Harness analytical strengths: SAS, R, Python Web Services

Trends and Technology – TT11

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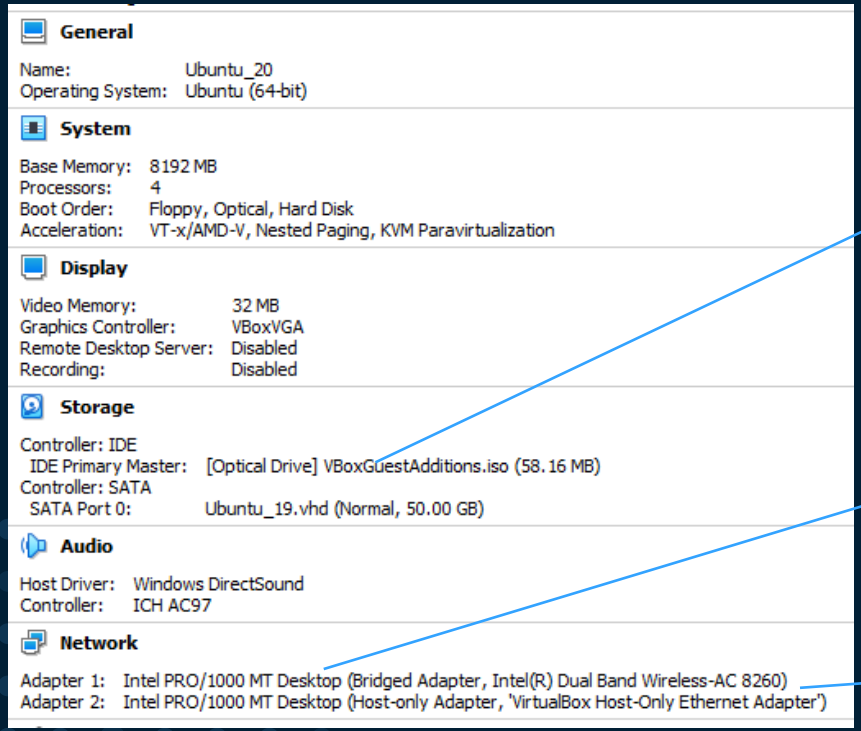
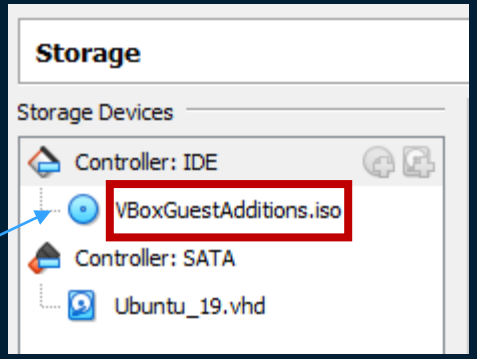
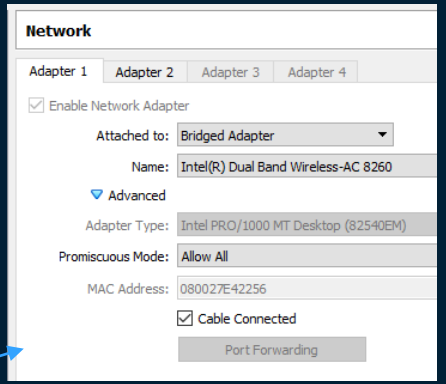
Harness analytical strengths: SAS, R, Python Web Services

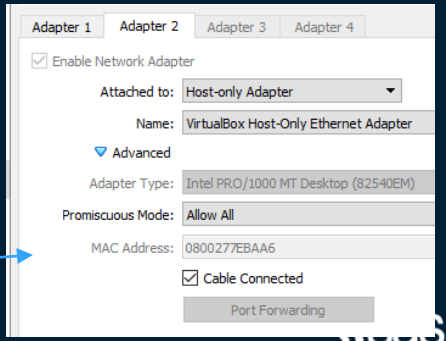
Configuring Virtual Machine

- Using VirtualBox, Create Virtual Machine using Ubuntu Image









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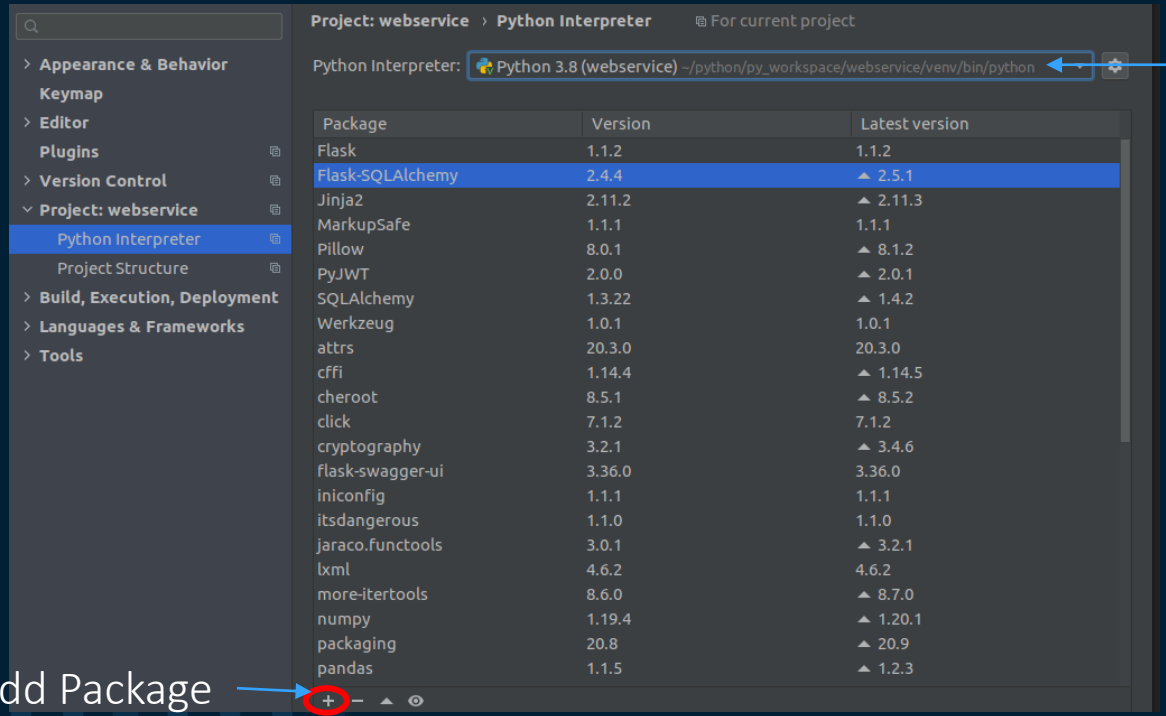
Configuring Python Environment

- sudo snap install [pycharm-professional|pycharm-community] - -classic
- In PyCharm Community Edition, File -> Properties ->Python Interpreter



Python Interpreter

Add Package

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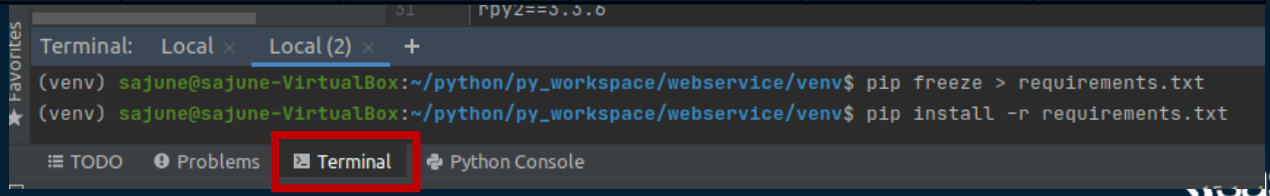
Configuring Python Environment

- Use Requirements.txt to capture / install requirements

attrs==20.3.0	iniconfig==1.1.1	packaging==20.8	pyparsing==2.4.7	six==1.15.0	Flask-SQLAlchemy==2.4.4	more-itertools==8.6.0	py==1.10.0
cffi==1.14.4	itsdangerous==1.1.0	pandas==1.1.5	pytest==6.2.1	SQLAlchemy==1.3.22	pycparser==2.20	rpy2==3.3.6	redis==3.5.3
cheroot==8.5.1	jaraco.functools==3.0.1	Pillow==8.0.1	python-dateutil==2.8.1	toml==0.10.2	flask-swagger-ui==3.36.0	numpy==1.19.4	Werkzeug==1.0.1
click==7.1.2	Jinja2==2.11.2	pkg-resources==0.0.0	python-docx==0.8.10	tzlocal==2.1	PyJWT==2.0.0	saspy==3.6.4	cryptography==3.2.1
lxml==4.6.2	pluggy==0.13.1	pytz==2020.4	uuid==1.30	Flask==1.1.2	MarkupSafe==1.1.1		

- pip freeze > requirements.txt
- pip install -r requirements.txt



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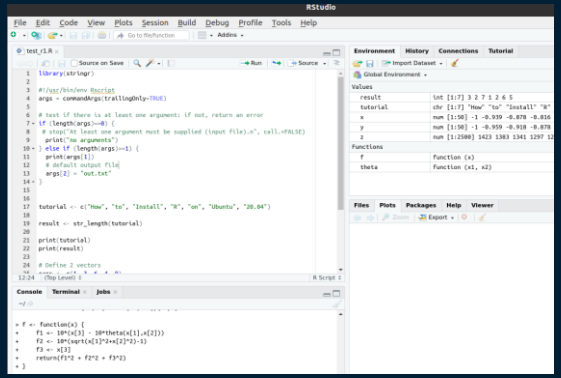
Configuring R Environment



- Step 1 Install R Environment
- $ sudo apt update
- $ sudo apt-get install r-base
- Step 2 Download R Studio
- $ wget https://download1.rstudio.org/desktop/bionic/amd64/rstudio-1.3.1093-amd64.deb
- Step 3 Install R Studio
- $ sudo apt install ./rstudio-1.3.1093-amd64.deb
- Step 4 Verify R Studio
- $ rstudio

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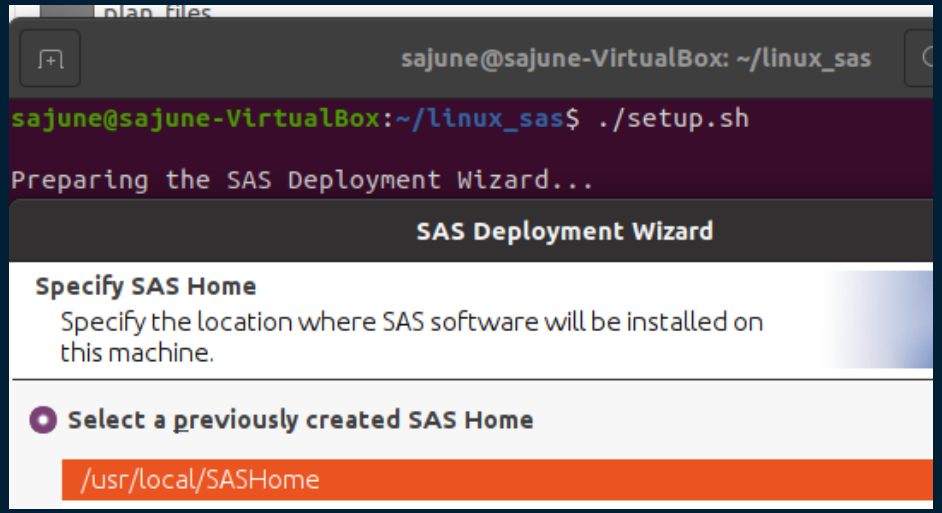
Configuring SAS Environment

- Step 1: Make setup.sh executable in SAS Depot
- $ chmod +x setup.sh
- Step 2 : Execute setup.sh script and follow the instructions
- $ ./setup.sh



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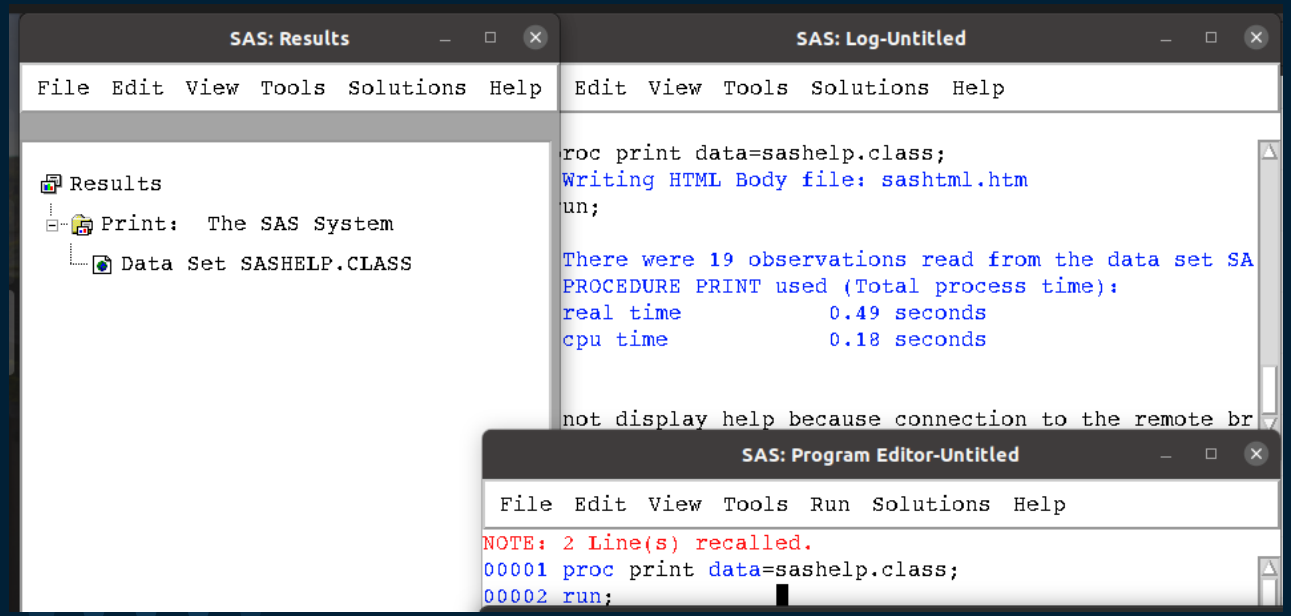
Configuring SAS Environment

- Step 3: Verify SAS Installation
- $ ./sas_u8

```
sajune@sajune-VirtualBox:/usr/local/SASHome/SASFoundation/9.4/bin$ ./sas_u8
```



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Troubleshooting SAS Environment

- If SAS UI fails to start due to missing libXp.so.6, follow below instructions
- $ sudo apt-get update
- $ wget ftp.us.debian.org/debian/pool/main/libx/libxp/libxp6_1.0.2-2_amd64.deb
- $ sudo dpkg -i libxp6_1.0.2-2_amd64.deb

Reference: https://www.codersgeek.in/2020/05/how-to-install-libxpso6-in-linux.html?m=1

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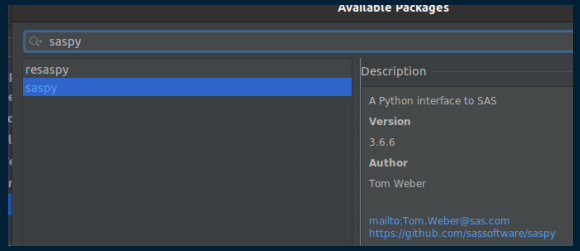
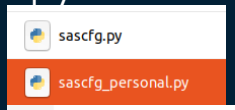
Configuring SASPy

- Step 1: Install saspy
- $ pip install saspy



- Step 2: configure saspy
  - Make a copy of sascfg.py -> sascfg_personal.py under folder: venv/lib/python3.8/site-packages/saspy



  - Verify config name in sascfg_personal.py

```
37
38 SAS_config_names=['default']
39
```

  - Specify saspath

```
91 #
92 default  = {'saspath'  : '/usr/local/SASHome/SASFoundation/9.4/bin/sas_u8'}
93
```

Reference : https://sassoftware.github.io/saspy/install.html

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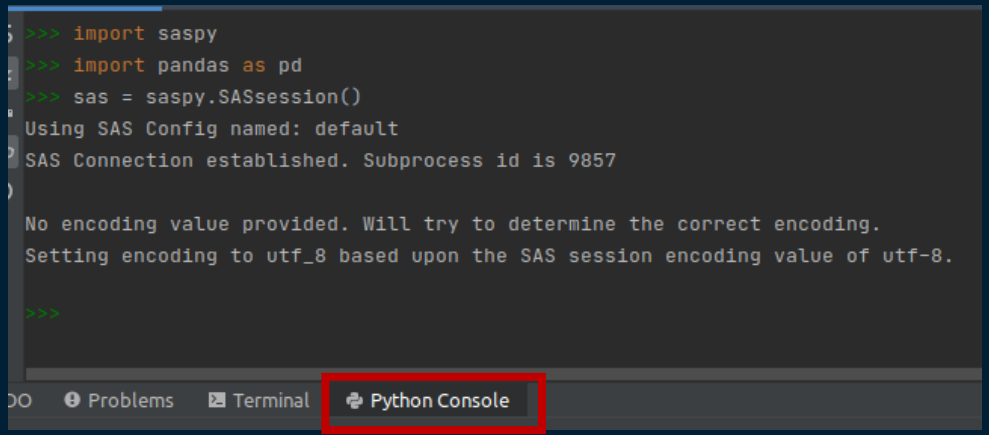
Configuring SASPy

- Step 3: Verify SAS Connection
  - Select Python Console and execute below commands and verify SAS session initialization



Reference : https://sassoftware.github.io/saspy/install.html

Questions

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sas.com