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Cloud Computing

Programming Assignment – 3

Manual:

- This is a Manual for running the local and a remote distributed task execution framework.
- In this assignment I have created two separate projects CloudKon and a QueueingService which is a remote and a local task execution frameworks.
- This document will help you to run these frameworks.

Steps to execute frameworks on ASW instance:

- First copy complete folder location to an amazon aws instance using below command

  $ scp –i Aditya.pem –rf "ProjectFolder"/ ubuntu@52.23.453.25:./

- Connect to an amazon instance.
  $ ssh –i Aditya.pem ubuntu@52.23.453.25

- Give permission to that folder.

  Chmod 600 "ProjectFolder"

Installation steps:

- Following is the list of libraries and frameworks which is pre-required to install before running this frameworks.
  - **Java 1.8**
  - **Ant 1.9**

- To install this go to installation folder location of a SourceCode and run following script

  /installation$ ./runInstallation.sh

To run a Queueing Service project: (Local task execution framework)

- Go to projects folder location /QueueingService/ and execute ant command to build jar using build.xml
  /QueueingService$ ant

  It will automatically build the project and creates a jar in build/jar/location

- Now run a utility to create a workload file. This utility takes two parameter first as number of task and second as sleep time. The **workload file will be generated in resources folder**.
  /QueueingService$ java –cp ./build/jar/QueingService.jar edu.utility.TaskCreation 10000 0

- Now to run a multiple workers and a client to execute execution framework run following command.

  /QueueingService$ java –cp ./build/jar/QueingService.jar edu.executor.ExecuteTask –s LOCAL t 2 -w ./resources/workloadFile

  This will execute 2 worker as number of thread parameter is 2 in above command. It will also invoke a client and task will be submitted to workers and execution process starts.

To run a CloudKon project: (Remote task execution framework)

- Go to projects folder location /QueueingService/ and execute ant command to build jar using build.xml
  / CloudKon $ ant

  The jar will be created in a build/dist/ folder. Or you can directly **use** the **executable jar** which is stored **in same project location - cloudKon.jar**

- Now run a utility to create a workload file. This utility takes two parameter first as number of task and second as sleep time. The **workload file will be generated in resources folder**.
  /CloudKon$ java –cp ./build/jar/cloudKon.jar edu.utility.TaskCreation 10000 10

  It will create a 10000 task of 10 millisecond sleep time

- Now run a worker first using below command. It take parameter as –S request queue name, response queue name and no of threads in a worker.

  java -cp ./cloudkon.jar edu.worker.Worker -S MyQueue responseQueue -t 1

- Now run a client using below command. It take parameter as –S request queue name, response queue name –w as workload file path.

java -cp cloudkon.jar edu.client.Client -S MyQueue responseQueue -W ./resources/workloadFile