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Software Architecture

Assignment 2

Migrating PieMatrix to Microservices Strategy

Microservices:

Formatters for Frontend

Social Feed View

-Recent Project Summarizer

-Recent Projects Attached to this user at a glance

-Convert project on the backend to Project view for the frontend

-Recent Chain of messages from message app

Process Authoring

-Create Project UI (see core data, we need one UI service for each of the main categories that feeds user input to that category)

Process Execution

-Display Status for project elements

-Input project, return XML for elements with status

-Conglomerate XML into a complete display status

-Update Project UI (see core data)

-Determine what’s modified via XML element type

-Update service

Message App

-Get Messages

-Formatter

-Grabber

-Validate Recipient

-Database Queue Manager - Receiver (One instance per user)

-Send Messages

-Formatter

-Sender

-Validate Recipient

-Database Queue Manager – Sender

Dashboard

-Project Summarizer

-Projects View Constructor

Core Data

Roles

-Role Determiner (Accepts Project Element, User)

-Role Modifiers

-Updater

-Deleter

-Accessor

Version Verification

-Major Version

-Minor Version

-Validate Project

-Determine least version in project chain

-Validate all against version (by walking until all elements are visited)

Project Data (access, update, delete, create, construct XML for each)

-Project

-Process

-Stage

-Box

-Step

-Infinite chain of substeps

-Data looks like:

Database ID / String ID / Fields as needed / Status / start date / duration / link to issue table

-Get Issues for element (for the severities user wants)

-Get severity for issue

-Determine end date for element (using duration and start date)

-XML Translation per element

-Children per element

-Attached Files Per Element

-Import from template (one service per main element)

-Load Template

-Export to template

-Save Template

User (w/ schedules)

-Create, Update, Delete, Access

-Assign User to project element

-Determine if user is available at time block

Scheduler

-Construct schedule

-Validate times for all elements of a project

-Determine date

-Display actual progress of project

-Display projected progress of project

Auxillary Tools

File Encryptor

File Decryptor

Send Manual Notification

-Severity assigner

-notification queue modifier

Send Auto Notification

-Get Current date

-Scan active projects for corresponding dates

-Severity assigner

-Notification queue modifier

Notification Sender

File Uploader

-Version History by date

-Update file version

File Downloader

-Version History by date

-Select specific file version

File Database Updater

File Database Accessor

Search within file (if text file)

Convert to microsoft project

-Convert each XML element individually

Decode from microsoft project

-Decode each XML element individually

Sync With microsoft project (do both)