Silent Installation Guide for Intel® Parallel Studio XE Composer Edition for macOS*

Here are the steps you can follow to install the Intel® Parallel Studio XE Composer Edition for macOS* version 2019 in silent mode.

Step 0) Start a "Terminal" program from Utilities group (if you have not done so already) or log into the Mac machine by "Terminal" windows like PUTTY*, Telnet etc. Confirm that the userID for the installation has 'sudo' or root privilege. Test your sudo privilege with a simple sudo command such as 'sudo pwd' or 'sudo ls -l'

Step 1) Mount the *.dmg file with required content using "Finder", for example, by double-clicking on *.dmg. OR If you are working from a terminal window, use the hdiutil command to mount the compiler installer disk image (.dmg)

2019 Example:

Mount the image

- sudo hdiutil attach m_fcompxe_2019.u.vvv.dmg
- sudo hdiutil attach m_ccompxe_2019.u.vvv.dmg

Disk image mounts under

- /Volumes/m_fcompxe_2019.u.vvv (for Intel® Parallel Studio Composer Edition for Fortran macOS*)
- /Volumes/m_ccompxe_2019.u.vvv (for Intel® Parallel Studio Composer Edition for C++ macOS*)

where 'u' is the update number (0, 1, 2, 3, etc) and where 'vvv' is the specific version (2019.2.142 is Update 2, version 142 for example).

Step 2) Change directory to the “MacOS” folder in "Terminal":

2019 Example:

- cd /Volumes/m_ccompxe_2019.u.vvv/m_ccompxe_2019.u.vvv.app/Contents/MacOS
- cd /Volumes/m_fcompxe_2019.u.vvv/m_fcompxe_2019.u.vvv.app/Contents/MacOS

Step 3) In this folder you can find the configuration file silent.cfg, copy it to the location where you have write permissions. This file controls the behavior of the installation. We will explain the configuration file contents below.

Example:

- cp ./silent.cfg /tmp/silent.cfg

Step 4) Edit /tmp/silent.cfg file, at least setting the value of ACCEPT_EULA to “accept”

- silent.cfg looks as follows. To proceed with the installation, you should agree with conditions of End User License Agreement (EULA) by setting the value of ACCEPT_EULA to “accept”. By default, the installer looks for license file in “/Users/Shared/Library/Application Support/Intel/Licenses” folder. We recommend you to copy your license file to it before starting the installation. Refer to “Configuration file format” section to find more information about licensing and other customizable options.

```
# Patterns used to check silent configuration file

#

# anythingpat - any string

# filepat     - the file location pattern (/file/location/to/license.lic)

# lspat       - the license server address pattern (0123@hostname)

# snpat       - the serial number pattern (ABCD-01234567)

# accept EULA, valid values are: {accept, decline}

ACCEPT_EULA=decline

# optional error behavior, valid values are: {yes, no}

CONTINUE_WITH_OPTIONAL_ERROR=yes

# install location, valid values are: {/opt/intel, filepat}

PSET_INSTALL_DIR=/opt/intel

# continue with overwrite of existing installation directory, valid values are: {yes, no}
```

```
CONTINUE_WITH_INSTALLDIR_OVERWRITE=yes

# list of components to install, valid values are: {ALL, DEFAULTS, anythingpat}

COMPONENTS=DEFAULTS

# installation mode, valid values are: {install, modify, repair, uninstall}

PSET_MODE=install

# directory for non-RPM database, valid values are: {filepat}

#NONRPM_DB_DIR=filepat

# Serial number, valid values are: {snpat}

#ACTIVATION_SERIAL_NUMBER=snpat

# License file or license server, valid values are: {lspat, filepat}

#ACTIVATION_LICENSE_FILE=

# Activation type, valid values are: {exist_lic, license_server, license_file, serial_number}

ACTIVATION_TYPE=exist_lic

# Intel(R) Software Improvement Program
#
# To improve our software and customer experience, Intel would like to collect technical
# information about your software installation and runtime status (such as installation metrics,
# license/support types, software SKU/serial, counters, flags, and timestamps)
# and development environment (such as operating system, CPU architecture,
# last 4-digits of the MAC address and other Intel products installed). ("Information").
#
# Information collected under this notice may be retained by Intel indefinitely but
# it will not be shared outside of Intel or its wholly-owned subsidiaries.
#
# For more details please refer to this article:
# https://software.intel.com/en-us/articles/software-improvement-program.
#
# Yes - I consent to the collection of my Information
# No  - I do NOT consent to the collection of my Information
#, valid values are: {yes, no}
```

```
#INTEL_SW_IMPROVEMENT_PROGRAM_CONSENT=no

# Xcode location, valid values are: {/Applications/Xcode.app, filepat}

XCODE_DIR=/Applications/Xcode.app

# integrate the product to Xcode, valid values are: {yes, no}

XCODE_INTEGRATION_NEEDED=yes
```

Step 5) Use 'sudo' to run the silent install (if you are not root user) passing the full path to your configuration file with the --silent option.

Example:

- sudo ./install.sh --silent /tmp/silent.cfg

DONE. If your configuration file is accepted the installer will now progress with the installation without further input from you, and no output will appear unless there is an error.

CONFIGURATION FILE FORMAT

A few comments on the directives inside the silent install configuration file:

ACCEPT_EULA=accept	This directive tells the install program that the invoking user has agreed to the End User License Agreement or EULA. This is a mandatory option and MUST be set to 'accept'. If this is not present in the configuration file, the installation will not complete. By using the silent installation program you are accepting the EULA. The EULA is a plain text file "/Volumes/m_ccompxe_2019.u.vvv/m_ccompxe_2019.u.vvv.app/Contents/Resources/pset/license.txt" directory. Read this before proceeding as using the silent installer means you have read and agree to the EULA. If you have questions, see our Get Help page for your support options.
CONTINUE_WITH_OPTIONAL_ERROR	This directive controls behavior when the installer encounters an "optional" error. These errors are non-fatal errors and will not prevent the installation to proceed if the user has set

	CONTINUE_WITH_OPTIONAL_ERROR=yes. Fatal errors found during installation will cause the installer to abort with appropriate messages printed. CONTINUE_WITH_OPTIONAL_ERROR=yes directs the installer to ignore non-fatal installation issues and continue with the installation. CONTINUE_WITH_OPTIONAL_ERROR=no directs the installer to abort with appropriate warning messages for the non-fatal error found during the installation.
PSET_INSTALL_DIR	This directive specifies the target directory for the installation. The Intel Compilers default to /opt/intel for installation target. Set this directive to the root directory for the final compiler installation.
CONTINUE_WITH_INSTALLDIR_OVERWRITE	Determines the behavior of the installer if the PSET_INSTALL_DIR already contains files. CONTINUE_WITH_INSTALLDIR_OVERWRITE=yes directs the installer to overwrite the existing files if they conflict with the files in the package. CONTINUE_WITH_INSTALLDIR_OVERWRITE=no directs the installer to exit if some files are already in PSET_INSTALL_DIR.
COMPONENTS	A typical Parallel Studio package contains multiple sub-packages, such as MKL, IPP, TBB, DAAL, Debugger, etc. This directive allows the user to control which sub-packages to install. COMPONENTS=DEFAULTS directs the installer to install the pre-determined default packages for the product (recommended setting). The defaults may not include some sub-packages deemed non-essential or special purpose. An example is the cluster components of MKL, which are only needed in a distributed memory installation. If you're not sure of the defaults you can do a trial installation of the Parallel Studio in interactive mode and select CUSTOMIZE installation to see and select components. COMPONENTS=ALL directs the installer to install all packages for the product.

	COMPONENTS=<pattern> allows the user to specify which components to install. The components vary by compiler version and package. The components should be enclosed in double-quotes and semi-colon separated. For a list of component, grep for the <Abbr> tags in <installation directory>/uninstall.app/mediaconfig.xml, such as this : cd < installation directory>/uninstall.app grep Abbr mediaconfig.xml or run trial installation in "duplicate mode" that will create the custom configuration file with the components you select in interactive mode (see details below)
PSET_MODE	Sets the installer mode. The installer can install, remove, modify, or repair an installation. PSET_MODE=install directs the installer to perform an installation PSET_MODE=uninstall directs the installer to remove a previous installation. If multiple versions of the compiler are installed, the installer removes the most recent installation. This information is kept in the RPM database or the non-rpm database depending on the mode used for the installation. PSET_MODE=modify allows the user to redo an installation. The most common scenario is to overwrite an existing installation with more COMPONENTS set or unset. PSET_MODE=repair directs the installer to retry an installation again, checking for missing or damaged files, directories, and symbolic links, permissions, etc.
NONRPM_DB_DIR	This directive can be used to override the default directory(/opt/intel) for the installation database. The format for this directive is: NONRPM_DB_DIR=/path/to/your/db/directory
ACTIVATION_TYPE=exist_lic	This directive tells the install program to look for an existing license during the install process. This is the preferred method for silent installs. Take the time to register your serial number and get a license file (see below). Having a license file on the system simplifies the process. In addition,

	as an administrator it is good practice to know WHERE your licenses are saved on your system. License files are plain text files with a .lic extension. By default these are saved in "/Users/Shared/Library/Application Support/Intel/Licenses". Options for ACTIVATION_TYPE are {exist_lic, license_file, server_lic, serial_number} **exist_lic** directs the installer to search for a valid license on the server. Searches will utilize the environment variable INTEL_LICENSE_FILE or search the default license directory "/Users/Shared/Library/Application Support/Intel/Licenses" to find a valid license file. **license_file** is similar to **exist_lic** but directs the installer to use ACTIVATION_LICENSE_FILE to find the license file. **license_server** is similar to exist_lic and license_file but directs the installer that this is a client installation and a floating license server will be contacted to activate the product. This option will contact your floating license server on your network to retrieve the license information. BEFORE using this option make sure your client is correctly set up for your network including all networking, routing, name service, and firewall configuration. Insure that your client has direct access to your floating license server and that firewalls are set up to allow TCP/IP access for the 2 license server ports. license_server will use INTEL_LICENSE_FILE containing a port@host format OR a client license file. The formats for these are described here https://software.intel.com/en-us/articles/licensing-setting-up-the-client-floating-license. **serial_number** directs the installer to use directive ACTIVATION_SERIAL_NUMBER for activation. This method will require the installer to contact an external Intel activation server over the Internet to confirm your serial number. Due to user and company firewalls, this method is more complex and hence error prone of the available activation methods. We highly recommend using a license file or license server for activation instead. **No license file but you have a serial number?** If you have only a serial number, please visit https://registrationcenter.intel.com to register your serial number. As part of registration, you will receive email with

	an attached license file. If your serial is already registered and you need to retrieve a license file, read this: https://software.intel.com/en-us/articles/how-do-i-manage-my-licenses Save the license file in "/Users/Shared/Library/Application Support/Intel/Licenses" directory, or in your preferred directory and set INTEL_LICENSE_FILE environment variable to this non-default location. If you have already registered your serial number but have lost the license file, revisit https://registrationcenter.intel.com and click on the hyperlinked product name to get to a screen where you can cut and paste or mail yourself a copy of your registered license file. Still confused about licensing? Go to our licensing FAQS page https://software.intel.com/en-us/articles/licensing-faq
ACTIVATION_LICENSE_FILE	This directive instructs the installer where to find your named-user or client license. The format is: ACTIVATION_LICENSE_FILE=/use/a/path/to/your/license file.lic where licensefile.lic is the name of your license file.
ACTIVATION_SERIAL_NUMBER	This directive instructs the installer which serial number to use to activate the product. The format is ACTIVATION_SERIAL_NUMBER= ABCD-01234567.
INTEL_SW_IMPROVEMENT_PROGRAM_CONSENT	Intel(R) Software Improvement Program To improve our software and customer experience, Intel would like to collect technical information about your software installation and runtime status (such as installation metrics, license/support types, software SKU/serial, counters, flags, and timestamps) and development environment (such as operating system, CPU architecture, last 4-digits of the MAC address and other Intel products installed). ("Information"). Information collected under this notice may be retained by Intel indefinitely but it will not be shared outside of Intel or its wholly-owned subsidiaries.

	For more details please refer to this article: https://software.intel.com/en-us/articles/software-improvement-program. Options for INTEL_SW_IMPROVEMENT_PROGRAM_CONSENT are {yes, no} **yes** - I consent to the collection of my Information **no** - I do NOT consent to the collection of my Information
XCODE_INTEGRATION_NEEDED	XCODE_INTEGRATION_NEEDED=yes directs the installer to integrate the compiler into XCODE located at the XCODE_DIR directory XCODE_INTEGRATION_NEEDED=no directs the installer to not integrate the compiler into XCODE. Use this option if you would like to use the compiler in command-line mode only.
XCODE_DIR	This directive instructs the installer where to find Xcode application to integrate the compiler into it. The format is: XCODE_DIR=/Applications/Xcode.app

Silent Install Steps: "Copy and Repeat" Method for Silent Configuration File Creation

If you need to make the same sort of installation over and over again, one way to get the silent installation configuration file right the first time is to run the installation program once interactively, using the options that meet the local needs, and record these options into a configuration file that can be used to replicate this same install via silent install for future installations.

To do this, the user simply needs to add the "duplicate" option to the script invocation, and run a normal interactive install, as follows:

- ./install.sh --duplicate /tmp/silent.cfg

This "--duplicate" option will put the choices made by you into the file specified on the command line. You can modify this recorded configuration file as appropriate and use it to perform future silent installations.

Silent UnInstall Steps:

Edit /tmp/silent.cfg with PSET_MODE=uninstall

> sudo ./uninstall.sh --silent /tmp/silent.cfg