Freestyle Architecture Challenge

Focus: System & Integration & Identity



341.02 - MindForce

PeopleWare is a massive software company offering HR management and Learning Management Systems. With the global recession looming and interest rates rising, they are aiming to secure another round of funding to secure their path to profitability. Their new "Training as a Service" offering should attract new investors and inspire existing ones alike.

As a product company, PeopleWare has extensive knowledge and experience building bespoke applications in C++, Java, and NodeJS with AWS and Kubernetes. However, they chose Salesforce to underpin "MindForce". MindForce will be the central hub to plan, staff, and execute training courses.

Objectives

Booking

Recently, they acquired a Training company to access their extensive catalog of thousands of courses and their network of instructors. PWs vision is for HR staff and training coordinators to access search, request, and book seats for a course in MindForce directly from within their own HRM instance, of which there are 30.000, without having to leave the system. The majority of customers who can afford PW have +1000 employees. Location, customer tier, and the bespoke license agreement with the customer determine the cost of the course.

Enrollment

Once they have booked a course, they can enroll their employees in the course. Product management insists this functionality to live in MF for a quicker time to market, but enrollment status and dates must also be visible on the employee's record in HCM. Navigation between the two systems is expected to be seamless. Upon

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booking confirmation, the course and its asset library (up to 5 GB) must be

provisioned in the customer's LMS instance and enrolled employees must gain access

to the course. Assets are managed by the CourseAssetCatalogue plugin for

Sharepoint Online.

Execution

For Instructor-led courses, a qualified instructor is assigned based on language skills,

location, and availability. No instructor is assigned for a self-paced online course, but

students shall still be able to discuss, collaborate and share in a central place, as for

instructor-led courses. To ease navigation and improve productivity, instructors

access the client's LMS from Salesforce using either LinkedIn, if they freelance, or the

network credentials from one of the five regional LDAPs. In Salesforce, they must be

able to report on their student's progress lessons quickly. More detailed information

from LMS must be accessible to the instructors and HR/training coordinators. For

each session, instructors track the student's attendance; they can do this by scanning

a student's personalized QR code from the attendee list they printed.

Upon completion, students review the course and instructor by filling out a

questionnaire in the LMS. Depending on the course, access to the course must be

revoked after a certain amount of time unless it's unlimited access or agreed upon in

the license agreement.

Challenges

1. Domains of HCM and LMS systems for every customer are unique.

2. Due to design flaws, the LMSs' external APIs run a risk of becoming unstable

under load; this is not expected to be fixed within the next three years.

3. A designated center of excellence will be responsible for MindForce. The

business values agility highly and wants them to operate as independently from

the other product teams and departments as possible.

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Assignment

- 1. Identity all integrations
- 2. Sketch a system architecture diagram
- 3. Propose a high-level end-to-end solution for Course Search To Review
- 4. **BONUS**: Draw the login sequence for freelance and employed instructors accessing the LMS.

Scenario: 341.02 Mindforce 1.0