ARCHITECTURE PATTERNS

CSPA Architecture Patterns
Introduction to CSPA Archetypes

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We need to address the gap in the specification to make sharing easier!
CSPA challenges today

- CSPA provides guidance on how to design and develop statistical service
- Focus on conceptual and logical description (business and information view)
- From an Application and Infrastructure viewpoint, the specification remain mostly undetermined
- The latter influences greatly the cost of integration
CSPA archetypes

- Characterise the context for the use of CSPA services
- Link to the infrastructure set up
- Influence the technical implementation of the service
Archetypes

- Separate Application from Data Store
- Point to Point
- Orchestration
- Event Driven

Do you separate application/logic from more permanent data storage?

What is driving the interaction between services?
Example Scenario: Web Questionnaire & Validation

User Stories

1. Respondent enters response in a Web Questionnaire

2. NSI does some server side validation (e.g. based on historical data)

3. If the response is valid, it is stored as “Raw Input” for further processing

IT Components

A. Web questionnaire Service

B. Validation Service

C. Data Storage
Archetype: P2P, Bundled
Example Implementation (P2P, Bundled)

Online Questionnaire (web gui)

POST /Response
P2P Sync Req/Resp

CSPA Web Collection Service

GET /Validation
P2P Sync Req/Resp

CSPA Validator

Legacy system

INSERT INTO

Raw Data Store

SELECT FROM

Traditional Application
Archetype - P2P, Separate
Example Implementation (P2P, Separate)

Online Questionnaire (web gui)

POST /Response
P2P Sync Req/Resp

CSPA Web Collection Service

GET /Validation
P2P Sync Req/Resp

CSPA Validator

POST /ValidatedData
P2P Sync Req/Resp

CSPA Raw Data Storage Service

GET /Historical Data
P2P Sync Req/Resp

Legacy system

Web-Enabled Application

GET /ValidatedData
P2P Sync Req/Resp
Archetype - Orchestration, Separate
Possible Implementation (Orchestrated, Separate)

Online Questionnaire (web gui)

POST /Response
P2P Sync Req/Resp

ESB / ORCH

POST /Data
P2P Sync Req/Resp

CSPA Validator

CSPA Raw Data Storage Service

POST /Data
P2P Sync Req/Resp
Archetype - Event Driven, Separate
Possible Implementation (Event Driven, Separate)

- Online Questionnaire (web gui)
- POST /OriginalData
- CSPA Validator
- OBSERVE/OriginalData
- POST /ValidatedData
- OBSERVE/ValidatedData
- CSPA Raw Data Storage Service
Archetypes & CSPA Compliance

Should we try to agree on one technical integration standard?

In any case, we should separate archetype-specific aspects of services from archetype-independent aspects.

CSPA Modules to the rescue!