ESB Architecture Principles for UCPaTh

Introduction

TBD.

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#1 All information must flow thru Service Bus

Sound Architecture dictates that we manage the flow of information between Oracle On-Demand and UCLA from a single place. By positioning ESB here, we can monitor and manage the message exchange more efficiently.

We may use software that lives outside the ESB (Managed File Transfer for example). However ESB is the logical point of control.

#2 Deviation from #1 must be documented

Should we deviate from principle #1 i.e. if we are bypassing ESB for any data exchange between Oracle On-Demand and UCLA, there should be a justification, whether technical limitation, expediency or whatever the reason may be.

#3 Common data definition

One of the guiding principles of UCPaTh project was to come up with common definition of data (Payroll/HR data). In fact this is the only technical requirement in UCPaTh project.

ODS is the center of the universe as far as UCPaTh data definition is concerned. ODS is common across UC locations, we should develop data definition and data dictionalry explaining each and every data element. All other applications look up to ODS to provide definition and interpretation.

#4 Tier 1 Outbound interfaces must use ODS

Before developing Tier1 Outbound interfaces, check if ODS serves the data needs. ODS has most of UCPaTh data. There is no need to develop a separate interface between UCLA and UCPaTh. This lowers administrative overheads and improves efficiency.

Notes:
Tier1 interface refers to those systems that interfaced directly with the PPS instance.
Outbound/Inbound refers to direction of data flow between Oracle On-Demand to Campus locations; Outbound means Oracle On-Demand to UCLA; Inbound means UCLA to Oracle On-Demand.

#5 Develop separate interface if ODS is not suitable

Develop a separate Tier1 Outbound interface only if ODS can't serve the needs of an interface.
For example, ODS data gets refreshed daily; ODS may not be suitable for real-time integration.

Tier1 Inbound interfaces are sourced from individual applications or departments. Many of them can't be merged. There will likely be one for each (current) PPS Inbound interface.

#6 Promote SOA and Real time Integration

ESB enables SOA. Take the opportunity to promote SOA.
Promote Real time integration where possible. Real time integration promotes Business agility; supports in-time provisioning and de-provisioning of services.
Currently employees wait for one or two days to to get Parking permit; one or two days to get BruinCard. There is no need to continue current practice.

#7 ESB Architecture and UCPaTh

The initial target date for UCPaTh was July 2013, a new date is to be determined. When designing ESB architecture for scalability, reliability and availability be pragmatic and deliver an architecture that supports UCPaTh.