



Introduction

Absoft license management provides a flexible method for administering license granting for any configuration of licenses from single-user/single-machine to multiple-user/multiple machines. A single license server can administer any number of licenses for any combination of licenses: Windows, Linux, and Macintosh.

Absoft license management consists of two major components: the license manager, `clmd_absoft`, and the license file, `license.dat`. For single user/single machine licenses, the Absoft compilers will automatically start the license manager to fulfill license requests. For multi-user and floating licenses, the license manager will have to be started at system boot time on the server machine. In this case, the compiler will broadcast over your network to obtain a license. All of these topics are discussed in detail in this document.

The License File

The license file is named `license.dat` and is maintained in the main Absoft directory. For Absoft Pro Fortran V11.0, the default path will be:

Linux	<code>/opt/absoft11.0/license.dat</code>
Macintosh	<code>/Applications/Absoft11.0/license.dat</code>
Windows	<code>C:\Absoft11.0\license.dat</code>

The format of the file is:

```
SERVER: server_name
PORT: port_number
LICENSE: license_string
```

SERVER: identifies the machine where the license server, `clmd_absoft`, is hosted. For a single user, single computer license, this line can be omitted. If not omitted, then *server_name* should be either "localhost" or "127.0.0.1" which are interchangeable.

For a multi-user client license, *server_name* should be either the name of the machine where the license server, `clmd_absoft`, is hosted or the IP address of that machine if static IPs have been assigned.

PORT: identifies the TCP/IP port used by the client/server relationship. The default port number is 1287. This line can be omitted unless a different port number is used.

LICENSE: identifies actual license. This will be the serial number on the inside of the CDROM case for physical deliveries or the number sent via email for electronic deliveries.

license_string is identical to serial number with all dashes removed. For example:

Serial Number:	876543-AQXF-TASG-6S6S-SFRS-G
<i>license_string</i> :	876543AQXFTASG6S6SSFRSG

For multi-user licenses, this line should be blank for all clients; only the server will maintain the actual license.

For multi-user licenses, license.dat can be empty or omitted. In that case, the compiler will broadcast on your network over port 1287 of any instance of the server, clmd_absoft.

ABSOFTE Environment Variable

In order for the compiler and license server to function correctly, the ABSOFT variable must be set in your environment. To determine if your ABSOFT environment variable is set, issue the appropriate command for your system:

Linux/Macintosh	<code>echo \$ABSOFT</code>
Windows	<code>echo %ABSOFT%</code>

The correct output will be the full path to the main Absoft directory.

If the variable is not set on Linux, you will need to add it to the appropriate start up script for the shell you are using. For *bash*, this is usually `.bashrc` or `.bash_profile` in your home directory. Add the following commands for Absoft Pro Fortran V11.0:

```
export ABSOFT=/opt/absoft11.0
export PATH=$PATH:$ABSOFT/bin
```

If the variable is not set on Macintosh, you will need to add it to the appropriate start up script for the shell you are using. For *bash*, this is `.bash_profile` in your home directory. Add the following commands for Absoft Pro Fortran V11.0:

```
export ABSOFT=/Applications/Absoft11.0
export PATH=$PATH:$ABSOFT/bin
```

If the variable is not set on Windows, the most likely cause is the **Absoft Development Command Prompt** is not being used. This command prompt is accessed from the Absoft menu and should be used as it automatically sets the required environment variables.

Floating Licenses

If all licenses will be used on a single machine, no action is necessary to use Pro Fortran with floating licenses as the server and all clients are located on the host.

If the license server will be located on a separate server, it will be necessary to have it start at system boot time so it will be available at all times the server is running.

Linux Floating License Server

There are two files needed to launch the Absoft License Daemon (clmd_absoft) at system boot time. They can be obtained by downloading one of the following gzipped tar archives.

SuSE Download:

http://www.absoft.com/electronicdelivery/clm/clmd_init_script_suse.tar.gz

Red Hat, CentOS, and Fedora Download:

http://www.absoft.com/electronicdelivery/clm/clmd_init_script_rhel.tar.gz

Contents:

clmd_absoft script for the /etc/init.d directory

clmd_absoft.conf configuration file for the /etc/sysconfig directory

After extracting the two files, place them in the appropriate directories and follow the standard steps for activating a script at boot time on your Linux distribution:

Red Hat, CentOS or Fedora:

man 8 chkconfig

SUSE:

Use the YaST runlevel service configuration tool

Note: The script is configured for a default 10.2 installation of our compiler. If you are using a different version or have installed to a non-standard location, you will need these two edit two lines:

Path to CLM binary

CLM_BIN=/opt/absoft10.2/bin/clmd_absoft

Path to license.dat

LICENSE_FILE=/opt/absoft10.2/license.dat

Macintosh Floating License Sever

1) Several of our users have had success using a program called Lingon, which provides a graphical user interface for creating and editing launchd configuration files for Mac OS X Leopard 10.5. You can find out more about this program and download it from:

<http://tuppis.com/lingon>

2) Absoft has created a simple OS X StartupItem which starts clmd_absoft. A tarball is available at:

For Pro Fortran 10.2:

http://www.absoft.com/electronicdelivery/osx-profortran-10.2.x86/AbsoftCLMD_StartupItem.tar.gz

For Pro Fortran 11.0:

http://www.absoft.com/electronicdelivery/osx-profortran-11.0.x86/Absoft11_0_CLMD_StartupItem.tar.gz

Directions for installing:

- a) Save the attachment and note where you saved it
- b) Launch Apple's Terminal.app program
- c) In the Terminal Window, enter the following commands:

```
cd /Library/StartupItems
```

```
sudo tar -xzf <full path to where you saved>/AbsoftCLMD_StartupItem.tar.gz
```

or

```
sudo tar -xzf <full path to where you saved>/Absoft11_0_CLMD_StartupItem.tar.gz
```

d) Reboot the computer

To verify that the Absoft license server daemon is running, use Apple's Console.app program located in /Applications/Utilities. Under the Console Messages item, you should see something like:

```
12/5/08 8:15:36 AM com.apple.SystemStarter[27] Starting Absoft Common License Manager
```

Please note that this Startup Item is configured for Absoft Pro Fortran 10.2 installed in /Applications/Absoft10.2. If you have a different version or installed to a different location, you will need to edit the file /Library/StartupItems/AbsoftCLMD/AbsoftCLMD and change the following line to reflect your installation:

```
ABSOFTE=/Applications/Absoft10.2; export ABSOFTE
```

Windows Floating License Server

If you have purchased an Absoft network license and wish to run the license server on Windows, you will need to install the license server as a Windows service. After installing the Absoft Pro Fortran package, perform the following steps:

- a) From the Absoft Pro Fortran 10.2 submenu in your Windows Start menu, select Development Command Prompt (32bit)
- b) Enter cd bin
- c) Enter install_clm.bat

To remove the license manager as a Windows service, perform the following steps:

- a) From the Absoft Pro Fortran submenu in your Windows Start menu, select Development Command Prompt (32bit)
- b) Enter cd bin
- c) Enter remove_clm.bat

Upgrading to a New Version

The following applies to Linux and Macintosh versions only.

If you are upgrading to a new version of Absoft Pro Fortran, you may have a conflict if a different version of the license server, clmd_absoft, is running when you try to use the compiler. Issue the following command to stop from a terminal session to stop any existing license servers:

```
killall clmd_absoft
```

Multiple Installed Versions

The following applies to Linux and Macintosh versions only.

If you have multiple versions of Absoft Pro Fortran installed, you can add the license number of each version to each license.dat file that you intend to use. Then, if the wrong license server is running, it will still find a license for the version that you intend to use.

License Server Debug Mode

Running the license server in debug mode often provides valuable clues for resolving license issues. In debug mode, the license server will report all requests and other diagnostic information. Begin by stopping any running instance of the license server:

```
killall clmd_absoft
```

To run the license server in debug mode on Linux or Macintosh you must open two terminals. In one terminal enter the commands:

```
cd $ABSOFT/bin  
./clmd_absoft -d -v -v -v -v -f $ABSOFT/license.dat
```

Compile a program in the second terminal window. Note that you can also use Absoft Tools to compile. Once clmd_absoft is running in debug mode, it will service all requests.

To run the license server in debug mode in Windows you must open a development command prompt and enter the commands:

```
cd %ABSOFT%\bin  
clmd_absoft.exe -d -v -v -v -v -f %ABSOFT%\license.dat
```

Compile a program in the second command prompt window. Note that you can also use Absoft Tools to compile. Once clmd_absoft is running in debug mode, it will service all requests.