

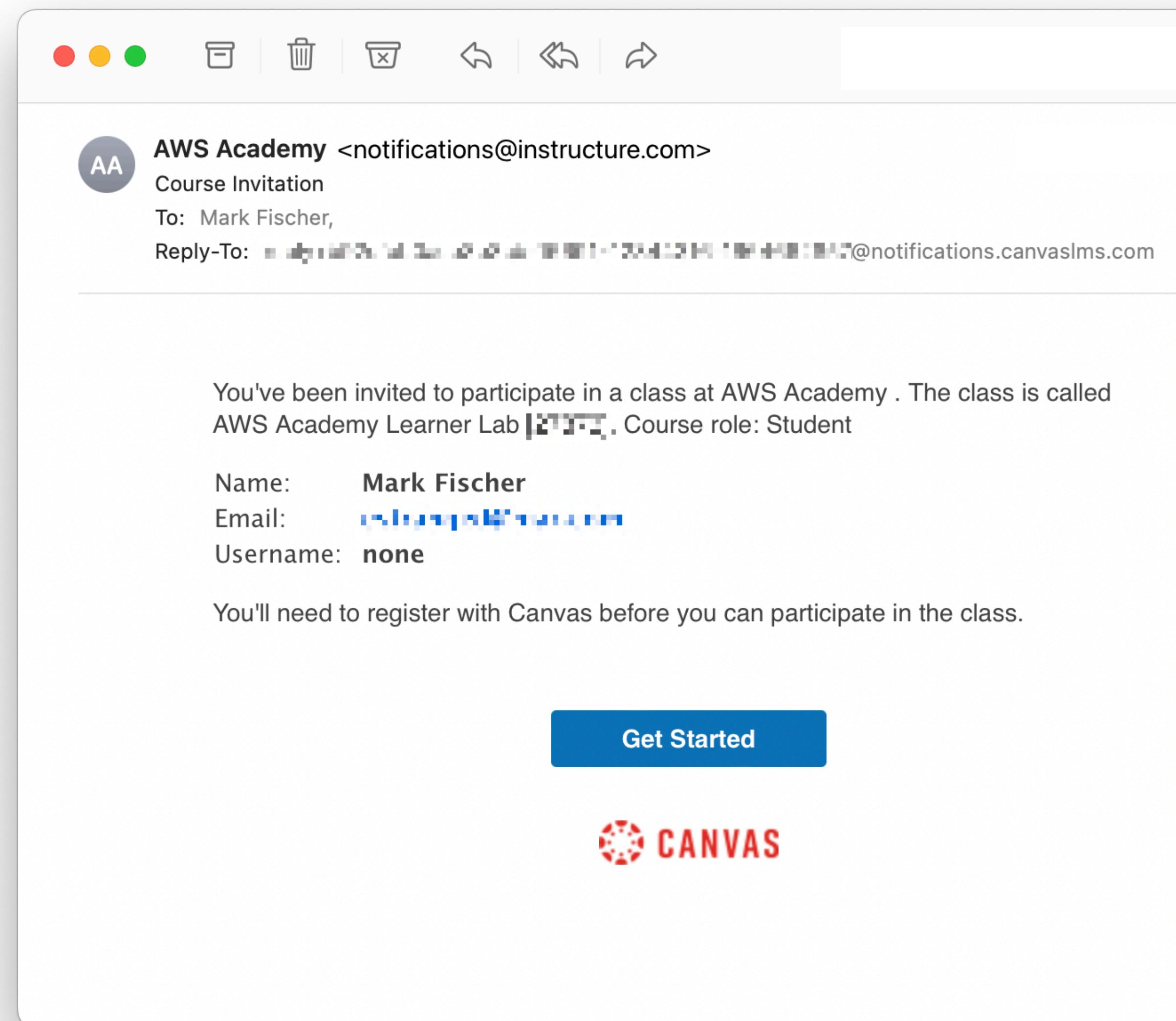
Amazon Web Services

AWS

AWS Academy

Getting Set Up

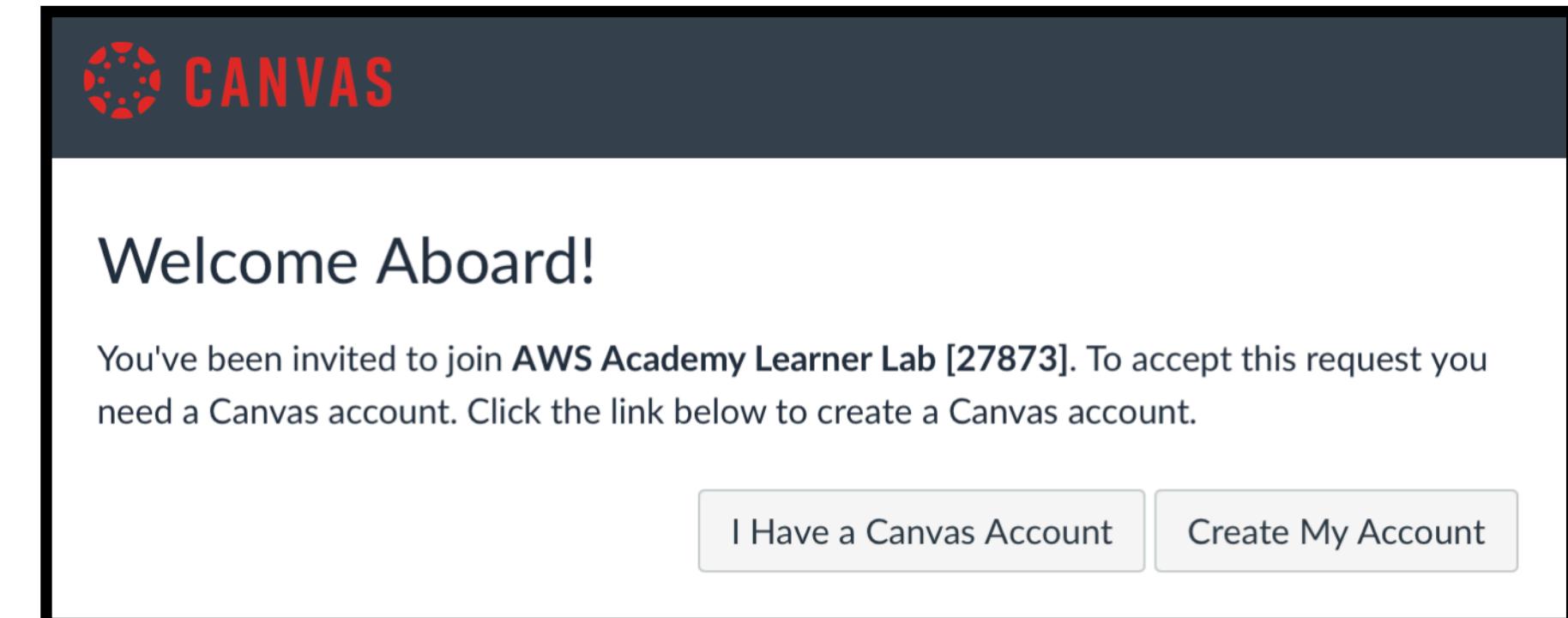
- You'll receive an email invite soon
- From instructure.com
- Click on Get Started



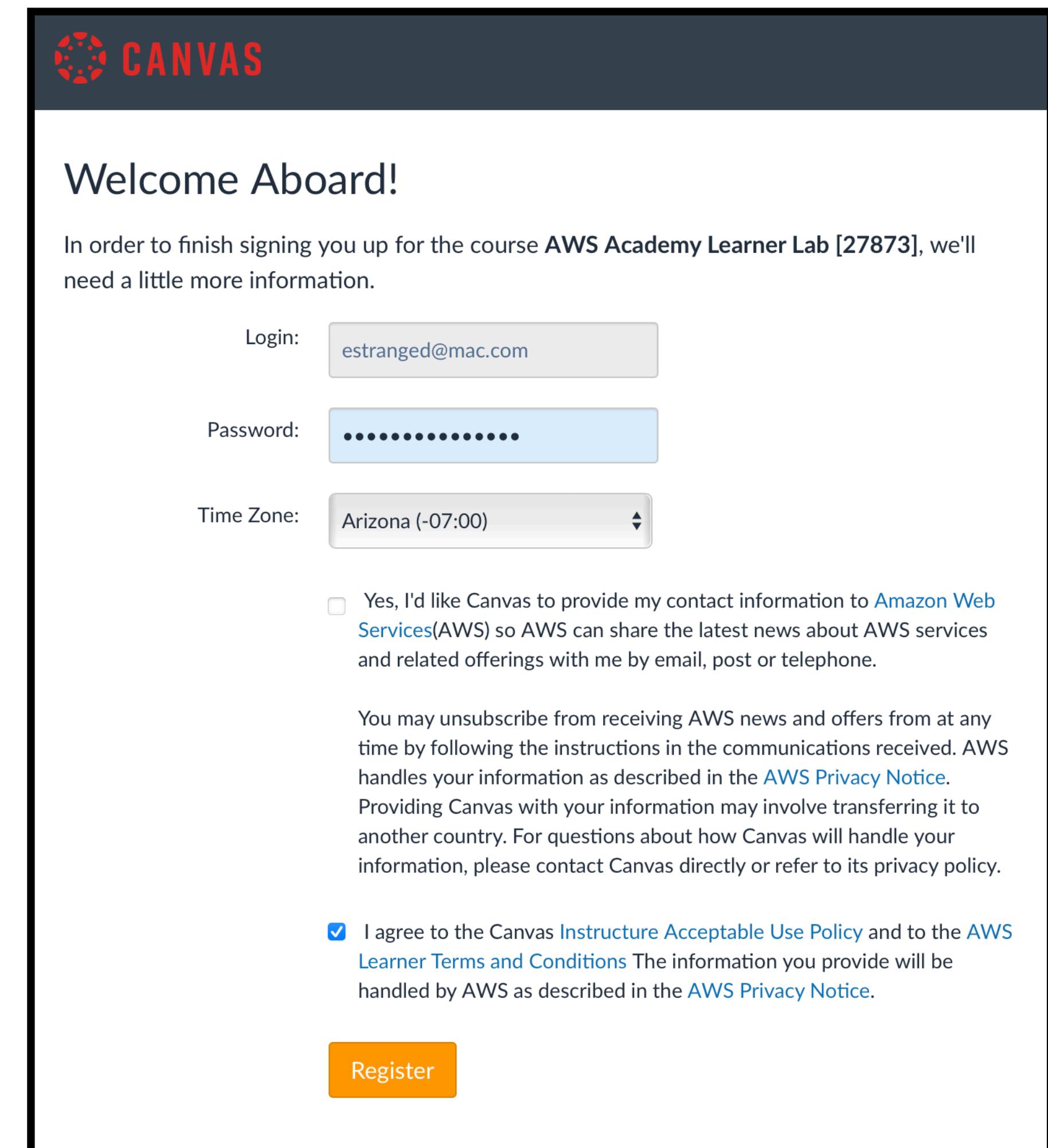
AWS Academy

Getting Set Up

- You'll likely have to Create My Account
- Select a Password and Time Zone
- Uncheck the AWS Spam
- Agree to Use Policy
- Register



The screenshot shows the Canvas 'Welcome Aboard!' page. At the top, there's a logo with the word 'CANVAS' in red. Below it, a message says: 'You've been invited to join AWS Academy Learner Lab [27873]. To accept this request you need a Canvas account. Click the link below to create a Canvas account.' There are two buttons at the bottom: 'I Have a Canvas Account' and 'Create My Account'.



The screenshot shows the Canvas registration form. It has fields for 'Login' (with the value 'estranged@mac.com'), 'Password' (with several dots), and 'Time Zone' (set to 'Arizona (-07:00)'). Below these fields is a checkbox with the text: 'Yes, I'd like Canvas to provide my contact information to [Amazon Web Services\(AWS\)](#) so AWS can share the latest news about AWS services and related offerings with me by email, post or telephone.' To the right of this, a note states: 'You may unsubscribe from receiving AWS news and offers from at any time by following the instructions in the communications received. AWS handles your information as described in the [AWS Privacy Notice](#). Providing Canvas with your information may involve transferring it to another country. For questions about how Canvas will handle your information, please contact Canvas directly or refer to its privacy policy.' At the bottom, there's another checkbox with the text: 'I agree to the Canvas [Instructure Acceptable Use Policy](#) and to the [AWS Learner Terms and Conditions](#). The information you provide will be handled by AWS as described in the [AWS Privacy Notice](#)'. A large orange 'Register' button is at the bottom right.

AWS Academy

Getting Set Up

The screenshot shows two browser windows. The top window is titled 'aws Dashboard' and has the URL https://awsacademy.instructure.com/?login_success=1. It displays a sidebar with icons for Account, Dashboard, Courses, Calendar, Inbox, History, and Help. The main area is titled 'Dashboard' and shows a preview of a course page. The bottom window is titled 'AWS Academy Learner Lab [27]' and has the URL <https://awsacademy.instructure.com/courses/27873>. It also has a sidebar with icons for Account, Courses, Calendar, Inbox, History, and Help. The main area is titled 'ALLv1-27873' and shows a preview of the 'AWS Academy Learner Lab' page, which features a large cloud icon and text about the long-running exploration of AWS services.

AWS Academy Learner Lab provides a long-running exploration of AWS services. Within this class, students will learn how to use the AWS Documentation and AWS Management Console. Not all AWS documentation will work in the Learner Lab environment. An AWS Production account will work in the Learner Lab, but it will not have access to the AWS resources set up in this environment. We limit your budget (\$100USD), so you should expect to spend some time in the Learner Lab. If you exceed your budget, your session will deplete your budget too quickly. If you exceed your budget, your session will be terminated and your environment and lose all of your work.

Each session lasts for 4 hours by default, although you can extend it by pressing the start button to reset your session. Your session and any resources you created will persist. However, we automatically terminate sessions after 4 hours to prevent them from using up too much of our resources.

- <https://awsacademy.instructure.com/login/canvas>

AWS Academy

Getting Set Up

- Go into Modules
- Select “Launch AWS Academy Learner Lab”
- Note: Safari security policy prevents the Vocareum frame from loading
 - Use Firefox for this

The screenshot shows a web browser window with the title "Course Modules: AWS Academy". The URL in the address bar is https://awsacademy.instructure.com/courses/67146/modules#module_808231. The page displays the course navigation menu on the left, which includes links for Home, Modules (selected), Discussions, and Grades. The main content area shows course modules under the heading "ALLv1EN-LTI13-67146 > Modules". The first module listed is "Course Welcome and Overview", followed by "Pre-Course Survey" and "AWS Academy Learner Lab Student Guide". The second module listed is "AWS Academy Learner Lab Compliance and Security", followed by "Learn how to effectively use the AWS Academy Learner Lab". The third module listed is "AWS Academy Learner Lab", followed by "Launch AWS Academy Learner Lab". A sidebar on the right indicates that the "AWS Academy Learner Lab" module has 10 notifications.

AWS Academy

Getting Set Up

- Skim through the terms of service
- Scroll down and accept

The screenshot shows a web browser window for 'awsacademy.instructure.com'. The URL is https://awsacademy.instructure.com/courses/67146/modules/items/5958265. The page title is 'Launch AWS Academy Learner Lab'. The left sidebar has a dark theme with white icons and text, listing: Account, Dashboard, Courses, Calendar, Inbox, History, and Help (with a '10' notification). The main content area has a light background. At the top right is the 'Vocareum' logo. Below it, the breadcrumb navigation shows 'ALLv1EN... > Modules > AWS Acad...' and the current page 'Launch AWS Academy Learner Lab'. The main content area contains two large blocks of text. The first block discusses the transferability of terms: 'null. Vocareum may freely assign or transfer these Terms without restriction. Subject to the foregoing, these Terms will bind and inure to the benefit of the parties, their successors and permitted assigns.' The second block discusses notice: 'Any notices or other communications provided by Vocareum under these Terms, including those regarding modifications to these Terms, will be given: (i) via email; or (ii) by posting to the Services. For notices made by e-mail, the date of receipt will be deemed the date on which such notice is transmitted.' Below these is another block of text: 'Vocareum's failure to enforce any right or provision of these Terms will not be considered a waiver of such right or provision. The waiver of any such right or provision will be effective only if in writing and signed by a duly authorized representative of Vocareum. Except as expressly set forth in these Terms, the exercise by either party of any of its remedies under these Terms will be without prejudice to its other remedies under these Terms or otherwise.' At the bottom right is a teal button labeled 'I Agree'.

Launch AWS Academy Learner Lab

ALLv1EN... > Modules > AWS Acad...

> Launch AWS Academy Learner Lab

Vocareum

Home

Modules

Discussions

Grades

Calendar

Inbox

History

Help (10)

null. Vocareum may freely assign or transfer these Terms without restriction. Subject to the foregoing, these Terms will bind and inure to the benefit of the parties, their successors and permitted assigns.

Any notices or other communications provided by Vocareum under these Terms, including those regarding modifications to these Terms, will be given:

(i) via email; or (ii) by posting to the Services. For notices made by e-mail, the date of receipt will be deemed the date on which such notice is transmitted.

Vocareum's failure to enforce any right or provision of these Terms will not be considered a waiver of such right or provision. The waiver of any such right or provision will be effective only if in writing and signed by a duly authorized representative of Vocareum. Except as expressly set forth in these Terms, the exercise by either party of any of its remedies under these Terms will be without prejudice to its other remedies under these Terms or otherwise.

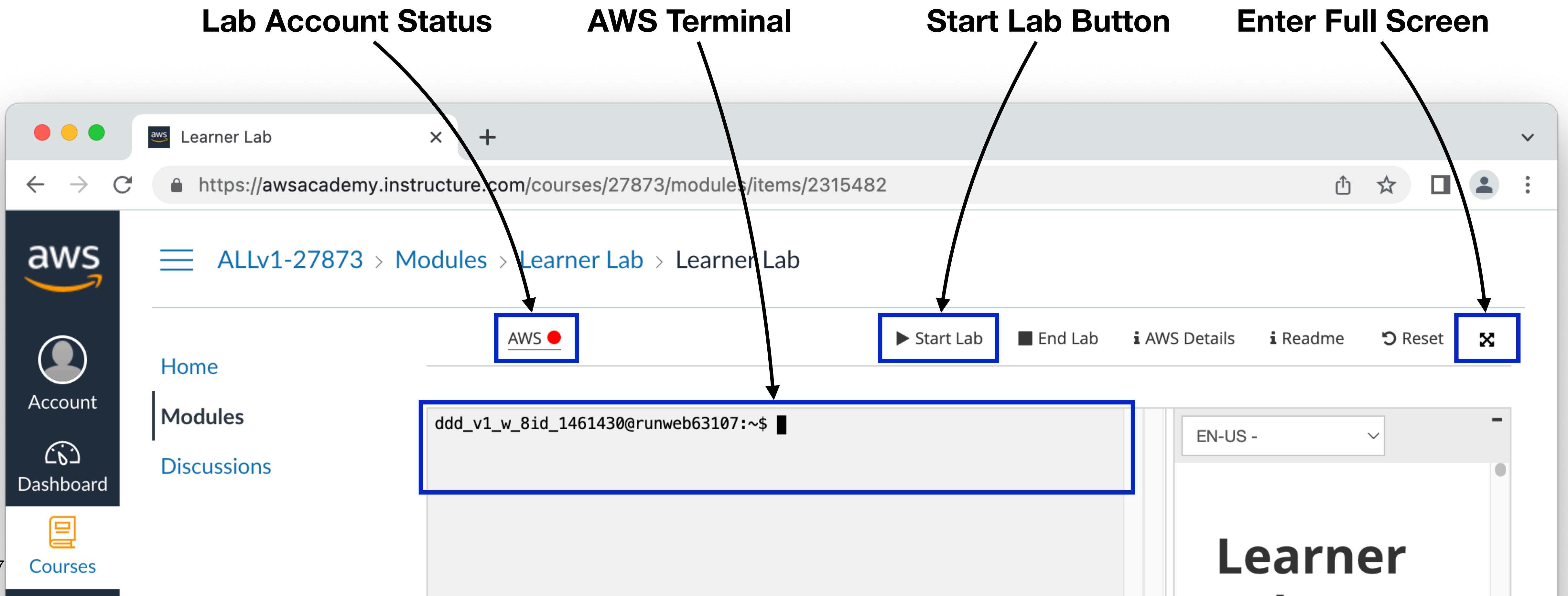
Contact Information

If you have any questions about these Terms or the Services, please contact Vocareum at info@vocareum.com

I Agree

AWS Academy

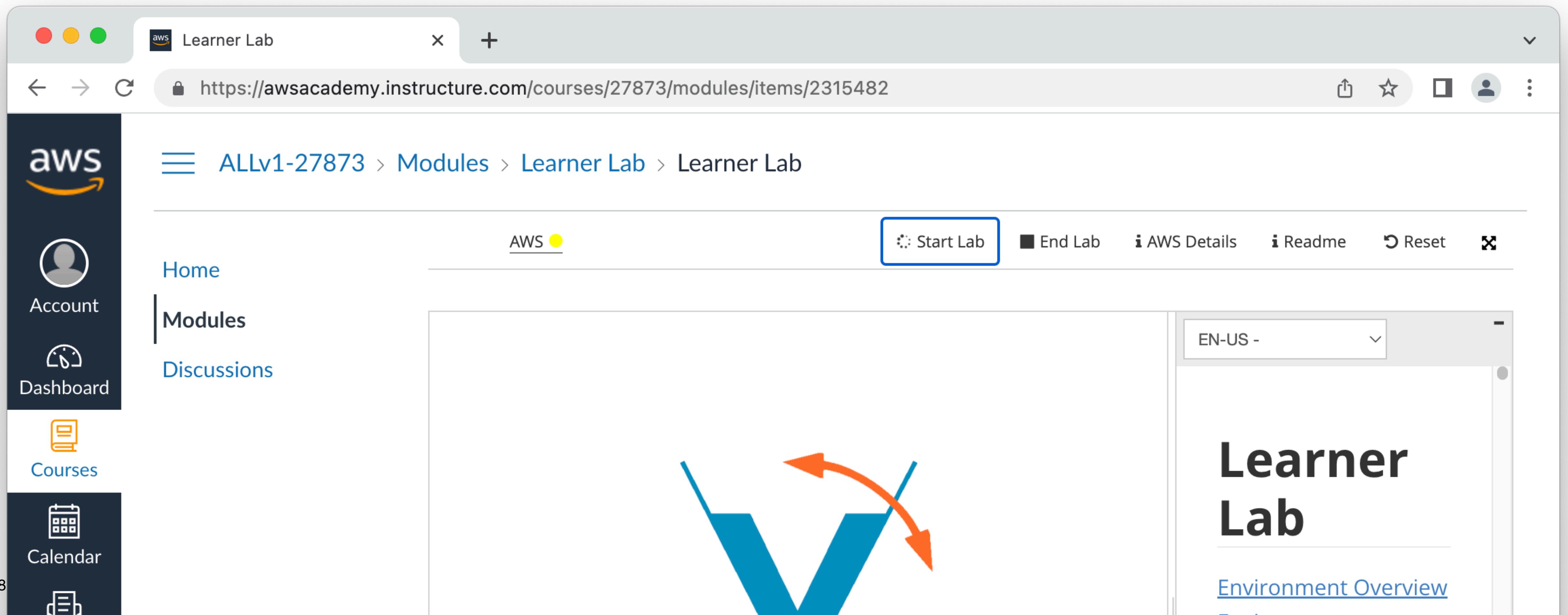
Getting Set Up



AWS Academy

Getting Set Up

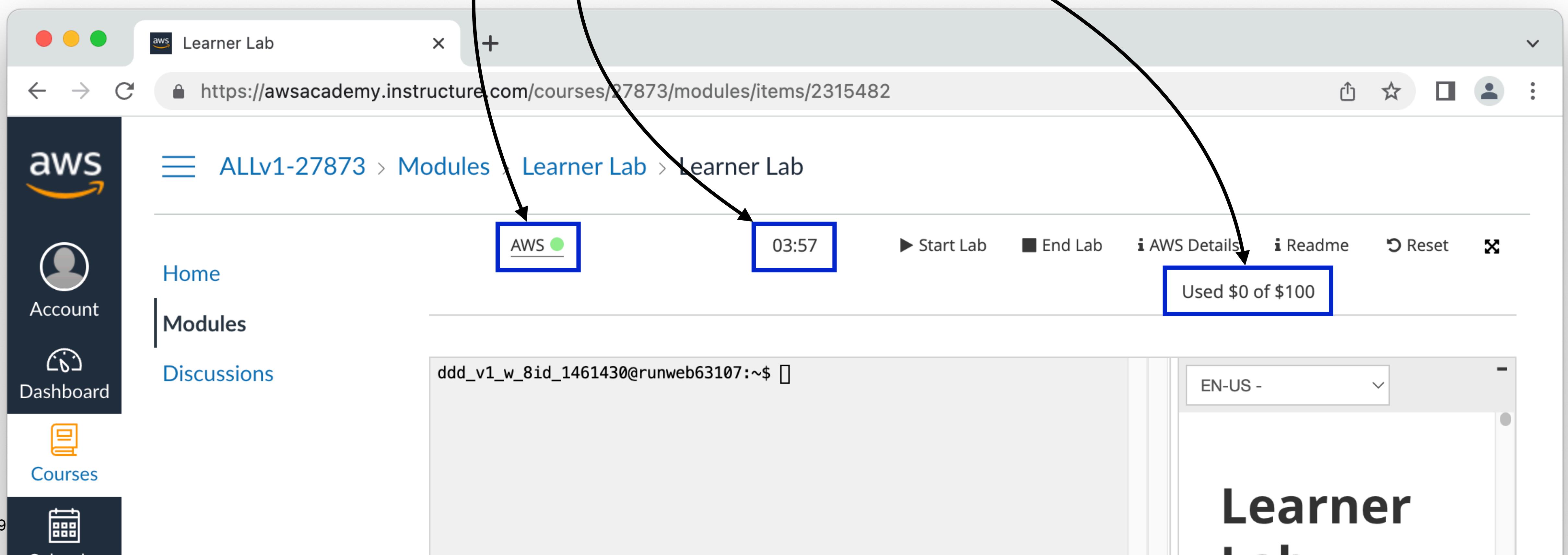
- Click Start Lab Button
- This takes a good 3-5 minutes the very first time to start



AWS Academy

Getting Set Up

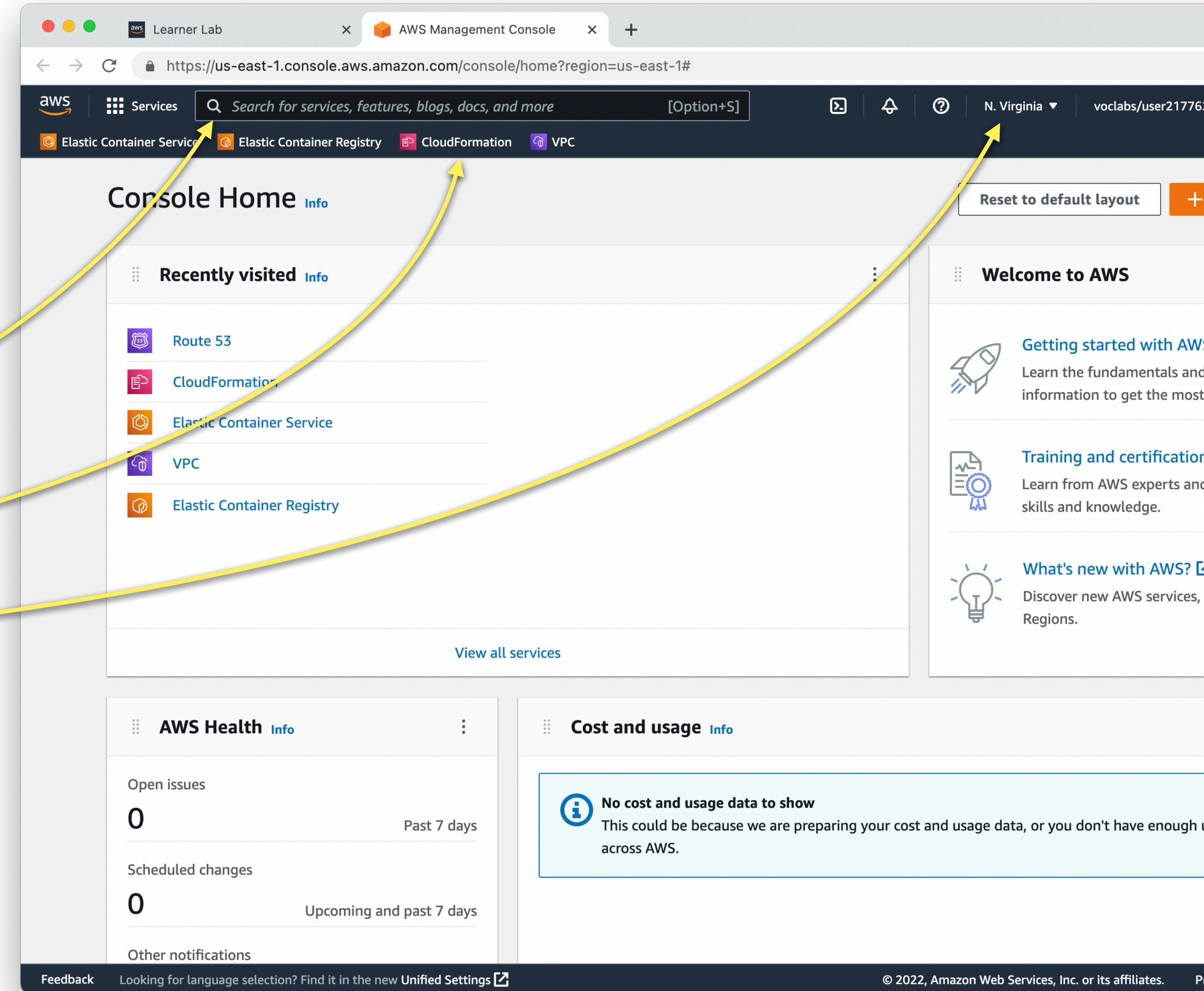
- AWS Account Status Button goes green
- Click the AWS Account Status button to load the AWS Console
- Current Active Lab Session Time Displayed. 4 hours per session
- Total Lab \$ Allowance used across all lab sessions. Don't go over this!



AWS Academy

AWS Console Overview

- AWS Console
- Search for Services
- Pin Favorite Services
- Select Region



AWS Academy

AWS Console Overview

- Can only use regions:
 - N. Virginia (us-east-1)
 - Oregon (us-west-2)
- For simplicity I recommend using N. Virginia (us-east-1)

The screenshot shows the AWS Management Console Home page. At the top, there are two tabs: "Learner Lab" and "AWS Management Console". The URL is https://us-east-1.console.aws.amazon.com/console/home?region=us-east-1#. The search bar contains "Search for services, features, blogs, docs, and more". Below the search bar, there are links for "Elastic Container Service", "Elastic Container Registry", "CloudFormation", and "VPC". On the right side, there is a "Region" dropdown menu with the following options:

Region Name	Region ID
US East (N. Virginia)	us-east-1
US East (Ohio)	us-east-2
US West (N. California)	us-west-1
US West (Oregon)	us-west-2
Africa (Cape Town)	af-south-1
Asia Pacific (Hong Kong)	ap-east-1
Asia Pacific (Jakarta)	ap-southeast-3
Asia Pacific (Mumbai)	ap-south-1
Asia Pacific (Osaka)	ap-northeast-3
Asia Pacific (Seoul)	ap-northeast-2
Asia Pacific (Singapore)	ap-southeast-1
Asia Pacific (Sydney)	ap-southeast-2
Asia Pacific (Tokyo)	ap-northeast-1
Canada (Central)	ca-central-1
Europe (Frankfurt)	eu-central-1
Europe (Ireland)	eu-west-1
Europe (London)	eu-west-2
Europe (Milan)	eu-south-1

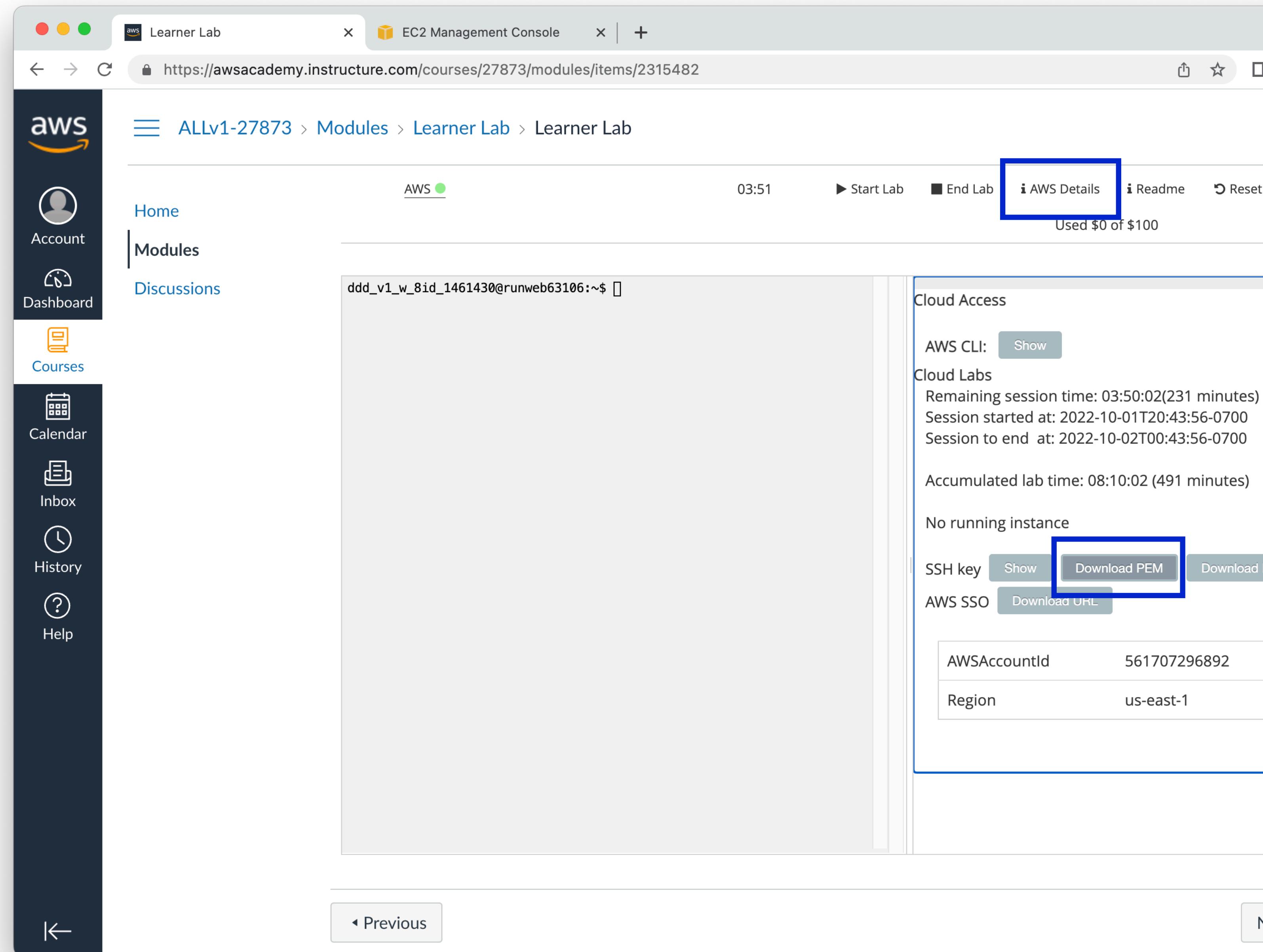
The "Recently visited" section lists "Route 53", "CloudFormation", "Elastic Container Service", "VPC", and "Elastic Container Registry". Below this is a "View all services" link. The "AWS Health" section shows "Open issues: 0 Past 7 days" and "Scheduled changes: 0 Upcoming and past 7 days". The "Cost and usage" section displays a message: "No cost and usage data found. This could be because you don't have enough data or haven't enabled cost allocation across AWS." The footer contains the URL https://us-west-2.console.aws.amazon.com/console/home?region=us-west-2 and the copyright notice "© 2022, Amazon Web Services, Inc. or its affiliates."

AWS Credentials

EC2 Security

Download SSH Keys

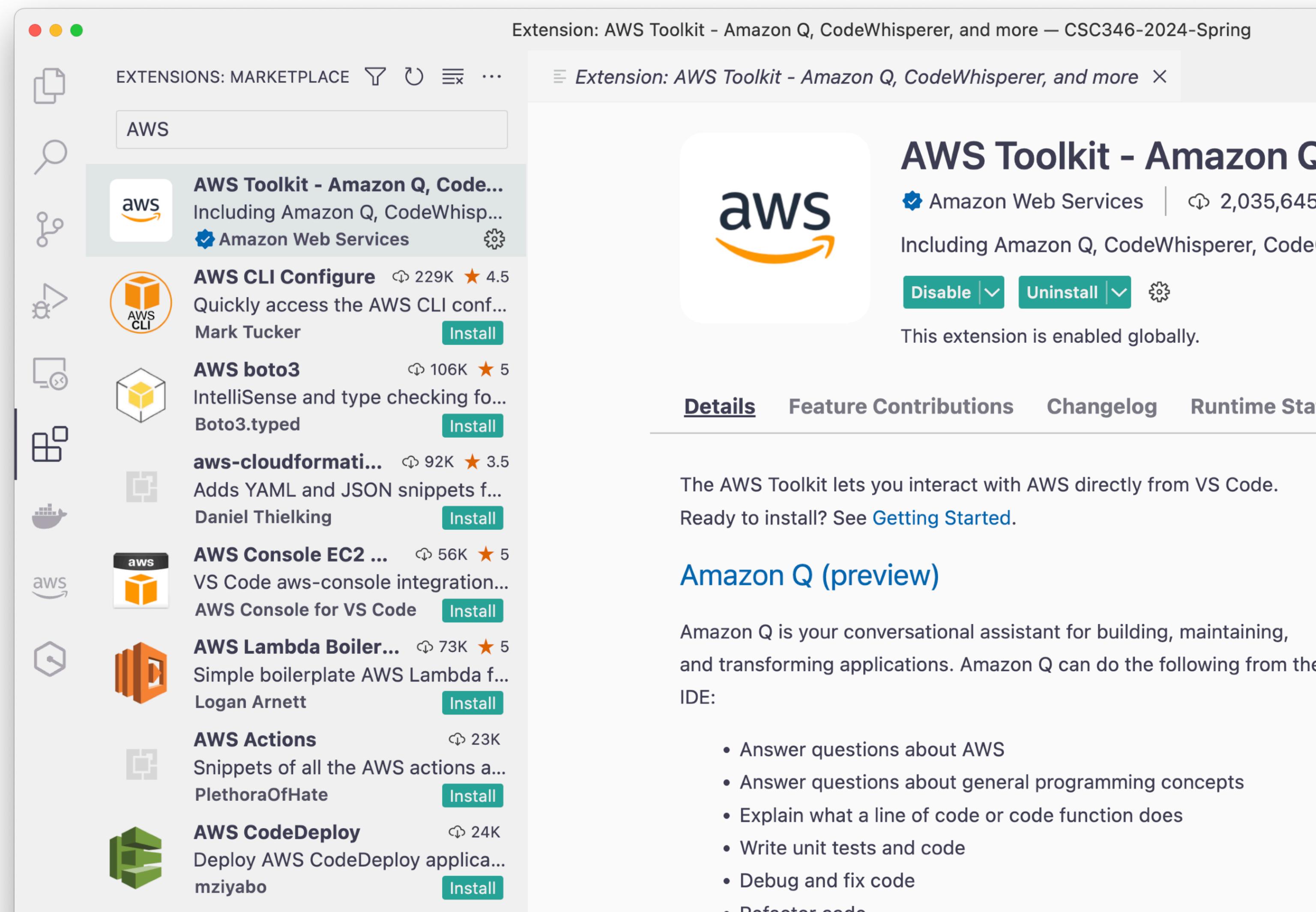
- Click on AWS Details
- Download the PEM file
 - May need the PPK file if you are using Putty on Windows
- You'll need this for SSH Terminal access and File Transfer
- Save someplace you'll remember!



AWS VS Code Extension

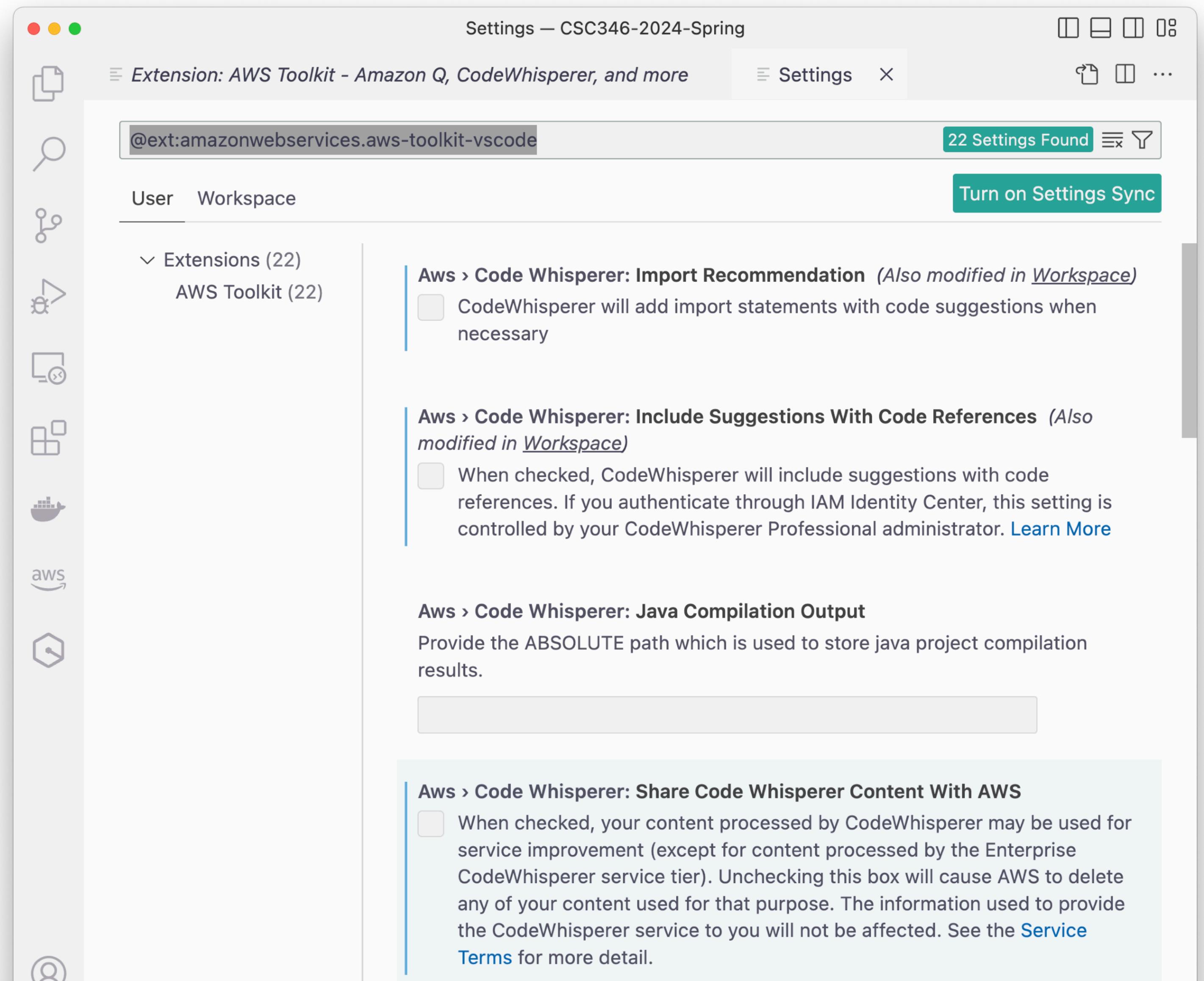
Not required, but highly recommended. Simplifies many things

- In VS Code go to the Extensions section of the left mode sidebar
- Search for AWS
- Install the “AWS Toolkit” extension from Amazon Web Services



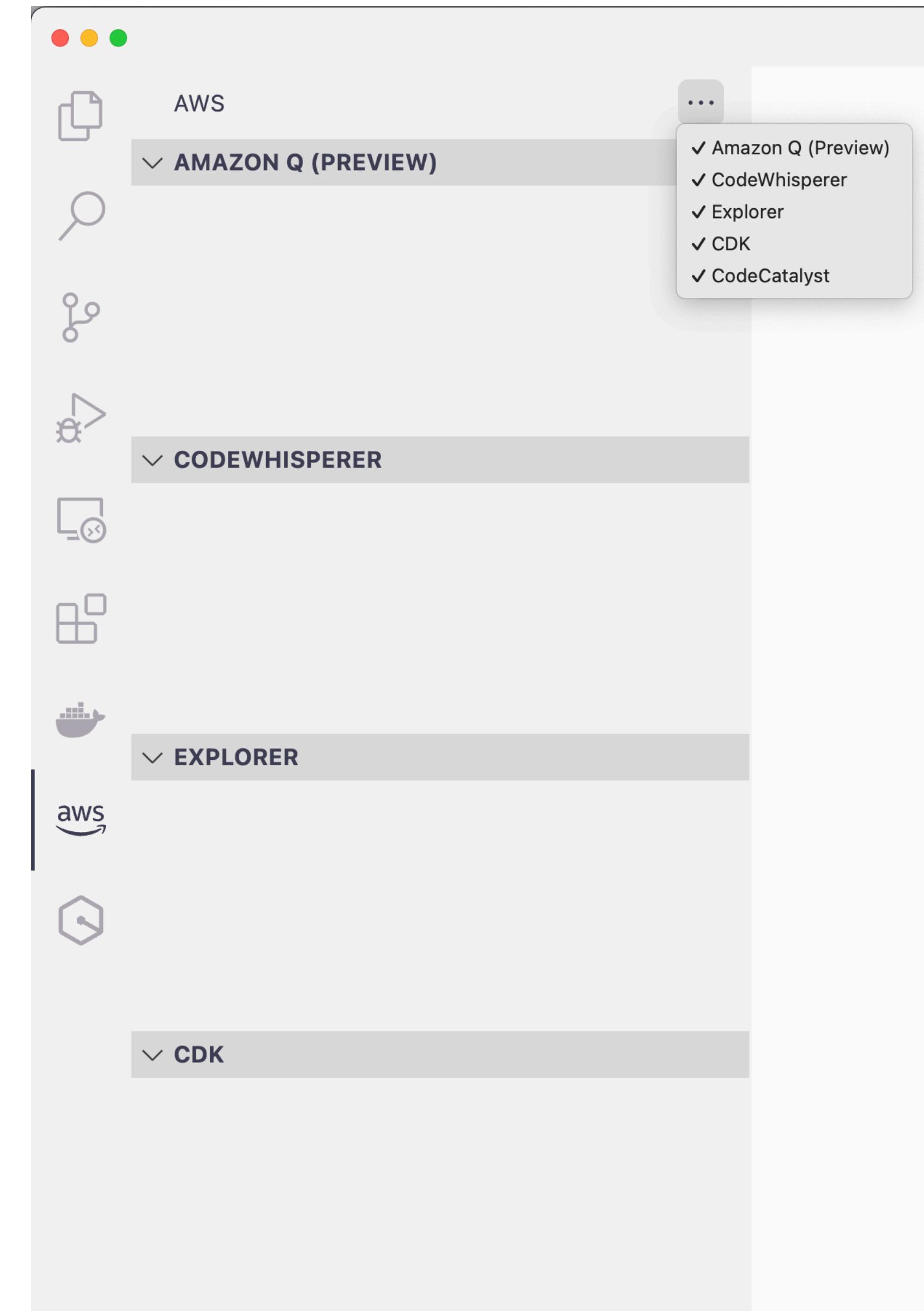
AWS VS Code Extension Configuration

- Turn off all of AWS “AI” spam
- Click the little Gear next to the Uninstall button
- Choose “Extension Settings”
- Scroll through and uncheck anything “Code Whisper” related.
- Close Settings



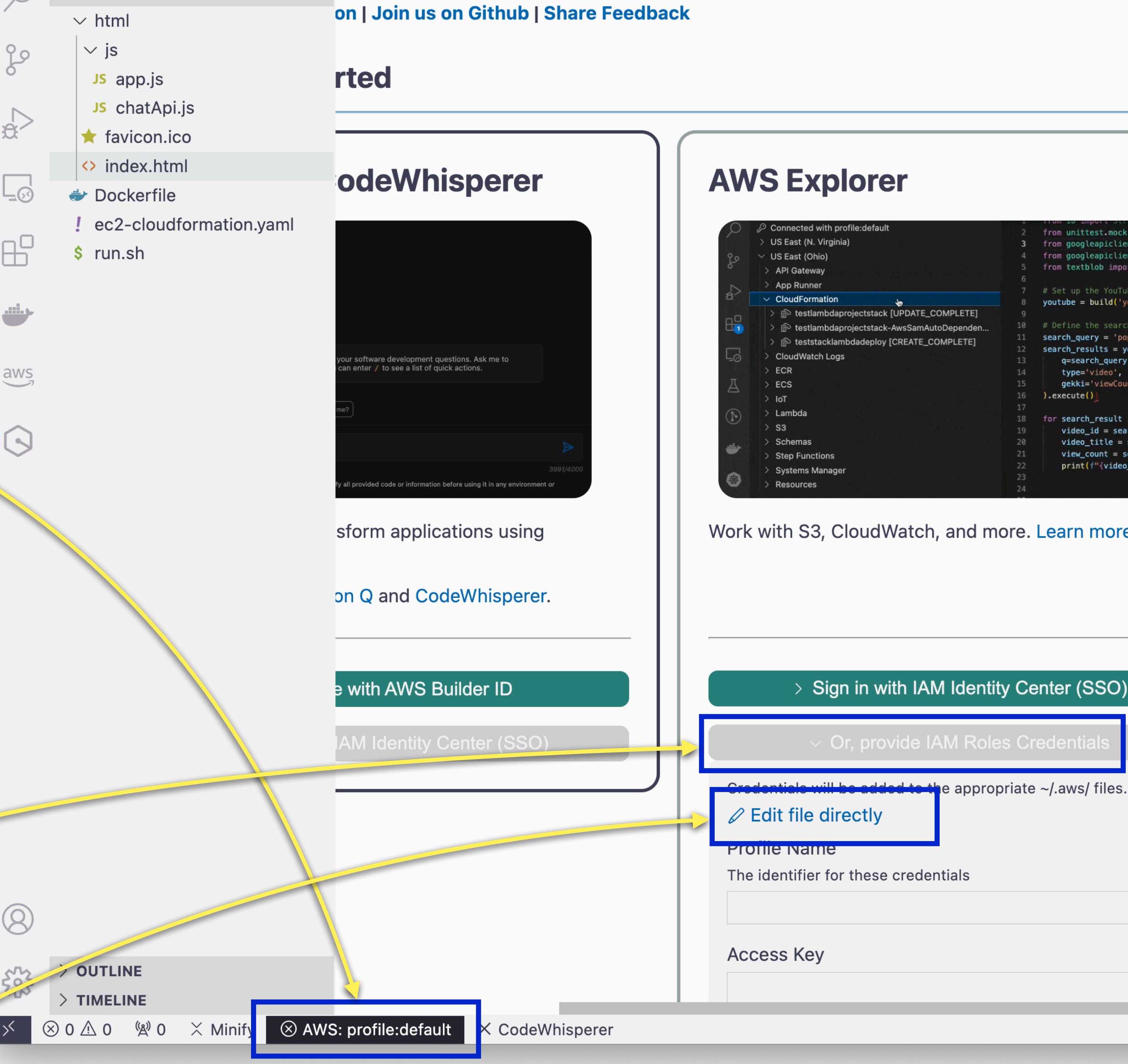
AWS VS Code Extension Configuration

- Click on the AWS Extension in the left sidebar
- Click on the three “...” menu in the upper pane and uncheck everything except “Explorer”



AWS VS Code Extension Configuration

- At the bottom of the window there should be a section that says “AWS: profile”
 - Restart VS Code if this isn’t showing up
- Click on that to bring up a Getting Started document
- Under AWS Explorer click on the “Or provide IAM Roles Credentials”
- Click on “Edit file directly”



AWS VS Code Extension Configuration

- A new “credentials” document will open.
- We will paste in credentials we get from AWS Academy

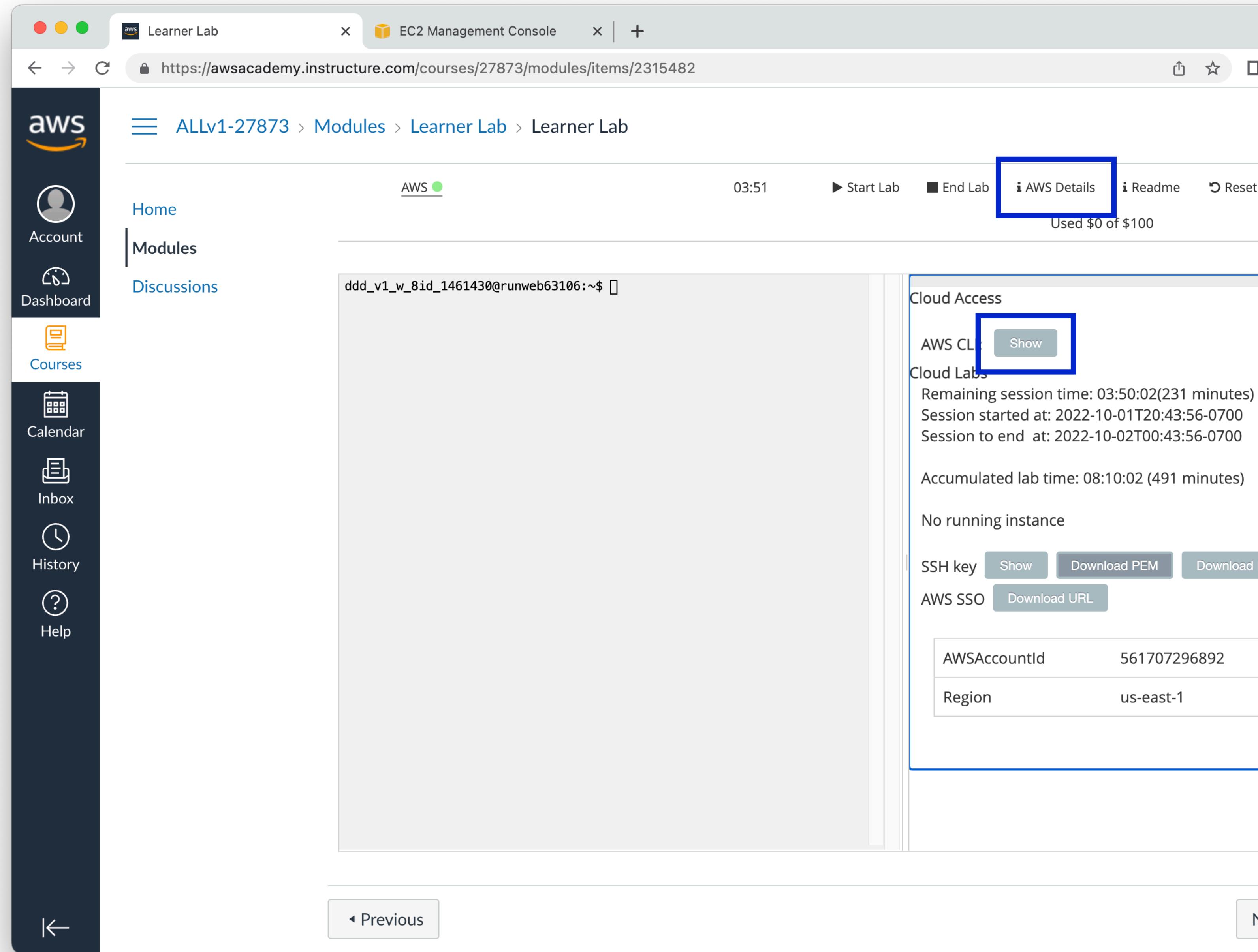
The screenshot shows the AWS Toolkit extension integrated into the VS Code interface. The Explorer sidebar on the left displays a project structure for a 'DEMO' folder, which includes files like 'index.html', 'app.js', 'chatApi.js', 'favicon.ico', 'Dockerfile', 'ec2-cloudformation.yaml', and 'run.sh'. The main editor area on the right shows a 'credentials' file with the following content:

```
1 # AWS credentials file used by AWS CLI, SDKs, and tools.
2 # Created by AWS Toolkit for VS Code. https://aws.amazon.com/visualstudio/
3 #
4 # Each [section] in this file declares a named "profile", which can
5 # be used in tools like AWS Toolkit to choose which credentials you want to
6 # use.
7 # See also:
8 # https://docs.aws.amazon.com/IAM/latest/UserGuide/id\_credentials.html
9 # https://docs.aws.amazon.com/cli/latest/userguide/cli-config-file-sections.html
```

The status bar at the bottom indicates the AWS profile is set to 'default'.

CLI Credentials Download SSH Keys

- Go back to AWS Academy
- Click on AWS Details
- Click on the “Show” button next to AWS CLI



CLI Credentials

Download SSH Keys

- A text box with credential information including the following is displayed:
 - `aws_access_key_id`
 - `aws_secret_access_key`
 - `aws_session_token`
- Copy all of the text inside the box, including [default]

The screenshot shows a web browser window titled "Launch AWS Academy Learner Lab" with the URL <https://awsacademy.instructure.com/courses/67146/modules/items/5958265>. The page displays a sidebar with navigation links: Home, Modules (selected), Discussions, Grades, Courses, Calendar, Inbox, History, and Help (with 10 notifications). The main content area shows a user profile "ALLv1EN..." and the path "Modules > AWS Acad... > Launch AWS Academy Learner Lab". On the right, there is a "Cloud Access" section with the following text:

```
[default]
aws_access_key_id=[REDACTED]
aws_secret_access_key=[REDACTED]
aws_session_token=FwoGZXIvYXdzEIn//////////wEaDMC
pCK9AbrMtRi6Bp3JufHWZaHicq2q6k2GW7ZxAsRKR/e4qRvyV
aur5pQ8PVodDChguY4YmU2n76khn+Ha2l+QNFT3KLky1An5+T
zoFB/dpy0i05LHSKRZgXBMdh7CjUJ574VckhvLDd5lwHTwcYD
YyWoN0MgsmBoBuJAmvcJLvSsamo1+SqCmcasso3P5Drzfyrna
QA277ow7gijcq6WuBjIt8SUC+5cg+RTfpeM+SEcpXhZcFW/85
39ah6X7zBhq2IEs3+c
```

Below this, the "Cloud Labs" section shows session details: Remaining session time: 03:59:48(240 minutes), Session started at: 2024-02-11T15:18:47-0800, and Session to end at: 2024-02-11T19:23:58-0800.

AWS vs Code Extension Configuration

- A new “credentials” document will open.
 - We will paste in credentials we get from AWS Academy
 - Save the document

The screenshot shows the AWS Toolkit for VS Code interface. The top bar includes standard OS X window controls (red, yellow, green) and a search bar labeled "Demo". The left sidebar, titled "EXPLORER", lists project files under a "DEMO" folder: "index.html", "app.js", "chatApi.js", "favicon.ico", "Dockerfile", "ec2-cloudformation.yaml", and "run.sh". A notification icon in the top right corner of the sidebar indicates "1 unsaved" changes. The main content area displays the "AWS Toolkit: Add Connection to AWS" dialog, which is a modal window titled "credentials". It shows the path "Users > fischerm > .aws > credentials". The content of the file is a sample AWS credentials configuration:

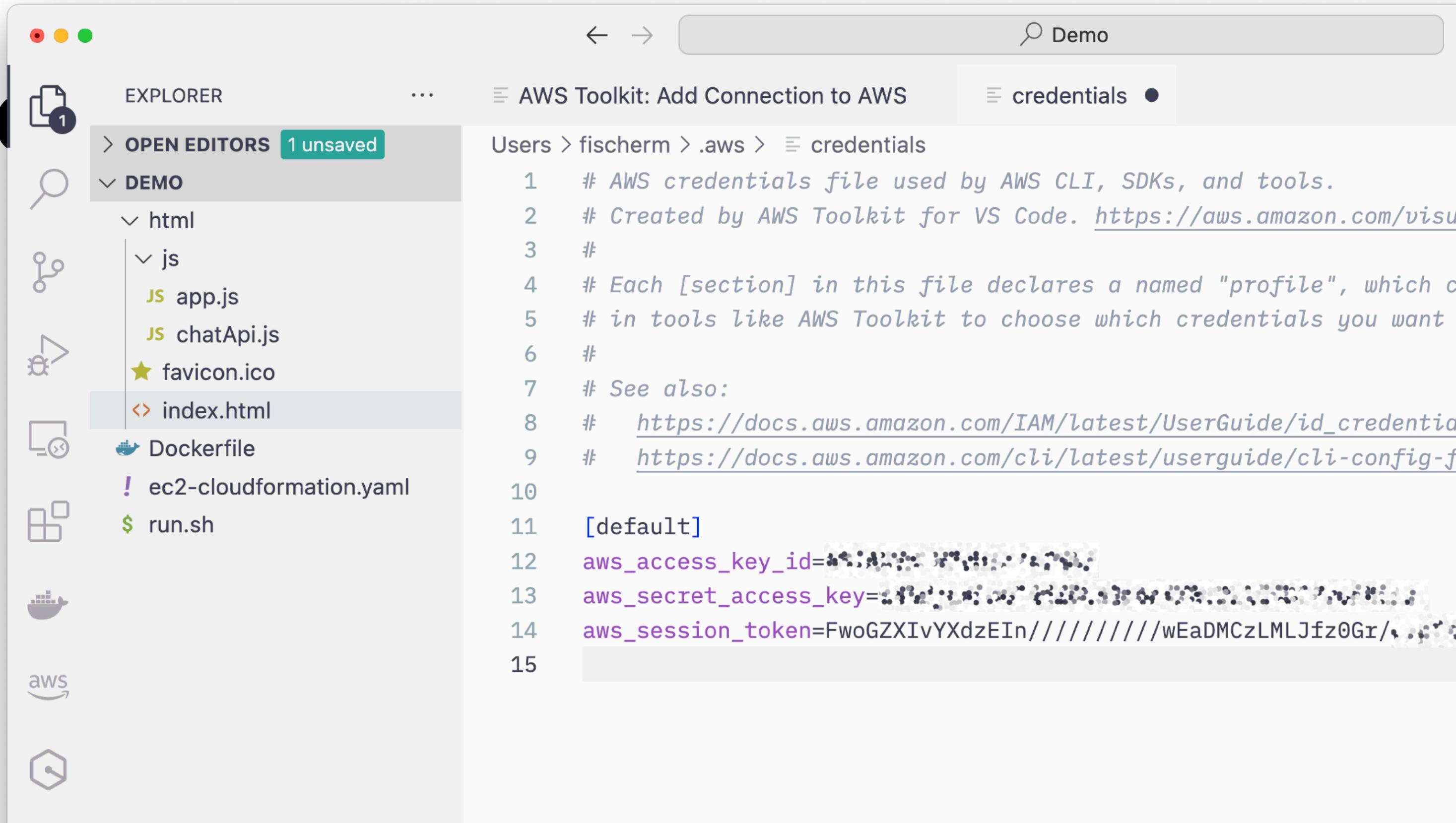
```
1 # AWS credentials file used by AWS CLI, SDKs, and tools.
2 # Created by AWS Toolkit for VS Code. https://aws.amazon.com/visualstudio/
3 #
4 # Each [section] in this file declares a named "profile", which can
5 # be used in tools like AWS Toolkit to choose which credentials you want to
6 # use.
7 # See also:
8 # https://docs.aws.amazon.com/IAM/latest/UserGuide/id\_credentials.html
9 # https://docs.aws.amazon.com/cli/latest/userguide/cli-config-file-sections.html
10
11 [default]
12 aws_access_key_id=XXXXXXXXXXXXXX
13 aws_secret_access_key=XXXXXXXXXXXXXX
14 aws_session_token=FwoGZXIvYXdzEIn//////////wEaDMCzLMLJfz0Gr/...
15
```

The bottom status bar shows icons for "0" (problems), "0" (warnings), "0" (information), "Minify", "AWS: profile:default", and "CodeWhisperer".



AWS vs Code Extension Configuration

- A new “credentials” document will open.
 - We will paste in credentials we get from AWS Academy
 - Save the document



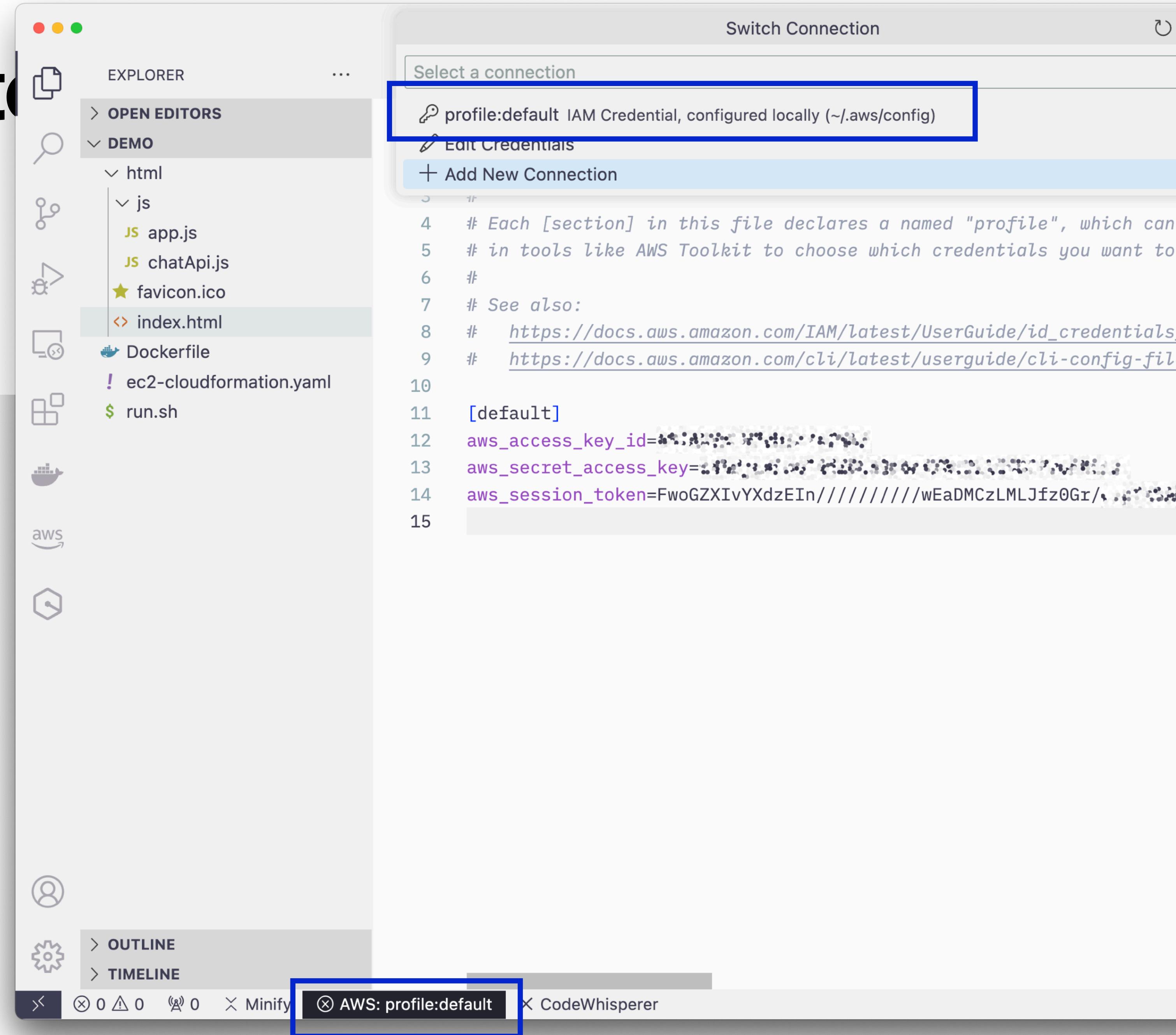
Important!

You will have to get new CLI credentials for each AWS Academy Lab session. Sessions are only valid for 4 hours at a time.

Copy them into this file and replace the old ones each time.

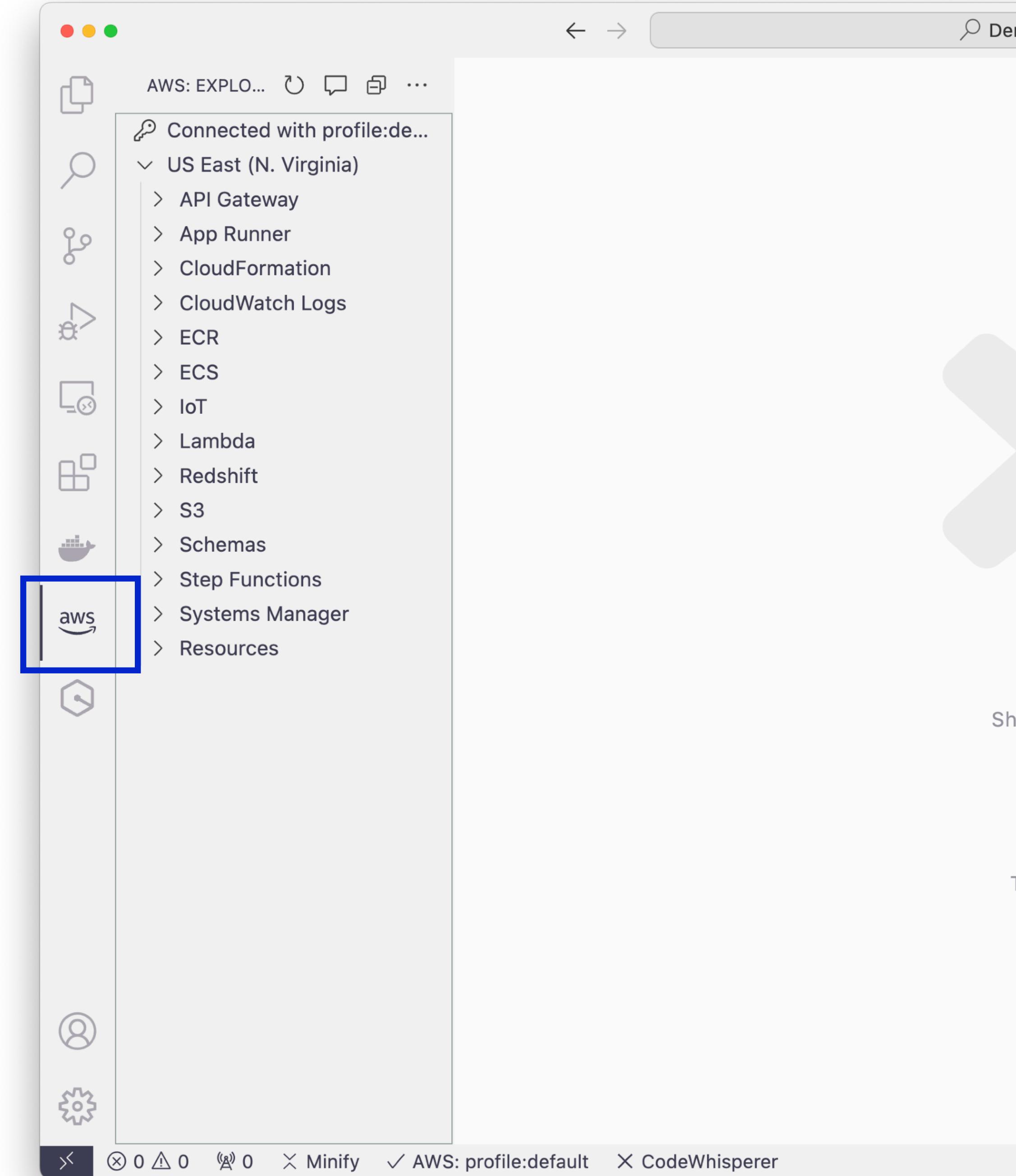
AWS VS Code Extension Configuration

- Click on the “AWS: profile” in the window footer again to open the profile selection
- You should see your new default profile in the list now
- Click on that line to activate it.



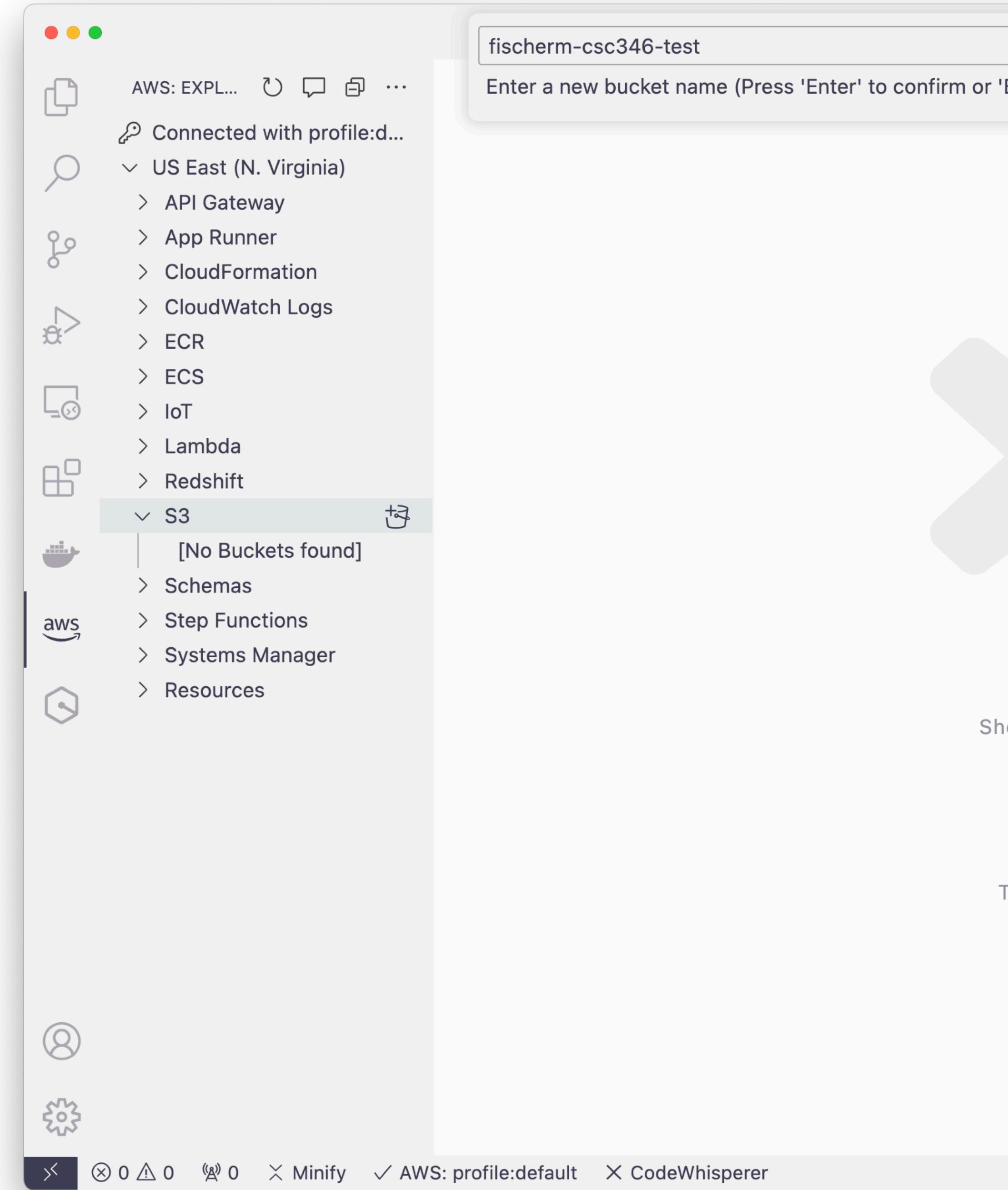
AWS VS Code Extension Configuration

- Clicking on the AWS Extension in the left sidebar will now bring up the resource browser for the current region (us-east-1)
- There's probably nothing there yet since this is a new empty account



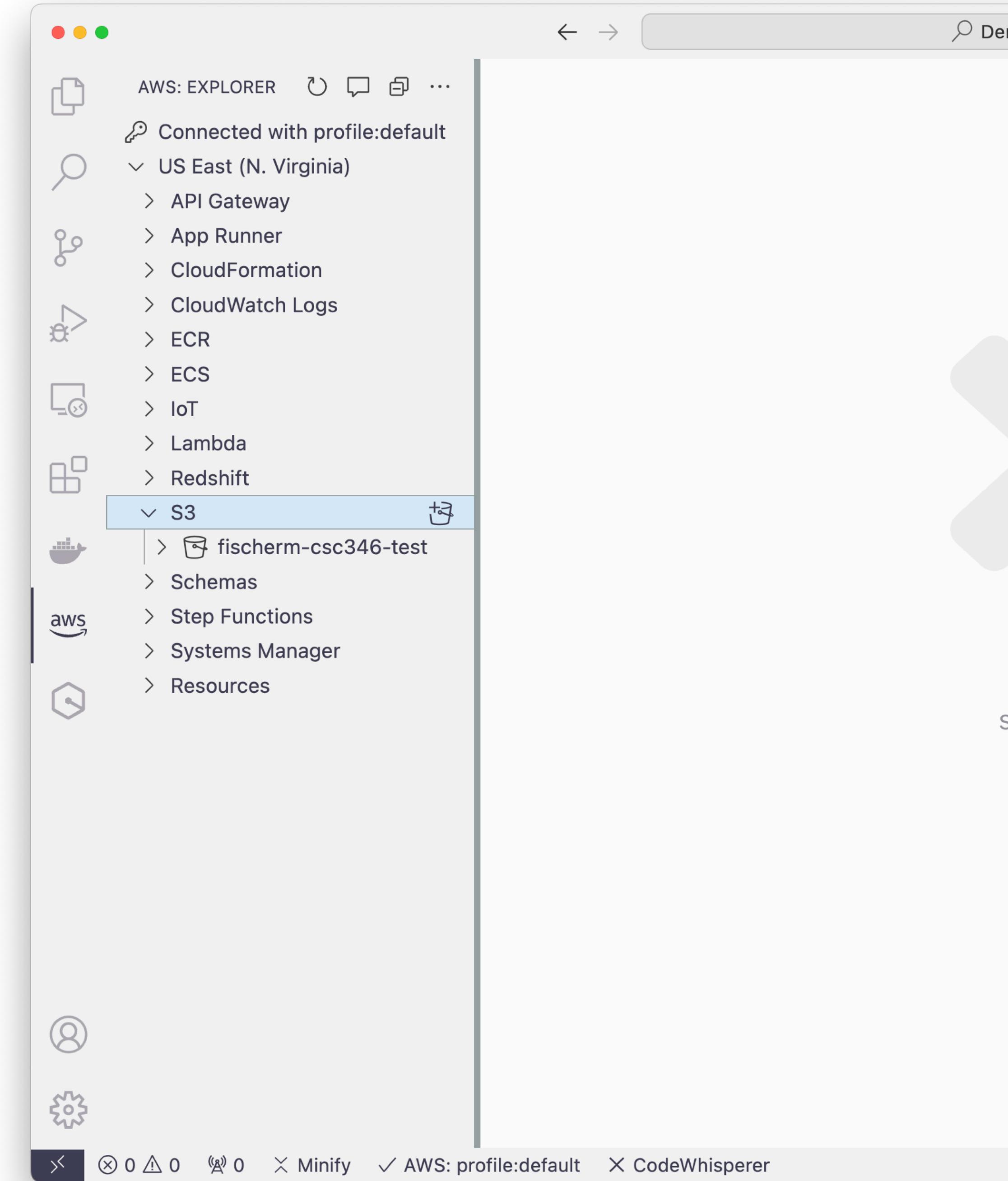
AWS VS Code Extension Configuration

- Click on the S3 section
- Click on the little +Bucket Icon
- Enter in the name of your bucket
 - Note bucket names must be globally unique among all AWS accounts
- Hit the “Return” key to make it



AWS VS Code Extension Configuration

- You made your first cloud resource!

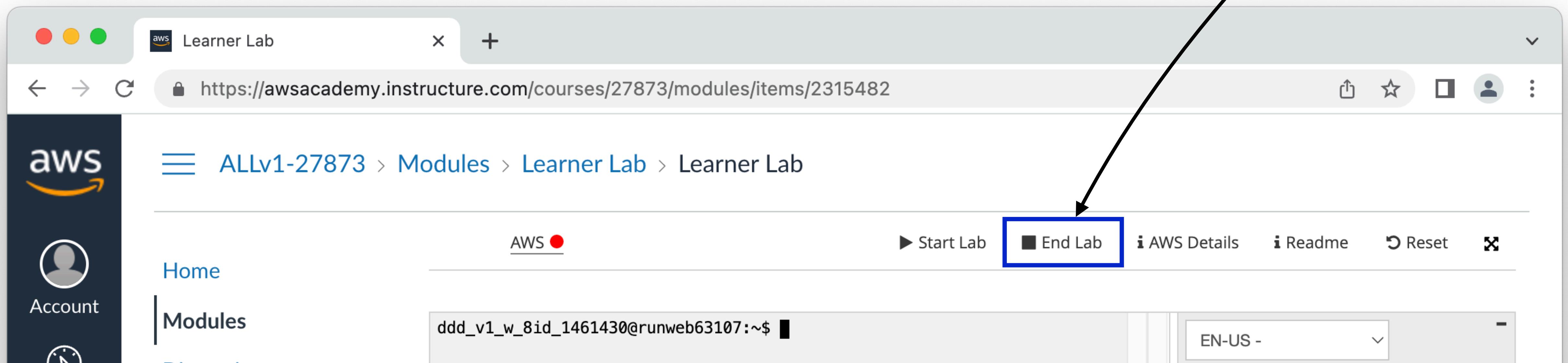


AWS Academy

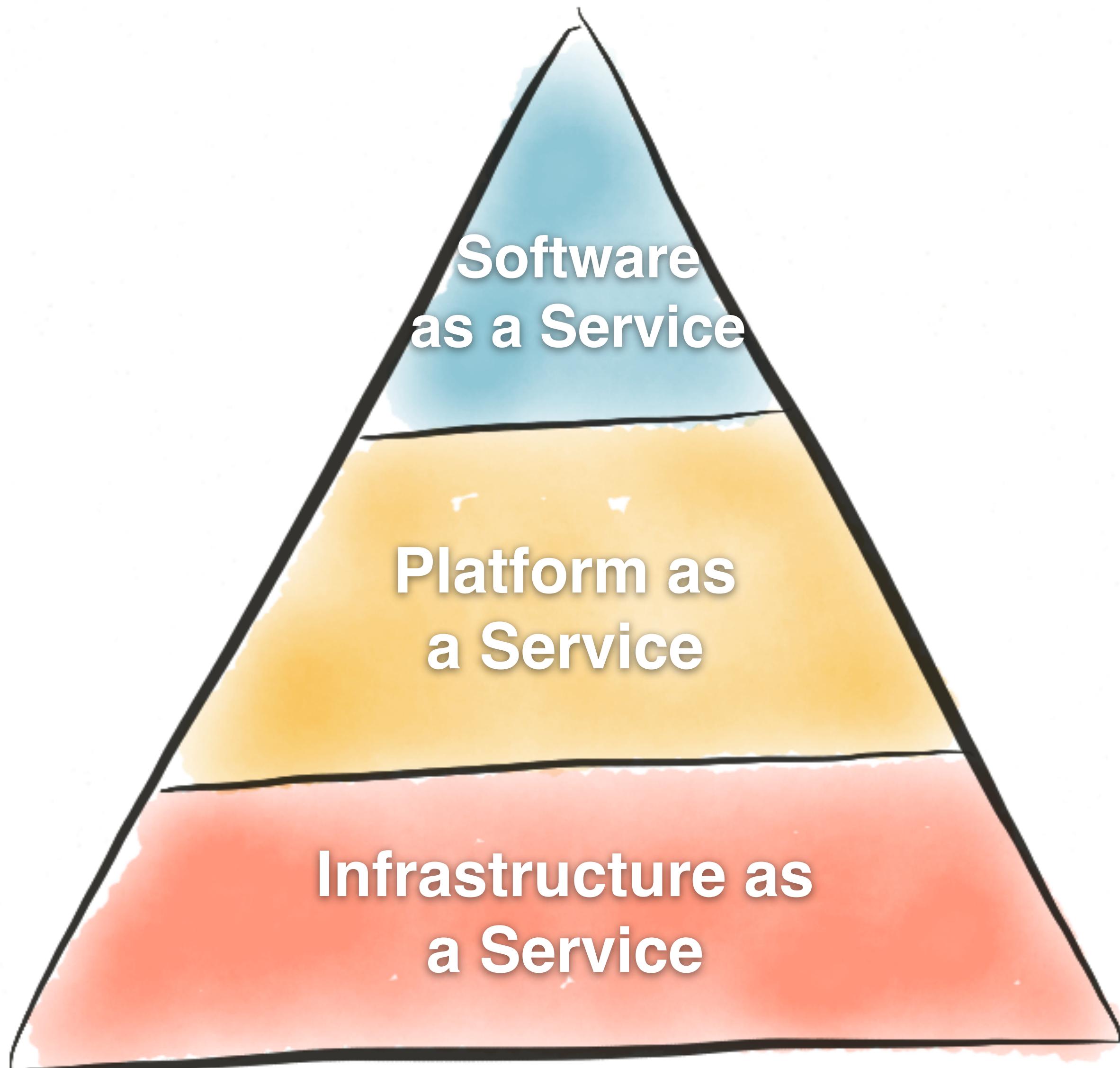
End Lab Session

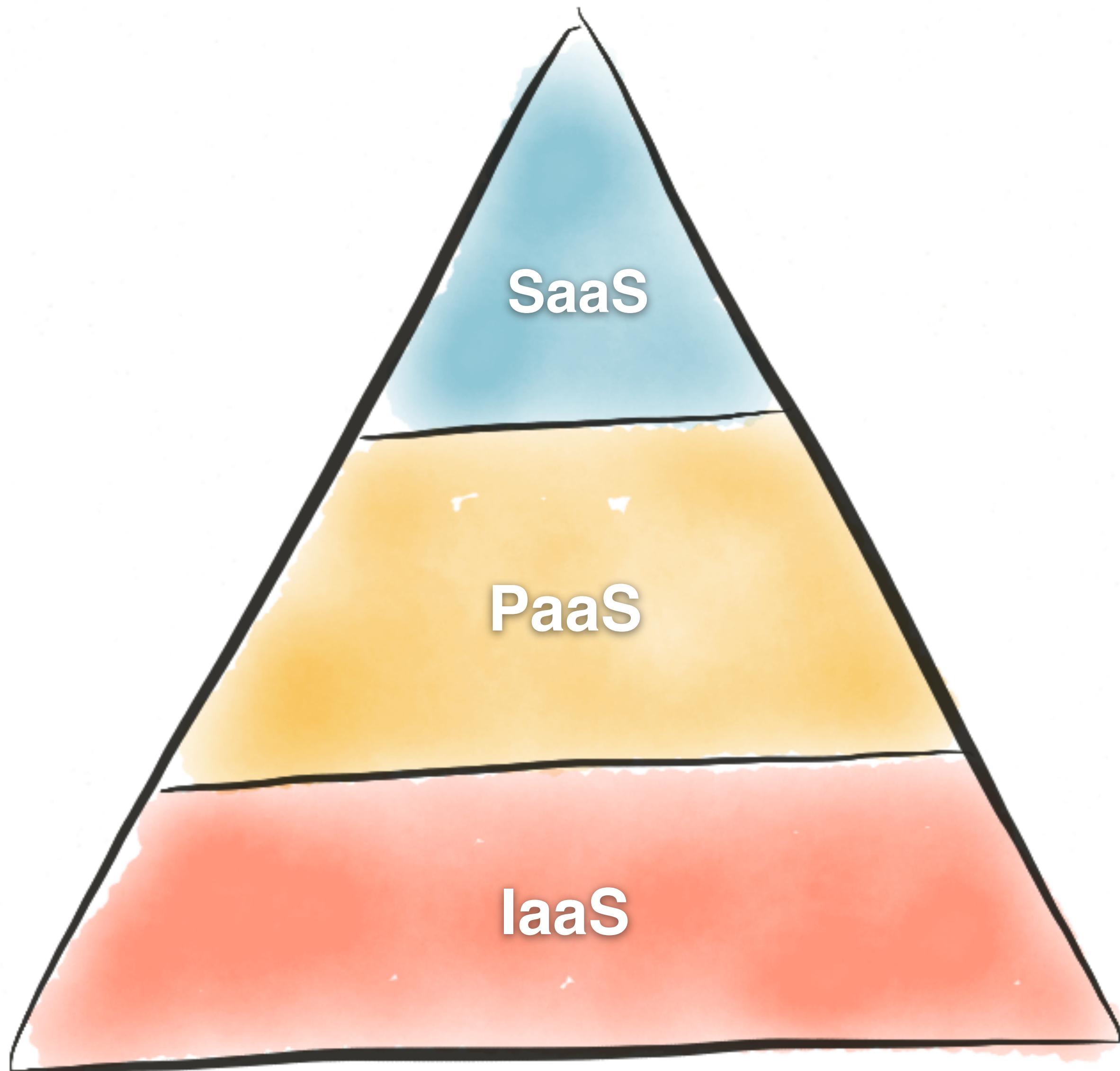
- When you're done, make a habit of ending your lab session in AWS Academy.
- If you forget, it will automatically time out after 4 hours, but you're charged for any running resources during that whole time.

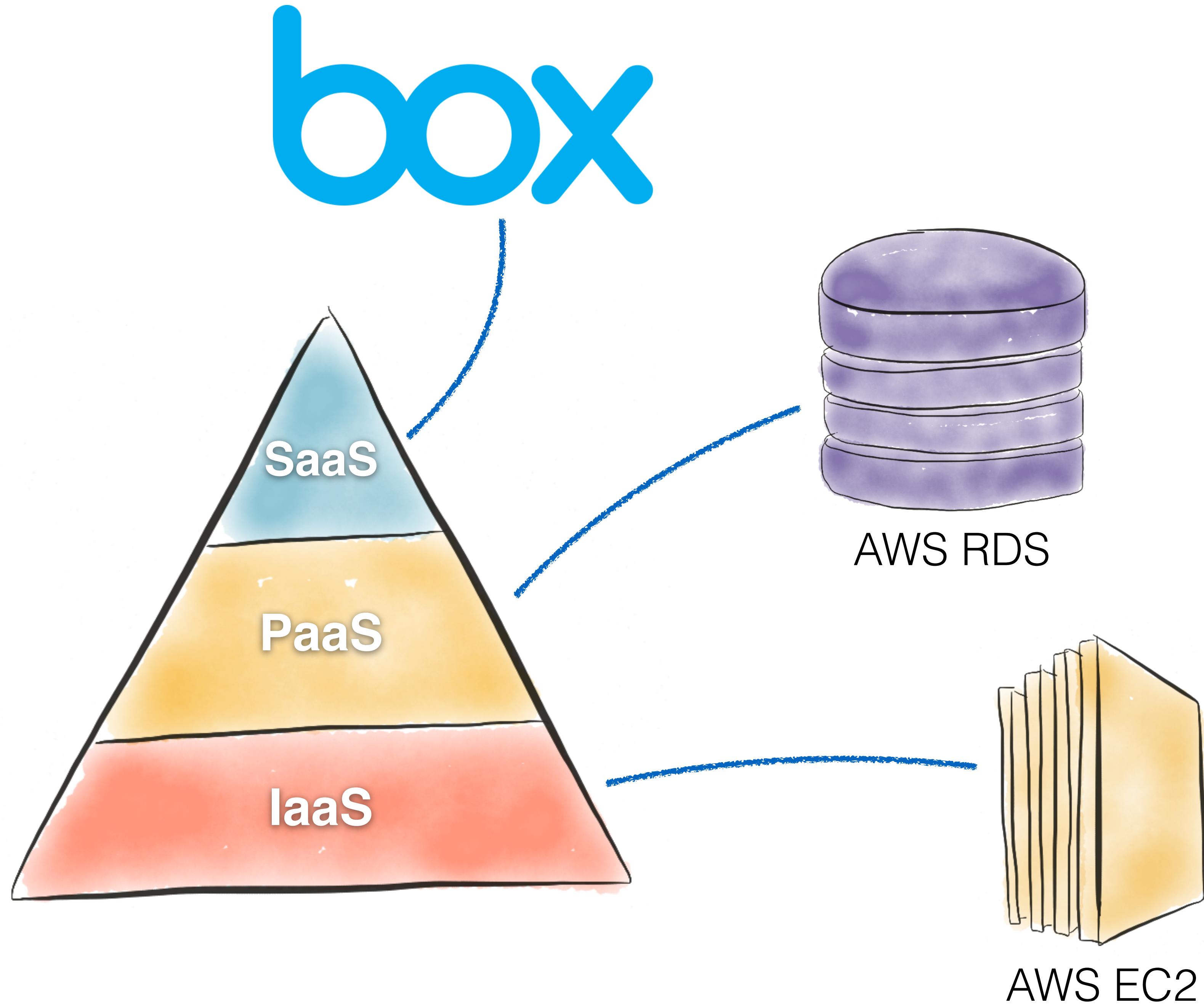
End Lab Button

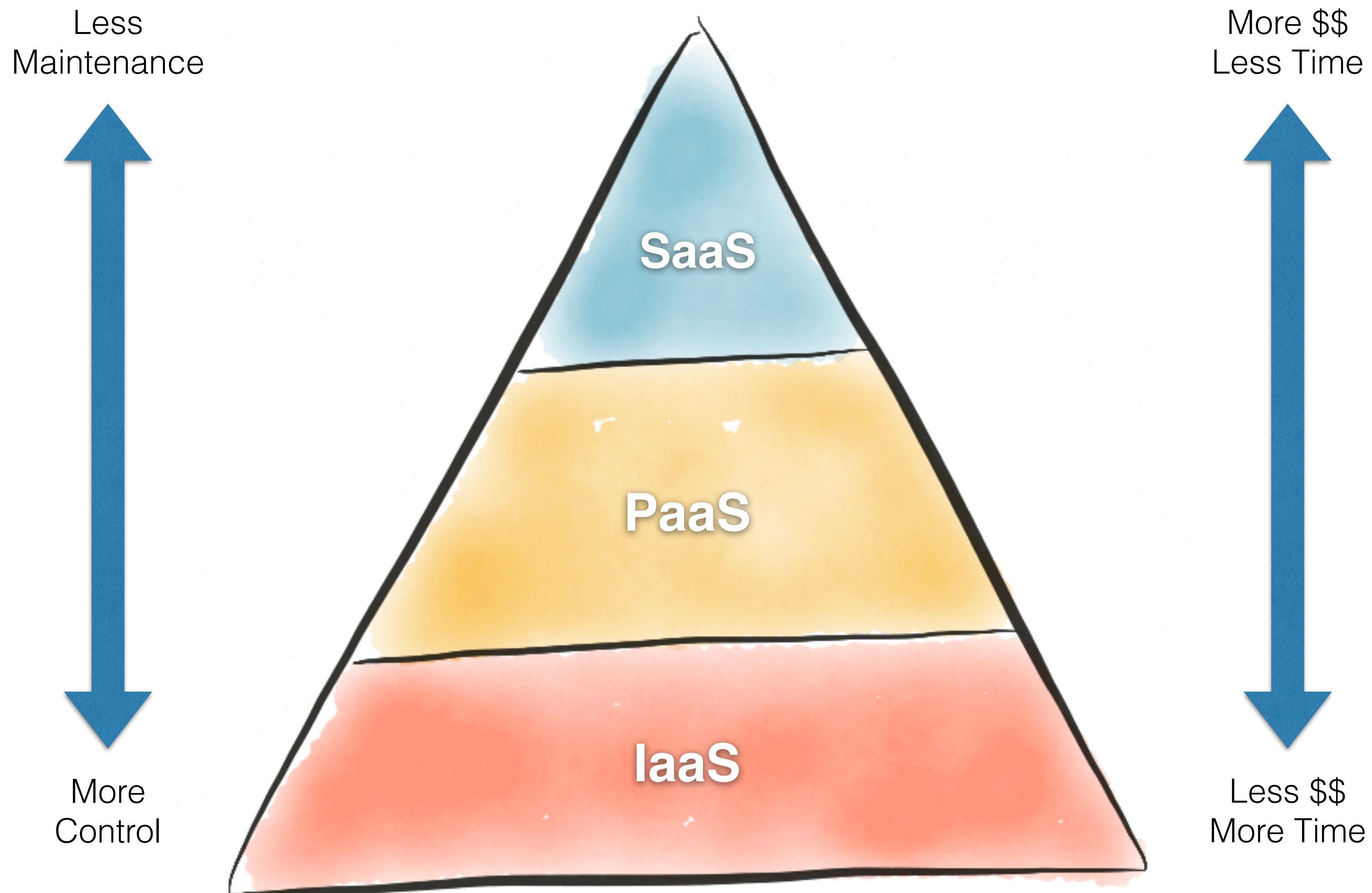


AWS Overview

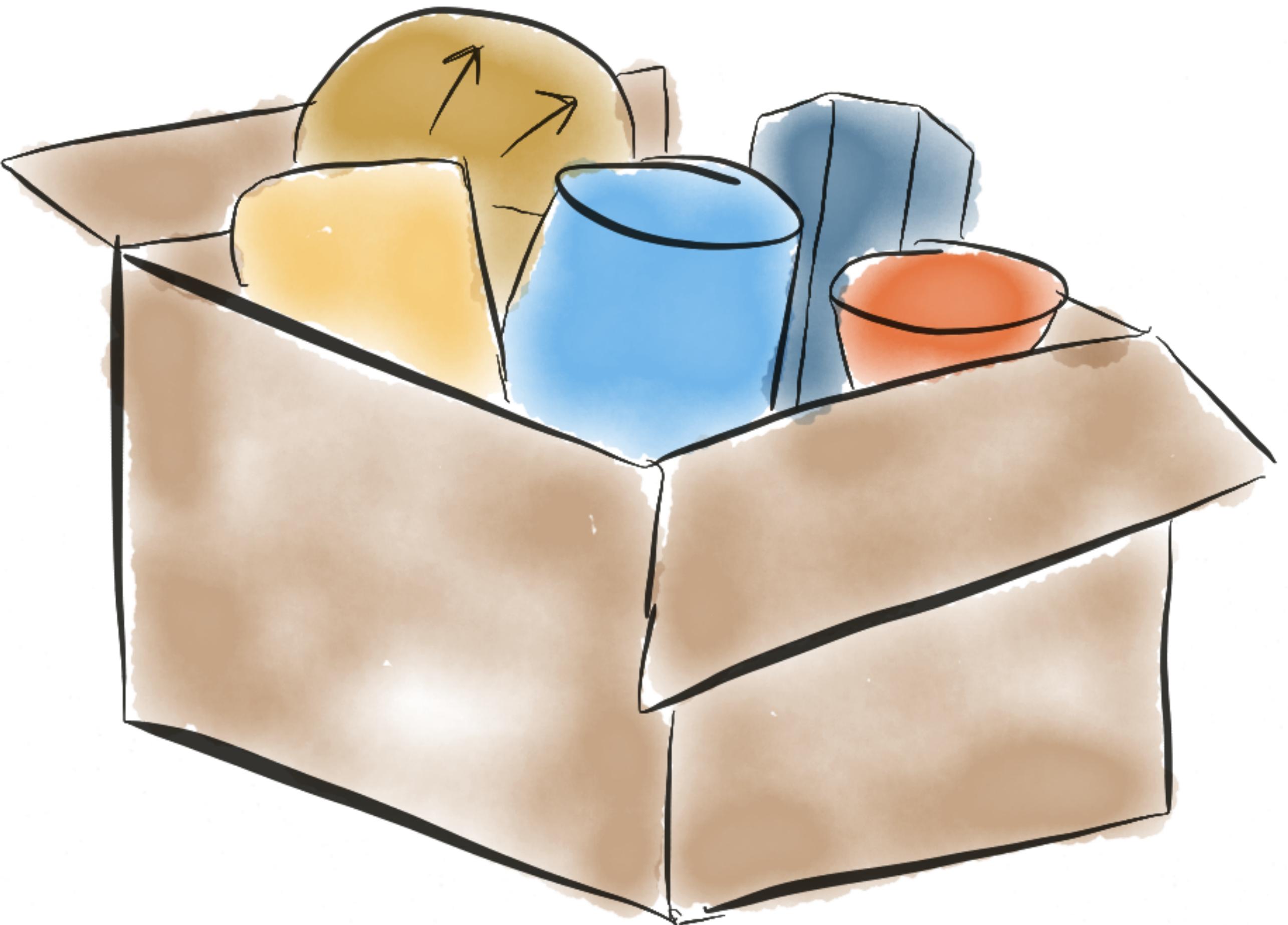








AWS Services



Three Main Categories

Compute	Storage	Network
EC2	S3	S3
RDS	RDS	VPC
Lambda	EBS	VPN

Compare On-Prem to Cloud

On-Prem	AWS
VMWare	EC2
Isilon / Synology / NAS	EFS
F5 bigIP	ELB / ALB
Firewalls	Security Groups

EC2

- Elastic Cloud Compute
- Virtual Machines (VMs)
- Linux or Windows
- Basic Server Building Block
- Provision, log in, configure as you like

EBS

- Elastic Block Storage
- Standard block storage attached to EC2 instances
- Multiple volumes can be attached to an instance
- Snapshots

EFS

- Elastic File System
- Amazon's Managed NFS Service
- Unix-centric shared file system
 - Mount a single file system across many application hosts
 - Store application files that need to be shared

S3

- Simple Storage System
- Basic Object Storage
 - Key/Value Pairs
 - NOT Block Storage! Cannot directly attach to EC2 Instances
- Good for storing lots of data independent of a single server
- Access through APIs and HTTP
- Much cheaper than EBS

RDS

- Relational Database Service
- PaaS for Databases
 - Oracle, MSSQL, MySQL, PostgresSQL, Aurora
 - AWS manages the servers, minor patching
 - Less management on your part, also less configurability

ELB / ALB

- Elastic Load Balancer / Application Load Balancer
- Simpler, dumber versions of an F5
- Accepts incoming traffic on some port, balances to n backend servers
- Usually public-facing, in public subnets
- SSL/TLS Termination

Regions

- Geographic location of AWS data centers
- Oregon, Virginia, London, etc.
- Each Region contains multiple physical data centers, each with independent power and networking
- Resources must be specified in a particular Region
 - We use Oregon (us-west-2) for almost everything

Availability Zone

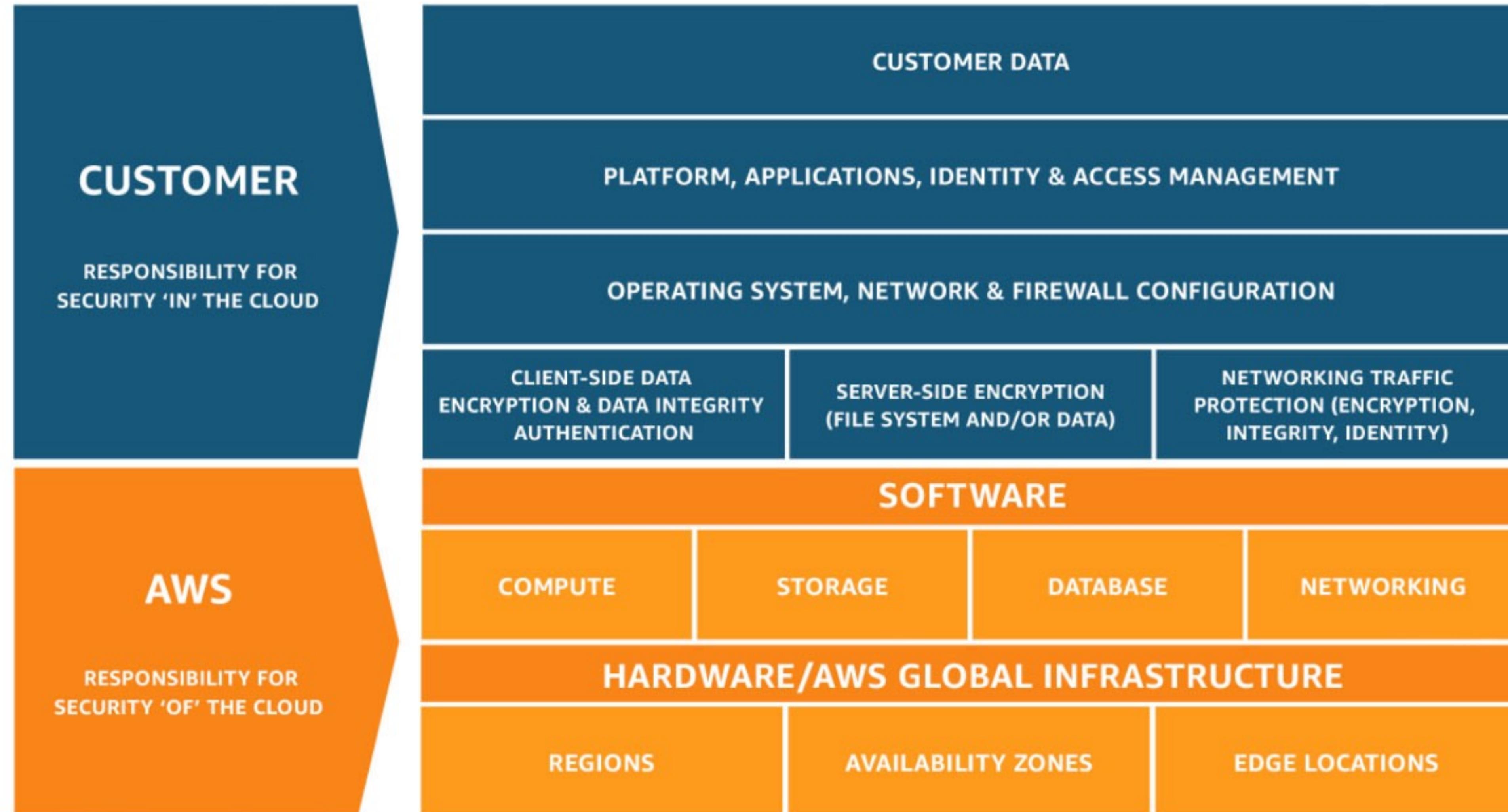
- Within a region, there are multiple Availability Zones
- Each AZ has separate power and networking
- Designed for physical redundancy
- High Availability is achieved by deploying resources into multiple AZs
- Many services (RDS, ELBs, etc) are Multi-AZ capable

VPC

- Virtual Private Cloud
- AWS's Network Construct
- Subnets, Route Table, ACLs, VPNs, etc.
- Almost all compute resources must be assigned to a subnet in a VPC
 - (EC2, RDS, ELBs, EFS, etc)

AWS Shared Responsibility Model

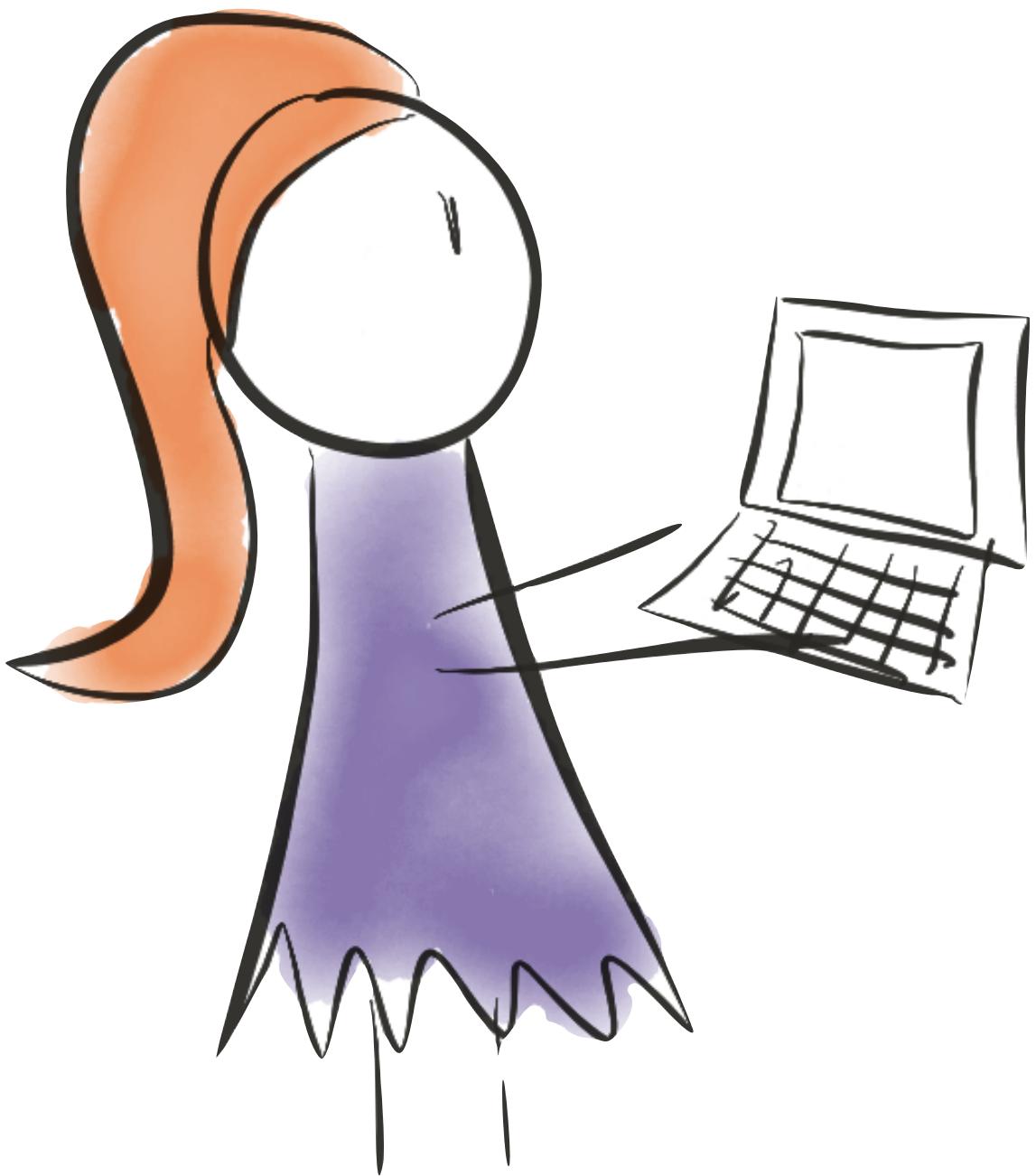
<https://aws.amazon.com/compliance/shared-responsibility-model/>



Permissions Model

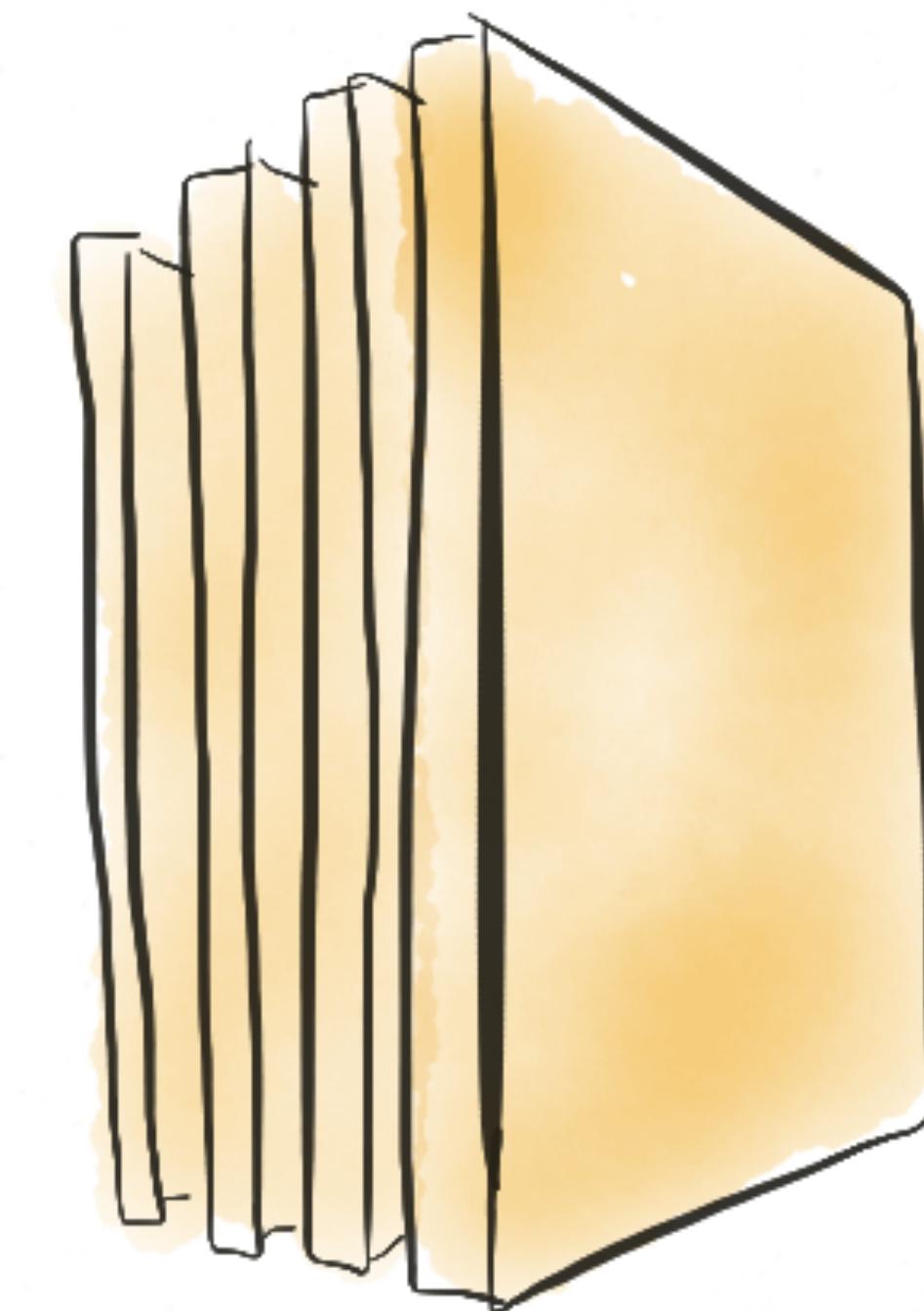
Can I push this button?

Permissions in 3 parts



Someone

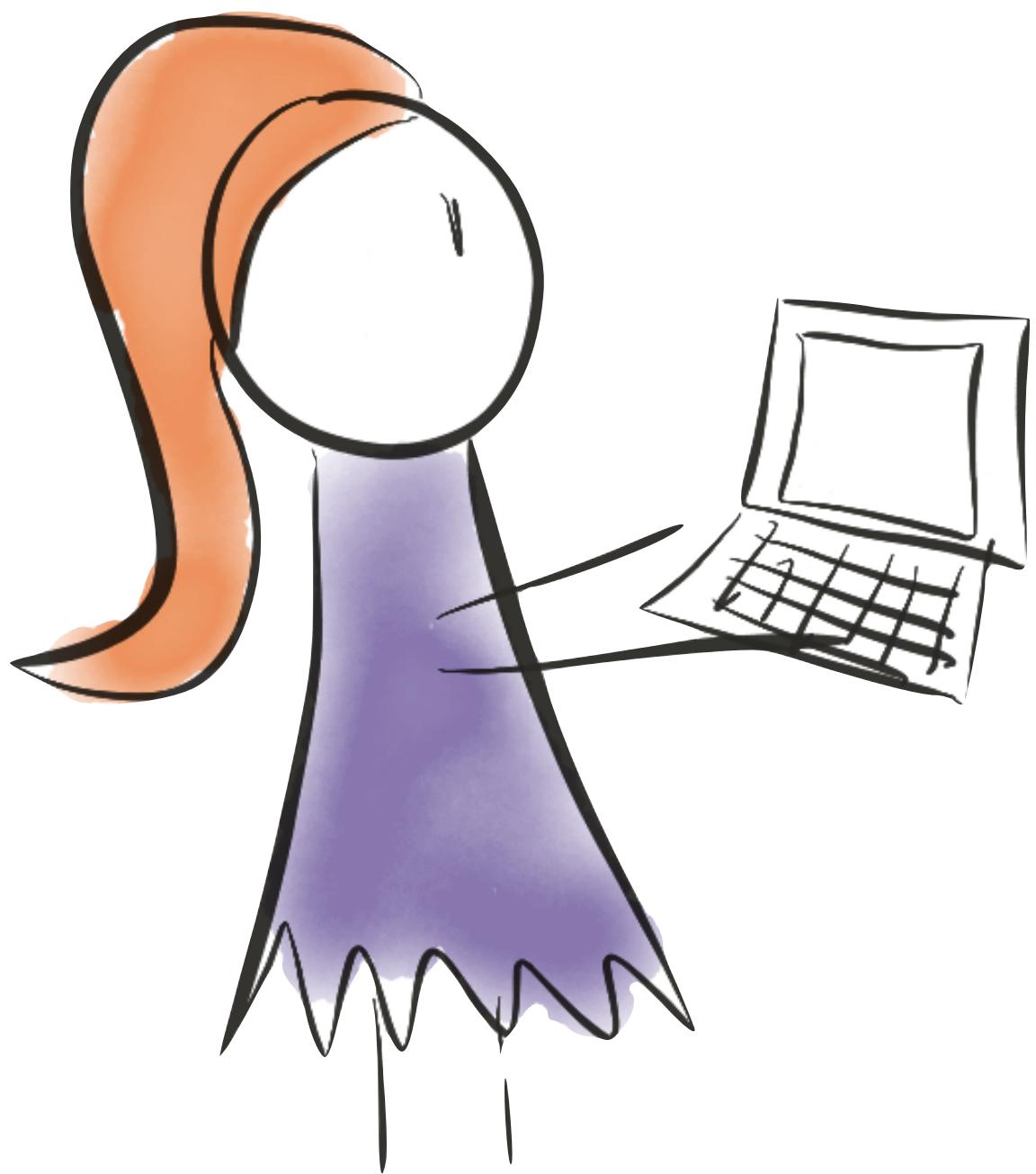
ec2 : RunInstance



To something

Does something

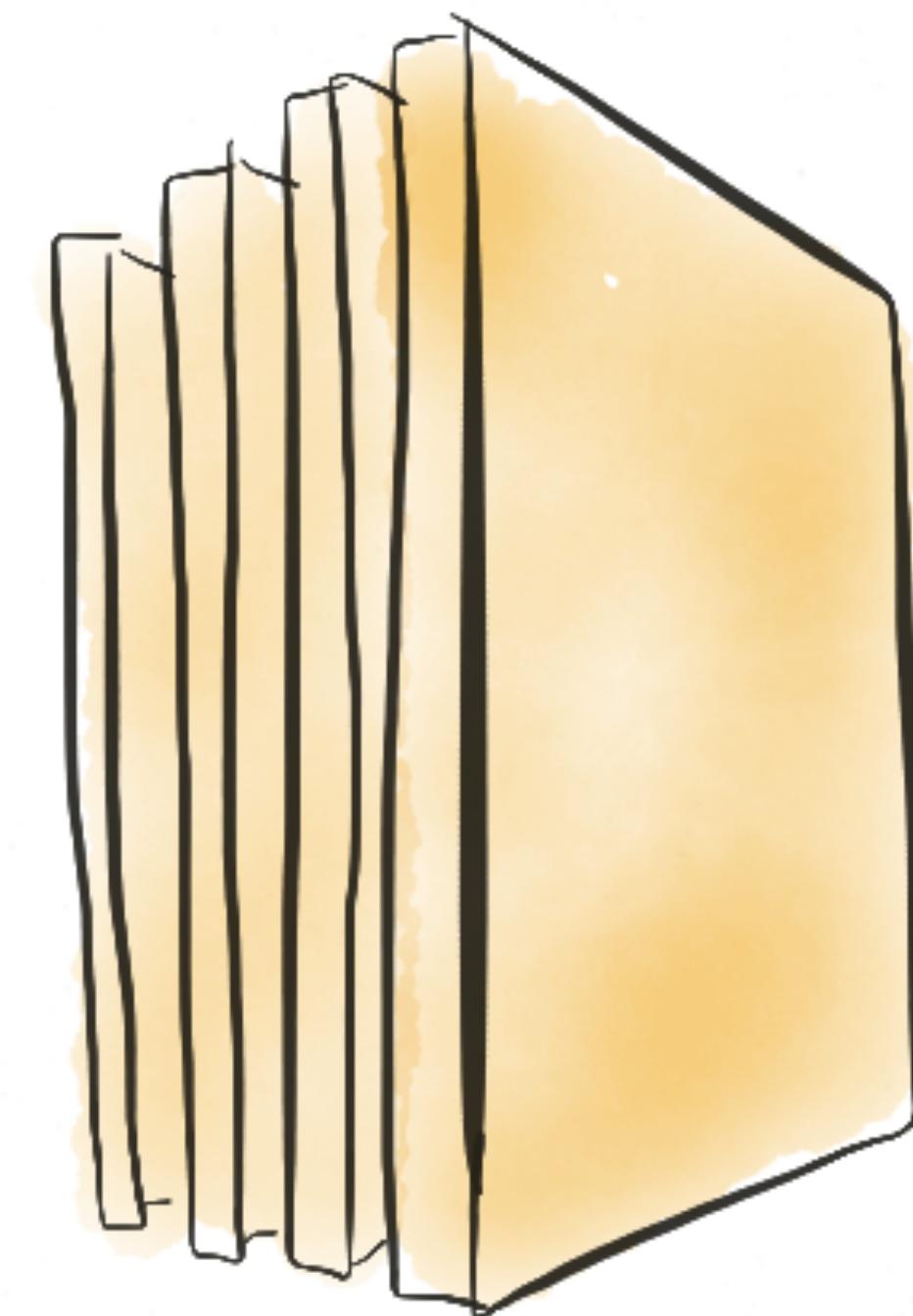
Permissions in 3 parts



Principal

ec2 : RunInstance

Action



Resource



IAM

- Identity & Access Management
- Controls who can do which actions to what resources

IAM User

- A user entity
- Could be configured with web console access (or not)
- Could be configured with API access keys (or not)
- Can have Roles assigned to it, and belong to groups

IAM Role

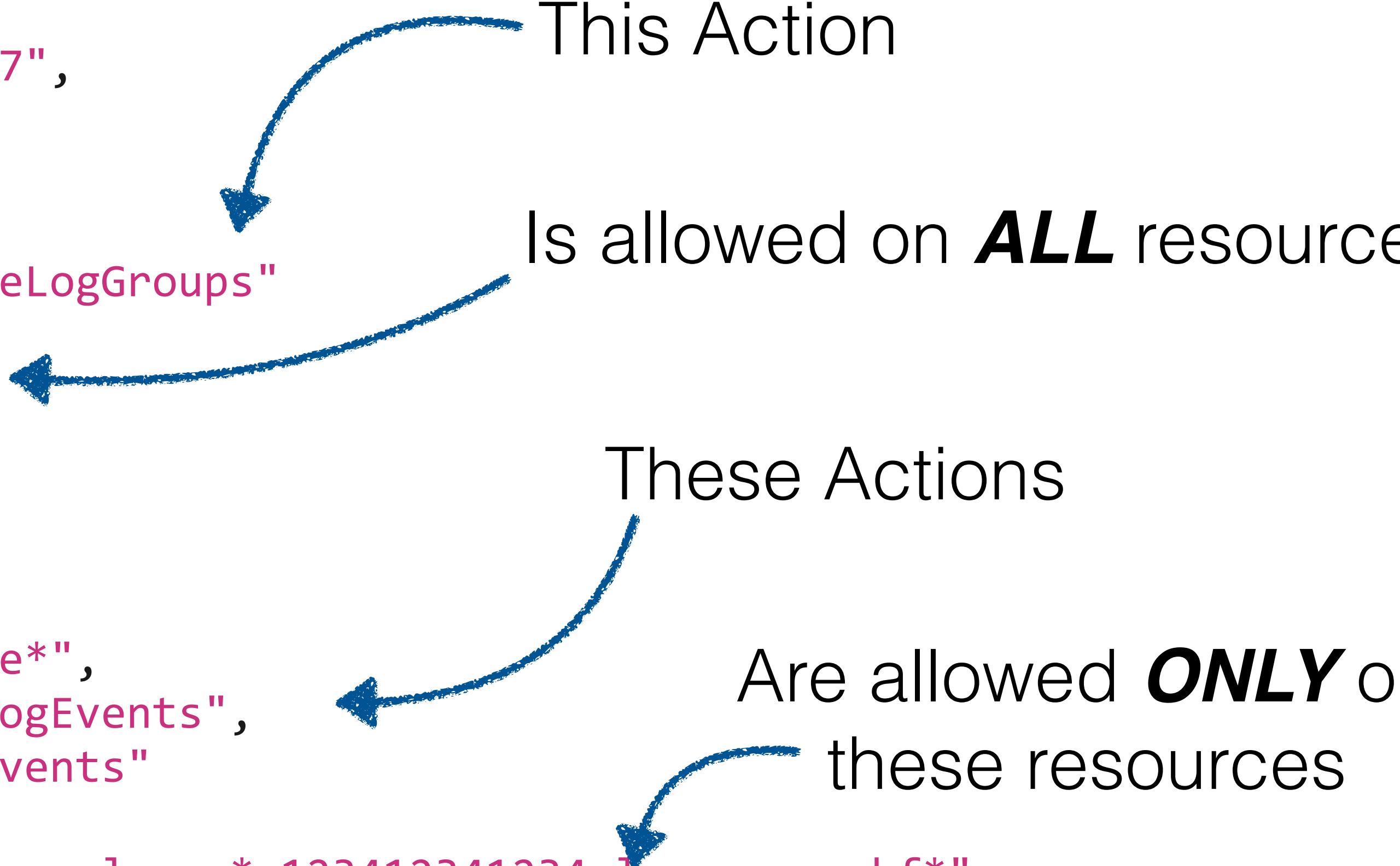
- A collection of 0 or more Policies
- Roles can be attached to users and services

IAM Policy

- A set of instructions allowing or denying an action to be performed on some resource
- Policies are assigned to Users or Roles
- JSON Document

IAM Policy

```
{  
  "Version": "2012-10-17",  
  "Statement": [  
    {  
      "Action": [  
        "logs:DescribeLogGroups"  
      ],  
      "Resource": "*",  
      "Effect": "Allow"  
    },  
    {  
      "Action": [  
        "logs:Describe*",  
        "logs:FilterLogEvents",  
        "logs:GetLogEvents"  
      ],  
      "Resource": "arn:aws:logs:*:123412341234:log-group:kf*",  
      "Effect": "Allow"  
    }  
  ]  
}
```



The diagram illustrates the structure of the IAM policy. It shows two main sections of statements. The first statement covers all resources with the action 'logs:DescribeLogGroups'. The second statement covers a specific log group ('arn:aws:logs:*:123412341234:log-group:kf*') with actions 'logs:Describe*', 'logs:FilterLogEvents', and 'logs:GetLogEvents'. Handwritten-style annotations with arrows explain these details:

- A blue arrow points from the text "This Action" to the line "logs:DescribeLogGroups" in the first statement.
- A blue arrow points from the text "Is allowed on **ALL** resources" to the line "Resource": "*" in the first statement.
- A blue arrow points from the text "These Actions" to the three actions listed in the second statement: "logs:Describe*", "logs:FilterLogEvents", and "logs:GetLogEvents".
- A blue arrow points from the text "Are allowed **ONLY** on these resources" to the Resource ARN in the second statement: "arn:aws:logs:*:123412341234:log-group:kf*".

There Are Lots of Actions

ec2:AcceptReservedInstancesExchangeQuote	ec2>CreateRoute	ec2:DescribeBundleTasks	ec2:DescribeSpotInstanceRequests
ec2:AcceptVpcPeeringConnection	ec2>CreateRouteTable	ec2:DescribeClassicLinkInstances	ec2:DescribeSpotPriceHistory
ec2:AllocateAddress	ec2>CreateSecurityGroup	ec2:DescribeConversionTasks	ec2:DescribeStaleSecurityGroups
ec2:AllocateHosts	ec2>CreateSnapshot	ec2:DescribeCustomerGateways	ec2:DescribeSubnets
ec2:AssignPrivateIpAddresses	ec2>CreateSpotDatafeedSubscription	ec2:DescribeDhcpOptions	ec2:DescribeTags
ec2:AssociateAddress	ec2>CreateSubnet	ec2:DescribeExportTasks	ec2:DescribeVolumeAttribute
ec2:AssociateDhcpOptions	ec2>CreateTags	ec2:DescribeFlowLogs	ec2:DescribeVolumesModifications
ec2:AssociateFpgaImage	ec2>CreateVolume	ec2:DescribeHosts	ec2:DescribeVolumeStatus
ec2:AssociateIamInstanceProfile	ec2>CreateVpc	ec2:DescribeHostReservations	ec2:DescribeVolumes
ec2:AssociateRouteTable	ec2>CreateVpcEndpoint	ec2:DescribeHostReservationOfferings	ec2:DescribeVpcAttribute
ec2:AttachClassicLinkVpc	ec2>CreateVpcPeeringConnection	ec2:DescribeIamInstanceProfileAssociation	ec2:DescribeVpcClassicLink
ec2:AttachInternetGateway	ec2>CreateVpnConnection	ec2:DescribeIdentityIdFormat	ec2:DescribeVpcEndpointServices
ec2:AttachNetworkInterface	ec2>CreateVpnConnectionRoute	ec2:DescribeIdFormat	ec2:DescribeVpcEndpoints
ec2:AttachVolume	ec2>CreateVpnGateway	ec2:DescribeImageAttribute	ec2:DescribeVpcPeeringConnections
ec2:AttachVpnGateway	ec2>DeleteCustomerGateway	ec2:DescribeImages	ec2:DescribeVpcs
ec2:AuthorizeSecurityGroupEgress	ec2>DeleteDhcpOptions	ec2:DescribeImportImageTasks	ec2:DescribeVpnConnections
ec2:AuthorizeSecurityGroupIngress	ec2>DeleteFlowLogs	ec2:DescribeImportSnapshotTasks	ec2:DescribeVpnGateways
ec2:BundleInstance	ec2>DeleteInternetGateway	ec2:DescribeInstanceAttribute	ec2:DetachClassicLinkVpc
ec2:CancelBundleTask	ec2>DeleteKeyPair	ec2:DescribeInstanceState	ec2:DetachInternetGateway
ec2:CancelConversionTask	ec2>DeleteNatGateway	ec2:DescribeInstances	ec2:DetachNetworkInterface
ec2:CancelExportTask	ec2>DeleteNetworkAcl	ec2:DescribeInternetGateways	ec2:DetachVolume
ec2:CancelImportTask	ec2>DeleteNetworkAclEntry	ec2:DescribeKeyPairs	ec2:DetachVpnGateway
ec2:CancelReservedInstancesListing	ec2>DeleteNetworkInterface	ec2:DescribeMovingAddresses	ec2:DisableVgwRoutePropagation
ec2:CancelSpotFleetRequests	ec2>DeletePlacementGroup	ec2:DescribeNatGateways	ec2:DisableVpcClassicLink
ec2:CancelSpotInstanceRequests	ec2>DeleteRoute	ec2:DescribeNetworkAcls	ec2:DisableVpcClassicLinkDnsSupport
ec2:ConfirmProductInstance	ec2>DeleteRouteTable	ec2:DescribeNetworkInterfaceAttribute	ec2:DescribeVpcClassicLinkDnsSupport
ec2:CopyImage	ec2>DeleteSecurityGroup	ec2:DescribeNetworkInterfaces	ec2:DisassociateAddress
ec2:CopySnapshot	ec2>DeleteSnapshot	ec2:DescribePlacementGroups	ec2:DisassociateFpgaImage
ec2>CreateCustomerGateway	ec2>DeleteSpotDatafeedSubscription	ec2:DescribePrefixLists	ec2:DisassociateIamInstanceProfile
ec2>CreateDhcpOptions	ec2>DeleteSubnet	ec2:DescribeRegions	ec2:DisassociateRouteTable
ec2>CreateFlowLogs	ec2>DeleteTags	ec2:DescribeReservedInstances	ec2:EnableVgwRoutePropagation
ec2>CreateImage	ec2>DeleteVolume	ec2:DescribeReservedInstancesListings	ec2:EnableVolumeIO
ec2>CreateInstanceExportTask	ec2>DeleteVpc	ec2:DescribeReservedInstancesModifications	ec2:EnableVpcClassicLink
ec2>CreateInternetGateway	ec2>DeleteVpcEndpoints	ec2:DescribeReservedInstancesOfferings	ec2:EnableVpcClassicLinkDnsSupport
ec2>CreateKeyPair	ec2>DeleteVpcPeeringConnection	ec2:DescribeRouteTables	ec2:GetConsoleOutput
ec2>CreateNatGateway	ec2>DeleteVpnConnection	ec2:DescribeSecurityGroups	ec2:GetConsoleScreenshot
ec2>CreateNetworkAcl	ec2>DeleteVpnConnectionRoute	ec2:DescribeSnapshotAttribute	ec2:GetHostReservationPurchasePreview
ec2>CreateNetworkAclEntry	ec2>DeleteVpnGateway	ec2:DescribeSnapshots	ec2:GetPasswordData
ec2>CreateNetworkInterface	ec2:DeregisterImage	ec2:DescribeSpotDatafeedSubscription	ec2:GetReservedInstancesExchangeQuote
ec2>CreatePlacementGroup	ec2:DescribeAccountAttributes	ec2:DescribeSpotFleetInstances	ec2:ImportImage
ec2>CreateReservedInstancesListing	ec2:DescribeAddresses	ec2:DescribeSpotFleetRequestHistory	ec2:ImportInstance
	ec2:DescribeAvailabilityZones	ec2:DescribeSpotFleetRequests	ec2:ImportKeyPair
			ec2:ImportSnapshot
			ec2:ImportVolume

Demo