SNIA SMI | STORAGE MANAGEMENT

Pywbem
Installation and Set-up

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Disclaimer

The purpose of this presentation is to provide information on installing code and data in order to run a set of SMI-S 1.8.0 mock WBEM Servers. The presentation describes the process for Windows but there are similar steps for installing code and data on Linux.

There also is some discussion of SMI-S Quick Start Guides which are pywbemcli scripts for accessing important data from WBEM Servers that support SMI-S 1.8.0. But the details of the guides will be addressed in other presentations.

Sessions

- Install Python, Python Virtual Environments, PyWBEM & PyWBEMTools
- Installing mock environments for SMI-S 1.8.0
- SMI-S 1.8.0 Quick Start Guides

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Install Python 3, Python Virtual Environments, PyWBEM & PyWBEMTools

Install Python 3 (windows)

- Go to https://www.python.org/downloads/
- Download the latest version (Python 3.8.5)
- Run python-3.8.5.exe
  - Check install launcher for all users
  - Check add python 3.8 to PATH
  - Click on Install Now
- To verify the installation, check the version from command prompt:
  - C:\> python --version
- We also recommend downloading the documentation
  - Go to https://docs.python.org/3/download.html
  - Download your favorite format (e.g., pdf, html, etc)

Install Python Virtual Environments

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- After installing Python, run:
  - C:\> pip install virtualenv
  - C:\> pip install virtualenvwrapper-win
- Once installed, you can define your virtual environments (and initialize their directories)
  - C:\> mkvirtualenv -a devenv mocks
    - Creates a virtual environment (mocks) using a directory /devenv
- To see what environments have been defined:
  - C:\> workon
- To work in the virtual environment:
  - C:\> workon mocks

Install Pywbem (pip install)

- Go to your virtual environment
  - Workon mocks
- Pip install pywbem
  - (mocks) C:\> pip install pywbem
- For more details, see:
  - https://pywbem.readthedocs.io/en/latest/intro.html#installation

Install PyWBEM Tools

- Go to your virtual environment
  - Workon mocks
- Pip install pywbemtools
  - (mocks) C:\> pip install pywbemtools
- For more details, see:
  - https://pywbemtools.readthedocs.io/en/latest/

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Install supplied mock environments

Clone the mock environments

- Go to the repo of mocks
  - https://github.com/FarmerMike252/SMI-S_Mocks
- Perform git init in a directory on your system
  - C:\> git init
- Clone the repo to your system
  - C:\> git clone https://github.com/FarmerMike252/SMI-S_Mocks.git

Running a mock

- Copy the 3 mock files of a profile to your virtual environment
  - Such as the devenv directory defined in an earlier slide
- Go to your virtual environment
  - C:\> workon mocks
- Start and save your mock
  - (mocks) C:\devenv> pywbemcli -m ArrayMockLoad.py connection save ArrayMock
- Once it is saved it can be started with:
  - (mocks) C:\devenv> pywbemcli -o table -n ArrayMock
- Issue a pywbemcli command to finish the setup (it will take some time)
  - Pywbemcli> instance get CIM_System.? --pl CreationClassName,Name

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SMI-S Quick Start Guides

What is a Quick Start Guide?

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SMI-S is 2516 pages of reading spread across 8 books, plus it references another 14 or so DMTF profiles which amount to another 660 pages of reading. So, the question is where do you start?

We have come up with a series of Quick Start Guides that are designed to help you get started by illustrating how to find useful SMI-S information in mock servers (mock ups of SMI-S server implementations). The Quick Start Guides don't illustrate EVERYTHING in the 3176 pages, but they give you a head start at finding some important items in SMI-S.

What do they cover?

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We currently have quick start guides for:

1. **The Interop Namespace** - What is it and what does it tell us?
2. **Performance Information** - Where do I find performance information in an SMI-S Server?
3. **Capacity Information** - Where do I find storage capacity information in an SMI-S Server?
4. **Hardware Information** - Where do I find hardware information in an SMI-S Server?
5. **Product Information** - Where do I find product information in an SMI-S Server?
6. **Software Information** - Where do I find software information in an SMI-S Server?

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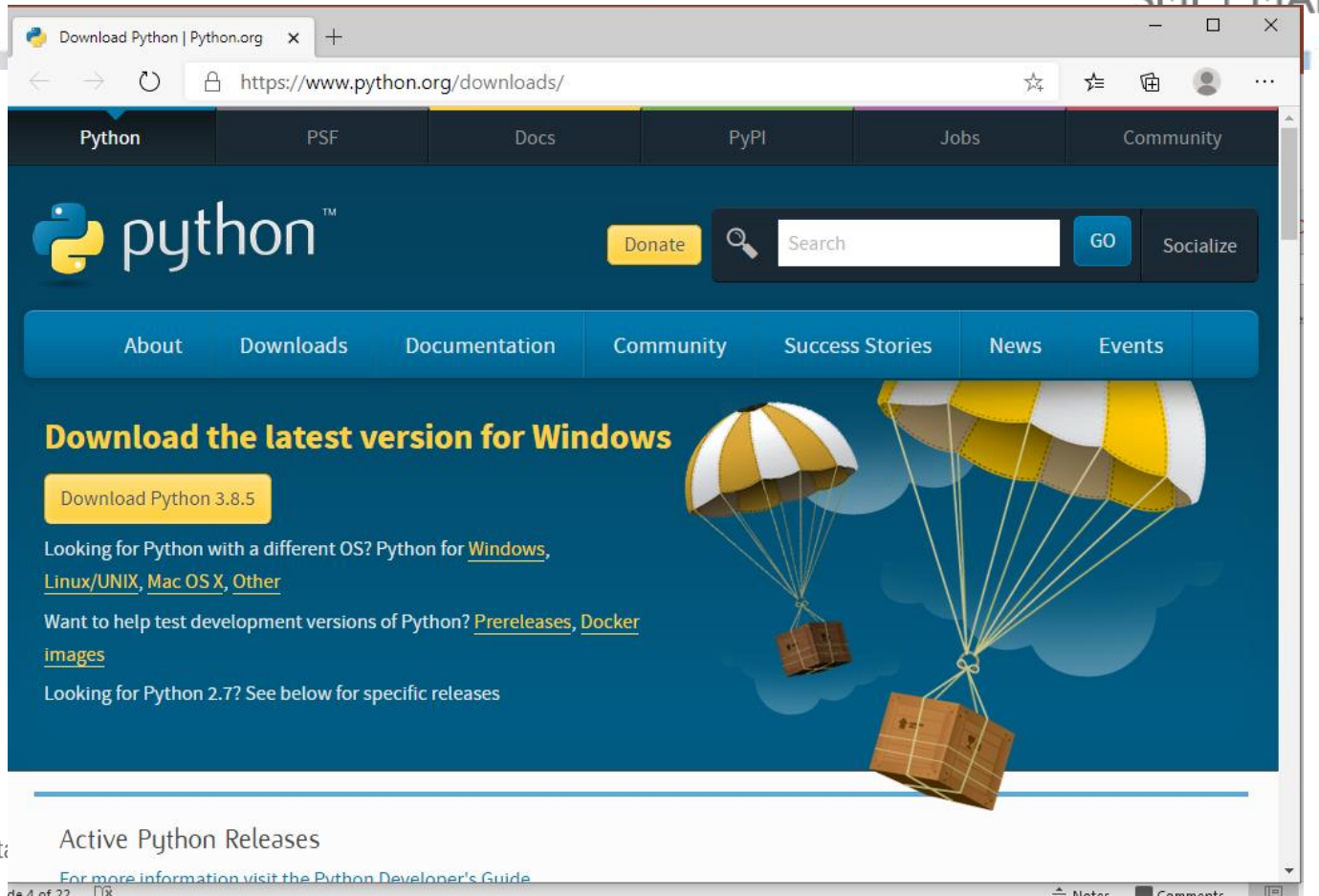
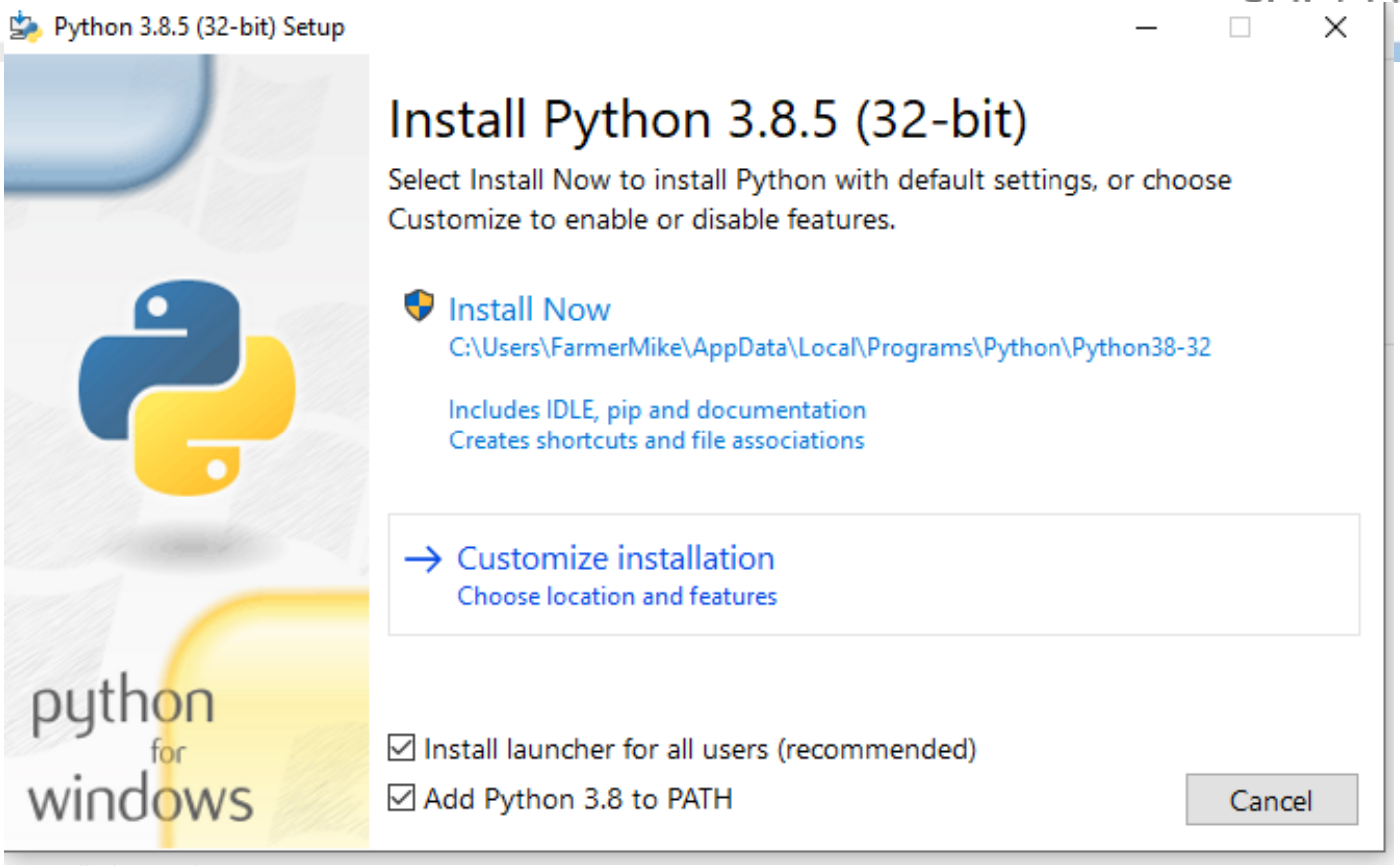
Screen Shots

Python Download



Python install screen



Python Version

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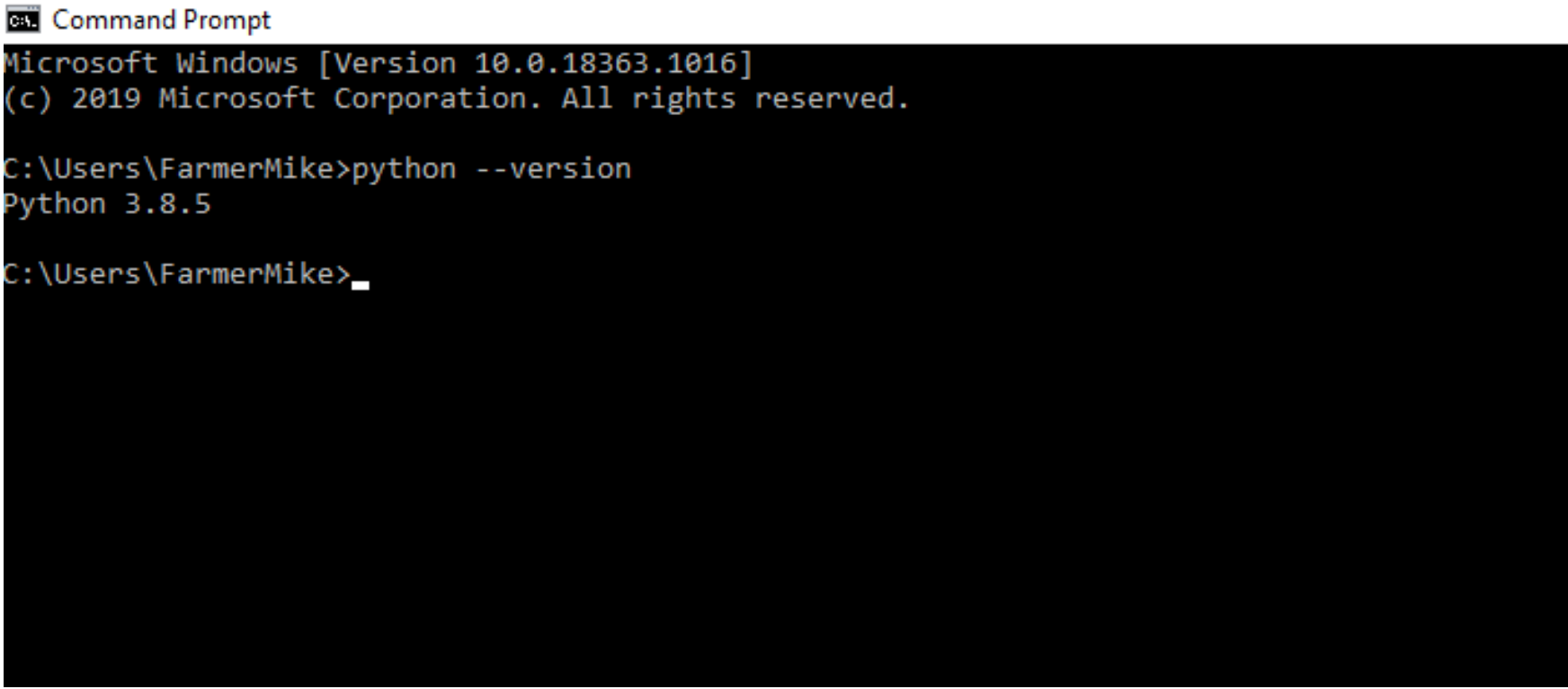
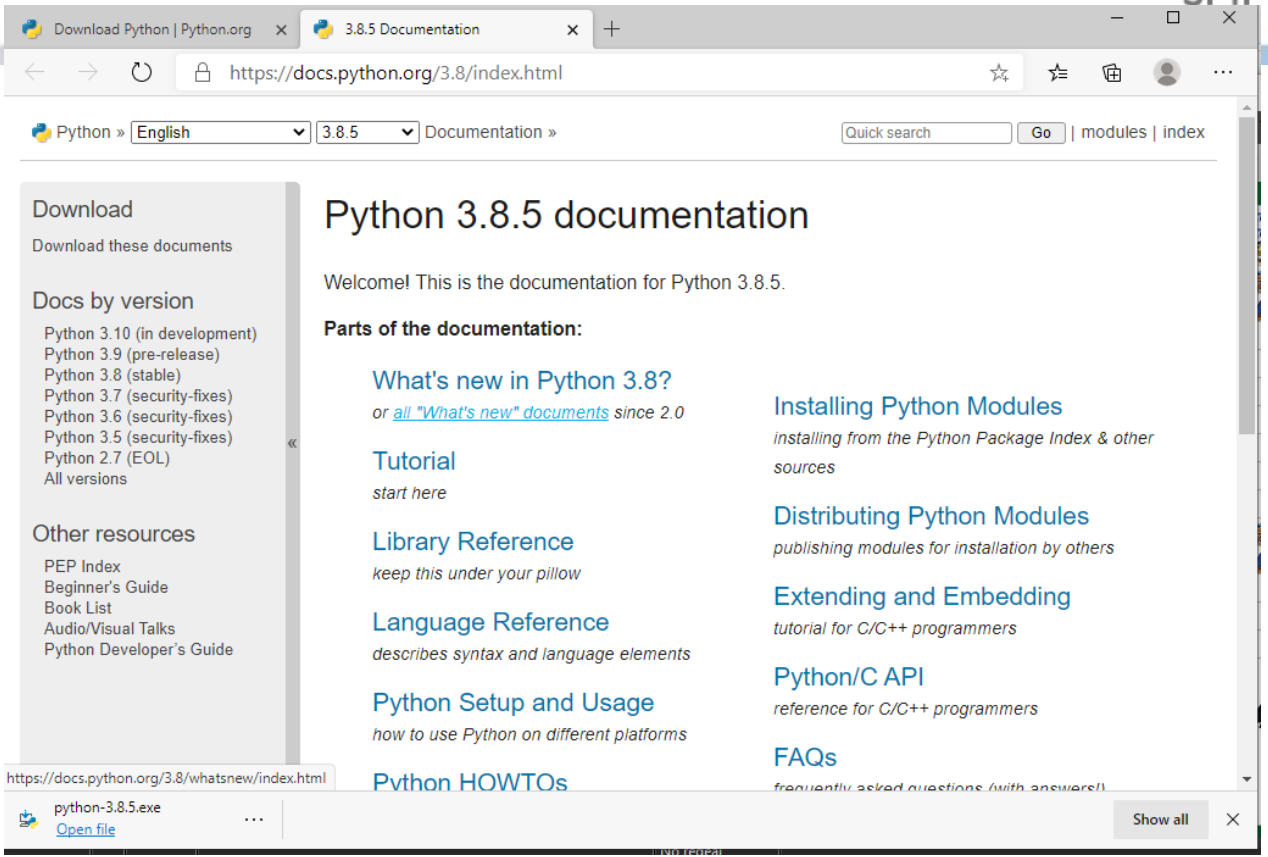
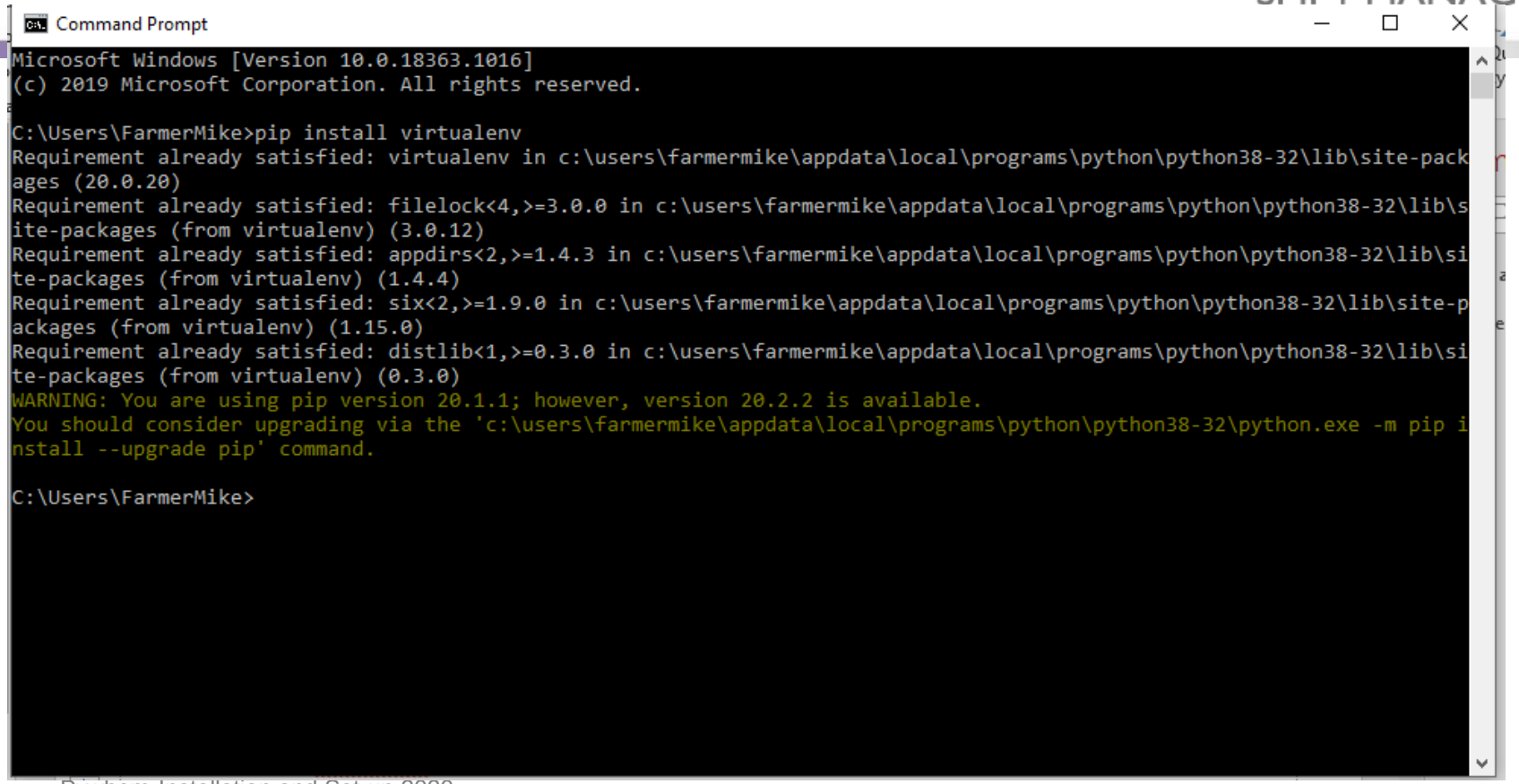


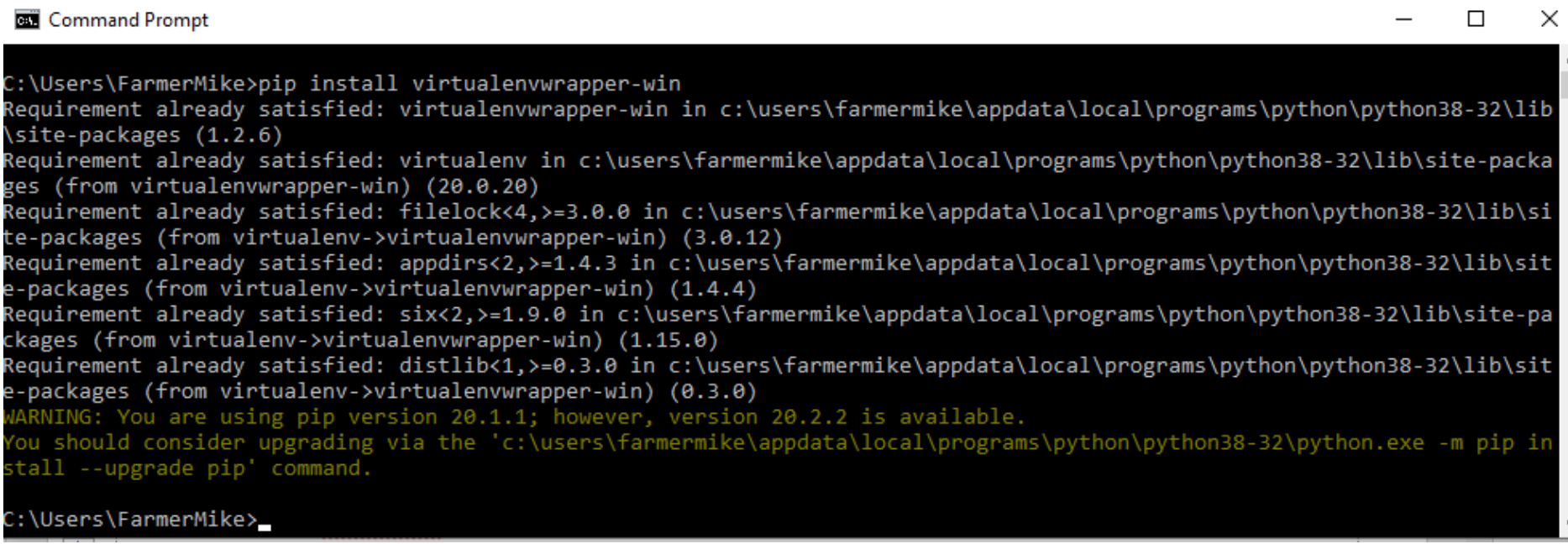
Python Documentation



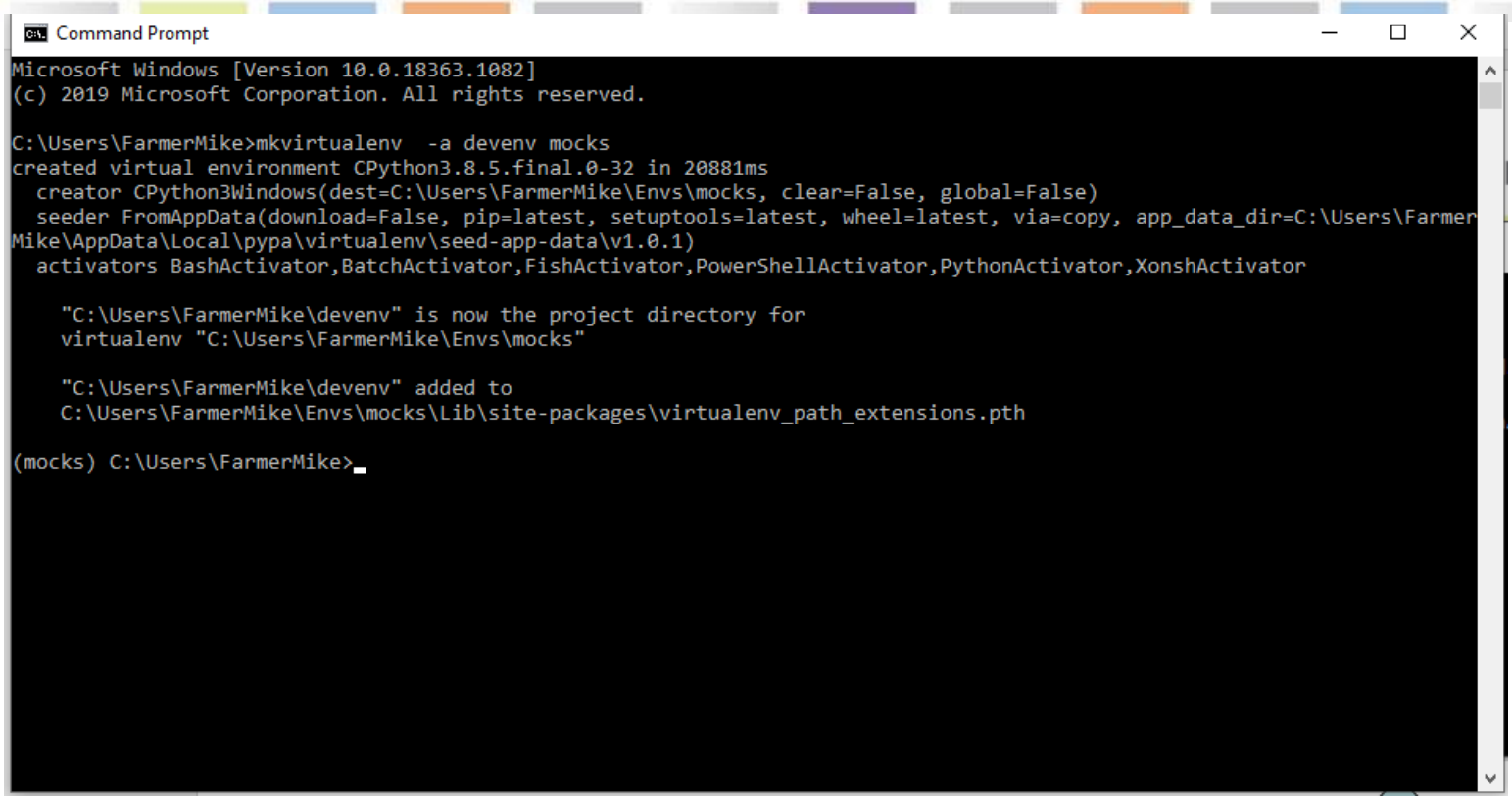
Install virtualenv



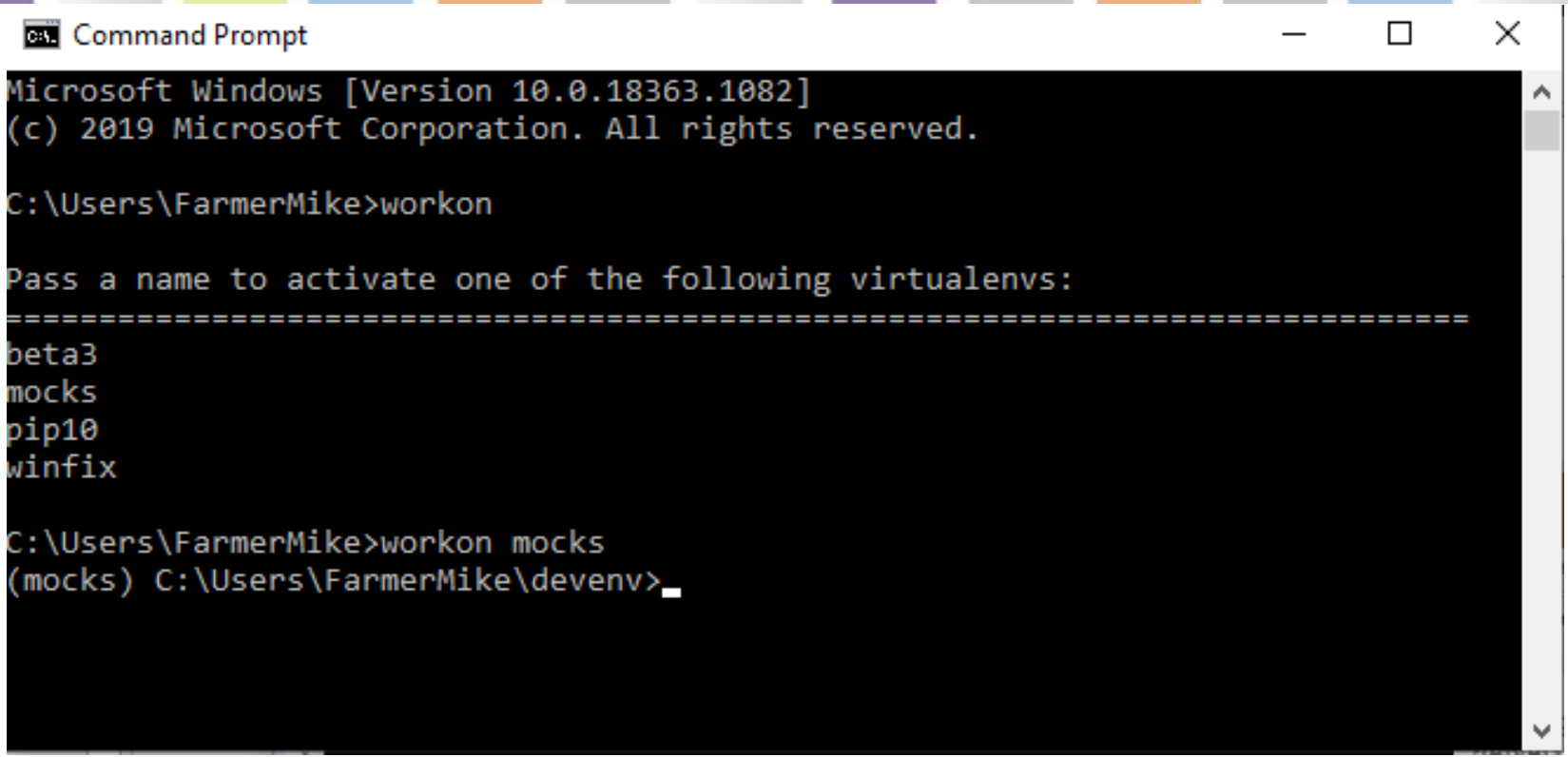
Install virtualenvwrapper



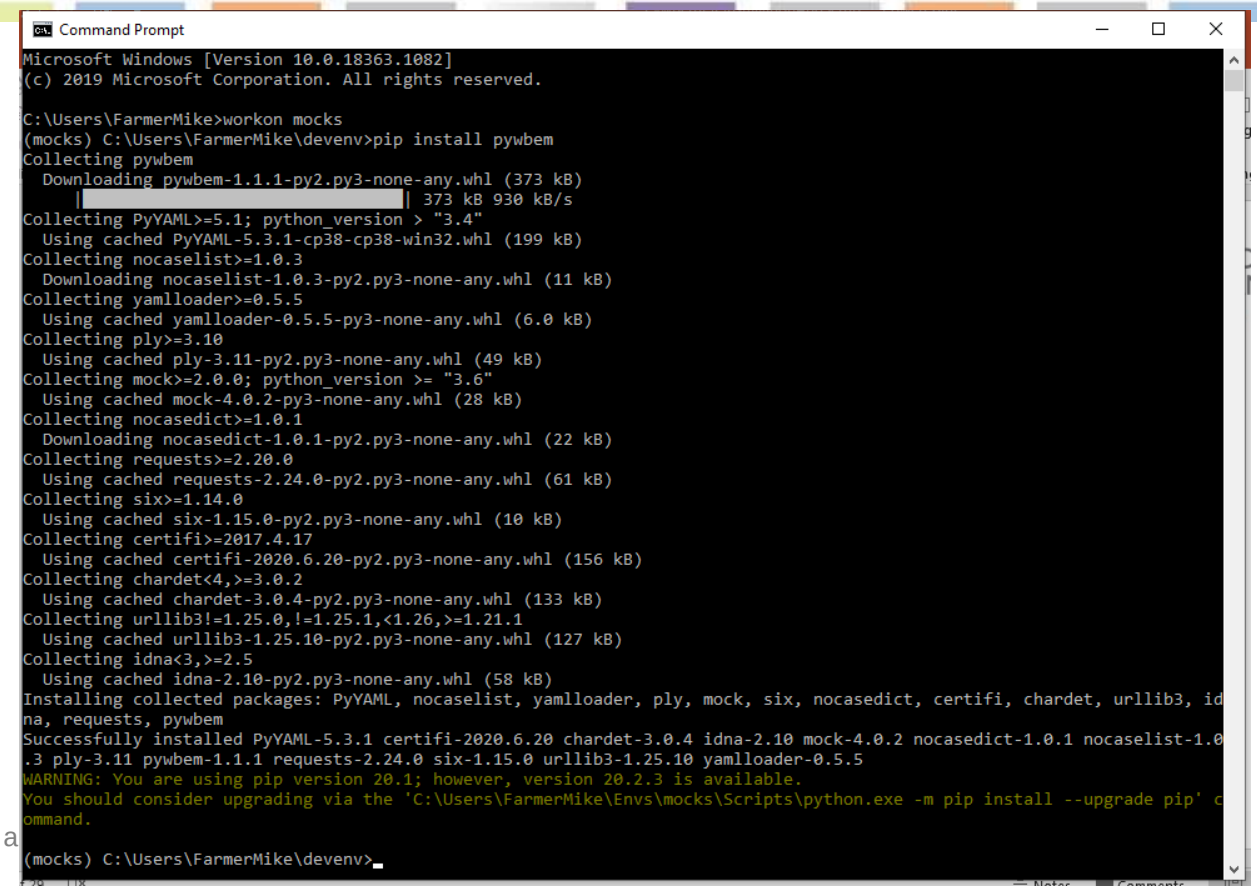
Create a Virtual environment



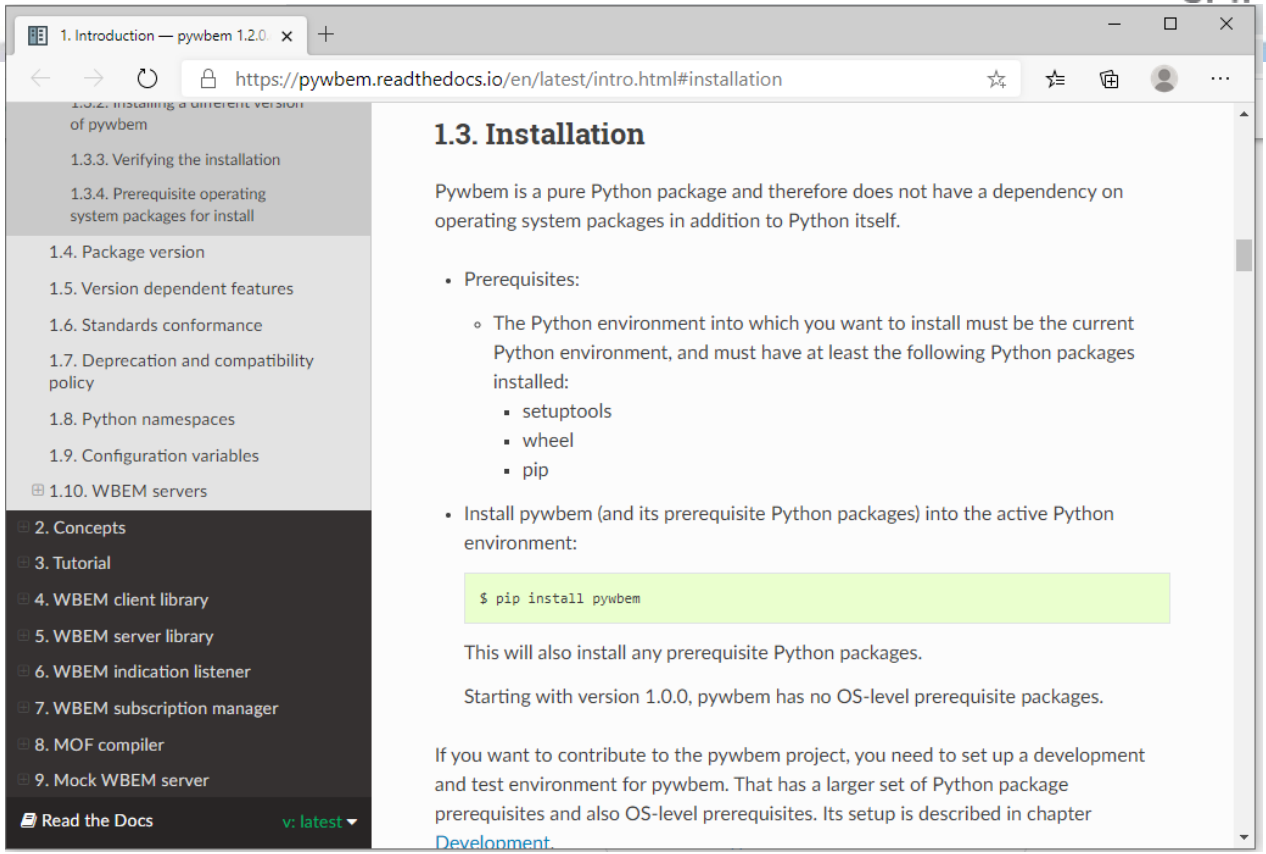
Show Virtual Environments



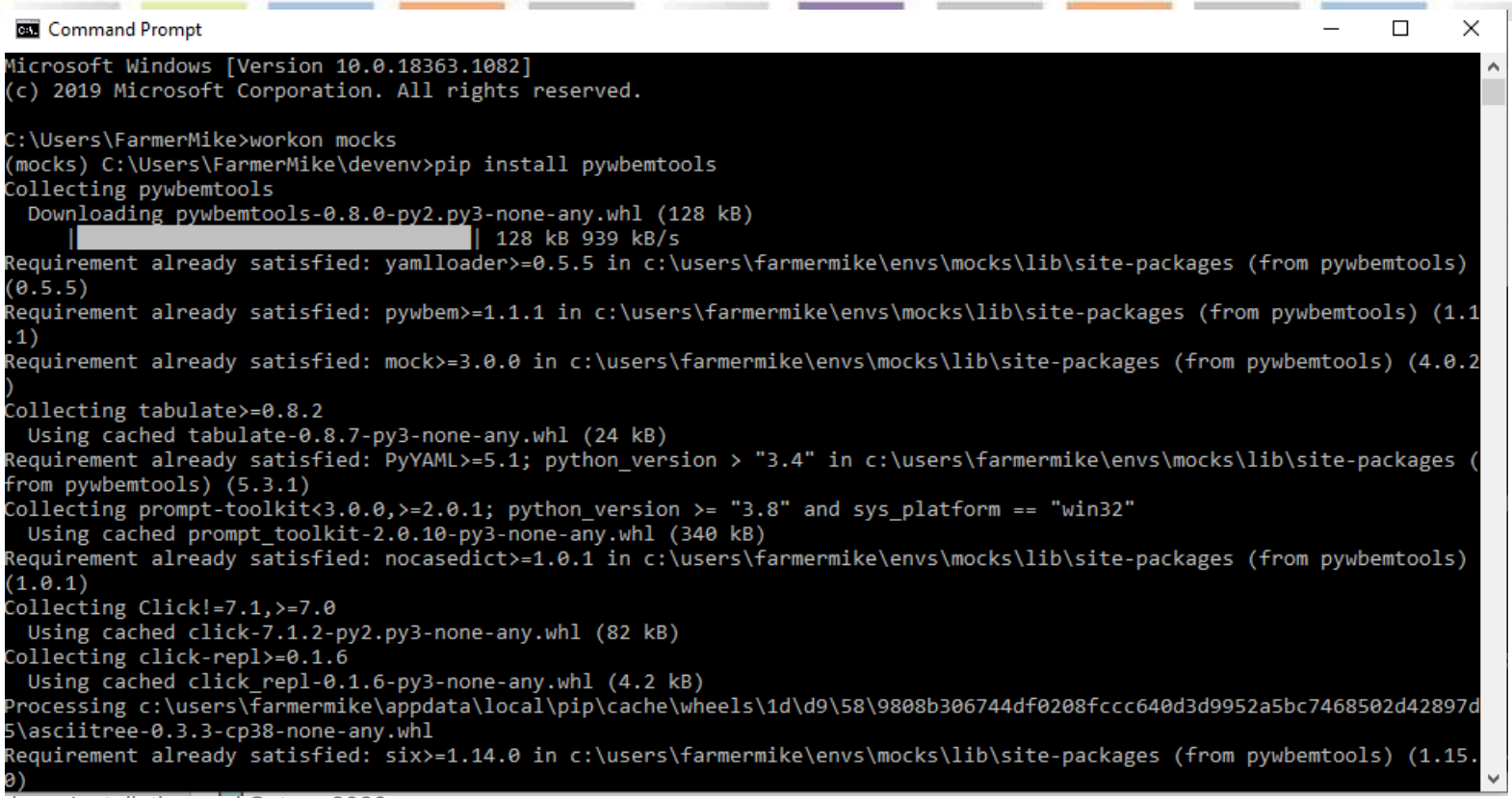
Install pywbem



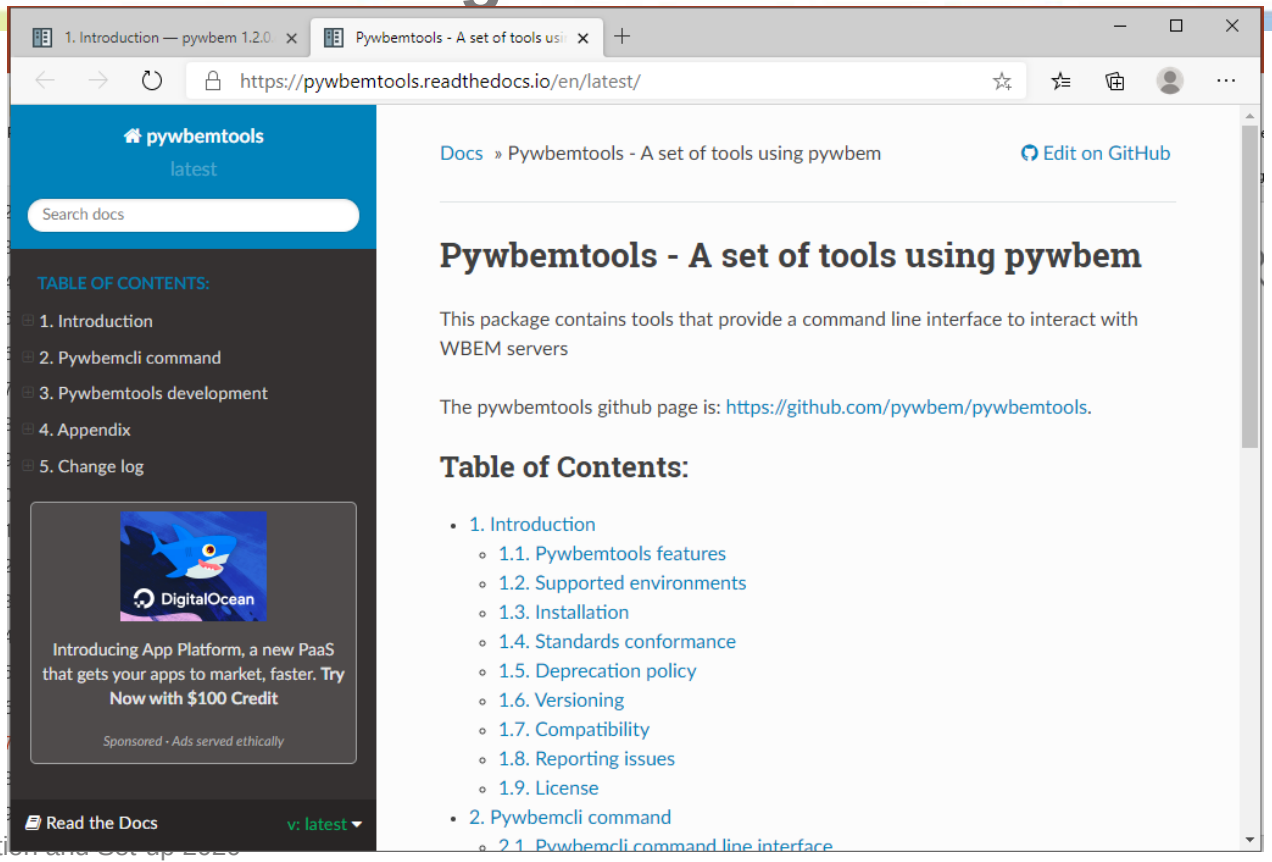
Pywbem Documentation Page



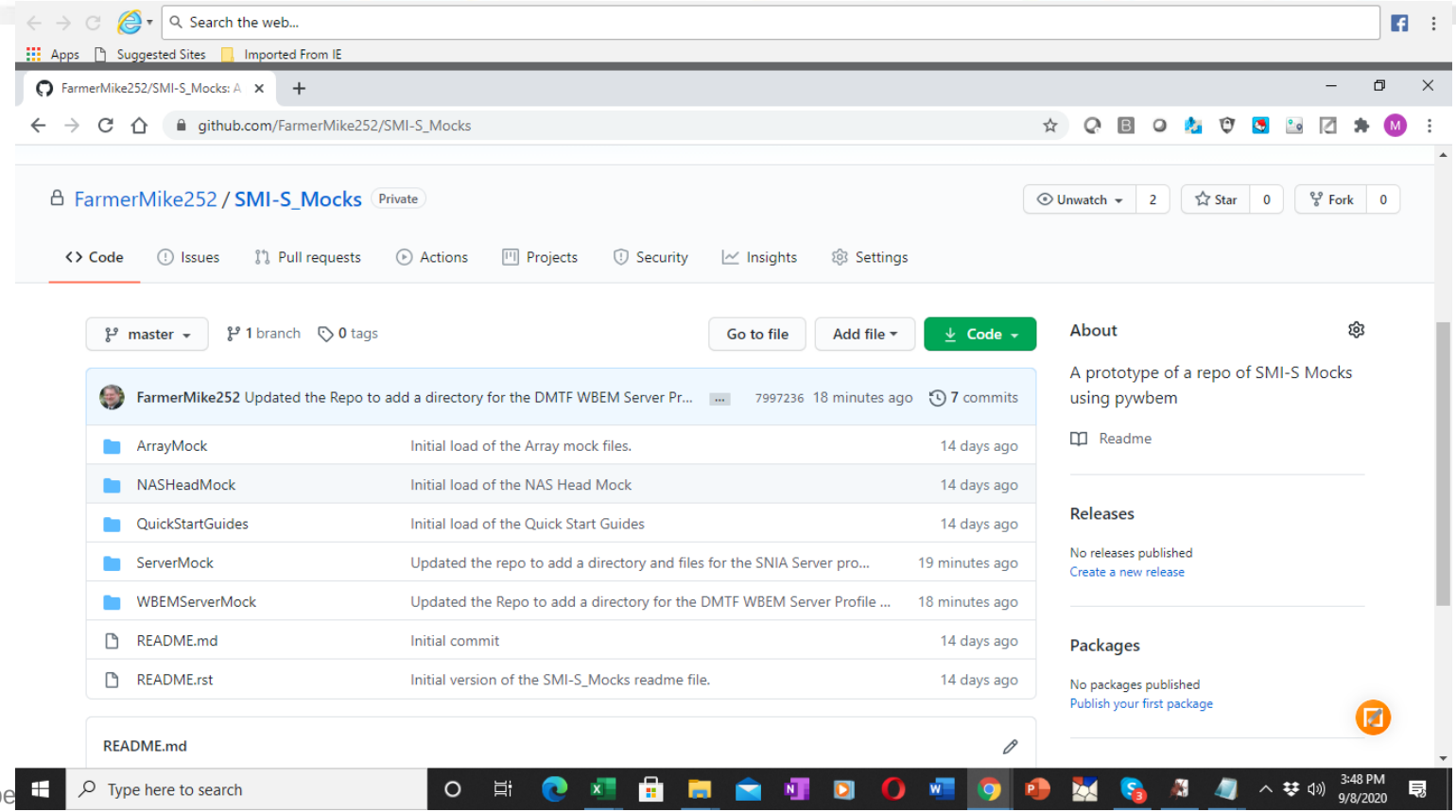
Install pywbemtools



PywbemTools Documentation Page



Repo of Mocks



Running a mock