

New Smart Home Tools and Metrics to Debug, Test, and Manage the Performance of Your Smart Home Skills

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The Smart Home Skill API allows you to build and connect virtually any device to Alexa. Thanks to your help, there are now over 140,000 smart home products connected to Alexa, and customers are using Alexa to control smart devices hundreds of millions of times each week. We've launched a set of development, debugging, testing, and analytic tools to help you through the skill building process and to optimize your skill performance.

Validate Your Smart Home Skill's Response

When implementing your skill, you will need to validate that your smart home skill is sending the right responses back to Alexa. You can now use the Smart Home schemas to validate your skill. These schemas can be used with any JSON Schema Validator and can help you validate and correct errors for any "response" JSON object for your Smart Home skills. To learn more about this tool and supported capabilities, visit the [Alexa Smart Home GitHub](#).

Debug Your Skill with the State Reporting Test Tool and Smart Home Live Debugger

During a skill implementation, you will often need to check to see whether your devices are changing to the right state. It can be difficult to verify device state with visual verification. For example, if you are implementing the BrightnessController interface for a smart light bulb, you may want to verify that your device is changing to the correct brightness percentage value when a customer says, "Alexa, turn the light to 50%". This is hard to visually verify. Now, you can use the [State Reporting Test Tool](#) to verify the states for all your test Smart Home devices in your developer account. For more information on this tool, read the technical documentation [here](#).

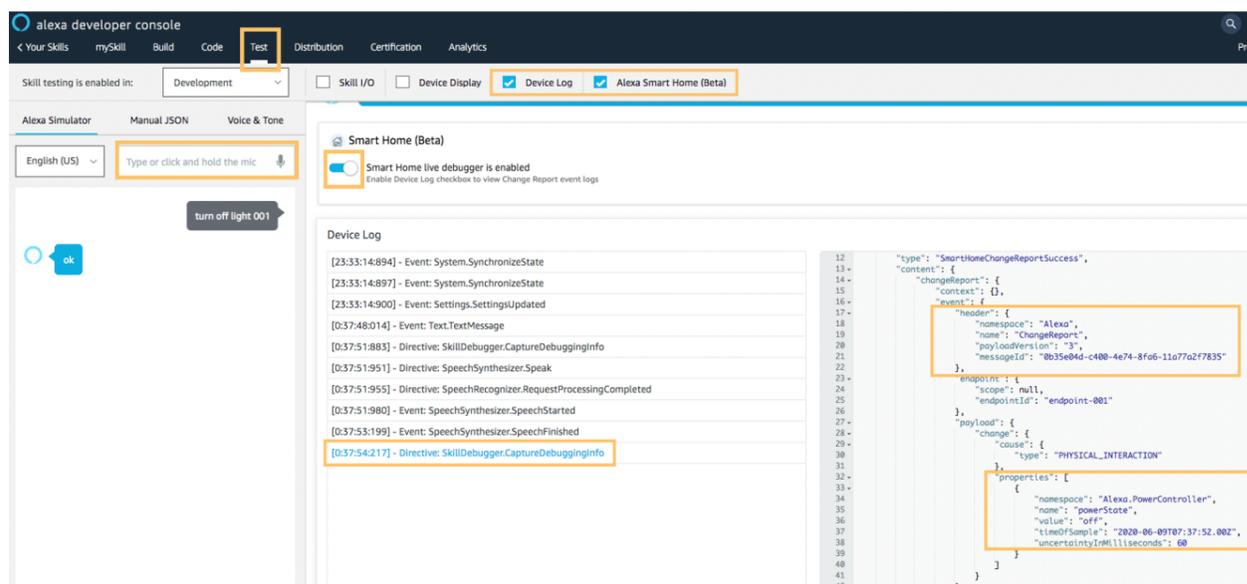
We also built the [Smart Home Live Debugger](#) tool to help you debug [ChangeReport](#),

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experience. The Smart Home Live Debugger will debug asynchronous events that Alexa receives, including the JSON for your request and processing errors (if any) for those events. You can access the Smart Home Live Debugger under **Test** tab in the Alexa Skills Kit (ASK) developer console or learn more about it [here](#).



Test Your Lighting and Thermostat Skills Using the Smart Home Test Tool

Now you can use [Smart Home Tests](#) tool to verify your lighting or thermostat device's functionality before submitting it for [Works with Alexa](#) (WWA) Certification. We've added a set of automated tests in the Alexa Skills Kit developer console that will send directives to your skill and verify that it correctly sets the state of the device. With the Smart Home Test tool, you can reduce the time and cost to certify your device by quickly testing that your smart home skill is correctly handling Alexa directives for the capabilities it supports, reducing manual testing efforts and improving your skill's quality. The tool currently provides automated tests for the following Alexa interfaces: BrightnessController, ColorController, ColorTemperatureController, PowerController, and ThermostatController. With the tool, you'll be able to select a test device to run the automated tests against, download a summary report, and download detailed test execution results. To get started, read our [documentation](#) and navigate to the Test tab in the [Alexa Skills Kit developer console](#).

Smart Home Test
Run a series of automated tests on your Alexa Smart Home skill. [Learn more](#)

Device: Color Bulb | Capabilities: Alexa.BrightnessController

Test Results

START TIME	DEVICE NAME	STATUS	ACTIONS	
September 14th 2020, 18:12:36 UTC	Color Bulb	In Progress	⌵	
August 27th 2020, 19:53:55 UTC	PI-Light-003	Passed	⌵	
CAPABILITY				
	TOTAL	PASSED	FAILED	
PowerController	2	2	0	
ColorController	13	13	0	
August 27th 2020, 19:53:30 UTC	PI-Light-004	Passed	⌵	
August 27th 2020, 18:45:20 UTC	PI-Light-001	Failed	⌵	
August 27th 2020, 18:45:17 UTC	PI-Light-002	Error	⌵	
CAPABILITY				
	TOTAL	PASSED	FAILED	ERROR
PowerController	2	0	0	2
ColorController	13	4	6	3

Manage Your Skill's Performance with New Metrics and Troubleshooting Tools

To help you understand how end-users interact with your Alexa skill, we've built a set of usage metrics including latency and success rates for device discovery, device control, query state requests, and change reports. To view your skill metrics reports, visit the Analytics page in the [Alexa Skills Kit developer console](#) or read the technical documentation [here](#). We also launched a new feature in the Analytics page that allows you to download message IDs and associated metadata such as latency, errors, and exceptions for skill failures which will help you troubleshoot and solve issues that impact your customers. Learn more about downloading message IDs [here](#).

Capability Directives
Alexa sends a directive request to your skill to trigger a capability, such as turning on a light, when a customer asks Alexa to control their smart device. The metrics for how your skill responds to directive requests are shown in the graphs below. [Learn More](#)

Skill Stage: Live | Region: NA | Time Interval (UTC): Last 3 Hours | Aggregation Period: 5 Minutes

Latency | Success Rate

[Download Message IDs](#)

All Capabilities
Graphs showing P90 latency and Request Volume for All Capabilities.

Alexa.BrightnessController
Graphs showing AdjustBrightness P90, SetBrightness P90, Aggregate P90, and Request Volume.

Alexa.ColorController
Graphs showing SetColor P90, Aggregate P90, and Request Volume.

Alexa.ColorTemperatureController
Graphs showing DecreaseColorTemperature P90, IncreaseColorTemperature P90, SetColorTemperature P90, Aggregate P90, and Request Volume.

Get Started Today

You can debug, test, and improve your Alexa Smart Home skill today by accessing these smart home tools and metrics in the [developer console](#), or learn more by visiting the technical documentation below:

- [Smart Home Debugger](#) – View the ChangeReport, AddOrUpdateReport, and DeleteReport events that Alexa receives from your skill, including your JSON, and any processing errors.
- [Smart Home Test](#) – Run automated tests that send directives to your skill and verify that you set the state correctly. Available for some of the most common Alexa interfaces.
- [State Reporting Test Tool](#) – View the current values of all properties of smart home devices that are associated with your skill and your developer account, and whether the current value came from a StateReport request or proactive reporting such as a ChangeReport.

[Back to Top](#)

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[Launch](#)

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[Learn](#)

[Design](#)

[Build](#)

[Launch](#)

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[Alexa Smart Home](#)

[Alexa Gadgets](#)

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[Agreements and Terms](#)

[Program Materials License Agreement](#)

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[Device Makers Blog](#)

[AWS Blog](#)

[Alexa Science](#)

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Resources

[Getting Started](#)

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