



Python Visualization tool
for Kernel Trace Data

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Requirements :

Python 2.4 onwards (Python 2.7 recommended)

[<http://www.python.org/download>]

Matplotlib v1.0.1

[<http://sourceforge.net/projects/matplotlib/files/matplotlib/matplotlib-1.0.1/>]

Numpy 1.1 (required by Matplotlib 1.0.1)

[<http://new.scipy.org/download.html>]

Files :

1. run.py
2. vizker.py
3. cleanup.py

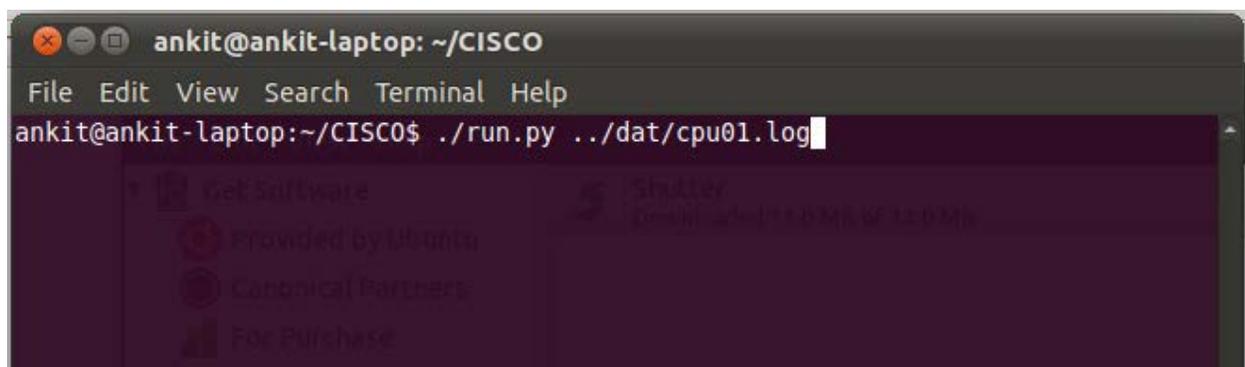
Usage :

Ensure that the three files above are in the same directory. Then, on the command line, run :

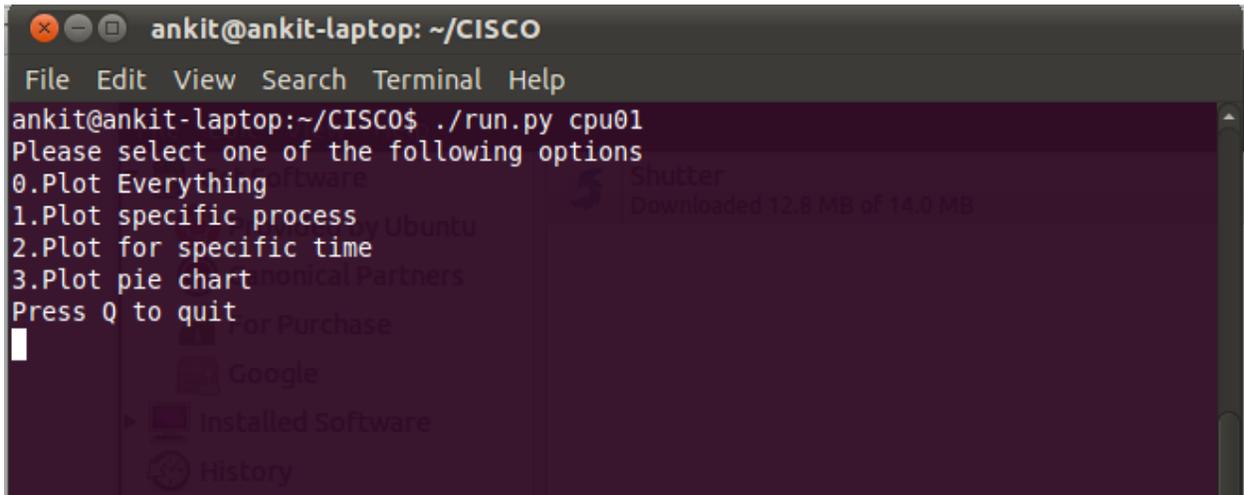
```
./run.py path_to_data_file
```

For example,

```
./run.py ../trace/tracedata.log
```



Running the above command will provide a CLI which looks as follows :

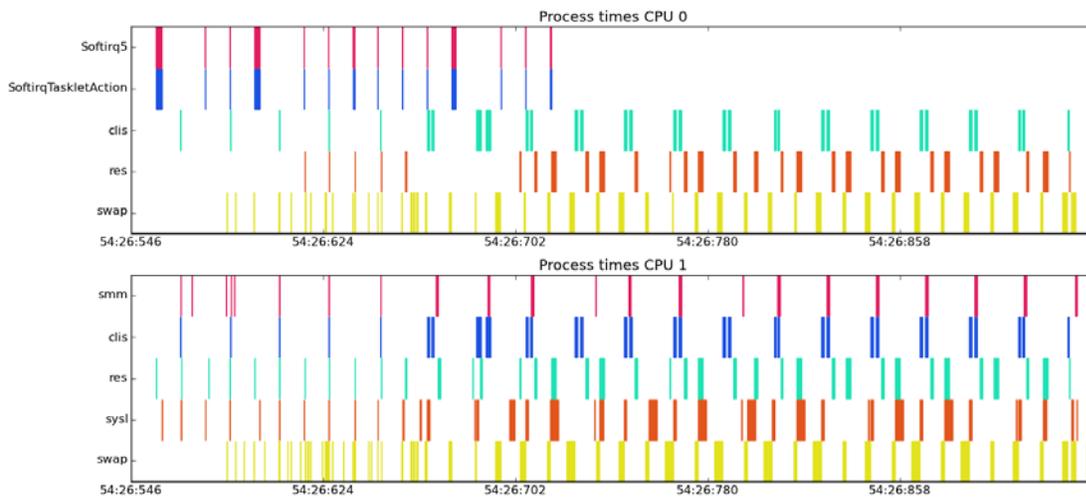


Options :

The available options are :

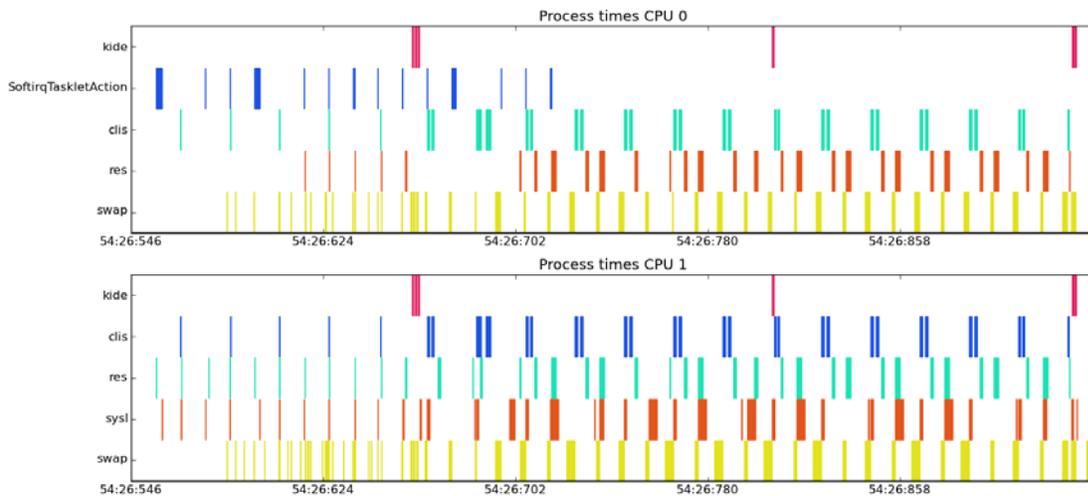
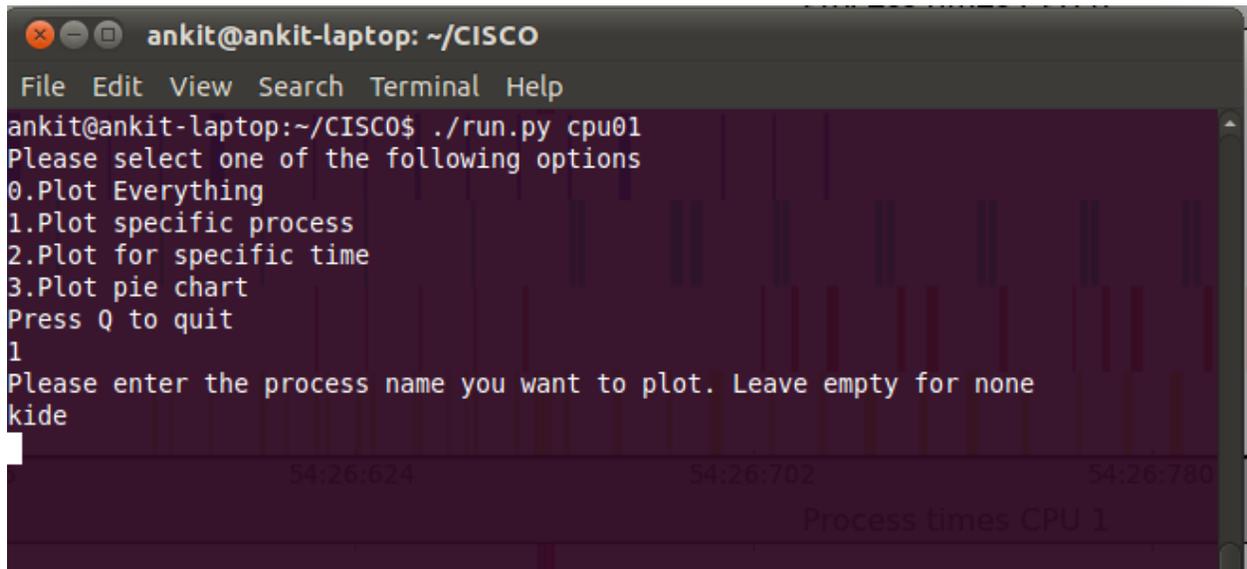
0. Plot everything

Plot everything in the log file without taking any specific time or process as input. This option will display a window which plots the top five processes against time.



1. Plot specific process

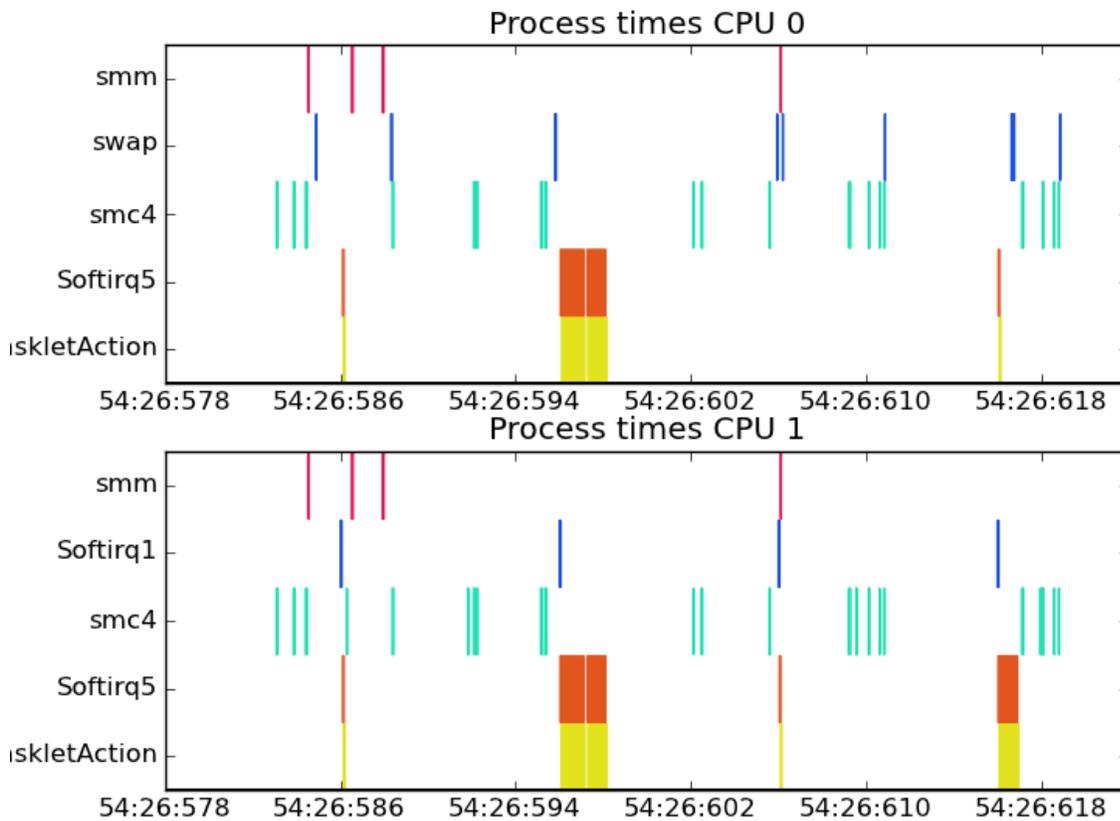
Plots everything, but the user may also specify a specific process to be plotted. The processes running for the least time in the list of top five running processes will be replaced. May be left blank to plot everything.



2. Plot for specific time

Plot process data for specific time interval. Also offers the additional option of plotting a specific process for that time interval. Process name may be left blank to plot everything.

```
ankit@ankit-laptop: ~/CISCO
File Edit View Search Terminal Help
ankit@ankit-laptop:~/CISCO$ ./run.py cpu01
Please select one of the following options
0.Plot Everything
1.Plot specific process
2.Plot for specific time
3.Plot pie chart
Press Q to quit
2
Please enter the process name you want to plot. Leave empty for none
smm
Start time is 20:54:26:546
End time is 20:54:26:936
Please enter the start time
20:54:26:612
Please enter the end time
20:54:26:871
```



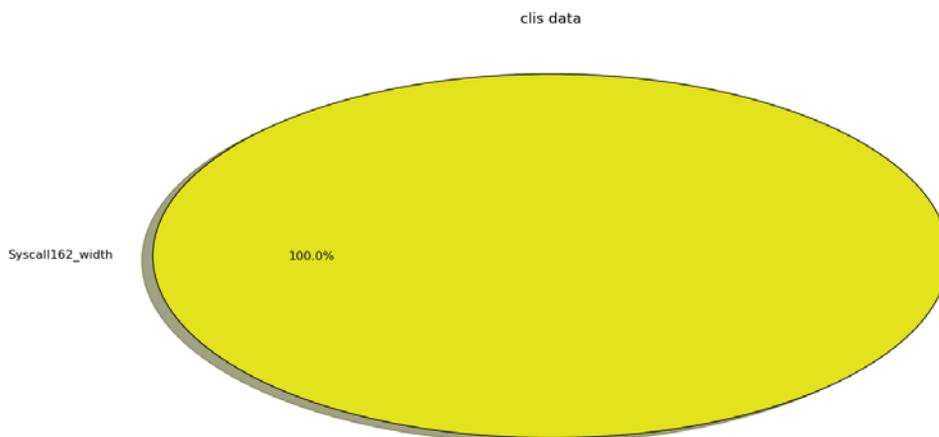
3. Plot pie chart

Plot a pie chart for a specified sched_change process.

Take a sched_change process name and number of events to show, as input .

Plots a pie chart for the events occurring between the input process name and a consecutive sched_change

```
ankit@ankit-laptop: ~/CISCO
File Edit View Search Terminal Help
ankit@ankit-laptop:~/CISCO$ ./run.py cpu01
Please select one of the following options
0.Plot Everything
1.Plot specific process
2.Plot for specific time
3.Plot pie chart
Press Q to quit
3
Please enter the name of a valid process
clis
```



Notes:

- At any point, press Ctrl + D to quit a mode
- At the main screen, press Q to quit
- Input time must be specified in the example format :
20:54:26:432 (HH:MM:SS:XXX)
- The run.py script is executable. In case it is not, run :

```
chmod +x run.py to make it executable
```
- A log file called “pie.log” is auto generated when mode 3 is entered to plot the pie chart

Known Issues :

- The graph window will not return control to the calling script until it is closed by pressing the “Close” button on the top left/right corner, due to library limitations
- There might be I/O errors if there isn't enough memory available in the directory where the script is placed, as an intermediate file is generated for plotting the graphs
- More regex strings might have to be added to resolve errors of the type “IndexError”. This is because of the delimited “:” appearing in certain process names.

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