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NATIONAL TSING HUA UNIVERSITY

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# Workshop on Synopsys ARC CPU with TensorFlow Lite

## Tutorial 1 – Environment Installation

主辦單位：國立清華大學電機系、新思科技

協辦單位：智慧製造電子應用聯盟

指導單位：教育部資訊及科技教育司

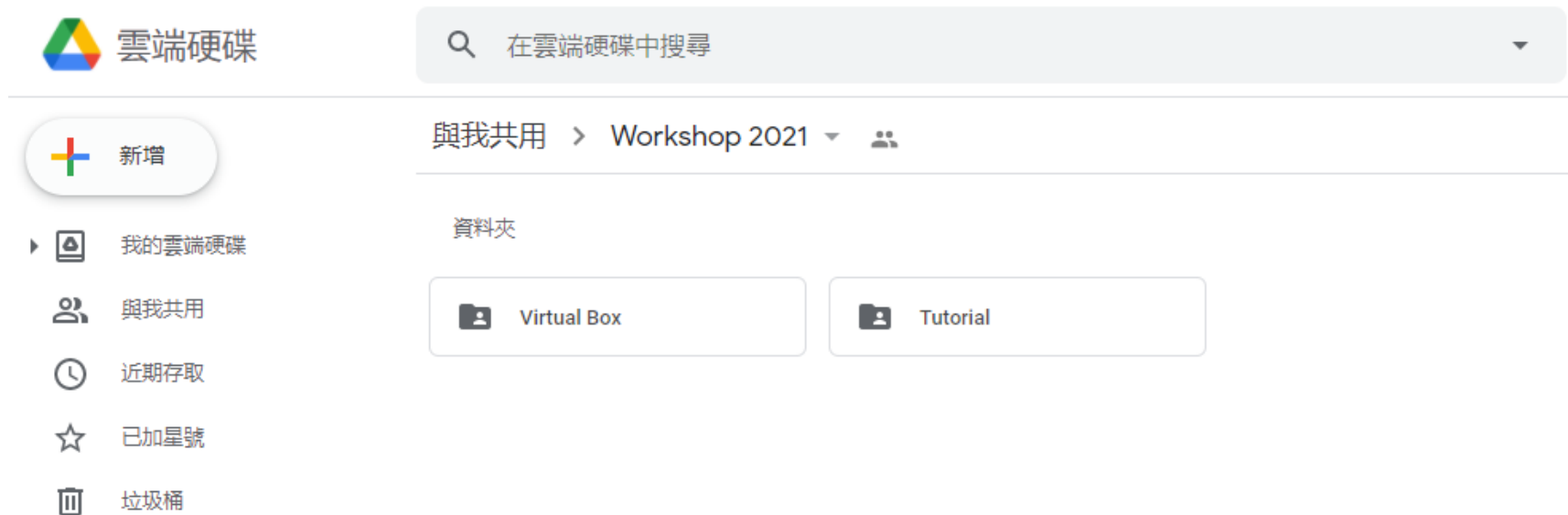
# Download

Workshop Google Drive :

Copy the link below and search it in Google

Do **not** just click it!

<https://drive.google.com/drive/folders/15gbcCkZDxUxfITWtAprPqIHkD5nbxKjP?usp=sharing>





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# Install VirtualBox



# VirtualBox Installation

- [https://www.virtualbox.org/wiki/Downloads?fbclid=IwAR12O6-1e\\_Dg00CFt4xuChqjJSuGKQwgVZDZa3MI-I2QojYsEq9ILe3bWLQ](https://www.virtualbox.org/wiki/Downloads?fbclid=IwAR12O6-1e_Dg00CFt4xuChqjJSuGKQwgVZDZa3MI-I2QojYsEq9ILe3bWLQ)



The screenshot shows the VirtualBox website's download page. On the left is a sidebar with navigation links: About, Screenshots, Downloads, Documentation (with sub-links for End-user docs and Technical docs), Contribute, and Community. The main content area features the VirtualBox logo and the heading 'Download VirtualBox'. Below this, it states: 'Here you will find links to VirtualBox binaries and its source code.' The 'VirtualBox binaries' section includes a disclaimer about the license and links to the latest 6.0 and 5.2 packages. Under 'VirtualBox 6.1.18 platform packages', the 'Windows hosts' link is highlighted with a red box. Other links include OS X hosts, Linux distributions, Solaris hosts, and Solaris 11 IPS hosts. Further down, it mentions the GPL version 2, provides a changelog link, and offers SHA256 and MD5 checksums for verification. A note recommends upgrading guest additions after upgrading VirtualBox. At the bottom, there is a link for the 'VirtualBox 6.1.18 Oracle VM VirtualBox Extension Pack'.

**VirtualBox**  
Download VirtualBox

Here you will find links to VirtualBox binaries and its source code.

**VirtualBox binaries**

By downloading, you agree to the terms and conditions of the respective license.

If you're looking for the latest VirtualBox 6.0 packages, see [VirtualBox 6.0 builds](#). Please also use version 6.0 if you need it.

If you're looking for the latest VirtualBox 5.2 packages, see [VirtualBox 5.2 builds](#). Please also use version 5.2 if you still need it.

**VirtualBox 6.1.18 platform packages**

- ➞ [Windows hosts](#)
- ➞ [OS X hosts](#)
- [Linux distributions](#)
- ➞ [Solaris hosts](#)
- ➞ [Solaris 11 IPS hosts](#)

The binaries are released under the terms of the GPL version 2.

See the [changelog](#) for what has changed.

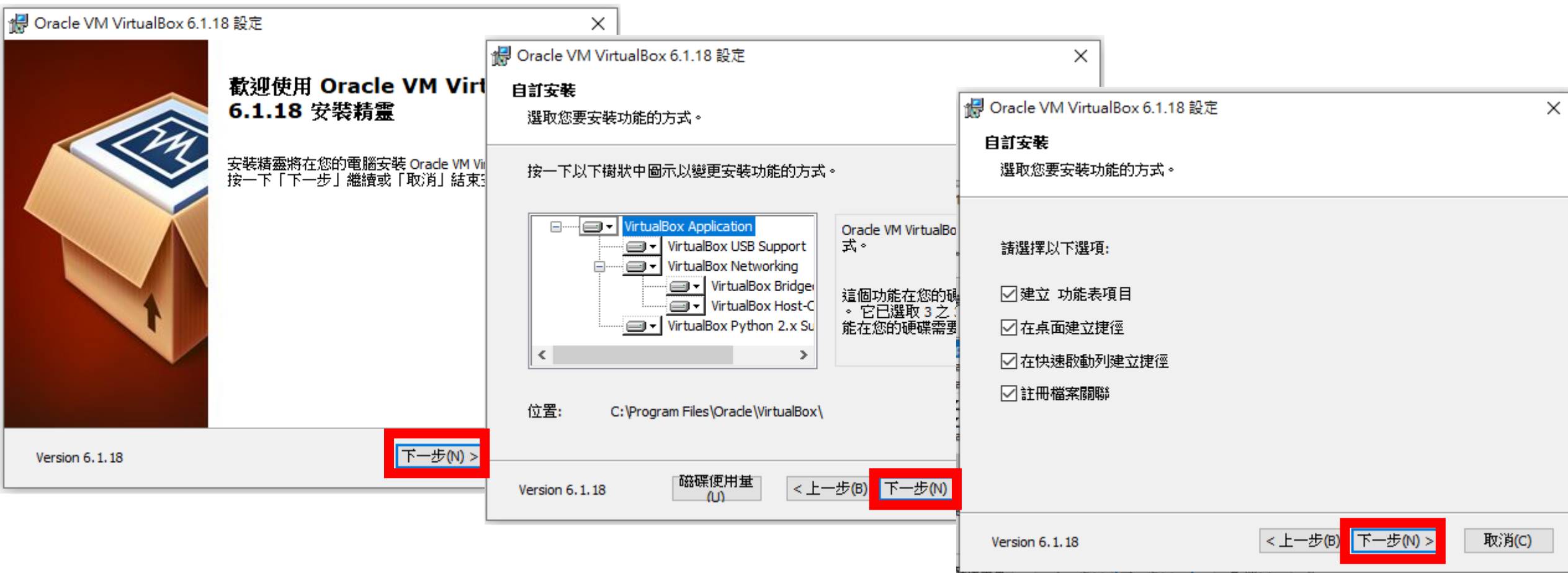
You might want to compare the checksums to verify the integrity of downloaded packages. *The SHA256 checksums should match the ones in the changelog.*

- [SHA256 checksums](#), [MD5 checksums](#)

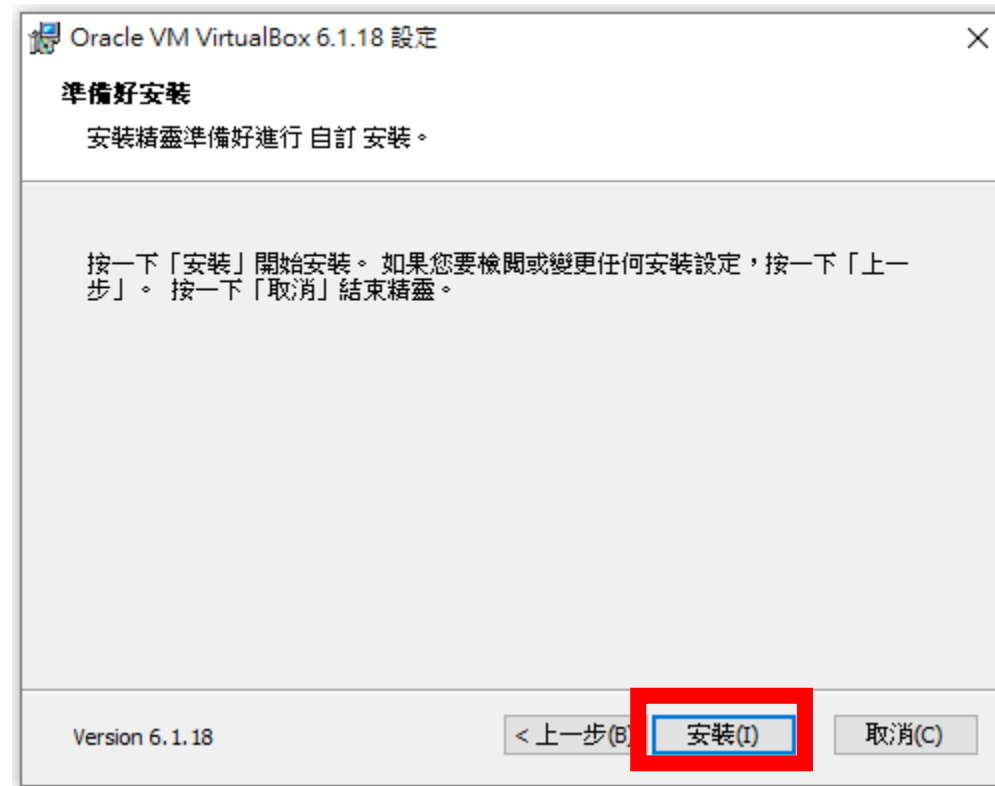
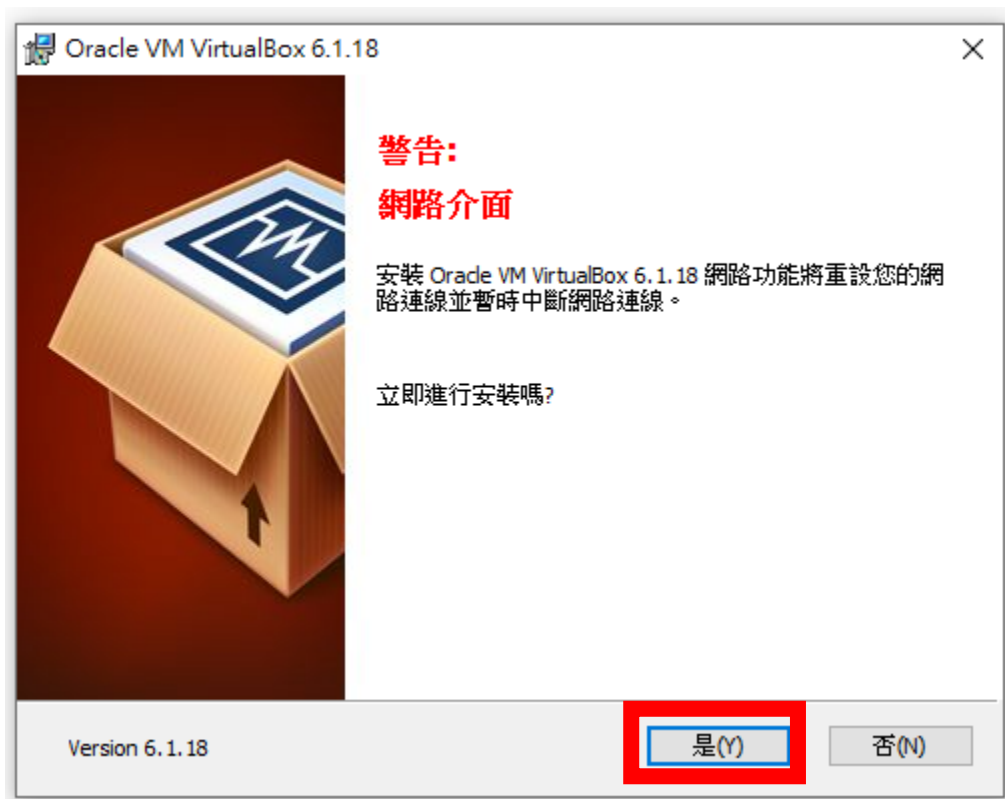
**Note:** After upgrading VirtualBox it is recommended to upgrade the guest additions as well.

**VirtualBox 6.1.18 Oracle VM VirtualBox Extension Pack**

# VirtualBox Installation



# VirtualBox Installation



# VirtualBox Installation







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# Install Cygwin





# Cygwin64 installation

- Go to <https://cygwin.com/install.html>

# Cygwin

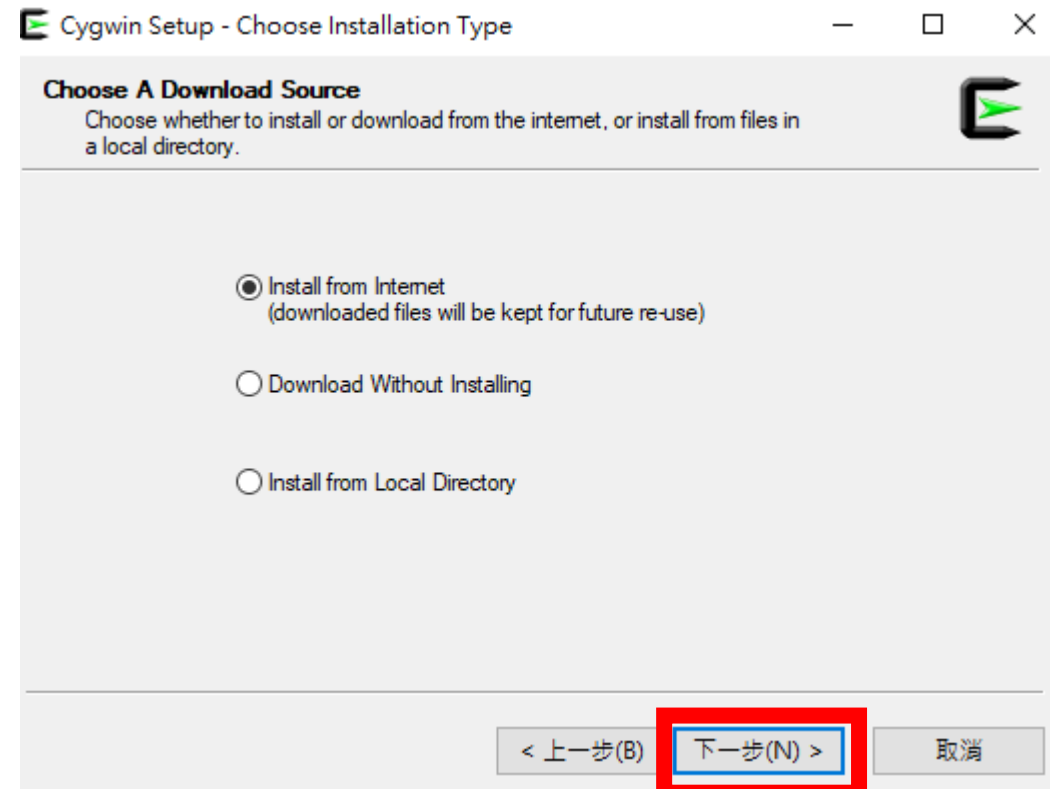
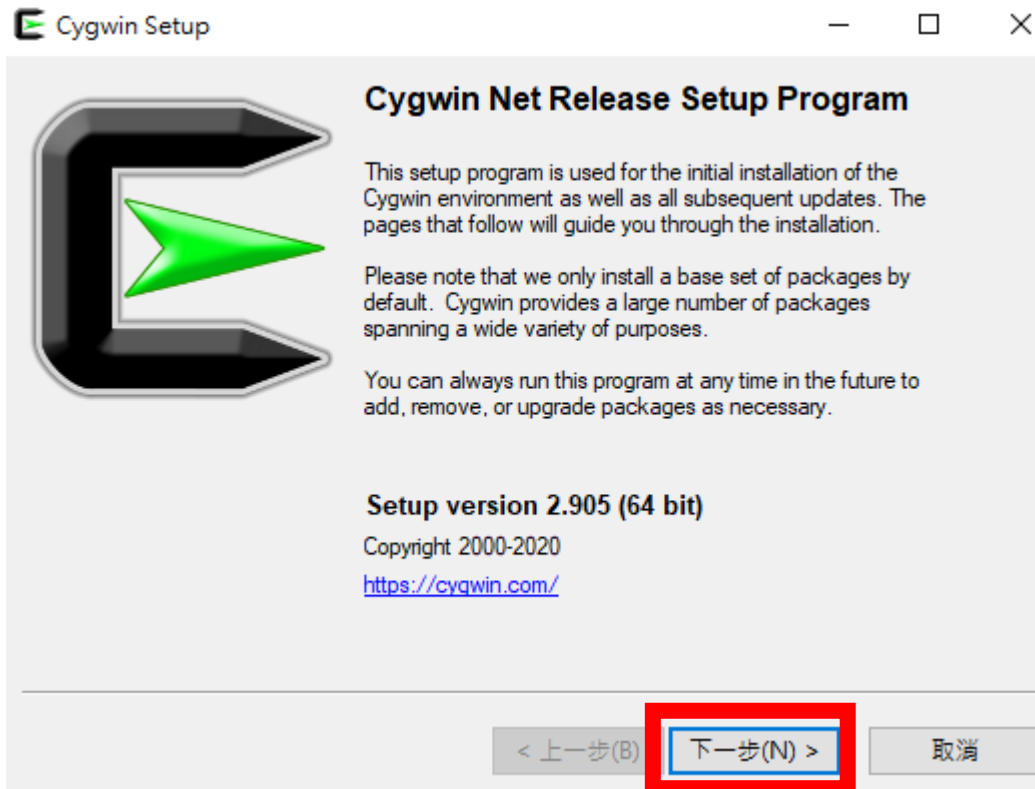
Get that [Linux](#) feeling - on Windows

## Installing and Updating Cygwin Packages

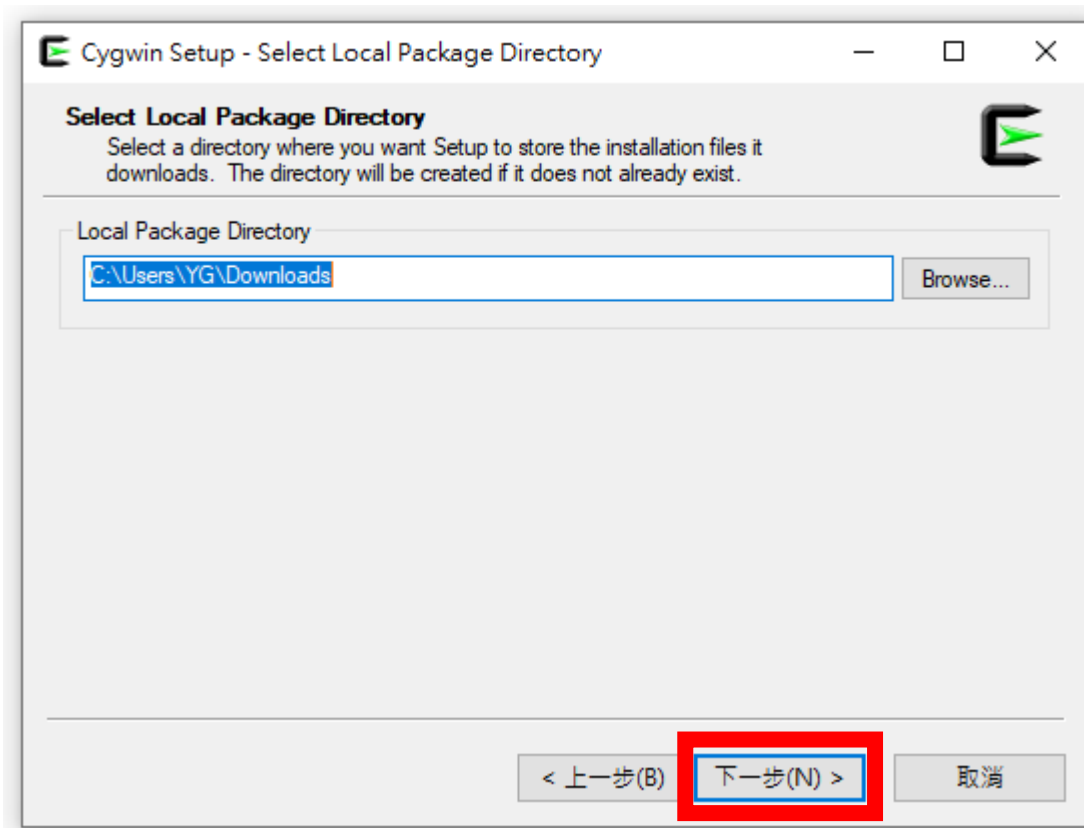
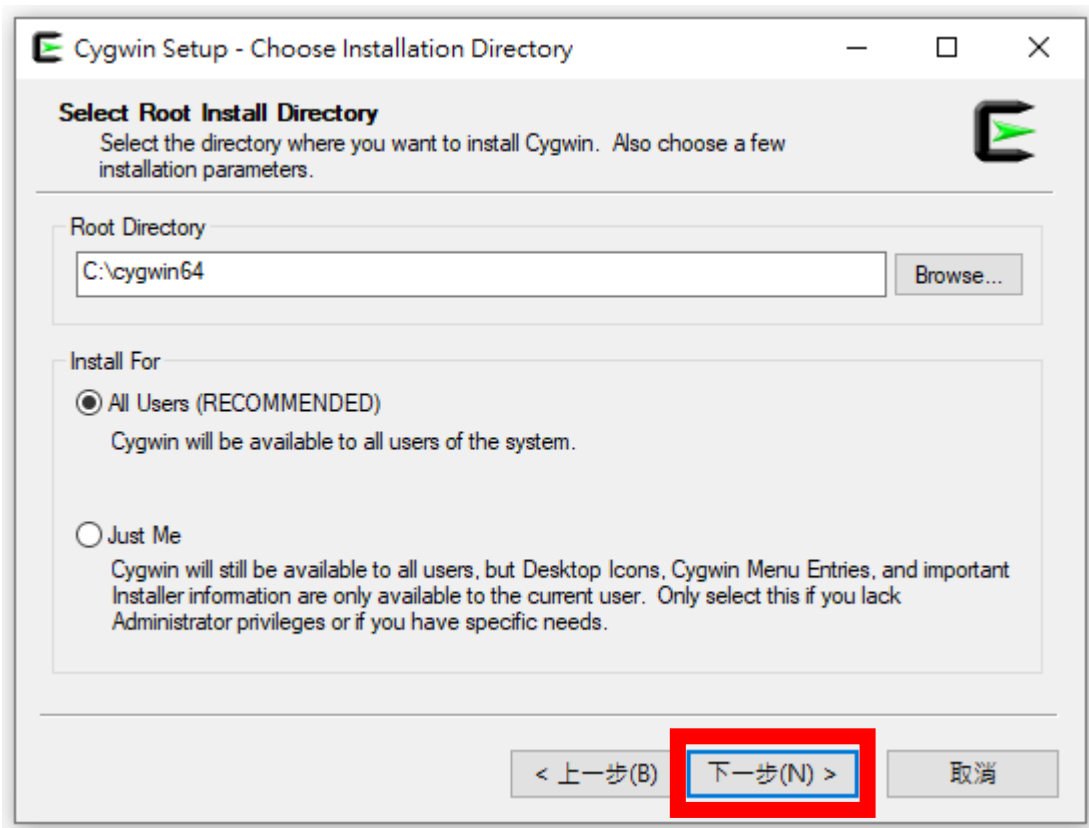
### Installing and Updating Cygwin for 64-bit versions of Windows

Run [setup-x86\\_64.exe](#) any time you want to update or install a Cygwin package for 64-bit windows. The [signature](#) for [setup-x86\\_64.exe](#) can be used to verify the validity of this binary.

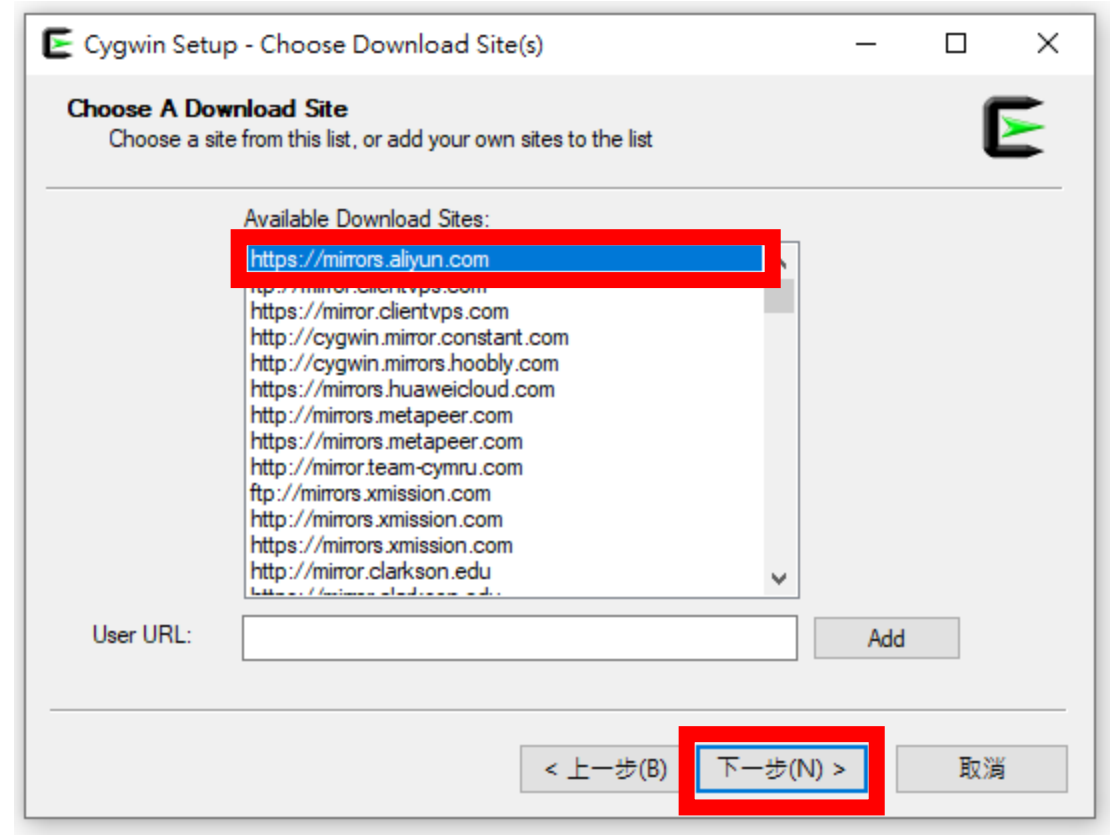
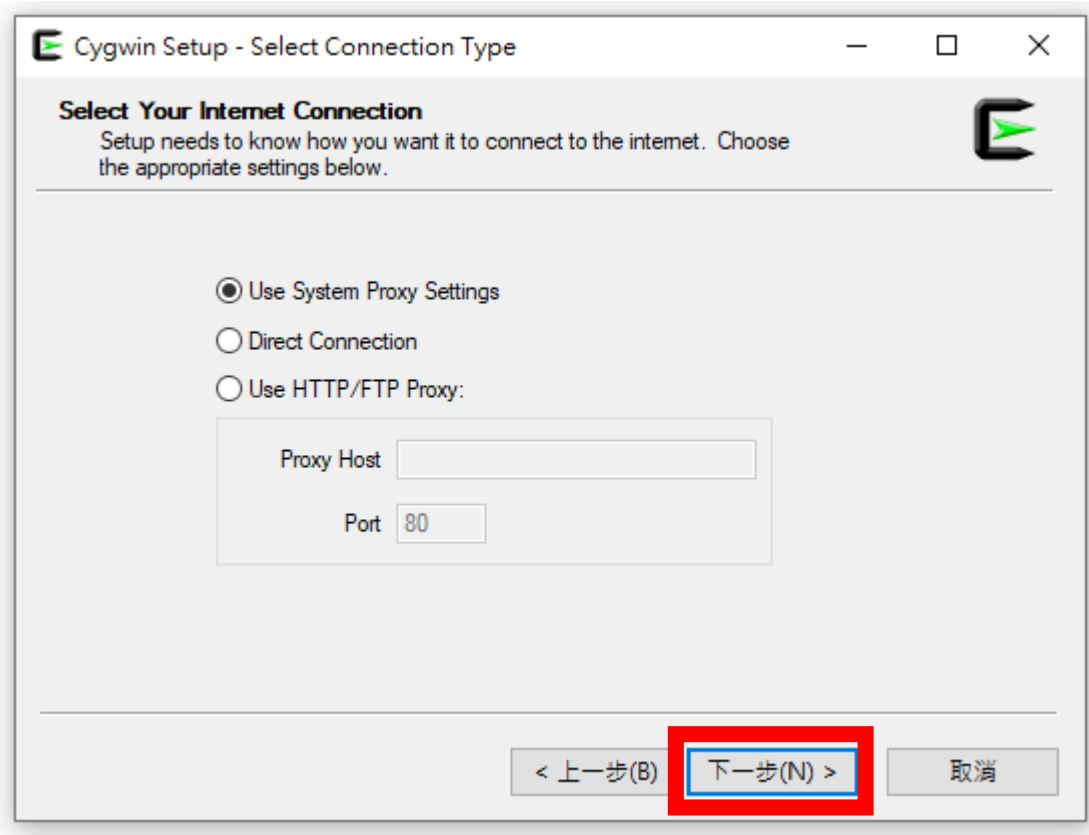
# Cygwin64 installation



# Cygwin64 installation

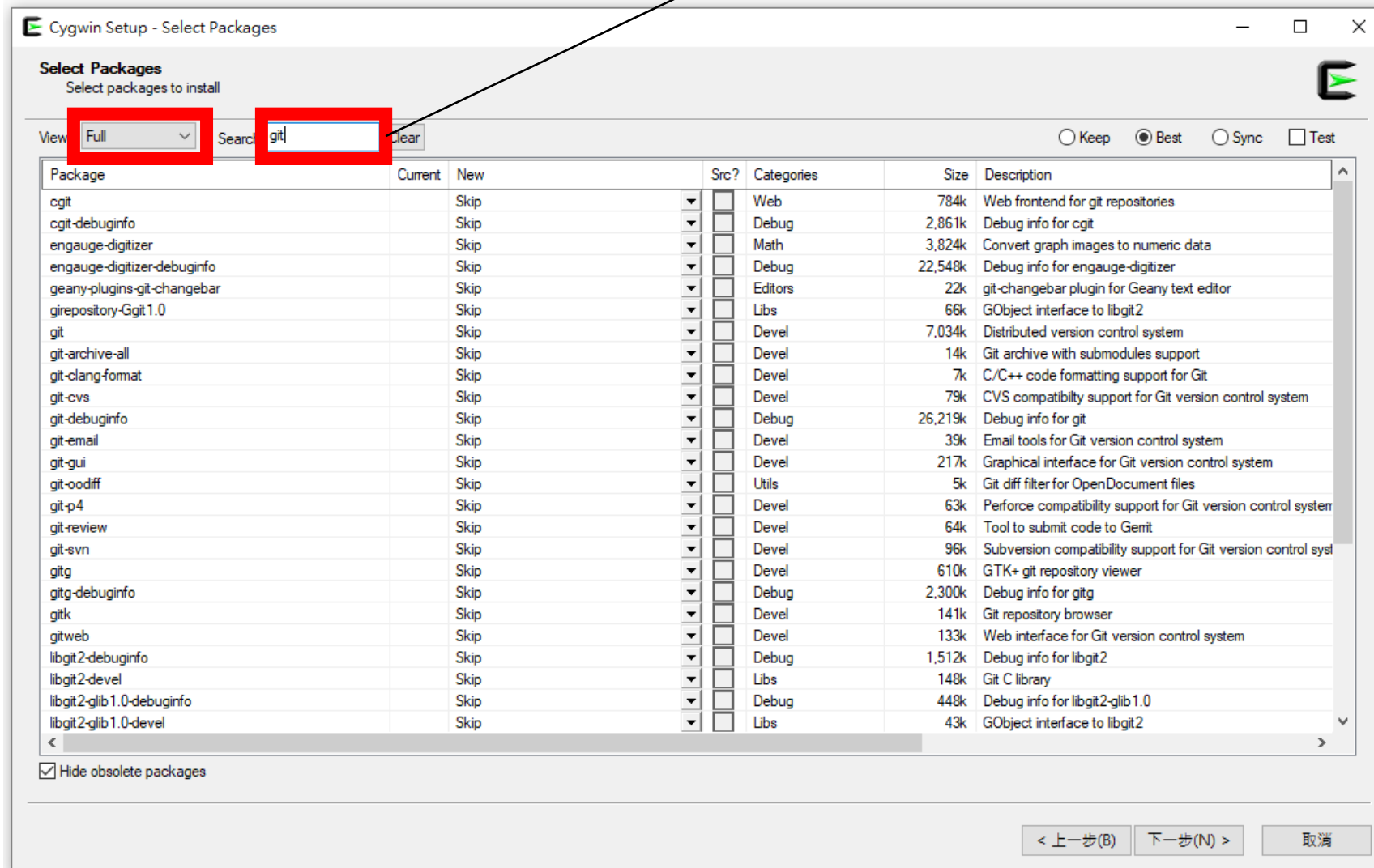


# Cygwin64 installation

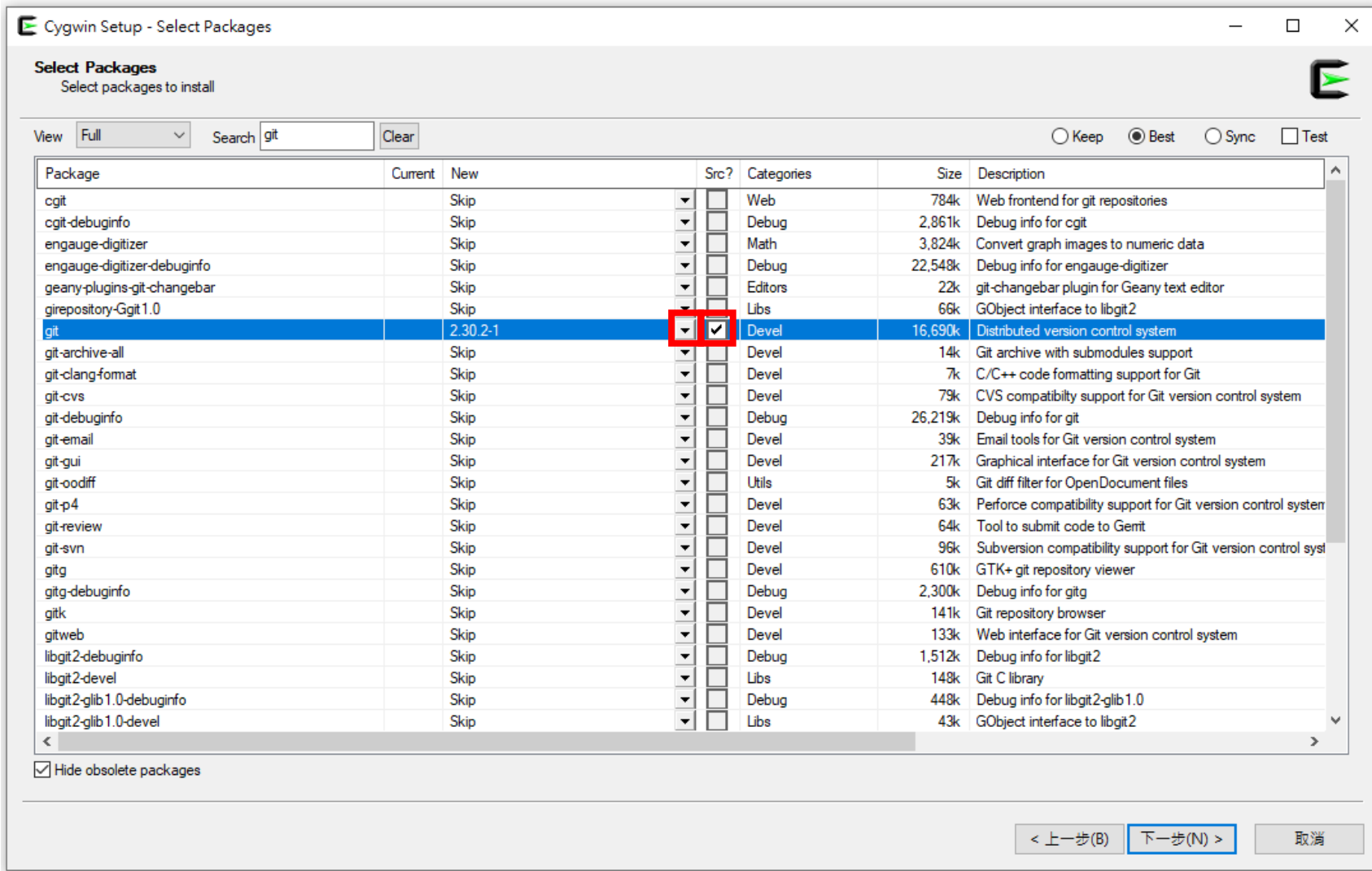


# Cygwin64 installation

Search: git , xxd, make, unzip, curl



# Cygwin64 installation



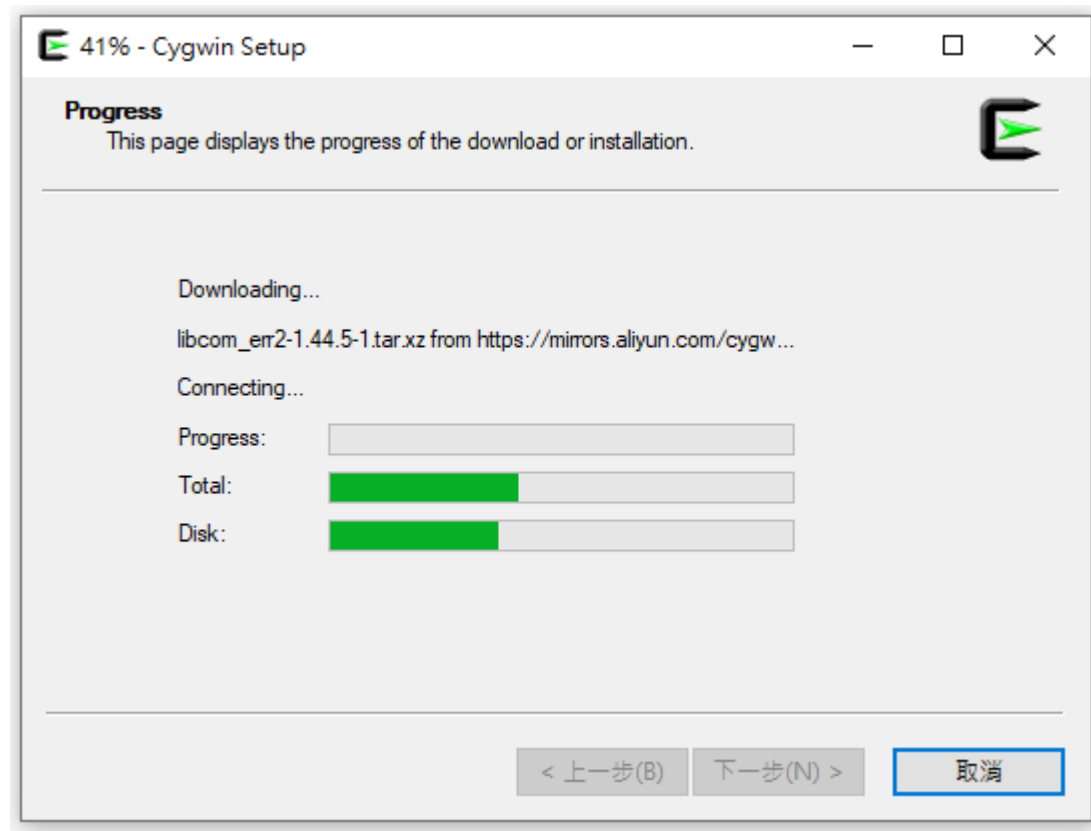
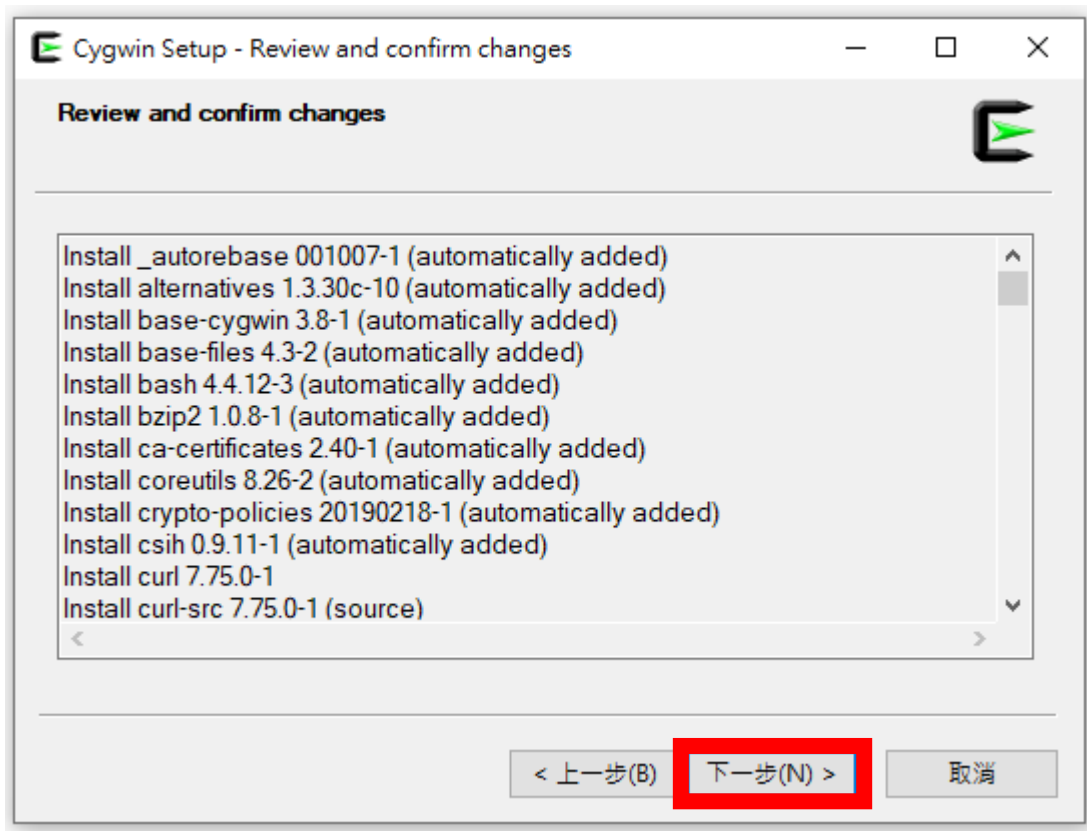
1. 按 選擇最新版本

2. 打勾

3. 請重複以上步驟在Search的欄位依序搜尋: git, xxd, make, unzip, curl 且選擇版本&打勾

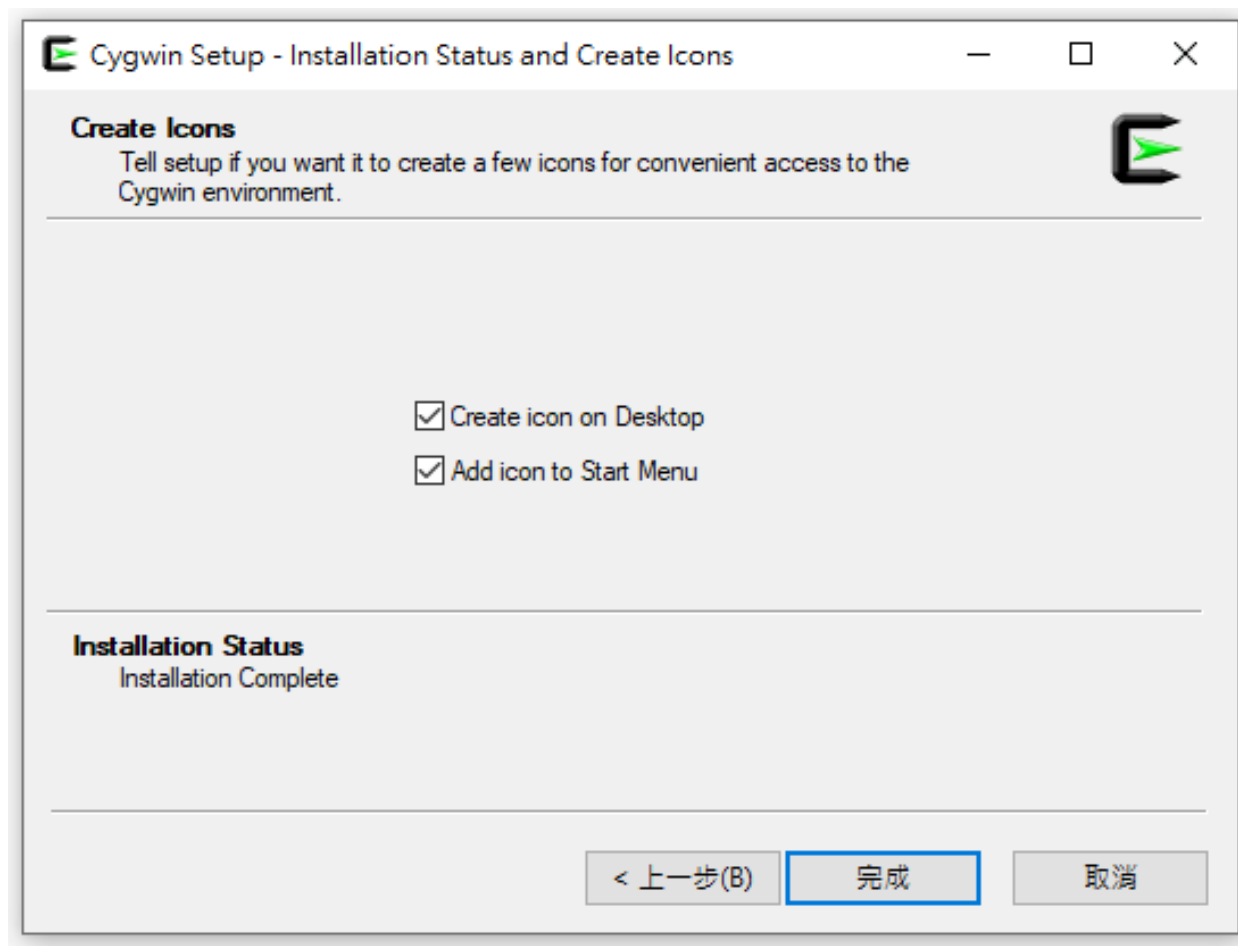
4. 上述完成後再按

# Cygwin64 installation





# Cygwin64 installation





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# Install Teraterm



# TeraTerm Installation

- Go to <https://ttssh2.osdn.jp/index.html.en>

## Tera Term Home Page

[\[Project page\]](#) [\[License\]](#) [\[Download\]](#) [\[Document\]](#) [\[Snapshot\]](#) [\[SourceCode\]](#) [\[Users ML\]](#) [\[Commit ML\]](#) [\[Development\]](#)

**8468346** (Today: **1067** Yesterday: **2515**)

## TeraTerm Project

TeraTerm Project would have been developed terminal emulator "Tera Term" and SSH module "TTSSH". This software is open source software in [Project Page](#) on OSDN.

## Download

Latest version is available from OSDN [download page](#). Current latest release is [4.105](#).

If you can get latest development version, the source code is available from [SVN repository](#). And [snapshot](#) is here. Here is the [Old release](#), however we recommend using the latest release as possible.

## Manual

Following manuals are available.

These manuals are the latest contents. New feature not including the release version will be written.

However, a user can check next version contents. Tera Term developer can preliminarily respond the user request.

# Teraterm Installation

- Download teraterm-4 .105.exe

**Download List**

**Project Description**

Tera Term is [Tera Term Pro 2.3](#) succession version and is being officially recognized by the original author. Tera Term is open source free software terminal emulator.

**System Requirements**

Operating System: Windows 7, Windows 95/98/ME, Windows NT/2000

**Download Package list**

**Tera Term** (37 items) Hide 🔗

**4.105** (2 files) Hide 🔗

Name
<a href="#">teraterm-4.105.exe</a> <span>🔗</span>
<a href="#">teraterm-4.105.zip</a> <span>🔗</span>

**4.104** (2 files) Show 🔗

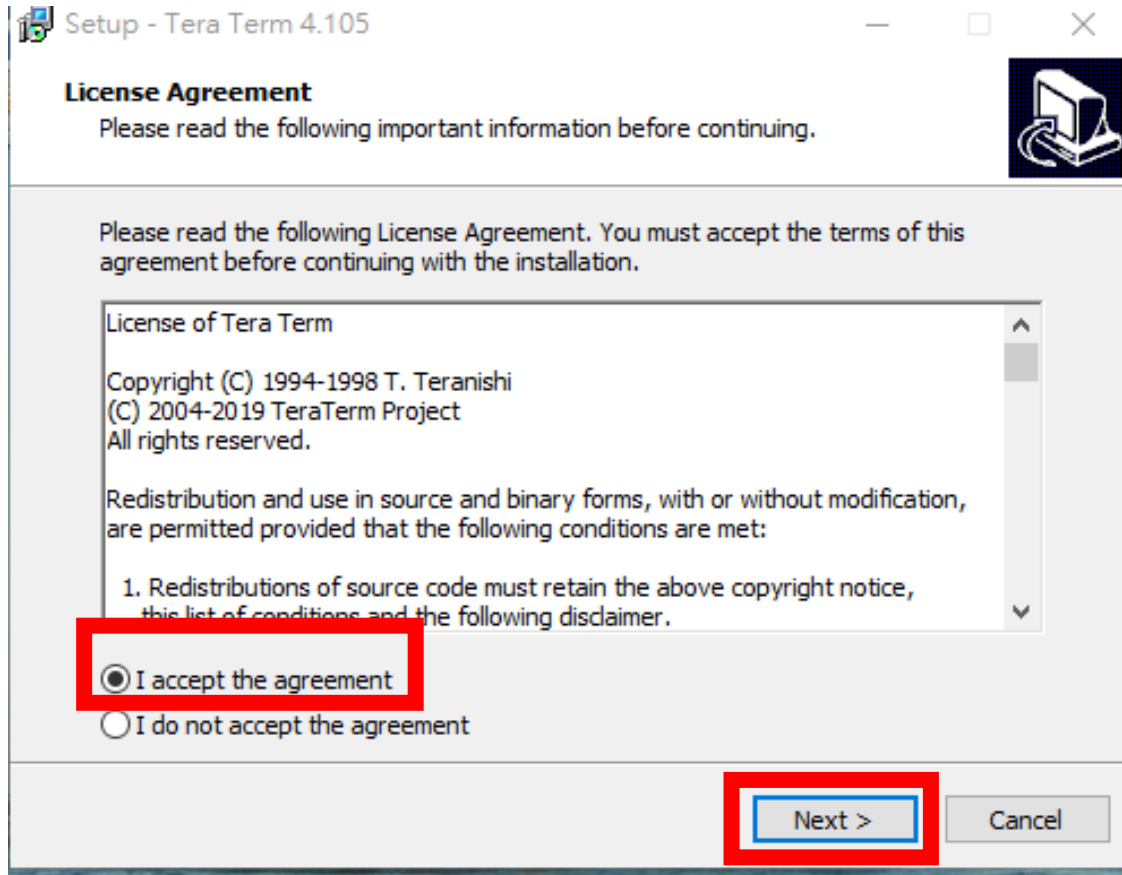
**4.103** (2 files) Show 🔗

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[Accept](#) [Privacy policy](#) [Term of Use](#)

# Teraterm Installation

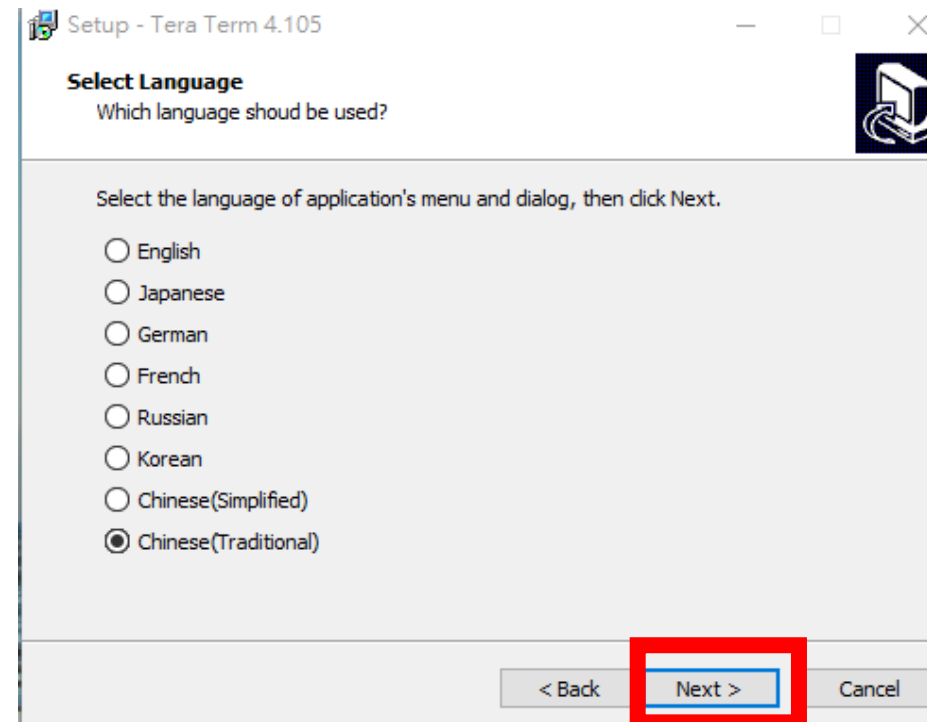
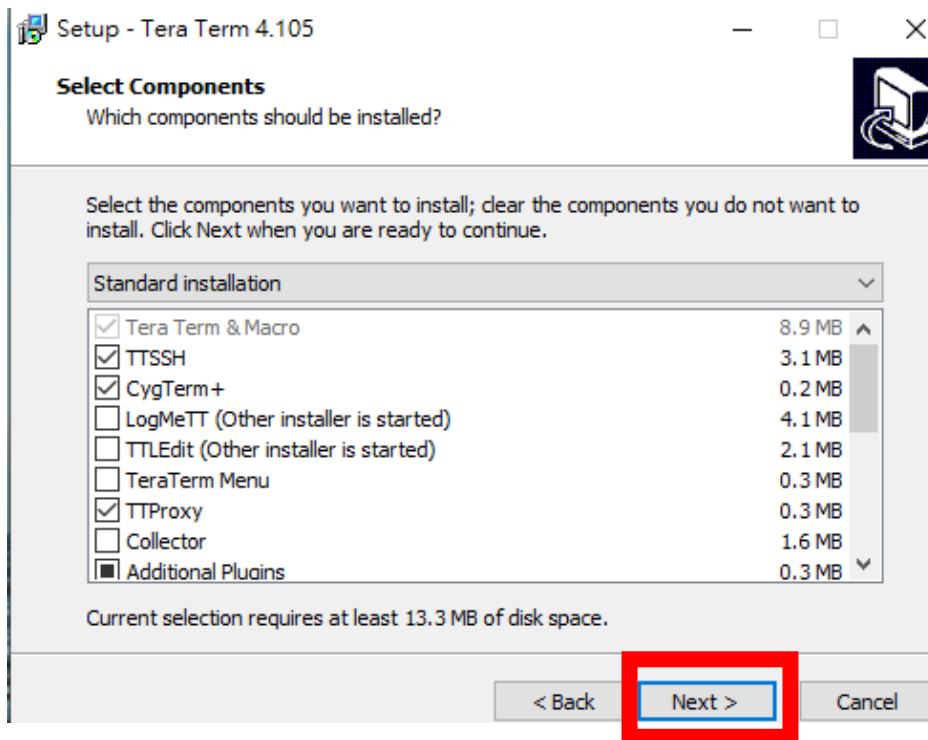
- Accept the agreement after reading it and select next



# Teraterm Installation

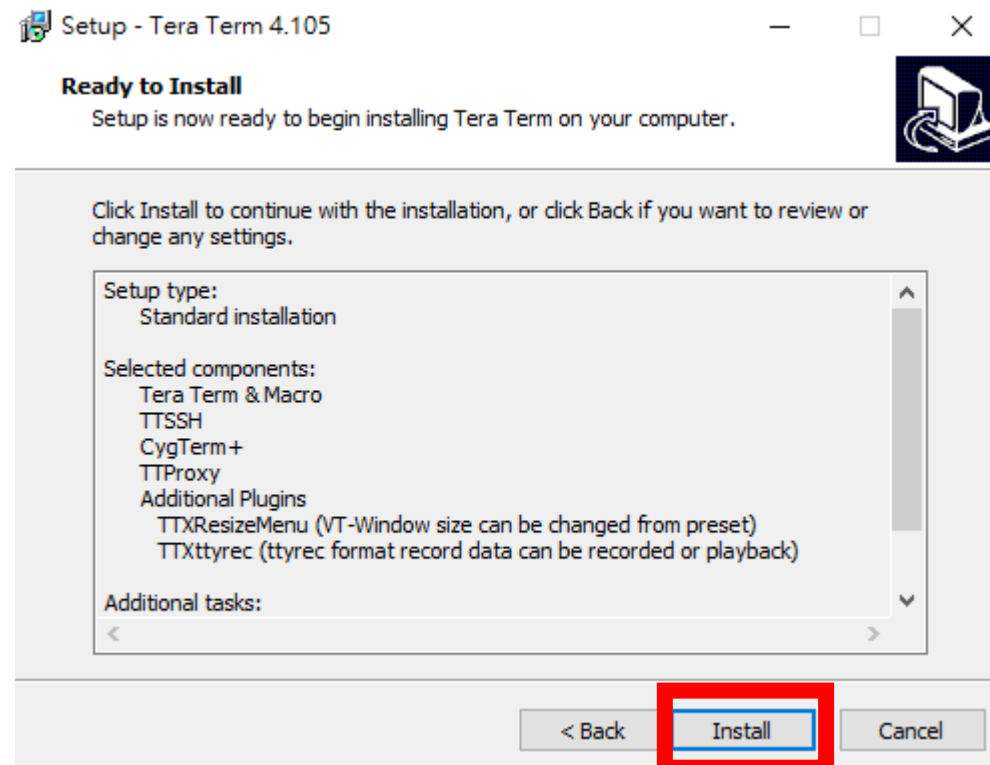
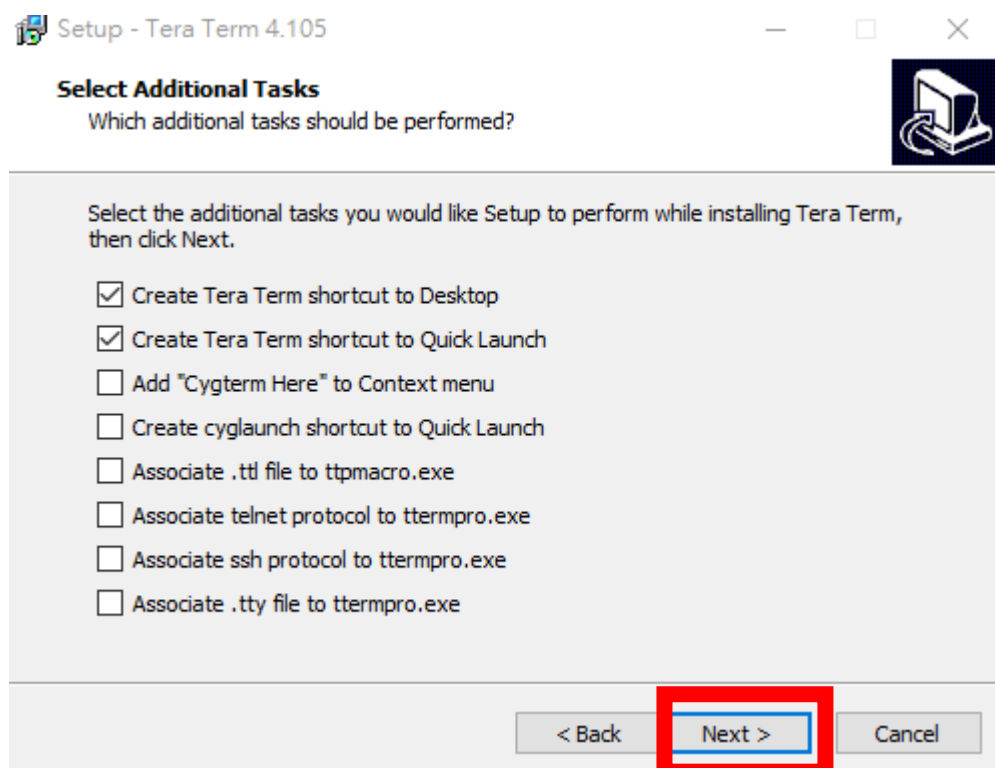
- Keep selecting Next

English or Chinese(Traditional) is recommended in this workshop



# Teraterm Installation

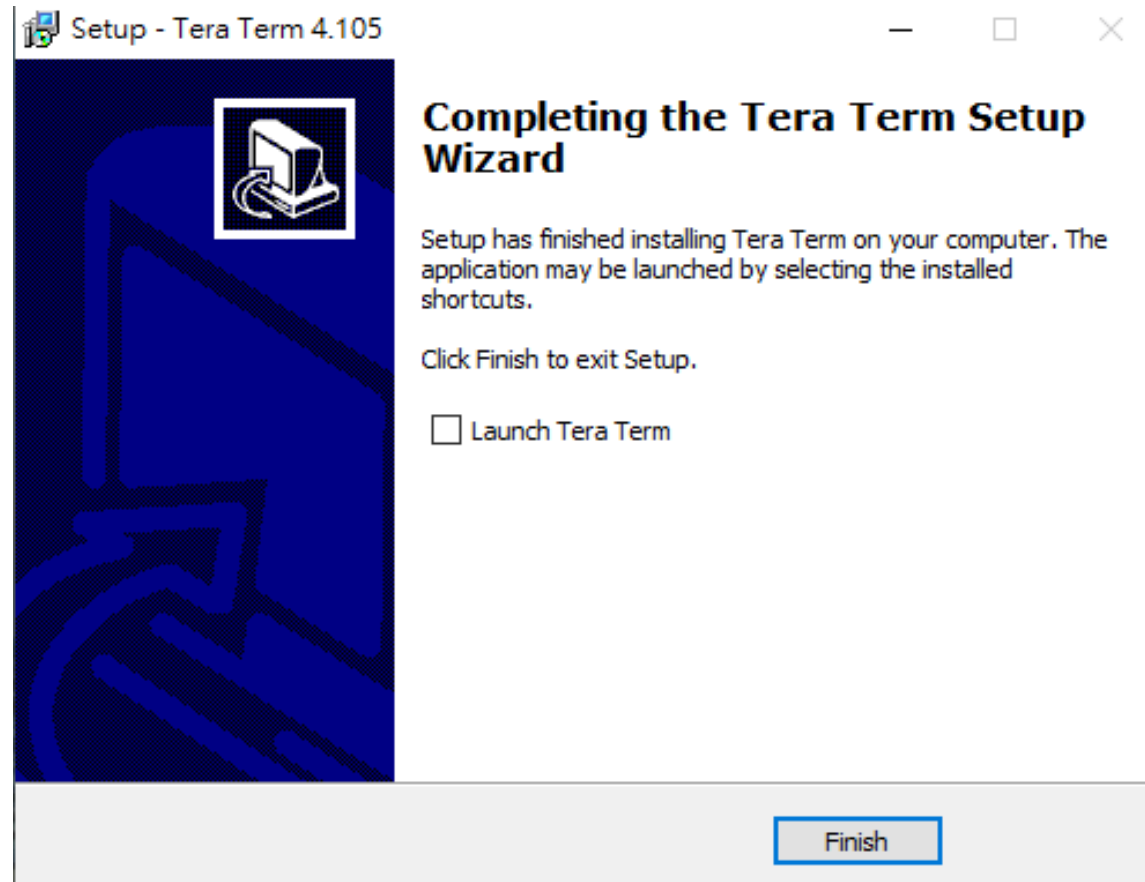
- Keep selecting Next and install





# TeraTerm Installation

- Done





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# Install ARC GNU ToolChain



# Installation of ARC GNU ToolChain

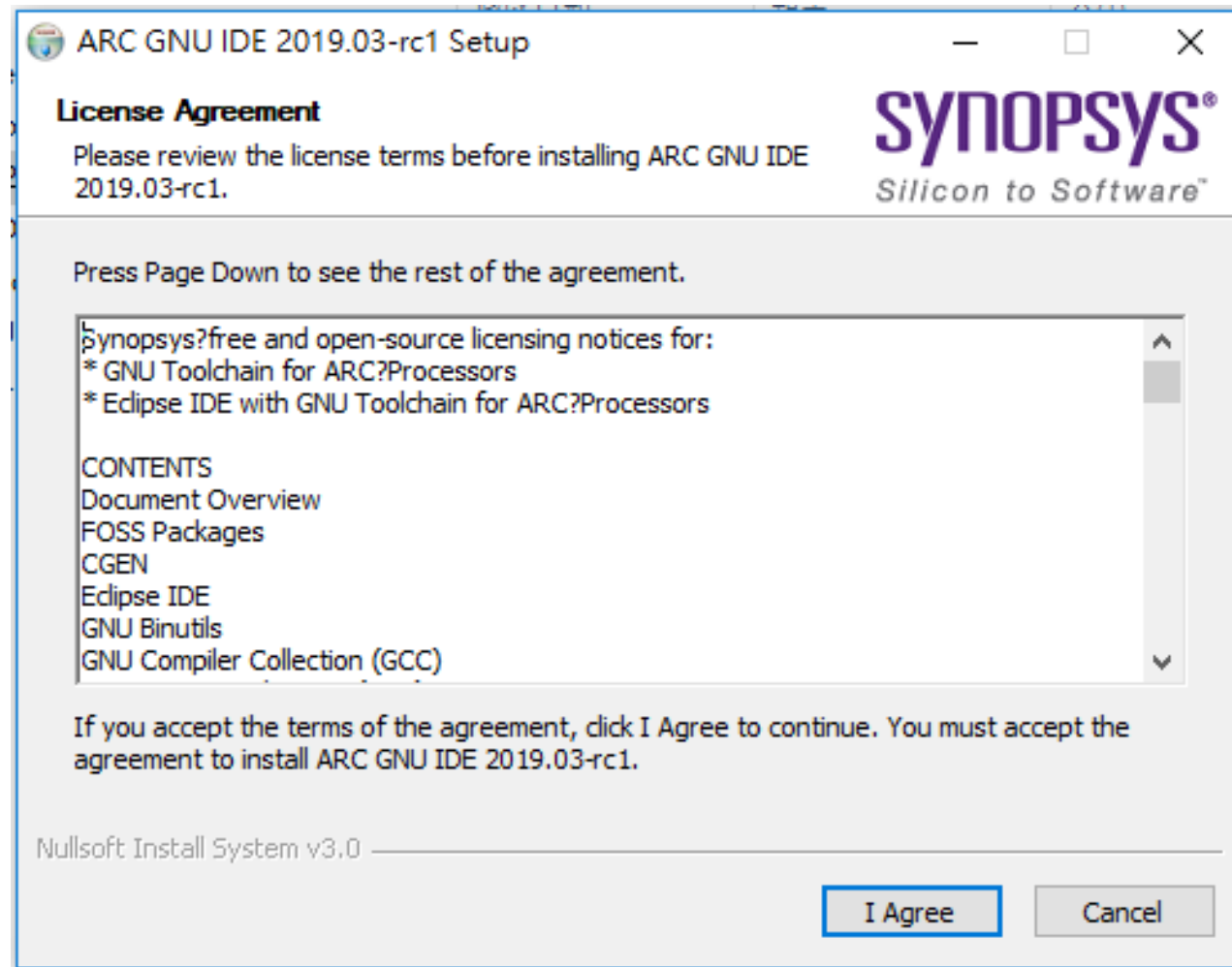
- Step 1 – Go to the download page :

<https://github.com/foss-for-synopsys-dwc-arc-processors/toolchain/releases/>

	Linux x86_64	Windows x86_64	Linux ARC HS	macOS x86_64
Baremetal	Little endian \ Big endian			Little endian \ Big endian
Linux/uClibc ARC700	Little endian \ Big endian			
Linux/uClibc ARC HS	Little endian \ Big endian		Little endian	
Linux/glibc ARC HS	Little endian \ Big endian			
IDE	Download	Download		Download

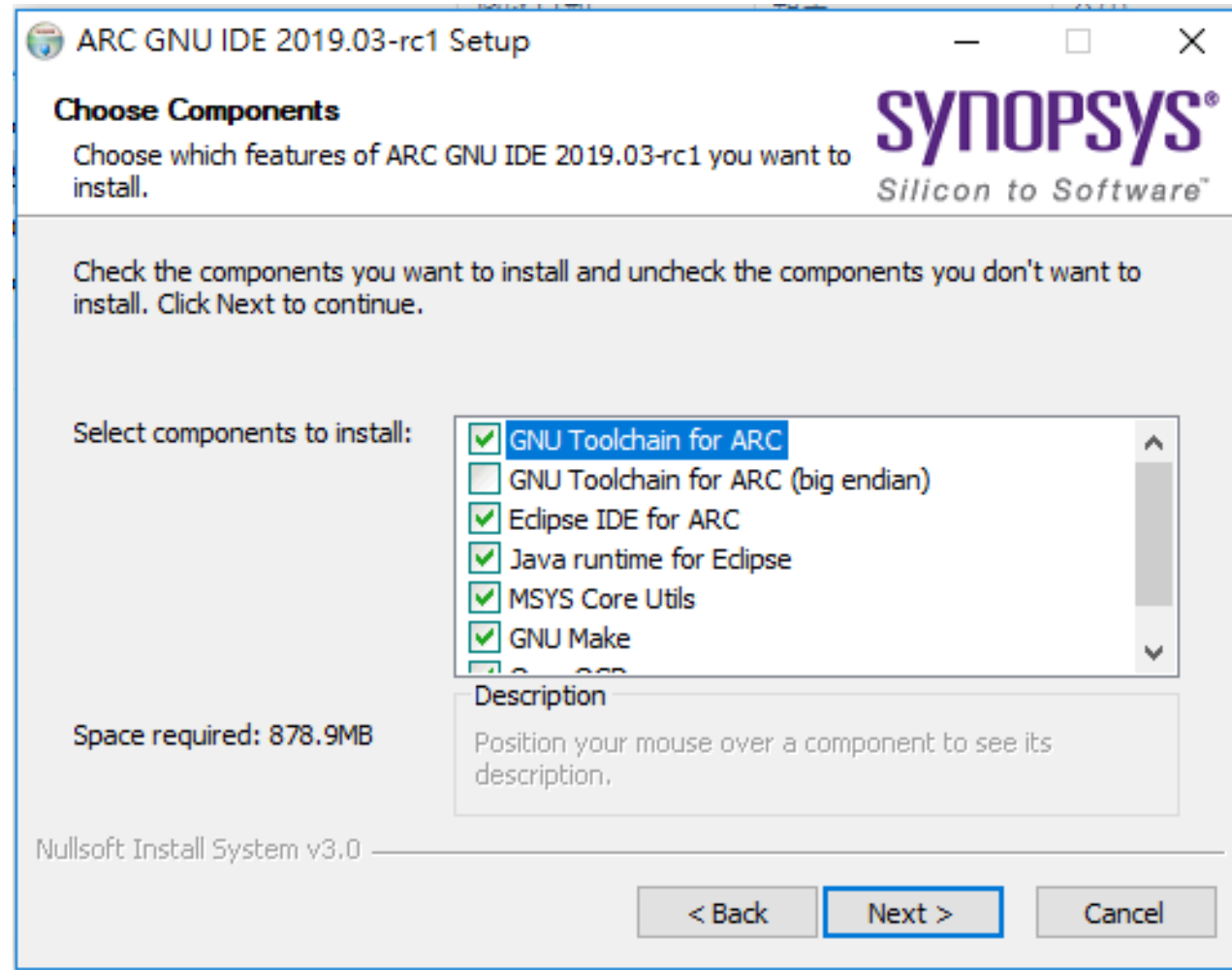
# Installation of ARC GNU ToolChain

- Step 2 – Double click the installation file and press I Agree



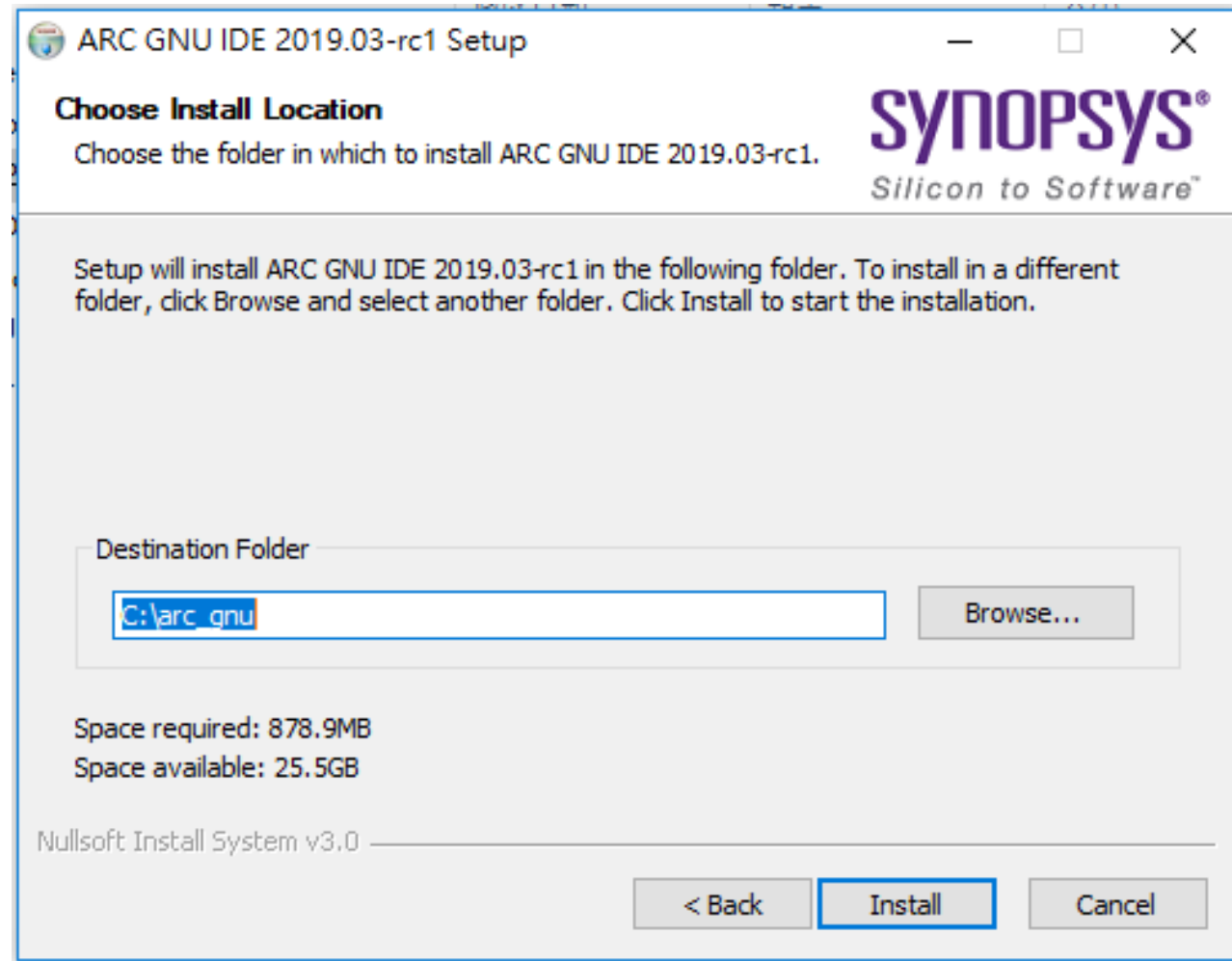
# Installation of ARC GNU ToolChain

- Step 3 – Press Next



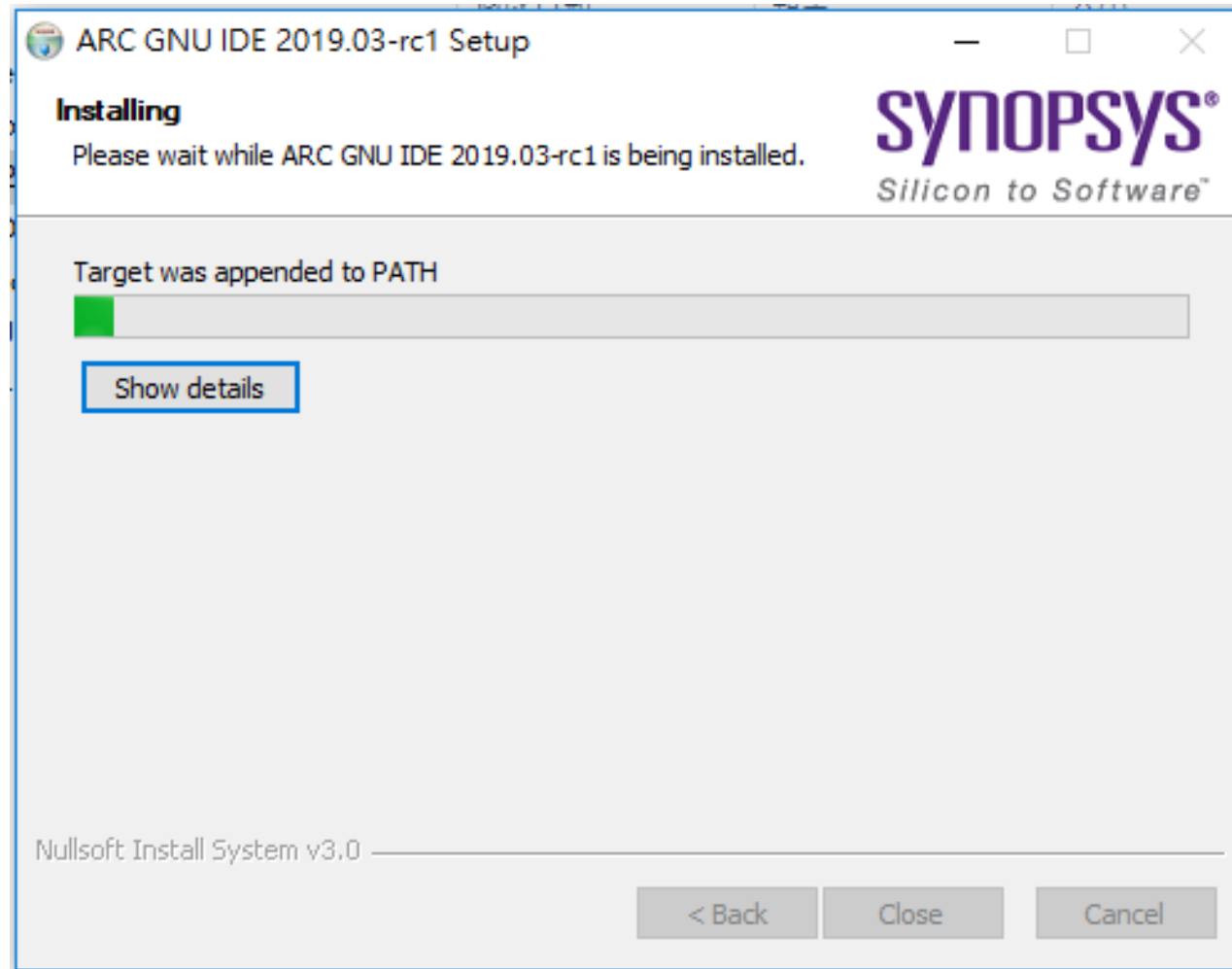
# Installation of ARC GNU ToolChain

- Step 4 – Press Install



# Installation of ARC GNU ToolChain

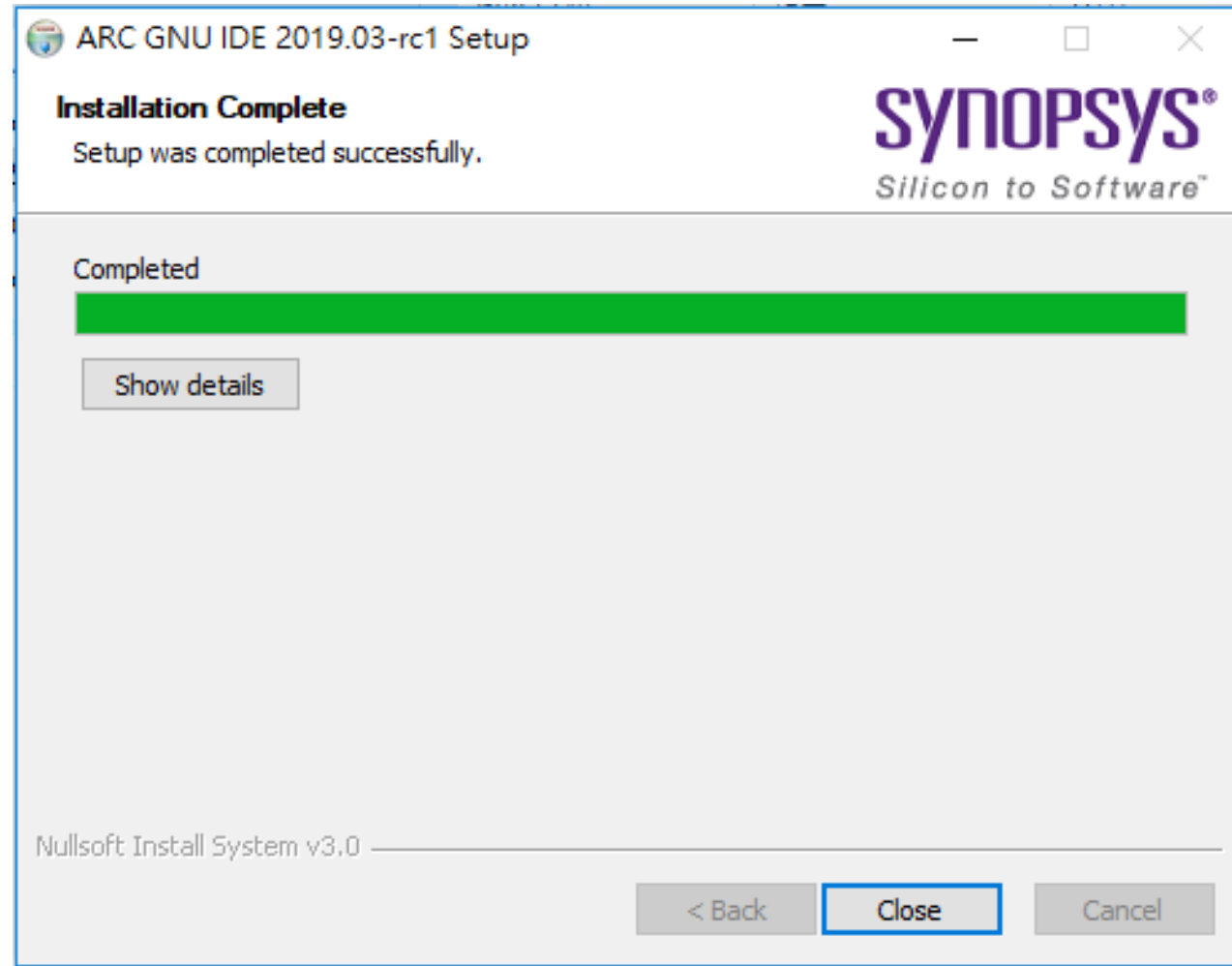
- Step 5 – Start to install...





# Installation of ARC GNU ToolChain

- Step 6 - Press close and complete the installation





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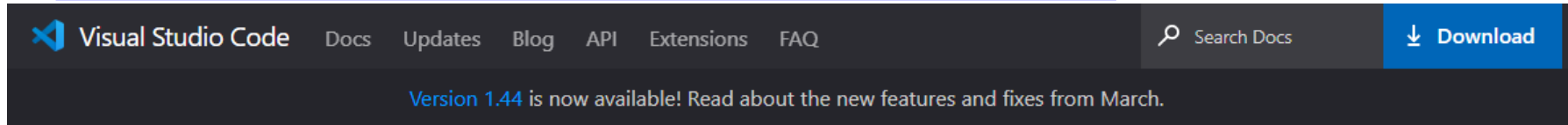
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# Install VScode



# Installation of VScode

- Step 1 – Go to download page of VScode :  
<https://code.visualstudio.com/download>



## Download Visual Studio Code

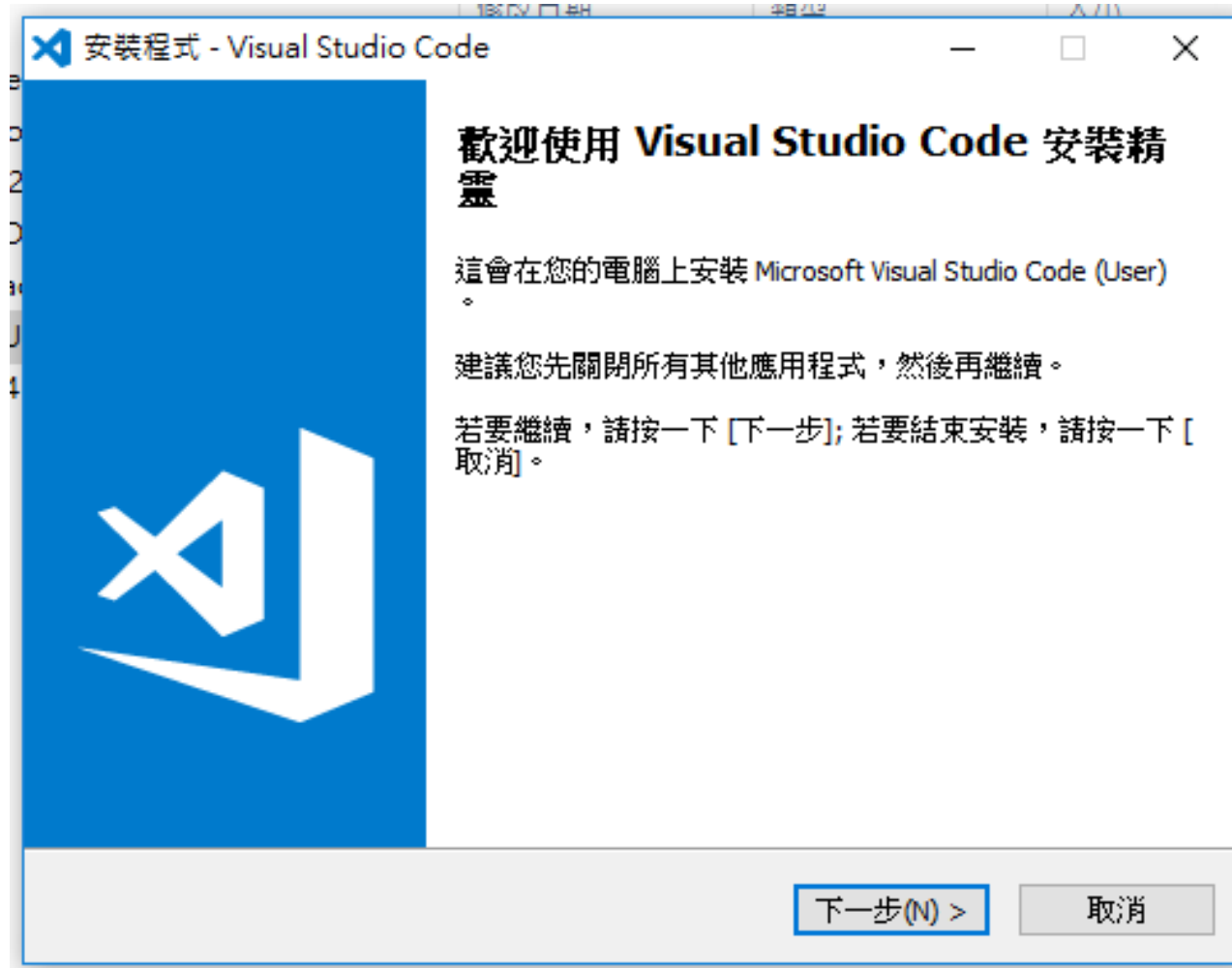
Free and built on open source. Integrated Git, debugging and extensions.

The main content area of the download page, featuring three primary download paths: Windows, Linux, and Mac. Each path has a corresponding icon (Windows logo, Tux penguin, and Apple logo) and a blue button with a download icon. Below these buttons, specific installation methods and file formats are listed for each operating system.

Operating System	Download Method / File Format	Architecture
Windows	User Installer	64 bit, 32 bit
	System Installer	64 bit, 32 bit
	.zip	64 bit, 32 bit
	Snap Store	
Linux	.deb	64 bit
	.rpm	64 bit
	.tar.gz	64 bit
Mac	Mac	macOS 10.10+

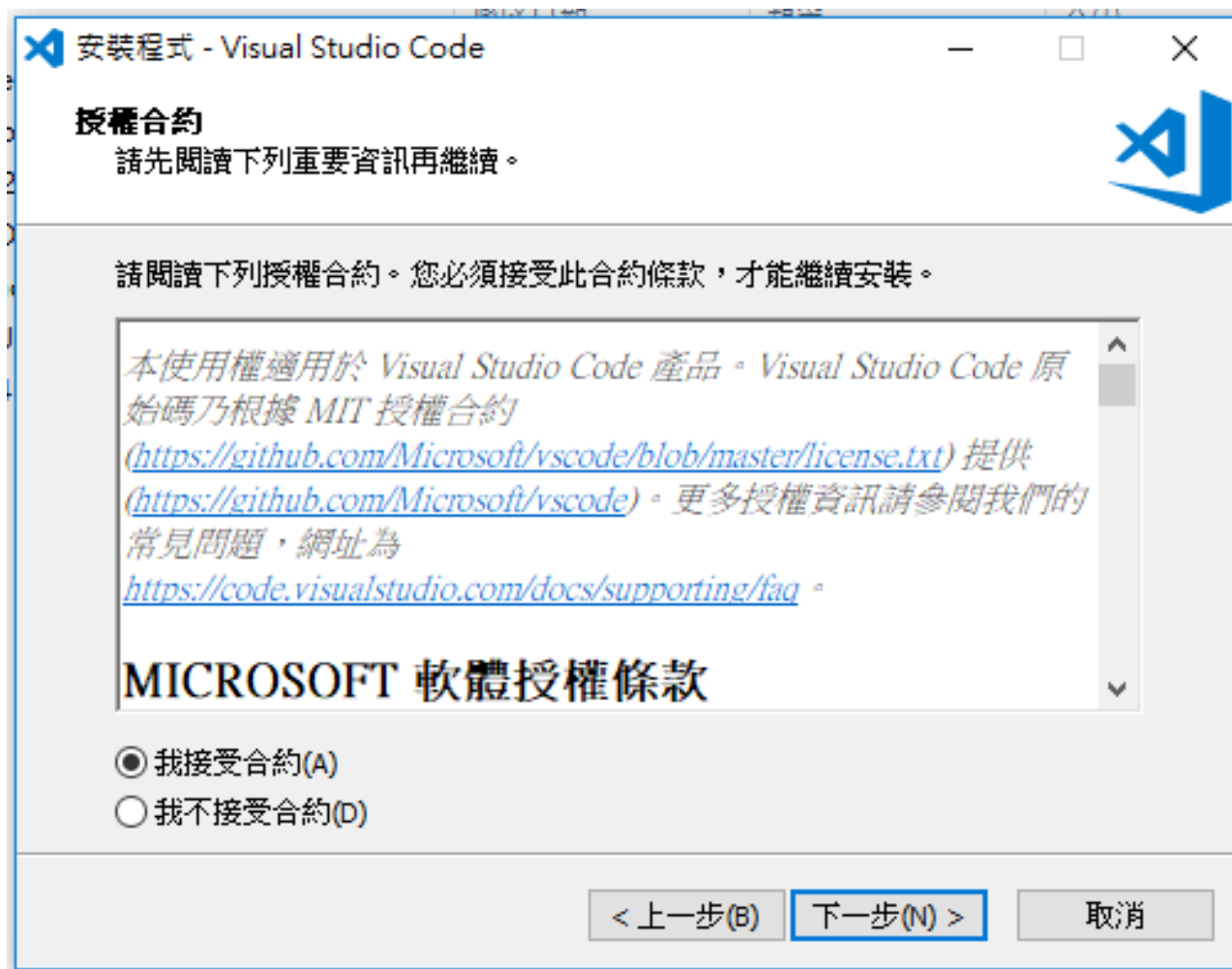
# Installation of VScode

- Step 2 – Double click the installation file and press next



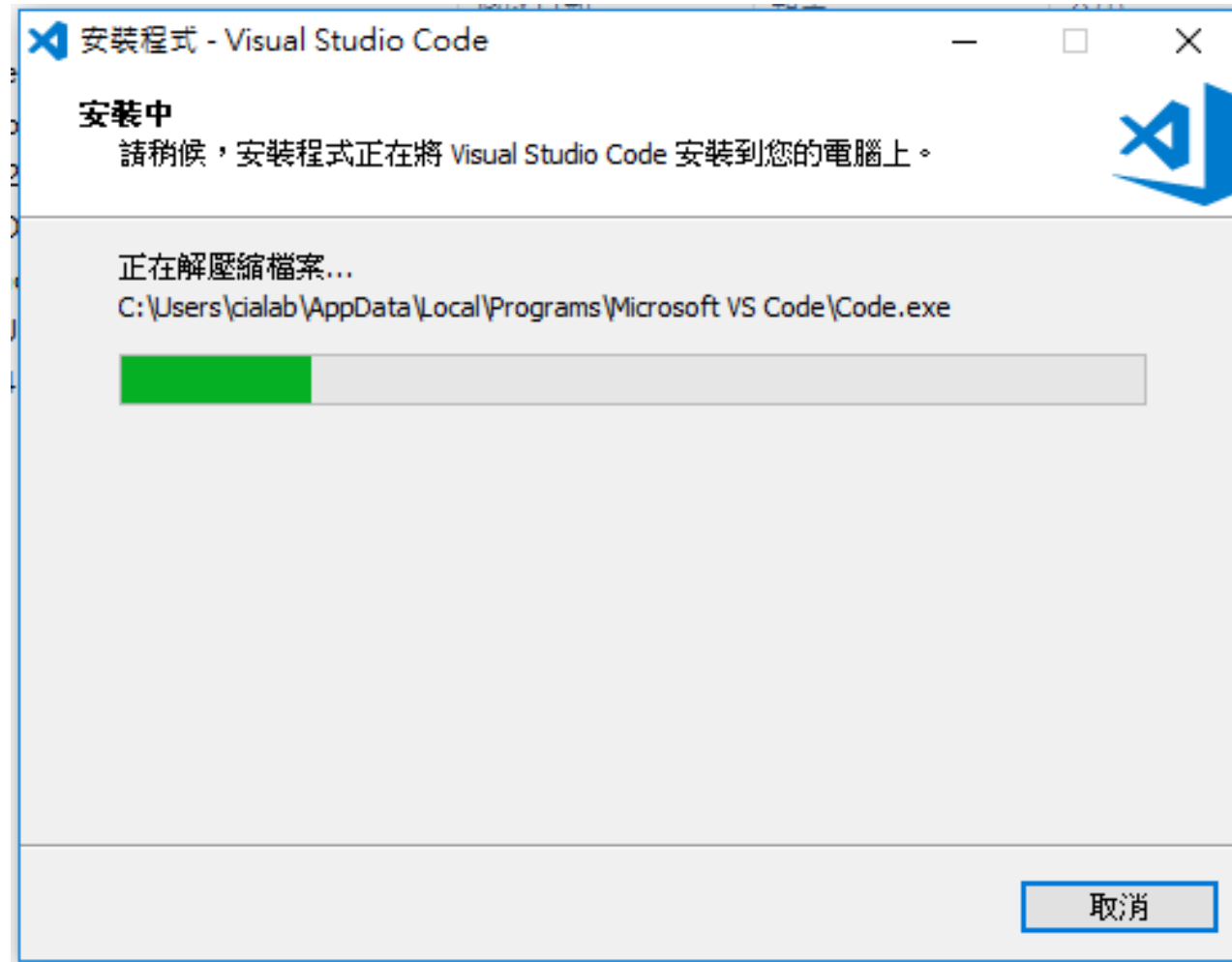
# Installation of VScode

- Step 3 – Accept the contract and press next...



# Installation of VScode

- Step 4 – Start to install...



# Installation of VScode

- Step 5 – Press finish





# Installation of VScode

- Step 6 – Try to open the VScode

