ACE Installation and Licensing Guide (UG002)

All Achronix Devices



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Chapter - 1: General Information and Preparation

Supported Operating Systems

Supported operating systems are: Windows and Linux. For details on versions, releases and kernels, refer to the release notes section, "System and Tool Requirements," for the specific ACE download or delivery.

Minimum Memory Requirements

Criteria		Amount
Minimum	≤100k LUTs	32 GB
Recommended	>100k LUTs	64 GB

Download the Software

Obtaining Credentials for Download Access

Downloads from Achronix are available via a secure FTP (SFTP) server. The Achronix web site provides a hosted FTP client enabling downloads directly from the site, avoiding the need for separate FTP software.

To gain access to the download server, login credentials must be requested. At www.achronix.com, click **Technical Support** \rightarrow **Getting Started with Achronix** \rightarrow **Learn more**. From there, directions can be found on how to register for a support account at Achronix. After reviewing the authorization request, Achronix will send an automated email containing your username and password.

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Figure 1: Achronix Home Page

Logging into the Secure Server

Use a web browser to navigate to the secure web site location: https://secure.achronix.com. Enter the username and password obtained from Achronix to access the Achronix secure FTP server.

Download the Needed File(s)

When logged in, the toplevel FTP screen appears displaying your home directory (see the figure below). Any files contained in your home directory are private and cannot be accessed by others. These files can be specific files provided to you by Achronix, or files that you choose to upload to the secure server. By default there are no files in your home directory.

Note

Files contained in the 'public' directory can be seen by any user. You cannot upload to the public folder.

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🌣 Most Visited 💊 Getting	g Started 🗋 Achronix			
achr SEMICONDUCTO Name	Home Directory Upload files License Request Logout R CORPORATION Size Last Modified			
public uploads © 2016 Achronix Semicond	luctor Corporation			

Figure 2: Home Directory on the Achronix Secure Server

In the directory /public/Achronix/ACE, you will find subdirectories containing software specific to different Achronix FPGA architectures (previous releases can be downloaded from the sub-directory /Archive).

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Name	Size	Last Modified		
Parent Directo	ry			
Speedster22i				
Speedster7t				
Support				
Speedcore_eF	PGA			
Archive				
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Figure 3: ACE Directory on the Achronix Secure Server

In <selected_subdirectory>/ACE_X.X.X you will find the most recent releases of ACE and device overlays for the cores available, sorted by process node. The latest version of license server binaries are included in the ACE download for both Linux and Windows. The installation scripts for both Windows and Linux are found in ACE_installation_scripts.zip.

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🌣 Most Visited 💊 Getting Started 🗀 Achronix					
achronix SEMICONDUCTOR CORPORATION	ory Upload fil	es License Request Logo	out		
Name	Size	Last Modified			
Parent Directory					
16nm_device_overlays					
7nm_device_overlays					
ACE 8.3.4 Release Notes.pdf	231.93 Kb	02 June 2021 10:27:15			
ACE_8.3.3_ac7t1500_DSM_base_sim_overlay.tgz	151.06 Mb	03 June 2021 03:51:22			
ACE_8.3.4_Windows.exe	307.72 Mb	02 June 2021 09:57:56			
ACE_8.3.3_ac7t1500_DSM_base_sim_overlay.zip	151.07 Mb	03 June 2021 03:51:02			
ACE_installation_scripts.zip	2.90 Kb	02 June 2021 09:55:58			
ACE_8.3.4_Linux.tgz	444.15 Mb	02 June 2021 09:57:08			
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Figure 4: Speedster7t Directory Listing

In the directory /public/Synopsys , you will find the most recent releases of Synplify Pro for Achronix. The most recent license server binaries can be found in the /Licensing subdirectory.

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Licensing					
Archive					
install_synplify_pro.sh	11.79 Kb	05 April 2021 09:21:	10		
	221.70 Mb	05 April 2021 09:22:	48		
SynplifyPro_2020.09x-SP1_release_Windows.zip					
SynplifyPro_2020.09x-SP1_release_Windows.zip	0.64 Kb	05 April 2021 09:29:	19		
 SynplifyPro_2020.09x-SP1_release_Windows.zip README.txt SynplifyPro_2020.09x-SP1_release_Linux.zip 	0.64 Kb 335.24 Mb	05 April 2021 09:29: 05 April 2021 09:22:	19 03		

Figure 5: Synopsys Directory Listing

ACE can be installed to use a node-locked or floating license. Node-locked licenses do not require a license server, while floating licenses do, which can be hosted on a Linux or Windows machine. Synplify Pro always uses a server.

Floating license configurations requires that both client and server machines are connected to the same network. The client machines connecting to a floating license server (i.e., the machines running the ACE and Synplify Pro installations) can be Windows or Linux based regardless of the license server's operating system. In other words, a Linux license server can provide licenses to both Windows and Linux clients. Likewise, a Windows license server can provide licenses to both Windows and Linux clients.

Download the appropriate files depending on your setup.

Note

Specific file names below are examples and may be updated when newer versions are available.

OS and License Type	File Names
Linux Node Locked / Linux Client Software	<pre>/public/Achronix/ACE/<architecture>/<ace build="">/ACE_X.X. X_Linux.tgz (ACE) /public/Synopsys/SynplifyPro_X_X_X_Linux.zip (Synplify Pro)</ace></architecture></pre>
Windows Node locked / Windows Client Software	<pre>/public/Achronix/ACE/<architecture>/<ace build="">/ACE_X.X. X_Windows.exe (ACE) /public/Synopsys/SynplifyPro_X_X_X_Windows.zip (Synplify Pro)</ace></architecture></pre>

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OS and License Type	File Names
Floating (Linux License Server) [†]	Included in software download
Floating (Windows License Server) [†]	Included in software download
 Table Note † For the client software, download the Linux or Windows client software. 	

Chapter - 2: Obtaining Software Licenses

This chapter describes the process of obtaining licenses for ACE design tools and Synplify Pro for Achronix. When installing ACE, you are asked to agree to the Achronix software license agreement. The process is as follows.

Determine the MAC Address of the License Host

Achronix needs the MAC address of the machine for which the license is being generated and the license type (floating or node-locked). MAC addresses are 12 hexadecimal digits long, represented as six pairs of hex digits, with each pair separated by colons (12:34:56:78:90:AB) or dashes (FE-DC-BA-09-87-65).

Windows

To determine the MAC address for Windows machines, enter the following from the command prompt:

```
Example ipconfig output
D:\examples>ipconfig /all
Windows IP Configuration
  Host Name . . . . . . . . . . . . . DEMO-PC
  Primary Dns Suffix . . . . . . : achronix.local
  IP Routing Enabled. . . . . . . . . No
  WINS Proxy Enabled. . . . . . . . . No
  DNS Suffix Search List. . . . . : achronix.local
                              example.net
Ethernet adapter Local Area Connection:
  Connection-specific DNS Suffix . : example.net
  Description . . . . . . . . . . . . Realtek PCIe GBE Family Controller
  Physical Address. . . . . . . . . . . DE-AD-BE-EF-12-34
  DHCP Enabled. . . . . . . . . . . . Yes
  Autoconfiguration Enabled . . . . : Yes
  Link-local IPv6 Address . . . . :
  Lease Obtained. . . . . . . . . . .
  Lease Expires . . . . . . . . . . .
  Default Gateway . . . . . . . . : 192.168.1.1
  DHCPv6 IAID . . . . . . . . . . . . .
  DHCPv6 Client DUID. . . . . . :
  NetBIOS over Tcpip. . . . . . .
  Connection-specific DNS Suffix Search List :
                              example.net
```

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The minimum information required are the hexadecimal numbers following the string "Physical Address" (DE-AD-BE-EF-12-34 in the example above).

Alternately, from the Start menu, select **Settings** \rightarrow **Network & Internet**. Under "Advanced network settings", select **Network and Sharing Center** to open the Network and Sharing Center window. Then click the primary connection link in your active networks, for example **Local Area Connection**, to open the Status dialog:

General			
Connection —			
IPv4 Connectiv	ity:		Internet
IPv6 Connectiv	ity:	No netwo	ork access
Media State:			Enabled
Duration:			02:14:24
Speed:			1.0 Gbps
Details			
Activity			
	Sent —	-	Received
Bytes:	18,819,339	7	1,346,398
Properties	Disable	Diagnose	
			Close

Figure 6: Active Network Status Dialog

From the **Status Dialog Box**, click **Details...** to open the Network Connection Details dialog (see below). The information required are the numbers following "Physical Address" (MAC address) in the form 00-12-34-56-67-89. Click **Close** on both windows and close the Network and Sharing Center and Settings to return to the desktop.

Network Connection Details:		
Property	Value	
Connection-specific DN	achronix.local	
Description	Intel(R) Ethernet Connection 1219-LM	
Physical Address	2017/02/12:40:01	
DHCP Enabled	Yes	
IPv4 Address	152 146 102 30	
IPv4 Subnet Mask	255.255.0.0	
Lease Obtained	Friday, February 28, 2020 10:56:19 AM	4
Lease Expires	Monday, March 02, 2020 10:56:18 AM	1
IPv4 Default Gateway	192.168.1.1	
IPv4 DHCP Server	192.168.100.14	
IPv4 DNS Servers	192.168.100.10	
	192.168.100.14	
IPv4 WINS Server		
NetBIOS over Tcpip En	Yes	
Link-local IPv6 Address	fw80: bald bala on 11 be8014	
IPv6 Default Gateway		
IPv6 DNS Server		
	Close	

Figure 7: Network Connection Details Dialog

Linux

In RHEL, the physical network address (or MAC) value is typically called the Ethernet "HWaddr", reported in the form "00:00:00:00:00:00:00" (six pairs of hexadecimal digits separated by colons).

For Linux machines, run the *ifconfig* command to determine the physical network address (or MAC) of the license server. For RHEL/CentOS 7, the physical network address value is typically called "ether". Below is an example of the output:

```
example ifconfig output from CentOS 7
$ /sbin/ifconfig
eth0: flags=4163<UP,BROADCAST,RUNNING,MULTICAST> mtu 1500
    inet 192.168.99.247 netmask 255.255.0.0 broadcast 192.168.255.255
    ether DE:AD:BE:EF:12:34 txqueuelen 1000 (Ethernet)
    RX packets 1763784155 bytes 3080686114867 (2.8 TiB)
    RX errors 0 dropped 35229878 overruns 0 frame 0
    TX packets 1251178054 bytes 2499128995736 (2.2 TiB)
    TX errors 0 dropped 29 overruns 0 carrier 0 collisions 0
```

If ACE has already been downloaded, the MAC address can be determined by running rlmutil rlmhostid ether from the Achronix-Linux/bin (or bin64) directory.

Request an Evaluation License

Initiate an evaluation license request from https://secure.achronix.com by selecting License Request on the top of the page.

Warning! When accessing a remote license server, running Synplify Pro in batch mode, or if remotely accessing a machine with the tools installed (including remote desktop) request a *floating* license.

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Figure 8: Starting the License Request Process

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achroni SEMICONDUCTOR CORPORA	Home Directory File Manager (SFTP) Logout				^
Achronix License Request Form					
Operating System:	Linux				
License Type:					
License Duration:	30 days V				
Virtual Machine support:					
Mac Address:	de : ad : be : ef : 12 : 34				
Name of requester :	Joe User				
Name of recipient :	Joe User				
Email of recipient :	joeuser@anywhere.com				
Company Name :	Anywhere Corp.				
Company Phone Number :	555-555-1234				
Company physical street address					
0987 Skisdt St Loiuy, CO 12345 USA					
					- 1
Comments					
New evaluation license for Speedster7t					
					~

Figure 9: License Request On-line Form

If the request is for a floating license, enter the number of concurrent users:

Achronix License Request Form	
Operating System:	Linux •
License Type:	Floating -
Number of Concurrent Users:	1 •

Figure 10: Floating License Request

After providing the requested information, scroll down to click Submit, The system then confirms your request:



Figure 11: License Request Confirmation

Achronix responds with license files via e-mail. Details of how to deploy this license file are covered in License Installation (Linux) (see page 22) and License Installation (Windows) (see page 52).

For non-evaluation license requests, i.e., tool licenses attached to sales orders for devices, boards, IP or tools, please contact Achronix technical support at support@achronix.com or your sales representative directly to have a purchase order filled out for the generation of new licenses or renew expired/expiring ones.

Chapter - 3: Software Installation (Linux)

This chapter covers installing Linux versions of ACE design tools and Synplify Pro for Achronix.

Installing ACE

Floating and Node-Locked Licensing

Installing ACE includes installing the ACE tool itself, along with any device overlays. The device overlays include library files for the specific device, example designs, etc. The device overlays are detected and installed as part of this flow. If more device overlays need to be added in the future, see Device Overlays (see page 66). After downloading the ACE software archive (e.g., ACE_8.3.3_Linux.tgz), the necessary device overlays (in the *_device_overlays directories) and ACE_installation_scripts.zip (which include the install script, install_ace.sh) into one directory, perform the following steps:

Do not install multiple versions of ACE in the same directory or install ACE in the same directory as a previous install.

1. In the directory containing the downloaded files, set the installation script to be executable:

```
$ cd <download_directory>
$ chmod 755 install_ace.sh
```

2. Extract the software.

```
$ install_ace.sh [-d <installdir> ] or [-i] | [-h]
```

Table 1: Installer Script install_ace.shOptions

Option	Description
-d <installdir></installdir>	Specifies the root directory to install ACE into. If omitted, ACE is installed in the current directory.
-i (interactive mode)	Prompts the user to enter the name of each TGZ file to install. If omitted, all TGZ files in the current directory are installed.
-h (help mode)	Invokes 'Help' mode where all command line options are listed.

- 3. Copy the resulting /Achronix_Linux directory into the desired "ACE-Install" directory (usually /opt).
- 4. Optionally create an environment variable, ACE_INSTALL_DIR, set to the path of the /Achronix_Linux directory for use by scripts to easily access ACE.
- 5. Install the license file and verify the installation per "FloatingNode and Node-Locked Licensing," in License Installation (Linux). (see page 22)

Uninstalling ACE

To uninstall the current installation, delete the directory used to install ACE (default is /opt/Achronix-linux):

```
$ rm -r /opt/Achronix-linux
```

Note

Root permissions might be required to delete the install directory.

It is recommended to remove the ~/.achronix/ directory located in the home directory. This directory contains ACE session log files, ACE GUI metadata and logs from previous runs of ACE. When installing a new version of ACE, it is good practice to clear out this directory.

Installing Synplify Pro for Achronix

Node-Locked and Floating Licensing

Installing Synplify Pro includes installing the tool and the device overlays. optionally, the overlays alone can be installed if the tool has already been installed (see Device Overlays (see page 66)). Regardless, this version of Synplify Pro (provided by Achronix) must be installed to synthesize designs. After downloading the Synplify Pro software archive and install_synplify_pro.sh in the same directory, perform the following steps:

1. In the directory containing the downloaded files, set the installation script to be executable:

```
$ chmod 755 install_symplify_pro.sh
```

2. Install the software:

```
$ ./install_symplify_pro.sh [-d <installdir> ] or [-h]
```

Table 2: Installer Script install_synplify_pro.sh Options

Option	Description
-d <installdir></installdir>	Specifies the root directory to unzip the Synplify Pro archive into. If omitted, the archive is unzipped in the current directory. Please enter the full path when using this mode.
-h (help mode)	Invokes 'Help' mode where all command line options are listed.

- 3. Follow the instructions given in the installation script, accepting the default options during the installation process. When prompted to enter the installation directories, please enter the full paths. Tilde (~) is not allowed when specifying the paths. At the conclusion of the installation process, the software creates a sub-directory for the installed version of the tool suite in the current directory, by default, or in the chosen directory, if provided.
- 4. Install the license file and verify the installation per "Synplify Pro for Achronix License Installation" in License Installation (Linux) (see page 22).

Uninstalling Synplify Pro for Achronix

To uninstall the current installation, simply delete the directory used to install Synplify Pro (default is /<install_directory>/):

```
$ rm -r /<install_directory>/fpga
```

Note

Root permissions may be required to delete the install directory.

Chapter - 4: License Installation (Linux)

ACE License Installation

Node-Locked Licensing

1. After installing the software per Software Installation (Linux) (see page 19), determine the physical network address (or MAC) of the host system:

\$ /sbin/ifconfig

/ SDII/ IICOIII Ig

Alternatively, the MAC address can be determined by running rlmutil rlmhostid ether from the Achronix-Linux/bin (or bin64) directory.

- 2. Request licenses from Achronix as described in Obtaining Software Licenses (see page 12). Achronix Semiconductor responds with license files as an email attachment. Save these files to a safe location.
- When ACE is installed as described in Software Installation (Linux) (see page 19) (in this example, under /opt), the directory tree is configured as follows:
 Table 3: Ace Linux Directory Structure

	Directory Structure		
/op	/opt/Achronix-linux		
	/bin		
	/bin64		
	/doc		
	/examples		
	/libraries		
	/system		
	/license		
	/ace		

Navigate to the directory where the license file was saved in step 2, and copy <license_file_name>. lic into the license sub-directory.

\$ cp <license_file_name>.lic /opt/Achronix-linux/license

4. Start ACE by launching the executable

```
$ ./install_directory/Achronix-linux/ace
```

Review the license agreement, clicking the **Spacebar** to scroll, then click **y** to agree to the terms. After agreeing to the license, ACE starts up and displays the welcome page (shown below).



Figure 12: ACE Welcome Page

 If the license was not found or was improperly installed, an error dialog appears. Click Close to terminate. Refer to "ACE Licensing Issues" in Troubleshooting (Linux) (see page 31) or contact Achronix Technical Support at support@achronix.com.



Figure 13: Startup Error Dialog

Floating-Node Licensing

1. After installing the software on the client machine per "Installing ACE" in Software Installation (Linux) (see page 19), determine the physical network address (or MAC) of the license server:

```
$ /sbin/ifconfig
```

Alternately, the MAC address of the license server can be determined by running the RLM utility copied over from the client machine where ACE was installed. Copy the directory <ACE install dir>/Achronix-linux/bin (or bin64) from the client to the license server. Then run rlmutil rlmhostid ether from the Achronix-Linux/bin (or bin64) directory.

- 2. Request licenses from Achronix as described in Obtaining Software Licenses (see page 12). Achronix Semiconductor responds by sending a file, ace.lic, as an email attachment. Save this file to a safe location.
- 3. Copy the license file <license_file_name>.lic to an appropriate directory on the license server (/<license_file_path>).
- 4. If you have not done so already, copy the directory<ACE install dir>/Achronix-linux/bin(or bin64)from the client to the license server.
- 5. Edit <license_file_name>.lic to add the license server name and path to the licensing agent:

```
HOST <license_server_host> XXXXXXXXXX 1710
ISV achronix <install_directory>/bin/achronix_license_agent
```

Where XXXXXXXXXXXX is the host ID of the license server.

6. Set the environment variable on the client machine: From a C shell:

```
$ setenv RLM_LICENSE 1710@<license_server_host>
```

From a bash shell:

```
$ export RLM_LICENSE=1710@<license_server_host>
```

Note

Use the following command to check that the environment variable is properly set.

```
$ echo $RLM_LICENSE
```

7. Start the remote licensing manager (RLM) on the license server:

```
$ /<install_directory>/bin/rlm -c <license_file_path> &
```

Note

In the line above can be copied into /etc/rc.d to ensure the server is started each time the license server is restarted,

This command returns an indication that the license server is up:

```
07/14 18:18 (rlm) RLM License Server Version 3.0BL4
Copyright (C) 2006-2007, Reprise Software, Inc. All rights reserved
07/14 18:18 (rlm) License server started on <license_server_host>
07/14 18:18 (rlm) Server architecture: x86 12
07/14 18:18 (rlm) License files:
07/14 18:18 (rlm)/opt/Achronix-linux/<license_file_name>.lic
07/14 18:18 (rlm)
07/14 18:18 (rlm) Web server starting on port 9000
07/14 18:18 (rlm) Using TCP/IP port 1710
07/14 18:18 (rlm) Starting ISV servers:
07/14 18:18 (rlm)... achronix on port 56255
07/14 18:18 (achronix) RLM License Server Version 3.0BL4 for ISV "achronix"
07/14 18:18 (achronix) Server architecture: x86_12
Copyright (C) 2006-2007, Reprise Software, Inc. All rights reserved
RLM contains software developed by the OpenSSL Project for use in the
OpenSSL Toolkit (http//www.openssl.org) Copyright (c) 1998-2003 The
OpenSSL Project. All rights
reserved.
07/14 18:18 (achronix)
07/14 18:18 (achronix) Server started on <license_server_host>
(hostid: XXXXXXX) for:
07/14 18:18 (achronix)ace-v1.0
07/14 18:18 (achronix)
07/14 18:18 (achronix) License files:
07/14 18:18 (achronix) /opt/Achronix-linux/<license_file_name>.lic
07/14 18:18 (achronix)
```

8. Start ACE by launching the executable on the client machine:

\$ /<install_directory>/Achronix-linux/ace

 Review the license agreement, pressing Spacebar to scroll, then click y to agree to the terms. After agreeing to the license, ACE starts up and displays a welcome page (Figure: ACE Welcome Page (see page 23)).

Note

ACE uses the default browser to display information, including the welcome page. If the welcome page is blank, then no default browser is installed.

If the license was not found or was improperly installed, an error dialog (Startup Error Dialog (see page 23)) appears. Click Close to terminate. Refer to "ACE Licensing Issues" in Troubleshooting (Linux) (see page 31) or contact Achronix Technical Support at support@achronix.com.

Synplify Pro for Achronix License Installation

Node-Locked and Floating Licensing

Nodelocked licensing for Synplify Pro under Linux is a simplified floating node installation where the client and server are on the same host.

- 1. Request licenses from Achronix as described in Obtaining Software Licenses (see page 12). Achronix Semiconductor responds by sending a file, synplify.lic, as an email attachment. Save this file to a known location.
- 2. Create a new directory and extract the contents of the SCL_Linux_License_Manager_2018.zip file to this directory.
- 3. Extract the installer using the following command:

\$./SynopsysInstaller_v3.5.run

4. From the directory where the installer was extracted, start the installation:

\$./installer

When prompted to enter the path containing the EST (ftp) or CD/DVD-ROM product files for this version, enter the path to the directory containing the SCL *.spf files.

5. In the directory where SCL is installed, under the subdirectory linux64/bin, the executables lmgrd, lmstat and snpslmd should appear. Ensure that the path to lmgrd is added to the local \$PATH variable by including the following in your .cshrc or .bashrc file.

\$ export PATH=\$PATH:/<path_to_lmgrd>

6. Copy the license file, symplify.lic, to an appropriate directory on the license server (/<license_file_path>).

7. Edit synplify.lic to set the hostname1 to 'localhost' or the actual hostname, and set the path to the Synplify Pro license daemon:

```
SERVER localhost 012345678901 27000
VENDOR snpslmd <path_to_snpslmd>/snpslmd
USE_SERVER
INCREMENT SSST snpslmd 1.0 05-Jul-2012 1
ED1EDC268F3F082F8849 \
```

Note

On an unconfigured Linux machine, the default hostname can be set to localhost.localdomain. This setting can cause a license problem to occur. Changing the hostname to 'localhost' (using the command hostname), or any other name without a '.' should resolve the issue. Also, the SERVER, VENDOR, USE_SERVER, PACKAGE, INCREMENT, or # lines in symplify.lic each need to end with a newline return. Moving text files between Windows and Linux machines can cause the newline return to be lost. If the newline returns are lost, licensing problems can occur.

8. Navigate to the SCL installation directory, under linux64/bin and start the license server.

```
$ ./lmgrd -c <license_file_path> -l /usr/tmp/lmgrd_synplicity.log &
```

9. Verify that the license server has started correctly.

```
$ ./lmutil lmstat -a
```

This command returns an indication that both the license server and daemon are up:

```
lmutil - Copyright (c) 1989-2006 Macrovision Europe Ltd. and/or
Macrovision Corporation. All Rights Reserved.
Flexible License Manager status on Sat 7/16/2011 16:15
License server status: 27000@localhost
License file(s) on localhost:
/<license_file_path>/<license_file_name>.lic:
localhost: license server UP (MASTER) v10.8
Vendor daemon status (on localhost):
snpslmd: UP v11.6
Feature usage info:
Users of synplifypro_achronix: (Total of 1 license issued; Total of 0 licenses in use)
```

10. Set the required environment variable on the client. From a C shell:

\$ setenv SNPSLMD_LICENSE_FILE <license_file_path>

From a bash shell:

\$ export \$ SNPSLMD_LICENSE_FILE=<license_file_path>

To verify that the environment variable is set:

\$ echo \$SNPSLMD_LICENSE_FILE

11. Start Synplify Pro.

```
$ ./synplify_pro
```

If the license is properly installed and the license server and daemon are up, the License Agreement dialog appears (Figure: License Agreement Dialog (see page 29)). Click **Yes** to start the program. The main program window opens.

Note

It can take Synplify Pro up to 30 seconds to check out its license and start.

Synplicity License Agreement	
Please read the following Synplicity License Agreement.	
Press the PAGE DOWN key to see the rest of the Agreement.	
Synplicity Software License Agreement	
	=
BY INDICATING YOUR ACCEPTANCE OF THE TERMS OF THIS AGREEMENT, YOU ("LICENSEE") ARE REPRESENTING THAT YOU HAVE THE RIGHT AND AUTHORITY TO LEGALLY BIND YOURSELF OR YOUR COMPANY, AS APPLICABLE, AND CONSENTING TO BE LEGALLY BOUND BY ALL OF THE TERMS OF THIS AGREEMENT. IF YOU DO NOT AGREE TO ALL THESE TERMS DO NOT INSTALL OR USE THE SOFTWARE, AND RETURN THE SOFTWARE TO THE LOCATION OF PURCHASE FOR A REFUND. This is a legal agreement governing use of the software program provided by Synplicity, Inc. ("Synplicity") to you (the "SOFTWARE"). The term "SOFTWARE" also includes related documentation (whether in print or electronic form), any authorization keys, authorization codes, and license files, and an	1
updates or upgrades of the SOFTWARE provided by Synplicity, but does no include certain "open source" software licensed by third party licensors and	t
Do you agree to all terms and conditions of the Synplicity License Agreement	?
If you answer NO, this program will exit.	
YES	>

Figure 14: License Agreement Dialog

If the license is not found or is improperly installed, a license error page (Figure: License Error Page (see page 30)) opens. Click **Close** to terminate. Refer to "Synplify Pro for Achronix Licensing Issues" in Troubleshooting (Linux) (see page 31) or contact Achronix Technical Support at support@achronix.com.

S License Request X
Unable to get license
Unable to access a software license. This problem can occur for a number of reasons.
• You have a license file, but you are unable to use it. Please refer to the current version of the Synopsys Common Licensing Administration Guide available on the SolvNet Documentation page (click Licensing in the list of titles in the column on the right). If your licenses are centrally administered by your company, you may also want to consult your software system administrator. Note that this software version requires setting either the LM_LICENSE_FILE or the SNPSLMD_LICENSE_FILE environment variable, and that the SYNPLCTYD_LICENSE_FILE variable is no longer used.
• Your license has expired or is invalid for this version, or you have not yet installed a license file. You can obtain an up-to-date license file from your Synopsys SolvNet account, accessible at the following link: https://solvnet.synopsys.com . To initially register for a SolvNet account, you will need to know your Company's Synopsys SiteID. To obtain your SiteID please contact your software system administrator or the person responsible for purchasing your license. If you are still unable to locate your SiteID, please send an email to solvnetfeedback@synopsys.com , stating your name, company name, division and company address. Note that this software version requires a license generated on or after September 7, 2010.
Close

Figure 15: License Error Page

Chapter - 5: Troubleshooting (Linux)

ACE Licensing Issues

Checklist

Node-Locked Installations

- Verify that the host ID listed in the license file matches the MAC address of the first Ethernet adapter in the system (typically marked eth0).
- Verify the install path of the license is correct:

```
<install_directory>/Achronix-linux/license
```

• Verify that license file has the proper extension (.lic) and does not contain an illegal (nonalphanumeric) characters in the name.

Floating-Node Installations

- Verify that the correct type of license (nodelocked versus floatingnode) was requested.
- Verify that the host ID listed in the license file matches the MAC address of the first Ethernet adapter in the system (typically marked eth0).
- Ensure that the machine host name (HOST line), and license agent path (ISV path) are set correctly.
- Ensure that the port number listed in the RLM_LICENSE variable matches the port number listed in the license file.
- Verify the license manager is up on the server by checking the logs.
- If the license manager is running, but the client fails to receive a license, check the license manager logs for an entry showing the license being checked out by the client:

```
01/17 21:12 (achronix) OUT: ace-v1.0 v1.0 by user@client_host
```

...and returned when ACE is closed:

```
01/17 21:19 (achronix) IN: ace-v1.0 v1.0 by user@client_host
```

No entry means that the license request is not reaching the server. Verify that network communication between the client and server is working and that environment variables are properly set. An entry of DENIED can mean that the number of requested licenses has exceeded the number specified in the license file.

32-bit Libraries

When starting the license server, if the error, /lib/ld-linux.so.2: bad ELF interpreter: No such file or directory. is returned, the Linux host is 64-bit but does not have the 32-bit libraries installed. Install the libraries with the following commands:

• On any RPM based distribution (CentOS/RedHat/Fedora/Suse/Mandriva):

```
$ sudo yum -y install glibc.i686
On any DEB based distribution (Debian/Ubuntu/Mint/Crunchbang):

$ sudo apt-get update
$ sudo apt-get install ia32-libs
```

Note

ACE 8.5 is officially supported on CentOS/RHEL 7.4 and up, and RHEL 8 only.

Synplify Pro for Achronix Licensing Issues

Checklist

- Verify that the license file name does not contain illegal (nonalphanumeric) characters in the name.
- Verify that the host ID listed in the license file matches the MAC address of the first Ethernet adapter in the system (typically marked eth0).
- Ensure that first Ethernet adapter in the system (typically marked eth0) is active.
- For nodelocked installations, ensure that the host name in the license file is set to "localhost" or the actual host name.



• Verify that the path to **snpsImd** in the VENDOR line is set correctly.

- Ensure that the license file is formatted properly:
 - Do not remove the USE_SERVER line. This keyword must exist on a line by itself, before any INCREMENT lines.
 - Remove any VENDOR or DAEMON lines for nonsnpslmd vendor daemons.
 - All lines should start with SERVER, VENDOR, USE_SERVER, PACKAGE, INCREMENT, or #.
 - Lines may only wrap after a space and a continuation character (' \'), and all comment lines must start with '#'.
 - Blank lines must *not* be present in the key file as this can cause problems.
 - Strip out all extraneous characters, such as '>' or '>>' symbols at the beginning of lines.
- Ensure that the port number referenced in the SNPSLMD_LICENSE_FILE environment variable matches the port number listed in the license file.
- Problems can occur in batch mode when the license server has both Synplify Pro for Achronix and other Synopsys licenses available. This situation can be avoided by setting an environment variable that sets license preference or using a command line switch that sets license preference:

```
Environment variable
------
Variable: SYNPLIFYPRO_LICENSE_TYPE
Value: synplifypro_achronix
Command line switch
-------
%synplifypro -batch -licensetype synplifypro_achronix <project_file>
```

License Server

If the command Imstat returns:

```
Cannot find license file -1,359:2 (No such file or directory)
```

...even though the license path is set correctly, try running the command with the following option:

\$ lmstat -a -c /license_path/license.dat

If the license file is valid, the program returns the server and daemon status.

Running Multiple License Servers

When running a license server, it is recommended that the version of **Imgrd** be equal to or greater than the highest version of the vendor daemon. Also, two of the same vendor daemons cannot be running on the same system. If multiple Synopsys product licenses are being hosted on this server, the license features for Synplify Pro Achronix have to be appended to the existing license file using the following steps:

1. Stop the license server started for the Synplify Pro Achronix feature.

2. Append the INCREMENT lines for Achronix SynplifyPro to the main license file:

```
INCREMENT SSST
INCREMENT SCL_WAN_DISABLE
INCREMENT synplifypro_achronix
```

- 3. Confirm the versions of **Imgrd** and **snpsImd** being used with the main license file.
- 4. Run lmutil lmreread on the main license server, and then lmutil lmstat -a to confirm that the Synplify Pro Achronix feature is being read.

Other Issues

Host Name Resolution

For floatingnode (clientserver) licensing applications, the license manager normally uses the port@host convention for the license file environment variable set on the client. For example, for ACE licensing:

RLM_LICENSE=1710@main-server

Within some network topologies, the host name might not resolve. In this case, the actual IP address of the license server can be substituted for the host name as a workaround. For example:

RLM_LICENSE=1710@192.168.0.15

Note

This workaround might not be durable, as the server's IP address could change.

Chapter - 6: Software Installation (Windows)

Installing ACE

Warning!

If this is not a first-time installation, refer to Upgrading an ACE Installation (see page 43) below before proceeding. It is generally recommended to uninstall previous versions of ACE before attempting to install a new version of ACE.

Installing ACE includes installing both ACE itself, along with any device overlays. These device overlays include device-specific library files, example designs, etc. After creating an empty directory to receive the files, follow these steps:

1. Download the ACE_X.Y.Z_Windows.exe, ACE_installation_scripts.zip, and all the device overlays needed for the desired version of ACE into this directory. The device overlays are detected and installed as part of this flow. If more device overlays need to be added in the future, see the Device Overlays (see page 66) chapter.

Note

Only download the files for one version of ACE into this directory; do not mix files from multiple versions of ACE.

- 2. Unzip ACE_installation_scripts.zip into the same directory as in step 1 and run the install_ace.bat file by right-clicking the file in Windows Explorer and select **Run as Administrator**.
- 3. If the software was installed previously, the installer asks whether to remove the previous versions (see figure below). If previous version(s) of ACE are *not* desired on this client, click **Yes** to proceed with automatically uninstalling the most recent previous installation of ACE (regardless of version number). with multiple previous versions of ACE, it is necessary to manually uninstall them. To retain previous version (s), click **No** to proceed to step 4.

Achronix	CAD Environment Setup	\times
	Achronix CAD Environment has already been installed. Do you want to remove the previous version before installing Achronix CAD Environment ?	
	<u>Y</u> es <u>N</u> o	

Figure 16: Remove Previous Version Dialog
The installer verifies the archive and opens the Installer Language dialog (see figure below). Select the desired language from the pulldown menu and click **OK** to open the Achronix CAD Environment Setup dialog.

Installer La	nguage	\times
	Please select a language.	
	English	\sim
	OK Cancel	

Figure 17: Installer Language Dialog

5. From the Setup dialog, click **Next >** to open the License Agreement dialog.



Figure 18: Achronix CAD Environment Setup Dialog

6. From the License Agreement dialog, after reviewing the license, click I Agree.

🔕 Achronix CAD Environment Setup — 🗆 🗙	
License Agreement Please review the license terms before installing Achronix CAD Environment	
Press Page Down to see the rest of the agreement.	
ACHRONIX SEMICONDUCTOR CORPORATION	
END USER SOFTWARE LICENSE AGREEMENT	
USE OF THIS SOFTWARE IS SUBJECT TO LICENSE RESTRICTIONS SET FORTH IN THIS END USER LICENSE AGREEMENT. CAREFULLY READ THIS LICENSE AGREEMENT	
If you accept the terms of the agreement, dick I Agree to continue. You must accept the agreement to install Achronix CAD Environment	
Nullsoft Install System v3.03	
< Back I Agree Cancel	

Figure 19: License Agreement Dialog

From the Choose Components dialog, select the desired components to install. For example, uncheck
 Achronix CAD Environment to install only the software and drivers needed for programming. Click Next
 > to continue.

O Achronix CAD Environment	Setup	_		×	
Choose Components Choose which features of Achronix CAD Environment, you want to install.					
Check the components you war install. Click Next to continue.	nt to install and uncheck the comp	onents you dor	n't want t	o	
Select components to install:	 Achronix CAD Environmer Achronix Stapl Player Bitporter Pod USB drivers FTDI CDM USB drivers for 	Description Position you over a comp see its descr	r mouse onent to iption,		
Space required: 355.8 MB	< >				
Nullsoft Install System v3.03 —	< Back	Next >	Car	ncel	

Figure 20: Choose Components Dialog

8. From the Choose Install Location dialog, set the desired installed directory by either typing the path under **Destination Folder** or using the **Browse** button to navigate to the desired location. If previous version(s) of ACE are being retained, pick a location other than where a previous version is installed. For ease of use with scripts, choose a directory name that does not use spaces. Click **Next** > to continue.

🔕 Achronix CAD Environment Setup	_		×
Choose Install Location Choose the folder in which to install Achronix CAD Environment			
Setup will install Achronix CAD Environment in the following folder. To i different folder, click Browse and select another folder. Click Next to c	install in a ontinue.	а	
Destination Folder			
C: Program Files Achronix CAD Environment	Bro	wse	
Space required: 355.8 MB Space available: 322.9 GB			
Nullsoft Install System v3.03			
< Back Nex	d >	Car	ncel

Figure 21: Choose Install Location Dialog

 From the Choose Start Menu Folder dialog, select the desired folder and click Install to start file extraction and begin installation. If a Microsoft Visual C++ installer appears, click Yes to accept the license agreement. 10. If FTDI CDM USB drivers for the Development Board DCC Interface was selected in step 7, click Extract on the FTDI CDM Drivers dialog that appears in order to begin the installation of the drivers. After reviewing the agreement, click I accept this agreement and then click the Next > button. Click the Finish button on the Completing the Device Driver Installation dialog to continue with the ACE install.



Figure 22: Completing the Device Driver Installation Dialog

11. For a first-time installation, from the License Selection dialog, select **Manually install license later** and click **Next**. Otherwise, if a node-locked license or a license server has already been installed, point to the location of the license file or license server and click Next.

Achronix CAD Environment Setup	_		\times
Completing the Achronix CAD Environment Setup How would you like to install your license ?			
Achronix CAD Environment has been installed on your computer. Would you like to install a license now ?			
O License Server			
2765@server			
O License File			
license.lic			
Manually install license later			
Nullsoft Install System v3.03	ct >	Ca	ncel

Figure 23: License Selection Dialog

12. From the Completing Setup dialog, click **Finish**. Install the license file and verify the installation per the License Installation (Windows) (see page 52) chapter.

🕹 Achronix CAD Environment	Setup	_		\times
	Completing Achronix C/ Environment Setup Achronix CAD Environment has been in your computer. Click Finish to dose Setup.	AD Istalled on		
	< <u>B</u> ack <u>F</u> init	sh	Cance	

Figure 24: Completing Setup Dialog

13. Optionally create an environment variable ACE_INSTALL_DIR to set the location of the /Achronix directory that can be used by scripts to easily access ACE.

Upgrading an ACE Installation

Achronix presently does not support multiple parallel versions of ACE on the same machine. Thus before upgrading ACE, the prior version should be uninstalled.

- 1. Disconnect any USB Bitporters
- 2. (If a node-locked license is being used for ACE:) Copy the license/*.lic file from the ACE installation directory to another location (somewhere not under the ACE installation directory).
- 3. Uninstall the prior version of ACE
- 4. Install the desired version of ACE
- 5. (If a node-locked license is being used for ACE:) Copy the license/*.lic file back to the proper location within the new ACE installation directory.
- 6. Re-connect any USB Bitporters
- 7. Run ACE

Installing multiple versions of ACE at the same time is not supported in Windows

Unsupported: Installing multiple versions of ACE at once

This is not officially supported due to limitations in the existing installer/uninstaller framework used by ACE. We do hope to support this scenario in a future ACE release. Unsupported Workaround:

- 1. Disconnect any USB Bitporters
- Install each version of ACE into a separate directory. See the directions below regarding uninstalls.
- 3. Re-connect any USB Bitporters
- 4. Run the desired version of ACE.

Be aware that the most recently installed version of ACE is also the first one in the PATH

environment variable, which affects the version of ACE and the acx_stapl_player that gets executed if/when running those tools manually from the Command Prompt.

Unsupported: Uninstalling ACE after having previously installed multiple versions of ACE at once

This scenario is not officially supported, though we do hope to remedy this in a future version of ACE. At this time, the ACE uninstaller is only able to uninstall the most-recently-installed version of ACE. (Note that this is not the same as the most recent release of ACE.)

Unsupported Workaround (if the version-to-be-uninstalled is not the version most recently installed):

- 1. Disconnect any USB Bitporters
- 2. Re-install the EXACT version of ACE you wish to uninstall on top of itself. *The installation directory must match exactly.*
- Uninstall that unwanted version of ACE. When complete, all remnants of that ACE version should have been removed.
- 4. Repeat steps 2 and 3 (re-install, then uninstall) for each remaining unwanted version of ACE.
- 5. Re-install the current favorite version of ACE on top of itself. This ensures the favorite version of ACE is once-again the first version in the PATH environment variable (required when running " ace" and "acx_stapl_player" from the Command Prompt), and also makes the uninstaller once again aware of that version.
- 6. Re-connect any USB Bitporters

Uninstalling ACE

A Caution!

The ACE (un)installer does not fully support multiple copies of ACE being installed on the same machine simultaneously. The uninstaller always uninstalls the most recently installed version of ACE, regardless of version number. See the section Upgrading an ACE Installation (see page 43) for further details and workarounds.

To uninstall ACE on Windows:

- 1. Select Start \rightarrow Programs \rightarrow Achronix CAD Environment \rightarrow Uninstall Achronix CAD Environment and skip to step 4.
- 2. Alternately, open the Control Panel and click Programs and Features.
- 3. From the Uninstall or change a program dialog, double-click Achronix CAD Environment.
- 4. From the Achronix CAD Environment Uninstall dialog, click **Uninstall** to start the uninstall process. The window closes when the process completes.

Achronix CAD En	vironment Uninstall	_		×
Uninstall Achronix Remove Achronix C	AD Environment			
Achronix CAD Envir Uninstall to start th	onment will be uninstalled from the following folde e uninstallation.	er. Click		
Uninstalling from:	C:\Program Files\Achronix CAD Environment			
Nullsoft Install System	v3.03	ninstall	Ca	ncel

Figure 25: Achronix CAD Environment Uninstall Dialog

Installing Synplify Pro for Achronix

Warning!

A

If the license configuration is node locked when upgrading Synplify Pro for Achronix, any existing license files in the directory \Synopsys might be removed or overwritten. Be sure to save a copy of the license file in a safe place for reuse after a program upgrade.

Follow the steps below to install Synplify Pro:

1. Download the Synplify Pro zip file (e.g., SynplifyPro_2020.09x-SP1_release_Windows.zip) and extract its contents.

Note

Interpretation of the symplify Pro zip file, but are installed after the Symplify Pro zip file, but are installed after the Symplify Pro zip file.

- 2. Doubleclick the install program (e.g., fpga_vL-2016.09X_1w_win.exe) to begin the install.
- From the Synplify Pro for Achronix Setup dialog (shown below), click Next > to open the License Agreement dialog.



Figure 26: Synplify Pro for Achronix Setup Dialog

4. Select I accept the terms of the license agreement followed by Next >.

SynplifyPro_for_Achronix Setup	_		×
License Agreement	сл	וסחפי	10.
Please review the license terms before installing SynplifyPro_for_Achronix	эуі	IUP3)	3
Press Page Down to see the rest of the agreement.			
SYNOPSYS END-USER SOFTWARE LICENSE AND MAINTENANCE AGREEMENT Synplicity Software Products			^
This is a legal agreement between you and the contracting Synopsys identified below ("Synopsys"). If you use the Synopsys products and an employee of or for the benefit of your company, you represent the the power and authority to accept this agreement on behalf of your of the power and authority to accept this agreement on behalf of your of the power and authority to accept this agreement on behalf of your of the power and authority to accept this agreement on behalf of your of the power and authority to accept the power and authority of the power and authority to accept the power and behalf of your of the power and authority to accept the power and behalf of your of the power and authority to accept the power accept the power and behalf of your of the power and authority to accept the power and behalf of your of the power and authority to accept the power accept the power and behalf of your of the power and authority to accept the power accept the	entity services at you ha	as ave . In	¥
If you accept the terms of the agreement, select the first option below agreement to install SynplifyPro_for_Achronix. Click Next to continue	w. You mi	ust accept	the
I accept the terms of the License Agreement I do not accept the terms of the License Agreement			
Synopsys Installer v5.0			
< Back Next	t >	Cano	cel

Figure 27: Synopsys End-User License Agreement

5. Choose the destination folder to receive the software.

SynplifyPro_for_Achronix Setup	_		\times
Choose Install Location Choose the folder in which to install SynplifyPro_for_Achronix	sy	nops	ys:
Setup will install SynplifyPro_for_Achronix in the following folder. To ir in a different folder, click Browse and select another folder. Click Next	istall to con	tinue.	
Destination Folder c:\Synopsys\fpga_Q-2020.03-Beta5	В	rowse	
Space required: 439.8MB Space available: 320.4GB			
Synopsys Installer v5.0	t >	Ca	ncel

Figure 28: Choose Install Location Dialog

6. From the Choose Start Menu Folder dialog, select the desired folder and then click Next >.

7. From the Start Copying Files dialog, select **Accept**, **Next** > to begin the installation.

SynplifyPro_for_Achronix Setup	_		×
Start Copying Files Preview settings before copying files	Syn	OPS	/S [.]
Install SynplifyPro_for_Achronix Destination: c:\Synopsys\fpga_Q Core Component: 439 MB Available Disk Space: 328131 MB			
Licensed Products communicate with Synopsys servers for the software updates, detecting software piracy and verifying the Licensed Products in conformity with the applicable License Ke Products. Synopsys will use information gathered in connectio to deliver software updates and pursue software pirates and Synopsys Installer v5.0 <back< td=""><td>e purpose of pr at customers a ey for such Lice on with this prod infringers. eept, Next></td><td>oviding re using nsed cess Can</td><td>cel</td></back<>	e purpose of pr at customers a ey for such Lice on with this prod infringers. eept, Next>	oviding re using nsed cess Can	cel

Figure 29: Start Copying Files Dialog

8. From the InstallShield Wizard Complete dialog, click **Finish** to complete the installation.



Figure 30: InstallShield Wizard Complete Dialog

- 9. Install the license file and verify the installation as detailed in "Synplify Pro for Achronix License Installation" in the License Installation (Windows) (see page 52) chapter.
- 10. Install the device overlays as described in the Device Overlays (see page 66) chapter.

Uninstalling Synplify Pro

To uninstall Synplify Pro on Windows:

- 1. Select Start \rightarrow Programs \rightarrow Synplify Pro \rightarrow Uninstall Synplify Pro and skip to step 4.
- 2. Alternately, open the Control Panel and click Programs and Features.
- 3. From the Uninstall or change a program dialog, double-click Synopsys Synplify Pro for Achronix.

4. From the SynplifyPro for Achronix Confirm Uninstall dialog, click **Uninstall** to start the uninstall process. The window closes when the process completes.

SynplifyPro_for_Act	👿 SynplifyPro_for_Achronix Q-2020.03X Uninstall				×
Confirm uninstall Remove SynplifyPro_f computer.	or_Achronix Q-2020.03X fror	n your	Syna)PSY	S.
SynplifyPro_for_Achro Uninstall to start the u	onix Q-2020.03X will be uninst ininstallation.	talled from the foll	owing folder	. Click	
Uninstalling from:	C:\Synopsys\fpga_Q-2020.0	3X\			
Synopsys Installer v5.0 -		< Back Un	install	Cancel	I

Figure 31: Synplify Pro Confirm Uninstall Dialog

Chapter - 7: License Installation (Windows)

ACE License Installation

Node-Locked Licensing

Follow these steps to install a node-locked license on Windows:

- 1. Determine the physical network address (or MAC) of the host system.
- 2. Request licenses from Achronix as described in Obtaining Software Licenses (see page 12). Achronix Semiconductor responds by sending a file, ace.lic, as an email attachment. Save this file to a safe location.
- 3. When the Achronix CAD Environment is installed as described in the Software Installation (Windows) (see page 36) chapter, save ace.lic to the directory \Program Files\Achronix CAD Environment\Achronix\license, or to the location used during install if the default location was overridden. Ensure there are sufficient write privileges for the target directory.

To verify installation and licensing, select from the Start menu, Achronix CAD Environment → Achronix CAD Environment to start ACE. ACE starts up and displays the welcome page shown below.



Figure 32: ACE Welcome Page

If the license is not found or is improperly installed, an error dialog (shown below) appears. Click **Close** to terminate. Refer to Troubleshooting (Windows) (see page 64) or contact Achronix Technical Support at support@achronix.com.



Figure 33: Startup Error Dialog

It is possible that the windows firewall configuration might prompt for permission to allow ACE to access the network (an example is shown below). Grant permission by clicking **Allow access**.

💣 Windows Sec	urity Alert		×	
Windo app	ows Defend	er Firewall has blocked some features of this		
Windows Defender domain networks.	r Firewall has blo	cked some features of synplify on all public, private and		
6	Name:	synplify		
	Publisher:	Unknown		
	Path:	C:\synopsys\fpga_q-2020.03-beta5\bin64\mbin \synplify.exe		
Allow synplify to co	ommunicate on t	hese networks:		
🗹 Domain netv	works, such as a	workplace network		
Private netw	vorks, such as m	y home or work network		
Public networks, such as those in airports and coffee shops (not recommended because these networks often have little or no security)				
What are the risks	of allowing an a	pp through a firewall?		
		Allow access Cancel		

Floating Licensing

For a floating license, the option exists to host a license server on either a Linux or Windows platform, even if the specific license(s) are intended for use on Windows. If hosting a license server on Linux, refer to the License Installation (Linux) (see page 22) chapter. Refer to the following if hosting the license server on Windows.

After installing the software on the client as described in the "Installing ACE" topic in the chapter, Software Installation (Windows) (see page 36):

- Determine the physical network address (or MAC) of the license server. Refer to the "Windows" section under the topic "Determine the MAC Address of the License Host" in the chapter Obtaining Software Licenses (see page 12).
- 2. Request licenses from Achronix as described in Obtaining Software Licenses (see page 12). Achronix Semiconductor responds with a file, ace.lic, as an email attachment. Save this file to a safe location.
- 3. Copy the license file ace.lic to an appropriate directory on the license server.
- 4. Copy the directory C:\Program Files\Achronix CAD Environment\Achronix\bin (or bin64) from the client to the license server.
- 5. Edit ace.lic to add the license server name and path to the licensing agent:

HOST <license_server_host> XXXXXXXXXX 1710 ISV achronix <install_directory>\bin\achronix_license_agent

Where XXXXXXXXXXXXX is the host ID of the license server.

6. Set the environment variable on the client machine. From the Start menu, select Windows System → Control Panel → System. Scroll the About section down and select Advanced system settings to open the System Properties dialog (see below):

System Properties	\times
Computer Name Hardware Advanced System Protection Remote	
You must be logged on as an Administrator to make most of these changes	
Visual effects, processor scheduling, memory usage, and virtual memory	
Settings	
User Profiles	
Desktop settings related to your sign-in	
Settings	
Startup and Recovery	
System startup, system failure, and debugging information	
Settings	
Environment Variables	
OK Cancel Apply	

Figure 34: System Properties Dialog

7. Click Environment Variables... to open the Environment Variables dialog (see below).

lser variables for	lise -		
Variable	Value		
OneDrive	C:\Users\	OneDrive - Achronix Semiconductor Co	
OneDriveCommercial	C:\Users\	OneDrive - Achronix Semiconductor Co	
Path	C:\Users\	AppData\Local\Microsoft\WindowsAp	
SNPSLMD_LICENSE_FILE	C:\Synopsys\fpg	P-2019.09X-Beta1\license\synplify.lic	
TEMP	C:\Users\	<pre>\AppData\Local\Temp</pre>	
TMP	C:\Users\	\AppData\Local\Temp	
ystem variables			
ystem variables Variable	Value	- 20 1	^
ystem variables Variable ComSpec	Value C:\Windows\syste	em32\cmd.exe	^
ystem variables Variable ComSpec DriverData	Value C:\Windows\syste C:\Windows\Syste	em32\cmd.exe em32\Drivers\DriverData	^
variables Variable ComSpec DriverData NUMBER_OF_PROCESSORS	Value C:\Windows\syste C:\Windows\Syste 8 Windows NT	em32\cmd.exe em32\Drivers\DriverData	^
ystem variables Variable ComSpec DriverData NUMBER_OF_PROCESSORS OS Path	Value C:\Windows\syste C:\Windows\Syste 8 Windows_NT C:\Windows\syste	em32\cmd.exe em32\Drivers\DriverData em32\C\Windows\System32\Whe	^
ystem variables Variable ComSpec DriverData NUMBER_OF_PROCESSORS OS Path PATHEXT	Value C:\Windows\syste C:\Windows\Syste 8 Windows_NT C:\Windows\syste COM: EXE: RAT: C	em32\cmd.exe em32\Drivers\DriverData em32;C:\Windows;C:\Windows\System32\Wbe MD: VRS: VRF: IS: ISF: WSF: WSF: WSF: MSC	^
variables Variable ComSpec DriverData NUMBER_OF_PROCESSORS OS Path PATHEXT PROCESSOR_ARCHITECTUR	Value C:\Windows\syste C:\Windows\Syste 8 Windows_NT C:\Windows\syste .COM;.EXE;.BAT;.C	em32\cmd.exe em32\Drivers\DriverData em32;C:\Windows;C:\Windows\System32\Wbe MD;.VBS;.VBE;JS;JSE;.WSF;.WSH;.MSC	^
ystem variables Variable ComSpec DriverData NUMBER_OF_PROCESSORS OS Path PATHEXT PROCESSOR_ARCHITECTUR PROCESSOR_IDENTIFIER	Value C:\Windows\syste C:\Windows\Syste 8 Windows_NT C:\Windows\syste .COM;.EXE;.BAT;.C E AMD64 Intel64 Family 6 M	em32\cmd.exe em32\Drivers\DriverData em32;C:\Windows;C:\Windows\System32\Wbe MD;.VBS;.VBE;JS;JSE;.WSF;.WSH;.MSC Model 142 Stepping 12. GenuineIntel	^ ~
ystem variables Variable ComSpec DriverData NUMBER_OF_PROCESSORS OS Path PATHEXT PROCESSOR_ARCHITECTUR PROCESSOR_IDENTIFIFR	Value C:\Windows\syste C:\Windows\Syste 8 Windows_NT C:\Windows\syste .COM;.EXE;.BAT;.C E AMD64 Intel64 Family 6 M	em32\cmd.exe em32\Drivers\DriverData em32;C:\Windows;C:\Windows\System32\Wbe MD;.VBS;.VBE;.JS;JSE;.WSF;.WSH;.MSC Model 142 Stepping 12. GenuineIntel	~
ystem variables Variable ComSpec DriverData NUMBER_OF_PROCESSORS OS Path PATHEXT PROCESSOR_ARCHITECTUR PROCESSOR_IDENTIFIER	Value C:\Windows\syste C:\Windows\Syste 8 Windows_NT C:\Windows\syste .COM;.EXE;.BAT;.C & AMD64 Intel64 Family 6 M	em32\cmd.exe em32\Drivers\DriverData em32;C:\Windows;C:\Windows\System32\Wbe MD;.VBS;.VBE;JS;JSE;.WSF;.WSH;.MSC Model 142 Stepping 12. GenuineIntel New Edit Delete	~

Figure 35: Environment Variables Dialog

 Under the System variables section, click New and enter: Variable name: RLM_LICENSE Variable value: 1710@<license_server_host>

New System Variable	×	(
Variable <u>n</u> ame:	RLM_LICENSE	
Variable <u>v</u> alue:	1710@servername	
Browse <u>D</u> irectory	Browse <u>F</u> ile OK Cancel	

Figure 36: New System Variable Dialog

9. Click **OK** to set, followed by **OK** to close the Environment Variables window and then the System Properties window.

Note The environment variable can also be set from the command line (but is forgotten as soon as the command line window is closed): C:\> set RLM_LICENSE 1710@<license_server_host> To verify that the environment variable is set: C:\> echo %RLM_LICENSE%

10. Start the remote licensing manager (RLM) on the license server. This can either be run as administrator on demand from the server, or run as a Windows service process at startup. A service process set up to start automatically at boot time runs as long as the system is up. To install RLM as a service, enter the following from a command prompt:

```
rlm -install_service -dlog [+]logfile [-service_name sname] [-user username] [-password
password] <rlm runtime args>
```

Table 4: RLM Command Parameters

RLM Option	Description
logfile	The path name for the server debug log. This parameter is required. If preceded by the '+' character, the logfile is appended, rather than created.
sname	An optional name for the installed service. If not specified, sname defaults to "rlm". If sname contains embedded whitespace, it must be enclosed in double quotes.
rlm runtime args	Any other command line arguments to be passed to rlm when it is started.

Example

```
rlm -install_service -service_name rlm-xyz -dlog c:\logs\server.log -c c:\licenses\xyz.lic
```

This example installs rlm as a service under the name "rlm-xyz". When started via the Services control panel or at boot time, rlm receives arguments from the file c:\licenses\xyz.lic, and writes debug log information to the file c:\logs\server.log

This command returns an indication that the license server is up:

```
07/14 18:18 (rlm) RLM License Server Version 3.0BL4
Copyright (C) 2006-2007, Reprise Software, Inc. All rights reserved
07/14 18:18 (rlm) License server started on <license_server_host>
```

```
ACE Installation and Licensing Guide (UG002)
```

```
07/14 18:18 (rlm) Server architecture: x86_12
07/14 18:18 (rlm) License files:
07/14 18:18 (rlm)/opt/Achronix-linux/<license_file_name>.lic
07/14 18:18 (rlm)
07/14 18:18 (rlm) Web server starting on port 9000
07/14 18:18 (rlm) Using TCP/IP port 1710
07/14 18:18 (rlm) Starting ISV servers:
07/14 18:18 (rlm)... achronix on port 56255
07/14 18:18 (achronix) RLM License Server Version 3.0BL4 for ISV "achronix"
07/14 18:18 (achronix) Server architecture: x86_12
Copyright (C) 2006-2007, Reprise Software, Inc. All rights reserved
RLM contains software developed by the OpenSSL Project for use in the
OpenSSL Toolkit (http//www.openssl.org) Copyright (c) 1998-2003 The
OpenSSL Project. All rights
reserved.
07/14 18:18 (achronix)
07/14 18:18 (achronix) Server started on <license_server_host>
(hostid: XXXXXXX) for:
07/14 18:18 (achronix)ace-v1.0
07/14 18:18 (achronix)
07/14 18:18 (achronix) License files:
07/14 18:18 (achronix) /opt/Achronix-linux/<license_file_name>.lic
07/14 18:18 (achronix)
```

Synplify Pro for Achronix License Installation

Floating-Node Licensing

- Determine the physical network address (or MAC) of the license server. Refer to the "Windows" section under the topic "Determine the MAC Address of the License Host" in the chapter Obtaining Software Licenses (see page 12).
- 2. Request licenses from Achronix as described in Obtaining Software Licenses (see page 12). Achronix Semiconductor responds with a file, synplify.lic, as an email attachment. Save this file to a safe location.

Note

- Insure the FEATURE line in symplify.lic begins on a new line. If the newline returns are lost, licensing problems can occur.
- 3. When Synplify Pro for Achronix is installed as described in "Installing Synplify Pro for Achronix" in Software Installation (Windows) (see page 36), save synplify.licto a directory. The license file location is assigned to an environment variable later in this process.
- 4. Edit synplify.lic to set the hostname1 to "localhost" or the actual hostname, and set the path to the Synplify Pro license daemon:

```
SERVER localhost 012345678901 27000 VENDOR snpslmd <path_to_snpslmd>/snpslmd USE_SERVER
INCREMENT SSST snpslmd 1.0 05-Jul-2012 1
ED1EDC268F3F082F8849 \
```

- 5. Download scl_v2018.06_OEM_win.exe from the /public/Synopsys/Licensing directory on secure.achronix.com, then run it as administrator.
- 6. Navigate to the license server directory created from scl_v2018.06_OEM.exe and start the license server:

C:\> <license_server>\win32\bin\lmgrd.exe -c <license_file_path> -l lmgrd_synplicity.log &

7. Verify that the license server has started correctly:

C:\> <license_server>\lmutil lmstat -a

This command returns an indication that both the license server and daemon are up:

```
lmstat - Copyright (c) 1989-2009 Flexera Software, Inc. All Rights
Reserved.
Flexible License Manager status on Mon 10/3/2011 22:04 [Detecting lmgrd processes...]
License server status: 27000@localhost
License file(s) on Australia: C:\license_dir\synplify.lic:
localhost: license server UP (MASTER) v11.8
Vendor daemon status (on localhost):
snpslmd: UP v11.8
Feature usage info:
Users of SSST: (Total of 1 license issued; Total of 0 licenses in use) Users of
synplifypro_achronix: (Total of 1 license issued; Total of 0
licenses in use)
```

 Set the required environment variable on the host. From the Start menu, select Windows System → Control Panel → System. Scroll the About section down and select Advanced system settings to open the System Properties dialog (see below):

System Properties	\times
Computer Name Hardware Advanced System Protection Remote	
You must be logged on as an Administrator to make most of these changes	
Visual effects, processor scheduling, memory usage, and virtual memory	
Settings	
User Profiles	
Desktop settings related to your sign-in	
Settings	
Startup and Recovery	
System startup, system failure, and debugging information	
Settings	
Environment Variables]
OK Cancel Apply	

Figure 37: System Properties Dialog

9. Click Environment Variables... to open the Environment Variables dialog (see below).

Variable	Value		
OneDrive	C:\Users\	OneDrive - Achronix Semiconductor Co.	
OneDriveCommercial	C:\Users\	OneDrive - Achronix Semiconductor Co.	
Path	C:\Users\	\AppData\Local\Microsoft\WindowsAp	
SNPSLMD_LICENSE_FILE	C:\Synopsys\fpga	P-2019.09X-Beta1\license\synplify.lic	
TEMP	C:\Users\	\AppData\Local\Temp	
TMP	C:\Users\	\AppData\Local\Temp	
		New Edit Delet	e
vstem variables		New Edit Delet	e
vstem variables Variable	Value	New Edit Delet	e
rstem variables Variable ComSpec	Value C:\Windows\syste	New Edit Delet	e
rstem variables Variable ComSpec DriverData NIMBRER OF PROCESSORS	Value C:\Windows\syst C:\Windows\Syst	New Edit Delet em32\cmd.exe em32\Drivers\DriverData	e
vstem variables Variable ComSpec DriverData NUMBER_OF_PROCESSORS	Value C:\Windows\syst C:\Windows\Syst 5 8 Windows NT	New Edit Delet em32\cmd.exe em32\Drivers\DriverData	e
rstem variables Variable ComSpec DriverData NUMBER_OF_PROCESSORS OS Path	Value C:\Windows\syst C:\Windows\Syst S 8 Windows_NT C:\Windows\syst	New Edit Delet em32\cmd.exe em32\Drivers\DriverData	e
rstem variables Variable ComSpec DriverData NUMBER_OF_PROCESSORS OS Path PATHEXT	Value C:\Windows\syste C:\Windows\Syste S 8 Windows_NT C:\Windows\syste .COM:EXE:BAT:.C	New Edit Delet em32\cmd.exe em32\Drivers\DriverData em32;C:\Windows;C:\Windows\System32\Wbe MD:.VBS:.VBE:JS:JSE:WSF:.WSF:.WSF:.MSC	e
rstem variables Variable ComSpec DriverData NUMBER_OF_PROCESSORS OS Path PATHEXT PROCESSOR ARCHITECTUF	Value C:\Windows\syst C:\Windows\Syst S 8 Windows_NT C:\Windows\syst .COM;.EXE;.BAT;.C RE AMD64	New Edit Delet em32\cmd.exe em32\Drivers\DriverData em32;C:\Windows;C:\Windows\System32\Wbe :MD;.VBS;.VBE;JS;JSE;.WSF;.WSH;.MSC	e
vstem variables Variable ComSpec DriverData NUMBER_OF_PROCESSORS OS Path PATHEXT PROCESSOR_ARCHITECTUF PROCESSOR_IDENTIFIER	Value C:\Windows\syst C:\Windows\Syst S 8 Windows_NT C:\Windows\syst .COM;.EXE;.BAT;.C RE AMD64 Intel64 Family.6 M	New Edit Delet em32\cmd.exe em32\Drivers\DriverData em32;C:\Windows;C:\Windows\System32\Wbe MD;.VBS;.VBE;JS;JSE;.WSF;.WSH;.MSC Model 142 Stepping 12. GenuineIntel	e
vstem variables Variable ComSpec DriverData NUMBER_OF_PROCESSORS OS Path PATHEXT PROCESSOR_ARCHITECTUF PROCESSOR_IDENTIFIER	Value C:\Windows\syst C:\Windows\Syst 8 Windows_NT C:\Windows\syst .COM;.EXE;.BAT;.C RE AMD64 Intel64 Family 6 M	New Edit Delet em32\cmd.exe em32\Drivers\DriverData em32;C:\Windows;C:\Windows\System32\Wbe MD;.VBS;.VBE;.JS;JSE;.WSF;.WSH;.MSC Model 142_Stepping_12_GenuineIntel	e

Figure 38: Environment Variables Dialog

 Under the System variables section, click New and enter: Variable name: SNPSLMD_LICENSE_FILE Variable value: clicense_file_path>

New System Variable		×
Variable <u>n</u> ame:	SNPSLMD_LICENSE_FILE	
Variable <u>v</u> alue:	\path\to\license\file	
Browse <u>D</u> irectory	Browse <u>F</u> ile OK Cancel	

Figure 39: New System Variable Dialog

11. Click **OK** to set, followed by **OK** to close the Environment Variables dialog and then the System Properties dialog.



Node-Locked License

Under Windows, Synplify-Pro for Achronix does not require the license server software to be running. Simply store the synplify.lic file received from Achronix in a directory on the host machine, and set the SNPSLMD_LICENSE_FILE environment variable as in steps 8-11 above.

Starting Synplify Pro for Achronix

To verify installation and licensing, select from the Start menu **Synopsys** \rightarrow **Synplify Pro for Achronix E-201x. xxx-xxx** \rightarrow **Synplify Pro** to start the program. A window displaying the license agreement appears. Click **Yes** to start the program. If licensing is properly set, the main program window appears.



Figure 40: Synplify Pro for Achronix Main Program Window

 If the license is not found or is improperly installed, the License Request dialog (below) opens. Click Close to terminate. Refer to "Synplify Pro for Achronix Licensing Issues" in Troubleshooting (Windows) (see page 64) or contact Achronix Technical Support at support@achronix.com.

S License Request	?	×
License for feature synplifypro is not available.		
Host ID: "00ffc83e5994 50eb719cfa2d 52eb719cfa2c 50eb719cfa2c 50eb719cfa30" Please contact support at https://solvnetplus.synopsys.com/ManageCase?ccf=1		
Unable to access a software license. This problem can occur for a number of reasons.		
 You have a license file, but you are unable to use it. Please refer to the current version of the Common Licensing Administration Guide available on the SolvNet Documentation page (click License titles in the column on the right). If your licenses are centrally administered by your company, you may consult your software system administrator. Note that this software version requires setting either the LM_LICENSE_FILE or the SNPSLMD_LICENSE_FILE environment variable, and that the SYNPLCTYD_LICENSE_FILE variable is no longer used. 	he Synop sing in the ay also w e	sys list of ant to
Your license has expired or is invalid for this version, or you have not yet installed a licen obtain an up-to-date license file from your Synopsys SolvNet account, accessible at the followin https://solvnet.synopsys.com. To initially register for a SolvNet account, you will need to know your O Synopsys SiteID. To obtain your SiteID please contact your software system administrator or the per for purchasing your license. If you are still unable to locate your SiteID, please send an email to solvnetfeedback@synopsys.com, stating your name, company name, division and company address software version requires a license generated on or after September 7, 2010.	cense fill g link: company's son respo	e. You sonsible at this
Close		

Figure 41: License Request Dialog

Chapter - 8: Troubleshooting (Windows)

This chapter provides troubleshooting hints for Windows licensing.

ACE Licensing Issues

Checklist

- Verify the install path of the license is correct: C:\Program Files\Achronix CAD Environment\Achronix\license
- Verify that license file has the proper extension (.lic) and contains no illegal (nonalphanumeric) characters in the name.
- Verify that the host ID listed in the license file matches the MAC address of an enabled Ethernet adapter in the system.
- Ensure the program path below has been added to the Path statement: C:\Program Files\Achronix CAD Environment\Achronix\system\cmd The Path variable is set by selecting from the Start menu Windows System → Control Panel → System → Advanced system settings to open the System Properties dialog. Then, from the Advanced tab, clicking Environment Variables followed by highlighting the Path string and clicking Edit.

Other Issues

When upgrading ACE, any existing license files in the directory ./license might be removed. Be sure to save a copy of the license file in a safe place for reuse after a program upgrade.

Synplify Pro for Achronix Licensing Issues

Checklist

- Verify the install path of the license is correct, for example: C:\Synopsys\license.txt
- Verify that license file contains no illegal (nonalphanumeric) characters in the name.
- Ensure that the INCREMENT symplifypro_achronix ... lines in the license file start on new lines.
- Verify that the HOSTID listed in the license file matches the MAC address of an enabled Ethernet adapter in the system.
- Ensure that the SNPSLMD_LICENSE_FILE environment variable exists and is set to the correct install path for the license file, for example:

C:\Synopsys\license.txt

The Path variable is set by selecting from the Start menu **Windows System** \rightarrow **Control Panel** \rightarrow **System** \rightarrow **Advanced system settings** to open the System Properties dialog. Then, from the Advanced tab, clicking **Environment Variables** followed by highlighting the Path string and clicking **Edit**.

Other Issues

Save the License File when Performing an Upgrade

When upgrading Synplify Pro for Achronix, any existing license files in the directory \Synopsys might be removed or overwritten. Be sure to save a copy of the license file in a safe place for reuse when performing a program upgrade.

Multiple Ethernet Cards Present on the System

If the host system has multiple Ethernet cards, first install the Synplify license manager and run lmutil lmhostid from the command prompt to get the reported MAC address. Then, use this MAC address when requesting the license.

ACE Startup Error Due to Missing DLL Component in Windows 10

In some Windows 10 configurations, users might see the following error when invoking the ACE GUI. This error occurs due to a missing DLL component from the Visual Studio redistributable installer. This situation can be resolved by reinstalling the vc_redist.x64.exe executable. This executable can be downloaded from the following link: https://www.microsoft.com/en-ca/download/details.aspx?id=48145.



Figure 42: ACE Startup Error

Chapter - 9: Device Overlays

Support for Achronix devices (e.g., Speedcore instances or Speedster devices) is provided in ACE and Synplify-Pro with the use of overlays. Achronix provides device overlays for downloading. All device overlays must be installed for the devices planned to be used.

ACE Overlays

Device overlays for ACE are delivered as a zip or tar file containing the additional library and system files required for the device in use. For example, ACE_8.1.1_Linux_AC7t1500ES0.tgz and ACE_8.1.1 __Windows_AC7t1500ES0.zip contain the necessary overlays to support the Speedster7t AC7t1500 device in ACE version 8.1.1 in Linux (.tgz file) and Windows (.zip file) respectively. To install ACE along with the device overlays on Linux, users can simply use the install_ace.sh script provided (see Installing ACE (see page 19) for directions). For Windows, the device overlays are also installed during the ACE installation process (see Installing ACE (see page 36) for directions). If it is necessary to install device overlays manually, follow the directions below.

The zip/tar file contains a directory structure similar to the following:



Figure 43: Overlay File Directory Structure

Note

Before proceeding, make sure that write privileges are enabled for the ACE Install directory (usually C: \Program Files\Achronix CAD Environment\Achronix in Windows or /opt/Achronix-Linux in Linux). Also, if using Windows, run the unzip program as administrator by right-clicking the unzip program and selecting More → Run as Administrator.

Extract the contents of the zip/tar file into the ACE Install directory. ACE now allows the selection of device(s).

🗄 Options 🛛 💺 Multipre	ocess		
Project: quicksta Implementation: impl_1	art		^
- Design Preparation			
Target Device	AC16tSC01HI02B	\sim	
Package	AC16tSC01HI01C AC16tSC01HI02B		
Speed Grade	AC7t1500ES0 AC7tFSC04A100R1		
Core Voltage	AC/tFSC04A500R1		
Junction Temperature	125	\sim	
Flow Mode	Normal	\sim	
Incremental Compile	I Compile	~	

Figure 44: ACE Design Preparation Options Showing the Added Devices

Synplify Pro Overlays

Synplify Pro overlays are delivered as a zip (for Windows) or tar (for Linux) file, with the name indicating the applicable version of Synplify Pro and the custom devices supported. For example,

speedster7t_16t_Linux_P-2019.09X-Beta1_overlay.zip represents the overlays for the Speedster7t, Speedcore7t, and Speedcore16t evaluation devices, with the overlays applying to version P-2019.09X-Beta1 of Synplify-Pro.

Caution!

A

Ensure that the overlay downloaded matches the version of Synplify Pro that is to be updated. If subsequently a new version Synplify Pro is used, then a new overlay file must be requested from Achronix.

After the zip or tar files are downloaded, extract them and continue to Applying the Overlay (see page 69).

Applying the Overlay

- 1. Locate the subdirectory /lib (if using Linux) or \lib (if using Windows) within the Synplify Pro installation directory.
- All of the files from the extracted overlay directories should then be copied to their equivalent locations in the Synplify Pro installation directory. However, if other overlays have been downloaded, it might be necessary to manually merge some files.

Note

 If using Linux, files /lib/generic/custom_partdata.txt and /lib/parts
 /custom_parts.txt must be manually merged if they already exist in the Synplify Pro installation. In both instances, add the contents of the new overlay file to the existing file using a text editor. If using Widnows, the file paths instead are \lib\generic\custom_partdata. txt and \lib\parts\custom_parts.txt. 3. To ensure that all new devices have been installed, launch Synplify Pro. The splash screen should indicate that the new devices have been detected.



Figure 45: Synplify Pro Splash Screen

- 4. To confirm the parts are correctly installed, after opening Synplify Pro, create a new project.
- 5. Select Implementation Options \rightarrow Device.

6. The new parts sho	ould be available in the	"Part:" drop-down list.
----------------------	--------------------------	-------------------------

Implementation Options - PA_L2_flexcore_2X	(10_10G : rev_1	×
Device Options Constraints Implementation Results Timing Report Veril	og GCC Place ar	Implementations:
Technology: Part: Package: S	Speed.	(rev_1
Achronix Speedster7t V AC711500ES0 V E53A0 V	C1 v	
Device Mapping Options		
Option	Value	
Fanout Guide	10000	
Disable I/O Insertion	•	
Update Compile Point Timing Data		
Automatic Read/Write Check Insertion for RAM		
Retime Registers Forward		
Annotated Properties for Analyst		
Resolve Mixed Drivers		
Click on an option for description		
		SVDDPSVS*
ОК	Cancel Help	Predictable Success

Figure 46: Synplify Pro Implementation Options Screen

Revision History

Version	Date	Description
2.0	01 Oct 2017	 Significant set of updates for new Synplify-Pro and ACE installation licensing schemes and conversion of document to Confluence.
2.1	23 Oct 2018	 License Installation (Windows) (see page 52): Updated ACE Welcome screenshot. Obtaining Software Licenses (see page 12): Provided clarifications and a note to differentiate between requesting for an evaluation license and generating PO for licenses attached to sales orders.
2.2	25 Jun 2019	 Updated all pages and screenshots to reflect the newest licensing and installation schemes based on architecture specifications and after migration to the ACE 7.x infrastructure.
2.3	24 Mar 2020	 Updated Minimum Memory Requirements (see page 6). Included install_ace.sh instructions for Linux. Updated Synplify Pro Node-Locked License Installation (Windows) (see page 62) to exclude need for server. Updates for Windows 10 and various screenshots.
2.4	20 Jul 2020	 Updated the Linux and Windows Troubleshooting sections. Included the steps for running install_ace.bat in ACE Windows installation instructions. Updated all screenshots to not include the product version.
2.5	16 Dec 2020	 Updated the Windows Troubleshooting section. Updated steps for installing SCL. Added note to inform users to request a floating license when accessing the license server remotely.
2.6	28 Jun 2021	 Added instructions for the ACE Windows floating license Updated steps to run install_ace.sh Added steps for the Windows FTDI CDM install prompt