Installing Intel® Parallel Studio XE 2020 for Windows

Word of Caution: *We all know how to run installers, but it is important that you follow these instructions since the installations will need to be customized. If you are not the person who will be installing the software, please make sure you pass these instructions along to whomever will be doing the install.*

Step 1: If you have an Existing Intel Fortran Installation

If you already have a compatible version of the Intel compiler installed on your computer, you may not need to install Intel again. CRTech software will work with Intel® Visual Fortran Version 11.1.048 or newer, or Intel® Visual Fortran Composer XE for Fortran Windows or [Parallel Studio XE for Fortran Windows](#).

To verify an existing Intel Fortran installation, you can run a small test program. Instructions to do this can be found in [this forum post](#) (you will need to logged into the CRTech website). If the test runs properly, the compiler is installed and you can ignore the rest of this document.

Step 2: Check to see if MS Visual Studio is Installed

Intel Parallel Studio requires one of the following to be installed:

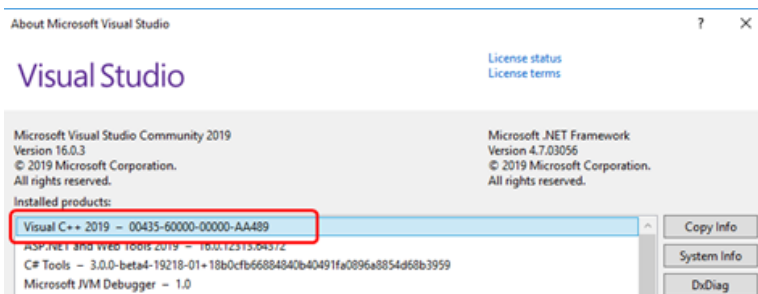- Microsoft Build Tools 2019 (preferred over Visual Studio unless you need Visual Studio for other reasons)

- Microsoft Visual Studio versions 2013, 2015, 2017, or 2019. <u>Click here to determine if you have a compatible version of Visual Studio installed.</u>

If you do not have Visual Studio installed it is recommended you install Build Tools 2019, jump to <u>Step 4</u> to begin this process.

If you already have a compatible version of MS Visual Studio installed, continue to <u>Step 3</u>.

Step 3: Visual Studio Already Installed

CRTech software requires the optional Desktop Development for C++ workload to be installed. Check to see if this workload is installed by opening Microsoft Visual Studio through the computer start menu. After opening, use the pulldown menu to select Help >> About. The About window will display the installed products (see graphic below). Verify "Visual C++" is in the list. If you already have a compatible version of Visual Studio installed with C++ support, skip to <u>Step 4: Installing Parallel Studio XE</u>. If you do not have Visual C++ installed, you will need to modify your Visual Studio installation to add it before continuing to Step 4.
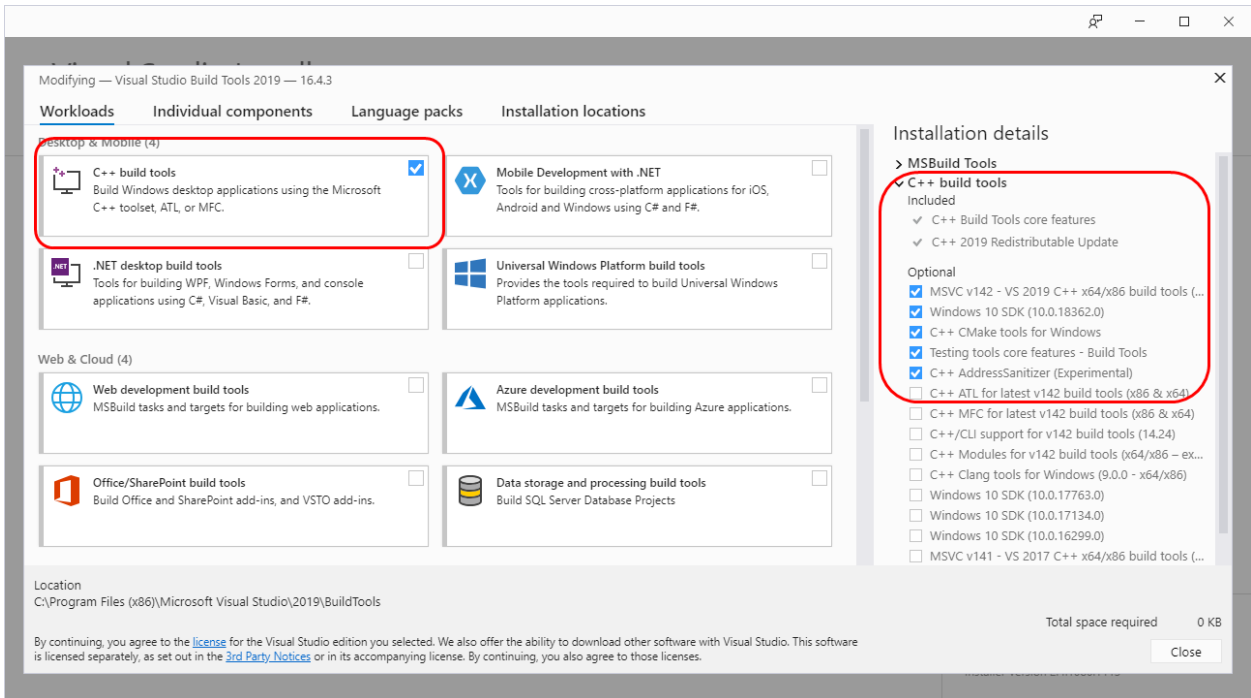

Step 4: Installing Build Tools

You will need to install Build Tools before installing Intel Parallel Studio. This can be downloaded from the following link.

- <u>Download Build Tools 2019</u>

The default installation of Build Tools does not install support for C++ which is required for CRTech software. During the installation process you will be prompted to select which "Workloads" you wish to install. You must add support for C++ Build Tools as shown below.
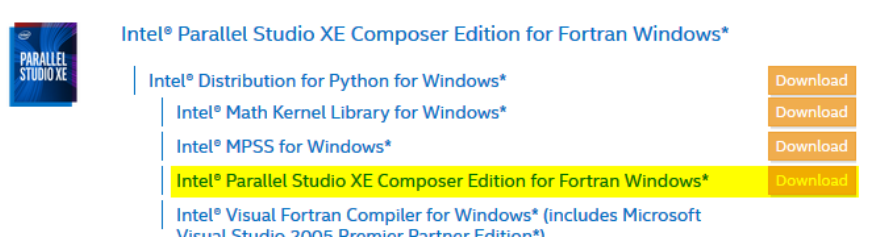
Details of this option will appear on the right side of the screen. No additional options need to be selected. Continue with the install of VS Build Tools.

Step 5: Download Intel Parallel Studio XE

Download "Intel Parallel Studio XE Composer Edition for Fortran Windows". Below are links for the various download options.

- **Purchased License:** Log into the Intel Registration Center to download the software. You will find multiple download options, be sure to pick "Intel Parallel Studio XE Composer Edition for Fortran Windows".

- **Trial Version:** Visit the following link to sign up for a trial version of Parallel Studio XE. Be sure you sign up for the Windows version. After registering for a trial, you will receive and email with a serial number and a download link.

- https://software.intel.com/en-us/parallel-studio-xe/choose-download/free-trial-cluster-windows-c-fortran

- **Student Version:** Visit the following link to sign up for the student version of Parallel Studio XE. Be sure you sign up for the Windows version. Note that you must meet specific criteria to download this version. After registering for a student version, you will receive and email with a serial number and a download link.

  - https://software.intel.com/en-us/parallel-studio-xe/choose-download/student-windows

You can download the Full Package, or you can download the Customizable Package. Either package is acceptable and both are customizable, however the customizable version will download the software during the install process. You may find it more convenient to download the full version which will allow you to save the installer for future use.
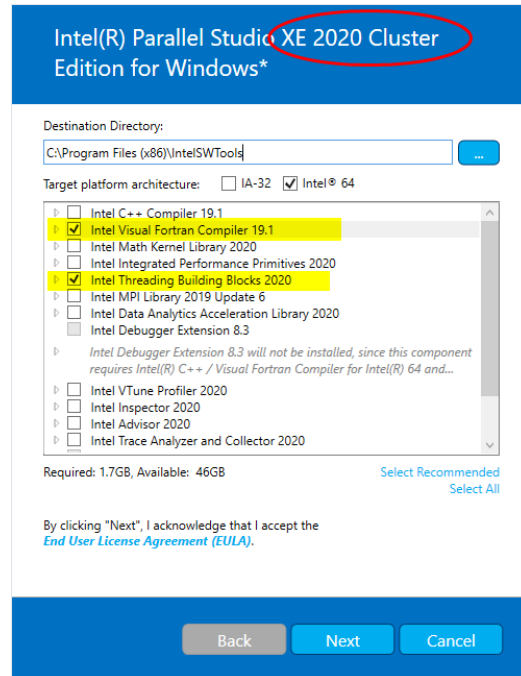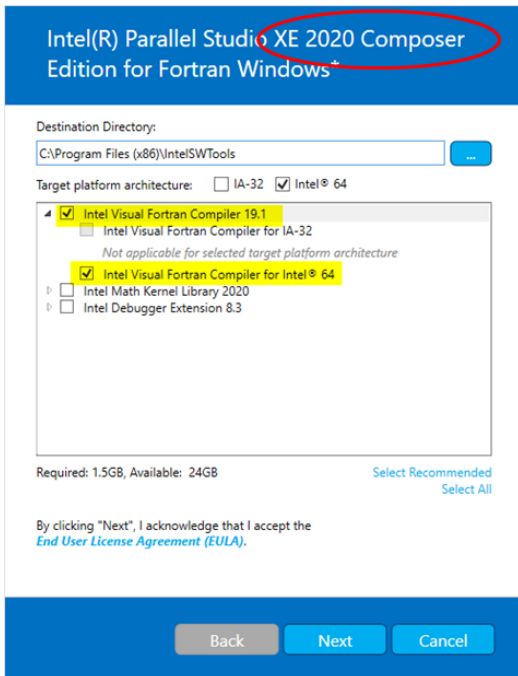
Note that both the trial and student versions will download the "Cluster Edition" of Parallel Studio XE.

Step 6: Installing Parallel Studio XE

Intel Release Notes: Parallel Studio XE Release Notes

Intel Installation Guide: Parallel Studio XE

Parallel Studio XE contains many features which are not required to support CRTech's software. If you wish to save on disk space you can customize the installation and install only the 64 bit Fortran compiler as highlighted in the graphic below. For the cluster edition you also need to install TBB core libraries.

Step 7: Your Installation is complete!

If you wish to verify the compiler installation before installing CRTech software, please visit this post on our Community Support Forum for instructions. You will need to be logged into the website to view the forum.

Appendix: How to Identify Compatible VS Installations

Open up the control panel on your computer by typing "Control Panel" in the search field of the start menu. Then click on Programs and Features. Sort programs by Name.

Look for "Visual Studio Professional (or Community)" versions 2013, 2015, 2017, or 2019 published by Microsoft Corporation. Published by Microsoft is a key indicator, see first two graphics below. In this case you have a compatible version of Visual Studio installed.

If you see something similar to the third screenshot below, you have a Visual Studio shell installed by a previous version of Intel. These are not compatible for Parallel Studio XE 2020 Composer.

Programs and Features

← → ∨ ↑ 🗔 > Control Panel > All Control Panel Items > Programs and Features ∨ ᷢ Search Prog

Control Panel Home

View installed updates

Turn Windows features on or off

Uninstall or change a program

To uninstall a program, select it from the list and then click Uninstall, Change, or Repair.

Organize ▼

Name	Publisher	Installed On	Size	Version
Microsoft Visual C++ 2008 Redistributable - x86 9.0.3...	Microsoft Corporation	4/13/2017	10.1 MB	9.0.30729.4148
Microsoft Visual C++ 2017 Redistributable (x64) - 14.1...	Microsoft Corporation	3/20/2019	23.1 MB	14.16.27029.1
Microsoft Visual C++ 2017 Redistributable (x86) - 14.1...	Microsoft Corporation	3/20/2019	20.1 MB	14.16.27029.1
Microsoft Visual Studio Installer	Microsoft Corporation	3/20/2019		1.18.1096.130
Update for Windows 10 for x64-based Systems (KB40...	Microsoft Corporation	3/20/2019	1.36 MB	2.56.0.0
Update for Windows 10 for x64-based Systems (KB44...	Microsoft Corporation	3/20/2019	308 KB	2.51.0.0
Visual Studio Professional 2017	Microsoft Corporation	3/20/2019		15.9.28307.518
VMware Tools	VMware, Inc.	4/13/2017	85.5 MB	10.0.6.3595377
Windows 10 Update Assistant	Microsoft Corporation	10/10/2018	5.00 MB	1.4.9200.22532

VS Installed

Programs and Features

← → ∨ ↑ 🗔 > Control Panel > All Control Panel Items > Programs and Features ∨ ᷢ Search Program

Control Panel Home

View installed updates

Turn Windows features on or off

Uninstall or change a program

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Organize ▼

Name	Publisher	Installed On	Size	Version
Microsoft Visual C++ 2017 Redistributable (x86) - 14.1...	Microsoft Corporation	11/12/2018	20.0 MB	14.15.26706.0
Microsoft Visual Studio Installer	Microsoft Corporation	11/9/2018		1.17.1298.831
Update for Windows 10 for x64-based Systems (KB40...	Microsoft Corporation	10/10/2018	874 KB	2.50.0.0
Visual Studio Community 2017	Microsoft Corporation	11/12/2018		15.8.28010.2050
VMware Tools	VMware, Inc.	4/13/2017	85.5 MB	10.0.6.3595377
Windows 10 Update Assistant	Microsoft Corporation	10/10/2018	5.00 MB	1.4.9200.22532
Windows Mobile Connectivity Tools 10.0.15254.0 - De...	Microsoft Corporation	11/12/2018	1.84 MB	10.1.15254.1
Windows SDK AddOn	Microsoft Corporation	11/12/2018	152 KB	10.1.0.0
Windows Setup Remediations (x64) (KB4023057)		10/10/2018		
Windows Software Development Kit - Windows 10.0....	Microsoft Corporation	11/12/2018	2.27 GB	10.1.17134.12

VS Installed

Programs and Features

← → ∨ ↑ 🗔 > Control Panel > All Control Panel Items > Programs and Features ∨ ᷢ Search Programs

Control Panel Home

View installed updates

Turn Windows features on or off

Uninstall or change a program

To uninstall a program, select it from the list and then click Uninstall, Change, or Repair.

Organize ▼

Name	Publisher	Installed On	Size	Version
Microsoft Visual C++ 2013 Redistributable (x86) - 12.0...	Microsoft Corporation	10/19/2018	17.1 MB	12.0.21005.1
Microsoft Visual C++ 2015 Redistributable (x64) - 14.0...	Microsoft Corporation	10/19/2018	22.4 MB	14.0.23026.0
Microsoft Visual C++ 2015 Redistributable (x86) - 14.0...	Microsoft Corporation	10/19/2018	18.6 MB	14.0.23026.0
Microsoft Visual Studio 2015 Files for Intel Visual Fortr	Intel Corporation	10/19/2018	138 MB	19.0.0.117
Microsoft Visual Studio 2015 Shell (Integrated)	Microsoft Corporation	10/19/2018	3.20 MB	14.0.23111.35
Microsoft Visual Studio 2015 Shell (Isolated)	Microsoft Corporation	10/19/2018	1.56 GB	14.0.23107.10
Remote Tools for Visual Studio 2015	Microsoft Corporation	10/19/2018	221 MB	14.0.23309.0
Update for Windows 10 for x64-based Systems (KB40...	Microsoft Corporation	10/10/2018	874 KB	2.50.0.0
VMware Tools	VMware, Inc.	4/13/2017	85.5 MB	10.0.6.3595377
Windows 10 Update Assistant	Microsoft Corporation	10/10/2018	5.00 MB	1.4.9200.22532
Windows SDK AddOn	Microsoft Corporation	10/18/2018	152 KB	10.1.0.0

This is not VS!