Altair - Breeze Installation Guide

Version 2025.2.0

Contents

1   Required Items

The following items should be found on any standard Linux installation. The Breeze GUI will detect them on start up and warn you if it detects a potential problem.

- You will need to have GDK+ 2.2 installed. We recommend at least GTK+ 2.8 This is part of the minimum install with most Linux distributions.

2   Licenses and the License Server

The Breeze GUI requires a license, served by the Altair License Manager (ALM). The ALM runs on a license server host that can be reached by network clients. By default, it restarts on machine restart. The Altair License Manager (ALM) is built on X-Formation's LM-X license manager suite.

2.1   Downloading Altair License Manager

Altair License Manager (ALM) is available on AltairOne. Register and then log in to access the download links.

2.2   Installing Altair License Manager

- Log in as root on the license server host.
- You can run the installer via its GUI or on the command line. If you want to use the installer's GUI, provide an X server and connection. Otherwise, make sure that the environment variable `DISPLAY` is unset.
- Make sure that server port (default 6200) can be used by the license server and its clients.
- Make sure that the installer is executable, meaning the executable bit is set.
- Run the installer, either via the GUI (`./<package name>`) or the command line (`./<package name> -i console`):

  a. If there is an existing license server, the installer asks whether you would like to use the license and configuration files from that installation.
  b. Specify the location where you want to install the license server. If you provide a non-existent directory, the installer creates it.
  c. The installer installs the Altair License Manager.
  d. The installer asks whether you already have a license file. If you want to use an existing file, give its location. Otherwise, the installer creates a blank altair_lic.dat file in the installation location; you can replace it later.
  e. The installer displays the host ID of the machine.
  f. The installer asks whether you want to install the init scripts for automatic startup; answer yes or no.
  g. The installer asks about configuring the usage reporting system, and tries to contact the Altair usage reporting server. If you do not have the data to configure the proxy, you can skip this step and manually modify the `<install directory>/alus.conf` file later. Note that the proxy password is stored in the configuration file in plain text. Be sure to limit access to this file.

2.3   Ports

By default the license server uses TCP/IP port 6200. If you have another application using that port, the server will not start. You can edit the `altair-serv.cfg` file after installation to change the port used by the license server.

You can run multiple ALM servers on a single machine by specifying different ports. For example, you can run an older FLEXlm-based version of ALM (10.0 and prior) alongside the 13.0+ ALM. You can also run an ALM license server side by side with the license servers of other vendors such as FLEXlm. You can run only one license server from any specific vendor on a machine at one time. You can run only one version of the LM-X-based Altair License Manager on a host.

2.4   Installing a License File

In order to run the Breeze GUI, you need to install a license file supplied by Altair Engineering, Inc.

1. Provide the host ID of your license server with your request. Log into the license server host and run the following command:

   ```
   <license server installation directory>/bin/almutil -hostid
   ```

   If you are using one of the ethernet-based host IDs, choose one that is on a permanent interface. Do not use an interface for VPNs or other software-based adapters; these may not always be present.

2. When you receive your license file, put it in the license server installation directory.

3. By default the license file is named `altair_lic.dat`. You can change the name.

4. Make sure that the value of `LICENSE_FILE` in the `altair-serv.cfg` file is the full path to the license file.

5. Restart the license server:

   ```
   altairlmxd restart
   ```

When you replace an existing license file with a new one, repeat steps 4-5 above.

This will not affect running programs. Each client will reconnect to the server once the server is restarted. This may take approximately 15 minutes.

2.5   Units or Feature License

As of Breeze v2025.1.0 the default is to use 30 Altair HPC Works Units when running Breeze. You will require a license that has the `HWHPCBreeze` feature for this to work.

For backwards compatibility floating Altair Breeze licenses can still be used if you set and export the following environment variable before running `BREEZE_UNITS=false`. This will checkout a `BREEZE` license.

2.6   Legacy Breeze Licenses

Earlier versions of Breeze were licensed using the Ellexus License server, with either node-locked or floating licenses.

2.6.1   Legacy node-locked licenses

If you have been sent a node-locked license file, simply save it somewhere that the Breeze GUI can access when started.

2.6.2   Legacy floating licenses

To use floating licenses, you need to install the Ellexus license server. Download the license server archive corresponding to your architecture (32 bit or 64 bit).

1. Extract the license server archive into your preferred installation directory. The license server must be installed on a physical machine running a recent Linux operating system whose details match those specified within the license.

2. Start the license server on the command line:

   ```
   $ nohup ./ellexus_license_server -d <path to license directory> &
   ```

   Useful options for the license server are:

   - `-d <license dir>` to specify a directory to search for licenses; by default this is the same directory as the server installation.
   - `-p <port>` to run the license server on a port of your choosing (5656 by default).

To use a legacy floating license, simply place the license file (`*.lic.json`) in the license directory specified to the license server (see above). Since this is a floating license, it only needs to be accessible to the license server and not to Breeze.

To update your license, you will need to save your new license file in the license directory and make the license server re-read its license files. By default, the server will re-read at midnight every day, but you can also force a re-read manually by shutting down and restarting the license server.

3   Installing Altair Breeze

3.1   Downloading the Altair Breeze Package

Altair Breeze is available on AltairOne. Register and then log in to access the download links.

You can download the trace-only package or the full product. The trace-only package contains the tracing technology as a lightweight install, but it is missing all the tools needed to analyse the Breeze data. It is useful when you are tracing or profiling an application in a different environment to the system used to look at the data.

We have 3 formats of package, a ".tar.gz", ".deb" and ".rpm". Select whichever is easiest for you to work with.

It is important to note that Breeze assumes that it is available on the same, canonical path on every machine when following jobs from one execution host to another.

You should make sure that you choose the right version of Breeze (32 or 64 bit) for the machine you want to run it on.

3.2   Tar file

To install, just untar the product on any filesystem which is accessible from all the hosts running workloads which you wish to trace.

3.3   Debian package

Install using your package manager. This will install Breeze to `/opt/altair/breezeAP_2025.2.0_x86_64` by default.

e.g.

```
$ sudo dpkg -i breeze_2025.2.0-0_amd64.deb
```

To install to a different location use the `--instdir=dir` argument to `dpkg`.

3.4   RPM package

Install using your package manager. This will install Breeze to `/opt/altair/breezeAP_2025.2.0_x86_64` by default.

e.g.

```
$ sudo rpm --install breeze-2025.2.0-0.x86_64.rpm
```

To install in a different location use the `--prefix=<path>` argument to `rpm`.
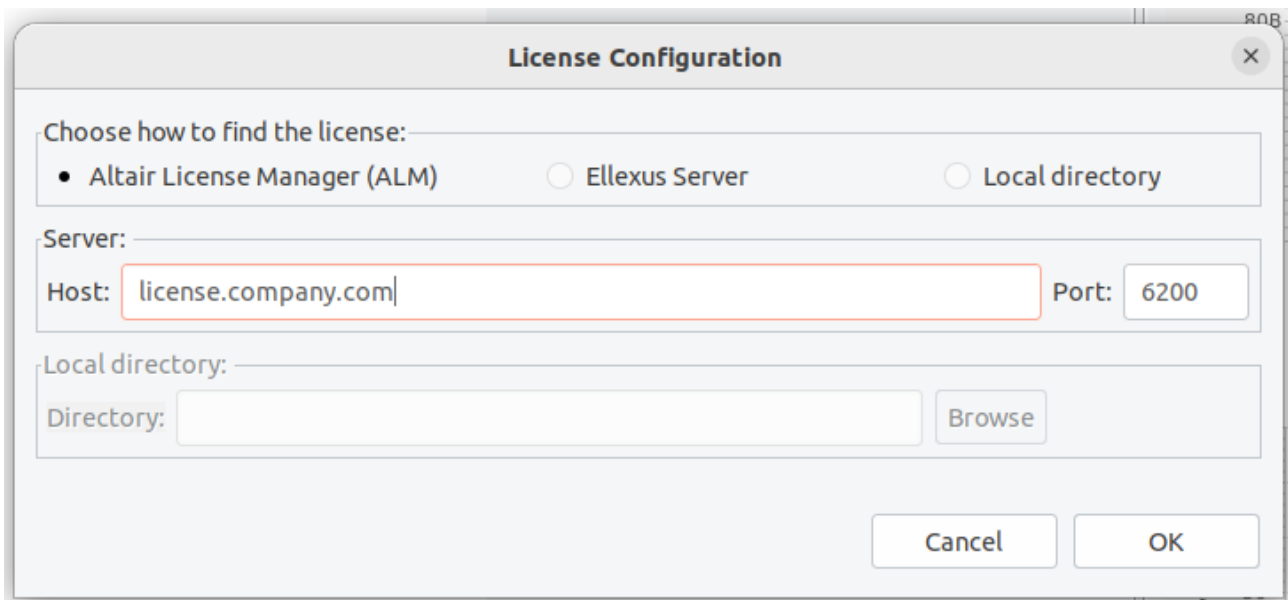
Figure 1: Configuring the license location in Breeze

3.5   Configuring the license for the Breeze GUI for the first time

The first time the Breeze UI is started you will be prompted to enter your license details. You will also be prompted to update these details if your configured license is invalid for any reason, for example it is not possible to contact the configured license server.

In most cases Breeze should be configured for use with a license server (see section Licenses and the License Server). To do this make sure the "License server" option is selected, place the fully qualified domain name (or IP address) of your license server in the "Host" field, and the port on which the server is listening for license requests in the "Port" field. The port will be 6200 by default. If you do not know the location of your license server please contact your local administrator for the correct details.

If you have a legacy node-locked license (see section Legacy node-locked licenses) select "Local directory" and then use the "Browse" button to select the directory that contains your license. Please note that the license file must be named with a `.lic.json` file extension to be recognised.

Once this is configured it will be stored in `<install directory>/etc/breeze-license.properties` and you will not have to enter it again.

3.6   Preventing other users from changing the license settings

Once the license settings are correct you may wish to remove write premissions from the `breeze-license.properties` file to prevent users from changing the license settings. This is supported and will not cause any issues.

3.7   Configuring the license for the Breeze Automation Platform and Breeze Healthcheck

The Breeze Automation Platform and Breeze Healthcheck are command line applications to parse trace data captured via Breeze or Trace-Only Breeze and export the data as text, XML files, or as an HTML Healthcheck report. It can export data corresponding to the views shown in the Breeze GUI. This allows automated test suites to be written and allows analysis of the data via third party tools. The `breezeAP.sh` application can be found under the Breeze installation `bin` folder.

Before you can run Breeze Automation Platform or Breeze Healthcheck you must have a Breeze license preferences file with the license configured (this is automatically generated when you set the license in the GUI) or the `ALTAIR_LICENSE_PATH` environment variable must be set to the location of the license server. This should be:

- The IP address and port of the license server expressed as `<port>@<server>`. The port number used by the license server is usually 6200.

For example:

```
$ export ALTAIR_LICENSE_PATH=6200@10.33.0.1
```