Design alternatives

Local Hashring

* Every node maintains its own hashring
* View Manager needs to be assigned to/withdrawn from a node
* Node sends operations to assigned view managers
* During a crash node just needs to replay the TL
* Load balancing has to be performed to react to hot spots
* Moving key ranges is difficult 🡪 consistency

VM 2

VM 1

VM 4

VM 3

VM 6

VM 5

VM 7

Node 1

NX

hash  
ring

Node 2

NX

hash  
ring

Node 3

NX

hash  
ring

Global Hashring

* Every node maintains an instance of the same global hashring
* Hash-ring is synchronized via Zookeeper
* Node sends operations to all view managers
* Load balancing essentially comes for free
* Moving key ranges is easy

VM 2

VM 1

VM 4

VM 3

VM 6

VM 5

VM 7

Node 1

NX

hash  
ring

Node 2

NX

hash  
ring

Node 3

NX

hash  
ring