

End-to-End Diagnostic Tools

T + 32 hours and counting

Problem

- Users, help desks, identity providers and application administrators need tools to aid
 - the troubleshooting of middleware induced anomalies within target applications
 - performance management of middleware services and individual components
 - maybe monitoring SLAs

Goals

- Gather requirements from the perspective of the user, origin and target/application operators
- Initially focus on simple solutions to quickly aid in the analysis and evolution of middleware diagnostic support
- Create a modular architecture to prepare for a rich toolset in a subsequent phase
- Engage NSF Middleware efforts, NMI-EDIT and GRIDS
- Reuse middleware components in diagnostic toolset (e.g. Shibboleth) where sensible

Issues

- Privacy
 - Who can look at the transaction logs and at what granularity?
 - Access policy needed
 - Should some log fields be pseudo-anonymous?
- Data retention of logs
 - Infrastructure/application
- Tools need to scale

Issues Cont.

- Overall Problem Dependencies
 - Is it
 - Middleware (origin or target)
 - End application?
 - Network (routing, QoS, DoS, etc.)?
 - Ancillary service problem (DNS, NTP, etc.)?

First Year Effort

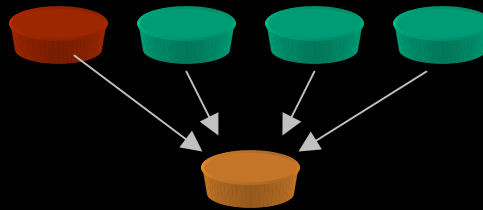
- Requirements gathering
 - Solicit input from the NMI community
 - Create a small working group
 - gather and compile requirements
 - advise the effort
 - Discovery of other efforts in this area
- Design an initial architecture
- Implementation of initial toolset
 - Simple useful tools to get started
- Usability study to give feedback on initial toolset and provide requirements for second phase of effort


What Initial Set of Tools?

- Application (auditlog) platform built on logs
 - Phase I
 - Central repository within an enterprise
 - Federation filters log information from enterprise members to a central repository
 - Phase II
 - Widely distributed repositories with tagged transactions
- Traceauth(transaction_id) function
- Error Managed Middleware (Phase ?)
- Performance Oriented

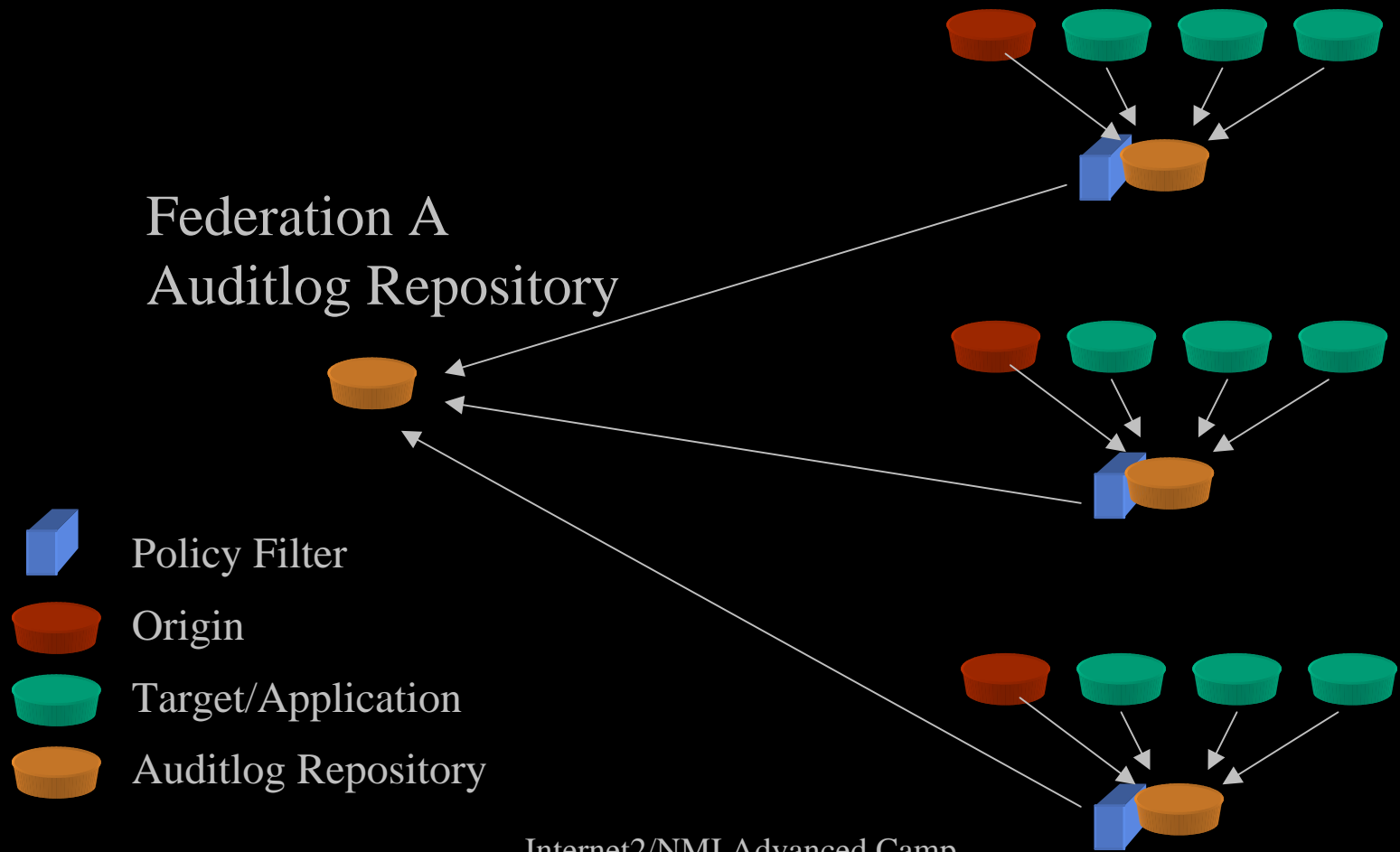
Phase I of Auditlog platform

Within an enterprise...



-  Origin
-  Target/Application
-  Auditlog Repository

Phase I Auditlog Within a Federation



Comments or interested in
participating in the effort?

Chas DiFatta – chas@cmu.edu