



MESOS

Yes, yet another resource negotiator



What is Mesos?

- Came out of Twitter - it's a system that manages resources across your data center(s)
- Not just for big data stuff - it can allocate resources for web servers, small scripts, whatever.
- Meant to solve a more general problem than YARN - it's really a general container management system



We're kind of going off the reservation

- Mesos isn't really part of the Hadoop ecosystem per se, but it can play nice with it
 - *Spark and Storm may both run on Mesos instead of YARN*
 - *Hadoop YARN may be integrated with Mesos using Myriad*
 - So you don't necessarily need to partition your data center between your Hadoop cluster and everything else!



Differences between Mesos and YARN

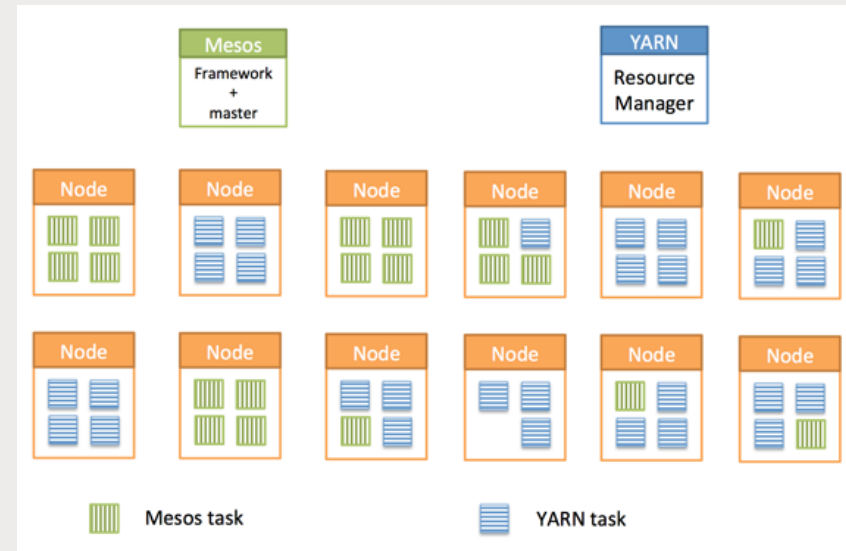
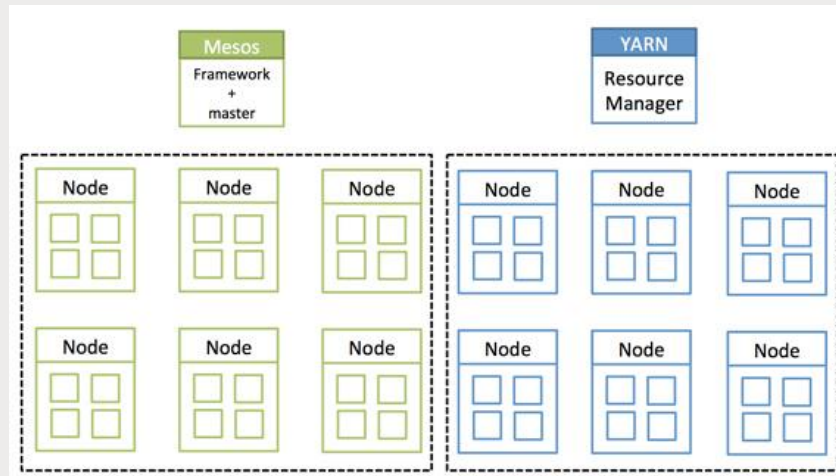
- YARN is a monolithic scheduler - you give it a job, and YARN figures out where to run
- Mesos is a two-tiered system
 - *Mesos just makes offers of resources to your application (“framework”)*
 - *Your framework decides whether to accept or reject them*
 - *You also decide your own scheduling algorithm*
- YARN is optimized for long, analytical jobs like you see in Hadoop
- Mesos is built to handle that, as well as long-lived processes (servers) and short-lived processes as well.

How Mesos fits in

- If you're looking for an architecture you can code all of your organization's cluster applications against - not just Hadoop stuff - Mesos can be really useful
 - *You should also look at Kuberentes / Docker*
- If all you are about is Spark and Storm from the Hadoop-y world, Mesos is an option
 - *But YARN's probably better, especially if your data is on HDFS*
 - *Spark on Mesos is limited to one executor per slave (node)*



Siloed vs resource sharing



When to use Mesos?

- If your organization as a whole has chosen to use Mesos to manage its computing resources in general
 - *Then you can avoid partitioning off a Hadoop cluster by using Myriad*
 - *There is also a “Hadoop on Mesos” package for Cloudera that bypasses YARN entirely*
- Otherwise - probably not. I just want you know what Mesos is and how it's different from YARN.