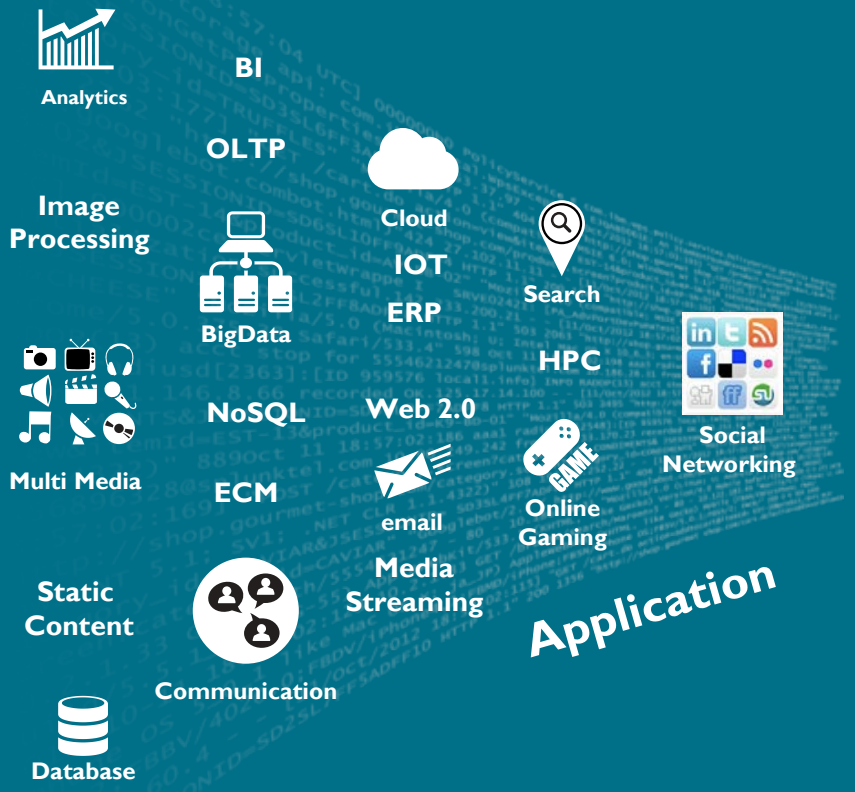
SDC
STORAGE DEVELOPER CONFERENCE
SNIA SANTA CLARA, 2016

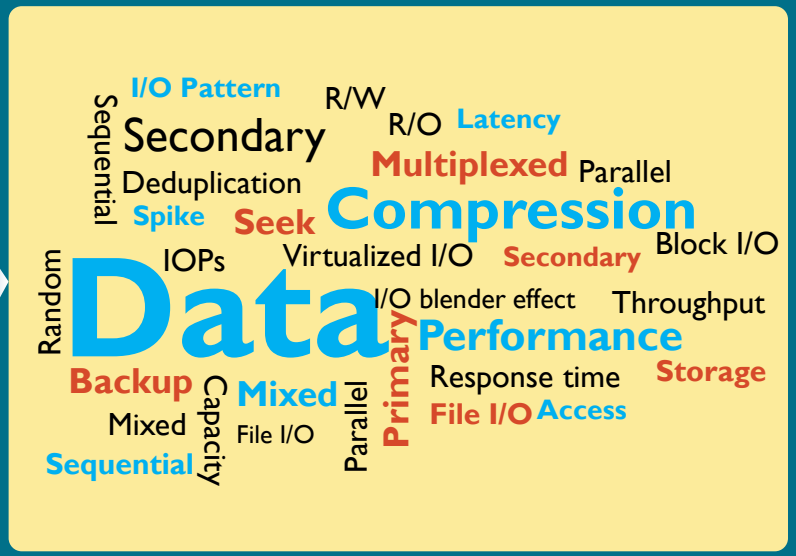
Intelligent QoS Grid for Virtualized Workloads

Gaurav Gupta

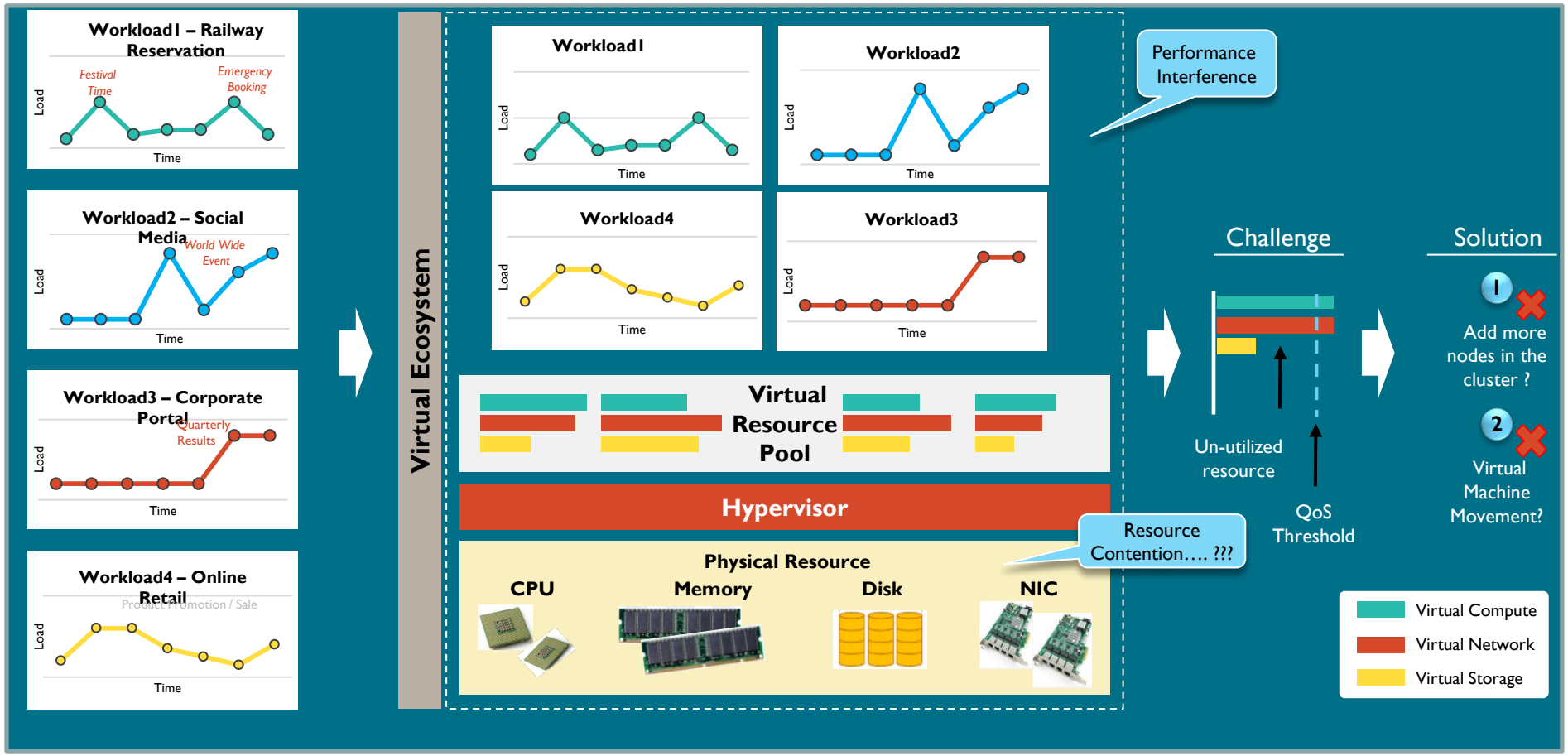
Tata Consultancy Services

Characteristics of Data

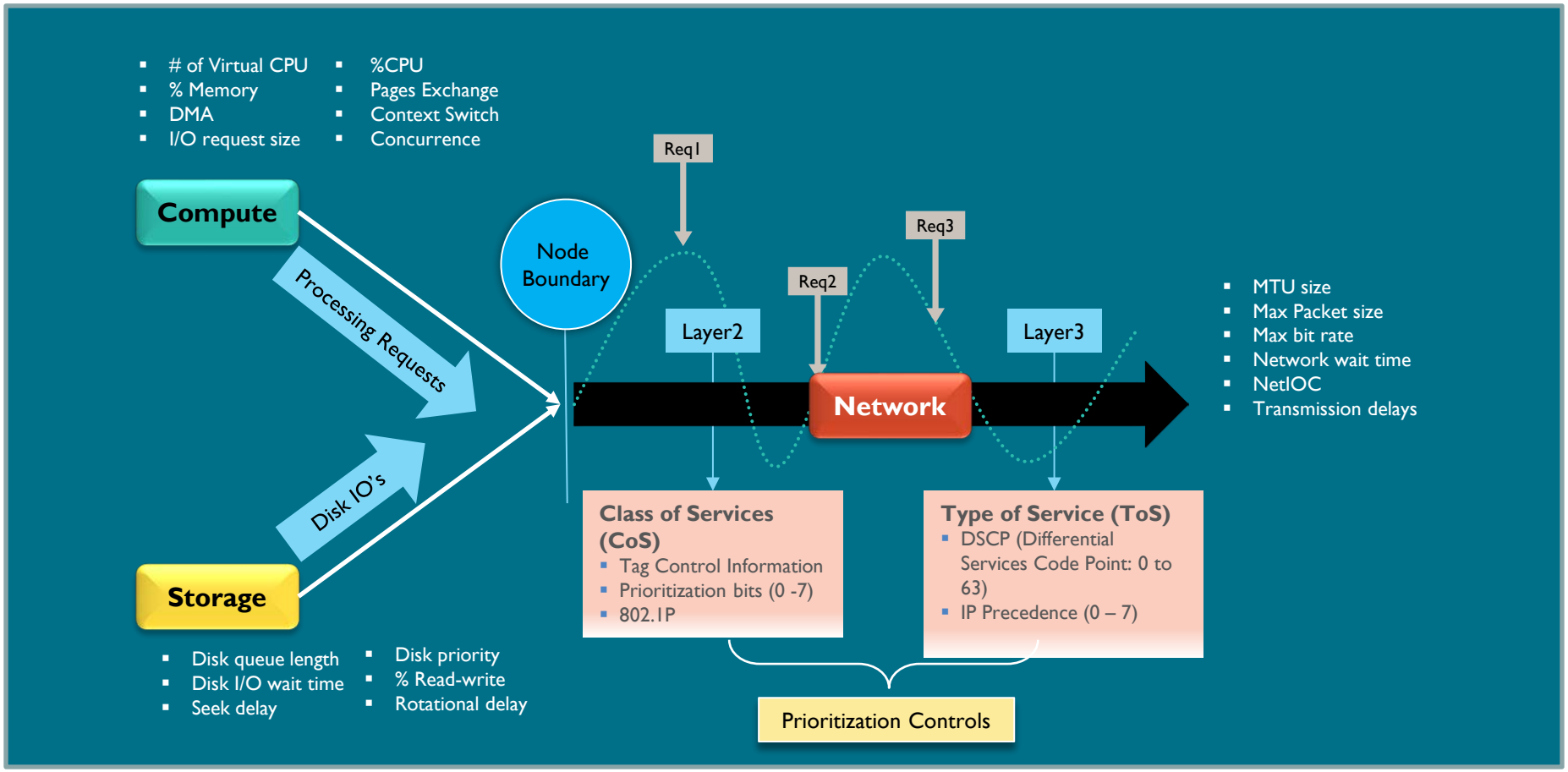




Application Lifecycle & Challenges in Virtual Environment



Elastic Controls - Key QoS



QoS Grid – An overview

Federated

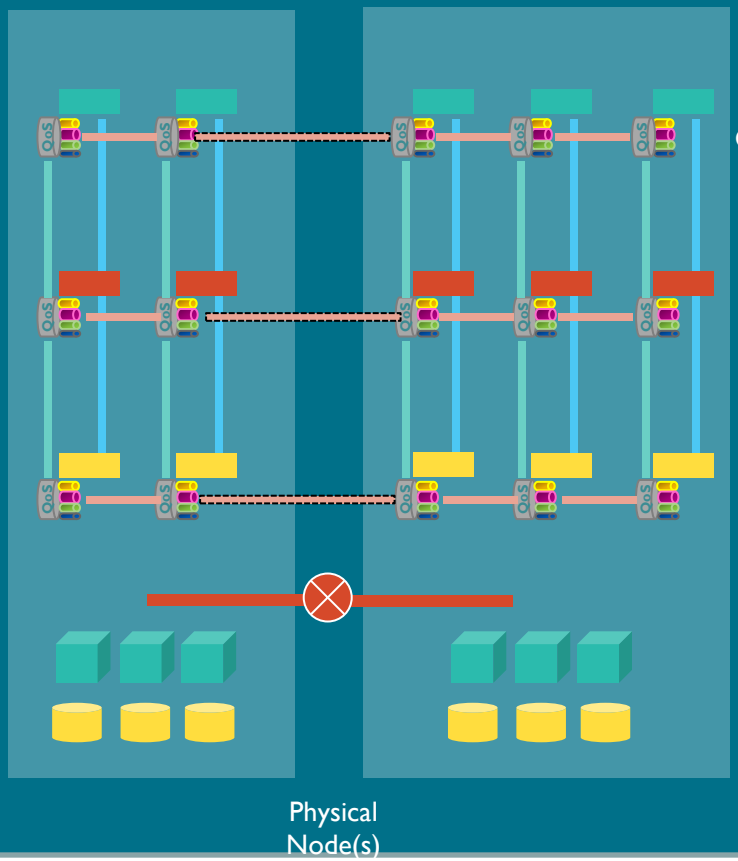
- Distributed architecture
- Allows grouping of virtual resources & QoSs
- Scales up to cluster limit

Intelligent

- Senses the change in workload behavior
- Dynamically leases virtual resources to others
- Implements bandwidth-as-a-service model

Analytic

- Takes into account the historical usage
- Prioritizes resource allocation



QoS Grid - Building Blocks

Extender

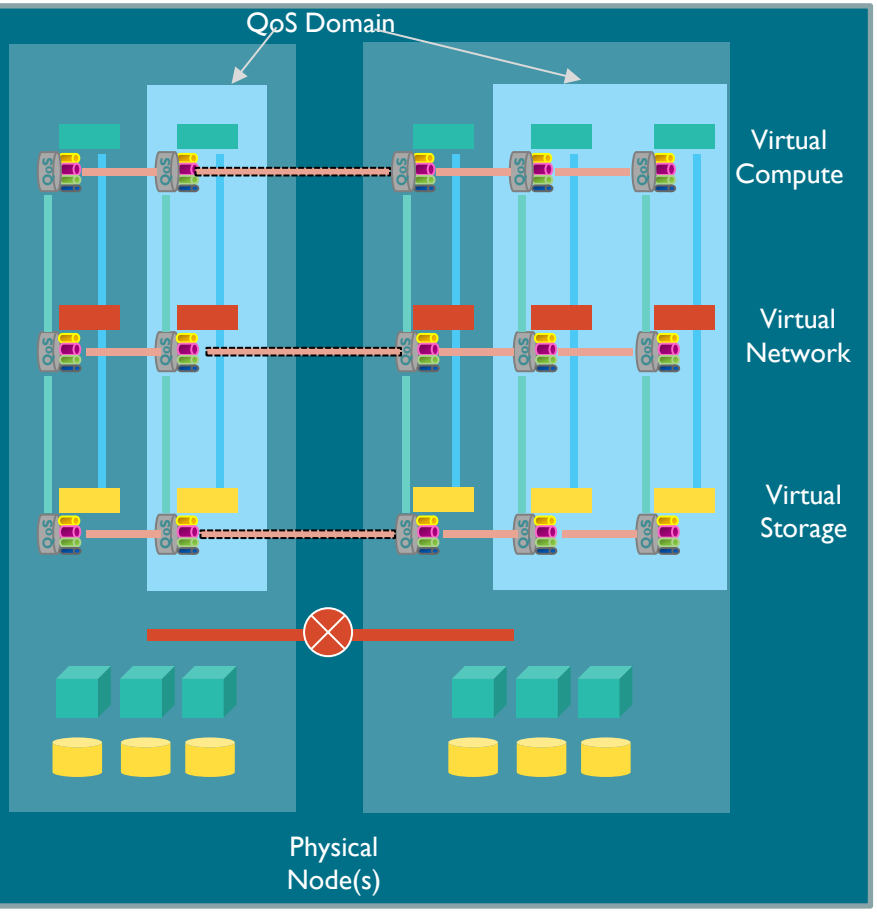
- Discover all virtual stacks in the cluster
- Allows forming domain for sharing virtual resources

Sensor

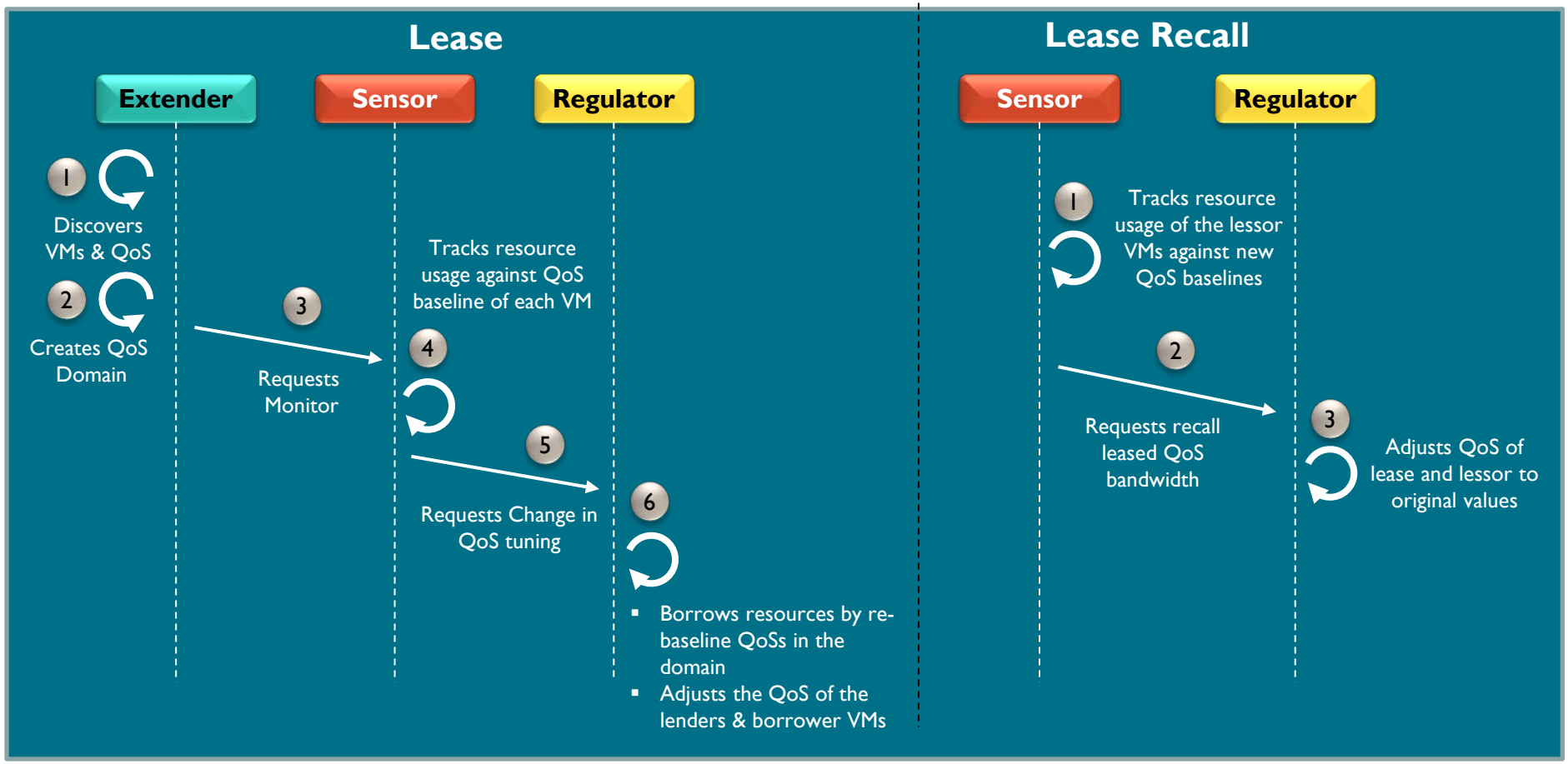
- Senses the change in workload behavior
- Dynamically releases virtual bandwidth to others in the domain

Regulator

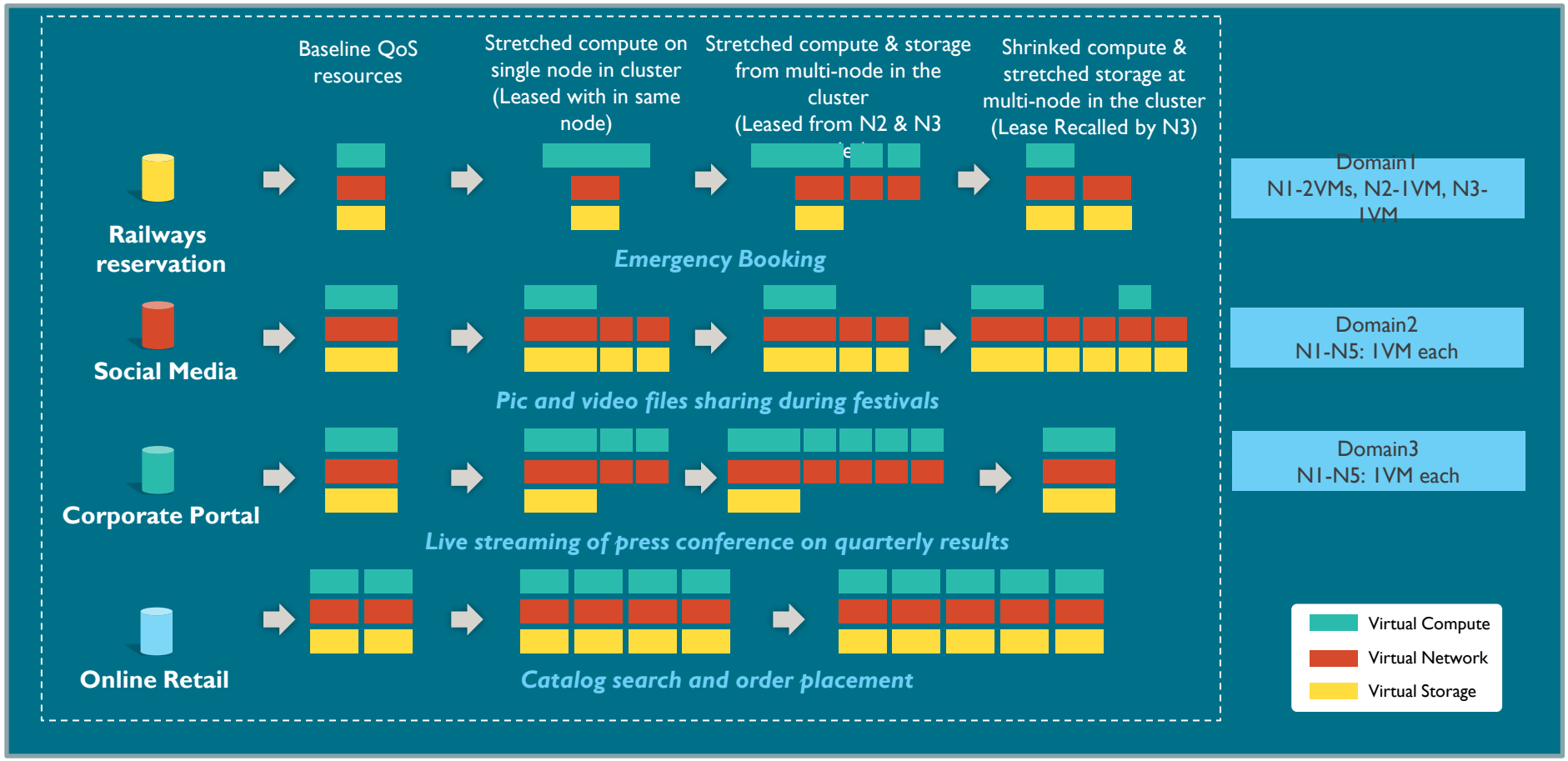
- Throttles resource bandwidth across nodes based on change in requirement



QoS Grid Operations



Co-existence of workloads through QoS Grid effect (Indicative)



Thank You

Gaurav Gupta
gupta.gaurav1@tcs.com
www.tcs.com