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# Dog Shelter Website

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# What is the page about?

The goal is to **list available dogs** and **add new adoption offers**

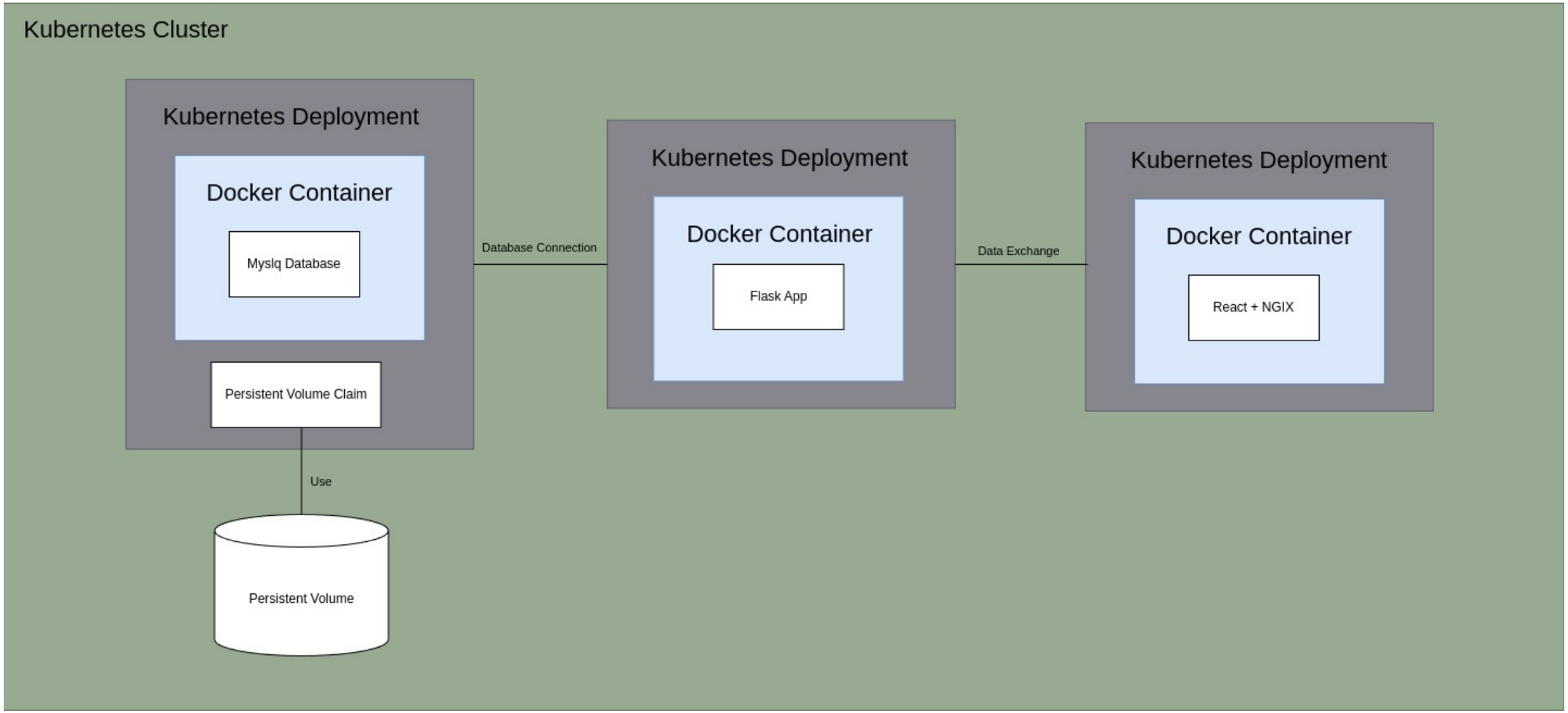
# Used Technologies

The project utilized a diverse array of technologies, including cloud-based solutions

| Cloud Solution | Frontend | Backend - REST API | Database |
| --- | --- | --- | --- |
| Docker | React | Flask | MySQL |
| Kubernetes | Bootstrap | | |
| OpenStack | NGINX | | |
| | HTML | | |

# Application Design

The key benefits of this design are modularity and component isolation.



# Key Features

Key features include security measures, scalability, and unit testing

## Frontend

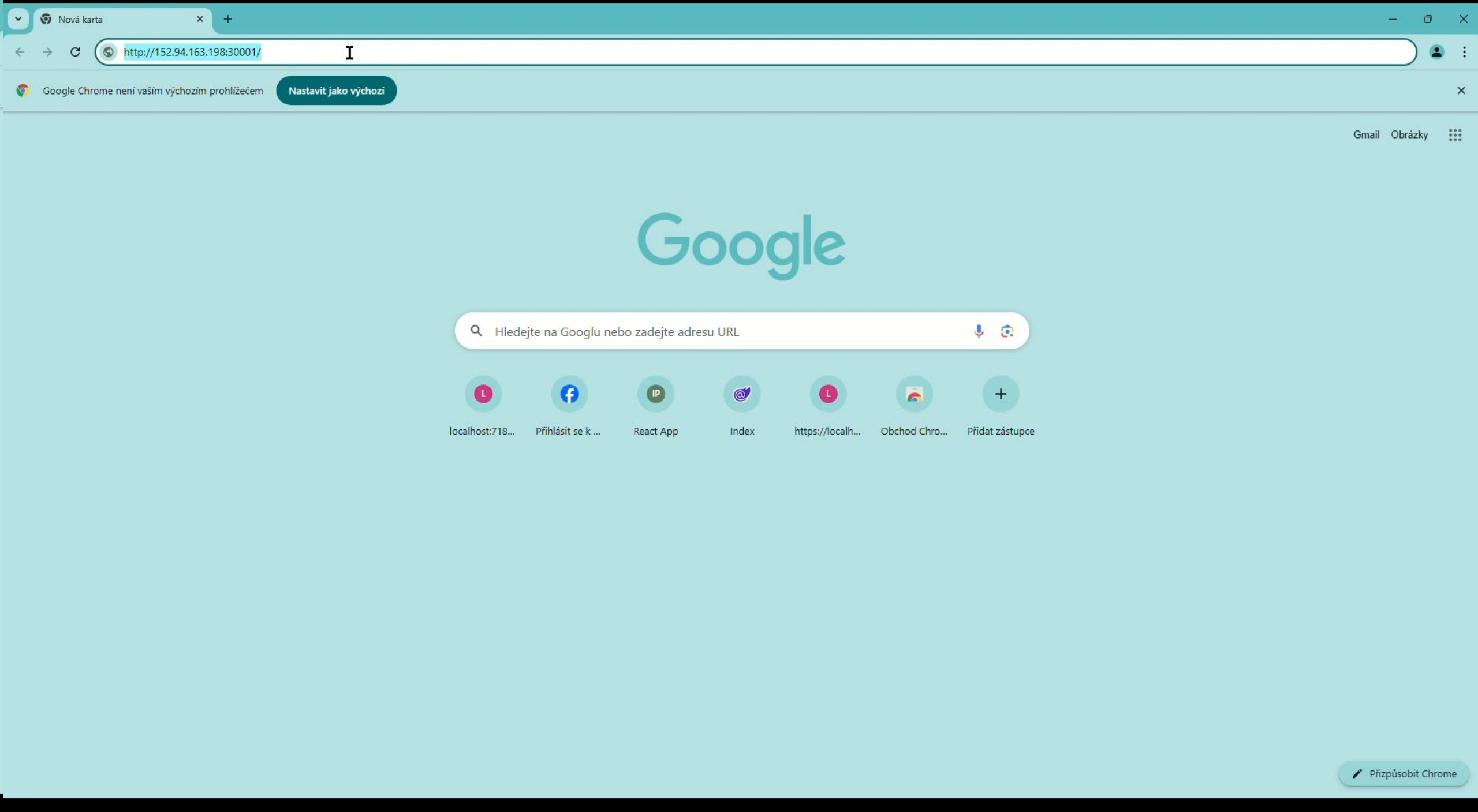
- NodePort Service Type
- Multi-stage Dockerfile
- Health and Life Checks
- Resource Restriction
- Unit Tests

## Backend - REST API

- LoadBalancer Service Type
- Horizontal Pod AutoScaling
- Resource Restriction
- Enviroment Variable Injection
- Health and Life Checks
- RootReadOnly Filesystem
- Unit Tests

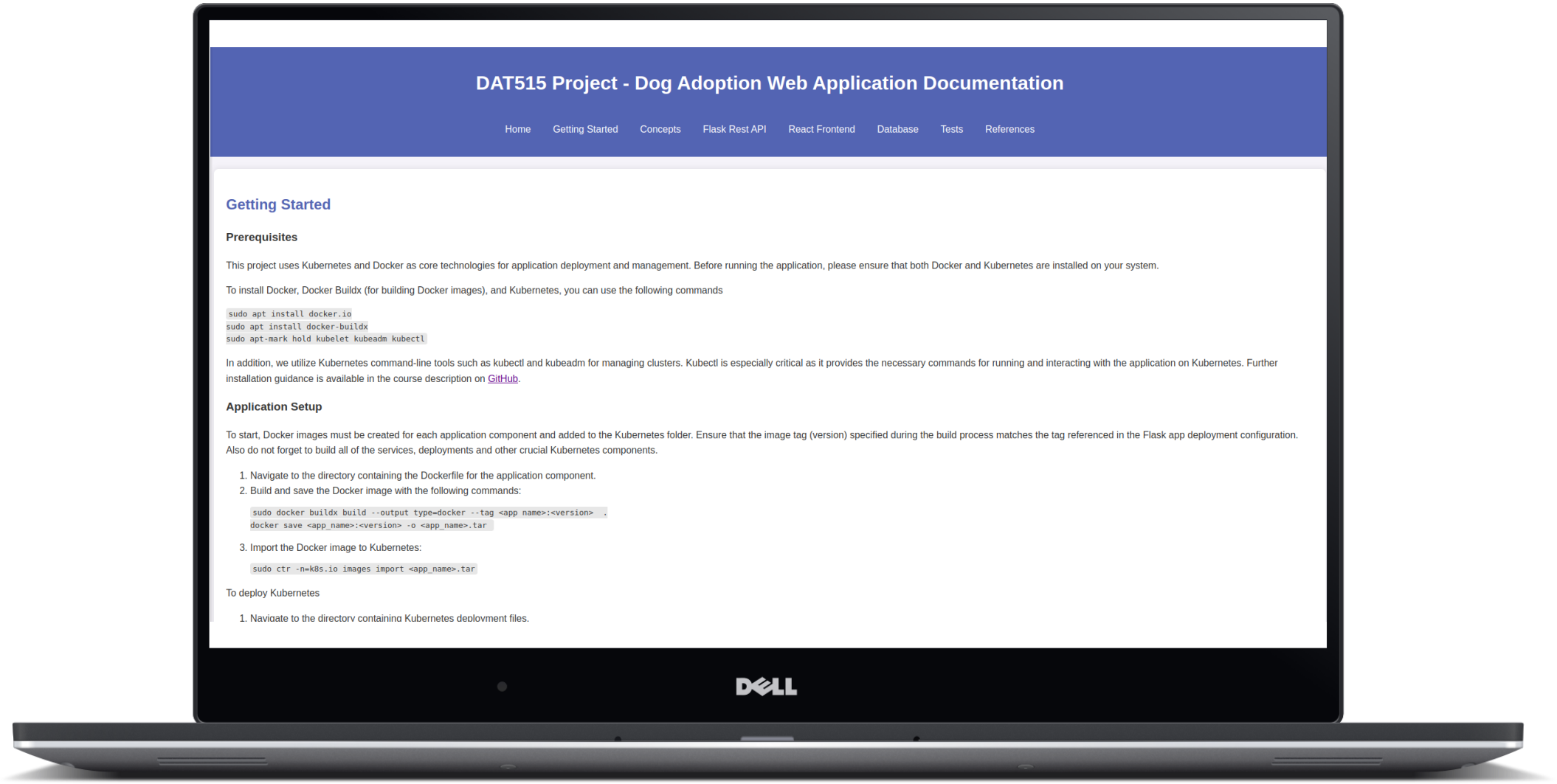
## Database

- ClusterIP Service Type
- Persistent Volume
- Persistent Volume Claim
- Kubernetes Secrets


Nová karta
http://152.94.163.198:30001/
Google Chrome není vaším výchozím prohlížečem
Nastavit jako výchozí
Gmail
Obrázky
Google
Hledejte na Googlu nebo zadejte adresu URL
localhost:718...
Přihlásit se k ...
React App
Index
https://localh...
Obchod Chro...
Přidat zástupce
Přizpůsobit Chrome

# Documentation

Detailed documentation ensures clarity and understanding of the project



# Challenges

Difficulties faced during implementation and lessons learned

- Docker and Kubernetes as new technologies
- Kubernetes poses significant complexities
- Multiple challenges faced during development
  - Image import into Kubernetes enviroment
  - Difficult database debug
  - Proper setup and testing of components
  - ...

# Conclusion

Successful implementation and deployment of dog shelter web page

- Deployment with Docker and Kubernetes
- Focus on deployment, security, scalability and proper testing
- Comprehensive documentation
- Facing multiple challenges
- Future Ideas
  - Enhancing security measures - Network Policy

# Thank You For Your Attention

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