IT 4100: File Systems

ScaleIO

Due according to date on Canvas

Assignment

We will do this in class.

Begin by enabling root ssh access on your Ubuntu machine. Must give root a password. Test that you can login as root. Double check that your kernel version is the same as everyone else in your group `uname -r`

Install the packages that the quickstart guide recommends

- liabaio1, numactl, unzip, binutils, rpm, open-jdk-8,

Make sure that you have done an `apt-get update`.

Download

- Necessary files to wget can be found here

Instructions

- A quick-start guide can be found here
- An in-depth installation guide can be found here

Kernel Fix

- Some of the commands that I executed after installing are found here

Essentially you need to show me that you can mount a volume.

More Requirements

Begin by creating a 20G volume for each member of your group.

Down below, you will have to gather some statistics of your scaleio cluster, you may use some of the following commands:

- `dd if=/dev/zero of=testzero.txt count=20GB`
  - This command copies 20GB worth of zeroes into a file called testzero.txt
  - tests write speeds
- `dd if=./testzero.txt of=/dev/null count=20GB`
  - Could copy back (to null device)
  - tests read speeds
- `hdparm -Tt /dev/scinia`
  - Read `man hdparm`
- `scp jfrancom@vm.cs.dixie.edu:/qemu/iso/en_windows_10_enterprise_version_1511_x64_dvd_7224901.iso .`
  - Example of how I could copy a large `real` file (iso) onto the partition.

Each group member should answer the questions below using their own volume.

Using some/all/none of those commands, answer the following questions:

- What are your average read/write speeds?
- Does changing the block size make a difference when reading? When writing?
- What happens if you reboot a node? Are your files still available?
  - I would probably make a bunch of small text files, shutdown or remove a node from the cluster, and see if you can still read/write.
- After putting some files in a volume, create a snapshot of the volume. Then make some more changes to the volume and see if you can restore from the snapshot (screenshot it)
- For a volume, you can set limits. Why would you do this?