Topic - Tools and Architecture

Notes from the morning of day 1.

- Assumptions - general — Assumptions that apply broadly.
- Done - defined — Definition of Done
- Done - steps to be done — The steps to making an integration of 'Done'
- Integration Prototype Definition — Basic definition of the prototypes to pursue.
- Parking lot — Backlog / parking lot of topics
- Workday constraints to know about — file sizes, turn around time on tests, etc.

File	Modified
Microsoft Powerpoint Presentation Menu of SOA Design Patterns.pptx From Dustin@Vivantech	Oct 06, 2011 by 00d4eab94afcfd33014afd06a0b74992
Microsoft Powerpoint Presentation Cornell_integration_Kick_Off.pptx From Kalan @ Workday	Oct 06, 2011 by 00d4eab94afcfd33014afd06a0b74992

Download All

Kalan presented an overview of Workday Integrations

Everything going in or out of Workday goes through a web services API for consistency

2 integration tools - Enterprise Interface Builder (EIB) and Workday Studio

The Workday Integration Network (WIN)

1. HCM Network
2. Benefits Network
3. Payroll Network (Interface)
4. Workday Payroll (Network)
5. Workday Spend Network
6. Workday Financial Network

bulk loads typically don;t happen - usually one data item is transferred at a time

Reviewed a few use cases (see Workday slide deck)

Typical Integrations Mix - Configured (Workday Integration Network - 30%), EIB (simple - 45%), Workday Studio (complex - 25%)

Studio is an Eclipse based language - Java based

EIB Integrations Outbound: => Get Data -> Transform -> Deliver -> External System

Inbound: External System -> Get Data -> Transform - > Deliver

Cornell has 95 integrations - 25 of which are studios

Why does CU have more Studios than most customers? - retroactive benefits and semi-monthly pay are a result of Kronos configuration at CU

A menu of SOA design options - Dustin - Vivantech

Service Oriented Architecture (SOA)

It is a formalized approach for incorporating:

1. Web Services
2. XML
3. Enterprise wide multi-tiered design

Goals

Compatible with current systems

- New applications would be able to communicate with existing systems
- Minimal changes should be required to existing applications / systems

Support multiple document formats

- Legacy Formats (PS, Kronos)
- Current Formats (Workday XML v14)
- Future Formats (XML v100)

Ease of Maintenance & Enhancements

- Maintenance & Enhancements account for well over 50% of typical software cost
- In long lived environments, like universities, the costs jump much higher

Organize our Units of work into Enterprise Services

- Allows reuse of 1. low level data retrieval services 2. high level data processing such as reports
- Easier Developement
- Simplified Maintenance
- Makes replacement of individual components possible

Design

- A good SOA design can be described in this simple way
- Software design is the most important ingredient to building an effective SOA environment
- This is the basic SOA principal for software design

1. Group (encapsulate) the programs into logical business processes
2. Allow access to each business process by a web service
3. Business processes are designed to meet the needs of the entire enterprise not just the current application

- In an ideal SOA environment applications do not exist as independent silos
- Instead each new business process joins the pool of available "enterprise services"
- New application projects reuse or if needed extend existing business processes
- Only where a business process hasn't been created yet is a new program created

Multi-tier = Division of labor in our software

Provides:

- Industry best practice
- Simplifies maintenance
- Promotes code reuse
- Stability
- Manageability of complex applications

Touch Points - all integrations are made of 2 or more touch points

Standardized Internal File Format

Benefits:

- allows maximum reuse of programs
- simplifies addition of future programs

Integration Types

Not long ago, the text book anser was that the only valid SOA communication is SOAP based web services.

In practice this is not realistic

Not all systems support web service...

In practice there are a number of communication systes that are commonly used

Oracle SOA will support all of these

1. Web Services (SOAP or REST)
2. Queues
3. File Drop

Recommendations:

1. Use SOAP web services for all communication outside of the Enterprise
2. Standardize on either REST or SOAP fo web services within the Enterprise
3. Most communications will be quick with reasonable sized docs Use Web services fr these
4. for very large docs use files
5. for batch processing use ques
6. more to add

Oracle SOA is an Integration Suite.

See Dustin's slide deck for diagrams and detailed notes.

Workday Tenants

CU is using 5 tenants currently

How do we manage CU environments to match Workday tenant upgrades? We need a test environment synced up with Workday.

Dustin - what is the backward compatibility plan - Kalan - current - 3 is the current policy

Phil - how does load test get handled

Workday has a 2GB limit on flle extracts and integrations can only run for less than an hr

In bound Workday can only receive 5MB file size

COPY in Steve's Google doc notes here.

One customer out of 200+ wants a user acceptance test environment in place

We will need to plan for testing CU systems when a system (including Workday) is upgraded