1. Compilation

$ make

gcc -Wall -g -c proto.c

gcc -Wall -g -c cmd.c

gcc -Wall -g rex.c proto.o cmd.o -o rex

gcc -Wall -g rexd.c proto.o cmd.o -o rexd -pthread

2. Description

System follows the specifications described in assignment specification, the system specifies one service per host (2 computers to run 2 rexd )or you can test with one rexd and have many clients. The system has the following additions:

1) To start rexd as a slave, we use first parameter of program to tell who is the leader:

$ ./rexd 10.0.3.1 -- this uses server 10.0.3.1 as the leader

Electing as leader: 10.0.3.1

2) To start rexd as a master:

$ ./rexd

Acting as Rexd leader

3) Client uses localhost, as default rexd leader, if you want to change it:

$ ./rex -l 10.0.3.2 status

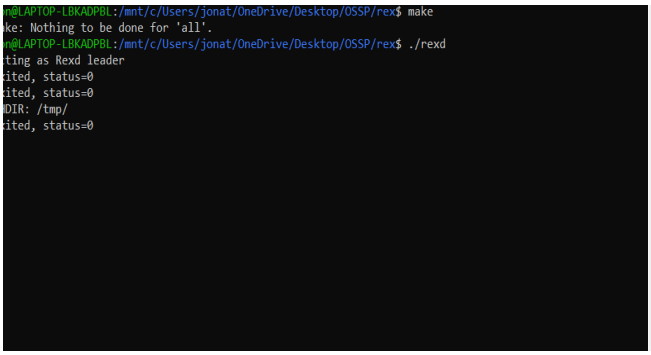
Rexd uses processes for all run/submit commands. For the rest (chdir, status, copy, kill) we use Pthreads.

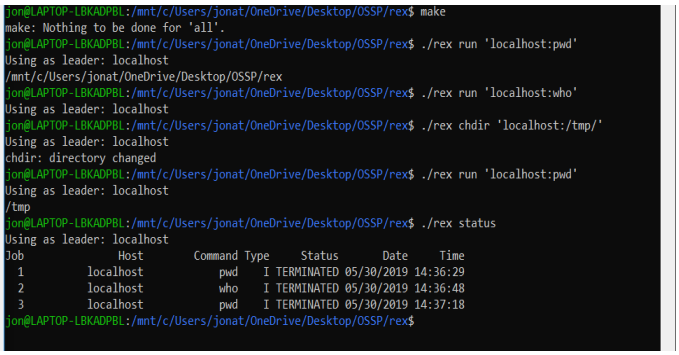
There are 2 internal server to server commands:

a) getid - used to get a job ID from leader

b) state - used to inform leader, a job changed its state. For example from SCHEDULED -> RUNNING

Output of batch jobs is saved with the following names - job-ID.err and job-ID.out.


n@LAPTOP-LBKADPBL:/mnt/c/Users/jonat/OneDrive/Desktop/OSSP/rex$ make
ke: Nothing to be done for 'all'.
n@LAPTOP-LBKADPBL:/mnt/c/Users/jonat/OneDrive/Desktop/OSSP/rex$ ./rexd
ting as Rexd leader
ited, status=0
ited, status=0
DIR: /tmp/
ited, status=0


jon@LAPTOP-LBKADPBL:/mnt/c/Users/jonat/OneDrive/Desktop/OSSP/rex$ make
make: Nothing to be done for 'all'.
jon@LAPTOP-LBKADPBL:/mnt/c/Users/jonat/OneDrive/Desktop/OSSP/rex$ ./rex run 'localhost:pwd'
Using as leader: localhost
/mnt/c/Users/jonat/OneDrive/Desktop/OSSP/rex
jon@LAPTOP-LBKADPBL:/mnt/c/Users/jonat/OneDrive/Desktop/OSSP/rex$ ./rex run 'localhost:who'
Using as leader: localhost
jon@LAPTOP-LBKADPBL:/mnt/c/Users/jonat/OneDrive/Desktop/OSSP/rex$ ./rex chdir 'localhost:/tmp/'
Using as leader: localhost
chdir: directory changed
jon@LAPTOP-LBKADPBL:/mnt/c/Users/jonat/OneDrive/Desktop/OSSP/rex$ ./rex run 'localhost:pwd'
Using as leader: localhost
/tmp
jon@LAPTOP-LBKADPBL:/mnt/c/Users/jonat/OneDrive/Desktop/OSSP/rex$ ./rex status
Using as leader: localhost
Job Host Command Type Status Date Time
1 localhost pwd I TERMINATED 05/30/2019 14:36:29
2 localhost who I TERMINATED 05/30/2019 14:36:48
3 localhost pwd I TERMINATED 05/30/2019 14:37:18
jon@LAPTOP-LBKADPBL:/mnt/c/Users/jonat/OneDrive/Desktop/OSSP/rex$