Clock Synchronization


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dozer@dozer-VirtualBox: ~/os/p        dozer@dozer-VirtualBo        dozer@dozer-VirtualBox:        dozer@dozer-VirtualBox
dozer@dozer-VirtualBox:~/os/proj2$   dozer@dozer-VirtualBox:~/os/   dozer@dozer-VirtualBox:~/os/pr   dozer@dozer-VirtualBox:~/os/p
dozer@dozer-VirtualBox:~/os/proj2$   proj2$ ./sub 2 33332 0        oj2$ ./sub 3 33333 0            roj2$ ./sub 4 33334 0
dozer@dozer-VirtualBox:~/os/proj2$   Process ID = 2               Process ID = 3                  Process ID = 4
dozer@dozer-VirtualBox:~/os/proj2$   Starting Time: 4472          Starting Time: 3325             Starting Time: 9681
dozer@dozer-VirtualBox:~/os/proj2$   Listener Started             Listener Started                Listener Started
dozer@dozer-VirtualBox:~/os/proj2$   Time: 4539                   Time: 3397                      Time: 9762
dozer@dozer-VirtualBox:~/os/proj2$   Time: 4606                   Time: 3469                      Time: 9787
dozer@dozer-VirtualBox:~/os/proj2$   Time: 4748                   Time: 3603                      Time: 9884
dozer@dozer-VirtualBox:~/os/proj2$   Time: 4798                   Time: 3674                      Time: 9956
dozer@dozer-VirtualBox:~/os/proj2$   Time: 4860                   Time: 3795                      Time: 10090
dozer@dozer-VirtualBox:~/os/proj2$   Received synch request       Time: 3845                      Time: 10161
dozer@dozer-VirtualBox:~/os/proj2$   Sending time 4872            Time: 3869                      Time: 10282
dozer@dozer-VirtualBox:~/os/proj2$   Time before: 4872            Received synch request          Time: 10332
dozer@dozer-VirtualBox:~/os/proj2$   Time after 6365              Sending time 3869               Received synch request
dozer@dozer-VirtualBox:~/os/proj2$   Time: 6405                   Time before: 3869               Sending time 10356
./sub 1 44444 3 33332 33333 33334    Time: 6445                   Time after 6365                 Time: 10356
Process ID = 1                       Time: 6451                   Time: 6405                      Time before: 10356
Sent Synch Request                   Time: 6504                   Time: 6448                      Time after: 6365
Sent Synch Request                   Received synch request       Time: 6451                      Time: 6405
Sent Synch Request                   Sending time 6557            Time: 6557                      Time: 6448
Time values received: 10356 3869 48  Time before: 6557            Received synch request          Time: 6504
72                                   Time after: 6557             Sending time 6557               Time: 6557
Average 6365 sent                    Time: 6557                   Time before: 6557               Received synch request
Sent Synch Request                   Time: 6755                   Time after: 6557                Sending time 6557
Sent Synch Request                   Time: 6802                   Time: 6656                      Time before: 6557
Sent Synch Request                   Time: 6870                   Time: 6755                      Time after: 6557
Time values received: 6557 6557 655  Time: 6891                   Time: 6849                      Time: 6656
7                                    Received synch request       Time: 6870                      Time: 6802
Average 6557 sent                    Sending time 6914            Received synch request          Time: 6849
Sent Synch Request                   Time before: 6914            Sending time 6891               Time: 6891
Sent Synch Request                   Time after: 6898             Time before: 6891               Received synch request
Sent Synch Request                   Time: 6921                   Time after 6898                 Sending time 6891
Time values received: 6891 6891 691  Time: 6933                   Time: 6921                      Time before: 6891
4                                    Time: 7034                   Time: 6933                      Time after 6898
Average 6898 sent                    ^C                           Time: 7034                      Time: 6921
^C                                   dozer@dozer-VirtualBox:~/os/  ^C                              ^C
dozer@dozer-VirtualBox:~/os/proj2$   proj2$                       dozer@dozer-VirtualBox:~/os/pr  dozer@dozer-VirtualBox:~/os/p
                                     dozer@dozer-VirtualBox:~/os/  oj2$                            roj2$
                                     oj2$
```

The time server in the left terminal sends synch requests to the clients. The clients reply with their current time. The server calculates the average time and multicasts it to the clients. The clients update their clock to the received average.