

Introduction to AWS

INTRODUCTION TO AWS



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Welcome to AWS: your cloud journey begins here



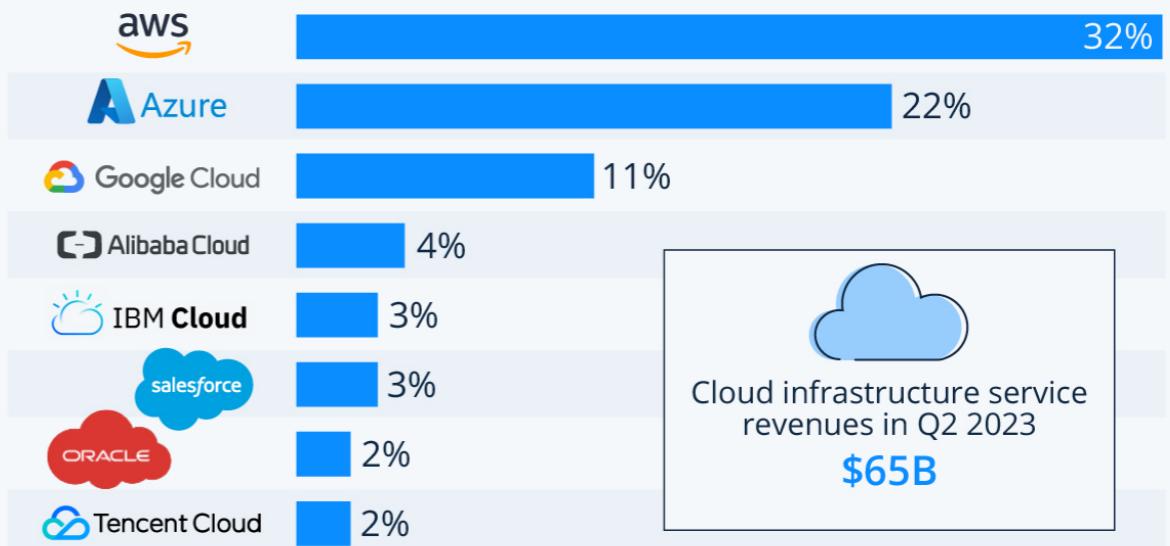
- AWS = Amazon Web Services
- World's most comprehensive and broadly adopted cloud platform

Why is AWS a big deal?

- Market Leader in cloud computing
- Trusted by millions of customers
- Over 200 fully featured services

Amazon Maintains Lead in the Cloud Market

Worldwide market share of leading cloud infrastructure service providers in Q2 2023*



* Includes platform as a service (PaaS) and infrastructure as a service (IaaS) as well as hosted private cloud services

Source: Synergy Research Group



statista

¹ <https://www.statista.com/chart/18819/worldwide-market-share-of-leading-cloud-infrastructure-service-providers/>

AWS is used everywhere!

A close-up photograph of a computer monitor displaying a block of PHP code. The code is part of a theme setup function, specifically handling the 'incode_starter_setup' hook. The monitor is positioned on a desk with a dark keyboard visible at the bottom.* @link https://developer.wordpress.org/themes/basics/adding-support-for-more-themes/

```
* @package _5
```

```
if ( ! function_exists( 'incode_starter_setup' ) ) :
```

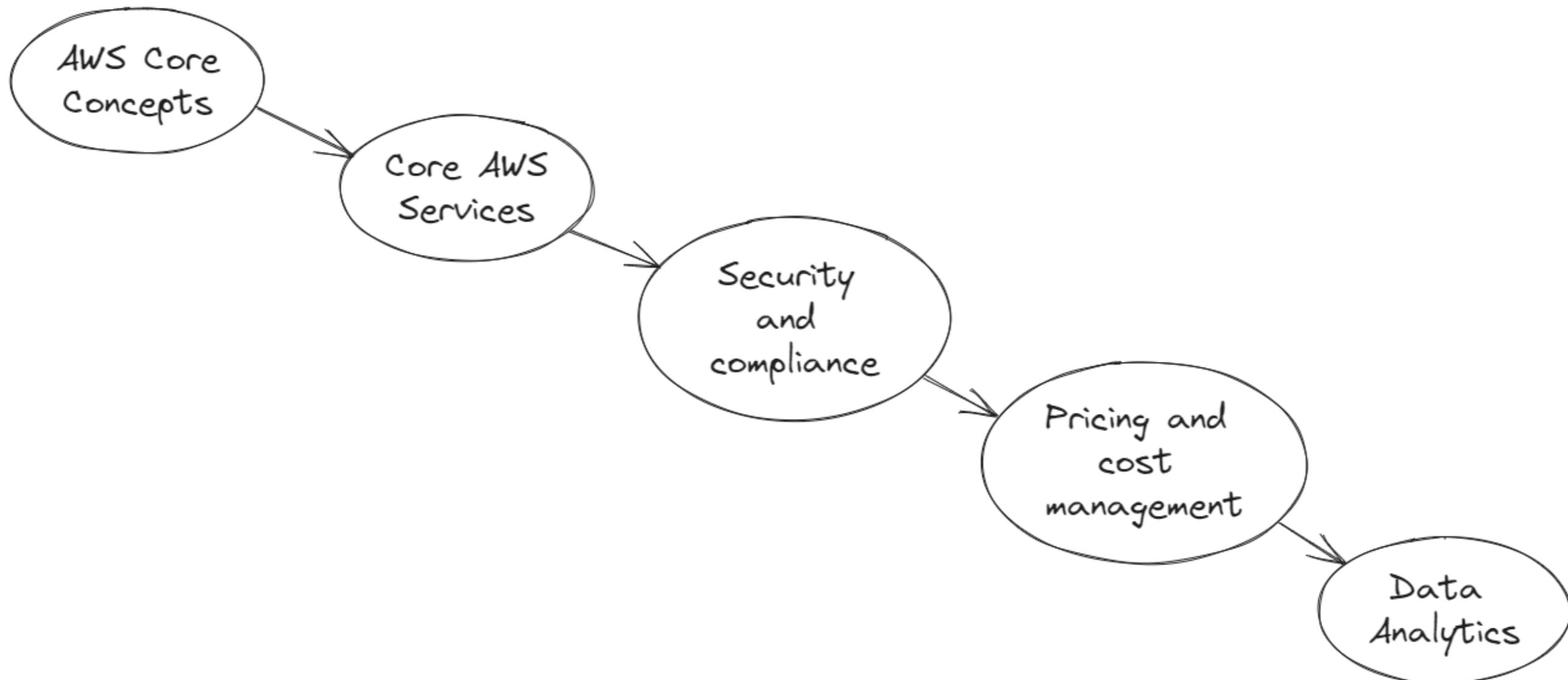
```
    /**
     * Sets up theme defaults and registers support for various WordPress features.
     */
    function incode_starter_setup() {
        /*
         * Note that this function is hooked into the init hook. The init hook is too late for some hooks,
         * runs before the after_setup_theme hook. If you're building a theme based on another theme,
         * as indicating support for post thumbnails.
         */
        add_theme_support( 'post-thumbnails' );
        /*
         * Make theme available for translation.
         * Translations can be filed in the /languages/ directory.
         * If you're building a theme based on another theme, make sure to change the domain for
         * to change "incode_starter".
         */
        load_theme_textdomain( 'incode-starter', get_stylesheet_directory() );
    }
}
```

What can you do with AWS?

- Host websites and applications
- Store, process, and analyze data
- Develop new apps and services



What's in store: your AWS journey



Chapter 1 highlights



- AWS overview
- Significance of AWS
- Core service domains
- Global architecture

Chapter 2 highlights



- Fundamentals of cloud computing
- AWS Compute services
- AWS Storage services
- AWS Database services

Chapter 3 highlights



- AWS Security and Compliance
- AWS Pricing and Cost Management
- Data analytics in AWS
- Role of analytics in AWS

Your AWS adventure begins now!



Let's practice!

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AWS foundations and core service domains

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AWS core service domains: the cosmic pillars

- Compute



- Storage



- Database



- Networking



Compute: the powerhouse star

- Compute = sun in our AWS solar systems
- Main processing machine
- Essential for:
 - Running applications
 - Analyzing data
 - Executing workflows



Storage: the vast cosmic vault



- Preserves data in various forms
- Foundation for building applications, websites, or databases
- Examples:
 - Temporary caches
 - Long-term archives

Database: the grand librarian

- Structures and organizes data
- Makes sure information is efficiently retrievable
- Examples:
 - Retrieve real-time data
 - Brings up records from decades ago



Networking: cosmic webways



- Ensures smooth communication and data flow
- Examples:
 - Provides secure connections
 - Optimizes data transfer
 - Ensures seamless interactivity.

Deep dive: from bookstore to real world

- Compute: handles processing of user requests, from item searches to checkouts
- Storage: Maintains product images, descriptions, and user transaction histories
- Database: organizes product listings, manages user profiles, and tracks inventory
- Networking: guarantees secure and fast user access, and connects the platform to external systems like payment processors



Let's practice!

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AWS global architecture: spanning the globe

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AWS's geographical diversity



AWS data centers: the cloud's star clusters

- Data centers in each region
- Highly secure, reliable, and high-speed



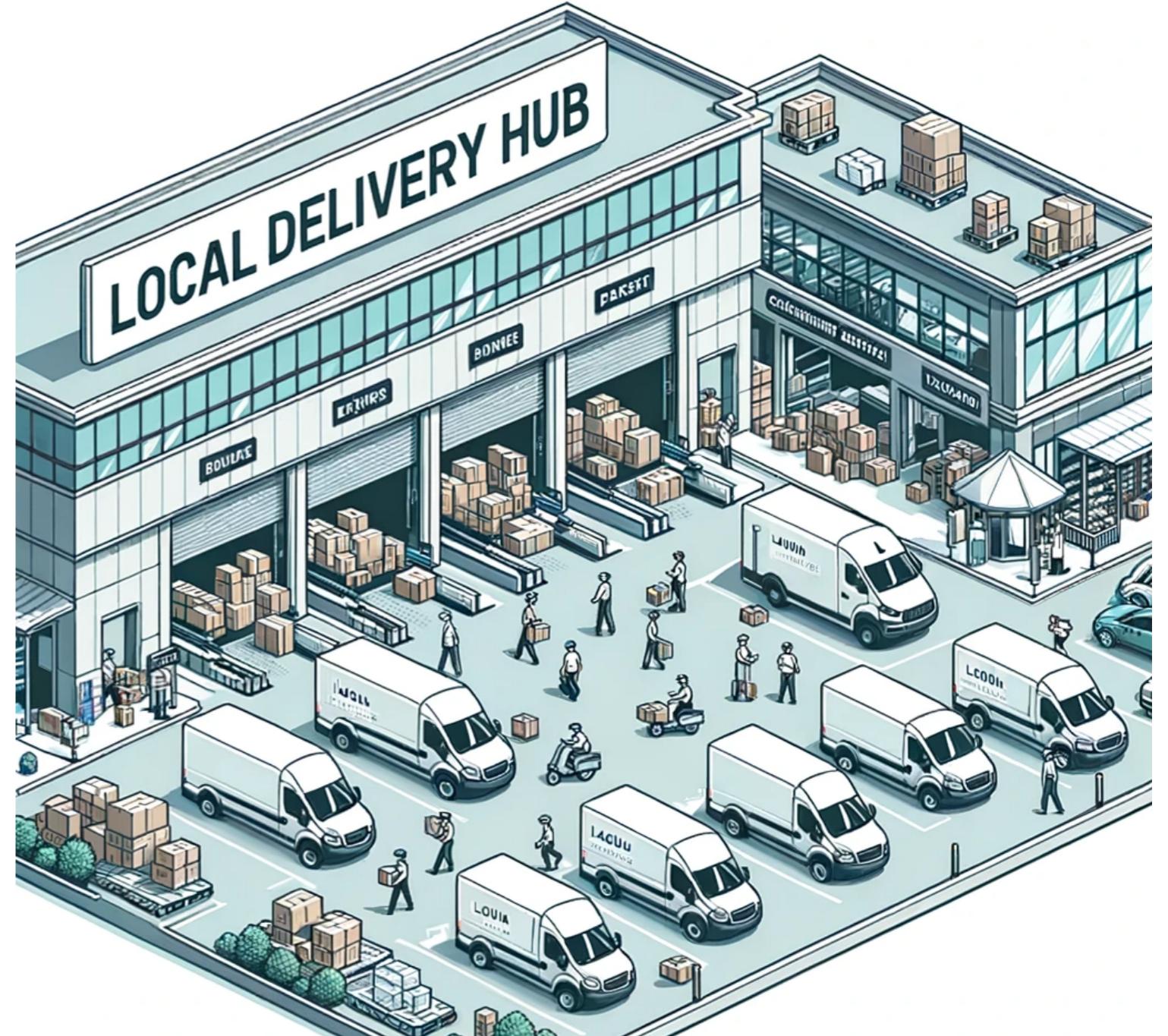
Redundancy & high availability

- Multiple Availability Zones (AZs) per region
- Each AZ is one or more discrete data centers



Edge locations: speed of light

- Over 400 Edge Locations worldwide
- Stores copies of data
- Faster content delivery with AWS CloudFront



Black Friday: AWS global architecture in action

Data Centers

- Core processing and data storage
- Scalable resources to manage the surge in traffic

Availability Zones

- Redundancy to prevent service disruptions
- Multiple data centers ready to take over the load if one faces an issue

Edge Locations

- Fast content delivery to global customers
- AWS CloudFront caching content closer to users for lower latency



Let's practice!

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