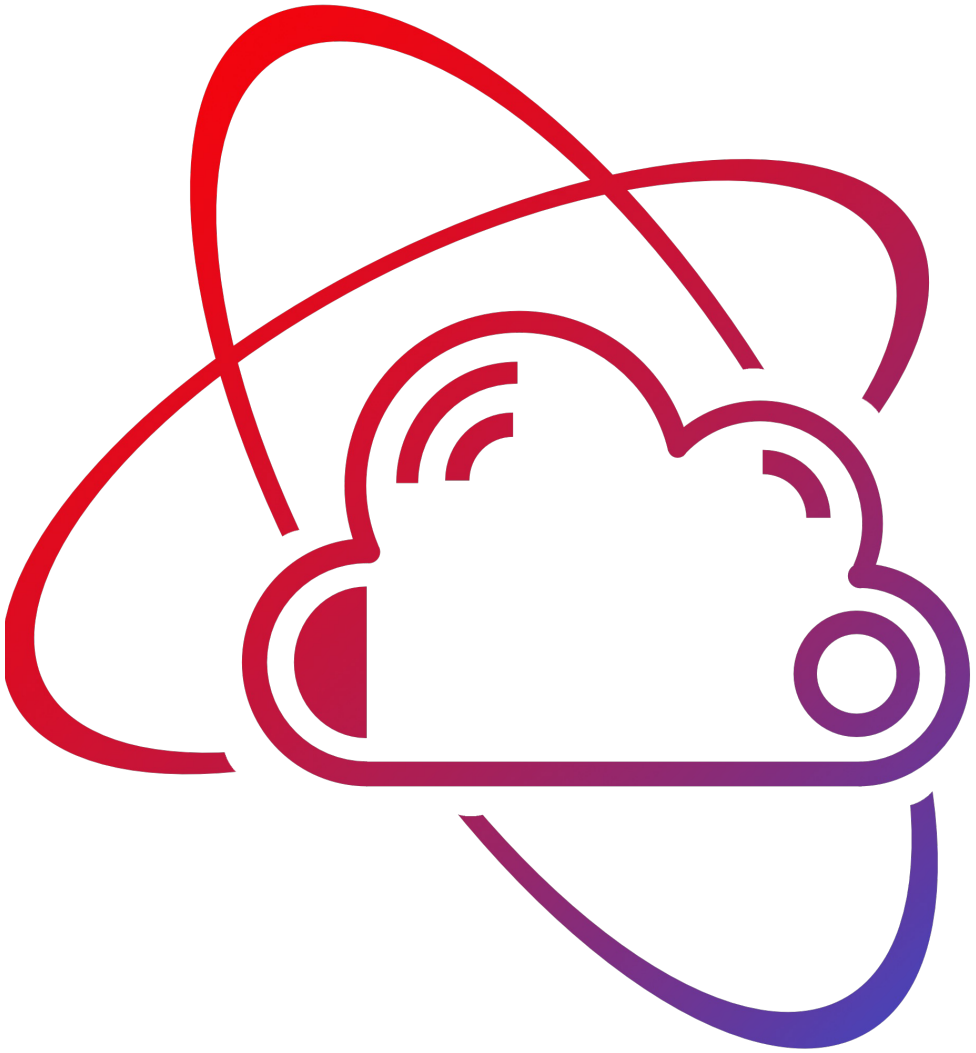
Cloud Computing Architecture

Week 6 - Introduction



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Acknowledgement of Country

We respectfully acknowledge the Wurundjeri People of the Kulin Nation, who are the Traditional Owners of the land on which Swinburne's Australian campuses are located in Melbourne's east and outer-east, and pay our respect to their Elders past, present and emerging.

We are honoured to recognise our connection to Wurundjeri Country, history, culture, and spirituality through these locations, and strive to ensure that we operate in a manner that respects and honours the Elders and Ancestors of these lands.

We also respectfully acknowledge Swinburne's Aboriginal and Torres Strait Islander staff, students, alumni, partners and visitors.

We also acknowledge and respect the Traditional Owners of lands across Australia, their Elders, Ancestors, cultures, and heritage, and recognise the continuing sovereignties of all Aboriginal and Torres Strait Islander Nations.

In this Presentation:

- AWS Security Services Overview
- Introduction to AWS IAM
- Introduction to AWS Authentication
- Introduction to AWS Security

Image from: https://aws.amazon.com/security/

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AWS Security Services Overview

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Week 6 – Introduction: AWS Security Services Overview

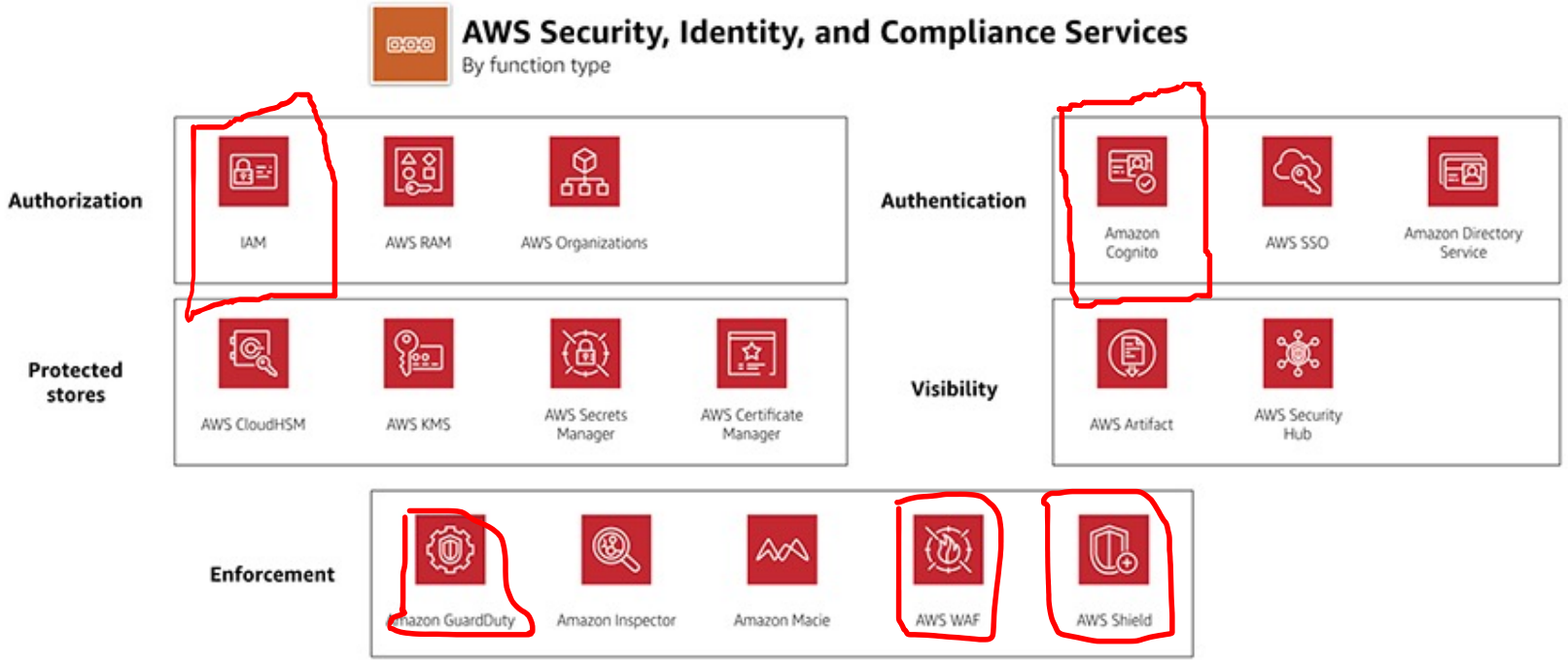

Image from: https://aws.amazon.com/blogs/aws/aws-heroes-putting-aws-security-services-to-work-for-you/

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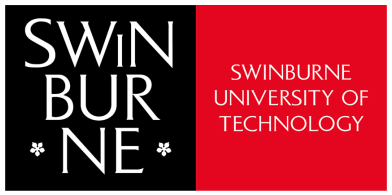
Introduction to AWS IAM



AWS Identity and Access Management (IAM)

- Use **IAM** to manage access to **AWS resources** –
  - A resource is an entity in an AWS account that you can work with
  - Example resources; An Amazon EC2 instance or an Amazon S3 bucket
- *Example* – Control who can terminate Amazon EC2 instances
- Define fine-grained access rights –
  - **Who** can access the resource
  - **Which** resources can be accessed and what can the user do to the resource
  - **How** resources can be accessed
- IAM is a no-cost AWS account feature

AWS Identity and Access Management (IAM)

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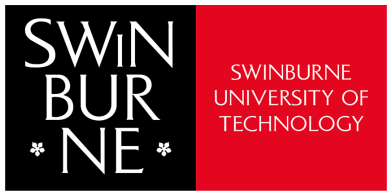
Introduction to AWS Authentication



Amazon Cognito

Amazon Cognito features:

- **Adds user sign-up, sign-in, and access control to your web and mobile applications**.
- Scales to millions of users.
- Supports sign-in with social identity providers, such as Facebook, Google, and Amazon; and enterprise identity providers, such as Microsoft Active Directory via Security Assertion Markup Language (SAML) 2.0.

Amazon Cognito

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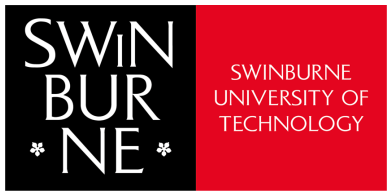
Introduction to AWS Security



AWS Shield

- **AWS Shield** features:
  - Is a managed distributed denial of service (DDoS) protection service
  - Safeguards applications running on AWS
  - Provides always-on detection and automatic inline mitigations
  - *AWS Shield Standard* enabled for at no additional cost. *AWS Shield Advanced* is an optional paid service.
- Use it to **minimize application downtime and latency.**

AWS Shield

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Week 6 – Introduction: Introduction to AWS Security

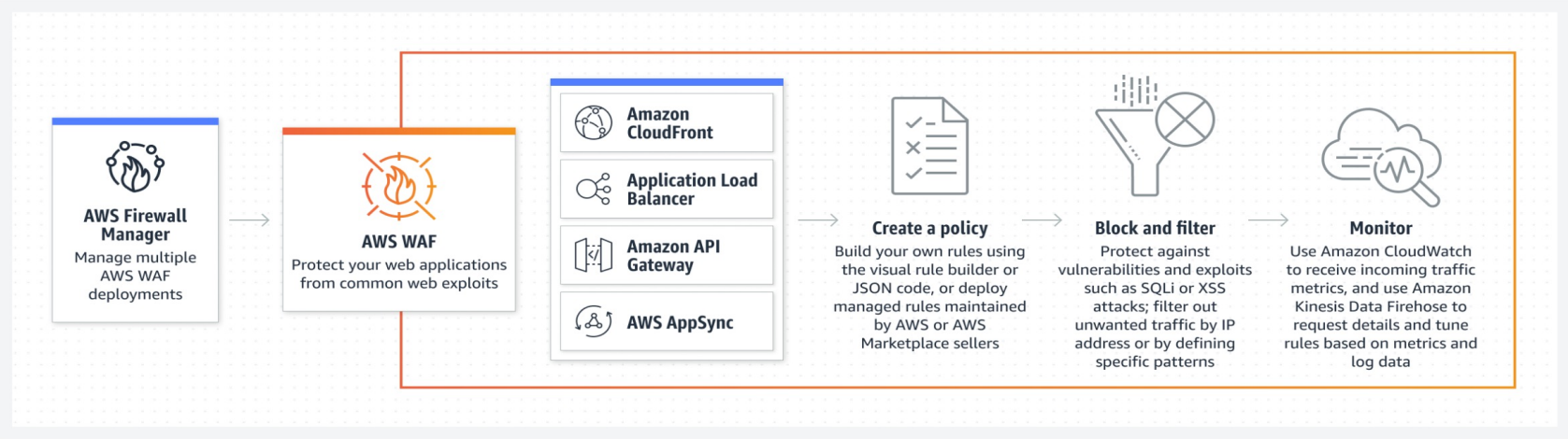

Image from: https://aws.amazon.com/waf/

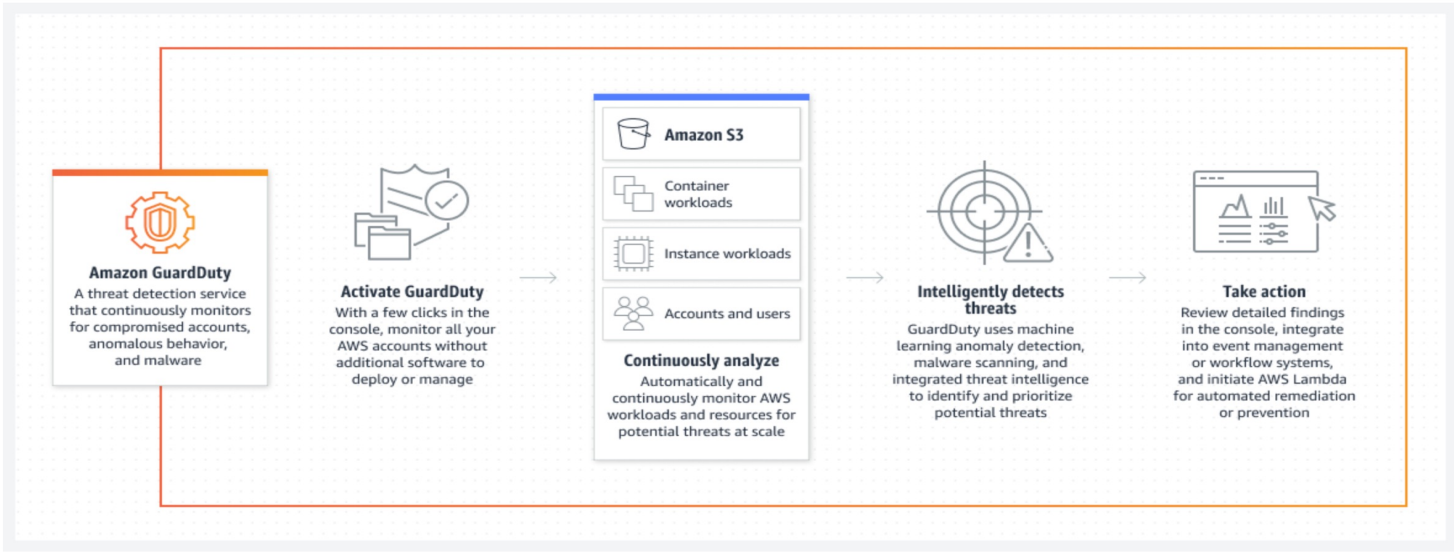

Image from: https://aws.amazon.com/guardduty/

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