IC_Cache_Coding Exercise

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Project Details:

The project consists of two python programs:

1. *generate.py* : Generates the logs for one day(today) for n(1000) servers, where each server has 2 CPUs, and writes the data to CSV file in the provided directory path.
2. *query.py* : Implements a command line tool which takes a directory of data files as a parameter and lets you query CPU usage for a specific CPU in a given time period. It is an interactive command line tool which read a user's commands from stdin.

And two shell scripts:

1. *generate.sh* : Runs *generate.py* program
2. *query.sh* : Runs *query.py* program

Required Tools:

Python 3.7

How to run and sample output:

To run generate.sh in Linux:

./generate.sh [DATA_PATH]

Sample Output:

Generating logs for 1000 servers at DATA_PATH=[DATA_PATH] for date: 2021-06-24
Done.

To run query.sh in Linux:

./query.sh [DATA_PATH]

Sample Output:

>QUERY 192.168.1.10 1 2021-06-23 01:05 2021-06-23 01:10

CPU1 usage on 192.168.1.10:

(2021-06-23 01:05:00, 12%),(2021-06-23 01:06:00, 49%),(2021-06-23 01:07:00, 55%), (2021-06-23 01:08:00, 46%),(2021-06-23 01:09:00, 94%)

>EXIT

Duration:

I took three days to complete the exercise.