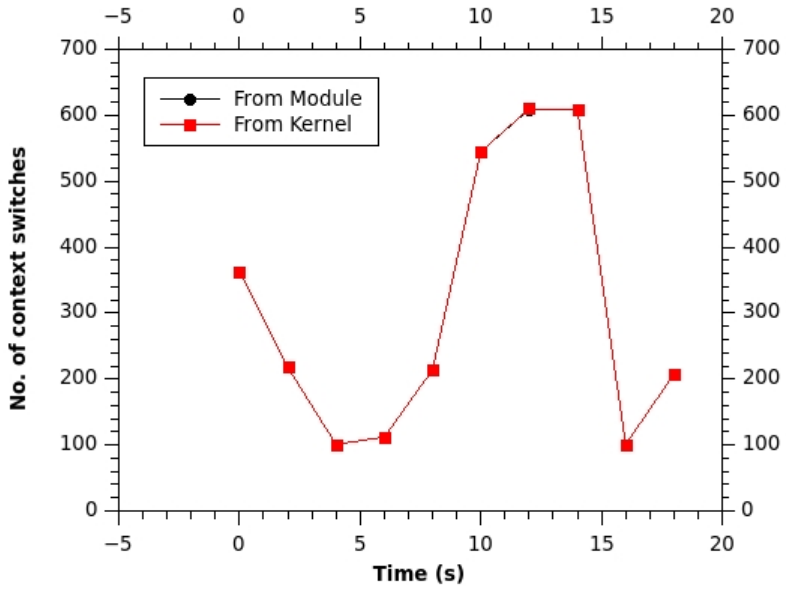
Experiments

1 Logging scheduler level context switches

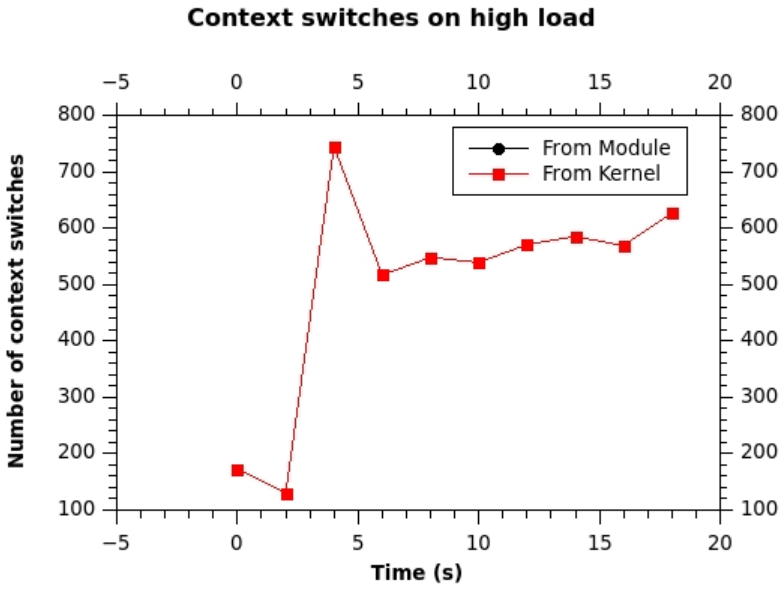
NOTE: The experiment below can be executed using the script
'**bash experiment.sh 1**'

1. Compile the module using `make`.
2. Insert the module: `sudo insmod assignment.ko`
3. Monitor the syslogd output and wait till the logging completes. Unload the module
   (`sudo rmmod assignment`), the log will be printed to the console.

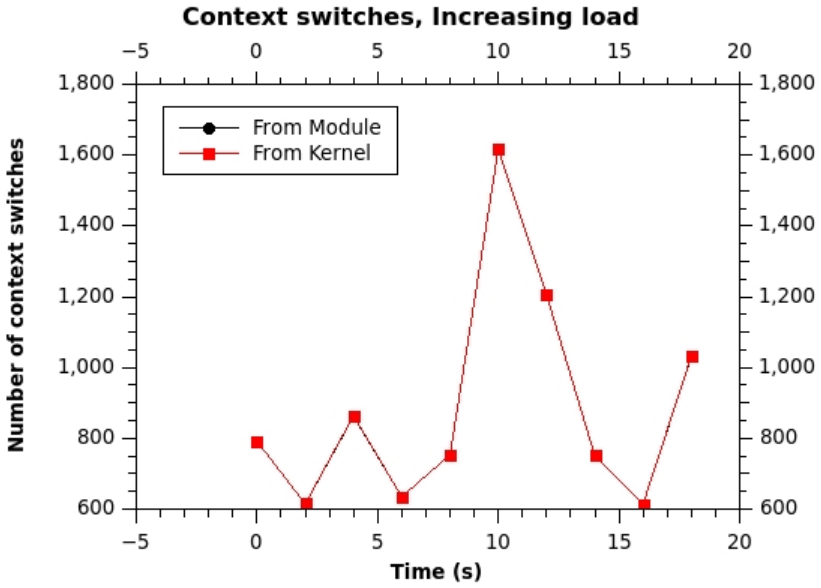


4. Use the c program 'process_creator.c' to fork 20 processes
   (`./process_creator 20 0`). Repeat the above steps. This gives the high-load stats. Can be executed using the script

bash experiment.sh 2



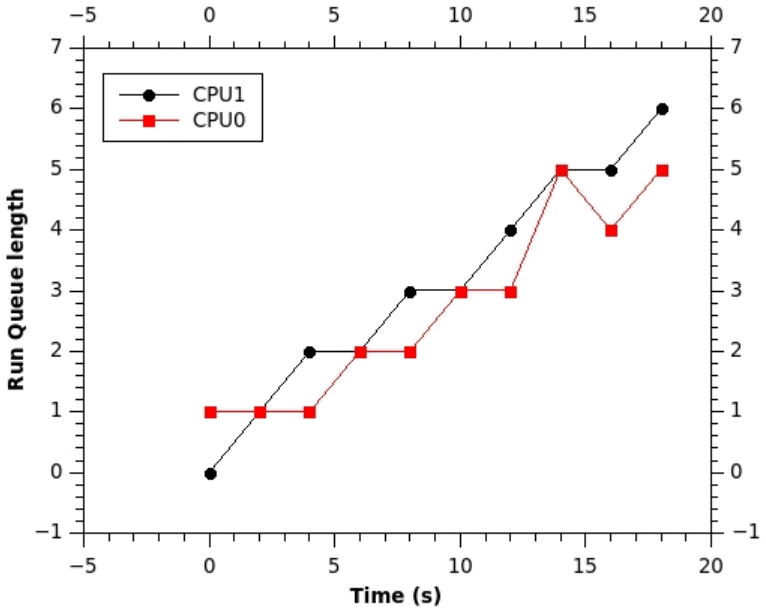
5. Use the process creator to fork a process every 2 seconds for 10 times, (`./process_creator 10 2`). Insert the module immediately. This gives the 'increasing load' stats. Can be executed using the script
bash experiment.sh 3



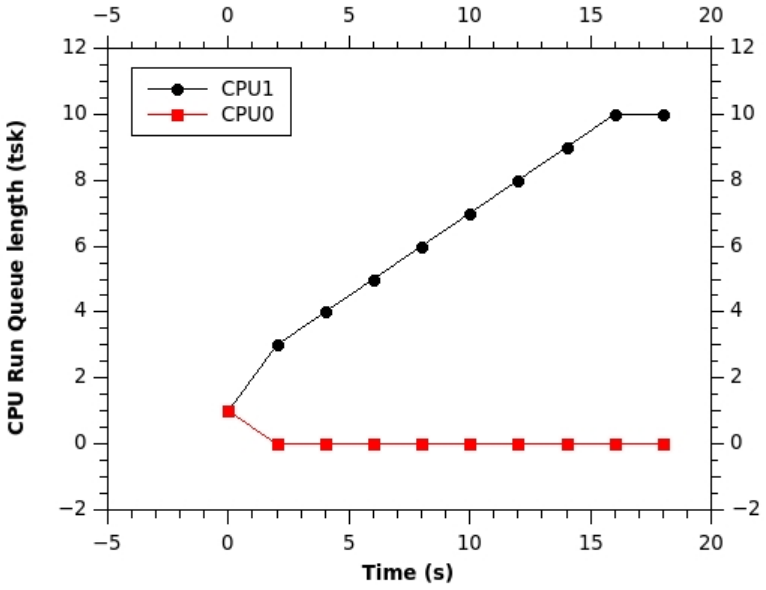
2 Logging Run Queue Length distribution per CPU

NOTE: The experiment below can be executed using the script
'**bash experiment.sh 4**'

1. Compile the module using `make`.
2. Insert the module: `sudo insmod assignment.ko`
3. Monitor the syslogd output and wait till the logging completes. Unload the module (`sudo rmmod assignment`). The systemd log is the output.
4. Use the c program 'process_creator.c' to fork 10 processes without any affinity
   (`./process_creator 10 2`). Repeat the above steps. Check whether the run-queue length matches the number of processes created.



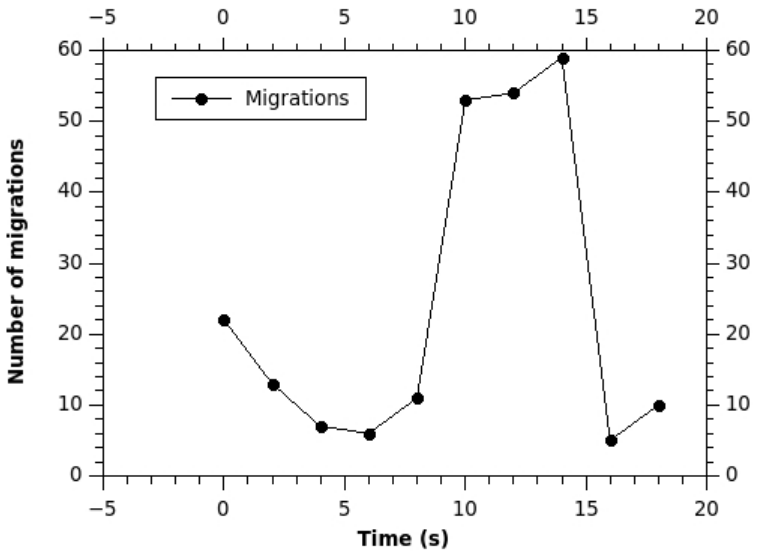
5. Use the process creator to fork a process every 2 seconds for 10 times with affinity to cpu 1
   (`./process_creator 10 2 1`). Insert the module immediately. Check whether the run queue length is increasing only for cpu 1 corresponding to the processes created. Can be executed using the script
   bash experiment.sh 5



3 Logging Number of Migrations

NOTE: The experiment below can be executed using the script
'**bash experiment.sh 6**'

1. Compile the module using `make`.
2. Insert the module: `sudo insmod assignment.ko`
3. Monitor the syslogd output and wait till the logging completes. Unload the module (`sudo rmmod assignment`). The number of migrations log will be printed on to the terminal.



4. Use the c program 'process_creator.c' to fork 10 processes (`./process_creator 10 2`). Repeat the above steps. Can be executed using the script
   bash experiment.sh 7. Analyze change in number of migrations.