Inside the Inca Depot

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Inca 2.0 Workshop
February 24, 2006

Architecture overview
The Inca Depot

- Data repository for Reporter output and Inca deployment configuration
- Generally interacts only with other Inca components
- Complete redesign from Inca v1

Outline

- Depot v2 goals and design
- What’s in the Depot?
- Depot consumer services
**Depot v2 Goals**

- Flexible data content
- Efficient storage and retrieval of data
- Flexible access to data
- Data security
- Scalability

**Depot v2 Design Choices**

- Flexible data content
  - No required schema for report body
- Efficient storage and retrieval of data
  - Storage in a selection of databases via Hibernate
  - Schema designed to reduce redundant data
- Flexible access to data
  - Access to all data via SQL queries
  - Depot protocol provides predefined queries; extensible
  - Depot retains history of reporter output
  - Queries via Inca protocol and (soon) web service interface
- Data security
  - Certificate-based authentication
- Scalability
  - Multiple depots organized into a hierarchy (planned)
Outline

• Goals and design
• What’s in the Depot?
• Depot consumer services

What’s in the Depot?

• Goal: Depot should provide centralized access to all Inca deployment information
• Information available
  • Inca deployment configuration
  • Reporter output
**Inca Deployment Configuration**

- Support incomplete; Consumer queries Reporter Agent
- Repository/Reporter information not part of schema
- Resources defined by schema; as yet unused
- Suite info stored and returned as part of reports

**Reporter Output**

- Report Config contains host and signature
- Report contains body, stderr, exit status/message
- Instance contains timestamp, resource usage info
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Queries

- Supported queries
  - Single instance
  - Latest instance for each series in a suite
  - Report history for a series (soon)
- Planned queries
  - Graph image (e.g., series history)
  - General SQL
  - Inca Configuration
  - Plug-in API?
Report Triggers

- Register action when incoming report shows problem
- Comparitors test reports for acceptable output
  - Xml schema
  - Regular expression
  - Version
  - Plug-in API (planned)
  - Results stored in Depot
- Actions
  - Email
  - Others?