PLS

Installation Guide
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PLS may be installed easily on a number of different systems using automatic installation procedures which require minimal user intervention. The various system requirements, as well as detailed installation procedures, are described in the following sections.

1. System Requirements

1.1. Sun/Hewlett-Packard Workstations

PLS for UNIX runs on Sun and Hewlett-Packard series 700 workstations. The following operating systems are supported:

- Sun Sparc stations: SunOS 4.1.x and Solaris with OpenWindows 2.0 or later.
- HP 700 series workstations: HP-UX 9.0.1, Motif 1.2 or later.

The complete installation requires approximately 20 Mbytes of disk space.

1.2. IBM-PC Compatible

PLS for Windows runs on an IBM-PC (or compatible) with a 486 or Pentium running Windows 3.1x, Windows 95 or Windows NT. The PLS programs and data files require about 15 Mbytes of disk space. We strongly recommend a PC with at least 16 Mbytes of memory.
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2. User Guided Installation

PLS may be installed using the automatic installation procedures included with the software. The following sections describe the installation procedures for Sun/HP workstations and IBM PC compatibles.

2.1. Sun/Hewlett-Packard Workstations

Move to the PLS installation directory (a new directory may be created for this purpose). Use one of the following commands to read the installation archive:

- `tar xvf /dev/rst0` (tape)
- `tar xvf /dev/rmt/0mn` (DAT)
- `bar xvf /dev/rfd0` (multiple floppies)

The csh script "install_asyl" should be used to automatically install PLS:

```
./install_asyl
```

Follow the instructions in section 3.1. to configure the PLS execution environment. Please contact MINC France Hotline if you want to install PLS manually.

2.2. IBM-PC Compatible

If your PC is running Windows 3.1x, you must have the Win32s extension installed.

2.2.1. Microsoft Win32s installation

PLS needs the Win32s extension of Windows 3.1. If the PC where PLS will be installed is already capable of running Win32s applications, skip to the second step described in section 2.2.2.

Insert Microsoft Win32s installation disk 1 into the 3.5 inch drive.

Before starting the installation process, make sure that any other applications are closed and that all data is saved. Then select the "Run" command from the program manager’s “File” menu. Enter on the command line when requested:

```
a\setup
```

Follow the instructions given by the Microsoft Win32s installation program. It will automatically detect if Microsoft Win32s is already installed and up-to-date and if Windows 3.1 is correctly set up. The following errors/warnings may appear during installation:

**Microsoft Win32s requires Windows 3.1 running in Enhanced Mode.**

**Solution:** Restart windows in Enhanced Mode before attempting to install the Win32s components.

**Microsoft Win32s requires virtual memory.**

**Solution:** Use the Control Panel / 386 Enhanced icon and configure Windows using the Virtual Memory option.
Microsoft Win32s setup: SHARE.EXE is not loaded.

Solution: File-sharing control must be enabled. Run the "share.exe" program before starting Windows or add the following line to the "autoexec.bat" file:

\texttt{share}

The installation program will then restart Windows 3.1 in order to activate Win32s. If more details are needed about this installation, please contact MINC France Hot Line.

2.2.2. Acrobat Reader installation (Version 2.1)

The User’s Manual, delivered with the PLS software is in Adobe PDF format and may be read by Acrobat Reader. If Acrobat Reader is already installed on your system, you may skip this section.

It is preferable to install Acrobat Reader before the installation of PL Synthesizer. In order to install it, please insert disk 1 into the 3.5 inch drive.

To start the installation process:

\begin{itemize}
  \item If your PC is running Windows 3.1x or Windows NT, select the "Run" command from the program manager’s “File” menu.
  \item If your PC is running Windows 95, select the "Run" command from the "Start" menu.
\end{itemize}

Follow the instructions given by the installation program.

2.2.3. PLS installation

Insert PLS disk 1 into the 3.5 inch drive.

To start the installation process:

\begin{itemize}
  \item If your PC is running Windows 3.1x or Windows NT, select the "Run" command from the program manager’s “File” menu.
  \item If your PC is running Windows 95, select the "Run" command from the "Start" menu.
\end{itemize}

Enter on the command line when requested:

\texttt{a:\setup}

Follow the instructions given by the installation program. Enter the name of the PLS root directory when requested (e.g. \texttt{d:\pls}). During the automatic installation, the user is given the opportunity to configure the PLS system.
Figure 1: Icons on PC Windows after PLS installation

If the installation procedure has automatically updated AUTOEXEC.BAT, the PC needs only to be rebooted. Else, follow the instructions in section 3.2. to configure the PLS execution environment and then reboot the PC.
3. PLS Environment Definition

This section explains how to run PLS from any single user’s account.

3.1. Sun/Hewlett-Packard Workstations

For the following example, PLS has been installed in:

/usr/contrib/pls

This value should be modified on the installed system to reflect the real PLS installation directory.

Users append the following line to their ".cshrc" or ".login" or ".profile" file:

    alias xpls /usr/contrib/pls/bin/xpls
    alias tpls /usr/contrib/pls/bin/tpls

    xpls is used to start a graphical session of New-Wave PL Synthesizer.
    tpls is used to start a textual/batch session of New-Wave PL Synthesizer.

See the "Getting Started" part for details on running PLS in graphics mode.

3.2. IBM-PC Compatible

For the following example, PLS has been installed in:

d:\pls (This value should be modified on the installed system to reflect the real PLS installation directory.)

The installation procedure will have automatically set the variables ASYLDIR, ASYL_DUMP_DIR and FIN_LICENSE_PATH.

    set ASYLDIR=D:\pls
    set ASYL_DUMP_DIR=D:\pls\dump
    set FIN_LICENSE_PATH=D:\pls\etc

However, these values can be modified in the AUTOEXEC.BAT file.

Please refer to the "Getting Started" part for details on running PLS in graphics mode.
4. Licensing

4.1. IBM-PC Compatible

The PC version of the PLS software is protected by a hard-key and its corresponding authorization file, which are both delivered by MINC France. The delivered authorization codes must be placed into the %ASYLDIR%/hlp/pls.aut file, overwriting the existing copy.

4.1.1. Verilog License

Verilog front end is an OEM product from Fintronic US.

Verilog authorization codes, which are also delivered by MINC France, must be placed into the %FIN_LICENSE_PATH%/fintronc.key file. Please note, that FIN_LICENSE_PATH is an environment variable, which is automatically set up by the installation procedure and point to the %ASYLDIR%/etc directory (see also 3.2).

4.2. Sun/Hewlett-Packard Workstations

The Sun/Hewlett-Packard Workstation version of the PLS software is protected by the following licensing mechanisms:

- Targets and Languages License File (pls.aut).
- Flex License Manager (FlexLM), which requires an additional license file.

These license files are delivered by MINC France.

4.2.1. Targets and Languages License File (pls.aut)

The pls.aut file allows to lock the software on specific targets and languages. This file must be placed into the $ASYLDIR/hlp directory, overwriting the existing copy.

4.2.2. Flex License Manager Installation

The PLS product uses the industry standard Flex network license manager. The following sub-sections explain how this software is installed and used.

4.2.2.1. Demo licenses

The evaluation version of PLS does not require any special installation procedure for the Flex network license manager. FlexLM Demo codes must be placed into the license.dat file located in the $ASYLDIR/license directory, overwriting the existing copy.
4.2.2.2. Floating or Node Locked Licenses: Standard Installation

The standard location for Flex license manager software is /usr/local/flexlm.

Check the existence of the lmgrd in the /usr/local/flexlm/admin directory, which might be used by other softwares. If it already exists, then you have to check the version of the existing one. It must be 4.1 or higher. If the version you have is less than 4.1, then you have to execute a non standard installation (see 4.2.2.4.). In all other cases, please follow the following procedure:

1) The license.dat file installed in the $ASYLDIR/license directory must be removed.

2) Place the license.dat into the /usr/local/flexlm/licenses directory. The license file should be accessible by any user of PLS. This file may be appended to the existing license file if the Flex license manager is already running on your system.

3) Copy mincxld from the $ASYLDIR/license directory to the /usr/local/flexlm/daemons.

4) Check the existence of the lmgrd in the /usr/local/flexlm/admin directory, which might be used by other softwares. If it does not exist, then you have to copy lmgrd from the $ASYLDIR/license directory to /usr/local/flexlm/admin.

5) The license manager is normally started during the machine startup. This is performed by adding the following line to the /etc/rc.local file:

```
nohup /usr/local/flexlm/admin/lmgrd -c /usr/local/flexlm/license/license.dat > /usr/local/flexlm/admin/license.log
```

The nohup command is used to trap the SIGHUP signal and is required on some systems, and is safe to use on all systems for lmgrd (with the bourne shell only).

The license manager may be also be started manually using the same command at the shell prompt.

6) All users must set the environment variable LM_LICENSE_FILE to point to the installed license.dat.

```
setenv LM_LICENSE_FILE /usr/local/flexlm/license/license.dat
```

4.2.2.3. Floating or Node Locked Licenses: NON Standard Installation

The normal location for Flex license manager software is /usr/local/flexlm. If there is a need to install the software elsewhere (for example described in 4.2.2.3), the following procedure should be followed (in our example we supposed to launch FlexLM manager from $ASYLDIR/license directory)

1) Place the license.dat in the $ASYLDIR/license directory, overwriting the existing one. If you decide to place this file into another directory, then the license.dat must be removed from the $ASYLDIR/license directory. The license file should be accessible by any user of PLS.

2) Modify the DAEMON line in the license.dat to point to the mincxld executable. So it should be:

```
DAEMON $ASYLDIR/license/minxld
```

3) The license manager is normally started during the machine startup. This is performed by adding the following line to /etc/rc.local:

```
nohup $ASYLDIR/license/lmgrd -c $ASYLDIR/license/license.dat > $ASYLDIR/license/license.log
```

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The `nohup` command is used to trap the SIGHUP signal and is required on some systems, and is safe to use on all systems for `lmgrd` (with the `bourne` shell only).

The license manager may be also be started manually using the same command at the shell prompt.

5) All users must set the environment variable `LM_LICENSE_FILE` to point to the installed `license.dat`.

   `setenv LM_LICENSE_FILE $ASYLDIR/license/license.dat`

### 4.2.3. Verilog License

Verilog front end is an OEM product from Fintronic US.

Verilog authorization codes, which are also delivered by MINC France support, must be placed into `$ASYLDIR/license/fintronc.key` file.

### 4.2.4. In Case of Trouble

Here are some common problems and solutions.

In case of trouble with the licence manager you get a message like the following:

   **License Manager error:**
   **Checkout asyl+pls: <message>**

**Problem 1:** Program cannot find license file. For example:

   `no such feature exists`

**Solution:** Make sure that the environment variable `LM_LICENSE_FILE` points to the license file, or that the license file is in `/usr/local/flexlm/licenses/license.dat`.

**Problem 2:** Program cannot connect to license server. For example:

   `cannot connect to license server`

**Solution:** Make sure that the daemon is running; use the `lmstat` utility. Make sure that the server node is reachable by the node running the program; use the `ping` command.

**Problem 3:** Program reports inconsistent encryption code. For example:

   `encryption code in license file is inconsistent`

**Solution:** The license file is not valid. Make certain it is identical to the copy from MINC France. Every character must match, with the exceptions noted in the customization section.

**Problem 4:** Too many licenses in use. For example:

   `licensed number of users already reached`

**Solution:** Too many licenses are checked out for that program. Try again later, after another use of the program is complete.
**Problem 5:** Evaluation time has expired. For example:

*feature has expired*

Solution: A new *license.dat* file is needed for PLS. Please contact MINC France Hot Line to get a new one.
5. PLS Execution Errors

The following error messages may be displayed when running PLS. If the problem cannot be solved, please contact MINC France Hot Line.

Unable to access authorization file.
Check that the authorization file `pls.aut` located in `$ASYLDIR/hlp` is present and that authorization is correctly set.

Incorrect authorization file.
The encrypted authorization file located in `$ASYLDIR/hlp` is corrupt. Please contact a MINC France representative for help with this problem.

A stream of “Xt warning” messages appears whenever PLS is executed in graphics mode. (Workstations)
The system file `XKeysymDB` is not up-to-date. Please contact MINC France to get the updated one. The following command (which must be executed as the super-user) will copy this file and prevent the warning messages.

\[ cp \ XKeysymDB \ /usr/openwin/lib/XKeysymDB \]

This system cannot be run on this PC - Security key absent. (PC)
Verify that the security key is correctly plugged in, or remove other security keys. If the problem persists, use the "Key Control Utility" application in the PLS program group to verify the security key.

Your system will expire after \( n \) executions - Please contact MINC France. (PC)
The security key contains an internal counter used for controlling evaluation copies. This warning informs users of the impending expiration of the key.

Your system has expired - Please contact MINC France. (PC)
The security key contains an internal counter used for controlling evaluation copies. Please contact a MINC France representative to reset the counter value.

The authorization file is not for this Key (PC)
A specific authorization file must be used with the Hard-Key. Please contact a MINC France representative to get the correct authorization file.