Process Dashboard

June 23, 2017

Xactly

Problem Context – Application domain

- Xactly is a sales performance management solution that is offered in a multi-tenant Software-as-a-Service (SaaS). Specifically, Xactly services include payroll, commission and incentive calculations for enterprise customers.
- Xactly's client need timely and accurate services, which requires any problems in Xactly's application server network to be quickly identified and rectified.
- In order to facilitate this, we created a visual tool to assist the Xactly support team in identifying problematic jobs in their processing pipeline. Jobs that are identified as long running or halted processes allow the support team to quickly address issues and increase service efficiency.

Problem Statement

Design a tool for the Xactly support team to determine the "jobs" that are problematic

- Support team currently looks through SQL tables manually to view data
- Main goal is to have a dashboard to organize and visualize database

Project Goals

- Create APIs, using the Spring Boot framework, to get data from Xactly's databases.
- Use a Node.js server to send data from backend to frontend.
- Implement frontend using React components to create an intuitive to use dashboard to view and sort data.

Project Requirements

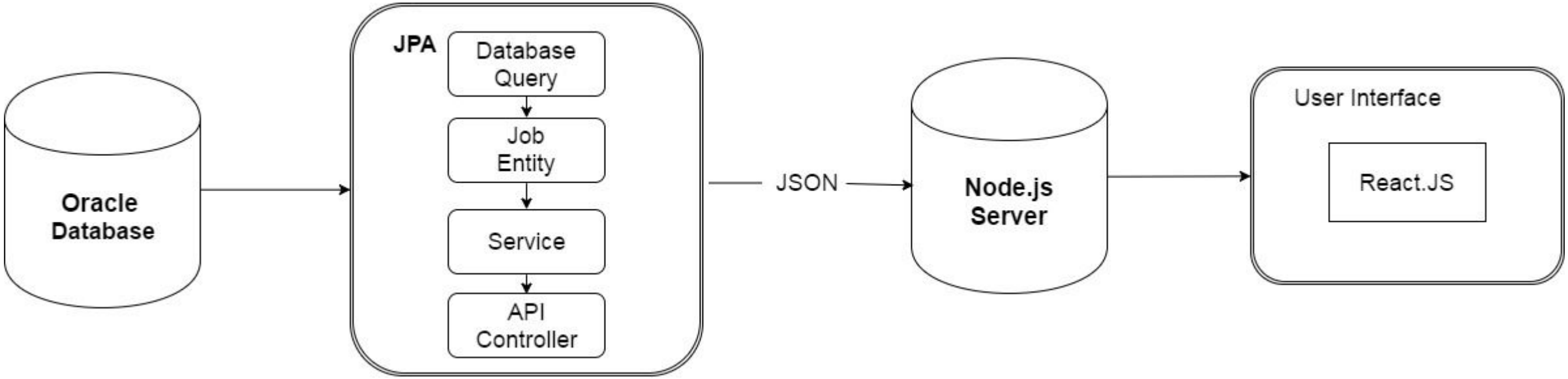
Backend

- APIs to get data from Xactly's database
  - Use SQL logic to categorize "jobs"
- Server to communicate between backend and frontend

Frontend

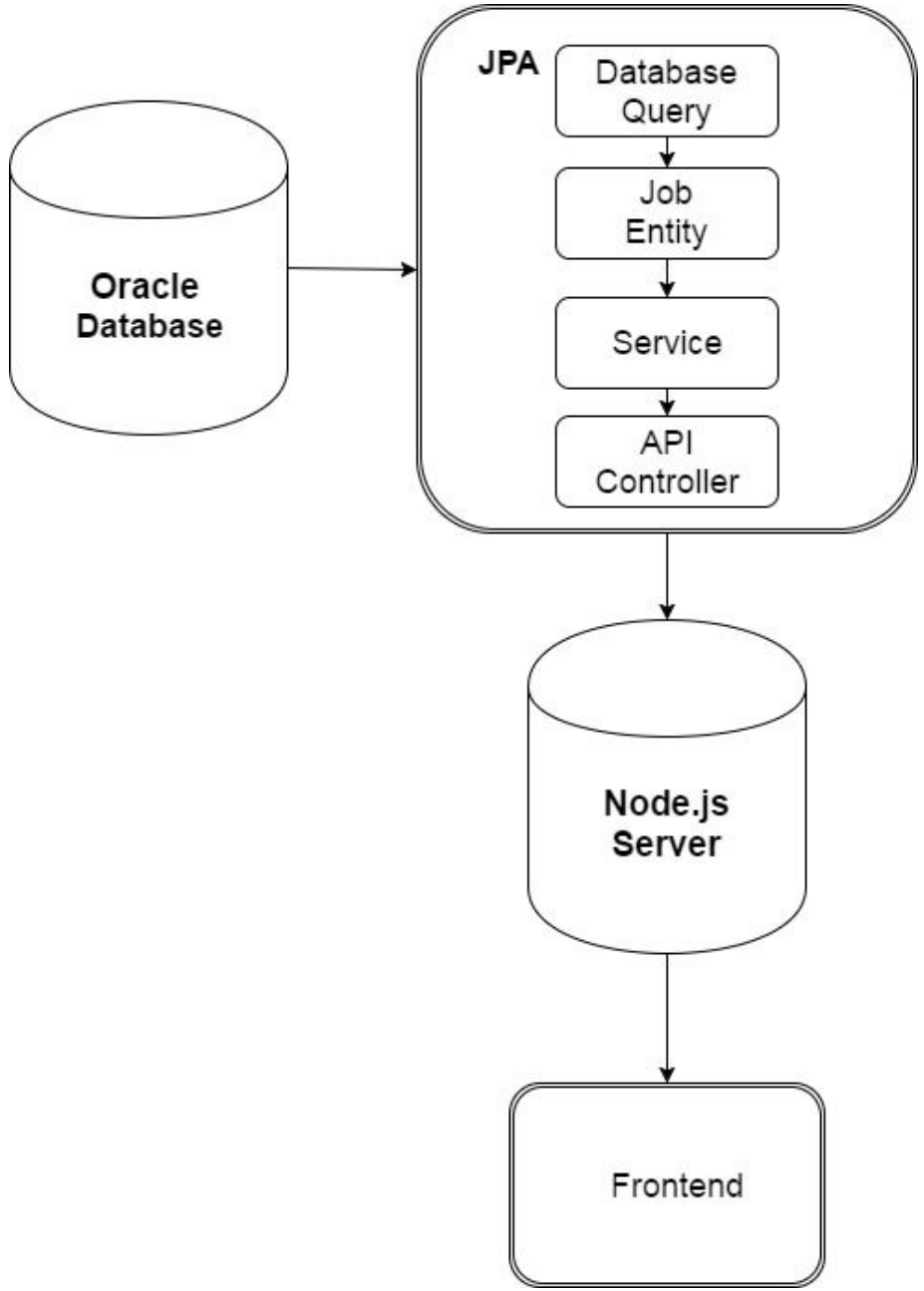
- Dashboard to view all "jobs" in Xactly's database
- Ways to filter data to be able to view what the support team needs.
- Charts to view progress of "jobs" over time

Solution (Technical Details)

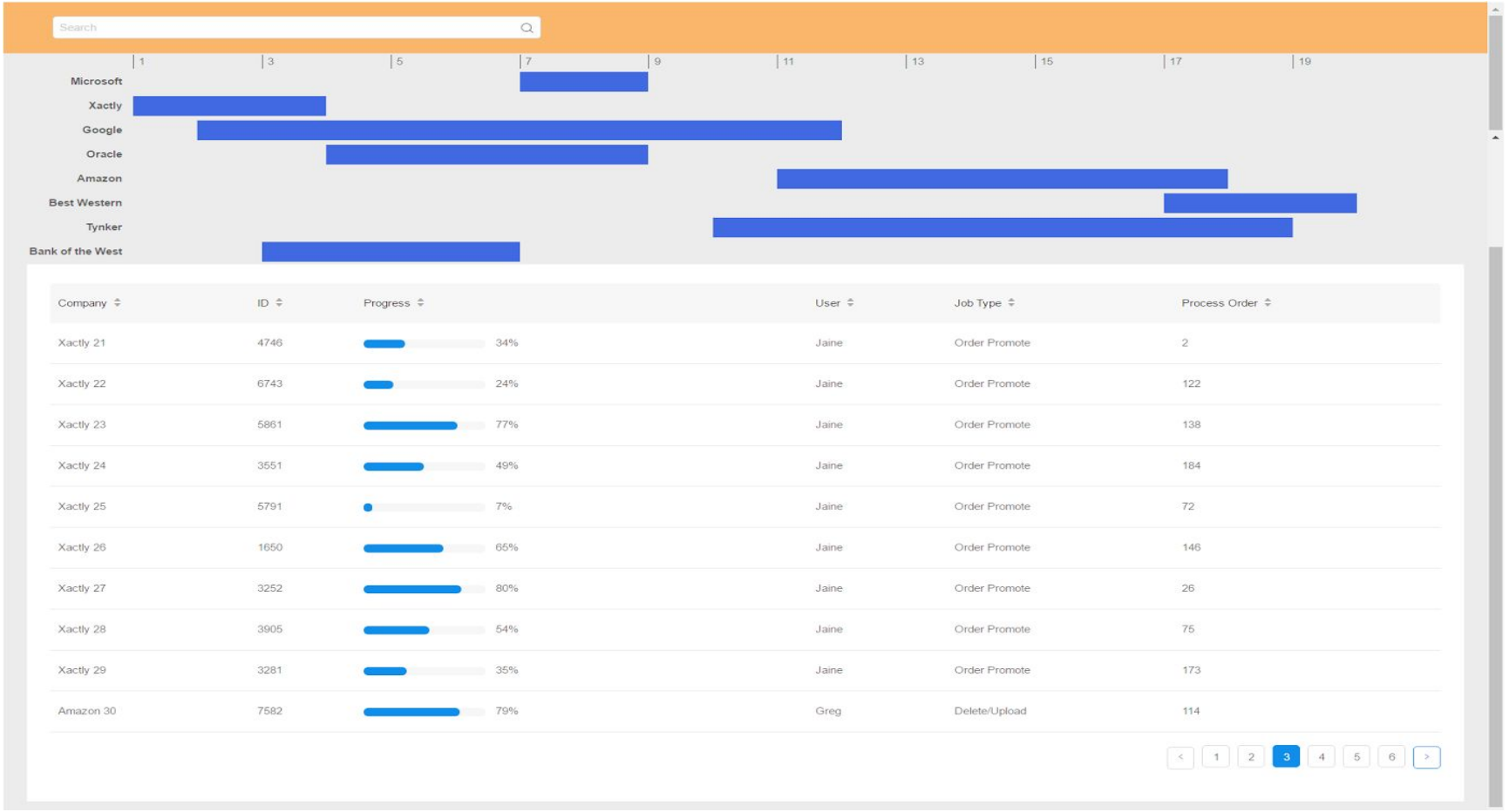


Backend Implementation details

- Used Spring Boot to implement the APIs.
- Read data using JPA (Java Persistence API)
- Created an entity class to format the “job” events
- Created a service class to output the data as a list
- Created API controllers to output data of the lists in JSON format
- Setup Node.js server to communicate between backend and frontend.

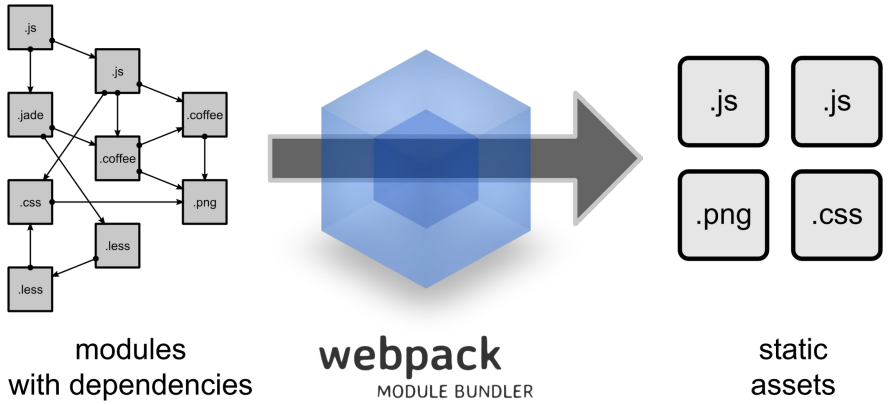


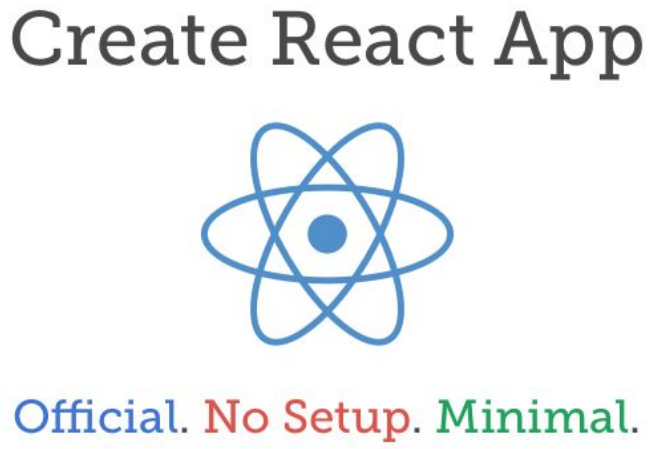
System Illustration



Frontend Implementation details

- Learned all required technologies to begin developing in React
- Studied boilerplates and chose one to begin development on.
- Tested individual components on boilerplate, constructed working demo using dummy data.
- Currently implementing real data using node.js





Results/Achievements

- Our dashboard will replace Xactly's current inefficient system for job failure diagnostics and provide a much more intuitive user experience and easy data visualization
- Developed an intuitive UI that visualizes all current running jobs and long-running jobs
- Implemented Gantt chart to visualize job timelines