

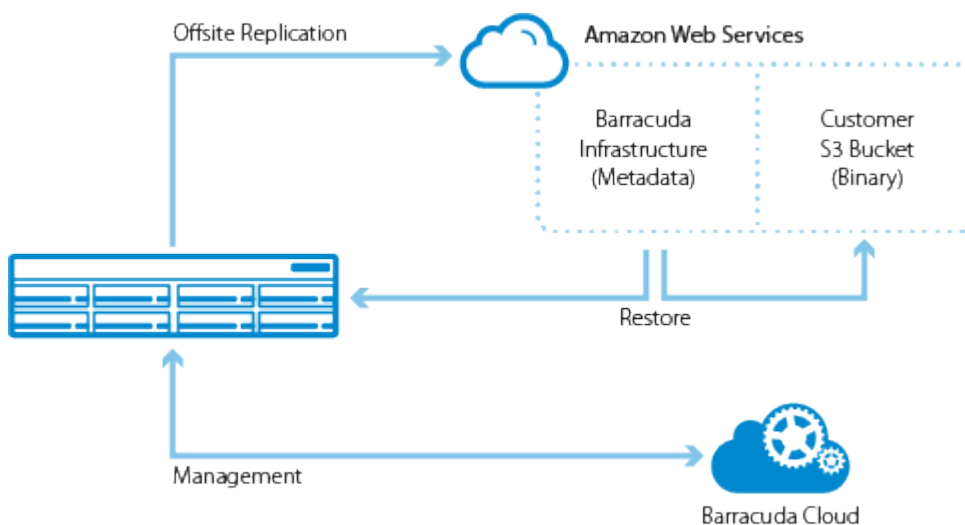
Amazon Web Services Offsite Replication

<https://campus.barracuda.com/doc/78809432/>

 Note that the videos in this article do not contain audio.

Replication of data offsite to Amazon Web Services (AWS) requires an AWS Replication subscription from Barracuda. Replication to AWS is designed for customers currently using AWS and who have either a preference for storing backup data in AWS or are required to do so for compliance reasons. Once configured, all binary data that has been replicated offsite is stored in an Amazon Simple Storage Service (S3) bucket in the customer AWS account. All metadata is stored in Barracuda's AWS account and infrastructure. All data replicated to AWS is encrypted using 256-bit AES encryption in-flight and stored deduplicated, compressed, and encrypted in the customer S3 bucket. See [Amazon S3](#) for more information.

Figure 1. Offsite Replication to AWS.



To configure AWS as an offsite replication destination, you must first prepare your AWS account by giving Barracuda Backup the proper permissions to create an S3 bucket and store data in it. After these steps are complete, you can configure the replication destination on the **Backup > Replication** page.

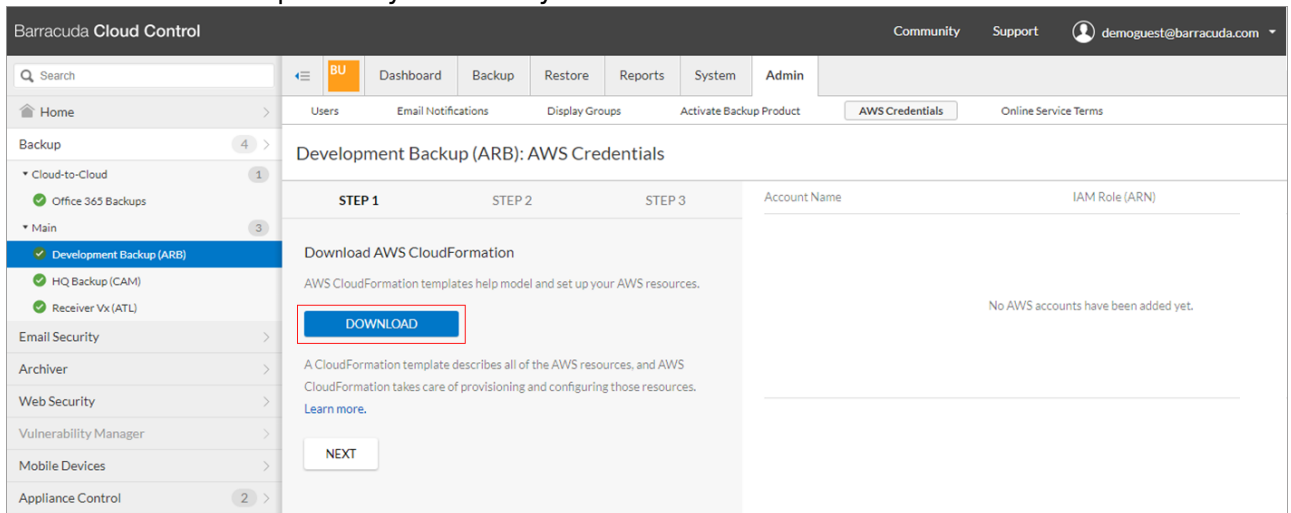
Prepare Amazon Web Services

The following steps explain how to download the Barracuda provided CloudFormation Template, upload the template to AWS, configure the AWS Import Service Role, and add your AWS credentials to Barracuda Backup so that it can access your AWS account.

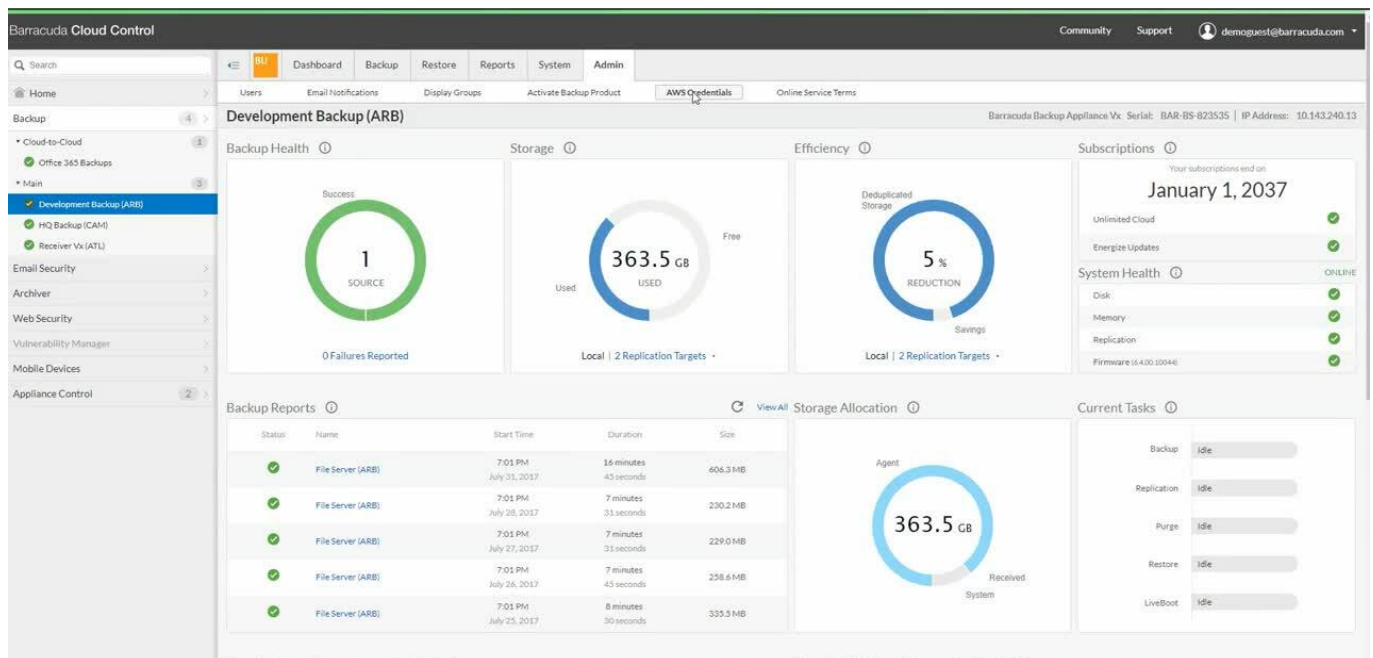
Download the CloudFormation Template

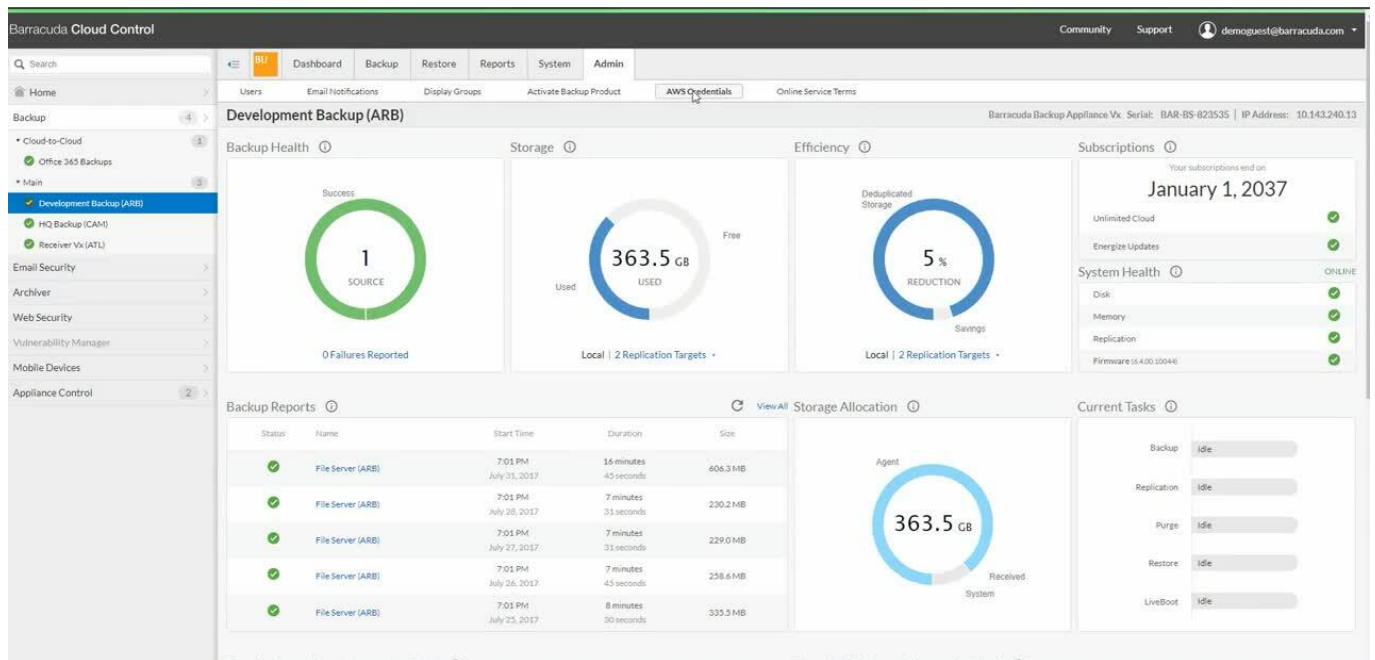
See [AWS CloudFormation Templates](#) for additional information.

1. Log in to your Barracuda Backup appliance, and go to the **Admin > AWS Credentials** page.
2. Under **STEP 1** of the **Add AWS Account** wizard, click **Download** to save the Barracuda CloudFormation template to your local system:



Watch the video demonstration:



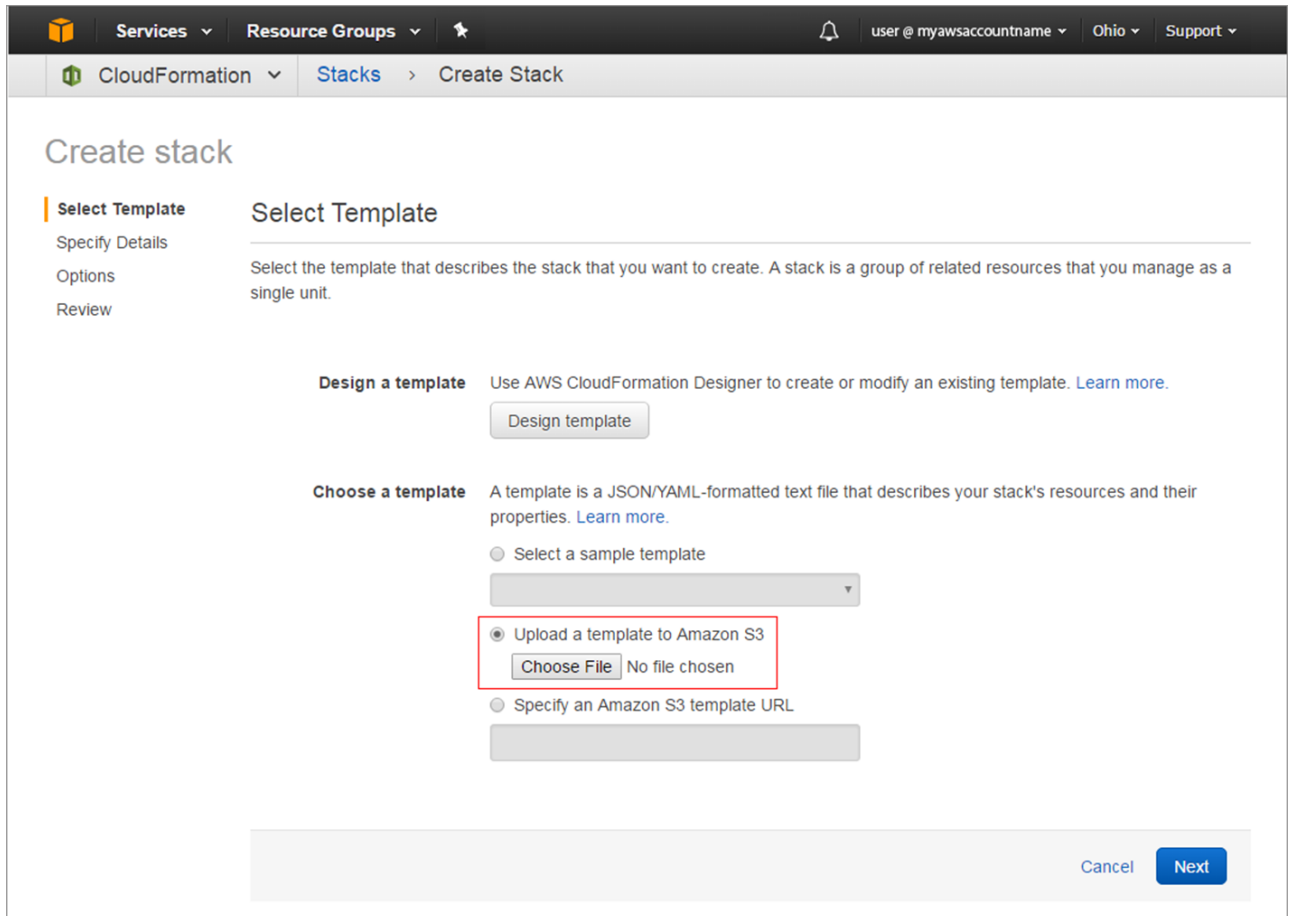


Videolink:

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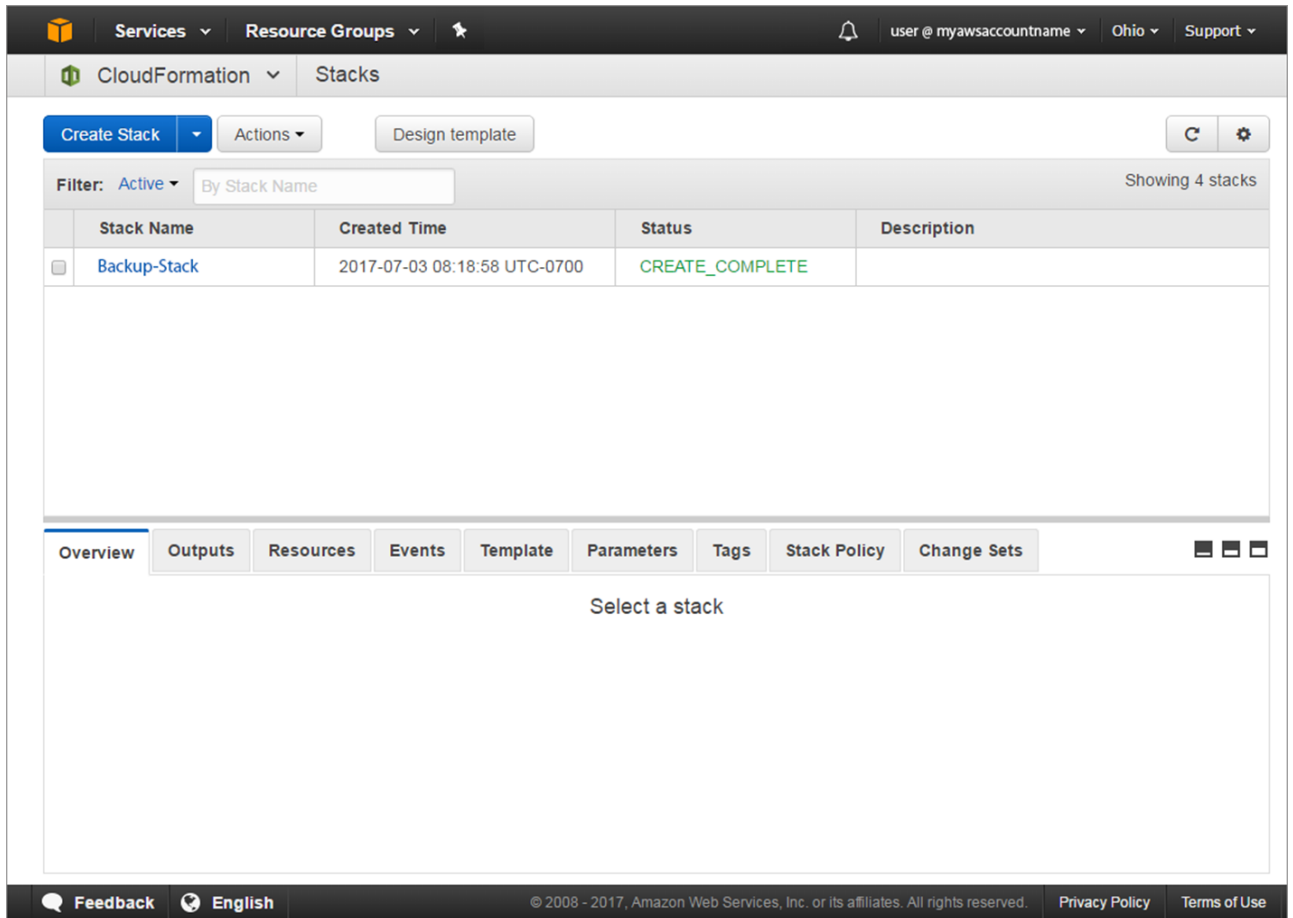
Upload Template to Amazon Web Services

1. Log in to AWS services using your account credentials.
2. Click **Services**, and navigate to and select **CloudFormation**.
3. Click **Create Stack**. In the **Choose a template** section, click **Upload a template to Amazon S3**:



The screenshot shows the AWS CloudFormation console's 'Create Stack' wizard. The breadcrumb navigation at the top indicates the path: CloudFormation > Stacks > Create Stack. The left sidebar shows the wizard's steps: Select Template (active), Specify Details, Options, and Review. The main content area is titled 'Select Template' and includes a description: 'Select the template that describes the stack that you want to create. A stack is a group of related resources that you manage as a single unit.' There are two main options: 'Design a template' (with a 'Design template' button) and 'Choose a template' (with a description of templates). Under 'Choose a template', there are three radio buttons: 'Select a sample template' (disabled), 'Upload a template to Amazon S3' (selected and highlighted with a red box), and 'Specify an Amazon S3 template URL' (disabled). The 'Upload a template to Amazon S3' option includes a 'Choose File' button and the text 'No file chosen'. At the bottom right, there are 'Cancel' and 'Next' buttons.

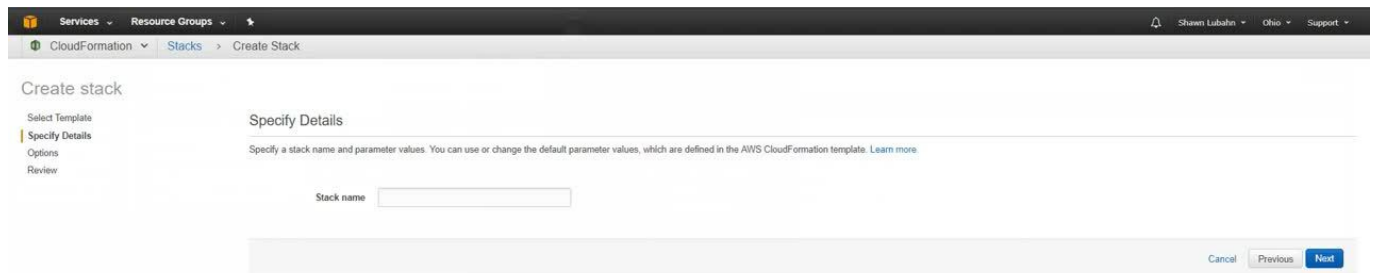
4. Click **Choose File**, and navigate to and select the CloudFormation template saved to your local system. Click **Next**.
5. On the **Specify Details** page, enter a name to represent the AWS resources in the **Stack name** field. Click **Next**.
6. On the **Options** page, click **Next**.
7. On the **Review** page, select **I acknowledge that AWS CloudFormation might create IAMresources**, and click **Create** to create an IAM role in your AWS account.
8. Once the stack is created, it displays in the table with a status of **CREATE_COMPLETE**:



The screenshot shows the AWS CloudFormation console. At the top, there are navigation tabs for 'Services' and 'Resource Groups'. Below these, the 'CloudFormation' section is active, showing a list of stacks. The 'Backup-Stack' is listed with a status of 'CREATE_COMPLETE'. Below the list, there are tabs for 'Overview', 'Outputs', 'Resources', 'Events', 'Template', 'Parameters', 'Tags', 'Stack Policy', and 'Change Sets'. The 'Overview' tab is selected, showing a 'Select a stack' prompt.

Stack Name	Created Time	Status	Description
Backup-Stack	2017-07-03 08:18:58 UTC-0700	CREATE_COMPLETE	

Watch the video demonstration:



The screenshot shows the 'Create stack' wizard in the AWS CloudFormation console. The 'Specify Details' step is active, showing a 'Stack name' input field. The wizard includes a sidebar with 'Select Template', 'Specify Details', 'Options', and 'Review'. At the bottom, there are 'Cancel', 'Previous', and 'Next' buttons.

Videolink:

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Configure an Amazon Web Services Import Service Role (Optional)

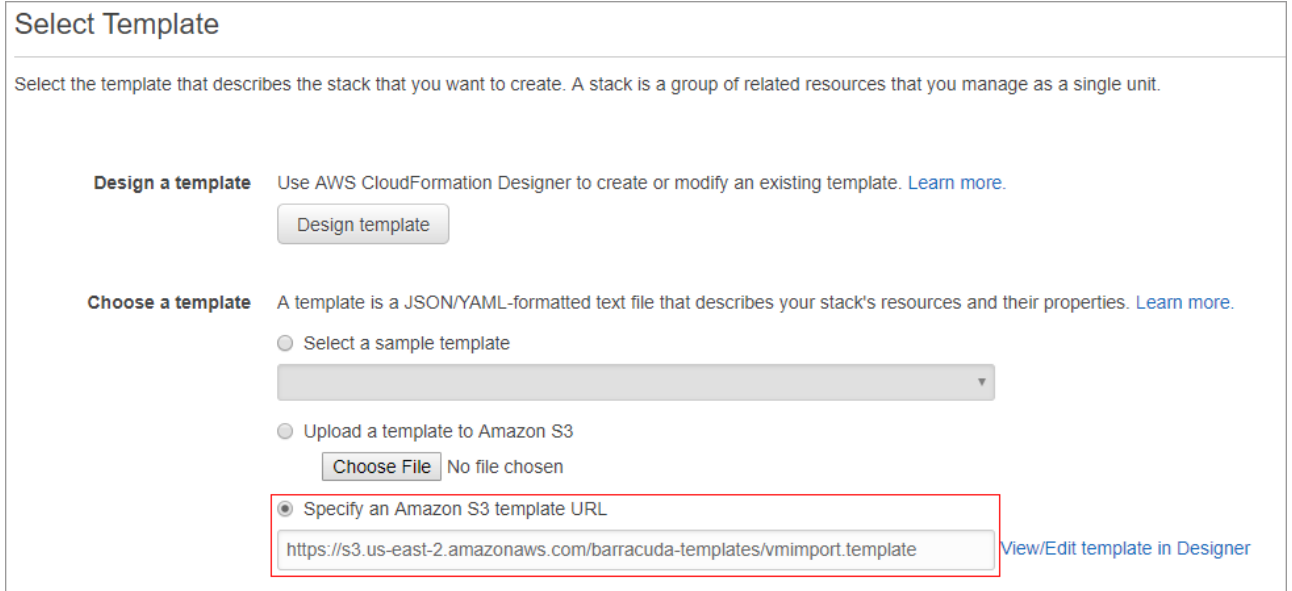
Included in the replication to AWS functionality is the ability to restore VMware vSphere and Microsoft Hyper-V virtual machines (VMs) to an Amazon Machine Image (AMI) where they can be launched in Amazon Elastic Compute Cloud (EC2). Before you can restore VMware and Hyper-V VM backups to AWS, you must first create the service role *vmimport*. The following steps are only necessary if you plan to restore VMware or Hyper-V virtual machines to AWS.

Amazon Elastic Compute Cloud (EC2) and Amazon Storage Service (S3) instances are typically separate. AWS requires a role to allow EC2 to access your S3 storage. AWS uses the *vmimport* service role to provide permissions between EC2 and S3. This section assumes you have not set up the *vmimport* service role. If you previously set up the *vmimport* role, you must grant Barracuda Networks access to replicate Barracuda Backup data to AWS.

To create the service role:

1. Click the following hyperlink:
<https://console.aws.amazon.com/cloudformation/home?#/stacks/new?stackName=barracuda-vmimport-stack&templateURL=https://s3.us-east-2.amazonaws.com/barracuda-templates/vmimport.template>

2. On the **Select Template** page, verify that **Specify an Amazon S3 template URL** is selected and that the URL in the text box matches the URL in the following images:



Select Template

Select the template that describes the stack that you want to create. A stack is a group of related resources that you manage as a single unit.

Design a template Use AWS CloudFormation Designer to create or modify an existing template. [Learn more.](#)

Design template

Choose a template A template is a JSON/YAML-formatted text file that describes your stack's resources and their properties. [Learn more.](#)

☐ Select a sample template

☐ Upload a template to Amazon S3

Choose File No file chosen

☒ Specify an Amazon S3 template URL

[View/Edit template in Designer](#)

3. On the **Select Template** page, click **Next**.
4. On the **Specify Details** page, click **Next**.
5. On the **Options** page, click **Next**.
6. On the **Review** page, select **I acknowledge that AWS CloudFormation might create IAM resources with custom names**, and then click **Create** to create the **vmimport** role in your AWS account:

Create stack

Select Template

Specify Details

Options

Review

Review

Template

Template URL

https://s3.us-east-2.amazonaws.com/barracuda-templates/vmimport.template

Description

DESCRIPTION

Estimate cost

Link is not available

Details

Stack name:

barracuda-vmimport-stack

Options

Tags

No tags provided

Advanced

Notification

Timeout

none

Rollback on failure

Yes

Capabilities

The following resource(s) require capabilities: [AWS::IAM::ManagedPolicy, AWS::IAM::Role]

This template contains Identity and Access Management (IAM) resources. Check that you want to create each of these resources and that they have the minimum required permissions. In addition, they have custom names. Check that the custom names are unique within your AWS account. [Learn more.](#)

☒ I acknowledge that AWS CloudFormation might create IAM resources with custom names.

Cancel

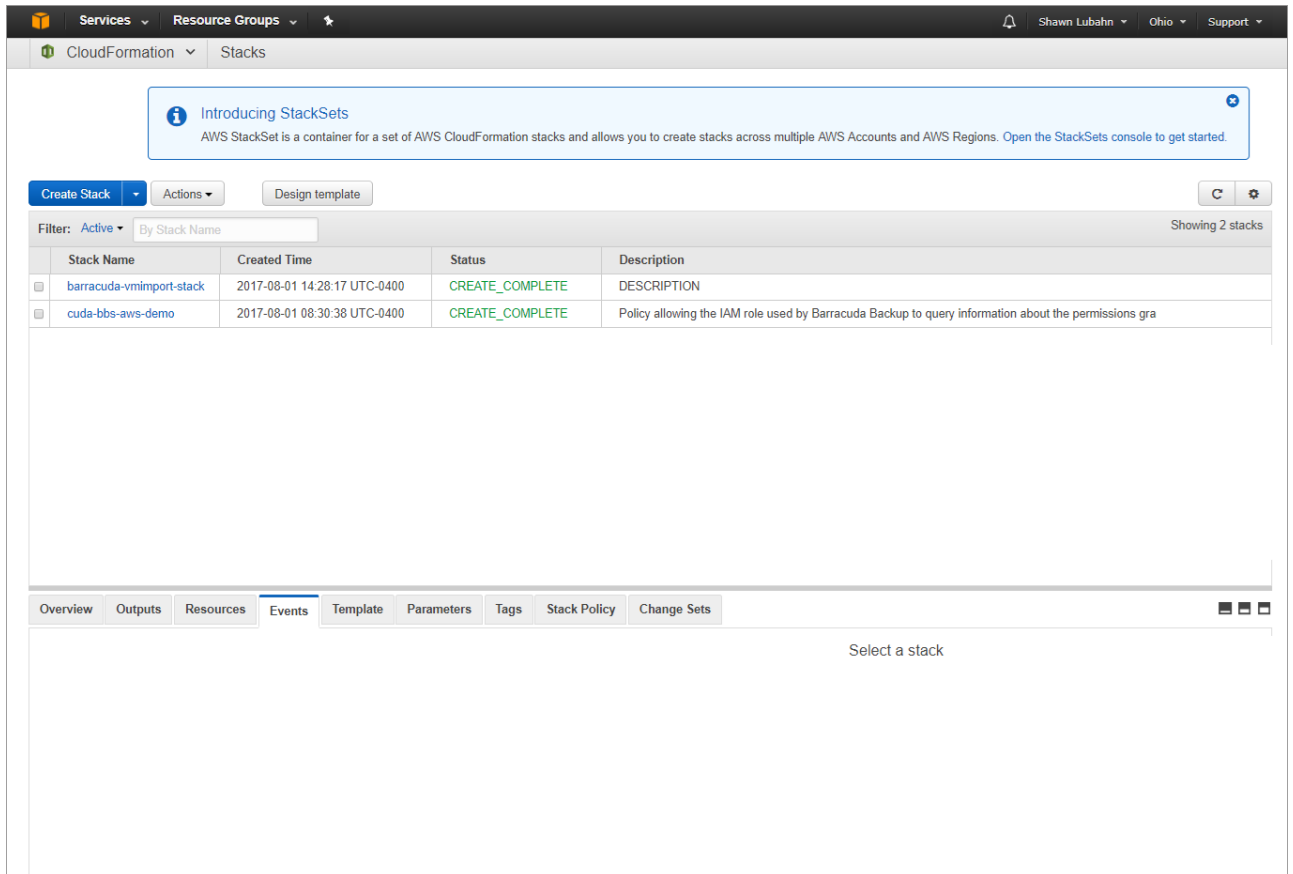
Previous

Create

7. Once the stack is created, it displays in the table with a status of **CREATE_COMPLETE**:

Amazon Web Services Offsite Replication

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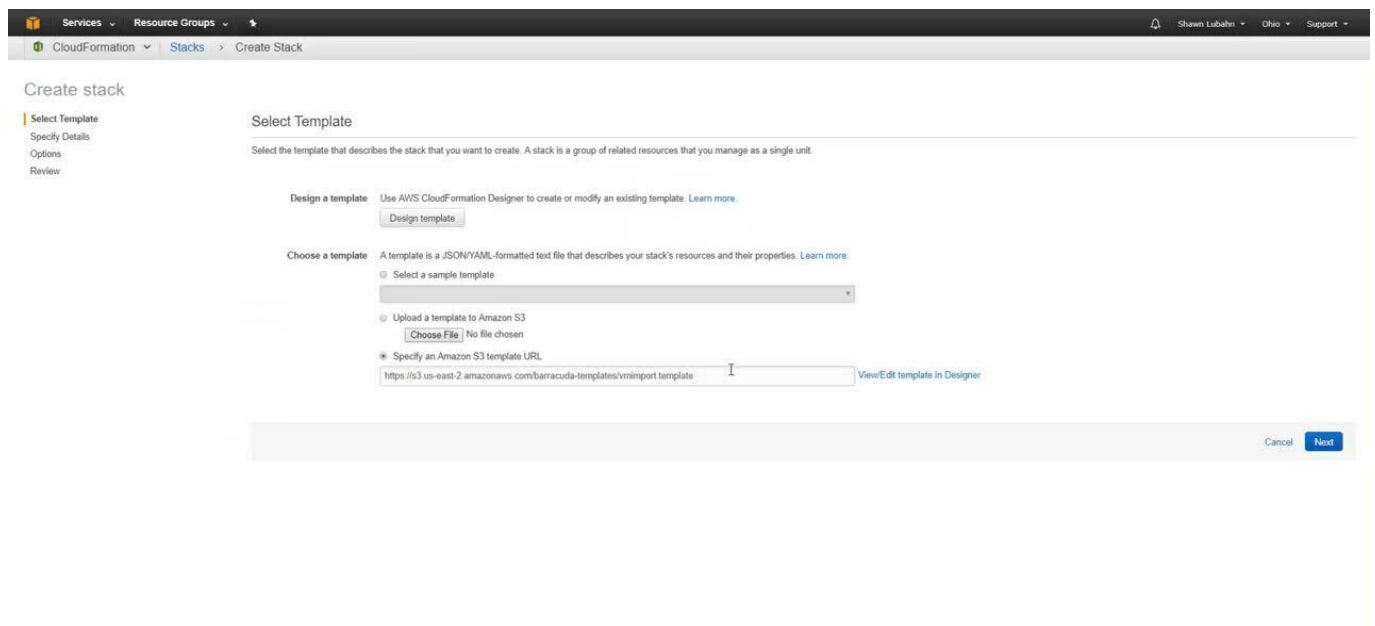


The screenshot shows the AWS CloudFormation console. At the top, there's a navigation bar with 'Services', 'Resource Groups', and a search icon. Below it, the 'CloudFormation' service is selected, and the 'Stacks' tab is active. A blue banner at the top says 'Introducing StackSets' with a link to 'Open the StackSets console to get started.' Below the banner, there are buttons for 'Create Stack', 'Actions', and 'Design template'. A filter bar shows 'Filter: Active' and 'By Stack Name'. A table lists two stacks:

Stack Name	Created Time	Status	Description
barracuda-vmimport-stack	2017-08-01 14:28:17 UTC-0400	CREATE_COMPLETE	DESCRIPTION
cuda-bbs-aws-demo	2017-08-01 08:30:38 UTC-0400	CREATE_COMPLETE	Policy allowing the IAM role used by Barracuda Backup to query information about the permissions gra

Below the table, there are tabs for 'Overview', 'Outputs', 'Resources', 'Events', 'Template', 'Parameters', 'Tags', 'Stack Policy', and 'Change Sets'. The 'Events' tab is currently selected, showing a message 'Select a stack'.

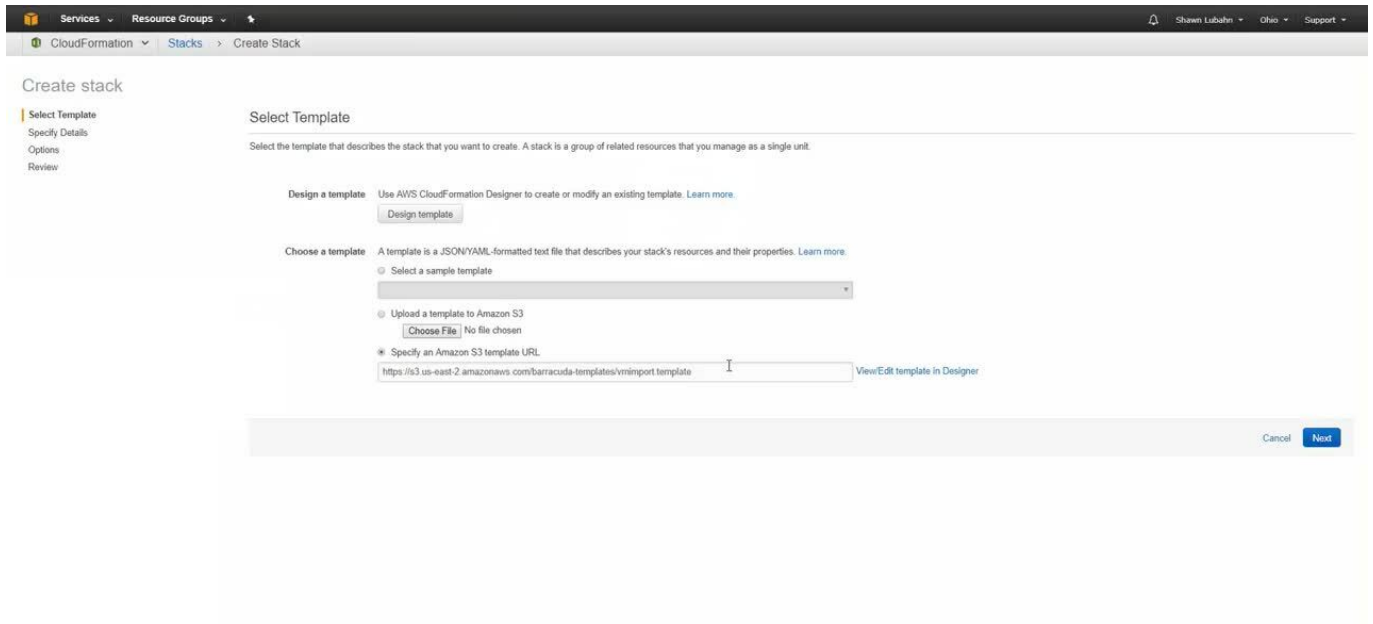
Watch the video demonstration:



The screenshot shows the 'Create stack' wizard in the AWS CloudFormation console. The 'Select Template' step is active. The wizard provides instructions on how to select a template and offers three options:

- Design a template:** Use AWS CloudFormation Designer to create or modify an existing template. [Learn more.](#) [Design template](#)
- Choose a template:** A template is a JSON/YAML-formatted text file that describes your stack's resources and their properties. [Learn more.](#)
 - ☒ **Select a sample template**
 - ☐ **Upload a template to Amazon S3**
[Choose File](#) No file chosen
 - ☒ **Specify an Amazon S3 template URL**
 [View/Edit template in Designer](#)

At the bottom right, there are 'Cancel' and 'Next' buttons.



Videolink:

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Add Amazon Web Services Credentials

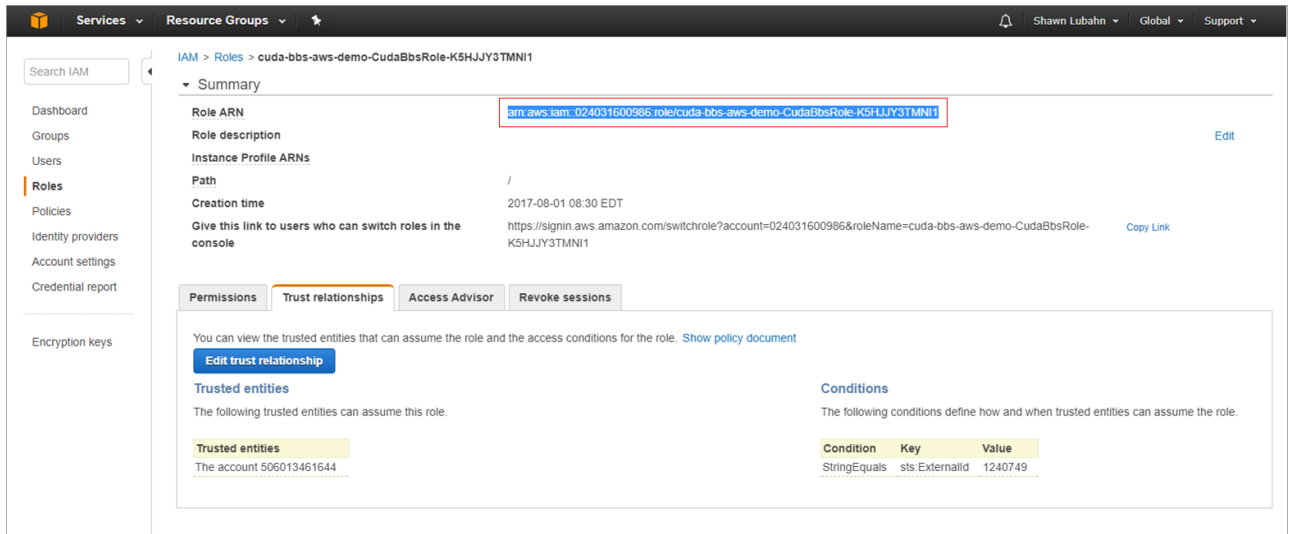
- After creating the two AWS CloudFormation stacks in the sections above, select the newly created IAM role:

Create Stack ▾ Actions ▾ Design template				
Filter: Active ▾ By Stack Name				
Showing 2 stacks				
Stack Name	Created Time	Status	Description	
<input type="checkbox"/> barracuda-vmimport-stack	2017-08-01 14:28:17 UTC-0400	CREATE_COMPLETE	DESCRIPTION	
<input checked="" type="checkbox"/> cuda-bbs-aws-demo	2017-08-01 08:30:38 UTC-0400	CREATE_COMPLETE	Policy allowing the IAM role used by Barracuda Backup to query information about the permissions granted to it.	

- Click the **Resources** tab below the table and click the link in the **Physical ID** field:

Overview Outputs Resources Events Template Parameters Tags Stack Policy Change Sets				
Logical ID	Physical ID	Type	Status	Status Reason
CudaBbsRole	cuda-bbs-aws-demo-CudaBbsRole-K5HUJY3TMNI1	AWS-IAM: Role	CREATE_COMPLETE	
CudaBbsTestCredentialsPolicy	arn:aws:iam::024031600986:policy/cuda-bbs-aws-demo-CudaBbsTestCredentialsPolicy-NNO R6NDD7A2J	AWS-IAM: ManagedPolicy	CREATE_COMPLETE	

- On the **Summary** page, copy the **Role ARN** to your clipboard:



Services ▾ Resource Groups ▾

Search IAM

Dashboard
Groups
Users
Roles
Policies
Identity providers
Account settings
Credential report

Encryption keys

IAM > Roles > cuda-bbs-aws-demo-CudaBbsRole-K5HJY3TMNI1

Summary

Role ARN: **arn:aws:iam::024031600986:role/cuda-bbs-aws-demo-CudaBbsRole-K5HJY3TMNI1** [Edit](#)

Role description

Instance Profile ARNs

Path: /

Creation time: 2017-08-01 08:30 EDT

Give this link to users who can switch roles in the console: <https://signin.aws.amazon.com/switchrole?account=024031600986&roleName=cuda-bbs-aws-demo-CudaBbsRole-K5HJY3TMNI1> [Copy Link](#)

Permissions Trust relationships Access Advisor Revoke sessions

You can view the trusted entities that can assume the role and the access conditions for the role. [Show policy document](#)

[Edit trust relationship](#)

Trusted entities

The following trusted entities can assume this role.

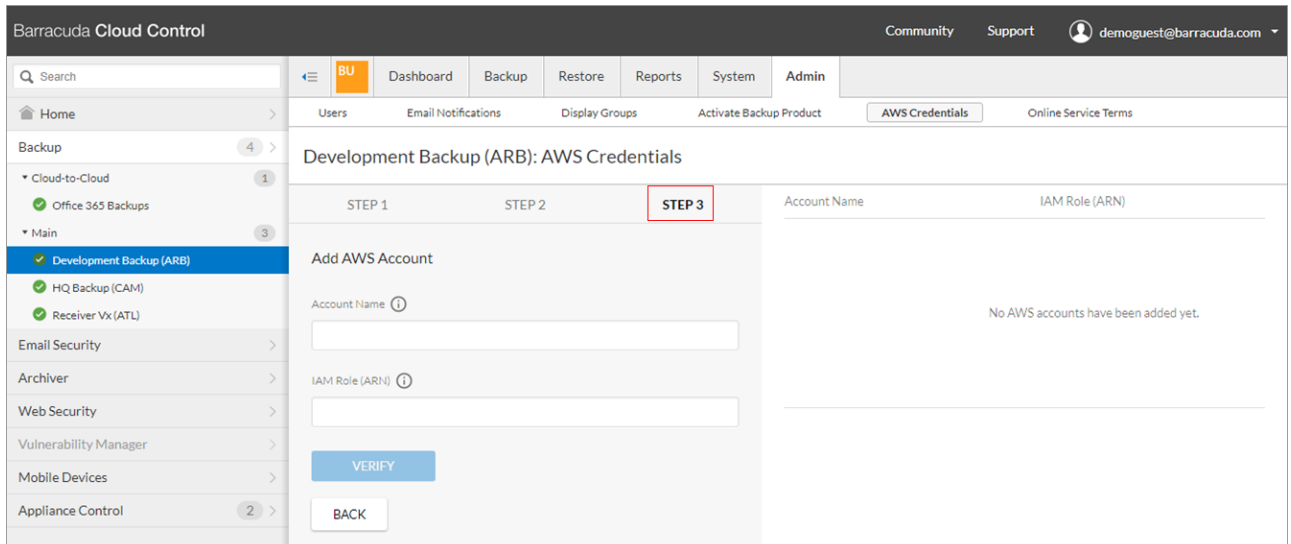
Trusted entities
The account 506013461644

Conditions

The following conditions define how and when trusted entities can assume the role.

Condition	Key	Value
StringEquals	sts:ExternalId	1240749

- Return to the **Admin > AWS Credentials** page in the Barracuda Backup web interface.
- Click **STEP 3** in the **Add AWS Account** wizard:



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Community Support demoguest@barracuda.com ▾

Search

BU Dashboard Backup Restore Reports System Admin

Users Email Notifications Display Groups Activate Backup Product **AWS Credentials** Online Service Terms

Home > Backup > 4 >

Cloud-to-Cloud > 1 >

Office 365 Backups

Main > 3 >

Development Backup (ARB) **✓**

HQ Backup (CAM) **✓**

Receiver Vx (ATL) **✓**

Email Security >

Archiver >

Web Security >

Vulnerability Manager >

Mobile Devices >

Appliance Control > 2 >

Development Backup (ARB): AWS Credentials

STEP 1 STEP 2 **STEP 3**

Add AWS Account

Account Name ⓘ

IAM Role (ARN) ⓘ

VERIFY

BACK

Account Name IAM Role (ARN)

No AWS accounts have been added yet.

- Enter an **Account Name** and paste the **Role ARN** copied earlier into the **IAM Role (ARN)** field.

The **Account Name** can be anything; this name is used in Barracuda Backup to easily identify your AWS IAM Role (ARN).

- Click **Verify**, and click **Add** if the verification was successful:

STEP 1

STEP 2

STEP 3

Add AWS Account

Account Name ⓘ

cuda-aws-test

IAM Role (ARN) ⓘ

arn:aws:iam::024031600986:role/cuda-bbs-aws-demo-CudaBbsRole-67OE

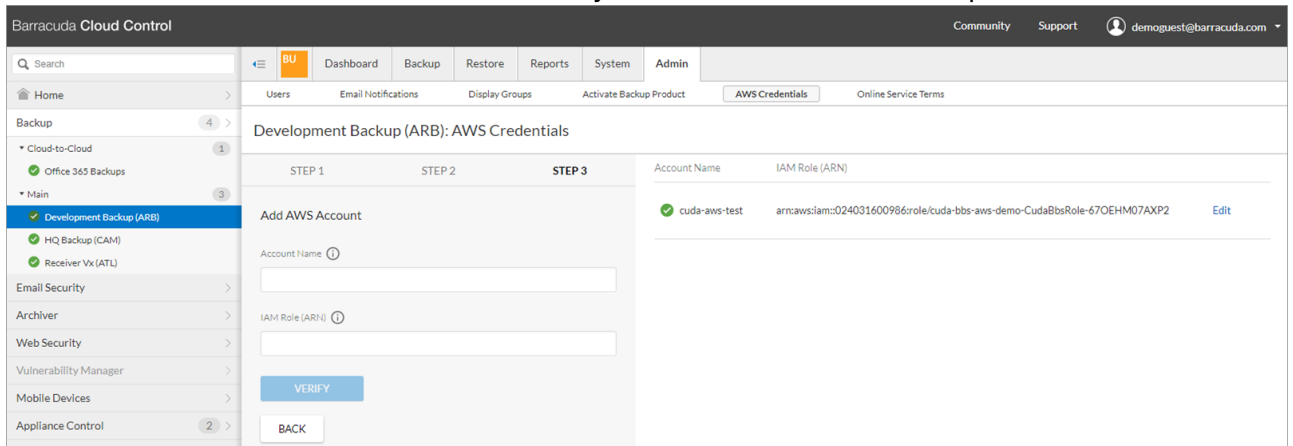
✓ VERIFIED

ADD

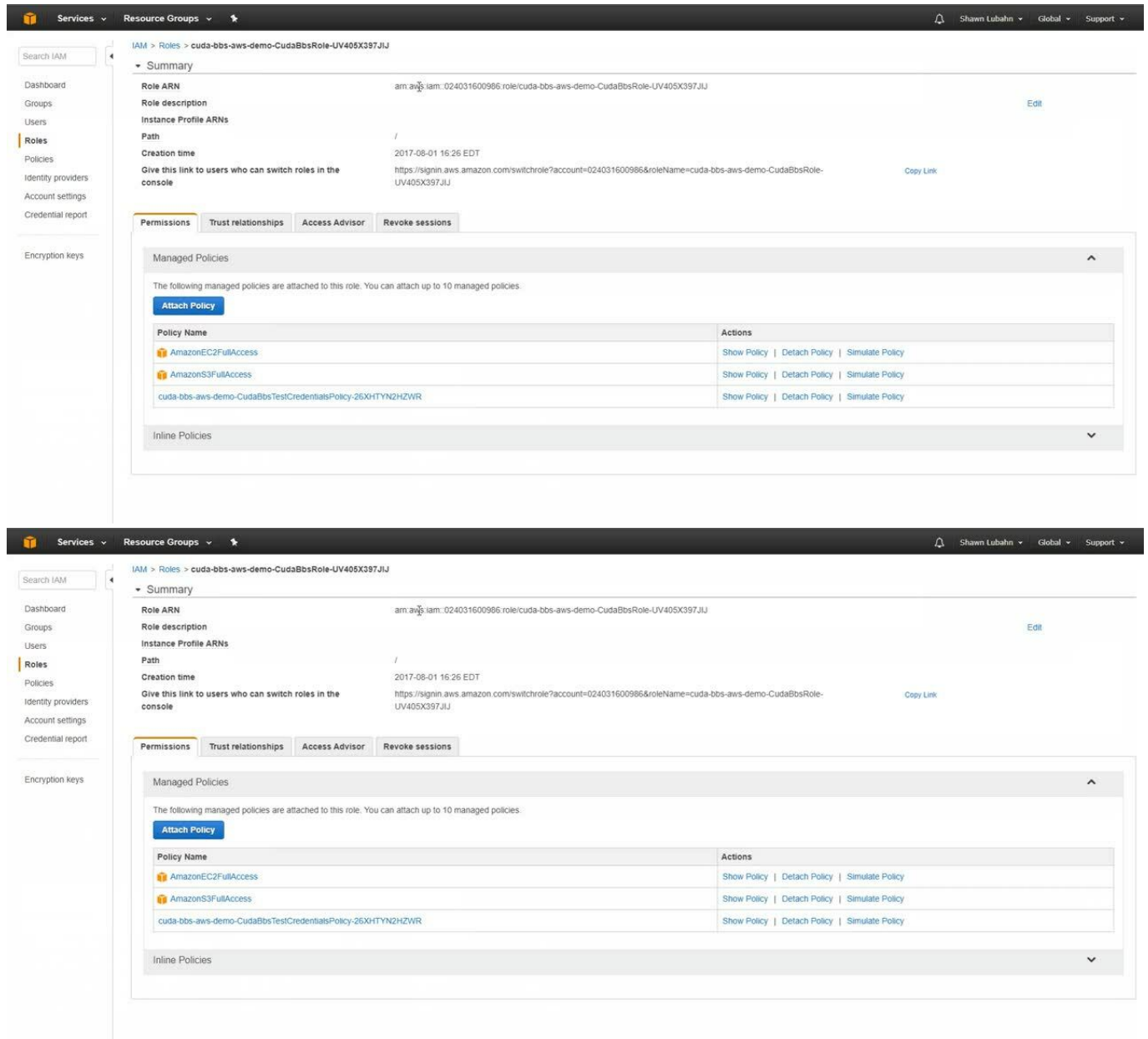
BACK

If verification fails, verify that you pasted the complete Role ARN into the **IAM Role (ARN)** field and that all steps above were completed properly. If verification continues to fail, contact [Barracuda Networks Technical Support](#).

8. The AWS Account should now be successfully added to Barracuda Backup:



Watch the video demonstration:



The screenshots show the AWS IAM console interface. The top screenshot displays the 'Summary' tab for the role 'cuda-bbs-aws-demo-CudaBbsRole-UV405X397JU'. It lists the Role ARN, Role description, Instance Profile ARNs, Path, Creation time, and a link to switch roles. The bottom screenshot displays the 'Permissions' tab for the same role, showing a table of attached managed policies: AmazonEC2FullAccess, AmazonS3FullAccess, and cuda-bbs-aws-demo-CudaBbsTestCredentialsPolicy-26XhTYN2HZWR. Each policy has links for Show Policy, Detach Policy, and Simulate Policy.

Videolink:

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Configure Amazon Web Services as an Offsite Replication Destination

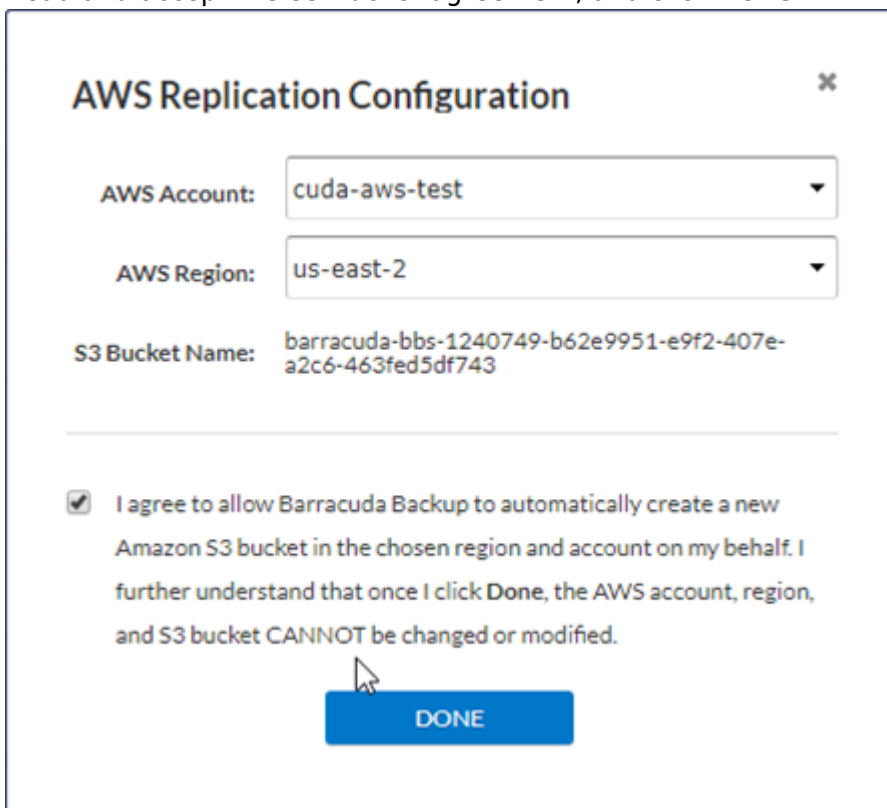
You must complete the steps in the *Prepare Amazon Web Services* section before you can replicate data to AWS.

Use the following steps to set up replication to AWS:

1. Log in to your Barracuda Backup appliance, and go to the **Backup > Replication** page.
2. Scroll down to **AWS (Amazon Web Services)**, and click **Configure now**.

Configure US East (Ohio) for North American customers and EU West (Ireland) for customers in EMEA.

3. The AWS Replication dialog displays. Select your preconfigured **AWS Account** and the **AWS Region** where you want your replicated data to be stored.
4. Read and accept the S3 Bucket agreement, and click **Done**:



The image shows a screenshot of the 'AWS Replication Configuration' dialog box. It has a title bar with a close button (X). Inside, there are three dropdown menus: 'AWS Account' with the value 'cuda-aws-test', 'AWS Region' with the value 'us-east-2', and 'S3 Bucket Name' with the value 'barracuda-bbs-1240749-b62e9951-e9f2-407e-a2c6-463fed5df743'. Below these is a checkbox that is checked, followed by a paragraph of text: 'I agree to allow Barracuda Backup to automatically create a new Amazon S3 bucket in the chosen region and account on my behalf. I further understand that once I click Done, the AWS account, region, and S3 bucket CANNOT be changed or modified.' At the bottom is a blue button labeled 'DONE' with a mouse cursor hovering over it.

5. The AWS replication target should now be configured:

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Home

Backup4

Cloud-to-Cloud1

Office 365 Backups

Main3

Development Backup (ARB)

HQ Backup (CAM)

Receiver Vx (ATL)

Email Security

Archiver

Web Security

Vulnerability Manager



Mobile Devices

Appliance Control2

Development Backup (ARB): ReplicationDevice Info

ADD A TARGET

Sending Data To

Target List	Status	Total Stored	Queue Age	Queue Size	Settings
<div><div><div>HQ Backup (CAM) / Barracuda Backup Appliance Vx</div><div>Destination IP Address: 10.143.240.12</div><div>Bandwidth Rate Limit: Default Full Speed, Alternate 25% - 192 Mb/s</div><div>8:00am - 5:00pm Weekdays</div></div></div>	✓	51.9 GB	-	0 bytes	⚙
<div><div><div>AWS (Amazon Web Services)</div><div>AWS Account: cuda-aws-test, Region: us-east-2</div><div>S3 Bucket Name: barracuda-bbs-1240749-b62e9951-e9f2-407e-a2c6-463fed5df743</div><div>Bandwidth Rate Limit: Default Full Speed, Alternate 30% - 165 Mb/s</div><div>8:00am - 5:00pm Weekdays</div></div></div>	✓	51.9 GB	-	0 bytes	⚙

Receiving Data From

Source List	Status	Total Stored	Queue Age	Queue Size
There are no Barracuda Backup devices sending data to this device.				

Figures

1. MultipleVideo.png
2. AWSSetup.png
3. AWSWizard_download.png
6. SelectTemplate.png
7. StatusCreateComplete.png
10. SpecifyAmazonS3.png
11. CreateVMimport.png
12. Create_Complete.png
15. AddAWSCredentials01.png
16. PhysicalID.png
17. CopyRoleARN.png
18. ClickStep3.png
19. Verification.png
20. AWSBBS.png
23. S3BucketAgree.png
24. EditBandwidth.png

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