

Telchemy

QoS Management for Voice over IP

Applying Policy Management to Voice over IP

www.telchemy.com

VON Developers Conference - Summer 2001

Telchemy

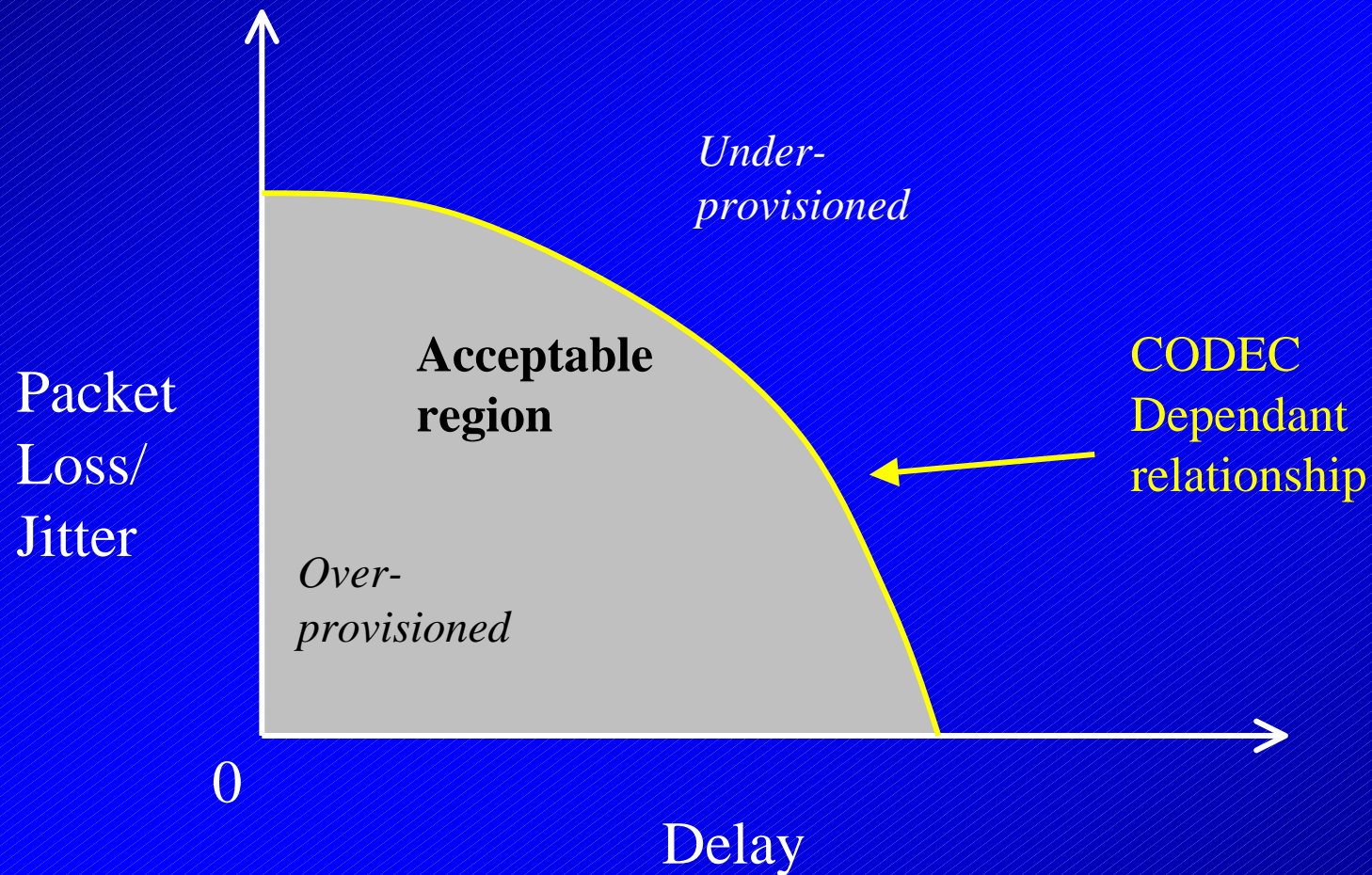
About Telchemy

- **Focus** – *deliver end-user perceived QoS with minimum use of network resources*
- **Approach** – *open architecture, software based, integrate with any VoIP systems*
- **First products** – *lightweight call quality monitoring software for integration into VoIP Gateways, IP Phones and SLA monitors*
- **Current development** – *QoS Server, providing Call Admission Control, Bandwidth Management*

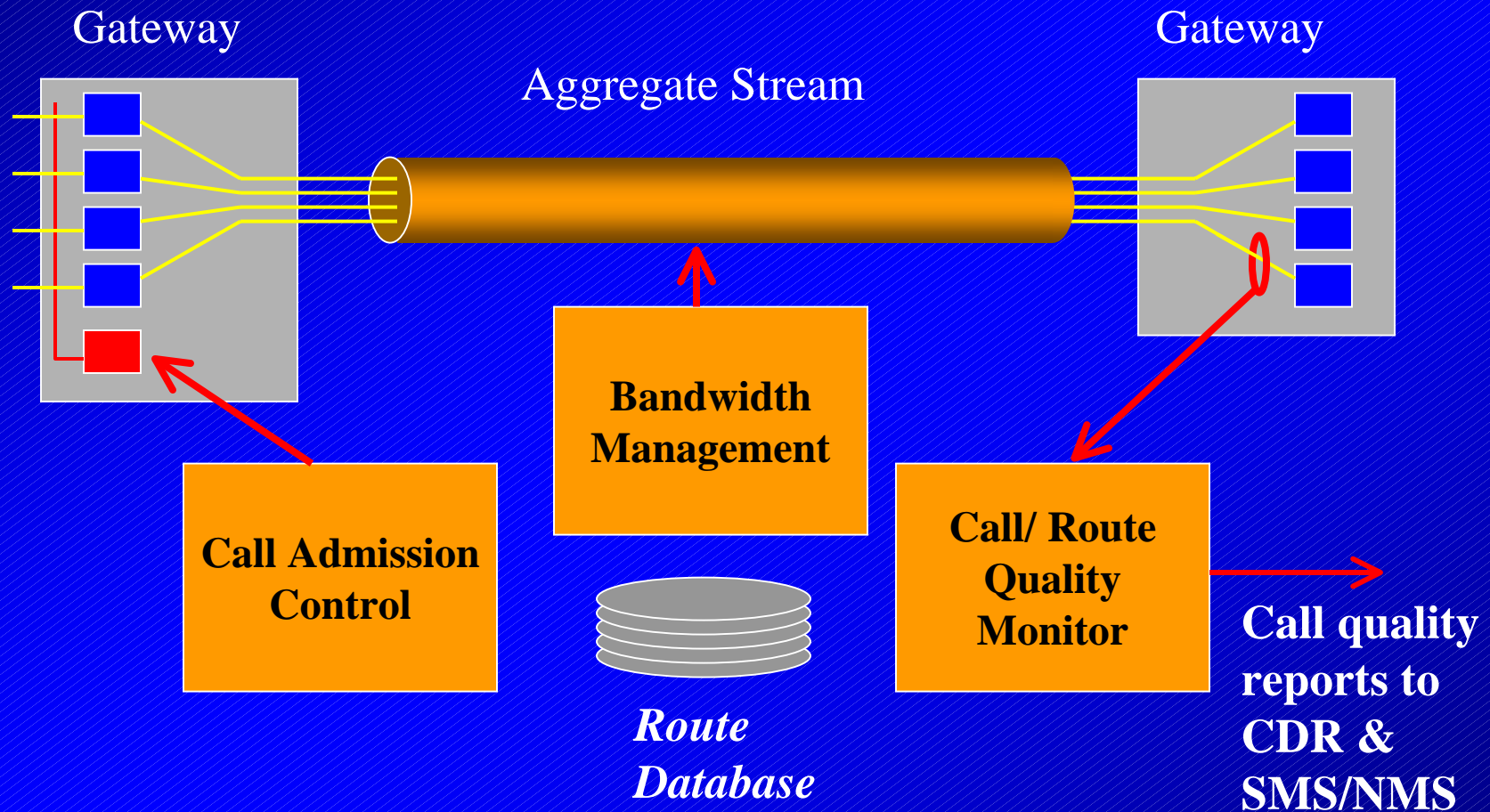
Why Manage QoS?

- Maintain end-user perceived quality
 - *Subscriber retention/ satisfaction*
- Minimize network operating costs
 - *Avoid over provisioning*
- Enforce Service Level Agreements
- Support differentiated service levels
- Identify performance problems/ trends

Factors affecting VoIP QoS



VoIP QoS Architecture



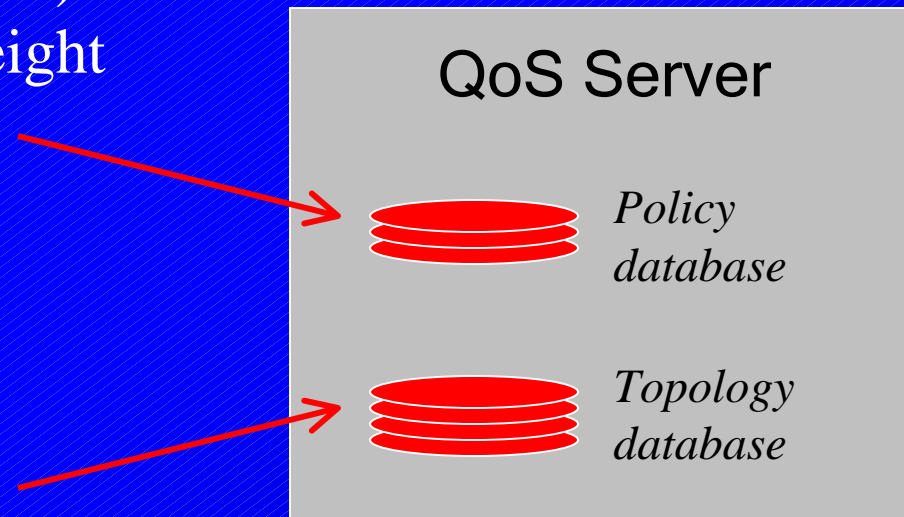
QoS Architecture - Policy

Policy Input

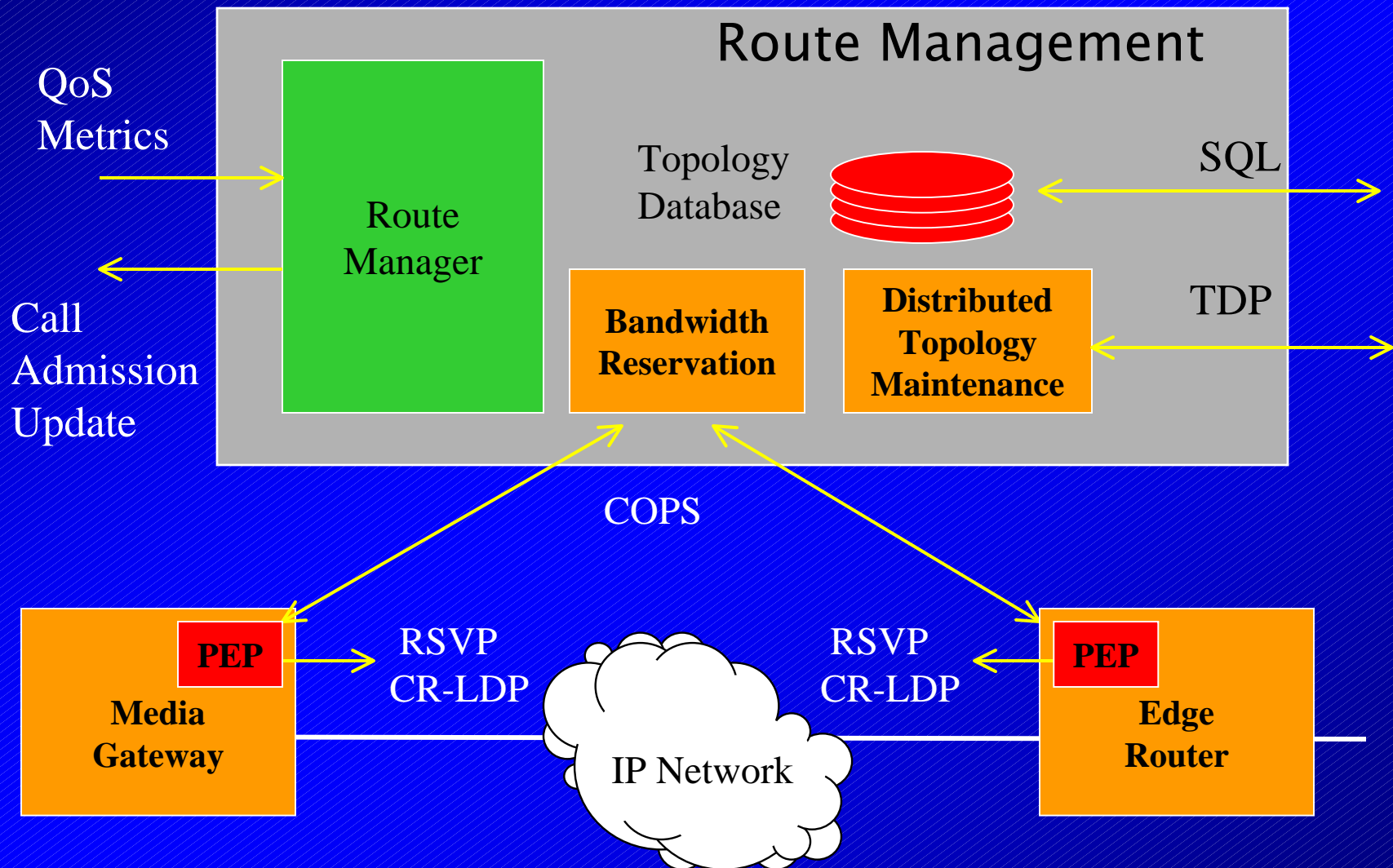
1. Minimum QoS (MOS)
2. Relative priority/weight
 - *achieve QoS level*
 - *bandwidth (cost)*
 - *call blocking*

Topology input

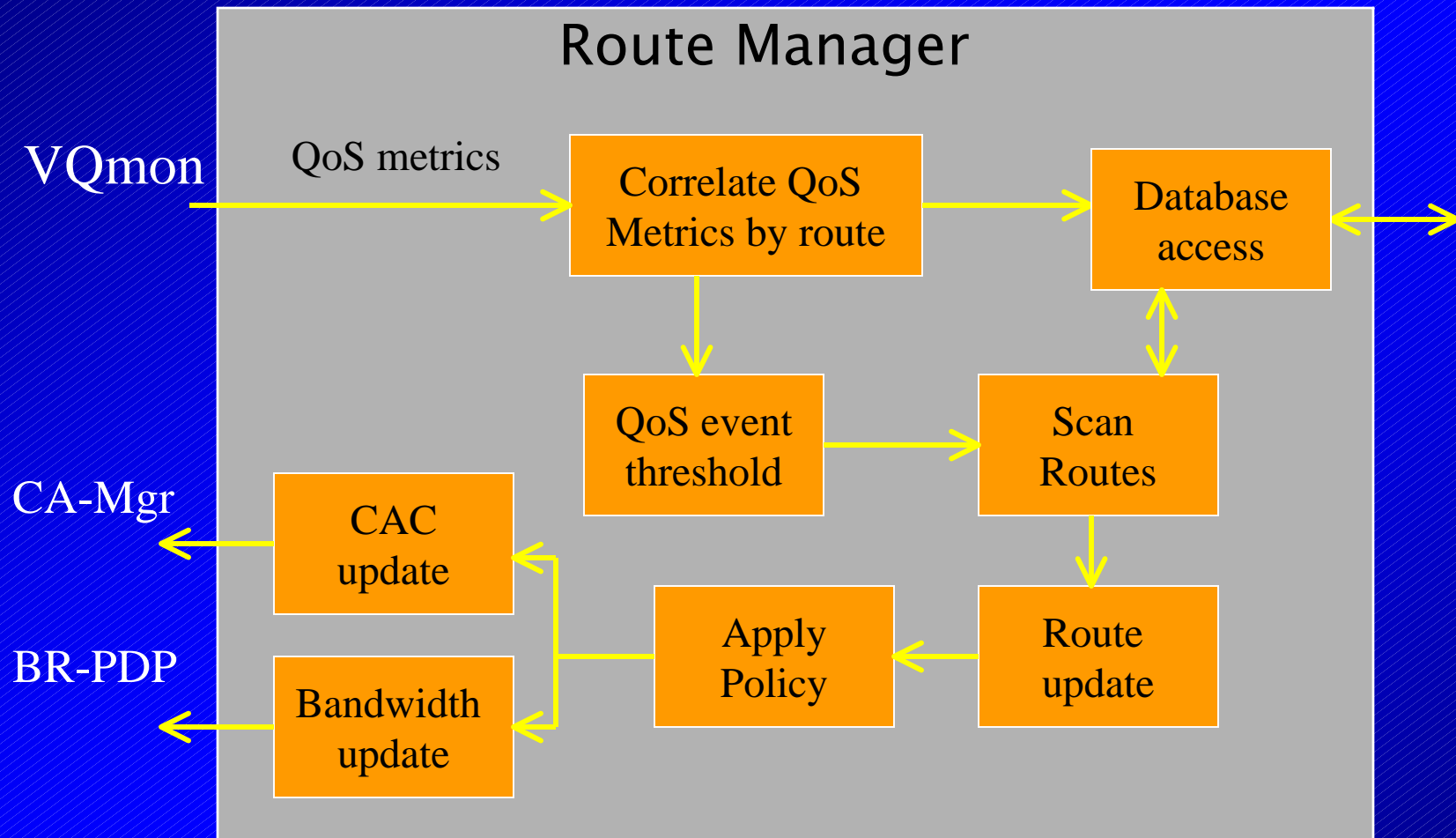
- *Manual*
- *Imported*
- *Discovery*



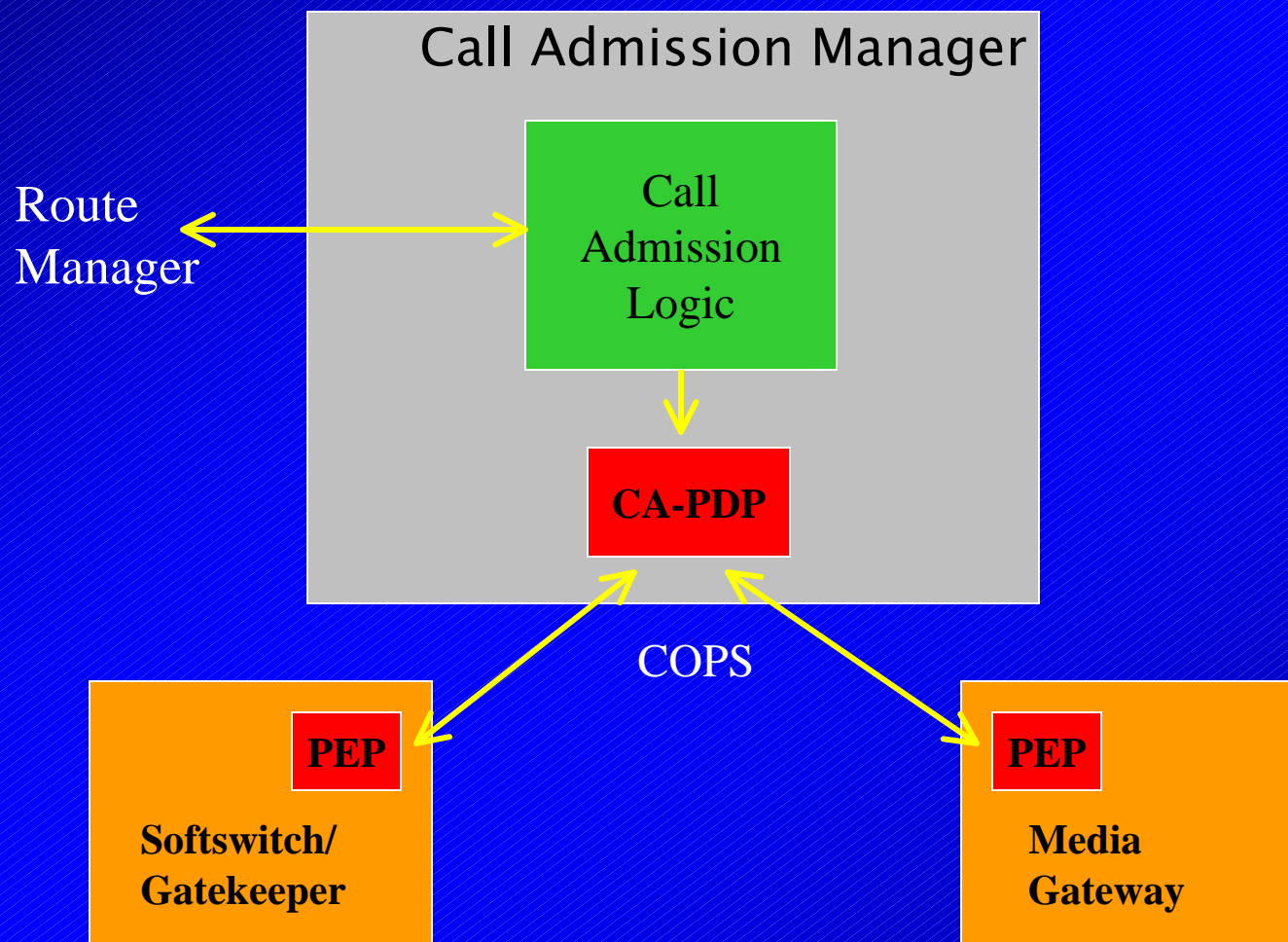
Route Management Model



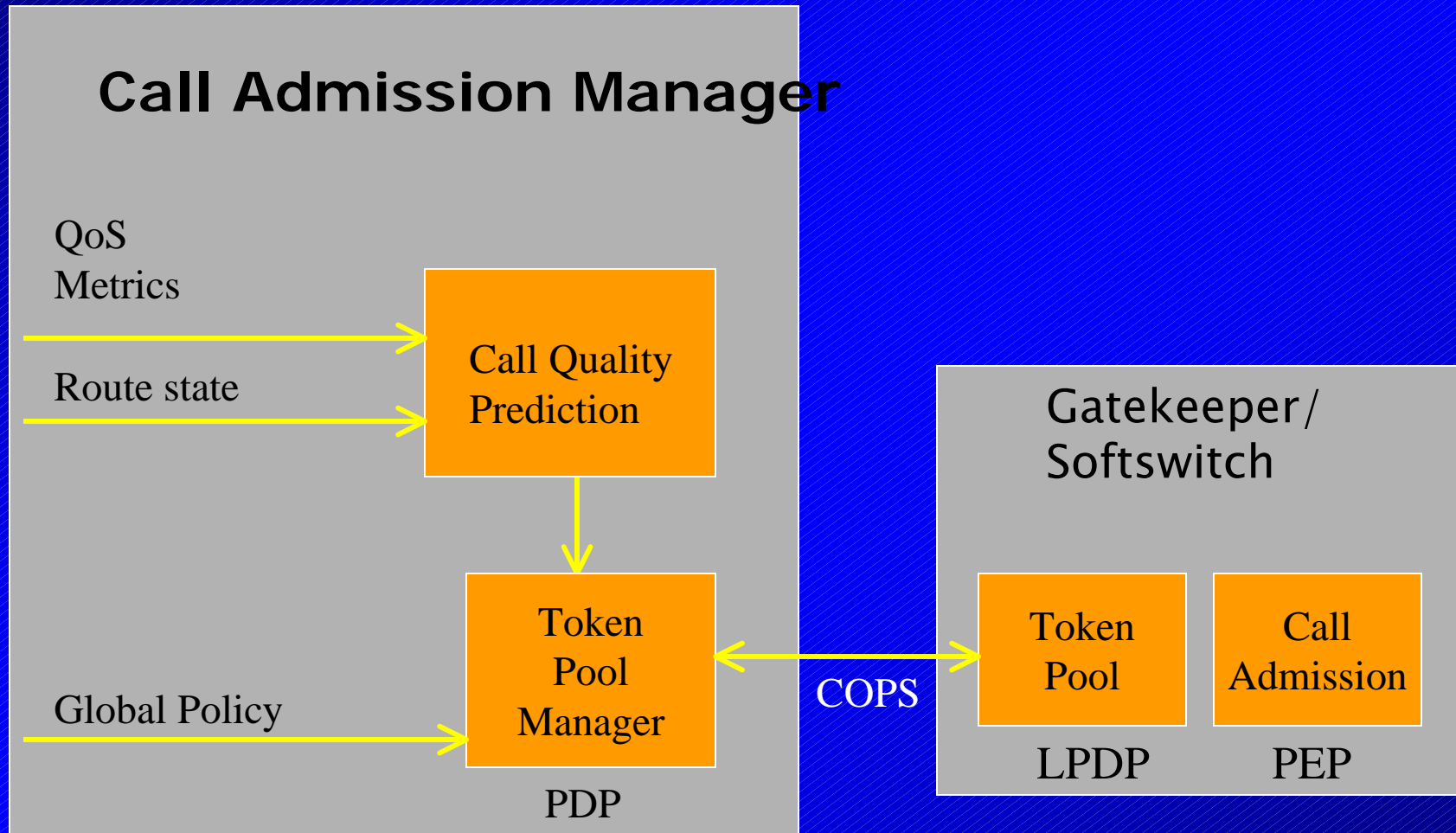
Route Manager



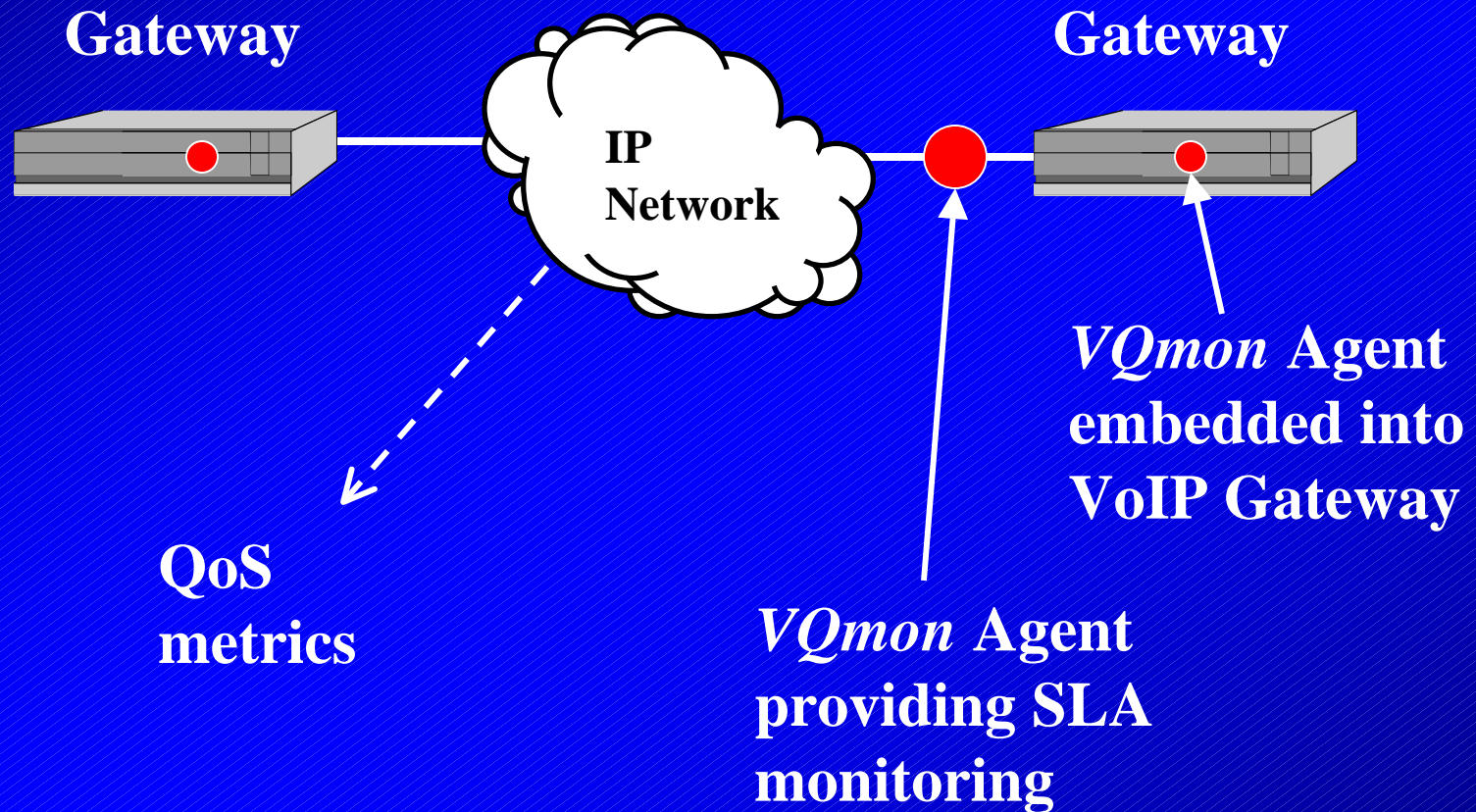
Call Admission Model



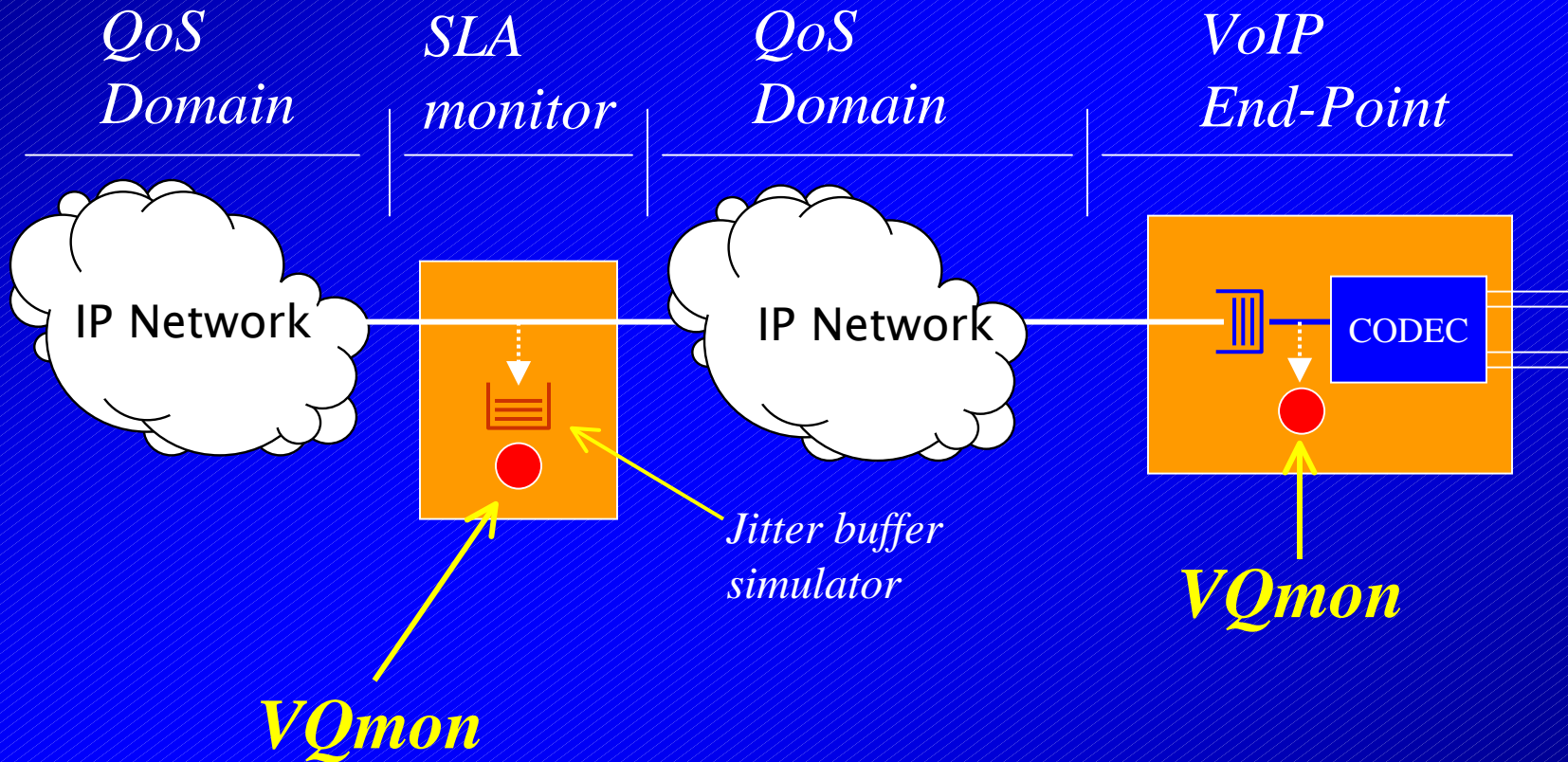
Call Admission Control



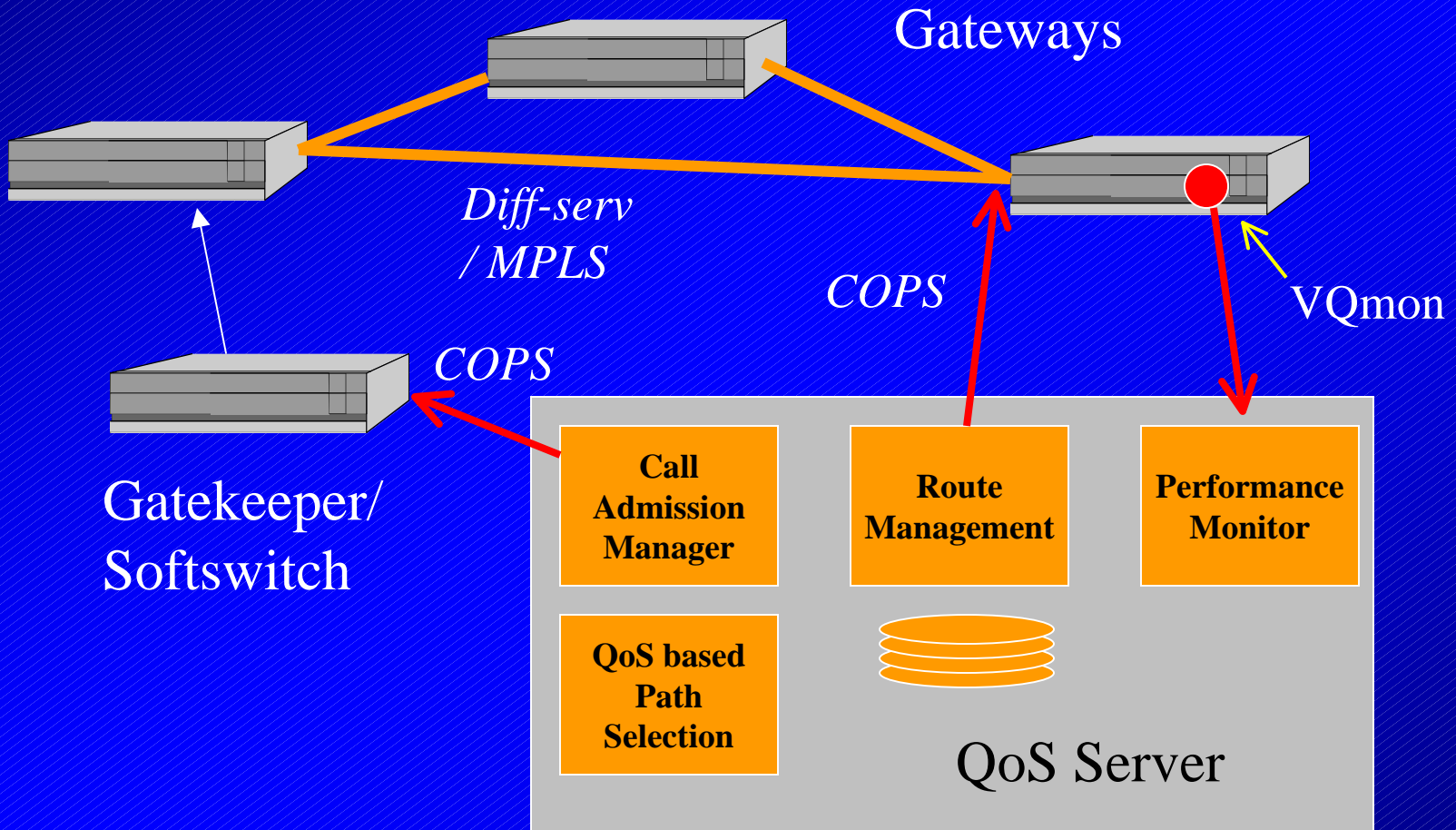
Performance Monitoring



Call Quality Monitoring



VoIP QoS Server



VoIP Policy Management

- Deliver required call quality levels with minimum use of network resources
- Allow service provider to determine trade-offs between cost and quality
- Open software approach – integrates with existing Softswitch/ Gatekeeper / Media Gateway architecture