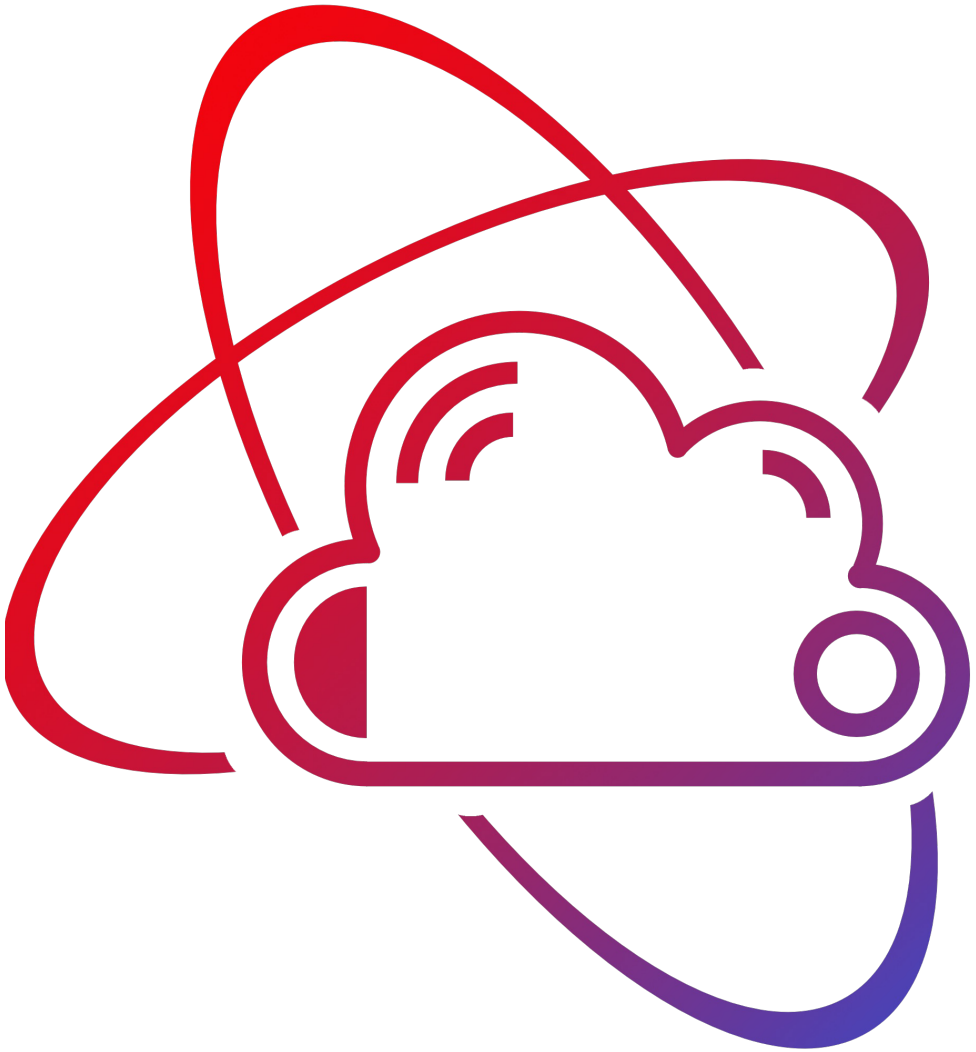
Cloud Computing Architecture

Week 3 - 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.

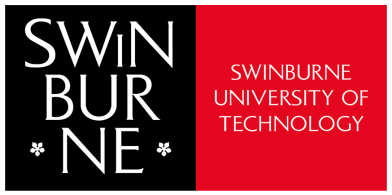
We also acknowledge and respect the Traditional Owners of lands across Australia, their Elders, Ancestors, cultures, and heritage, and recognise the continuing sovereignties of all Aboriginal and Torres Strait Islander Nations.

In this Presentation:

- AWS Networking Services Overview
- Introduction to Amazon VPC
- Assignment 1a Reminder (Due Week 4)

Image from: https://digitalcloud.training/aws-networking-services/

AWS Networking Services Overview



AWS Networking Services Overview

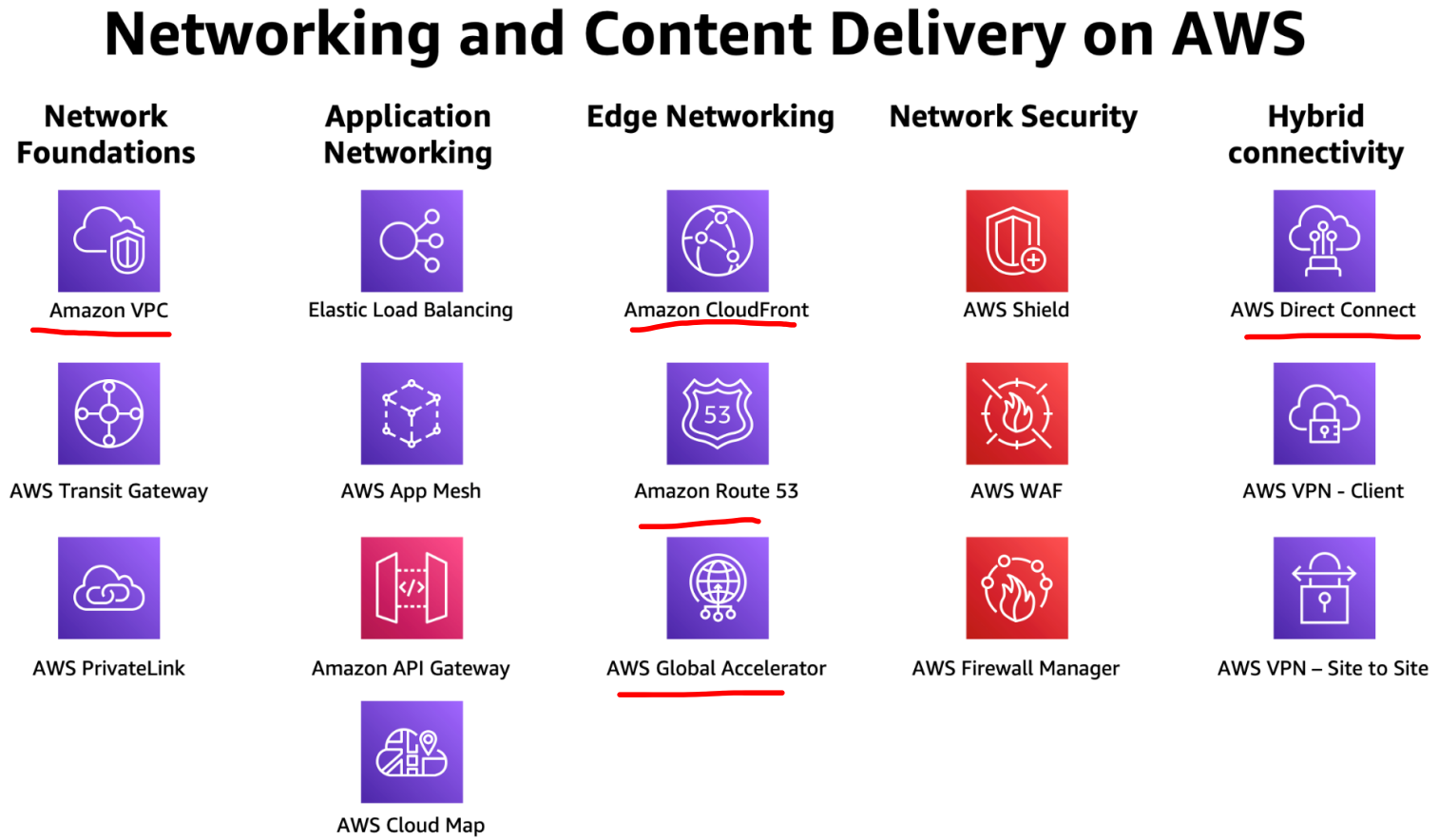
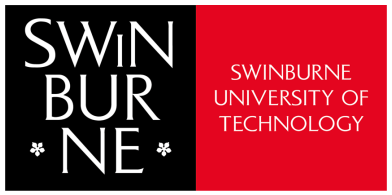


Image from: https://catalog.workshops.aws/general-immersionday/en-US/basic-modules/20-vpc

Introduction to Amazon VPC



Amazon VPC

Amazon VPC

- Enables you to provision a logically isolated section of the AWS Cloud where you can launch AWS resources in a virtual network that you define
- Gives you control over your virtual networking resources, including:
  - Selection of IP address range
  - Creation of subnets
  - Configuration of route tables and network gateways
- Enables you to customize the network configuration for your VPC
- Enables you to use multiple layers of security

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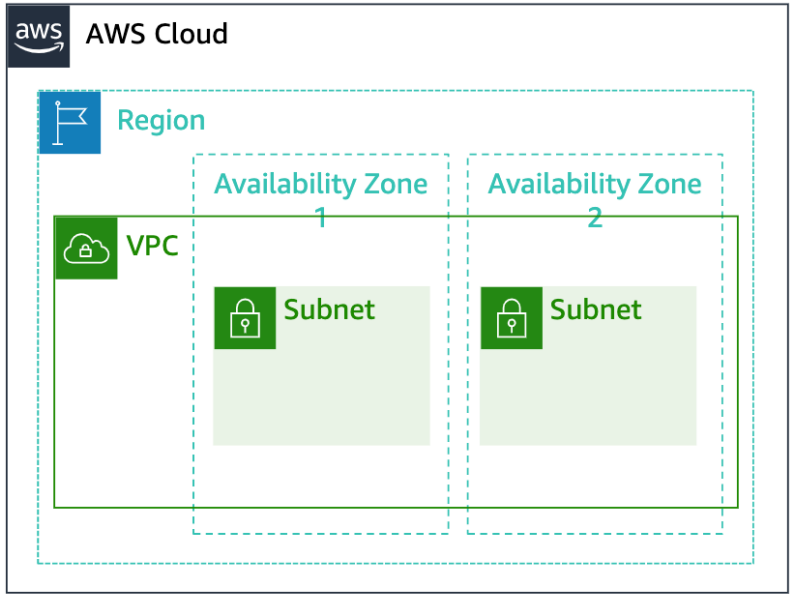
VPCs and subnets

- VPCs:
  - Logically isolated from other VPCs
  - Dedicated to your AWS account
  - Belong to a single AWS Region and can span multiple Availability Zones
- Subnets:
  - Range of IP addresses that divide a VPC
  - Belong to a single Availability Zone
  - Classified as public or private



Assignment 1a (Due Week 4)

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Week 3 – Introduction: Introduction to Amazon VPC

Assignment 1a

Publish | Edit | ⋮

Assignment Specification

No submission required. Assessment by demonstration in your tutorial Week 4.

Contribution to final assessment: 5%, graded as pass/fail.

Note: All AWS resources in assignments are to be implemented in a Lab environment accessible through AWS canvas (**AWS Academy Learner Lab**). Please note that this classroom is NOT the same as the sandbox in ACA/ACF courses that you use to do your weekly labs.
This classroom comes with a $100 credit, use it carefully (turn off resources when not in use to save costs, etc.)

Objectives:

1. Get familiar with the AWS management console.
2. Launch your own EC2 instance.
3. Deploy your first PHP web page (PhotoAlbum) on Apache web server on your EC2 instance.

***Note**: In this introductory assignment you will create an EC2 Web server in the default VPC. In general, the default VPC is suitable only for experimental / toy deployments, and its use is considered bad practice for production resources. In the next assignments, you will create your own secure VPC.*

Supporting materials:

Auto Setup EC2 with script tutorial: Auto Setup EC2 with script.pdf

EC2 setup bash script: EC2 setup script.txt

Remote access to an EC2 instance tutorial: Remote Access to an EC2.pdf

Remote access to an EC2 instance (Mac) tutorial: Remote Access to an EC2 from a Mac.pdf