A Framework for Service Activity Monitoring
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Motivation

Service Monitoring Modes

Passive Monitoring

Active Monitoring

System Architecture

Service Monitor

Passive Listener

Active Listener

Heartbeat Listener

Interaction Authorization Algorithms

Policies

Anomaly Detection

System Features

- Pluggable service topologies
- Passive monitoring
- Active monitoring for service interaction authorization
- Pluggable trust management algorithms
- Pluggable service interaction authorization policies
- Service Monitor management console
- Service Heartbeat module

Implementation

- Node.js based implementation
- RESTful services
- XACML policy integration
- Instrumented “request” Modules
  - Blocking and Non-Blocking
  - Management Console

Future Work

- Service health analysis
- Context based service criticality rating
- Context based service orchestration management
- Scenario trust level analysis
- Attack detection
- System performance analysis

https://code.google.com/p/end-to-end-soa