



Installation guide for LINK3D V.1.0.x

Software Installation Steps:

- 1) Navigate to the GHI file share site: <https://www.gohypersonic.com/filesare>
- 2) Login using your username and password and select LINK3D from the workspace menu.
- 3) Enter the folder with the latest version of the software and download the file with the compiler version and MPI version that most closely matches the software installed on the target system.

link3d-1.0.0-object-gnu-4.8.5-openmpi-1.8.tar.gz

- 4) Unpack the file using the following command:

```
>> tar -zxf link3d-1.0.0-object-gnu-4.8.5-openmpi-1.8.tar.gz
```

- 5) Load the compiler and OpenMPI version on the installation system. This is the compiler that will be used to complete the software linking process.

Note: The GNU/GCC compiler is recommended for compatibility.

- 6) Enter the folder and run the installation script:

```
>> cd link3d-1.0.0-object-gnu-4.8.5-openmpi-1.8  
>> ./install.pl
```

Note: If the install command returns “gfortran os error” and/or “undefined reference” errors, you may need to add additional flags to the compiler linking command. To do this go into the “objects” folder, copy the linking command, and add two additional flags:

```
-lgfortran -lgcc
```

For reference, the linking command with added flags are shown here:

```
>> mpif90 *.o -o link-grid ../lib/libhdf5_fortran.a ../lib/libhdf5.a -lz -ldl  
../lib/liblicense.a ../lib/liblmgr_trl.a ../lib/libcrvs.a ../lib/libsb.a  
../lib/libnoact.a ../lib/liblmgr_dongle.a -lgcc -lgfortran
```



If the command completes successfully, go back and run the install command again. The installer should now skip the linking step and complete the installation. If this does not resolve the issue please contact GHI for further support.

- 7) Specify the installation directory (“link3d” will be appended to the path):

>> /share/apps

- 8) Specify the license type and location:

>> Press (1) for server-based license or (2) for file-based license:

For a server-based license specify the server location as shown:

>> Please specify the server name: @flex-server-name

For a file-based license specify the location of the license file:

>> Please specify the license file: ~/Desktop/link3d.lic

The license file will then be copied to the installation directory’s license folder.

- 9) The installer will then create a template module file suitable for system-wide installation:

```
##Module 1.0
module-whatis "Sets the environment for running LINK3D"
module load openmpi/1.8.8/gnu/4.8.5
set l3dhome /share/apps/link3d/1.0.0
setenv LINK3D_HOME $l3dhome
setenv GHI_LICENSE_FILE @server-name
append-path PATH $l3dhome/bin
conflict link3d
```

This completes the installation of LINK3D.



License Server / License File Specification:

After installation, the license server/file location can be set in several different ways. The recommended method is to set an environment variable in a module. Alternatively, the environment variable can be set in a .bashrc file or in a .flexlmrc file.

To set the server location or license file in a module, use one of the following:

```
setenv GHI_LICENSE_FILE @server-name
```

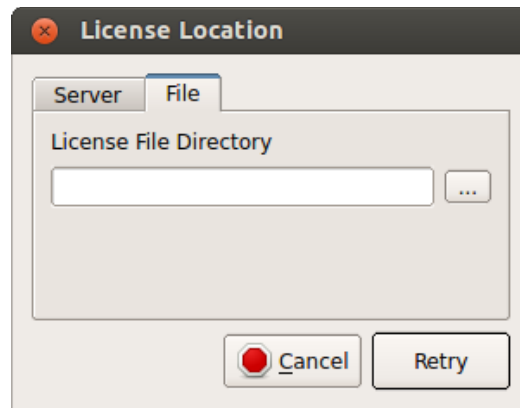
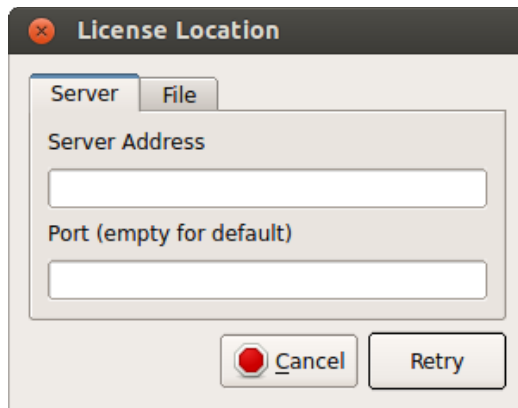
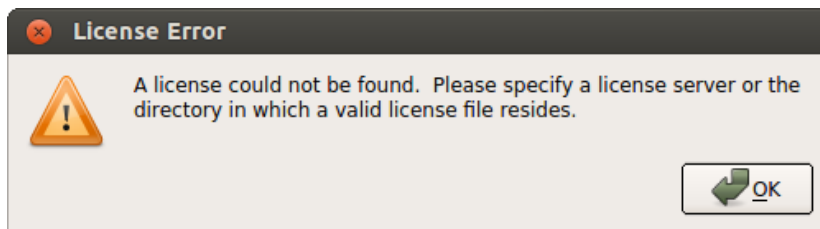
```
setenv GHI_LICENSE_FILE /share/apps/link3d/1.0.0/license
```

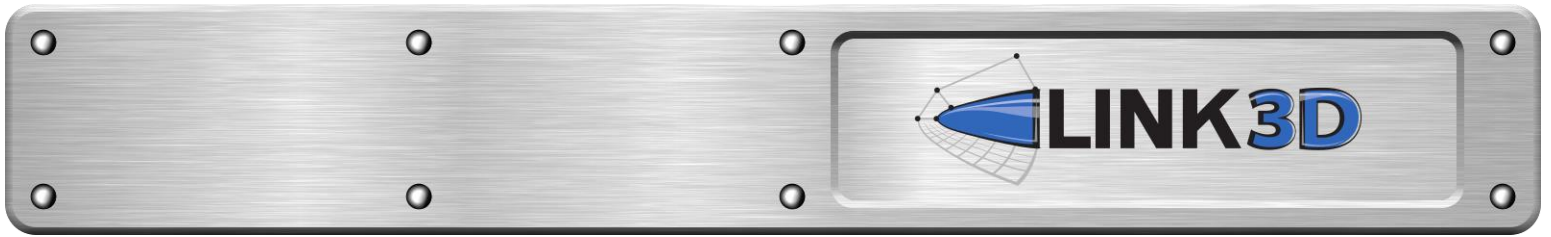
To set the server location or license file in a .flexlmrc file, use one of the following:

```
GHI_LICENSE_FILE=@server-name
```

```
GHI_LICENSE_FILE=/share/apps/link3d/1.0.0/license
```

For flexnet license server installations, the vendor daemon called 'GHI' is included in the installation directory's bin folder. Finally, if link-gui is launched and is unable to find a valid license file, an error will be displayed and followed by a license selection menu.





Graphical Driver Notes:

For best performance, it is recommend that the proprietary graphics drivers for NVIDIA, ATI, or Intel be installed on all workstations where link-gui will be used. This is not a requirement for the remote clusters where link-grid will be executed since link-gui does not typically need to run on the remote cluster.