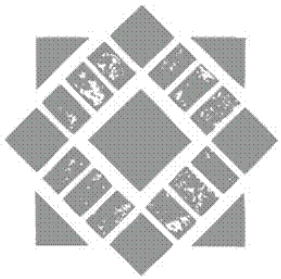
System Monitoring

(Part 3)



San José State
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A lab for CS 218

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Objectives:

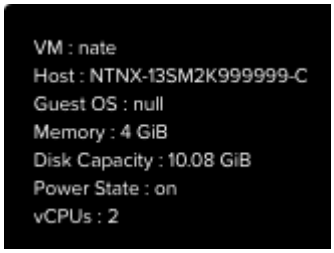
- Create network traffic
- Learn and perform health monitoring
- Learn and perform performance monitoring

Readings:

- **Technical Background**
  - Nutanix Bible: Services (Sections 3.3) and Administration (section 3.6).
    - Nutanixbible.com
- **User Guide**
  - Advance Acropolis Administration Guide
    - https://goo.gl/PNVp1J
  - Health Monitoring:
    - https://portal.nutanix.com/#/page/docs/details?targetId=Web-Console-Guide-Prism-v51:wc-health-management-wc-c.html
  - Performance Monitoring:
    - https://goo.gl/y1Gdd4

1. **Create Traffic**
   - 1.1. Turn on your VM
   - 1.2. Login to your VM
     - 1.2.1. Check your version of make
       - 1.2.1.1. In terminal type: make --version
     - 1.2.2. **(24) Take a screenshot of your terminal. This should have your first and last name as well as the make command.**
   - 1.3. Install Stress-ng
     - 1.3.1. Create a directory called stress-ng
     - 1.3.2. Add "stress" (ISO) to your cdrom
     - 1.3.3. Mount your cdrom
       - 1.3.3.1. **(25) What is your linux command to mount it?**
     - 1.3.4. Copy files from your cdrom to your new directory
       - 1.3.4.1. **(26) What is your linux command to copy the files?**
     - 1.3.5. Go to your new directory and install Stress-ng
       - 1.3.5.1. In terminal type: sudo make install
       - 1.3.5.2. After the install is complete check by typing: stress-ng –version
       - 1.3.5.3. **(27) Take a screenshot of your terminal**
   - 1.4. Stress your VM
     - 1.4.1. Go to: http://kernel.ubuntu.com/~cking/stress-ng/ look for commands to stress your system. Input the commands and stress your system.

2. **Monitor Health**
   - 2.1. Review the user guide for Health Monitoring
   - 2.2. Go to the Health element
     - 2.2.1. **(28) What are the different warning levels of a check?** (hint: how many colors are used to indicate the status of each check?)
   - 2.3. Find the "HDD Usage Check" and select it
     - 2.3.1. **(29) What is the Cause, Resolution and Impact if this check reaches critical status? (take a screenshot)**
   - 2.4. Within the Health element, go to Actions > Run Checks
     - 2.4.1. **(30) How many checks are run if you select to run "All Checks"?**
   - 2.5. Review your VM
     - 2.5.1. **(31) Take a screenshot of your VM on your host. You screenshot should include your VM information (as shown below)**



3. **Monitor Performance**
    3.1. Review the user guide for Performance Monitoring
    3.2. Go to the Analysis element
    3.3. Create an Entity chart
        3.3.1. Title = first and last name Entity
            3.3.1.1. E.g. NateKong Entity
        3.3.2. Entity Type = VM
        3.3.3. Entity = your entity
        3.3.4. Metric = Storage Controller Bandwidth
    3.4. **(32) Take a screenshot of your chart from a large view**
    3.5. Create a metric chart
        3.5.1. Title = first and last name Metric
        3.5.2. Metric = Storage container own usage
        3.5.3. Entity Type = Storage Container
        3.5.4. Entity = your container and the default container
    3.6. **(33) Take a screenshot of your chart only showing the past 2 hours. Make sure I can clearly tell it is ONLY 2 hours.**

4. **Answer the following questions:**
    4.1. **(34) How does Nutanix provide the ability to leverage persistent containers?**
    4.2. **(35) What is the difference between VMs and Containers?**

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)