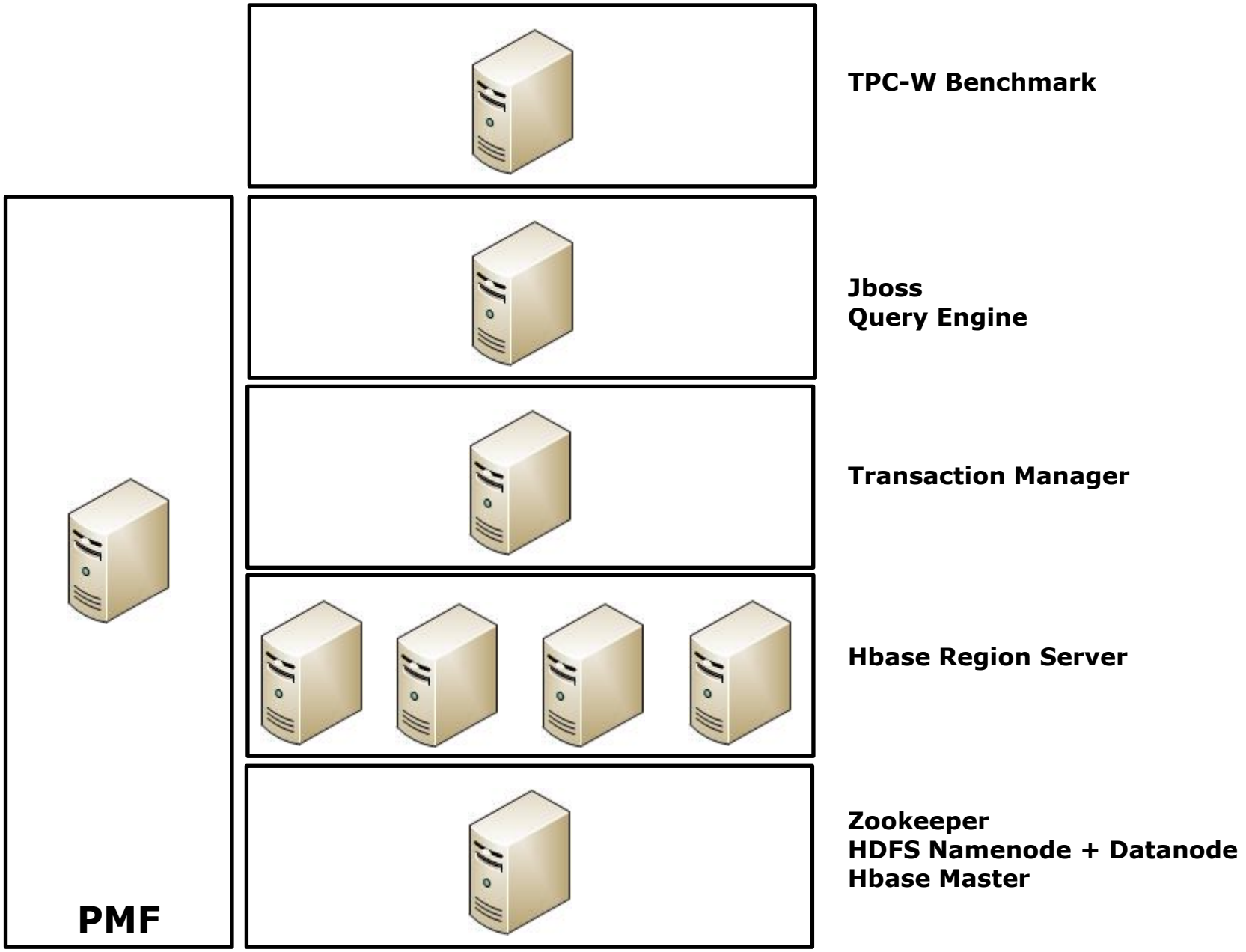
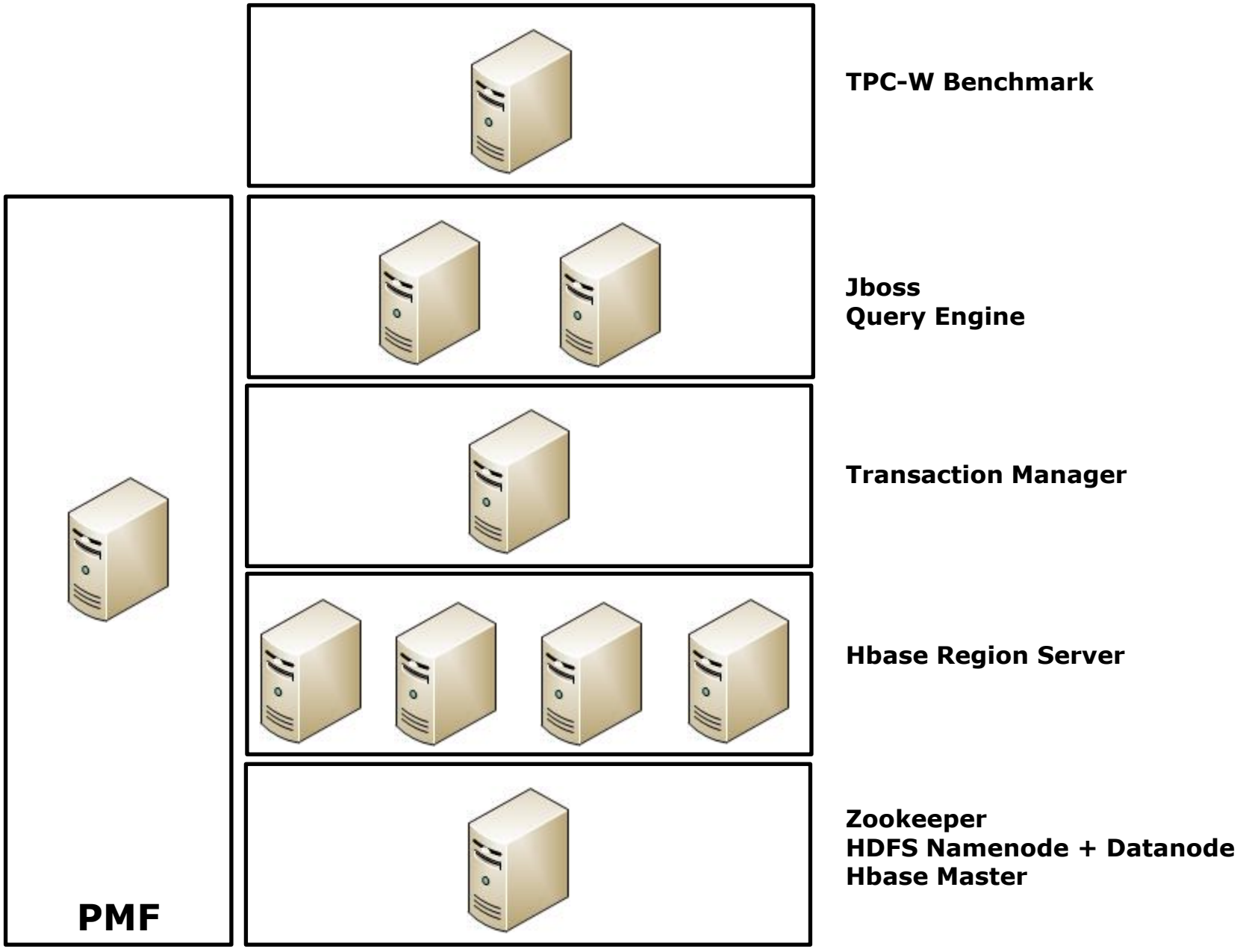
Demo of Elasticity

- Running on Flexiant public cloud
- Benchmark will increase and decrease load
- PMF will monitor and auto-scale the platform


TPC-W Benchmark
Jboss
Query Engine
Transaction Manager
Hbase Region Server
Zookeeper
HDFS Namenode + Datanode
Hbase Master
PMF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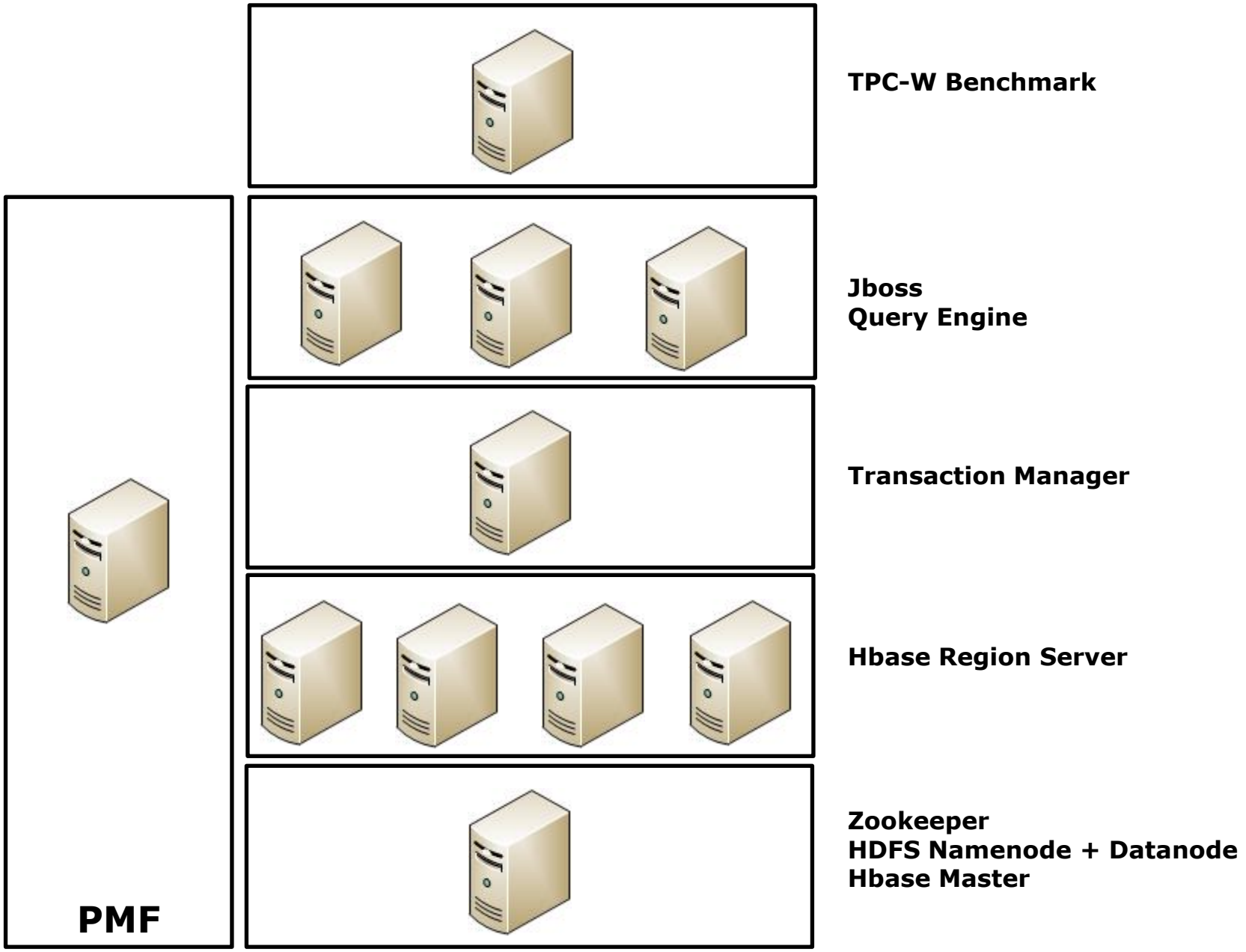
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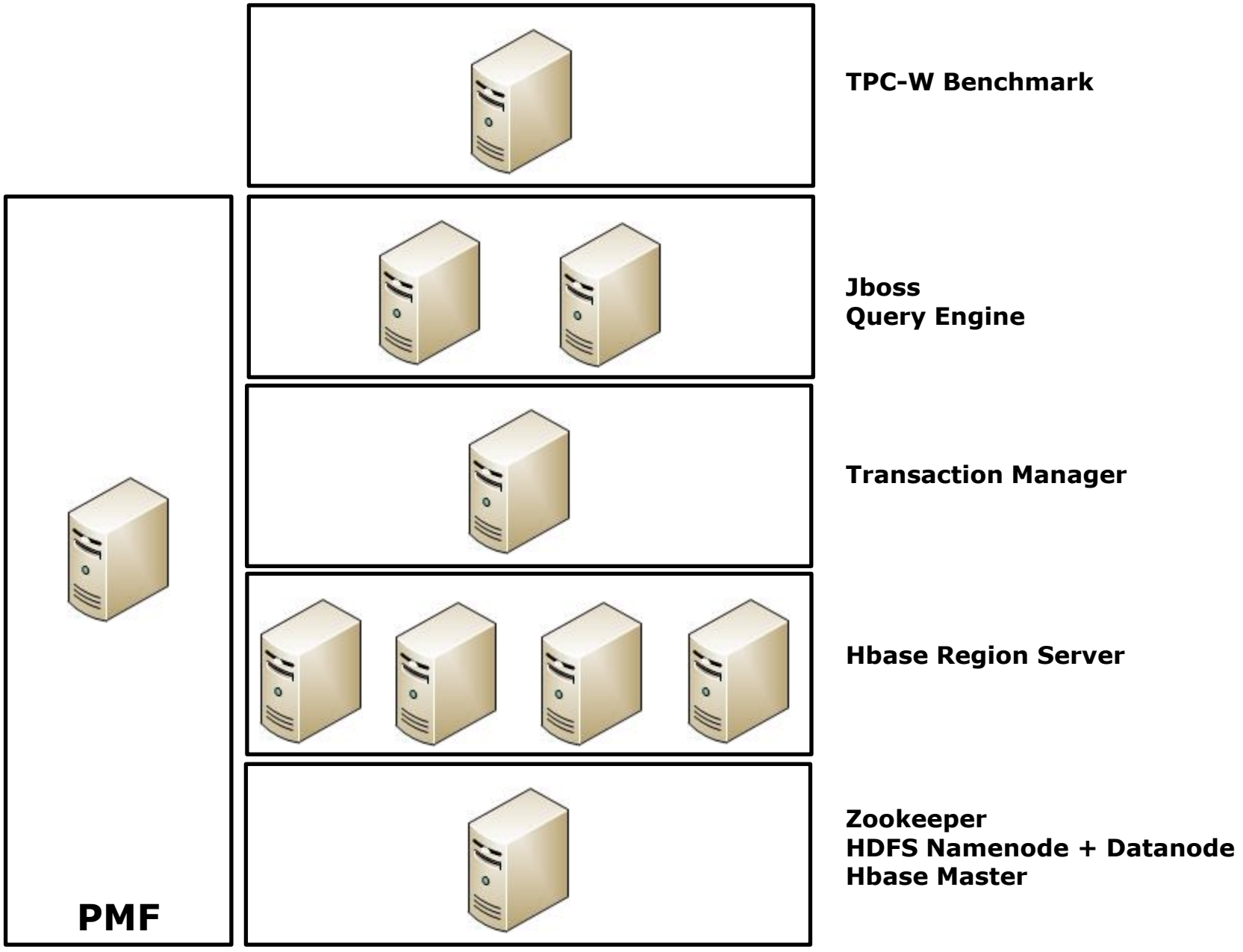
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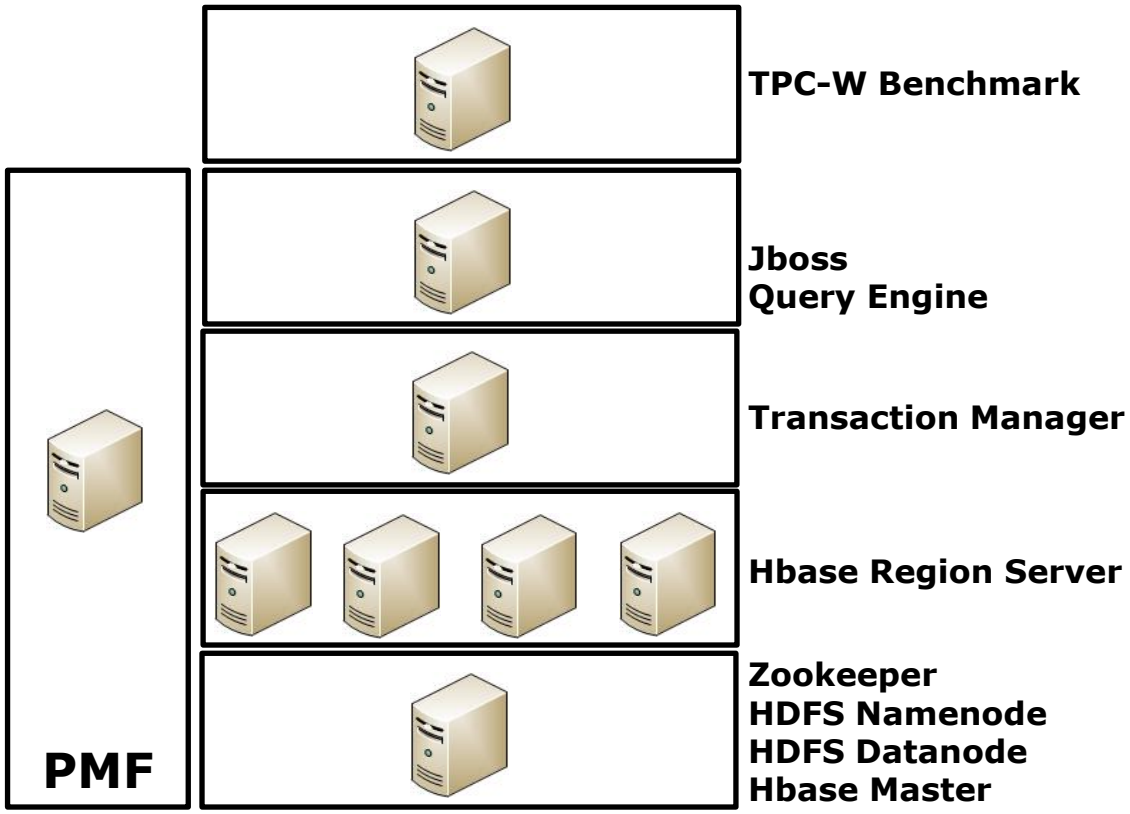
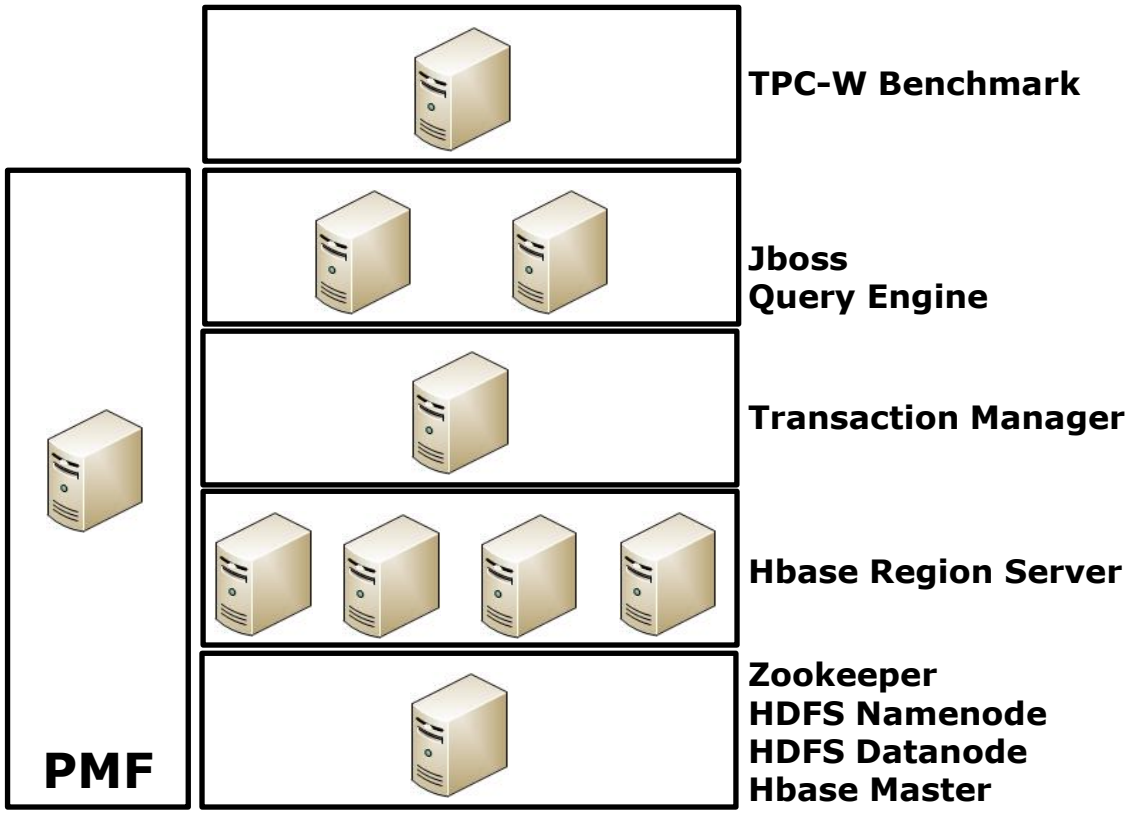
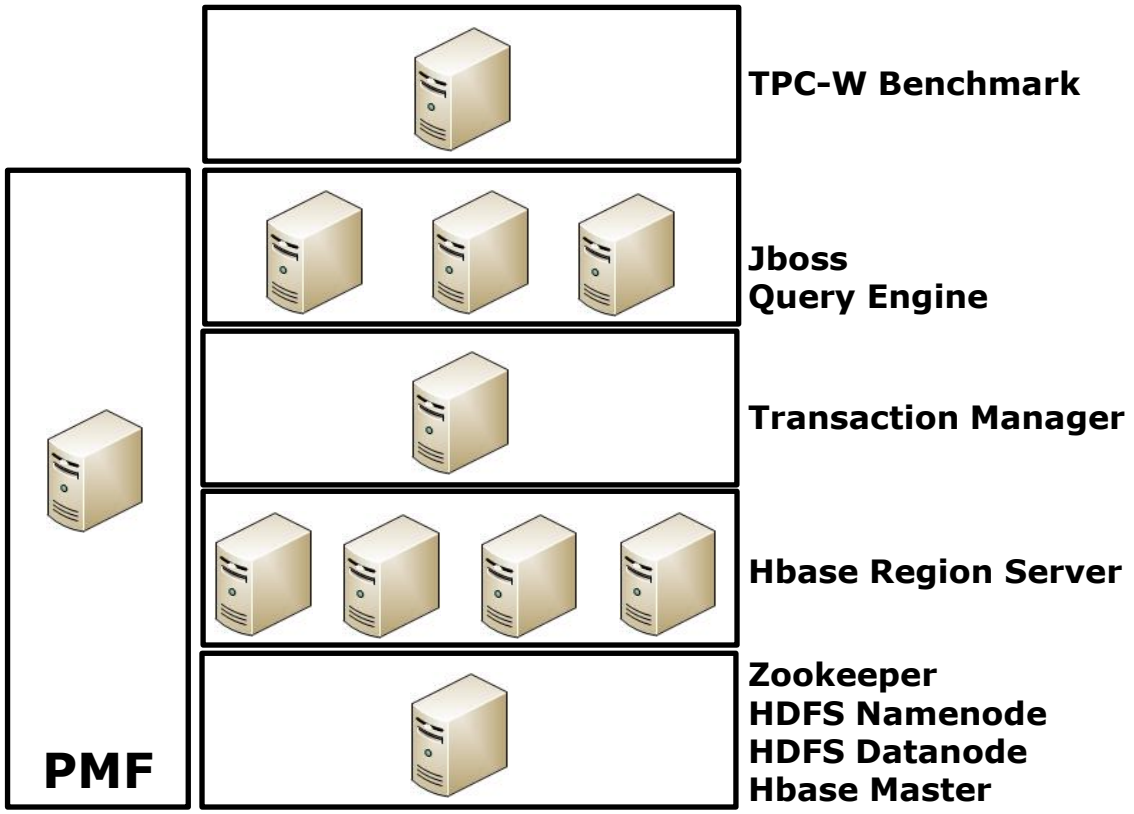
- Initial deployment
- Scaling rules for JBoss and Query Engine tier:
  - Scale out when average CPU > 60%
  - Scale in when average CPU < 47%
- TPC-W will increase load for 10 minutes and then decrease load for 10 minutes
- PMF Monitoring will show:
  - Increasing CPU utilization and increasing number of HTTP sessions when TPC-W benchmark starts



- JBoss / Query Engine tier scales out to 2 VMs
- PMF Rule Monitoring shows:
  - Average CPU > 60%
  - Alert triggered to add 1 more VM
- Flexiant Control Panel shows:
  - Job request to start up 1 new VM
- PMF Monitoring shows:
  - System in state 'Repair'
  - Logs for starting new VM and provisioning services
  - When services are on-line, 2 VMs appear in UI and system in state 'Operational'



- JBoss / Query Engine tier scales out to 3 VMs
- PMF Rule Monitoring shows:
  - Average CPU > 60%
  - Alert triggered to add 1 more VM
- Flexiant Control Panel shows:
  - Job request to start up 1 new VM
- PMF Monitoring shows:
  - System in state 'Repair'
  - Logs for starting new VM and provisioning services
  - When services are on-line, 3 VMs appear in UI and system in state 'Operational'



- JBoss / Query Engine tier scales in to 2 VMs
- PMF Rule Monitoring shows:
  - Average CPU < 47%
  - Alert triggered to remove 1 VM
- Flexiant Control Panel shows:
  - Job request to stop 1 new VM
- PMF Monitoring shows:
  - System in state 'Repair'
  - Logs for stopping VM and gracefully shutting down services
  - When VM shut down, only 2 VMs remain active in UI and system in state 'Operational'