CS6963 Lecture #19

Robert Ricci

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• From last time:
  – Talk about first weekly reports
    * If you didn’t report much progress this week, I will penalize you more for not reporting next week
    * Main stuff should be in scripts, etc. not report—much more useful that way
  – Don’t forget that you have to write a final report and make a profile
  – Check in scripts, notes, etc.
  – People did stuff they didn’t report
  – General discussion

• For today: Getting resources and making profiles
  – I recommend following along
  – What is a profile?
    * RSpec and a disk image
    * Show a request RSpec
    * Talk about description and instructions
    * Talk about how most people make disk images
  – How to find existing profiles
    * “My profiles” → show all
    * Search
    * Look a project (emulab-ops, testbed, CloudLab)
  – Public/project permissions
  – Do you need to make a disk image?
    * Talk about who needs what on the disk
    * Are a tarball and a startup script enough?
    * Start script could clone your git repo and run something
    * You should be able to run this something by hand too
    – Who needs to make disk images?

• Walk through Jacks
  – Make a LAN
  – Show picking disk images
  – Show setting tarballs and startup scripts
• Tarball/startup script order

• Walk through geni-lib examples
  – Recommend you install it locally
  – Better if you need a big topo
  – You can ignore anything about context/credentials

• Main CloudLab clusters available today
  – Go through http://docs.cloudlab.us/hardware.html
  – Utah CloudLab
    * ARM64
  – Wisconsin CloudLab
    * Lots of disks on each machine, lots of RAM
  – APT cluster
    * Basic PCs, plus they have IB
  – Which cluster will everyone use?

• Good citizenship
  – Others can’t use resources while you have them allocated
  – You are probably not getting something useful done 24/7
  – You should be able to get back to where you are easily
  – So don’t hold machines for long!
  – Don’t assume they are stable or reliable
  – The longer since you last created a fresh experiment, the lower probability you can get back to that state

• Other considerations
  – Use VMs or physical machines?
    * Guests are allowed to use VMs
    * Physical gives more consistent performance
  – Where to put things on local disk (/local/)
  – You really want to have an ssh keypair set up
    * Who does not?
    * Who uses an agent?
    * Why you want to use an agent
  – CloudLab-users mailing list
    * Linked to on “contact” page
    * Search before you ask
  – How to get more local disk space (search for disk space on mailing list)

• Potential gotchas
  – Control network vs. experiment network
- User accounts added by software
- Your user account/homedir won’t be in profile
- Requesting firewall holes
- We try to figure out where a profile will run, might get it wrong sometimes
- Don’t assume physical hostnames will be the same, use shortnames

• For next time
  - Papers #4 handed out, you have two weeks
  - For Thursday, read 3 posts from the reproducing network research blog
    * We are going to talk about the final report, which will be modeled off those posts
  - We will have second weekly report due Friday at midnight
  - Short presentations last two weeks
    * 28th: Jonathon, Keith, Richard, ??
    * 23rd: everyone else
  - To submit, just ’git push grading weekly2-submit’