

# Distributed systems

## Lab8 Clock Synchronization

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Question 1: In term of NTP stratum is a distance a particular device is from a time source. It mean, if we will further away, time sync will be less accurate.

Question 2:

```
root@ubuntu:~# ntpq -p
      remote           refid      st t when poll reach   delay   offset  jitter
=====
ec2-52-15-244-1 3.17.153.224    16 u  12   64    3    0.325   -0.295   16.452
```

Remote: default the NTP server connected with.

Refid: refers to the NTP servers that the remote servers are connected to.

St: refers to a server's stratum, which refers to how close the server is from us

T: refers to the type, specifically whether the server is using unicast, broadcast, multicast, or multicast.

When: refers to how long ago it was since the last time the server was polled.

Poll: indicates how often the server will be polled.

Reach: If all eight are successful, this field will read 377.

Delay: in milliseconds.

Offset: refers to the delay in reaching the server, in milliseconds.

Jitter: refers to the network latency between your server and theirs

Output of program:

```
buldiga@buldiga:~$ /usr/bin/python3 /home/buldiga/homeworks/ds/lab8/main.py
Process a: [7, 6, 1]
Process b: [2, 8, 1]
Process c: [2, 8, 4]
```