

Anaconda system with or without GPU

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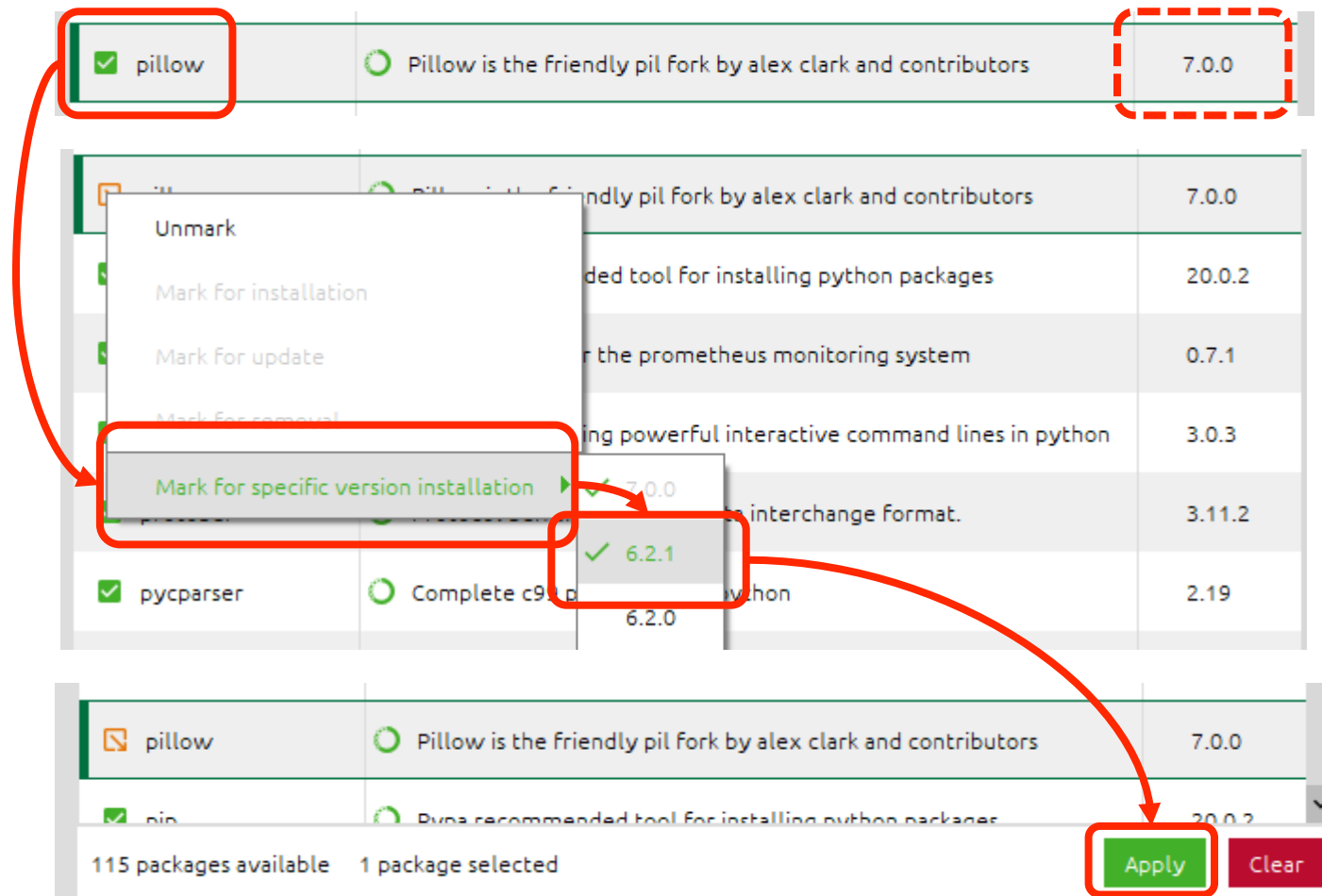
If you have already installed.

- Update conda from virtual environment.
 - `conda update -n base -c defaults conda`
- Update installed libraries.
 - `conda update --all`
- Note: If any updates are not applicable, downgrade in the anaconda menu.
 - At present, version “6.2.1” is good for “pillow”.
- Be careful when updating “opencv”
 - I recommend that you uninstall opencv and then (re) install version 3.
 - `conda uninstall opencv`
 - `conda install -c conda-forge opencv=3`

“➤” mark means to enter as a command.

Example of downgrade in Anaconda menu

Pillow downgrade



Check the NVIDIA driver

After complete the Windows update.

- Check your NVIDIA Driver version.
(Install new version if necessary)
 - <https://www.nvidia.co.jp/Download/index.aspx>
- Check the CUDA Toolkit version for your system. (No need to install !!)
 - <https://docs.nvidia.com/cuda/cuda-toolkit-release-notes/index.html>
- The following description is based on the environment shown in the table below.

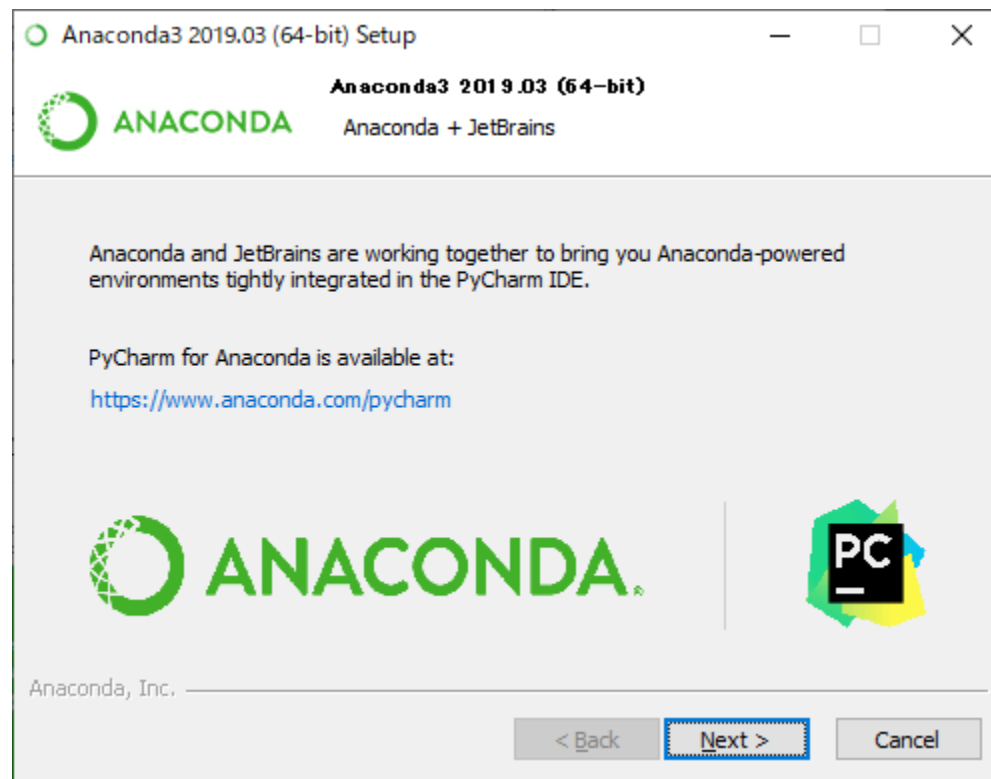
Python	CUDA toolkit	cuDNN	TensorFlow-GPU
3.6	9	7.65	1.14.0
3.7	10	7.65	2.0.0

Install "Microsoft Visual Studio 2015 Community" if you do not have it and use GPU system.

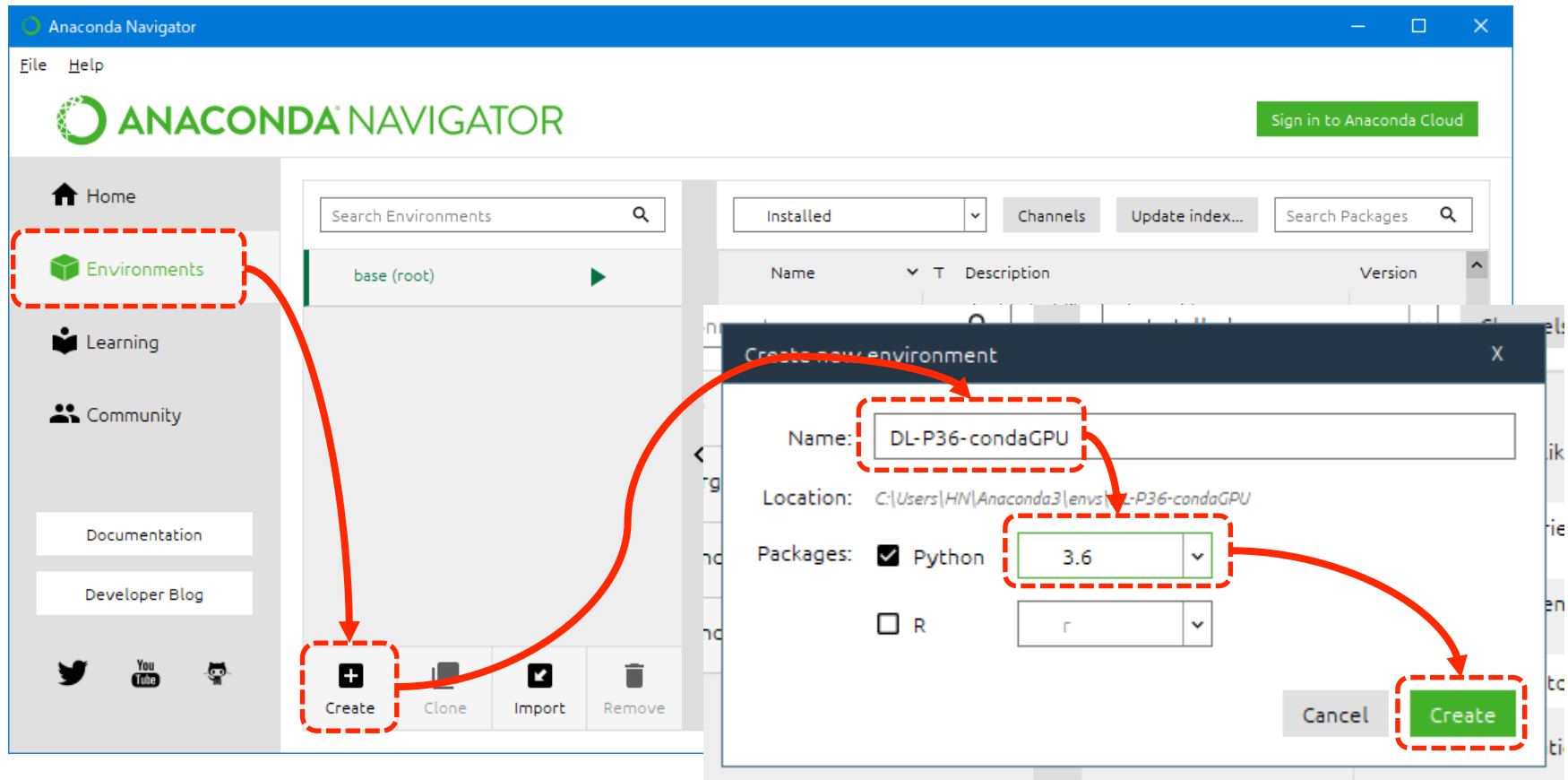
- Join to "Visual Studio Dev Essentials"
 - <https://my.visualstudio.com>
- Select "2015" and click "Download" button.
 - <https://visualstudio.microsoft.com/vs/older-downloads/>
- Select "Visual Studio Community 2015 with Update XXX" (XXX is latest), then download and install.

Install “Anaconda (Python 3)”

<https://www.anaconda.com/distribution/>

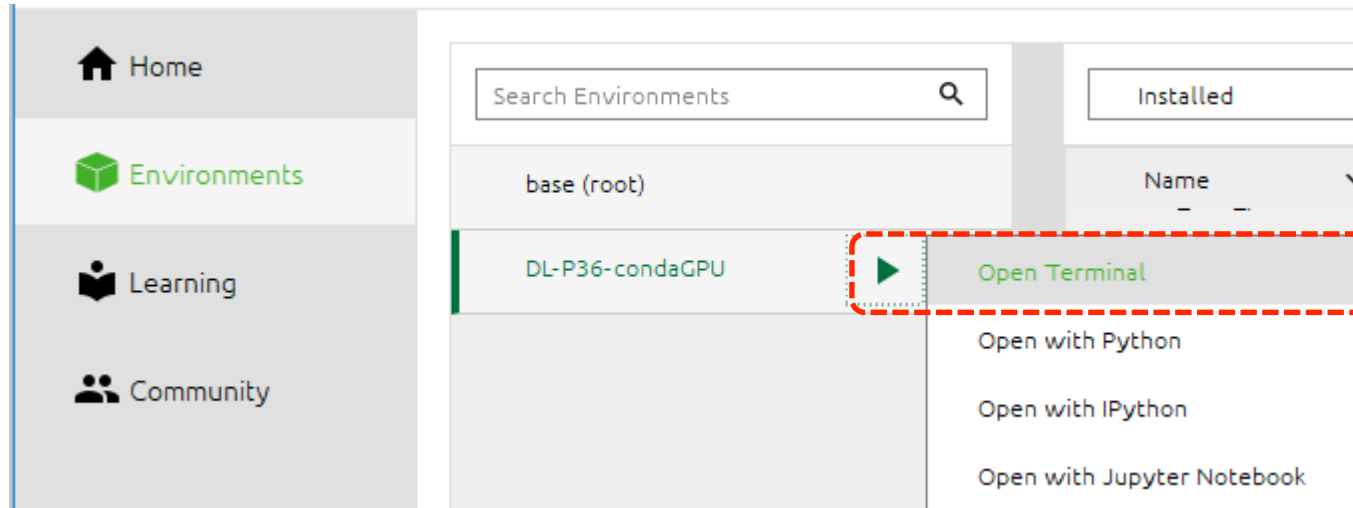


Create new environment for Python 3.x* system.



* Python 3.x : over 3.6

After create a new environment, do “Open Terminal” and install libraries as following page.



```
C:\WINDOWS\system32\cmd.exe
(DL-P36-GPU-2) C:\Users\HN>conda install tensorflow-gpu==1.14.0
```


Do “conda install tensorflow-gpu” for GPU system.

Using "conda" instead of "pip" will automatically install the appropriate CUDA toolkit and cuDNN for each virtual environment.

- GPU (NVIDIA) system
 - Python3.6 --- Recommended system (operation confirmed)
 - conda install tensorflow-gpu==1.14.0
 - Tensorflow-gpu --- 1.14.0
 - cudatoolkit --- 9.0.176
 - cuDNN --- 7.65 for cuda 9.0
 - Python3.7.6 --- Recommended system (operation confirmed)
 - conda install tensorflow-gpu==2.0.0
 - tensorflow-gpu --- 2.0.0
 - cudatoolkit --- 10.0.130
 - cuDNN --- 7.6.5 for cuda 10.0

“➤” mark means to enter as a command.

Do “conda install tensorflow”.

- Python3.6 --- Recommended system
(operation confirmed)
 - conda install tensorflow==1.15.0
 - Tensorflow --- 1.15.0
- Python3.7.6 --- Recommended system
(operation confirmed)
 - conda install tensorflow
 - tensorflow --- 2.0.0

Libraries for both GPU and non-GPU system.

➤ conda install [follows libraries name]

- jupyter
- h5py
- pillow==6.2.1
- pandas
- scipy
- matplotlib
- scikit-learn
- cython
- keras

The “opencv” often doesn't work well with version 4, so use version 3 for now.
Import command regardless of version
Note that the command will be “import cv2”!

• Install opencv

➤ conda install -c conda-forge opencv=3

• Install pydicom

➤ conda install -c conda-forge pydicom

“➤” mark means to enter as a command.

Launch "jupyter notebook" for the first time

Common

The diagram illustrates the process of launching Jupyter Notebook from Anaconda Navigator. It consists of three main components: two screenshots of the Anaconda Navigator interface and a screenshot of the Jupyter Notebook web interface.

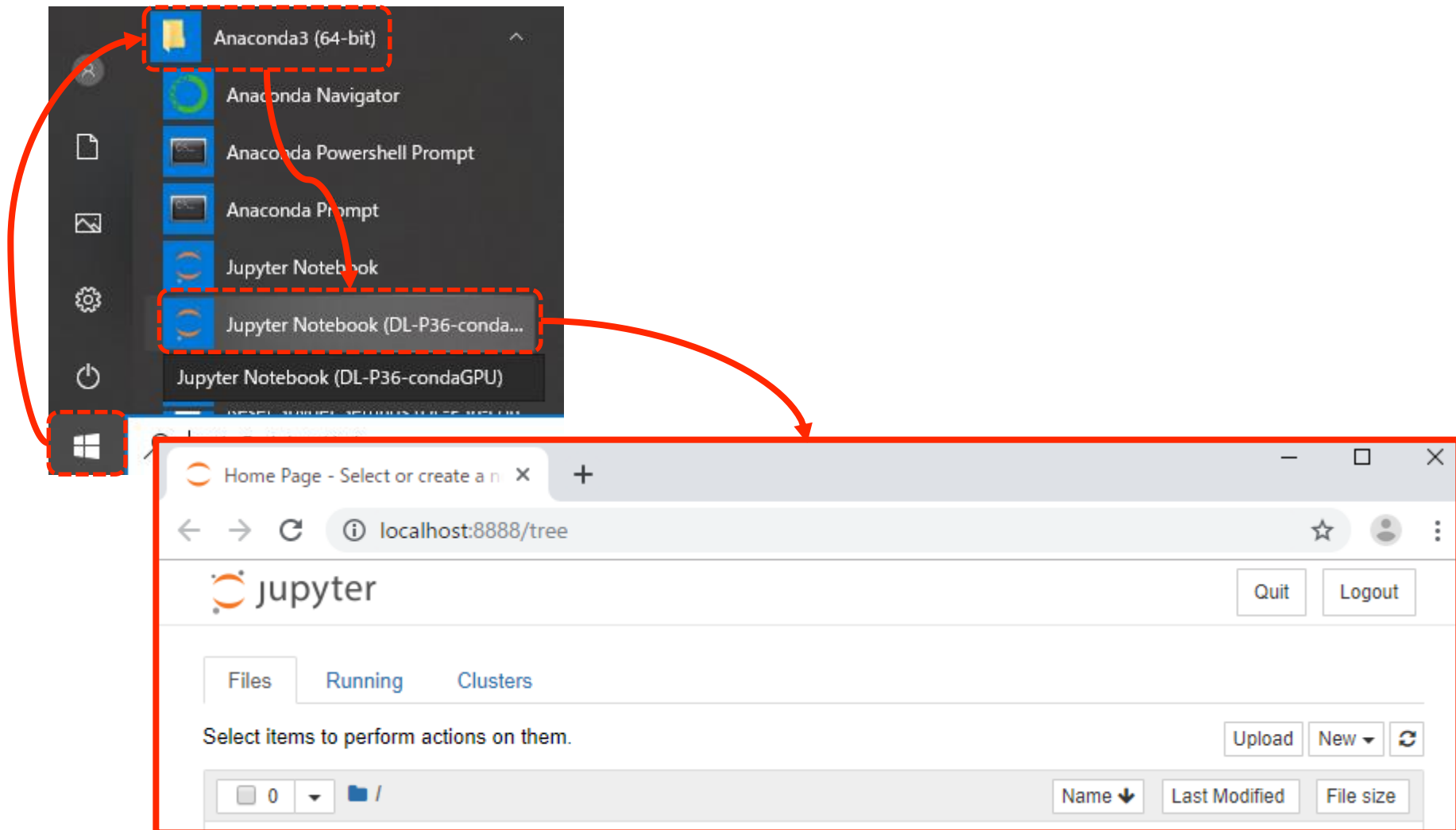
Left Screenshot (Initial State): The Anaconda Navigator interface shows the 'Home' button in the top-left sidebar, the 'Applications on DL-P36-condaGPU' dropdown menu, and the 'Install' button in the 'jupyter' section. A red dashed box highlights the 'Home' button, and another red dashed box highlights the 'Install' button.

Right Screenshot (After Clicking 'Install'): The 'Launch' button in the 'jupyter' section is now visible and highlighted with a red dashed box. A red arrow points from the 'Install' button in the left screenshot to the 'Launch' button in the right screenshot.

Bottom Screenshot (Jupyter Notebook Interface): The Jupyter Notebook web interface is shown in a browser window. The address bar displays 'localhost:8888/tree'. The interface includes a 'Quit' button, a 'Logout' button, and a 'Files' tab. A red arrow points from the 'Launch' button in the right screenshot to the top of the browser window.

Red Arrows: Red arrows indicate the flow of the process: from the 'Home' button in the left screenshot to the 'Install' button, and from the 'Launch' button in the right screenshot to the Jupyter Notebook web interface.

How to start "jupyter Notebook ([virtual environment]) " directly from "Windows Start".



Default folder setting when starting Jupyter ([virtual environment]) directly(1)

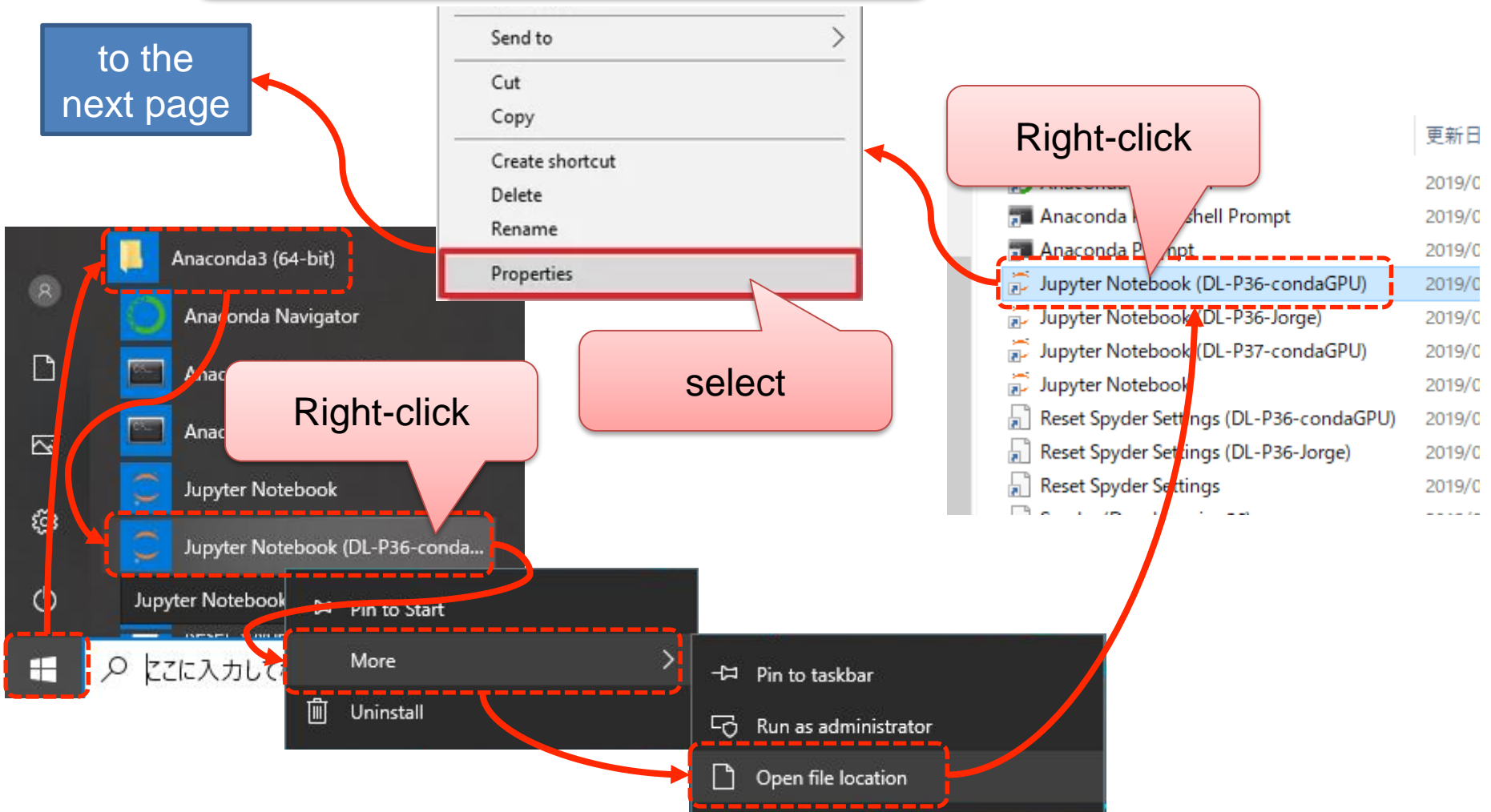
If the virtual environment name is long, the last operation may not be possible.

to the next page

Right-click

Right-click

select



Default folder setting when starting Jupyter ([virtual environment]) directly(2)

As a precaution, it is recommended that you copy all of target and save them in a text file.

From the previous page

Target:

```
ts¥jupyter-notebook-script.py "%USERPROFILE%/"
```

Change "%USERPROFILE%/" (at the end of the target) to the desired folder. For example, change it to
"%USERPROFILE%/Documents/Python-Data/"
* "%USERPROFILE%/Documents/" matches the "Documents" folder.

To make the above settings, create a "Python-Data" folder in your "Documents" folder.
Please note up to 159 characters!

