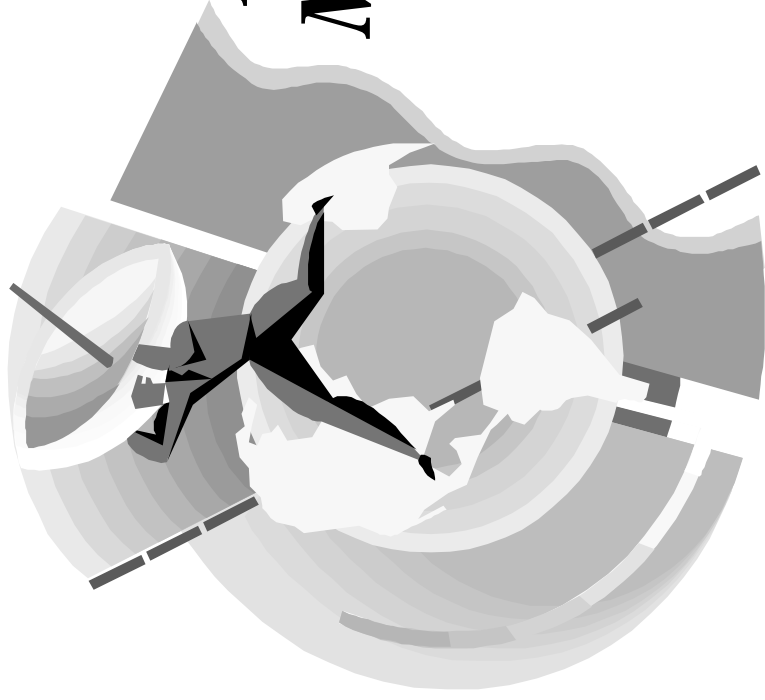


Quality of Service Task Force



Enterprise QoS: An Example Component Mapping for DeSiDeRaTa

David Lounsbury
Open Group Advanced Research

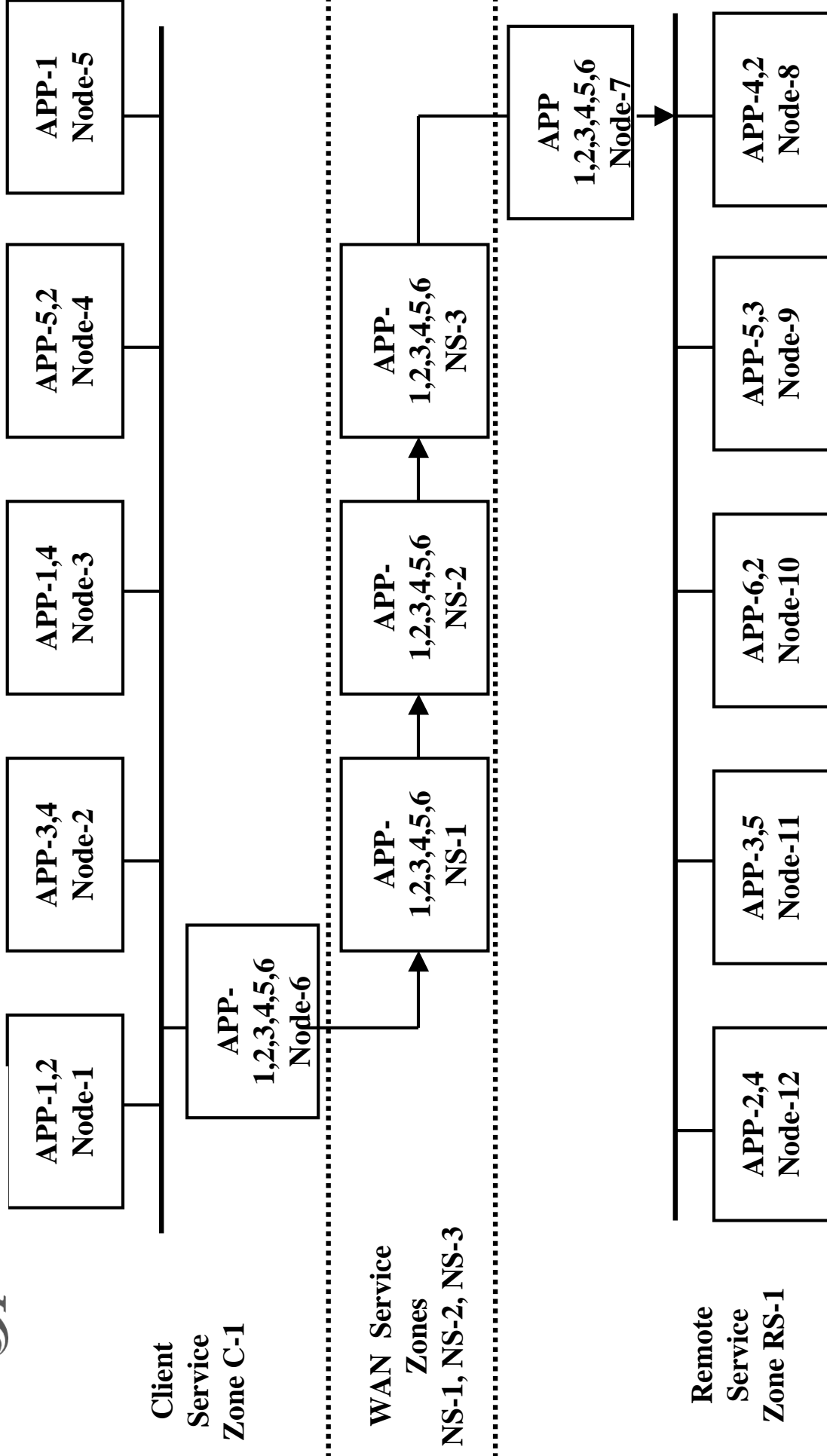
<http://www.opengroup.org/ar>

d.lounsbury@opengroup.org

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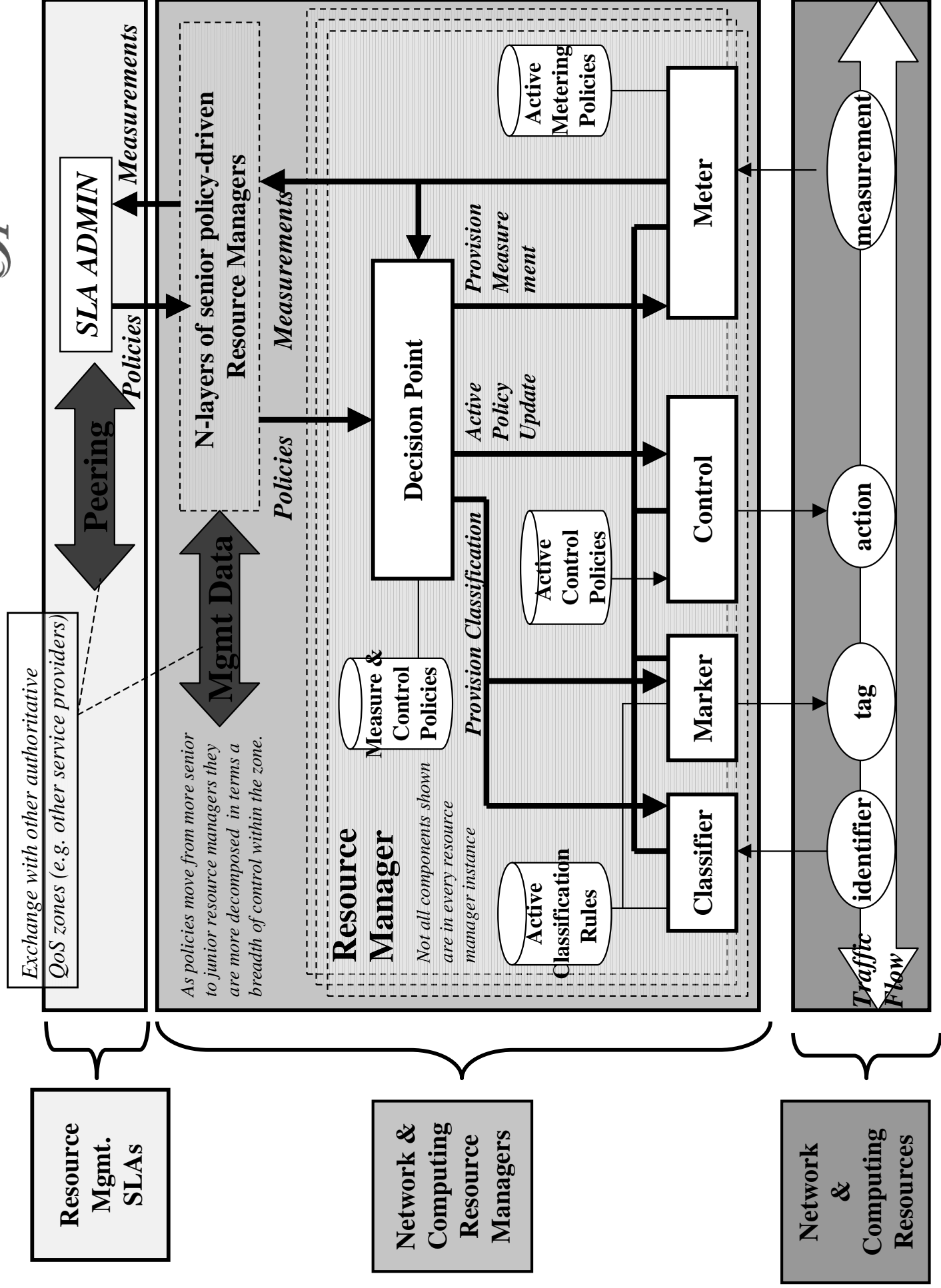
EXAMPLE - Multiple Applications Competing for End to End Computing & Network Services

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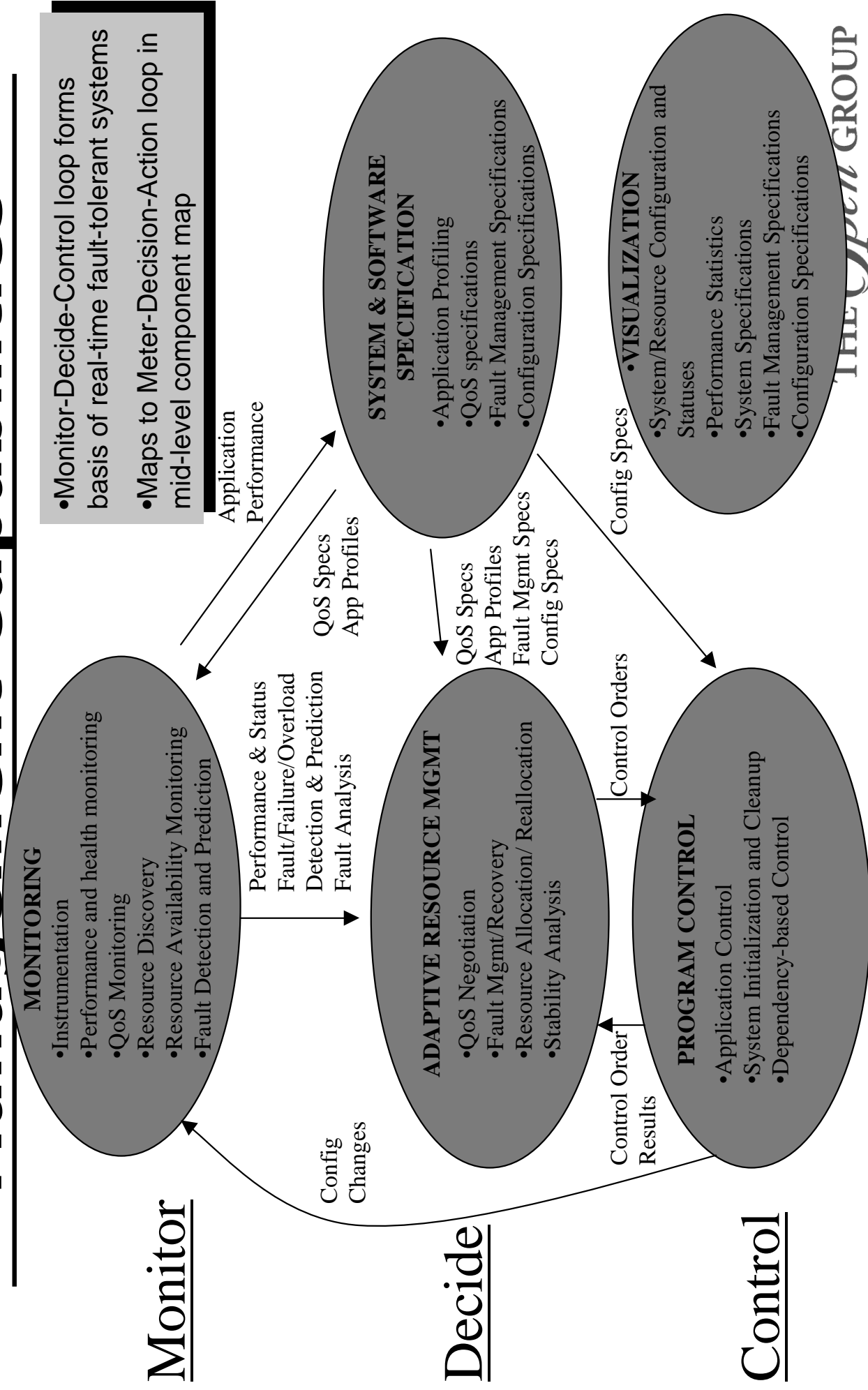


MID-LEVEL COMPONENT MAP

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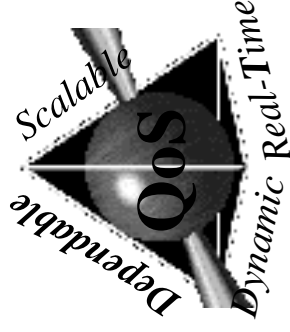
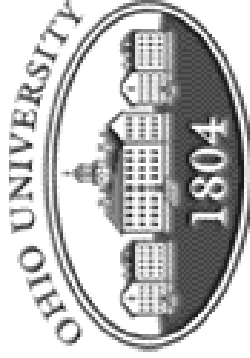


Generic Resource Management Capabilities



DeSiDeRaTa - Background

- Dependable, Scalable, Dynamic Real-Time
- Developed by UT Arlington, Ohio U, NSWC
 - Lonnie Welch, Ohio U.
 - Behrooz A. Shirazi, UTA
- Used as part of NSWC High performance Distributed Computing test bed

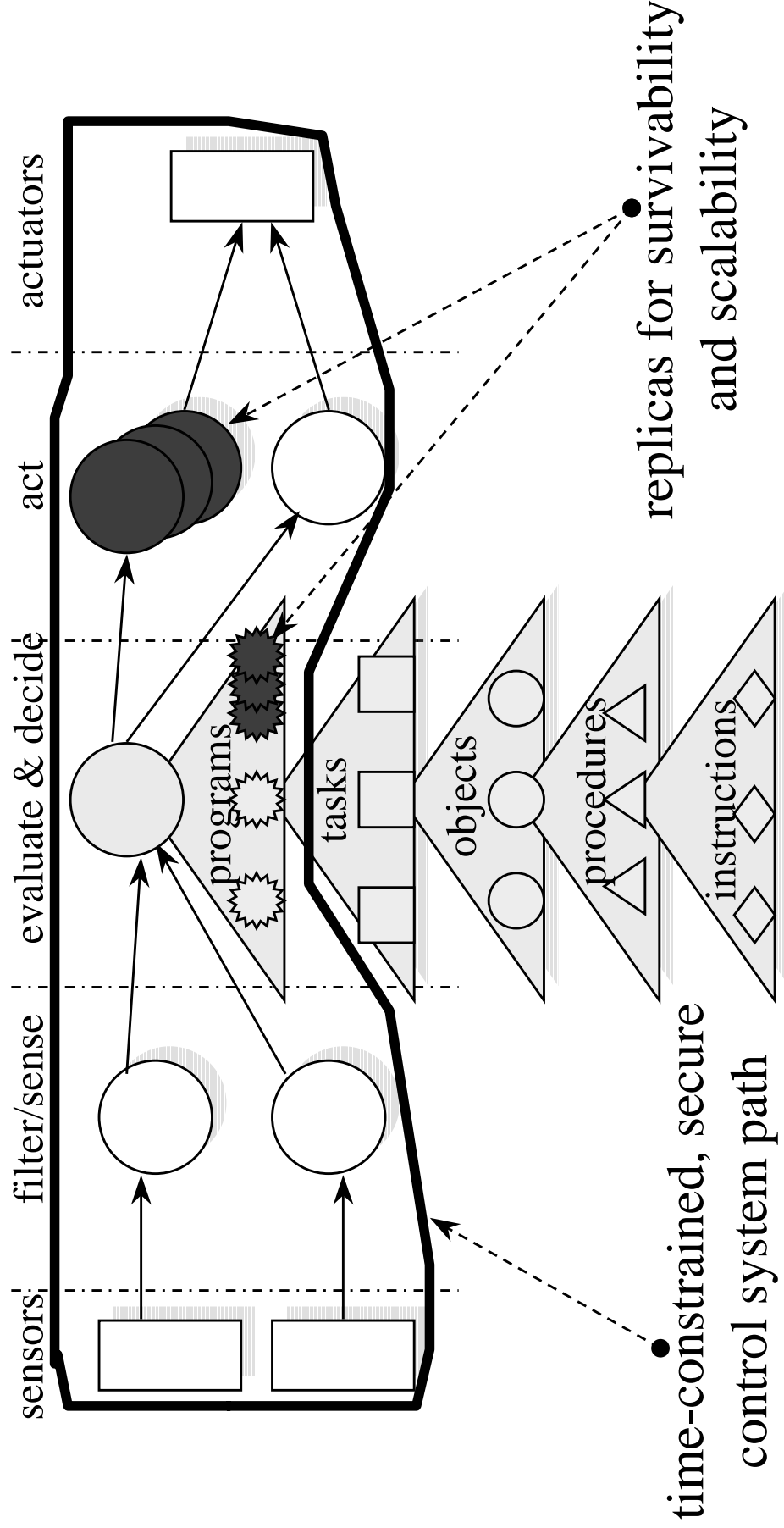
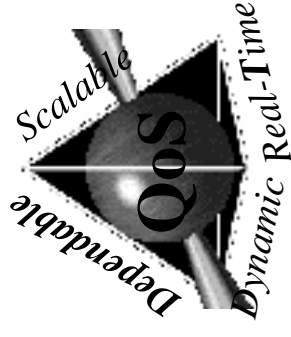


Principal Attributes

- Manages end-to-end latency among competing distributed applications
 - Automatic load distribution among scalable replicas
- Provides failure monitoring and recovery for survivability
- Schedulability (admission control) of new tasks
- Stability Analysis



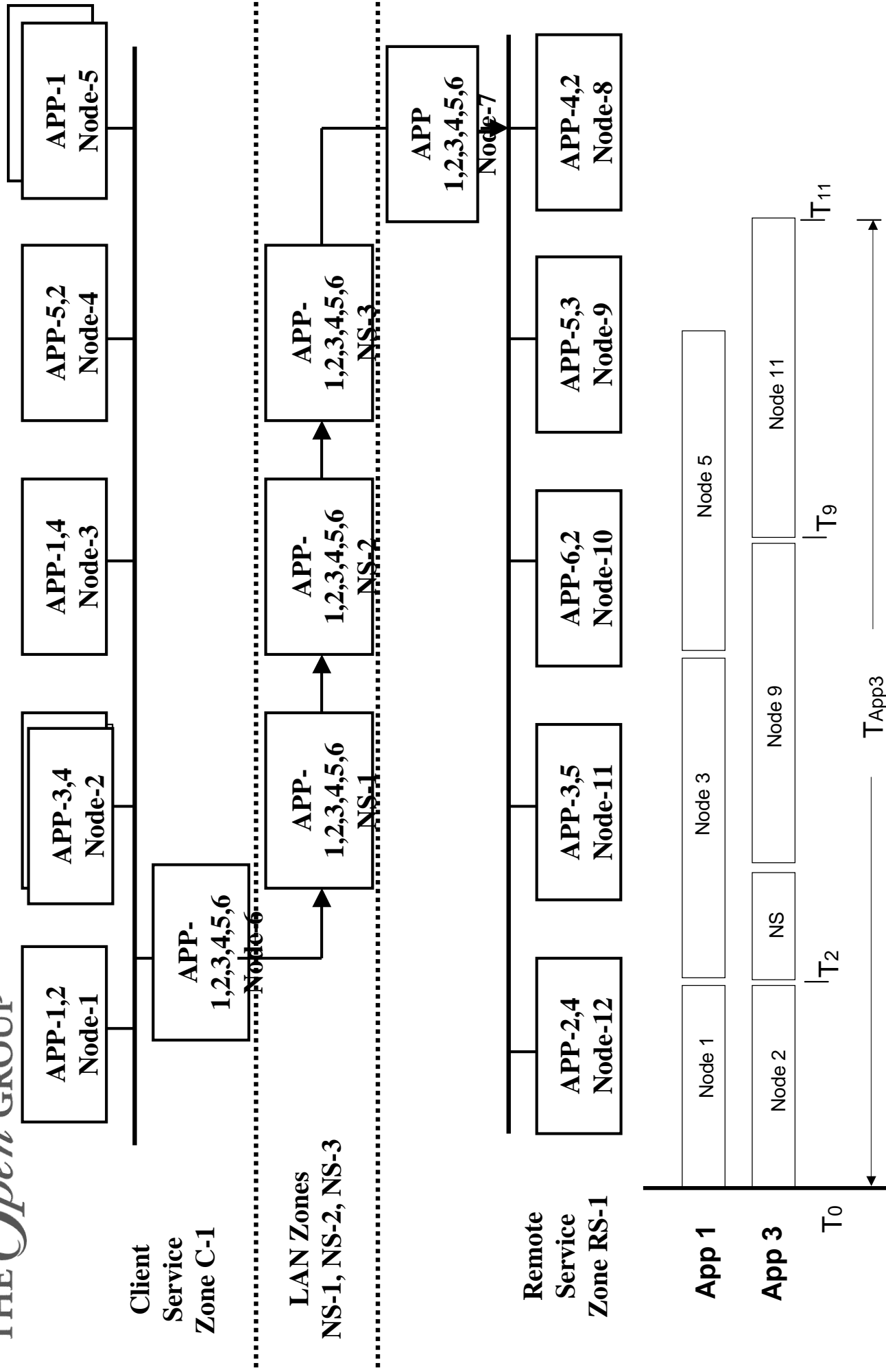
Application & QoS Models



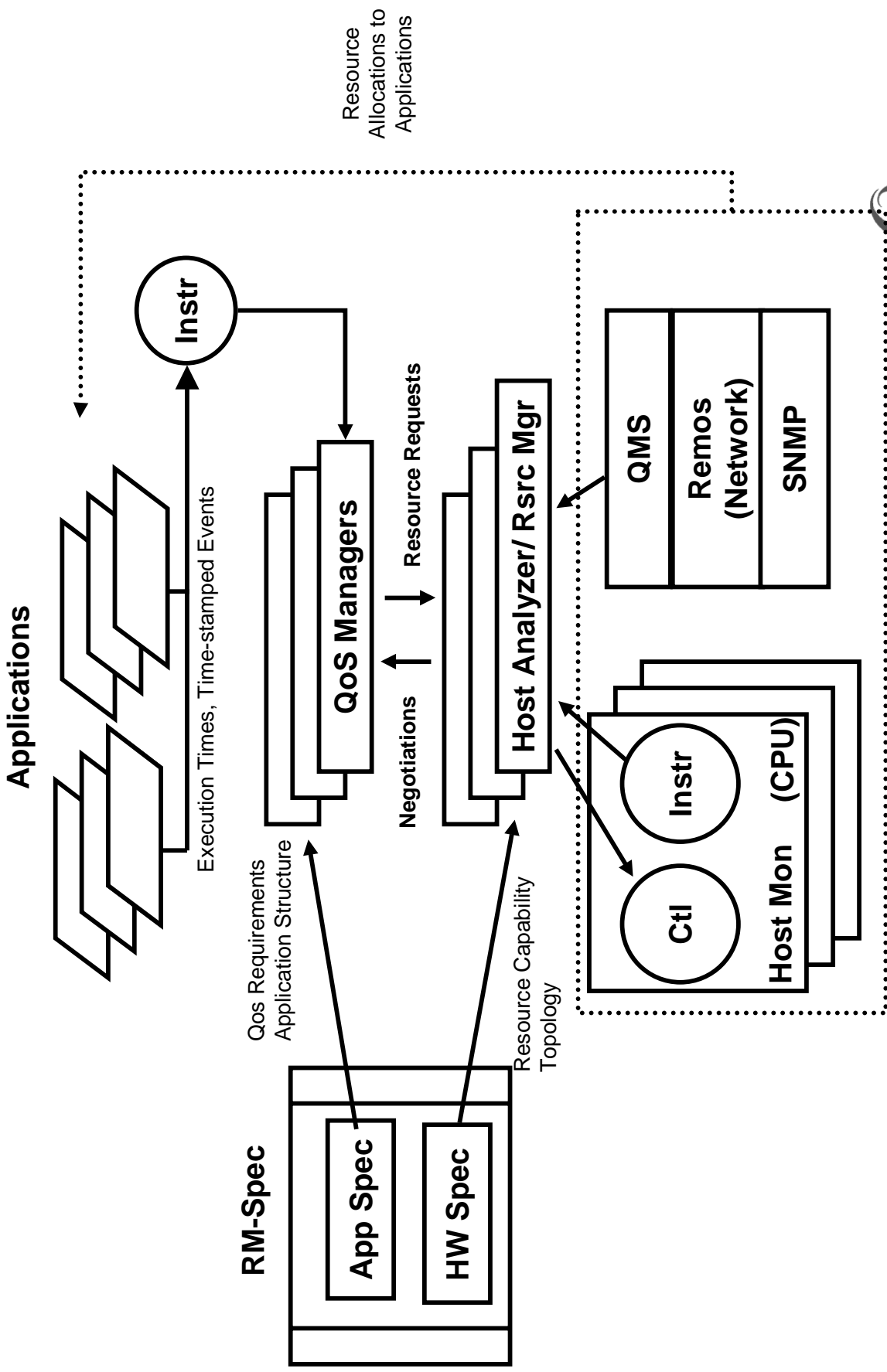
Slide courtesy of Lonnie Welch, Ohio U.

Latency Management in DeSiDeRaTa

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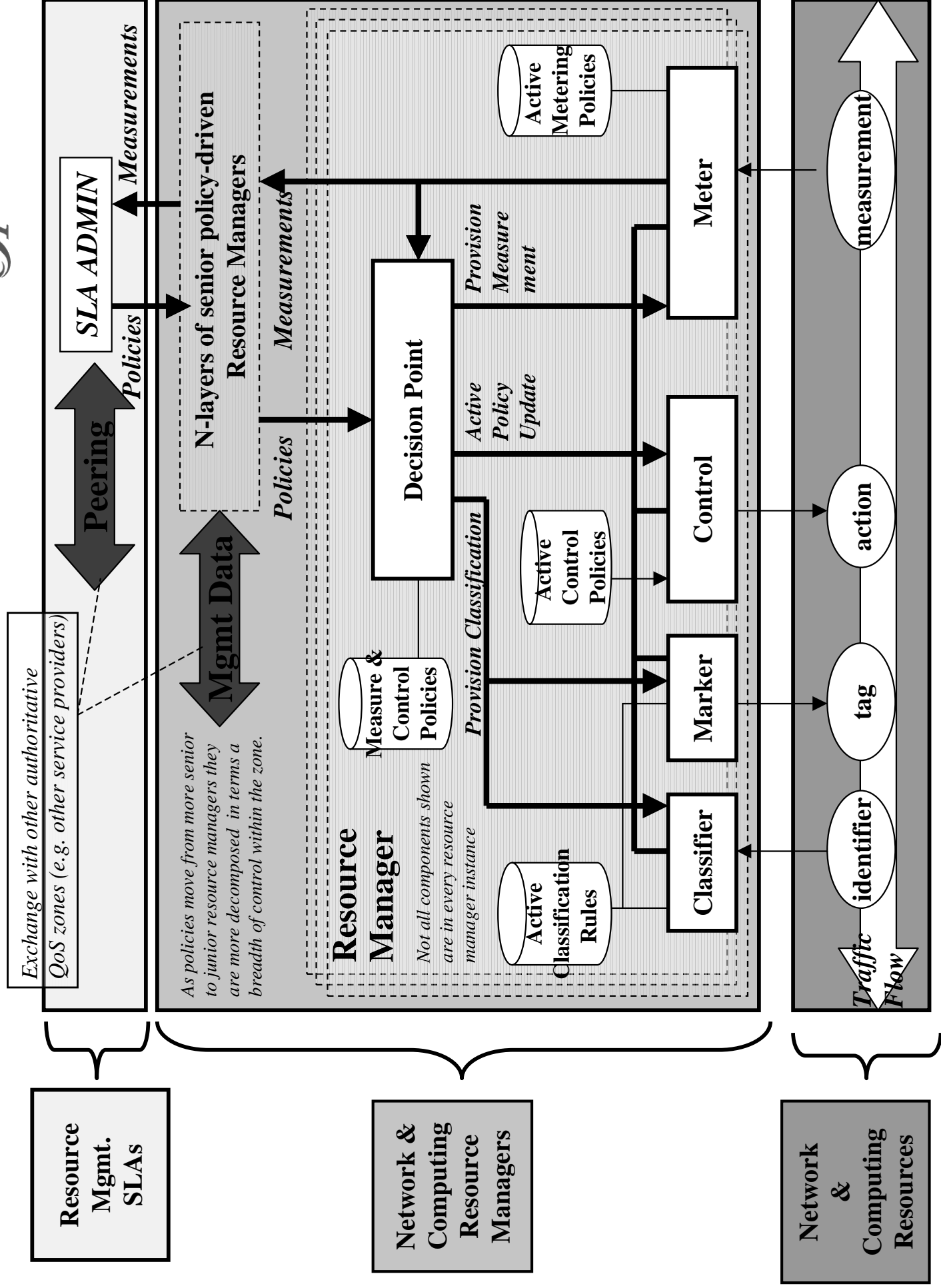


DeSiDeRaTa - Components



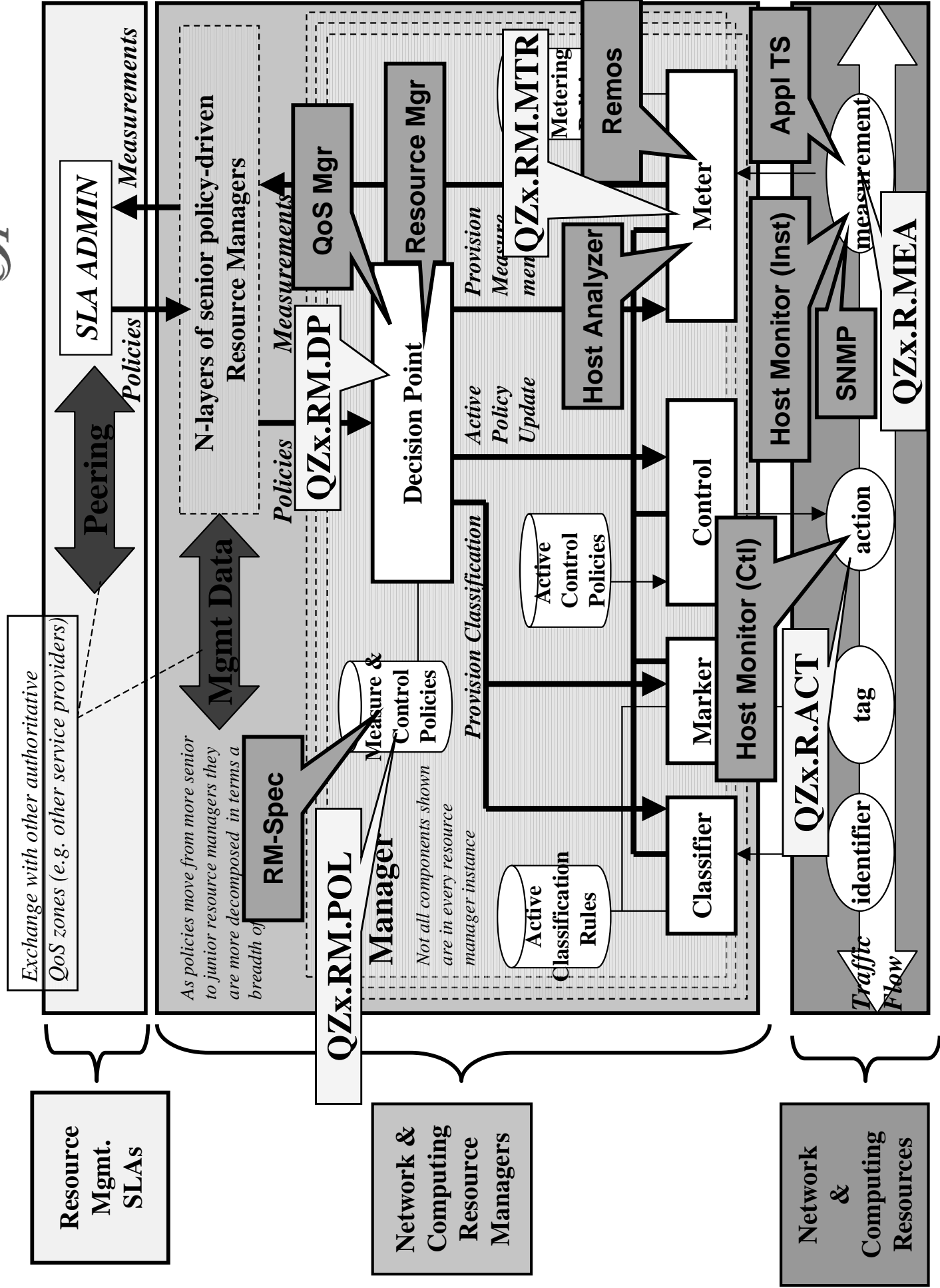
MID-LEVEL COMPONENT MAP

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MID-LEVEL COMPONENT MAP

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QoS Taxonomy Mapping

DeSi Component	QoS Taxonomy	Applicable Standard
Specification	QZx.RM.POL	(RM-Spec)
QoS Manager	QZx.RM.DP	
Resource Manager	QZx.RM.DP	
Host Analyzer	QZx.RM.MTR	
Remos	QZx.RM.MTR	
Host Monitor	QZx.R.ACT QZx.R.MEA	
Network Monitor	QZx.R.MEA	SNMP
Application Monitor	QZx.R.MEA	(should be AIC)

Conclusions

- Mid-Level Component map captures DeSi RM architecture reasonably well
- Taxonomy needs LAN domain to capture QoS specs for “clustered” systems
- Need greater emphasis on, and separation of, application QoS from resource QoS manager
 - QoS != RM