The background of the slide features a blue gradient with a network of white lines and dots. On the left, a hand is shown reaching towards a cluster of interlocking white gears. Below the gears, another hand is shown palm-up. The overall theme is technology and development.

CS 470 Project Two Conference Presentation: Cloud Development

[Kyle Pavlack]

[October/2021]

<https://youtu.be/x7xyq6bnPc4>



Overview



- Intro
- State the purpose of the presentation: to articulate the intricacies of cloud development to both technical and nontechnical audiences.



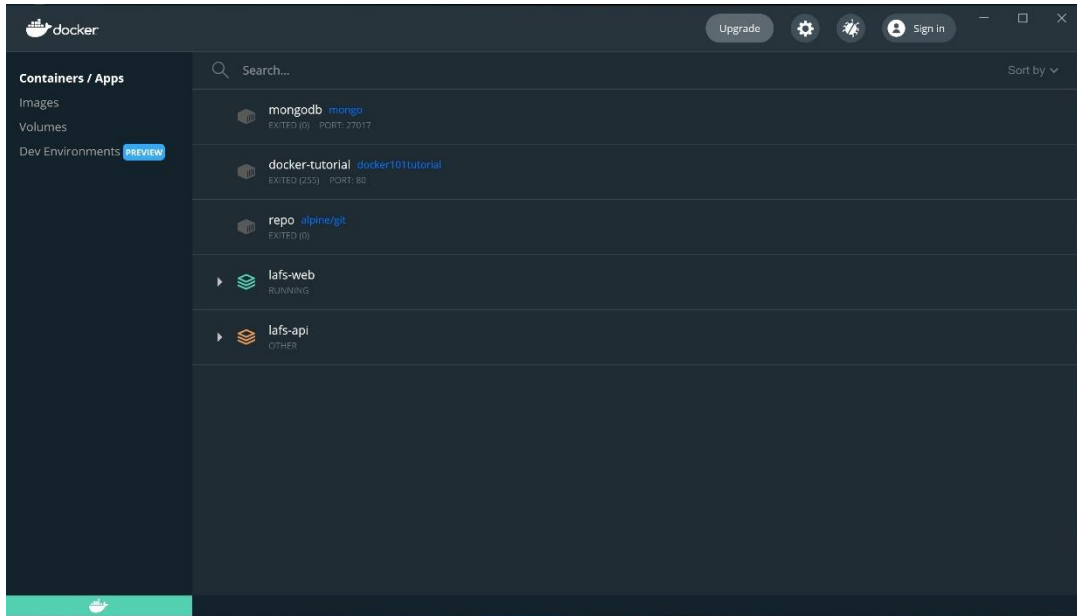
Containerization

- Explain the models used to migrate a full stack application to the cloud.
- What tools are necessary for containerization?



Orchestration

- What is the value of using Docker Compose?





The Serverless Cloud

Serverless

- What is “serverless” and what are its advantages?
- What is S3 storage and how does it compare to local storage?





The Serverless Cloud



API & Lambda

- Describe the advantages of using a serverless API.
- Explain Lambda API Logic.
- What scripts are produced in order to make this happen?
- Summarize the steps needed to integrate the frontend with the backend.



The Serverless Cloud

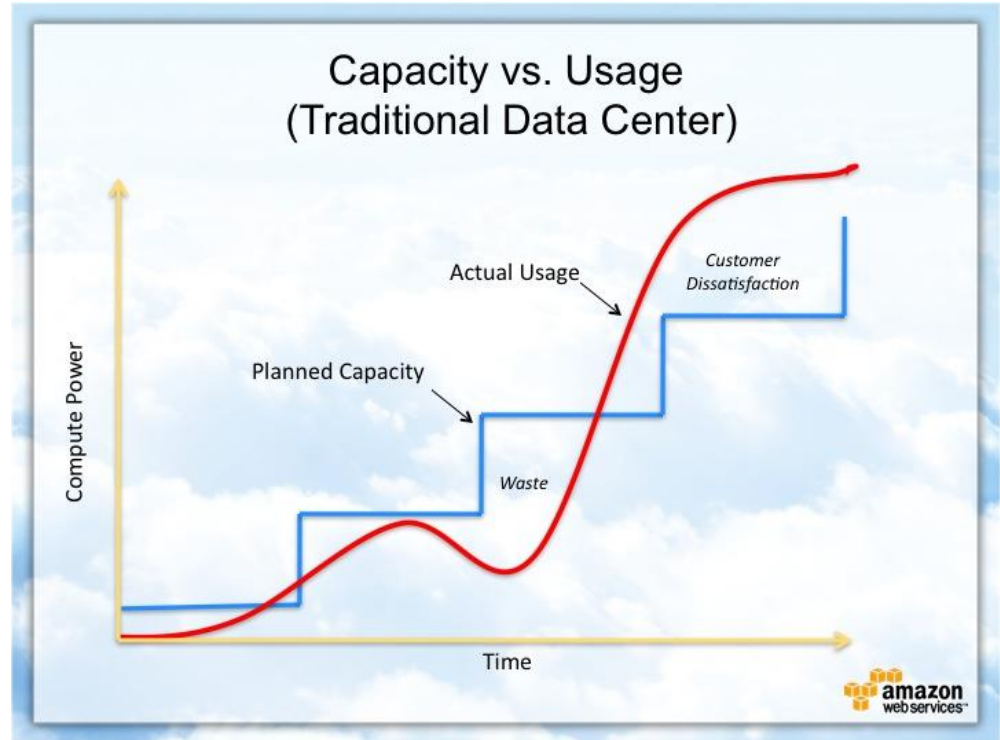


Database

- What are the data-model differences between MongoDB and DynamoDB?
- What queries did you perform?
- What scripts are produced in order to make this happen?

Cloud-Based Development Principles

- Elasticity
- Pay-for-use model





Securing Your Cloud App



Access

- How can you prevent unauthorized access?

Policies

- Explain the relationship between roles and policies.
- What custom policies were created?

API Security

- How can you secure the connection between Lambda and Gateway?
- Lambda and the database
- S3 Bucket

Optional: Break this into three separate slides.



CONCLUSION

- Briefly recount three main points that are salient to your explanation and demonstrate your understanding of cloud development.



Thank you for your time.



Resources

- By: IBM Cloud Education. (n.d.). *Containerization*. IBM. Retrieved October 12, 2021, from <https://www.ibm.com/cloud/learn/containerization>.
- *Overview of docker compose*. Docker Documentation. (2021, October 12). Retrieved October 12, 2021, from <https://docs.docker.com/compose/>.
- Taylor, D. (2021, October 6). *What is Aws Lambda? lambda function with examples*. Guru99. Retrieved October 12, 2021, from <https://www.guru99.com/aws-lambda-function.html>.
- *Why use serverless computing? | Pros and cons of ...* (n.d.). Retrieved October 12, 2021, from <https://www.cloudflare.com/learning/serverless/why-use-serverless/>.