User Guide

AWS Health

AWS Health: User Guide

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What is AWS Health?

AWS Health provides ongoing visibility into your resource performance and the availability of your AWS services and accounts. You can use AWS Health *events* to learn how service and resource changes might affect your applications running on AWS. AWS Health provides relevant and timely information to help you manage events in progress. AWS Health also helps you be aware of and to prepare for planned activities. The service delivers alerts and notifications triggered by changes in the health of AWS resources, so that you get near-instant event visibility and guidance to help accelerate troubleshooting.

All customers can use the AWS Health Dashboard, powered by the AWS Health API. The dashboard requires no setup, and it's ready to use for authenticated AWS users. For more service highlights, see the AWS Health Dashboard detail page.

To understand the basics of AWS Health and how you can use the service, see Are you a first-time AWS Health user?.

For a list of terms that you will see when you use AWS Health, see Concepts for AWS Health.

Notes

- The AWS Health Dashboard is available for all AWS customers at no additional cost.
- All AWS customers can receive AWS Health events through Amazon EventBridge at no additional cost.
- If you have a Business, Enterprise On-Ramp, or Enterprise Support plan, you can use the AWS Health API to integrate with in-house and third-party systems. For more information, see the AWS Health API Reference.
- For more information about available AWS Support plans, see AWS Support.

Are you a first-time AWS Health user?

If you are a first-time user of AWS Health, begin by reading the following sections:

- What is AWS Health? – This section describes the underlying data model, the operations it supports, and the AWS SDKs that you can use to interact with the service.
- Concepts for AWS Health – Learn the basics about AWS Health and terms that you will encounter while you use the service.
- Getting started with your AWS Health Dashboard – Your account health – Learn how to view events and affected entities and perform advanced filtering. This dashboard includes events that are specific to your account and organization.
- AWS Health Dashboard – Service health – If you don't have an AWS account, you can view information about the health and statuses of AWS services for each AWS Region.
- Monitoring AWS Health events with Amazon EventBridge – You can use Amazon EventBridge to receive push notifications from AWS Health.
- Accessing the AWS Health API – The AWS Health API section describes the operations that retrieve information about events and entities.

AWS Health provides a console, called the AWS Health Dashboard, to all customers. You do not need to write code or perform any actions to set up the dashboard.

You can set up an EventBridge rule to receive AWS Health events on Amazon EventBridge. This provides a way to use push notifications to automate AWS Health events management by creating Amazon EventBridge rules to take actions.

If you have a Business, Enterprise On-Ramp, or Enterprise Support plan, you can access the information presented on the dashboard programmatically. You can use the AWS Command Line Interface (AWS CLI) or write code to make requests, by using either the REST API directly or the AWS SDKs.

For more information about using AWS Health events on Amazon EventBridge, see Monitoring AWS Health events with Amazon EventBridge. For more information about using AWS Health with the AWS CLI, see the AWS CLI Reference for AWS Health. For instructions for installing the AWS CLI, see Installing the AWS Command Line Interface.

Concepts for AWS Health

Learn about AWS Health concepts and understand how you can use the service to maintain the health of your applications, services, and resources in your AWS account.

Topics

AWS Health event

AWS Health events, also known as Health events, are notifications that AWS Health sends on behalf of other AWS services. You can use these events to learn about upcoming or scheduled changes that might affect your account. For example, AWS Health can send an event if AWS Identity and Access Management (IAM) plans to deprecate a managed policy or AWS Config plans to deprecate a managed rule. AWS Health also sends events when there are service availability issues in an AWS Region. You can review the event description to understand the issue, identify any affected resources, and take any recommended actions.

There are two types of Health events:

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Account-specific event

Account-specific events are local to either your AWS account or an account in your AWS organization. For example, if there's an issue with an Amazon Elastic Compute Cloud (Amazon EC2) instance type in a Region that you use, AWS Health provides information about the event and the name of the affected resources.

You can find account-specific events from your AWS Health Dashboard, the AWS Health API, or use Amazon CloudWatch Events to receive notifications.

Public event

Public events are reported service events that aren't specific to an account. For example, if there's a service issue for Amazon Simple Storage Service (Amazon S3) in the US East (Ohio) Region, AWS Health provides information about the event, even if you don't use that service or have S3 buckets in that Region. We recommend that you review public notifications before you take action on them.

You can find public events from your AWS Health Dashboard and the AWS Health Dashboard – Service health.

If you have an account, see Getting started with your AWS Health Dashboard – Your account health.

If you don't have an account, see AWS Health Dashboard – Service health.

AWS Health Dashboard

If you have an AWS account, your AWS Health Dashboard shows both *public* events and *account-specific* events.

We recommend that you use your AWS Health Dashboard to learn about events that provide general awareness, such as an upcoming maintenance issue for a service in a Region. You can also use the AWS Health Dashboard to learn about events that might affect you directly, such as a deprecated resource in your account.

You can sign in to the AWS Management Console to view your AWS Health Dashboard at https://health.aws.amazon.com/health/home.

For more information, see Getting started with your AWS Health Dashboard – Your account health.

AWS Health Dashboard – Service health

If you don't have an account, you can use the AWS Health Dashboard – Service health at https://health.aws.amazon.com/health/status to view public events. Public events are reported service issues for AWS that provide information about service availability. This website only shows public events, which aren't specific to any account. You don't need to sign in or have an account to view this page.

For more information, see AWS Health Dashboard – Service health.

Event type code

The event type codes shown in a Health event include the affected service and the type of event. For example, if you receive a Health event that has the `AWS_EC2_SYSTEM_MAINTENANCE_EVENT` event type code, this means that the service is scheduling a maintenance event that might affect you. Use this information to plan ahead or take action for your account.

Event type categories

All Health events have an associated event type category. For some events, the event type category might appear in the event type code, such as the `AWS_RDS_MAINTENANCE_SCHEDULED` code. In this example, the category is *scheduled*. You can use this information to understand event categories at a high level.

We recommend that you monitor all event type categories. Note that each category appears for different types of events. You can also use the DescribeEventTypes API operation to find the event type category.

Account notification

These events provide information about the administration or security of your accounts and services. These events might be informative, or they might require urgent action from you. We recommend that you pay attention for these types of events and review all recommended actions.

The following are example event type codes for account notifications:

- `AWS_S3_OPEN_ACCESS_BUCKET_NOTIFICATION` – You have an Amazon S3 bucket that might allow public access.

- `AWS_BILLING_SUSPENSION_NOTICE` – Your account has outstanding charges and has been suspended, or you deactivated your account.
- `AWS_WORKSPACES_OPERATIONAL_NOTIFICATION` – There’s a service issue for Amazon WorkSpaces.

Issue

These events are unexpected events that affect AWS services or resources. Common events in this category include communications about operational issues that are causing service degradation, or localized resource-level issues for your awareness.

The following are example event type codes for issues:

- `AWS_EC2_OPERATIONAL_ISSUE` – An operational issue for a service, such as delays in using a service.
- `AWS_EC2_API_ISSUE` – An operational issue for a service's API, such as increased latency for an API operation.
- `AWS_EBS_VOLUME_ATTACHMENT_ISSUE` – A localized resource-level issue that might affect your Amazon Elastic Block Store (Amazon EBS) resources.
- `AWS_ABUSE_PII_CONTENT_REMOVAL_REPORT` – This event means that your account might be suspended if you don't take action.

Scheduled change

These events provide information about upcoming changes to your services and resources. These events include planned lifecycle events such as end-of-support notifications and auto-upgrades for different versions. Some events might recommend that you take action to avoid service disruptions, while others will occur automatically without any action on your part. Your resource might be temporarily unavailable during the scheduled change activity. All events in this category are account-specific events.

The following are example event type codes for scheduled changes:

- `AWS_EC2_INSTANCE_RETIREMENT_SCHEDULED` – An Amazon EC2 instance requires a reboot.
- `AWS_SAGEMAKER_SCHEDULED_MAINTENANCE` – SageMaker requires a maintenance event, such as fixing a service issue.
- `AWS_RDS_PLANNED_LIFECYCLE_EVENT` – Amazon RDS is scheduling a planned lifecycle event, such as an end-of-support event for one of its versions, which requires customer action.

> **Tip**
>
> If you use the AWS Health API or the AWS Command Line Interface (AWS CLI) to return event details, the `Event` object contains the `eventScopeCode` field with the `ACCOUNT_SPECIFIC` value. For more information, see the AWS Health API Reference.

Event status

The event status tells you if the Health event is open, closed, or upcoming. You can view Health events in the AWS Health Dashboard or the AWS Health API for up to 90 days.

Affected entities

Affected entities are AWS resources that might be affected by the event. For example, if you receive a scheduled event for Amazon EC2 maintenance for a specific instance type that you're using in your account, you can use the Health event to determine the ID of the affected instances. Use this information to address any potential service issue, such as creating or deprecating resources.

AWS Health events on Amazon EventBridge

You can setup Amazon EventBridge rules for your accounts to automate actions after the appropriate AWS Health event is received by an account. These can be general actions, such as sending all planned lifecycle event messages to a chat interface. Or, they can be specific actions, such as triggering a workflow in an IT service management tool.

For more information, see Monitoring AWS Health events with Amazon EventBridge.

AWS Health API

You can use the AWS Health API to programmatically access the information that appears in the AWS Health Dashboard, such as the following:

- Get information about events that might affect your AWS services and resources
- Enable or disable the organizational view feature for your AWS organization
- Filter your events by specific services, event type categories, and event type codes

For more information, see the AWS Health API Reference.

> **Note**
>
> You must have a Business, Enterprise On-Ramp, or Enterprise Support plan from AWS Support to use the AWS Health API. If you call the AWS Health API from an account that doesn't have a Business, Enterprise On-Ramp, or Enterprise Support plan, you receive a `SubscriptionRequiredException` error.

Organizational view

You can use this feature to aggregate all health events for AWS accounts in your AWS Organizations into a single view in the AWS Health Dashboard. You can then sign in to the management account of your organization or use the AWS Health API to view all events that might affect the different accounts and resources. You can enable this feature from the AWS Health console or API. For more information, see Aggregating AWS Health events across accounts with organizational view.

AWS Health Dashboard – Service health

You can use the AWS Health Dashboard – Service health to view the health of all AWS services. This page shows reported service events for services across AWS Regions. You don't need to sign in or have an AWS account to access the AWS Health Dashboard – Service health page.

> **Tip**
>
> This website only shows *public* events, which are not specific to an AWS account. If you already have an account, we recommend that you sign in to view your AWS Health Dashboard and stay informed about events that can affect your account and services. For more information, see Getting started with your AWS Health Dashboard – Your account health.

To view the AWS Health Dashboard – Service health

1. Navigate to the https://health.aws.amazon.com/health/status page.

   > **Note**
   >
   > If you are already signed in to your AWS account, page, you will be redirected to the **AWS Health Dashboard – Your account health** page.

2. Under **Service health**, choose **Open and recent issues** to view recently reported events. You can view the following information about the event:

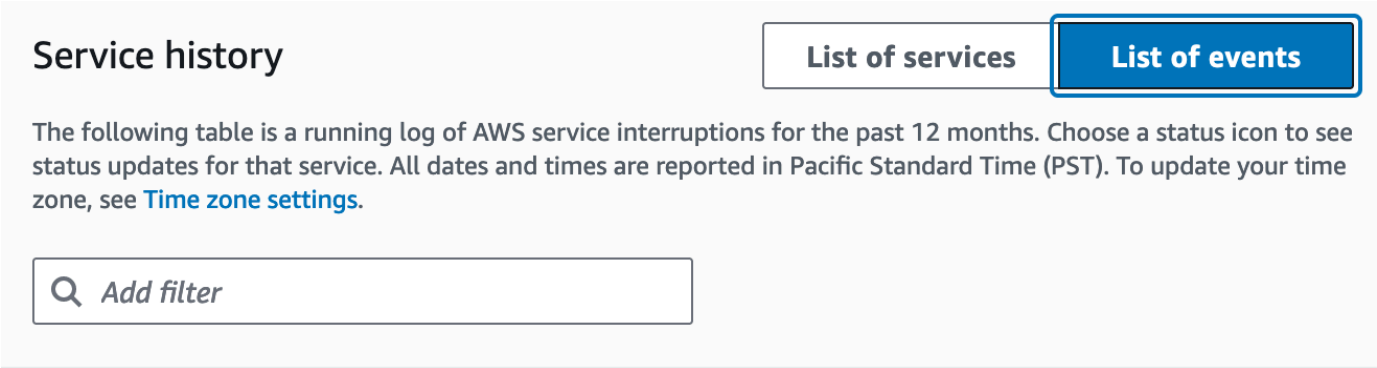
   - The event name and affected Region. For example, **Operational issue – Amazon Elastic Compute Cloud (N. Virginia)**
   - The service name
   - The event's severity, such as **Informational** or **Degradation**
   - A timeline of recent updates for the event
   - A list of AWS services that are also affected by this event

> **Note**
>
> You can view the events in your local time zone or in UTC. For more information, see Time zone settings.

3. (Optional) Next to the event, choose **RSS** to subscribe to an RSS feed for this event. You will receive notifications about this specific service in the specified AWS Region.
4. Choose **Service history** to view the **Service history** table. This table shows all AWS service interruptions for the last 12 months.

> **Tip**
>
> You can filter by **Service**, **AWS Region**, and date.

5. Next to an ongoing service event, choose the status icon ( ) to view more information about the event.
6. (Optional) To view this as a list of historical events, choose the list of events button. Choose any event in the event column to view more information about that specific event in the pop-up side-panel.



> **Note**
>
> Selecting any public event after September 2023 will populate the URL in the browser with a link to that public AWS Health event. After you select this link, you navigate to the list of events view with that event pop-up.

7. (Optional) Choose **RSS** to subscribe to an RSS feed. You will receive notifications about this specific service in the specified AWS Region.
8. (Optional) You can view the events in your local time zone or UTC. For more information, see Time zone settings.
9. (Optional) If you have an account, choose **Open your account health** to sign in. After you sign in, you can view events that are specific to your account. For more information, see Getting started with your AWS Health Dashboard – Your account health.

Planned lifecycle events for AWS Health

Learn about planned lifecycle events for AWS Health.

Topics

What are planned lifecycle events?

AWS Health communicates important changes that can affect the availability of your applications. In the AWS shared responsibility model, AWS takes action to keep the underlying hardware and infrastructure that supports your resources up to date and secure. However, some changes require customer action or coordination in order to avoid impact to your applications. AWS Health notifies you in advance of important changes such as:

- Open source software end of support - Some AWS services run open source versions of software. If the open source community ends support for software versions, then AWS informs you when you need to take action to upgrade and avoid impact to your applications.
  - Amazon RDS for MySQL engine version end of support
  - Amazon EKS Kubernetes version end of support
- Changes that affect AWS-owned resources that might require your action.
  - Amazon RDS Certificate Authority certificates expiration.
  - Amazon WorkDocs Companion is reaching end of life and is no longer available.

> **Note**
>
> All notifications that fit this criteria will be reported through AWS Health as Planned Lifecycle Events.

- **Dynamic resource burndown and improved metadata**: From the time you receive the notification through the lifespan of the AWS Health event, your affected resources are associated

with the AWS Health event as affected entities with a specific entity status. Affected resources are specified in ARN format, where applicable. If your affected resource(s) require customer action, then they are listed with a “PENDING” status. If your affected resource(s) had the requisite action performed or the resources were deleted, then the status is updated to “RESOLVED”.

> **Note**
>
> - Resource state updates are performed asynchronously and periodically and can have a delay of up to 72 hours in rare occasions.
> - In the exceptions where dynamic updates are not provided, rather than resources having a “PENDING” or “RESOLVED” status, resources will not be assigned any status.
> - Resource status updates are not supported in the AWS GovCloud (US) and China Regions.

What should I expect when I receive a planned lifecycle event notification?

The AWS Health experience for planned lifecycle events helps your teams learn about upcoming lifecycle changes and track action completion.

Type category: Scheduled change

Event type code: AWS_{SERVICE}_PLANNED_LIFECYCLE_EVENT

Event start time: Event start time is the soonest date at which your resources are affected by the change.

Event end time: Event end time is the date that the change finishes across all AWS resources. Note that end time is not always specified. It is important to treat the start time as the change date.

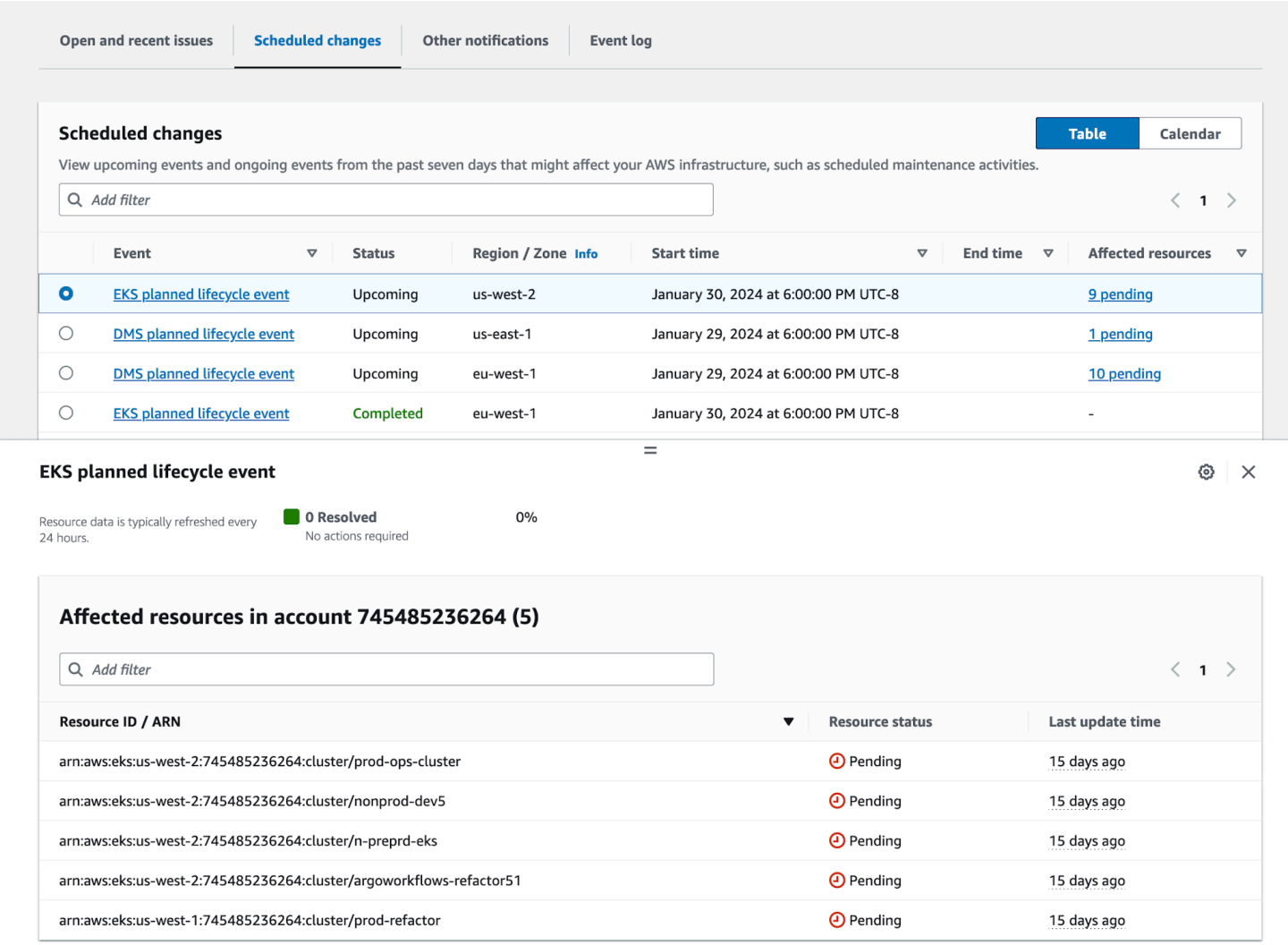
> **Note**
>
> Organizations can expect to receive a single event ARN for every planned lifecycle event grouped by Region where there are affected resources. But they might receive multiple ARNs if the organization has a large number of affected AWS accounts or resources.

Early visibility into planned lifecycle events: Planned lifecycle events are designed to have a minimum lead time of 180 days for major versions/changes and 90 days for minor versions/changes, where possible.

Dynamic resource burndown and improved metadata: From the time you receive the notification through the lifespan of the AWS Health event, your affected resources are associated with the AWS Health event as affected entities with a specific entity status. Affected resources are specified in ARN format, where applicable. If your affected resource(s) require customer action, then they are listed with a “PENDING” status. If your affected resource(s) had the requisite action performed or the resources were deleted, then the status is updated to “RESOLVED”.

Note

- AWS Health notifications provide status updates over time where possible, except for the AWS GovCloud (US) and China Regions.
- Resource state updates are performed asynchronously and periodically and can have a delay of up to 72 hours in rare occasions.



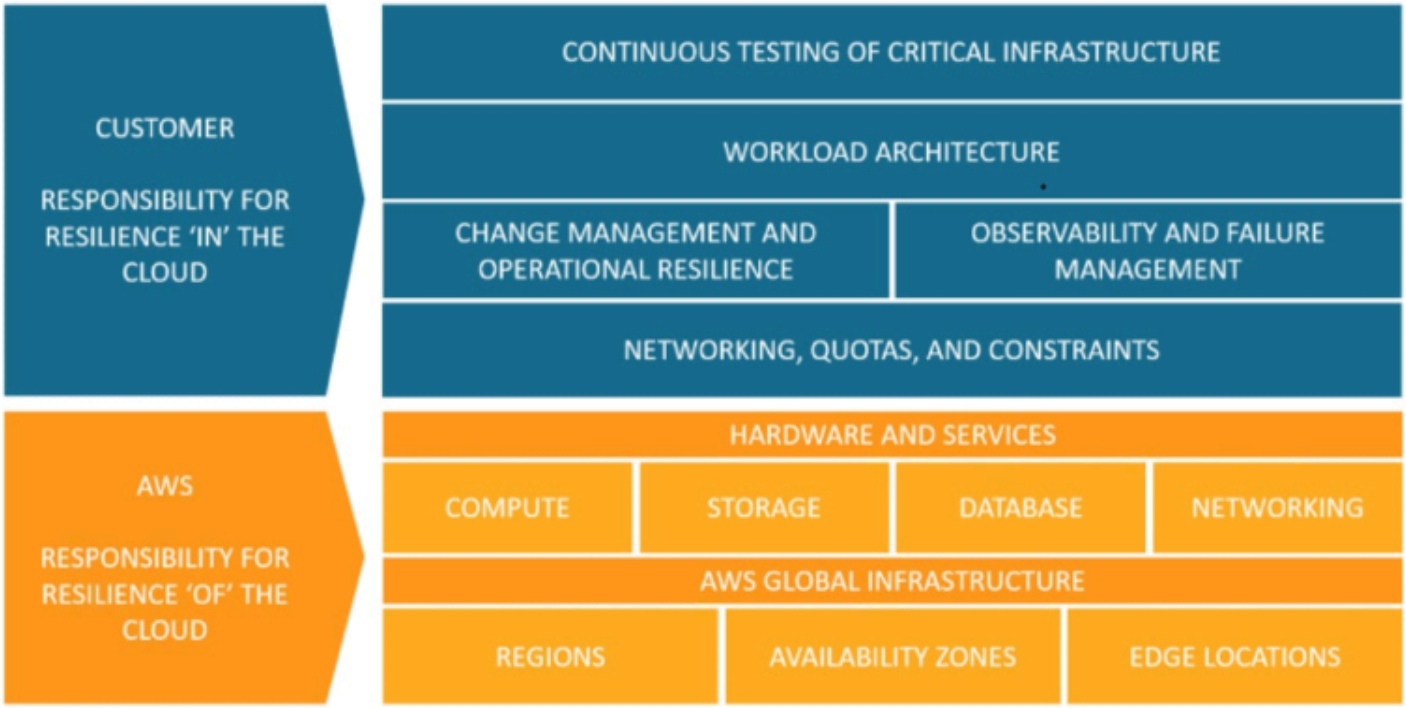
After the planned event date passes:

1. If applicable, the service might implement the described change to your resource any time after the start date of the event.
2. If you resolve all resources prior to the end of support date, then your AWS Health event changes to the status "Closed".
3. If you have outstanding resources after the date that aren't resolved, then the AWS Health event remains open for 90 days after the start or end date. Then the event is deleted.

Shared responsibility model for resilience

Security and compliance are shared responsibilities between AWS and the customer. Depending on the services deployed, this shared model can help relieve the customer’s operational burden.

This is because AWS operates, manages, and controls the components from the host operating system and virtualization layer down to the physical security of the facilities in which the service operates. The customer assumes responsibility and management of the guest operating system (including updates and security patches) and other associated application software, in addition to the configuration of the AWS-provided security group firewall. For more information, see Shared responsibility model.



Accessing planned lifecycle events

Planned lifecycle events can be accessed and monitored using several channels:

- Use Amazon EventBridge
- Use the AWS Health dashboard
  - Calendar view
  - Affected resources view
- Use the AWS Health API

Getting started with your AWS Health Dashboard – Your account health

You can use your AWS Health Dashboard to learn about AWS Health events. These events can affect your AWS services or AWS account. After you sign in to your account, the AWS Health Dashboard shows information in the following ways:

- **Your account events** – This page shows events that are specific to your account. You can view open, recent, and scheduled changes. You can also view notifications and an event log that shows all events from the past 90 days.
- **Your organization events** – This page shows events that are specific to your organization in AWS Organizations. You can view open, recent, and scheduled changes for your organization. You can also view notifications, as well as an event log that shows all organization events from the past 90 days.

> **Note**
>
> If you don't have an AWS account, you can use the AWS Health Dashboard – Service health to learn about general service availability.
> If you have an account, we recommend that you sign in to your AWS Health Dashboard to get deeper insights into events and upcoming changes that might affect your services and resources.

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Viewing your account events in the AWS Health Dashboard

You can sign in to your account to get personalized events and recommendations.

To view account events in your AWS Health Dashboard

1. Open your AWS Health Dashboard at https://health.aws.amazon.com/health/home.
2. In the navigation pane, for **Your account health**, you can choose the following options:
   a. **Open and recent issues** – View recently opened and closed events.
   b. **Scheduled changes** – View upcoming events that might affect your services and resources.
   c. **Other notifications** – View all other notifications and ongoing events from the past seven days that might affect your account.
   d. **Event log** – View all events from the past 90 days.

Open and recent issues

Use the **Open and recent issues** tab to view all ongoing events from the past seven days that might affect your account.

When you choose an event from the dashboard, the **Details** pane appears with information about the event and a list of affected resources. For more information, see Event details.

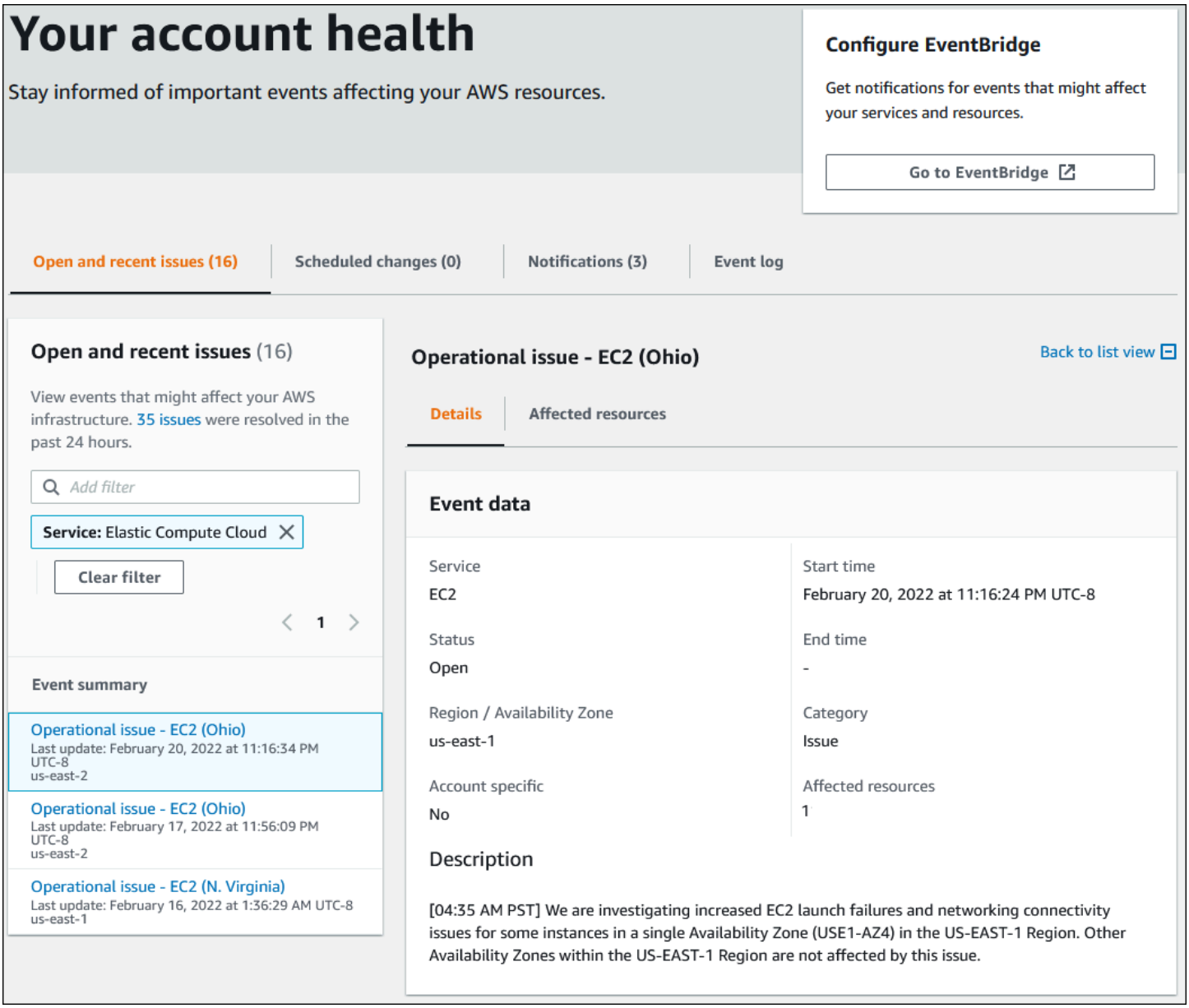
You can filter the events that appear in any tab by choosing options from the filter list. For example, you can narrow the results by Availability Zone, Region, event end time or last update time, AWS service, and so on.

To see all the events, rather than the recent ones that appear in the dashboard, choose the **Event log** tab.

> **Note**
>
> Currently, you can't delete notifications for events that appear in your AWS Health Dashboard. After an AWS service resolves an event, the notification is removed from your dashboard view.

Example : Operational issue event for Amazon Elastic Compute Cloud (Amazon EC2)

The following image shows an event for launch failures and connectivity issues for Amazon EC2 instances.



Scheduled changes

Use the **Scheduled changes** tab to view upcoming events that might affect your account. These events can include scheduled maintenance activities for services and planned lifecycle events that require action to resolve. To help you plan for these activities, a calendar view is provided so that you can map these scheduled changes into a monthly calendar. Filters are available. For more information about planned lifecycle events, see Planned lifecycle events for AWS Health.

Other notifications

Use the **Notifications** tab to view all other notifications and ongoing events from the past seven days that might affect your account. This can include events, such as certificate rotations, billing notifications, and security vulnerabilities.

Event log

Use the **Event log** tab to view all AWS Health events. The log table includes additional columns so that you can filter by **Status** and **Start time**.

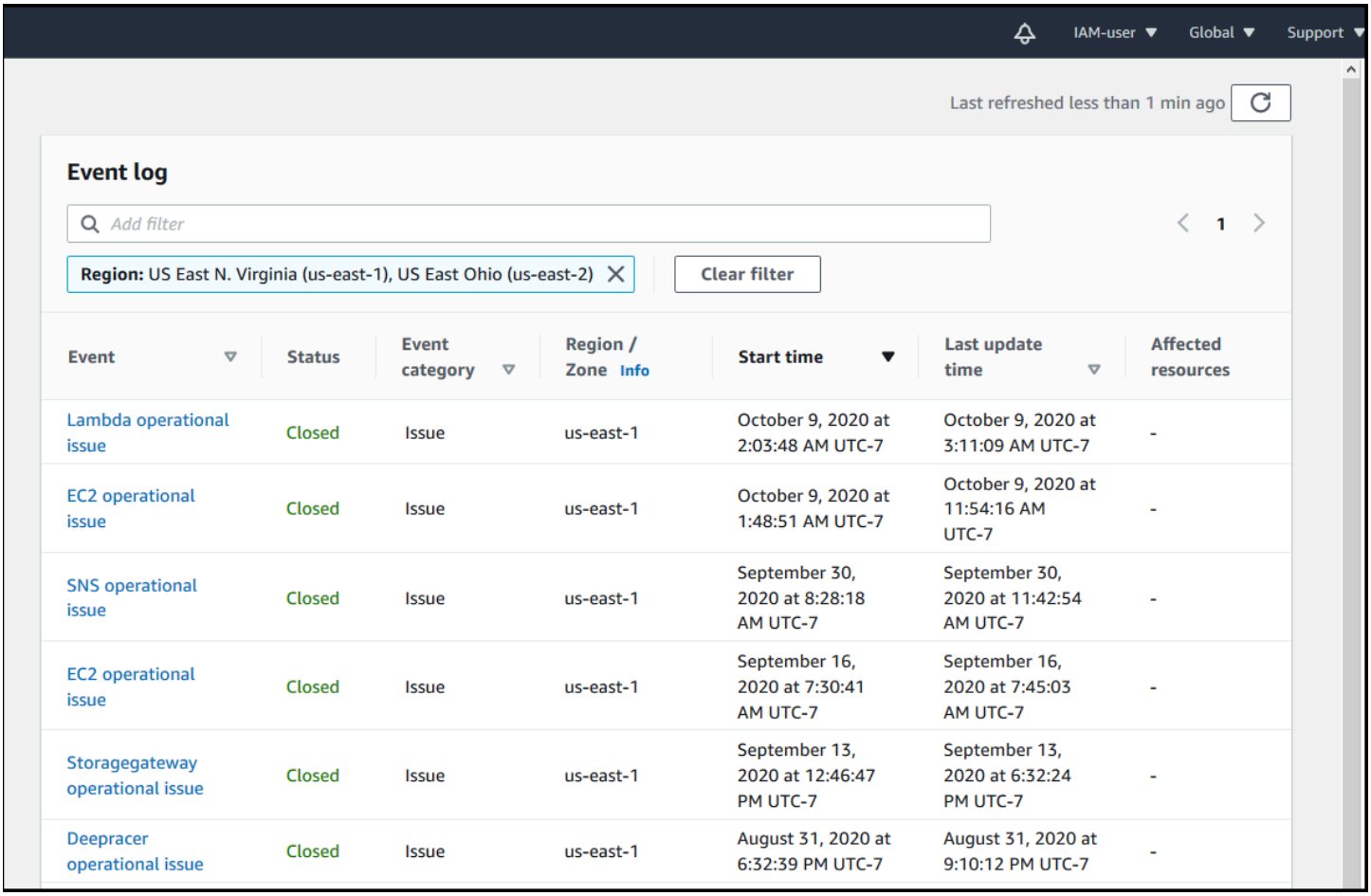
When you choose an event in the **Event log** table, the **Details** pane appears with information about the event and the list of affected resources. For more information, see Event details.

You can choose the following filter options to narrow your results:

- Availability Zone
- End time
- Event
- Event ARN
- Event category
- Last update time
- Region
- Resource ID / ARN
- Service
- Start time
- Status

Example : Event log

The following image shows recent events for the US East (N. Virginia) and US East (Ohio) Regions.



Event details

When you choose an event, two tabs appear about the event. The **Details** tab shows the following information:

- Service
- Status
- Region / Availability Zone
- Whether or not the event is account specific
- Start and end time
- Category
- Number of affected resources

- Description and a timeline of updates about the event

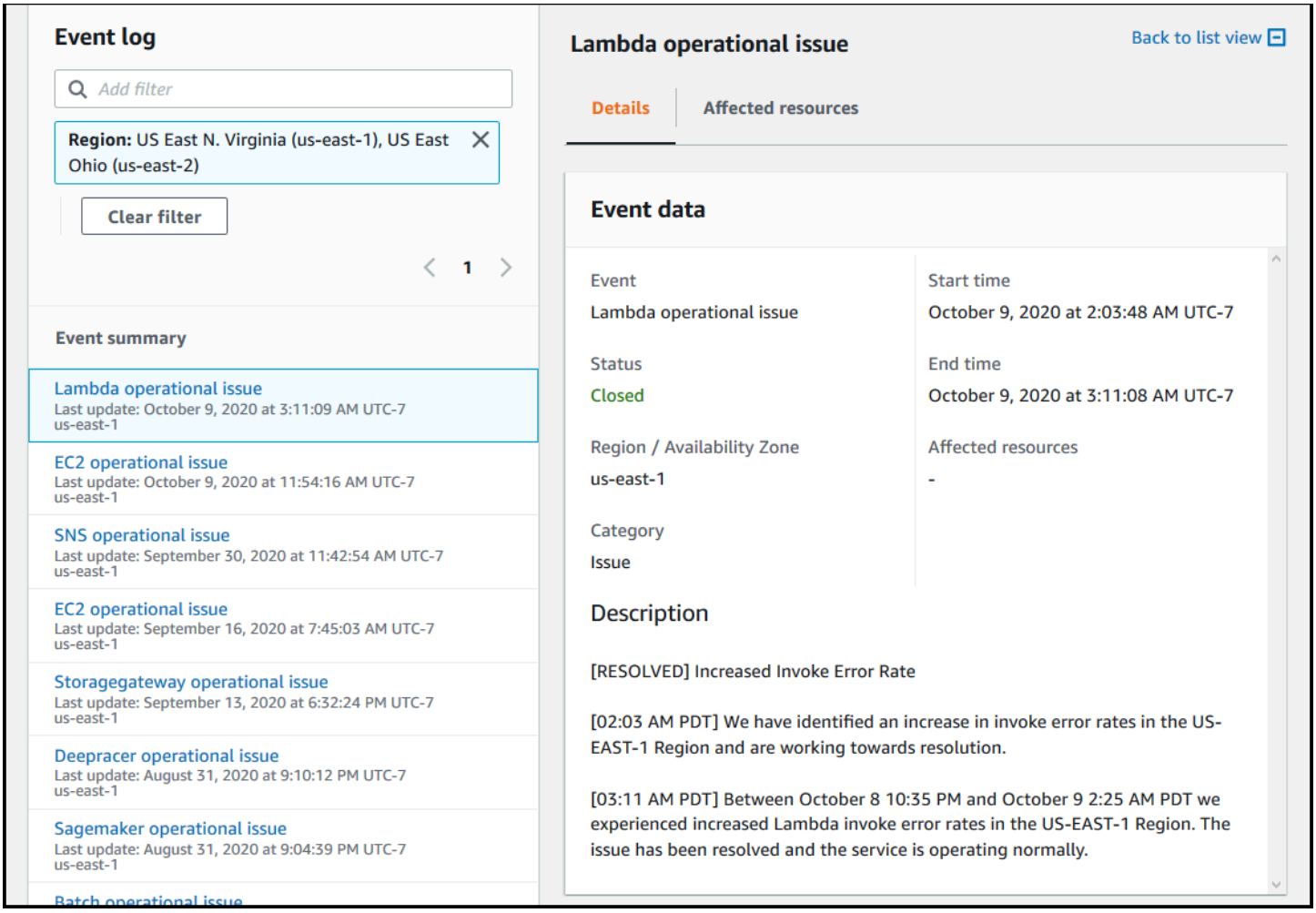
The **Affected resources** tab shows the following information about any AWS resources that are affected by the event:

- The resource ID (for example, an Amazon EBS volume ID such as `vol-a1b2c34f`) or Amazon Resource Name (ARN), if available or relevant.
- For planned lifecycle events, this affected resources list also contains the latest status of the resources (**Pending**, **Unknown**, or **Resolved**. This list usually refreshes once every 24 hours.

You can filter the items that appear in the resources. You can narrow your results by resource ID or ARN.

Example : AWS Health event for AWS Lambda

The following screenshot shows an example event for Lambda.



Events types

There are two types of AWS Health events:

- *Public events* are service events that aren't specific to an account. For example, if there is an issue with Amazon EC2 in an AWS Region, AWS Health provides information about the event, even if you don't use services or resources in that Region.
- *Account-specific* events are specific to your account or an account in your organization. For example, if there's an issue with an Amazon EC2 instance in a Region that you use, AWS Health provides information about the event and the list of affected Amazon EC2 instances.

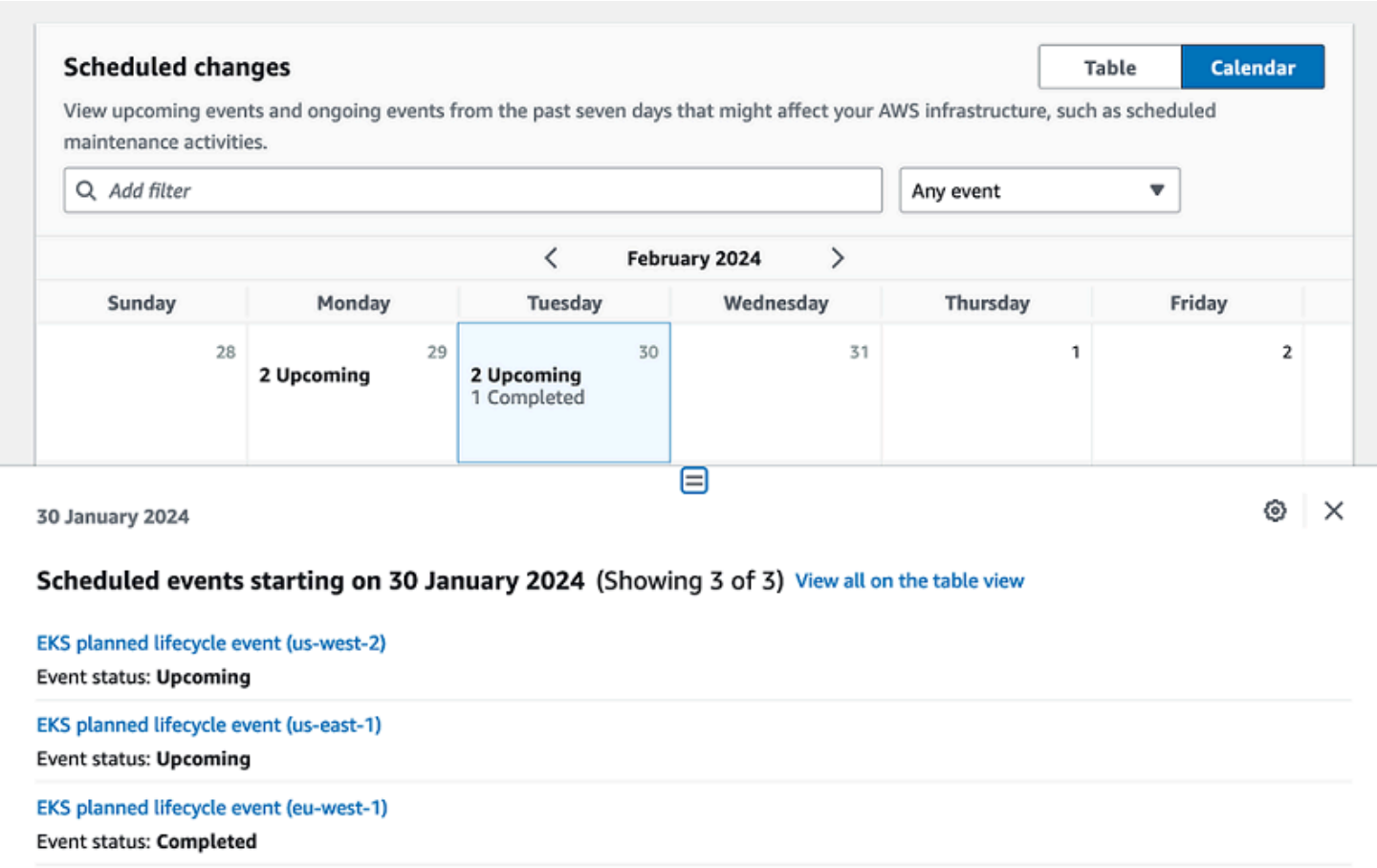
You can use the following options to identify if an event is public or account-specific:

- In the AWS Health Dashboard, choose the **Affected resources** tab for an event. Events with resources are specific to your account. Events without resources are public and are not specific to your account. For more information, see Getting started with your AWS Health Dashboard – Your account health.
- Use the AWS Health API to return the `eventScopeCode` parameter. Events can have the `PUBLIC`, `ACCOUNT_SPECIFIC`, or `NONE` value. For more information, see the DescribeEventDetails operation in the *AWS Health API Reference*.

Calendar view

Calendar view is available in the **scheduled changes** tab to project AWS Health events into a monthly calendar. This view allows you to see scheduled changes up to 3 months into the past and a year into the future.

AWS Health events are displayed by date. Select a date to display a side panel that contains further details on the AWS Health event. **Upcoming** and **ongoing** events are displayed in black. **Completed** events are displayed in grey. If there are more than two events in a date, only the number of black and grey events are shown. Select a date to display a list of AWS Health events in the side panel. You can select an event in the side panel to display information about the event. The side panel has breadcrumbs to navigate to an earlier view.



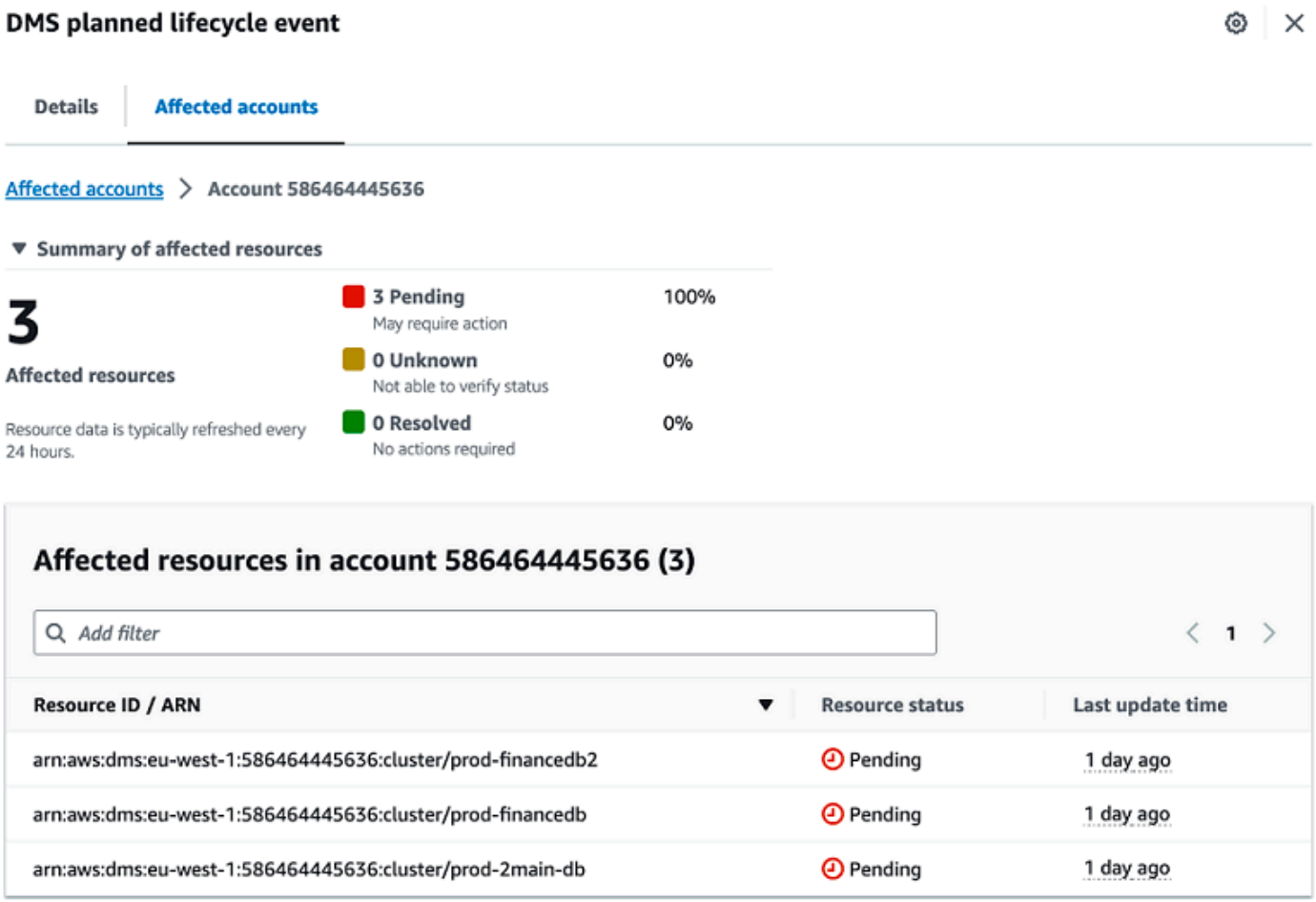
Affected resources view

For planned lifecycle events, AWS Health events typically provide daily updates of affected resources' status. To view the status, select the AWS Health event. The status displays in the **affected resources** tab in the side panel.

Account-level AWS Health events display a summary of affected resources statuses at the top of the **affected resources** tab. A list of affected resources is displayed in a table along with the corresponding status. Planned lifecycle events are an example of event types that use the **resource status** field. To learn more about planned lifecycle events, see Planned lifecycle events for AWS Health.

If accessing the organization view, AWS Health events display a summary of the status of all affected resources for all included accounts. Following the summary is a list of affected accounts and the number of pending resources for that account. Select the account number or the number of pending resources to display the account view summary. The account view summary has

breadcrumbs to navigate back to the organizational list of affected accounts. A summary of affected resource statuses is displayed at the top of the split panel.



Time zone settings

You can view the events in the AWS Health Dashboard in your local time zone or in UTC. If you change the time zone in your AWS Health Dashboard, all timestamps in the dashboard and public events update to the time zone that you specify.

To update your time zone settings

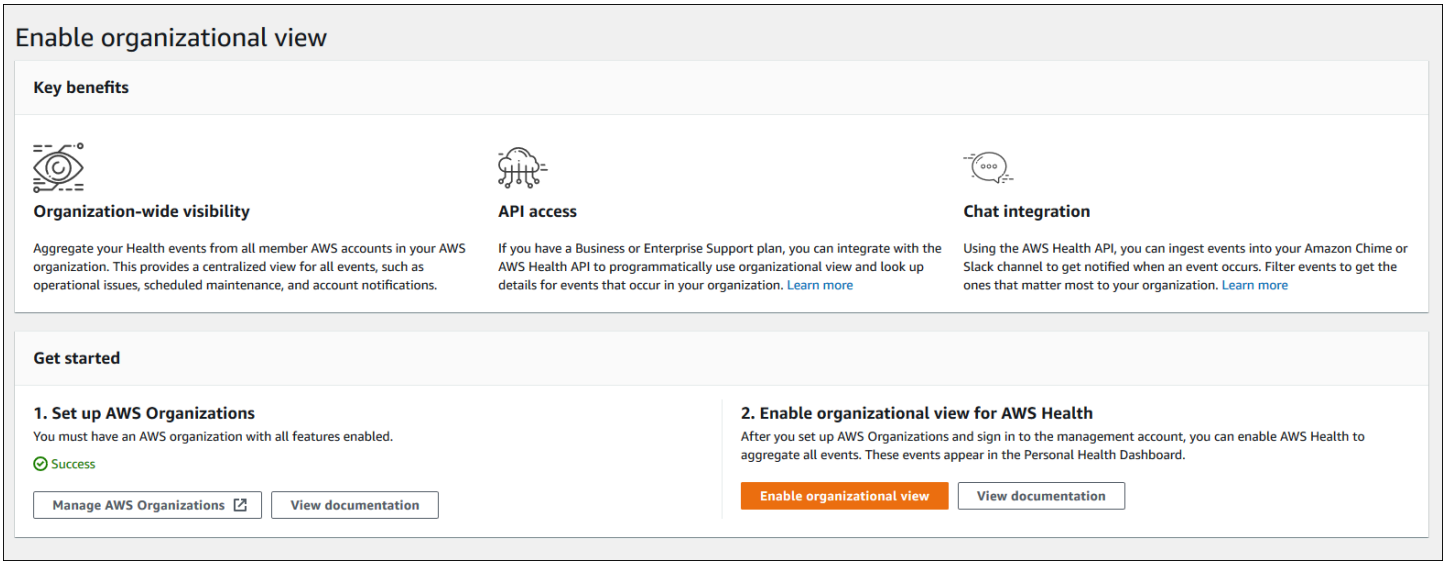
1. Open your AWS Health Dashboard at https://health.aws.amazon.com/health/home.
2. At the bottom of the page, choose **Cookie preferences**.
3. Select **Allowed** for Functional cookies. Then choose **Save preferences**.

4. In the navigation pane of your AWS Health Dashboard, choose **Time zone settings**.
5. Select a time zone for your AWS Health Dashboard sessions. Then choose **Save changes**.

Your organization health

AWS Health integrates with AWS Organizations so that you can view events for all accounts that are part of your organization. This provides you a centralized view for events that appear in your organization. You can use these events to monitor for changes in your resources, services, and applications.

For more information, see Aggregating AWS Health events across accounts with organizational view.



Configure Amazon EventBridge

Use EventBridge to detect and react to changes for AWS Health events. You can monitor specific AWS Health events that occur in your account, and then set up rules so that AWS Health notifies you, or you take action, when events change.

Use EventBridge with AWS Health

1. Open your AWS Health Dashboard at https://health.aws.amazon.com/health/home.
2. To navigate to the EventBridge console to create a rule, do one of the following:
   - From the navigation pane, under **Health Integrations**, choose **Amazon EventBridge**.

- Under **Configure EventBridge**, choose **Go to EventBridge**.

3. Follow this procedure to create rules and monitor for events. See Monitoring AWS Health events with Amazon EventBridge.

AWS Health Aware

You can get started with the AWS Health API by using AWS Health Aware – a low-cost application that you can use to sends health events to Slack, JIRA, ServiceNow and more. No-charge live webinars available now.

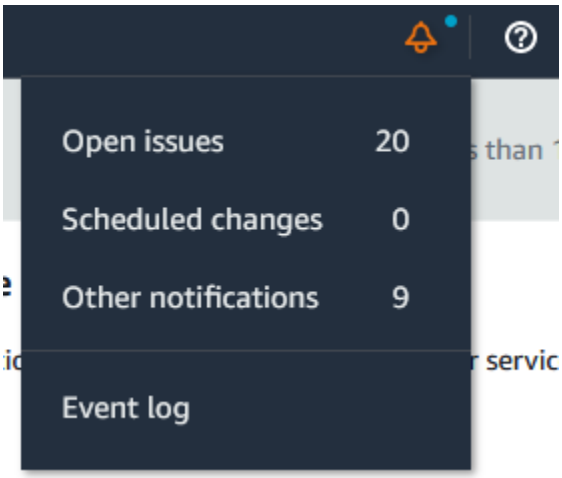
Alerts for AWS Health events

Your AWS Health Dashboard has a bell icon in the console navigation bar with an alert menu. This feature displays the number of recent AWS Health events that appear on the dashboard in each category. This bell icon appears on several AWS consoles, such as those for Amazon EC2, Amazon Relational Database Service (Amazon RDS), AWS Identity and Access Management (IAM), and AWS Trusted Advisor.

Choose the bell icon to see if recent events affect your account. You can then choose an event to navigate to your AWS Health Dashboard for more information.

Example : Open events

The following image shows open and notification events for an account.



Configure AWS User Notifications for AWS Health

AWS Health provides information about service operations, such as operational issues, planned maintenance, and planned software lifecycle events. For comprehensive visibility into AWS Health event details, such as affected resource IDs, current status (open or closed), and resource status, it's a best practice to use AWS Health endpoints, such as the AWS Health API, the aws.health source in Amazon EventBridge, and the AWS Health Dashboard. These endpoints provide the most detailed and real-time information about ongoing events and changes that might affect your workloads.

AWS User Notifications notifies you through additional UX channels (email, chat, or push notifications to the AWS Console Mobile Application). AWS Health event notifications don't contain as much detailed data as the endpoints listed above; however, they provide a simple and effective way to notify stakeholders of issues and changes. Based on rules that you create, User Notifications creates and sends a notification when an event matches the values that you specify in a rule. You can select which UX delivery channels a notification is sent to, and setup aggregation to reduce the number of notifications generated for specific events. Notifications are also visible in the Console Notifications Center. For example, you can receive chat notifications if you have resources in your AWS account that are scheduled for updates, such as Amazon Elastic Compute Cloud (Amazon EC2) instances.

To learn more about setting up AWS User Notifications, see Getting started with AWS User Notifications.

Accessing the AWS Health API

AWS Health is a RESTful web service that uses HTTPS as a transport and JSON as a message serialization format. Your application code can make requests directly to the AWS Health API. When you use the REST API directly, you must write the necessary code to sign and authenticate your requests. For more information about the AWS Health operations and parameters, see the AWS Health API Reference.

> **Note**
>
> You must have a Business, Enterprise On-Ramp, or Enterprise Support plan from AWS Support to use the AWS Health API. If you call the AWS Health API from an AWS account that doesn't have a Business, Enterprise On-Ramp, or Enterprise Support plan, you receive a `SubscriptionRequiredException` error.

You can use the AWS SDKs to wrap the AWS Health REST API calls, which can simplify your application development. You specify your AWS credentials, and these libraries take care of authentication and request signing for you.

AWS Health also provides a AWS Health Dashboard in the AWS Management Console that you can use to view and search for events and affected entities. See Getting started with your AWS Health Dashboard – Your account health.

Endpoints

The AWS Health API follows a multi-Region application architecture and has two regional endpoints in an active-passive configuration. To support active-passive DNS failover, AWS Health provides a single, global endpoint. You can perform a DNS lookup on the global endpoint to determine the active endpoint and corresponding signing AWS Region. This helps you know which endpoint to use in your code, so that you can get the latest information from AWS Health.

When you make a request to the global endpoint, you must specify your AWS access credentials to the regional endpoint that you target and configure the signing for your Region. Otherwise, your authentication might fail. For more information, see Signing AWS Health API requests.

The following table represents the default configuration.

Description	Signing Region	Endpoint	Protocol
Active	us-east-1	health.us-east-1.amazonaws.com	HTTPS
Passive	us-east-2	health.us-east-2.amazonaws.com	HTTPS
Global	us-east-1 **Note** This is the signing Region of the current active endpoint.	global.health.amazonaws.com	HTTPS

To determine if an endpoint is the *active endpoint*, do a DNS lookup on the *global endpoint* CNAME, and then extract the AWS Region from the resolved name.

Example : DNS lookup on global endpoint

The following command completes a DNS lookup on the global.health.amazonaws.com endpoint. The command then returns the us-east-1 Region endpoint. This output tells you which endpoint you should use for AWS Health.

```
dig global.health.amazonaws.com | grep CNAME
global.health.amazonaws.com. 10 IN CNAME health.us-east-1.amazonaws.com
```

Tip

Both the active and passive endpoints return AWS Health data. However, the latest AWS Health data is only available from the active endpoint. Data from the passive endpoint will be eventually consistent with the active endpoint. We recommend that you restart any workflows when the active endpoint changes.

Using the high availability endpoint demo

In the following code examples, AWS Health uses a DNS lookup against the global endpoint to determine the active regional endpoint and signing Region. Then, the code restarts the workflow if the active endpoint changes.

Topics

Using the Java demo

Prerequisite

You must install Gradle.

To use the Java example

1. Download the AWS Health high availability endpoint demo from GitHub.
2. Navigate to the demo project `high-availability-endpoint/java` directory.
3. In a command line window, enter the following command.

```
gradle build
```

4. Enter the following commands to specify your AWS credentials.

```
export AWS_ACCESS_KEY_ID="AKIAIOSFODNN7EXAMPLE"
export AWS_SECRET_ACCESS_KEY="wJalrXUtnFEMI/K7MDENG/bPxRfiCYEXAMPLEKEY"
export AWS_SESSION_TOKEN="your-aws-token"
```

5. Enter the following command to run the demo.

```
gradle run
```

Example : AWS Health event output

The code example returns the recent AWS Health event in the last seven days in your AWS account. In the following example, the output includes an AWS Health event for the AWS Config service.

```
> Task :run
[main] INFO aws.health.high.availability.endpoint.demo.HighAvailabilityV2Workflow
 - EventDetails(Event=Event(Arn=arn:aws:health:global::event/CONFIG/
AWS_CONFIG_OPERATIONAL_NOTIFICATION/AWS_CONFIG_OPERATIONAL_NOTIFICATION_88a43e8a-
e419-4ca7-9baa-56bcde4dba3,
Service=CONFIG, EventTypeCode=AWS_CONFIG_OPERATIONAL_NOTIFICATION,
 EventTypeCategory=accountNotification, Region=global,
 StartTime=2020-09-11T02:55:49.899Z, LastUpdatedTime=2020-09-11T03:46:31.764Z,
StatusCode=open, EventScopeCode=ACCOUNT_SPECIFIC),
 EventDescription=EventDescription(LatestDescription=As part of our ongoing efforts
 to optimize costs associated with recording changes related to certain ephemeral
 workloads,
AWS Config is scheduled to release an update to relationships modeled within
 ConfigurationItems (CI) for 7 EC2 resource types on August 1, 2021.
Examples of ephemeral workloads include changes to Amazon Elastic Compute Cloud
 (Amazon EC2) Spot Instances, Amazon Elastic MapReduce jobs, and Amazon EC2
 Autoscaling.
This update will optimize CI models for EC2 Instance, SecurityGroup, Network
 Interface, Subnet, VPC, VPN Gateway, and Customer Gateway resource types to record
 direct relationships and deprecate indirect relationships.

A direct relationship is defined as a one-way relationship (A->B) between a
 resource (A) and another resource (B), and is typically derived from the Describe
 API response of resource (A).
An indirect relationship, on the other hand, is a relationship that AWS Config
 infers (B->A), in order to create a bidirectional relationship.
For example, EC2 instance -> Security Group is a direct relationship, since
 security groups are returned as part of the describe API response for an EC2
 instance.
But Security Group -> EC2 instance is an indirect relationship, since EC2 instances
 are not returned when describing an EC2 Security group.

Until now, AWS Config has recorded both direct and indirect relationships. With
 the launch of Advanced queries in March 2019, indirect relationships can easily be
 answered by running Structured Query Language (SQL) queries such as:

SELECT
 resourceId,
 resourceType
WHERE
 resourceType ='AWS::EC2::Instance'
AND
 relationships.resourceId = 'sg-234213'
```

```
By deprecating indirect relationships, we can optimize the information contained
 within a
Configuration Item while reducing AWS Config costs related to relationship
 changes.
This is especially useful in case of ephemeral workloads where there is a high
 volume of configuration changes for EC2 resource types.

Which resource relationships are being removed?

Resource Type: Related Resource Type
1 AWS::EC2::CustomerGateway: AWS::VPN::Connection
2 AWS::EC2::Instance: AWS::EC2::EIP, AWS::EC2::RouteTable
3 AWS::EC2::NetworkInterface: AWS::EC2::EIP, AWS::EC2::RouteTable
4 AWS::EC2::SecurityGroup: AWS::EC2::Instance, AWS::EC2::NetworkInterface
5 AWS::EC2::Subnet: AWS::EC2::Instance, AWS::EC2::NetworkACL,
 AWS::EC2::NetworkInterface, AWS::EC2::RouteTable
6 AWS::EC2::VPC: AWS::EC2::Instance, AWS::EC2::InternetGateway,
 AWS::EC2::NetworkACL, AWS::EC2::NetworkInterface, AWS::EC2::RouteTable,
 AWS::EC2::Subnet, AWS::EC2::VPNGateway, AWS::EC2::SecurityGroup
7 AWS::EC2::VPNGateway: AWS::EC2::RouteTable, AWS::EC2::VPNConnection

Alternate mechanism to retrieve this relationship information:
The SelectResourceConfig API accepts a SQL SELECT command, performs the
 corresponding search, and returns resource configurations matching the properties.
 You can use this API to retrieve the same relationship information.
For example, to retrieve the list of all EC2 Instances related to a particular VPC
 vpc-1234abc, you can use the following query:

SELECT
 resourceId,
 resourceType
WHERE
 resourceType ='AWS::EC2::Instance'
AND
 relationships.resourceId = 'vpc-1234abc'

If you have any questions regarding this deprecation plan, please contact AWS
 Support [1]. Additional sample queries to retrieve the relationship information
 for the resources listed above is provided in [2].

[1] https://aws.amazon.com/support
[2] https://docs.aws.amazon.com/config/latest/developerguide/
examplerelationshipqueries.html),
```

```
EventMetadata={})
```

Java resources

- For more information, see the Interface HealthClient in the *AWS SDK for Java API Reference* and the source code.
- For more information about the library used in this demo for DNS lookups, see the dnsjava in GitHub.

Using the Python demo

Prerequisite

You must install Python 3.

To use the Python example

1. Download the AWS Health high availability endpoint demo from GitHub.
2. Navigate to the demo project `high-availability-endpoint/python` directory.
3. In a command line window, enter the following commands.

```
pip3 install virtualenv
virtualenv -p python3 v-aws-health-env
```

> **Note**
>
> For Python 3.3 and later, you can use the built-in `venv` module to create the virtual environment, instead of installing `virtualenv`. For more information, see venv - Creation of virtual environments on the Python website.
>
> ```
> python3 -m venv v-aws-health-env
> ```

4. Enter the following command to activate the virtual environment.

```
source v-aws-health-env/bin/activate
```

5. Enter the following command to install the dependencies.

```
pip install -r requirements.txt
```

6. Enter the following commands to specify your AWS credentials.

```
export AWS_ACCESS_KEY_ID="AKIAIOSFODNN7EXAMPLE"
export AWS_SECRET_ACCESS_KEY="wJalrXUtnFEMI/K7MDENG/bPxRfiCYEXAMPLEKEY"
export AWS_SESSION_TOKEN="your-aws-token"
```

7. Enter the following command to run the demo.

```
python3 main.py
```

Example : AWS Health event output

The code example returns the recent AWS Health event in the last seven days in your AWS account. The following output returns an AWS Health event for an AWS security notification.

```
INFO:botocore.credentials:Found credentials in environment variables.
INFO:root:Details: {'arn': 'arn:aws:health:global::event/SECURITY/
AWS_SECURITY_NOTIFICATION/AWS_SECURITY_NOTIFICATION_0e35e47e-2247-47c4-
a9a5-876544042721',
'service': 'SECURITY', 'eventTypeCode': 'AWS_SECURITY_NOTIFICATION',
 'eventTypeCategory': 'accountNotification', 'region': 'global', 'startTime':
 datetime.datetime(2020, 8, 19, 23, 30, 42, 476000,
tzinfo=tzlocal()), 'lastUpdatedTime': datetime.datetime(2020, 8, 20, 20, 44, 9,
 547000, tzinfo=tzlocal()), 'statusCode': 'open', 'eventScopeCode': 'PUBLIC'},
 description:
{'latestDescription': 'This is the second notice regarding TLS requirements on FIPS
 endpoints.\n\nWe
are in the process of updating all AWS Federal Information Processing Standard
 (FIPS) endpoints across all AWS regions
to Transport Layer Security (TLS) version 1.2 by March 31, 2021 . In order to avoid
 an interruption in service, we encourage you to act now, by ensuring that you
 connect to AWS FIPS endpoints at a TLS version of 1.2.
If your client applications fail to support TLS 1.2 it will result in connection
 failures when TLS versions below 1.2 are no longer supported.\n\nBetween now and
 March 31, 2021 AWS will remove TLS 1.0 and TLS 1.1 support from each FIPS endpoint
 where no connections below TLS 1.2 are detected over a 30-day period.
After March 31, 2021 we may deploy this change to all AWS FIPS endpoints, even if
 there continue
```

```
to be customer connections detected at TLS versions below 1.2. \n\nWe will provide
 additional updates and reminders on the AWS Security Blog, with a 'TLS' tag [1].
 If you need further guidance or assistance, please contact AWS Support [2] or your
 Technical Account Manager (TAM).
Additional information is below.\n\nHow can I identify clients that are connecting
 with TLS
1.0/1.1?\nFor customers using S3 [3], Cloudfront [4] or Application Load Balancer
 [5] you can use
your access logs to view the TLS connection information for these services, and
 identify client
connections that are not at TLS 1.2. If you are using the AWS Developer Tools on
 your clients,
you can find information on how to properly configure your client's TLS versions
 by visiting Tools to Build on AWS [7] or our associated AWS Security Blog has a
 link for each unique code language [7].\n\nWhat is Transport Layer Security (TLS)?
\nTransport Layer Security (TLS Protocols) are cryptographic protocols designed to
 provide secure communication across a computer network
[6].\n\nWhat are AWS FIPS endpoints? \nAll AWS services offer Transport Layer
 Security (TLS) 1.2 encrypted endpoints that can be used for all API calls. Some
 AWS services also offer FIPS 140-2 endpoints [9] for customers that require use
 of FIPS validated cryptographic libraries. \n\n[1] https://aws.amazon.com/blogs/
security/tag/tls/\n[2] https://aws.amazon.com/support\n[3]
https://docs.aws.amazon.com/AmazonS3/latest/dev/LogFormat.html\n[4] https://
docs.aws.amazon.com/AmazonCloudFront/latest/DeveloperGuide/AccessLogs.html\n[5]
 https://docs.aws.amazon.com/elasticloadbalancing/latest/application/load-balancer-
access-logs.html\n[6] https://aws.amazon.com/tools\n[7] https://aws.amazon.com/
blogs/security/tls-1-2-to-become-the-minimum-for-all-aws-fips-endpoints\n[8]
https://en.wikipedia.org/wiki/Transport_Layer_Security\n[9] https://aws.amazon.com/
compliance/fips'}
```

8. When you're finished, enter the following command to deactivate the virtual machine.

```
deactivate
```

Python resources

- For more information about the `Health. Client`, see the AWS SDK for Python (Boto3) API Reference.
- For more information about the library used in this demo for DNS lookups, see the dnspython toolkit and the source code on GitHub.

Signing AWS Health API requests

When you use the AWS SDKs or the AWS Command Line Interface (AWS CLI) to make requests to AWS, these tools automatically sign the requests for you with the access key that you specify when you configure the tools. For example, if you use the AWS SDK for Java for the previous high availability endpoint demo, you don't need to sign requests yourself.

Java code examples

For more examples on how to use the AWS Health API with the AWS SDK for Java, see this example code.

When you make requests, we strongly recommend that you don't use your AWS root account credentials for regular access to AWS Health. You can use the credentials for an IAM user. For more information, see Lock Away Your AWS Account Root User Access Keys in the *IAM User Guide*.

If you don’t use the AWS SDKs or the AWS CLI, then you must sign your requests yourself. We recommend that you use AWS Signature Version 4. For more information, see Signing AWS API Requests in the *AWS General Reference*.

Supported operations in AWS Health

AWS Health supports the following operations for getting information about events that affect an AWS account:

- The event types supported by AWS Health.
- Information about one or more events that match specified filter criteria.
- Information about the entities that are affected by one or more events.
- Categorized counts of events or entities that match specified filter criteria.

All operations are non-mutating. That is, they retrieve data but do not modify it. The following sections summarize the AWS Health operations:

Event types

The DescribeEventTypes operation retrieves event types that match the optional specified filter. An event type is a template definition of an event's AWS service, event type code, and category. An

event type and event are similar to a class and object in object-oriented programming. The number of event types supported by AWS Health grows over time.

Events

The DescribeEvents operation retrieves summary information about events that are related to an AWS account. The events can be related to AWS operational issues, scheduled changes to AWS infrastructure, or security and billing notifications. The DescribeEventDetails operation retrieves detailed information about one or more events, such as the AWS service, Region, Availability Zone, event start and end times, and a text description.

Affected entities

The DescribeAffectedEntities operation retrieves information about entities that are affected by one or more events. The results can be filtered by additional criteria, such as status, that might be assigned to AWS resources.

Aggregation

The DescribeEventAggregates operation retrieves a count of the events in each event type category, optionally filtered by other criteria. The DescribeEntityAggregates operation retrieves a count of the entities (resources) that are affected by one or more specified events.

AWS Organizations and Organization View

DescribeEventsForOrganization

DescribeEventsForOrganization returns summary information about events across the AWS Organizations, meeting the specified filter criteria.

DescribeAffectedAccountsForOrganization

DescribeAffectedAccountsForOrganization returns a list of AWS accounts in the AWS Organizations that are affected by the provided event.

DescribeEventDetailsForOrganization

DescribeEventDetailsForOrganization returns detailed information about one or more specified events for one or more accounts in AWS Organizations.

DescribeAffectedEntitiesForOrganization

DescribeAffectedEntitiesForOrganization returns a list of entities that have been affected by one or more events for one or more accounts in your organization, based on the filter criteria.

EnableHealthServiceAccessForOrganization

EnableHealthServiceAccessForOrganization operation grants the AWS Health service permission to interact with AWS Organizations on the customer's behalf and applies a Service Linked Role to the management account in your organization.

DisableHealthServiceAccessForOrganization

DisableHealthServiceAccessForOrganization operation revokes permission for the AWS Health service to interact with AWS Organizations on the customer's behalf.

DescribeHealthServiceStatusForOrganization

DescribeHealthServiceStatusForOrganization operation provides status information on enabling or disabling AWS Health to work with your organization

For more information about these operations, see the AWS Health API Reference.

Sample Java code for the AWS Health API

The following Java code examples demonstrate how to initialize an AWS Health client and retrieve information about events and entities.

Step 1: Initialize credentials

Valid credentials are required to communicate with the AWS Health API. You can use the key pair of any IAM user associated with the AWS account.

Create and initialize an AWSCredentials instance:

```
AWSCredentials credentials = null;
try {
       credentials = new ProfileCredentialsProvider("default").getCredentials();
} catch (Exception e) {
throw new AmazonClientException(
   "Cannot load the credentials from the credential profiles file. "
   + "Please make sure that your credentials file is at the correct "
   + "location (/home/username/.aws/credentials), and is in valid format.", e);
```

```
}
```

Step 2: Initialize an AWS Health API client

Use the initialized credentials object from the previous step to create an AWS Health client:

```
import com.amazonaws.services.health.AWSHealthClient;

AWSHealth awsHealthClient = new AWSHealthClient(credentials);
```

Step 3: Use AWS Health API operations to get event information

DescribeEvents

```
import com.amazonaws.services.health.model.DescribeEventsRequest;
import com.amazonaws.services.health.model.DescribeEventsResult;
import com.amazonaws.services.health.model.Event;
import com.amazonaws.services.health.model.EventFilter;

DescribeEventsRequest request = new DescribeEventsRequest();

EventFilter filter = new EventFilter();
// Filter on any field from the supported AWS Health EventFilter model.
// Here is an example for Region us-east-1 events from the EC2 service.
filter.setServices(singletonList("EC2"));
filter.setRegions(singletonList("us-east-1"));
request.setFilter(filter);

DescribeEventsResult response = awsHealthClient.describeEvents(request);
List<Event> resultEvents = response.getEvents();

Event currentEvent = null;
for (Event event : resultEvents) {
    // Display result event data; here is a subset.
    System.out.println(event.getArn());
    System.out.println(event.getService());
    System.out.println(event.getRegion());
    System.out.println(event.getAvailabilityZone());
    System.out.println(event.getStartTime());
    System.out.println(event.getEndTime());
 }
```

DescribeEventAggregates

```
import com.amazonaws.services.health.model.DescribeEventAggregatesRequest;
import com.amazonaws.services.health.model.DescribeEventAggregatesResult;
import com.amazonaws.services.health.model.EventAggregate;
import com.amazonaws.services.health.model.EventFilter;

DescribeEventAggregatesRequest request = new DescribeEventAggregatesRequest();
// set the aggregation field
request.setAggregateField("eventTypeCategory");

// filter more on result if needed
EventFilter filter = new EventFilter();
filter.setRegions(singleton("us-east-1"));
request.setFilter(filter);

DescribeEventAggregatesResult response =
 awsHealthClient.describeEventAggregates(request);

// print event count for each eventTypeCategory
for (EventAggregate aggregate: response.getEventAggregates()) {
    System.out.println("Event Category:" + aggregate.getAggregateValue());
    System.out.println("Event Count:" + aggregate.getCount());
 }
```

DescribeEventDetails

```
import com.amazonaws.services.health.model.DescribeEventDetailsRequest;
import com.amazonaws.services.health.model.DescribeEventDetailsResult;
import com.amazonaws.services.health.model.Event;
import com.amazonaws.services.health.model.EventDetails;


DescribeEventDetailsRequest describeEventDetailsRequest = new
 DescribeEventDetailsRequest();
// set event ARN and local value

describeEventDetailsRequest.setEventArns(singletonList("arn:aws:health:us-
east-1::event/service/eventTypeCode/eventId"));
describeEventDetailsRequest.setLocale("en-US");
filter.setEventArns
DescribeEventDetailsResult describeEventDetailsResult =
 awsHealthClient.describeEventDetails(request);
```

```
EventDetails eventDetail = describeEventDetailsResult.getSuccessfulSet().get(0);

// check event-related fields
Event event = eventDetail.getEvent();
System.out.println(event.getService());
System.out.println(event.getRegion());
System.out.println(event.getAvailabilityZone());
System.out.println(event.getStartTime());
System.out.println(event.getEndTime());

// print out event description
System.out.println(eventDetail.getEventDescription().getLatestDescription());
```

DescribeAffectedEntities

```
import com.amazonaws.services.health.model.AffectedEntity;
import com.amazonaws.services.health.model.DateTimeRange;
import com.amazonaws.services.health.model.DescribeAffectedEntitiesRequest;
import
 com.amdescribeEventDetailsRequestazonaws.services.health.model.DescribeAffectedEntitiesResult;

DescribeAffectedEntitiesRequest request = new DescribeAffectedEntitiesRequest();
EntityFilter filter = new EntityFilter();

filter.setEventArns(singletonList("arn:aws:health:us-
east-1::event/service/eventTypeCode/eventId"));

DescribeAffectedEntitiesResult response =
 awsHealthClient.describeAffectedEntities(request);

for (AffectedEntity affectedEntity: response.getEntities()) {
    System.out.println(affectedEntity.getEntityValue());
    System.out.println(affectedEntity.getAwsAccountId());
    System.out.println(affectedEntity.getEntityArn());
 }
```

DescribeEntityAggregates

```
import com.amazonaws.services.health.model.DescribeEntityAggregatesRequest;
import com.amazonaws.services.health.model.DescribeEntityAggregatesResult;
import com.amazonaws.services.health.model.EntityAggregate;

DescribeEntityAggregatesRequest request = new DescribeEntityAggregatesRequest();
```

```
request.setEventArns(singletonList("arn:aws:health:us-
east-1::event/service/eventTypeCode/eventId"));

DescribeEntityAggregatesResult response =
 awsHealthClient.describeEntityAggregates(request);

for (EntityAggregate entityAggregate : response.getEntityAggregates()) {
    System.out.println(entityAggregate.getEventArn());
    System.out.println(entityAggregate.getCount());
 }
```

Security in AWS Health

Cloud security at AWS is the highest priority. As an AWS customer, you benefit from data centers and network architectures that are built to meet the requirements of the most security-sensitive organizations.

Security is a shared responsibility between AWS and you. The shared responsibility model describes this as security *of* the cloud and security *in* the cloud:

- **Security of the cloud** – AWS is responsible for protecting the infrastructure that runs AWS services in the AWS Cloud. AWS also provides you with services that you can use securely. Third-party auditors regularly test and verify the effectiveness of our security as part of the AWS Compliance Programs. To learn about the compliance programs that apply to AWS Health, see AWS Services in Scope by Compliance Program.
- **Security in the cloud** – Your responsibility is determined by the AWS service that you use. You're also responsible for other factors including the sensitivity of your data, your company's requirements, and applicable laws and regulations.

This documentation helps you understand how to apply the shared responsibility model when using AWS Health. The following topics show you how to configure AWS Health to meet your security and compliance objectives. You also learn how to use other AWS services that help you to monitor and secure your AWS Health resources.

Topics

Data protection in AWS Health

The AWS shared responsibility model applies to data protection in AWS Health. As described in this model, AWS is responsible for protecting the global infrastructure that runs all of the AWS Cloud. You are responsible for maintaining control over your content that is hosted on this infrastructure. You are also responsible for the security configuration and management tasks for the AWS services that you use. For more information about data privacy, see the Data Privacy FAQ. For information about data protection in Europe, see the AWS Shared Responsibility Model and GDPR blog post on the *AWS Security Blog*.

For data protection purposes, we recommend that you protect AWS account credentials and set up individual users with AWS IAM Identity Center or AWS Identity and Access Management (IAM). That way, each user is given only the permissions necessary to fulfill their job duties. We also recommend that you secure your data in the following ways:

- Use multi-factor authentication (MFA) with each account.
- Use SSL/TLS to communicate with AWS resources. We require TLS 1.2 and recommend TLS 1.3.
- Set up API and user activity logging with AWS CloudTrail.
- Use AWS encryption solutions, along with all default security controls within AWS services.
- Use advanced managed security services such as Amazon Macie, which assists in discovering and securing sensitive data that is stored in Amazon S3.
- If you require FIPS 140-2 validated cryptographic modules when accessing AWS through a command line interface or an API, use a FIPS endpoint. For more information about the available FIPS endpoints, see Federal Information Processing Standard (FIPS) 140-2.

We strongly recommend that you never put confidential or sensitive information, such as your customers' email addresses, into tags or free-form text fields such as a **Name** field. This includes when you work with AWS Health or other AWS services using the console, API, AWS CLI, or AWS SDKs. Any data that you enter into tags or free-form text fields used for names may be used for billing or diagnostic logs. If you provide a URL to an external server, we strongly recommend that you do not include credentials information in the URL to validate your request to that server.

Data encryption

See the following information about how AWS Health encrypts data.

Data encryption refers to protecting data while in-transit (as it travels from the service to your AWS account), and at rest (while it is stored in AWS services). You can protect data in transit using Transport Layer Security (TLS) or at rest using client-side encryption.

AWS Health doesn't record personal identifying information (PII) such as email addresses or customer names in events.

Encryption at rest

All data stored by AWS Health is encrypted at rest.

Encryption in transit

All data sent to and from AWS Health is encrypted in transit.

Key management

AWS Health doesn't support customer-managed encryption keys for data encrypted in the AWS Cloud.

Identity and access management for AWS Health

AWS Identity and Access Management (IAM) is an AWS service that helps an administrator securely control access to AWS resources. IAM administrators control who can be *authenticated* (signed in) and *authorized* (have permissions) to use AWS Health resources. IAM is an AWS service that you can use with no additional charge.

Topics

Audience

How you use AWS Identity and Access Management (IAM) differs, depending on the work that you do in AWS Health.

Service user – If you use the AWS Health service to do your job, then your administrator provides you with the credentials and permissions that you need. As you use more AWS Health features to do your work, you might need additional permissions. Understanding how access is managed can help you request the right permissions from your administrator. If you cannot access a feature in AWS Health, see Troubleshooting AWS Health identity and access.

Service administrator – If you're in charge of AWS Health resources at your company, you probably have full access to AWS Health. It's your job to determine which AWS Health features and resources your service users should access. You must then submit requests to your IAM administrator to change the permissions of your service users. Review the information on this page to understand the basic concepts of IAM. To learn more about how your company can use IAM with AWS Health, see How AWS Health works with IAM.

IAM administrator – If you're an IAM administrator, you might want to learn details about how you can write policies to manage access to AWS Health. To view example AWS Health identity-based policies that you can use in IAM, see AWS Health identity-based policy examples.

Authenticating with identities

Authentication is how you sign in to AWS using your identity credentials. You must be *authenticated* (signed in to AWS) as the AWS account root user, as an IAM user, or by assuming an IAM role.

You can sign in to AWS as a federated identity by using credentials provided through an identity source. AWS IAM Identity Center (IAM Identity Center) users, your company's single sign-on authentication, and your Google or Facebook credentials are examples of federated identities. When you sign in as a federated identity, your administrator previously set up identity federation using IAM roles. When you access AWS by using federation, you are indirectly assuming a role.

Depending on the type of user you are, you can sign in to the AWS Management Console or the AWS access portal. For more information about signing in to AWS, see How to sign in to your AWS account in the *AWS Sign-In User Guide*.

If you access AWS programmatically, AWS provides a software development kit (SDK) and a command line interface (CLI) to cryptographically sign your requests by using your credentials. If

you don't use AWS tools, you must sign requests yourself. For more information about using the recommended method to sign requests yourself, see Signing AWS API requests in the *IAM User Guide*.

Regardless of the authentication method that you use, you might be required to provide additional security information. For example, AWS recommends that you use multi-factor authentication (MFA) to increase the security of your account. To learn more, see Multi-factor authentication in the *AWS IAM Identity Center User Guide* and Using multi-factor authentication (MFA) in AWS in the *IAM User Guide*.

AWS account root user

When you create an AWS account, you begin with one sign-in identity that has complete access to all AWS services and resources in the account. This identity is called the AWS account *root user* and is accessed by signing in with the email address and password that you used to create the account. We strongly recommend that you don't use the root user for your everyday tasks. Safeguard your root user credentials and use them to perform the tasks that only the root user can perform. For the complete list of tasks that require you to sign in as the root user, see Tasks that require root user credentials in the *IAM User Guide*.

IAM users and groups

An *IAM user* is an identity within your AWS account that has specific permissions for a single person or application. Where possible, we recommend relying on temporary credentials instead of creating IAM users who have long-term credentials such as passwords and access keys. However, if you have specific use cases that require long-term credentials with IAM users, we recommend that you rotate access keys. For more information, see Rotate access keys regularly for use cases that require long-term credentials in the *IAM User Guide*.

An *IAM group* is an identity that specifies a collection of IAM users. You can't sign in as a group. You can use groups to specify permissions for multiple users at a time. Groups make permissions easier to manage for large sets of users. For example, you could have a group named *IAMAdmins* and give that group permissions to administer IAM resources.

Users are different from roles. A user is uniquely associated with one person or application, but a role is intended to be assumable by anyone who needs it. Users have permanent long-term credentials, but roles provide temporary credentials. To learn more, see When to create an IAM user (instead of a role) in the *IAM User Guide*.

IAM roles

An *IAM role* is an identity within your AWS account that has specific permissions. It is similar to an IAM user, but is not associated with a specific person. You can temporarily assume an IAM role in the AWS Management Console by switching roles. You can assume a role by calling an AWS CLI or AWS API operation or by using a custom URL. For more information about methods for using roles, see Using IAM roles in the *IAM User Guide*.

IAM roles with temporary credentials are useful in the following situations:

- **Federated user access** – To assign permissions to a federated identity, you create a role and define permissions for the role. When a federated identity authenticates, the identity is associated with the role and is granted the permissions that are defined by the role. For information about roles for federation, see Creating a role for a third-party Identity Provider in the *IAM User Guide*. If you use IAM Identity Center, you configure a permission set. To control what your identities can access after they authenticate, IAM Identity Center correlates the permission set to a role in IAM. For information about permissions sets, see Permission sets in the *AWS IAM Identity Center User Guide*.
- **Temporary IAM user permissions** – An IAM user or role can assume an IAM role to temporarily take on different permissions for a specific task.
- **Cross-account access** – You can use an IAM role to allow someone (a trusted principal) in a different account to access resources in your account. Roles are the primary way to grant cross-account access. However, with some AWS services, you can attach a policy directly to a resource (instead of using a role as a proxy). To learn the difference between roles and resource-based policies for cross-account access, see Cross account resource access in IAM in the *IAM User Guide*.
- **Cross-service access** – Some AWS services use features in other AWS services. For example, when you make a call in a service, it's common for that service to run applications in Amazon EC2 or store objects in Amazon S3. A service might do this using the calling principal's permissions, using a service role, or using a service-linked role.
  - **Forward access sessions (FAS)** – When you use an IAM user or role to perform actions in AWS, you are considered a principal. When you use some services, you might perform an action that then initiates another action in a different service. FAS uses the permissions of the principal calling an AWS service, combined with the requesting AWS service to make requests to downstream services. FAS requests are only made when a service receives a request that requires interactions with other AWS services or resources to complete. In this case, you must have permissions to perform both actions. For policy details when making FAS requests, see Forward access sessions.

- **Service role** – A service role is an IAM role that a service assumes to perform actions on your behalf. An IAM administrator can create, modify, and delete a service role from within IAM. For more information, see Creating a role to delegate permissions to an AWS service in the *IAM User Guide*.
- **Service-linked role** – A service-linked role is a type of service role that is linked to an AWS service. The service can assume the role to perform an action on your behalf. Service-linked roles appear in your AWS account and are owned by the service. An IAM administrator can view, but not edit the permissions for service-linked roles.

- **Applications running on Amazon EC2** – You can use an IAM role to manage temporary credentials for applications that are running on an EC2 instance and making AWS CLI or AWS API requests. This is preferable to storing access keys within the EC2 instance. To assign an AWS role to an EC2 instance and make it available to all of its applications, you create an instance profile that is attached to the instance. An instance profile contains the role and enables programs that are running on the EC2 instance to get temporary credentials. For more information, see Using an IAM role to grant permissions to applications running on Amazon EC2 instances in the *IAM User Guide*.

To learn whether to use IAM roles or IAM users, see When to create an IAM role (instead of a user) in the *IAM User Guide*.

Managing access using policies

You control access in AWS by creating policies and attaching them to AWS identities or resources. A policy is an object in AWS that, when associated with an identity or resource, defines their permissions. AWS evaluates these policies when a principal (user, root user, or role session) makes a request. Permissions in the policies determine whether the request is allowed or denied. Most policies are stored in AWS as JSON documents. For more information about the structure and contents of JSON policy documents, see Overview of JSON policies in the *IAM User Guide*.

Administrators can use AWS JSON policies to specify who has access to what. That is, which **principal** can perform **actions** on what **resources**, and under what **conditions**.

By default, users and roles have no permissions. To grant users permission to perform actions on the resources that they need, an IAM administrator can create IAM policies. The administrator can then add the IAM policies to roles, and users can assume the roles.

IAM policies define permissions for an action regardless of the method that you use to perform the operation. For example, suppose that you have a policy that allows the `iam:GetRole` action. A

user with that policy can get role information from the AWS Management Console, the AWS CLI, or the AWS API.

Identity-based policies

Identity-based policies are JSON permissions policy documents that you can attach to an identity, such as an IAM user, group of users, or role. These policies control what actions users and roles can perform, on which resources, and under what conditions. To learn how to create an identity-based policy, see Creating IAM policies in the *IAM User Guide*.

Identity-based policies can be further categorized as *inline policies* or *managed policies*. Inline policies are embedded directly into a single user, group, or role. Managed policies are standalone policies that you can attach to multiple users, groups, and roles in your AWS account. Managed policies include AWS managed policies and customer managed policies. To learn how to choose between a managed policy or an inline policy, see Choosing between managed policies and inline policies in the *IAM User Guide*.

Resource-based policies

Resource-based policies are JSON policy documents that you attach to a resource. Examples of resource-based policies are IAM *role trust policies* and Amazon S3 *bucket policies*. In services that support resource-based policies, service administrators can use them to control access to a specific resource. For the resource where the policy is attached, the policy defines what actions a specified principal can perform on that resource and under what conditions. You must specify a principal in a resource-based policy. Principals can include accounts, users, roles, federated users, or AWS services.

Resource-based policies are inline policies that are located in that service. You can't use AWS managed policies from IAM in a resource-based policy.

AWS Health supports resource-based conditions. You can specify which AWS Health events that users can view. For example, you might create a policy that only allows an IAM user access to specific Amazon EC2 events in the AWS Health Dashboard.

For more information, see Resources.

Access control lists

Access control lists (ACLs) control which principals (account members, users, or roles) have permissions to access a resource. ACLs are similar to resource-based policies, although they do not use the JSON policy document format.

Amazon S3, AWS WAF, and Amazon VPC are examples of services that support ACLs. To learn more about ACLs, see Access control list (ACL) overview in the *Amazon Simple Storage Service Developer Guide*.

AWS Health doesn't support ACLs.

Other policy types

AWS supports additional, less-common policy types. These policy types can set the maximum permissions granted to you by the more common policy types.

- **Permissions boundaries** – A permissions boundary is an advanced feature in which you set the maximum permissions that an identity-based policy can grant to an IAM entity (IAM user or role). You can set a permissions boundary for an entity. The resulting permissions are the intersection of an entity's identity-based policies and its permissions boundaries. Resource-based policies that specify the user or role in the `Principal` field are not limited by the permissions boundary. An explicit deny in any of these policies overrides the allow. For more information about permissions boundaries, see Permissions boundaries for IAM entities in the *IAM User Guide*.
- **Service control policies (SCPs)** – SCPs are JSON policies that specify the maximum permissions for an organization or organizational unit (OU) in AWS Organizations. AWS Organizations is a service for grouping and centrally managing multiple AWS accounts that your business owns. If you enable all features in an organization, then you can apply service control policies (SCPs) to any or all of your accounts. The SCP limits permissions for entities in member accounts, including each AWS account root user. For more information about Organizations and SCPs, see How SCPs work in the *AWS Organizations User Guide*.
- **Session policies** – Session policies are advanced policies that you pass as a parameter when you programmatically create a temporary session for a role or federated user. The resulting session's permissions are the intersection of the user or role's identity-based policies and the session policies. Permissions can also come from a resource-based policy. An explicit deny in any of these policies overrides the allow. For more information, see Session policies in the *IAM User Guide*.

Multiple policy types

When multiple types of policies apply to a request, the resulting permissions are more complicated to understand. To learn how AWS determines whether to allow a request when multiple policy types are involved, see Policy evaluation logic in the *IAM User Guide*.

How AWS Health works with IAM

Before you use IAM to manage access to AWS Health, you should understand what IAM features are available to use with AWS Health. To get a high-level view of how AWS Health and other AWS services work with IAM, see AWS Services That Work with IAM in the *IAM User Guide*.

Topics

AWS Health identity-based policies

With IAM identity-based policies, you can specify allowed or denied actions and resources as well as the conditions under which actions are allowed or denied. AWS Health supports specific actions, resources, and condition keys. To learn about all of the elements that you use in a JSON policy, see IAM JSON Policy Elements Reference in the *IAM User Guide*.

Actions

Administrators can use AWS JSON policies to specify who has access to what. That is, which **principal** can perform **actions** on what **resources**, and under what **conditions**.

The `Action` element of a JSON policy describes the actions that you can use to allow or deny access in a policy. Policy actions usually have the same name as the associated AWS API operation. There are some exceptions, such as *permission-only actions* that don't have a matching API operation. There are also some operations that require multiple actions in a policy. These additional actions are called *dependent actions*.

Include actions in a policy to grant permissions to perform the associated operation.

Policy actions in AWS Health use the following prefix before the action: `health:`. For example, to grant someone permission to view detailed information about specified events with the DescribeEventDetails API operation, you include the `heath:DescribeEventDetails` action in the policy.

Policy statements must include an `Action` or `NotAction` element. AWS Health defines its own set of actions that describe tasks that you can perform with this service.

To specify multiple actions in a single statement, separate them with commas as follows.

```
"Action": [
      "health:action1",
      "health:action2"
```

You can specify multiple actions using wildcards (*). For example, to specify all actions that begin with the word `Describe`, include the following action.

```
"Action": "health:Describe*"
```

To see a list of AWS Health actions, see Actions Defined by AWS Health in the *IAM User Guide*.

Resources

Administrators can use AWS JSON policies to specify who has access to what. That is, which **principal** can perform **actions** on what **resources**, and under what **conditions**.

The `Resource` JSON policy element specifies the object or objects to which the action applies. Statements must include either a `Resource` or a `NotResource` element. As a best practice, specify a resource using its Amazon Resource Name (ARN). You can do this for actions that support a specific resource type, known as *resource-level permissions*.

For actions that don't support resource-level permissions, such as listing operations, use a wildcard (*) to indicate that the statement applies to all resources.

```
"Resource": "*"
```

An AWS Health event has the following Amazon Resource Name (ARN) format.

```
arn:${Partition}:health:*::event/service/event-type-code/event-ID
```

For example, to specify the `EC2_INSTANCE_RETIREMENT_SCHEDULED_ABC123-DEF456` event in your statement, use the following ARN.

```
"Resource": "arn:aws:health:*::event/EC2/EC2_INSTANCE_RETIREMENT_SCHEDULED/
EC2_INSTANCE_RETIREMENT_SCHEDULED_ABC123-DEF456"
```

To specify all AWS Health events for Amazon EC2 that belong to a specific account, use the wildcard (*).

```
"Resource": "arn:aws:health:*::event/EC2/*/*"
```

For more information about the format of ARNs, see Amazon Resource Names (ARNs) and AWS Service Namespaces.

Some AWS Health actions can't be performed on a specific resource. In those cases, you must use the wildcard (*).

```
"Resource": "*"
```

AWS Health API operations can involve multiple resources. For example, the DescribeEvents operation returns information about events that meet a specified filter criteria. This means that an IAM user must have permissions to view this event.

To specify multiple resources in a single statement, separate the ARNs with commas.

```
"Resource": [
      "resource1",
      "resource2"
```

AWS Health supports only resource-level permissions for health events and only for the DescribeAffectedEntities and DescribeEventDetails API operations. For more information, see Resource- and action-based conditions.

To see a list of AWS Health resource types and their ARNs, see Resources Defined by AWS Health in the *IAM User Guide*. To learn with which actions you can specify the ARN of each resource, see Actions Defined by AWS Health.

Condition keys

Administrators can use AWS JSON policies to specify who has access to what. That is, which **principal** can perform **actions** on what **resources**, and under what **conditions**.

The `Condition` element (or `Condition` *block*) lets you specify conditions in which a statement is in effect. The `Condition` element is optional. You can create conditional expressions that use condition operators, such as equals or less than, to match the condition in the policy with values in the request.

If you specify multiple `Condition` elements in a statement, or multiple keys in a single `Condition` element, AWS evaluates them using a logical `AND` operation. If you specify multiple values for a single condition key, AWS evaluates the condition using a logical `OR` operation. All of the conditions must be met before the statement's permissions are granted.

You can also use placeholder variables when you specify conditions. For example, you can grant an IAM user permission to access a resource only if it is tagged with their IAM user name. For more information, see IAM policy elements: variables and tags in the *IAM User Guide*.

AWS supports global condition keys and service-specific condition keys. To see all AWS global condition keys, see AWS global condition context keys in the *IAM User Guide*.

AWS Health defines its own set of condition keys and also supports using some global condition keys. To see all AWS global condition keys, see AWS Global Condition Context Keys in the *IAM User Guide*.

The DescribeAffectedEntities and DescribeEventDetails API operations support the `health:eventTypeCode` and `health:service` condition keys.

To see a list of AWS Health condition keys, see Condition Keys for AWS Health in the *IAM User Guide*. To learn with which actions and resources you can use a condition key, see Actions Defined by AWS Health.

Examples

To view examples of AWS Health identity-based policies, see AWS Health identity-based policy examples.

AWS Health resource-based policies

Resource-based policies are JSON policy documents that specify what actions a specified principal can perform on the AWS Health resource and under what conditions. AWS Health supports resource-based permissions policies for health events. Resource-based policies let you grant usage permission to other accounts on a per-resource basis. You can also use a resource-based policy to allow an AWS service to access your AWS Health events.

To enable cross-account access, you can specify an entire account or IAM entities in another account as the principal in a resource-based policy. Adding a cross-account principal to a resource-based policy is only half of establishing the trust relationship. When the principal and the resource

are in different AWS accounts, you must also grant the principal entity permission to access the resource. Grant permission by attaching an identity-based policy to the entity. However, if a resource-based policy grants access to a principal in the same account, no additional identity-based policy is required. For more information, see How IAM Roles Differ from Resource-based Policies in the *IAM User Guide*.

AWS Health supports only resource-based policies for the DescribeAffectedEntities and DescribeEventDetails API operations. You can specify these actions in a policy to define which principal entities (accounts, users, roles, and federated users) can perform actions on the AWS Health event.

Examples

To view examples of AWS Health resource-based policies, see Resource- and action-based conditions.

Authorization based on AWS Health tags

AWS Health doesn't support tagging resources or controlling access based on tags.

AWS Health IAM roles

An IAM role is an entity within your AWS account that has specific permissions.

Using temporary credentials with AWS Health

You can use temporary credentials to sign in with federation, assume an IAM role, or to assume a cross-account role. You obtain temporary security credentials by calling AWS STS API operations such as AssumeRole or GetFederationToken.

AWS Health supports using temporary credentials.

Service-linked roles

Service-linked roles allow AWS services to access resources in other services to complete an action on your behalf. Service-linked roles appear in your IAM account and are owned by the service. An IAM administrator can view but not edit the permissions for service-linked roles.

AWS Health supports service-linked roles to integrate with AWS Organizations. The service-linked role is named `AWSServiceRoleForHealth_Organizations`. Attached to the role is the

Health_OrganizationsServiceRolePolicy AWS managed policy. The AWS managed policy allows AWS Health to access health events from other AWS accounts in the organization.

You can use the EnableHealthServiceAccessForOrganization operation to create the service-linked role in the account. However, if you want to disable this feature, you must first call the DisableHealthServiceAccessForOrganization operation. You can then delete the role through the IAM console, IAM API, or AWS Command Line Interface (AWS CLI). For more information, see Using service-linked roles in the *IAM User Guide*.

For more information, see Aggregating AWS Health events across accounts with organizational view.

Service roles

This feature allows a service to assume a service role on your behalf. This role allows the service to access resources in other services to complete an action on your behalf. Service roles appear in your IAM account and are owned by the account. This means that an IAM administrator can change the permissions for this role. However, doing so might break the functionality of the service.

AWS Health doesn't support service roles.

AWS Health identity-based policy examples

By default, IAM users and roles don't have permission to create or modify AWS Health resources. They also can't perform tasks using the AWS Management Console, AWS CLI, or AWS API. An IAM administrator must create IAM policies that grant users and roles permission to perform specific API operations on the specified resources they need. The administrator must then attach those policies to the IAM users or groups that require those permissions.

To learn how to create an IAM identity-based policy using these example JSON policy documents, see Creating Policies on the JSON Tab in the *IAM User Guide*.

Topics

Policy best practices

Identity-based policies determine whether someone can create, access, or delete AWS Health resources in your account. These actions can incur costs for your AWS account. When you create or edit identity-based policies, follow these guidelines and recommendations:

- **Get started with AWS managed policies and move toward least-privilege permissions** – To get started granting permissions to your users and workloads, use the *AWS managed policies* that grant permissions for many common use cases. They are available in your AWS account. We recommend that you reduce permissions further by defining AWS customer managed policies that are specific to your use cases. For more information, see AWS managed policies or AWS managed policies for job functions in the *IAM User Guide*.
- **Apply least-privilege permissions** – When you set permissions with IAM policies, grant only the permissions required to perform a task. You do this by defining the actions that can be taken on specific resources under specific conditions, also known as *least-privilege permissions*. For more information about using IAM to apply permissions, see Policies and permissions in IAM in the *IAM User Guide*.
- **Use conditions in IAM policies to further restrict access** – You can add a condition to your policies to limit access to actions and resources. For example, you can write a policy condition to specify that all requests must be sent using SSL. You can also use conditions to grant access to service actions if they are used through a specific AWS service, such as AWS CloudFormation. For more information, see IAM JSON policy elements: Condition in the *IAM User Guide*.
- **Use IAM Access Analyzer to validate your IAM policies to ensure secure and functional permissions** – IAM Access Analyzer validates new and existing policies so that the policies adhere to the IAM policy language (JSON) and IAM best practices. IAM Access Analyzer provides more than 100 policy checks and actionable recommendations to help you author secure and functional policies. For more information, see IAM Access Analyzer policy validation in the *IAM User Guide*.
- **Require multi-factor authentication (MFA)** – If you have a scenario that requires IAM users or a root user in your AWS account, turn on MFA for additional security. To require MFA when API operations are called, add MFA conditions to your policies. For more information, see Configuring MFA-protected API access in the *IAM User Guide*.

For more information about best practices in IAM, see Security best practices in IAM in the *IAM User Guide*.

Using the AWS Health console

To access the AWS Health console, you must have a minimum set of permissions. These permissions must allow you to list and view details about the AWS Health resources in your AWS account. If you create an identity-based policy that is more restrictive than the minimum required permissions, the console won't function as intended for entities (IAM users or roles) with that policy.

To ensure that those entities can still use the AWS Health console, you can attach the following AWS managed policy, AWSHealthFullAccess.

The `AWSHealthFullAccess` policy grants an entity full access to the following:

- Enable or disable the AWS Health organizational view feature for all accounts in an AWS organization
- The AWS Health Dashboard in the AWS Health console
- AWS Health API operations and notifications
- View information about accounts that are part of your AWS organization
- View the organizational units (OU) of the management account

Example : AWSHealthFullAccess

```
{
    "Version": "2012-10-17",
    "Statement": [
        {
            "Effect": "Allow",
            "Action": [
                "organizations:EnableAWSServiceAccess",
                "organizations:DisableAWSServiceAccess"
            ],
            "Resource": "*",
            "Condition": {
                "StringEquals": {
                    "organizations:ServicePrincipal": "health.amazonaws.com"
                }
            }
        },
        {
            "Effect": "Allow",
```

```
            "Action": [
                "health:*",
                "organizations:DescribeAccount",
                "organizations:ListAccounts",
                "organizations:ListDelegatedAdministrators",
                "organizations:ListParents"
            ],
            "Resource": "*"
        },
        {
            "Effect": "Allow",
            "Action": "iam:CreateServiceLinkedRole",
            "Resource": "*",
            "Condition": {
                "StringEquals": {
                    "iam:AWSServiceName": "health.amazonaws.com"
                }
            }
        }
    ]
}
```

> **Note**
>
> You can also use the `Health_OrganizationsServiceRolePolicy` AWS managed policy, so that AWS Health can view events for other accounts in your organization. For more information, see Using service-linked roles for AWS Health.

You don't need to allow minimum console permissions for users that are making calls only to the AWS CLI or the AWS API. Instead, allow access to only the actions that match the API operation that you're trying to perform.

For more information, see Adding Permissions to a User in the *IAM User Guide*.

Allow users to view their own permissions

This example shows how you might create a policy that allows IAM users to view the inline and managed policies that are attached to their user identity. This policy includes permissions to complete this action on the console or programmatically using the AWS CLI or AWS API.

```
{
```

```
    "Version": "2012-10-17",
    "Statement": [
        {
            "Sid": "ViewOwnUserInfo",
            "Effect": "Allow",
            "Action": [
                "iam:GetUserPolicy",
                "iam:ListGroupsForUser",
                "iam:ListAttachedUserPolicies",
                "iam:ListUserPolicies",
                "iam:GetUser"
            ],
            "Resource": ["arn:aws:iam::*:user/${aws:username}"]
        },
        {
            "Sid": "NavigateInConsole",
            "Effect": "Allow",
            "Action": [
                "iam:GetGroupPolicy",
                "iam:GetPolicyVersion",
                "iam:GetPolicy",
                "iam:ListAttachedGroupPolicies",
                "iam:ListGroupPolicies",
                "iam:ListPolicyVersions",
                "iam:ListPolicies",
                "iam:ListUsers"
            ],
            "Resource": "*"
        }
    ]
}
```

Accessing the AWS Health Dashboard and the AWS Health API

The AWS Health Dashboard is available for all AWS accounts. The AWS Health API is available only to accounts with a Business, Enterprise On-Ramp, or Enterprise Support plan. For more information, see AWS Support.

You can use IAM to create entities (users, groups, or roles), and then give those entities permissions to access the AWS Health Dashboard and the AWS Health API.

By default, IAM users don't have access to the AWS Health Dashboard or the AWS Health API. You give users access to your account's AWS Health information by attaching IAM policies to a single

user, a group of users, or a role. For more information, see Identities (Users, Groups, and Roles) and Overview of IAM Policies.

After you create IAM users, you can give those users individual passwords. Then, they can sign in to your account and view AWS Health information by using an account-specific sign-in page. For more information, see How Users Sign In to Your Account.

> **Note**
>
> An IAM user with permissions to view AWS Health Dashboard has read-only access to health information across all AWS services on the account, which can include, but is not limited to, AWS resource IDs such as Amazon EC2 instance IDs, EC2 instance IP addresses, and general security notifications.
>
> For example, if an IAM policy grants access only to AWS Health Dashboard and the AWS Health API, then the user or role that the policy applies to can access all information posted about AWS services and related resources, even if other IAM policies don't allow that access.

You can use two groups of APIs for AWS Health.

- Individual accounts – You can use the operations such as DescribeEvents and DescribeEventDetails to get information about AWS Health events for your account.
- Organizational account – You can use operations such as DescribeEventsForOrganization and DescribeEventDetailsForOrganization to get information about AWS Health events for accounts that are part of your organization.

For more information about the available API operations, see the AWS Health API Reference.

Individual actions

You can set the `Action` element of an IAM policy to `health:Describe*`. This allows access to the AWS Health Dashboard and AWS Health. AWS Health supports access control to events based on the `eventTypeCode` and service.

Describe access

This policy statement grants access to AWS Health Dashboard and any of the `Describe*` AWS Health API operations. For example, an IAM user with this policy can access the AWS Health

Dashboard in the AWS Management Console and call the AWS Health `DescribeEvents` API operation.

Example : Describe access

```
{
  "Version": "2012-10-17",
  "Statement": [
  {
    "Effect": "Allow",
    "Action": [
      "health:Describe*"
    ],
    "Resource": "*"
  }]
}
```

Deny access

This policy statement denies access to AWS Health Dashboard and the AWS Health API. An IAM user with this policy can't view the AWS Health Dashboard in the AWS Management Console and can't call any of the AWS Health API operations.

Example : Deny access

```
{
  "Version": "2012-10-17",
  "Statement": [
  {
    "Effect": "Deny",
    "Action": [
      "health:*"
    ],
    "Resource": "*"
  }]
}
```

Organizational view

If you want to enable organizational view for AWS Health, you must allow access to the AWS Health and AWS Organizations actions.

The `Action` element of an IAM policy must include the following permissions:

- `iam:CreateServiceLinkedRole`
- `organizations:EnableAWSServiceAccess`
- `organizations:DescribeAccount`
- `organizations:DisableAWSServiceAccess`
- `organizations:ListAccounts`
- `organizations:ListDelegatedAdministrators`
- `organizations:ListParents`

To understand the exact permissions needed for each APIs, see Actions Defined by AWS Health APIs and Notifications in the *IAM User Guide*.

> **Note**
>
> You must use credentials from the management account for an organization to access the AWS Health APIs for AWS Organizations. For more information, see Aggregating AWS Health events across accounts with organizational view.

Allow access to AWS Health organizational view

This policy statement grants access to all AWS Health and AWS Organizations actions that you need for the organizational view feature.

Example : Allow AWS Health organizational view access

```
{
    "Version": "2012-10-17",
    "Statement": [
        {
            "Effect": "Allow",
            "Action": [
                "organizations:EnableAWSServiceAccess",
                "organizations:DisableAWSServiceAccess"
            ],
            "Resource": "*",
            "Condition": {
```

```
                "StringEquals": {
                    "organizations:ServicePrincipal": "health.amazonaws.com"
                }
            }
        },
        {
            "Effect": "Allow",
            "Action": [
                "health:*",
                "organizations:DescribeAccount",
                "organizations:ListAccounts",
                "organizations:ListDelegatedAdministrators",
                "organizations:ListParents"
            ],
            "Resource": "*"
        },
        {
            "Effect": "Allow",
            "Action": "iam:CreateServiceLinkedRole",
            "Resource": "arn:aws:iam::*:role/aws-service-role/health.amazonaws.com/
AWSServiceRoleForHealth*"
        }
    ]
}
```

Deny access to AWS Health organizational view

This policy statement denies access to the AWS Organizations actions but allows access to the AWS Health actions for an individual account.

Example : Deny AWS Health organizational view access

```
{
    "Version": "2012-10-17",
    "Statement": [
        {
            "Effect": "Allow",
            "Action": [
                "health:*"
            ],
            "Resource": "*"
        },
        {
```

```
            "Effect": "Deny",
            "Action": [
                "organizations:EnableAWSServiceAccess",
                "organizations:DisableAWSServiceAccess"
            ],
            "Resource": "*",
            "Condition": {
                "StringEquals": {
                    "organizations:ServicePrincipal": "health.amazonaws.com"
                }
            }
        },
        {
            "Effect": "Deny",
            "Action": [
                "organizations:DescribeAccount",
                "organizations:ListAccounts",
                "organizations:ListDelegatedAdministrators",
                "organizations:ListParents"
            ],
            "Resource": "*"
        },
        {
            "Effect": "Deny",
            "Action": "iam:CreateServiceLinkedRole",
            "Resource": "arn:aws:iam::*:role/aws-service-role/health.amazonaws.com/
AWSServiceRoleForHealth*"
        }
    ]
}
```

> **Note**
>
> If the user or group that you want to give permissions to already has an IAM policy, you can add the AWS Health-specific policy statement to that policy.

Resource- and action-based conditions

AWS Health supports IAM conditions for the DescribeAffectedEntities and DescribeEventDetails API operations. You can use resource- and action-based conditions to restrict events that the AWS Health API sends to a user, group, or role.

To do so, update the `Condition` block of the IAM policy or set the `Resource` element. You can use String Conditions to restrict access based on certain AWS Health event fields.

You can use the following fields when you specify an AWS Health event in your policy:

- `eventTypeCode`
- `service`

Notes

- The DescribeAffectedEntities and DescribeEventDetails API operations support resource-level permissions. For example, you can create a policy to allow or deny specific AWS Health events.
- The DescribeAffectedEntitiesForOrganization and DescribeEventDetailsForOrganization API operations don't support resource-level permissions.
- For more information, see Actions, resources, and condition keys for AWS Health APIs and Notifications in the *Service Authorization Reference*.

Example : Action-based condition

This policy statement grants access to AWS Health Dashboard and the AWS Health `Describe*` API operations, but denies access to any AWS Health events that relate to Amazon EC2.

```
{
    "Version": "2012-10-17",
    "Statement": [
        {
            "Effect": "Allow",
            "Action": "health:Describe*",
            "Resource": "*"
        },
        {
            "Effect": "Deny",
            "Action": [
                "health:DescribeAffectedEntities",
                "health:DescribeEventDetails"
            ],
            "Resource": "*",
```

```
            "Condition": {
                "StringEquals": {
                    "health:service": "EC2"
                }
            }
        }
    ]
}
```

Example : Resource-based condition

The following policy has the same effect, but uses the `Resource` element instead.

```
{
  "Version": "2012-10-17",
  "Statement": [
  {
    "Effect": "Allow",
    "Action": [
      "health:Describe*"
    ],
    "Resource": "*"
  },
  {
    "Effect": "Deny",
    "Action": [
      "health:DescribeEventDetails",
      "health:DescribeAffectedEntities"
    ],
    "Resource": "arn:aws:health:*::event/EC2/*/*"
  }]
}
```

Example : eventTypeCode condition

This policy statement grants access to AWS Health Dashboard and the AWS Health `Describe*` API operations, but denies access to any AWS Health events with the `eventTypeCode` that matches `AWS_EC2_*`.

```
{
    "Version": "2012-10-17",
    "Statement": [
```

```
        {
            "Effect": "Allow",
            "Action": "health:Describe*",
            "Resource": "*"
        },
        {
            "Effect": "Deny",
            "Action": [
                "health:DescribeAffectedEntities",
                "health:DescribeEventDetails"
            ],
            "Resource": "*",
            "Condition": {
                "StringLike": {
                    "health:eventTypeCode": "AWS_EC2_*"
                }
            }
        }
    ]
}
```

Important

If you call the DescribeAffectedEntities and DescribeEventDetails operations and don't have permission to access the AWS Health event, the `AccessDeniedException` error appears. For more information, see Troubleshooting AWS Health identity and access.

Troubleshooting AWS Health identity and access

Use the following information to diagnose and fix common issues that you might encounter when working with AWS Health and IAM.

Topics

- I'm not authorized to perform an action in AWS Health
- I'm not authorized to perform iam:PassRole
- I want to view my access keys
- I'm an administrator and want to allow others to access AWS Health
- I want to allow people outside of my AWS account to access my AWS Health resources

I'm not authorized to perform an action in AWS Health

If the AWS Management Console tells you that you're not authorized to perform an action, then you must contact your administrator for assistance. Your administrator is the person that provided you with your user name and password.

The `AccessDeniedException` error appears when a user doesn't have permission to use AWS Health Dashboard or the AWS Health API operations.

In this case, the user's administrator must update the policy to allow the user access.

The AWS Health API requires a Business, Enterprise On-Ramp, or Enterprise Support plan from AWS Support. If you call the AWS Health API from an account that doesn't have a Business, Enterprise On-Ramp, or Enterprise Support plan, the following error code is returned: `SubscriptionRequiredException`.

I'm not authorized to perform iam:PassRole

If you receive an error that you're not authorized to perform the `iam:PassRole` action, your policies must be updated to allow you to pass a role to AWS Health.

Some AWS services allow you to pass an existing role to that service instead of creating a new service role or service-linked role. To do this, you must have permissions to pass the role to the service.

The following example error occurs when an IAM user named `marymajor` tries to use the console to perform an action in AWS Health. However, the action requires the service to have permissions that are granted by a service role. Mary does not have permissions to pass the role to the service.

```
User: arn:aws:iam::123456789012:user/marymajor is not authorized to perform:
 iam:PassRole
```

In this case, Mary's policies must be updated to allow her to perform the `iam:PassRole` action.

If you need help, contact your AWS administrator. Your administrator is the person who provided you with your sign-in credentials.

I want to view my access keys

After you create your IAM user access keys, you can view your access key ID at any time. However, you can't view your secret access key again. If you lose your secret key, you must create a new access key pair.

Access keys consist of two parts: an access key ID (for example, `AKIAIOSFODNN7EXAMPLE`) and a secret access key (for example, `wJalrXUtnFEMI/K7MDENG/bPxRfiCYEXAMPLEKEY`). Like a user name and password, you must use both the access key ID and secret access key together to authenticate your requests. Manage your access keys as securely as you do your user name and password.

> **Important**
>
> Do not provide your access keys to a third party, even to help find your canonical user ID. By doing this, you might give someone permanent access to your AWS account.

When you create an access key pair, you are prompted to save the access key ID and secret access key in a secure location. The secret access key is available only at the time you create it. If you lose your secret access key, you must add new access keys to your IAM user. You can have a maximum of two access keys. If you already have two, you must delete one key pair before creating a new one. To view instructions, see Managing access keys in the *IAM User Guide*.

I'm an administrator and want to allow others to access AWS Health

To allow others to access AWS Health, you must create an IAM entity (user or role) for the person or application that needs access. They will use the credentials for that entity to access AWS. You must then attach a policy to the entity that grants them the correct permissions in AWS Health.

To get started right away, see Creating your first IAM delegated user and group in the *IAM User Guide*.

I want to allow people outside of my AWS account to access my AWS Health resources

You can create a role that users in other accounts or people outside of your organization can use to access your resources. You can specify who is trusted to assume the role. For services that support

resource-based policies or access control lists (ACLs), you can use those policies to grant people access to your resources.

To learn more, consult the following:

- To learn whether AWS Health supports these features, see How AWS Health works with IAM.
- To learn how to provide access to your resources across AWS accounts that you own, see Providing access to an IAM user in another AWS account that you own in the *IAM User Guide*.
- To learn how to provide access to your resources to third-party AWS accounts, see Providing access to AWS accounts owned by third parties in the *IAM User Guide*.
- To learn how to provide access through identity federation, see Providing access to externally authenticated users (identity federation) in the *IAM User Guide*.
- To learn the difference between using roles and resource-based policies for cross-account access, see Cross account resource access in IAM in the *IAM User Guide*.

Using service-linked roles for AWS Health

AWS Health uses AWS Identity and Access Management (IAM) service-linked roles. A service-linked role is a unique type of IAM role that is linked directly to AWS Health. Service-linked roles are predefined by AWS Health and include all the permissions that the service requires to call other AWS services for you.

You can use a service-linked role to set up AWS Health to avoid manually adding the necessary permissions. AWS Health defines the permissions of its service-linked roles, and unless defined otherwise, only AWS Health can assume its roles. The defined permissions include the trust policy and the permissions policy, and that permissions policy can't be attached to any other IAM entity.

Service-linked role permissions for AWS Health

AWS Health has two service-linked roles:

- AWSServiceRoleForHealth_Organizations – This role trusts the AWS Health (`health.amazonaws.com`) to assume the role to access AWS services for you. Attached to this role is the `Health_OrganizationsServiceRolePolicy` AWS managed policy.
- AWSServiceRoleForHealth_EventProcessor – This role trusts the AWS Health service principal (`event-processor.health.amazonaws.com`) to assume the role for you. Attached to this role is the `AWSHealth_EventProcessorServiceRolePolicy` AWS managed policy. The

service principal uses the role to create an Amazon EventBridge managed rule for AWS Incident Detection and Response. This rule is the infrastructure required in your AWS account to deliver alarm state change information from your account to AWS Health.

For more information about the AWS managed policies, see AWS managed policies for AWS Health.

Creating a service-linked role for AWS Health

You don't need to create the AWSServiceRoleForHealth_Organizations service-linked role. When you call the EnableHealthServiceAccessForOrganization operation, AWS Health creates the this service-linked role in the account for you.

You must manually create the AWSServiceRoleForHealth_EventProcessor service-linked role in your account. For more information, see Creating a service-linked role in the *IAM User Guide*.

Editing a service-linked role for AWS Health

AWS Health doesn't allow you to edit the service-linked role. After you create a service-linked role, you can't change the name of the role because various entities might reference the role. However, you can edit the description of the role using IAM. For more information, see Editing a service-linked role in the *IAM User Guide*.

Deleting a service-linked role for AWS Health

To delete the AWSServiceRoleForHealth_Organizations role, you must first call the DisableHealthServiceAccessForOrganization operation. You can then delete the role through the IAM console, IAM API, or AWS Command Line Interface (AWS CLI).

To delete the AWSServiceRoleForHealth_EventProcessor role, contact AWS Support and ask that they offboard your workloads from AWS Incident Detection and Response. After this process completes, you can then delete either role through the IAM console, IAM API, or AWS CLI.

Related information

For more information, see Using service-linked roles in the *IAM User Guide*.

AWS managed policies for AWS Health

An AWS managed policy is a standalone policy that is created and administered by AWS. AWS managed policies are designed to provide permissions for many common use cases so that you can start assigning permissions to users, groups, and roles.

Keep in mind that AWS managed policies might not grant least-privilege permissions for your specific use cases because they're available for all AWS customers to use. We recommend that you reduce permissions further by defining customer managed policies that are specific to your use cases.

You cannot change the permissions defined in AWS managed policies. If AWS updates the permissions defined in an AWS managed policy, the update affects all principal identities (users, groups, and roles) that the policy is attached to. AWS is most likely to update an AWS managed policy when a new AWS service is launched or new API operations become available for existing services.

For more information, see AWS managed policies in the *IAM User Guide*.

AWS Health has the following managed policies.

Contents

AWS managed policy: AWSHealth_EventProcessorServiceRolePolicy

AWS Health uses the AWSHealth_EventProcessorServiceRolePolicy AWS managed policy. This managed policy is attached to the `AWSServiceRoleForHealth_EventProcessor` service-linked role. The policy allows the service-linked role to complete actions for you. You can't attach this policy to your IAM entities. For more information, see Using service-linked roles for AWS Health.

The managed policy has the following permissions to allow AWS Health to access the Amazon EventBridge rule for AWS Incident Detection and Response.

Permissions details

This policy includes the following permissions.

- `events` – Describes and deletes EventBridge rules, and describes and updates the targets for those rules.

```
{
    "Version": "2012-10-17",
    "Statement": [
        {
            "Condition": {
                "StringEquals": {"events:ManagedBy": "event-
processor.health.amazonaws.com"}
            },
            "Action": [
                "events:DeleteRule",
                "events:RemoveTargets",
                "events:PutTargets",
                "events:PutRule"
            ],
            "Resource": "*",
            "Effect": "Allow"
        },
        {
            "Action": [
                "events:ListTargetsByRule",
                "events:DescribeRule"
            ],
            "Resource": "*",
            "Effect": "Allow"
        }
    ]
}
```

For a list of changes to the policy, see AWS Health updates to AWS managed policies.

AWS managed policy: Health_OrganizationsServiceRolePolicy

AWS Health uses the Health_OrganizationsServiceRolePolicy AWS managed policy. This managed policy is attached to the `AWSServiceRoleForHealth_Organizations` service-linked role. The

policy allows the service-linked role to complete actions for you. You can't attach this policy to your IAM entities. For more information, see Using service-linked roles for AWS Health.

This policy grants permissions that allow AWS Health to access required AWS Organizations details for the Health Organizational view.

Permissions details

This policy includes the following permissions.

- `organizations` – Describes the accounts in AWS Organizations and the AWS services that can be used with Organizations.

```
{
    "Version": "2012-10-17",
    "Statement": [
        {
            "Effect": "Allow",
            "Action": [
                "organizations:ListAccounts",
                "organizations:ListAWSServiceAccessForOrganization",
                "organizations:ListDelegatedAdministrators",
                "organizations:DescribeOrganization",
                "organizations:DescribeAccount"
            ],
            "Resource": "*"
        }
    ]
}
```

For a list of changes to the policy, see AWS Health updates to AWS managed policies.

AWS managed policy: AWSHealthFullAccess

AWS Health uses the AWSHealthFullAccess AWS managed policy. The policy grants entities (IAM users or roles) access to the AWS Health console. For more information, see Using the AWS Health console.

Permissions details

This policy includes the following permissions.

- `organizations` – Enable or disable the AWS Health organizational view feature for all accounts in an AWS organization, and view the organizational units (OU) of the management account
- `health` – Access to the AWS Health API operations and notifications
- `iam` – Creates an IAM role that is linked the AWS Health service

```
{
    "Version": "2012-10-17",
        "Statement": [
            {
                "Sid": "OrganizationWriteAccess",
                "Effect": "Allow",
                "Action": [
                    "organizations:EnableAWSServiceAccess",
                    "organizations:DisableAWSServiceAccess"
                ],
                "Resource": "*",
                "Condition": {
                    "StringEquals": {
                        "organizations:ServicePrincipal": "health.amazonaws.com"
                    }
                }
            },
            {
                "Sid": "HealthFullAccess",
                "Effect": "Allow",
                "Action": [
                    "health:*",
                    "organizations:DescribeAccount",
                    "organizations:ListAccounts",
                    "organizations:ListDelegatedAdministrators",
                    "organizations:ListParents"
                ],
                "Resource": "*"
            },
            {
                "Sid": "ServiceLinkAccess",
                "Effect": "Allow",
                "Action": "iam:CreateServiceLinkedRole",
                "Resource": "*",
                "Condition": {
```

```
                    "StringEquals": {
                        "iam:AWSServiceName": "health.amazonaws.com"
                    }
                }
            }
        ]
}
```

For a list of changes to the policy, see AWS Health updates to AWS managed policies.

AWS Health updates to AWS managed policies

View details about updates to AWS managed policies for AWS Health since this service began tracking these changes. For automatic alerts about changes to this page, subscribe to the RSS feed on the Document history for AWS Health page.

The following table describes important updates to the AWS Health managed policies since January 13, 2022.

AWS Health

Change	Description	Date
AWS managed policy: AWSHealthFullAccess - Update to an existing policy	AWS Health has expanded the AWSHealthFullAccess policy to AWS GovCloud (US) Regions and China Regions.	October 16, 2023
AWS managed policy: Health_OrganizationsServiceRolePolicy - Update to an existing policy	AWS Health added new AWS Organizations actions to allow service-linked role to describe the accounts and AWS services that can be used with AWS Organizations.	July 19, 2023
Change log published	Change log for the AWS Health managed policies.	January 13, 2023

Logging and monitoring in AWS Health

Monitoring is an important part of maintaining the reliability, availability, and performance of AWS Health and your other AWS solutions. AWS provides the following monitoring tools to watch AWS Health, report when something is wrong, and take actions when appropriate:

- *Amazon CloudWatch* monitors your AWS resources and the applications that you run on AWS in real time. You can collect and track metrics, create customized dashboards, and set alarms that notify you or take actions when a specified metric reaches a threshold that you specify. For example, you can have CloudWatch track CPU usage or other metrics of your Amazon Elastic Compute Cloud (Amazon EC2) instances and automatically launch new instances when needed. For more information, see the Amazon CloudWatch User Guide.
- *Amazon EventBridge* delivers a near-real-time stream of system events that describe changes in AWS resources. EventBridge enables automated event-driven computing. You can write rules that watch for certain events and trigger automated actions in other AWS services when these events happen. For more information, see Monitoring AWS Health events with Amazon EventBridge.
- *AWS CloudTrail* captures API calls and related events made by or on behalf of your AWS account and delivers the log files to an Amazon Simple Storage Service (Amazon S3) bucket that you specify. You can identify which users and accounts called AWS, the source IP address from which the calls were made, and when the calls occurred. For more information, see the AWS CloudTrail User Guide.

For more information, see Monitoring AWS Health.

Compliance validation for AWS Health

To learn whether an AWS service is within the scope of specific compliance programs, see AWS services in Scope by Compliance Program and choose the compliance program that you are interested in. For general information, see AWS Compliance Programs.

You can download third-party audit reports using AWS Artifact. For more information, see Downloading Reports in AWS Artifact.

Your compliance responsibility when using AWS services is determined by the sensitivity of your data, your company's compliance objectives, and applicable laws and regulations. AWS provides the following resources to help with compliance:

- Security and Compliance Quick Start Guides – These deployment guides discuss architectural considerations and provide steps for deploying baseline environments on AWS that are security and compliance focused.
- Architecting for HIPAA Security and Compliance on Amazon Web Services – This whitepaper describes how companies can use AWS to create HIPAA-eligible applications.

> **Note**
>
> Not all AWS services are HIPAA eligible. For more information, see the HIPAA Eligible Services Reference.

- AWS Compliance Resources – This collection of workbooks and guides might apply to your industry and location.
- AWS Customer Compliance Guides – Understand the shared responsibility model through the lens of compliance. The guides summarize the best practices for securing AWS services and map the guidance to security controls across multiple frameworks (including National Institute of Standards and Technology (NIST), Payment Card Industry Security Standards Council (PCI), and International Organization for Standardization (ISO)).
- Evaluating Resources with Rules in the *AWS Config Developer Guide* – The AWS Config service assesses how well your resource configurations comply with internal practices, industry guidelines, and regulations.
- AWS Security Hub – This AWS service provides a comprehensive view of your security state within AWS. Security Hub uses security controls to evaluate your AWS resources and to check your compliance against security industry standards and best practices. For a list of supported services and controls, see Security Hub controls reference.
- Amazon GuardDuty – This AWS service detects potential threats to your AWS accounts, workloads, containers, and data by monitoring your environment for suspicious and malicious activities. GuardDuty can help you address various compliance requirements, like PCI DSS, by meeting intrusion detection requirements mandated by certain compliance frameworks.
- AWS Audit Manager – This AWS service helps you continuously audit your AWS usage to simplify how you manage risk and compliance with regulations and industry standards.

Resilience in AWS Health

The AWS global infrastructure is built around AWS Regions and Availability Zones. AWS Regions provide multiple physically separated and isolated Availability Zones, which are connected with low-latency, high-throughput, and highly redundant networking. With Availability Zones, you can design and operate applications and databases that automatically fail over between zones without interruption. Availability Zones are more highly available, fault tolerant, and scalable than traditional single or multiple data center infrastructures.

AWS Health events are stored and replicated across multiple Availability Zones. This approach ensures that you can access them from the AWS Health Dashboard or the AWS Health API operations. You can view AWS Health events up to 90 days from when they occur.

For more information about AWS Regions and Availability Zones, see AWS Global Infrastructure.

Infrastructure security in AWS Health

As a managed service, AWS Health is protected by the AWS global network security procedures that are described in the Amazon Web Services: Overview of Security Processes whitepaper.

You use AWS published API calls to access AWS Health through the network. Clients must support Transport Layer Security (TLS) 1.0 or later. We recommend TLS 1.2 or later. Clients must also support cipher suites with perfect forward secrecy (PFS) such as Ephemeral Diffie-Hellman (DHE) or Elliptic Curve Ephemeral Diffie-Hellman (ECDHE). Most modern systems such as Java 7 and later support these modes.

Additionally, requests must be signed by using an access key ID and a secret access key that is associated with an IAM principal. Or you can use the AWS Security Token Service (AWS STS) to generate temporary security credentials to sign requests.

Configuration and vulnerability analysis in AWS Health

Configuration and IT controls are a shared responsibility between AWS and you, our customer. For more information, see the AWS shared responsibility model.

Security best practices for AWS Health

See the following best practices for working with AWS Health.

Grant AWS Health users minimum possible permissions

Follow the principle of least privilege by using the minimum set of access policy permissions for your users and groups. For example, you might allow an AWS Identity and Access Management (IAM) user access to the AWS Health Dashboard. However, you might not allow that same user to enable or disable access to AWS Organizations.

For more information, see AWS Health identity-based policy examples.

View the AWS Health Dashboard

Check your AWS Health Dashboard often to identify events that might affect your account or applications. For example, you might receive an event notification about your resources, such as an Amazon Elastic Compute Cloud (Amazon EC2) instance that needs to be updated.

For more information, see Getting started with your AWS Health Dashboard – Your account health.

Integrate AWS Health with Amazon Chime or Slack

You can integrate AWS Health with your chat tools. This integration lets you and your team get notified about AWS Health events in real time. For more information, see the AWS Health Tools in GitHub.

Monitor for AWS Health events

You can integrate AWS Health with Amazon CloudWatch Events, so that you can create rules for specific events. When CloudWatch Events detects an event that matches your rule, you are notified and can then take action. CloudWatch Events events are Region-specific, so you must configure this service in the Region in which your application or infrastructure resides.

In some cases, the Region for the AWS Health event can't be determined. If that situation occurs, the event appears in the US East (N. Virginia) Region by default. You can set up CloudWatch Events in this Region to ensure that you monitor these events.

For more information, see Monitoring AWS Health events with Amazon EventBridge.

Aggregating AWS Health events across accounts with organizational view

By default, you can use AWS Health to view the AWS Health events of a single AWS account. If you use AWS Organizations, you can also view AWS Health events centrally across your organization. This feature provides access to the same information as single account operations. You can use filters to view events in specific AWS Regions, accounts, and services.

You can aggregate events to identify accounts in your organization that are affected by an operational event or get notified for security vulnerabilities. You can then use this information to proactively manage and automate resource maintenance events across your organization. Use this feature to stay informed of upcoming changes to AWS services that might require updates or code changes.

It's a best practice to use the Delegated Administrator feature to delegate access to the AWS Health Organizational view to a member account. This makes it easier for operational teams to access the AWS Health events in your organization. The Delegated Administrator feature allows you to keep your management account restricted, while providing teams with the visibility that they need to act on AWS Health events.

Important

- AWS Health doesn't record events that occurred in your organization before you enabled organizational view. For example, if a member account (111122223333) in your organization received an event for Amazon Elastic Compute Cloud (Amazon EC2) before you enabled this feature, this event won't appear in your organizational view.
- AWS Health events that were sent for accounts in your organization will appear in organizational view as long as the event is available, up to 90 days, even if one or more of those accounts leave your organization.
- Organizational events are available for 90 days before they're deleted. This quota can't be increased.

Prerequisites

Before you use organizational view, you must:

- Be part of an organization with all features enabled.
- Sign in to the management account as an AWS Identity and Access Management (IAM) user or assume an IAM role.

  You can also sign in as the root user (not recommended) in your organization's management account. For more information, see Lock away your AWS account root user access keys in the *IAM User Guide*.
- If you sign in as an IAM user, use an IAM policy that grants access to the AWS Health and Organizations actions, such as the AWSHealthFullAccess policy. For more information, see AWS Health identity-based policy examples.

Topics

Organizational view (console)

You can use the AWS Health console to get a centralized view for health events in your AWS organization.

Organizational view is available in the AWS Health console for all AWS Support plans at no additional cost.

> **Note**
>
> If you want to allow users access to this feature in the management account, they must have permissions such as the AWSHealthFullAccess policy. For more information, see AWS Health identity-based policy examples.

Contents

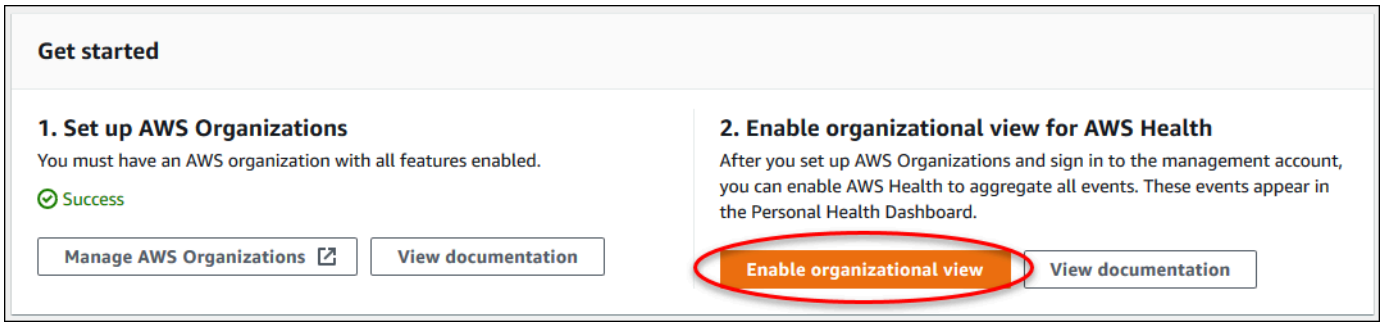
- Scheduled changes
- Other notifications
- Event log
- Viewing affected accounts and resources (console)
- Disabling organizational view (console)

Enabling organizational view (console)

You can enable organizational view from the AWS Health console. You must sign in to the management account of your AWS organization.

To view the AWS Health Dashboard for your organization

1. Open your AWS Health Dashboard at https://health.aws.amazon.com/health/home.
2. In the navigation pane, under **Your organization health**, choose **Configurations**.
3. On the **Enable organizational view** page, choose **Enable organizational view**.



4. (Optional) If you want to make changes to your AWS organizations, such as creating organizational units (OUs), choose **Manage AWS Organizations**.

   For more information, see Getting started with AWS Organizations in the *AWS Organizations User Guide*.

Notes

- Enabling this feature is an asynchronous process and takes time to complete. Depending on the number of accounts in your organization, it can take several minutes to load the accounts. You can leave and check the AWS Health console later.

- If you have a Business, Enterprise On-Ramp, or Enterprise Support plan, you can call the DescribeHealthServiceStatusForOrganization API operation to check the status of the process.
- When you enable this feature, the `AWSServiceRoleForHealth_Organizations` service-linked role with the `Health_OrganizationsServiceRolePolicy` AWS managed policy is applied to the management account in the organization. For more information, see Using service-linked roles for AWS Health.

Viewing organizational view events (console)

After you enable organizational view, AWS Health displays health events for all accounts in your organization.

When an account joins your organization, AWS Health automatically adds the account to organizational view. When an account leaves your organization, new events from that account are no longer logged to organizational view. However, existing events remain and you can still query them up to the 90-day limit.

AWS retains the policy data for the account for 90 days from the effective date of the administrator account closure. At the end of the 90 day period, AWS permanently deletes all policy data for the account.

- To retain findings for more than 90 days, you can archive the policies. You can also use a custom action with an EventBridge rule to store the findings in an S3 bucket.
- As long as AWS retains the policy data, when you reopen the closed account, AWS reassigns the account as the service administrator and recovers the service policy data for the account.
- For more information, see Closing an account.

Important

For customers in the AWS GovCloud (US) Regions:

- Before closing your account, back up and then delete account resources. You will no longer have access to them after you close the account.

> **Note**
>
> When you enable this feature, the AWS Health console can display public events from the AWS Health Dashboard – Service health for the last 7 days. These public events aren't specific to accounts in your organization. Events from the AWS Health Dashboard – Service health provide public information about the regional availability of AWS services.

You can view organizational view events in the following pages:.

Topics

- Open and recent issues
- Scheduled changes
- Other notifications
- Event log

Open and recent issues

You can use the **Open and recent issues** tab to view events that might affect your AWS infrastructure, such as changes to AWS services and resources that affect your organization.

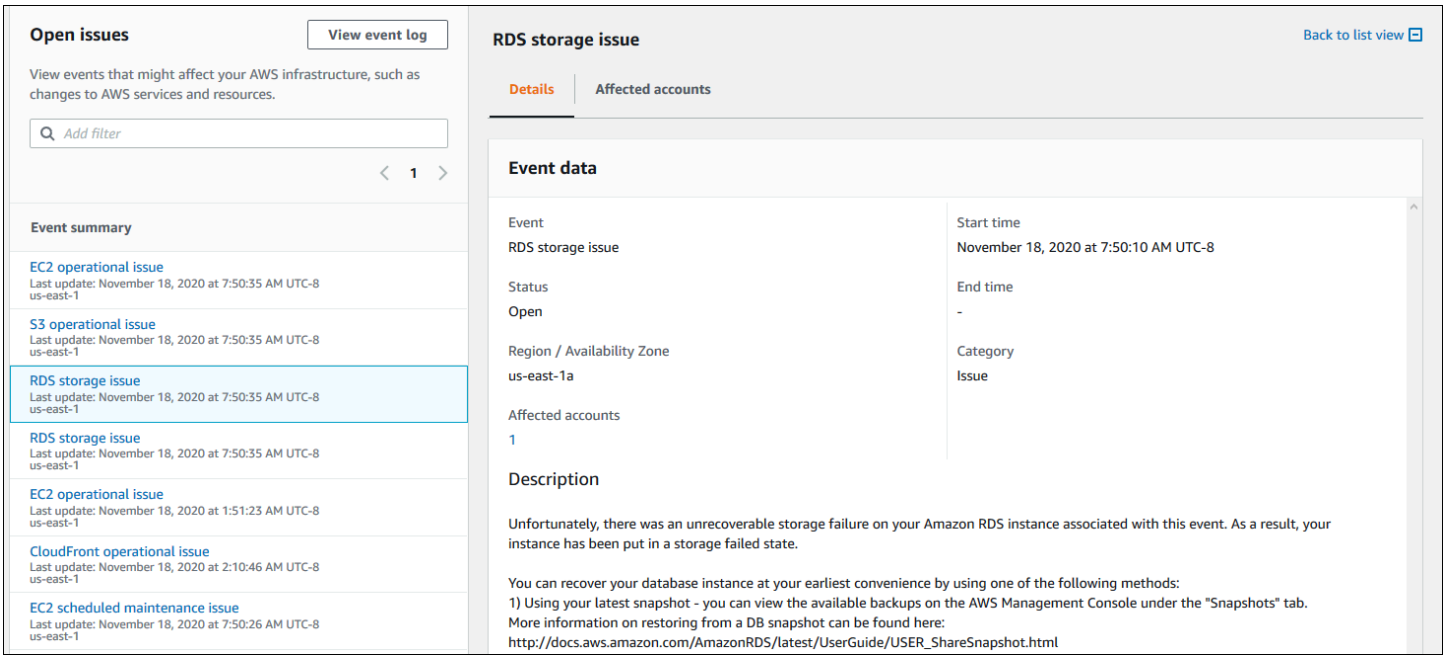
To view organizational view events

1. Open your AWS Health Dashboard at https://health.aws.amazon.com/health/home.
2. In the navigation pane, under **Your organization health**, choose **Open and recent issues** to view recently reported events.
3. Choose an event. On the **Details** tab, you can review the following information about the event:
   - Event name
   - Status
   - Region / Availability Zone
   - Affected accounts
   - Start time
   - End time

- Category
- Description

Example : Open issues for organizational view

The following Amazon Relational Database Service (Amazon RDS) event appears in the **Open and recent issues** tab for organizational view and affects one account in the organization.



Scheduled changes

Use the **Scheduled changes** tab to view upcoming events that might affect your organization. These events can include scheduled maintenance activities for services.

Other notifications

Use the **Notifications** tab to view all other notifications and ongoing events from the past seven days that might affect your organization. This can include events, such as certificate rotations, billing notifications, and security vulnerabilities.

Event log

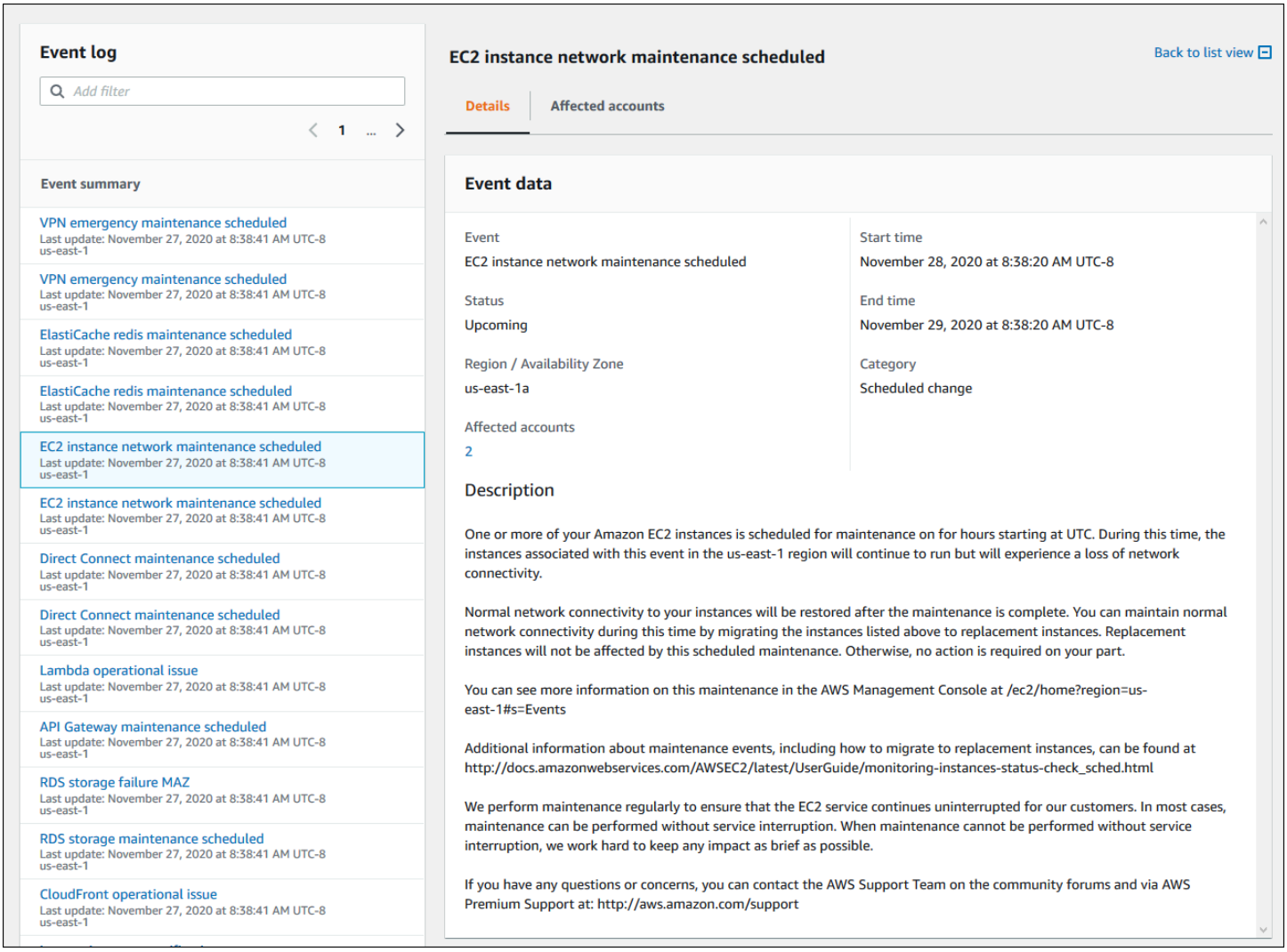
You can also use the **Event log** tab to view AWS Health events for organizational view. The column layout and behavior are similar to the **Open and recent issues** tab, except that the **Event log** tab includes additional columns and filter options, such as the **Event category**, **Status**, and **Start time**.

To view organizational view events in the Event log tab

1. Open your AWS Health Dashboard at https://health.aws.amazon.com/health/home.
2. In the navigation pane, under **Your organization health**, choose **Event log**.
3. Under **Event log**, choose the event name. You can review the following information about the event:
   - Event name
   - Status
   - Region / Availability Zone
   - Affected accounts
   - Start time
   - End time
   - Category
   - Description

Example : Event log tab for organizational view

The following example Amazon DynamoDB (DynamoDB) event appears in the **Event log** tab and affects two accounts in the organization.



Viewing affected accounts and resources (console)

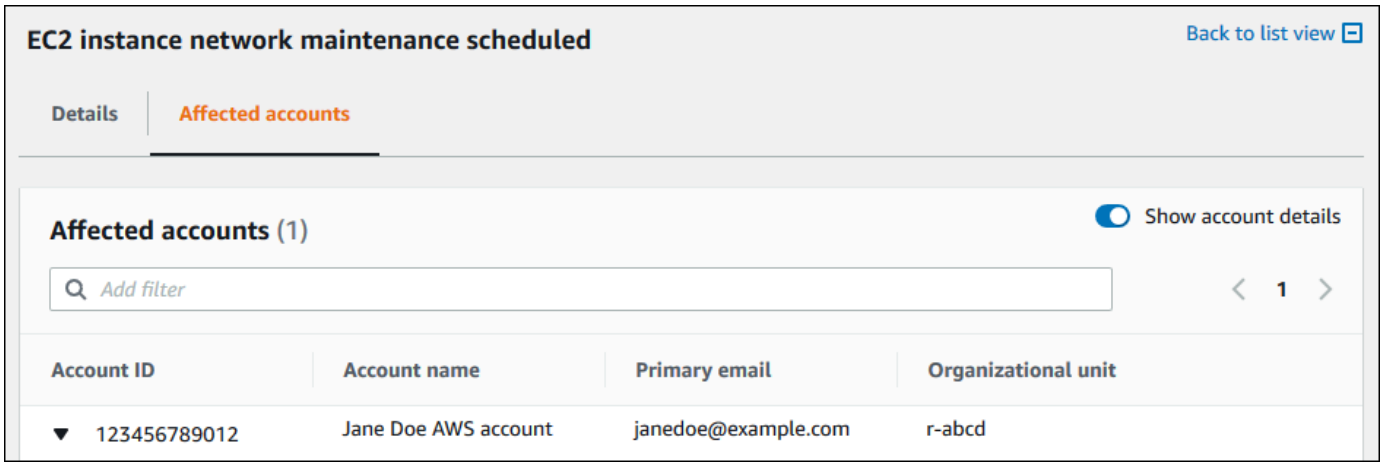
Under **Your organization health**, you can view the accounts in your organization that are affected by the event and any related resources. For example, if there's an upcoming event for Amazon Elastic Compute Cloud (Amazon EC2) instance maintenance, accounts in your organization that have Amazon EC2 instances can appear in the **Details** tab. You can identify the specific resources and then contact the account owner.

To view affected accounts and resources

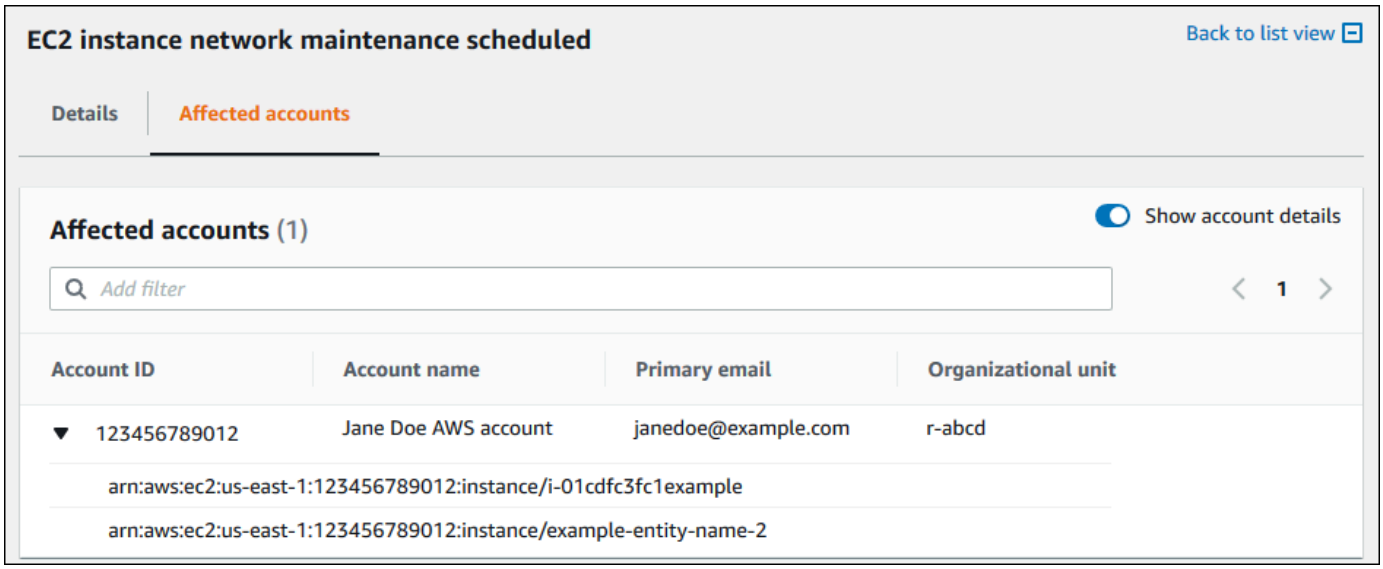
1. Open your AWS Health Dashboard at https://health.aws.amazon.com/health/home.
2. In the navigation pane, under **Your organization health**, choose one of the tabs.
3. Choose an event that has a value for **Affected accounts**.
4. Choose the **Affected accounts** tab.

5. Choose **Show account details** to view the following information for the accounts:

   - Account ID
   - Account name
   - Primary email
   - Organizational unit (OU)



6. Expand the account to view the affected resources.



7. If there are more than 10 resources, choose **View all resources** to view them.
8. To filter by account ID for this specific event, do the following:

   a. On the **Affected accounts** tab, choose **Add filter**, choose **Account ID**, and then enter the account ID. You can only enter one account ID at a time.

b. Choose **Apply**. The account that you entered appears in the list.

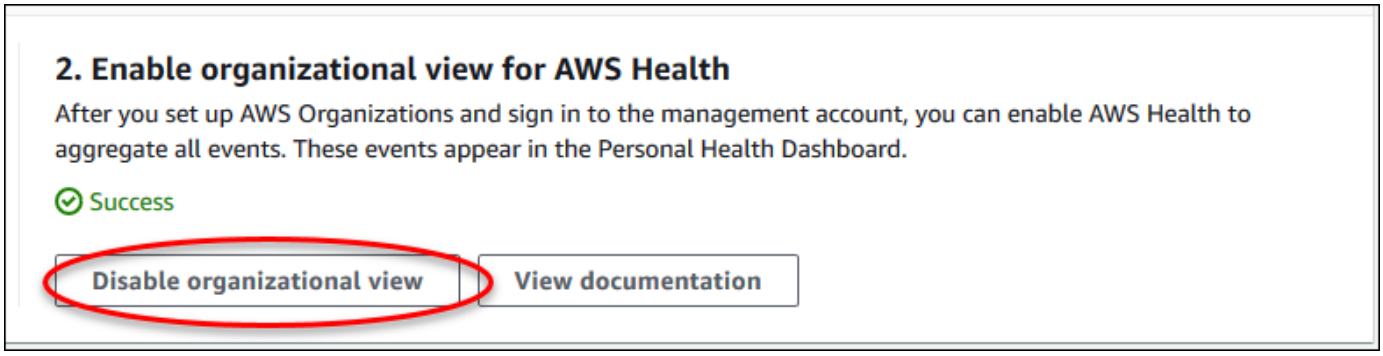
Disabling organizational view (console)

If you don't want to aggregate events for your organization, you can turn off this feature from the management account.

AWS Health stops aggregating events for all other accounts in your organization. You can continue to view previous events from your organization until they're deleted.

To disable organizational view

1. Open your AWS Health Dashboard at https://health.aws.amazon.com/health/home.
2. In the navigation pane, under **Your organization health**, choose **Configurations**.
3. On the **Enable organizational view** page, choose **Disable organizational view**.



After you turn off this feature, AWS Health no longer aggregates events from your organization. However, the service-linked role remains in the management account until you delete it through the AWS Identity and Access Management (IAM) console, IAM API, or AWS Command Line Interface (AWS CLI). For more information, see Deleting a service-linked role in the *IAM User Guide*.

Organizational view (CLI)

You can also enable the organizational view feature from the AWS Command Line Interface (AWS CLI) instead of the AWS Health console. To use the console, see Enabling organizational view (console).

> **Note**
>
> If you want to allow users access to the management account for the organizational view feature, they must have permissions such as the AWSHealthFullAccess policy. For more information, see AWS Health identity-based policy examples.

Contents

Enabling organizational view (CLI)

You can enable organizational view by using the EnableHealthServiceAccessForOrganization API operation.

You can use the AWS Command Line Interface (AWS CLI) or your own code to call this operation.

> **Note**
>
> - You must have a Business, Enterprise On-Ramp, or Enterprise Support plan to call the AWS Health API.
> - You must use the US East (N. Virginia) Region endpoint.

Example

The following AWS CLI command enables this feature from your AWS account. You can use this command from the management account or from an account that can assume the role with the required permissions.

```
aws health enable-health-service-access-for-organization --region us-east-1
```

The following code examples call the EnableHealthServiceAccessForOrganization API operation.

Python

```
import boto3

client = boto3.client('health')

response = client.enable_health_service_access_for_organization()

print(response)
```

Java

You can use the AWS SDK for version Java 2.0 for the following example.

```
import software.amazon.awssdk.services.health.HealthClient;
import software.amazon.awssdk.services.health.HealthClientBuilder;

import software.amazon.awssdk.services.health.model.ConcurrentModificationException;
import
 software.amazon.awssdk.services.health.model.EnableHealthServiceAccessForOrganizationReques
import
 software.amazon.awssdk.services.health.model.EnableHealthServiceAccessForOrganizationRespon
import
 software.amazon.awssdk.services.health.model.DescribeHealthServiceStatusForOrganizationRequ
import
 software.amazon.awssdk.services.health.model.DescribeHealthServiceStatusForOrganizationResp

import software.amazon.awssdk.auth.credentials.DefaultCredentialsProvider;

import software.amazon.awssdk.regions.Region;

public class EnableHealthServiceAccessDemo {
    public static void main(String[] args) {
        HealthClient client = HealthClient.builder()
            .region(Region.US_EAST_1)
            .credentialsProvider(
                DefaultCredentialsProvider.builder().build()
            )
            .build();

        try {
            DescribeHealthServiceStatusForOrganizationResponse statusResponse =
 client.describeHealthServiceStatusForOrganization(
```

```
                DescribeHealthServiceStatusForOrganizationRequest.builder().build()
            );

            String status =
 statusResponse.healthServiceAccessStatusForOrganization();
            if ("ENABLED".equals(status)) {
                System.out.println("EnableHealthServiceAccessForOrganization already
 enabled!");
                return;
            }

            client.enableHealthServiceAccessForOrganization(
                EnableHealthServiceAccessForOrganizationRequest.builder().build()
            );

            System.out.println("EnableHealthServiceAccessForOrganization is in
 progress");
        } catch (ConcurrentModificationException cme) {
            System.out.println("EnableHealthServiceAccessForOrganization is already
 in progress. Wait for the action to complete before trying again.");
        } catch (Exception e) {
            System.out.println("EnableHealthServiceAccessForOrganization FAILED: " +
 e);
        }
    }
}
```

For more information, see the AWS SDK for Java 2.0 Developer Guide.

When you enable this feature, the `AWSServiceRoleForHealth_Organizations` service-linked role with the `Health_OrganizationsServiceRolePolicy` AWS managed policy is applied to the management account in the organization.

> **Note**
>
> Enabling this feature is an asynchronous process and takes time to complete. You can call the DescribeHealthServiceStatusForOrganization operation to check the status of the process.

Viewing organizational view events (CLI)

After you enable this feature, AWS Health starts to record events that affect accounts in the organization. When an account joins your organization, AWS Health automatically adds the account to organizational view.

> **Note**
>
> AWS Health doesn't record events that occurred in your organization before you enabled organizational view.

When an account leaves your organization, new events from that account are no longer logged to organizational view. However, existing events remain and you can still query them up to the 90-day limit.

AWS retains the policy data for the account for 90 days from the effective date of the administrator account closure. At the end of the 90 day period, AWS permanently deletes all policy data for the account.

- To retain findings for more than 90 days, you can archive the policies. You can also use a custom action with an EventBridge rule to store the findings in an S3 bucket.
- As long as AWS retains the policy data, when you reopen the closed account, AWS reassigns the account as the service administrator and recovers the service policy data for the account.
- For more information, see Closing an account.

> **Important**
>
> For customers in the AWS GovCloud (US) Regions:
>
> - Before closing your account, back up and then delete account resources. You will no longer have access to them after you close the account.

You can use the AWS Health API operations to return events from organizational view.

Example : Describe organizational view events

The following AWS CLI command returns health events for AWS accounts in your organization.

```
aws health describe-events-for-organization --region us-east-1
```

See the following section for other AWS Health API operations.

Disabling organizational view (CLI)

You can disable organizational view by using the DisableHealthServiceAccessForOrganization API operation.

Example

The following AWS CLI command disables this feature from your account.

```
aws health disable-health-service-access-for-organization --region us-east-1
```

> **Note**
>
> You can also disable the organizational feature by using the Organizations DisableAWSServiceAccess API operation. After you call this operation, AWS Health stops aggregating events for all other accounts in your organization. If you call the AWS Health API operations for organizational view, AWS Health returns an error. AWS Health continues to aggregate health events for your AWS account.

After you disable this feature, AWS Health no longer aggregates events from your organization. However, the service-linked role remains in the management account until you delete it through the AWS Identity and Access Management (IAM) console, IAM API, or AWS CLI. For more information, see Deleting a service-linked Role in the *IAM User Guide*.

AWS Health organizational view API operations

You can use the following AWS Health API operations for organizational view:

- DescribeEventsForOrganization – Returns summary information about events across the organization.
- DescribeAffectedAccountsForOrganization – Returns a list of AWS accounts in the organization that are affected by the specified event.

- DescribeEventDetailsForOrganization – Returns detailed information about the specified events for one or more accounts in the organization.
- DescribeAffectedEntitiesForOrganization – Returns a list of entities that have been affected by one or more events for one or more accounts in an organization.

You can use the following operations to enable or disable AWS Health from working with Organizations:

- EnableHealthServiceAccessForOrganization – Grants AWS Health permission to interact with Organizations and applies the SLR to the management account in the organization.
- DisableHealthServiceAccessForOrganization – Revokes permission for AWS Health to interact with Organizations.
- DescribeHealthServiceStatusForOrganization – Returns status information on whether AWS Health is enabled for your organization.

You must have a Business, Enterprise On-Ramp, or Enterprise Support plan to call these API operations. If you call the `DescribeEventForOrganization` and `DescribeAffectedAccountsForOrganization` operations from an account that has at least a Business support plan, you can return information about any account in the organization, regardless of the support level of the individual accounts. See the following examples.

Example Example: An organization with accounts that have Business and Developer support plans

- You have three accounts in your organization. The management account has a Business support plan and the other two accounts have a Developer support plan.
- You call the `DescribeEventForOrganization` API operation from the management account or from an account that can assume the role with the required permissions.
- AWS Health returns information for all three accounts.

If you call the `DescribeEventDetailsForOrganization` and `DescribeAffectedEntitiesForOrganization` API operations from an account that has at least a Business support plan, you can only return information about accounts in the organization that have a Business, Enterprise On-Ramp, or Enterprise Support plan.

Example Example: An organization with accounts that have an Enterprise, Business, and Developer Support plans

- You have five accounts in your organization. The management account has an Enterprise support plan, two accounts have a Business support plan, and two accounts have a Developer support plan.
- You call the `DescribeEventDetailsForOrganization` API operation from the management account.
- AWS Health returns information for only the accounts that have an Enterprise or Business support plan. The accounts that have a Developer support plan appear in the `failedSet` of the response.

Delegated administrator organizational view

With AWS Health, you can leverage the delegated administrator feature from AWS Organizations that allows an account other than the management account to view aggregated AWS Health events on the AWS Health Dashboard or programmatically through the AWS Health API. The delegated administrator feature provides the flexibility for different teams to view and manage health events across your organization. It's an AWS security best practice to delegate responsibilities outside of the management account where possible.

Contents

Register a delegated administrator for your organizational view

After you enable organizational view for your organization, you can register up to five member accounts in your organization as a delegated administrator. To do this, call the RegisterDelegatedAdministrator API operation. After you register the member acounts, they are delegated administer accounts and can access the AWS Health organizational view from the AWS Health Dashboard. If the account has a Business, Enterprise On-Ramp, or Enterprise Support plan, then the delegated administrators can use the AWS Health API to access the AWS Health organizational view.

To establish a delegated administrator, from the management account in your organization, call the following AWS Command Line Interface (AWS CLI) command. You can use this command from the management account or from an account that can assume the role with the required AWS Identity and Access Management permissions. In the following example command, replace **ACCOUNT_ID** with the member account ID that you want to register along with the AWS Health service principal "health.amazonaws.com".

```
aws organizations register-delegated-administrator --account-id ACCOUNT_ID --service-
principal  health.amazonaws.com
```

After a delegated administrator is registered, you have visibility into all AWS Health events affecting accounts across your organization. You can view historical events over the past 90 days or since the organizational view feature was first enabled, whichever is more recent. Note that enabling the delegated administrator feature is an asynchronous process and takes up to a minute to complete.

Remove a delegated administrator from your organizational view

To remove access for a delegated administrator, call the DeregisterDelegatedAdministrator API operation.

From your organization's management account, call the following AWS CLI command to remove a member account as delegated administrator. In the following example command, replace **ACCOUNT_ID** with the member account ID that you want to remove.

```
aws organizations deregister-delegated-administrator --account-id ACCOUNT_ID --service-
principal  health.amazonaws.com
```

Monitoring AWS Health events with Amazon EventBridge

You can use Amazon EventBridge to detect and react to AWS Health events. Then, based on rules that you create, EventBridge invokes one or more target actions when an event matches the values that you specify in a rule. Depending on the type of event, you can capture event information, initiate additional events, send notifications, take corrective action, or perform other actions. For example, you can use AWS Health to receive email notifications if you have AWS resources in your AWS account that are scheduled for updates, such as Amazon Elastic Compute Cloud (Amazon EC2) instances.

Notes

- AWS Health delivers events on a *best effort* basis. Events aren't always guaranteed to be delivered to EventBridge.
- Any EventBridge rules which you create can only receive notifications for your AWS account. To receive organizational events for other accounts within your AWS Organizations, please see Aggregating AWS Health events using organizational view and delegated administrator access.

You can choose between multiple target types for EventBridge as part of your AWS Health workflow, including:

- AWS Lambda functions
- Amazon Kinesis Data Streams
- Amazon Simple Queue Service (Amazon SQS) queues
- Built-in targets (such as CloudWatch alarm actions)
- Amazon Simple Notification Service (Amazon SNS) topics

For example, you can use a Lambda function to pass a notification to a Slack channel when an AWS Health event occurs. Or, you can use Lambda and EventBridge to send custom text or SMS notifications with Amazon SNS when an AWS Health event occurs.

For samples of automation and customized alerts that you can create in response to AWS Health events, see the AWS Health Tools in GitHub.

Topics

About AWS Regions for AWS Health

You must create an EventBridge rule for each Region that you want to receive AWS Health events for. If you don’t create a rule, you won’t receive events. For example, to receive events from the US West (Oregon) Region, you must create a rule for this Region.

Setting up an additional rule in a backup Region adds an extra layer of resilience to your workflows, should your primary rule be affected by an ongoing event. Public events for AWS Health are sent simultaneously to both the impacted Region and to a backup Region. See About public events for AWS Health for more information. For all Regions in the standard AWS partition, you can setup a rule in US West (Oregon) as a backup to continue receiving events even if your primary Region is affected by an ongoing issue. The backup Region for the US West (Oregon) Region is US East (N. Virginia) Region.

For example, if you're monitoring events in the Europe (Frankfurt) Region and that Region is temporarily unavailable, then AWS Health will also deliver that event to the US West (Oregon) Region. Next, your back up EventBridge rule sends the event to the targets that you specified. To create a backup rule, follow the procedure below for Creating an EventBridge rule for AWS Health and use the US West (Oregon) Region.

Some AWS Health events are not Region-specific. Events that aren't specific to a Region are called global events. These include events sent for AWS Identity and Access Management (IAM). To receive global events, you must create a rule for the US East (N. Virginia) Region for the primary Region and US West (Oregon) Region as the backup Region.

To receive global events in the AWS GovCloud (US), you must create a rule in the AWS GovCloud (US-West) Region.

About public events for AWS Health

When you create an EventBridge rule to monitor events from AWS Health, the rule delivers both account-specific events and public events:

- *Account-specific* events affect your account and resources, such as an event that tells you about a required update to an Amazon EC2 instance or other scheduled change events.
- *Public* events appear on the AWS Health Dashboard – Service health. Public events aren't specific to AWS accounts and provide public information about the Regional availability of a service.

> **Important**
>
> To receive both event types, your rule must use the `"source": [ "aws.health"]` value. Wildcards, such as `"source": [ "aws.health*"]` won't match the pattern to monitor for any events.

If you're monitoring public events from an AWS Region, we recommend that you create a back up rule. Public events for AWS Health are sent simultaneously to both the impacted Region and to a backup Region. It's recommended that you de-duplicate AWS Health events using eventARN and communicationId because these remain consistent for AWS Health messages sent to the backup Region.

You can identify if an event is public or account-specific in EventBridge, by using the eventScopeCode parameter. Events can have the `PUBLIC` or `ACCOUNT_SPECIFIC`. You can also filter your rule on this parameter.

Example: Public events for Amazon Elastic Compute Cloud

The following event shows an operational issue for Amazon EC2 in the US East (N. Virginia) Region.

```
{
    "version": "0",
    "id": "fd9d4512-1eb0-50f6-0491-d016ae56aef0",
    "detail-type": "AWS Health Event",
```

```
    "source": "aws.health",
    "account": "123456789012",
    "time": "2023-02-15T10:07:10Z",
    "region": "us-east-1",
    "resources": [],
    "detail": {
        "eventArn": "arn:aws:health:us-east-1::event/EC2/AWS_EC2_OPERATIONAL_ISSUE",
        "service": "EC2",
        "eventTypeCode": "AWS_EC2_OPERATIONAL_ISSUE",
        "eventTypeCategory": "issue",
        "eventScopeCode": "PUBLIC",
        "communicationId": "01b0993207d81a09dcd552ebd1e633e36cf1f09a-1",
        "startTime": "Wed, 15 Feb 2023 22:07:07 GMT",
        "lastUpdatedTime": "Wed, 15 Feb 2023 22:07:07 GMT",
        "statusCode": "open",
        "eventRegion": "us-east-1",
        "eventDescription": [
            {
                "latestDescription": "We are investigating increased API Error rates
 and Latencies for Amazon Elastic Compute Cloud in the US-EAST-1 Region.",
                "language": "en_US"
            }
        ],
        "page": "1",
        "totalPages": "1",
        "affectedAccount":"123456789012",

    }
}
```

Event processor for AWS Health

If you use AWS Incident Detection and Response for your account, then you must install the `AWSServiceRoleForHealth_EventProcessor` service-linked role in your account.

This role trusts the `event-processor.health.amazonaws.com` service principal to assume the role. Attached to this role is the `AWSHealth_EventProcessorServiceRolePolicy` AWS managed policy. This policy lists the permissions that the role can perform, such as calling other AWS services for you.

This role then creates an Amazon EventBridge managed rule in your account. The rule is named `AWSHealthEventProcessor-DO-NOT-DELETE`. This rule is the required infrastructure for your

account so that EventBridge can deliver alarm state change information from your account to AWS Health.

Related information

To learn more, see the following topics:

- Using service-linked roles for AWS Health
- AWS managed policy: AWSHealth_EventProcessorServiceRolePolicy

Creating an EventBridge rule for AWS Health

You can create an EventBridge rule to get notified for AWS Health events in your account. Before you create event rules for AWS Health, do the following:

- Familiarize yourself with events, rules, and targets in EventBridge. For more information, see What is Amazon EventBridge? in the *Amazon EventBridge User Guide* and New EventBridge – Track and Respond to Changes to Your AWS Resources .
- Create the target or targets to use in your event rules.

To create an EventBridge rule for AWS Health

1. Open the Amazon EventBridge console at https://console.aws.amazon.com/events/.
2. To change the AWS Region, use the **Region selector** in the upper-right corner of the page. Choose the Region in which you want to track AWS Health events.
3. In the navigation pane, choose **Rules**.
4. Choose **Create rule**.
5. On the **Define rule detail** page, enter a name and description for your rule.
6. Keep the default values for **Event bus** and **Rule type**, and then choose **Next**.
7. On the **Build event pattern** page, for **Event source**, choose **AWS events and EventBridge partner events**.
8. Under **Event pattern**, for **Event source**, choose **AWS services**.
9. Under **Event pattern**, for **AWS service**, choose **Health**.
10. For **Event type**, choose one of the following options.

- **Specific Health Abuse Events** – Create a rule for AWS Health events that have the word `Abuse` in the event type name.
- **Specific Health events** – Create a rule for events for a specific AWS service, such as Amazon EC2.

11. You can choose **Any service** or **Specific service(s)**. If you chose a specific service, choose one of the following options:
    - Choose **Any event type category** to create a rule that applies to all event type categories.
    - Choose **Specific event type category(s)** and then choose a value from the list, such as **issue**, **accountNotification**, or **scheduledChange**.

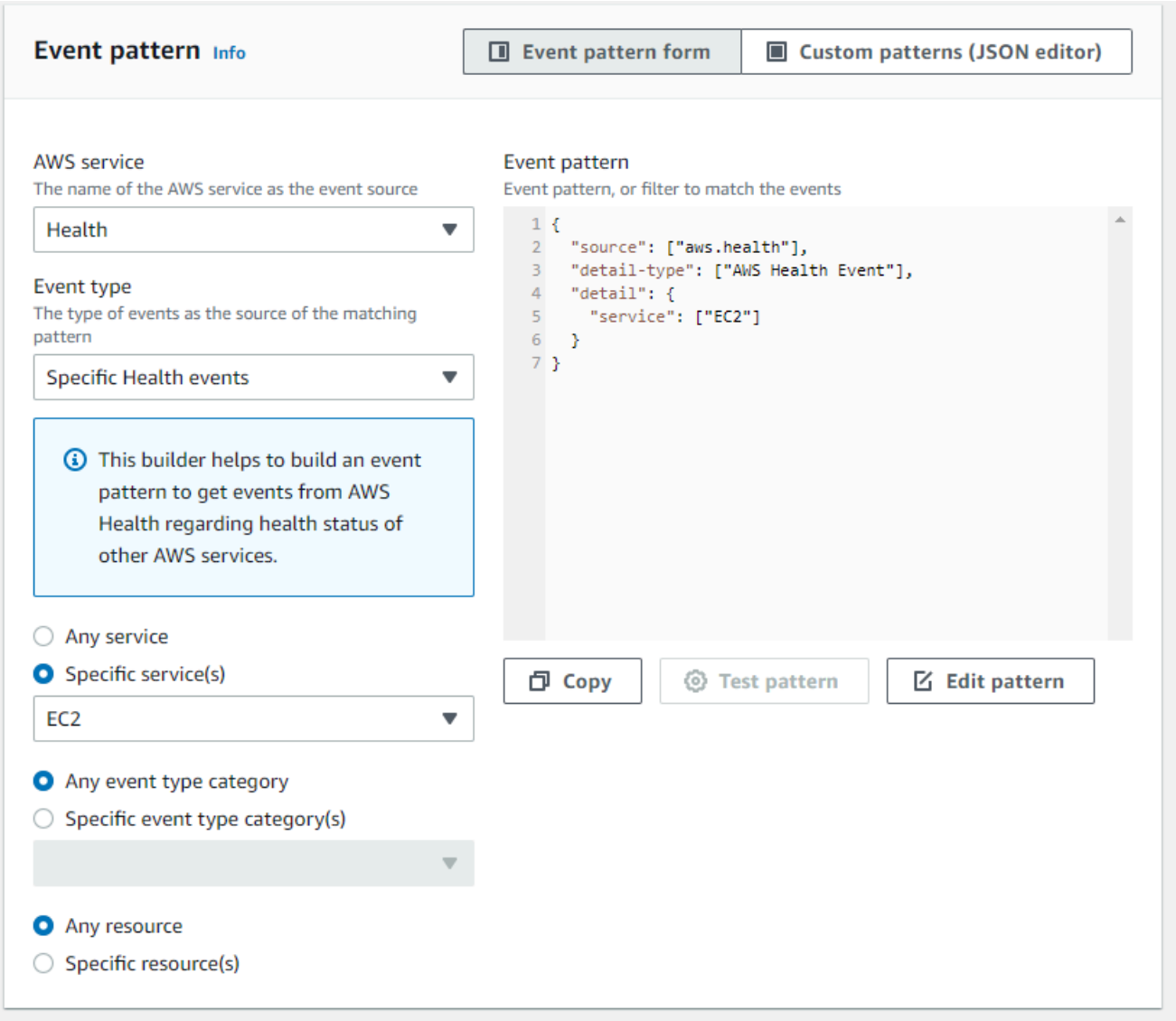
    > **Tip**
    >
    > - To monitor all AWS Health events for a specific service, we recommend that you choose **Any event type category** and **Any resource**. This ensures that your rule monitors for any AWS Health events, including any new event type codes, for your specified service. For an example rule, see all Amazon EC2 events.
    > - You can create a rule to monitor for more than one service or event type category. To do so, you must manually update the event pattern for the rule. For more information, see Creating a rule for multiple services and categories.

12. If you chose a specific service and event type category, choose one of the following options for event type codes.
    - Choose **Any event type code** to create a rule that applies to all event type codes.
    - Choose **Specific event type code(s)** and then choose one or more values from the list. This creates a rule that applies only to specific event type codes. For example, if you choose **`AWS_EC2_INSTANCE_STOP_SCHEDULED`** and **`AWS_EC2_INSTANCE_RETIREMENT_SCHEDULED`**, your rule applies only to these events when they occur in your account.
13. Choose one of the following options for affected resources.
    - Choose **Any resource** to create a rule that applies to all resources.
    - Choose **Specific resource(s)** and enter the IDs of one or more resources. For example, you might specify an Amazon EC2 instance ID, such as *`i-EXAMPLEa1b2c3de4`*, to monitor for events that affect only this resource.
14. Review your rule setup so that it meets your event-monitoring requirements.

15. Choose **Next**.
16. On the **Select target(s)** page, choose the target type that you created for this rule, and then configure any additional options that are required for that type. For example, you might send the event to an Amazon SQS queue or an Amazon SNS topic.
17. Choose **Next**.
18. (Optional) On the **Configure tags** page, add any tags and then choose **Next**.
    - Note: Tags are currently not sent by the aws.health source in EventBridge.
19. On the **Review and create** page, review your rule setup and ensure that it meets your event monitoring requirements.
20. Choose **Create rule**.

Example : Rule for all Amazon EC2 events

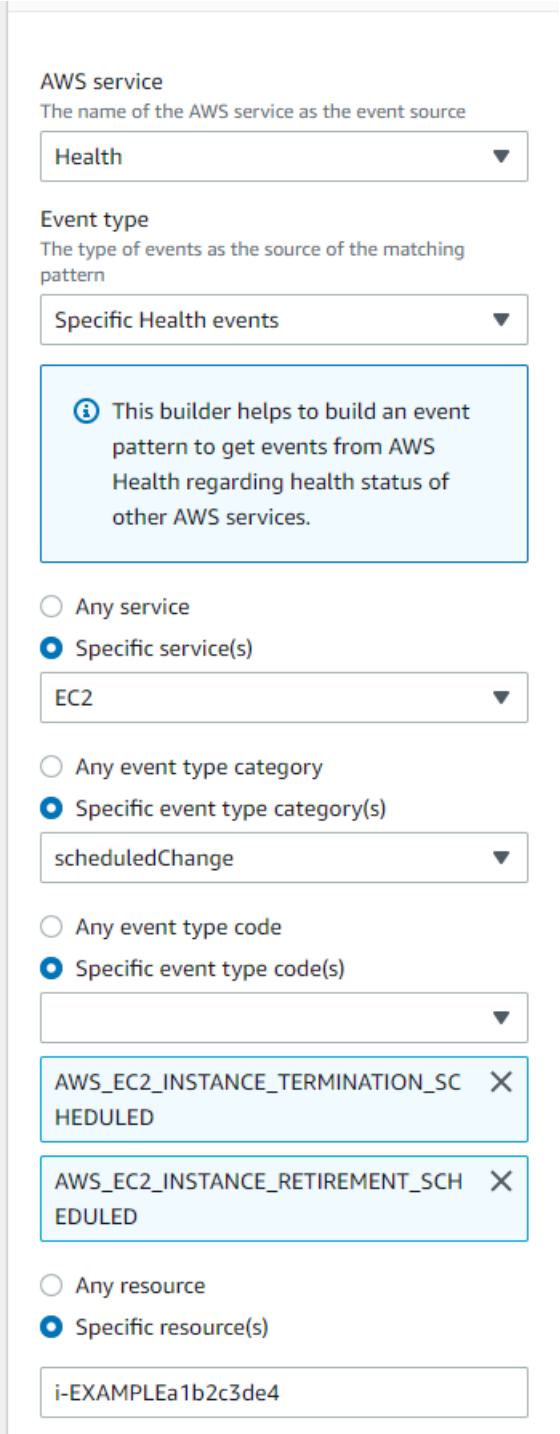
The following example creates a rule so that EventBridge monitors for all Amazon EC2 events, including the event type categories, event codes, and resources.



Example : Rule for specific Amazon EC2 events

The following example creates a rule so that EventBridge monitors the following:

- The Amazon EC2 service
- The **scheduledChange** event type category
- The event type codes for `AWS_EC2_INSTANCE_TERMINATION_SCHEDULED` and `AWS_EC2_INSTANCE_RETIREMENT_SCHEDULED`
- The instance with the ID `i-EXAMPLEa1b2c3de4`



Creating a rule for multiple services and categories

The examples in the previous procedure show you how to create a rule for a single service and event type category. You can also create a rule for multiple services and event type categories. This means that you don't have to create a separate rule for each service and category that you want to monitor. To do so, you must edit the event pattern and then enter your changes manually.

You can use one of the following options.

To add services and categories for an existing rule

1. In the EventBridge console, on the **Rules** page, choose the rule name.
2. In the upper-right corner, choose **Edit**.
3. Choose **Next**.
4. For **Event pattern**, choose **Edit pattern**, and then enter your changes into the text field.
5. Choose **Next** until you reach the **Review and update** page.
6. Choose **Update rule** to save your changes.

To add services and categories for a new rule

1. Follow the procedure in Creating an EventBridge rule for AWS Health to step 9.
2. Instead of choosing a single service or category from the lists, for **Event pattern**, choose **Edit pattern**.
3. Enter your changes into the text field. See the following example pattern as a model for creating your own event pattern.
4. Review your event pattern, and then follow the rest of the procedure in Creating an EventBridge rule for AWS Health to create your rule.

Use the API or AWS Command Line Interface (AWS CLI)

For a new or existing rule, use the PutRule API operation or the `aws events put-rule` command to update the event pattern. For an example AWS CLI command, see put-rule in the *AWS CLI Command Reference*.

Example Example: Multiple services and event type categories

The following event pattern creates a rule to monitor events for the `issue`, `accountNotification`, and `scheduledChange` event type categories for three AWS services: Amazon EC2, Amazon EC2 Auto Scaling, and Amazon VPC.

```
{
  "detail": {
    "eventTypeCategory": [
```

```
      "issue",
      "accountNotification",
      "scheduledChange"
    ],
    "service": [
      "AUTOSCALING",
      "VPC",
      "EC2"
    ]
  },
  "detail-type": [
    "AWS Health Event"
  ],
  "source": [
    "aws.health"
  ]
}
```

AWS Health Events Amazon EventBridge Schema

The following is the schema for AWS Health events. Changes or additions to the previous version of the schema are highlighted as "New". A sample payload is provided after the schema.

AWS Health Event Schema

AWS Health Event Schema

Parameter	Description	Required
version	EventBridge Version, currently "0"	Yes
id	The uniqueEventBridge identifier for the event	Yes
detail-type	Describes the detail	Yes

Parameter	Description	Required
	type. For AWS Health events this will be `&AWS Health Event` or `AWS Health Abuse Event`	
source	The event bus source. For AWS Health events this will be `aws.health`	Yes

Parameter	Description	Required
account	The accountId to that the AWS Health event was sent to. **Note** For organizational view this will be different from the affectedAccount if it's received in the management or delegated administrator account.	Yes

Parameter	Description	Required
time	Time at which the notification was sent to EventBridge. Format: `yyyy-mm-ddThh:mm:ssZ` .	Yes

Parameter	Description	Required
region	Identifies the AWS Region that the notification was delivered to. **Note** This field doesn't indicate the impacted Region for this AWS Health event. This is provided by "detail.eventRegion".	Yes

Parameter	Description	Required
resources	Describes the list of affected resources within an account, if there are affected resources. **Note** This field can be empty if there are no resources referenced.	No
detail	This section contains all the details of the AWS Health event, as listed below.	Yes

Parameter		Description	Required
	eventArn	Unique identifier for the AWS Health event for the specific Region, includes the Region and event id. **Note** An eventArn isn't unique to a specific customer account or to a Region.	Yes

Parameter		Description	Required
	service	The AWS service affected by the AWS Health event. For example, Amazon EC2, Amazon Simple Storage Service, Amazon Redshift, or Amazon Relationa l Database Service.	Yes

Parameter		Description	Required
	eventTypeCode	The unique identifier for the event type. For example: `AWS_EC2_INSTANCE_NETWORK_MAINTENANCE_SCHEDULED` and `AWS_EC2_INSTANCE_REBOOT_MAINTENANCE_SCHEDULED`. Events that include `MAINTENANCE_SCHEDULED` are generally pushed out approximately two weeks before the startTime. **Note** All new planned lifecycle	Yes

Parameter		Description	Required
		events have the event type `AWS_{SERVICE}_PLANNED_LIFECYCLE_EVENT` .	
	eventTypeCategory	The category code of the event. The possible values are `issue`, `accountNotification` , `investigation` , and `scheduledChange` .	Yes

Parameter		Description	Required
	eventScopeCode	Indicates if the AWS Health event is account-specific or public. Possible values are `ACCOUNT_SPECIFIC` or `PUBLIC`.	Yes

Parameter		Description	Required
	communicationId (New)	A unique identifier for this communication for the AWS Health event. Messages with the same communicationId are possible backup messages or pages of a single AWS Health event. This identifier can be used with the accountId to help de-duplicate messages. **Note** With the paginatio n feature release,	Yes

Parameter		Description	Required
		communicationId includes the page number to keep the communicationId unique across pages, for example, 12345678 10-1. For more information, see Pagination of AWS Health events on EventBridge.	

Parameter		Description	Required
	startTime	The start time of the AWS Health event in the format: `DoW, DD, MMM, YYYY, HH:MM:SS TZ`. **Note** The start time can be in the future for schedulec events.	Yes

Parameter		Description	Required
	endTime	The end time of the AWS Health event in the format: `DoW, DD MMM YYYY HH:MM:SS TZ`. **Note** endTime may not be provided for events that are set in the future.	No

Parameter		Description	Required
	lastUpdatedTime	The last update time for the AWS Health event in the format: `DoW, DD MMM YYYY HH:MM:SS TZ`.	Yes

Parameter		Description	Required
	statusCode	Status of the AWS Health event. Type categories have different statuses. The possible values for `Issue` event categories are `open`, `closed` or `upcoming`. `scheduledChanges` event categories have different statuses: `Upcoming`, `Ongoing`, or `Completed`. `AccountNotifications` event categories don't have a status and	Yes

Parameter		Description	Required
		are set to "-".	
	eventRegion	The impacted Region described by this AWS Health event.	Yes
	eventDescription	A section that describes the AWS Health event. This includes fields for language and text to describe the event.	Yes

Parameter			Description	Required
		language	Language used in the AWS Health event. This is typically determined by the Region that the event is published to. For the us-east-1 Region, this is typically "en_US".	Yes

Parameter			Description	Required
		latestDescription	Describes the AWS Health event as it is rendered from the AWS Health API and typically appears on the the AWS Health dashboard. **Note** For public events, this contains only the latest update and not the entire history of the event.	Yes

Parameter			Description	Required
	eventMetadata		Additional event metadata that can be provided for the AWS Health event.	No
		<metadata key 1>	metadata key, value strings "keystring1": "keyvalue1" **Note** The key-value pairs for event metadata are determined by the service that sent the AWS Health event.	No

Parameter			Description	Required
	affectedEntities		An array that describes the resource value and status of affected resources within this AWS Health event.	No
		entityValue	The resource/entity ID	No
		lastUpdatedtime (New)	The time when this resource/entity status was last updated in the format:`DoW, DD MMM YYYY HH:MM:SS TZ`	No

Parameter			Description	Required
		status (new)	The status of the affected resource/entity. Possible values include `IMPAIRED`, `UNIMPAIRED` , `PENDING`, `RESOLVED`, `UNKNOWN`.	No

Parameter		Description	Required
	page (New)	The page this message represents. For more information, see Pagination of AWS Health events on EventBridge. **Note** Pagination occurs only on resources. Other causes for the 256KB size limit breach will cause the communication	Yes

Parameter		Description	Required
		to fail.	

Parameter		Description	Required
	totalPages (New)	The total number of pages for this health event. For more informati on, see Pagination of AWS Health events on EventBridge. **Note** You can use this to determine if you received all of the pages of a multi-page communication for an account.	Yes

Parameter		Description	Required
	affectedAccount (New)	This is the accountId of the impacted account. **Note** This may be different from the "account" field if this health event is sent to an account that is part of an AWS Organizations and this is received in the managem t or	Yes

Parameter		Description	Required
		delegated administrator account.	

Public Health Event - Amazon EC2 operational issue

```
        {
          "version": "0",
          "id": "7bf73129-1428-4cd3-a780-95db273d1602",
          "detail-type": "AWS Health Event",
          "source": "aws.health",
          "account": "123456789012",
          "time": "2023-01-27T09:01:22Z",
          "region": "af-south-1",
          "resources": [],
          "detail": {
            "eventArn": "arn:aws:health:af-south-1::event/EC2/
AWS_EC2_OPERATIONAL_ISSUE/AWS_EC2_OPERATIONAL_ISSUE_7f35c8ae-af1f-54e6-a526-
d0179ed6d68f",
            "service": "EC2",
            "eventTypeCode": "AWS_EC2_OPERATIONAL_ISSUE",
            "eventTypeCategory": "issue",
            "eventScopeCode": "PUBLIC",
            "communicationId": "01b0993207d81a09dcd552ebd1e633e36cf1f09a-1",
            "startTime": "Fri, 27 Jan 2023 06:02:51 GMT",
            "endTime": "Fri, 27 Jan 2023 09:01:22 GMT",
            "lastUpdatedTime": "Fri, 27 Jan 2023 09:01:22 GMT",
            "statusCode": "open",
            "eventRegion": "af-south-1",
            "eventDescription":
            [{
              "language": "en_US",
              "latestDescription": "Current severity level: Operating normally\n
\n[RESOLVED] \n\n [03:15 PM PST] We continue see recovery \n\nThe following AWS
 services were previously impacted but are now operating normally: APPSYNC, BACKUP,
 EVENTS."
```

```
            }],
            "affectedEntities":[],
            "page": "1",
            "totalPages": "1",
            "affectedAccount": "123456789012",
          }
        }
```

Account-specific AWS Health Event - Elastic Load Balancing API Issue

```
        {
          "version": "0",
          "id": "121345678-1234-1234-1234-123456789012",
          "detail-type": "AWS Health Event",
          "source": "aws.health",
          "account": "123456789012",
          "time": "2022-06-10T06:27:57Z",
          "region": "ap-southeast-2",
          "resources": [],
          "detail": {
            "eventArn": "arn:aws:health:ap-southeast-2::event/
AWS_ELASTICLOADBALANCING_API_ISSUE_90353408594353980",
            "service": "ELASTICLOADBALANCING",
            "eventTypeCode": "AWS_ELASTICLOADBALANCING_API_ISSUE",
            "eventTypeCategory": "issue",
            "eventScopeCode": "ACCOUNT_SPECIFIC",
            "communicationId": "01b0993207d81a09dcd552ebd1e633e36cf1f09a-1",
            "startTime": "Fri, 10 Jun 2022 05:01:10 GMT",
            "endTime": "Fri, 10 Jun 2022 05:30:57 GMT",
            "statusCode": "open",
            "eventRegion": "ap-southeast-2",
            "eventDescription": [{
                "language": "en_US",
                "latestDescription": "A description of the event will be provided here"
            }],
            "page": "1",
            "totalPages": "1",
            "affectedAccount": "123456789012",
          }
        }
```

Account-specific AWS Health Event - Amazon EC2 Instance Store Drive Performance Degraded


```
        {
          "version": "0",
          "id": "121345678-1234-1234-1234-123456789012",
          "detail-type": "AWS Health Event",
          "source": "aws.health",
          "account": "123456789012",
          "time": "2022-06-03T06:27:57Z",
          "region": "us-west-2",
          "resources": [
            "i-abcd1111"
          ],
          "detail": {
            "eventArn": "arn:aws:health:us-west-2::event/
AWS_EC2_INSTANCE_STORE_DRIVE_PERFORMANCE_DEGRADED_90353408594353980",
            "service": "EC2",
            "eventTypeCode": "AWS_EC2_INSTANCE_STORE_DRIVE_PERFORMANCE_DEGRADED",
            "eventTypeCategory": "issue",
            "eventScopeCode": "ACCOUNT_SPECIFIC",
            "communicationId": "01b0993207d81a09dcd552ebd1e633e36cf1f09a-1",
            "startTime": "Fri, 3 Jun 2022 05:01:10 GMT",
            "endTime": "Fri, 3 Jun 2022 05:30:57 GMT",
            "statusCode": "open",
            "eventRegion": "us-west-2",
            "eventDescription": [{
                "language": "en_US",
                "latestDescription": "A description of the event will be provided here"
            }],
            "affectedEntities": [{
              "entityValue": "i-abcd1111",
            }],
            "page": "1",
            "totalPages": "1",
            "affectedAccount": "123456789012",
          }
        }
```

Pagination of AWS Health events on EventBridge

AWS Health supports pagination of AWS Health events when the list of “resources” or “affectedEntities” causes the size of the message to exceed EventBridge’s 256KB message size limit. Previously, AWS Health didn't communicate the full list of resources with events when it exceeded this limit.

AWS Health now includes all “resources” and “detail.affectedEntities” in the message. If this list of “resources” and “detail.affectedEntities” exceeds 256KB, then AWS Health splits the health event into multiple pages and publish these pages as individual messages in EventBridge. Each page retains the same eventARN and communicationId to help recombine the list of “resources” or “detail.affectedEntities” after all the pages are received.

These additional messages might cause unecessary messages, for example when the EventBridge rule is directed to a human readable interface such as email or chat. Customers with human readable notifications can add a filter for the “detail.page” field to process only the first page, which eliminates the unnecessary messages created from subsequent pages.

Several schema changes are included to support the pagination launch. Each communicationId now includes the hyphenated page number after the communicationId, even when there is only 1 page. There are also two new fields, detail.page and detail.totalPages, which describe the current page number and the total number of pages for the AWS Health event. The information contained in each paginated message is the same except for the list of “detail.affectedEntities” or “resources”. These lists can be reconstructed after all the pages are received. The pages of affected resources and entities are order-agnostic.

Aggregating AWS Health events using organizational view and delegated administrator access

AWS Health supports organizational view and delegated administrator access for AWS Health events published on Amazon EventBridge. When organizational view is turned on in AWS Health, then the management account or a delegated administrator account receives a single feed of AWS Health events from all accounts within your organization in AWS Organizations.

This feature is designed to provide a centralized view to help manage AWS Health events across your organization. Setting up organizational view and an EventBridge rule in the management account doesn't deactivate EventBridge rules for other accounts in your organization.

For more information on enabling organizational view and delegated administrator access on AWS Health, see Aggregating AWS Health Events.

Receiving AWS Health events with AWS Chatbot

You can receive AWS Health events directly in your chat clients, such as Slack and Amazon Chime. You can use this event to identify recent AWS service issues that might affect your AWS applications and infrastructure. Then, you can sign in to your AWS Health Dashboard to learn more about the update. For example, if you're monitoring for the `AWS_EC2_INSTANCE_STOP_SCHEDULED` event type in your AWS account, the AWS Health event can appear directly to your Slack channel.

Prerequisites

Before you get started, you must have the following:

- A chat client configured with AWS Chatbot. You can configure Amazon Chime and Slack. For more information, see Getting started with AWS Chatbot in the *AWS Chatbot Administrator Guide*.
- An Amazon SNS topic that you created and to which you're subscribed. If you already have an SNS topic, you can use an existing one. For more information, see Getting started with Amazon SNS in the *Amazon Simple Notification Service Developer Guide*.

To receive AWS Health events with AWS Chatbot

1. Follow the procedure in Creating an EventBridge rule for AWS Health through step 13.

   a. When you finish setting up the event pattern in step 13, add a comma to the last line of the pattern, and add the following line to remove unnecessary chat messages from paginated AWS Health events. See Pagination of AWS Health events on EventBridge.

   ```
   "detail.page": ["1"]
   ```

   b. When you choose the target in step 14, choose an SNS topic. You will use this same SNS topic in the AWS Chatbot console.

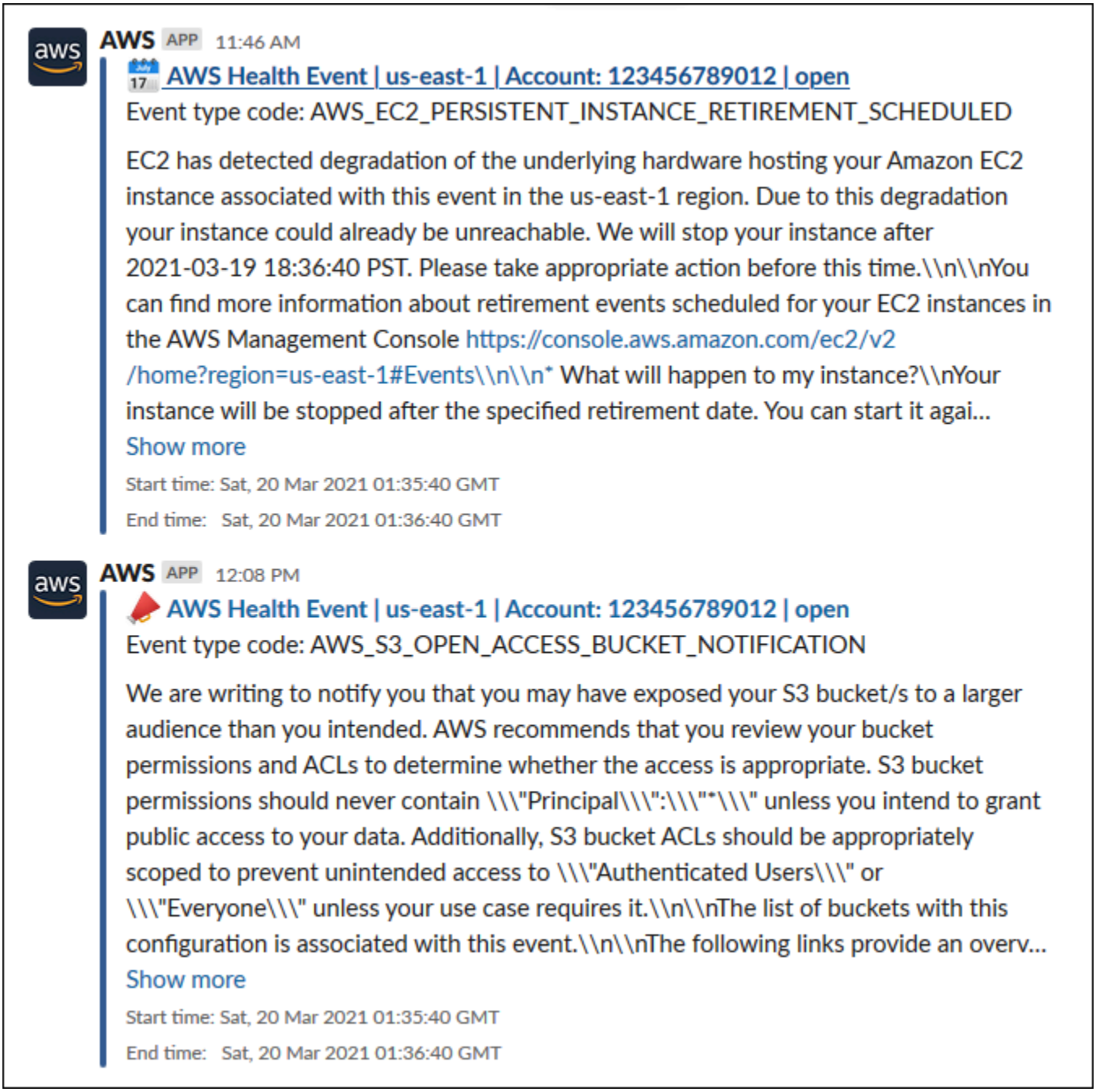
   c. Complete the rest of the procedure to create the rule.
2. Navigate to the AWS Chatbot console.
3. Choose your chat client, such as your Slack channel name, and then choose **Edit**.

4. In the **Notifications - optional** section, for **Topics**, choose the same SNS topic that you specified in step 1.
5. Choose **Save**.

   When AWS Health sends an event to EventBridge that matches your rule, the AWS Health event will appear in your chat client.
6. Choose the event name to see more information in your AWS Health Dashboard.

Example : AWS Health events sent to Slack

The following is an example of two AWS Health events for Amazon EC2 and Amazon Simple Storage Service (Amazon S3) in the US East (N. Virginia) Region that appear in the Slack channel.



Automating actions for Amazon EC2 instances

You can automate actions that respond to scheduled events for your Amazon EC2 instances. When AWS Health sends an event to your AWS account, your EventBridge rule can then invoke targets, such as AWS Systems Manager Automation documents, to automate actions on your behalf.

For example, when an Amazon EC2 instance retirement event is scheduled for an Amazon Elastic Block Store (Amazon EBS)-backed EC2 instance, AWS Health will send the

`AWS_EC2_PERSISTENT_INSTANCE_RETIREMENT_SCHEDULED` event type to your AWS Health Dashboard. When your rule detects this event type, you can automate the stop and start of the instance. This way, you don't have to perform these actions manually.

> **Note**
>
> To automate actions for your Amazon EC2 instances, the instances must be managed by Systems Manager.

For more information, see Automating Amazon EC2 with EventBridge in the *Amazon EC2 User Guide*.

Prerequisites

You must create an AWS Identity and Access Management (IAM) policy, create an IAM role, and update the role's trust policy before you can create a rule.

Create an IAM policy

Follow this procedure to create a customer managed policy for your role. This policy gives the role permission to perform actions on your behalf. This procedure uses the JSON policy editor in the IAM console.

To create an IAM policy

1. Sign in to the AWS Management Console and open the IAM console at https://console.aws.amazon.com/iam/.
2. In the navigation pane, choose **Policies**.
3. Choose **Create policy**.
4. Choose the **JSON** tab.
5. Copy the following JSON and then replace the default JSON in the editor.

```
{
  "Version": "2012-10-17",
  "Statement": [
    {
      "Effect": "Allow",
      "Action": [
```

```
        "ec2:StartInstances",
        "ec2:StopInstances",
        "ec2:DescribeInstanceStatus"
      ],
      "Resource": [
        "*"
      ]
    },
    {
      "Effect": "Allow",
      "Action": [
        "ssm:*"
      ],
      "Resource": [
        "*"
      ]
    },
    {
      "Effect": "Allow",
      "Action": [
        "sns:Publish"
      ],
      "Resource": [
        "arn:aws:sns:*:*:Automation*"
      ]
    },
    {
      "Effect": "Allow",
      "Action": [
        "iam:PassRole"
      ],
      "Resource": "arn:aws:iam::123456789012:role/AutomationEVRole"
    }
  ]
}
```

a. In the `Resource` parameter, for the Amazon Resource Name (ARN), enter your AWS account ID.

b. You can also replace the role name or use the default. This example uses *`AutomationEVRole`*.

6. Choose **Next: Tags**.

7. (Optional) You can use tags as key–value pairs to add metadata to the policy.

8. Choose **Next: Review**.
9. On the **Review policy** page, enter a **Name**, such as `AutomationEVRolePolicy` and an optional **Description**.
10. Review the **Summary** page to see the permissions that the policy allows. If you're satisfied with your policy, choose **Create policy**.

This policy defines the actions that the role can take. For more information, see Creating IAM policies (console) in the *IAM User Guide*.

Create an IAM role

After you create the policy, you must create an IAM role, and then attach the policy to that role.

To create a role for an AWS service

1. Sign in to the AWS Management Console and open the IAM console at https://console.aws.amazon.com/iam/.
2. In the navigation pane, choose **Roles**, and then choose **Create role**.
3. For **Select type of trusted entity**, choose **AWS service**.
4. Choose **EC2** for the service that you want to allow to assume this role.
5. Choose **Next: Permissions**.
6. Enter the policy name that you created, such as `AutomationEVRolePolicy`, and then select the check box next to the policy.
7. Choose **Next: Tags**.
8. (Optional) You can use tags as key–value pairs to add metadata to the role.
9. Choose **Next: Review**.
10. For **Role name**, enter `AutomationEVRole`. This name must be the same name that appears in the ARN of the IAM policy that you created.
11. (Optional) For **Role description**, enter a description for the role.
12. Review the role and then choose **Create role**.

For more information, see Creating a role for an AWS service in the *IAM User Guide*.

Update the trust policy

Finally, you can update the trust policy for the role that you created. You must complete this procedure so that you can choose this role in the EventBridge console.

To update the trust policy for the role

1. Sign in to the AWS Management Console and open the IAM console at https://console.aws.amazon.com/iam/.
2. In the navigation pane, choose **Roles**.
3. In the list of roles in your AWS account, choose the name of the role that you created, such as *AutomationEVRole*.
4. Choose the **Trust relationships** tab, and then choose **Edit trust relationship**.
5. For **Policy Document**, copy the following JSON, remove the default policy, and paste the copied JSON in its place.

```
{
    "Version": "2012-10-17",
    "Statement": [
        {
            "Effect": "Allow",
            "Principal": {
                "Service": [
                    "ssm.amazonaws.com",
                    "events.amazonaws.com"
                ]
            },
            "Action": "sts:AssumeRole"
        }
    ]
}
```

6. Choose **Update Trust Policy**.

For more information, see Modifying a role trust policy (console) in the *IAM User Guide*.

Create a rule for EventBridge

Follow this procedure to create a rule in the EventBridge console so that you can automate the stop and start of EC2 instances that are scheduled for retirement.

To create a rule for EventBridge for Systems Manager automated actions

1. Open the Amazon EventBridge console at https://console.aws.amazon.com/events/.
2. In the navigation pane, under **Events**, choose **Rules**.
3. On the **Create rule** page, enter a **Name** and **Description** for your rule.
4. Under **Define pattern**, choose **Event pattern**, and then choose **Pre-defined pattern by service**.
5. For **Service provider**, choose **AWS**.
6. For **Service name**, choose **Health**.
7. For **Event type**, choose **Specific Health events**.
8. Choose **Specific service(s)** and then choose **EC2**.
9. Choose **Specific event type category(s)** and then choose **scheduledChange**.
10. Choose **Specific event types code(s)** and then choose the event type code.

    For example, for Amazon EC2 EBS-backed instances, choose **`AWS_EC2_PERSISTENT_INSTANCE_RETIREMENT_SCHEDULED`**. For Amazon EC2 instance store-backed instances, choose **`AWS_EC2_INSTANCE_RETIREMENT_SCHEDULED`**.
11. Choose **Any resource**.

    Your **Event pattern** will look similar to the following example.

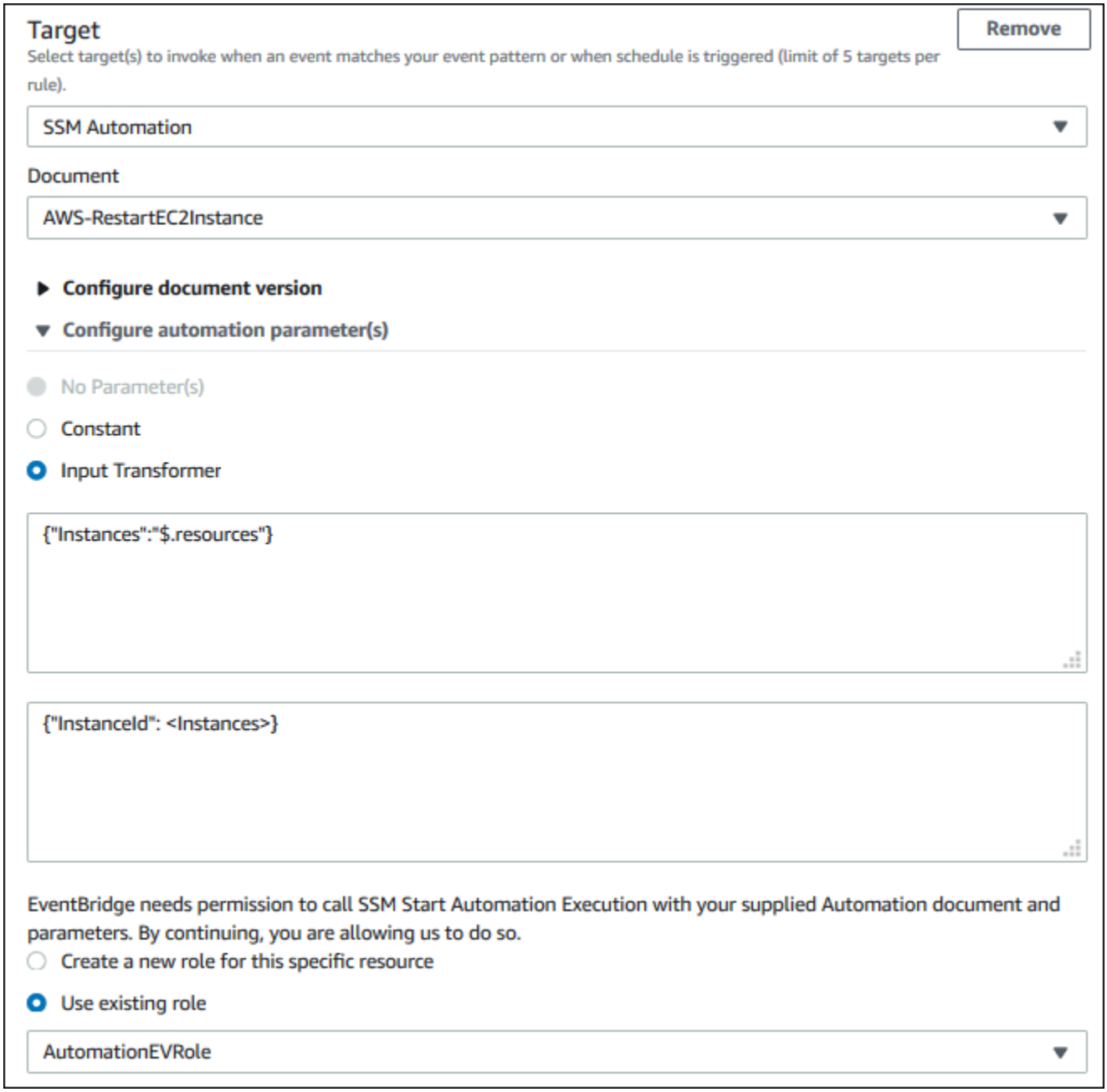
    Example

```
{
  "source": [
    "aws.health"
  ],
  "detail-type": [
    "AWS Health Event"
  ],
  "detail": {
    "service": [
      "EC2"
    ],
    "eventTypeCategory": [
      "scheduledChange"
    ],
    "eventTypeCode": [
```

```
      "AWS_EC2_PERSISTENT_INSTANCE_RETIREMENT_SCHEDULED"
    ]
  }
}
```

12. Add the Systems Manager Automation document target. Under **Select targets**, for **Target**, choose **SSM Automation**.
13. For **Document**, choose `AWS-RestartEC2Instance`.
14. Expand the **Configure automation parameters(s)** and then choose **Input Transformer**.
15. For the **Input Path** field, enter **`{"Instances":"$.resources"}`**.
16. For the second field, enter **`{"InstanceId": <Instances>}`**.
17. Choose **Use existing role**, and then choose the IAM role that you created, such as *`AutomationEVRole`*.

    Your target should look like the following example.



> **Note**
>
> If you don't have an existing IAM role with the required EC2 and Systems Manager permissions and trusted relationship, your role won't appear in the list. For more information, see Prerequisites.

18. Choose **Create**.

If an event occurs in your account that matches your rule, EventBridge will send the event to your specified target.

Configure SMC connectors for AWS Health

You can integrate AWS Health events with JIRA and ServiceNow to receive operational and account information, prepare for scheduled changes, and manage Health events using the Service Management Connector (SMC). The SMC Integration with AWS Health can use Health events sent through EventBridge to automatically create, map, and update JIRA tickets and ServiceNow incidents.

You can use organizational view and delegated administrator access to easily manage Health events across the organization within JIRA and ServiceNow, and incorporate AWS Health information directly into your team's workflow.

For more information on ServiceNow integration using the SMC, see Integrating AWS Health in ServiceNow.

For more information on JIRA Management Cloud integration using the SMC, see AWS Health in JIRA.

Monitoring AWS Health

Monitoring is an important part of maintaining the reliability, availability, and performance of AWS Health and your other AWS solutions. AWS provides the following monitoring tools to watch AWS Health, report when something is wrong, and take actions when appropriate:

- Amazon CloudWatch monitors your AWS resources and the applications you run on AWS in real time. You can collect and track metrics, create customized dashboards, and set alarms that notify you or take actions when a specified metric reaches a threshold that you specify. For more information, see the Amazon CloudWatch User Guide.

  You can use Amazon EventBridge so that you're notified about AWS Health events that might affect your services and resources. For example, if AWS Health publishes an event about your Amazon EC2 instances, you can use these notifications to take action and update or replace your resources as needed. For more information, see Monitoring AWS Health events with Amazon EventBridge.
- AWS CloudTrail captures API calls and related events made by or on behalf of your AWS account and delivers the log files to an Amazon S3 bucket that you specify. You can identify which users and accounts called AWS, the source IP address from which the calls were made, and when the calls occurred. For more information, see the AWS CloudTrail User Guide.

Topics

Logging AWS Health API calls with AWS CloudTrail

AWS Health is integrated with AWS CloudTrail, a service that provides a record of actions taken by a user, role, or an AWS service in AWS Health. CloudTrail captures API calls for AWS Health as events. The calls captured include calls from the AWS Health console and code calls to the AWS Health API operations. If you create a trail, you can enable continuous delivery of CloudTrail events to an Amazon S3 bucket, including events for AWS Health. If you don't configure a trail, you can still view the most recent events in the CloudTrail console in **Event history**. Using the information collected by CloudTrail, you can determine the request that was made to AWS Health, the IP address that the request was made from, who made the request, when it was made, and additional details.

To learn more about CloudTrail, including how to configure and enable it, see the AWS CloudTrail User Guide.

AWS Health information in CloudTrail

CloudTrail is enabled on your AWS account when you create the account. When supported event activity occurs in AWS Health, that activity is recorded in a CloudTrail event along with other AWS service events in **Event history**. You can view, search, and download recent events in your AWS account. For more information, see Viewing Events with CloudTrail Event History.

For an ongoing record of events in your AWS account, including events for AWS Health, create a *trail*. A trail enables CloudTrail to deliver log files to an Amazon S3 bucket. By default, when you create a trail in the console, the trail applies to all AWS Regions. The trail logs events from all Regions in the AWS partition and delivers the log files to the Amazon S3 bucket that you specify. Additionally, you can configure other AWS services to further analyze and act upon the event data collected in CloudTrail logs. For more information, see the following:

- Overview for Creating a Trail
- CloudTrail Supported Services and Integrations
- Configuring Amazon SNS Notifications for CloudTrail
- Receiving CloudTrail Log Files from Multiple Regions and Receiving CloudTrail Log Files from Multiple Accounts

All AWS Health API operations are logged by CloudTrail and are documented in the AWS Health API Reference. For example, calls to the `DescribeEvents`, `DescribeEventDetails`, and `DescribeAffectedEntities` operations generate entries in the CloudTrail log files.

AWS Health supports logging the following actions as events in CloudTrail log files:

- Whether the request was made with root or IAM credentials
- Whether the request was made with temporary security credentials for a role or federated user
- Whether the request was made by another AWS service

For more information, see the CloudTrail userIdentity Element.

You can store your log files in your Amazon S3 bucket for as long as you want. You can also define Amazon S3 lifecycle rules to archive or delete log files automatically. By default, your log files are encrypted with Amazon S3 server-side encryption (SSE).

To be notified upon log file delivery, you can configure CloudTrail to publish Amazon SNS notifications when new log files are delivered. For more information, see Configuring Amazon SNS Notifications for CloudTrail.

You can also aggregate AWS Health log files from multiple AWS regions and multiple AWS accounts into a single Amazon S3 bucket.

For more information, see Receiving CloudTrail Log Files from Multiple Regions and Receiving CloudTrail Log Files from Multiple Accounts.

Example: AWS Health log file entries

A trail is a configuration that enables delivery of events as log files to an Amazon S3 bucket that you specify. CloudTrail log files contain one or more log entries. An event represents a single request from any source and includes information about the requested action, the date and time of the action, request parameters, and so on. CloudTrail log files aren't an ordered stack trace of the public API calls, so they don't appear in any specific order.

The following example shows a CloudTrail log entry that demonstrates the DescribeEntityAggregates operation.

```
{
   "Records": [
   {
   "eventVersion": "1.05",
   "userIdentity": {
      "type": "IAMUser",
      "principalId": "AIDACKCEVSQ6C2EXAMPLE",
      "arn": "arn:aws:iam::123456789012:user/JaneDoe",
      "accountId": "123456789012",
      "accessKeyId": "AKIAIOSFODNN7EXAMPLE",
      "userName": "JaneDoe",
      "sessionContext": {"attributes": {
         "mfaAuthenticated": "false",
         "creationDate": "2016-11-21T07:06:15Z"
      }},
      "invokedBy": "AWS Internal"
```

```
    },
   "eventTime": "2016-11-21T07:06:28Z",
   "eventSource": "health.amazonaws.com",
   "eventName": "DescribeEntityAggregates",
   "awsRegion": "us-east-1",
   "sourceIPAddress": "203.0.113.0",
   "userAgent": "AWS Internal",
   "requestParameters": {"eventArns": ["arn:aws:health:us-east-1::event/EBS/
EBS_LOST_VOLUME/EBS_LOST_VOLUME_123"]},
   "responseElements": null,
   "requestID": "05b299bc-afb9-11e6-8ef4-c34387f40bd4",
   "eventID": "e4deb9dc-dbc2-4bdb-8515-73e8abcbc29b",
   "eventType": "AwsApiCall",
   "recipientAccountId": "123456789012"
   }
   ],
   ...
}
```

Document history for AWS Health

The following table describes the documentation for this release of AWS Health.

- **API version:** 2016-08-04

The following table describes important updates to the AWS Health documentation, beginning in August 28, 2020. You can subscribe to the RSS feed to receive notifications about the updates.

Change	Description	Date
Removed Internetwork traffic privacy from the Security section AWS Health documentation	For more information, see Security inAWS Health	March 27, 2024
Updated the AWS Health Dashboard – Service health and Planned lifecycle events for AWS Health documentation.	For more information, see AWS Health Dashboard – Service health and Planned lifecycle events for AWS Health.	February 15, 2024
Removed a duplicate bullet point in Creating an EventBridge rule for AWS Health	Removed a duplicate bullet point in Creating an EventBridge rule for AWS Health.	December 4, 2023
Added documentation for Planned Lifecycle Events	For more information, see Planned Lifecycle Events for AWS Health.	October 31, 2023
Updated documentation for `AWSHealthFullAccess`	You can now use the `AWSHealthFullAccess` managed policy in the AWS GovCloud (US) Regions. See AWS managed policies for AWS Health.	October 16, 2023

Added documentation for configuring AWS User Notifications in AWS Health.	You can now configure AWS User Notifications in AWS Health. For more informati on, see Configure AWS User Notifications for AWS Health.	August 30, 2023
Added documentation for the delegated administrator feature to the **Aggregating AWS Health events** section.	For more information, see Delegated administrator organizational view.	July 27, 2023
SLR policy update	Update to AWS managed policy: Health_Organizatio nsServiceRolePolicy. For more information, see AWS managed policies for AWS Health.	July 19, 2023
AWS Health schema now supports event metadata	You can now receive event metadata from AWS Health events. For more informati on, see Monitoring AWS Health events with Amazon EventBridge.	June 20, 2023
Updated documentation for Amazon EventBridge	You can now use an Amazon EventBridge rule to monitor both account-specific and public events. For more information, see Monitorin g AWS Health events with Amazon EventBridge.	May 2, 2023

Added documentation for AWS managed policies	Added documentation for the AWS managed policies for AWS Health and Using service-linked roles for AWS Health.	January 18, 2023
Added time zone setting documentation	Use the new time zone feature to view the AWS Health Dashboard in your local time zone or in UTC. For more information, see Getting started with your AWS Health Dashboard – Your account health and the AWS Health Dashboard – Service health.	September 21, 2022
Updated documentation	Added documentation for AWS Health Aware. For more information, see AWS Health Aware.	May 25, 2022
Updated documentation	The Service Health Dashboard and the AWS Personal Health Dashboard have been rebranded to the AWS Health Dashboard. For more information, see Getting started with your AWS Health Dashboard – Your account health and the AWS Health Dashboard – Service health.	February 28, 2022

Updated documentation for Amazon EventBridge	New topic for AWS Health to use Amazon EventBridge to monitor for Health events. For more information, see Monitoring AWS Health events with Amazon EventBridge.	February 3, 2022
Updated documentation	If you have an Enterprise On-Ramp Support plan, you can use the AWS Health API.	November 24, 2021
Added documentation	New topic for AWS Health concepts. For more information, see Concepts for AWS Health.	July 29, 2021
Updated documentation for CloudWatch Events	Added a section about how to create a rule for multiple services and event type categories. For more information, see Creating a rule for multiple services and categories.	May 7, 2021
Updated documentation for CloudWatch Events	Updated the section to automate AWS Systems Manager actions for Amazon CloudWatch Events rules. For more information, see Automating actions for Amazon EC2 instances.	April 28, 2021

Updated documentation for CloudWatch Events	Added a section to receive AWS Health events in your chat client. For more information, see Receiving AWS Health events with AWS Chatbot.	March 16, 2021
Updated documentation	The following topics are updated: • Updated the Aggregating AWS Health events topic • Reorganized and updated the Monitor for AWS Health events with Amazon CloudWatch Events topic • Updated the Resource- and action-based conditions section	January 29, 2021
Added the AWS Health Dashboard for organizational view in the AWS Health console	You can use the AWS Health console to enable the organizational view feature. You can then view health events for member accounts in your AWS organization.	December 14, 2020
High availability endpoint demo	You can use the example code to determine the active regional endpoint and signing AWS Region for AWS Health.	October 22, 2020
Updates to the *AWS Health User Guide*	Organization updates and added an RSS feed so that you can subscribe for the latest updates to the AWS Health documentation.	August 28, 2020

Earlier updates

Change	Description	Date
Updated the organizat ional view topic to include examples.	See Aggregating AWS Health events across accounts with organizational view.	June 3, 2020
Security and AWS Health	Added information about security considerations when using AWS Health. See Security in AWS Health.	May 5, 2020
Added new section to explain how to use organizational view to events aggregated across all accounts in AWS Organizations.	See Aggregating AWS Health events across accounts with organizational view.	December 18, 2019
Added new section "Resource- and Action-based Conditions" to explain Events restrictions vended by the AWS Health API.	See Identity and access management for AWS Health.	August 2, 2018
Added a note about the visibility of AWS Health information.	See Identity and access management for AWS Health.	August 16, 2017
Service release.	AWS Health released.	December 1, 2016

AWS Glossary

For the latest AWS terminology, see the AWS glossary in the *AWS Glossary Reference*.