

## AWS Educate Institution Onboarding Guide September 2015



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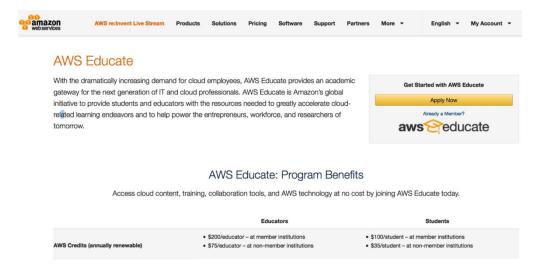


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#### Welcome and Introduction

Welcome to AWS Educate! (If you have not yet joined the program, please submit your application at <a href="https://www.awseducate.com">www.awseducate.com</a>, see below.)



AWS Educate is Amazon's global initiative to provide students and educators with the resources needed to greatly accelerate cloud-related learning to help prepare students for a cloud-enabled workplace. AWS Educate provides four pillars of grant-based support for educators and students: 1) content on the Cloud contributed by top educators and AWS to help you build your courses; 2) training materials to help you skill up on AWS; 3) collaboration tools such as discussion forums, events, and places to upload and rate content; and 4) credits to access AWS services for free.

To help you get started with AWS Educate and maximize benefits for your institution along with your students and faculty, we created this onboarding whitepaper to guide you through the following key activities:

- 1. Processes to Join AWS Educate for Institutions, Educators, and Students
- 2. Different Options for Setting up AWS Accounts
- 3. Maximizing your Administrative Access and Whitelisting Domains for your Institution
- Overview of AWS Educate Benefits and a Walk-through of the AWS Educate Portals
  - 4.1. Credits
  - 4.2. Collaboration
  - 4.3. Build your Course/Explore Content
  - 4.4. Skill up on AWS
  - 4.5. Support

Note: The processes and steps described in this onboarding guide, appendices, and associated web pages may be updated from time-to-time. To view the most up-to-date version of this document, login to the AWS Educate – Educator Collaboration Portal <u>here</u>, and scroll down to the Featured Content by AWS section or search the FAQs for "onboarding guide".

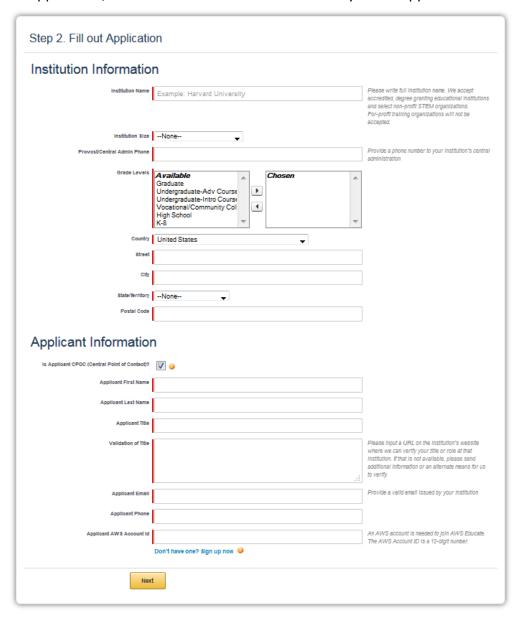


#### 1. Process to Join AWS Educate for Institutions, Educators and Students

AWS Educate provides a quick and easy onboarding process for institutions, educators, and students.

#### 1.1 How Institutions Join AWS Educate

Institutions can apply on-line at <a href="www.awseducate.com">www.awseducate.com</a> for free membership in the AWS Educate Program. This will maximize the number of benefits provided to students at the institution, and it will enable you to have a direct relationship with the AWS Educate team and gain the most from the program. The institution applications should take less than 10 minutes to complete – see below for an example. A complete walk-through of the institution application is provided in Appendix A, but below is a visual of the main body of the application:





On the institution application, you will be asked to specify a central point of contact (CPOC). This person will be the technical account administrator and our point of contact, and will have access to additional features in the AWS Educate - Educator Collaboration Portal. In order to expedite approval of your institution, the applicant should provide a publicly accessible web link that confirms the CPOC affiliation with the institution along with his role/title at the institution. If that link is not available, please provide other backup in this section. We will use this link or other information to verify that the CPOC works for the institution in the specified role.

You will also need to provide a unique AWS account for the CPOC during the application process. If the CPOC doesn't already have an account, then he/she will need to create a new one. On the AWS Educate application form we provide a link to create a free AWS account. We do not accept multiple AWS Educate applications with the same AWS account ID, please ensure that this ID is unique. Note that new AWS account applicants will also receive one year AWS Free Tier access – see <a href="http://aws.amazon.com/free/">http://aws.amazon.com/free/</a> for more information.

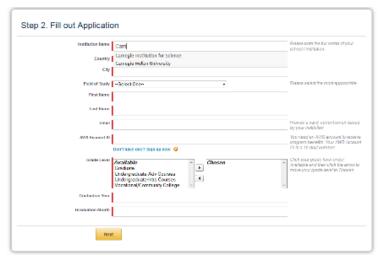
As soon as you submit the institution application for AWS Educate, you will receive a confirmation email. Our goal is to approve, deny, or request further information from the institution within three business days, though we may experience delays during peak registration periods. Once approved into the AWS Educate program, the CPOC will receive a Welcome Email that provides important program details, including an AWS credit code to access AWS services, web address or instructions for how to access the AWS Educate portals, logins to external sites, and other pertinent information. CPOCs should immediately enter their AWS credit code into their AWS account and activate their AWS Educate portal login credentials. (While the institution and educator share access to the AWS Educate - Educator Collaboration Portal, students have access to a separate, student-focused portal designed for the student community.)

#### 1.2 How Educators and Students Join AWS Educate

AWS Educate also provides a quick and easy onboarding process for educators and students from your institution. Each can apply on-line at <a href="www.awseducate.com">www.awseducate.com</a>. The educator and student applications should each take less than 5 minutes to complete. A complete walk-through of the application process for educators is provided in Appendix B, and a complete walk-through of the application process for students is provided in Appendix C.

In order to be associated with your institution, all educators and students will need to list their institution's name, or department within the institution, on the application when they apply. The application form will autofill as the educator or student types in your institution's name – see below for an example:





To expedite the approval process, educators and students should always use an email address provided by the institution, featuring the institution's approved email domain(s). If the educator or student does not have or does not use an institution-provided email address in the application process, we will need to do further validation; this will delay the approval process and can result in the educator or student not being approved into the program.

Educators and students also need to provide a unique AWS account during the application process. If they don't already have an account or did not have an AWS account created for them by their institution, then they will need to create a new one. On the AWS Educate application form, we provide a link to create a free AWS account. Note that new AWS account applicants will also receive one year AWS Free Tier access -- see <a href="http://aws.amazon.com/free/for more information">http://aws.amazon.com/free/for more information</a>.

As soon as the educator or student completes and submits the AWS Educate application, he/she will be sent a confirmation email. We target approving, denying, or requesting further information from the educator or student within three to five business days, though applications that contain all required information and an institution-provided email may be approved more quickly. Note that there may be delays during peak registration periods. Approved educators and students will receive a Welcome Email that provides important program details, including an AWS credit code to access AWS services, web address or instructions for how to access the educator or student AWS Educate portal, logins to external sites, and other pertinent information. Educators and students should immediately enter their AWS credit code into their AWS account. Educators should also immediately activate their AWS Educate portal login credentials. (While the institution and educator share access to the AWS Educate Educator Collaboration Portal, students have access to a separate, student-focused portal designed for the student community.)

While there are limits to the number of educators and students from each institution who can join AWS Educate, those limits have purposely been set high. You can find the limits on the FAQs after you login to the portal. If you believe that the limit is too low for your institution, send us an email explaining your institution's needs to <a href="mailto:support@awseducate.com">support@awseducate.com</a>. We will review the request and quickly respond.



#### 2. Setting up AWS Accounts

When applying to join AWS Educate, each applicant is asked to enter an AWS Account ID. There are several options to set up an AWS account that can accommodate different use cases. Depending on your institution's needs, any of the following options may be useful:

- Option 1: A fully distributed option that enables educators and students to create and manage their own unique AWS accounts;
- Option 2: A fully centralized option, where the institution creates unique AWS accounts for students and bears some responsibility in managing the accounts; and
- Option 3: A hybrid of the distributed and centralized options.

This section describes these options and several benefits for each.

2.1 Option 1: Distributed – Educators and Students Create and Manage Their Own AWS Accounts

The distributed option is most often used by institutions that would like educators and students to create and manage their own AWS accounts. The steps required to implement the fully-distribution option include:

- <u>Step 1</u>: Educators and students sign up for AWS Educate at <a href="https://www.awseducate.com">https://www.awseducate.com</a> using their .edu email address (or other institutional email address).
- <u>Step 2</u>: While filling out the AWS Educate application, educators and students input
  their own AWS account ID. If they do not have an AWS account, they navigate to
  <a href="http://aws.amazon.com">http://aws.amazon.com</a>, click *Create an AWS Account* and follow the on-screen
  instructions. (Visual instructions for creating an AWS Account are also located in
  Appendix D.)
- <u>Step 3</u>: Educators and students will receive an AWS credit code in a Welcome Email after their AWS Educate application has been accepted. The code should be entered into their AWS account. (See Appendix E for more detail about how to enter an AWS credit code.) Educators and students manage their own accounts, including setting up Billing Alerts and monitoring spend. (See Appendix F for more detail about how to set up a Billing Alert.)
- Option 1 benefits:
  - Easiest option for the institution to administer.
  - The institution is not responsible for the educator or student accounts.
  - Students can continue to use their account after graduation with no action required from the institution.



### 2.2 Option 2: Centrally Managed - Institutions Create and Partially Manage Educator and Student AWS Accounts

The centralized managed option works well for educational institutions or departments within educational institutions that would like to more actively manage AWS accounts for their educators and/or students. With this option, the institution or department may create and manage unique AWS accounts for its students and educators. The steps required to implement the fully-centralized options are described in this section.

#### 2.2.1 Centrally Managed with a Credit Card

If an institution wants to create, link to a master account for billing purposes, and manage unique AWS accounts backed by a credit card for its students and educators, follow these steps:

- Step 1: Institution or department within the institution creates a master account and configures it for consolidated billing (see Appendix H for more detail on consolidated billing). Note that separate master AWS accounts could be set up for a group of educators, a group of students, specific classes, or other subcategories.
- Step 2: Institution or department within the institution creates an AWS account for each educator and student and enters a valid payment method.
- Step 3: Institution or department within the institution links the student and educator AWS accounts to the institution's master AWS account for billing purposes.
- Step 4: Institution or department within the institution creates an AWS Identity and Access Management (IAM) user for each educator and student's AWS account. The institution may then provide the AWS account number and IAM credentials to each educator and student so that each can access their account and AWS resources (see Appendix I and Appendix J for more detail on IAM).
- Step 5: Each educator and student then applies to join AWS Educate, inputting the AWS account number shared with them by the institution or department within the institution.
- Step 6: Educators and students receive their AWS credits in a Welcome Email from AWS Educate, log in to their AWS account and access the billing & cost management section, and enter the AWS credit code into their AWS account. The AWS credits flow up to the institution's master account after being applied and will be shared across all of the linked accounts.

As long as the educator and student AWS accounts remain linked to the institution's master account, the institution would retain root access and can manage various aspects of the linked accounts, such as limiting the AWS services that the educators or students can utilize, setting up Billing Alerts to monitor spend, terminating running services, adding additional funds to the master account to be utilized by the linked accounts, unlinking accounts from the master, and other managerial tasks.



#### 2.2.2 Centrally Managed without a Credit Card

By linking accounts to a master account for billing purposes, the institution or department within the institution can enable educators and students to create an AWS account without a credit card, should educators and students not have a credit card available for use. If an institution wants to link student and educator accounts to enable the no credit card option, follow these steps:

- Step 1: Institution or department within the institution creates a master AWS
  account and configures it for consolidated billing (see Appendix H for more detail
  on consolidated billing). Note that separate master accounts could be set up for
  a group of educators, a group of students, specific classes, or other subcategories.
- Step 2: Institution's administrator sends an email to <u>NoCCexception@awseducate.com</u> with a request to set up student accounts without entering a credit card and later link those accounts to the master account. We will review the request quickly and if approved will then provide a separate link that can be used to create the accounts.
- Step 3: Institution or department within the institution uses the link to create the educator and student AWS accounts; the accounts will not require entry of a payment method.
- Step 4: Institution or department within the institution sends an email to <u>NoCCexception@awseducate.com</u> with a list of the AWS account numbers that should be linked to the master account.
- o Step 5: AWS links these accounts to the institution's master AWS account.
- Step 6: Institution or department within the institution creates an AWS Identity and Access Management (IAM) user for each educator and student account. The institution then provides the IAM credentials to each educator and student so that each can access their account and AWS resources. (See Appendix I and Appendix J for more detail on IAM.)
- Step 7: Each educator and student then applies to join AWS Educate, inputting the AWS account number shared with them by the institution or department within the institution.
- Step 8: Educators and students receive their AWS credits in a welcome email from AWS Educate, log in to their AWS account and access the billing & cost management section of their AWS account, and enter the AWS credit code into their AWS account. The AWS credits flow up to the institution's master AWS account after being applied.

Note that the student and educator accounts created without a credit card cannot be de-linked, and we recommend that the institution have the students enter their credit card number prior to graduating so that they could continue to use the same AWS account upon leaving. However, even if the account is not de-linked, as long as the institution maintains root access, the institution can remove or limit the ability for the account holder to start new services as well as set up Billing Alerts to monitor spend, terminate running services, add additional funds to the master account to be utilized by the linked accounts, and other managerial tasks.



#### • Option 2 benefits:

- Educators and students wouldn't be required to set up their own accounts.
- Educator and student accounts could potentially create accounts without entering a credit card.
- Institutions spread the AWS credits across all of the linked accounts, thereby mitigating overages by individual educators or students.
- Institutions could terminate running services (as long as root access to linked accounts is retained).
- When an educator or student leaves the institution, that AWS account could be de-linked provided that educator or student's credit card is associated with the account so that that individual could continue to have a lifetime AWS account.
- A detailed description and walk-through of the process are found in the appendices as follows: create AWS accounts (see Appendix D), set up billing alerts (see Appendix F), link or de-link accounts (see Appendix H), and configure IAM users and roles (see Appendix I and Appendix J).

In addition, if you find visuals helpful, a flow diagram of these steps for both fully-centralized options is provided in Appendix G.

#### 2.3 Option 3: Hybrid of Distributed and Centrally Managed

The hybrid option is available for institutions that would like to support both distributed and centrally managed students and educators. For example, educators and students could create their own AWS accounts, apply to the AWS Educate program, and then request or be invited by the institution or various departments within the institution to link to specific AWS master accounts by course or department. The benefits of this option for the institution are that specified departments could pool the AWS credits provided by AWS Educate, while placing the administrative burden on the educator and student.

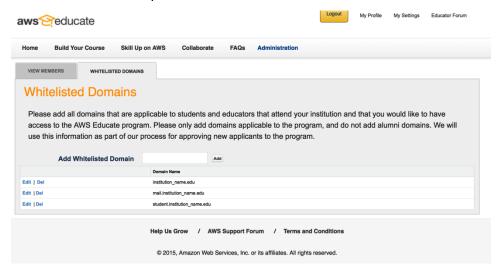
Note that only AWS accounts that are created by the institution, where the institution retains root access, would be eligible for the no credit card exception option described for the centrally managed option.



#### 3. Maximizing Your Administrative Access and Whitelisting Domains for Your Institution

As soon as your institution is accepted in to AWS Educate, the person designated on the application as the central point of contact (CPOC) will receive a Welcome Email. The CPOC is the institutional administrator and has administrative access to the AWS Educate - Educator Collaboration Portal. The login information in the Welcome Email provides the CPOC with that special access. Please login to the Portal as soon as possible.

After you login to the Portal, you will see several tabs at the top of the page, including an "Administration" tab. An example is show below:



The CPOC is the only member at the institution with access to the Administration tab. This tab serves two primary functions: 1) to enable you to whitelist domains and 2) to provide you with access to the list of educators and students who have joined AWS Educate or are attempting to join. Please immediately click on the Whitelisted Domain link within the Administration tab and add institutional domains and sub-domains that will be in the email addresses for current educators and students that you wish to join the program (e.g., institution\_name.edu, mail.institution\_name.edu). We use the whitelisted domain information to automatically authenticate educators and students from your institution and provision their benefits. Alumni or former educators are not eligible for AWS Educate benefits, and their domains should not be added.

Under View Members on the Administration tab, you can view the list of educators and students associated with your institution who have applied to the program, and whether their status is valid, invalid, or in a pending state. If an educator or student has submitted an application with a non-whitelisted domain (such as "google.com") and you recognize that they are a current attendee at your institution and your institution does not provide students and email address, you can over-ride the Pending state on this page by checking the box next to their name and clicking *Valid*. You can do this task for multiple applicants at a time. Note that using an email domain provided by the institution is preferred and speeds the approval process.



#### 4. Overview of AWS Educate Benefits and a Walk-through of the AWS Educate Portals

Educators and students at your institution that join AWS Educate should receive the benefits in the table below. Provided that your institution has joined, educators and students will receive nearly three times as many AWS credits.

AWS Educate: Program Benefits

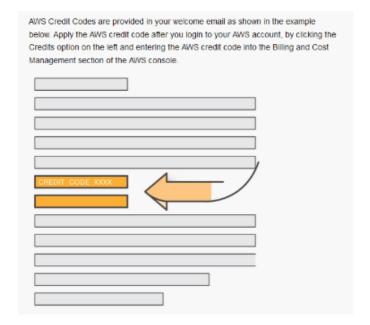
Access cloud content, training, collaboration tools, and AWS technology by joining AWS Educate today.

Educators Students \$200/educator – at member institutions \$100/student – at member institutions AWS Credits (annually renewable) . \$75/educator - at non-member institutions . \$85/student - at non-member institutions · Free access to labs Free AWS Essentials eLearning course. Free access to labe 50% off instructor-led training and certification. Free access to AWS content for classes . Free access to AWS content for homework, labs, or Curated Content . Free access to content contributed by leading educators self-study Educator Collaboration Portal access Student Portal access Virtual and in-person events . Virtual and in-person event to gether information, share Contribute and rate content best practices, and network Private and public discussion forums . Provide feedback on AWS Educate

#### 4.1 AWS Credits

The AWS Educate portals house most of the benefits available from AWS Educate, with the exception of the AWS Credit code that is provided in the Welcome Email and should be entered into the AWS account to provide access to AWS services. A pictorial of where students and educators will find the AWS credit code in their Welcome Email is shown below.

Provide feedback on AWS Educate





#### 4.2 Collaborate

Educators and CPOCs receive login information to the AWS Educate – Educator Collaboration Portal. Please log in to that portal as soon as possible. Note that student receive access to a separate portal and do not require log in information. Once an educator or CPOC logs in to the portal, he/she should update his/her profile by clicking the *My Profile* link found at the top right of the page. Click on *Overview*, and enter a list of topics areas he/she is knowledgeable about, join groups, or add a photo. Educators and CPOCs can then introduce themselves to the AWS Educate community by clicking on the *Collaborate* tab and then clicking on the *Educator Forums*, an example of the *Collaborate* tab is show below.



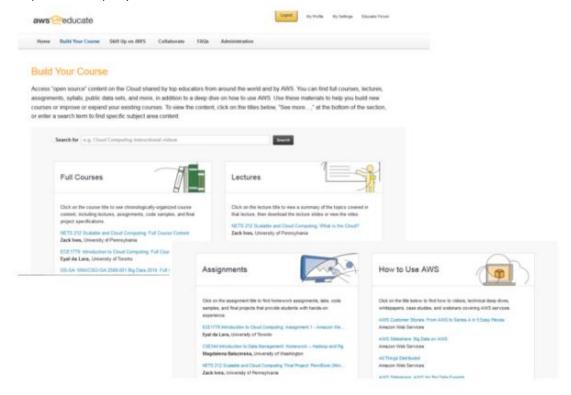
In the *Educator Forum*, we have created a "Welcome to AWS Educate" group dedicated to introductions, and is a place where you can let other educators know about your background and interests related to cloud teaching and AWS. Educators should also introduce themselves when they join and check out the other forums. (As mentioned previously, the student portal is separate from the educator portal; students do not have access to the *Educator Forums*.)

Under the Collaborate tab shown previously, we offer three opportunities for educators to collaborate with and contribute to the community. First, we welcome new content contributions to the community. Please click *Upload Content* and follow the instructions to upload content for consideration in the community. Educators (or the institution) retain all intellectual property rights and can ask us to remove the content at any time, but it is a great way to contribute – thank you! Secondly, we have many in-person and online free events – both educators and students can sign up for free events through the *Events* tab. Lastly, educators gain access to the *Educator Forum* mentioned previously, which enables educators to post and search for answers to their questions, join in existing groups, or create new groups. Conversations can be public across the AWS Educate community or limited to a private group, of the founding group member's choosing.

#### 4.3 Build Your Course

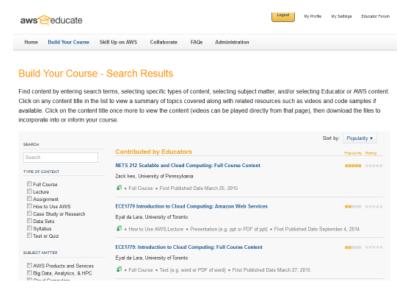
The *Build Your Course* tab on the Educator Collaboration Portal (shown as the *Explore Content* tab on the Student Portal) houses content provided by both AWS and fantastic educators from around the globe. This content can be easily downloaded and integrated into classes. We have provided content that can be adopted, in whole or in part, in computer science courses, decision analytics and big data courses, life sciences courses, and many other topic areas. Our mission is to provide valuable content, such as lectures, videos, assignments, case studies, or other content on the cloud or AWS, for faculty to bolster their classes. We want to do all that we can to help speed the injection of the cloud into curricula and, thereby, help prepare students for a cloud-enabled workforce.

After accessing the Build Your Course tab, shown below, you will see that the content is organized by full courses, lectures, assignments, and how to use AWS. If an educator wanted to use one of the full courses on the Introduction to the Cloud, Big Data, or other topics, he/she can click on the title and download the materials. If another educator is interested in a project, lab, or lecture, he/she can download those as well.



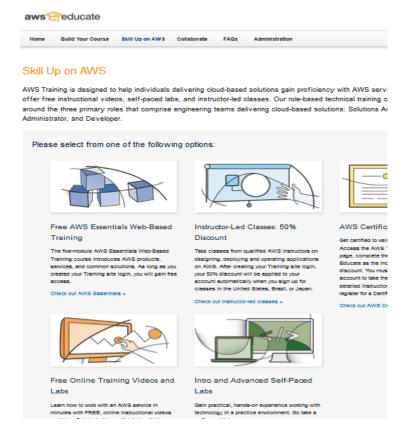
Educators can access and search the full content repository by either typing information into the *Search* bar at the top of that page or by clicking on the *More* link at the bottom of each section. This expanding repository includes all of the content that AWS and our educator community are providing educators openly and freely in order to speed the injection of cloud into curricula. Please consider attribution when adopting materials that AWS Educate colleagues have contributed. If you have courses or learning objects that you would like to share, please see section 4.2 Collaborate.

An example of the full *Build Your Course* searchable content repository is shown below.



#### 4.4 Skill Up on AWS

For Educators, the *Skill Up on AWS* tab, shown below, includes free access to the online version of AWS Technical Essentials; 50% discount on instructor-led training provided directly by AWS in the United States, Brazil, and Japan; 50% discount on AWS certification exams; and access to free labs on AWS services. (Students currently gain access to the free labs in their portal.)





We recommend that all educators take the free, five-module AWS Technical Essentials online course soon after they join AWS Educate, especially if they are relatively new to AWS. Educators that have already used AWS may want to take the AWS Essentials course as a refresher or to expand their knowledge across the AWS and cloud horizon. The AWS Technical Essentials in-person course costs USD \$695, but AWS provides free on-line access through AWS Educate. In order to take this course, educators must first login on the learning management system (LMS) – instruction for LMS login information are provided in the Welcome Email. After logging in to the LMS, educators can click on the AWS Essentials icon on the page and immediately sign into AWS Essentials for free.

To access the 50% discount on instructor-led training (ILT), educators login to the LMS, click on the ILT icon, and then search for courses that best fits timing and location needs. The 50% discount is applied during checkout. Right now, we are only able to offer the discount on ILT for courses in the United States, Brazil, and Japan; we hope to expand this list in the future.

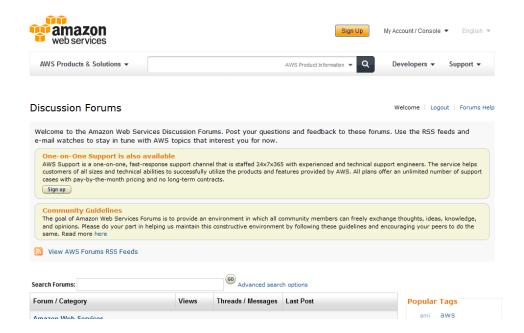
To access the 50% discount on AWS certification, educators should click on the AWS certification icon and follow the directions to sign up for a certification exam under the AWS Educate referral. The 50% discount is applied during checkout.

Free labs on various AWS services, such as on Amazon Elastic Compute Cloud (EC2), Amazon Simple Storage Service (S3), and Amazon Elastic Map Reduce (EMR), are provided by clicking on the free labs icon and then finding the appropriate free lab. There is no limit to the number of free labs that can be taken.

#### 4.5 Support

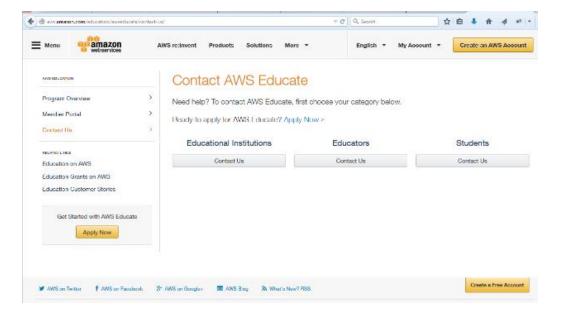
The last benefit that we wanted to describe is accessing support. There are several ways for the AWS Educate community to find help. The first way involves leveraging the community – CPOCs and Educators can submit questions or find answers to their questions on the *Educator Forum*, a great way to quickly get an answer and contribute to the community's knowledge base at the same time. Secondly, we list *AWS Forums* in the footer of the portals, where everyone in the community can go to quickly search thousands of discussions about AWS and find answers to numerous questions about AWS products and services.





Lastly, if an AWS Educate member wishes to contact the AWS Educate team directly, he/she can contact us through the forms located at the following links and shown below. This information is also found within the *FAQs* on the AWS Educate portals.

- Institution contact form: https://aws.amazon.com/forms/contact-aws-educate-institutions/
- Educator contact form: <u>https://aws.amazon.com/forms/contact-aws-educate-educators/</u>
- Student contact form: <u>https://aws.amazon.com/forms/contact-aws-educate-students/</u>





## Appendix A. AWS Educate Application Walk-Through - Institutions



**Institutions** can apply to join AWS Educate in just a few steps:

- Step A: Access the AWS Educate website <a href="here">here</a> and click Apply Now.
- <u>Step B</u>: Click Apply for AWS Educate for Institutions.
- <u>Step C</u>: Enter the information requested on the AWS Educate Institution Application form
- <u>Step D</u>: Verify your email address and complete a captcha to verify that you are not a robot.
- Step E: Click-through to accept AWS Educate Terms and Conditions.

Screen captures and a detailed walk-through follow below. *Note: This process may change or the web pages may be updated from time-to-time.* 

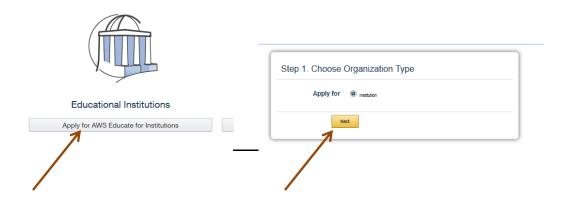
**Step A:** Access the AWS Educate web page <u>here</u> and then click *Apply Now*.



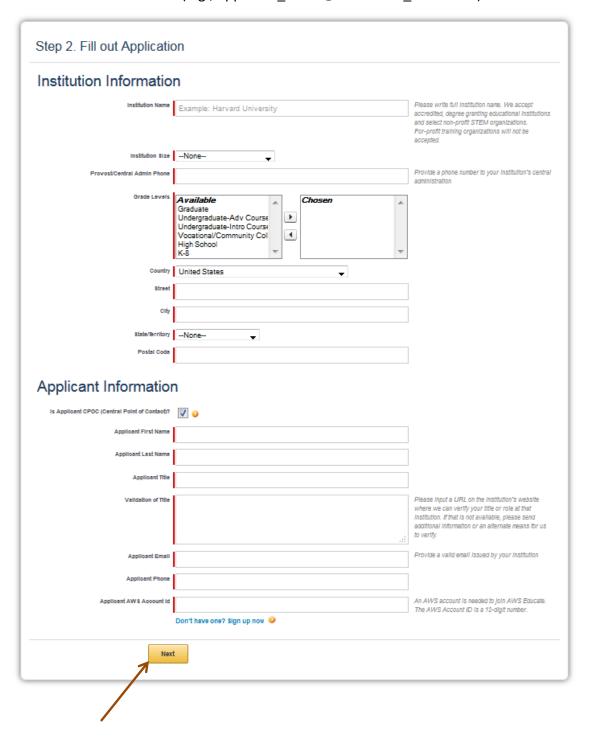
**Step B:** Click Apply for AWS Educate for Institutions and click Next to apply for an institution.

#### Apply for AWS Educate

It just takes a few minutes to apply for access to AWS I administrators, just choose your category below and pr

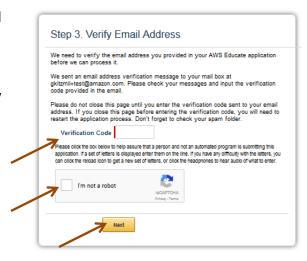


**Step C:** Enter the information requested on the AWS Educate Institution Application form and click *Next*. The institution contact is required to enter an AWS Account ID to complete the application. If the contact does not have a unique AWS Account ID, he/she can click the link to be taken to the AWS account creation pages. All applicants should use the email domain associated with the institution (e.g., applicant name@institution name.edu).

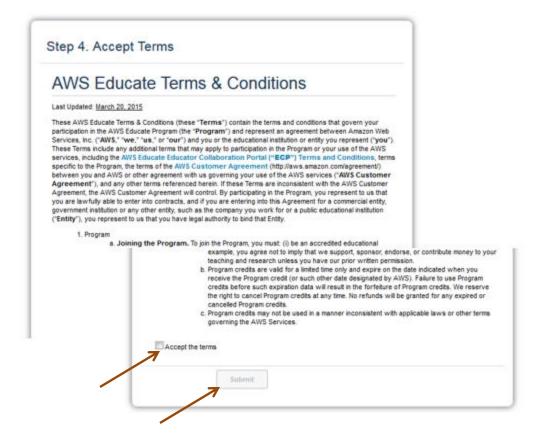




**Step D:** An email with a verification code will be sent to the person listed as the applicant. The applicant will need to enter the verification code on this page, then click the box to the left of 'I'm not a robot' and follow any additional instructions.



**Step E.** Click-through to accept AWS Educate Terms and Conditions and then click *Submit*.





After the institution application is submitted:

- The central point of contact (CPOC) will receive an email indicating that the application was received.
- AWS Educate will review the application and perform any necessary validation of the institution, accreditation, degrees granted, and CPOC.
- Upon acceptance of the institution, a welcome message will be sent to the institution's CPOC. The message includes a link for the CPOC to create a password for his/her account, links to training, and other benefits.

## Appendix B. AWS Educate Application Walk-through - Educators

Educators can apply to join AWS Educate in just a few steps:

- Step A: Access the AWS Educate website <a href="here">here</a> and click Apply Now.
- <u>Step B</u>: Click to Apply for AWS Educate for Educators.
- Step C: Enter the information requested on the AWS Educate Educator Application form.
- <u>Step D</u>: Verify your email address and complete a captcha to verify that you are not a robot.
- Step E: Click-through to accept AWS Educate Terms and Conditions.

Screen captures and a detailed walk-through follow below. *Note: This process may change or the web pages may be updated from time-to-time.* 

**Step A:** Access the AWS Educate web page <a href="here">here</a> and then click *Apply Now*.

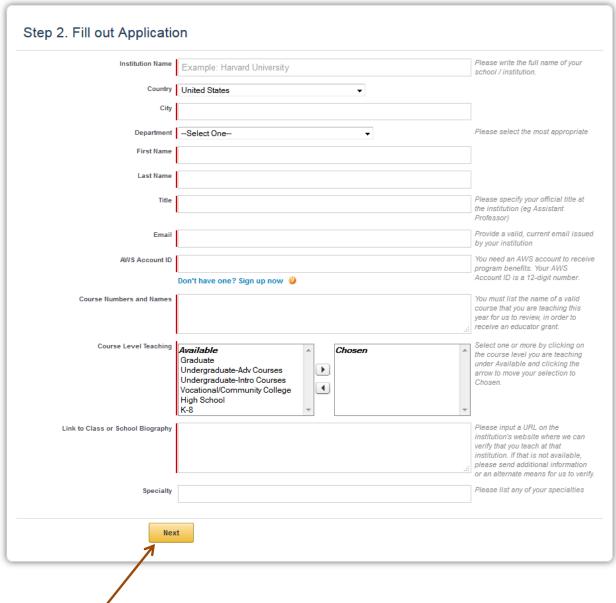


**Step B:** Click Apply for AWS Educate for Educators and click Next to apply as an Educator.



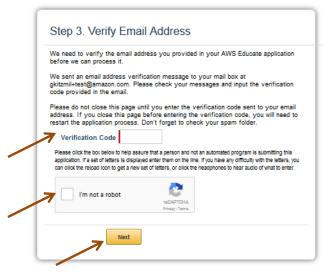


**Step C:** Enter the information requested on the AWS Educate - Educator Application form and click *Next*. If the educator is associated with an institution that has already joined AWS Educate, he/she should start typing the name of the institution in the Institution Name box and the form will show options that match. The Educator is required to enter a unique AWS Account ID to complete the application. If the Educator does not have an AWS Account ID, he/she can click the link to be taken to pages to sign up. All educators should use an email domain associated with their institution, and they should enter a link to a web page that shows their school biography or other information that can be used to verify both their affiliation with the school and active teaching role to expedite the approval process.

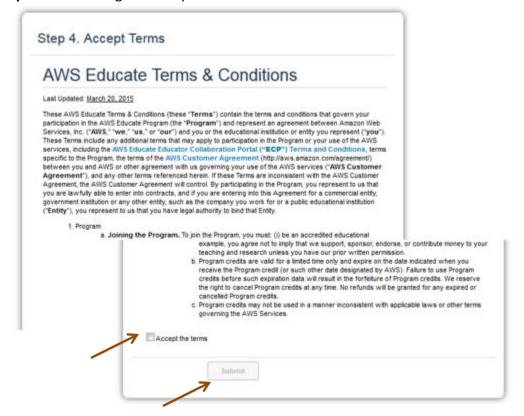




**Step D:** An email with a verification code will be sent to the email address the Educator listed. The Educator will need to enter the verification code in the next step, then click the box to the left of 'I'm not a robot' and follow any additional instructions.



Step E. Click-through to accept AWS Educate Terms and Conditions and then click Submit.





After the Educator application is submitted:

- The Educator will receive an email indicating that the application was received.
- AWS Educate will review the application and perform any necessary validation of the Educator and his/her institution.
- Upon acceptance of the educator, a welcome message will be sent to the educator's email address. The message includes a link for the educator to create a password for his/her AWS Educate account to access the AWS Educate – Educator Collaboration Portal, links to training and other benefits, and an AWS credit code.

## Appendix C. AWS Educate Application Walk-through – Students

**Students** can apply to join AWS Educate in just a few steps:

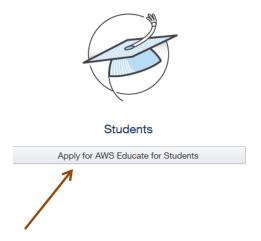
- Step A: Access the AWS Educate website here and click Apply Now.
- <u>Step B</u>: Click to Apply for AWS Educate for Students.
- <u>Step C:</u> Enter the information requested on the AWS Educate Student Application form.
- <u>Step D</u>: Verify your email address and complete a captcha to verify that you are not a robot.
- Step E: Click-through to accept AWS Educate Terms and Conditions.

Screen captures and a detailed walk-through follow below. *Note: This process may change or the web pages may be updated from time-to-time.* 

**Step A:** Access the AWS Educate web page <a href="here">here</a> and then click *Apply Now*.

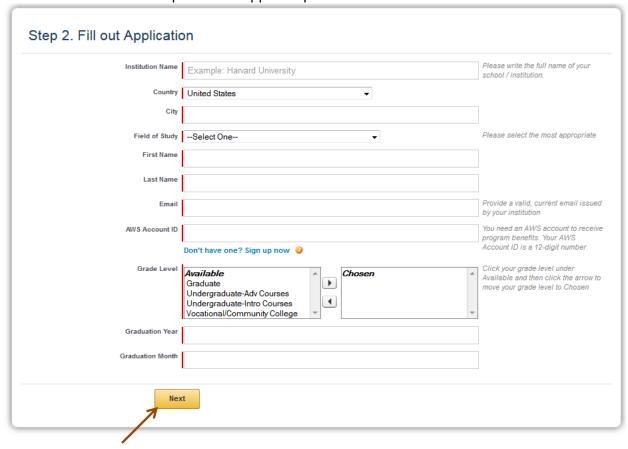


**Step B:** Click Apply for AWS Educate for Students and Click Next to apply as a Student.

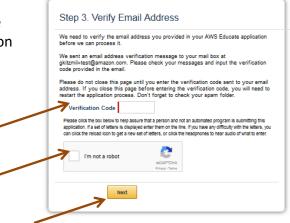




**Step C:** Enter the information requested on the AWS Educate – Student Application form. If the Student is associated with an institution that has already joined AWS Educate, he/she should start typing the name of the institution in the Institution Nam box and the form will show options that match. The Student is required to enter a unique AWS Account ID to complete the application. If the Student does not have an AWS Account ID, he/she can click the link to be taken to the AWS account creation pages. All students should use email domains associated with their institution to expedite the approval process.



**Step D:** An email with a verification code will be sent to the email address the Student listed. The student will need to enter the verification code on this page, click the box to the left of 'I'm not a robot' and follow any additional instructions.



Step 4. Accept Terms **AWS Educate Terms & Conditions** Last Updated March 20, 2015 These AWS Educate Terms & Conditions (these "Terms") contain the terms and conditions that govern you participation in the AWS Educate Program (the "Program") and represent an agreement between Amazon Web Services, Inc. ("AWS," "we," "us," or "our") and you or the educational institution or entity you represent ("you"). These Terms include any additional terms that may apply to participation in the Program or your use of the AWS services, including the AWS Educate Educator Collaboration Portal ("ECP") Terms and Conditions, terms specific to the Program, the terms of the AWS Customer Agreement (http://aws.amazon.com/agreement/) between you and AWS or other agreement with us governing your use of the AWS services ("AWS Customer Agreement"), and any other terms referenced herein. If these Terms are inconsistent with the AWS Customer Agreement, the AWS Customer Agreement will control. By participating in the Program, you represent to us that you are lawfully able to enter into contracts, and if you are entering into this Agreement for a commercial entity, government institution or any other entity, such as the company you work for or a public educational institution ("Entity"), you represent to us that you have legal authority to bind that Entity. Joining the Program. To join the Program, you must. (i) be an accredited educational example, you agree not to imply that we support, sponsor, endorse, or contribute money to your teaching and research unless you have our prior written permission.

b. Program credits are valid for a limited time only and expire on the date indicated when you receive the Program credit (or such other date designated by AMPS). Failure to use Program credits before such expiration data will result in the forfeiture of Program credits. We reserve the right to cancel Program credits at any time. No refunds will be granted for any expired or cancelled Program credits. c. Program credits may not be used in a manner inconsistent with applicable laws or other terms governing the AWS Services Sutienit

**Step E.** Click-through to accept AWS Educate Terms and Conditions and then click *Submit*.

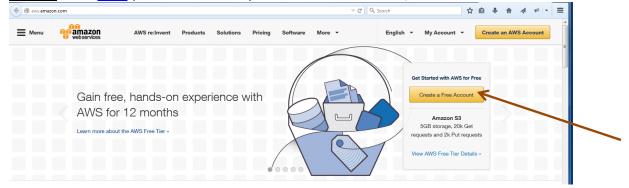
#### After the Student application is submitted:

- The Student will receive an email indicating that the application was received.
- AWS Educate reviews the application and performs any necessary validation of the Student and his/her institution.
- Upon acceptance of the Student, a welcome message is forwarded to his/her email address. The message includes a link for the AWS Educate Student portal and an AWS credit code.

## Appendix D. AWS Account Creation Walk-Through

A walk-through of the AWS account creation pages is provided below. This process may change or be updated at any time.

Step A: Click here (aws.amazon.com) to access AWS website, then click Create a Free Account.



**Step B:** Enter your email address, select *I am a new user*, and click *Sign in using our secure server*.



#### Sign In or Create an AWS Account

# What is your e-mail or mobile number? E-mail or mobile number: Enter your email address I am a new user. I am a returning user and my password is: Sign in using our secure server Forgot your password?



Learn more about <u>AWS Identity and Access Management</u> and <u>AWS Multi-Factor Authentication</u>, features that provide additional security for your AWS Account. View full <u>AWS Free Usage Tier</u> offer terms.

#### About Amazon.com Sign In

Amazon Web Services uses information from your Amazon.com account to identify you and allow access to Amazon Web Services. Your use of this site is governed by our Terms of Use and Privacy Policy linked below.

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#### **Step C:** Enter Login Credentials and click *Create Account*.



#### Login Credentials

Use the form below to create login credentials that can be used for AWS as well as Amazon.com.

My name is:	
My e-mail address is:	
Type it again:	
	note: this is the e-mail address that we will use to contact you about your account
Enter a new password:	
Type it again:	
	Create account

#### About Amazon.com Sign In

Amazon Web Services uses information from your Amazon.com account to identify you and allow access to Amazon Web Services. Your use of this site is governed by our Terms of Use and Privacy Policy linked below.

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**Step D:** Enter your contact information, complete the security check, and click-through to agree to the AWS Customer Agreement. Be sure to enter a phone number that you have access to in order to complete the identity verification step. Click *Create Account and Continue* to proceed to the next step.

azon ervices	Amazon Web Service
— Contact Information	
* Required Fields	
Full Name*	
Company Name	
Country*	United States ▼
Address*	Street, P.O. Box, Company Name, c/o
	Apartment, suite, unit, building, floor, etc.
City*	
State / Province or Region*	
Postal Code*	
Phone Number*	
Security Check 🛭	
	FBWWY
	Refresh Image
	Please type the characters as shown above
AWS Customer A	greement
Check here to	
	Create Account and Continue
	Create / Hooders and Gorsand
	Privacy Policy   Terms of Use
© 2015 Amazon I	Web Services, Inc. or its affiliates. All rights reserved.

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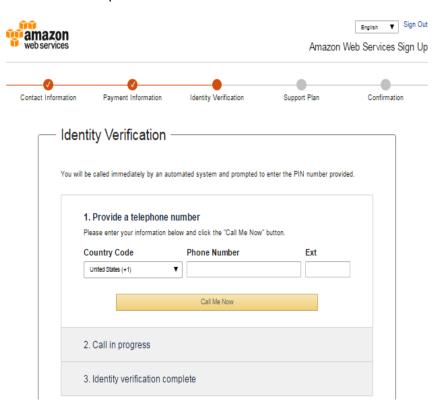
**Step E:** Enter payment information and click *Continue*. Your credit card will not be charged until you begin using services above and beyond the Free Tier (if applicable) and any AWS credit codes entered into your account. (Note that there are a few AWS services that are not eligible to be covered by AWS credits. Review the FAQs after accessing the AWS Educate educator or student portals for any exclusions.)

amaz( web service				Amazon We	b Services Si
ontact Infor	mation Payment Info	matica Identity	Verification S	Support Plan	Confirmation
The second second	Payment Inform		venication 3	opport Pall	Commission
	Please enter your payment in the Free Usage Tier. We will	formation below. You will only bill your credit card f	be able to try a broad set or usage that is not cover	of AWS products for fre ed by our Free Usage Ti	e via er.
	AWS Free Usage Tier	Compute Amazon EC2	Storage Amazon \$3	Database Amazon RDS	
	free for 1 year	750hrs/month*	5GB	750hrs/month*	
		Card Number	Expiratio 0 ▼	n Date 201 ▼	
		ny contact address			
	Continue				
		Privacy Policy	Terms of Use		

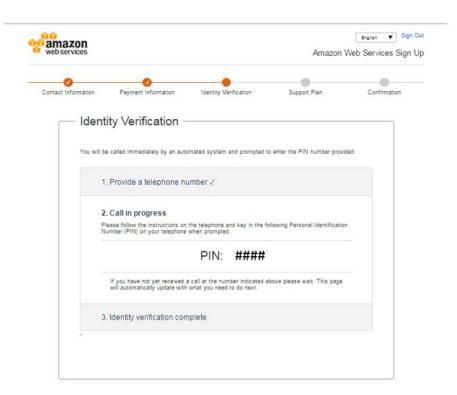
An amazon.com company



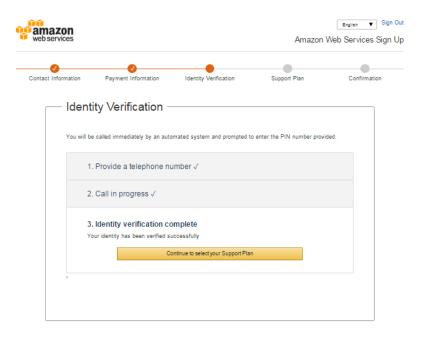
**Step F.** Provide a phone number for Identity Verification and click *Call Me Now*. Please assure that you must access to the phone number listed.



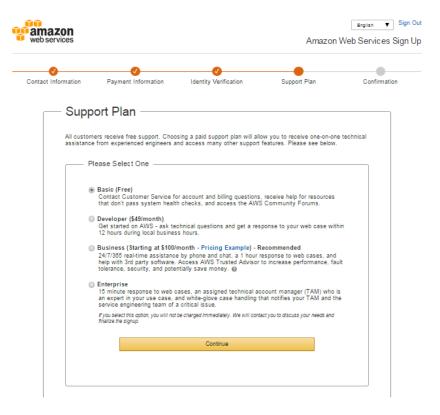
**Step G.** A PIN number will be displayed, when you receive the call enter the PIN number.



**Step H.** After successful entry of the PIN number, an Identity Verification Complete message will be displayed. Click *Continue to select your Support Plan*.

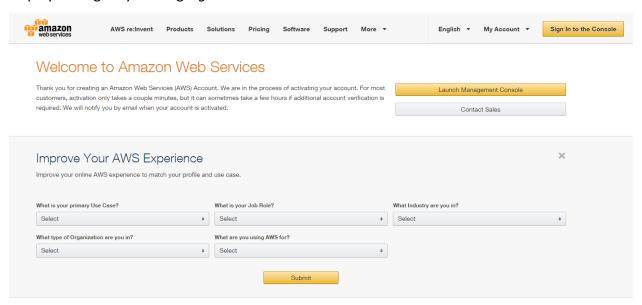


**Step I.** Select a Support Plan and click *Continue*. Most educators and students will use the Basic (free) level. Support fees are not eligible for coverage by AWS credits.





**Step J.** AWS Account Creation is complete and a Welcome to Amazon Web Services page is displayed. Login by clicking *Sign in to the Console*.



**Step K.** Enter your email address, click *I am a returning user and my password is*, enter your password, and click *Sign in using our secure server*.





**Step L**. After login, the first thing that you will see is the AWS Console. You can manage your AWS account and start uses AWS services from the AWS Console.



# Appendix E. Adding an AWS Credit Code to an AWS Account

- 1. Visit: http://aws.amazon.com/console/.
- 2. Click Sign in to the AWS Console.
- 3. Enter your email address and password (enter an authentication code if you have enabled multi-factor authentication (MFA) for your account).
- 4. In the AWS Console, click on your name and then click Billing & Cost Management.
- 5. In the Billing & Cost Management Dashboard, click Credits on the left.
- 6. Enter the AWS credit promo code, complete the security check, and click *Redeem*.

The credits will be added to your AWS account immediately and automatically applied to the services covered by the promotion. To view the details of your AWS credits, such as remaining balance or covered services, just revisit the above link at any time.

How are AWS credits handled if an account is linked to another account for billing purposes, or Consolidated Billing? Any AWS credits entered under an account linked to a master account for billing purposes flow up to the master account and are applied to the consolidated bill charged to the master account each month, beginning on the first full billing cycle after the account joins the Consolidated Bill.

If a linked account is removed from a Consolidated Bill, any unused credits belonging to the newly de-linked account are returned to it at the start of the next full billing cycle.



# Appendix F. Setting Up Billing Alerts

With CloudWatch Billing Alerts, students and educators can monitor estimated charges as Amazon CloudWatch metrics. You can also create alarms that automatically send email notifications when these charges exceed the levels that you set. You can configure your own metrics and alarms to help you manage your AWS usage charges or configure alarms for accounts that are linked to yours. In order to use billing alerts, you must first configure your account and then you can create specific alerts and alarms.

# Configure Your Account for Billing Alerts

To configure your account to receive billing alerts:

- 1. Visit: http://aws.amazon.com/console/.
- 2. Click Sign in to the AWS Console.
- 3. Enter your email address and password (enter an authentication code if you have enabled multi-factor authentication (MFA) for your account).
- 4. In the AWS Console, click on your name and then click Billing & Cost Management.
- 5. In the Billing & Cost Management Dashboard, click *Preferences* on the left.
- 6. Click the box next to Receive Billing Alerts and click to Save Preferences.

Note that you must set this billing preference in order for any accounts linked to your account to be able to set up billing alerts.

# **Create Billing Alerts**

To create billing alerts:

- 1. Visit: <a href="http://aws.amazon.com/console/">http://aws.amazon.com/console/</a>.
- 2. Click Sign in to the AWS Console.
- 3. Enter your email address and password; enter an authentication code if you have MFA set up on your account.
- 4. In the AWS Console, click on your name and then click Billing & Cost Management.
- 5. In the Billing & Cost Management Dashboard, scroll down and click Alerts and Notifications.
- 6. Click Set your first billing alarm to create a billing alert.

You can also set billing alerts and alarms using CloudWatch. Access CloudWatch by logging in to your AWS account and clicking *CloudWatch* under Administration & Security on the Amazon Web Services page. The first 10 CloudWatch alarms are free.

## <u>Create CloudWatch Alarms to Stop Running Instances</u>

You can find more detail on creating CloudWatch alarms that automatically stop, terminate, reboot, or recover your Amazon Elastic Compute Cloud (Amazon EC2) instances when CPU Utilization Capacity drops below a specific threshold over a specific time period at: <a href="http://docs.aws.amazon.com/AWSEC2/latest/WindowsGuide/UsingAlarmActions.html">http://docs.aws.amazon.com/AWSEC2/latest/WindowsGuide/UsingAlarmActions.html</a>



You can use CloudWatch alarms to stop or terminate actions to help you save money when you no longer need an instance running, or to help you from spending more than desired. For example, you may run development or test instances and occasionally forget to shut them off. You can create an alarm that is triggered when the average CPU utilization percentage has been lower than 10 percent for 24 hours, signaling that it is idle and no longer in use. You can adjust the threshold, duration, and period to suit your needs, plus you can add an Amazon Simple Notification Service (Amazon SNS) notification, so that you will receive an email when the alarm is triggered. If you are using an AWS Identity and Access Management (IAM) account to create or modify an alarm, you may need additional permissions to create alarms that stop instances. See the Using Alarm Actions link <a href="here">here</a> for more details.

# To create an alarm to stop an idle instance:

- 1. Visit: <a href="http://aws.amazon.com/console/">http://aws.amazon.com/console/</a>.
- 2. Click Sign in to the AWS Console.
- 3. Enter your email address and password (enter an authentication code if you have enabled multi-factor authentication (MFA) for your account).
- 4. If necessary, change the region. From the navigation bar, select the region where your instance is running. For more information, see Regions and Endpoints.
- 5. In the navigation pane, under INSTANCES, click *Instances*.
- 6. In the contents pane, right-click on an instance, select *CloudWatch Monitoring*, and then click *Add/Edit Alarms*. Or, you can also select the instance, and then in the lower pane on the *Monitoring* tab, click *Create Alarm*.
- 7. In the Alarm Details for box, click Create Alarm.
- 8. If you want to receive an email when the alarm is triggered, in the *Create Alarm* and in the *Send a notification to* box, select an existing Amazon SNS topic, or click *Create Topic* to create a new one.
  - If you create a new topic, in the *Send a notification to* box type a name for the topic, and then in the *With these recipients* box, type the email addresses of the recipients (separated by commas). Later, after you create the alarm, you will receive a subscription confirmation email that you must accept before you will get email for this topic.
- 9. Select the *Take the action* check box, and then choose the *Stop this instance* radio button.
- 10. If prompted, select the *Create IAM role: EC2ActionsAccess* check box to automatically create an IAM role so that AWS can automatically stop the instance on your behalf when the alarm is triggered.
- 11. In the *Whenever* boxes, choose the statistic you want to use and then select the metric. In this example, choose Average and CPU Utilization.

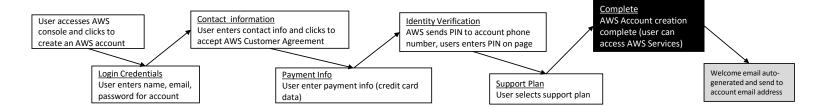


- 12. In the Is boxes, define the metric threshold. In this example, enter 10 percent.
- 13. In the *For at least* box, choose the sampling period for the alarm. In this example, enter 24 consecutive periods of one hour.
- 14. To change the name of the alarm, in the *Name this alarm* box, type a new name. If you don't type a name for the alarm, Amazon CloudWatch will automatically create one for you.
- 15. Note: You can adjust the alarm configuration based on your own requirements before creating the alarm, or you can edit them later. This includes the metric, threshold, duration, action, and notification settings. However, after you create an alarm, you cannot edit its name later.
- 16. Click Create Alarm.

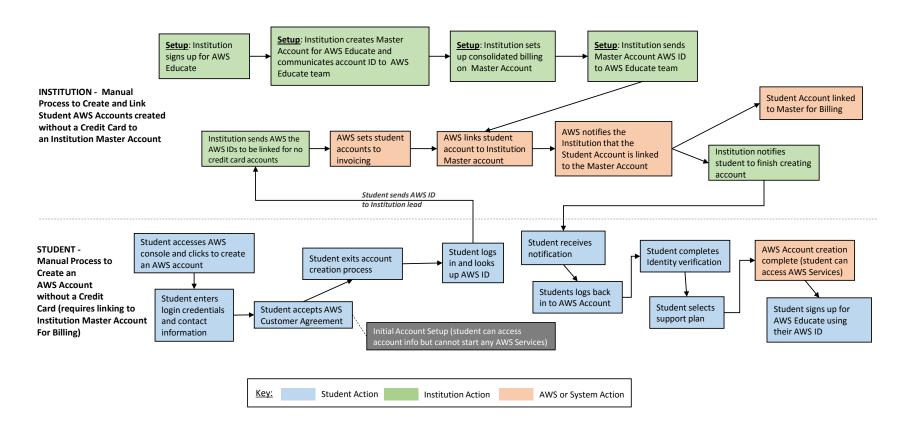
# Appendix G. AWS Account Creation Process Flow Diagrams



#### **Typical AWS Account Creation Process**

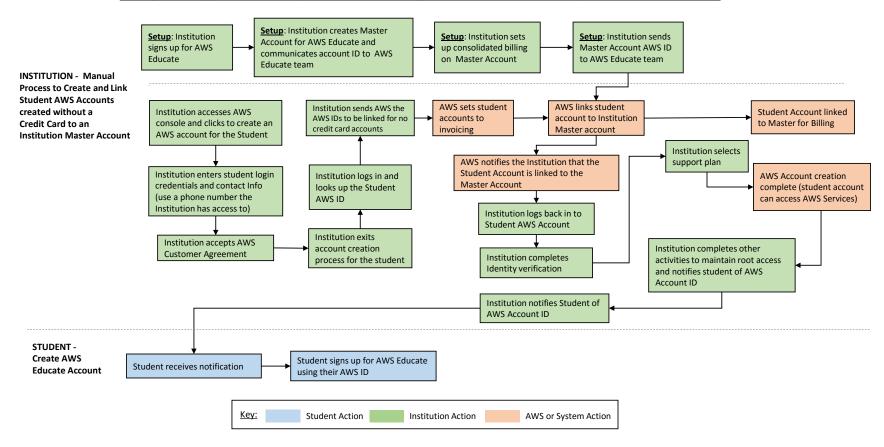


Option 2 Fully Centralized (with a credit card)
Creating and Linking Student Accounts (without credit card backing) to an Institution Master Account (Student Retains Root Access)





# Option 2 Fully Centralized (without a credit card) Creating and Linking Student Accounts (without credit card backing) to an Institution Master Account (Institution Retains Root Access)





# Appendix H. Linking Students to an Institutional AWS Account for Consolidated Billing

To invite students or educators to linked their AWS accounts to your account for Consolidated Billing, you must first configure your AWS account for consolidated billing, then you will need the e-mail addresses associated with the account you would like to invite.

# Configure Your Account for Consolidated Billing

To configure your account for consolidated billing so that you can invite student and educator accounts to be linked to your account, you must first set up your account as a master payer account for consolidated billing:

- 1. Visit: http://aws.amazon.com/console/.
- 2. Click Sign in to the AWS Console.
- 3. Enter your email address and password (enter an authentication code if you have enabled multi-factor authentication (MFA) for your account).
- 4. In the AWS Console, click on your name and then click Billing & Cost Management.
- 5. In the Billing & Cost Management Dashboard, click *Consolidated Billing* on the left.
- 6. Click Sign up for Consolidated Billing.
- 7. You will receive an email when consolidated billing is set up for your account.

## <u>Invite Students or Educators to Link to Your Account for Consolidated Billing</u>

To invite students or educators to link their AWS account to your AWS account and add any charges on those accounts to your bill (consolidated billing):

- 1. Visit: <a href="http://aws.amazon.com/console/">http://aws.amazon.com/console/</a>.
- 2. Click Sign in to the AWS Console.
- 3. Enter your email address and password (enter an authentication code if you have enabled multi-factor authentication (MFA) for your account).
- 4. In the AWS Console, click on your name and then click Billing & Cost Management.
- 5. In the Billing & Cost Management Dashboard, click Consolidated Billing on the left.
- 6. On the Manage Requests and Accounts page, click Send a Request.
- 7. Enter the email address of the person whose account you would like to link to your account for billing purposes and any notes, and then click *Send*.
- 8. A message will be sent to the email address you provided with a link for the person to click to accept the invitation.



# Removing a Student of Educator Account from your Consolidated Bill (De-linking)

You can de-link an account from your consolidated bill at any time, provided that the account you would like to de-link has a valid payment method on file in its AWS account. To de-link an account, visit the "Consolidated Billing" page in your Billing Console here:

- 1. Visit: http://aws.amazon.com/console/.
- 2. Click Sign in to the AWS Console.
- 3. Enter your email address and password (enter an authentication code if you have enabled multi-factor authentication (MFA) for your account).
- 4. In the AWS Console, click on your name and then click Billing & Cost Management.
- 5. In the Billing & Cost Management Dashboard, click Consolidated Billing on the left.
- 6. On the Manage Requests and Accounts page, locate name and the AWS account id for the linked account.
- 7. Click *Remove* in the Actions column to de-link the account.

Note that an account can only be de-linked if it has a valid payment method entered.

# Appendix I.

# Overview of AWS Identity and Access Management (IAM) Users and Policies, along with IAM Automation

In the centralized or hybrid option, using AWS Identity and Access Management (IAM) enables you to securely control access to AWS resources for students and educators, as well as set specific access policies and alarms to streamline your ability to manage accounts. Using IAM, you can create and manage AWS users and groups, and use permissions to allow and deny their access to AWS resources. You can find detailed information about AWS IAM at <a href="http://aws.amazon.com/iam/">http://aws.amazon.com/iam/</a>.

To access IAM in your account on an account you created for an educator or student:

- 1. Visit: http://aws.amazon.com/console/.
- 2. Click Sign in to the AWS Console.
- 3. Enter the account email address and password (enter an authentication code if you have enabled multi-factor authentication (MFA) for your account).
- 4. In the AWS Console, click *Identity & Access Management*.

Under IAM, you can set up Policies to address specific security needs, such as restricting an IAM user's access to account information or specifying which AWS services the IAM user can access. A few example IAM policies are provided below.

# **Example IAM Policies**

Example IAM Policy #1: Allows an IAM user full access to all AWS services but denies access to account settings and setting up IAM users. You can find this complete policy, along with the JSON code to cut and paste into the IAM policy at:

http://docs.aws.amazon.com/awsaccountbilling/latest/aboutv2/billing-permissions-ref.html#example-billing-read-only

# <u>Automating the Process to Create AWS Identity and Access Management (IAM) Users and Policies</u>

You can also use the AWS Command Line Interface (CLI) to automate creation of IAM policies, users, and groups. The AWS Command Line Interface (CLI) is a unified tool to manage your AWS services. With just one tool to download and configure, you can control multiple AWS services from the command line and automate them through scripts.



## Create New IAM Users and Groups

This describes how to create a new IAM group and a new IAM user and then add the user to the group using AWS CLI.

http://docs.aws.amazon.com/cli/latest/userguide/cli-iam-new-user-group.html

### Set an Initial Password for an IAM User

http://docs.aws.amazon.com/cli/latest/userguide/cli-iam-set-pw.html

## Create Security Credentials for an IAM User

http://docs.aws.amazon.com/cli/latest/userguide/cli-iam-create-creds.html

# Create IAM policy

http://docs.aws.amazon.com/cli/latest/reference/iam/create-policy.html - examples

# Set an IAM Policy for an IAM User/Group

How to assign an IAM policy to an IAM user/group:

http://docs.aws.amazon.com/cli/latest/userguide/cli-iam-policy.html

# Create a Billing Alarm

The example in the following procedure creates an alarm that will send an email message when the account's estimated month-to-date charges for Amazon EC2 exceed \$50.

\$ aws cloudwatch put-metric-alarm --alarm-name ec2billing --comparison-operator GreaterThanOrEqualToThreshold --evaluation-periods 1 --metric-name EstimatedCharges --namespace AWS/Billing --dimensions Name=Currency,Value=USD" --period 21600 --statistic Maximum --threshold 50 --actions-enabled --alarm-actions arn:aws:sns:us-east-1:111111111111:NotifyMe

http://docs.aws.amazon.com/AmazonCloudWatch/latest/DeveloperGuide/monitor\_estimated\_charges\_with\_cloudwatch.html

### Create SNS Topic and Subscribe to It

```
$ aws sns create-topic --name MyTopic
$ aws sns subscribe --topic-arn arn:aws:sns:us-west-2:123456789012:MyTopic --
protocol email --notification-endpoint emailusername@example.com
http://docs.aws.amazon.com/cli/latest/userguide/cli-sqs-queue-sns-topic.html
```



# Appendix J. Providing IAM Users with Access to Billing and Cost Management Features

To grant IAM users access to an account's billing information and tools, you must first *activate* the functionality.

To activate access to the AWS console:

- Sign in to the AWS Management Console as the AWS account owner (that is not as an IAM user), then go to the <u>Account Settings</u> page in the AWS Billing and Cost Management console.
- 2. Next to IAM User Access to Billing Information, click *Edit*, and then select the check box to activate access to the Billing and Cost Management pages. You use IAM policies to control which pages a user can access.

For more information about using policies to grant IAM users access to Billing and Cost Management features, see <u>Billing and Cost Management Permissions Reference</u>.

When you activate IAM user access to the AWS console, you grant full access to the AWS website to all users who already have full access to the AWS APIs. You can restrict their access by applying a more constrained set of permissions. For an example of how to use permissions to limit access, see Appendix I and the following link at <u>4: Allow full access to AWS services but deny IAM users access to the Billing and Cost Management console.</u>

