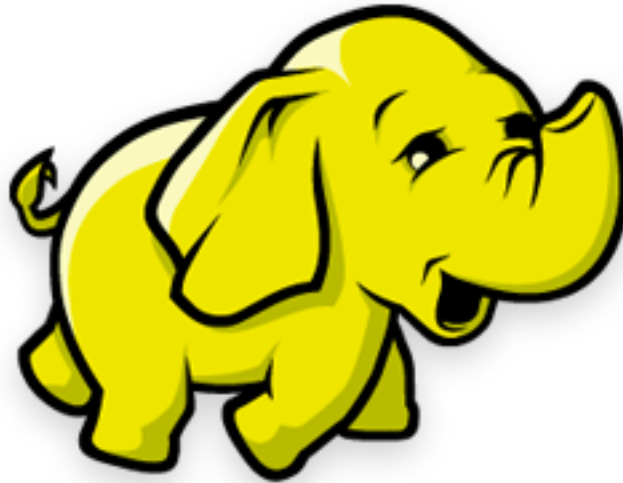


Smart Hadoop Cluster – SMHACL

Project url: www.github.com/mr-ravin/Smart-Hadoop-Cluster-SMHACL



Project Developer:

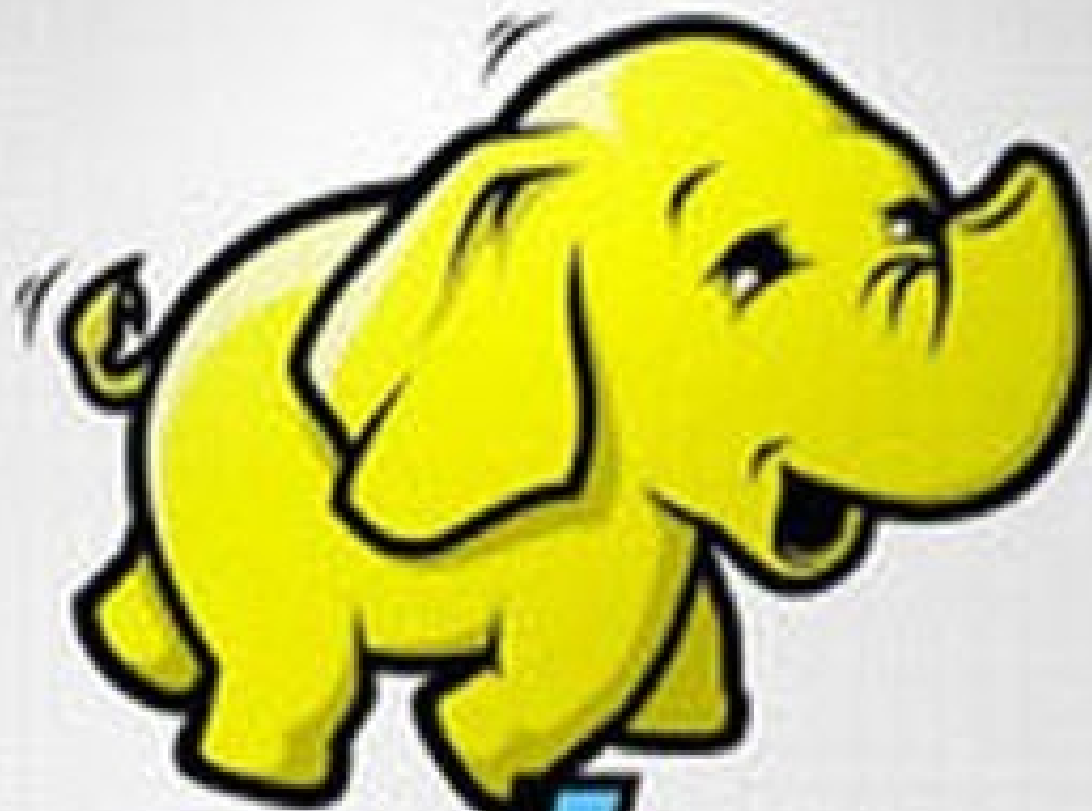
Name: Ravin Kumar

Linkedin: <https://in.linkedin.com/in/ravinkumar21>

Email id: mr.ravin_kumar@hotmail.com

Objective:- Developing an automated software for installing hadoop tools, generating Hadoop cluster, and then running the operations on various systems that Are connected to each other. It also provides Terminal user interface for Interaction.

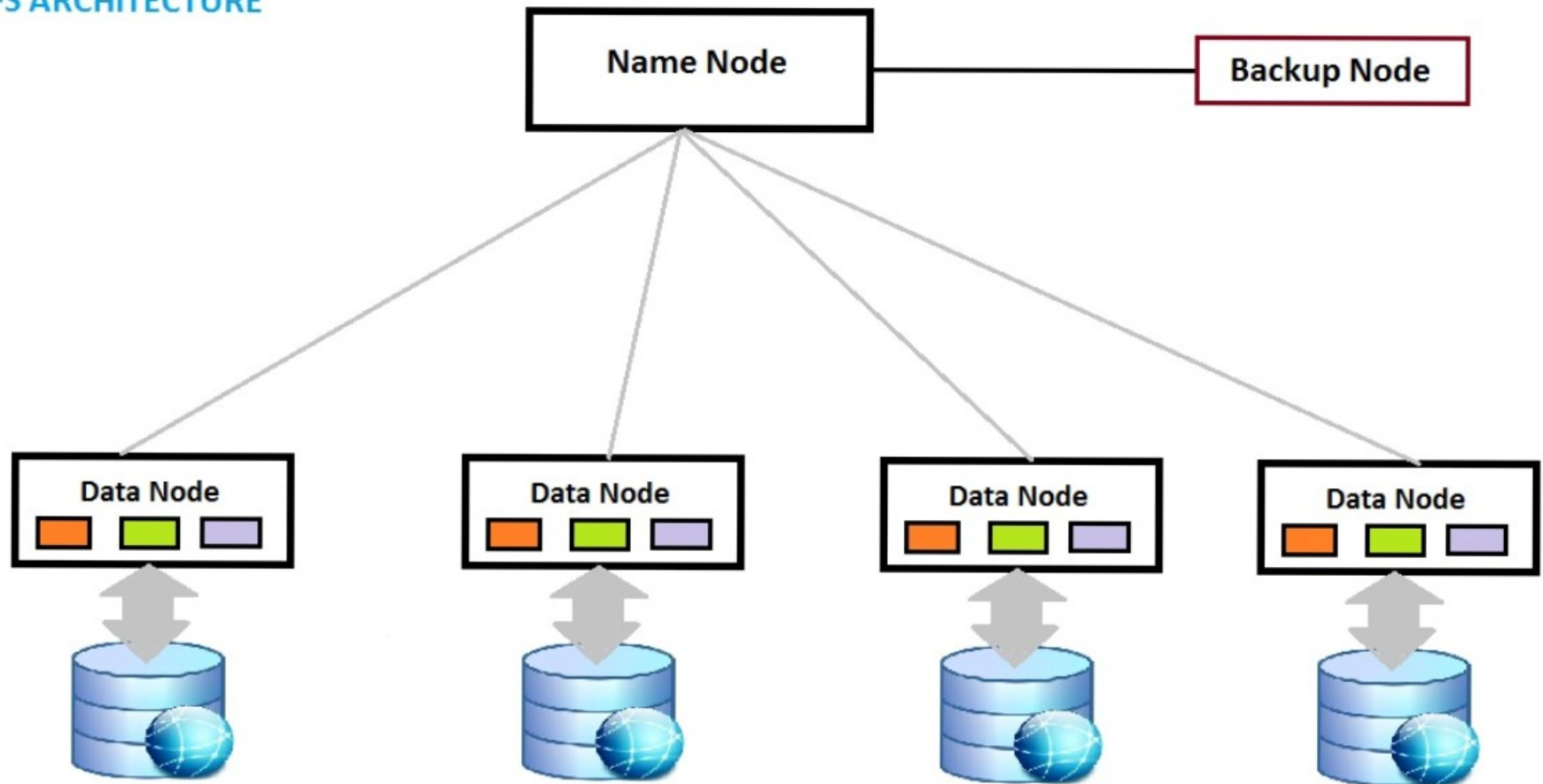
1. Automatic installation of required softwares, and dependencies.
2. Creation of hadoop cluster (for hadoop version 1, and 2).
3. Displaying system specifics like- Ram Hard disk for selection of roles, like- name node, job tracker.
4. Creating a log file, containing all the details of processes that occurred in connected computers .
5. Also, provides support for other applications, like- Hive, Dockers, Splunk.



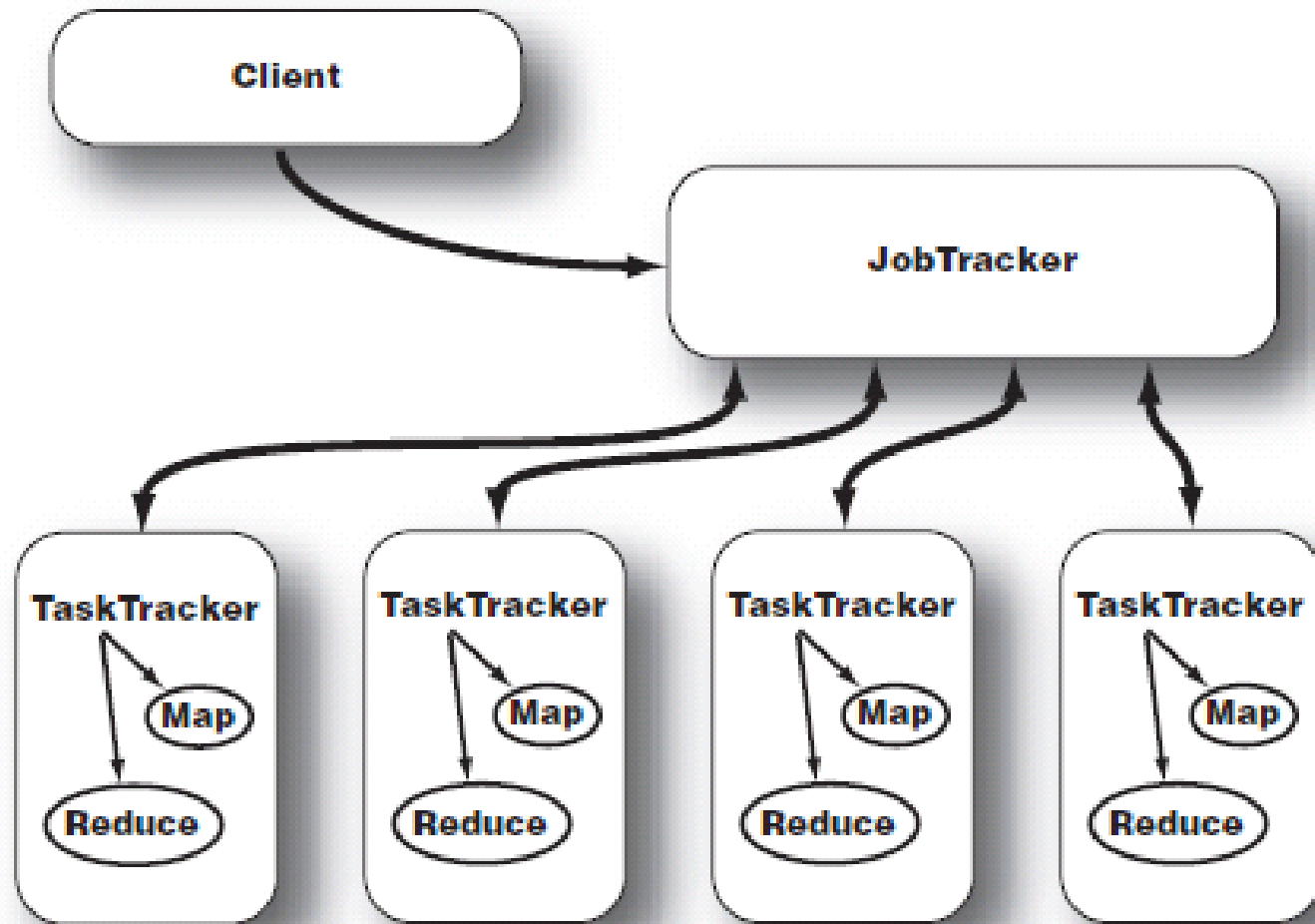
hadoop

Hadoop HDFS

HDFS ARCHITECTURE



Job Tracker and Task Tracker



System Requirements

1. RAM: 8 GB (minimum), for complete running on single machine.
2. RAM: 4 GB, if one role is assigned to each machine.
3. Hard Disk: atleast 20 GB free.
4. Operating System: RedHat Enterprise Linux 7.2
5. Pre requisit: Python 2.7, virtual machine(kvm), if running on single machine.

Technologies Used:-

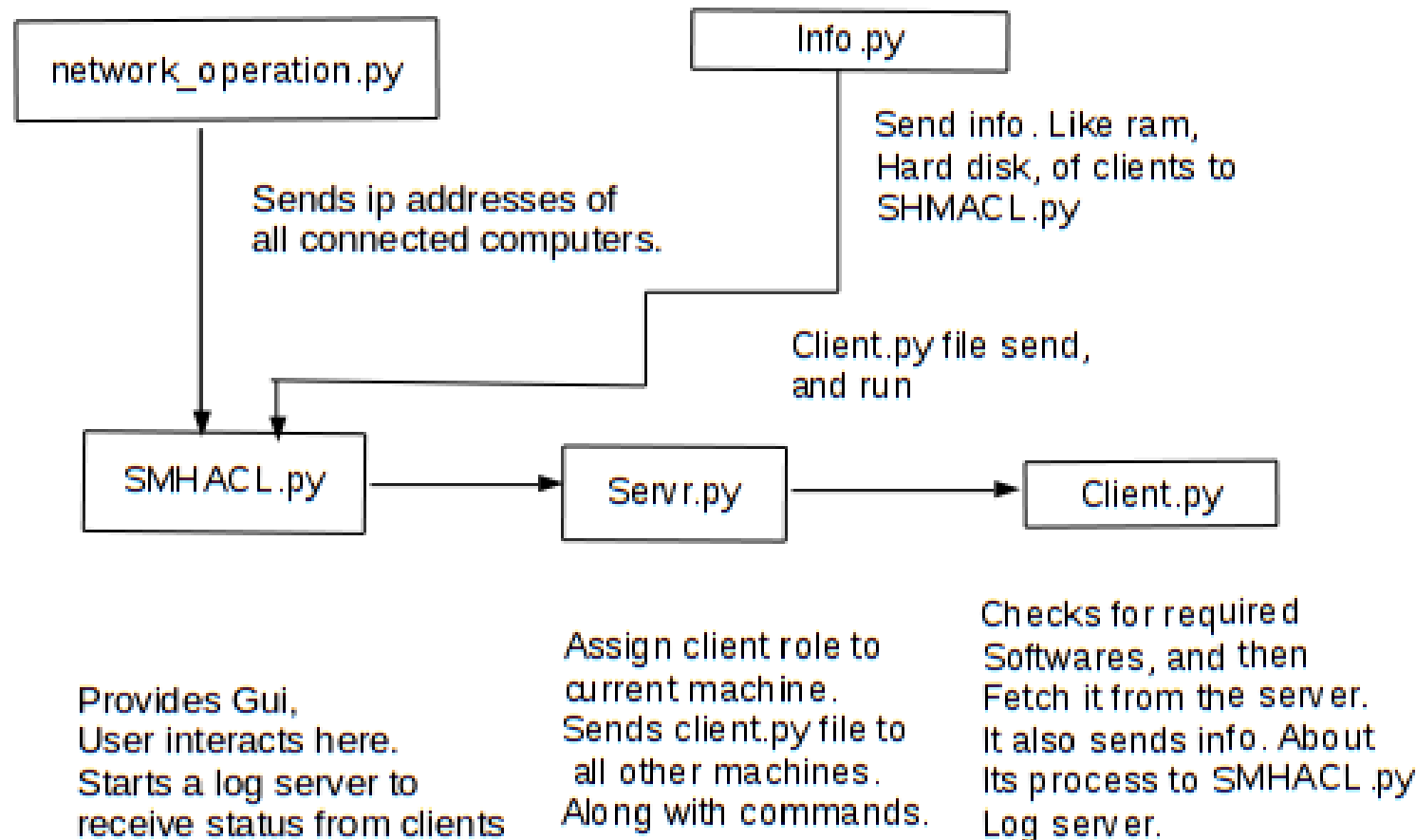
1. Hadoop (version 1 and 2).
2. Python programming language.
3. RedHat Enterprise Linux 7.2.
4. Dockers.
5. Splunk.
6. Shell Scripting.

Smart Hadoop Cluster Software Architecture.

SMHACL

- |
- | -SMHACL.py
- |
- | -servr.py
- |
- | -client.py
- |
- | -network_operation.py
- |
- | -softwares
 - |
 - | -hadoop1 (it is a directory).
 - |
 - | -hadoop2 (it is a directory).
 - |
 - | -java (it is a directory).
 - |
 - | -packages (it is a directory).

Overall Working Model :



Advantages Of SMHACL:

1. It takes very less time to create and run the hadoop cluster, even for 100 of computers.
2. It provides TUI for end user to interact.
3. It automatically install all the required softwares.
4. It creates log file, so in cases of any error, it can be used to resolve it.
5. It provide graphical button for various commands, makes it easier to use.

THANK YOU