

Create your own „Alexa Domoticz Smart Home Skill“

Prerequisites:

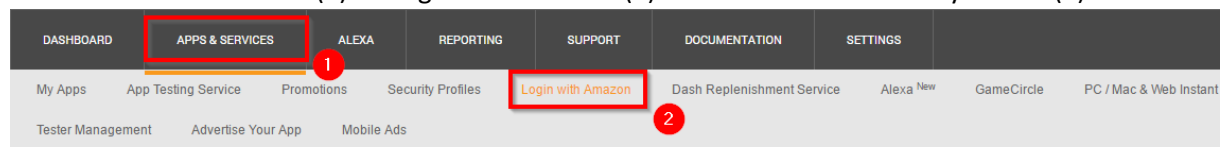
- Register Account: <https://developer.amazon.com>
- Register Account: <https://console.aws.amazon.com>
- External connect from the internet to domoticz (port forwarding, dns name)

Create oauth2 authorization provider:

Alexa smart home skill requires an OAuth2 authorization.

1.1 Sign in: <https://developer.amazon.com>

1.2 Click to APPS & SERVICES (1) → Login with Amazon (2) → Create a New Security Profile (3)



Login with Amazon

Login with Amazon allows users to login to registered third party websites or apps ('clients') using their Amazon user name and password. Clients may ask the user to share some personal information from their Amazon profile, including name, email address, and zip code. To get started, select an existing Security Profile or create a new Security Profile. [Learn More](#)



1.3 Type in any Security Profile Name, Description and Privacy URL, (Optional Logo Image)
Click to Save

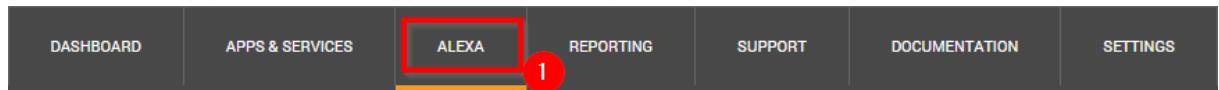
1.4 Click to “Show Client ID and Client Secret” and save Client ID and Client Secret to notepad

1.5 Do not close this page, one last step is needed at the end

Create alexa skill:

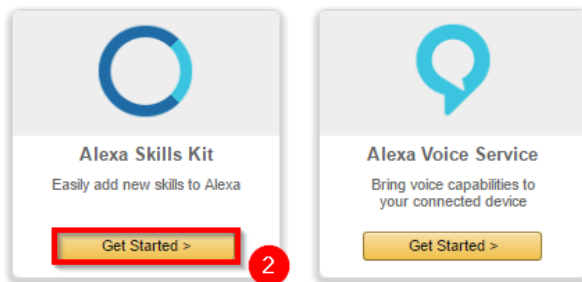
2.1 Sign in: <https://developer.amazon.com>

2.2 Click to ALEXA (1) → Get Started (2, Alexa Skills Kit)

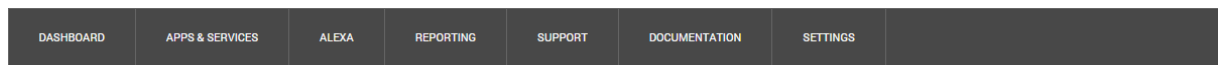


Get started with Alexa

Add new voice-enabled capabilities using the Alexa Skills Kit, or add voice-powered experiences to your connected devices with the Alexa Voice Service.



2.3 Click to “Add a New Skill”



Building Alexa Skills with the Alexa Skills Kit

To learn more about building Alexa skills, see [Getting Started with the Alexa Skills Kit](#). To start building an Alexa skill for free using AWS Lambda, see [Creating an AWS Lambda Function for a Custom Skill](#). We encourage you to visit the [Alexa Developer Forum](#) to collaborate with Alexa team members and fellow Alexa developers.

Your skills		Skill Metrics				
Name	Language	Type	Modified	Status	Actions	

2.4 Select Skill Type → “Smart Home Skill API” (1)

Choose your skill language (2)

Input the name of your skill → For example “Domoticz” (3)

Click to Next (4)

Create a New Alexa Skill

Skill Information

Interaction Model

Configuration

SSL Certificate

Test

Publishing Information

Privacy & Compliance

Skill Type
Define a custom interaction model or use one of the predefined skill APIs. [Learn more](#)

☐ Custom Interaction Model

☒ Smart Home Skill API

☐ Flash Briefing Skill API

Language
Language of your skill

English (U.S.)

Name
Name of the skill that is displayed to customers in the Alexa app. Must be between 2-50 characters.

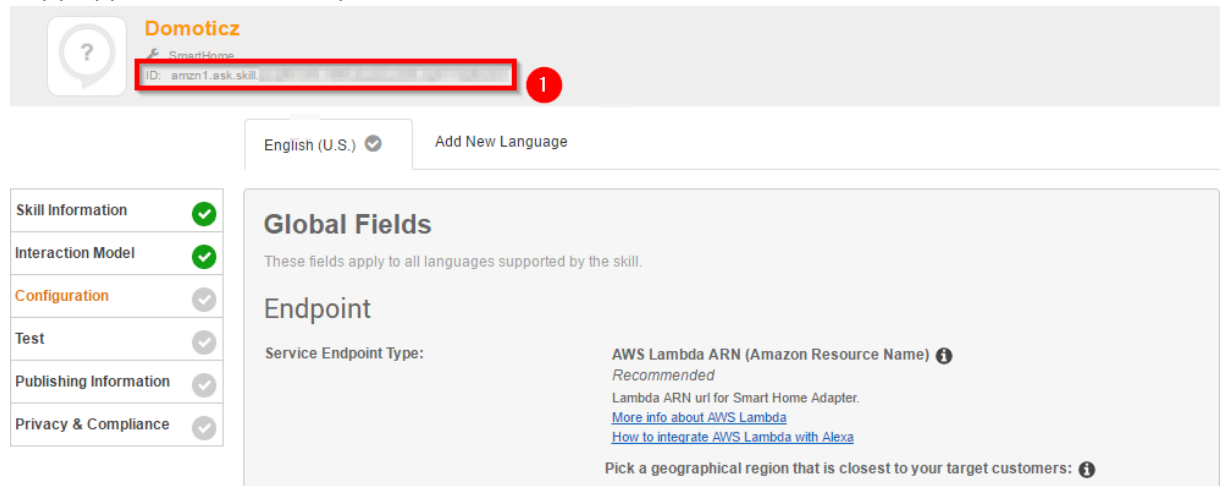
Domoticz

Save

Next

2.5 In section “Interaction Model” click to Next

2.6 Copy Application ID to notepad



The screenshot shows the Alexa Developer Console for a skill named "Domoticz". At the top, the skill's name and icon are displayed. Below this, the "ID" field is highlighted with a red box and a red circle with the number "1". The ID is "amzn1.ask.skill...".

Below the ID field, there is a language selector showing "English (U.S.)" and a button to "Add New Language".

On the left side, there is a sidebar with navigation links: "Skill Information", "Interaction Model", "Configuration", "Test", "Publishing Information", and "Privacy & Compliance".

The main area is titled "Global Fields" and contains the following information:

- Endpoint**
- Service Endpoint Type:** AWS Lambda ARN (Amazon Resource Name) ⓘ
- Recommended:** Lambda ARN url for Smart Home Adapter.
- [More info about AWS Lambda](#)
- [How to integrate AWS Lambda with Alexa](#)
- Pick a geographical region that is closest to your target customers:** ⓘ

2.7 Now you have to create the lambda service to continue Do not close this website

Create lambda service:

Alexa smart home skill requires an OAuth2 authorization.

3.1 Sign in: <https://console.aws.amazon.com>

3.2 Click to Lambda in “All services” and then to “Get Started Now”

3.3 On the right top corner select your region

EU Language → Recommended “Ireland”

US Region → Recommended “N.Virginia”

The smart home skill runs from Ireland and N.Virginia. In the future, the other servers should work too.

If your skill is in german, you have to choose “Ireland”.

3.4 Type Alexa in the Filter field (1) and select the “alexa-smart-home-skill-adapter” (2)

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](#).

The screenshot shows the AWS Lambda console's 'Select blueprint' page. At the top, there's a search bar with 'Alexa' entered, highlighted by a red box and labeled '1'. Below the search bar, a grid of blueprint cards is displayed. The card for 'alexa-smart-home-skill-adapter' is highlighted with a red box and labeled '2'. This card describes a basic framework for a skill adapter for a smart home skill, using the runtime 'nodejs · iot · smart-home · alexa · I...'. Other visible cards include 'Blank Function', 'alexa-skill-kit-sdk-factskill', 'alexa-skill-kit-sdk-triviaskill', 'alexa-skills-kit-color-expert', and 'alexa-skill-kit-sdk-howtoskill'.



Blank Function	alexa-skill-kit-sdk-factskill	alexa-skill-kit-sdk-triviaskill
Configure your function from scratch. Define the trigger and deploy your code by stepping through our wizard. custom	Demonstrate a basic fact skill built with the ASK NodeJS SDK nodejs · alexa	Demonstrate a basic trivia skill built with the ASK NodeJS SDK nodejs · alexa
alexa-smart-home-skill-adapter Provides the basic framework for a skill adapter for a smart home skill. nodejs · iot · smart-home · alexa · I...	alexa-skills-kit-color-expert Demonstrates a basic skill built with the Amazon Alexa Skills Kit. nodejs6.10 · alexa	alexa-skill-kit-sdk-howtoskill Demonstrate a basic How-to skill built with the ASK NodeJS SDK nodejs · alexa
alexa-skills-kit-color-expert-pyt... Demonstrates a basic skill built with the Amazon Alexa Skills Kit. python2.7 · alexa		

3.5 Input Application ID (1) from notepad and enable Trigger (2)

Click to Next (3)

Configure triggers

You can choose to add a trigger that will invoke your function.

Alexa Smart Home   Lambda Remove

Application Id ⓘ 1

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.

Enable trigger ☒ ⓘ 2

Cancel Previous Next 3

3.6 Set a name and description

Set the Runtime* to "Node.js 4.3"

Configure function

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

Name*

Description

Runtime*

3.7 Download all files from https://github.com/madgeni/alexa_domo and extract zip file

Open example_conf.json and input your values.

Host should be your external address (DNS name or IP address)

Save the changed file with filename conf.json

3.8 Zip files conf.json, domapi.js, package.json and folder node_modules together



3.9 Select Upload a .ZIP file (1)

Click to Upload and select your ZIP file (2)

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 1

Function package* 2

For files larger than 10 MB, consider uploading via S3.

- 3.10 Change the handler (1) to domapi.handler (or if you change the domapi.js filename, then to whatever you change it to)
Select "Create a custom role" (2)

Lambda function handler and role

Handler* 1

Role* 2

Existing role* 2

[Create a custom role](#)

- 3.11 Click to Allow

▼ Hide Details

Role Summary ?

Role Lambda execution role permissions

Description

IAM Role

Role Name

[View Policy Document](#)

Don't Allow

Allow

- 3.12 Now the window should look like this
Click to Next

Lambda function handler and role

Handler* ⓘ

Role* ⓘ

Existing role* ⓘ

▶ Advanced settings

* These fields are required.

Cancel Previous **Next** ⓘ

3.13 Click to Create function

3.14 Copy ARN address to notepad (1)


Lambda > Functions > domapi

ARN - arn:aws:lambda:eu-west-1: [redacted] ⓘ

Qualifiers ▼ Test Actions ▼

This function contains external libraries. Uploading a new file will override these libraries. ✕

Code Configuration **Triggers** Monitoring ⓘ

 **Alexa Smart Home**
Application Id: amzn1.ask.skill.[redacted] Disable Delete

+ Add trigger

▶ View function policy

[Continue with Create alexa skill:](#)

4.1 Back to the section "Configuration" from step 2.6

Select your Region (1) and input your ARN address (2) from notepad or lambda website

Global Fields

These fields apply to all languages supported by the skill.

Endpoint

Service Endpoint Type:

AWS Lambda ARN (Amazon Resource Name) ⓘ
Recommended
Lambda ARN url for Smart Home Adapter.
[More info about AWS Lambda](#)
[How to integrate AWS Lambda with Alexa](#)

Pick a geographical region that is closest to your target customers: ⓘ

☐ North America ☒ Europe ⓘ

Europe

arn:aws:lambda:eu-west-1: [redacted] ⓘ

4.2 Set "Authorization URL" (1)

https://www.amazon.com/ap/oa/?redirect_url=

and then copy the Redirect URL from further down the page and append it to the end of the Authorization URL

For example:

https://www.amazon.com/ap/oa/?redirect_url=https://layla.amazon.com/api/skill/link/xxxxxx

Set your "Client Id" from notepad or step 1.4. (2)

Set "Scope" (3)

profile:user_id

This will give your Alexa Skill access to a minimal amount of information about you from Amazon, in this case just your user_id

Select "Auth Code Grant" (4)

Set "Access Token URI" (5)

<https://api.amazon.com/auth/o2/token>

Set "Client Secret" from notepad or step 1.4 (6)

Set any "Privacy Policy URL" (7)

Click to Next

Account Linking

Authorization URL
The url where customers will be redirected in the companion app to enter login credentials.

https://www.amazon.com/ap/oa/?redirect_url=https://layla.amazon.com/api/skill/link/

Client Id
Unique public string used to identify the client requesting for authentication.

amzn1.application-oa2-client

Domain List (Optional)
The list of domains that the authorization URL will fetch content from. You can provide up to 15 domains.

[Add domain](#) +

Scope
List of permissions to request from the skill user. You can provide up to 15 scopes.

[Add scope](#) +

1 profile:user_id

Redirect URLs (Optional)
The list of valid HTTPS redirection endpoints that could be requested during authorization to redirect the user back to after the authorization process.
[Learn more.](#)

<https://layla.amazon.com/api/skill/link/>
<https://pitangui.amazon.com/api/skill/link/>

Authorization Grant Type (Optional)
Specifies the OAuth authorization grant that Alexa uses to obtain an access token from your provider.
[Learn more.](#)

☐ Implicit Grant ☒ Auth Code Grant

Access Token URI
This URI will be used for both access token and token refresh requests.

<https://api.amazon.com/auth/o2/token>

Client Secret

Client Authentication Scheme (Optional)

HTTP Basic (Recommended)

Privacy Policy URL
Link to the Privacy Policy for this skill. This is mandatory for account linking.

<https://developer.amazon.com>

4.3 Select Yes in “Start testing this skill” and click to Next

4.4 (Optional) Type in some informations and select images
Click to Save

[Link account back to your skill:](#)

5.1 Sign in: <https://developer.amazon.com> or back to the first step website (OAuth2)

5.2 Click to APPS & SERVICES → Login with Amazon

5.3 Click to Manage → Web Settings

5.4 Add the two ReDirect URLs from Step 4.2

Example: <https://layla.amazon.com/api/skill/link/xxxxxxxxxx>

<https://pitangui.amazon.com/api/skill/link/xxxxxxxxxx>

[Activate smart home skill in alexa:](#)

6.1 Open alexa app or alexa website (<https://alexa.amazon.com>)

6.2 Click to skills and then to Your skills

6.3 Select domoticz skill and click to activate

6.4 Login with your amazon credentials

6.5 Search devices in smart home

Appendix – TESTING via Lambda:

Under the Actions dropdown:

Configure test event allows you to send requests to your domoticz and interact with it, without having to install the smart skill on your alexa.

Here are a 3 – 1 discovery, 1 for lights, 1 for scenes:

Just copy one in, change the applicationId to a Domoticz IDX and test it.

```
{
  "header": {
    "messageId": "01ebf625-0b89-4c4d-b3aa-32340e894688",
    "name": "TurnOffRequest",
    "namespace": "Alexa.ConnectedHome.Control",
    "payloadVersion": "2"
  },
  "payload": {
    "accessToken": "123",
    "appliance": {
      "additionalApplianceDetails": {
        "switchis": "On/Off",
        "WhatAmI": "light"
      },
      "applianceId": "CHANGETHISTOANIDXINYOURDOMOTICZ"
    }
  }
}
```

```
{
  "header": {
    "messageId": "01ebf625-0b89-4c4d-b3aa-32340e894688",
    "name": "TurnOffRequest",
    "namespace": "Alexa.ConnectedHome.Control",
```

```
"payloadVersion": "2"
},
"payload": {
  "accessToken": "123",
  "appliance": {
    "additionalApplianceDetails": {
      "WhatAmI": "scene"
    },
    "applianceId": CHANGETHISTOANIDXINYOURDOMOTICZ
  }
}

{
  "header": {
    "messageId": "6d6d6e14-8aee-473e-8c24-0d31ff9c17a2",
    "name": "DiscoverAppliancesRequest",
    "namespace": "Alexa.ConnectedHome.Discovery",
    "payloadVersion": "2"
  },
  "payload": {
    "accessToken": "123"
  }
}
```