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Intel@ Math Kernel Library, <http://www.intel.com/software/products/mkl>

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<http://www.cise.ufl.edu/research/sparse> . MA38 is available in the Harwell Subroutine Library. This version of UMFPACK includes a modified form of COLAMD Version 2.0, originally released on Jan. 31, 2000, also available at <http://www.cise.ufl.edu/research/sparse> . COLAMD V2.0 is also incorporated as a built-in function in MATLAB version 6.1, by The MathWorks, Inc. <http://www.mathworks.com> . COLAMD V1.0 appears as a column-preordering in SuperLU (SuperLU is available at <http://www.netlib.org> ). UMFPACK v4.0 is a built-in routine in MATLAB 6.5. UMFPACK v4.3 is a built-in routine in MATLAB 7.1.

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# Before You Begin UNIX and Linux Installation

Before starting the Advanced Design System (ADS) Installation on Unix or Linux platform, read the guidelines provided in the following sections.

## Check the System Requirements

Ensure that your hardware and software configuration meets the following minimum hardware and system requirements to install and/or run ADS.

**Note**  
Agilent recommends you to have more than the minimum configuration to effectively work with ADS.

### System Requirements

Advanced Design System 2011.01 - UNIX and Linux Installation

Requirement	Solaris (on SPARC)	Linux
32-bit Operating System (see "Operating Systems Details")	Solaris 10 05/08 Patch Bundle or the Solaris 10 05/08 (Update 5) release image with 138352-02 X11 6.6.2: fontconfig patch	Redhat RHEL WS 4.x, Redhat RHEL WS 5.x, Novell SUSE SLES 10
64-bit Operating System (see "Supported Features on 64-bit Operating Systems")	Solaris 10 with 64-bit support turned on Solaris 10 05/08 Patch Bundle or the Solaris 10 05/08 (Update 5) release image with 138352-02 X11 6.6.2: fontconfig patch	Redhat RHEL WS 4.x, Redhat RHEL WS 5.x, Novell SUSE SLES 10 (64-bit AMD Opteron and Intel EM64T processors)
Displays	High-resolution color only. (Super VGA, 1024x768, 15-inch monitor minimum)	
Processor	ADS is not supported on Intel Itanium-based workstations.	Intel Pentium® 4 or better, or AMD XP 3000 or better.
RAM	1 GB RAM recommended minimum. Additional RAM will enable you to simulate larger designs. However, on a 32-bit operating system, its processes cannot use more than 2 GB regardless of the maximum addressable memory available on your system.	
Swap Space	512 MB recommended minimum, increased swap space may be required for larger designs.	
Web Browser	ADS documentation is HTML-based and displayed via a web browser. Netscape 4.5 or higher is required. Mozilla Firefox 5.5 or better are the recommended web browsers. To view the pdf files, Acrobat Reader 5.0 or higher is recommended. The minimum recommended version is Sun Java Plug-in 1.3 for searchability. To use the documentation search engine on 64-bit Novell SUSE SLES 10 systems, 32-bit Mozilla from SuSe (mozilla-1.7.8-5.13.i586.rpm) and the 32-bit JRE 1.6.9_3 from Sun (jre-6u3-linux-i586.rpm) is required.	
Hard Disk Space	1.3 GB for a minimum installation and 4.5 GB for complete installation.	
Security Device	ADS software licenses are secured to a network server using FLEXlm server software <i>or</i> locked to an individual computer host ID number.	ADS software licenses are secured to a network server using FLEXlm server software <i>or</i> locked to an external device (FLEXid hardware security key) attached to the USB port (only applies to 32-bit code) or locked to a LAN ethernet card.
Supported Printers	ADS uses Xprinter for all PostScript®, HPGL2 and PCL printing. For a complete list of output devices supported with Xprinter, consult the text file called <i>filename_map.txt</i> , located in the directory path: <i>/xprinter/ppds</i> . For instructions on UNIX and Linux printing and plotting, refer to "Printing and Plotting".	
Internet	High speed internet access required to download ADS install files. You can also check latest documentation and release updates at Agilent EEsof website.	
Window Manager	Motif™ V.1.1/1.2 Open Windows 3.0, or CDE	KDE or GNOME
Compiler (required only for model development) (see "User Complied Models")	C+\+ and CC: SunStudio 11	C++: gcc Version 4.4.2
HDL simulator (required only for HDL cosimulation)	These HDL simulators are the latest versions supported on ADS: - Mentor Graphics ModelSim SE Plus 6.3a (both 32-bit and 64-bit mode) - Cadence NCSim IUS6.2 for both 64-bit and 32-bit simulation (Only on ADS supported Linux and Sun). - Cadence VerilogXL IUS6.2 for only 32-bit simulation (Only on ADS supported Linux and Sun).	



<b>Operating Systems Details</b>	
<b>Solaris Details</b>	Solaris operating systems are not supported on Intel-compatible chips. Solaris requires the following patches (exact patch numbers may change as new patches are issued): You can find patches at <a href="http://sunsolve.sun.com/pub-cgi/show.pl?target=patchpage">http://sunsolve.sun.com/pub-cgi/show.pl?target=patchpage</a>
<i>Solaris 10</i>	119689-06 (libc.so.1 Patch) 138352-02 ( X11 6.6.2: fontconfig patch ) 117461-08 (ld patch) 118822-27 (kernel patch) 118707-04 (Expert3D IFB Graphics Patch) 118712-08 (Sun XVR-100 Graphics Accelerator Patch) 118711-02 (M64 Graphics Patch) 118708-11 (Sun XVR-1200 Graphics Accelerator Patch)
<b>Red Hat Linux Details</b>	For installation information, see the <i>Red Hat Linux Installation Guide</i> at <a href="http://www.redhat.com/docs/manuals/linux/">http://www.redhat.com/docs/manuals/linux/</a> . The following is the minimum RPM and RPM version recommendation based on RHEL 4 Update 1 and Redhat 5 — the required RPM version for your system may vary:
Linux RHEL 4.x 32-bit	kernel-2.6.9-11.EL glibc-2.3.4-2.9 elfutils-0.91.3 elfutils-libelf-0.91.3 openmotif-2.2.x...i386 libpng-1.2.X .i386 redhat-lsb-3.0
Linux RHEL 4.x (x86_64)	kernel-2.6.9-11.EL glibc-2.3.4-2.9 elfutils-0.91.3 elfutils-libelf-0.91.3 openmotif-2.2.x...x86_64 openmotif-2.2.x...i386 libpng-1.2.X...x86_64 libpng-1.2.X .i386 redhat-lsb-3.0
Linux Redhat 5.x 32-bit	kernel-2.6.18.X glibc-2.5-49 elfutils-0.137-3 elfutils-libelf-0.137-3 openmotif22-2.2.3-18...i386 libpng-libpng-1.2.10...i386 redhat-lsb-3.1-12
Linux Redhat 5.x (x86_64)	kernel-2.6.18.X glibc-2.5-49 elfutils-0.137-3 elfutils-libelf-0.137-3 openmotif22-2.2.3-18...x86_64 openmotif22-2.2.3-18...i386 libpng-libpng-1.2.10...x86_64 libpng-libpng-1.2.10...i386 redhat-lsb-3.1-12
<b>Novell Linux Details</b>	Agilent EEsof recommends the following patches for Novell Linux systems:
<i>Linux SUSE SLES 10 (32Bit or x86_64)</i>	All base errata in SLES 10 SP3 including the rpm lsb-3.1.X
<i>Linux SUSE SLES 9 (32Bit or x86_64)</i>	All base errata in SLES 9 SP4 plus the rpm lsb-3.0.X

## Solaris Window Style Manager

On Solaris, the Window Style Manager may set transient dialogs (modeless dialogs) so that they do not remain on top when another window is selected. For example, if you open

a *Measure* window, then select a *Layout* window, the *Measure* window may be covered by the *Layout* window. To change this behavior, perform the following steps:

1. Open desktop Controls.
2. Open Window Style Manager.
3. Remove selection from the **All Primary Windows on Top** option.
4. Restart Window Style Manager.
5. Start ADS.

## User Compiled Models

For dynamic User Compiled Models (UCMs), recompilation is required only for platforms where the compiler has been upgraded. For example, if you are doing 32-bit models, going from ADS 2009 Update 1 to ADS2011.01, the compilers have been upgraded for Sun and Linux so recompilation is required.

For static UCMs, recompilation is required for every upgrade.

The following table shows the required compilers for the current release and back to ADS 2006A:

ADS Release	Solaris	HP-UX	RH Linux	Windows
2011	C++: CC: SunStudio 12	HP-UX is no longer supported	C++: gcc Version 4.4.2	Visual Studio 2008
2009	C++: CC: SunStudio 12	HP-UX is no longer supported	C++: gcc Version 4.1.1	
2008	C++: CC: SunStudio 12	HP-UX is no longer supported	C++: gcc Version 4.1.1	
2006A and 2006 Update	C++ and CC: Sun C+\ (Sun Studio 10)	C++: aCC HP ANSI C++ B3910B A.03.63 C: cc or B3899BA B.11.11.12 HP C/ANSI C Developer's Bundle	C++: gcc Version 3.3.2	

## Checking the Operating System Version

To determine the version that you are currently running, at the system prompt type:

```
uname -r (All UNIX and Linux platforms)
```

## Obtain Licenses

Though you can install all ADS features, but you can use only those features that have valid licenses. To obtain a license, you can submit an online request at License Request Form. The licenses are then emailed to you in a license file, file with extension `.lic`, for example `license.lic`. You can also tie your licenses to a hardware key or dongle. To obtain a valid hardware key, contact Agilent EEsof Business Support.

For information on how to setup your ADS license using ADS License Setup Wizard, see License Setup through Wizard, otherwise see *ADS License Setup - Unix and Linux (install)*.

## Linux Systems

If you are using your LAN card's Ethernet ID to run the FLEXnet licensing system on your PC and you have more than one network card (such as a permanent LAN card and a removable WLAN card) inform your Agilent sales representative to assist you in selecting the correct ID when you request licenses. Use the following command to read the ID, and copy the address returned for *Ethernet HWAddr*. This *Ethernet HWAddr* ID must be mentioned while you submitting your License Request Form.

```
/sbin/ifconfig
```

## Back Up Data from Previous Installations

You are advised to backup your important data and designs before uninstalling any ADS version.

## Check Available Memory

You need a minimum of 512 MB of memory installed on your system. More memory results in better overall system performance for some design work.

To check the memory available in you system, enter the following command at a command prompt:

```
/bin/dmesg
```

Check for the *Memory* line which includes the amount of available memory.

## Check Available Disk Space

The amount of disk space required depends on the ADS features that you want to install. Approximately 4.5 GB of disk space is required to install all ADS features. To check the available disk space, enter the following command at command prompt for the workstation you are using:

Workstation	Command
Red Hat Linux	df -k
Solaris	df -k

**Note**  
ADS requires at least 20-30 MB of free disk space under /tmp and var/tmp to work properly.

## Checking Swap Space

The minimum swap space required is 300 MB. Very large designs, and designs with many hierarchical levels, may require more swap space.

To check the swap space available on your system, enter one of the following:

Workstation	Command
Red Hat Linux	/usr/bin/free -t
Solaris	/usr/sbin/swap -s

## Defining an Install Location

Ensure that you must have permissions to write to the disk drive where you want to install ADS. Also, while defining the install location for ADS:

- You do not need to install as *root*, although you may need root privileges in some cases.
- If installed as root, all ADS files should have at least read permission for all users.

You can re-run the installation program to install ADS features you chose not to install the first time.

For details on install steps and options, refer to *Installing Advanced Design System on UNIX and Linux* (install).

**Note**  
The installation program does not support cross-platform installations. Use the correct platform-specific installation file for your system.

## Dataset Types

For existing ADS users, due to a change that removes the former limitation on dataset file sizes, datasets created by ADS 2008 software (and subsequent releases) are not readable by earlier versions of the ADS software. However, two new command-line programs are available that can identify (and if necessary to change) the type of a given dataset.

### **dstype**

The *dstype* program identifies the type of one or more specified datasets.

Usage:

`dstype`

This program displays the type of the specified dataset filename(s). The filenames must include the *.ds* dataset file extension. UNIX wildcards may be used in dataset filenames. More than one filename can be specified on the command-line. Example:

```
$ dstype test.ds hbtest.ds junkfile.ds
test.ds: Agilent EEsof dataset, Release 2008 format
hbtest.ds: Agilent EEsof dataset, Release 2006A format
junkfile.ds: unknown file type (not a valid dataset)
```

The types are referred to as *Release 2006A format* and *Release 2008 format*. *Release 2006A format* applies to a dataset produced by any version of ADS before 2008. The

*Release 2008 format* applies to a dataset produced by ADS 2008 or later versions.

## dsconvert

The *dsconvert* program performs type-conversion between the two dataset types.

Usage:

```
dsconvert [-f] [-d <2008_alloc_chunks>]
```

Where *<from\_dataset>* and *<to\_dataset>* are the source and destination dataset filenames, respectively, including the *.ds* extension. Only one file can be converted at a time; do not use wildcards with the *dsconvert* program.

To prevent accidental overwriting, the destination dataset must not exist, unless the *-f* option is given. The *-f* option forces the overwrite/deletion of an existing destination dataset.

Conversion can be in either direction:

- If *<from\_dataset>* is in *Release 2008 format*, the program converts it to the *Release 2006A format*.
- If *<from\_dataset>* is in *Release 2006A format*, the program converts it to the *Release 2008 format*. (However, it is not actually necessary to perform this type of conversion, as ADS 2008 is capable of reading datasets created by earlier versions.)

## Supported Features on 64-bit Operating Systems

The following simulators are supported when ADS is installed on a 64-bit Solaris or Linux operating system:

- 64-bit Analog/RF
- 64-bit Momentum
- 64-bit Ptolemy

If you want to run these simulators in 32-bit mode or you want to use features that are not available on a 64-bit operating system, you can launch ADS in 32-bit mode. See *Using 32-bit Simulators on a 64-bit Operating System* (install).

The following tables provide details about the supported features when ADS is installed on a 64-bit operating system:

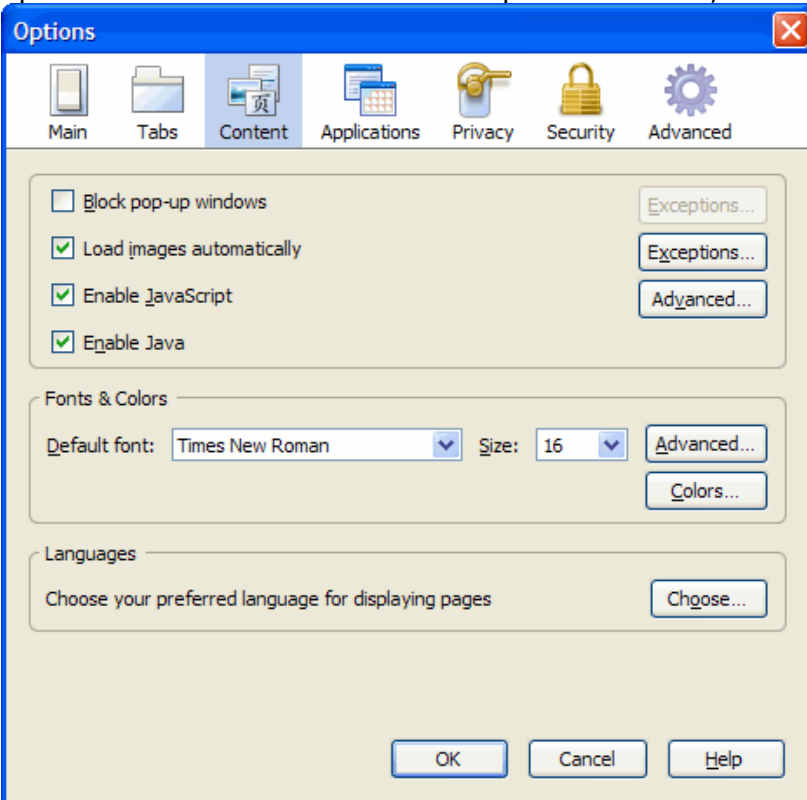
<b>Functionality</b>	<b>Solaris64</b>	<b>Linux RedHat64</b>
Large Schematics, Netlists, Layouts	32-bit mode	32-bit mode
Data Display / Large Datasets	native 64-bit	native 64-bit
3rd Party: DRC, Translators	32-bit mode	32-bit mode
Utilities (LineCalc, Smith, DesignGuides)	32-bit mode	32-bit mode
Connection Manager Client	32-bit mode	32-bit mode
Connection Manager Server	n/a	n/a
Legacy Instrument Server	n/a	n/a
Dynamic Link to Cadence	32-bit mode	32-bit mode
DSP Filter Tool	32-bit mode	32-bit mode
Data Display AEL Expressions based on ADS Ptolemy (evm_wlan_dsss_cck_pbcc(), evm_wlan_ofdm(), spectrum_analyzer())	32-bit mode	32-bit mode
FlexLM License Server	32-bit mode	32-bit mode
<b>Circuit Simulation</b>	<b>Solaris64</b>	<b>Linux RedHat64</b>
Circuit Simulation Engine, Local Simulation (assume no external cosims or linked executables)	native 64-bit	native 64-bit
Circuit Simulation Engine, Remote Simulation (assume no external cosims or linked executables)	native 64-bit	native 64-bit
Verilog-A	all native 64-bit only, or all 32-bit in compatibility mode, no 64/32-bit mixture	native 64-bit only
User-Compiled Models, SimKit, MINT	all native 64-bit only, or all 32-bit in compatibility mode, no 64/32-bit mixture	native 64-bit only
LSF	n/a	n/a
A/RF Modulated-Source-DSP-Based (assume no 3rd party cosims)	native 64-bit	native 64-bit
A/RF Wireless Test Benches (assume no 3rd party cosims)	native 64-bit	native 64-bit
<b>System Simulation</b>	<b>Solaris64</b>	<b>Linux RedHat64</b>
Ptolemy Engine (assume no user-compiled models)	native 64-bit	native 64-bit
Ptolemy Remote Simulation	native 64-bit	native 64-bit
Ptolemy LSF	native 64-bit	native 64-bit
Ptolemy, User-Compiled C	all native 64-bit only, or all 32-bit in compatibility mode, no 64/32-bit mixture	all native 64-bit only, or all 32-bit in compatibility mode, no 64/32-bit mixture
Matlab64 Cosim	32-bit mode	32-bit mode
HDL Cosim (NCSim and ModelSim)	native 64-bit	native 64-bit
HDL Cosim (VerilogXL)	32-bit mode	32-bit mode
89601 VSA Cosim	n/a	n/a
Ptolemy, Connection Manager Client	32-bit mode	n/a
Ptolemy, Connection Manager Instruments components (except for CM_LA_167xx_Source and VSA 89600 components)	32-bit mode	32-bit mode
Ptolemy, Legacy Instrument Links (non-connection manager)	32-bit mode	32-bit mode

Note: All Connection Manager Client and Instrument components require that the Connection Manager Server be installed on a remote Windows 32-bit XP or 2000 machine.

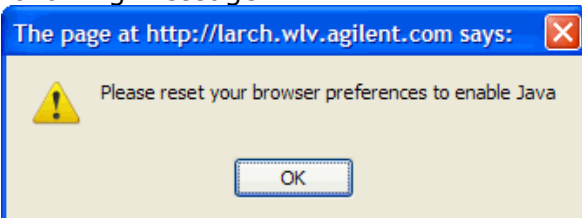
Momentum Simulation	Solaris64	Linux RedHat64
Momentum Engine, Local	native 64-bit	native 64-bit
Momentum Engine, Remote Simulation	native 64-bit	native 64-bit
Momentum Visualization (and 3D Layout Viewer)	32-bit mode	32-bit mode

## Verifying Java (JRE) Installation

Use this two-step test to ensure the Java Runtime Environment is enabled and configured correctly in your browser to use the search functionality provided in the documentation. As a first step, check your browser preferences (**Edit > Preferences**), to verify that the options to enable Java and JavaScript are selected, as shown in the following image.



Even if this preference is set correctly, displaying a documentation page may display the following message.



This confirms that the Java Runtime Environment is not configured correctly. To verify the Java Runtime Environment is configured correctly, go to <http://www.java.com>, click the "Do I have Java?" link, and follow the online instructions. On Linux systems you may need Admin privileges to configure plugins.

# Installing Advanced Design System on UNIX and Linux

Before starting the ADS installation on a unix or linux platform, see *Before You Begin UNIX and Linux Installation* (install) for system requirements and other necessary details.

## Note

- The installation program does not support cross-platform installations.
- If you installed an Early Access version of ADS, you should uninstall it before installing this release.

To install ADS on UNIX or Linux systems:

1. Log onto the system using an account that has permissions to write to the disk to which you want to install.
2. Download ADS install file, `ads2011_01_rXXX_linux_x86.tar`, from the [Agilent EEsof EDA Web](#) and untar the using the command below:  

```
tar xf ads2011_01_rXXX_linux_x86.tar
```
3. Change directory to the path of the extracted tar files, for example `temp`.  

```
cd /temp
```
4. Start the installation program using the following command:  

```
./SETUP.SH
```
5. At the *Introduction* window, click **Next** to read the License Agreement. This is a usage agreement and is not related to the licenses required to run the software.
6. At the *License Agreement* window, after reviewing the agreement, choose:
  - *I accept the terms of the License Agreement*, then click **Next** to continue with the setup.
  - *I do NOT accept the terms of the License Agreement* to end the setup program.
7. At the *Choose Install Set* window, choose
  - **Complete** to install the basic ADS software, design guides, examples, and documentation. If you choose *Complete*, you can skip the next step.
  - **Custom** to choose which ADS features you want to install. For a list of Custom Installation features, refer to [Installation Features](#).

## Note

You can install all features supported by ADS but you can run only those features of ADS for which you have a valid license.

8. For a *Custom* installation, the next window lets you choose the features you want to install. Click an feature name to see a description. Select the features you wish to install and click **Next** to continue.

## Note

You must choose to install the *ADS programs and tools* option since it is the basic ADS software. You can always re-run the installation program to install other features.

9. At the *Choose Install Folder* window, enter the full path to the directory where you would like ADS software to be installed. If you specify a directory that does not already exist, the installation program will create it for you. The default directory is `/usr/local/ADS2011.01`. Choose:
  - **Next** to install to the default destination or
  - Enter the full path or click **Choose** to browse to a different destination directory then click **Next** to install to the specified folder.
10. At the *Pre-Installation Summary*, the installation directory you have selected is shown, along with the available disk space on the disk partition that contains this directory. If you want to keep the installation directory shown, click **Install**. If you want to change the installation directory, click **Previous**.



11. The *Installing Advanced Design System 2011.01* window appears. When installation is finished, the *Install Complete* window appears. Note the *Host ID* (aka MAC Address or License ID) then click **Done** to close the installation program.
12. Configure user accounts. See [Configuring User Accounts](#).
13. Use the FLEXnet security licenses from Agilent EEsof to create a *license.lic* file with the correct SERVER and VENDOR line configurations. See *Setting Up Licenses* (install).
14. Place the *license.lic* file in the licenses sub-directory of your ADS installation directory and start FLEXnet to enable your licenses. See *Setting Up Licenses* (install).
15. Launch ADS. See *Running Advanced Design System* (install).  
If you will be using license bundles, select a bundle using the Agilent License Preference tool prior to running ADS. See *Using the Agilent License Preference Tool* (install).

## Installation Features

A complete ADS installation installs the following features (including FLEXnet files) and requires approximately 4.5 GB of disk space. For a custom installation, you can choose which features you want to install.

Feature	Description	Size
ADS programs and tools	This is the basic ADS software, minus the following features	1.8 GB
DesignGuides and Application Guides	Special interactive tool kits and handbooks for various design types	630 MB
Manuals & Help	All documentation. If this option is not selected, ADS documentation will not be available	700 MB
Examples	All examples for Advanced Design System	1.3 GB

## Configuring User Accounts

Configure the user accounts that will run ADS as follows:

### C Shell

Add the following at the end of *\$HOME/.cshrc*:

```
setenv HPEESOF_DIR <install_directory>

setenv ADS_LICENSE_FILE <path_to_license_file>
Default: $HPEESOF_DIR/licenses/license.lic

set path = ( . $HPEESOF_DIR/bin $path )
```

### Bourne or Korn Shell

Add the following at the end of *\$HOME/.profile*:

```
HPEESOF_DIR=<install_directory>

ADS_LICENSE_FILE=_<path_to_license_file>
Default: $HPEESOF_DIR/licenses/license.lic
```

```
PATH=.:$HPEESOF_DIR/bin:$PATH
```

```
export HPEESOF_DIR ADS_LICENSE_FILE PATH
```

#### Note

If you are running Common Desktop Environment (CDE) or HP VUE, your user account may be using `$HOME/.dtprofile` or `$HOME/.vueprofile` respectively to set up your user account instead of `.cshrc` or `.profile`. The `.dtprofile` and `.vueprofile` files contain a line that can be uncommented to activate the use of `.cshrc` or `.profile`. Check with your system administrator or CDE or VUE documentation for details.

Once the user accounts are configured, each user should log in and verify that the new environment variables are set. Type the **env** command and check that `HPEESOF_DIR` and `ADS_LICENSE_FILE` are set and that `PATH` contains a path to the ADS *bin* subdirectory.

## Setting the Display

If you plan to run ADS from a remote computer and you want the display to appear on your local machine, you will need to set the `DISPLAY` environment variable:

```
setenv DISPLAY <my_hostname>: 0.0 (C-Shell)
```

```
DISPLAY = <my_hostname>: 0.0 _(Korn Shell, Bourne Shell)
```

```
export DISPLAY
```

For a Sun Ray file server and diskless terminals using Solaris 8, you will need to set the `DISPLAY` environment variable:

```
setenv DISPLAY <servername>$Display (C-Shell)
```

```
set DISPLAY = <servername>$Display (Korn Shell, Bourne Shell)
```

```
export DISPLAY
```

For details on using the Sun Ray appliance, refer to the Sun website at:

<http://www.sun.com/sunray/index.html>

## Installing to Multiple Disk Partitions or Directories

If you do not have a single partition large enough to hold the entire ADS installation, you can spread the installation across partitions using symbolic or *soft* links. The symbolic links are created before installation to redirect files to other partitions.

For example, suppose you want to install ADS with most of the software installed in `/opt/apps/eesof`, but you want the example workspaces to be installed to `/disk2` due to lack of disk space in the `/opt` partition. Before starting the installation program you would do the following:

1. Create the main installation directory:

```
cd /opt/apps
mkdir eesof
```

2. Create the directory that will hold the example files on `/ disk2`:

```
cd /disk2
mkdir ads_examples
```

3. Create a link named *examples* in the main installation directory that points to the */disk2/ads\_examples* directory:

```
cd /opt/apps/eesof
ln -s /disk2/ads_examples examples
```
4. Begin the installation process. When the examples are installed, the example workspaces will follow the */opt/apps/eesof/examples* link to */disk2/ads\_examples*.

Following is a list of the *larger* directory (not the complete list) names for ADS, along with approximate sizes. Any of these directories can be re-directed to another disk partition as shown above for the examples directory. The sizes shown are for a complete installation.

Directory Name	Approximate Size
doc	900 MB
examples	1.3 GB
DesignGuides	630 MB

## Using Multiple ADS Versions

Use the following instructions to maintain and run more than one version of ADS (such as version 2009Update1 and 2011.01). Keep a separate *\$HOME* directory for each version of ADS to help in structuring all the files and prevent problems that may arise if the configuration files are shared between multiple installations. The *\$HOME* directory is where all your workspaces are kept.

### Setting the HOME Environment Variable

You need to specify the variable *\$HOME* separately for each version of ADS that you want to run. You can set up two directories from which you can run different scripts to launch the version of ADS you want.

Below are example scripts. You can customize them as per your requirements.

#### Script for ADS 2011.01

```
#!/bin/ksh
# Script for starting ADS 2011.01 on UNIX and Linux systems.
cd /users/jdoe/ads2011.01
HOME=/users/jdoe/ads2011.01
HPEESOF_DIR=/utils/eesof/ads2011.01
PATH=$HPEESOF_DIR/bin:$PATH
export HOME HPEESOF_DIR PATH
ads
```

#### Script for ADS 2009 Update 1

```
#!/bin/ksh
# Script for starting ADS 2009 Update 1 on UNIX and Linux systems.
cd /users/jdoe/ads2009u1
```

```
HOME=/users/jdoe/ads2009u1
HPEESOF_DIR=/utils/eesof/ads2009u1
PATH=$HPEESOF_DIR/bin:$PATH
export HOME HPEESOF_DIR PATH
ads
```

## Installing Connection Manager

For details on Installing Connection Manager, see *Installing Connection Manager Server for UNIX and Linux* (install)

# Before Setting Up Licenses - Unix or Linux

## Obtaining Host Id/Hardware Key

Host Id (License ID) is the unique machine ID of the license server machine running Solaris. On Linux, it is either the unique machine ID of the license server machine or the LAN card's Ethernet ID. You can obtain the Host Id (Ethernet Address / License Id) by using the below command (as per your operating system):

Operating System	Command
Red Hat Linux & Suse	/sbin/ifconfig -a eth0
Solaris	/sbin/ifconfig -a

### Notes

1. The 12-digit Host Id / Physical Address should be used without dashes, for example, **000805E1A8DF**.
2. This example applies to LAN card users. Wireless Network Card users should locate their network card in the text file and use that Physical Address.
3. To obtain Host Id of a Solaris machine, you must have the administrator permissions.

## Obtaining the ADS License File

You must have license file (file with extension .lic) before starting ADS license setup. If you have not received the same, you can place your ADS license request for:

- New Sale License Request
- New Release License Request
- Renew Expired License
- Early Access License Request
- Change / Transfer Licenses
- Evaluation License / Token Redemption / Renewal Request
- Temporary / Provisional License Request

### Evaluation License

If your request for ADS evaluation license is approved, you will receive a license file (of ADS license version 2.9) as an attachment through e-mail. Save this license file on your computer.

[Click here](#) to order ADS evaluation / trial version.

### Purchased License

If you purchase the ADS license, you will receive an e-mail containing an entitlement certificate. Follow the instructions in e-mail which directs you to the Agilent Software Manager (ASM) to redeem the certificate for a license file. The license file will be sent through e-mail. You can also download the license file from the Agilent website. Save the license file on your computer.

## License Types

ADS supports the following license types on Unix / Linux machines:

1. **Node Locked Counted:** This license type is used for accessing ADS on current machine. For example:

```
SERVER unknown 81AAAAAA
VENDOR agileesofd
INCREMENT ads_datadisplay agileesofd 2.7 08-nov-2007 1 \
VENDOR_STRING="81AAAAAA : DXNLFPQ WZBCLQ2 AUJXJ2E IEKCKLI \
WFYQNVM DNJU1YM LHYKAQC OM" HOSTID=81aaaaaa START=11-nov-2007 \
SIGN="0169 4457 1B00 5266 852D 7813 5FB6 F38F 941A 1D0F E300 \
F868 5245 2627 CF7B 03B9 037F 9F0F 6BAE 32F6 321C"
INCREMENT ads_layout agileesofd 2.7 08-nov-2007 1 \
VENDOR_STRING="81AAAAAA : KSGSOTJ D1JYAXW BOCLRMW 2YNB2HN \
GFVU2LG FQ1AQPJ UGW" HOSTID=81aaaaaa START=11-nov-2007 \
SIGN="0115 CEDE 58A8 A734 FF5C 8AC8 A3AC DAE6 FD7E E9D2 C002 \
EB4B 0FF8 884C 61BE 84D7 AB0F A3E2 47EA EC43 A5E6"
```

**Floating:** This license type is used to run license server to cater the licences to the remote machines. For example:

```
SERVER unknown 77542052
VENDOR agileesofd
INCREMENT ads_datadisplay agileesofd 2.7 08-nov-2007 1 \
VENDOR_STRING="2002002002 : DXNLFPQ WZBCLQ2 AUJXJ2E IEKCKLI
WFYQNVM DNJU1YM LHYKAQC OM" START=11-may-2007 SIGN="03CC 8B82 \
5582 2A7F 7A5D B54F 05C8 ED12 3789 AFD6 DB00 D838 8120 E013 \
DF09 F741 CD95 4240 7B56 C012 822E"
```

# ADS License Setup - Unix and Linux

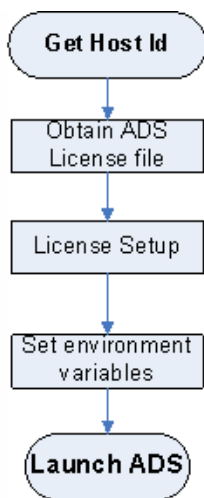
After installing ADS, you need to setup your ADS license before you can run ADS. This section provides license setup information for ADS on a Unix/Linux based PC.

## Note

The **ADS License Setup Wizard** starts automatically once ADS is installed successfully. If you have already received your license file (file with extension `.lic`), then you can also proceed with the license setup using License Setup wizard. For more details on setting up license through wizard, see **License Setup through Wizard**.

## License Installation Overview

The following flowchart illustrates the steps that help you complete the ADS license setup (without using ADS License Setup Wizard).



## Get Host Id

To obtain the host id of your machine see *Obtain Host Id* (instalpc).

## Installing the FLEXid Driver on Linux

Complete the following steps to install the latest FLEXid driver needed to license ADS. You need to do this only if you wish to lock your licenses to a hardware key. Be aware that to install dongle drivers on Linux, you must be root or have "sudo" privileges. Acreso recommends that you install the FLEXid System Driver with their installer.

To install the Acreso FLEXid Driver:

1. If you have the hardware key connected to the machine, unplug it.
2. Locate the downloaded ADS installation tar file and untarred installation image.
3. Use the package manager utility, `rpm`, to install the driver:  
`rpm -i aksusbd-redhat-1.8.1-3.i386.rpm`
4. Connect the hardware key to the machine.
5. Confirm that the key is working properly. To do this, run a utility from the installation directory. If you installed ADS in `/hfs/d1/ads2011_01`, then the command would be:

```
> cd /hfs/d1/ads2011_01/EEsof_License_Tools/ e.g.
/hfs/d1/ads2011_01/EEsof_License_Tools/linux_x86
```

```
> lmutil lmhostid -flexid
lmutil - Copyright (c) 1989-2008 Acresto Software Inc. All Rights Reserved.
The FLEXnet host ID of this machine is "FLEXID=9-a8675309"
```

For additional information, see the `FLEXnet_ID_Dongle_Drivers.pdf` file located in the `UNIX/dongle_sup` directory. This directory also contains the files needed to install a USB hardware key. For the most up-to-date files, contact your hardware key vendor.

For information about linking your LAN card's Ethernet ID to your ADS licenses, see *Before You Begin UNIX and Linux Installation* (install).

## Installing a Hardware Key on Linux

If you are using a hardware key for ADS license, run FLEXnet to install the FLEXid hardware key (also called a dongle) on a parallel or USB port of your computer. In a node-locked environment, hardware key is installed on the local machine. In a floating license environment, it is only required on the server machine.

### Notes

1. Before installing the hardware key, note the hardware key ID number. If you have not already received your security licenses from Agilent EEsof, you will need to provide this number for your License Request Form, as explained in the section, *License Types* (instalpc).
2. ADS 2011.01 installs version 11.9.0.0 of FLEXnet. Make sure you use the latest version of the FLEXnet software, drivers, and hardware key as needed on all ADS systems and license servers.

## Obtain License File

You must have a valid license file to start the license setup. [Click here](#) to order ADS evaluation / trial version. Once your license request is approved, license file is mailed as an attachment to registered email id.

You can also contact Agilent EEsof business support for license file.

## License Setup

The following section provide instructions to install ADS license. You should have installed ADS before you complete these steps. For details on installing ADS on a PC running Windows, refer to *Installing Advanced Design System* (instalpc).

### Notes

1. Use the following information to update all existing license servers with the latest version of the FLEXnet software (for example, *lmgd* and *lmutil*). The software is installed with ADS 2011.01. Using older versions may cause license-encryption errors, invalid *hostid* results, and unsupported feature errors.
2. Verify that all multiple and redundant servers are updated including any license administration scripts in use. Run *lmutil* from the `$HPEESOF_DIR\EEsof_License_Tools` for information to help modify the scripts.
3. Restart the license server.

## Place License File



A copy of the *license.lic* file must be placed on all SERVER machine(s) listed in the *license.lic* file.

## License Placement Guidelines

- The recommended location for the *license.lic* file is:  
`$HPEESOF_DIR/EEsof_License_Tools/linux_x86_xx/licenses/license.lic`
- You might need root permission to copy the *license.lic* file into the ADS installation directory if ADS was installed by a user logged in as root.
- You can choose to locate the *license.lic* file someplace else on the SERVER machine(s). If you choose to do this, make sure that ADS users properly set `ADS_LICENSE_FILE`.
- Make sure that the *license.lic* file has at least read permission for all users:  
`cd $HPEESOF_DIR/EEsof_License_Tools/linux_x86_xx/licenses`  
`chmod 555 license.lic`  
This command gives you read/executable permissions only.
- Place a copy of the `$HPEESOF_DIR/EEsof_License_Tools/linux_x86_xx/licenses/license` directory on all SERVER machines or custom install the FLEXnet license server on each machine.

## Edit the License File

Edit your *license.lic* file to correct the SERVER line and add information to the VENDOR line. Refer to *SERVER Line Guidelines (install)* and *VENDOR Line Guidelines (install)* for details. You can use the Agilent License Information Tool to check your environment variable settings, display your *license.lic* file, and show your license and server status. For details, refer to *Using the Agilent License Information Tool (install)*.

### Note

Each line in the *license.lic* file must be a single continuous line with each field separated by a single space. You may line wrap lines using the backslash ('\') character, but be very careful not to add a space after the backslash. Otherwise, you can remove the backslash and make each INCREMENT line one continuous line.  
In the license file, # can be used to comment out the incremental codewords.

## SERVER Line Format

The SERVER line, by default, has the following format:

```
SERVER hostname hostid [port]
```

Where:

- *hostname* is the network name of the machine whose hostid appears in field 3 of the SERVER line. Use one of the following commands to read the hostname for your system:

Operating System	Command
Red Hat Linux	/bin/hostname
Solaris	/bin/hostname

- *hostid* (License ID) is the unique machine ID of the license server machine running

Solaris. On Linux, it is either the unique machine ID of the license server machine or the LAN card's Ethernet ID. Use one of the following commands to read the `hostid` for your system:

Operating System	Command
Red Hat Linux	<code>/sbin/ifconfig</code>
Solaris	<code>/bin/hostid</code>

To obtain the `hostid` when ADS is not installed on the system:

Operating System	Command
Red Hat Linux	<code>/sbin/ifconfig -a eth0</code>
Solaris	<code>netstat -p grep (hostname)</code>



#### Note

The evaluation form accepts these addresses as one continuous 12-digit number, without the colons.

- `port` is an optional entry naming the TCP/IP port number that the license server will listen at for license requests. An example port number is 27000.

## SERVER Line Guidelines

- Your license file should contain an odd number of SERVER lines; for example, 1 or 3. If you have 3 SERVER lines, the first SERVER is the primary license server and the other two are backup servers. All three SERVER lines must use the same `port` number.
- You may only change the `hostname` and the optional `port` number fields.
- Adding or removing SERVER lines requires a new `license.lic` file.
- By default, Agilent EEsof sets `hostname` to unknown. The SERVER line does not contain a port address. FLEXnet software assigns a port address in the range of 27000 to 27009. The examples in this documentation use a port address of 27000, but your license file may differ. If you do not want to use the port address assigned by FLEXnet, specify any other unused port number for your network.



#### Note

Enter a specific port address on the SERVER line for improved license check-out performance. You may enter a port address outside the range of 27000 to 27009, as long as the address is not used elsewhere. Also, set the environment variable `ADS_LICENSE_FILE` as described in [Place License File](#).

- If the `hostid` is wrong, or changes for some reason, you will need to request a new `license.lic` file from Agilent EEsof.

Here are examples of properly configured SERVER lines:

```
SERVER joshua 2072EFE45 (default - FLEXnet assigns port address)
```

```
SERVER isaiah 20472A3D3 27000 (optional - port address is specified)
```

## VENDOR Line Format

The VENDOR line, by default, has the following format:

```
VENDOR daemon_name [daemon_path] [options_file_path] [port]
```

Where:

- `daemon_name` is the name of the vendor daemon.
- `daemon_path` is an optional entry specifying a path to the vendor daemon.
- `options_file_path` is an optional entry specifying a path to the FLEXnet options file.
- `port` is an optional entry naming the daemon TCP/IP port number to use. A port

number *must* be used when connecting to the daemon through a firewall.

## VENDOR Line Guidelines

- During installation of ADS, the vendor daemon is installed in the `$HPEESOF_DIR/EEsof_License_Tools/<ARCH>` directory, for example `/my_install_dir/EEsof_License_Tools/linux_x86`
- The *daemon\_name* must be *agileesofd*.
- The path to the options file is intentionally left blank. If you want to use FLEXnet options, you must add a full path to your option file. To learn about FLEXnet options, refer to *Using FLEXnet Options* (install). If the file does not exist and this option is not blank, a warning message will appear in the *flex.log* file.
- Here is an example of a properly configured VENDOR line including the daemon path, options file path, and port number:

```
VENDOR agileesofd /my_install_dir/EEsof_License_Tools/linux_x86/agileesofd \
/my_install_dir/licenses/agileesofd.opt 27000
```

- For client systems connecting to a license server through an Internet firewall set up on Windows PC, the port number the vendor daemon uses must be specified. If the port is not specified, the default is chosen by the operating system at run time. If this port number is specified, there may be a delay restarting the vendor daemon until all clients have closed their connections to the vendor daemon.

### Note

Some clients may timeout before they can connect to a license server through a firewall set up on a Windows PC. The default timeout period is 0.1 second. If you need a longer timeout period, you can set the environment variable `FLEXLM_TIMEOUT` to a new value. Enter the value using microseconds. Agilent EEsof recommends trying one second. For example:  
`FLEXLM_TIMEOUT=1000000` Depending on your network, you may need to adjust the period so it is long enough to allow connections without slowing down simulations excessively.

## INCREMENT Line Format

The INCREMENT lines must have the following format:

```
INCREMENT feature vendord ver exp num vendorstring hostid sign
```

Where:

- *feature* is the name of the feature licensed by this line.
- *vendord* is the name of the vendor daemon that will manage this feature.
- *ver* is the version of the feature licensed by this line.
- *exp* is the expiration date of this license.
- *num* is the number of licenses this line enables.
- *vendorstring* is the CPU ID of the primary license server.
- *hostid* is an optional field. If this field exists, it is the hostid of the machine that this license is node-locked to. Only the machine whose hostid appears in this field may checkout this license.
- *sign* is the encrypted license.

## INCREMENT Line Guidelines

- None of the fields on the INCREMENT lines are editable. Any change made to any of the fields on an INCREMENT line will make that feature invalid. The only valid edit of an INCREMENT line is to add a backslash ('\') to line wrap the line. Be careful not to add an extra space between fields when using a backslash to line wrap an INCREMENT line.
- '#' can be used to comment out the INCREMENT codewords.
- Here are two examples of valid INCREMENT lines.  
*Floating license example:*

```
INCREMENT ads_schematic agileesofd 2.7 06-nov-2007 1 \
    VENDOR_STRING="2003298463 : XMGBGCE PSUOKRT EIQGAUY DLBVVHE \
    IWNYES2 EWFTFGP AU2BKGR" START=09-may-2007 SIGN="0091 AE42 \
    01AF 69F0 7D18 E9D3 F651 4EF0 5EEA 6EB2 5D00 E0C2 F314 8CAE \
    AB9C 3262 A18A 0F3C 8178 EB11 F848"
```

*Node-locked license example:*

```
INCREMENT ads_schematic agileesofd 2.7 06-nov-2007 1 \
    VENDOR_STRING="2007560205 : XMGBGCE PSUOKRT EIQGAUY DLBVVHE \
    IWNYES2 EWFTFGP AU2BKGR" HOSTID=77a8f00d START=09-may-2007 \
    SIGN="01EB BB84 1441 154F 2E82 AFAA 3BDF 426A B6A9 3ACF 3A02 \
    AE86 3414 510C 08BD 9C1D C69D D3D7 9CD6 579D 68D9"
```

The backslash used to line wrap these two INCREMENT line examples is prefaced by a space and contains a carriage return immediately after it. The '\ ' character is the absolute last character of the line it is on.

## Start the License Server (Imgrd)

Use the following procedure and guidelines to start the license server, *Imgrd*, on the SERVER machine.

**Important**  
 Be sure to use the following guidelines to update all existing license servers with the latest version of the FLEXnet software (e.g., *Imgrd* and *Imutil*). The software is installed with ADS 2011.01. Using older versions may cause license-encryption errors, invalid *hostid* results, and unsupported feature errors. Verify that all multiple and redundant servers are updated including any license administration scripts in use. Run *Imutil* directly from the ADS 2011.01 installation location (`$HPEESOF_DIR/EEsof_License_Tools/<ARCH>`) for information to help modify the scripts. You will need to stop, then restart, the license server to make these updates.

## Guidelines for Starting Imgrd

- You only need to run *Imgrd* on the SERVER machine(s).
- If the SERVER machine(s) has ADS installed on it, you will find the FLEXnet license manager daemon (*Imgrd*) in the `$HPEESOF_DIR/EEsof_License_Tools` directory. If the SERVER machine does not have ADS installed, you can copy the `$HPEESOF_DIR/EEsof_License_Tools/linux_x86_xx/licenses` directory from the machine that has ADS installed.
- ADS installs version 11.9 of FLEXnet. Make sure you use the version 11.6 *Imgrd* and *agileesofd* supplied or a newer version of *Imgrd*. You can determine the version of *Imgrd* and *agileesofd* by typing the following commands:  
`cd $HPEESOF_DIR/EEsof_License_Tools/<ARCH> , where ARCH can be linux_x86`

```
./lmgrd -v
./agileesofd -v
```

## To start lmgrd

Change the directory to where *lmgrd* resides on the SERVER machine and execute *lmgrd*. For example:

```
cd $HPEESOF_DIR/EEsof_License_Tools/<ARCH> , where ARCH can be
linux_x86
./lmgrd -c ../license.lic > ../flex.log
```

The login executing *lmgrd* must have full permissions to the licenses/bin directory and at least write permissions to the directory specified for *flex.log*.

All error, warning and status messages will be redirected to the *flex.log* file. After starting *lmgrd*, wait approximately 30 seconds, then look at the contents of *flex.log* to see if there are any errors that need to be corrected.

## To verify that the licenses are available:

Make sure that the *flex.log* file does not contain any errors, then run *lmstat* as follows:

```
cd $HPEESOF_DIR/EEsof_License_Tools
./lmutil lmstat -a -c ../license.lic | more
```

Or, you may launch the Agilent License Information Tool to do this. Refer to *Using the Agilent License Information Tool* (install) for more information.

If the licenses are available, you should see a listing similar to the following:

```
lmutil - Copyright \(\C\) 1989-2007 Acresto Software Inc. All Rights Reserved.
Flexible License Manager status on Mon 9/22/2007 12:42
License server status: 27000@joshua
  License files on joshua: ads2009U1/licenses/bin/../license.lic:
  joshua: license server UP \(\MASTER\) v10.1
Vendor daemon status \(\on joshua\):
  agileesofd: UP v10.1
Feature usage info:
Users of ads_schematic: \(\Total of 3 licenses available\)
Users of ads_layout: \(\Total of 3 licenses available\)
Users of trans_iges: \(\Total of 3 licenses available\)
Users of trans_dgsii: \(\Total of 3 licenses available\)
Users of trans_iff: \(\Total of 3 licenses available\)
Users of ads_lite: \(\Total of 3 licenses available\)
Users of ads_datadisplay: \(\Total of 3 licenses available\)
Users of sim_linear: \(\Total of 3 licenses available\)
Users of sim_harmonic: \(\Total of 3 licenses available\)
```

## Automating FLEXnet License Manager Startup

You can automate the FLEXnet startup so that *lmgrd* is started automatically each time

the license server machine is rebooted by adding the following lines for a startup routine to the appropriate *rc* file for your operating system:

```
\#! /bin/sh
\#
\# Sample script for restarting EEsof License Server
\#
\### BEGIN INIT INFO
\# Provides: eesof license server
\# Required-Start: $network
\# Required-Stop:
\# Default-Start: 3 4 5
\# Default-Stop:
\# Description: Start EEsof License Server
\### END INIT INFO
PATH=/bin:/usr/bin
export PATH
\
su - licadmin \-c "/ads/EEsof_License_Tools/linux_x86/lmgrd \-c /ads/licenses/license.lic \-l
/ads/licenses/ads_server_log.txt"
echo "Starting Agilent EEsof FLEXnet license daemon....."
sleep 5
\
```

You need to ensure that *all* references to */ads* must be changed to the actual path of your Agilent EEsof software installation directory.

**i** Following are instructions for the supported operating systems: # Change to the appropriate directory:  
 /etc/rc.d/init.d (*Linux*)}  
 /etc/rc3.d (*Solaris*)}  
 1. Create a file in this directory named *Sagileesofd*.  
 2. The *S* is capitalized. All other letters are in lower-case.

1. Place the FLEXnet startup routine (shown above) into this file.
2. Set the permissions for this file as follows:

```
chmod 755 Sagileesofd
chown root Sagileesofd
chgrp sys Sagileesofd
```

3. For Linux license servers, run the command `chkconfig --add /sbin/chkconfig --add Sagileesofd`

For Solaris systems, create the following soft links:

```
ln -s /etc/rc.d/init.d/Sagileesofd rc3.d/S99Sagileesofd
ln -s /etc/rc.d/init.d/Sagileesofd rc4.d/S99Sagileesofd
ln -s /etc/rc.d/init.d/Sagileesofd rc5.d/S99Sagileesofd
```

## Set Environment Variables

### Provide Access to Licenses

Before attempting to start ADS, you must configure each user's login environment to allow access to the licenses on the SERVER machine(s). To do this you need to configure the environment variable named `ADS_LICENSE_FILE` in the user's *.profile* or *.cshrc*.

For example:

**C Shell:**

```
setenv ADS_LICENSE_FILE  
$HPEESOF_DIR/EEsof_License_Tools/linux_x86_xx/licenses/license.lic
```

### **Bourne/Korn Shell:**

```
ADS_LICENSE_FILE=$HPEESOF_DIR/EEsof_License_Tools/linux_x86_xx/licenses/license.lic  
export ADS_LICENSE_FILE
```

You can avoid the need to have a copy of the *license.lic* file directly on the machine running ADS by setting `ADS_LICENSE_FILE` as follows:

```
ADS_LICENSE_FILE=<port>@<SERVER_hostname>
```

where

*port* is the TCP port number from the SERVER line(s) of the *license.lic* file.

*SERVER\_hostname* is the network name of a SERVER machine serving ADS licenses. This must be a name that the SERVER is known by on the network. You should be able to successfully ping this name from the machine that will run ADS.

Or, if your license server is set up to search for an available port, your `ADS_LICENSE_FILE` should read:

```
ADS_LICENSE_FILE=@<SERVER_hostname>
```

For example,

### **C Shell:**

```
setenv ADS_LICENSE_FILE 27000@joshua
```

OR

```
setenv ADS_LICENSE_FILE@joshua
```

### **Bourne/Korn Shell:**

```
ADS_LICENSE_FILE=27000@joshua
```

```
export ADS_LICENSE_FILE
```

OR

```
ADS_LICENSE_FILE=@joshua
```

```
export ADS_LICENSE_FILE
```

The syntax to access *multiple* license servers is as follows.

### **C Shell:**

```
setenv ADS_LICENSE_FILE 27000@server1:27000@server2:27000@server3
```

### **Bourne/Korn Shell:**

```
export ADS_LICENSE_FILE=27000@server1:27000@server2:27000@server3
```

However, in this case, "server" should be replaced by the actual license server name or IP address, and the "27000" may need to be changed to the actual port number on the license server. Note that the list of servers is separated by colons ( : ). For details on running FLEXnet-licensed products from multiple vendors refer to *Merging Multiple Vendor Licenses* (install).

## Using a UNIX/Linux-to-PC Floating License

A Windows PC system can access the UNIX or Linux license server's *license.lic* file in either of two ways:

- By copying the *license.lic* file from the UNIX/Linux license server to the Windows PC's *\$HPEESOF\_DIR/licenses* folder
- By setting the ADS\_LICENSE\_FILE variable on the Windows PC to point to the UNIX/Linux license server as follows:

```
set ADS_LICENSE_FILE=<port>@<host>
```

For example:

```
set ADS_LICENSE_FILE=27000@joshua
```

where

*27000* is the port number on the SERVER line in the *license.lic* file on the UNIX/Linux license server

*joshua* is the hostname of the UNIX/Linux license server

Conversely, the license server can be a Windows PC with a floating license locked to a LAN card or dongle hardware key and the UNIX/Linux computer can be set to point to it in the same way by using its host name or IP address.

## Launch ADS

To run ADS, open a terminal window and enter the command:

```
ads
```



### Note

Before starting ADS, the environment variables must be set properly.



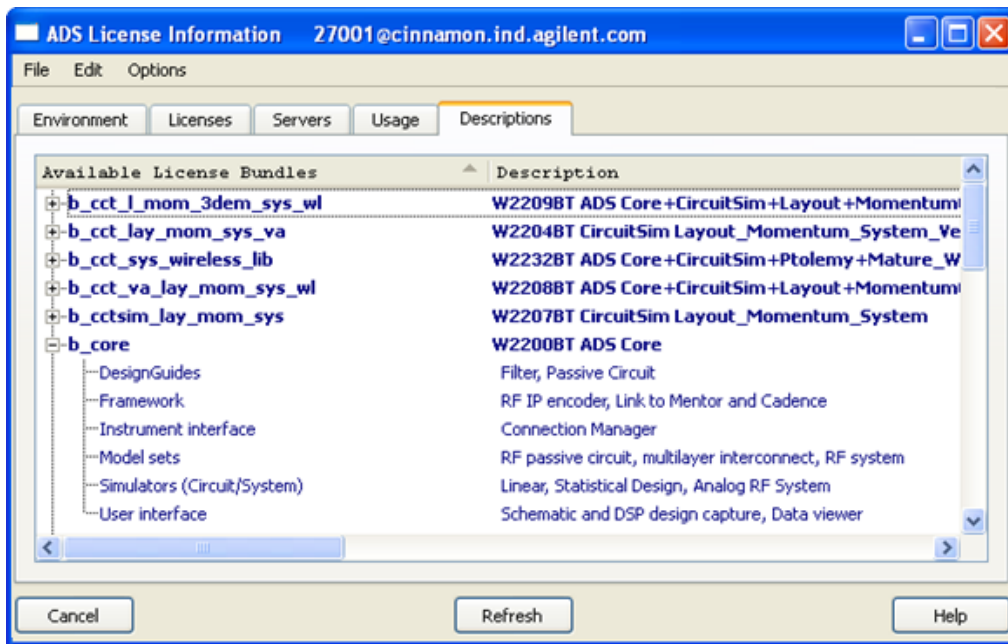
# Managing ADS Licenses - Unix or Linux

This section provides information on how to manage licenses of ADS and all the tools and utilities of ADS.

## License Information Tool

The Agilent License Information Tool is available to check your environment variable settings, display your license file (`license.lic`), and show your license and server status. You can access this tool in any of the following ways Linux:

1. Type `{{${HPEESOF_DIR}/EEsof_License_Tools/linux_x86_xx/aglmtool}}` and press **Enter**.
2. From the ADS main window, Choose Tools > License Information



For a current list of licenses available from Agilent EEsof with product descriptions and part numbers, see *License Codewords* (instalpc).

## License Preference Tool

This tool is useful if you have purchased ADS License Bundles.

License bundles typically start with a "b\_" in their names. A bundle looks like any other INCREMENT line in the license file, but ADS recognizes the feature name as a collection, or bundle, of individual features. When ADS checks out the license bundle, it enables all the functionality associated with the individual features.

By default, an ADS run-session has all the bundles available for checkout. However the License Preference Tool can be used to limit the set of license bundles to be used by your ADS session. It records such information in the environment variable `ADS_LICPREF_<hostname>`. If you need more bundle selection flexibility to control which

licenses are used on selected systems, see [Manually Setting the License Bundle Preference](#).

## Running the License Preference Tool

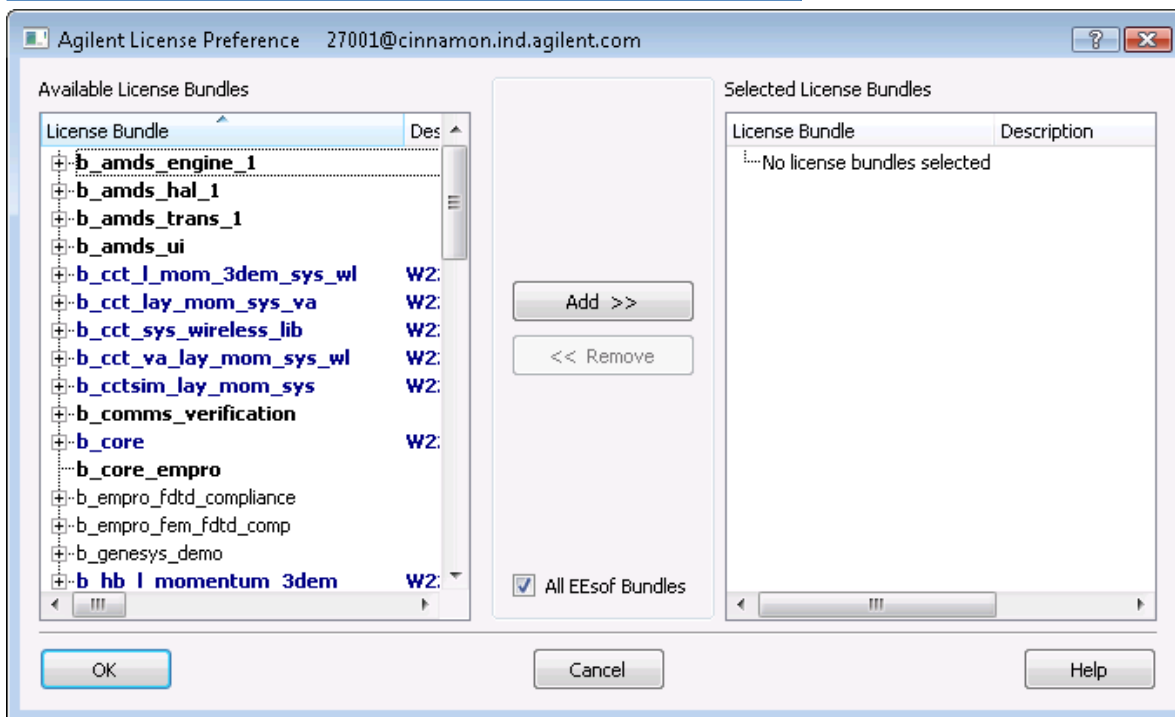
To start the License Preference Tool

Type `{{${HPEESOF_DIR}/EEsof_License_Tools/linux_x86_xx/aglmpref}}` and press **Enter**

The License Preference tool allows you to view the available license bundles and their features, and select bundles.

- To see the features available in a bundle, click the expansion icon next to the bundle name under **Available License Bundles**.
- To select a bundle, choose one of the bundles listed under **Available License Bundles**, then click **Add** button. The selected bundle appears under **Selected License Bundles**.
- To accept your choice, click **OK**. This sets the environment variable `ADS_LICPREF_<hostname> in`  
`HKEY_CURRENT_USER\Software\Agilent\EEsof_License_Configuration registry`.

**Note**  
You must have write permissions to update the registry settings.



## How the License Preference Tool Works

- When you run the License Preference tool, it attempts to locate a license file using the following license definitions:
  - Environment variable `ADS_LICENSE_FILE`
  - `HKEY_CURRENT_USER\Software\Agilent\EEsof_License_Configuration\ADS_LICENSE_FILE` in the registry
- The License Preference Tool will show all possible bundles if a license file is not located.

- You can select a bundle according to specific rules controlled by the License Preference Tool.
- ADS starts when a license bundle is selected, and ADS will not use a bundle unless it is selected using the License Preference Tool.
- If, while using ADS, the feature you attempt to use is not in the currently selected bundle, ADS will attempt to check out a valid floating or nodelocked license for the feature. This is known as license roll-over. If license roll-over fails to check out a license, a license error will appear even if another bundle with the requested feature is available.  
You can then select another bundle that contains the feature. Save your work, and exit ADS. Then run the License Preference Tool to remove and add bundles, and restart ADS.

## Special Licensing Needs

Use the following information to accommodate any special licensing needs you may have.

### Using FLEXnet Options

An options file enables the license administrator to control the security parameters of FLEXnet. Specifically the license administrator can:

- Allow the use of features based on user, hostname or display name.
- Deny the user of features based on user, hostname or display name.
- Reserve licenses based on user, hostname or display name.
- Control the amount of information logged about license usage.

### Creating an Options File

Use the desired options listed below to create the options file using any text editor. Ideally, you should keep the options file in the same directory as your *license.lic* file. Also, add the pathname to the options file in the *license.lic* file as the fourth field on the VENDOR line for *agileesofd* as shown in the following example. (Remember to use the backslash ('\') character if the file contains wrapped lines.)

```
VENDOR agileesofd //licenses/vendors/agileesofd \  
//licenses/agileesofd.opt
```

You can include comments in your options file by starting each comment with a pound sign "#". Everything in the options file is case-sensitive. Be sure that user names and feature names, for example, are entered correctly. The available options are:

- EXCLUDE  
Deny a user access to a feature.
- EXCLUDEALL  
Deny a user access to all feature served by this vendor daemon.
- GROUP  
Define a group of users for use with any options.
- INCLUDE  
Allow a user to use a feature.
- INCLUDEALL  
Allow a user to use all features served by this vendor daemon.

- NOLOG  
Turn off logging certain items.
- REPORTLOG  
Specify that a logfile be written suitable for use by the FLEXadmin End-User Administration Tool.
- RESERVE  
Reserve licenses for an individual user or groups of users.
- TIMEOUT  
Works only for *specified* simulator and library licenses.
- TIMEOUTALL  
Works for all simulator and library licenses.

Use the following steps to create and use an options file:

1. Create an options file with your required options.
2. Modify your *license.lic* file so that the VENDOR or DAEMON line points to this option file as shown in this example:

```
VENDOR agileesofd //licenses/vendors/agileesofd \
//licenses/agileesofd.opt
```

3. Start up your license server (lmgrd) that is pointing to your license file. You must stop it first if it is running. It's important that a message is displayed or recorded in the FLEXnet log verifying the license manager is using the options file. The following example shows that the license manager is using the *agileesofd.opt* file containing the TIMEOUTALL option set to 900 seconds:

```
17:35:14 \(\agileesofd\) Using options file: "//licenses/agileesofd.opt"
17:35:15 \(\agileesofd\) ALL FEATURES: INACTIVITY TIMEOUT set to 900 seconds
```

4. Set *ADS\_LICENSE\_FILE* to point to your license server.
5. Run ADS.

## Specifying the TIMEOUT Option

You can set a custom time-out period for simulator and library licenses using the TIMEOUT or TIMEOUTALL options. If you do not specify a time-out value in your options file or do not have an options file, a default two-hour limit is used. These time-out options apply to those application features that have explicitly implemented time-out via the heartbeat function. This includes licenses for the Analog/RF and Signal Processor simulators and for libraries, and *do not* affect licenses for the design environment and data display. The time-out option sets the amount of time a feature may remain idle before its license is released and reclaimed by the vendor daemon. The TIMEOUT option enables you to identify specific licenses, and the TIMEOUTALL affects all licenses (simulators and libraries).

To use TIMEOUT, add an entry for each feature to the options file using the following format:

```
TIMEOUT feature_name seconds
```

where:

*feature\_name* is name of the feature.

*seconds* is the number of seconds before inactive license is reclaimed. The minimum value is 900 seconds (15 minutes). If you specify a time-out value

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smaller than the minimum, the minimum is used.

The option `TIMEOUTALL` works just like `TIMEOUT`, but applies to all features.

`TIMEOUTALL` *seconds*

Here are example entries you can include in your options file:

To set a time-out for the harmonic balance simulator to one hour (3600 seconds):

```
TIMEOUT sim_harmonic 3600
```

To set time-outs for multiple simulators to different periods:

```
TIMEOUT sim_linear 900
TIMEOUT sim_harmonic 3600
TIMEOUT sim_convolution 3600
```

To set a time-out for all simulators and libraries to one hour (3600 seconds):

```
TIMEOUTALL 3600
```

## Updating the License File

If you have been running FLEXnet and receive updated licenses from Agilent EEsof, you can add the new licenses to the FLEXnet environment as follows:

1. Replace the existing *license.lic* files on the license servers and clients with the new *license.lic* file.
2. On the primary server, run `lmutil lmreread`. This causes the *lmgrd* on the primary server to re-read the *license.lic* file and update all of the other *lmgrd* processes on the network.
3. After you have done this, you can run `lmutil lmstat -a` to verify that the license servers have received the new license information.  
If this does not work, you may need to stop all of the *lmgrd* processes on your network and then restart the same. For detail, see *Start the License Server* (install)

## Merging Multiple Vendor Licenses

When you are running FLEXnet-licensed products from multiple vendors, you have three ways to prevent licensing conflicts during installation:

- Multiple license server nodes; each running one *lmgrd* and one license file
- One license server node running one *lmgrd* and one license file
- One license server node running multiple *lmgrds* and multiple license files

Each *lmgrd* can only read a single license file. With the first option you will have more license servers to monitor. With the third option you have only one server but multiple *lmgrds* to administer.

Your product's license file(s) define the license server(s) by hostname and hostid in the `SERVER` line(s) in the license file.

- If the license files for two or more products contain identical hostids on the SERVER line(s), then these files can be combined.
- If the license files for two products contain different hostids on a SERVER line, then the license servers for those products will be running on different nodes and the license files cannot be combined.

If you have two or more products whose license servers run on the same node (as specified by the SERVER lines in the license files), you may be able to combine the license files into a single license file.

- If the SERVER lines in those files have identical hostids, then you can combine the files into a single file.
- If the SERVER lines have different hostids, then you must keep the license files separate.

More precisely, you can combine two license files under the following conditions:

1. The number of SERVER lines in each file is the same.
2. The hostid field of each SERVER line in one file exactly matches the hostid field of each SERVER line in the other file.

Some possible reasons license files may not be compatible are:

- License files are set up to run on different server nodes, so hostids are different.
- One file is set up for single server (has only one SERVER line), the other is set up for redundant servers (has multiple SERVER lines).
- One vendor uses a custom hostid algorithm, so the hostids on the SERVER lines are different even though the files are for the same machine.

If your license files are compatible as described above, then you can combine license files and run a single *lmgrd*, as described in [Combining License Files from Multiple Vendors](#). If the license files are not compatible, then you must keep the license files separate and run separate copies of *lmgrd* for each license file, as described in [Using Separate License Files on the Same Server Node](#).

**Important**

There is virtually no performance or system-load penalty for running separate *lmgrd* processes.

## Combining License Files from Multiple Vendors

If your license files are compatible, you can combine them using any text editor. To combine license files, merge all of the compatible license files into one file, then edit out the extra SERVER lines so that only one set of SERVER lines remains. Write out this data, and you have your combined license file.

If you combine license files from multiple vendors, it is a good idea to keep a copy of the combined license file in each vendor's default license file location. This way, your users can avoid having to set `ADS_LICENSE_FILE`, because each package finds its license information in the default place. On UNIX and Linux, you can do this with a symbolic link from each default location to the location of the combined license file.

## FLEXnet Version Component Compatibility

When you combine license files for two different FLEXnet-licensed products, the products may not use the same version of FLEXnet. FLEXnet is designed to handle this situation. There are two basic compatibility rules for FLEXnet:

1. A newer *lmgrd* can be used with an older vendor daemon, but a newer vendor daemon might not work properly with an older *lmgrd*.
2. A newer vendor daemon (or *lmgrd*) can be used with an older client program, but a newer client program might not work properly with an older vendor daemon.

From these two compatibility rules come the simple rules for selecting which version of administration tools to use:

1. Always use the newest version of *lmgrd* and the newest version of each vendor daemon.
2. Use the newest FLEXnet utilities.

For specific application programs, you can use either the new or the old version (with the assumption that the vendor daemon for that application is at least as new as the application).

## Using Separate License Files on the Same Server Node

You must run a separate copy of *lmgrd* for each license file. When you run multiple copies of *lmgrd*, there are two details to remember:

1. The port number on the SERVER line of each license file must be unique. You can use a standard text editor to change the port number in each license file so that they are all different.
2. You must make sure that you are using a compatible version of *lmgrd* when you start it up for a particular license file. This can be done by using an explicit path to *lmgrd*.

When running client programs (such as a licensed application), you can set the `ADS_LICENSE_FILE` environment variable to point to multiple license files. For example, you may have a license file from vendor ABC and a license file from vendor XYZ with incompatible servers. You can place the license file from vendor ABC into:

```
/user/flexnet/abc.lic
```

and the license file from vendor XYZ into:

```
/user/flexnet/xyz.lic
```

then set the `ADS_LICENSE_FILE` environment variable to point to both of them. The syntax is as follows:

```
ADS_LICENSE_FILE=27000@server1;27000@server2;27000@server3
```

Note that each path is separated with a semi-colon.

`ADS_LICENSE_FILE` can point to only one license file for FLEXlm v1.x applications.

## Redundant License Servers

You can set up a redundant or backup license server(s), in case a primary server is unavailable. If your `license.lic` file has the maximum number of SERVER lines (three), you have a redundant license server configuration. The license setup is identical to a single SERVER configuration, with the exception that no licenses will be available until a majority of the license servers are running. That is, if you have three SERVER lines, at least two must be up and running before any licenses will be available for checkout. Be sure that the FLEXnet software is loaded and running on each server.

#### Note

- If you have more than one SERVER line in the `license.lic` file, you must start `lmgrd` on all the SERVER machines to enable the licenses.
- You must explicitly set the port number, for example 27005, and complete the license setup again.

## Controlling License Path Settings

The `lmutil` utility provides the `lmpath` function which allows direct control over FLEXnet license path settings. You can use `lmpath` to add to, override, or get the current license path set in the registry. This enables you to change or view path settings without locating individual settings in the Windows registry on the PC or in the FLEXnet registry (`.eesoflic`) on UNIX and Linux.

The `lmutil` utility is located in `_${HPEESOF_DIR}/EEsof_License_Tools/linux_x86_xx`. This location must be in your `PATH`, or use the following command before running the utility:

```
cd ${HPEESOF_DIR}/EEsof_License_Tools/linux_x86_xx
```

The usage for this function is:

```
lmutil lmpath -add | -override {vendor_name | all} _license_path_list_
```

where

*-add* appends *license\_path\_list* to the front of the current license-path settings or creates the list of license-path settings, if it doesn't exist, initializing it to *license\_path\_list*. Duplicates are discarded.

*-override* overrides the existing list of license-path settings with the contents of

*license\_path\_list*. If *license\_path\_list* is the null string, "", the specified list is deleted. For example:

- `lmutil lmpath -override agileesofd ""`  
Deletes the value of `ADS_LICENSE_FILE` from the registry.
- `lmutil lmpath -override vendor2 ""`  
Deletes the value of `VENDOR2_LICENSE_FILE` from the registry.
- `lmutil lmpath -override all ""`  
Deletes the value of `LM_LICENSE_FILE` from the registry.

*vendor* is a string naming a particular vendor daemon name. Affects the value of `vendor_LICENSE_FILE`. For example, use `agileesofd` to affect `ADS_LICENSE_FILE`.

*all* refers to all vendor daemons. Affects the value of only `LM_LICENSE_FILE`.



*license\_path\_list* is the new path setting(s). On UNIX and Linux, this is a colon-separated list, and on Windows it is a semi-colon-separated list. If *license\_path\_list* is the null string, "", then the list is deleted for the specified *vendor*. Though you can enter specific license file names, you gain flexibility by entering only a path without a file name. This will include all \*.lic files in the same location.

#### Note

- Environment variable settings (set in your shell) always override these registry settings.
- Imutil Impath -status (used in ADS 2009 Updated 1 and earlier versions) will not give valid results.

## Changing License Path Settings

When adding or overriding path settings, *Impath* sets the FLEXnet entry in the Windows registry on the PC, or changes the file *\$HOME/.eesoflic* on UNIX and Linux. Here are examples of how license settings may appear in each registry:

### UNIX and Linux

```
ADS_LICENSE_FILE = /ads2003a/licenses:/ads2009U1/licenses
```

## Manually Setting the License Bundle Preference

If you are using license bundles, you are aware that you must select a bundle prior to running ADS. Typically, bundles are selected by using the Agilent License Preference Tool. This tool is discussed in [Using the Agilent License Preference Tool](#). However, system administrators and advanced users can manually configure environment variables when they need more bundle selection flexibility. Proper configuration using these environment variables control which licenses are used, and the systems using them.

The two environment variables that control bundle selection are:

- *ADS\_LICPREF<hostname>* controls bundle selection specifically for the system identified by *<hostname>*.
- *ADS\_LICPREF* controls bundle selection for all systems on a network with access to the license server.

ADS looks for these variables in the following locations in the order given here:

- Shell environment
- *<project\_directory>/hpeesof.cfg*
- *\$HOME/hpeesof/config/hpeesof.cfg*
- *\$HPEESOF\_DIR/custom/config/hpeesof.cfg*
- *\$HPEESOF\_DIR/config/hpeesof.cfg*

ADS first looks for *ADS\_LICPREF<hostname>* in each of these locations. If ADS cannot find a value for *ADS\_LICPREF<hostname>*, then ADS looks for *ADS\_LICPREF*. If *ADS\_LICPREF* is not found, no bundle is selected.

## Examples

- Joe Smith wants to use the *pl\_desenv* bundle when he runs ADS on the system with the hostname *alpha*. To set this up, Joe should add

```
ADS_LICPREF_ALPHA=pl_desenv
```

to the configuration file

```
$HOME/hpeesof/config/hpeesof.cfg  
where $HOME is Joe's home directory
```

- A system administrator wants to configure a system to use the *pl\_ui* bundle when anyone runs ADS on the system named *beta*, and to use the *ltp\_mmic* bundle when ADS is run on other systems. To set this up, the administrator should add

```
ADS_LICPREF_BETA=pl_ui and  
ADS_LICPREF=ltp_mmic
```

to the configuration file

```
$HPEESOF_DIR/custom/config/hpeesof.cfg
```

## Accessing Licenses through a Firewall

There may be situations where it is necessary to check out FLEXnet licenses through a firewall (or router). This may occur when a license server is behind a company firewall and other sites or companies need to check out licenses.

Assuming your license agreement allows you to serve licenses in this manner, you can enable license checkout through a firewall by configuring your firewall to allow TCP communication through the TCP ports used by the license manager daemon (lmgrd) and any vendor daemons you will run.

For example, assume you have a license server serving EESof EDA licenses and your *license.lic* file contains the following lines:

```
SERVER myserver 00809AC7123F8  
VENDOR agileesofd /apps/flexnet/vendors/agileesofd  
VENDOR agileesof /apps/flexnet/vendors/agileesof  
DAEMON hpeesofd /apps/flexnet/vendors/hpeesofd
```

To set up your firewall to allow TCP access to the license server, you must specify a TCP port number for lmgrd on the SERVER line and for each vendor daemon on the VENDOR or DAEMON lines. For example:

```
SERVER myserver 00809AC7123F8 27005  
VENDOR agileesofd /apps/flexnet/vendors/agileesofd port=1705  
VENDOR agileesof /apps/flexnet/vendors/agileesof port=1706  
DAEMON hpeesofd /apps/flexnet/vendors/hpeesofd port=1707
```

**Note**  
After specifying TCP ports in your *license.lic* file, you must stop and restart your license server.

Next, configure your firewall or router to allow TCP communication through the TCP ports

you specified in your *license.lic* file. In the example above this would be ports 27005, 1705, 1706, and 1707.

Finally, clients must set the ADS\_LICENSE\_FILE environment variable to the port number assigned to the license server. Using the example above, the setting would be:

```
ADS_LICENSE_FILE=27005@myserver
```

Once this has been done, clients outside of the firewall will be able to access licenses from your server.

**Note**  
Some clients may timeout before they can connect to a license server through a firewall set up on a Windows PC. The default timeout period is 0.1 second. If you need a longer timeout period, you can set the environment variable FLEXLM\_TIMEOUT to a new value. Enter the value using microseconds. Agilent EEsof recommends trying one second. For example:  
FLEXLM\_TIMEOUT=1000000  
Depending on your network, you may need to adjust the period so it is long enough to allow connections without slowing down simulations excessively.

## Managing Multiple ADS Versions

This section discusses how to manage the licenses for multiple versions of ADS.

### Backward Compatibility of Licenses

The following table lists ADS versions with details of their license management:

Release Name	License File Version	Daemon Name	FLEX Version	License Environment Variable	Default License File Location
ADS 1.5	1.5	hpeesofd	FLEXlm 7.0g	LM_LICENSE_FILE	\$HPEESOF_DIR/licenses/license.dat
ADS 2001	1.7	hpeesofd	FLEXlm 7.0g	HPEESOFD_LICENSE_FILE	\$HPEESOF_DIR/licenses/license.dat
ADS 2002	1.9	agileesof	FLEXlm 7.2h CRO	AGILEESOF_LICENSE_FILE	\$HPEESOF_DIR/licenses/license.lic
ADS 2002C	2.1	agileesof	FLEXlm 7.2h CRO	AGILEESOF_LICENSE_FILE	\$HPEESOF_DIR/licenses/license.lic
ADS 2003	2.3	agileesofd	FLEXlm 8.2a CRO	ADS_LICENSE_FILE	\$HPEESOF_DIR/licenses/license.lic
ADS 2004	2.34	agileesofd	FLEXlm 9.2a CRO	ADS_LICENSE_FILE	\$HPEESOF_DIR/licenses/license.lic
ADS 2005	2.35	agileesofd	FLEXnet 10.1.3 CRO	ADS_LICENSE_FILE	\$HPEESOF_DIR/licenses/license.lic
ADS 2006	2.6	agileesofd	FLEXnet 10.8 CRO	ADS_LICENSE_FILE	\$HPEESOF_DIR/licenses/license.lic
ADS 2008	2.7	agileesofd	FLEXnet 11.4.1	ADS_LICENSE_FILE	\$HPEESOF_DIR/licenses/license.lic
ADS 2009	2.8	agileesofd	FLEXnet 11.6	ADS_LICENSE_FILE	\$HPEESOF_DIR/licenses/license.lic
ADS 2009U1	2.8	agileesofd	FLEXnet 11.6	ADS_LICENSE_FILE	\$HPEESOF_DIR/licenses/license.lic
ADS 2011.01	2.9	agileesofd	FLEXnet 11.9	ADS_LICENSE_FILE	<install_folder>/EEsof_License_Tools/license.lic

The following table shows the license compatibility between various ADS releases. Note that license compatibility also depends on the whether the license was available in that release.

Licenses From This Release	ADS 2011	ADS 2009	ADS 2008	ADS 2006	ADS 2005A	ADS 2004A	ADS 2003C	ADS 2003A	ADS 2002C	ADS 2002
<b>Will Work With This Release</b>										
ADS 20011	<b>X</b>	X	X							
ADS 2009U1	<b>X</b>	X	X							
ADS 2009	<b>X</b>	X	X							
ADS 2008		<b>X</b>	X	X						
ADS 2006			<b>X</b>	X	X					
ADS 2005A				<b>X</b>	X	X	X			
ADS 2004A					<b>X</b>	X	X			
ADS 2003C						<b>X</b>	X			
ADS 2003A						X	<b>X</b>			
ADS 2002C								<b>X</b>	X	
ADS 2002								X	<b>X</b>	

## Combining ADS Licenses with Other Agilent EEsof EDA Licenses

For ADS 2009, the vendor daemon *agileesofd* is used. This is the same vendor daemon that was used for ADS 2003A, 2003C, 2004A, 2005A, 2006A, 2006 Update, and 2008.

you want to serve ADS 2009 licenses and earlier from the same server, you need to have the latest version of *lmgrd*, v9.2a, and two or three DAEMON lines in your license file, depending on how many versions you want to support. The ADS daemon names available are:

*agileesofd* - for ADS 2003A, 2003C, 2004A, 2005A, 2006A, 2006 Update, 2008, 2009  
*agileesof* - for ADS 2002 and 2002C  
*hpeesofd* - up to and including ADS 2001

For example, the license file would include:

```
SERVER hpnmems 77a588a7 1700
VENDOR agileesofd /ads2009U1/licenses/vendors/agileesofd
VENDOR agileesof /ads2002C/licenses/vendors/agileesof
DAEMON hpeesofd /ads2001/licenses/vendors/hpeesofd
```

You would then add the INCREMENT lines for the different products to the file.

The name and extension of the license file are arbitrary (i.e., license.dat, license.lic or adslicenses.txt). By default, all ADS versions up to and including ADS 2001 look for a file named license.dat and all ADS versions from ADS 2002 to ADS 200A look for a file named license.lic. You can use one of these names, or some other name you prefer. Whatever name you choose to use, make sure you set the environment variables to point to your license file.

The supported environment variables are:

- ADS\_LICENSE\_FILE for ADS 2003A through 2009
- AGILEESOF\_LICENSE\_FILE for ADS 2002 and 2002C
- HPEESOFD\_LICENSE\_FILE for ADS 2001
- LM\_LICENSE\_FILE for ADS 1.5 and earlier

For example, if the combined license file is named adslicenses.txt and you want to build a license file that contains ADS 2009, ADS 2003C, ADS 2002C, ADS 2001, and IC-CAP 2001 licenses, then:

- ADS 2003C and 2009 will use:  
ADS\_LICENSE\_FILE=/licenses/adslicenses.txt
- ADS 2002 and 2002C will use:  
AGILEESOF\_LICENSE\_FILE=/licenses/adslicenses.txt
- ADS 2001 will use:  
HPEESOFD\_LICENSE\_FILE=/licenses/adslicenses.txt
- IC-CAP 2001 will use:  
LM\_LICENSE\_FILE=/licenses/adslicenses.txt

Each version of ADS uses a certain search order to look for the environment variable:

- ADS 2003C through 2009 will first look for the environment variable named ADS\_LICENSE\_FILE. If ADS\_LICENSE\_FILE and LM\_LICENSE\_FILE are both defined, ADS 2003C through 2009 will use ADS\_LICENSE\_FILE and ignore LM\_LICENSE\_FILE. If ADS\_LICENSE\_FILE is not defined, then ADS 2003C through 2009 will default to LM\_LICENSE\_FILE.
- ADS 2002 and 2002C will first look for the environment variable named AGILEESOF\_LICENSE\_FILE. If AGILEESOF\_LICENSE\_FILE and LM\_LICENSE\_FILE are both defined, ADS 2002 and 2002C will use AGILEESOF\_LICENSE\_FILE and ignore LM\_LICENSE\_FILE. If AGILEESOF\_LICENSE\_FILE is not defined, then ADS 2002 and

2002C will default to LM\_LICENSE\_FILE.

- ADS 2001 will first look for the environment variable named HPEESOFD\_LICENSE\_FILE. If HPEESOFD\_LICENSE\_FILE and LM\_LICENSE\_FILE are both defined, ADS 2001 will use HPEESOFD\_LICENSE\_FILE and ignore LM\_LICENSE\_FILE. If HPEESOFD\_LICENSE\_FILE is not defined, then ADS 2001 will default to LM\_LICENSE\_FILE.
- All previous ADS versions, up to and including ADS 1.5 will use LM\_LICENSE\_FILE.

Even though all versions of ADS will default to LM\_LICENSE\_FILE if that is the only environment variable that exists, it is recommended that you use the supported environment variables listed above.

# Using Advanced Design System

To help you get started using ADS, this section includes some basic information along with useful tips for resolving problems that might occur after you have installed ADS.

## Running Advanced Design System

Environment variables must be set before you can run ADS. To set the environment variables, see *Configuring User Accounts* (install).

Your FLEXnet license file must be properly configured and installed before you can run ADS. To set up your license file, follow the instructions in *License Setup* (install).

To run ADS, open a terminal window and enter the command:

```
ads
```

Choose **Help > Topics and Index > Quick Start** for help on getting started with ADS.

## Starting ADS in Verbose Mode (Debug Mode)

ADS 2006 Update can be started in verbose (debug) mode to display more information about what is occurring as ADS runs. This extra information can be very useful to debug a problem with ADS both at startup and in general operation. In verbose mode, ADS writes log files that can be used by Agilent EEsof EDA Technical Support to help track down any problems.

To start ADS in verbose mode, do the following:

1. Open a terminal window.
2. Type **ads\_verbose**.

This will start ADS. You will see some messages indicating the location of two log files. Note the location of these files as indicated in the messages. The file names are as follows:

```
ads_daemon.log  
ads_verbose.log
```

**Note**  
If *ads\_verbose* is not found, you may need to set the HPEESOF\_DIR and PATH environment variables.

Run ADS until the problem you are trying to debug occurs, then take a look at the *ads\_daemon.log* and *ads\_verbose.log* files for errors.

If you can't locate the trouble based on the contents of the log files, please contact Agilent EEsof EDA Technical Support. You will want to e-mail the log files to the support engineer working with you.

## Using 32-bit Simulators on a 64-bit Operating System

On a 64-bit operating system, you can either use the default 64-bit simulators or you can use the 32-bit simulators. To use the 32-bit simulators on a 64-bit system, do one of the following:

- Set the `EESOF_64BIT` environment variable as follows:  
`EESOF_64BIT=0`

or

- Start ADS by opening a terminal window and entering the command:  
`ads -32bit`

## Using a Remote Display

ADS has a Remote Display mode that improves graphics performance when using a remote display on X11 systems. A remote display is a display that's on a computer different from the computer that is running ADS.

ADS automatically determines whether to turn on Remote Display mode.

Remote Display mode is automatically turned on for:

- Exceed 10.0 and later
- Exceed Freedom
- Exceed On Demand 5.1 and later
- A native linux X server running on a machine different from the machine running ADS
- Any other X server that supports RENDER and is running on a machine different from the machine running ADS

Remote Display mode is automatically turned off for:

- Any X server that does not support the RENDER extension including:
  - Exceed 9.0 and earlier
  - Exceed On Demand 5.0 and earlier
  - VNC
  - A native Solaris X server (unless you have installed patches that provide the RENDER extension)
- Any X server running on the same machine as ADS

You can override this automatic behavior with the `EESOF_REMOTE_DISPLAY` environment variable. This environment variable has three settings:

- `AUTO` provides the automatic behavior described above.
- `YES` (or `1`) turns on Remote Display mode unless the X server does not support the RENDER extension.
- Any other value turns off Remote Display mode.

For `EESOF_REMOTE_DISPLAY` to have an effect, it must be set before you launch ADS. To set this variable to `YES` using the Bourne shell (`sh`) or the Korn shell (`ksh`), use

```
EESOF_REMOTE_DISPLAY=YES
export EESOF_REMOTE_DISPLAY
```

For the C Shell (`csh`), use



```
setenv EESOF_REMOTE_DISPLAY YES
```

## If ADS Does Not Start

It is possible to install programs or options for which you have not purchased licenses. Although the icons and features will appear in the software, you cannot access the applications without a license. Contact your Agilent EEsof sales representative to obtain additional licenses.

If your ADS applications will not start:

- Make sure all of your licensing requirements are correctly set up, as explained in *Managing ADS Licenses - Unix or Linux* (install).
- Using a text editor, open and review the *install.log* file in your installation directory to see if there are any apparent problems with the installation structure. (You can re-run Setup if necessary to re-install.)
- Try using the Agilent License Information Tool, which is available to check your environment variable settings, display your *license.lic* file, and show your license and server status. Refer to *Using the Agilent License Information Tool* (install).

If you cannot find the problem, run ADS in verbose (debug) mode and contact Technical Support to help pinpoint the problem. See [Starting ADS in Verbose Mode \(Debug Mode\)](#).

## Printing and Plotting

Printing and plotting from ADS on UNIX is accomplished by establishing the desired print setup and then choosing **File > Print**. The Print Setup and related dialog boxes enable you to:

- Select a printer/plotter other than the default
- Install additional printers or plotters
- Set the print resolution (dpi)
- Scale the output

When you select a printer/plotter, you can also change the following default printer/plotter-specific options:

- Page Size
- Source (Paper Tray)
- Duplexing (Double-sided)
- Orientation (Portrait or Landscape)
- Color (Black and White or Color)

When you choose **File > Print**, you can select from the following additional options:

- Choose to send output to a printer/plotter or print to file
- Scale the output to fit to the page
- Select a file format (if printing to file)
- Specify the number of copies

Your print setup is saved in *\$HOME/.Xprinterdefaults*. If you do not have a local copy of this file, or the file *.Xpdefaults* (from a previous release), the default file is read from the *\$HPEESOF\_DIR/xprinter* directory. When you change your print setup, the changes are

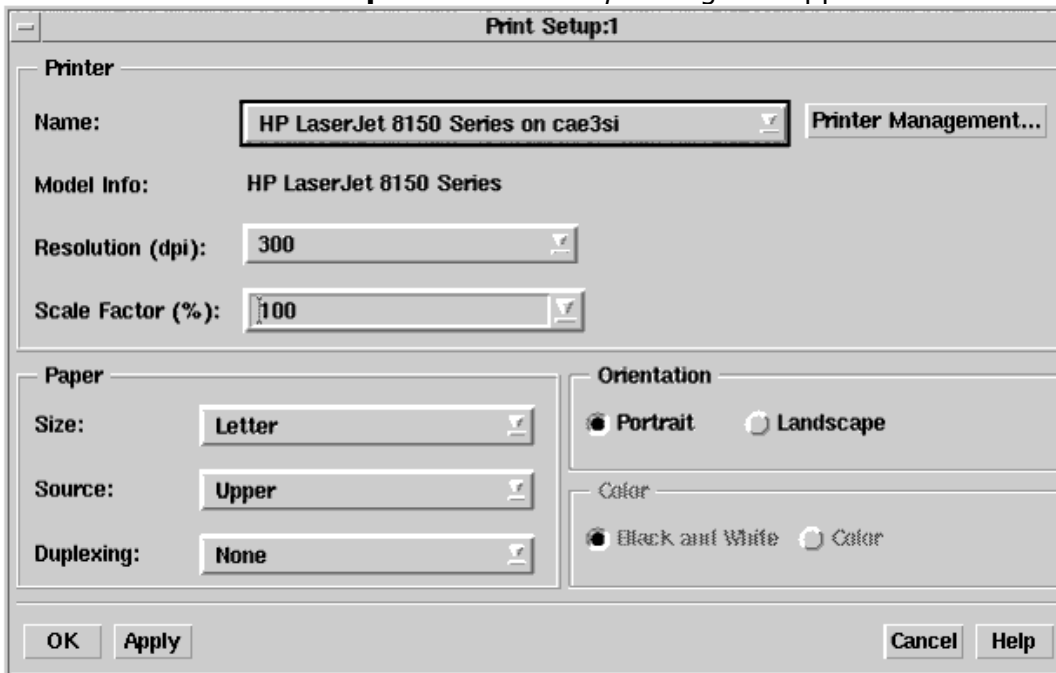
saved (as new defaults) to `$HOME/.Xprinterdefaults`.

**Note**  
If you do have a file `.Xpdefaults` (from a previous release), the settings of this file are copied to the new filename to serve as the starting point for your print setup. Both files are valid, depending on which release of ADS you are using. The old file is maintained for running an earlier version of ADS, but the new file is used when you run ADS 1.5 (or later).

## Setting Up a Printer

The *Print Setup* dialog box enables you to setup and manage your printer options. To access the Print Setup dialog box,

1. Choose **File > Print Setup**. The *Print Setup* dialog box appears.



For detailed information on using the Print Setup dialog box, refer to the following table.

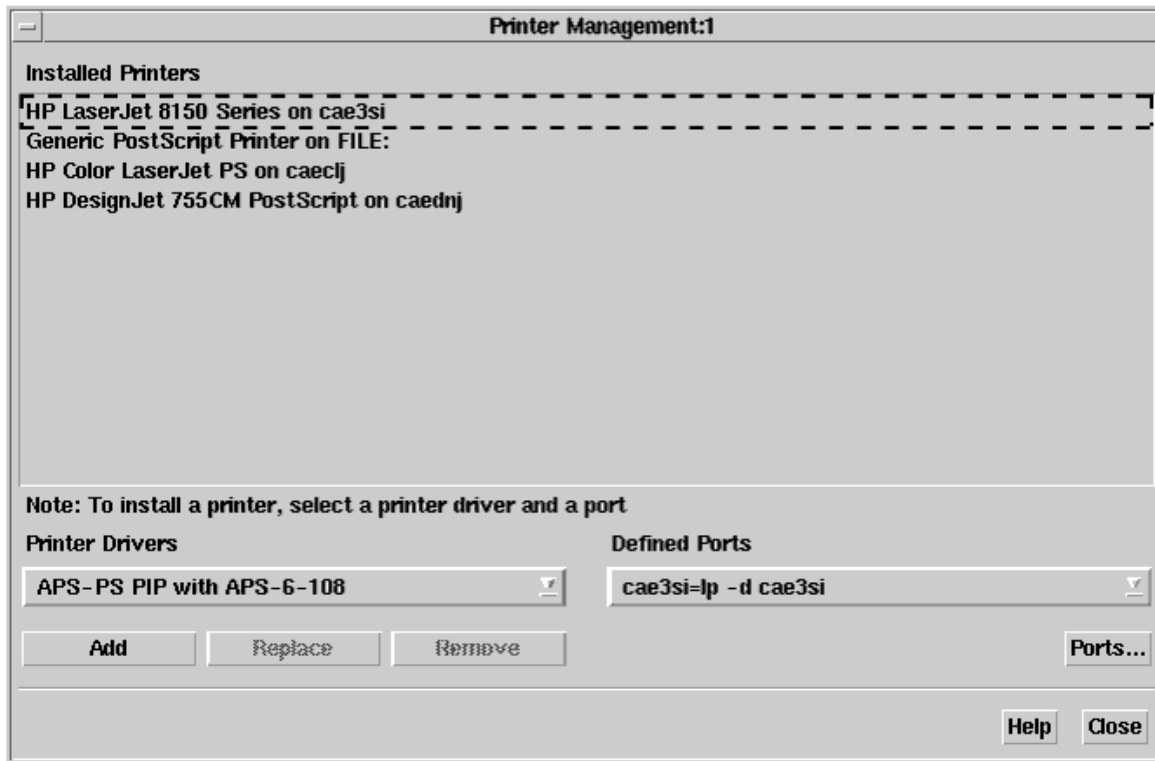
### Using the Print Setup Dialog box

Option	Description
Printer	Use this section of the Print Setup dialog box to define and manage your printers.
Name:	Select a printer from the Name drop-down list. If the printer you want to use is not available in the list, click the Printer Management button. For more information, refer to <a href="#">Managing Printers</a> .
Printer Management	If you want to add, replace, or remove a printer, click the Printer Management button to access the Printer Management dialog box. For more information, refer to <a href="#">Managing Printers</a> .
Model Info:	This section displays the selected printer model information.
Resolution (dpi):	This option enables you to set the print quality (resolution) in dots per inch (dpi).
Scale Factor (%):	This option enables you to set a scaling factor that defines the percentage of normal size by which to enlarge or reduce the document on the page. Default is 100%.
Paper	Use this section of the Print Setup dialog box to define the paper settings.
Size:	Use the Size drop-down menu to select the paper size. Default is Letter. Note that paper sizes can vary depending on the paper manufacturer. If you own a printer that provides a specific paper size that you are not familiar with, consult your printer documentation for information on the paper size options available. The more common American paper sizes are listed below in inches (Width vs. Height). Letter = 8.50" (W) x 11.00" (H) Executive = 7.25" (W) x 10.55" (H) Legal = 8.50" (W) x 14.00" (H) Tabloid = 17.00" (W) x 11.00" (H) Ledger = 11.00" (W) x 17.00" (H) Consult the International Organization for Standardization (ISO) for standard A through D-sizes as well as RA and SRA-sizes.
Source:	Use the Source drop-down menu to select the tray that has the paper you want to use. Default is the Upper tray.
Duplexing:	The Duplexing drop-down menu enables you to print on both sides of the paper. The options available are: -None - No duplexing, the document will only print on one side of the paper. -Flip on Short Edge - This option prints on both sides of each sheet and flips the page along the short edge of the paper. - Flip on Long Edge - This option prints on both sides of each sheet of paper and flips the page along the long edge of the paper. The default Duplexing option is None.
Orientation	Use this section of the Print Setup dialog box to define the orientation of your printed page.
Portrait	Click this option if you want your output printed in portrait orientation mode. Portrait is taller than it is wide when you view the text right-side up. Default is activated.
Landscape	Click this option if you want your output printed in landscape orientation mode. Landscape is wider than it is tall when you view the text right-side up. Default is deactivated.
Color	Use this section of the Print Setup dialog box to define your color settings.
Black and White	Click this option if you want your output in black and white. Default is activated unless the system detects support for color printer. If this is the case, the system will default to the color option.
Color	Click this option if you want your output in color. Default is deactivated unless the system detects support for color printer. If this is the case, the system will default to the color option.

## Managing Printers

The *Printer Management* dialog box enables you to manage an individual printer or group of printers. To access the Printer Management dialog box,

1. Choose **File > Print Setup**. The *Print Setup* dialog box appears.
2. Click the **Printer Management** button in the *Print Setup* dialog box. The *Printer Management* dialog box appears.



For detailed information on using the Printer Management dialog box, refer to the following table.

#### Using the Printer Management Dialog Box

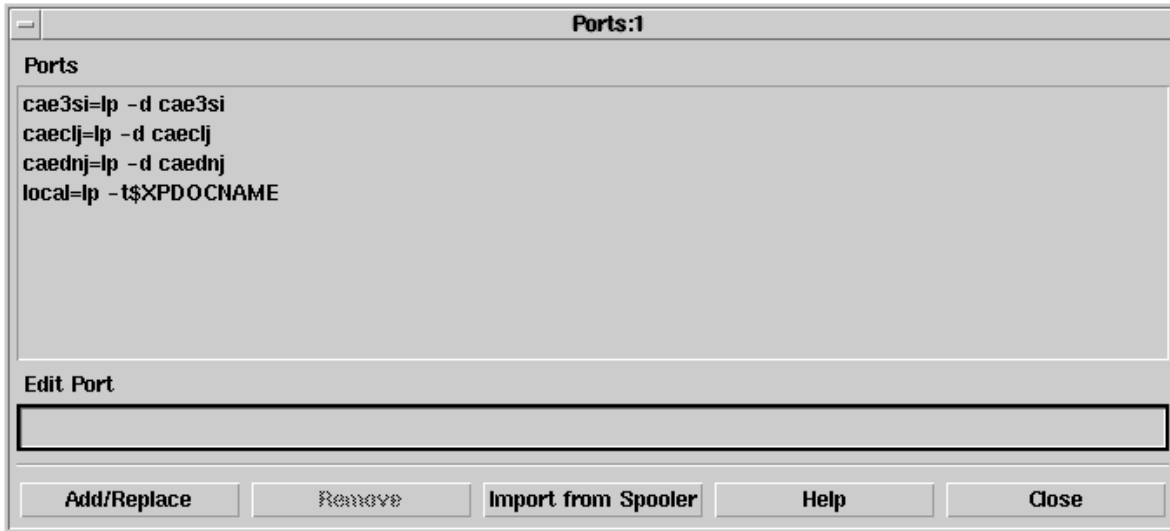
Options	Description
Installed Printers	The Installed Printers field displays a list of all currently installed printers.
Printer Drivers	Use the Printer Drivers drop-down list to select a printer driver.
Defined Ports	Use the Defined Ports drop-down menu to select a defined port.
Ports	To define a new printer port and/or replace or remove an existing printer port, click the Ports button to access the Ports dialog box. For more information on the Ports dialog box, refer to <a href="#">Defining Printer Ports</a> .
Add	To install a new printer, select a printer driver and a defined port, then click the Add button. The new printer appears in the Installed Printers list.
Replace	To replace an existing printer, click the printer you want to replace in the Installed Printers list. Then select a new printer driver and a new defined port. Click the Replace button to replace the printer. The new printer appears in place of the old printer in the Installed Printers list.
Remove	To remove an existing printer or group of printers, click the printer(s) you want to remove in the Installed Printers list and then click the remove button. A confirmation dialog box appears asking if you really want to remove the printer. Click OK to confirm or Cancel to abort the removal process. If you click OK, the printer(s) no longer appears in the Installed Printers list.
Help	Click the Help button to access the online context sensitive help.
Close	Click the Close button to dismiss the Printer Management dialog box and accept the changes. Settings will be saved upon exit.

## Defining Printer Ports

The *Ports* dialog box enables you to define new printer ports and/or replace or remove

existing printer ports. To access the Ports dialog box,

1. Choose **File > Print Setup**. The *Print Setup* dialog box appears.
2. Click the **Printer Management** button. The *Printer Management* dialog box appears.
3. Click the **Ports** button. The *Ports* dialog box appears.



For detailed information on using the Ports dialog box, refer to the following table.

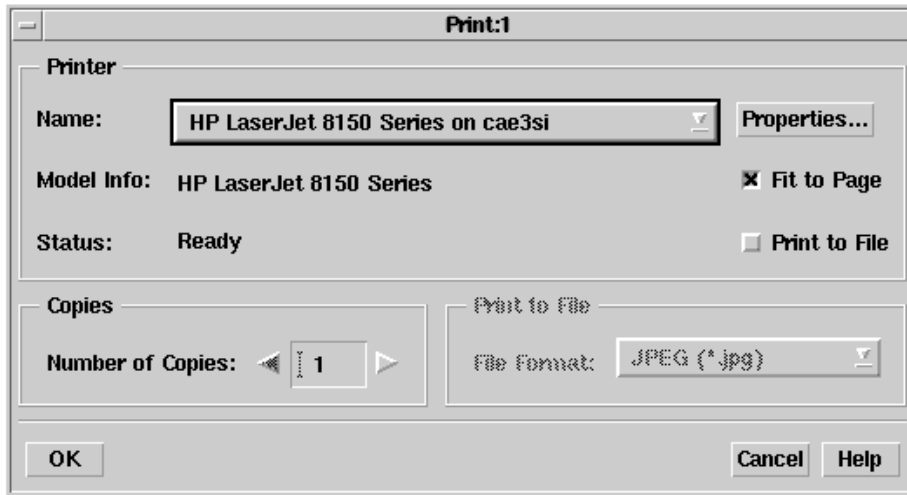
#### Using the Ports Dialog Box

Option	Description
Ports	The Ports field displays a list of ports. Port names can be any names you choose with the exception of <i>FILE:</i> which is a reserved port name.
Edit Port	The Edit Port field is used to enter a new port. After you have entered the port definition, click the Add/Replace button.
Add/Replace	Click the Add/Replace button to update the Ports list with contents of Edit Port field.
Remove	If you want to remove a port from the Ports list, click the port name in the Ports list to activate the Remove button. Click the Remove button to remove the selected port.
Import from Spooler	Click the Import from Spooler button to generate a list of ports (based on your <i>printcap</i> file).  Note that this option is only guaranteed to operate on HP-UX platforms. It may operate on other platforms; however, the third party utility that provides this feature does not guarantee it.
Help	Click the Help button to access the online context sensitive help.
Close	Click the Close button to dismiss the Ports dialog box and accept the changes. Settings will be saved upon exit.

## Printing to a Printer, Plotter, or File

The *Print* dialog box enables you to output your information to a supported printer, plotter, or specified file. To access the Print dialog box,

1. Choose **File > Print**. The *Print* dialog box appears.



**Note**

Alternatively, you can click the **Print The Current Design** button in the toolbar of a *Schematic* or *Layout* window to access the Print dialog box. The **Print this window** button in the *Data Display* uses the same user interface.

For detailed information on using the Print dialog box, refer to the following table.

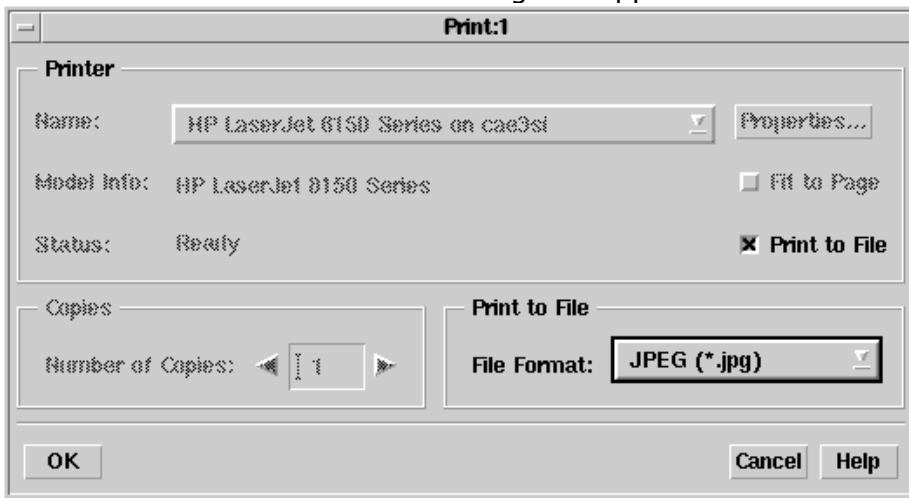
**Using the Print Dialog Box**

Option	Description
Printer	The Printer options in the Print dialog box enable you to define a printer and the output characteristics.
Name:	Select a printer from the Name drop-down list. If the printer you want to use is not available in the list, click the Cancel button and access the Print Setup dialog box.
Model Info:	This section displays the printer model information.
Status:	This section displays information on the printer status. If the printer is ready to print, the Status will display Ready.
Properties	Click the Properties button to view or set additional options used in the Print Setup dialog box. For more information, refer to <a href="#">Setting Up a Printer</a> .
Fit to Page	Activate the Fit to Page option if you want your output to be automatically scaled to fit on the page.
Print to File	Activate the Fit to Page option if you want your output to be directed to a file. When this option is selected, the Number of Copies feature is deactivated and the Print to File feature is activated. When this option is deactivated, the Number of Copies feature is activated and the Print to File feature is deactivated.
Copies	This section is used to set the number of copies to print.
Number of Copies	Use this feature to specify the number of copies to print. If Print to File is selected, this feature is deactivated.
Print to File	This section is used to define the type of file you want to send your output to.
File Format:	Use this feature to specify the file format to save your output to. After you have selected your file format, click OK in the Print dialog box. A Print to File dialog box will appear enabling you to define the path and name of the file. For more information on the Print to File dialog box, refer to <a href="#">Printing to a File</a> . If the Print to File radio button is deselected, this feature is deactivated.
OK	Click the OK button to accept the settings and send your output to the selected printer or file, depending on how you have set your options. Settings will be saved upon exit.
Cancel	Click the Cancel button to dismiss the Print dialog box. Settings will not be saved upon exit.
Help	Click the Help button to access the online context sensitive help.

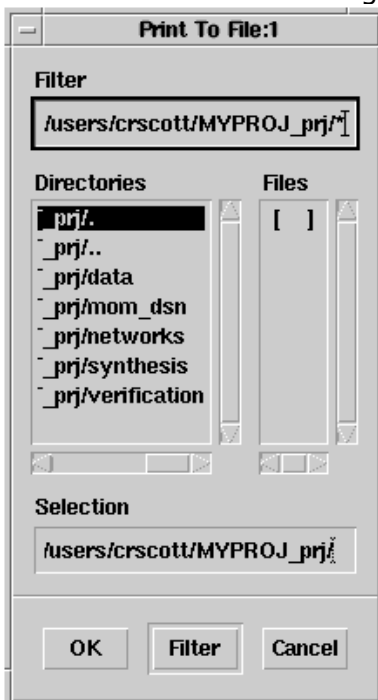
## Printing to a File

The *Print to File* dialog box enables you to define a destination path and file name and then output your information to the specified file. To use the Print to File dialog box,

1. Choose **File > Print**. The *Print* dialog box appears.



2. Select the *Print to File* option in the *Printer* section of the Print dialog box. Notice that when you select the *Print to File* option, the *Print to File* section is activated enabling you to select a file format.
3. Use the *File Format* drop-down list to select the desired file format. Options include JPEG, GIF, PDF, Bitmap, and HP-GL/2.
4. Click **OK** in the *Print* dialog box. The *Print to File* dialog box appears.



5. Enter the file name for your output in the Selection field.
6. Click the **OK** button to output the file.

Agilent EEsof worldwide technical support is available Monday through Friday. The toll-free North America hotline is open 6:00 am to 5:00 pm PT. Throughout Europe, the localized Online Technical Support Centers are open during business hours, typically 8:30 am to 5:30 pm, local time; throughout Asia, the localized Customer Response Centers are open during business hours, typically 9:00 am to 6:00 pm, local time.

The e-mail addresses for the various regions are listed below. However, for both the regional e-mail addresses and local telephone numbers for more than 25 countries, please refer to the Agilent EEsof Web site at

<http://www.agilent.com/find/eesof-supportcontact>

### **North America**

Phone: 1 800 47 EEsof (473-3763) - Fax: 707-577-3511  
e-mail: eesof\_support@agilent.com

**Europe:** e-mail: eesof-europe\_support@agilent.com

**Japan:** e-mail: eesof-japan\_support@agilent.com

**Korea:** e-mail: eesof\_korea@agilent.com

**Asia:** e-mail: eesof-asia\_support@agilent.com

Following are solutions to common problems that occur regarding the FLEXnet licensing setup for ADS.



# Troubleshooting and FAQs - Unix or Linux

## If ADS Does Not Start

It is possible to install programs or options for which you have not purchased licenses. Although the icons and features will appear in the software, you cannot access the applications without a license. Contact your Agilent EEsof sales representative to obtain additional licenses.

If your ADS applications will not start:

- Make sure all of your licensing requirements are correctly set up, as explained in *ADS License Setup - Unix and Linux* (install).
- Using a text editor, open and review the *install.log* file in your installation directory to see if there are any apparent problems with the installation structure. (You can re-run Setup if necessary to re-install.)
- Try using the Agilent License Information Tool, which is available to check your environment variable settings, display your `license.lic` file, and show your license and server status. Refer to *License Information Tool* (install).

If you cannot find the problem, run ADS in verbose (debug) mode and contact Technical Support to help pinpoint the problem. See *Starting ADS in Verbose Mode (Debug Mode)* (install).

## Common Licensing Problems

Following are solutions to common problems that occur regarding the FLEXnet licensing setup for ADS.

### Where to Begin

If you are having trouble getting FLEXnet working, the best place to begin troubleshooting is the *flex.log* file. The *flex.log* file is typically located in `$HPEESOF_DIR/EEsof_License_Tools/linux_x86_xx/licenses`.

Read the *flex.log* file and look for error or warning messages.

If nothing shows up in the *flex.log* file, try setting the following environment variable, then start ADS:

#### C Shell ( /bin/csh)

```
setenv HPEESOF_DEBUG_MODE key
```

#### Bourne/Korn Shell (/bin/sh, /bin/ksh)

```
HPEESOF_DEBUG_MODE=key
export HPEESOF_DEBUG_MODE
```

Look for errors or warnings in the shell where you started ADS.

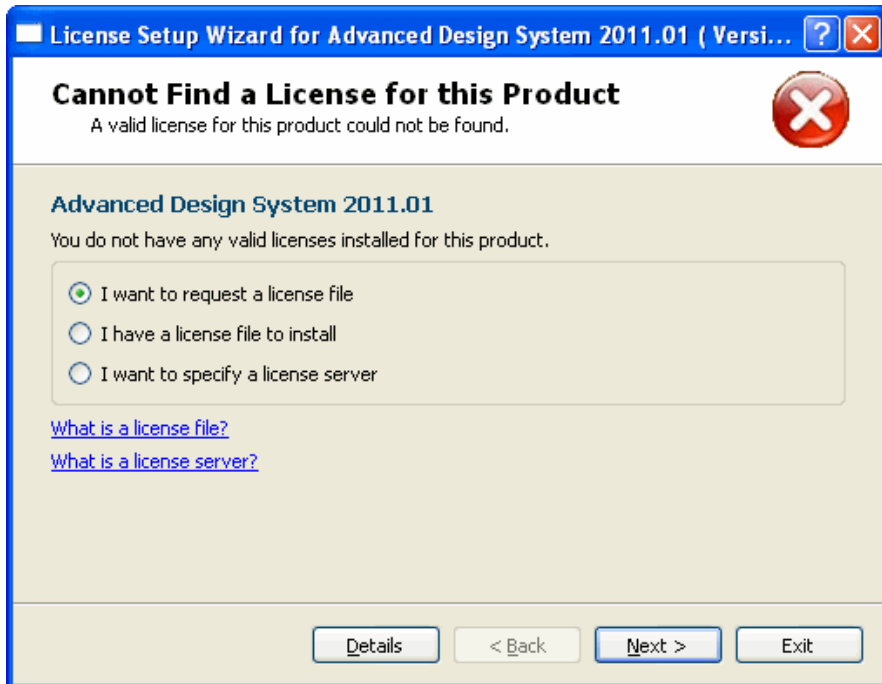
## Common Errors and Solutions

Following are possible solutions to certain license-related error messages that occur.

### ADS Does Not Run After Starting the License Server

If you are unable to run ADS after starting the License Server, additional license configuration may be needed as follows:

Run `aglmwizard` from `<install_folder>/EEsof_License_Tools/linux_x86_xx` folder



### Inconsistent Encryption Code

This error occurs when the information on the INCREMENT lines in the `license.lic` file is corrupted. Check the `license.lic` file for the following:

1. Make sure that each line of the `license.lic` file is a single continuous line with each field separated by a single space.
2. If there are backslash characters ("`\`") line wrapping the lines, make sure that the backslash character is the absolute last character on its line. Even a space after the "`\`" will cause a problem.
3. Try removing the backslash characters and joining the INCREMENT lines, so that each INCREMENT line is a single continuous line with no line wrap.
4. If the `license.lic` file was transferred from DOS to UNIX or Linux, make sure to remove the control M's (`^M`) at the end of all the lines in the `license.lic` file. If spaces are added to the end of each line to eliminate the `^M`'s, the spaces must also be removed. The spaces turn out to be just as disruptive as the `^M`'s. The best way to remove the `^M`'s is using the `vi` editor and the following substitution command:  

```
:1,$ s/.$//g
```
5. Make sure that none of the original SERVER line HOSTID information has been changed. Make sure that none of the SERVER lines have been eliminated.

## Invalid Host or Unable to Determine Machine ID

This can be caused by one of the following:

1. Make sure that the information on the SERVER line(s) in *license.lic* is correct.
2. If the licenses are node-locked, and you attempt to run ADS on a machine other than the machine the licenses are node-locked to, you will get a license error indicating *invalid host*. To check if this is the case, look at the *\$HPEESOF\_DIR/EEsof\_License\_Tools/linux\_x86\_xx/licenses/license.lic* file and check the INCREMENT lines. If each INCREMENT line ends in a machine hostid, then the licenses are node-locked to the machine whose id is shown. You can, however, export the display from the node-locked machine to another display.
3. If you are on an HP workstation, check the permissions of the */dev/lan0* file. This file must have read and write permissions for all:

```
chmod 777 /dev/lan0
```

The FLEXnet *lmgrd* and *agileosf* vendor daemons use this file and must be able to read and write to this device.

## Invalid System Clock Time

FLEXnet detects when systems have had their dates set more than 24 hours back, and prevents users from using expired licenses by setting the clock back. It works by looking for any files in "/" or "/etc" that have a date more than 24 hours in the future.

Use the command *ls -lat* in "/" and "/etc" to find the offending file(s). The date of the offending file(s) can be corrected by using the touch command:

```
touch <filename>
```

If the file is a link, the link must be removed and then recreated. If the link itself is dated ok, check the date of the actual file or directory it points to. The *pointed to* file must also have a valid date.

## A Feature is Not Enabled

FLEXnet licenses have both enable and expiration dates. If the license enable date is in the future with respect to the current machine date, then this error will occur.

First check the date on the computer. If it is not today's date, correct it. The date can be set using the date command:

Workstation	Date Command
Red Hat Linux	date MMDDhh[[cc]yy][.ss]
Solaris	date mddhmm[[cc]yy]

For example, to set the date on a UNIX system to *23 Sept, 2004* at *13:30*, the command would be:

```
date 0923133004
```

If this still does not correct the problem, or if the date is correct, then request new

licenses with an enable date set to today's date.

## Cannot Connect to License Server

If you see a *flex.log* file with the following errors:

```
(lmgrd) Started agileesofd
(agileesofd) Vendor daemon can't talk to lmgrd (cannot connect to
license server) port 27000
(lmgrd) Vendor daemon died with status 241
(lmgrd) Since this is an unknown status, lmgrd will
(lmgrd) attempt to re-start the vendor daemon.
(lmgrd) REStarted agileesofd (internet tcp_port xxxx)
```

Make sure that the *lmgrd* and *agileesofd* daemon are the correct version (current version is 11.6). The *lmgrd* daemon should have the same or higher version number as *agileesofd*. You can check version numbers as follows:

```
cd $HPEESOF_DIR/EEsof_License_Tools/linux_x86_xx/licenses
./bin/lmgrd -v
./vendors/agileesofd -v
```

Make sure that the workstation is connected to a network or that the network connector on the workstation is properly terminated. FLEXnet will not work if the network connection is down or if the network services are not starting properly. Check all physical network connections to make sure that they are okay and look for errors during machine boot up. On HP 700 workstations, look at the */etc/rc.log* file for errors.

Make sure that the *agileesofd* is being started successfully by *lmgrd*. If *agileesofd* cannot be started from the path specified on the VENDOR line in the *license.lic* file, this error will occur. Also make sure that the *agileesofd* file has execute permissions:

```
cd $HPEESOF_DIR/licenses/vendors
chmod 755 agileesofd
```

## Address Already in Use

The tcp port number specified on the SERVER line in the *license.lic* file is in use by another process. Try the following: Kill any stranded *lmgrd* processes. Remove the */usr/tmp/.flexnet/lmgrd.xxxx* file that contains the tcp port you want to use. You can remove the entire */usr/tmp/.flexnet* directory if you are the only one using *lmgrd* on this machine, then restart *lmgrd*. If you still have a problem, try using a different tcp port number on the SERVER line in *license.lic* and then restart *lmgrd*.

Here is an example of properly configured SERVER lines:

```
SERVER joshua 2072EFE45 27000
SERVER isaiah 20472A3D3 27000
SERVER jonah 2052C6416 27000
```

## Printing and Plotting

Printing and plotting from ADS on UNIX is accomplished by establishing the desired print setup and then choosing **File > Print**. The Print Setup and related dialog boxes enable you to:

- Select a printer/plotter other than the default
- Install additional printers or plotters
- Set the print resolution (dpi)
- Scale the output

When you select a printer/plotter, you can also change the following default printer/plotter-specific options:

- Page Size
- Source (Paper Tray)
- Duplexing (Double-sided)
- Orientation (Portrait or Landscape)
- Color (Black and White or Color)

When you choose **File > Print**, you can select from the following additional options:

- Choose to send output to a printer/plotter or print to file
- Scale the output to fit to the page
- Select a file format (if printing to file)
- Specify the number of copies

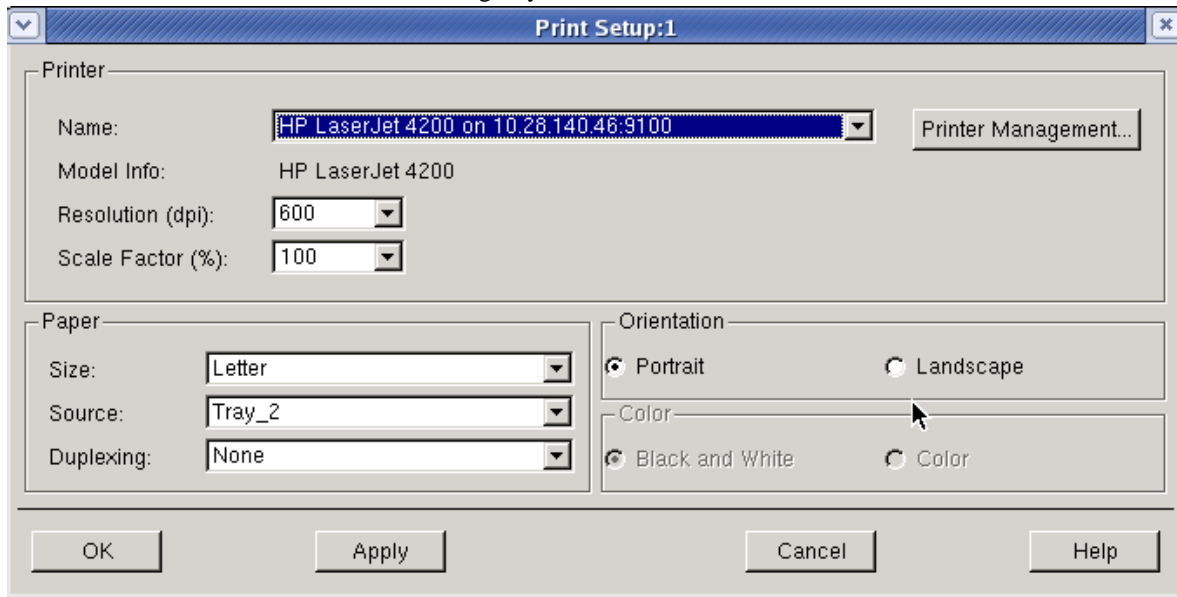
Your print setup is saved in `$HOME/.Xprinterdefaults`. If you do not have a local copy of this file, or the file `.Xpdefaults` (from a previous release), the default file is read from the `$HPEESOF_DIR/xprinter` directory. When you change your print setup, the changes are saved (as new defaults) to `$HOME/.Xprinterdefaults`.

**Note**  
If you do have a file `.Xpdefaults` (from a previous release), the settings of this file are copied to the new filename to serve as the starting point for your print setup. Both files are valid, depending on which release of ADS you are using. The old file is maintained for running an earlier version of ADS, but the new file is used when you run ADS 1.5 (or later).

## Setting Up a Printer

The *Print Setup* dialog box enables you to setup and manage your printer options. To access the Print Setup dialog box,

1. Choose **File > Print Setup**. The *Print Setup* dialog box appears.



For detailed information on using the Print Setup dialog box, refer to the following table.

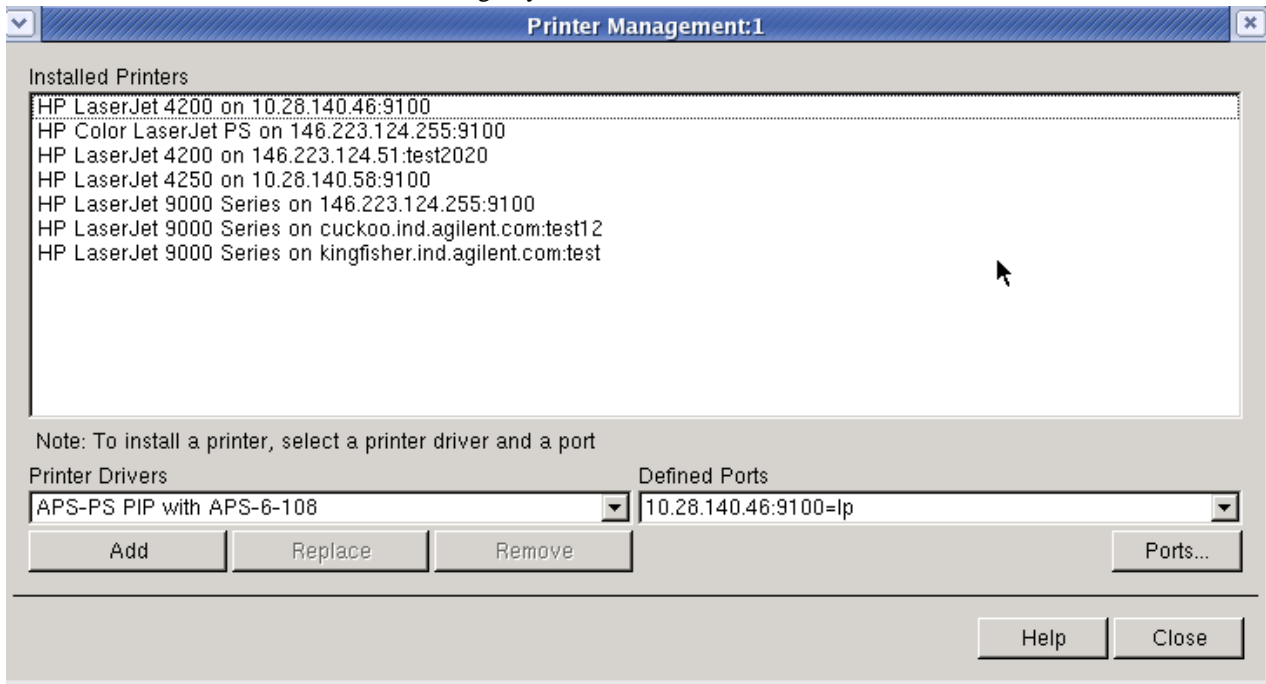
#### Using the Print Setup Dialog box

Option	Description
Printer	Use this section of the Print Setup dialog box to define and manage your printers.
Name:	Select a printer from the Name drop-down list. If the printer you want to use is not available in the list, click the Printer Management button. For more information, refer to <i>Managing Printers</i> (install).
Printer Management	If you want to add, replace, or remove a printer, click the Printer Management button to access the Printer Management dialog box. For more information, refer to <i>Managing Printers</i> (install)
Model Info:	This section displays the selected printer model information.
Resolution (dpi):	This option enables you to set the print quality (resolution) in dots per inch (dpi).
Scale Factor (%):	This option enables you to set a scaling factor that defines the percentage of normal size by which to enlarge or reduce the document on the page. Default is 100%.
Paper	Use this section of the Print Setup dialog box to define the paper settings.
Size:	Use the Size drop-down menu to select the paper size. Default is Letter. Note that paper sizes can vary depending on the paper manufacturer. If you own a printer that provides a specific paper size that you are not familiar with, consult your printer documentation for information on the paper size options available. The more common American paper sizes are listed below in inches (Width vs. Height). Letter = 8.50" (W) x 11.00" (H) Executive = 7.25" (W) x 10.55" (H) Legal = 8.50" (W) x 14.00" (H) Tabloid = 17.00" (W) x 11.00" (H) Ledger = 11.00" (W) x 17.00" (H) Consult the International Organization for Standardization (ISO) for standard A through D-sizes as well as RA and SRA-sizes.
Source:	Use the Source drop-down menu to select the tray that has the paper you want to use. Default is the Upper tray.
Duplexing:	The Duplexing drop-down menu enables you to print on both sides of the paper. The options available are: -None - No duplexing, the document will only print on one side of the paper. -Flip on Short Edge - This option prints on both sides of each sheet and flips the page along the short edge of the paper. - Flip on Long Edge - This option prints on both sides of each sheet of paper and flips the page along the long edge of the paper. The default Duplexing option is None.
Orientation	Use this section of the Print Setup dialog box to define the orientation of your printed page.
Portrait	Click this option if you want your output printed in portrait orientation mode. Portrait is taller than it is wide when you view the text right-side up. Default is activated.
Landscape	Click this option if you want your output printed in landscape orientation mode. Landscape is wider than it is tall when you view the text right-side up. Default is deactivated.
Color	Use this section of the Print Setup dialog box to define your color settings.
Black and White	Click this option if you want your output in black and white. Default is activated unless the system detects support for color printer. If this is the case, the system will default to the color option.
Color	Click this option if you want your output in color. Default is deactivated unless the system detects support for color printer. If this is the case, the system will default to the color option.

## Managing Printers

The *Printer Management* dialog box enables you to manage an individual printer or group of printers. To access the Printer Management dialog box,

1. Choose **File > Print Setup**. The *Print Setup* dialog box appears.
2. Click the **Printer Management** button in the *Print Setup* dialog box. The *Printer Management* dialog box appears.



For detailed information on using the Printer Management dialog box, refer to the following table.

#### Using the Printer Management Dialog Box

Options	Description
Installed Printers	The Installed Printers field displays a list of all currently installed printers.
Printer Drivers	Use the Printer Drivers drop-down list to select a printer driver.
Defined Ports	Use the Defined Ports drop-down menu to select a defined port.
Ports	To define a new printer port and/or replace or remove an existing printer port, click the Ports button to access the Ports dialog box. For more information on the Ports dialog box, refer to <i>Defining Printer Ports</i> (install).
Add	To install a new printer, select a printer driver and a defined port, then click the Add button. The new printer appears in the Installed Printers list.
Replace	To replace an existing printer, click the printer you want to replace in the Installed Printers list. Then select a new printer driver and a new defined port. Click the Replace button to replace the printer. The new printer appears in place of the old printer in the Installed Printers list.
Remove	To remove an existing printer or group of printers, click the printer(s) you want to remove in the Installed Printers list and then click the remove button. A confirmation dialog box appears asking if you really want to remove the printer. Click OK to confirm or Cancel to abort the removal process. If you click OK, the printer(s) no longer appears in the Installed Printers list.
Help	Click the Help button to access the online context sensitive help.
Close	Click the Close button to dismiss the Printer Management dialog box and accept the changes. Settings will be saved upon exit.

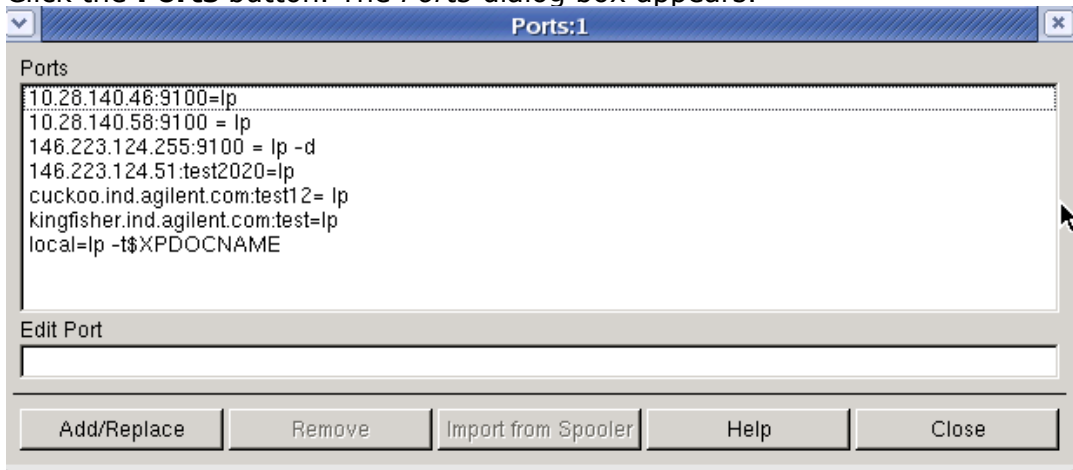
## Defining Printer Ports

The *Ports* dialog box enables you to define new printer ports and/or replace or remove existing printer ports. To access the Ports dialog box,

1. Choose **File > Print Setup**. The *Print Setup* dialog box appears.



- Click the **Printer Management** button. The *Printer Management* dialog box appears.
- Click the **Ports** button. The *Ports* dialog box appears.



For detailed information on using the Ports dialog box, refer to the following table.

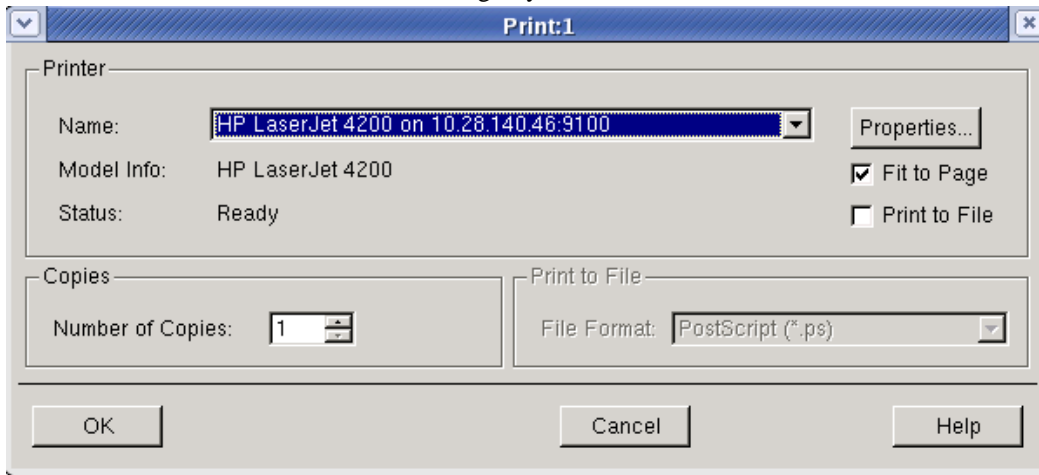
#### Using the Ports Dialog Box

Option	Description
Ports	The Ports field displays a list of ports. Port names can be any names you choose with the exception of <i>FILE:</i> which is a reserved port name.
Edit Port	The Edit Port field is used to enter a new port. After you have entered the port definition, click the Add/Replace button.
Add/Replace	Click the Add/Replace button to update the Ports list with contents of Edit Port field.
Remove	If you want to remove a port from the Ports list, click the port name in the Ports list to activate the Remove button. Click the Remove button to remove the selected port.
Import from Spooler	Click the Import from Spooler button to generate a list of ports (based on your <i>printcap</i> file).  Note that this option is only guaranteed to operate on HP-UX platforms. It may operate on other platforms; however, the third party utility that provides this feature does not guarantee it.
Help	Click the Help button to access the online context sensitive help.
Close	Click the Close button to dismiss the Ports dialog box and accept the changes. Settings will be saved upon exit.

## Printing to a Printer, Plotter, or File

The *Print* dialog box enables you to output your information to a supported printer, plotter, or specified file. To access the Print dialog box,

- Choose **File > Print**. The *Print* dialog box appears.



**Note**

Alternatively, you can click the **Print The Current Design** button in the toolbar of a *Schematic* or *Layout* window to access the Print dialog box. The **Print this window** button in the *Data Display* uses the same user interface.

For detailed information on using the Print dialog box, refer to the following table.

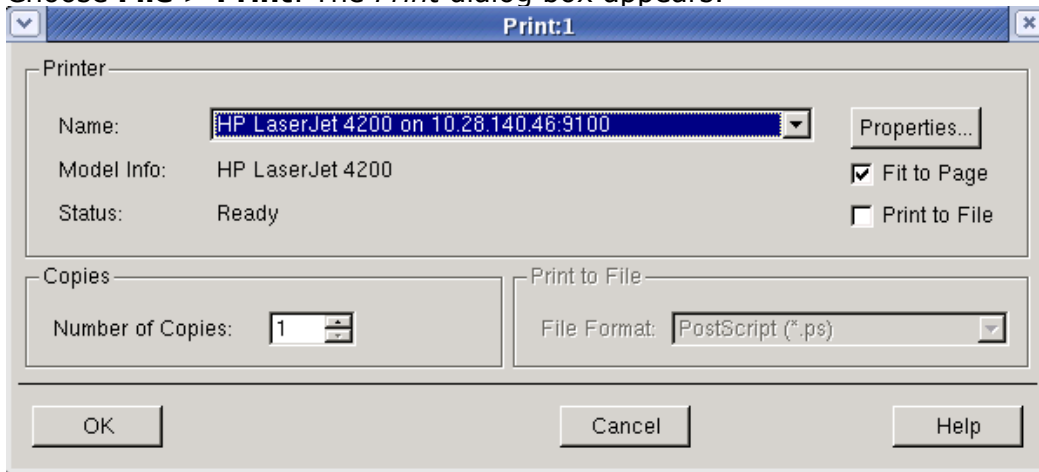
#### Using the Print Dialog Box

Option	Description
Printer	The Printer options in the Print dialog box enable you to define a printer and the output characteristics.
Name:	Select a printer from the Name drop-down list. If the printer you want to use is not available in the list, click the Cancel button and access the Print Setup dialog box.
Model Info:	This section displays the printer model information.
Status:	This section displays information on the printer status. If the printer is ready to print, the Status will display Ready.
Properties	Click the Properties button to view or set additional options used in the Print Setup dialog box. For more information, refer to <i>Setting Up a Printer</i> (install).
Fit to Page	Activate the Fit to Page option if you want your output to be automatically scaled to fit on the page.
Print to File	Activate the Fit to Page option if you want your output to be directed to a file. When this option is selected, the Number of Copies feature is deactivated and the Print to File feature is activated. When this option is deactivated, the Number of Copies feature is activated and the Print to File feature is deactivated.
Copies	This section is used to set the number of copies to print.
Number of Copies	Use this feature to specify the number of copies to print. If Print to File is selected, this feature is deactivated.
Print to File	This section is used to define the type of file you want to send your output to.
File Format:	Use this feature to specify the file format to save your output to. After you have selected your file format, click OK in the Print dialog box. A Print to File dialog box will appear enabling you to define the path and name of the file. For more information on the Print to File dialog box, refer to <i>Printing to a File</i> (install) If the Print to File radio button is deselected, this feature is deactivated.
OK	Click the OK button to accept the settings and send your output to the selected printer or file, depending on how you have set your options. Settings will be saved upon exit.
Cancel	Click the Cancel button to dismiss the Print dialog box. Settings will not be saved upon exit.
Help	Click the Help button to access the online context sensitive help.

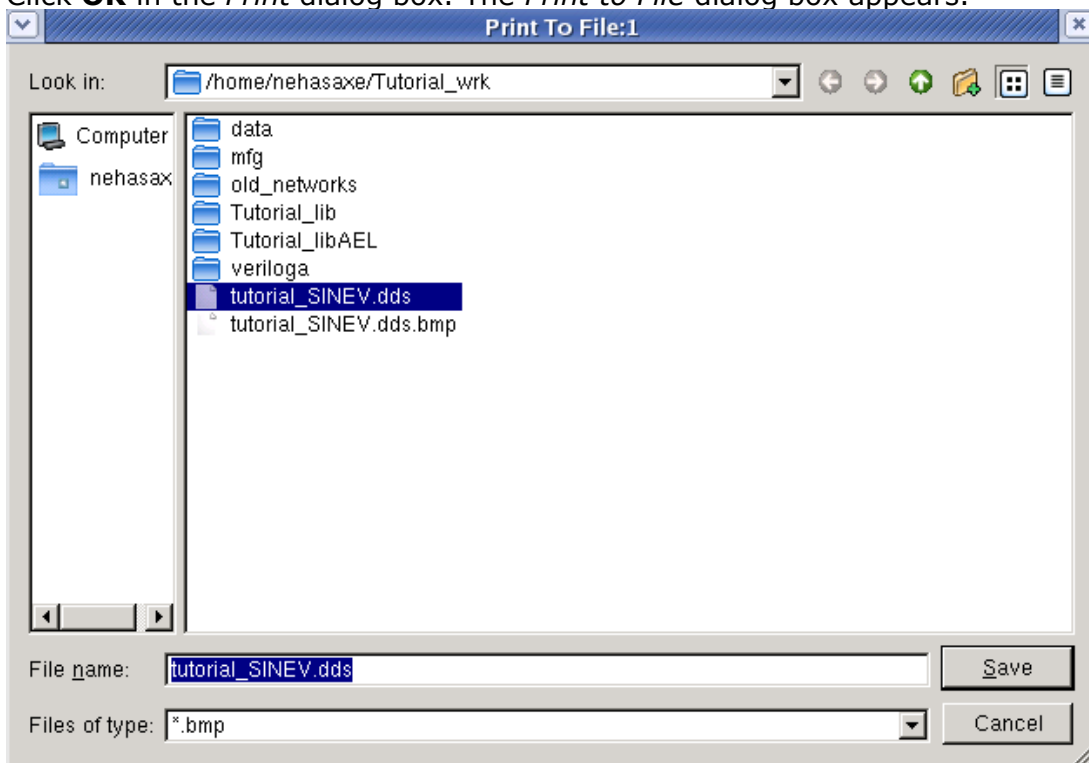
#### Printing to a File

The *Print to File* dialog box enables you to define a destination path and file name and then output your information to the specified file. To use the Print to File dialog box,

1. Choose **File > Print**. The *Print* dialog box appears.



2. Select the *Print to File* option of the Print dialog box. Notice that when you select the *Print to File* option, the *Print to File* section is activated enabling you to select a file format.
3. Use the *File Format* drop-down list to select the desired file format. Options include JPEG, GIF, PDF, Bitmap, and HP-GL/2.
4. Click **OK** in the *Print* dialog box. The *Print to File* dialog box appears.



5. Enter the file name for your output in the Selection field.
6. Click **Save** to save output on the file.

Agilent EEs of worldwide technical support is available Monday through Friday. The toll-free North America hotline is open 6:00 am to 5:00 pm PT. Throughout Europe, the localized Online Technical Support Centers are open during business hours, typically 8:30 am to 5:30 pm, local time; throughout Asia, the localized Customer Response Centers are open during business hours, typically 9:00 am to 6:00 pm, local time.

The e-mail addresses for the various regions are listed below. However, for both the regional e-mail addresses and local telephone numbers for more than 25 countries, please refer to the Agilent EEs of Web site at

<http://www.agilent.com/find/eesof-supportcontact>

**North America**

Phone: 1 800 47 EEs of (473-3763) - Fax: 707-577-3511

e-mail: eesof\_support@agilent.com

**Europe:** e-mail: eesof-europe\_support@agilent.com

**Japan:** e-mail: eesof-japan\_support@agilent.com

**Korea:** e-mail: eesof\_korea@agilent.com

**Asia:** e-mail: eesof-asia\_support@agilent.com

# Installing Connection Manager Server for UNIX and Linux

ADS 2011 release includes a Connection Manager Client on Unix and Linux; however the Connection Manager Server must be installed on a 32-bit system with Windows XP or Windows 2000.

For details, see *Installing Connection Manager Server on Windows* (instalpc).