



# Mesos

A cluster management software by Apache Software  
Foundation

# Overview

- At a high level Mesos is a cluster management platform which enables building resource-efficient distributed systems
- Mesos provides efficient dynamic resource isolation and sharing across multiple distributed applications (including, for example, Hadoop, Spark and Memcache)

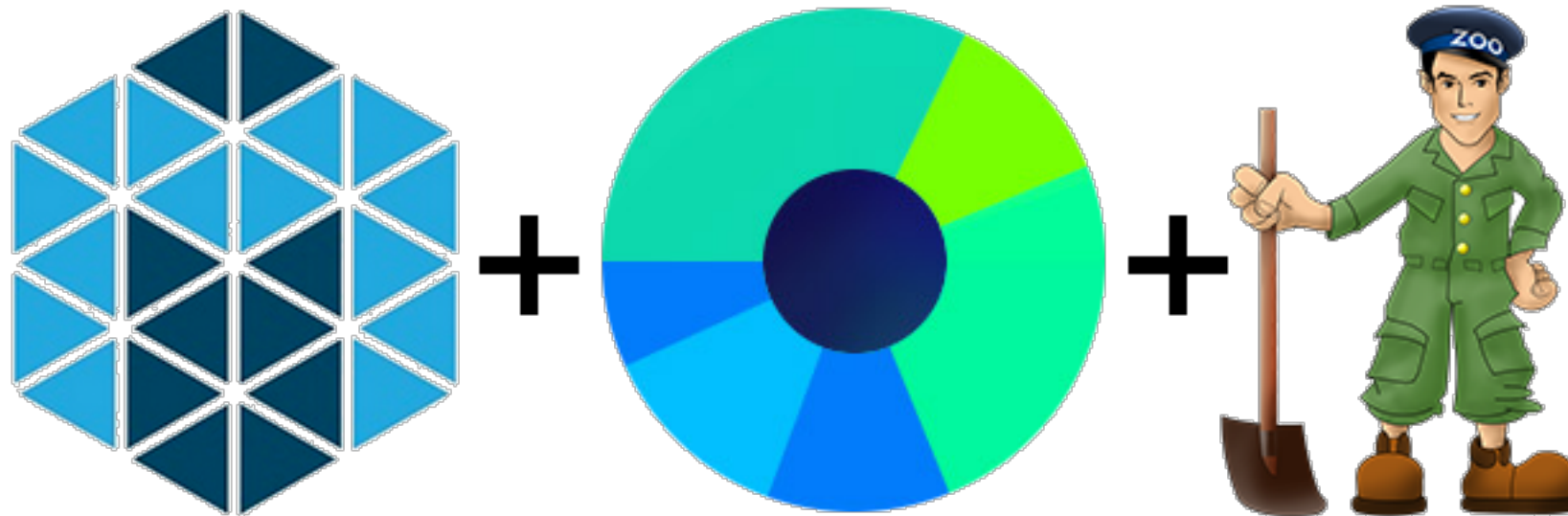
# Key benefits of Mesos

- No Vendor Lock-in
- Production Tested Application Scaling to 10,000+ nodes
- Flexible Configuration
- Open Source

# Companies who use Mesos

- Twitter, Airbnb and Apple. At least 50 organisations currently use Mesos
- And now we too use it

# Mesosphere Marathon framework



# Components of Mesosphere

- Apache Mesos
- Apache ZooKeeper
- Mesosphere Marathon
- HAProxy

# Key benefits of Mesosphere

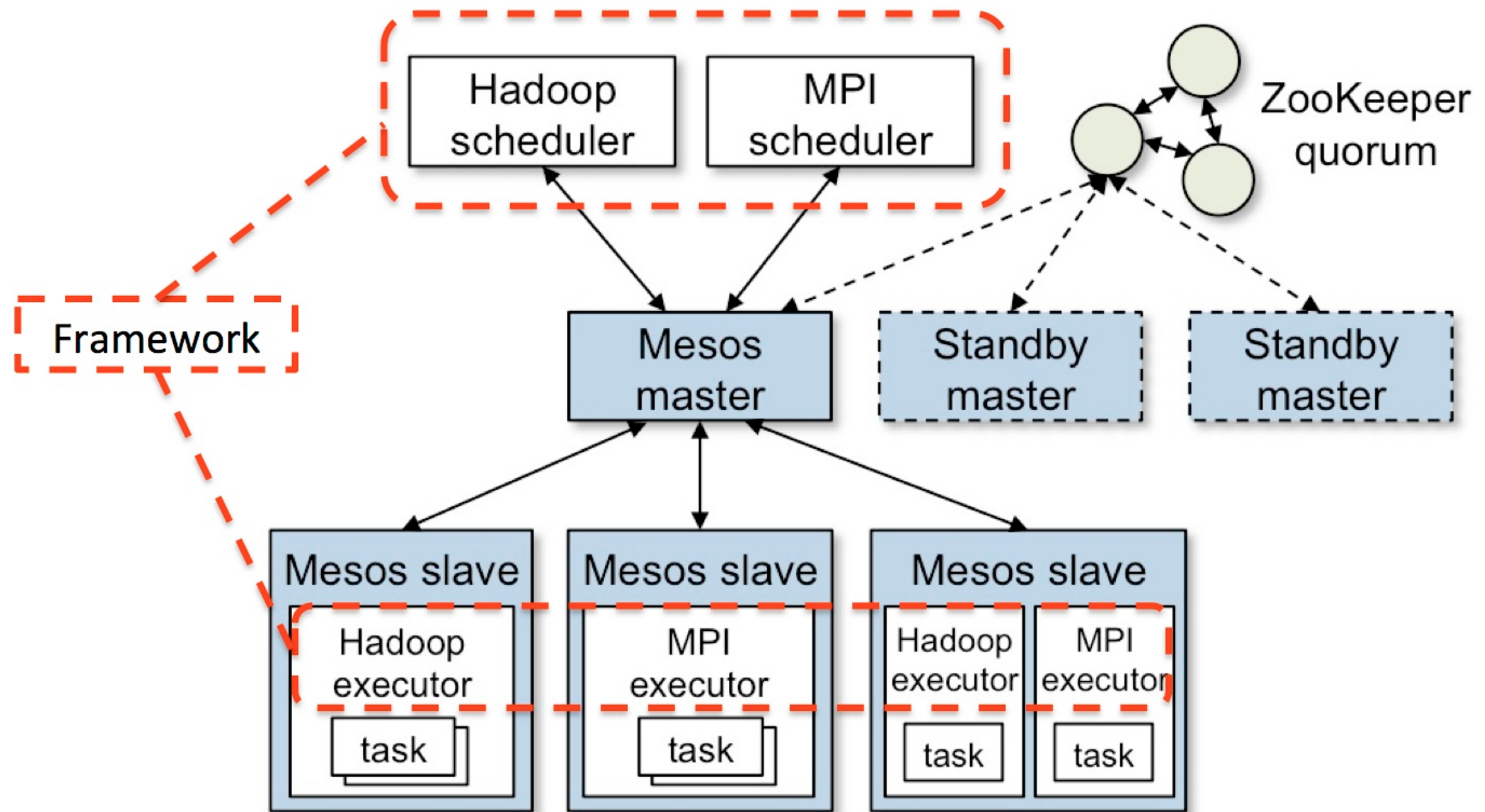
- Application scheduling and scaling
- Application fault-tolerance and self-healing
- Under load application prioritisation of applications
- Application service port unification
- Application service discovery
- Application service end-point elasticity

# Best Practices

- A Mesos cluster needs at least one Mesos Master and one Mesos Slave. The Mesos Master coordinates and dispatch tasks onto the Mesos Slaves which run the jobs
- In production clusters you typically run Mesos in High Availability (HA) Mode with three or more Mesos Masters, three or more Zookeepers, and many Mesos Slaves



# How Mesos works



# Demo

- Installing and configuring a Mesos cluster
- Running tasks from Marathon
- Running tasks from Chronos
- Running tasks from command line

# Playbook to install Mesos

- Master - <https://github.com/adithyakhamithkar/ansible/blob/master/install-mesos-master.yml>
- Slave - <https://github.com/adithyakhamithkar/ansible/blob/master/install-mesos-slave.yml>

# Further Reading

- Mesosphere - <https://open.mesosphere.com/mesosphere>
- Data center OS - <https://www.youtube.com/watch?v=0I6qG9RQUnY>
- Marathon - <https://mesosphere.github.io/marathon/>
- Mesos - <https://mesos.apache.org/>