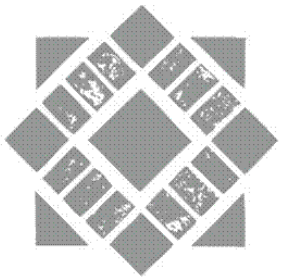
Virtual Machines

(Part 2)



San José State
UNIVERSITY

A lab for CS 218

Authors: Dr. Melody Moh and Nathan Kong

Dept of Computer Science
San Jose State University
USA
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Objectives:

- Create a new network adapter
- Create a new virtual machines (VM)
- Explore VM actions

Readings:

- **Technical Background**
  - Nutanix Bible: Acropolis Hypervisor (Sections 4.1 to 4.2).
    - Nutanixbible.com
  - Nutanix Platform Overview:
    - https://goo.gl/E8GRs6
- **User Guide**
  - Advance Acropolis Administration Guide
    - https://goo.gl/PNVp1J
  - Virtual Machine Management:
    - https://goo.gl/8W6f18

1. **Create a Network Adaptor**
    1.1. Go to the VM element and click Network Config
    1.2. Create a Network with:
        1.2.1. Name = first and last name
        1.2.2. VLAN ID = last 2 digits of your student ID number

2. **Create a VM**
    2.1. Click Create VM
        2.1.1. Name = first and last name – last 2 digits of student ID number
            2.1.1.1. E.g. natekong-89
        2.1.2. VCPUs = 2
        2.1.3. Core = 1
        2.1.4. Memory = 4GB
        2.1.5. Select "Add a Disk"
            2.1.5.1. Create a 10 GB disk on your container
        2.1.6. Add CentosEverythingISO to your CDROM
        2.1.7. Add the Network Adapter you created
            2.1.7.1. **(14) Once you select your VLAN NAME take a screenshot**
    2.2. **When the VM is created take a screenshot in the table view**

3. **Explore VM actions**
    3.1. Select your VM and power it on
        3.1.1. Go to the console and install CentOS_7 (ISO)
            3.1.1.1. Software Selection: Minimal install will all add-ons for selected environment
            3.1.1.2. Start installation
            3.1.1.3. Create a user with your first and last name and make it the user administrator
            3.1.1.4. At the end of the install when you are asked to reboot, just shut off the system. Then remove the CDROM and power on your VM.
    3.2. Take a snapshot of your VM
        3.2.1. **(15) Take a screenshot of your Snapshot Details. Name the snapshot your name -1. e.g. natekong-1**
    3.3. Migrate your VM
        3.3.1. **(16) What node did you start on and what node did you migrate to? Take screenshots that includes the VM name and the host name for the before and after.**
    3.4. Clone your VM
        3.4.1. Name = current name-clone
            3.4.1.1. E.g. natekong-89-clone
        3.4.2. **(17) Take a screenshot of your clone**
    3.5. Delete your clone

3.6. **(18) Take a screenshot of your VM Tasks**
3.7. Power off your VM

4. **Answer the following questions:**
   4.1. **(19) What is the maximum number of VMs per cluster?**
   4.2. **(20) What are reserve Hosts?**
   4.3. **(21) In your own words, how does VM availability work?**
   4.4. **(22) What are the potential levels of failure and how do they recover?**
   4.5. **(23) What happens when a node becomes unavailable?**

Submission:

To receive credit for the lab, create a PDF document containing the questions and the answers. Include screenshots when required. Questions and screenshots are in **red**.

Submit document through Slack via "Direct Messages"

The document title must be in the following format:
<Last Name>_<First Name>_Lab##.pdf
(Example: Kong_Nathan_Lab01.pdf)