Jupyter kernel installation
Installation guide

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Introduction

The WPS plugin to Jupyter (a Jupyter kernel) enables the features of WPS Analytics to be used in a Jupyter notebook.

To use the WPS Jupyter kernel, you must have Python and the Jupyter modules installed. You can either install the Jupyter modules into an existing Python environment, or install a packaged Python environment such as Anaconda that includes the necessary modules.

This document does not cover how to install Python or Jupyter. We assume that you are familiar with Python and Jupyter, and know how to install Python packages, building from source code if necessary.

Installing the WPS kernel (Microsoft Windows)

Steps to take to install the WPS Jupyter kernel on Microsoft Windows.

You must have Python installed (see the Python ☐ website for information), and a working Jupyter notebook installation (see the Jupyter ☐ website for information).

Once you have a working Jupyter environment, the files required to make the WPS kernel available are included in the WPS installer, available from the World Programming ☐ website.

1. Ensure the Python installation directory has been added to your *PATH* variable, and in a command prompt start Jupyter using the command `jupyter notebook`.

2. Download the WPS installation (.msi) file and when complete, double-click the file. Read and accept the end user agreement, and follow the on-screen instructions. After installation, apply your WPS licence.

3. Ensure that the *WPSHOME* environment variable is set to point to the WPS installation directory (for example, `C:\Program Files\World Programming\WPS\4`).

4. Create a folder called `WPS` for the WPS kernel software

   - If Jupyter is installed for a single user, create a `WPS` folder in `C:\Users\<userid>\AppData\Roaming\jupyter\kernels`.

   - If Jupyter is installed for all users,create a `WPS` folder in `C:\ProgramData\jupyter\kernels`

   You may need to create one of, or both, the `jupyter` and `kernels` folders in the path.

5. Copy the content of the jupyter folder in the WPS installation directory in to the `WPS` folder.

6. In the `kernel.json` file, edit the first string on the "argv" line to reference the `wpsjkrnl` file in the WPS installation directory, for example `"C:/program files/World Programming/WPS/4/bin/wpsjkrnl"`.

Note:

You can use either forward a slash (/) or an escaped backslash (\\) as the path delimiter. A single backslash cannot be used as this will be interpreted by Python as the escape character.

Installing the WPS kernel (Linux)

You must have Python installed (see the Python ☑ website for information), and a working Jupyter notebook installation (see the Jupyter ☑ website for information).

Once you have a working Jupyter environment, the files required to make the WPS kernel available are included in the WPS distribution, available from the World Programming ☑ website.

1. Download the distribution file and choose a suitable installation location to which you have write-access. Change to that directory and extract WPS using the following command:

    ```
    tar –xzof <wps-installation-file>.tar.gz
    ```

2. Apply the WPS licence key using the following command:

    ```
    <wps-installation-dir>/bin/wps –stdio –setinit <  <wps-key-file>
    ```

3. Create a folder called WPS for the WPS kernel software

    •   If Jupyter is installed for a single user, create a `WPS` folder in `~/.local/share/jupyter/kernel`

    •   If Jupyter is installed for all users,create a `WPS` folder in `/usr/share/jupyter/kernel`

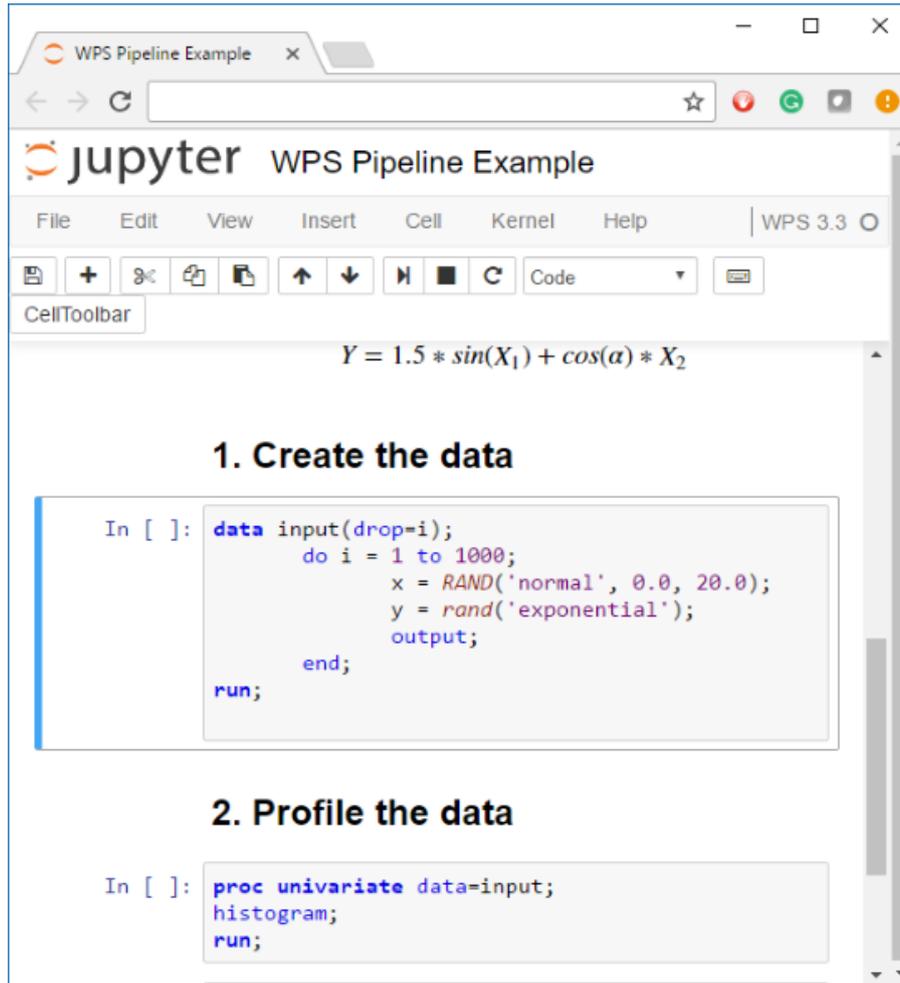   In both instances, you may need to create the `jupyter/kernel` folder path.

4. Copy the content of the jupyter folder in the WPS installation directory in to the `WPS` folder.

5. In the `kernel.json` file, edit the first string on the "argv" line to reference the `wpsjkrnl` file in the WPS installation directory, for example `"/opt/worldprogramming/wps-4/bin/wpsjkrnl"`.

Using WPS in a Jupyter notebook

In the Jupyter home page, you will have the option to create a new notebook of type WPS:
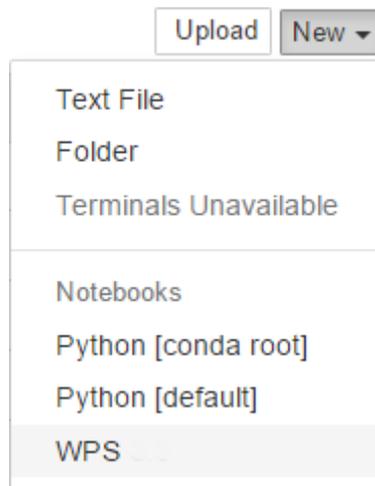
Select WPS. A new notebook is created in to which a SAS language program can be written:

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WPS includes software developed by third parties. More information can be found in the THANKS or acknowledgments.txt file included in the WPS installation.