Installing and configuring your first node:

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# Install CentOS7 using USB stick:

* Default layout for system drive
* Minimal installation
* Static IP address and hostname
* Set time zone and make sure network time is on - When setting the date/time and time zone you must first make sure that the network interface is configured. If you do not, the network time will not be enabled.

# Configure Host Names and IPs

After rebooting, we are going to configure the hosts and IPs for the local cluster. The file **/etc/hosts** provides a mapping between **IP addresses** and **host names**

Try running the following command (it will not work):

|  |
| --- |
| ping htc180.najah.edu |

but the command:

|  |
| --- |
| ping 172.16.9.180 |

will work. **Can you explain why?**

There is a copy of the /etc/hosts file for the test machines stored on the local server. The local server is running a web server and the file is accessible over the web. You can install it on your local machine using:

|  |
| --- |
| curl -o /etc/hosts<http://172.16.9.180/software/AnNajah-Files/hosts> |

If you do not understand the command curl, please try reading the documentation. If it is still unclear, please ask questions.

To read documentation on a Linux machine use the command "man". For example:

|  |
| --- |
| man curl |

Once installed, you can use now hostnames. For example, will now work. Can you explain why this changed?

|  |
| --- |
| ping [htc180.najah.edu](http://htc180.najah.edu) |

# Set up updates from from local server

In this section, we will set up the local machine to get updates and software from the local server:

|  |
| --- |
| CentOS and RedHat use software repositiories. The configuration files for the repositories are in /etc/yum.repos.d. We want to install repository configuration files (known as repo files) for the local configuration. I prepared some scripts and repo files for the local cluster. These are specific for this cluster and are not designed to run on any other cluster. The concept would be the same, the files would be different. |

## Procedure:

Get the tar archive file containing the setup files using:

|  |
| --- |
| cd /root/  mkdir install cd install  curl -o bootstrap.tar.gz  [http://htc180.najah.edu/software/bootstrap/bootstrap.tar.gz](http://htc180.najah.edu/software/bootstrap.tar.gz)  tar -xzvf bootstrap.tar.gz  cd startup  systemctl stop packagekit.service  systemctl disable packagekit.service  ./InstallRepos |

|  |
| --- |
| Please try to understand the script **InstallRepos**. It is also attached to this email.  **Note: This is done using the files on the server.**  **It does not get files from Internet.** |

|  |
| --- |
| yum clean all  yum update |

# Install additional files:

Now install a few addition useful files for working on the machine.

First try running the command to read the CPU core temperatures:

|  |
| --- |
| sensors |

You will an error message about command not found. Now run the script:

|  |
| --- |
| ./InstallPackages |

Now run the same command and you will see the temperatures on the CPU cores.

|  |
| --- |
| sensors |

You should get the output for the temperatures for CPU cores.

**Why is that information important?**

|  |
| --- |
| Now that you have gone through process once, doing it again will take a fraction of the time it took to do it the first time. |