Monitoring Middleware for Service Level Agreements in Heterogeneous Environments

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Overview

- Background
  - Quality-of-Service (QoS)
  - QoS Monitoring
  - Service Level Agreements (SLAs)
- SLA Monitoring Framework
- Evaluation of System Goals
- Future Work

Background - QoS

- Demands of enterprise computing environments
  - Consistent system behaviour
- Quality-of-Service (QoS) management
- Monitoring of QoS characteristics
- Inter-organisational QoS
  - Service Level Agreements (SLAs)
  - Automated QoS management
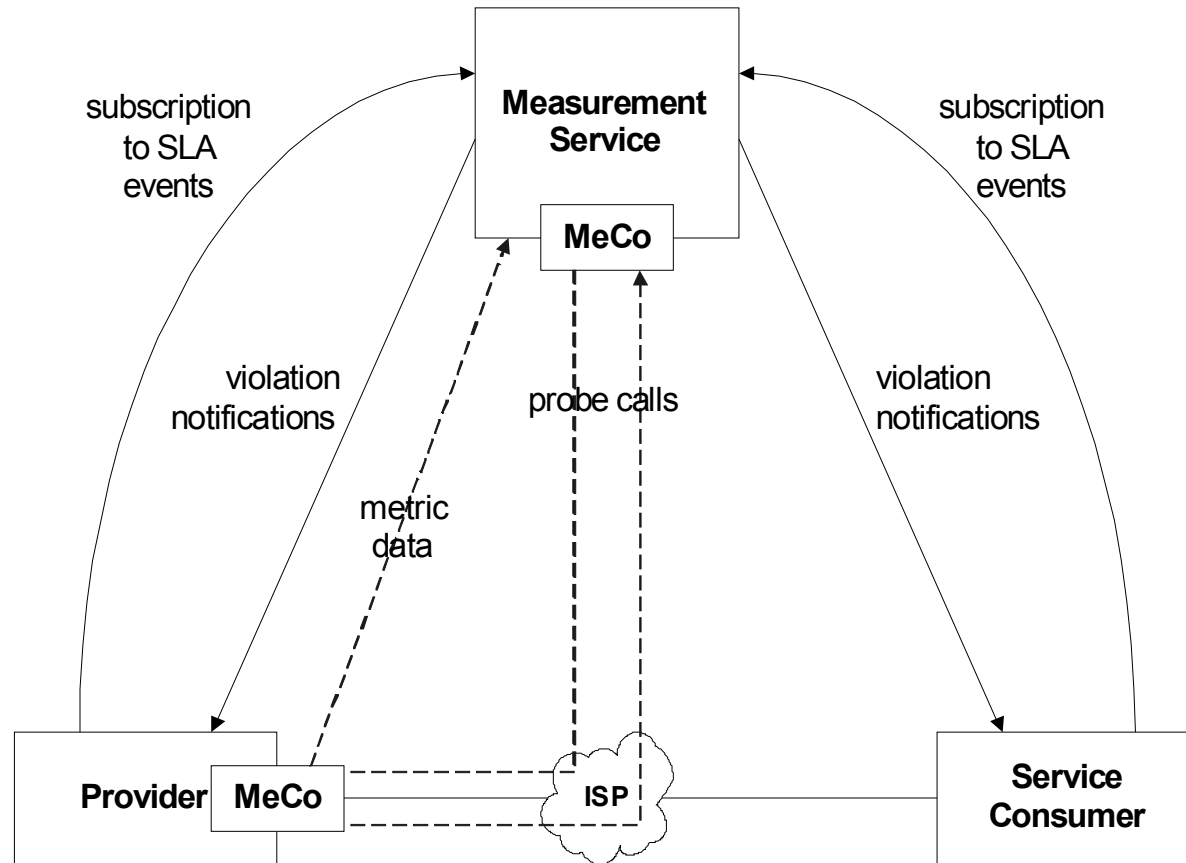
Background - Monitoring

- Collection of QoS metrics
- Approaches to metric collection
  - Active and Passive monitoring
- SLA Evaluation
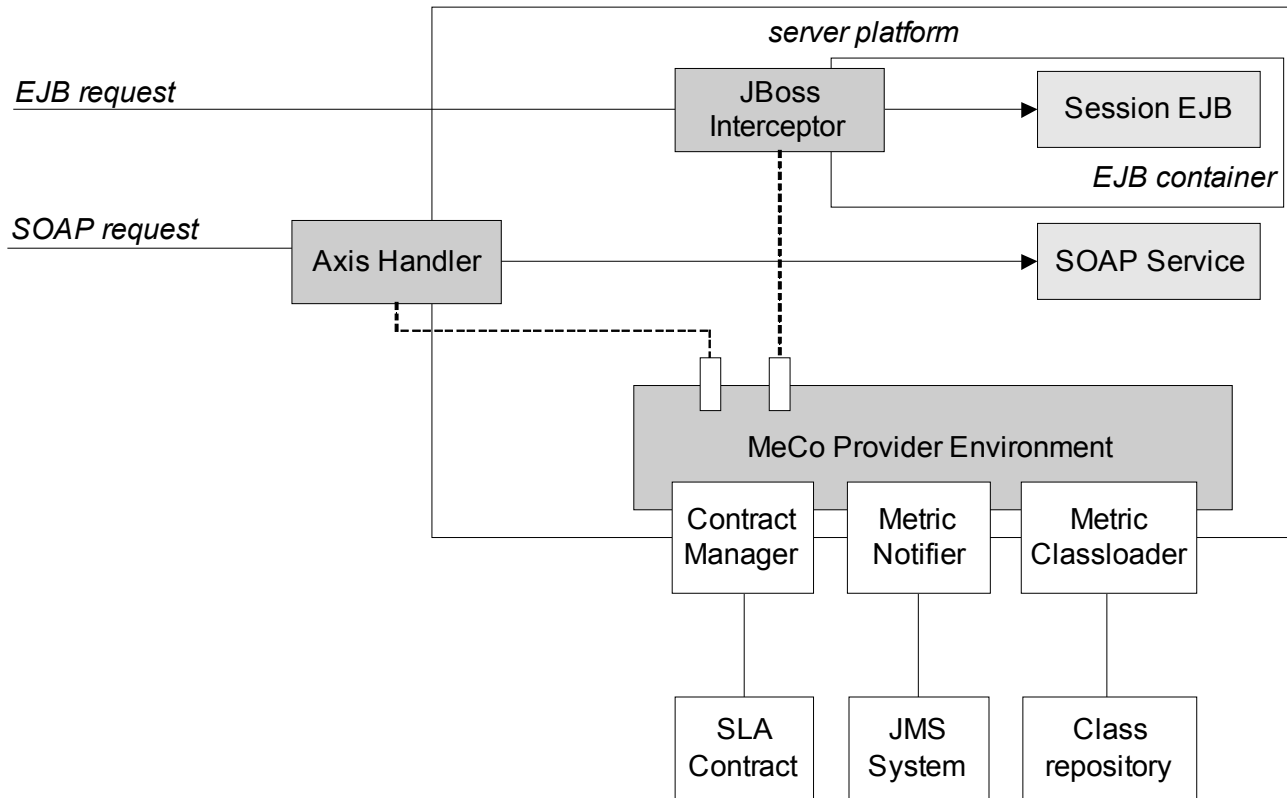- Accountability
  - Business considerations

Background – SLA Monitoring Requirements

- Alternative to Per-Service Solutions
- Simpler Rollout
  - Generic Monitoring Solution
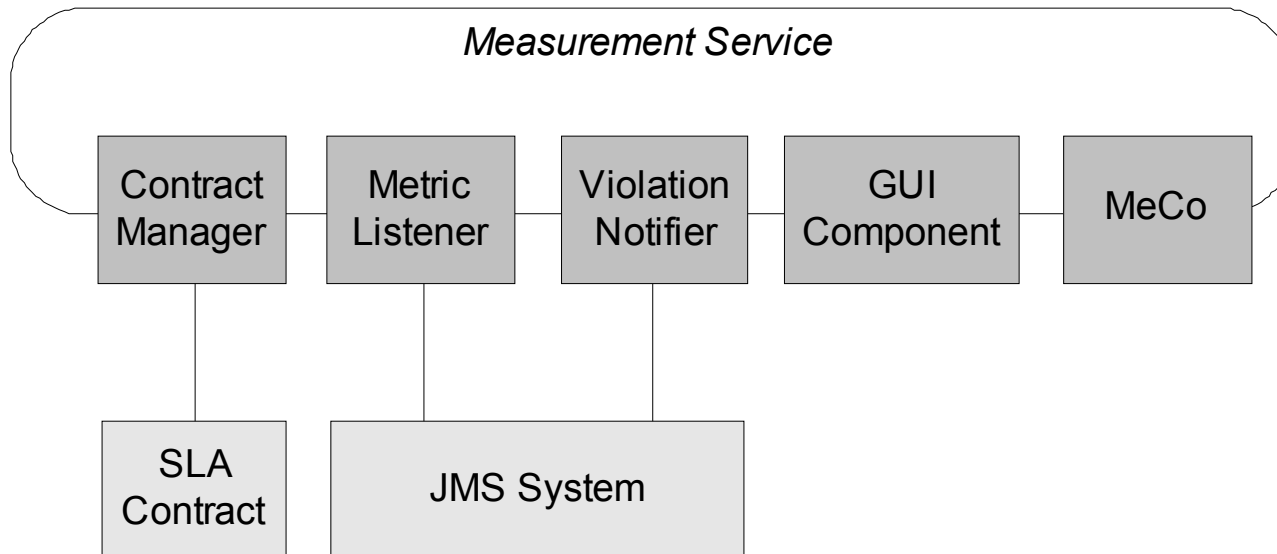- Transparent Monitoring

SLA Monitoring Framework

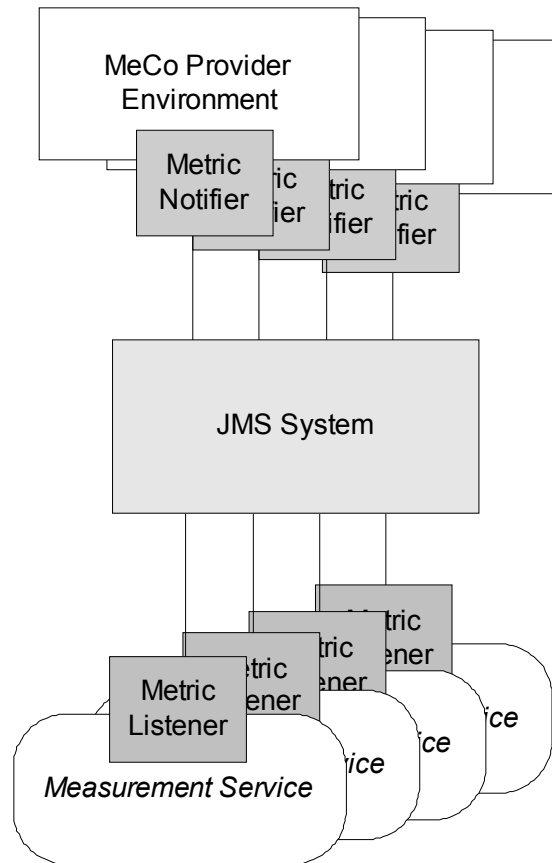# Metric Collector (MeCo) Interceptor

Measurement Service

Messaging Service

Evaluation of System Goals

- Heterogeneity
  - Arbitrary SLA Languages
  - Interceptor Protocols
- Adaptability
  - Scalable across MeCos and Measurement Services
  - Third-party Monitoring
  - Publish/Subscribe Messaging Subsystem
- Transparency
  - Minimal Modification
  - Decoupled Components

Future Work

- **Deployment Across Application Domains**
  - Multimedia
  - Information Management
  - Interactive Media
    - Network-Based Multiplayer Games
- **Performance Enhancements**
  - Centralised Configuration
  - Dynamic Contract State

The End

- Thank you for your attention
- Any questions?