Virtual Cluster over OpenNebula (Progress Report)
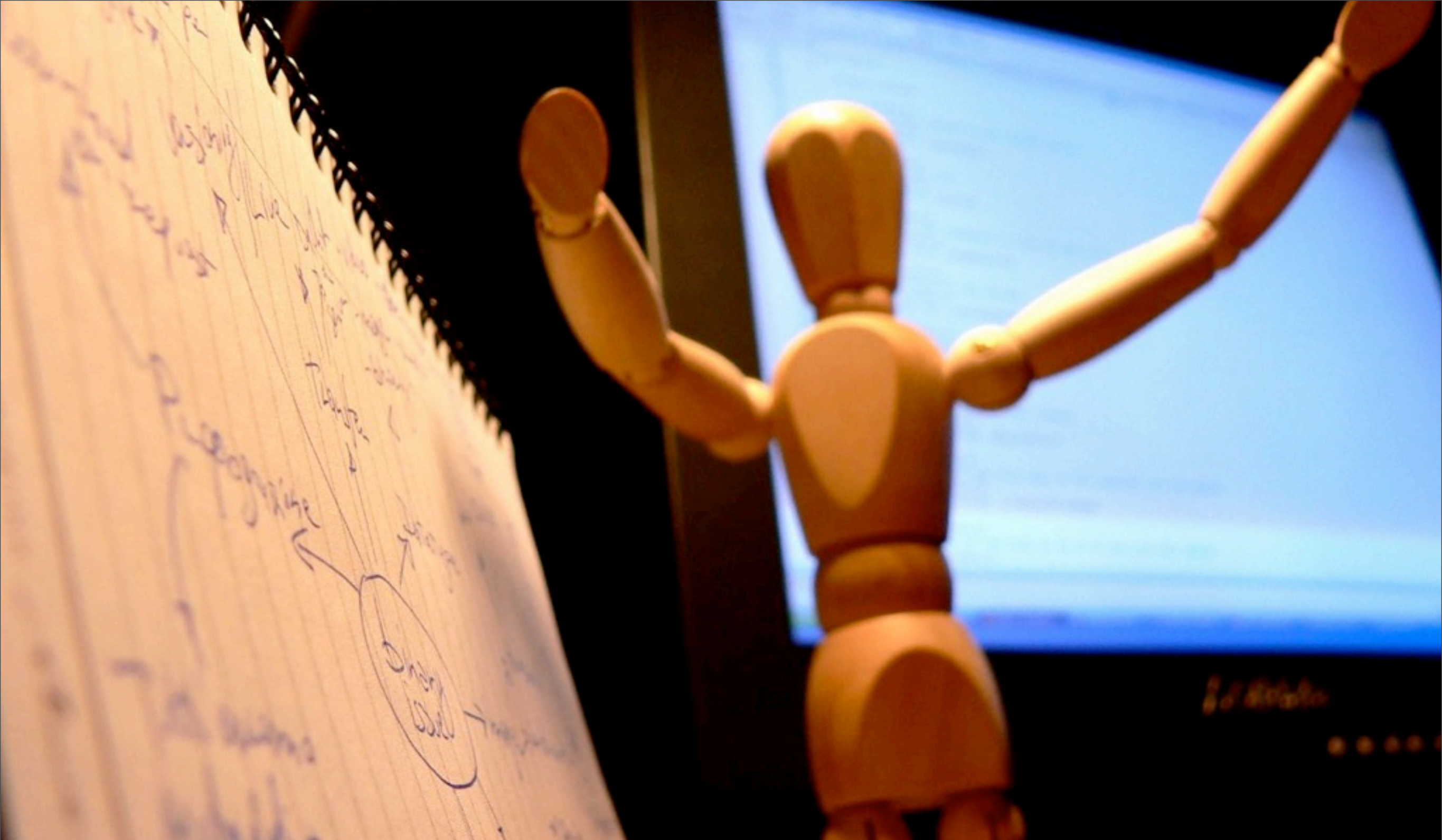
Pongsakorn U-chupala
09/08/2011

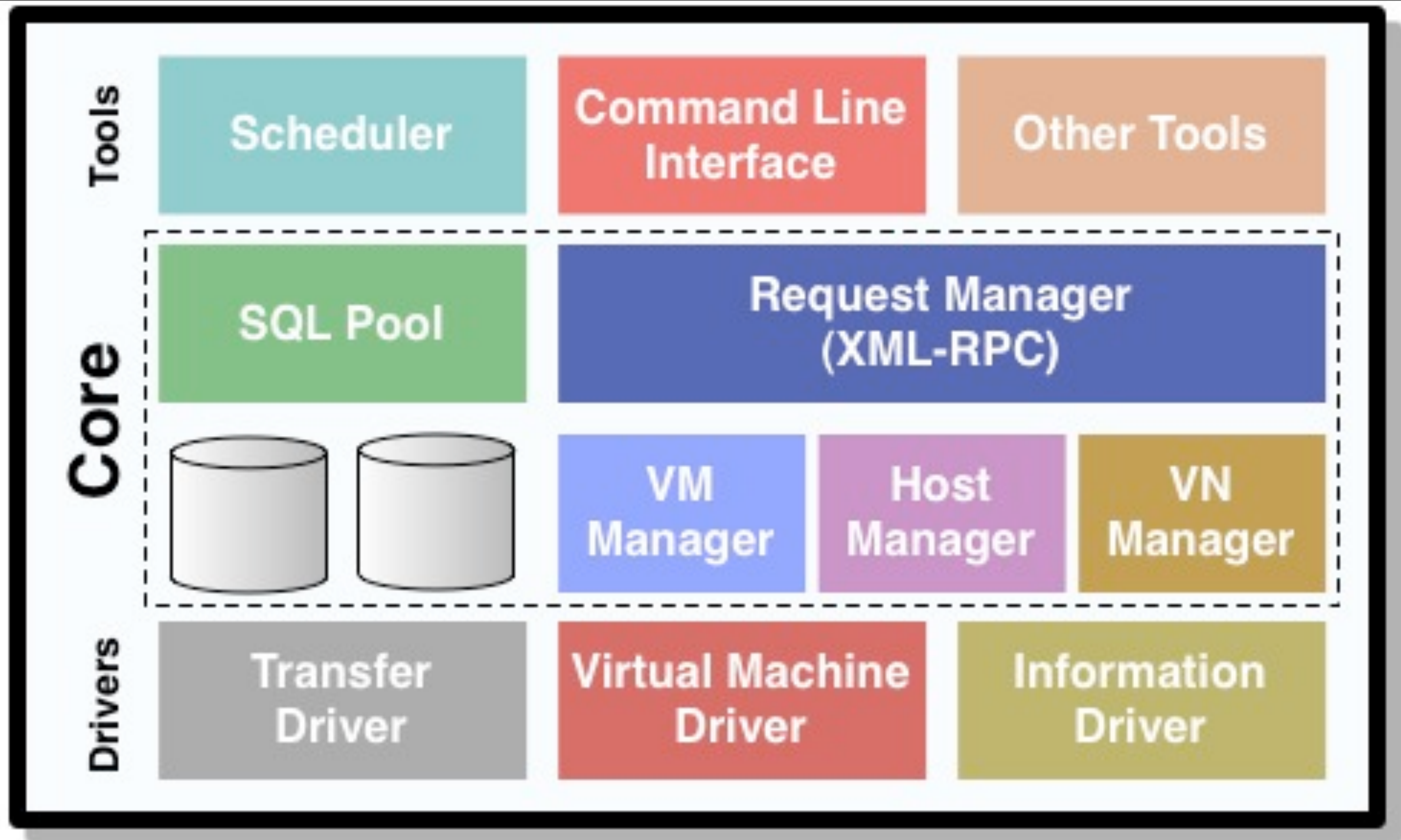# Agenda

1.Architecture

2.Progress

3.Issues & Problems
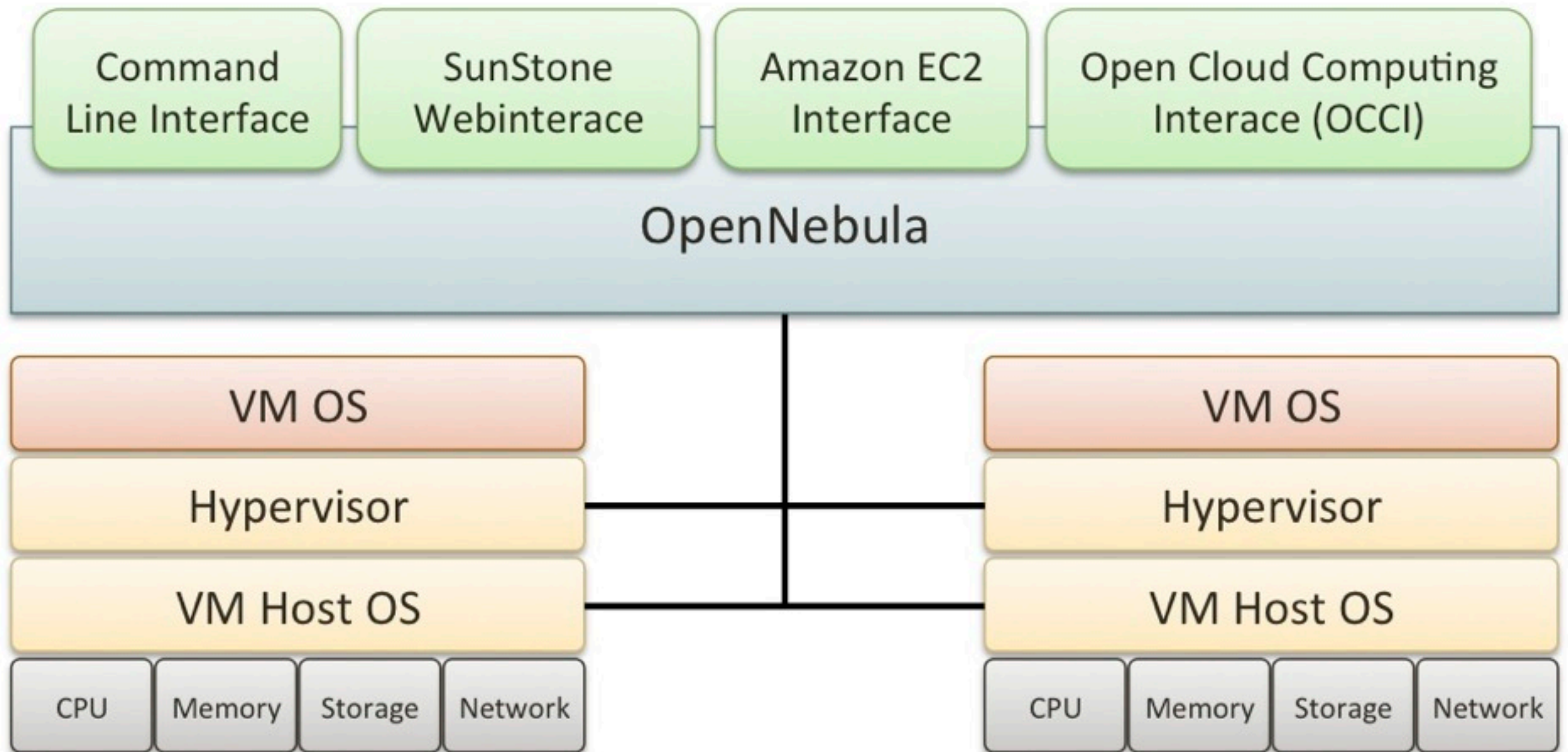
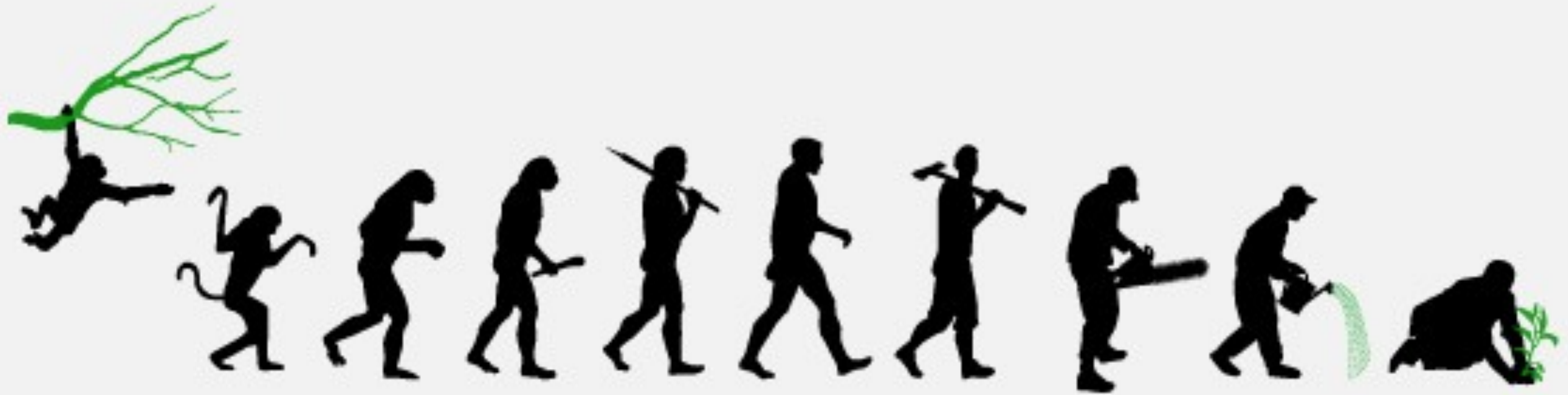# 1. Architecture

Architecture | Internal

Architecture | External

OpenNebula CLI Utilities

- *oneimage* - Manage image repository

- *onevnet* - Manage VM networking

- *onevm* - Manage VM

- *onehost* - Manage VM container (host)

- **OBJECTIVE:** *onevc* - Manage virtual cluster with above utilities

See Figures

2. Progress

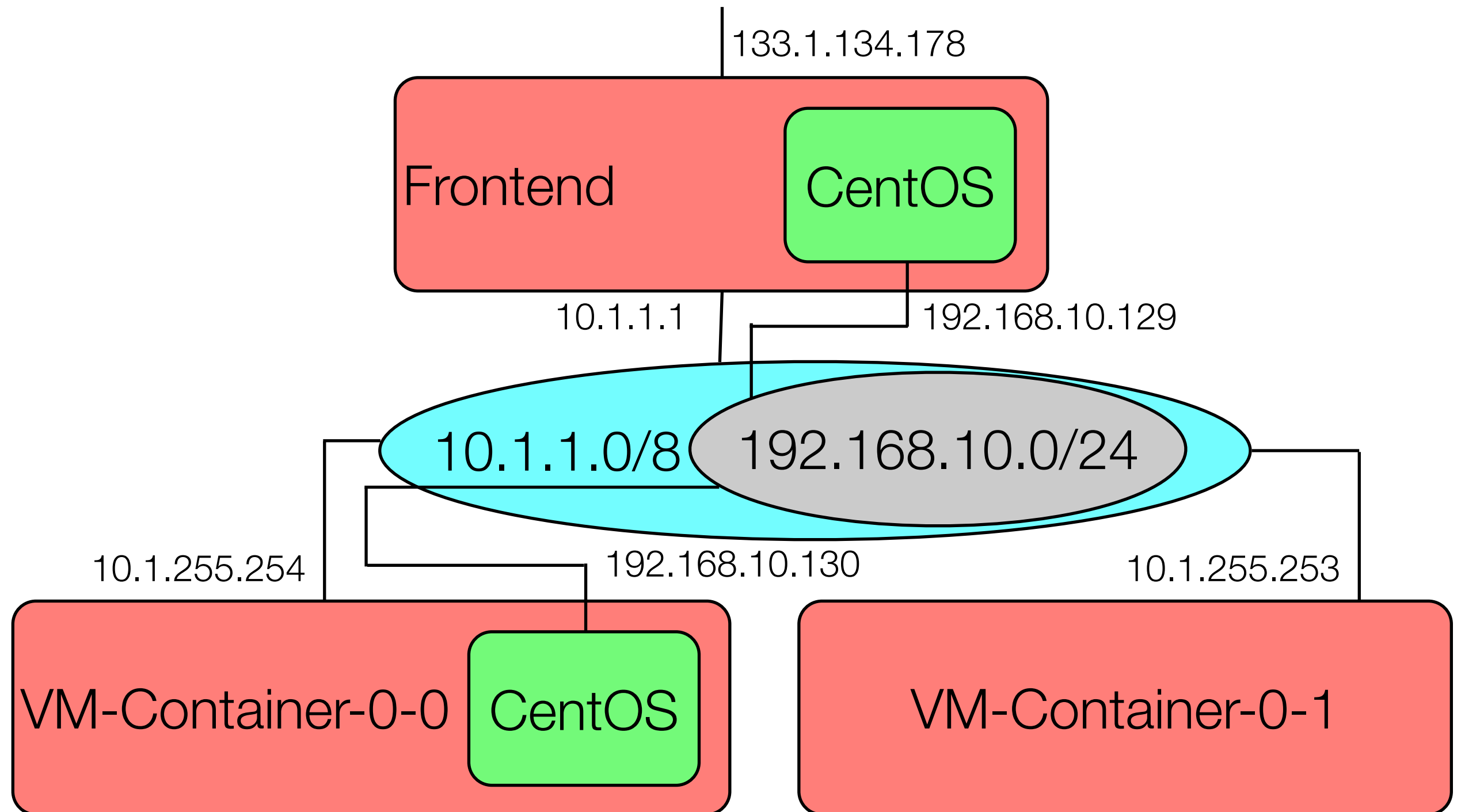# Milestones

☑ Familiarize myself with OpenNebula, Xen and other related tools

☐ **CURRENT OBJECTIVE:** Install Rocks Cluster Over OpenNebula (in *Fully-virtualized* mode)

☐ **CURRENT OBJECTIVE:** Design a utility to manage Virtual Cluster over OpenNebula

☐ Implement a utility to manage Virtual Cluster over OpenNebula

☐ Benchmark Rocks Cluster installed by this utility

What I have done

- Created a working modified CentOS image for OpenNebula

- Booted (modified) CentOS in *Fully Virtualized* mode with networking

- Connected CentOS VM to existing network

- Manually connected 2 CentOS VM to each other in Virtual Network

Current Setup

133.1.134.178

Frontend **CentOS**

10.1.1.1   192.168.10.129

10.1.1.0/8   192.168.10.0/24

10.1.255.254   192.168.10.130   10.1.255.253

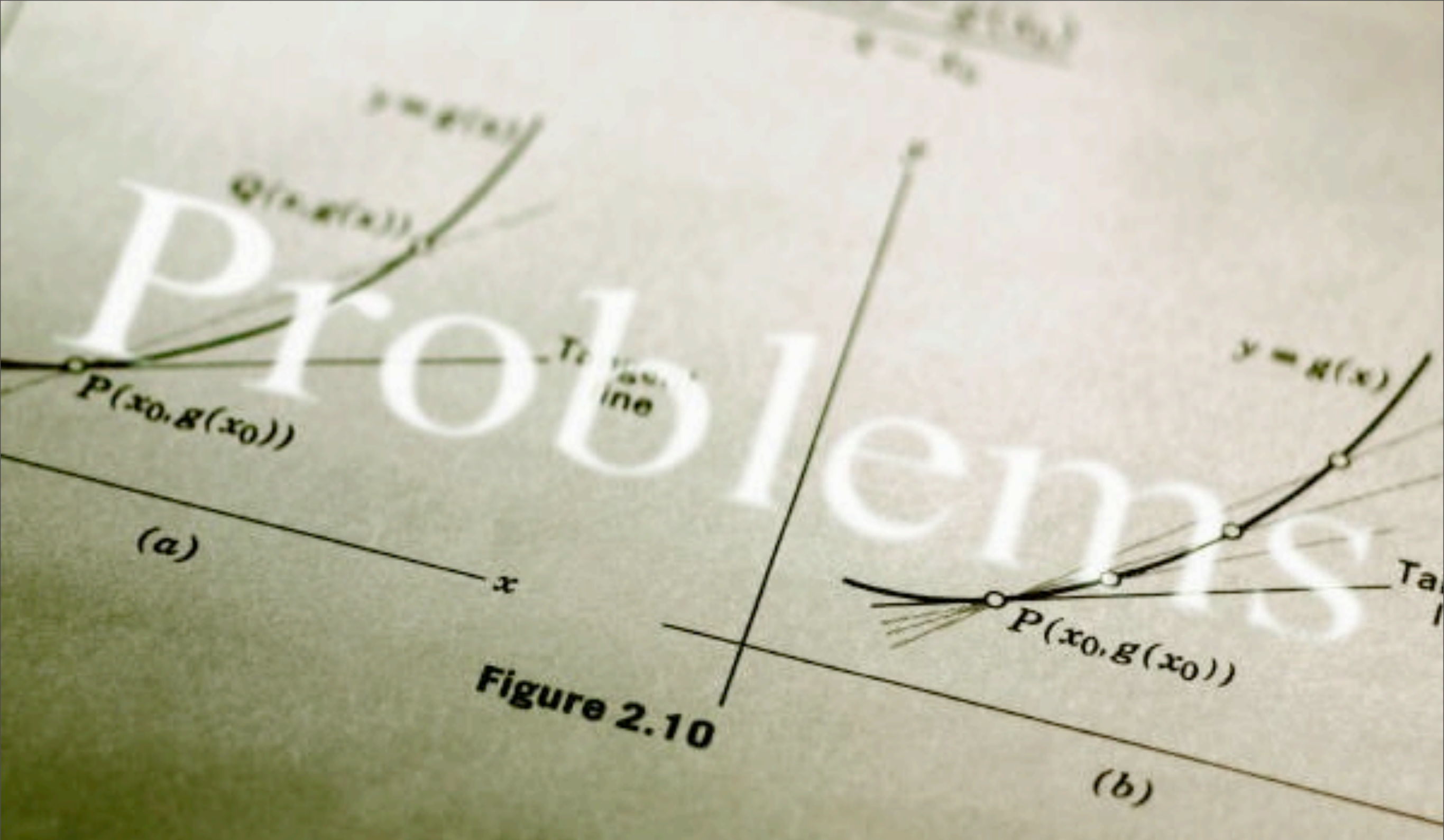**VM-Container-0-0** **CentOS**   **VM-Container-0-1**

What I have been doing

- Configure CentOS VM networking with *Context Script*

  - OpenNebula method to automatically setup networking on VM

- Attach multiple network interface to VMs

What I am going to do

- Create modified Rocks Cluster (Frontend) image

- See if I can get PXE installation (of compute node) work with OpenNebula

3. Issues & Problems

Problems

- *Context Script* configuration worked with existing network but not with virtual network

  - Perhaps, It's just some misconfiguration

Issues

- I've used DHCP's IP for a while, Perhaps I should ask for a proper IP from Taiki instead

- I'll go to Tokyo from 8/13 - 8/17

- I've never write a paper before

  - How should I start?

Conclusion

1.Architecture

2.Progress

3.Issues & Problems

Questions?

ありがとうございました

References

- http://opennebula.org/