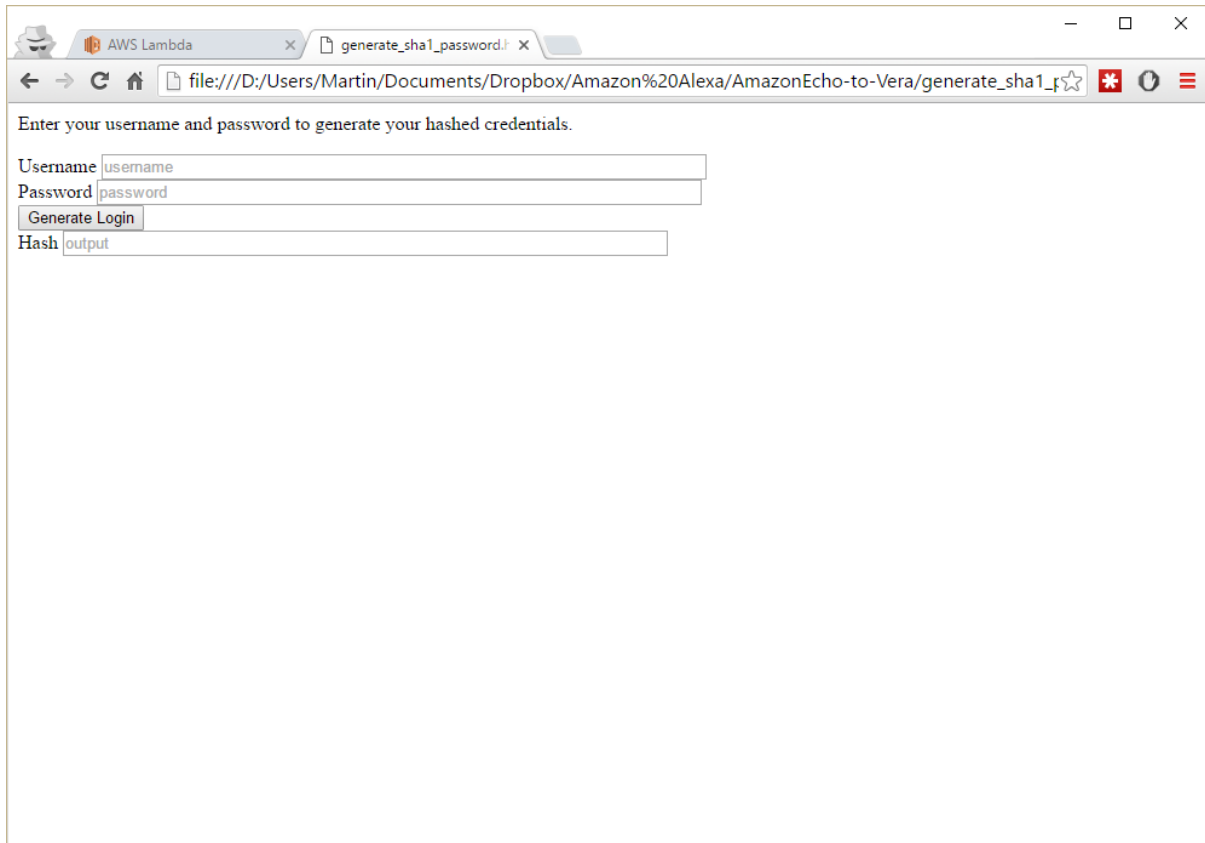


Vera Credentials

First of all you need to get your vera remote access credentials. Download

[https://raw.githubusercontent.com/mmillmor/AmazonEcho-to-](https://raw.githubusercontent.com/mmillmor/AmazonEcho-to-Vera/master/generate_sha1_password.html)

[Vera/master/generate_sha1_password.html](https://raw.githubusercontent.com/mmillmor/AmazonEcho-to-Vera/master/generate_sha1_password.html) to your computer and open it with a web browser



The screenshot shows a web browser window with a single tab titled 'generate_sha1_password.html'. The address bar shows the file path: 'file:///D:/Users/Martin/Documents/Dropbox/Amazon%20Alexa/AmazonEcho-to-Vera/generate_sha1_password.html'. The page content includes a heading 'Enter your username and password to generate your hashed credentials.' followed by a form with four fields: 'Username' (containing 'username'), 'Password' (containing 'password'), 'Generate Login' (a button), and 'Hash' (containing 'output').

Enter your username and password, and press Generate Login. That will calculate your hashed credentials, which you will need later on. These are the same credentials that you would use at home.getvera.com

Set up the remote code

1) Sign up for a free AWS account at

https://portal.aws.amazon.com/gp/aws/developer/registration/index.html?nc2=h_ct



Sign In or Create an AWS Account

What is your e-mail or mobile number?

E-mail or mobile number:

- ☒ I am a new user.
- ☐ I am a returning user and my password is:

Sign in using our secure server

[Forgot your password?](#)

New AWS Accounts Include:

12 months of access to the AWS Free Tier

Amazon EC2: 750 hrs/month of Windows and Linux t2.micro instance usage
Amazon S3: 5GBs of Storage
Amazon RDS: 750 hrs/month of Micro DB Instance usage
Amazon DynamoDB: 25 GB of storage, up to 200 million requests/month

AWS Basic Support Features

Customer Service: 24x7x365
Support Forums
Documentation, White Papers, and Best Practice Guides

Visit aws.amazon.com/free for full offer terms.

Learn more about [AWS Identity and Access Management](#) and [AWS Multi-Factor Authentication](#), features that provide additional security for your AWS Account. View full [AWS Free Usage Tier](#) offer terms.



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.

Enter your name, email and password

Contact Information

☐ Company Account ☒ Personal Account

* Required Fields

Full Name*

Country*

Address*


Apartment, suite, unit, building, floor, etc.

City*

State / Province or Region*

Postal Code*

Phone Number*

Security Check 

Enter contact details

Contact Information

Payment Information

Identity Verification

Support Plan

Confirmation

Payment Information

Please enter your payment information below. You will be able to try a broad set of AWS products for free via the Free Usage Tier. We will only bill your credit or debit card for usage that is not covered by our Free Usage Tier.

AWS Free Usage Tier	Compute Amazon EC2	Storage Amazon S3	Database Amazon RDS
free for 1 year	750hrs/month*	5GB	750hrs/month*

[*View full offer details »](#)

Credit/Debit Card Number

Expiration Date

01 ▼ 2016 ▼

Cardholder's Name

Enter a credit card number. Note, you will never be billed for the usage describe here - the Lambda service is free under 1 million hits a month (<https://aws.amazon.com/lambda/pricing/>)



English [Sign Out](#)

Amazon Web Services Sign Up

Contact Information

Payment Information

Identity Verification

Support Plan

Confirmation

Identity Verification

You will be called immediately by an automated system and prompted to enter the PIN number provided.

1. Provide a telephone number

Please enter your information below and click the "Call Me Now" button.

Country Code

United Kingdom (+44)

Phone Number

Ext

Call Me Now

Amazon will verify your identity



English [Sign Out](#)

Amazon Web Services Sign Up

Contact Information

Payment Information

Identity Verification

Support Plan

Confirmation

Support Plan

All customers receive free support. Choosing a paid support plan will allow you to receive one-on-one technical assistance from experienced engineers and access many other support features. Please see below.

Please Select One

☒ **Basic (Free)**

Contact Customer Service for account and billing questions, receive help for resources that don't pass system health checks, and access the AWS Community Forums.

☐ **Developer (\$49/month)**

Get started on AWS - ask technical questions and get a response to your web case within 12 hours during local business hours.

☐ **Business (Starting at \$100/month - Pricing Example) - Recommended**

24/7/365 real-time assistance by phone and chat, a 1 hour response to web cases, and help with 3rd party software. Access AWS Trusted Advisor to increase performance, fault tolerance, security, and potentially save money.

Pick the free support plan

Menu



Products

More ▾

English ▾

My Account ▾

Complete Sign Up

Welcome to Amazon Web Services

Thank you for creating an Amazon Web Services (AWS) Account. We are in the process of activating your account. For most customers, activation only takes a couple minutes, but it can sometimes take a few hours if additional account verification is required. We will notify you by email when your account is activated.

Sign In to the Console

Contact Sales

Get Started Quickly



Launch a Linux Virtual Machine



Backup Files



Launch a WordPress Website



Deploy Web Apps

And that's your account created. Sign in with the account you just created



Sign In or Create an AWS Account

What is your e-mail or mobile number?

E-mail or mobile number:

☐ I am a new user.

☒ I am a returning user and my password is:

Sign in using our secure server

[Forgot your password?](#)

Amazon

Aurora

Enterprise-class database at 1/10th the cost.



"10 times faster than our MySQL environment. It just works!"
-Alfresco

Learn more

Learn more about [AWS Identity and Access Management](#) and [AWS Multi-Factor Authentication](#), features that provide additional security for your AWS Account. View full [AWS Free Usage Tier](#) offer terms.

Amazon Web Services

Compute

- EC2: Virtual Servers in the Cloud
- EC2 Container Service: Run and Manage Docker Containers
- Elastic Beanstalk: Run and Manage Web Apps
- Lambda: Run Code in Response to Events

Storage & Content Delivery

- S3: Scalable Storage in the Cloud
- CloudFront: Global Content Delivery Network
- Elastic File System **PREVIEW**: Fully Managed File System for EC2
- Glacier: Archive Storage in the Cloud
- Import/Export Snowball: Large Scale Data Transport
- Storage Gateway: Hybrid Storage Integration

Database

- RDS: Managed Relational Database Service
- DynamoDB

Developer Tools

- CodeCommit: Store Code in Private Git Repositories
- CodeDeploy: Automate Code Deployments
- CodePipeline: Release Software using Continuous Delivery

Management Tools

- CloudWatch: Monitor Resources and Applications
- CloudFormation: Create and Manage Resources with Templates
- CloudTrail: Track User Activity and API Usage
- Config: Track Resource Inventory and Changes
- OpsWorks: Automate Operations with Chef
- Service Catalog: Create and Use Standardized Products
- Trusted Advisor: Optimize Performance and Security

Security & Identity

Internet of Things

- AWS IoT: Connect Devices to the Cloud

Mobile Services

- Mobile Hub **BETA**: Build, Test, and Monitor Mobile apps
- Cognito: User Identity and App Data Synchronization
- Device Farm: Test Android, FireOS, and iOS Apps on Real Devices in the Cloud
- Mobile Analytics: Collect, View and Export App Analytics
- SNS: Push Notification Service

Application Services

- API Gateway: Build, Deploy and Manage APIs
- AppStream: Low Latency Application Streaming
- CloudSearch: Managed Search Service
- Elastic Transcoder: Easy-to-Use Scalable Media Transcoding
- SES

Resource Groups [Learn more](#)

A resource group is a collection of resources that share one or more tags. Create a group for each project, application, or environment in your account.

[Create a Group](#) [Tag Editor](#)

Additional Resources

- [Getting Started](#): Read our documentation or view our training to learn more about AWS.
- [AWS Console Mobile App](#): View your resources on the go with our AWS Console mobile app, available from Amazon Appstore, Google Play, or iTunes.
- [AWS Marketplace](#): Find and buy software, launch with 1-Click and pay by the hour.
- [AWS re:Invent Announcements](#): Explore the next generation of AWS cloud capabilities. [See what's new](#)

You will be taken to the AWS dashboard. Click on Lambda

AWS Lambda

AWS Lambda is a compute service that runs developers' code in response to events and automatically manages the compute resources for them, making it easy to build applications that respond quickly to new information.

[Get Started Now](#)

[Learn more about AWS Lambda](#)

S3, Dynamo, Kinesis, SNS, CloudTrail, Mobile, S3, SQS, CloudWatch, SES, SQS

Region must be us-east-1. Click on the region link between your name and "Support" in the top right to change region to us-east-1 (N. Virginia) then press Get Started Now

AWS

Services

Edit

Martin

N. Virginia

Support

Lambda > New function

Step 1: Select blueprint

Select blueprint

Blueprints are sample configurations of event sources and Lambda functions. Choose a blueprint that best aligns with your desired scenario and customize as needed, or skip this step if you want to author a Lambda function and configure an event source separately. Except where otherwise noted, blueprints are licensed under [CC0](#).

Filter

All languages

<< < Viewing 1-9 of 35 > >>

s3-get-object-python

An Amazon S3 trigger that retrieves metadata for the object that has been updated.

python2.7 · s3

config-rule-change-triggered

An AWS Config rule that is triggered by configuration changes to EC2 instances. Checks instance types.

nodejs · config

dynamodb-process-stream

An Amazon DynamoDB trigger that logs the updates made to a table.

nodejs · dynamodb

microservice-http-endpoint

A simple backend (read/write to DynamoDB) with a RESTful API endpoint using Amazon API Gateway.

node-exec

Demonstrates running an external process using the Node.js child_process module.

slack-echo-command-python

A function that handles a Slack slash command and echoes the details back to the user.

Enter "alexa-connected-home-driver" in the filter box, and click on that box

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Lambda > New function

Step 1: Select blueprint

Select blueprint

Blueprints are sample configurations of event sources and Lambda functions. Choose a blueprint that best aligns with your desired scenario and customize as needed, or skip this step if you want to author a Lambda function and configure an event source separately. Except where otherwise noted, blueprints are licensed under [CC0](#).

alexa-connected-home-driver

All languages

<< < Viewing 1-1 of 1 > >>

alexa-connected-home-driver

Demonstrates the control of supported Alexa Connected Home products

nodejs · iot · connected-home · alexa · light

Cancel

Skip

Feedback

English

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Lambda > New function using blueprint alexa-connected-home-driver

Step 1: Select blueprint
Step 2: Configure event sources
 Step 3: Configure function
 Step 4: Review

Configure event sources

Choose the appropriate event source for your Lambda function.

Event source type: ⓘ

Choosing **Submit** will create a resource policy that allows the Amazon Alexa service to call your Lambda function. To configure the Alexa service to work with your Lambda function, go to the [Alexa Developer](#) portal. [Learn more](#) about the Lambda permission model.

[Cancel](#) [Previous](#) [Skip](#) [Next](#)

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Leave the event source as Alexa Connected Home, and press Next

Lambda > New function using blueprint alexa-connected-home-driver

Step 1: Select blueprint
 Step 2: Configure event sources
Step 3: Configure function
 Step 4: Review

Configure function

A Lambda function consists of the custom code you want to execute. [Learn more](#) about Lambda functions.

Name*

Description

Runtime*

Lambda function code

Provide the code for your function. Use the editor if your code does not require custom libraries (other than the aws-sdk). If you need custom libraries, you can upload your code and libraries as a .ZIP file. [Learn more](#) about deploying Lambda functions.

Code entry type ☒ Edit code inline ☐ Upload a .ZIP file ☐ Upload a .ZIP from Amazon S3

1 / **

Enter any name and description for your code. Leave the runtime as Node.js. Scroll down to the code entry. Copy and paste the entire contents of https://raw.githubusercontent.com/mmillmor/AmazonEcho-to-Vera/master/lambda/alexa_lambda_amazon_oauth.js in there.

Scroll down and replace the text {enter your username} with your vera username, and the text {enter your encoded password} with the hashed vera password from the first step.

Scroll down to the bottom of the page. For Role, pick Basic Execution Role* and it will open a new window to create a role;

AWS Lambda requires access to your resources

AWS Lambda uses an IAM role that grants your custom code permissions to access AWS resources it needs.

▼ Hide Details

Role Summary ?

Role Lambda execution role permissions

Description

IAM Role Create a new IAM Role ▼

Role Name lambda_basic_execution

► View Policy Document

Don't Allow Allow

name the role lambda_basic_execution, and click Allow. This will go back to the previous page with the role populated. Leave everything else at the default values.

```
26     case 'Discovery':
27         handleDiscovery(event, context);
28         break;
29
30     case 'Control':
31         handleControl(event, context);
32         break;
33
```

Your inline editor code size is too large. Maximum size is 20.0 kB.

Lambda function handler and role

Handler* index.handler ⓘ

Role* lambda_basic_execution ⓘ

Ensure that popups are enabled to create a new role. [Learn more](#) about Lambda execution roles.

Advanced settings

These settings allow you to control the code execution performance and costs for your Lambda function. Changing your resource settings (by selecting memory) or changing the timeout may impact your function cost. [Learn more](#) about how Lambda pricing works.

Memory (MB)* 512 ⓘ

Timeout* 0 min 10 sec

* These fields are required.

Cancel Previous Next

If it complains about the file being too big, remove the copyright text at the top of the page (everything between `/**` and `*/`)

Click Next

The screenshot shows the AWS Lambda console interface during the 'Review' step of creating a new function. The breadcrumb trail is 'Lambda > New function using blueprint alexa-connected-home-driver'. The left sidebar lists four steps: 'Step 1: Select blueprint', 'Step 2: Configure event sources', 'Step 3: Configure function', and 'Step 4: Review', with 'Step 4: Review' being the active step. The main content area is titled 'Review' and contains a message: 'Please review your Lambda function details. You can go back to edit changes for each section. When you are ready, click **Create function** to complete the setup process.' Below this message are two sections: 'Event sources' and 'Lambda function'. The 'Event sources' section shows 'Alexa Connected' as the selected event source, with 'Home' listed below it. The 'Lambda function' section shows the 'Name' as 'myVeraIntegration', the 'Description' as 'Integrates the Echo to my Vera', and the 'Runtime' as 'NodeJS'. Both sections have an 'Edit' button to the right.

Scroll down and click Create Function.

Click the Code tab, then the Test button, and paste the following in to the text box;

```
{
  "header": {
    "namespace": "Discovery",
    "name": "DiscoverAppliancesRequest",
    "payloadVersion": "1"
  },
  "payload": {
    "accessToken": "dummy"
  }
}
```

Scroll down, and you should see a list of your devices;

```
198 }
199 }
200
201 /**
202  * Control events are processed here.
203  * This is called when Alexa requests an action (IE turn off appliance).
204  */
205 function handleControl(event, context) {
206
```

✓ Execution result: succeeded (logs)

The area below shows the result returned by your function execution using the context methods. [Learn more](#) about returning results from your function.

```
{
  "header": {
    "namespace": "Discovery",
    "name": "DiscoverAppliancesResponse",
    "payloadVersion": "1"
  },
  "payload": {
    "discoveredAppliances": [
      {
        "manufacturerName": "vera",
        "modelName": "vera scene",
        "version": "1",

```

Summary

At the top of the page you will see the text "ARN - " followed by a string like `arn:aws:lambda:us-east-1:XXX`. You will need that string later.

AWS Services Edit Martin N. Virginia Support

Lambda > Functions > myVeralIntegration ARN - arn:aws:lambda:us-east-1:73322796138:function:myVeralIntegration

Test Actions

Code Configuration Event sources API endpoints Monitoring

Code entry type ☒ Edit code inline ☐ Upload a .ZIP file ☐ Upload a .ZIP from Amazon S3

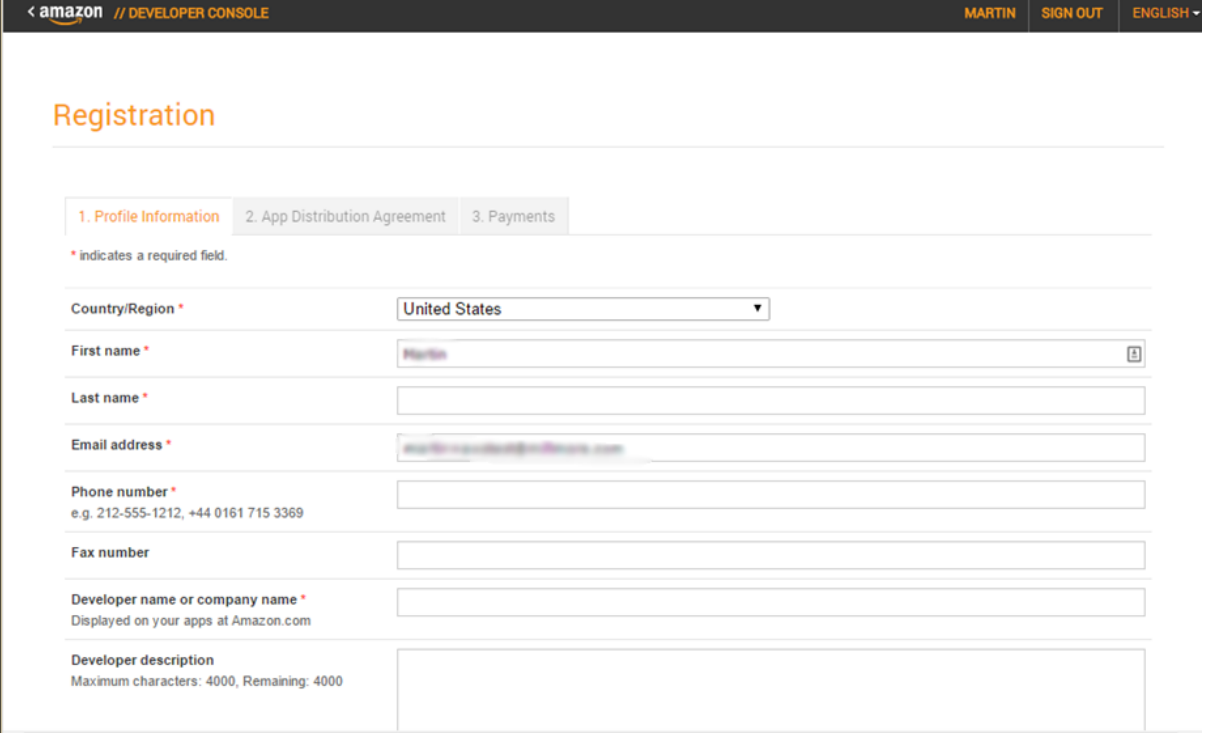
```
177 context.succeed(result),
178
179 });
180 });
181 } else {
182
183     var payload = {
184       exception: {
185         code: 'INVALID_ACCESS_TOKEN',
186         description: 'Could not find user'
187       }
188     };
189
190     var result = {
191       header: headers,
192       payload: payload
193     };
194     context.fail(result);
195   }
196 // }); // getLoginDetails
197
198
```

Well done - you are almost done!

Setting up OAuth2

Amazon expect everyone to use OAuth2 for login, but the Vera doesn't (which is why we hard coded the username and password). We still need an OAuth2 server though or the Echo won't do anything. Fortunately Amazon provide a simple one we can use.

Go to <https://developer.amazon.com/lwa/sp/overview.html>. You will get a page to register as a developer (free)



The screenshot shows the Amazon Developer Console Registration page. The top navigation bar includes the Amazon logo, the text "< amazon // DEVELOPER CONSOLE", and user options: "MARTIN", "SIGN OUT", and "ENGLISH". The main heading is "Registration". Below it are three tabs: "1. Profile Information" (active), "2. App Distribution Agreement", and "3. Payments". A note states "* indicates a required field." The form fields are as follows:

Country/Region *	United States ▼
First name *	Martin
Last name *	
Email address *	martin.martin@amazon.com
Phone number *	
e.g. 212-555-1212, +44 0161 715 3369	
Fax number	
Developer name or company name *	
Displayed on your apps at Amazon.com	
Developer description	
Maximum characters: 4000, Remaining: 4000	

Fill out your details, then press Save and Continue. Accept the license agreement on the next page.

< amazon // DEVELOPER CONSOLE
MARTIN — MILLIESOFT TEST
SIGN OUT
ENGLISH

Registration

1. Profile Information

2. App Distribution Agreement

3. Payments

* indicates a required field.

Do you plan to monetize apps by charging for apps or selling in-app items? *

☒ No
☐ Yes

Do you plan to monetize apps by displaying ads from the Amazon Mobile Ad Network or Mobile Associates? *

☒ No
☐ Yes

Note: You may still monetize later if you select "No" by entering payment and tax information from the Settings menu.

Cancel
Save and Continue

You aren't planning on releasing any apps, so select No to both questions, then press Save and Continue.

< amazon // DEVELOPER CONSOLE
MARTIN — MILLIESOFT TEST
SIGN OUT
ENGLISH

DASHBOARD
APPS & SERVICES
REPORTING
SUPPORT
DOCUMENTATION
SETTINGS

Developer Communications

Announcements
Notifications

Go Paperless for Year-end Tax For...	Dec 11, 2015
Amazon Appstore Introduces New...	Nov 3, 2015
Amazon replaces Free App of the ...	Aug 26, 2015
Manifest Filtering for Fire Devices	Aug 20, 2015
Amazon Announces New Develop...	Jun 25, 2015
Facebook Deprecates API v1.0 on...	Apr 24, 2015

Introducing
underground
apps & games

Does my app qualify?
How do I get started?
How much can I earn?

Learn More

Dashboard

App Sales (Units) | In-App Item Sales (Units) | Mobile Ad Earnings

Nothing Found

Click on Apps & Services

< amazon

// DEVELOPER CONSOLE

MARTIN — MILLIESOFT TEST

SIGN OUT

ENGLISH ▾

DASHBOARD

APPS & SERVICES

REPORTING

SUPPORT

DOCUMENTATION

SETTINGS

My Apps

App Testing Service

Promotions

Security Profiles

Login with Amazon

Cloud Drive

Alexa ^{New}

GameCircle

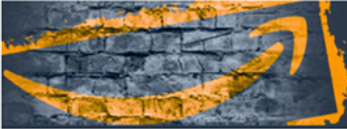
A/B Testing

Analytics

PC & Mac Instant Access

Tester Management

Mobile Ads



Introducing

underground

apps & games

Get Paid for Every Customer.

Every Minute.

Does m

How do

How m

Learn h

0 apps under this account

Nothing Found

Add a New App ▾

Click on Login with Amazon

< amazon

// DEVELOPER CONSOLE

MARTIN — MILLIESOFT TEST

SIGN OUT

ENGLISH ▾

DASHBOARD

APPS & SERVICES

REPORTING

SUPPORT

DOCUMENTATION

SETTINGS

My Apps

App Testing Service

Promotions

Security Profiles

Login with Amazon

Cloud Drive

Alexa ^{New}

GameCircle

A/B Testing

Analytics

PC & Mac Instant Access

Tester Management

Mobile Ads


Login with Amazon

You haven't set up Login with Amazon yet. Start now.

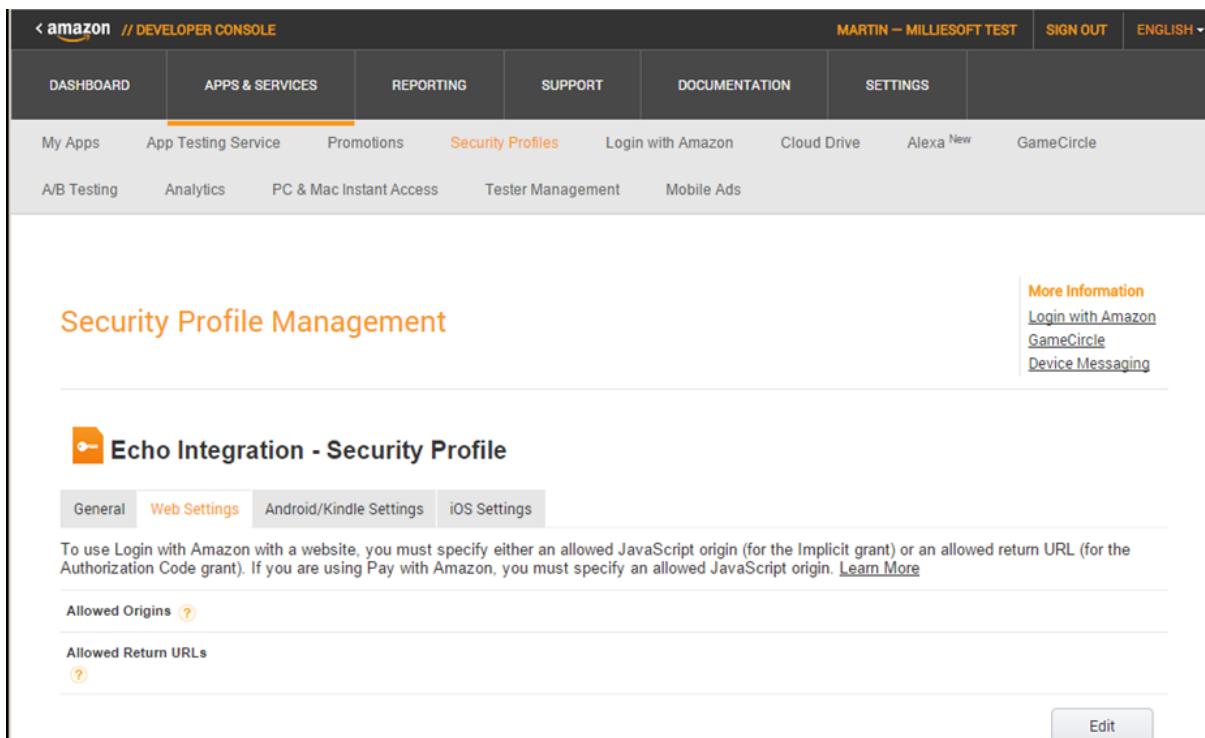
Login with Amazon allows users to login to third party websites or apps ("clients") using their Amazon username and password. Clients may ask the user to share some personal information from their Amazon profile, including name, email address, and zip code.

Login with Amazon features are linked to the Security Profile you create for your websites and apps. To get started, click **Create a New Security Profile**.

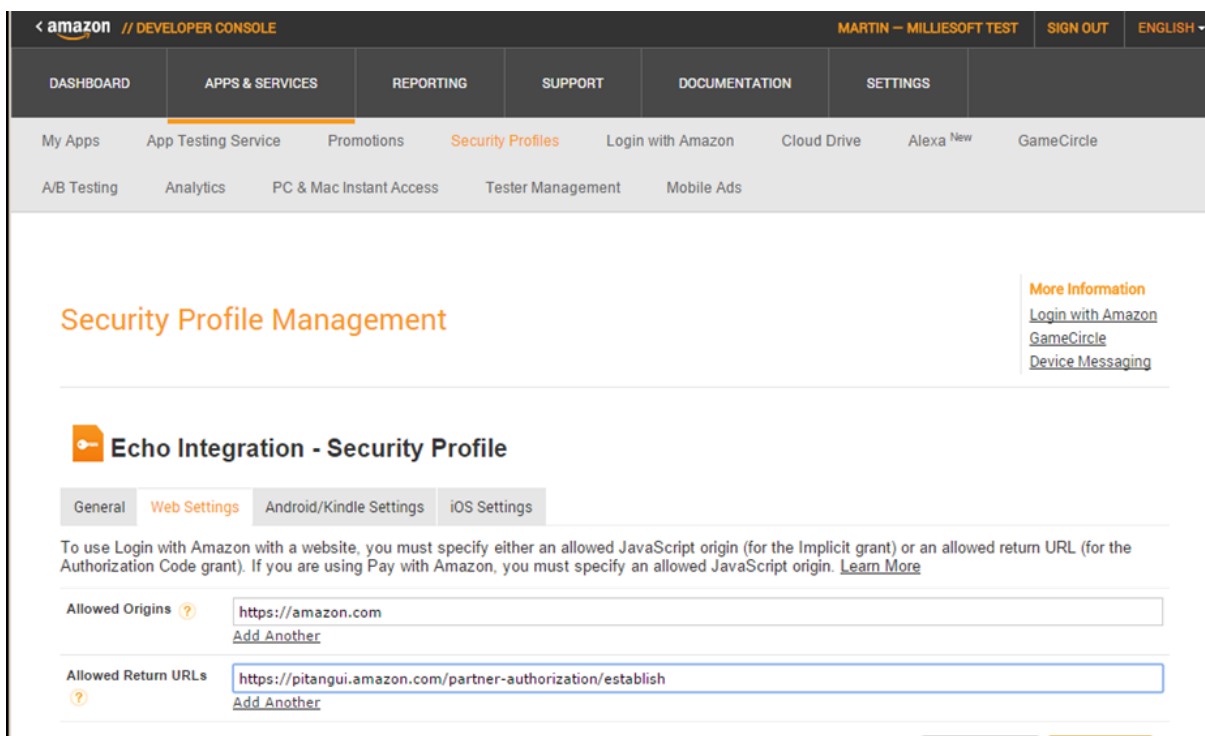
Create a New Security Profile



Click Create a New Security Profile



Click Edit



Set Allowed Origins to <https://amazon.com> and Allowed Return URLs to <https://pitangui.amazon.com/partner-authorization/establish>

Click Save.

Click on General

My Apps
App Testing Service
Promotions
Security Profiles
Login with Amazon
Cloud Drive
Alexa New
GameCircle
A/B Testing
Analytics
PC & Mac Instant Access
Tester Management
Mobile Ads

Security Profile Management

[More Information](#)
[Login with Amazon](#)
[GameCircle](#)
[Device Messaging](#)

Echo Integration - Security Profile

General
Web Settings
Android/Kindle Settings
iOS Settings

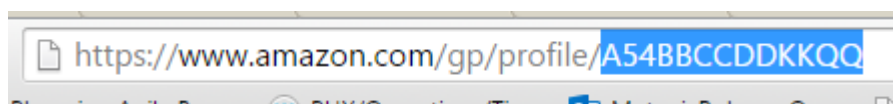
These settings apply to all the apps using this security profile. Your security profile credentials — Client ID and Client Secret — allow your app to securely identify itself to Amazon services. [Learn More](#)

Security Profile Name	Echo Integration
Security Profile Description	Login for Vera Echo Integration
Security Profile ID	amzn1.application- ... 3ba2
Client ID	amzn1.application-oa2-client.795 ... 3c11b71
Client Secret	a4e ... 3cdf1
Consent Privacy Notice URL ?	https://raw.githubusercontent.com/mmillmor/AmazonEcho-to-Vera/master/examples/privacy_policy.html
Consent Logo Image ?	

In there you will see your Client ID and Client Secret. You will need those later

Amazon Account Details

Go to <https://amazon.com/profile> while logged in with the account that your Echo is connected to. The URL will change to have your customer ID in the URL. You will need that later



Contact Amazon

The final step is to contact Amazon with your information so that they can wire it all together. Send an e-mail to alexa-coho-submissions@amazon.com with the following details

<i>Skill adapter display name</i>	The name for your integration, e.g. "Martin's Vera System"
<i>Skill adapter description</i>	A description, e.g. "Integration with my Vera"
<i>AWS Lambda function name</i>	This is the ARN string from the end of the coding step
<i>OAuth Client ID</i>	This is the Client ID from the Login step.
<i>OAuth Client Secret</i>	This is the Client Secret from the Login step
<i>OAuth Scope</i>	This is just the string "profile:user_id"
<i>OAuth authorization URL</i>	This is https://www.amazon.com/ap/oa

<i>OAuth token URL</i>	This is https://api.amazon.com/auth/o2/token
<i>Amazon Customer ID</i>	This is the customer ID from the last step above

Amazon will respond with confirmation that it has all been set up, and then you can run discover and control devices on your Echo.