

100 Days of AWS — Day 12 — Integrating AWS Chatbot with Slack- ChatOps for AWS

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Welcome to Day 12 of 100 Days of AWS. The topic for today is using Integrating AWS Chatbot with Slack- ChatOps for AWS

In the current DevOps world, teams rely on communication channels like chat rooms to interact with team members and the system they operate. This is done with the help of bots that help facilitate the interaction and deliver important notifications and are sometimes used to relay commands back to the server.

AWS provides a service, AWS Chatbot, which helps the DevOps team to receive notifications and execute commands. Currently, it supports:

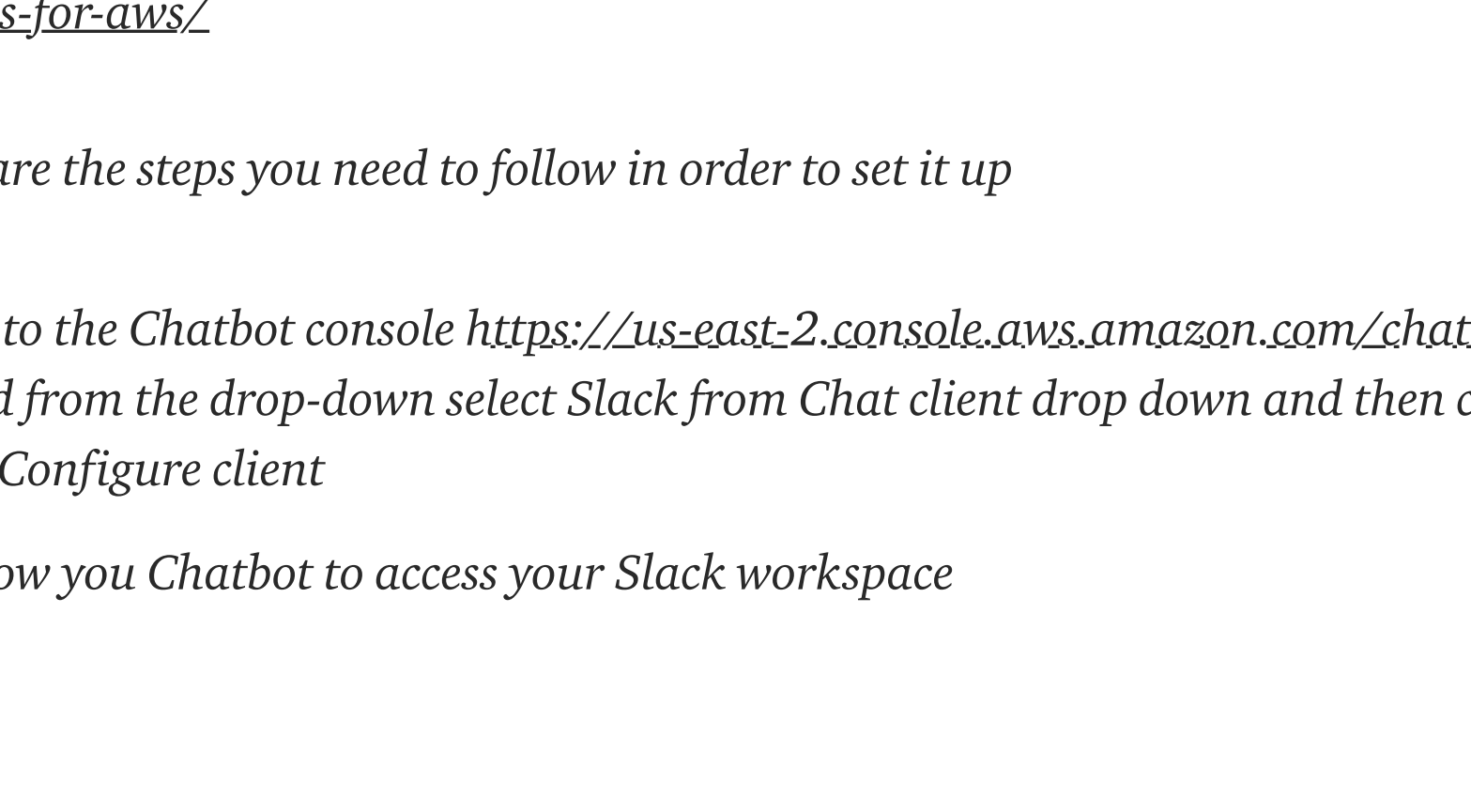
- Slack
- Amazon Chime

It takes minimum effort to set up, and AWS fully manages the integration. It supports receiving notifications from the following services:

- Amazon CloudWatch
- AWS Health
- AWS Budgets
- AWS Security Hub
- Amazon GuardDuty
- AWS CloudFormation

How it works

AWS Chatbot uses SNS to integrate with other AWS Services. The way it works, CloudWatch triggers an alarm that notifies the SNS topic, which activates Chatbot to notify the chat room.

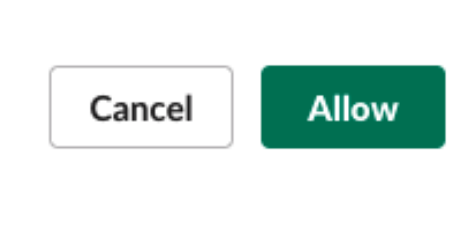


Reference: <https://aws.amazon.com/blogs/devops/introducing-aws-chatbot-chatops-for-aws/>

These are the steps you need to follow in order to set it up

- Go to the Chatbot console <https://us-east-2.console.aws.amazon.com/chatbot/> and from the drop-down select Slack from Chat client drop down and then click on Configure client

- Allow you Chatbot to access your Slack workspace



AWS Chatbot is requesting permission to access the 100daysofdevops Slack workspace

What will AWS Chatbot be able to view?

- ☒ Content and info about channels & conversations
- ☒ Content and info about your workspace

What will AWS Chatbot be able to do?

- ☒ Perform actions in channels & conversations

Cancel Allow

- In the next screen click on configure channel

Configured channels

Find channel to name

Configuration name

Channel name

Logging level

No configuration

Channel role

Guardrail policies

Assigned SNS topics

You don't have any configurations. Choose configuration new channel or create a configuration using [AWS CloudFormation templates](#)

Configure new channel

- Give your configuration some name(my-test-chatbot), and select the slack channel(It can be a public or private channel). AWS Chatbot needs an IAM role to respond to interactive messages. Give your IAM role some name and select the policy template. I am selecting all that will generate the IAM role for you for this demo. For more info, check this [link](#). Next step, select Channel guardrail policies, which provide detailed control of what actions your channels members can take. Finally, set up a notification to send event and alarm notifications to supported AWS services. Click on Configure.

AWS Chatbot

Configured clients

Slack workspace: 100daysofdevops

Configure Slack channel

Configuration details

Configuration name

my-test-chatbot

The name can have up to 128 characters. Valid characters: a-z, A-Z, 0-9, and -.

Logging - optional

☐ Publish logs to Amazon CloudWatch Logs

Slack channel

Channel type

☒ Public

Choose public channels from the list. To choose a private channel, enter the channel ID.

Private

☐ Private

You can join or view private channels only by invitation.

Public channel name

slacktest

Permissions

AWS Chatbot requires an IAM role to perform actions (run CLI commands and respond to interactive messages). The IAM role can be a channel IAM role, or user role depending on your role settings. Both role types indicate what permissions the channel member has. The channel guardrails control what actions channel members can take. [Show how roles and guardrails work together](#)

Role settings

☒ Channel IAM role

All channel members share the same permissions. Channel members can still use their own IAM user roles.

☐ User roles

Channel members must choose a IAM user role to perform actions.

Channel IAM role

This role is used when channel members don't choose their own roles. Policies specified in the Channel guardrails control what AWS actions members can take, regardless of what user role a channel member uses.

Create an IAM role using a template

Role name

AWSChatbot-role

The name can have up to 64 characters. Valid characters: a-z, A-Z, 0-9, and -.

Policy templates

Select template(s)

Notification permissions

Allows AWS Chatbot to retrieve metric graphs from Amazon CloudWatch.

Read-only command permissions

Allows AWS Chatbot to retrieve metric graphs in supported clients.

Lambda-invoke command permissions

Allows Lambda-invoke commands in supported clients.

AWS Support command permissions

Allows calling AWS Support APIs in supported clients.

Incident Manager permissions

Allows calling Incident Manager APIs in supported clients.

Channel guardrail policies

Policy name

Channel guardrail policies provide detailed control over what actions your channel members can take. These guardrail policies are applied at runtime to both channel IAM roles and user roles. What channel members are allowed to do is the intersection of role permissions and guardrail policies. [View policies in the IAM console](#) [Show how guardrails work](#)

Choose guardrail policies

AmazonEC2FullAccess

Notifications - optional

AWS Chatbot uses SNS topics to send event and alarm notifications from supported AWS services to your chat client. Notification permissions are required in the IAM role to retrieve metric graphs when available for the selected SNS topics.

☒ To render graphics for CloudWatch alarm notifications, the Chatbot fetches CloudWatch metrics for this account.

SNS topics

Region

US West - Oregon

Remove Region

Topics

Choose topics

+

Add another Region

- One additional step you need to perform. go to the slack channel you configured in the previous step and invite the AWS app.

aws

8:45 AM

You added to #general by Prashant Lakhera.

8

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#/aws @aws

- Now go to the EC2 instance console <https://us-west-2.console.aws.amazon.com/ec2/>. Select the instance, then Monitoring and View in metrics

- Under Graphed metrics, click the bell icon

Instances

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Options

Search

Labels

Details

Statistics

Alerts

Period

Y axis

Actions

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EC2-CPULabelation - supported (100%)

average

5 minutes

10

+

+

- Keep all the setting as default, select threshold as 10 i.e when CPU utilization goes more than 10% it will trigger an alarm.

Conditions

Threshold type

☒ Static

Use a value as a threshold

Whenever CPU utilization is...

Greater

>= threshold

Greater/Equal

>= threshold

Lower/Equal

<= threshold

Lower

< threshold

than...

Define the threshold value.

10

Must be a number

Additional configuration

Cancel

Next

- In the next screen select an SNS topic, you have configured earlier. As you can SNS is now referring to chatbot endpoint.

Configure actions

Notification

Alarm state trigger

Define the alarm state that will trigger this action.

In alarm

The metric or expression is outside of the defined threshold.

OK

The metric or expression is within the defined threshold.

Insufficient data

The alarm has just started or not enough data is available.

Select an SNS topic

Define the SNS (Simple Notification Service) topic that will receive the notification.

Create an existing SNS topic

Select new topic

Use topic ARN

Send a notification to...

my-test-topic

Only email lists for this account are available.

Email (endpoints)

<https://global.sns-api.chatbot.amazonaws.com - View in SNS Console>

Add notification

- Give your alarm some name

Add name and description

Name and description

Alarm name

cloudwatch-to-chatbot

Alarm description - optional

Alarm description

Up to 1024 characters (0/1024)

Cancel

Previous

Next

- In the next screen review all the configuration and select Create alarm
- For the purpose of this demo, let's install stress rpm on server

```
sudo amazon-linux-extras install epel -y
sudo yum install stress -y
```

- In order to generate load on server, run the below command. Stress command will spawn 6 workers spinning on sqrt() with a timeout of 60 seconds

```
sudo stress --cpu 6--timeout 60
```

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