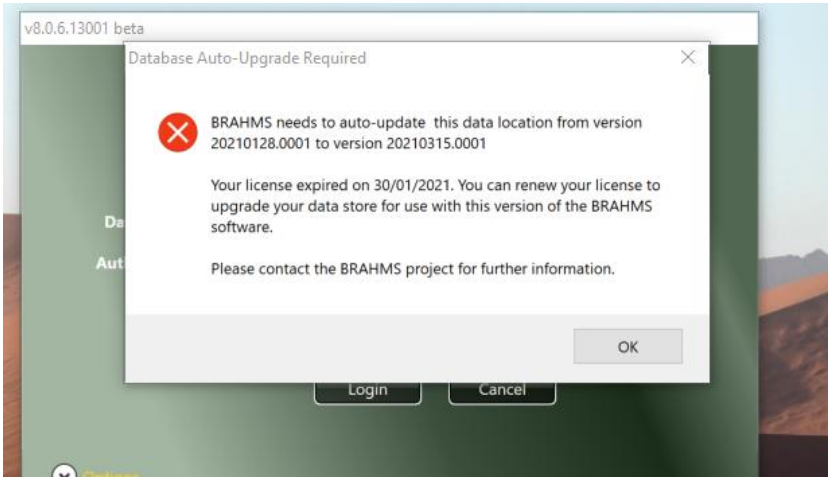
If your data location is updated, and you or another person on your network tries to log in using an earlier version of the software, they will see a message:



While you will be able to log in using an earlier software version, we recommend that anyone wishing to log in and edit the database uses the same updated version of BRAHMS.

Licence key out of date

If your license key is out of license period, you will not be able to upgrade to the new software version.



If you see the above message, it means your license is out of date and you'll need to contact brahms@innovation.ox.ac.uk *for more details.*