AWS Health Dashboard

NOTE: This content will be available as a video course soon! We are making it available as a Learning Path resource in the meantime to help you prepare for the newly updated AWS Certified Solutions Architect - Associate (SAA-C03) exam.

Introduction

AWS Health Dashboard is a tool that can help you plan and work around issues in AWS. As they say at AWS: “Everything fails all the time.” and it helps to be prepared. Some of these events include outages, scheduled maintenance, and service degradation events.

Hello and Welcome! My name is Carlos Rivas and I'm a senior AWS content creator here at Cloud Academy. Feel free to reach out if you have any questions using the details shown on the screen, or you can always get in touch with us by sending an email to support@cloudacademy.com, where one of our Cloud experts will reply to your question.

Who should attend this course?

If you are designing applications for high availability then monitoring AWS Health events should definitely be on your checklist. Also, this topic certainly comes up in AWS Certification Exams, including the DevOps Professional certification.

If you are looking to put this knowledge to use right away, I’ll show you how to integrate your own, custom, Lambda function to respond to AWS Health-related events.

So, whether you are Systems administrator, DevOps Engineer or an AWS Student learning for certification reasons, I’m sure you’ll find this content helpful.

Learning Objectives

By the end of this course, you should have a greater understanding of the AWS Health dashboard, its features and how to integrate it into your high-availability solutions.

Some of the key points we'll be covering in this course include:

- Service history and open issues
- Service events specific to your AWS accounts
- EventBridge integration for the Health dashboard
- Enterprise-level offerings (such as the AWS Health API)

Prerequisites

To get the most out of this course you should have an understanding of Amazon EventBridge, AWS Infrastructure in general, such as regions, availability zones and VPCs and just general knowledge about AWS services currently in use by your organization that would impact the business during maintenance and outages.

Feedback

Feedback on our courses here at Cloud Academy is valuable to both us as trainers and any students looking to take the same course in the future. If you have any feedback, positive or negative, it would be greatly appreciated if you could contact support@cloudacademy.com.

Alright, Let's get started!

Overview of the AWS Health Dashboard

The Health Dashboard is divided into 2 main sections:

- Events that affect everyone (top left), and
- Events that affect your account's resources, right below that.

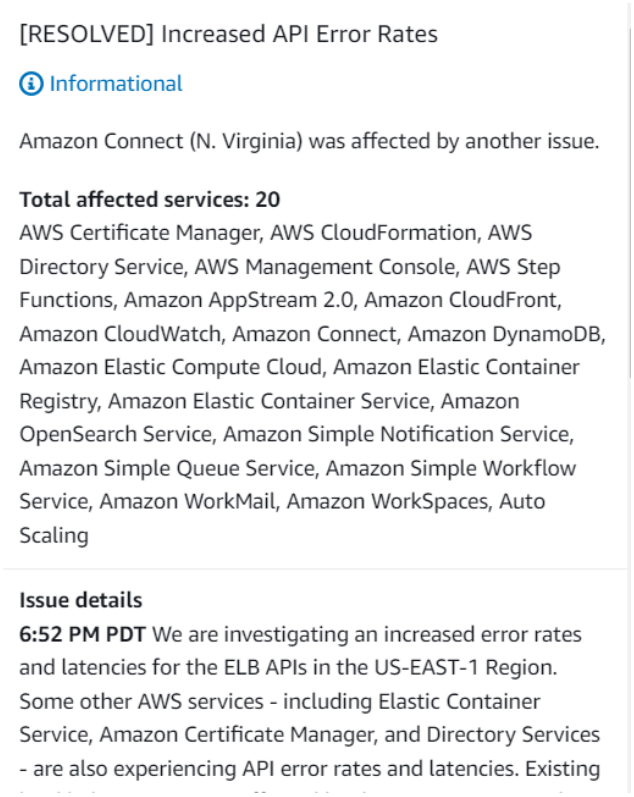
Let's go over each one.

Service Health

First, you have **Open and recent issues**, this is where you can see current issues happening in the AWS Platform. More often than not, this option will show as disabled if there's nothing of interest going on.

Service history on the other hand, will show a historic view of issues. This is really helpful if something happened over a weekend or holiday and you want to get details about which services and regions were affected.

Let's look at an example of a possible outage:



[RESOLVED] Increased API Error Rates

Informational

Amazon Connect (N. Virginia) was affected by another issue.

Total affected services: 20
AWS Certificate Manager, AWS CloudFormation, AWS Directory Service, AWS Management Console, AWS Step Functions, Amazon AppStream 2.0, Amazon CloudFront, Amazon CloudWatch, Amazon Connect, Amazon DynamoDB, Amazon Elastic Compute Cloud, Amazon Elastic Container Registry, Amazon Elastic Container Service, Amazon OpenSearch Service, Amazon Simple Notification Service, Amazon Simple Queue Service, Amazon Simple Workflow Service, Amazon WorkMail, Amazon WorkSpaces, Auto Scaling

Issue details
6:52 PM PDT We are investigating an increased error rates and latencies for the ELB APIs in the US-EAST-1 Region. Some other AWS services - including Elastic Container Service, Amazon Certificate Manager, and Directory Services - are also experiencing API error rates and latencies. Existing

Each one of these tickets will have: A header, showing the latest status , in this case "resolved" and a short description of the issue. In this case, "Increased API Error rates."

You want to pay close attention to the affected services, in this case it's a list of 20 services and chances are, that if you were using one of these services when this event happened in the US-EAST-1 regions, your application would have experienced similar problems.

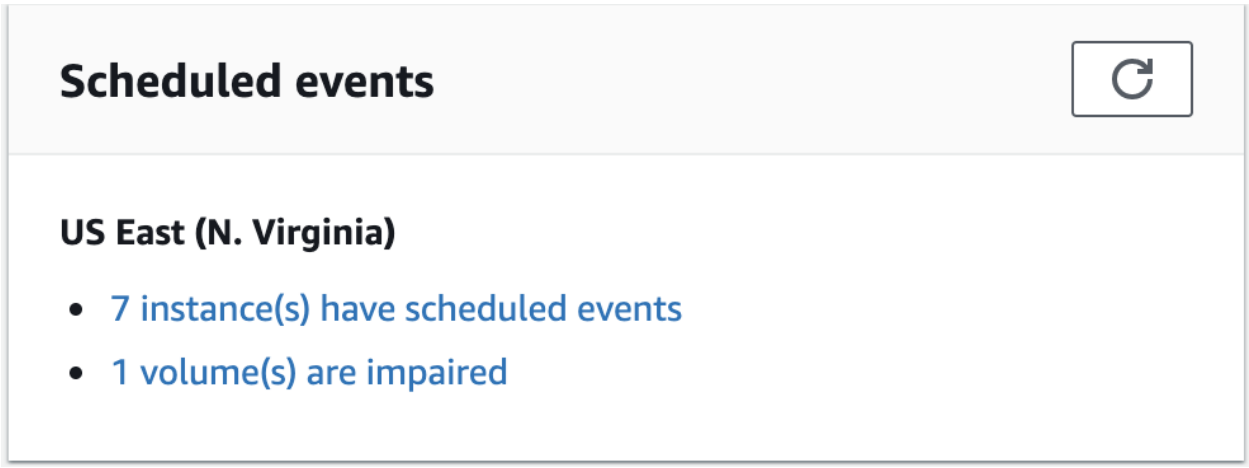
Information like this is useful to shorten troubleshooting times and also to consider multi-region solutions if your business suffers a significant impact by an issue like this, in this particular AWS region.

Your account health

If we switch over to **Your account health**, this is where the Health Dashboard becomes really useful, because it correlates AWS Global issues with the resources and service that you are currently using. This way, you can see if there's any impact to your business.

For example, let's say you are running an EC2 instance and it's been running nonstop for 12 months…

You may go here under the **Scheduled events** tab (or, you may get it in an Email from AWS) and see something like this:



Essentially, this means that the physical hardware running your EC2 server may need to be taken down for repairs, upgrades or simply maintenance. – The solution is simple by he way: simply stop and restart your virtual EC2 instance and it will come online on a different physical computer, therefore allowing AWS to perform maintenance without further interruption to you or any other customers.

Integration with EventBridge

It's totally understandable if you don't want to have to manually visit a web page to find out if there's an outage affecting your AWS infrastructure, for this, there's a solution: EventBridge.

EventBridge can be used to monitor and react to AWS Health Dashboard events, and take certain actions including:

- Sending a notification to the Ops team
- Identifying affected resources, and
- Executing custom lambda functions to perform pretty much any task, such as creating a Zendesk or JIRA ticket related to an AWS Scheduled maintenance event.

We will be looking at this in more detail, but here's a pattern to catch Events related to notifications, scheduled changes or issues sent to your account via the Health Dashboard.

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

With this pattern in EventBridge you can quickly react to potential issues without human intervention and notify the right folks in order to decide what to do. Also note the Service filter here that includes AUTOSCALING, EC2 and VPC. This is important because if you are not using AWS S3 -for example- you don't want to send out alerts if this service won't impact you directly.

Enterprise-level Services

The Health Dashboard is quite useful as it is, specially for those using AWS Organizations. However, if you also subscribe to a Business or Enterprise level support plan, AWS takes it up a notch by providing access to the Heath API.

This enables you to perform lots of additional health-related tasks such as integration with 3rd-party applications, such as: Creating JIRA Tickets, sending notifications to Slack or MS Teams and more.

One feature that I find quite interesting is to be able to use the Open-Source tool called AHA – AWS Health Aware. This tool, created by AWS, depends on the Health API.

https://aws.amazon.com/blogs/mt/aws-health-aware-customize-aws-health-alerts-for-organizational-and-personal-aws-accounts/

This tool will perform the monitoring for you and provide you with integrations and notifications of Events that are relevant to your accounts and overall AWS footprint.

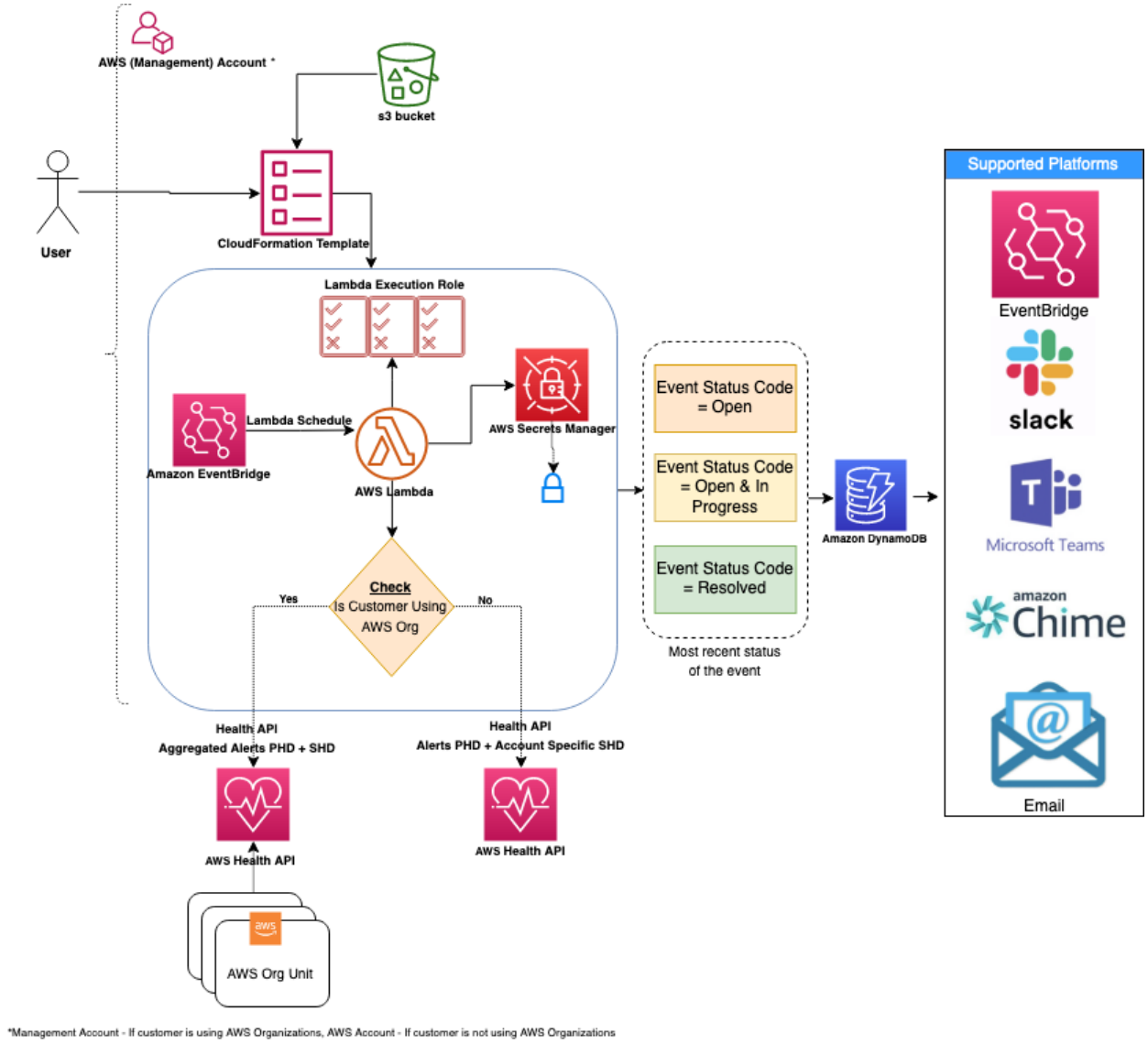


Image from https://d2908q01vomqb2.cloudfront.net/972a67c48192728a34979d9a35164c1295401b71/2021/09/04/aha-arch-single-region-1.png.

Summary

Let's summarize what we just learned.

- Before you start troubleshooting your own application, it's useful to go through the log of recent AWS events: if a Service that your application depends on was down, then it means your application is fine and it's up to AWS to resolve the issue.

- AWS Health Dashboard is integrated with EventBridge and also has its own API to help with additional task automation of notifications and actions related to outages and maintenance.
- If you use AWS Organizations it's important to enable Organizational view in the dashboard in order to consolidate all account specific alerts in a single view.
- If you have Business or Enterprise Support, you can access the Health API that you can use to automate actions and notifications and use Health monitoring tools such as AWS Health Aware (AHA).

If you'll be sitting the AWS DevOps Professional Exam, here are a few exam tips for you regarding this topic:

- You need to be aware of operational scenarios, for example, How would you prepare for planned maintenance?
- What's the best way to notify your team of an upcoming scheduled outage?
- Be aware that EventBridge has events specific to this and you can attach your own actions in order to react.

I hope this was helpful to you and if you have any questions, feel free to reach out, my name is Carlos and I will talk to you in the next one!

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