



A Guide to
Creating a Jamf Pro
Cloud Distribution Point with
Amazon Web Services (AWS)
and Simple Storage Service (S3)





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Requirements

- Root Identity and Access Management (IAM) AWS account to obtain the appropriate keys for signed URLs (Optional)
An AWS account (you can use the Root AWS account)
- A Jamf Pro instance
- A Jamf Pro administrator user

This guide was created using the following resources:

- A free AWS account
- The Root IAM AWS user
- A Jamf Pro 10.17 cloud instance hosted by Jamf Software

What's covered

1. Creating an AWS account if you do not already have one.
2. Setting the needed permissions inside of AWS for Jamf Pro
3. Testing your Cloud Distribution Point
4. Configuring Signed URLs

Sections

- Create an AWS Account - covers creating an AWS account if you do not already have one
- Configure AWS Permissions for Jamf Pro - covers creating the necessary permissions for a Jamf Pro AWS IAM user to be able to create and configure its S3 bucket
- Configure an AWS Distribution Point in Jamf Pro - covers configuring the Jamf Pro server with the previously created services
- Verify that Jamf Pro created an S3 bucket - covers verifying successful bucket creation inside of the AWS S3 service

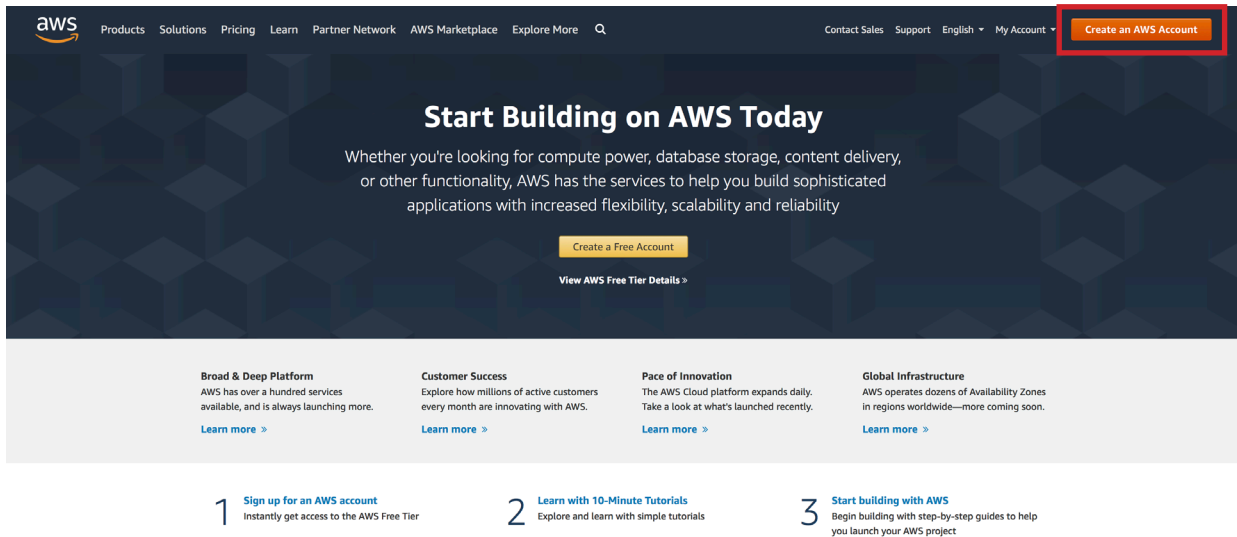


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Create an AWS Account

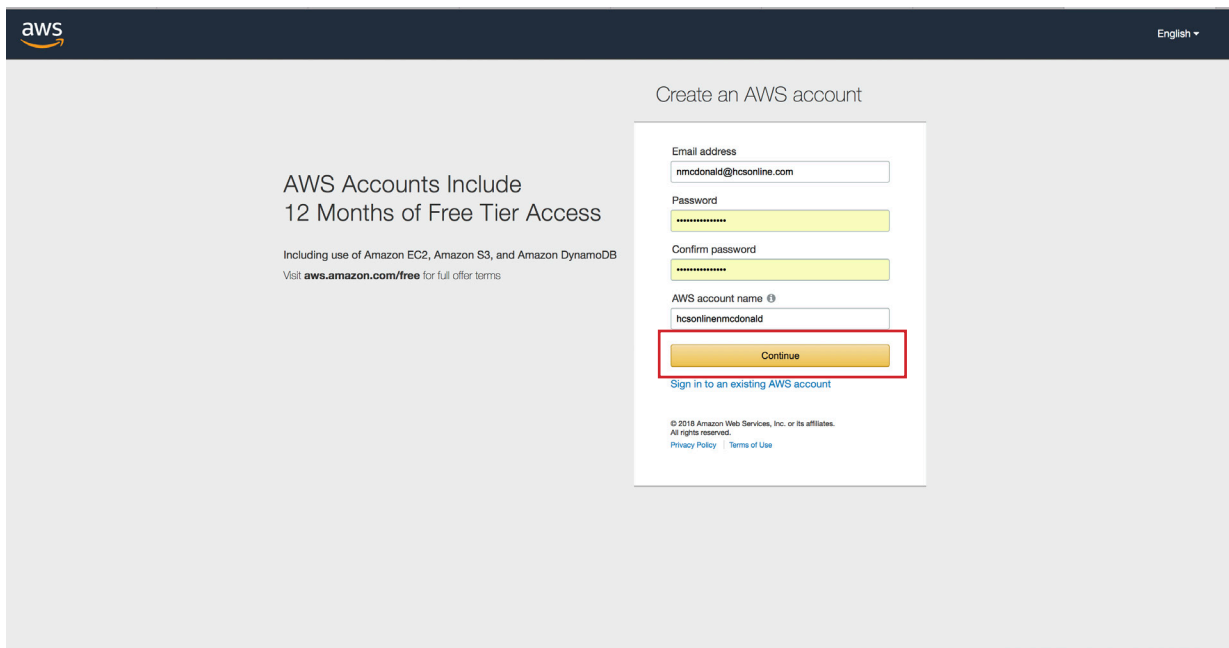
NOTE: If you already have an AWS account, skip to Configure AWS Permissions for Jamf Pro.

1. In a modern web browser open aws.amazon.com then select “Create an AWS account” in the upper-right corner.



Explore Our Products

2. Enter the required fields to create your Amazon Web Service account, then click Continue.





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3. Enter your organization's details, then click "Create Account and Continue."

The screenshot shows the AWS account creation form for organization details. At the top, there are two radio buttons: "Professional" (selected) and "Personal". Below this are several input fields: "Full name" (Nicholas McDonald), "Company name" (HCS Technology Group), "Phone number" (6319811048), "Country/Region" (United States), "Address" (3900 E Veterans Memorial Hwy, Suite 110), "City" (Bohemia), "State / Province or region" (NY), and "Postal code" (11716). There is a checkbox labeled "Check here to indicate that you have read and agree to the terms of the AWS Customer Agreement" which is checked. A yellow button labeled "Create Account and Continue" is highlighted with a red box. At the bottom, there is a copyright notice: "© 2018 Amazon Web Services, Inc. or its affiliates. All rights reserved." and links for "Privacy Policy", "Terms of Use", and "Sign Out".

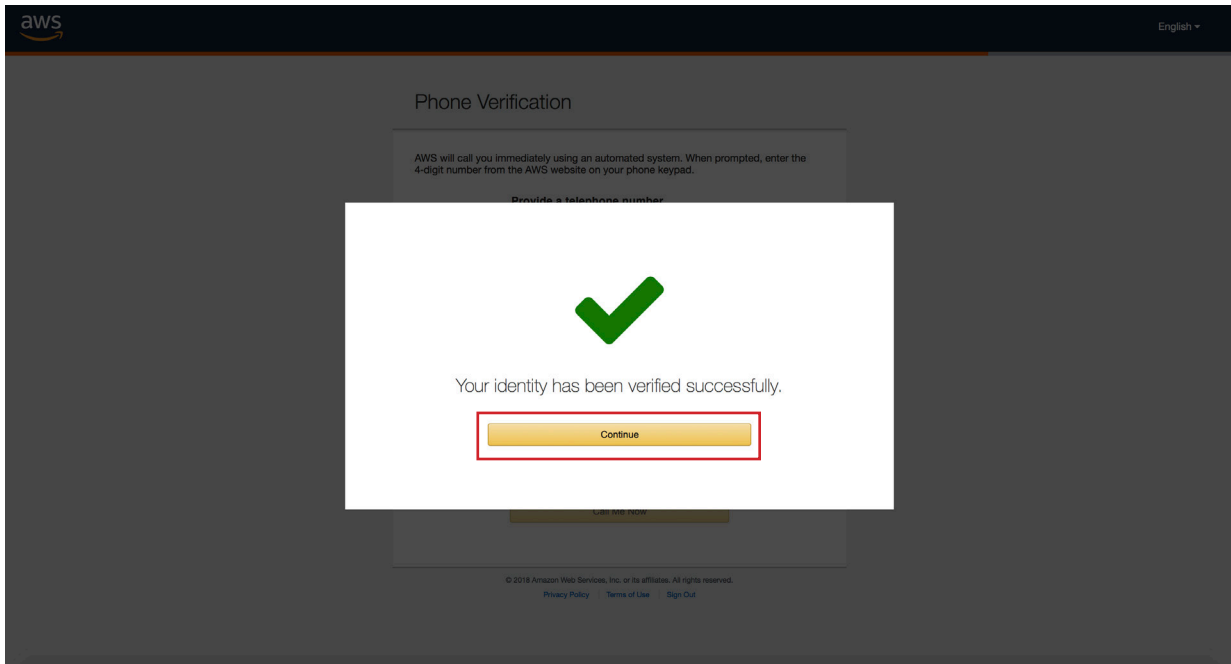
4. Enter your organization's payment information. You will not be charged unless your organization exceeds Amazon's Free Tier usage. If your organization does not allow you to use a credit card, contact Amazon Web Services directly to create your account. After you enter your payment information click Secure Submit.

The screenshot shows the AWS account creation form for payment information. At the top left is the AWS logo and at the top right is "English". The main heading is "Payment Information". Below this is a text box: "Please type your payment information so we can verify your identity. We will not charge you unless your usage exceeds the AWS Free Tier Limits. Review frequently asked questions for more information." Below this are several input fields: "Credit/Debit card number", "Expiration date" (09 / 2018), and "Cardholder's name". There are two radio buttons for "Billing address": "Use my contact address" (selected) and "Use a new address". The selected address is: "3900 E Veterans Memorial Hwy Suite 110, Bohemia NY 11716, US". A yellow button labeled "Secure Submit" is highlighted with a red box. At the bottom, there is a copyright notice: "© 2018 Amazon Web Services, Inc. or its affiliates. All rights reserved." and links for "Privacy Policy", "Terms of Use", and "Sign Out".

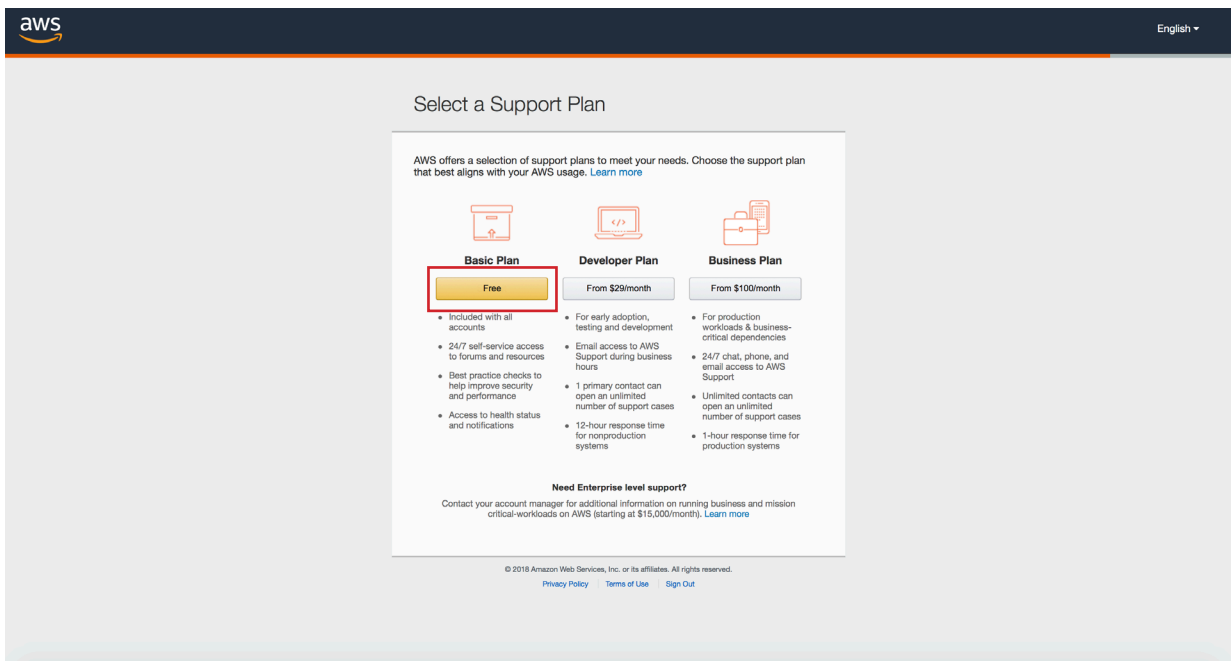


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5. Enter your phone number, then click Call Me Now.
6. The web page displays a 4-digit number. Answer the call from AWS and, when prompted, enter the 4-digit number on your phone keypad.
7. When you see the message, “Your identity has been successfully verified,” click Continue.



8. Select the support plan that best meets the needs of your organization. This guide uses the free Basic Plan.





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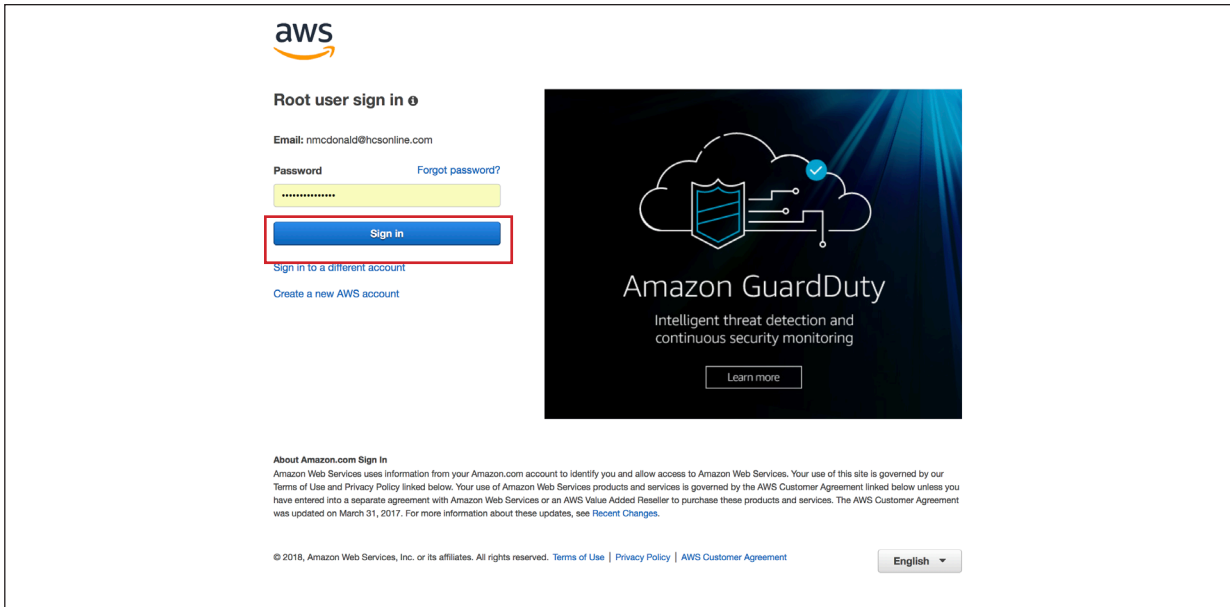
9. Check your email for verification. You may need to wait a few minutes while AWS activates your account.



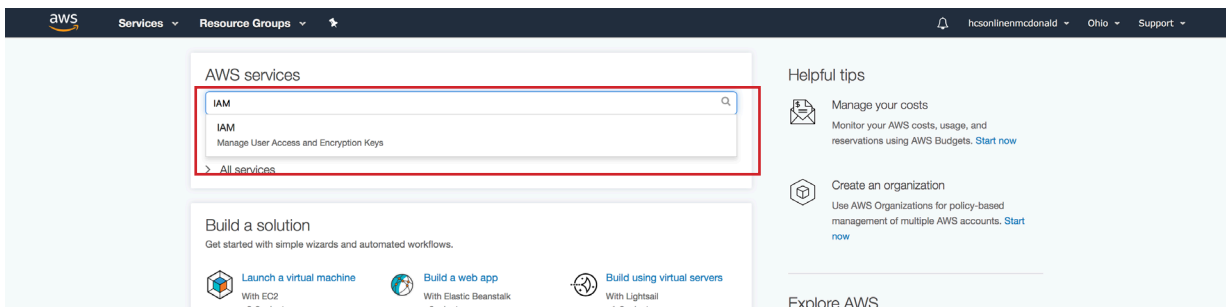
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Configure AWS Permissions for Jamf Pro

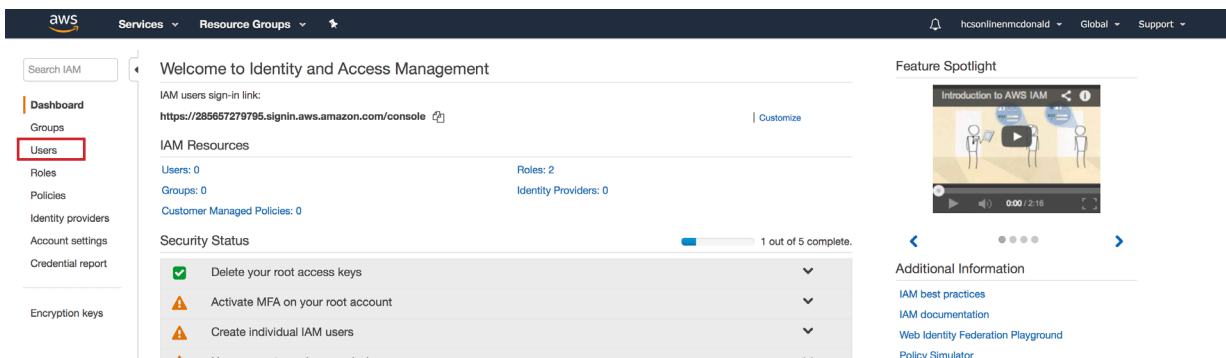
1. In a modern web browser, open console.aws.amazon.com then log in with your AWS account.
2. If you see the “Root user sign in” screen, enter the IAM Root user credentials then click “Sign in.”



3. In the AWS services search field, enter IAM, then choose IAM from the results list.



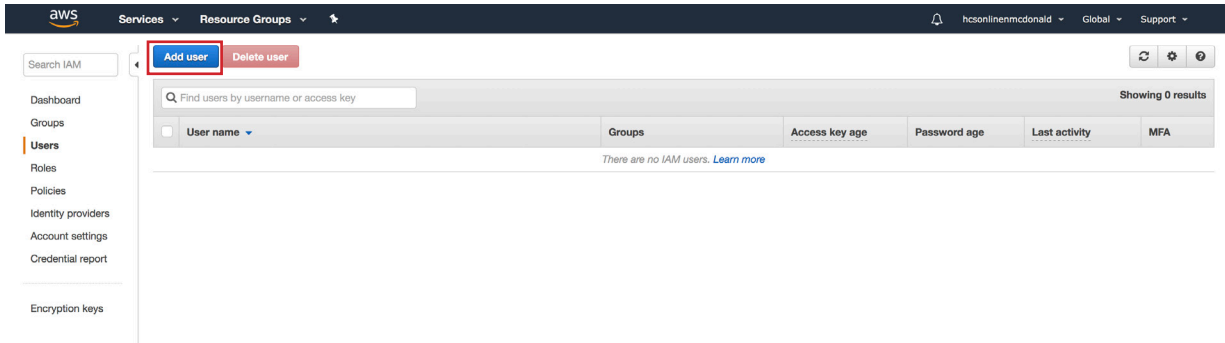
4. In the sidebar, click Users.





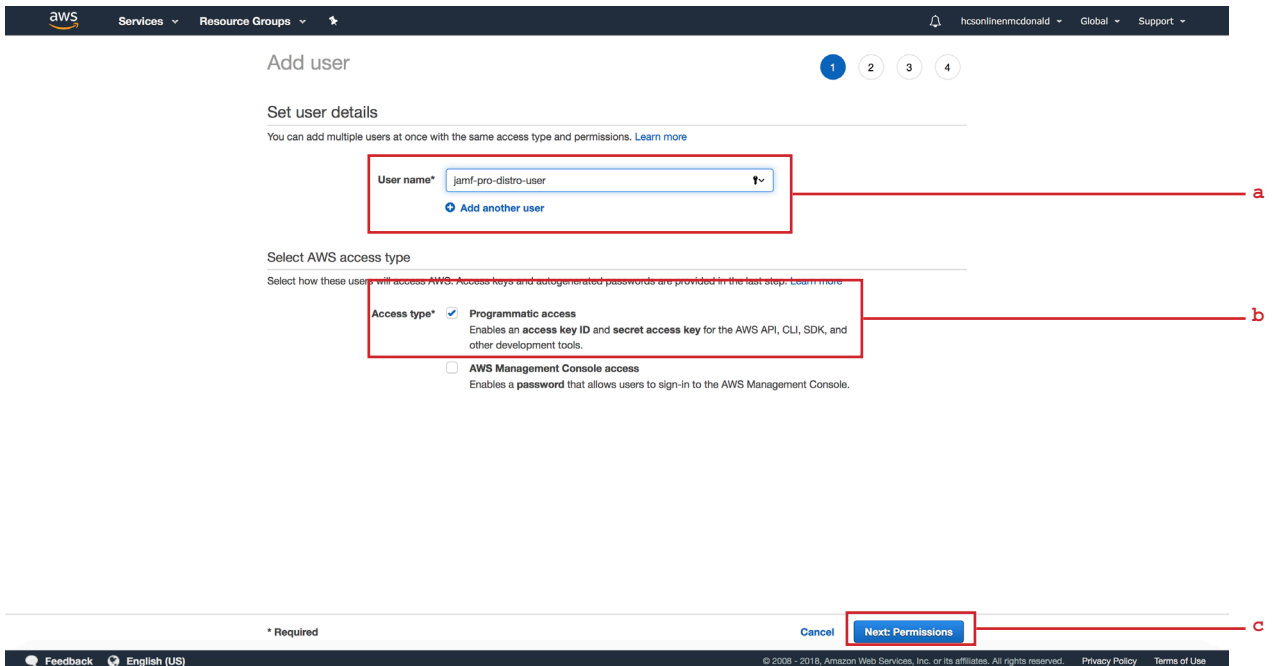
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5. Alick “Add Users.”



6. Configure the following details:

- a. User name: jamf-pro-distro-user
- b. Access Type: Programmatic access
- c. Click “Next: Permissions”





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7. Select “Attach existing policies directly”, then click “Create policy.” Click “Next: Review” to continue.

aws Services Resource Groups hconlinermcdonald Global Support

Add user

1 2 3 4

Set permissions

Add user to group Copy permissions from existing user **Attach existing policies directly**

Create policy

Filter policies Search Showing 358 results

	Policy name	Type	Used as	Description
<input type="checkbox"/>	AdministratorAccess	Job function	None	Provides full access to AWS services and re...
<input type="checkbox"/>	AlexaForBusinessD...	AWS managed	None	Provide device setup access to AlexaForBu...
<input type="checkbox"/>	AlexaForBusinessF...	AWS managed	None	Grants full access to AlexaForBusiness reso...
<input type="checkbox"/>	AlexaForBusinessG...	AWS managed	None	Provide gateway execution access to Alexa...
<input type="checkbox"/>	AlexaForBusinessR...	AWS managed	None	Provide read only access to AlexaForBusine...
<input type="checkbox"/>	AmazonAPIGatewa...	AWS managed	None	Provides full access to create/edit/delete A...
<input type="checkbox"/>	AmazonAPIGatewa...	AWS managed	None	Provides full access to invoke APIs in Amaz...
<input type="checkbox"/>	AmazonAPIGatewa...	AWS managed	None	Allows API Gateway to push logs to user's ...

Set permissions boundary

Cancel Previous **Next: Review**

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8. Click JSON.

9. Remove the existing datatext from the windowJSON field.

aws Services Resource Groups hconlinermcdonald Global Support

Create policy

1 2

A policy defines the AWS permissions that you can assign to a user, group, or role. You can create and edit a policy in the visual editor and using JSON. [Learn more](#)

This policy validation failed and might have errors converting to JSON: The policy must have at least one statement For more information about the IAM policy grammar, see [AWS IAM Policies](#)

Visual editor **JSON** Import managed policy

1

Add additional permissions

Cancel **Review policy**

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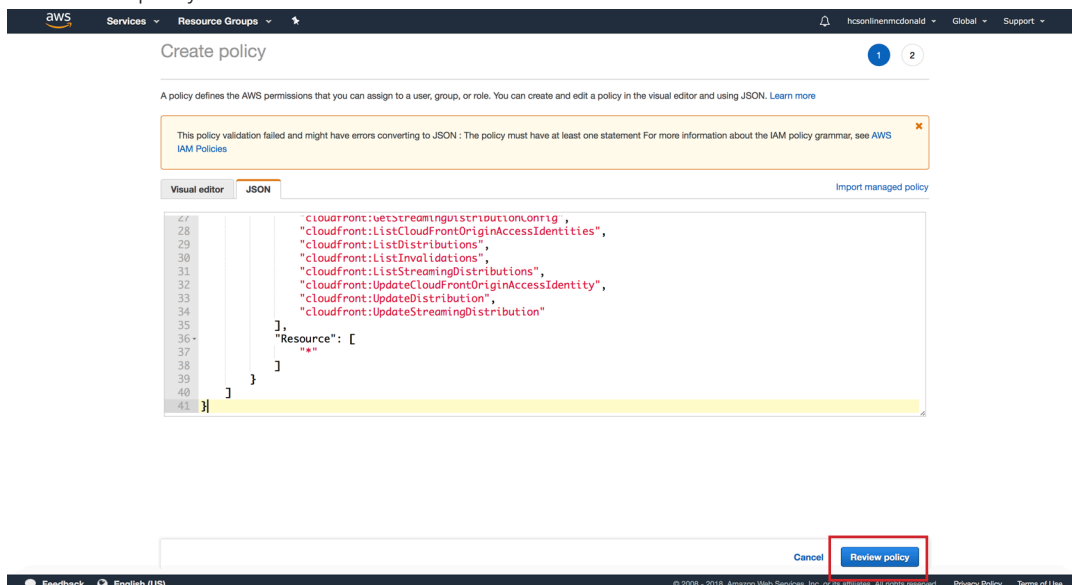
10. Go to this Link: <https://goo.gl/eJfXzH>

From the viewable page, copy the text and paste it into the JSON field (The text below is only for reference and will not work):

```
{
  "Version": "2012-10-17",
  "Statement": [
    {
      "Sid": "AllowFullS3JAMFBucketsOnly",
      "Effect": "Allow",
      "Action": [
        "s3:*"
      ],
      "Resource": [
        "arn:aws:s3:::jamf*"
      ]
    },
    {
      "Effect": "Allow",
      "Action": [
        "cloudfront:CreateCloudFrontOriginAccessIdentity",
        "cloudfront:CreateDistribution",
        "cloudfront:CreateInvalidation",
        "cloudfront:CreateStreamingDistribution",
        "cloudfront:GetCloudFrontOriginAccessIdentity",
        "cloudfront:GetCloudFrontOriginAccessIdentityConfig",
        "cloudfront:GetDistribution",
        "cloudfront:GetDistributionConfig",
        "cloudfront:GetInvalidation",
        "cloudfront:GetStreamingDistribution",
        "cloudfront:GetStreamingDistributionConfig",
        "cloudfront:ListCloudFrontOriginAccessIdentities",
        "cloudfront:ListDistributions",
        "cloudfront:ListInvalidations",
        "cloudfront:ListStreamingDistributions",
        "cloudfront:UpdateCloudFrontOriginAccessIdentity",
        "cloudfront:UpdateDistribution",
        "cloudfront:UpdateStreamingDistribution"
      ],
      "Resource": [
        "*"
      ]
    }
  ]
}
```

11. Ignore the warning that the policy must have at least one statement.

12. Click "Review policy."





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13. In the Name field enter jamf-pro-cloud-distro-policy.
14. You can leave the Description field blank.
15. Click “Create policy.”

The screenshot shows the 'Create policy' page in the AWS IAM console. The 'Name' field contains 'jamf-pro-cloud-distro-policy'. The 'Description' field is empty. A summary box states: 'This policy defines some actions, resources, or conditions that do not provide permissions. To grant access, policies must have an action that has an applicable resource or condition. For details, choose Show remaining. Learn more'. Below this is a table of permissions:

Service	Access level	Resource	Request condition
CloudFront	Limited: List, Read, Write	All resources	None
S3	Full: Read, Write, Permissions management Limited: List	BucketName string like jamf*	None

At the bottom, the 'Create policy' button is highlighted with a red box and labeled '15'.

16. Close the IAM Management Console tab.
17. Your web browser should display the Add User screen. Click the Refresh button (looks like two arrows in a circular outline).

The screenshot shows the 'Add user' page in the AWS IAM console. Under the 'Set permissions' section, there are three buttons: 'Add user to group', 'Copy permissions from existing user', and 'Attach existing policies directly'. Below these is a 'Create policy' button. A 'Refresh' button (two arrows in a circle) is highlighted with a red box. Below the refresh button is a table of policies:

Policy name	Type	Used as	Description
AdministratorAccess	Job function	None	Provides full access to AWS services and re...
AlexaForBusinessD...	AWS managed	None	Provide device setup access to AlexaForBu...
AlexaForBusinessF...	AWS managed	None	Grants full access to AlexaForBusiness reso...
AlexaForBusinessG...	AWS managed	None	Provide gateway execution access to Alexa...
AlexaForBusinessR...	AWS managed	None	Provide read only access to AlexaForBusine...
AmazonAPIGatewa...	AWS managed	None	Provides full access to create/edit/delete A...
AmazonAPIGatewa...	AWS managed	None	Provides full access to invoke APIs in Amaz...
AmazonAPIGatewa...	AWS managed	None	Allows API Gateway to push logs to user's ...

At the bottom, the 'Next: Review' button is visible.



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18. In the policy Search field, enter jamf-pro-cloud-distro-policy.

19. Select the jamf-pro-cloud-distro-policy policy weyou recently created then click “ earlier and click “Next: Review.”

aws Services Resource Groups hconlinenmcdonald Global Support

Add user

1 2 3 4

Set permissions

Add user to group Copy permissions from existing user Attach existing policies directly

Create policy

Filter policies jamf-pro-cloud-distro-policy Showing 1 result

Policy name	Type	Used as	Description
jamf-pro-cloud-distr...	Customer managed	None	

Set permissions boundary

Cancel Previous **Next: Review**

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20. Review your information then click “Create user.”

aws Services Resource Groups hconlinenmcdonald Global Support

Add user

1 2 3 4

Review

Review your choices. After you create the user, you can view and download the autogenerated password and access key.

User details

User name	jamf-pro-distro-user
AWS access type	Programmatic access - with an access key
Permissions boundary	Permissions boundary is not set

Permissions summary

The following policies will be attached to the user shown above.

Type	Name
Managed policy	jamf-pro-cloud-distro-policy

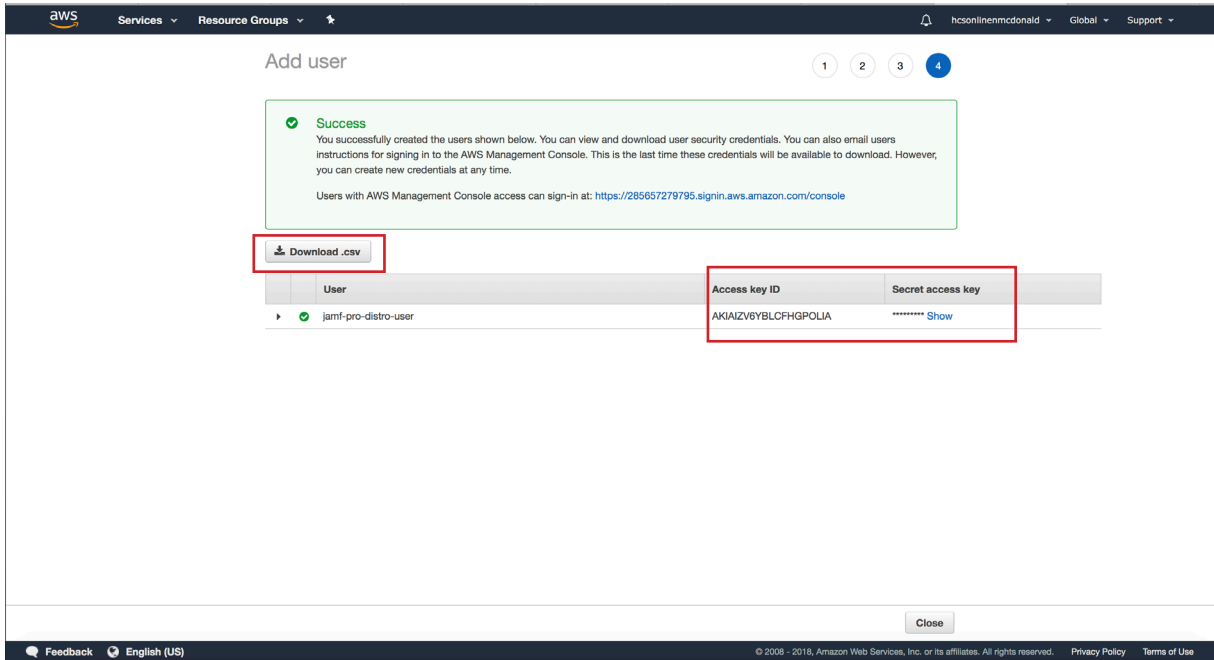
Cancel Previous **Create user**

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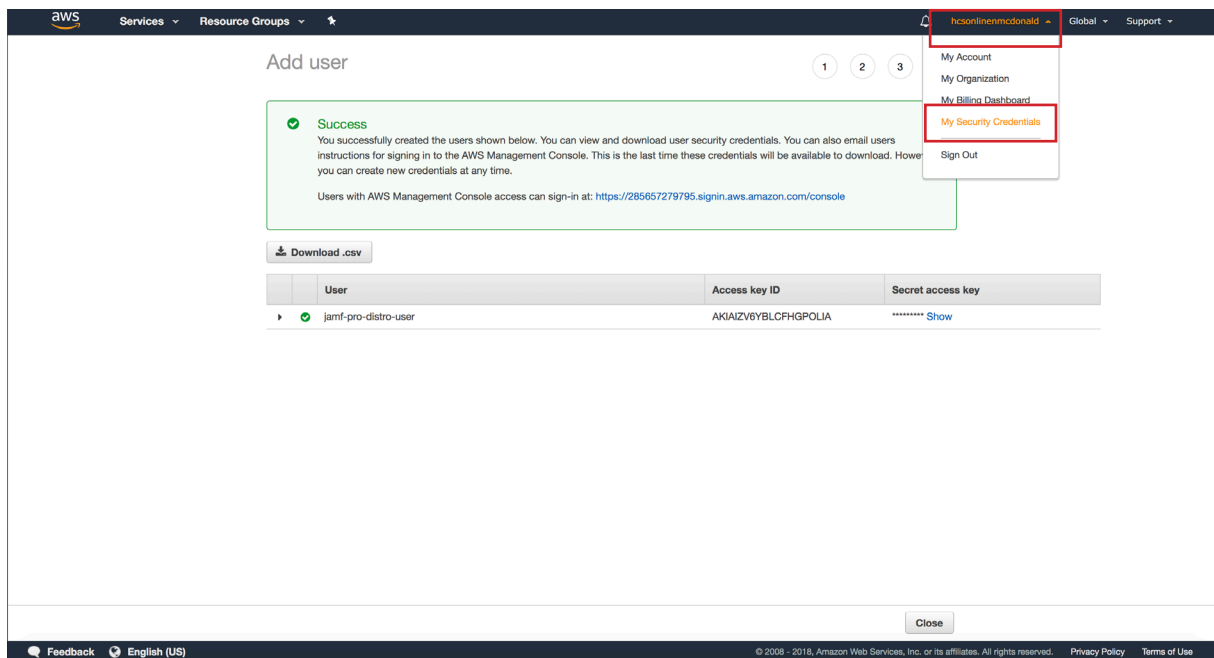
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21. At the success screen, click “Show” (which is displayed below the Secret access key).



22. Write down both the Access key ID and “Secret access key.” You need these pieces of information in the next section. Or you can click “Download .csv” to download the information. If you do not wish to use signed URLs in Jamf Pro you can skip to the next section, “Configure an AWS Distribution Point in Jamf Pro.”

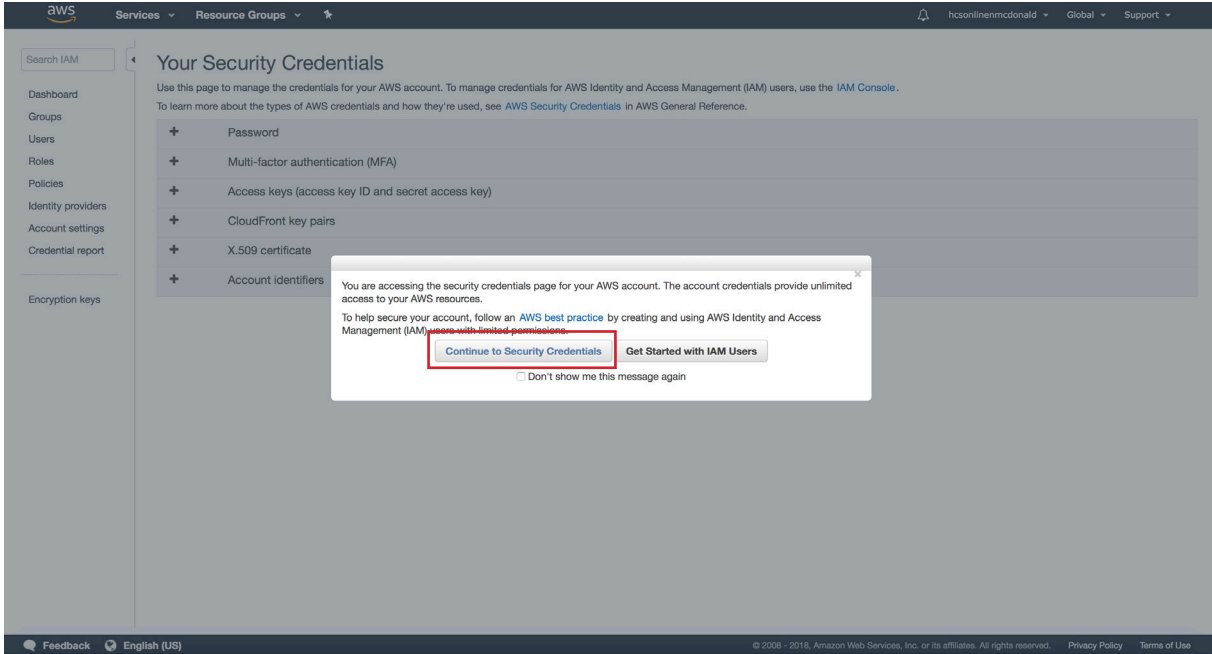
23. To use Signed URLs, click your account name in the upper right hand corner, then choose “My Security Credentials.”



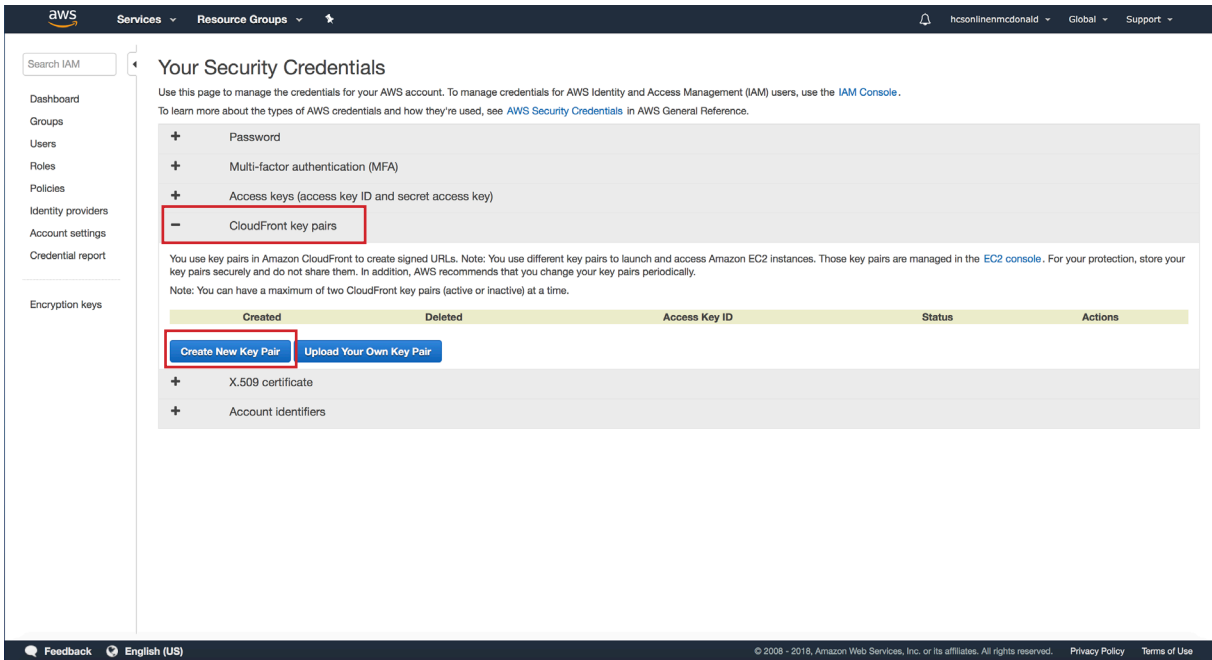


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24. Select "Continue with Security Credentials".



25. Select "CloudFront key pairs" then click "Create New Key Pair."





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26. Click “Download Private Key File”. Your private key will start with pk-. Note: Your file will download with a filename suffix of .pem.txt. You must change the filename suffix to .pem only.

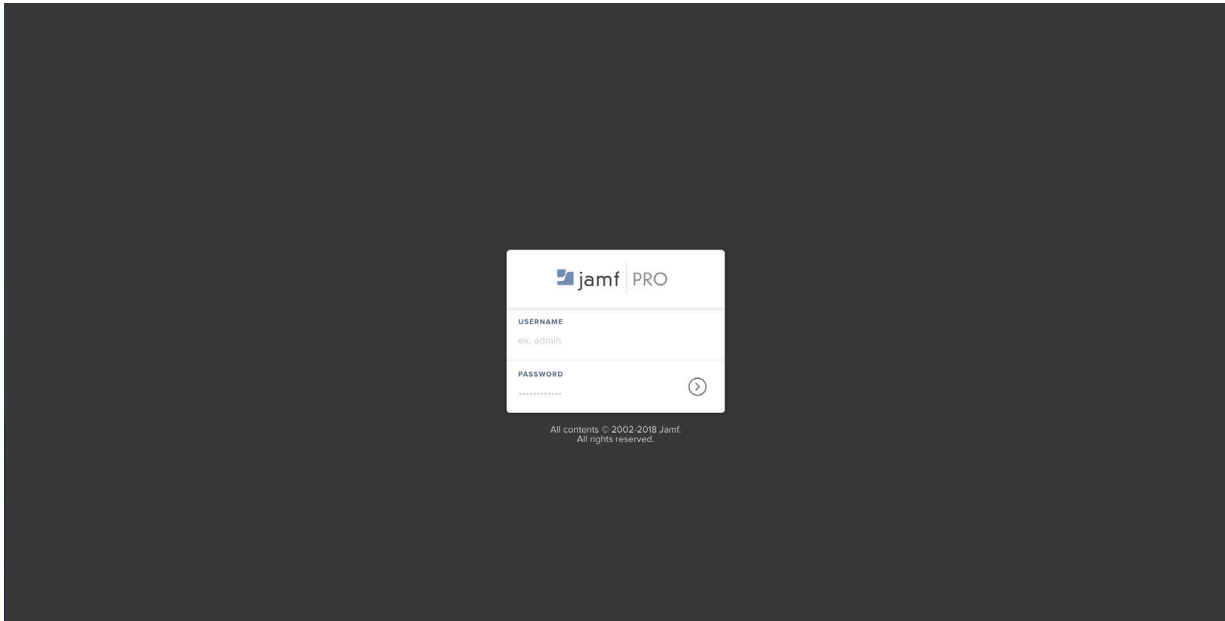
The screenshot shows the AWS IAM console interface. The main heading is "Your Security Credentials". A modal dialog titled "Create Key Pair" is displayed in the center, indicating a successful creation of a new key pair. The dialog contains the following text: "You have successfully created a new Key Pair. Please download your key files now. You will not be able to retrieve your private key later. Note: AWS does not retain your private key. If you lose your private key, you must create a new key pair. For your protection, store your private key securely and do not share it." Below this text, there are three buttons: "Download Private Key File" (highlighted with a red box), "Download Public Key File", and "Close". The background shows the "Your Security Credentials" page with a sidebar on the left containing navigation options like "Dashboard", "Groups", "Users", "Roles", "Policies", "Identity providers", "Account settings", "Credential report", and "Encryption keys".



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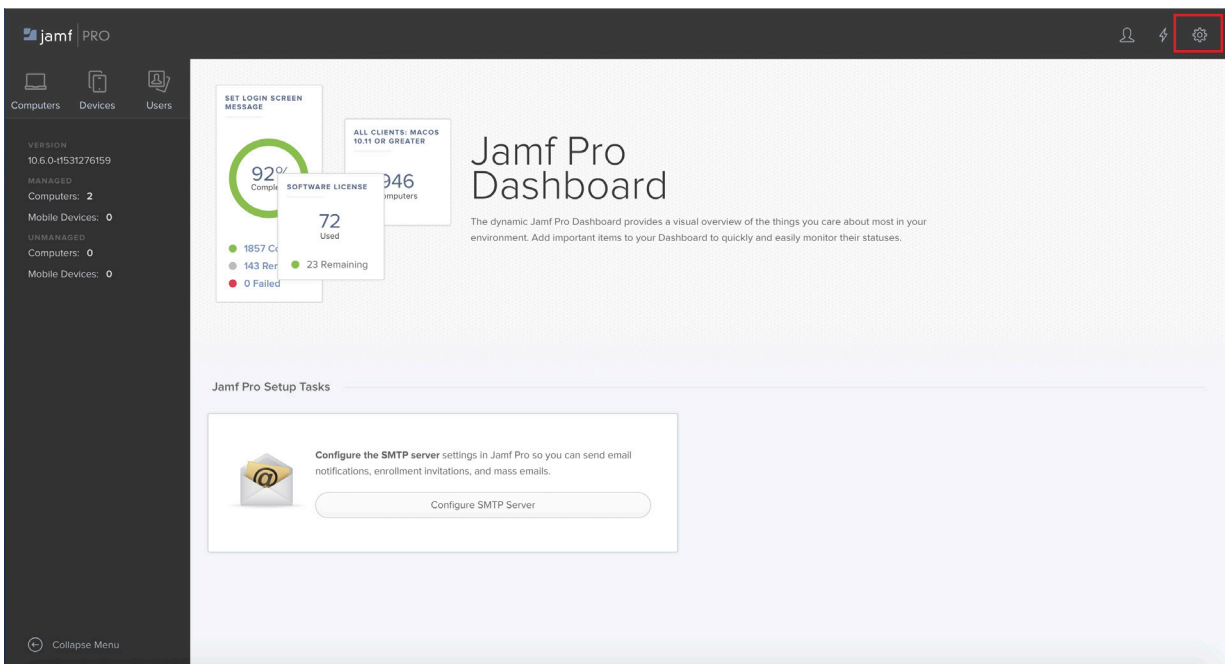
Configure an AWS Distribution Point in Jamf Pro

1. Navigate to your Jamf Pro Server, for example, <https://hcsjamf.hcsonline.com>



2. Sign in with an Administrative account.

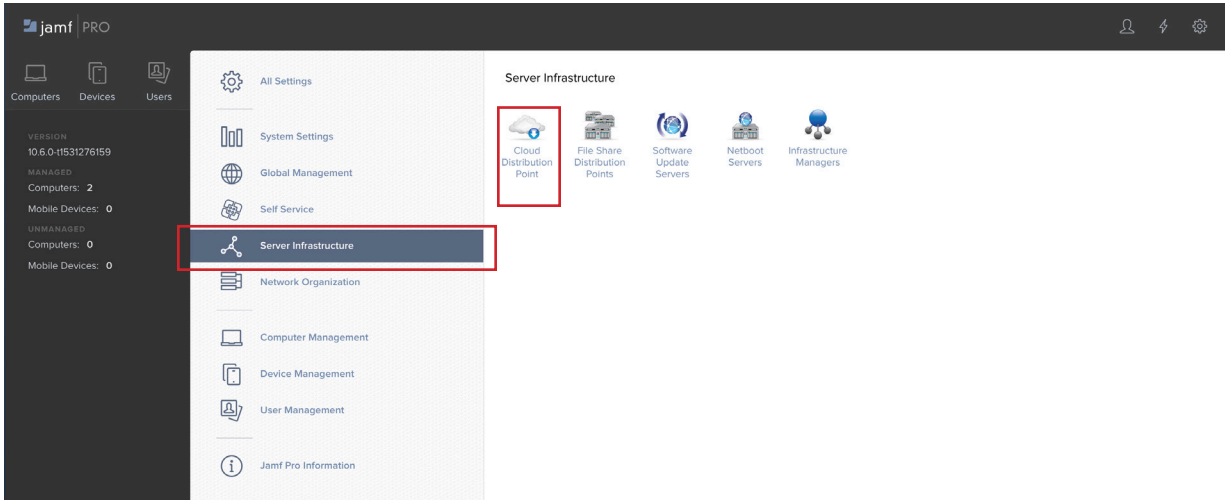
3. Click the Settings button (looks like a gear) in the upper- right hand corner.



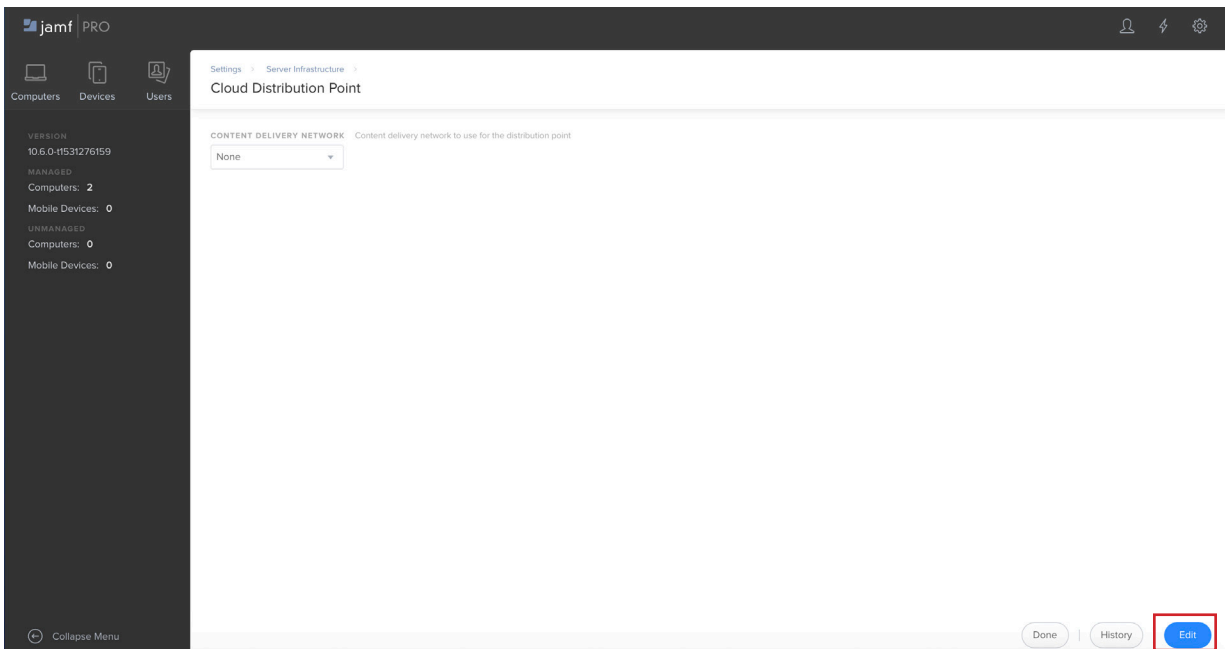


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4. In the middle column, select “Server Infrastructure,” then click “Cloud Distribution Point.”



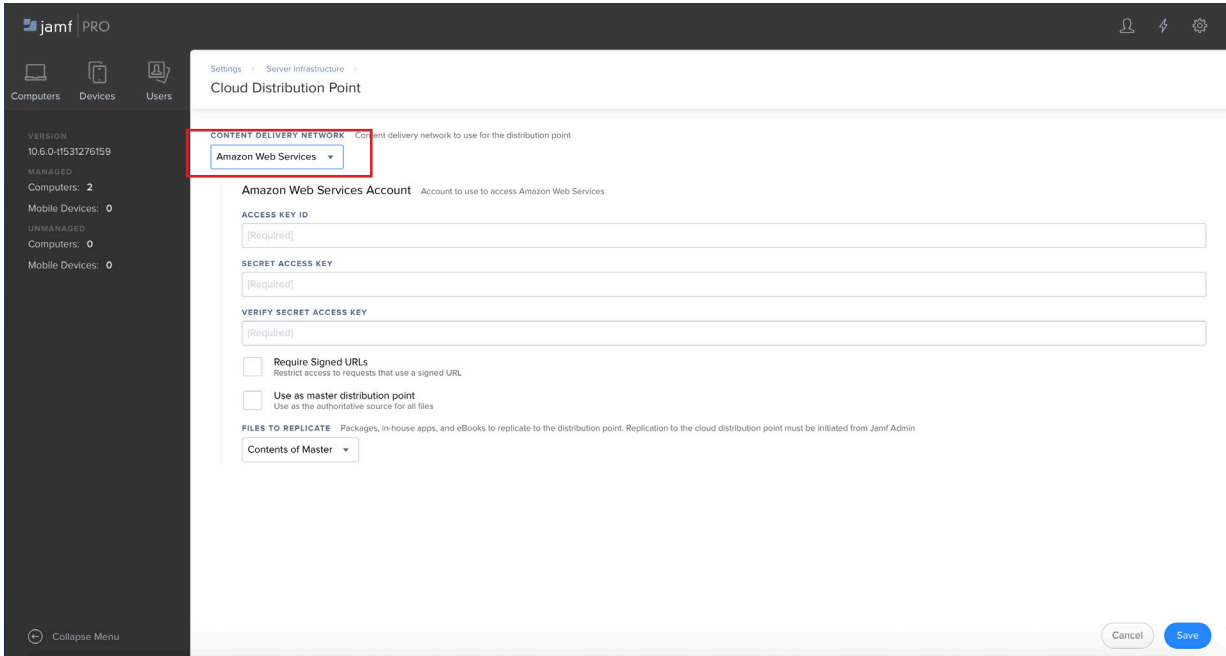
5. Select “Edit” from the lower right hand corner.





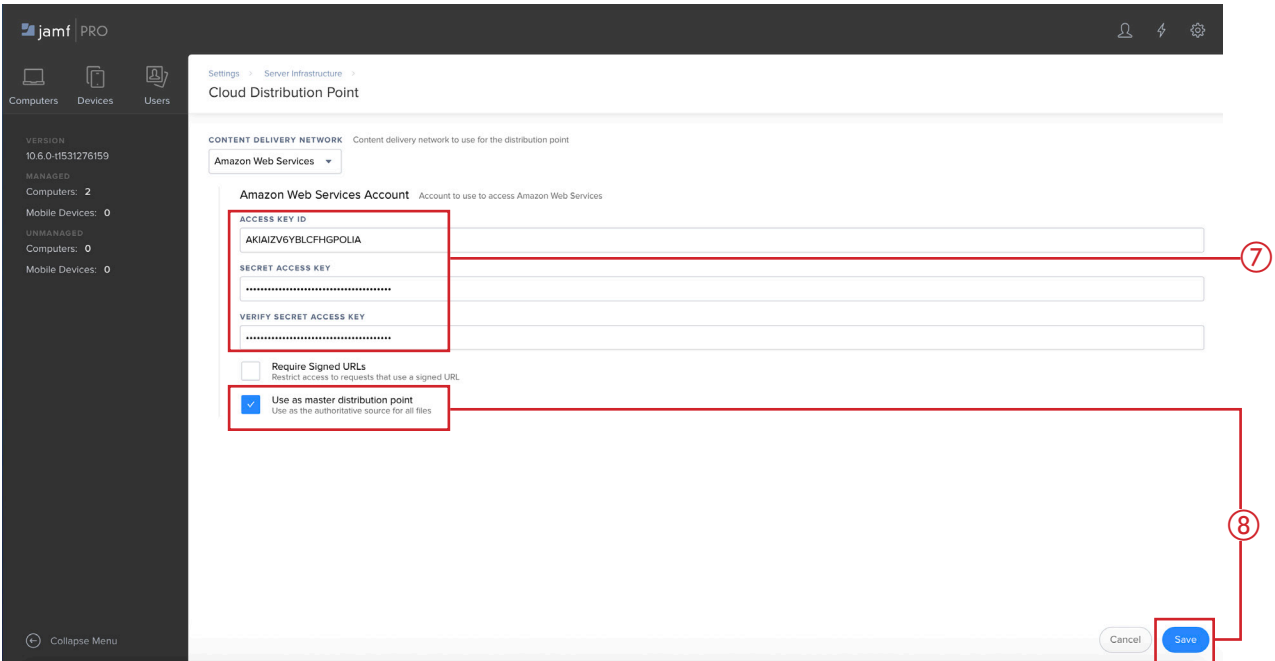
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6. Click the Content Delivery Network pop-up menu then choose “Amazon Web Services”.



7. Click the Content Delivery Network pop-up menu then choose “Amazon Web Services”.

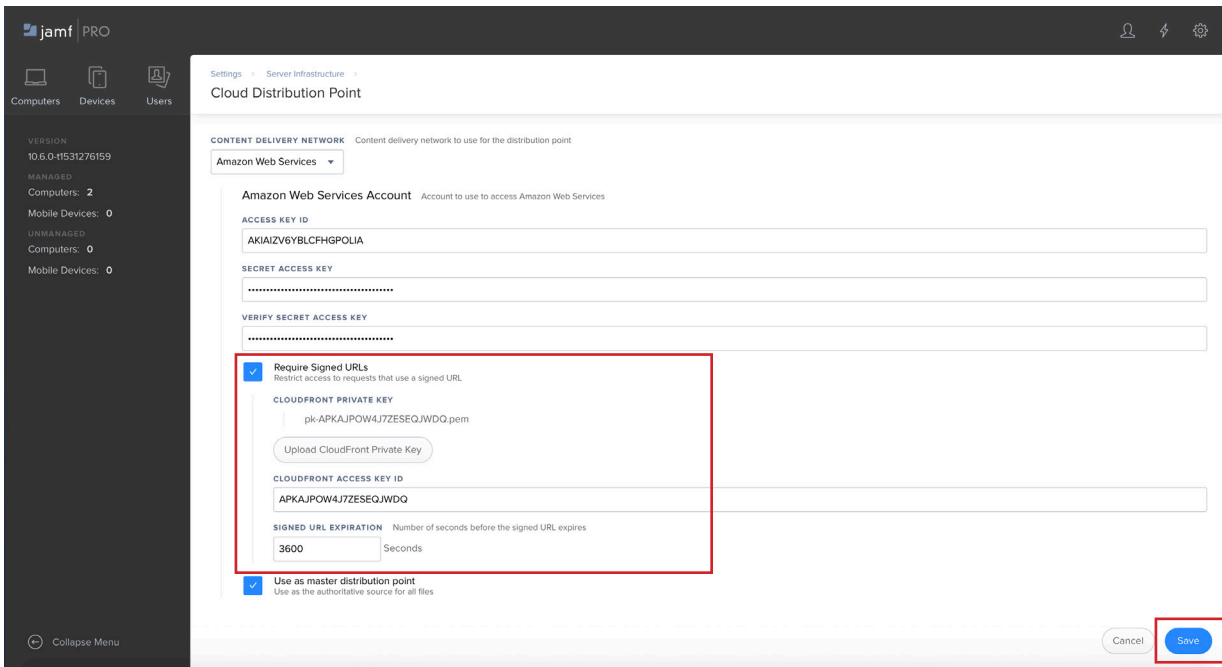
8. If you wish for your “Cloud Distribution Point” to also be your “Master Distribution Point,” select the checkbox labeled “Use as Master Distribution Point.” By default all contents of your Master Distribution Point will be replicated to any additional cloud distribution points you have. If you do not wish to use signed URLs, click Save in the lower-right corner.



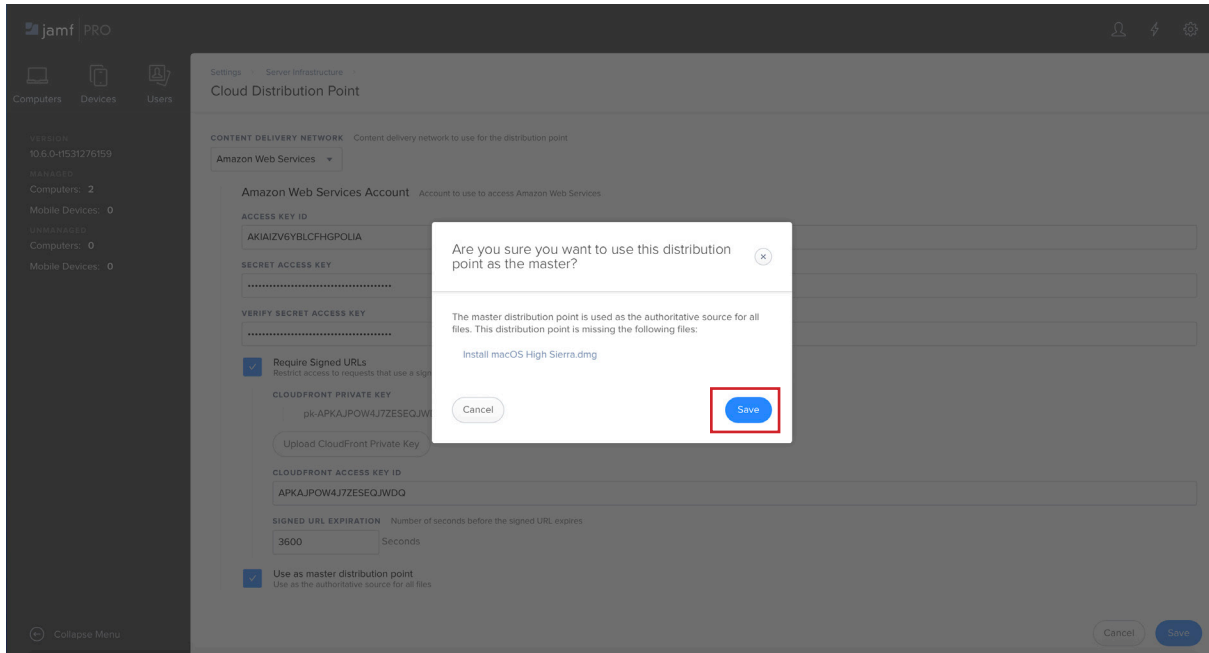


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9. If you wish to require signed URLs, ensure that you followed steps 24-26 in the previous section, then select the checkbox labeled “Require Signed URLs”, click “Upload CloudFront Private Key,” then select the private key you downloaded and renamed earlier. Confirm that your CloudFront Access Key ID should auto-populates, then click Save.



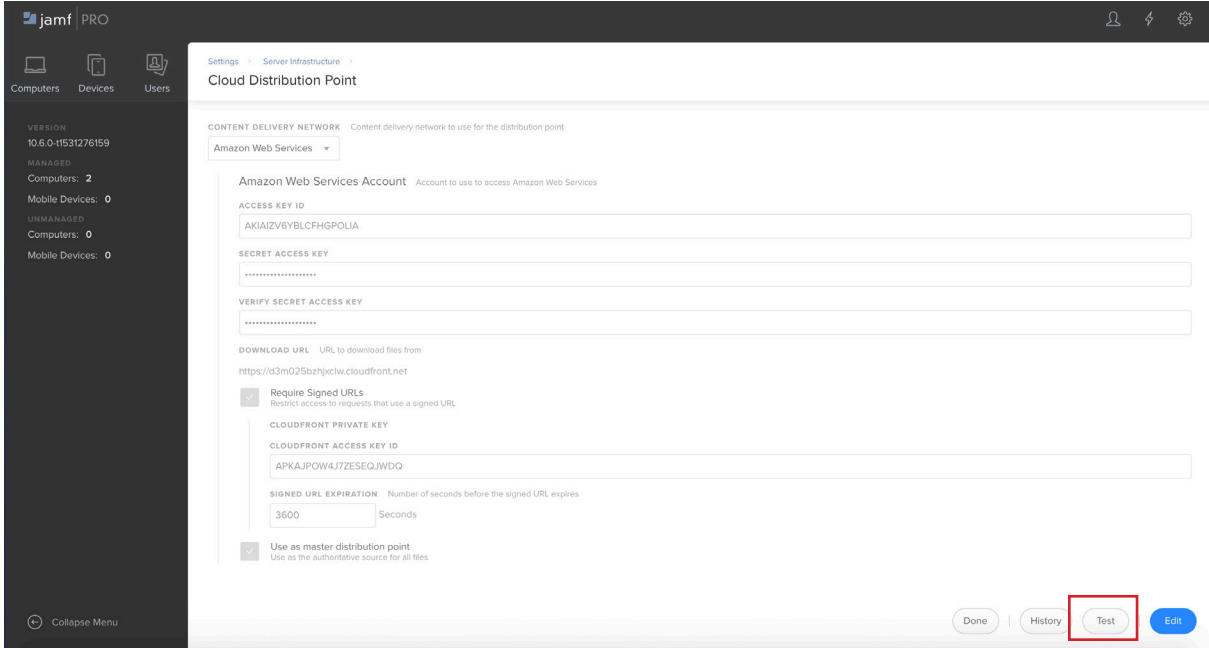
10. If you receive a warning labeled “Are you sure you want to use this distribution point as the master?” This means that you already have packages in your old Master Distribution Point; if this is the case, you can use the Mac app Jamf Admin to copy packages to your new Master Distribution Point after you complete this guide.



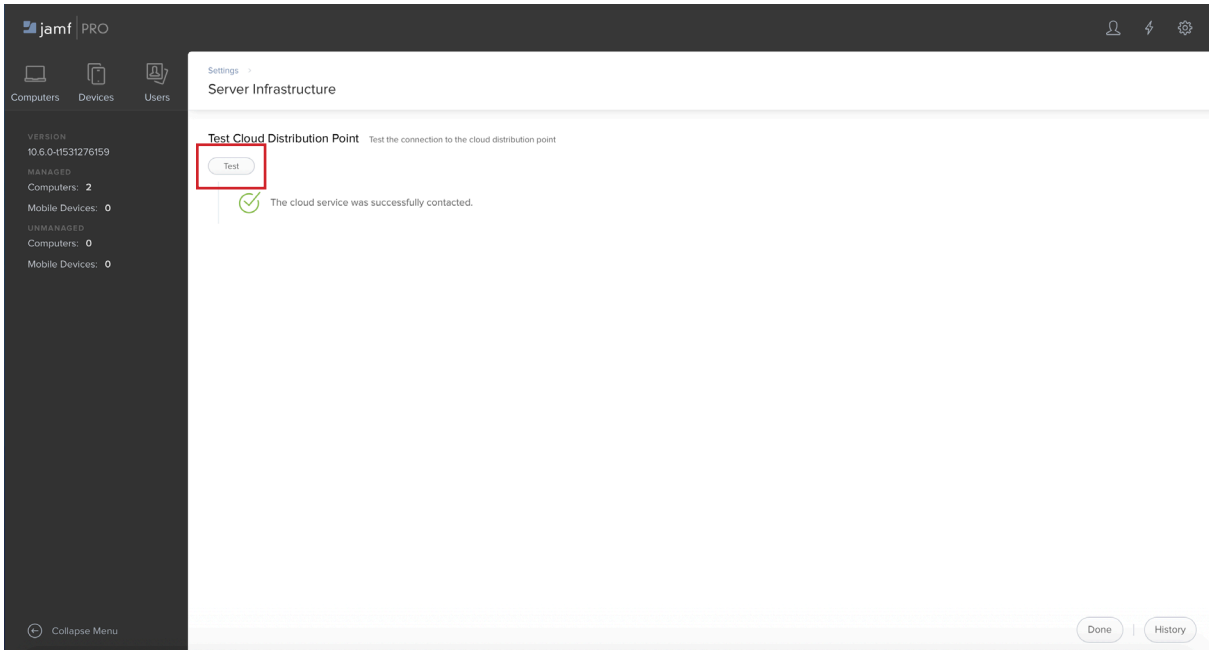


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11. Click “Test” in the lower-right corner.



12. Click “Test,” then confirm you see the following success message, otherwise go back and check your settings.

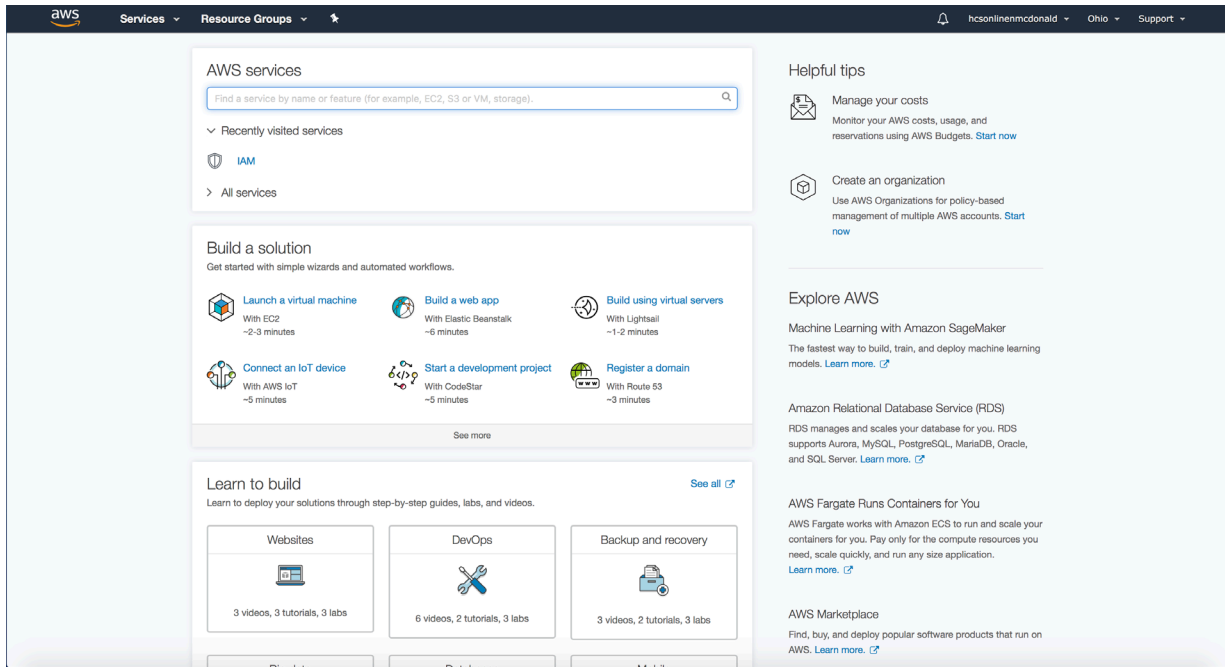




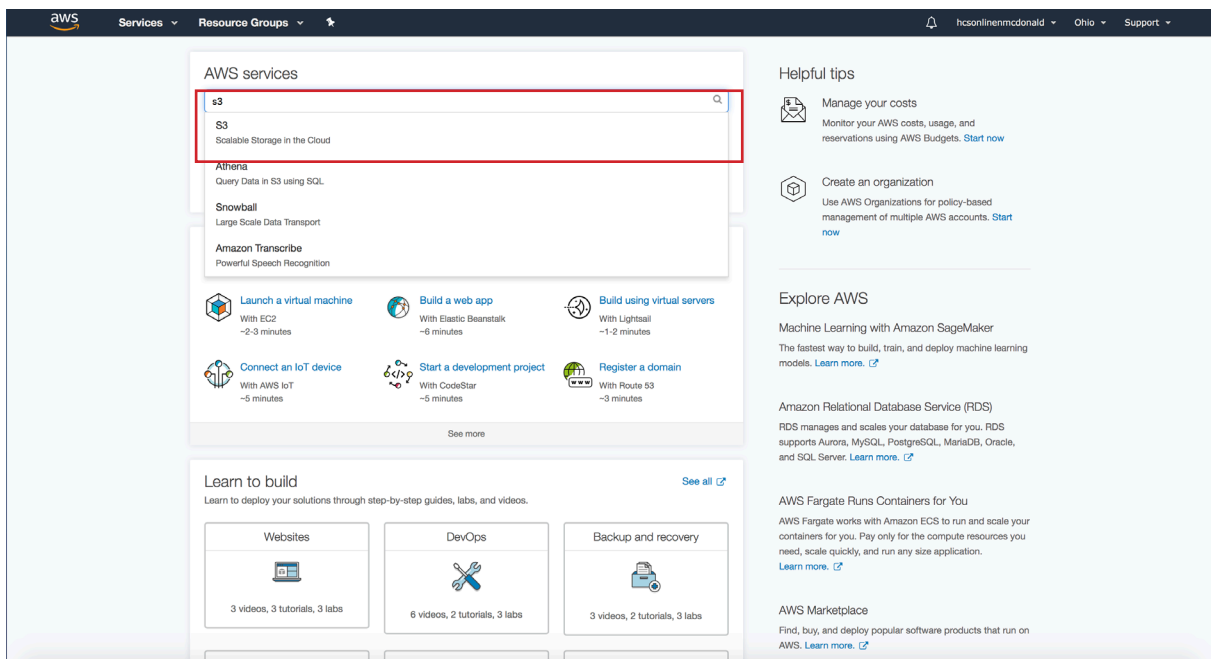
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Verify Jamf Pro Created an S3 Bucket

1. Navigate back to your Amazon Web Services Console (<https://console.aws.amazon.com>) and sign in again if needed.



2. In the AWS Services Search bar search for S3 and choose the first result as shown below.





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3. Confirm that you see a bucket beginning with “jamf.” This is a final confirmation that the Jamf Pro Server was able to successfully contact AWS and create an S3 bucket for storage.

The screenshot shows the AWS Management Console for Amazon S3. At the top, there are navigation tabs for 'Services' and 'Resource Groups'. Below that, there's a search bar and buttons for '+ Create bucket', 'Delete bucket', and 'Empty bucket'. A summary bar indicates '1 Buckets', '0 Public', and '1 Regions'. The main content is a table with the following data:

Bucket name	Access	Region	Date created
jamf81e450b8dd324c1ea4e2e4de9acc7bd5	Not public *	US East (N. Virginia)	Sep 17, 2018 12:30:34 AM GMT-0400

* Objects might still be publicly accessible due to object ACLs. [Learn more](#)

4. You are now finished!