

# Implementing and Testing Ceph Distributed File System with Multipath TCP

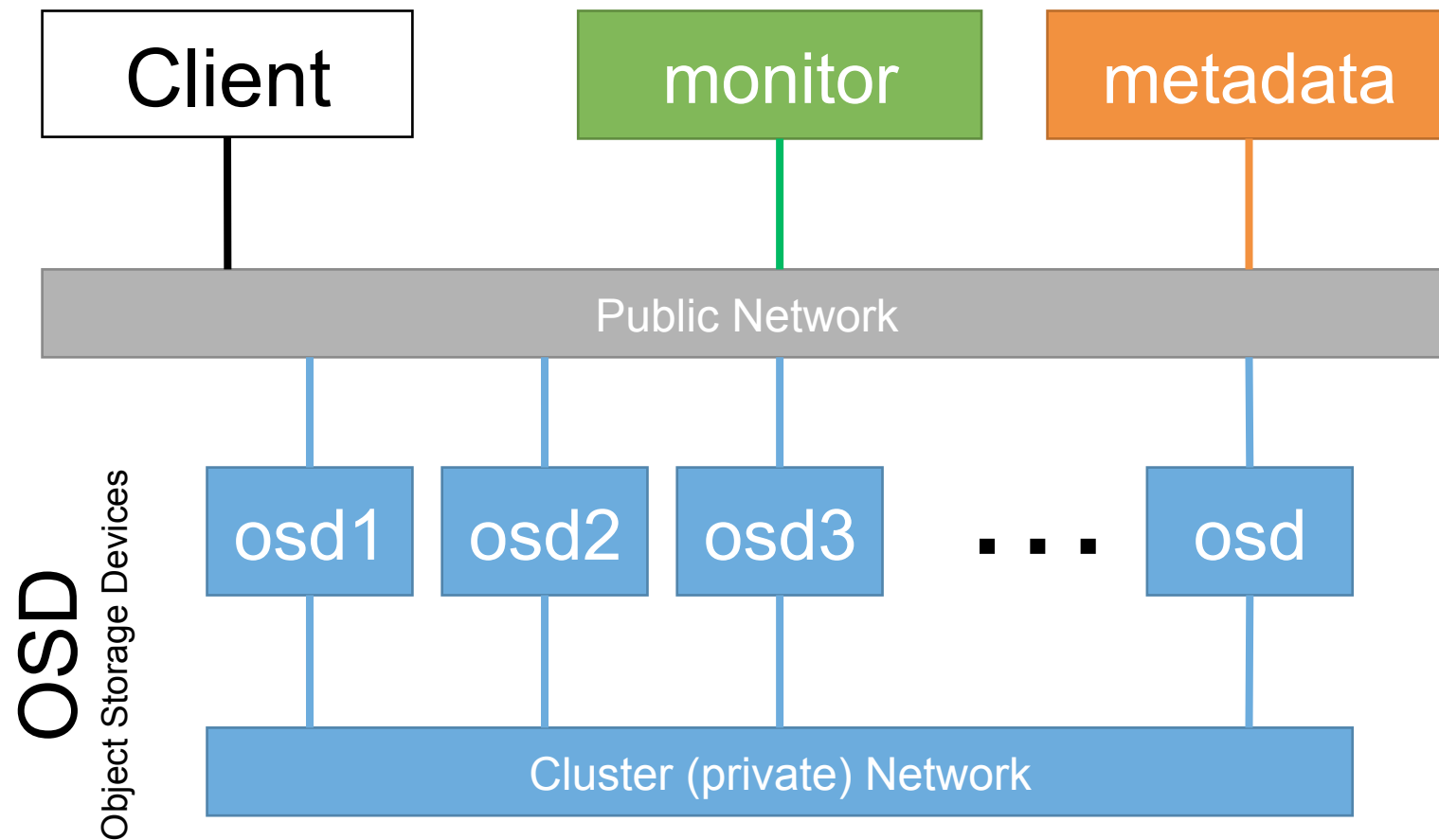
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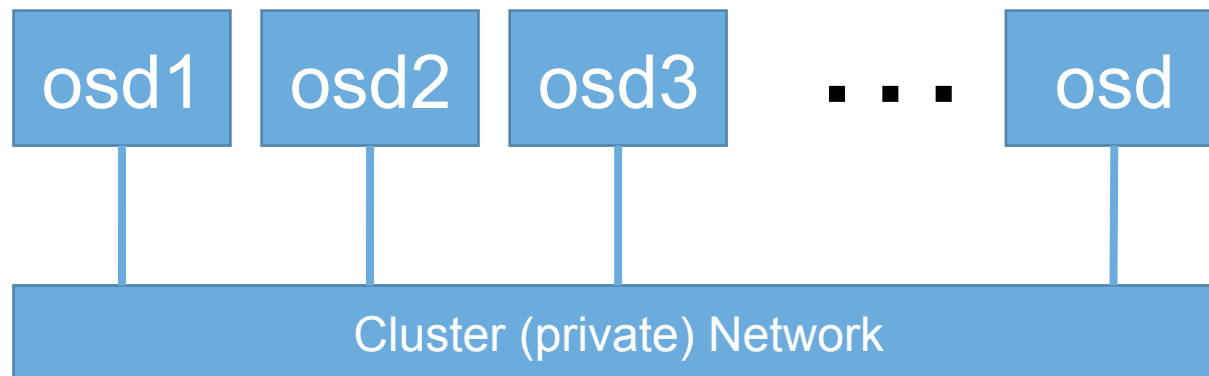
A lightning talk on 2016-09-07 @ PRAGMA31, Bangkok, Thailand

# Ceph Distributed File System

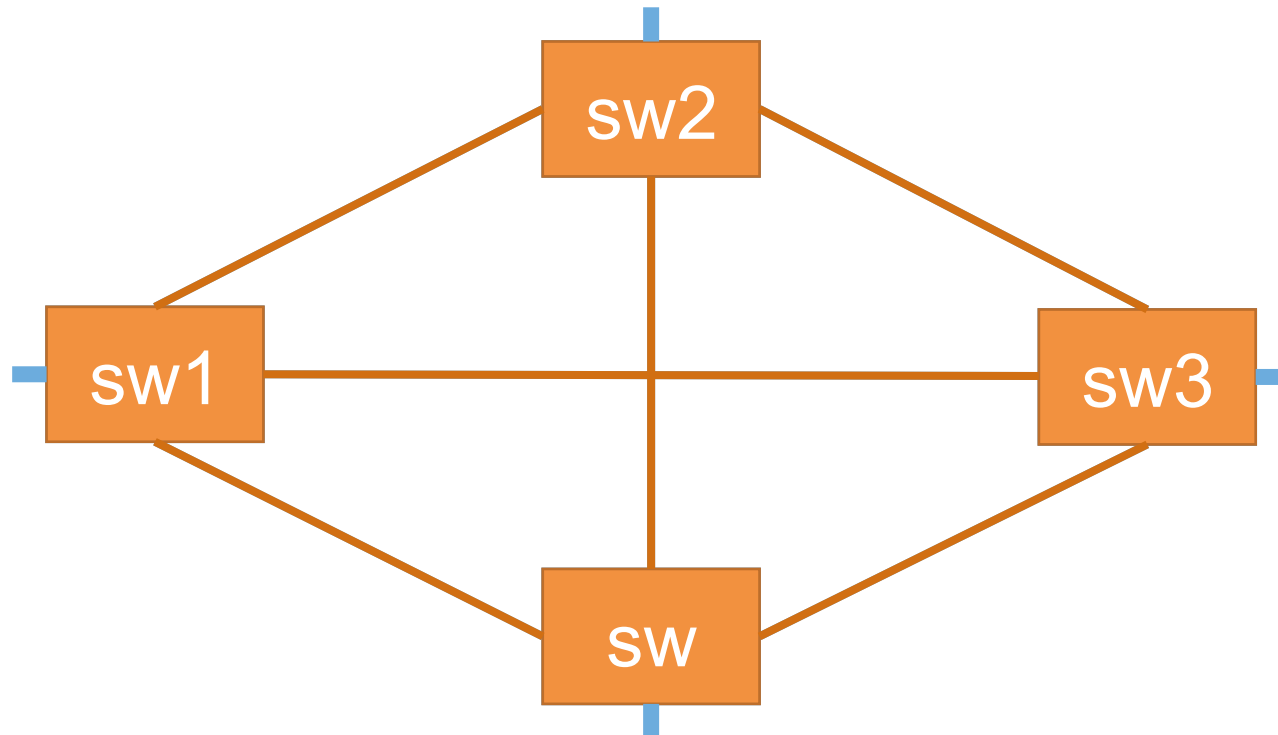


# Let's take a look at the cluster network.

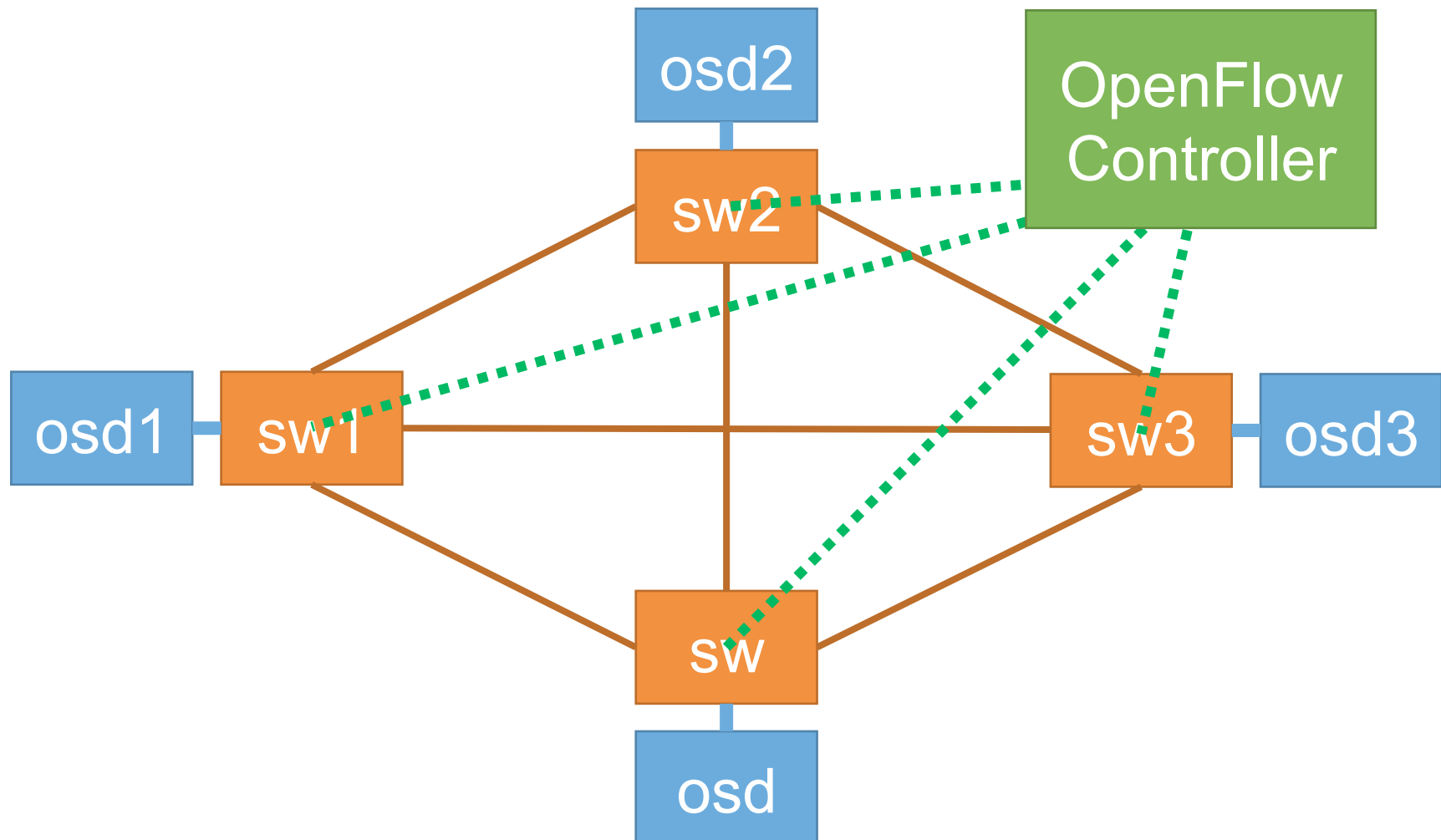
The cluster network here is used to synchronize the OSDs so they are all updated.



If we use a mesh network like this,  
and then add a few more bits and pieces, we could use multiple routes  
between nodes in this network.

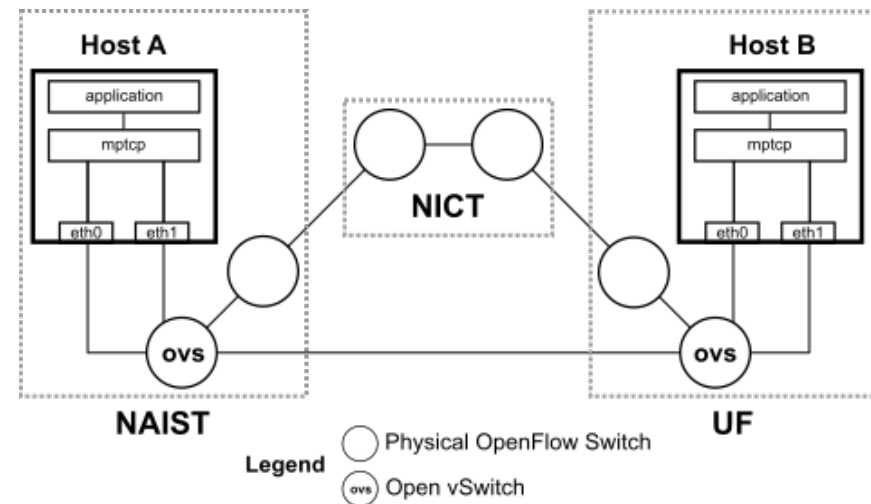
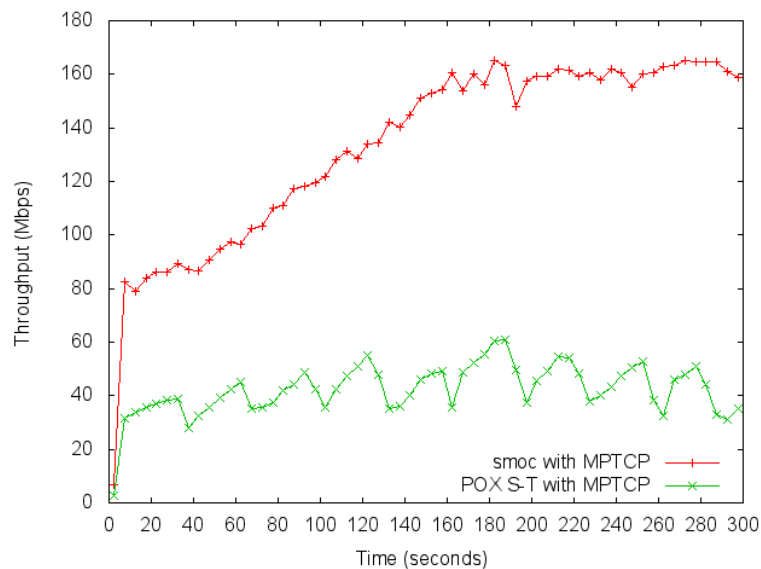


1. Put a switch in front of each OSD
2. Install Multipath TCP on the OSDs
3. Use OpenFlow to control the network



# Why this combination?

nFlow + Multipath TCP = Performance! (Even in W/



# Expected Benefits

- Replication **performance**
- Cluster network **reliability**
- **Viability in WANs**
- Align with PRAGMA's goals and research themes!