Cloud Native

Introduction

About me

Hi there, my name is Bilal and I will Welcome you to DevOps boot camp! I am thrilled to have you join us for this exciting journey of learning and discovery.

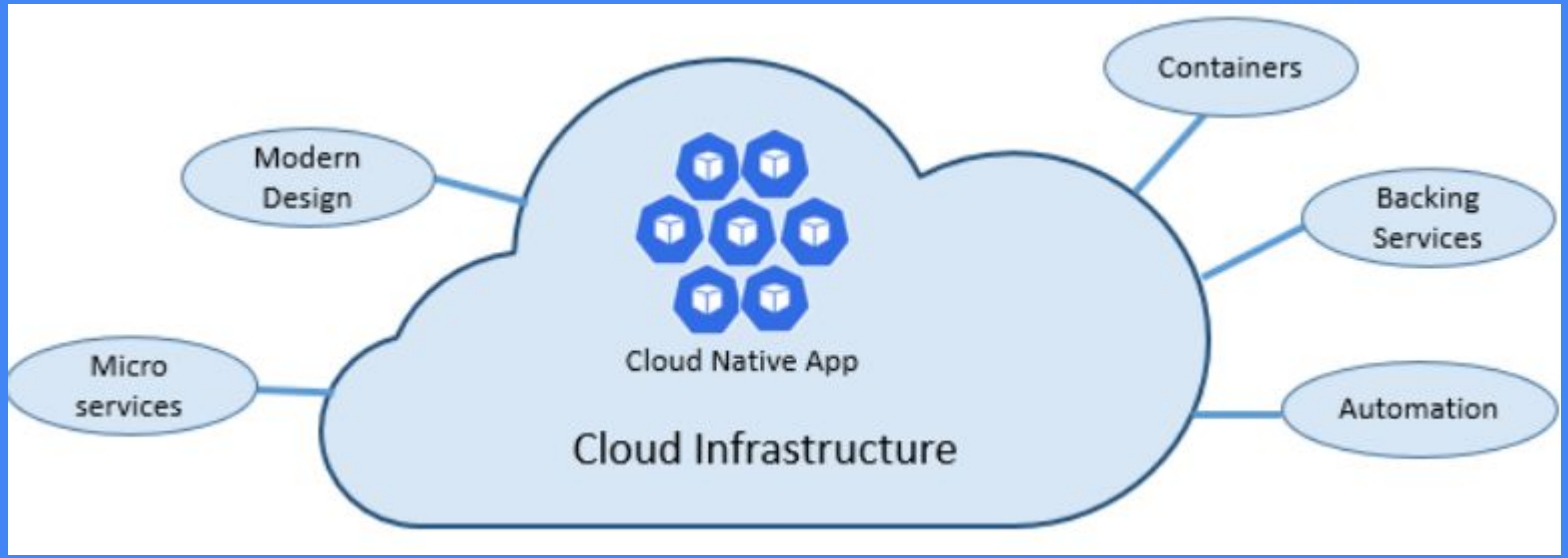
In this boot camp, we will be exploring the principles and practices of DevOps, which is a set of methodologies and tools that aims to bridge the gap between software development and operations. DevOps is an increasingly important area in the field of software engineering, as it helps organizations to streamline their processes, improve their agility, and deliver better value to their customers.

By the end of this boot camp, you will have gained a comprehensive understanding of DevOps and its key concepts, as well as practical skills in areas such as infrastructure automation, continuous integration and delivery, monitoring and logging, and more. You will be equipped with the knowledge and tools to apply DevOps principles in your own work and contribute to the success of your organization.

I am always looking to connect with other professionals in the field, share ideas and insights, and stay up to date on the latest trends and developments. I welcome the opportunity to connect with you and explore ways in which we can collaborate and support each other.

GitHub : https://github.com/BilalMaz/DevOps-Architect-BootCamp
LinkedIn : https://www.linkedin.com/in/bilalmazhar-cyber-security-consultant/

The pillars of cloud native



Introduction to Cloud native : https://www.youtube.com/watch?v=kbI9g5do1ME
12 Factor Application and its security : https://www.youtube.com/watch?v=4ya5ftn57Q0&t=1086s

What is Cloud Native Security?

Cloud-native security refers to the **practices** and **technologies** used to **secure applications** and data in a cloud-native environment. This type of security is designed specifically for applications and infrastructure that are built using cloud-native technologies, such as containers, microservices, and **serverless function**

Cloud-native security provides a set of **tools** and **best practices** to protect applications and data from threats such as **unauthorized access, data breaches**, and **cyber attacks**.

Some examples of cloud-native security practices and technologies include:

Technologies	Description
Container security	Techniques include image scanning, vulnerability management, runtime security, network segmentation, and secure orchestration
Microservices security	Techniques include service mesh, API gateways, access control, encryption, and logging.

Technologies	Description
Container security	Techniques include image scanning, vulnerability management, runtime security, network segmentation, and secure orchestration.
Infrastructure security	Techniques include service mesh, API gateways, access control, encryption, and logging.
DevSecOps	Practices include security testing, threat modeling, vulnerability management, secure coding, and continuous security monitoring
Serverless security	Techniques include code analysis, access control, encryption, and event-based logging.
Identity and access management (IAM)	Techniques include network security, identity and access management (IAM), data encryption, security groups, firewalls, and secure storage
Cloud security posture management (CSPM)	Practices include automated scanning, configuration management, compliance reporting, and policy enforcement
Data protection	Techniques include data encryption, key management, access control, and data loss prevention (DLP).
Threat detection	Techniques include intrusion detection and prevention systems (IDS/IPS), security information and event management (SIEM), and user and entity behavior analytics (UEBA).

Technologies	Description
Incident response	Practices include security incident and event management (SIEM), threat intelligence, security orchestration, and response (SOAR), and tabletop exercises
Compliance	Practices include regulatory compliance (e.g., HIPAA, PCI DSS), industry standards (e.g., ISO 27001, NIST), and security frameworks (e.g., CIS Controls, CSA CCM)

→ Cloud Native Application Security Risk
https://owasp.org/www-project-cloud-native-application-security-top-10/

→ Cloud Security Risk
https://owasp.org/www-pdf-archive/OWASP_Cloud_Top_10.pdf

→ Owasp Web application security Top 10
https://owasp.org/www-project-top-ten/

→ Owasp API security Top 10
https://owasp.org/www-project-api-security/

→ Owasp Mobile Security Top 10
https://owasp.org/www-project-mobile-top-10/

→ Owasp DevsecOps Top 10
https://owasp.org/www-project-devsecops-guideline/