

AWS Setup

Cloud Resources

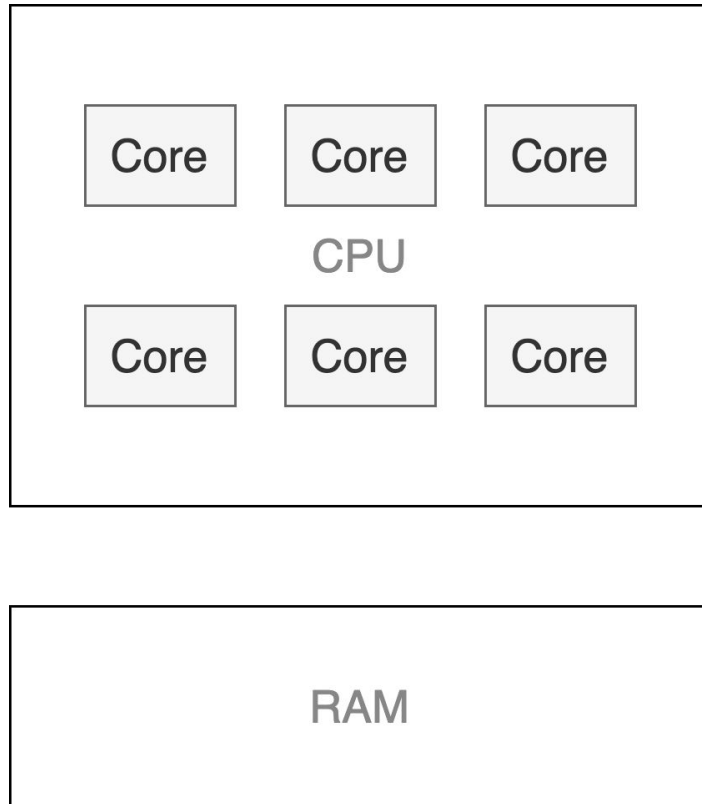
Performance: Hardware

- Desktop CPUs

- Frequency = 2-4 GHz
- Cores = 1-12
- RAM = 8-64GB

- Server CPUs

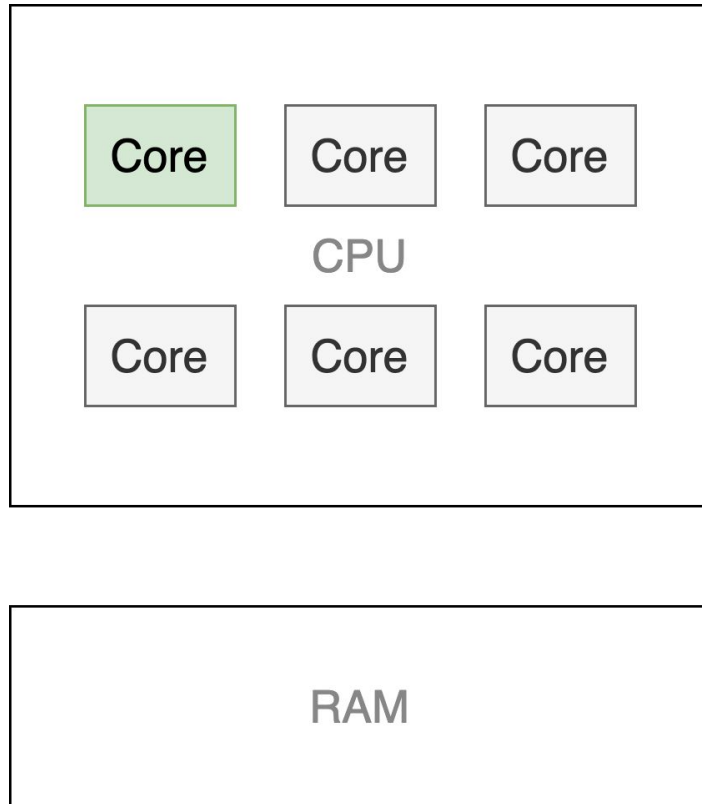
- Frequency = 2-4 GHz
- Cores = 1-96
- RAM = 1-1024GB



Performance: Single-Process

Process 1: Python

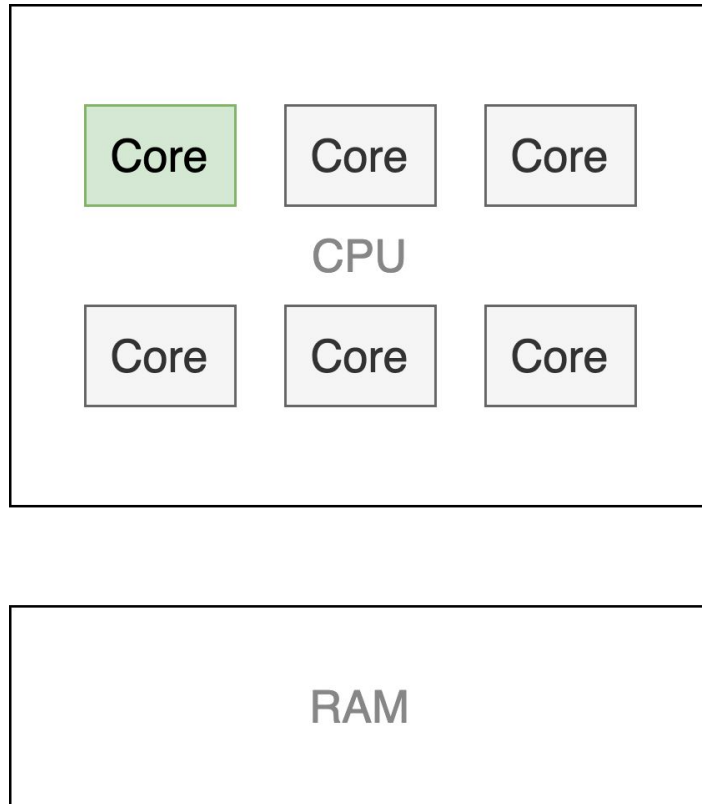
- Thread 1: Interpreter
 - Running your Python code



Performance: Single-Process

Process 1: Python

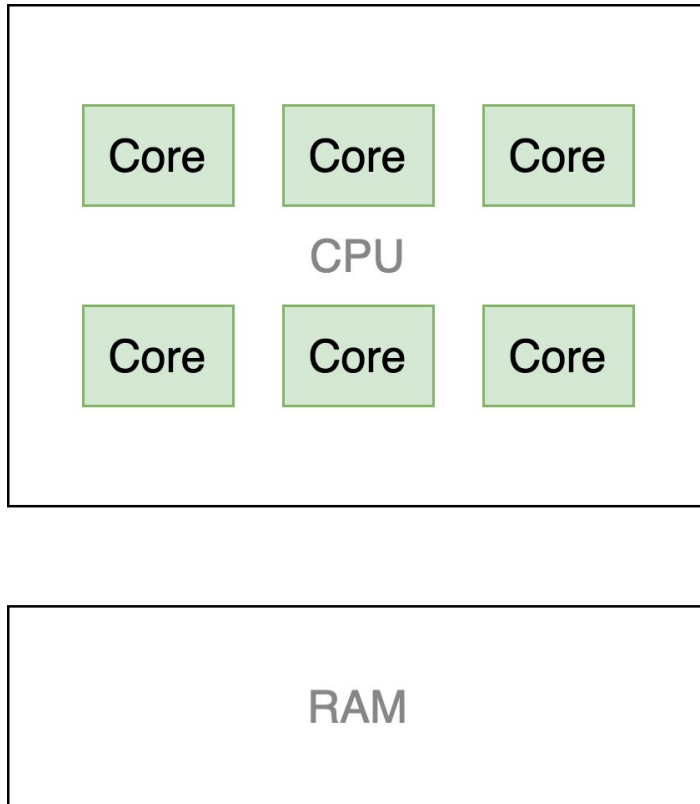
- Thread 1: Interpreter
 - Running your Python code
- Thread 2: NumPy/Tensorflow - C code
- Thread 3: NumPy/Tensorflow - C code
- Thread 4: NumPy/Tensorflow - C code
- Thread 5: NumPy/Tensorflow - C code
- Thread 6: NumPy/Tensorflow - C code
- Thread 7: NumPy/Tensorflow - C code



Performance: Single-Process

Process 1: Python

- Thread 1: Interpreter
 - Running your Python code
- Thread 2: NumPy/Tensorflow - C code
- Thread 3: NumPy/Tensorflow - C code
- Thread 4: NumPy/Tensorflow - C code
- Thread 5: NumPy/Tensorflow - C code
- Thread 6: NumPy/Tensorflow - C code
- Thread 7: NumPy/Tensorflow - C code



Performance: Multi-Process

Process 1:

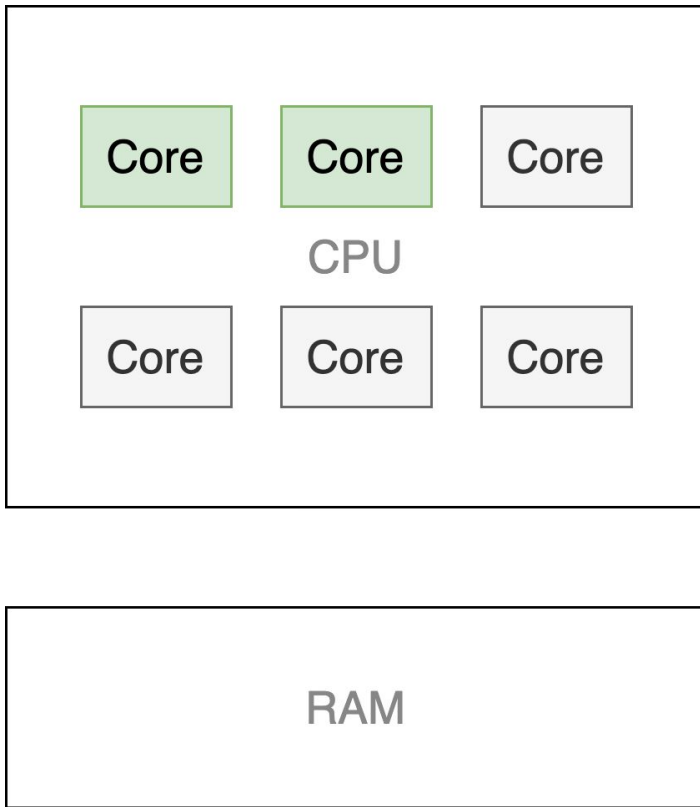
- Thread 1: Python Interpreter

Process 2:

- Thread 1: Python Interpreter

Examples:

- Jupyter notebooks / kernels
- Scikit-Learn (via Joblib)
- Tsfresh
- Dask



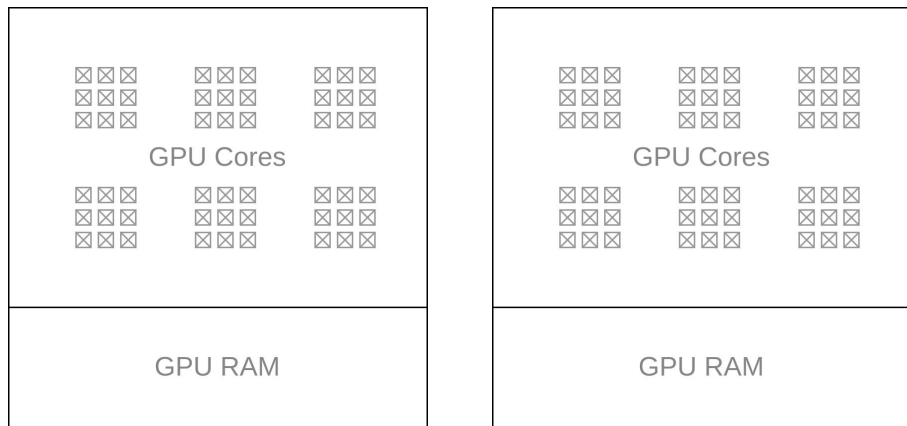
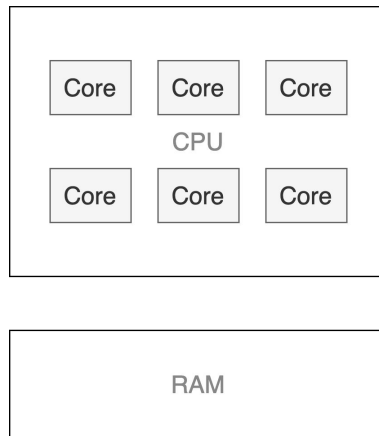
Performance: GPU

- Desktop GPUs

- Frequency = 1-2 GHz
- Cores = 1000 - 2000
- RAM = 6-24GB
- Support for multiple GPUs

- Server GPUs

- Frequency = 1-2 GHz
- Cores = 3000 - 5000
- RAM = 12-16GB
- Support for multiple GPUs



AWS Prices

Instance Types	CPU Cores	CPU RAM	GPU Cores	GPU RAM	\$ / hour	Hours / \$100
t3.medium	2	4			\$0.06	1666
t3.xlarge	4	16			\$0.23	434
t3.2xlarge	8	32			\$0.47	217
p2.xlarge	4	61	2,496	12	\$1.26	79
p3.2xlarge	8	61	5,120	16	\$4.28	23

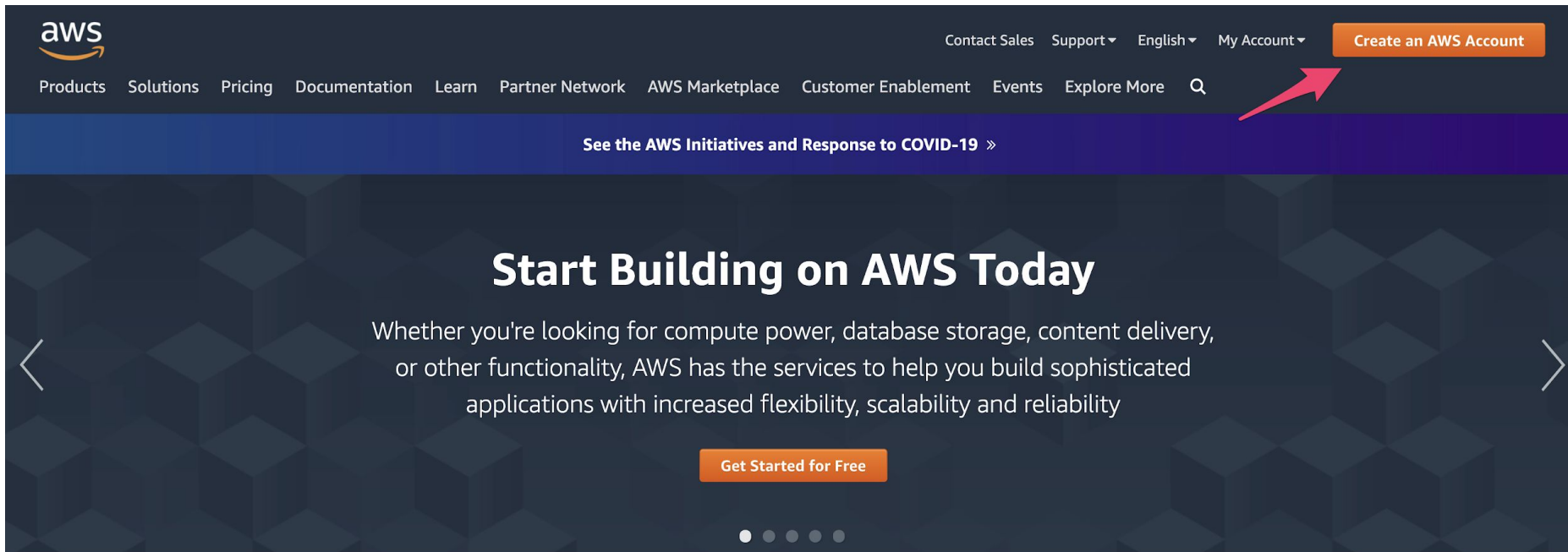
<https://aws.amazon.com/sagemaker/pricing/>

AWS Prices

Storage Type	\$ / GB / month	Months / 50GB / \$100
Elastic Block Store	\$0.14	7
Simple Storage Service	\$0.023	87

<https://aws.amazon.com/sagemaker/pricing/>

Create new AWS account



The image is a screenshot of the AWS website's homepage. At the top, there is a dark navigation bar. On the left, the AWS logo is displayed. To its right, a series of links are listed: 'Products', 'Solutions', 'Pricing', 'Documentation', 'Learn', 'Partner Network', 'AWS Marketplace', 'Customer Enablement', 'Events', and 'Explore More'. Further right are 'Contact Sales', 'Support', 'English', and 'My Account'. On the far right of this bar is an orange button labeled 'Create an AWS Account'. A red arrow points from the bottom right towards this button. Below the navigation bar is a dark blue banner with the text 'See the AWS Initiatives and Response to COVID-19 »'. The main content area has a dark background with a subtle geometric pattern of cubes. It features the heading 'Start Building on AWS Today' in large white text. Below this, a paragraph states: 'Whether you're looking for compute power, database storage, content delivery, or other functionality, AWS has the services to help you build sophisticated applications with increased flexibility, scalability and reliability'. At the bottom center of this section is an orange button labeled 'Get Started for Free'. Navigation arrows (left and right) are visible on the sides of the main content area, and a series of five dots at the bottom center indicates the current slide in a sequence.

aws

Contact Sales Support English My Account **Create an AWS Account**

Products Solutions Pricing Documentation Learn Partner Network AWS Marketplace Customer Enablement Events Explore More

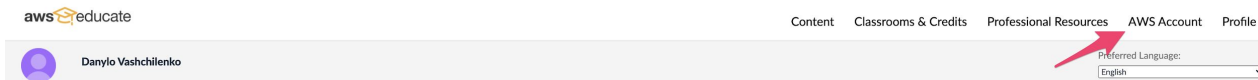
See the AWS Initiatives and Response to COVID-19 »

Start Building on AWS Today

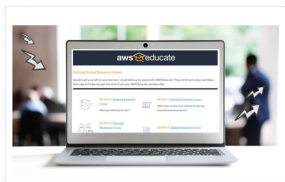
Whether you're looking for compute power, database storage, content delivery, or other functionality, AWS has the services to help you build sophisticated applications with increased flexibility, scalability and reliability

Get Started for Free

Get Promo Code from AWS Educate



Hi, welcome back to Educate.



Getting the Most out of AWS Educate

Looking to get the most from your AWS Educate membership? Seeking answers to frequently asked questions? The Getting Started resources Center provides brief overviews and deep-dive clips so you have everything you need to get started right away.

[Get Started Now](#)

Featured Content

Hands-On Activities and Guides
Engage your students in real-world activities aligned to in-demand cloud computing roles.

AWS Educate Content Resource Kit
A content kit from AWS Educate to guide your content development process.

Get Inspired
Read this month's AWS Educate Cloud Ambassador spotlight.

Getting Started Resource Center
One-stop-resource to get up to speed with AWS Educate

[Go to My AWS Account](#)

AWS Account

Use your AWS Account to access the AWS Console and resources, and start building in the cloud!

[Show my AWS Promotional Credit](#)

Learn how to redeem your AWS Promotional credit code
Visit <https://aws.amazon.com/awscredits/>



Apply promo code to your account

The screenshot shows the AWS Billing Credits page. On the left, the navigation menu includes: Home, Cost Management, Cost Explorer, Budgets, Budgets Reports, Savings Plans, Cost & Usage Reports, Cost Categories, Cost allocation tags, Billing, Bills, Orders and invoices, Credits (highlighted with a red arrow), and Purchase orders (preview). The main content area is titled 'Credits' and shows a table with one credit. A red arrow points to the 'My Billing Dashboard' link in the top right user menu. Below the table, the total credit amount remaining is \$180.09.

Credits (1)

Expiration date	Credit name	Amount used	Amount remaining
11/30/2020	EDU_ENG_FY2019_IC-Q2_3_200USD	\$19.91	\$180.09

Total credit amount remaining as of 09/01/2020: \$180.09

Create new AWS access key

Identity and Access Management (IAM)

- Dashboard
- Access management
 - Groups
 - Users
 - Roles
 - Policies
 - Identity providers
 - Account settings
- Access reports
 - Access analyzer
 - Archive rules
 - Analzers

Your Security Credentials

Use this page to manage the credentials for your AWS account. To manage credentials for AWS Identity and Access Management (IAM) users, use the [IAM Console](#).

To learn more about the types of AWS credentials and how they're used, see [AWS Security Credentials](#) in AWS General Reference.

- ▲ Password
- ▲ Multi-factor authentication (MFA)
- ▼ Access keys (access key ID and secret access key)

Use access keys to make programmatic calls to AWS from the AWS CLI, Tools for PowerShell, the AWS SDKs, or direct AWS API calls. You can have a maximum of two access keys (active or inactive) at a time.

Created	Access Key ID	Last Used	Last Used Region	Last Used Service	Status
Create New Access Key					

Root user access keys provide unrestricted access to your entire AWS account. If you need long-term access keys, we recommend creating a new IAM user with limited permissions and generating access keys instead. [Learn more](#)

- My Account 0816-0603-7347
- My Organization
- My Service Quotas
- My Billing Dashboard
- My Security Credentials
- Sign Out

Increase service quotas to use large instances

The screenshot shows the AWS Service Quotas console for Amazon Elastic Compute Cloud (Amazon EC2). The page displays a list of service quotas for On-Demand instances. Red arrows highlight specific elements: the breadcrumb for Amazon Elastic Compute Cloud (Amazon EC2), the search filter 'On-Demand', the 'Running On-Demand P instances' row, and the 'Running On-Demand Standard (A, C, D, H, I, M, R, T, Z) instances' row. A dropdown menu is open on the right, showing options like 'My Account', 'My Organization', 'My Service Quotas', 'My Billing Dashboard', 'My Security Credentials', and 'Sign Out'.

Service quota	Applied quota value	Adjustable
<input type="radio"/> Running On-Demand F instances	64	0 Yes
<input type="radio"/> Running On-Demand G instances	8	0 Yes
<input type="radio"/> Running On-Demand Inf instances	8	0 Yes
<input type="radio"/> Running On-Demand P instances	20	0 Yes
<input type="radio"/> Running On-Demand Standard (A, C, D, H, I, M, R, T, Z) instances	256	5 Yes
<input type="radio"/> Running On-Demand X instances	0	0 Yes

Increase service quota to use large CPU instances

Request quota increase: Running On-Demand Standard (A, C, D, H, I, M, R, T, Z) instances ✕

Quota name

Running On-Demand Standard (A, C, D, H, I, M, R, T, Z) instances



Description

Maximum number of vCPUs assigned to the Running On-Demand Standard (A, C, D, H, I, M, R, T, Z) instances.

Utilization

0

Applied quota value

256

AWS default quota value

5

Change quota value:

Enter in the total amount that you want the quota to be. [Learn more](#) 



Must be a number greater than your current quota value




Cancel

Request

Increase service quotas to use GPU instances

Request quota increase: Running On-Demand P instances ×


Quota name
Running On-Demand P instances 


Description
Maximum number of vCPUs assigned to the Running On-Demand P instances.

Utilization
0


Applied quota value
20

AWS default quota value
0

Change quota value:
Enter in the total amount that you want the quota to be. [Learn more](#) 



Must be a number greater than your current quota value

Cancel  Request