aws marketplace

Implementation Guide:

PagerDuty

November 2020

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Foreword

PagerDuty is an AWS Advanced Technology Partner with a DevOps competency. PagerDuty performs Digital Operations Management in the AWS Cloud. By implementing PagerDuty, you can mobilize the right individuals at the right time during any incident.

The purpose of this AWS Implementation Guide is to enable every AWS Marketplace customer to seamlessly activate, deploy and configure PagerDuty in the AWS Control Tower environment. Additionally, it enables them to take full advantage of the resources pre-configured by AWS Control Tower as part of the initialization.

Solution overview and features

The solution automatically configures new AWS accounts enrolled by AWS Control Tower with PagerDuty via Amazon SNS. This automation simplifies the provisioning process of PagerDuty with AWS Services in your AWS Control Tower multi-account environment. PagerDuty integrated with AWS Control Tower provides customers the ability to manage the alerts that come from many of the AWS Services. A list of AWS specific integrations can be found on the PagerDuty-AWS Partner page.

PagerDuty with AWS Control Tower enables customers to effectively:

- **Provide the right information –** Ingest alerts from Amazon CloudWatch or AWS Security Hub through Amazon SNS and determining based on PagerDuty rules and policies what alerts need to be escalated.
- **For the right person –** Use PagerDuty's Service Directory to determine who needs to be notified for the specific incident
- **At the right time –** PagerDuty On-Call Schedules determines the on-call resource that needs to be notified
- **To Take the right action –** Use Amazon EventBridge or Amazon GuardDuty to initiate automated actions in your AWS Environment

Architecture diagram

The solution is deployed using AWS CloudFormation Stack Set and connects via Amazon SNS. The solution primarily addresses AWS Control Tower Guardrails status, AWS Config rules, and conformance packs compliance status across all account/regions in AWS Control Tower environment.

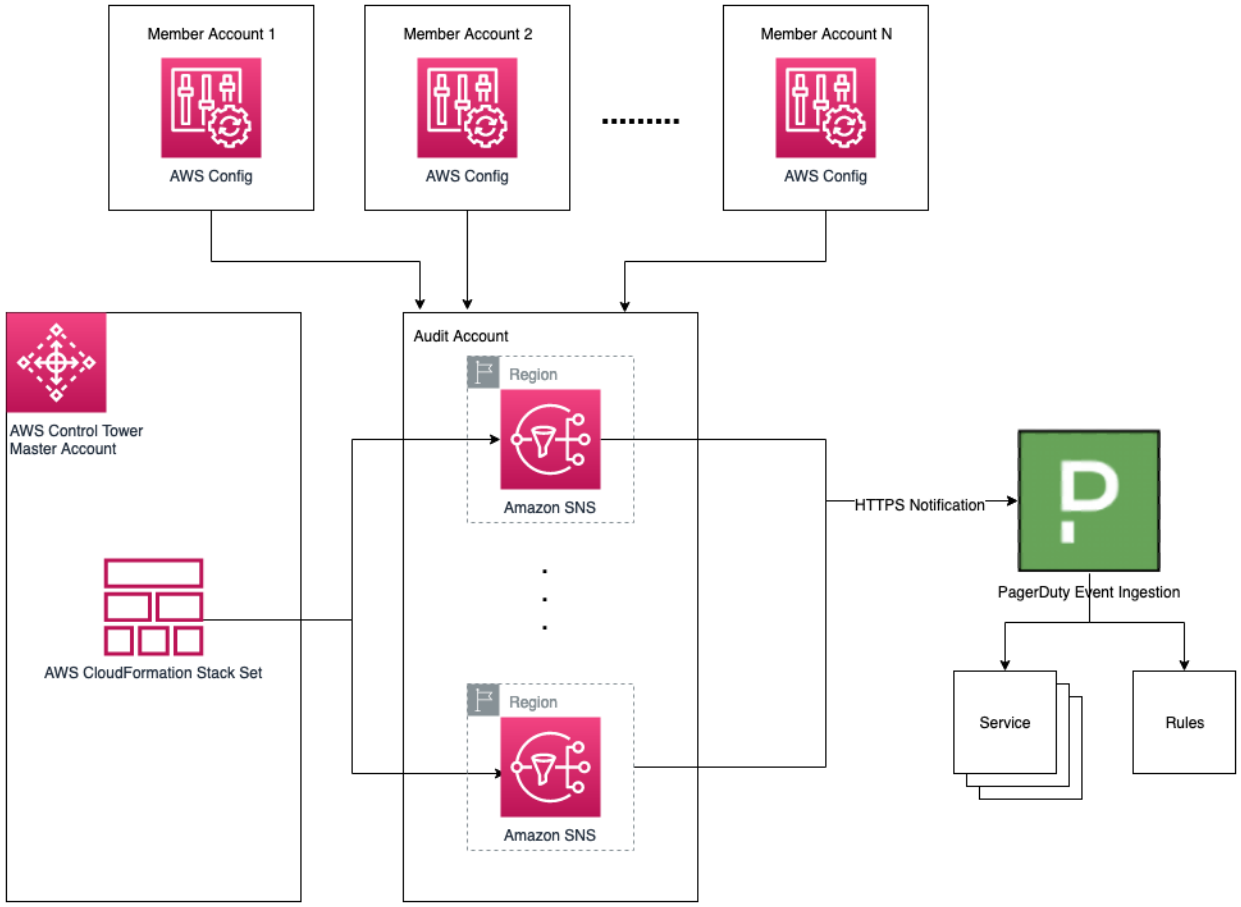


Figure 1. PagerDuty architecture diagram

Pre-requisites

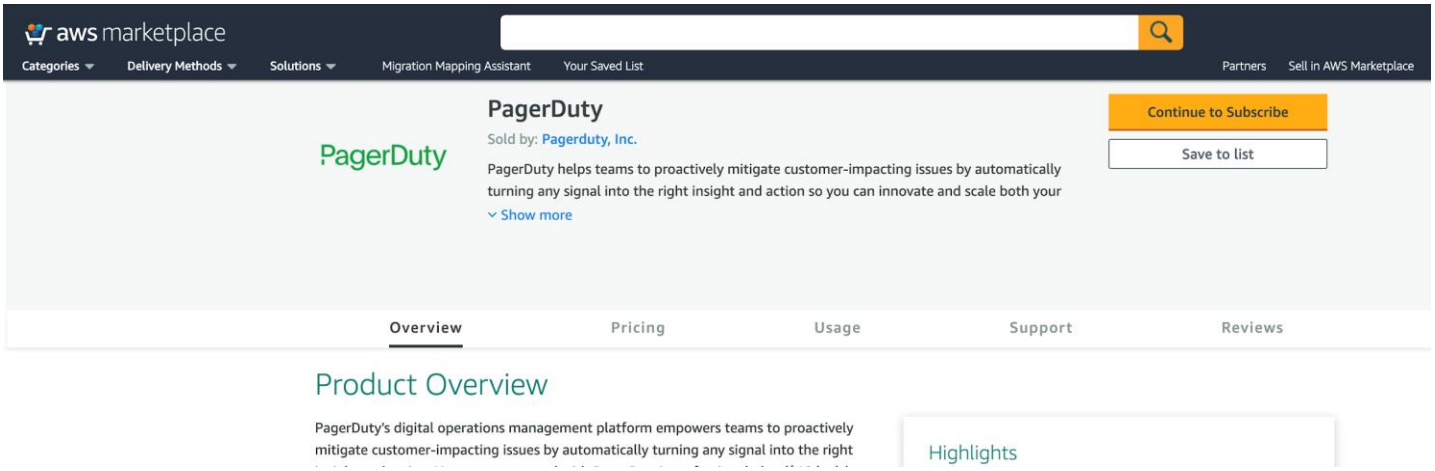
This guide assumes you already have AWS Control Tower deployed. To get started with AWS Control Tower, check out the Getting Started documentation. If you don't have a PagerDuty subscription, please check the listing on AWS Marketplace.

Deployment and configuration steps

Getting started

Step 1.1: Subscribe to PagerDuty on AWS Marketplace

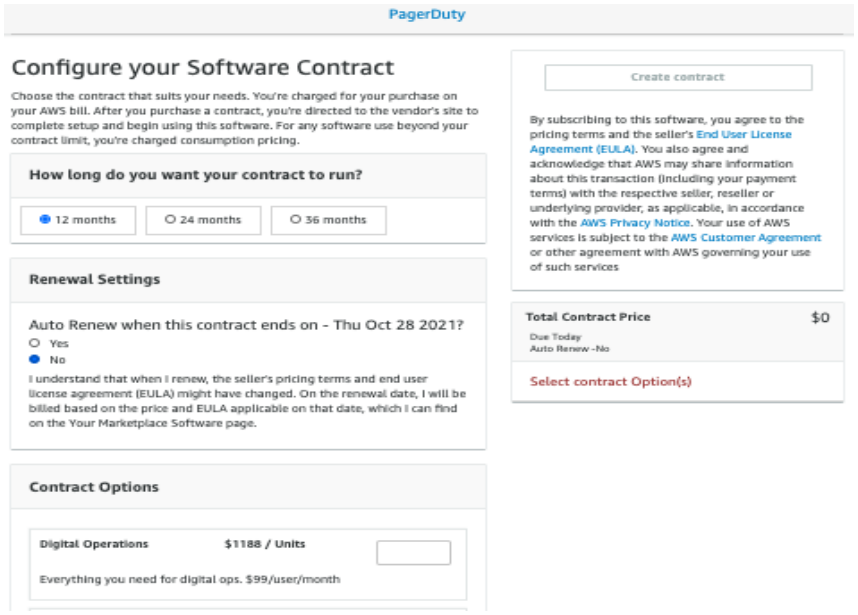
While in your AWS Control Tower management account, locate the **PagerDuty** in the AWS Marketplace (https://aws.amazon.com/marketplace/pp/B08HSJSKRG).



Click on the **Continue to Subscribe** button.

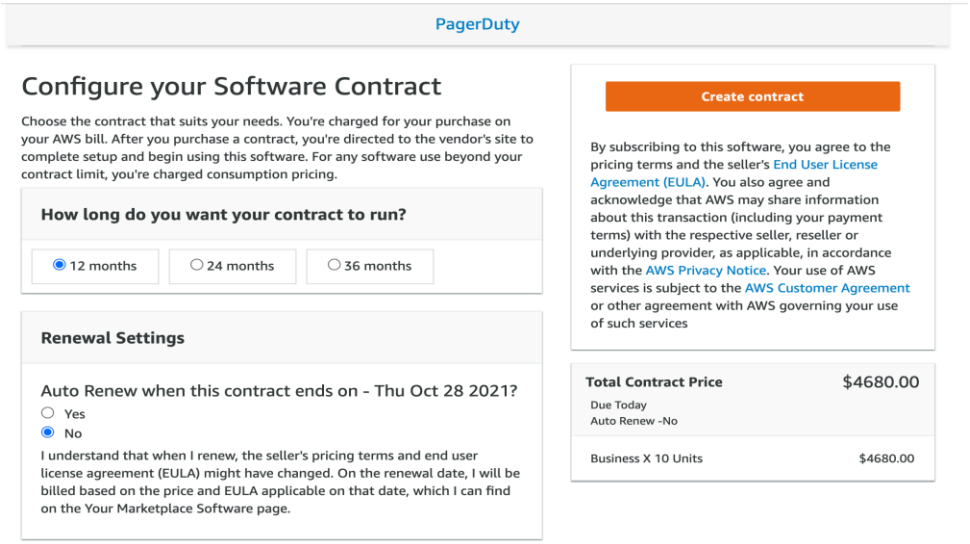
Step 1.2: Guidance on contract duration and renewal

In the new screen, you can configure your contract. You can select the **contract duration** and set the **renewal settings**.



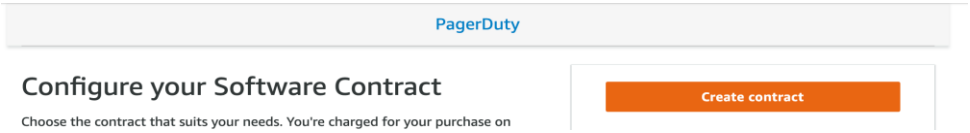
Step 1.3: Select contract options

Select the contract options to be activated with your contract.

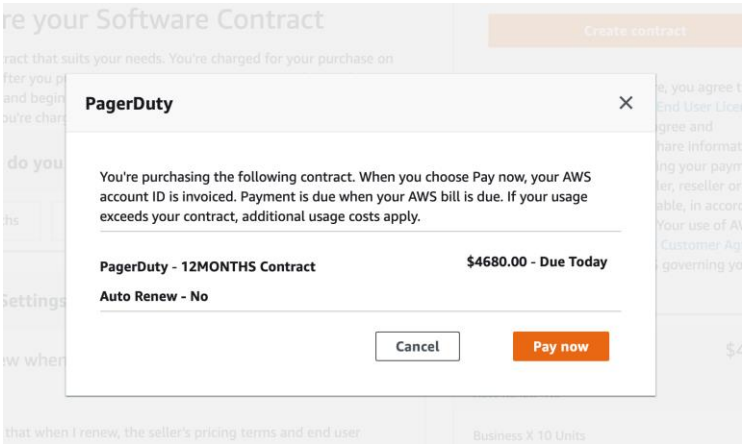


Step 1.4: Create the contract and pay

Once you have configured your contract, you can click on the **Create contract** button.

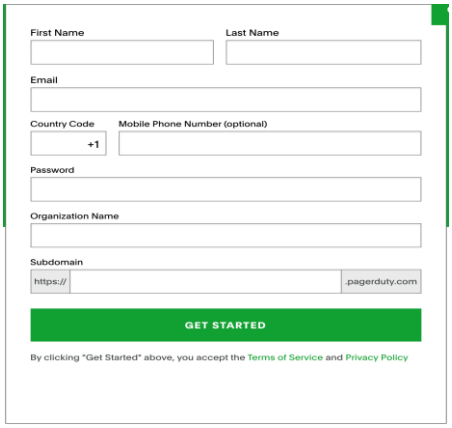


You will be prompted to confirm the contract. If you agree to the pricing, select the **Pay now** button.



Step 1.5: Set up Account

Customer will be redirected to a PagerDuty Registration page to be completed with contact info, desired subdomain name, and password



Configuration: Set up PagerDuty profile

Step 2.1: Set up your user profile

- Video: Setting up your user profile
- Walkthrough: Your user profile

Step 2.2: Make sure your team has been added to PagerDuty

- Go to Configuration > Users and search for your team members
- If you don't see them listed, contact your Account Owner or a Global Admin to have your team members added (here's a video: Adding Users to your Account).

Step 2.3: Add your Users to an On-Call Schedule

- Video: Creating a schedule
- Video: Copying a schedule to make a backup schedule
- Walkthrough: Schedule concepts
- Walkthrough: Schedule Examples

Step 2.4: Add your On-Call Schedules to an Escalation Policy

- Video: Creating an escalation policy
- Walkthrough: Create an escalation policy

Step 2.5: Set up Services and Integrations

- Walkthrough: Creating a PagerDuty service
- Walkthrough: Configuring services and integrations
- We integrate with over 150 tools - view our integration guides

Step 2.5.1 Set up First Service

- Navigate to **Services→Service Directory** and click the **+New Service** button on the right side of the screen.
- Under General Settings, enter a **Name** that represents the application, component or team that you wish to open incidents against (examples: "MobileApp", "Shopping Cart" or "BizOps"). Please note that when an incident is triggered, this is the service name it will be associated with.

- Add a **Description** of what this service represents in your infrastructure.
- Then select which **Integration type** you will be using and enter an integration name in the format monitoring-tool-service-name (e.g. “Datadog-Shopping-Cart”).

Step 2.6: Test your Configuration

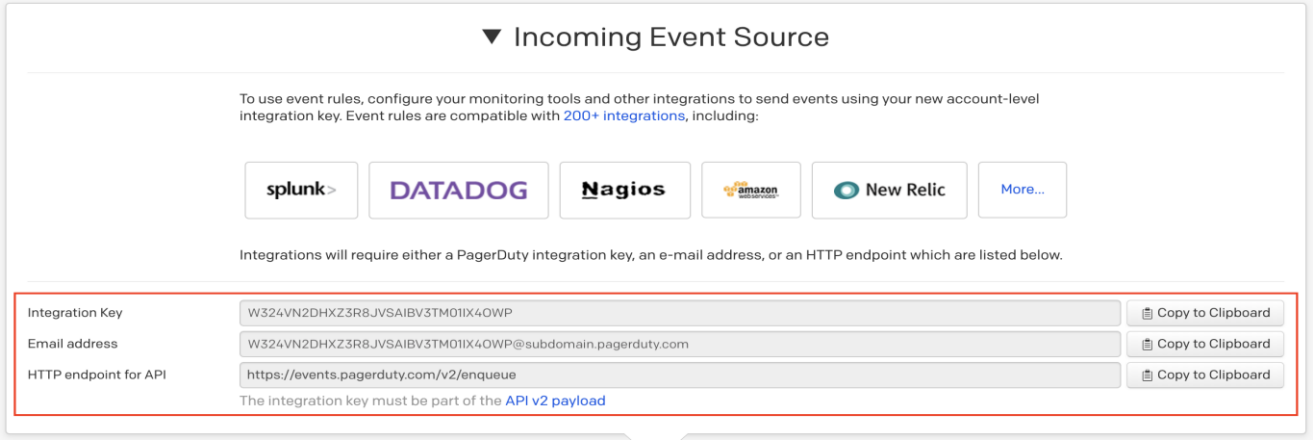
- Trigger a test incident
- Troubleshooting help? Contact support@pagerduty.com

Deployment: AWS Control Tower

Step 3.1: Obtain the ruleset’s integration key

In PagerDuty, choose Services...Event Rules from the menu.

On the next page, click the triangle to the left of “Incoming Event Source” to show the Integration information. On the first line labeled “Integration Key,” click the button “Copy to Clipboard.”

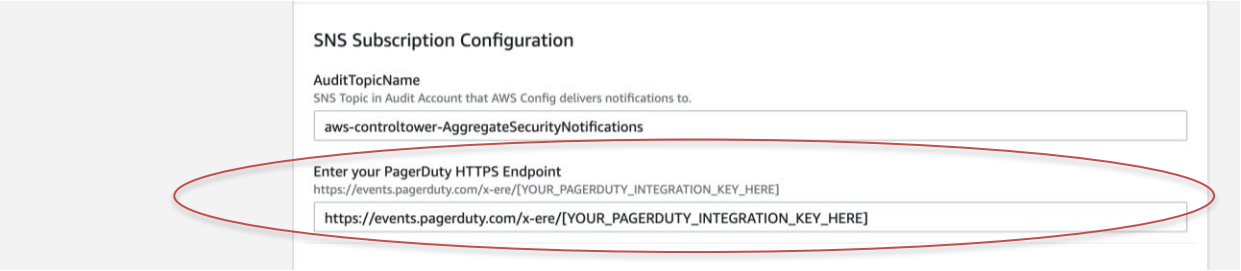


Step 3.2: Deploy Solution in Management Account

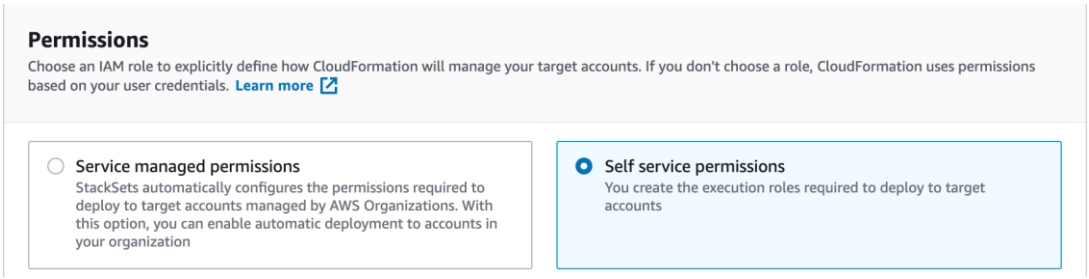
Login to the management account in AWS Control Tower as an Administrator. Now Launch an AWS CloudFormation StackSet in the AWS Control Tower management account, providing a StackSet Name.

Step 3.3: Complete Set Up

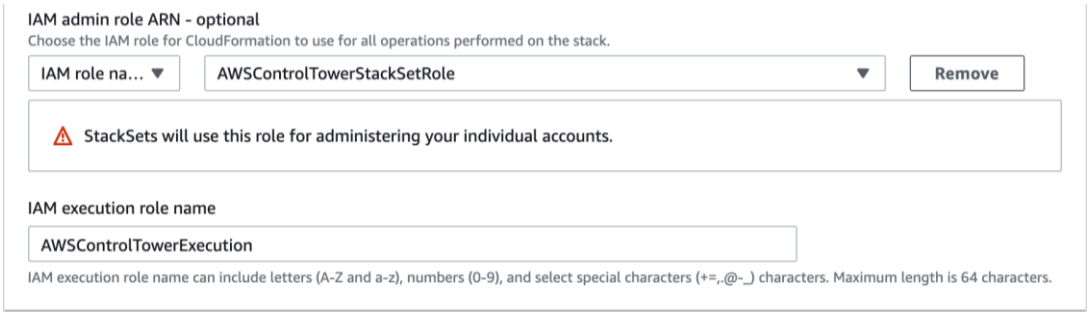
- Launch this CloudFormation Template
- Replace your PagerDuty Integration Key from the one you copied in Step 3.1



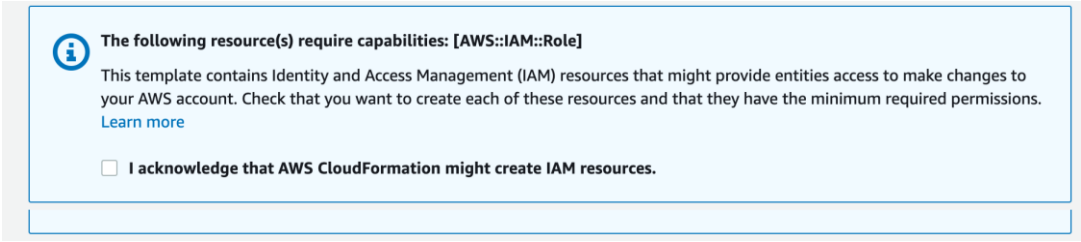
- Select **Self-Service Permissions**



- For **IAM role name**, choose **AWSControlTowerStackSetRole**
- For **IAM execution role name**, copy and paste this text: **AWSControlTowerExecution**. Choose **Next**



- For **Account Numbers**, enter the AWS account ID for your AWS Control Tower audit account
- Under **Specify regions**, Select the AWS Control Tower supported regions by referring to this link. Choose **Next**
- **Acknowledge** that AWS CloudFormation might create IAM resources

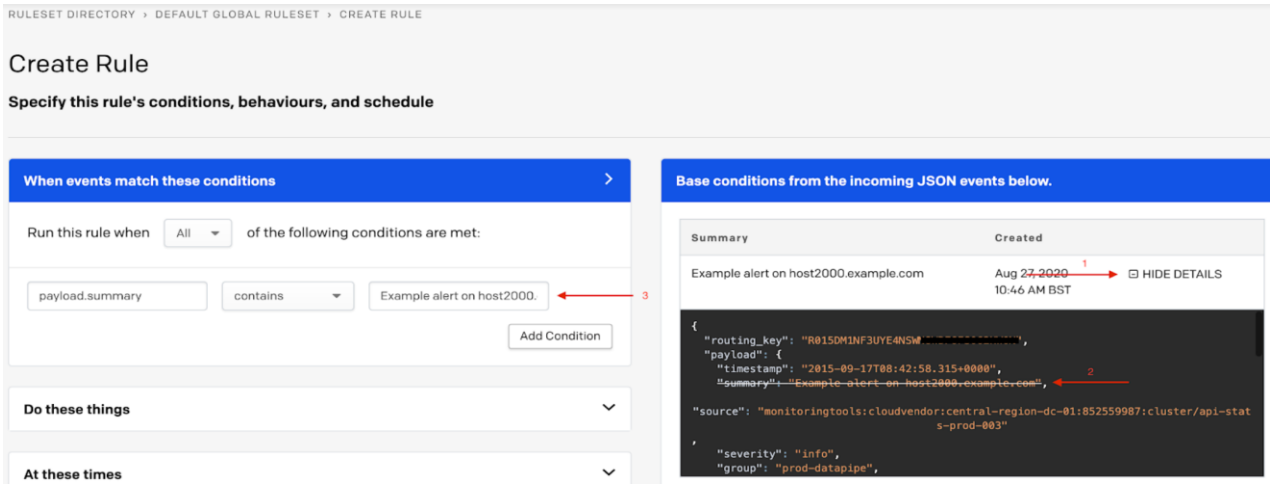


- Choose **Submit** after validating your selections

Deployment: PagerDuty

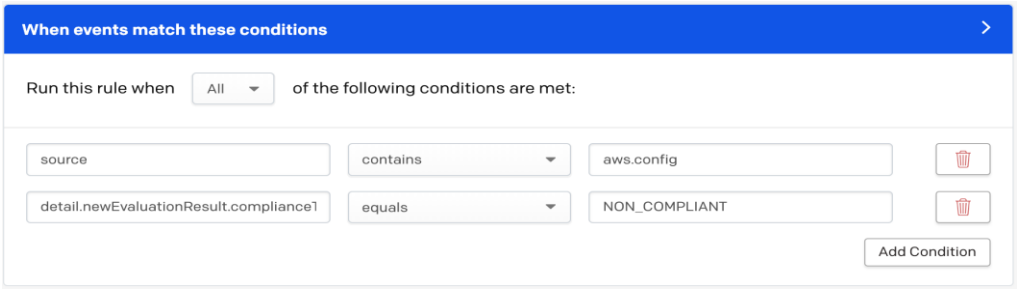
Step 4.1: Create a rule to initiate incidents

Step 4.1.1: Click the “New Event Rule“ button.



Step 4.1.2: Set the following conditions:

- Create a condition where source contains aws.config
- Create a condition where detail.newEvaluationResult.complianceType equals NON_COMPLIANT



Step 4.1.3 Customize field events:

Step 4.1.3.1 Add a variable where:

- Name is resourceId
- Value is (.*)
- Regex is detail.newEvaluationResult.evaluationResultIdentifier.evaluationResultQualifier.resourceId

Step 4.1.3.2 Add a variable where:

- Name is ruleName
- Value is (.*)
- Regex is detail.newEvaluationResult.evaluationResultIdentifier.evaluationResultQualifier.configRuleName

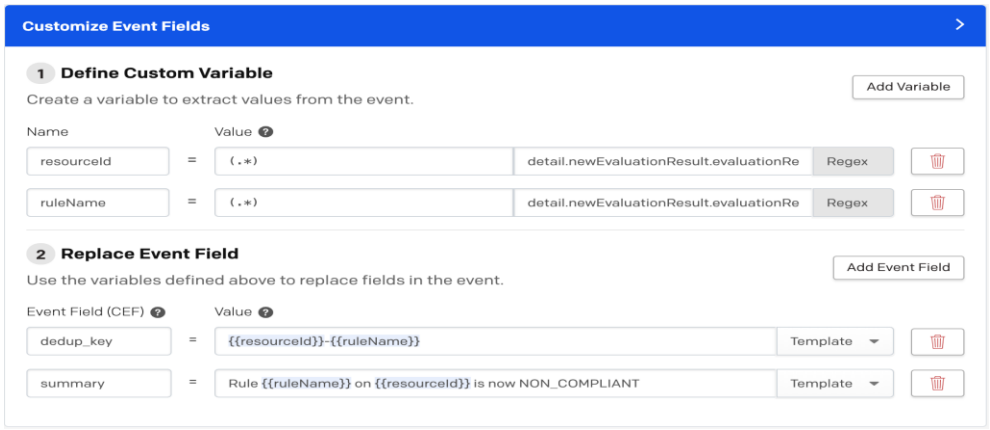
Step 4.1.3.3 Add an event field where:

- Name is dedup_key

- Value is {{resourceId}}-{{ruleName}}
- Set the drop-down as Template

Step 4.1.3.4 Add an event field where:

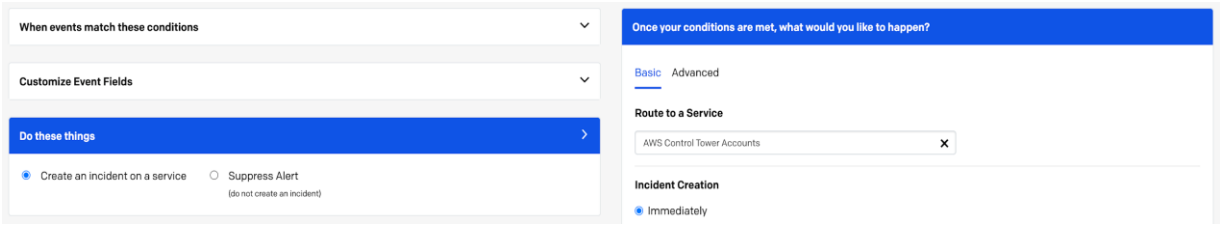
- Name is summary
- Value is Rule {{ruleName}} on {{resourceId}} is now NON_COMPLIANT
- Set the drop-down as Template



Step 4.1.4: Set up:

Step 4.1.4.1: Click the radio button “Create an incident on a service”

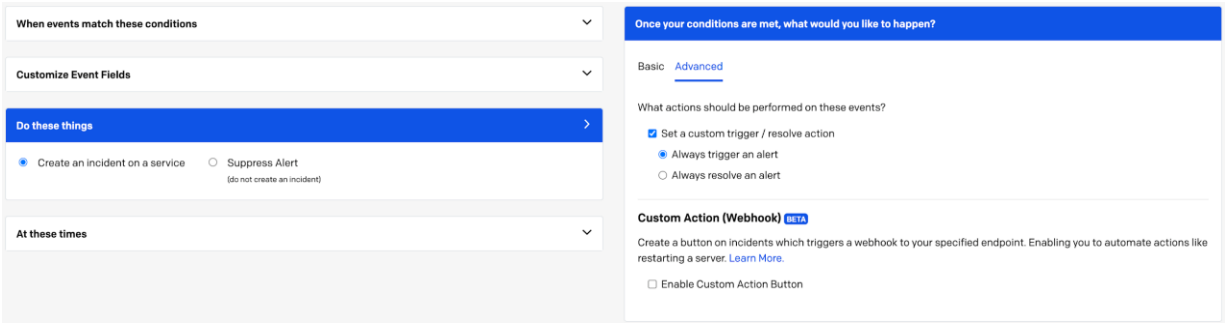
Step 4.1.4.2: Choose a Service from the drop down under “Route to a Service” on the right-hand side.



Step 4.1.4.3: Click the Advanced tab on the right-hand side.

Step 4.1.4.4: Click the checkbox “Set a custom trigger / resolve action”

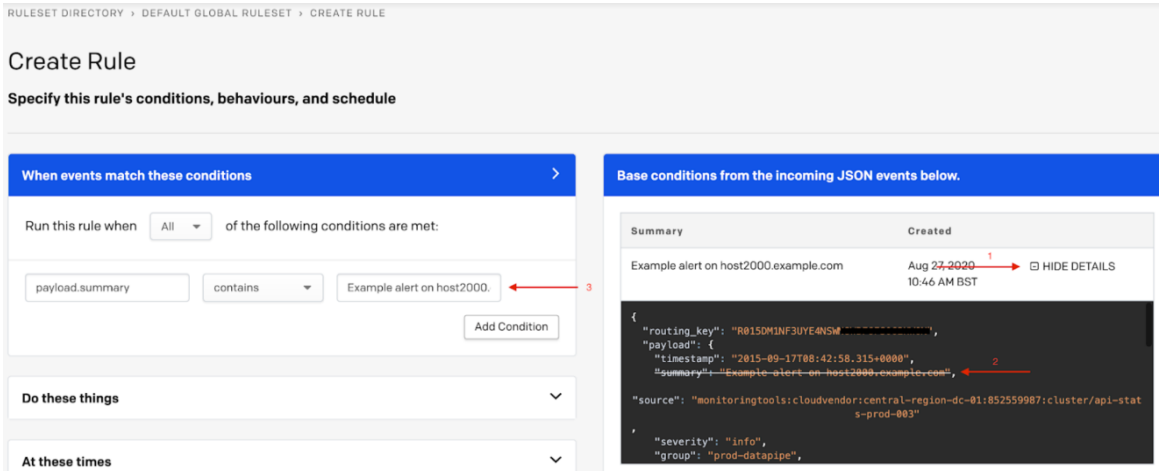
Step 4.1.4.5 Choose “Always trigger an alert”



Step 4.1.4.6: Click the button “Save Rule” at the bottom of the page.

Step 4.2: Create a rule to resolve incidents

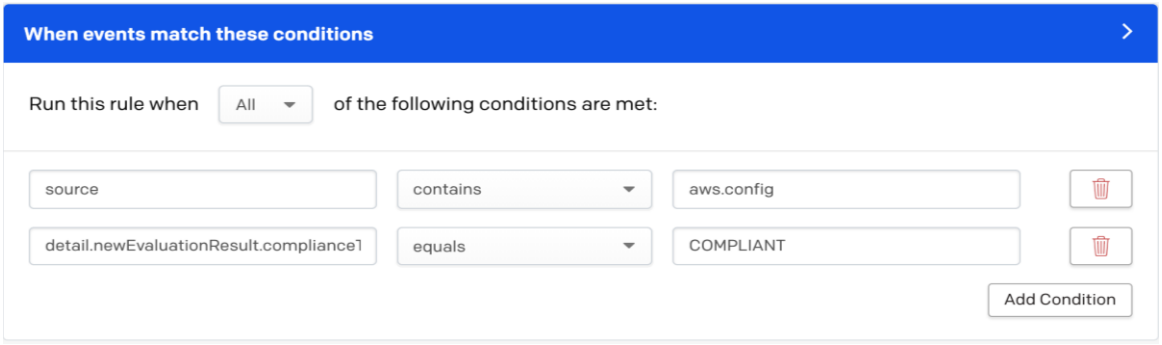
Step 4.2.1: Click the “New Event Rule“ button.



Step 4.2.2 Set the conditions:

Step 4.2.2.1 Create a condition where source contains aws.config

Step 4.2.2.2 Create a condition where detail.newEvaluationResult.complianceType equals COMPLIANT



Step 4.2.3 Customize field events:

Step 4.2.3.1 Add a variable where:

- Name is resourceId
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- Name is ruleName
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- Regex is detail.newEvaluationResult.evaluationResultIdentifier.evaluationResultQualifier.configRuleName

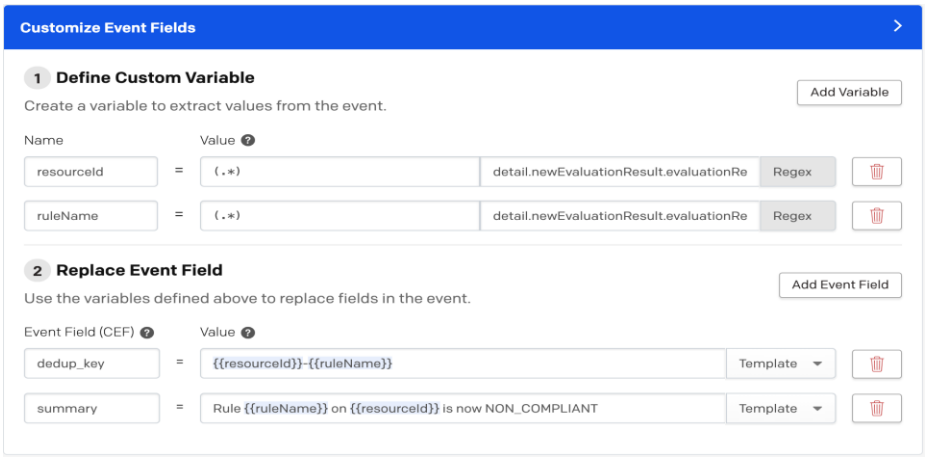
Step 4.2.3.3 Add an event field where:

- Name is dedup_key

- Value is {{resourceId}}-{{ruleName}}
- Set the drop-down as Template

Step 4.2.3.4 Add an event field where:

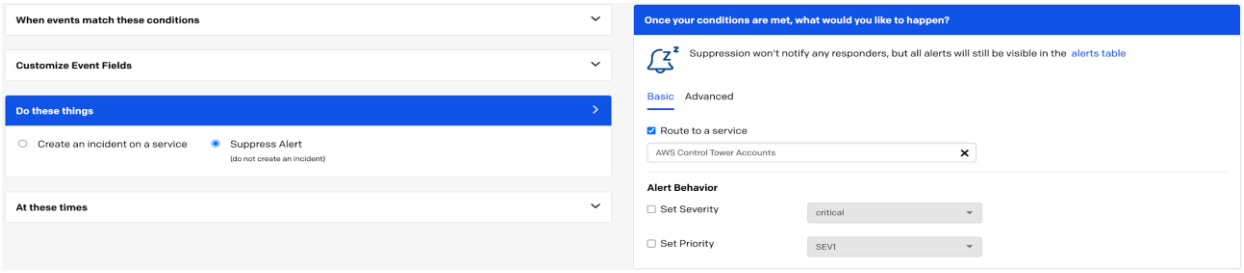
- Name is summary
- Value is Rule {{ruleName}} on {{resourceId}} is now NON_COMPLIANT
- Set the drop-down as Template



Step 4.2.4: Set up:

Step 4.2.4.1: Click the radio button “Suppress Alert”

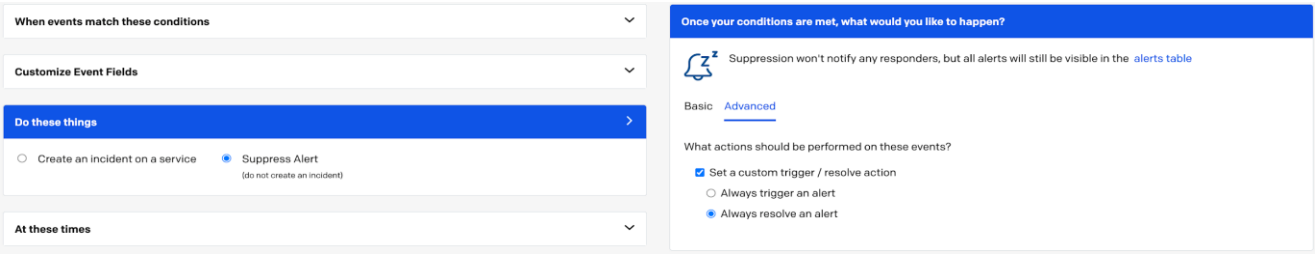
Step 4.2.4.2: Choose a Service from the drop down under “Route to a Service” on the right-hand side.



Step 4.2.4.3: Click the Advanced tab on the right-hand side.

Step 4.2.4.4: Click the checkbox “Set a custom trigger / resolve action”

Step 4.2.4.5 Choose “Always resolve an alert”

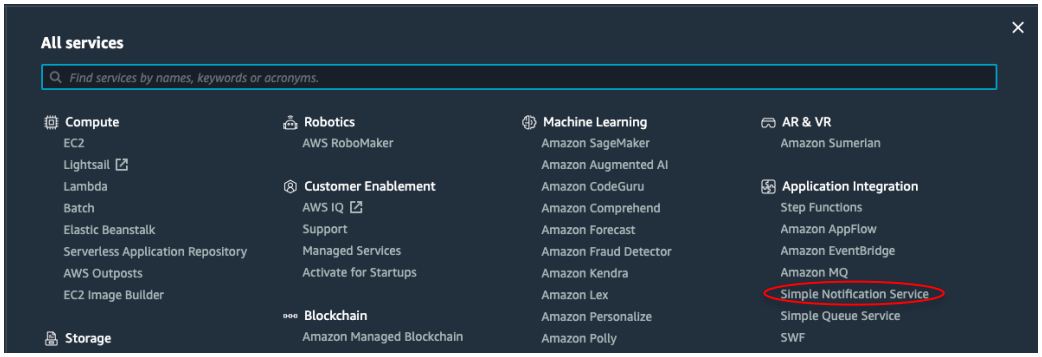


Step 4.2.4.6: Click the button “Save Rule” at the bottom of the page.

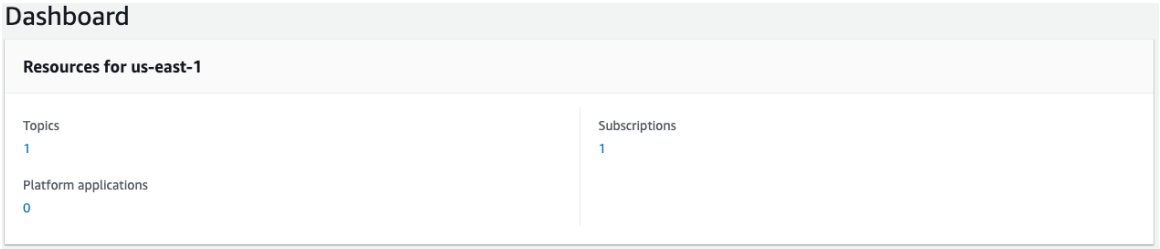
You should now have two rules: one to trigger when a rule indicates that a resource is not in compliance and one to resolve that same incident when it comes back into compliance.

Validate PagerDuty Integration

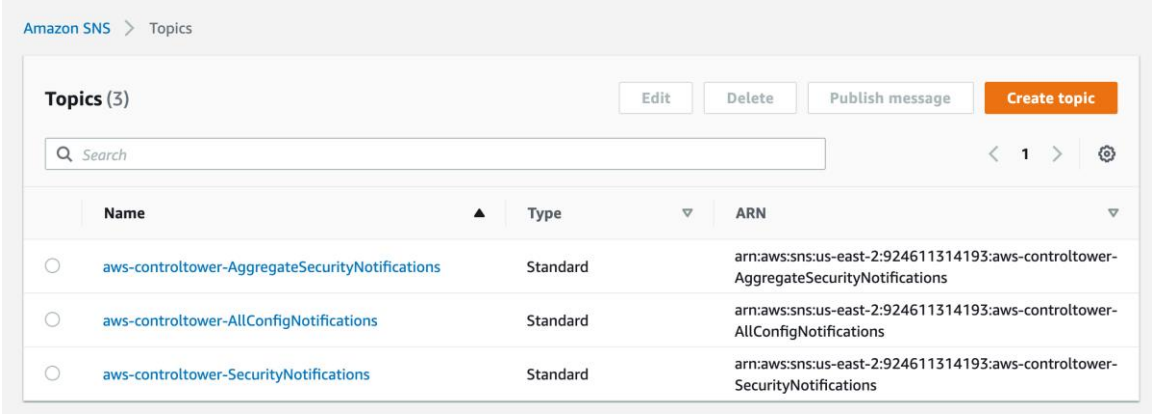
Once you have completed the steps, please validate that the integration is working by logging into the AWS management account and validate that a topic has been created in Amazon SNS. Start by choosing the Simple Notification Service option from the service menu:



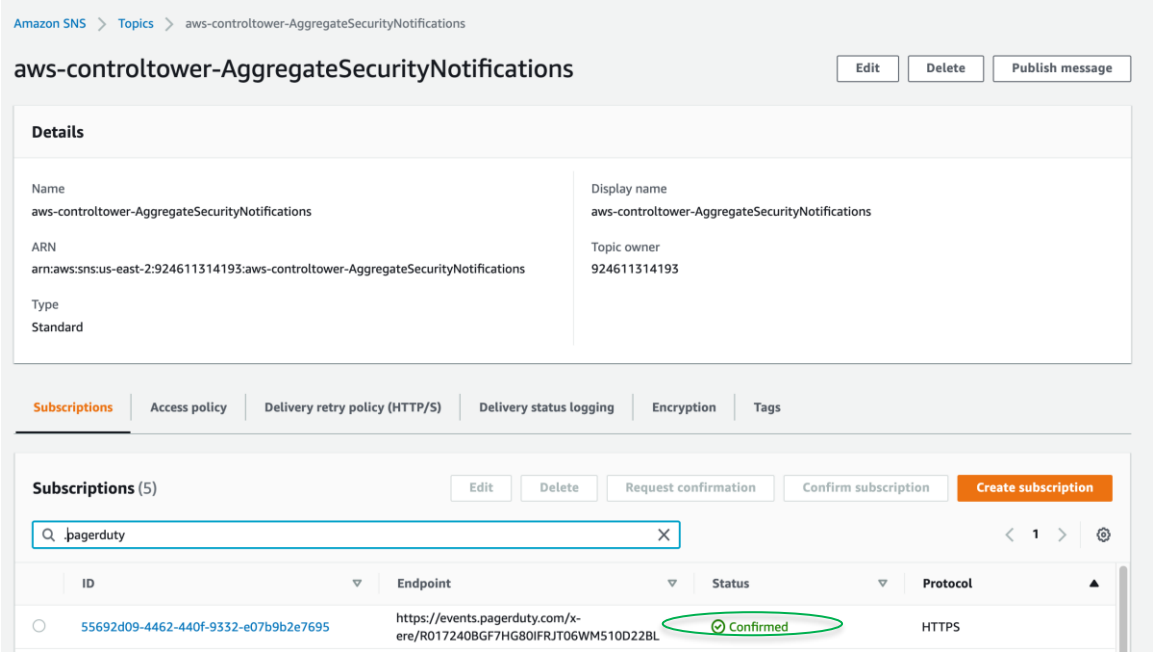
Click on the number below Topics in the Dashboard:



Validate that the topics have been created:



Click on the Topics and ensure status is confirmed :



Best Practices

[PagerDuty User Roles & Permissions]
[PagerDuty Account Subdomains]
[Retrieving Incident Details in PagerDuty]

Solution estimated pricing

Pricing detail is available on [AWS Marketplace]

FAQs

FAQs on [PagerDuty.com]

Additional resources

[Getting Started with PagerDuty on AWS Marketplace]
[Amazon CloudWatch Integration Guide | PagerDuty]
[Amazon EventBridge Integration Guide | PagerDuty]
[Amazon GuardDuty Integration Guide | PagerDuty]
[AWS CloudTrail Integration Guide | PagerDuty]
[AWS Personal Health Dashboard Integration Guide | PagerDuty]
[AWS Security Hub Integration Guide | PagerDuty]

Partner contact information

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