



Getting Started with AWS



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Introduction to AWS

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Introduction to AWS

What is AWS?



- AWS stands for **Amazon Web Services**.
- Amazon Web Services (AWS) is the world's most comprehensive and broadly adopted **Cloud Platform**.

Introduction to AWS

What is AWS?



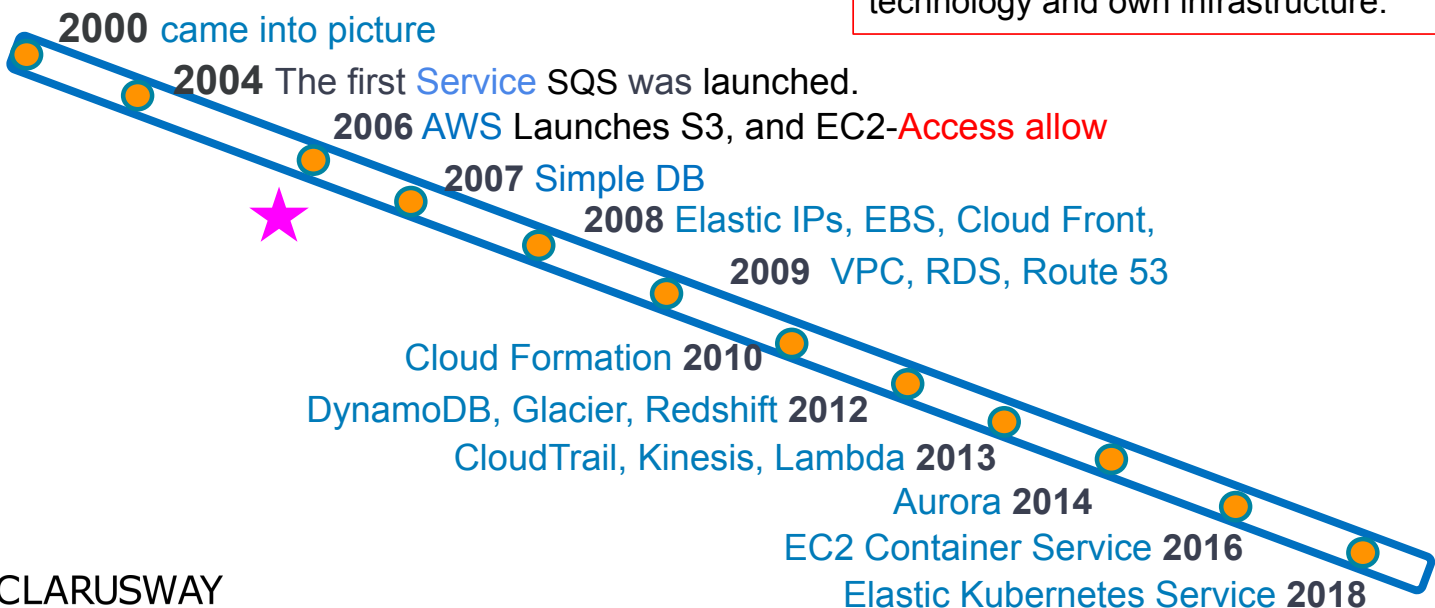
- AWS offers **over 200** fully featured services
- Millions of customers are using AWS to **lower costs, become more agile, and innovate faster.**

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Introduction to AWS

History of AWS

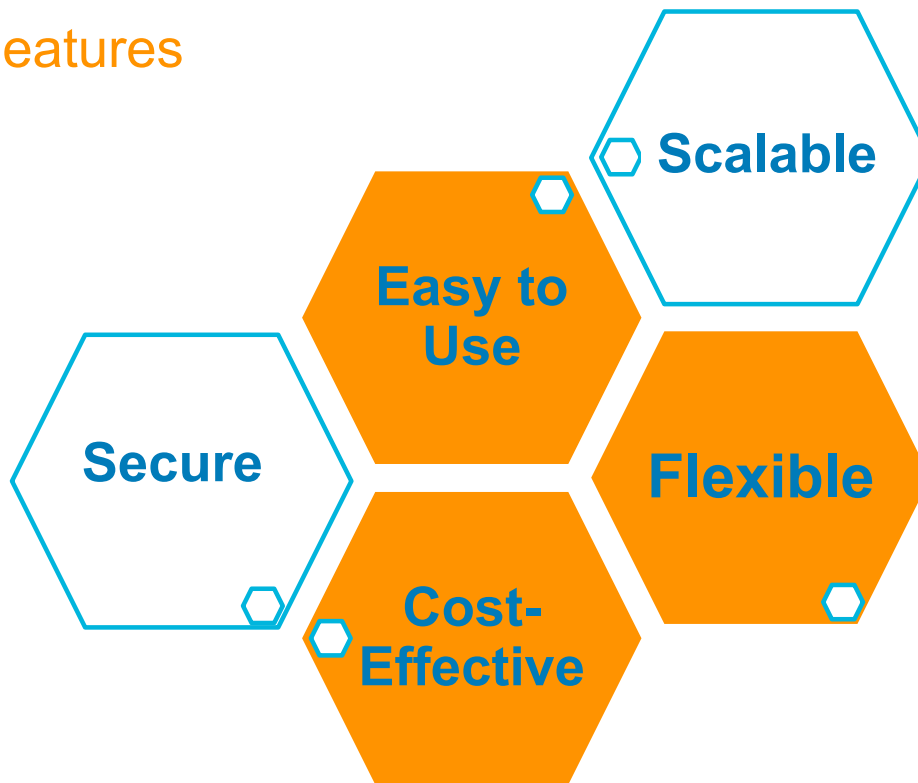
AWS launched its **first service** in 2004. Over the years, many new services were put into service. But in this diagram, **the real breaking point started in 2006**, when AWS allowed developer begin to access to Amazon's own back-end technology and own infrastructure.



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Introduction to AWS

AWS Features



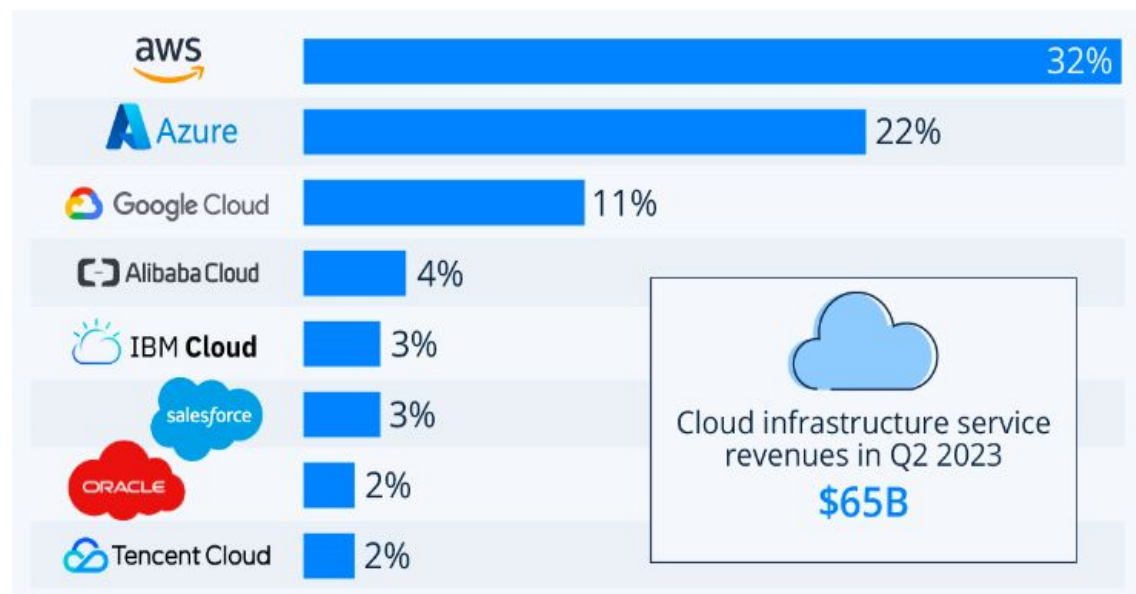
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Introduction to AWS

AWS Market Share

AWS 32%
Azure 22%,
Google Cloud 11%,
Alibaba Cloud 4%
IBM 3%
Others 28%.



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Introduction to AWS

AWS Pros

- AWS offers more than **5 times the computation capacity** in use compared to the aggregate of the other 14 leading market providers.
- With hundreds of thousands of customers operating every possible use case on AWS in **245 countries and territories**.
- Thousands of independent software vendors such as **SAP, Oracle, Adobe, Microsoft**, etc.
- Amazon Web Services currently **supports over 7,500 government agencies and 14000 educational institutions**.

Introduction to AWS

AWS Cons

- Sometimes a difficult learning curve for large companies
- Billing can be confusing
- Amazon's EC2 Limits
- Common Cloud Computing problems





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What does AWS offer?

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What does AWS offer?

AWS Services

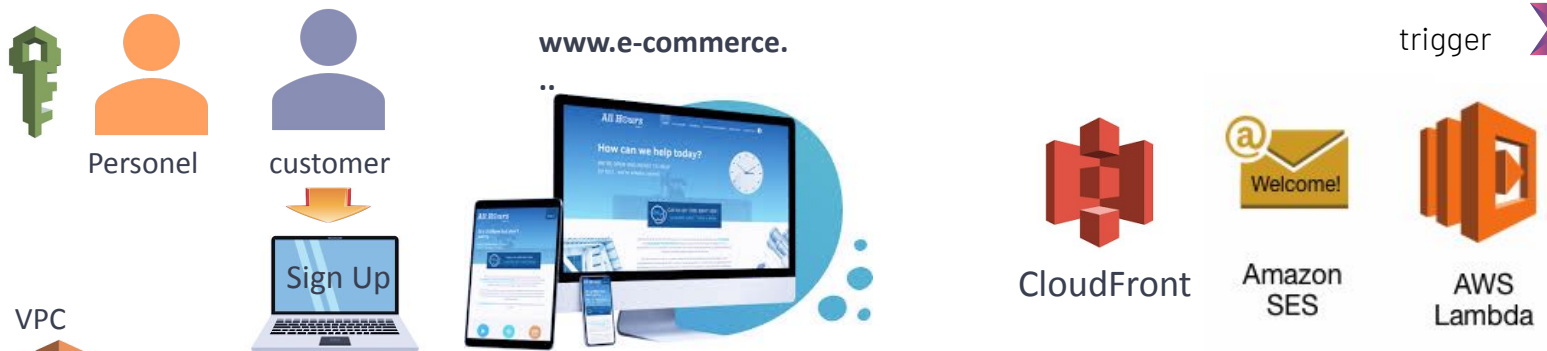


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What does AWS offer?



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VPC



Web Server work in EC2 machine

(nginx-apache httpd)

- Auto Scaling
- Load Balancing

- Register domain name of the website
- Publishing on Internet
- Routing –region-language

- Best seller images,
- Inventory List etc.

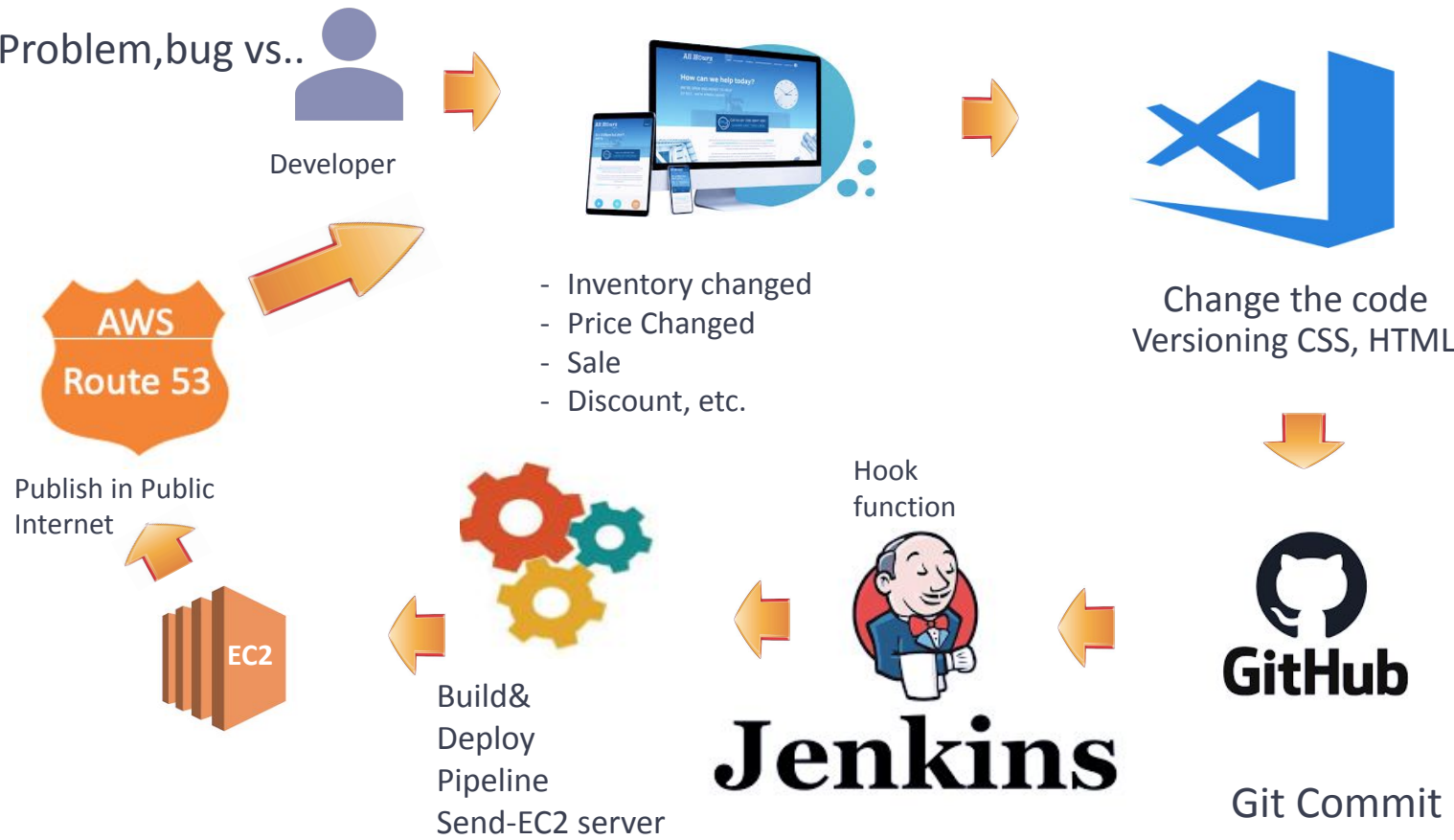
- Data Log record
- Customer info
- System Backups



S3



RDS



AWS Well-Architected Framework 6 Pillars

Operational Excellence Pillar



Security Pillar



Reliability Pillar



Performance Efficiency Pillar



Cost Optimization Pillar



Sustainability Pillar



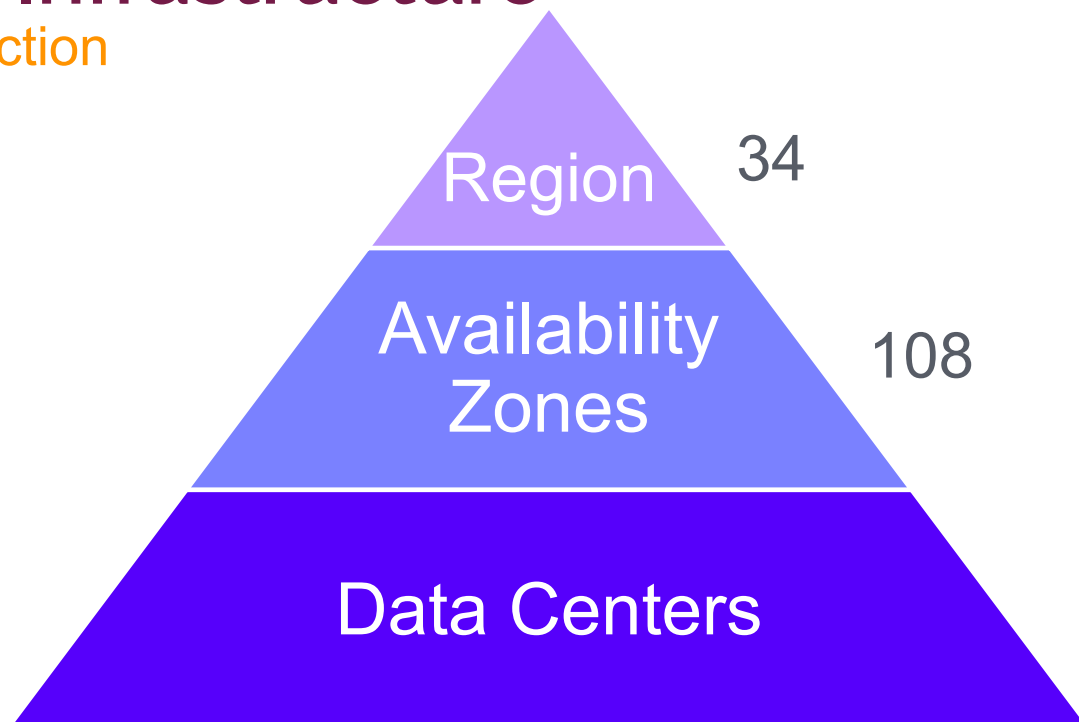


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AWS Infrastructure

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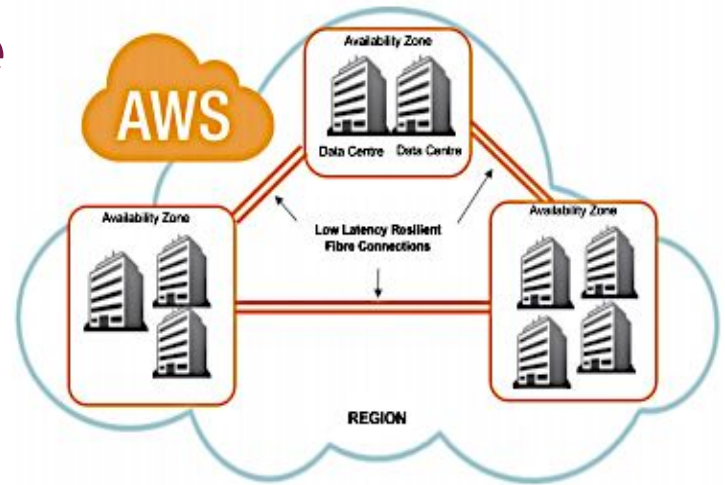
AWS Infrastructure Introduction



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AWS Infrastructure

Introduction



- Availability Zones consist of one or more discrete Data Centers
- Multiple Availability Zones in AWS Region

AWS Infrastructure

AWS Regions

34 Geographic Regions

N. Virginia is the region with the most service-support. In the other regions, not all [services](#) of AWS are in progress.



- Current Regions
- New Regions coming soon

GO

AWS Infrastructure

Factors Impacting Region Selection



**Governance and
Legal Requirements**



Latency



Cost



**Service
availability**

AWS Infrastructure

AWS Availability Zones



AWS Infrastructure

AWS Availability Zones

- An Availability Zone is a facility where the data centers are located.
- There are currently 108 Availability Zones.
- All AZ's in an AWS region are interconnected with metro fiber.
- All traffic between AZ's is encrypted.
- AZ's are physically separated by a meaningful distance, many kilometers, from any other AZ, although all are within 100 km (60 miles of each other).

AWS Infrastructure

AWS Data Centers

- The data center infrastructure consists of **physical or hardware-based tools and components**.
- AWS data centers are **secure** by design.



Northern Virginia Data Center

AWS Infrastructure

AWS Local Zones

NETFLIX

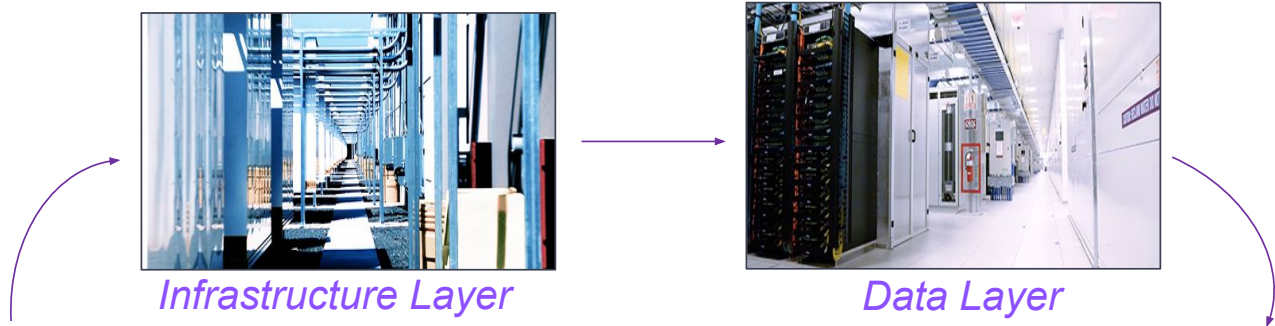


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AWS Infrastructure

AWS Data Centers Layers



Perimeter Layer



Environmental Layer

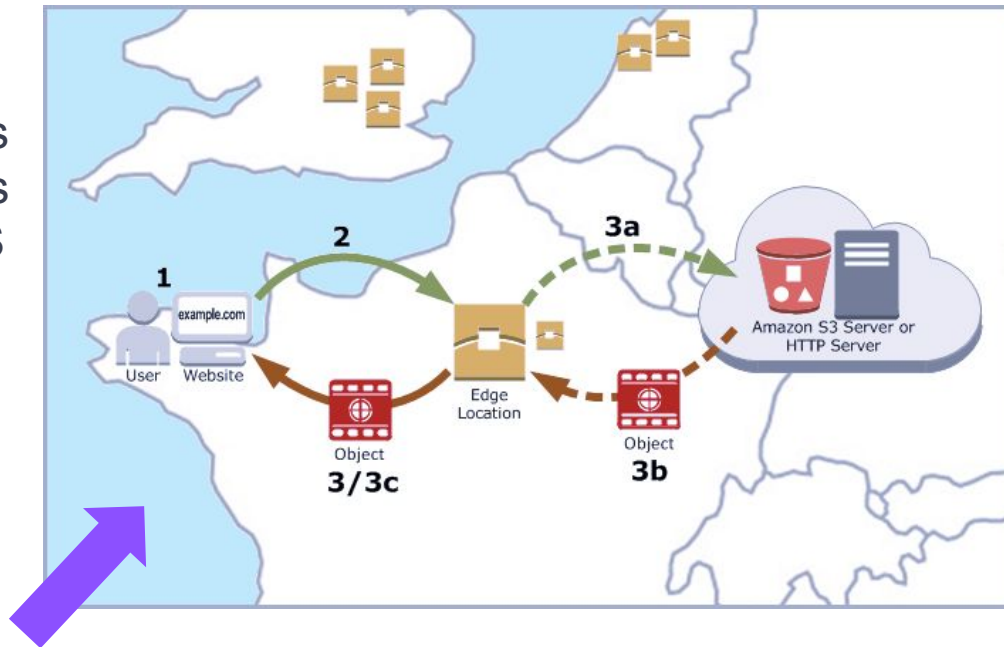
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AWS Infrastructure

Edge Locations

- An edge location is where end-users access services located at AWS and used for **caching content**.
- **400 +** Edge Locations



First Query : 1-2-3a-3b-3c-1

Second Query : 1-2-3-1

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AWS Infrastructure

AWS Local Zones

- AWS Local Zones are a new type of AWS infrastructure deployment that places AWS compute, storage, database, and other select services closer to large population, industry, and IT centers **where no AWS Region exists today**.
- Each AWS Local Zone location is an **extension of an AWS Region**
- There are 41 Local Zones currently

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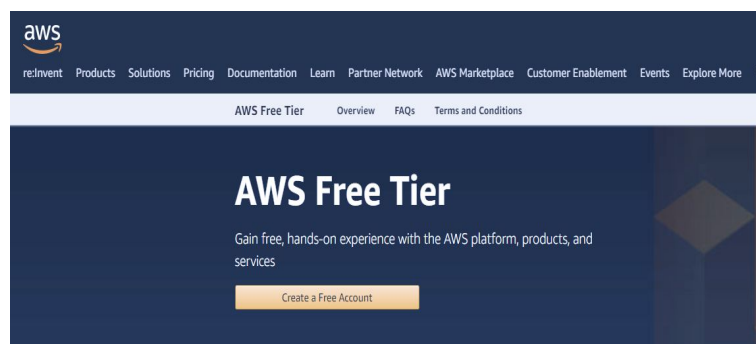


4 AWS Free Tier

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AWS Free Tier

What is AWS Free Tier?



- The AWS free tier is a account type that lets you gain free, hands-on experience with AWS products and services.
- The AWS free tier provides customers the ability to explore and try out aws services free of charge up to specified limits for each service.

AWS Free Tier

Free Tier Offer Types



The Free Tier is comprised of three different types of offerings;

- Services with a **12-month free tier** allow customers to use the product for free up to specified limits for one year from the date the account was created.
- Services with an **always free** offer allow customers to use the product for free up to specified limits as long as they are an aws customer.
- Services with a **short term trial** are free to use for a specified period of time or up to a one-time limit depending on the service selected.

AWS Free Tier

Billing Policy



- You are recommended to set a **billing alarm** to stay within the limits.
- If your application use exceeds the free tier limits, you simply pay standard, **pay-as-you-go service rates**.
- AWS Free Tier is applied to your **monthly usage**. It will expire on the 1st day of each month and does not accumulate.





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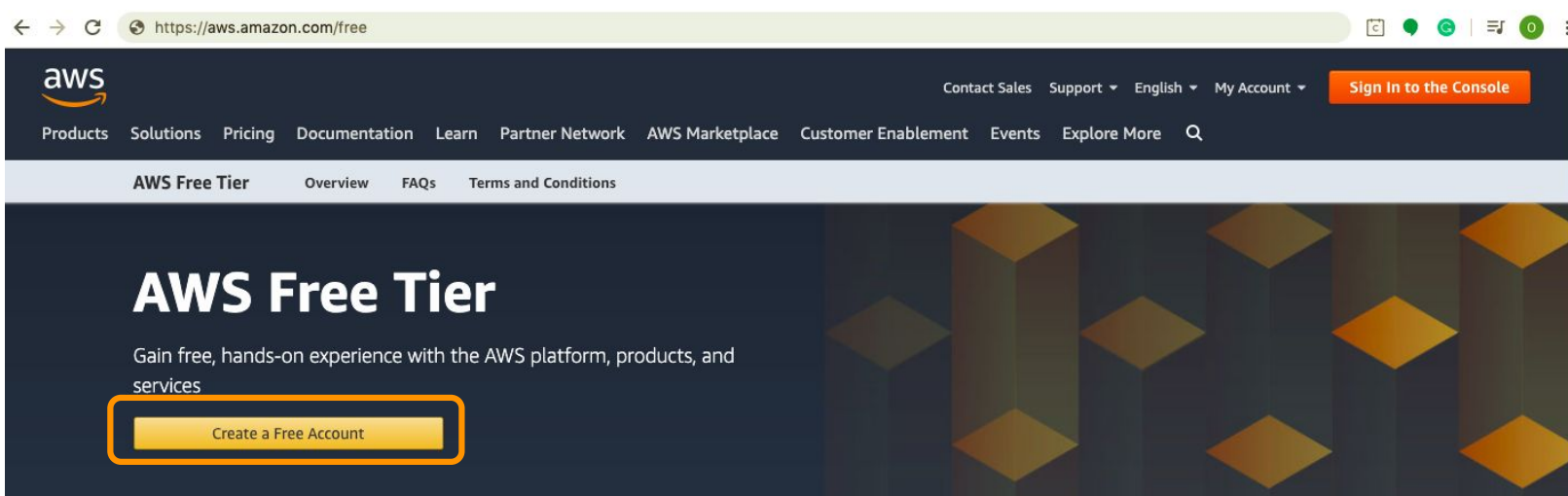
Creating AWS Free Tier

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Creating AWS Free Tier

- First, Enter the browser: <https://aws.amazon.com/free>
- Then click, **"Create Free Account"**



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Creating AWS Free Tier

- On clicking on the **"Create Free Account"** button, the following screen appears that requires some fields to be filled by the user including **email address, password and account name.**

The screenshot shows the 'Create an AWS account' form. It has a light blue header with the title 'Create an AWS account'. Below the header, there are four input fields: 'Email address' (containing 'example@clarusway.com'), 'Password' (containing '*****'), 'Confirm password' (containing '*****'), and 'AWS account name' (containing 'awsdevopsteam' and a help icon). Below these fields is a yellow 'Continue' button. At the bottom, there is a link that says 'Sign in to an existing AWS account'.

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Creating AWS Free Tier

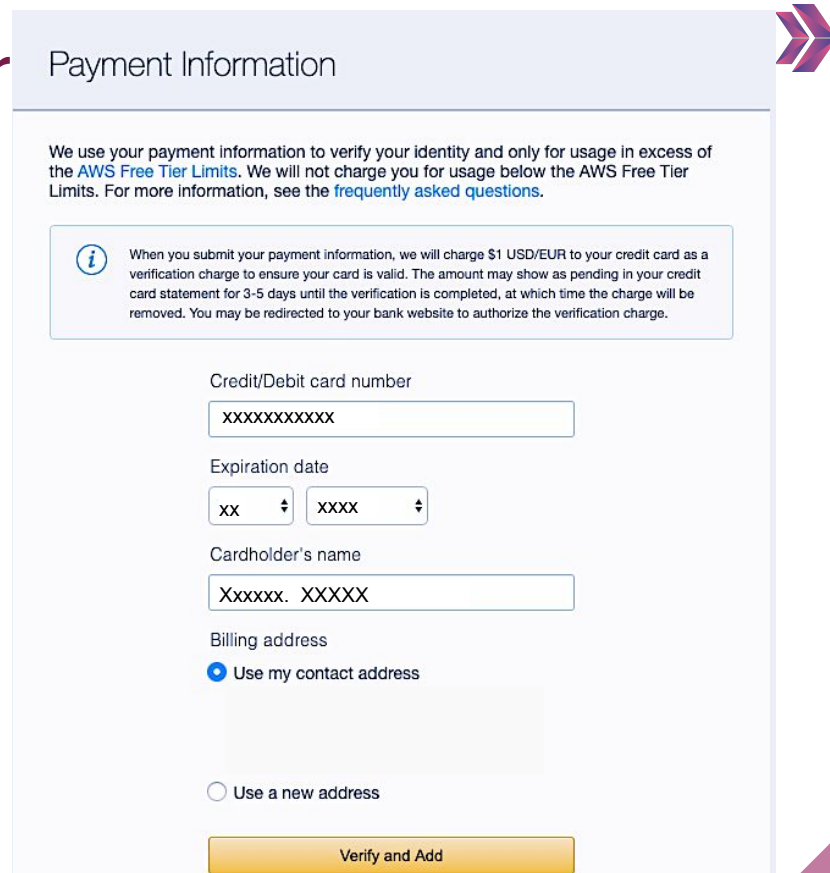
- Select **"Personal"** as an account Type and then fill your contact information.

The screenshot shows the 'Contact Information' form. It has a light blue header with the title 'Contact Information' and a note 'All fields are required.' on the right. Below the header, there are several fields: 'Account type' (with radio buttons for 'Professional' and 'Personal', where 'Personal' is selected and highlighted with an orange box), 'Full name' (containing 'awsdevopsteam'), 'Phone number' (containing '123456789'), 'Country/Region' (a dropdown menu showing 'United States'), 'Address' (two lines, both containing 'XXXXXXXXXX'), 'City' (containing 'XXXXXXXXXX'), 'State / Province or region' (containing 'XXXXXXXXXX'), 'Postal code' (containing 'XXXXXXXXXX'), and a checkbox labeled 'Check here to indicate that you have read and agree to the terms of the AWS Customer Agreement' which is checked. At the bottom, there is a yellow 'Create Account and Continue' button.

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Creating AWS Free Tier

- Fill your payment information.



Payment Information

We use your payment information to verify your identity and only for usage in excess of the [AWS Free Tier Limits](#). We will not charge you for usage below the AWS Free Tier Limits. For more information, see the [frequently asked questions](#).

 When you submit your payment information, we will charge \$1 USD/EUR to your credit card as a verification charge to ensure your card is valid. The amount may show as pending in your credit card statement for 3-5 days until the verification is completed, at which time the charge will be removed. You may be redirected to your bank website to authorize the verification charge.

Credit/Debit card number
XXXXXXXXXX

Expiration date
XX XX

Cardholder's name
Xxxxxx. XXXXX

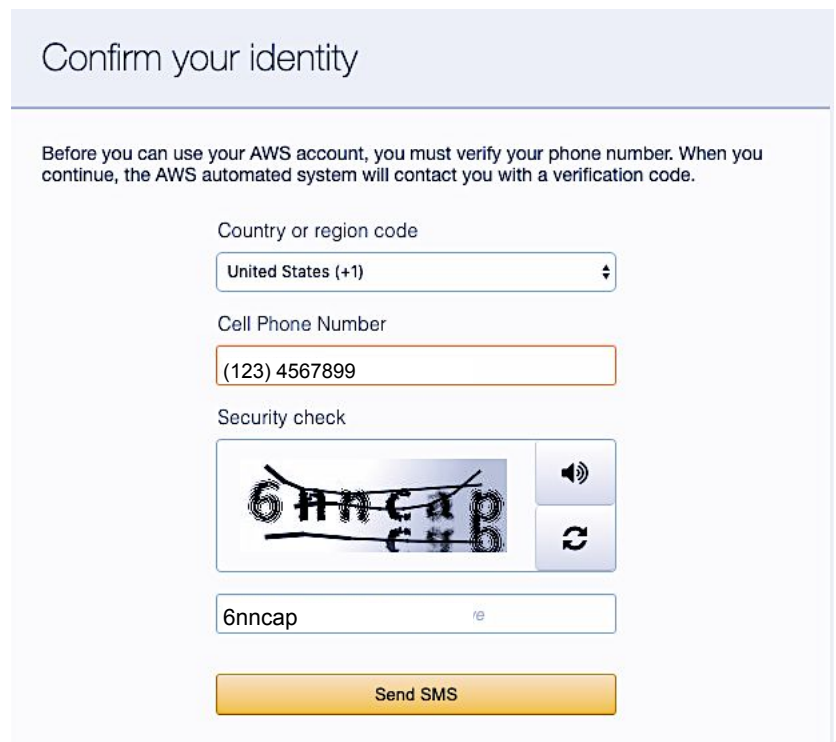
Billing address
☒ Use my contact address
☐ Use a new address

Verify and Add

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Creating AWS Free Tier

- Confirm your identity by entering **your phone** number and code displayed in the captcha.
- Choose "Contact me".
- If you chose to verify your account by SMS, choose "Send SMS" instead, like in the picture.
- Then enter the PIN you receive by text message or voice call, and then choose "Continue".




Confirm your identity

Before you can use your AWS account, you must verify your phone number. When you continue, the AWS automated system will contact you with a verification code.

Country or region code
United States (+1)

Cell Phone Number
(123) 4567899

Security check

6nncap

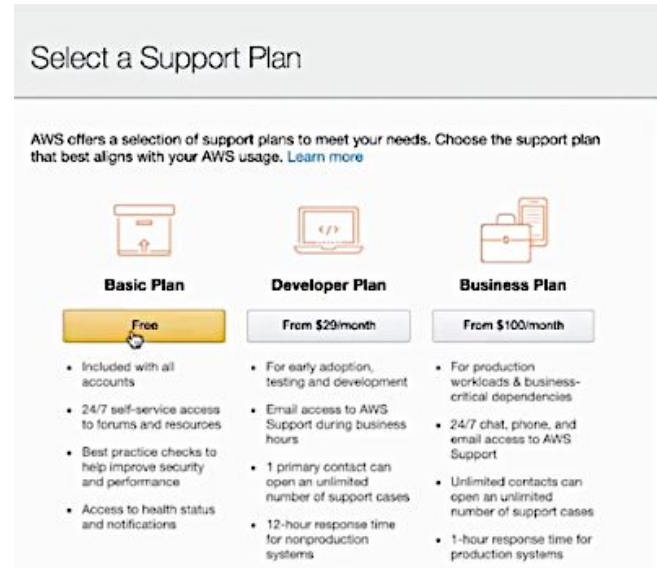
Send SMS

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Creating AWS Free Tier

- After verification, select the support Plan. Choose the **"Basic Plan"** which is free.



THANKS!

Any questions?

