



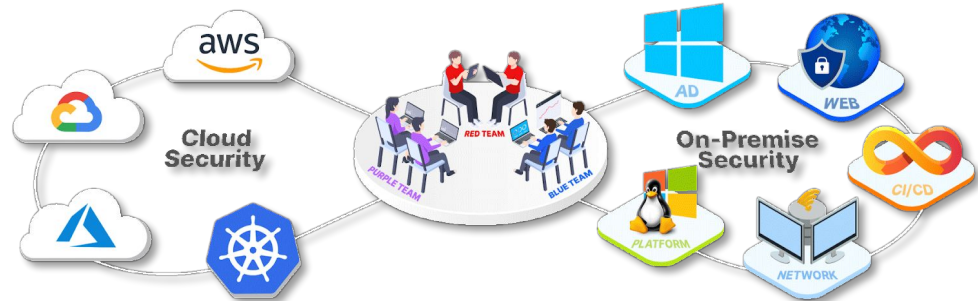
The Science of Cloud Access:

Demystifying IAM for Beginners Webinar

About CyberWarfare Labs :

CW Labs is a renowned Infosec company specializing in cybersecurity practical learning. They provide on-demand educational services. The company has 3 primary divisions :

- 1. Learning Management System (LMS) Platform**
- 2. CWL CyberSecurity Playground (CCSP) Platform**
- 3. Infinity Learning Platform**



INFINITE LEARNING EXPERIENCE

About Speaker:

Abhijeet Kumar (Security Researcher)

His research areas include Red Team Operations, Network Security, Cloud Infrastructure, and Linux Systems. Apart from this, he enjoys researching Adversarial TTPs and conducting experimenting in his homelab.

CLOUD 101

- ★ Compute resources which are globally distributed with high availability

CLOUD 101

- ★ Compute resources which are globally distributed with high availability
- ★ Ease of access & resource provisioning

CLOUD 101

- ★ Compute resources which are globally distributed with high availability
- ★ Ease of access & resource provisioning
- ★ Commonly used flavours include
 - Infrastructure as a Service (IaaS)
 - Platform as a Service (PaaS)
 - Software as a Service (SaaS)

CLOUD ACCESS 101

- ★ Ways to access cloud services:
 - Through web-based console through browser

CLOUD ACCESS 101

- ★ Ways to access cloud services:
 - Through web-based console through browser
 - With Command Line Interface (CLI)
 - e.g: AWS CLI, Azure CLI, Gcloud CLI

CLOUD ACCESS 101

★ Ways to access cloud services:

- Through web-based console through browser
- With Command Line Interface (CLI)
 - e.g: AWS CLI, Azure CLI, Gcloud CLI
- Programmatically through official Software Development Kits (SDKs) available in multiple languages
 - E.g: Boto3 (AWS), Azure SDK , Google Cloud SDK

CLOUD ACCESS 101

- ★ Credentials types used to access cloud services:
 - Username + Password (web-based console)

CLOUD ACCESS 101

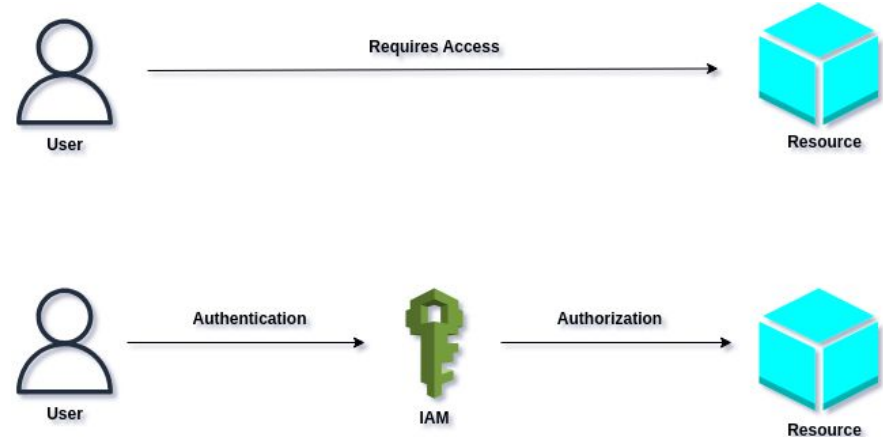
- ★ Credentials types used to access cloud services:
 - Username + Password (web-based console)
 - Access Credentials:
 - Keys,
 - Tokens
 - Service Accounts

CLOUD ACCESS 101

- ★ Credentials types used to access cloud services:
 - Username + Password (web-based console)
 - Access Credentials:
 - Keys,
 - Tokens
 - Service Accounts
 - Federated Identities/Single Sign On (SSO)

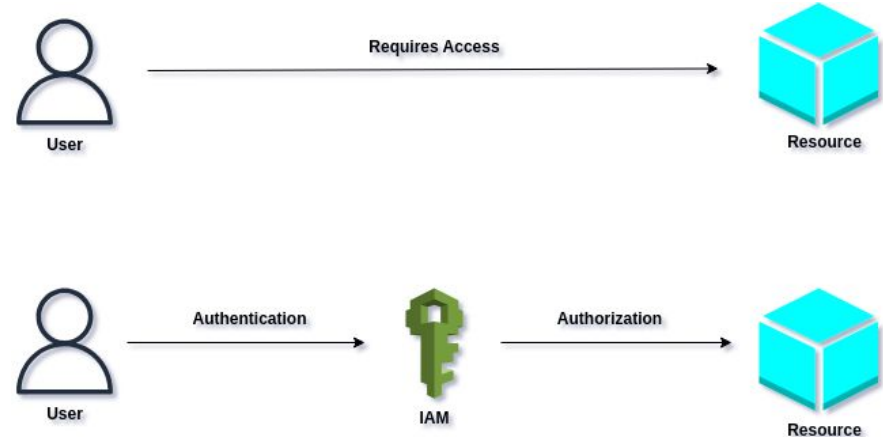
IAM 101

★ Stands for Identity & Access Management



IAM 101

- ★ Stands for Identity & Access Management
- ★ Streamlines access control through objects like policies, roles, etc



IAM 101

AUTHENTICATION

★ Part of Identity service

AUTHORIZATION

★ Part of Access Management service

IAM 101

AUTHENTICATION

- ★ Part of Identity service
- ★ Process to verify user identity

AUTHORIZATION

- ★ Part of Access Management service
- ★ Used to verify the authenticated user's access to resources

IAM COMPONENTS

Two components make IAM what it is:

★ Identity

- Used to provision user accounts/credentials

IAM COMPONENTS

Two components make IAM what it is:

★ Identity

- Used to provision user accounts/credentials

★ Access Management

- Used to grant resource access to provisioned user accounts/credentials

IAM OBJECTS

★ Policies

- Object which can be attached to other objects like users, groups

IAM OBJECTS

★ Policies

- Object which can be attached to other objects like users, groups
- Used for describing permissions

IAM OBJECTS

★ Policies

- Object which can be attached to other objects like users, groups
- Used for describing permissions

★ Roles

- Object with permissions to access specified resources

IAM OBJECTS

★ Policies

- Object which can be attached to other objects like users, groups
- Used for describing permissions

★ Roles

- Object with permissions to access specified resources
- Can be provider defined or custom made

IAM OBJECTS

★ Users

- Objects which have their own credentials

IAM OBJECTS

★ Users

- Objects which have their own credentials
- Used to access resources

IAM OBJECTS

★ Users

- Objects which have their own credentials
- Used to access resources

★ Groups

- Collection of other objects with similar attributes

IAM OBJECTS

★ Users

- Objects which have their own credentials
- Used to access resources

★ Groups

- Collection of other objects with similar attributes
- Used to manage permissions in one place

IAM IN CLOUD

★ AWS

- Resource provisioning directly in **AWS Account**

IAM IN CLOUD

★ AWS

- Resource provisioning directly in **AWS Account**

★ Azure

- Resource provisioning in containers called **Subscription**

IAM IN CLOUD

★ AWS

- Resource provisioning directly in **AWS Account**

★ Azure

- Resource provisioning in containers called **Subscription**

★ GCP

- Resource provisioning in containers called **Projects**

COMMON ACCESS MISCONFIGURATIONS

- ★ Usage of Administrative account for day-to-day tasks



COMMON ACCESS MISCONFIGURATIONS

- ★ Usage of Administrative account for day-to-day tasks
- ★ Overly permissive policies



COMMON ACCESS MISCONFIGURATIONS

- ★ Usage of Administrative account for day-to-day tasks
- ★ Overly permissive policies
- ★ Wildcard access to resources



IAM BEST PRACTICES

- ★ Define IAM policies clearly according to use cases

IAM BEST PRACTICES

- ★ Define IAM policies clearly according to use cases
- ★ Utilise Role-Based-Access-Controls (RBACs) for granting access to resources

IAM BEST PRACTICES

- ★ Define IAM policies clearly according to use cases
- ★ Utilise Role-Based-Access-Controls (RBACs) for granting access to resources
- ★ Enforce MFAs & strong password policies

IAM BEST PRACTICES

- ★ Define IAM policies clearly according to use cases
- ★ Utilise Role-Based-Access-Controls (RBACs) for granting access to resources
- ★ Enforce MFAs & strong password policies
- ★ Last but not least, audit IAM regularly

DEMO TIME!

**...WHAT COULD POSSIBLY GO
WRONG**

Certified Cyber Security Engineer (CCSE)



GET

20%

OFF

USE CODE

"CCSE20OFF"

ENROLL NOW

Now at

~~\$ 199~~

\$ 159.20



Thank You

**For Professional Red Team / Blue Team / Purple Team,
Cloud Cyber Range labs / Courses / Trainings, please contact**

info@cyberwarfare.live

To know more about our offerings, please visit:

<https://cyberwarfare.live>