MC5511 CLOUD AND BIG DATA LABORATORY

DETAILED SYLLABUS

OBJECTIVES

- Be exposed to tool kits for cloud and hadoop environment.
- Be familiar with migration of Virtual Machines from one node to another
- Learn to run virtual machines of different configuration.
- Learn to use Hadoop Distributed File System(HDFS) to set up single and multi-node clusters.

LIST OF EXPERIMENTS

Use Eucalyptus or Open Nebula or Open Stack or equivalent to set up the cloud and demonstrate

1. Find procedure to run the virtual machine of different configuration. Check how many virtual machines can be utilized at particular time
2. Find procedure to attach virtual block to the virtual machine and check whether it holds the data even after the release of the virtual machine
3. Install a C compiler in the virtual machine and execute a sample program.
4. Show the virtual machine migration based on the certain condition from one node to the other
5. Find procedure to install storage controller and interact with it
6. Find procedure to set up the one node Hadoop cluster.
7. Mount the one node Hadoop cluster using FUSE.
8. Write a word count program to demonstrate the use of Map - Reduce tasks.
9. Unstructured data into NoSQL data and do all operations such as NoSQL query with API.
10. K-means clustering using map reduce
11. Page Rank Computation

LAB EQUIPMENT FOR A BATCH OF 30 STUDENTS

SOFTWARE

Eucalyptus or Open Nebula or equivalent

HARDWARE

Standalone desktops 30 Nos