Putting IT Together - APIs, ESB and Beyond

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Agenda

- Current integration landscape
- Our vision
- API use cases
- Architecture and management of our platform
- Demo
- Challenges and successes
Overview – Problem

- Many point to point interfaces
- Many manual and double entry processes
- Hard to maintain and support
- Decentralized solution
- Same data is created in many formats
- **Who We Are:**
  Centralized group providing integration solutions across UCSF enterprise and beyond.

- **Our Services:**
  Provide expertise and reliable integration platforms for building robust, reusable and cost efficient interfaces.

- **Our Mission:**
  Use integration platforms and tools to move away from point-to-point interfaces.

  Build APIs to expose commonly requested data to adapt to changing business needs more rapidly with less cost.
Our Vision
Where are we now?

Diagram showing integrations between Moodle, EDS (Enterprise Directory Service), Salesforce, MuleSoft, Archibus, and PeopleSoft.
What’s Next?

- Development phase:
  - Cross Campus Enrollment System - UC-wide project, students from one UC campus enroll in and complete courses offered by another UC campus.
  - ServiceNow Integration - generic API to enable applications to create incident tickets.
  - Ilios to E*Value – project with the School of Pharmacy linking Ilios (curriculum management) to E*Value (evaluation system).

- Discovery phase:
  - Airborne Precautions – link APeX (electronic medical record) to facilities management system to generate work order.

- Platform as a Service (PaaS).
Use Case 1 – SIS APIs

- API to share schools, departments, subjects, courses, terms and enrollments from the Student Information System (SIS) with other systems

- Replace the existing nightly batch file interface from SIS to the Collaborative Learning Environment (CLE) with RESTful web services calls using new API.

- Currently the SIS APIs will only be available for consumers permitted to access data for all student enrollments (restricting data access is for a future phase).
Use Case 2 – Building Metadata

- API to share building metadata (building, floor, room and room splits) from new space management system (Archibus) with other systems.

- Share employee and employee location information with Archibus.
  - Subscribe to published people data from our Enterprise Directory Service (EDS) through the Enterprise Service Bus (ESB).
Demo

- Architecture review
- API Manager (SSO)
- Use case 1 - Student Information Systems (SIS) API
- Use case 2 - Building Metadata API
- Security policies and API monitoring
Challenges

- Developing an enterprise culture of development with an eye to reusability.
- Identifying the right stage for the Integration Services team to become involved.
- Funding – budget for development of the initial integration and for support/maintenance of the project and the integration platform.
- Educating project requestors that integration projects are a shared responsibility.
- Socialization of tools/approach.
- Platform as a Service model.
- Finding resources.
Successes

- Built the team, delivered pilot project to show proof of concept, created standard processes for the team.
- Developing partnerships across the enterprise (multiple projects with same partners).
- Building metadata API – used by Directory Self-Service and HR Service Request System and available to developers across UCSF.
- Working with first customer for UCSF API Repository (Advance).
- Platform as a Service model!
Through its singular focus on health, UCSF is leading revolutions in health.

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