



MBARI

Next-Gen Migration Initiative Project

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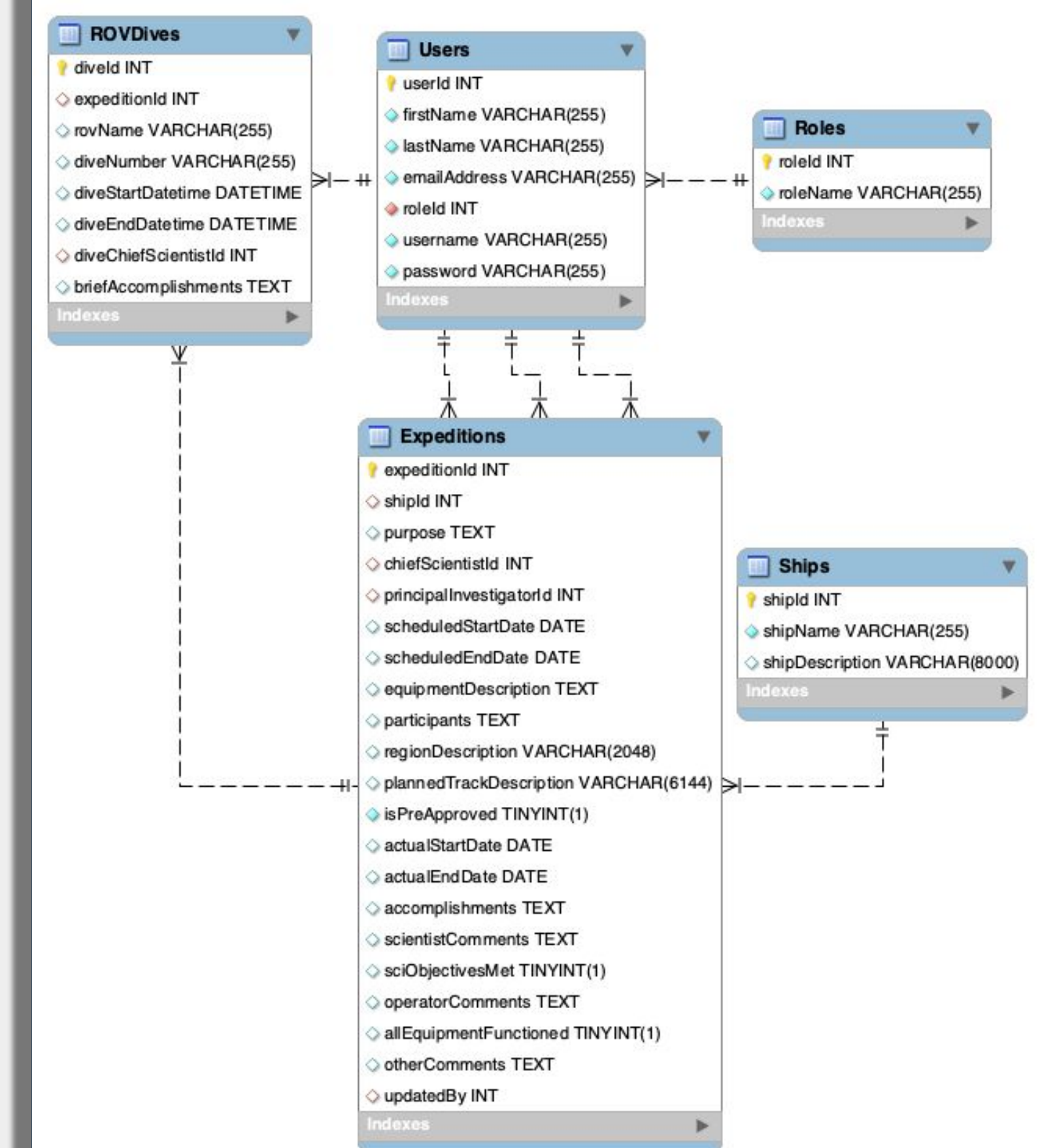
Motivation

Develop, from scratch, a proof of concept tech transition from a traditional **monolithic** repository to a modern, **segregated** architecture, aiming to enhance **cost efficiency** and reduce the current annual expenditure of **\$25,000**.

Results

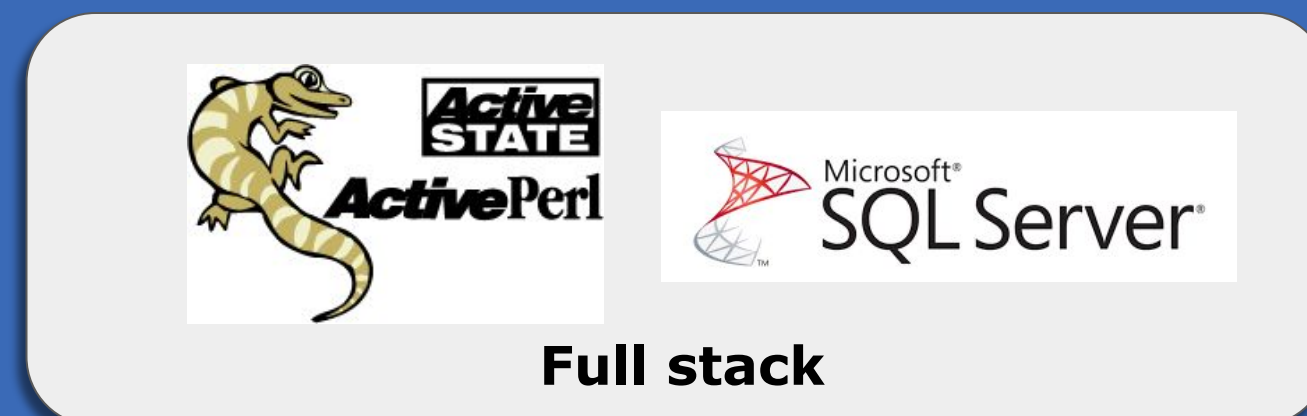
- Viable **cost reduction** up to **\$24,762**
- Frontend rendering process uses **SSR & CSR**
- Multiple-page application to Single-page application
- Implemented authentication security using **JWT**

ER-Diagram

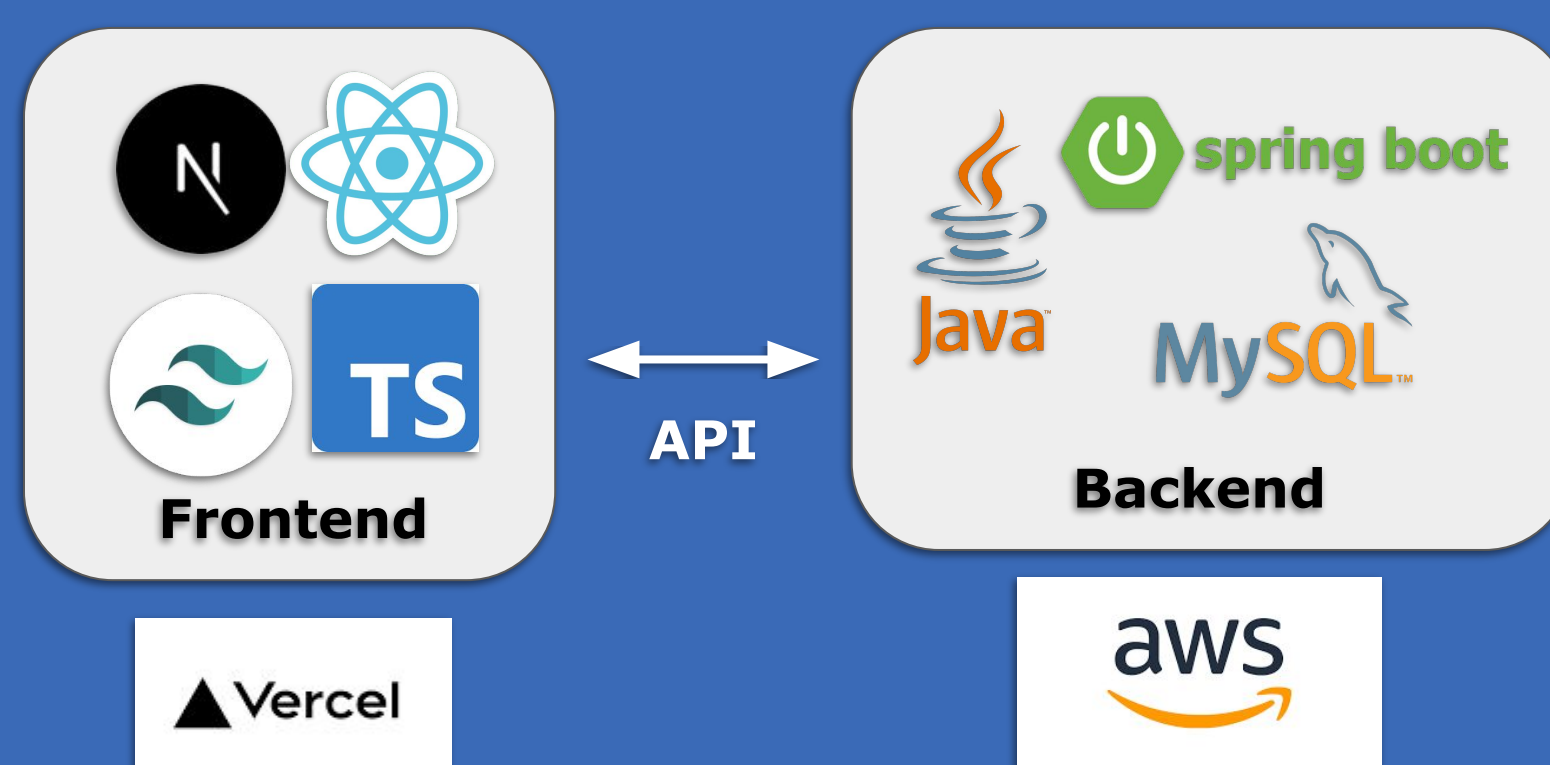


Tech Stack

Legacy



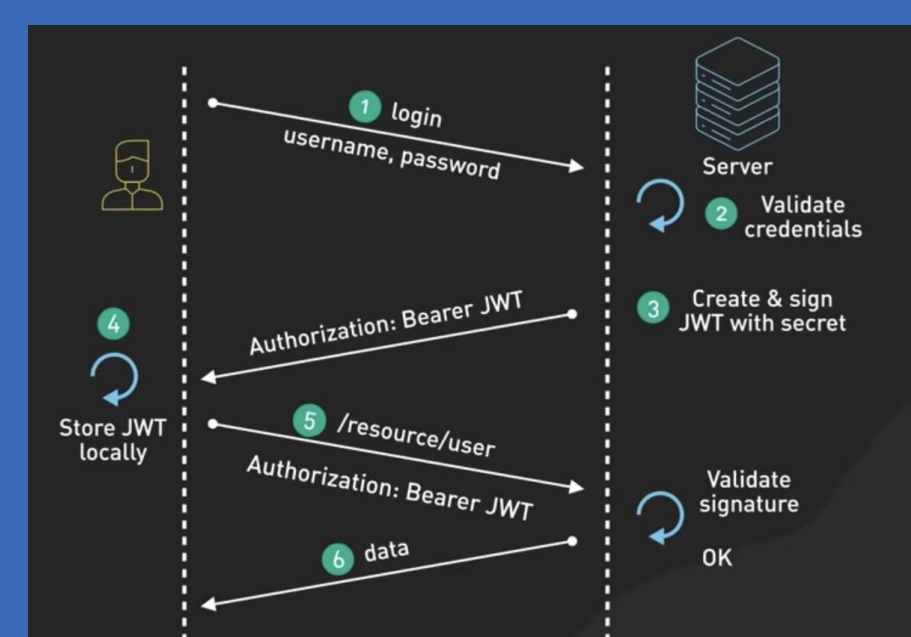
Modeled



Swagger API doc

JWT Security Design

expedition-controller	
POST	/api/v1.1/search
POST	/api/v1.1/preExpedition
POST	/api/v1.1/preExpedition/approve
GET	/api/v1.1/postExpedition
POST	/api/v1.1/postExpedition
GET	/api/v1.1/preExpedition/unapproved
GET	/api/v1.1/preExpedition/approved



Set JWT in Cookie

Toast

Server Side Rendering (SSR)

Client Side Rendering (CSR)

Conclusions

MBARI now has a proof of concept project demonstrating the implementation of **modern, cost-reducing** technologies when adapting their current infrastructure and in future endeavors.

Special Thanks

To our project mentor Mike McCann