

A decorative graphic on the left side of the slide consisting of white lines and circles on a blue gradient background, resembling a circuit board or a network diagram.

AWS - CLOUDWATCH

BY

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WHAT IS CLOUDWATCH?

- Amazon CloudWatch is a monitoring service for AWS cloud resources and the applications you run on AWS. You can use Amazon CloudWatch to collect and track metrics, collect and monitor log files, set alarms, and automatically react to changes in your AWS resources. Amazon CloudWatch can monitor AWS resources such as Amazon EC2 instances, Amazon DynamoDB tables, and Amazon RDS DB instances, as well as custom metrics generated by your applications and services, and any log files your applications generate. You can use Amazon CloudWatch to gain system-wide visibility into resource utilization, application performance, and operational health. You can use these insights to react and keep your application running smoothly.

STEP-1 : GO TO MANAGEMENT TOOLS & SELECT CLOUDWATCH

The screenshot shows the AWS CloudWatch console in the US West (Oregon) region. The left sidebar contains navigation links for CloudWatch, Dashboards, Alarms (with sub-items ALARM, INSUFFICIENT, and OK), Billing, Events (with sub-items Rules and Event Buses), Logs, Metrics, and Favorites. A button to 'Add a dashboard' is at the bottom of the sidebar. The main content area is divided into three sections: 'Metric Summary' (showing 694 available metrics), 'Alarm Summary' (stating no alarms are created in this region), and 'Service Health' (showing the Amazon CloudWatch Service is operating normally).

CloudWatch Manager x

Veilig | <https://us-west-2.console.aws.amazon.com/cloudwatch/home?region=us-west-2#>

aws Services Resource Groups Route 5 AWS_DevOps_KK

CloudWatch

- Dashboards
- Alarms
 - ALARM 0
 - INSUFFICIENT 0
 - OK 0
- Billing
- Events
 - Rules
 - Event Buses
- Logs
- Metrics
- Favorites
- [+ Add a dashboard](#)

Metric Summary

Amazon CloudWatch monitors operational and performance metrics for your AWS cloud resources and applications. You currently have **694 CloudWatch metrics available** in the US West (Oregon) region.

Browse or search your metrics to get started graphing data and creating alarms

[Browse Metrics](#)

Alarm Summary

You do not have any alarms created in the US West (Oregon) region. Alarms can be used to monitor your AWS resources and applications for anomalies, and send notifications or execute AutoScaling actions in response to any CloudWatch metrics.

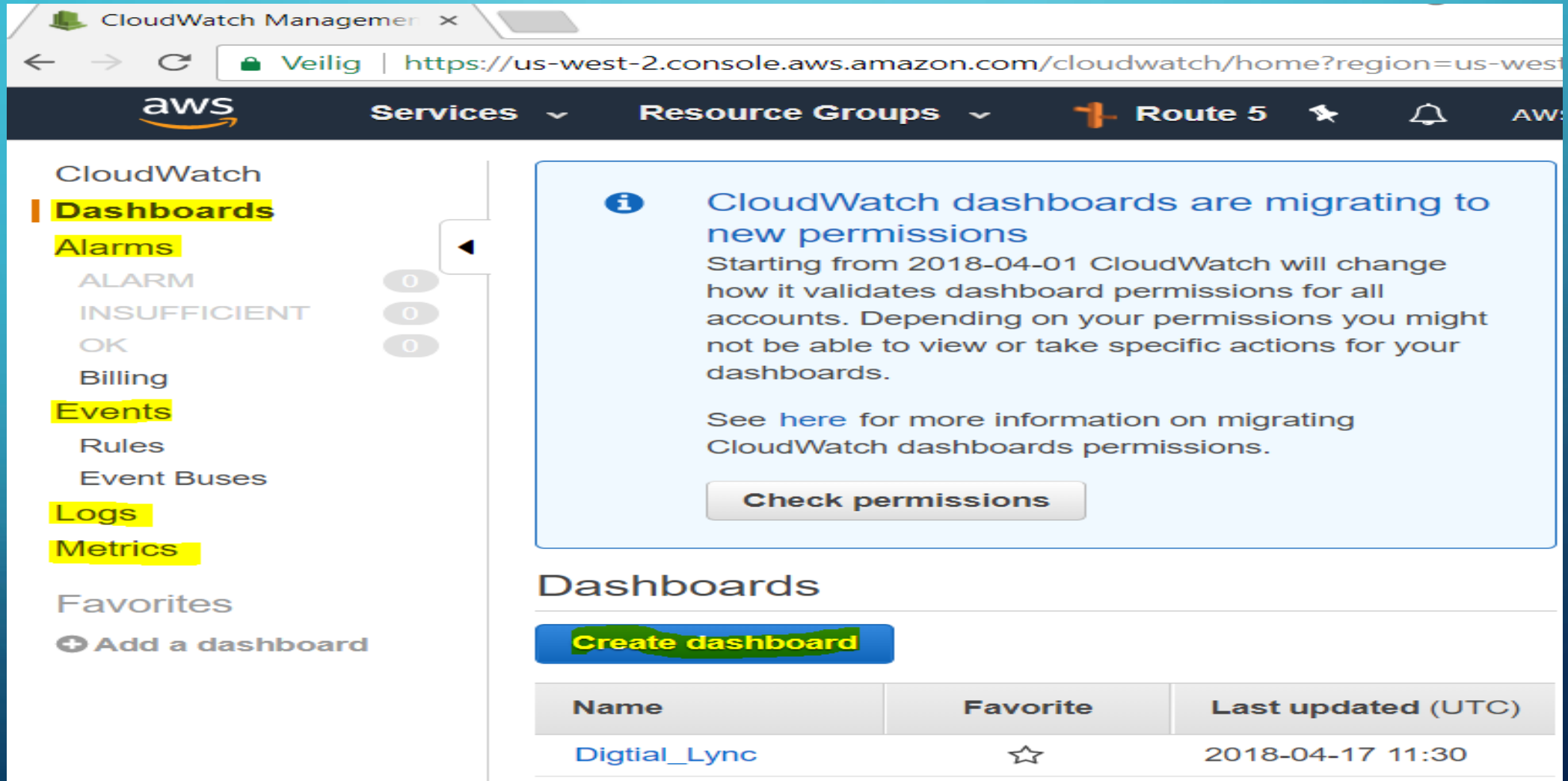
You can now use Amazon CloudWatch alarms to monitor the estimated charges for your AWS resources and receive email alerts whenever charges exceed a threshold you define. Visit the [Amazon CloudWatch Billing Alarms](#) page to learn more.

[Go to CloudWatch US East \(N. Virginia\) region](#)

Service Health

Current Status	Details
Amazon CloudWatch Service	Service is operating normally
View complete service health details	

STEP-2 : CREATE A DASHBOARD



The screenshot shows the AWS CloudWatch console interface. The left sidebar contains navigation links for CloudWatch, Dashboards, Alarms, Events, Logs, Metrics, and Favorites. The main content area features a notification about dashboard permissions migration and a list of existing dashboards.

CloudWatch

- Dashboards**
- Alarms
 - ALARM 0
 - INSUFFICIENT 0
 - OK 0
- Billing
- Events
- Rules
- Event Buses
- Logs
- Metrics
- Favorites
 - + Add a dashboard

CloudWatch dashboards are migrating to new permissions

Starting from 2018-04-01 CloudWatch will change how it validates dashboard permissions for all accounts. Depending on your permissions you might not be able to view or take specific actions for your dashboards.

See [here](#) for more information on migrating CloudWatch dashboards permissions.

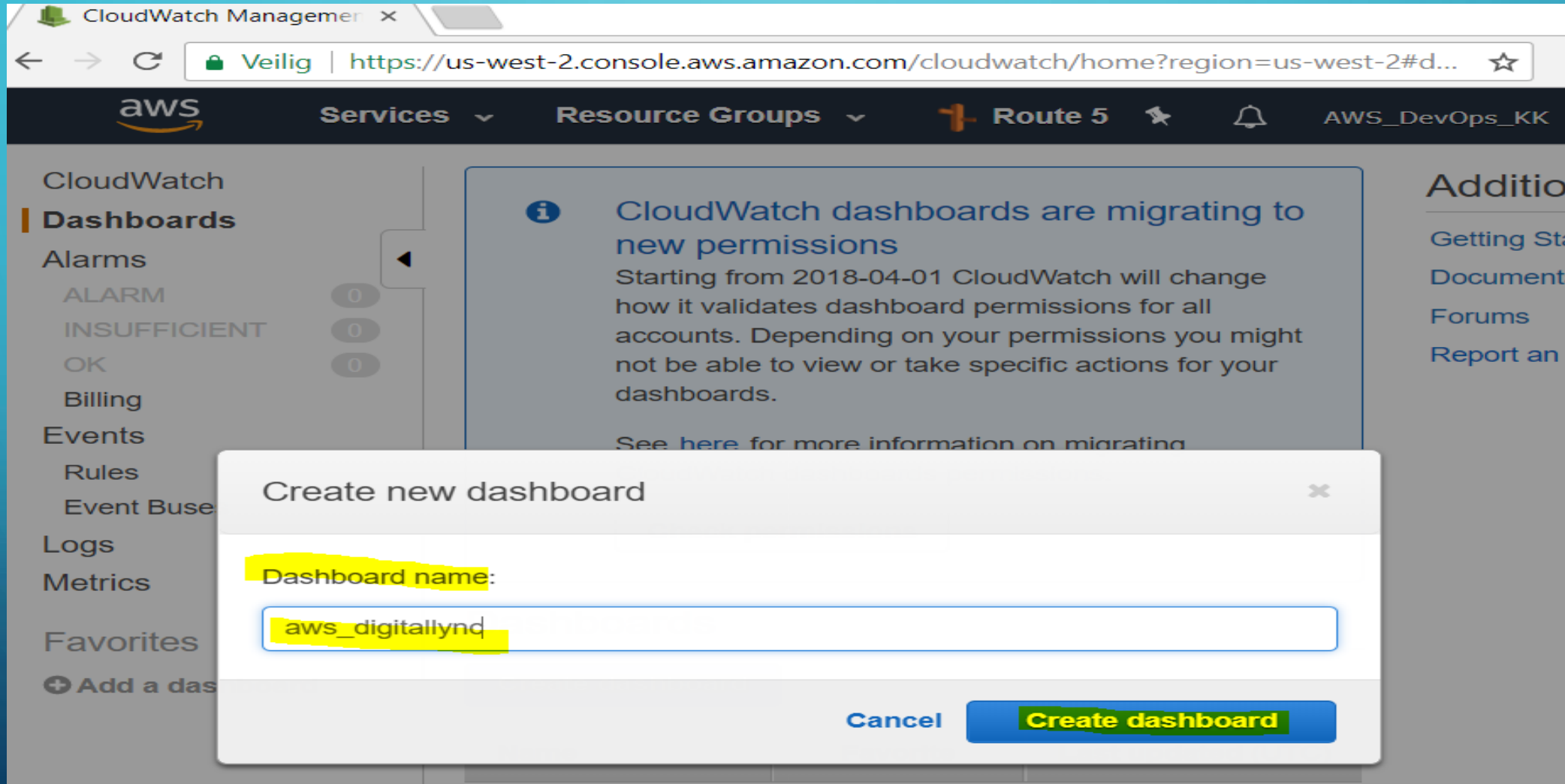
[Check permissions](#)

Dashboards

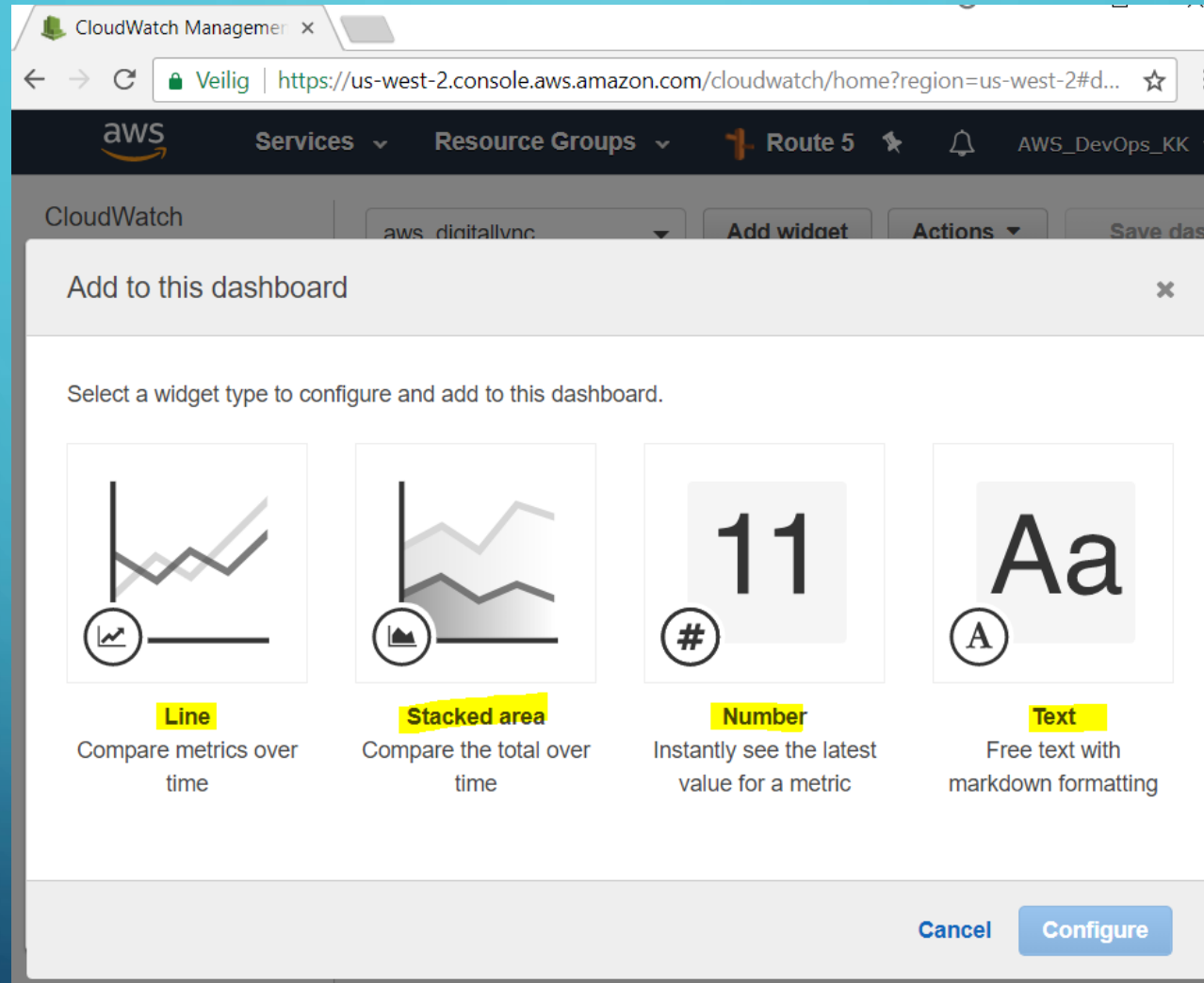
[Create dashboard](#)

Name	Favorite	Last updated (UTC)
Digital_Lync	☆	2018-04-17 11:30

STEP-3 : USER ANY NAME & CREATE DASHBOAD



STEP-4 : SELECT ANY ONE OF THE BELOW OPTION



STEP-5: I'VE SELECTED TEXT

New text widget

Create a text widget to label parts of your dashboard. Format your text with Markdown. [Learn more.](#)

Markdown

Preview

```
# Heading
## Sub-heading
Paragraphs are separated by a blank line. Text attributes italic,
bold, strikethrough .

A [link](http://amazon.com). A link to
this dashboard: [aws_digitallync]
(#dashboards:name=aws_digitallync).

[button:Button link](http://amazon.com)
[button:primary:Primary button link]
(http://amazon.com)

Table | Header
----|-----
CloudWatch | Dashboards

Text block
ssh my-host

List syntax:
```

Heading

Sub-heading

Paragraphs are separated by a blank line. Text attributes *italic*, **bold**, ~~strikethrough~~ .

A [link](#). A link to this dashboard: [aws_digitallync](#).

Button link

Primary button link

Table

Header

CloudWatch

Dashboards

Text block
ssh my-host

List syntax:

- CloudWatch
- Dashboards
 - 1. Graphs
 - 2. Text widget

Cancel

Create widget

STEP-6: DELETE EVERYTHING & ADD AS BELOW

CloudWatch Manager x

← → ↻ Veilig | https://us-west-2.console.aws.amazon.com/cloudwatch/home?region=us-west-2#d...

New text widget

Create a text widget to label parts of your dashboard. Format your text with Markdown. [Learn more.](#)

Markdown

Preview

```
# Heading  
## Sub-heading
```

Heading

Sub-heading

Cancel Create widget

Edit text widget

Create a text widget to label parts of your dashboard. Format your text with Markdown. [Learn more.](#)

Markdown

Preview

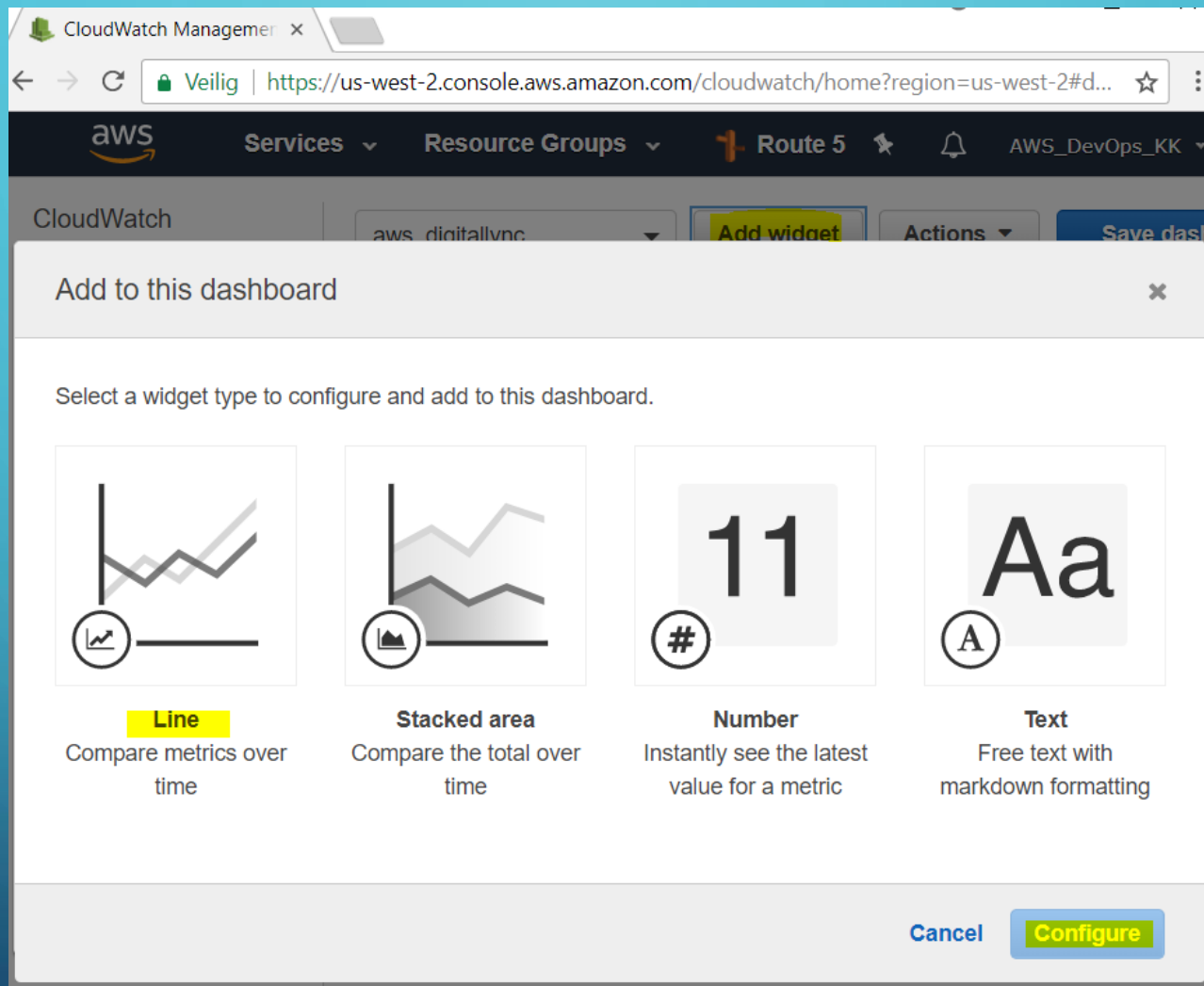
```
# WebServer  
## CPU Utilization
```

WebServer

CPU Utilization

Cancel Update widget

STEP-7: ADD WIDGET OF LINE



STEP-8: CREATE A WIDGET ON CPU UTILIZATION ON EC2

CloudWatch Manager x

Veilig | https://us-west-2.console.aws.amazon.com/cloudwatch/home?region=us-west-2#d...

Add metric graph

1h 3h 12h 1d 3d 1w custom ▾ Line ▾ ↺ ▾

1.00
0.8
0.6
0.4
0.2
0

Your CloudWatch graph is empty.
Select some metrics to appear here.

11:30 11:45 12:00 12:15 12:30 12:45 13:00 13:15 13:30 13:45 14:00 14:15

All metrics Graphed metrics Graph options

Search for any metric, dimension or resource id

694 Metrics

EBS 90 Metrics	EC2 160 Metrics
EFS 24 Metrics	ELB 115 Metrics

Cancel Create widget

CloudWatch Manager x EC2 Management Console x

Veilig | https://us-west-2.console.aws.amazon.com/cloudwatch/home?region=us-west-2#d...

Add metric graph

1h 3h 12h 1d 3d 1w custom ▾ Stacked area ▾ ↺ ▾

30.3 Various units
15.2
0

11:30 11:45 12:00 12:15 12:30 12:45 13:00 13:15 13:30 13:45 14:00 14:15 14:30

CPUCreditBalance CPUUtilization

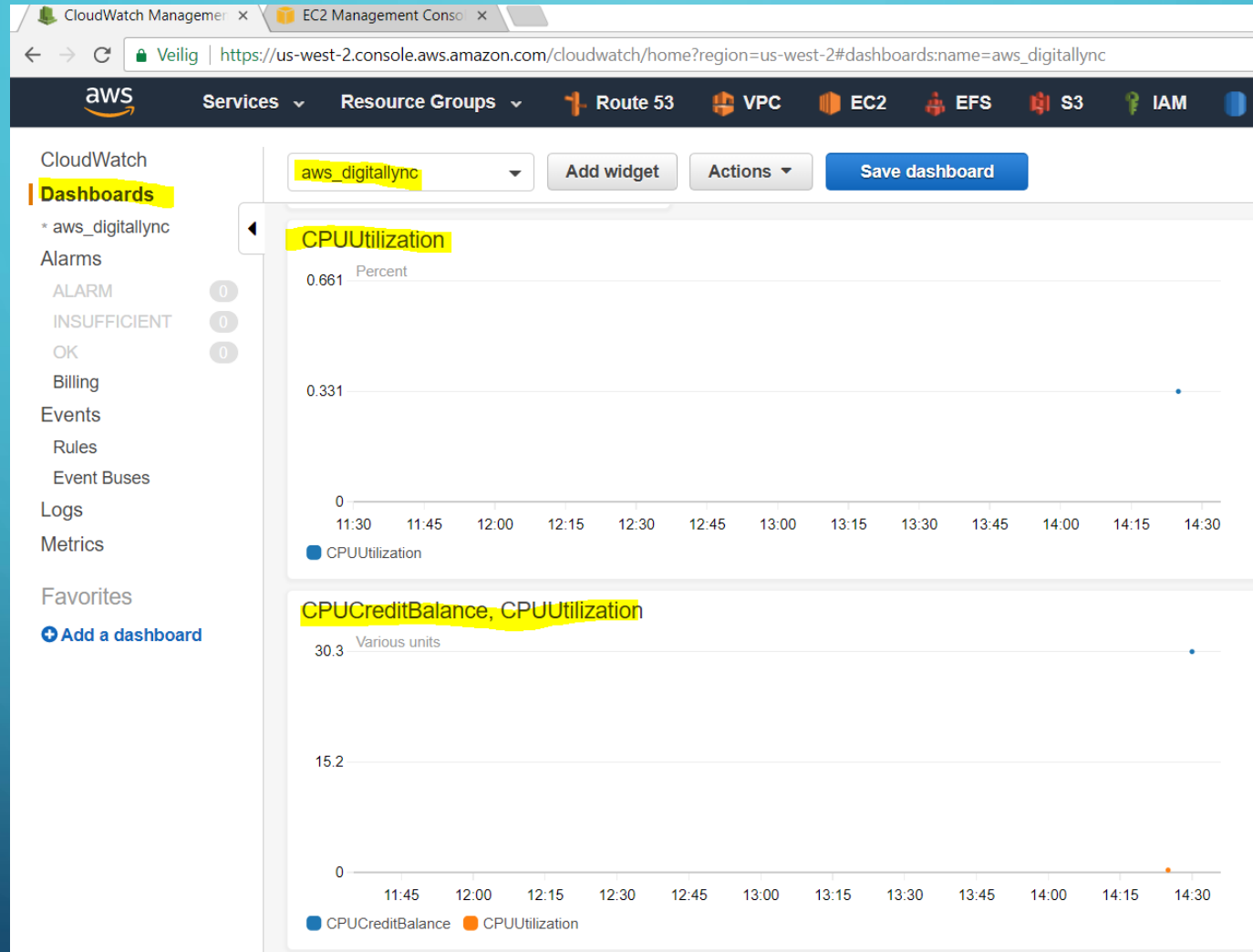
All metrics Graphed metrics (2) Graph options

All > EC2 > Per-Instance Metrics Search for any metric, dimension or resource id

	Instance Name (160) ▴	Instanceld	Metric Name
<input checked="" type="checkbox"/>	R&D	i-058ad0a561493db40	CPUCreditBalance
<input type="checkbox"/>	R&D	i-058ad0a561493db40	CPUCreditUsage
<input type="checkbox"/>	R&D	i-058ad0a561493db40	CPUSurplusCreditBalance
<input type="checkbox"/>	R&D	i-058ad0a561493db40	CPUSurplusCreditsCharged
<input checked="" type="checkbox"/>	R&D	i-058ad0a561493db40	CPUUtilization

Cancel Create widget

STEP-9: CREATED A DASHBOARD WITH 2 WIDGETS



STEP-10: CREATE ALARMS

The screenshot shows the AWS CloudWatch console interface. The left sidebar contains a navigation menu with the following items: CloudWatch, Dashboards, * aws_digitallync, **Alarms** (highlighted), ALARM (0), INSUFFICIENT (0), OK (0), Billing, Events, Rules, Event Buses, Logs, Metrics, and Favorites. Below the Favorites section is a link to '+ Add a dashboard'. The main content area has a top bar with buttons for 'Create Alarm' (highlighted), 'Add to Dashboard', and 'Actions'. Below these buttons is a filter section with 'Filter: All alarms' and a search bar labeled 'Search Alarms'. A checkbox option 'Hide all AutoScaling alarms' is also present. Below the filter section is a table with the following columns: State, Name, Threshold, and Config Status. The table is currently empty, displaying the message 'No records found.' at the bottom. At the very bottom of the console, there is a status bar indicating '0 Alarms selected' and a prompt to 'Select an alarm above'.

STEP-11: SELECT EC2 & CPUUTILIZATION & CREATE

The screenshot shows the 'Create Alarm' wizard in the AWS CloudWatch console. The first step, '1. Select Metric', is active. A search bar at the top contains 'Search Metrics'. Below it, the title 'CloudWatch Metrics by Category' is followed by a summary: 'Your CloudWatch metric summary has loaded. Total metrics: 694'. The metrics are organized into three columns: EBS Metrics (90), EC2 Metrics (160), and EFS Metrics (90). Under EC2 Metrics, 'CPUUtilization' is highlighted. At the bottom, there are navigation buttons: 'Cancel', 'Previous', 'Next', and 'Create Alarm'.

The screenshot shows the 'Create Alarm' wizard in the AWS CloudWatch console, now at the '2. Define Alarm' step. The '1. Select Metric' step is completed. A search bar at the top contains 'Search Metrics'. Below it, the title 'Create Alarm' is followed by a summary: 'Please select a metric before continuing.'. The metrics are organized into three columns: EC2 Metrics (160), EBS Metrics (90), and EFS Metrics (90). Under EC2 Metrics, 'CPUUtilization' is highlighted. At the bottom, there are navigation buttons: 'Cancel', 'Previous', 'Next', and 'Create Alarm'.

STEP-12: CREATE AN ALARM

Create Alarm

[1. Select Metric](#)[2. Define Alarm](#)

Alarm Threshold

Provide the details and threshold for your alarm. Use the graph on the right to help set the appropriate threshold.

Name: digital_cpuUtilization

Description: CPU Utilization

Whenever: CPUUtilization

is: \geq 5

for: 1 out of 1 datapoints

Additional settings

Provide additional configuration for your alarm.

Treat missing data as: missing

Actions

Define what actions are taken when your alarm changes state.

Notification

Create Alarm

[1. Select Metric](#)[2. Define Alarm](#)

Additional settings

Provide additional configuration for your alarm.

Treat missing data as: missing

Actions

Define what actions are taken when your alarm changes state.

Notification

Whenever this alarm: State is ALARM

Send notification to: AWS_EC2 CPU Utilization

Invalid notification list name, allowed characters are letters (a-z, A-Z), numbers (0-9), and underscore (_).

Email list: devops.keshav@gmail.com

+ Notification

+ AutoScaling Action

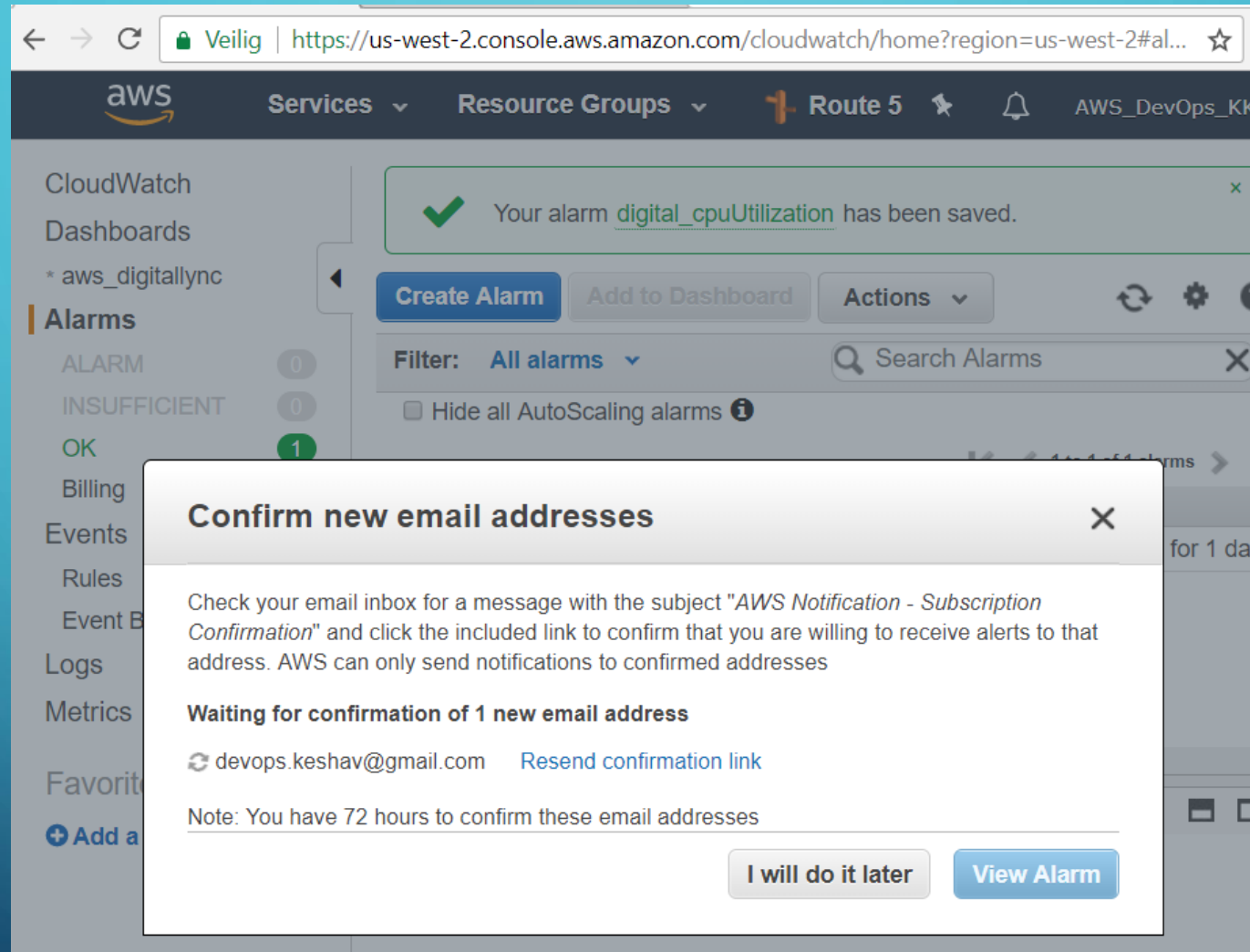
+ EC2 Action

Alarm Preview

This alarm will trigger when the blue line goes up to or above the red line for 1 datapoints within 5

[Cancel](#)[Previous](#)[Next](#)[Create Alarm](#)

STEP-13: GO TO MAILBOX AND CONFIRM THE MAIL.



The screenshot shows the AWS CloudWatch console interface. At the top, a notification bar indicates that the alarm `digital_cpuUtilization` has been saved. Below this, the 'Alarms' section is visible, showing a filter for 'All alarms' and a search bar. A modal dialog titled 'Confirm new email addresses' is overlaid on the console. The dialog contains the following text:

Confirm new email addresses

Check your email inbox for a message with the subject "AWS Notification - Subscription Confirmation" and click the included link to confirm that you are willing to receive alerts to that address. AWS can only send notifications to confirmed addresses

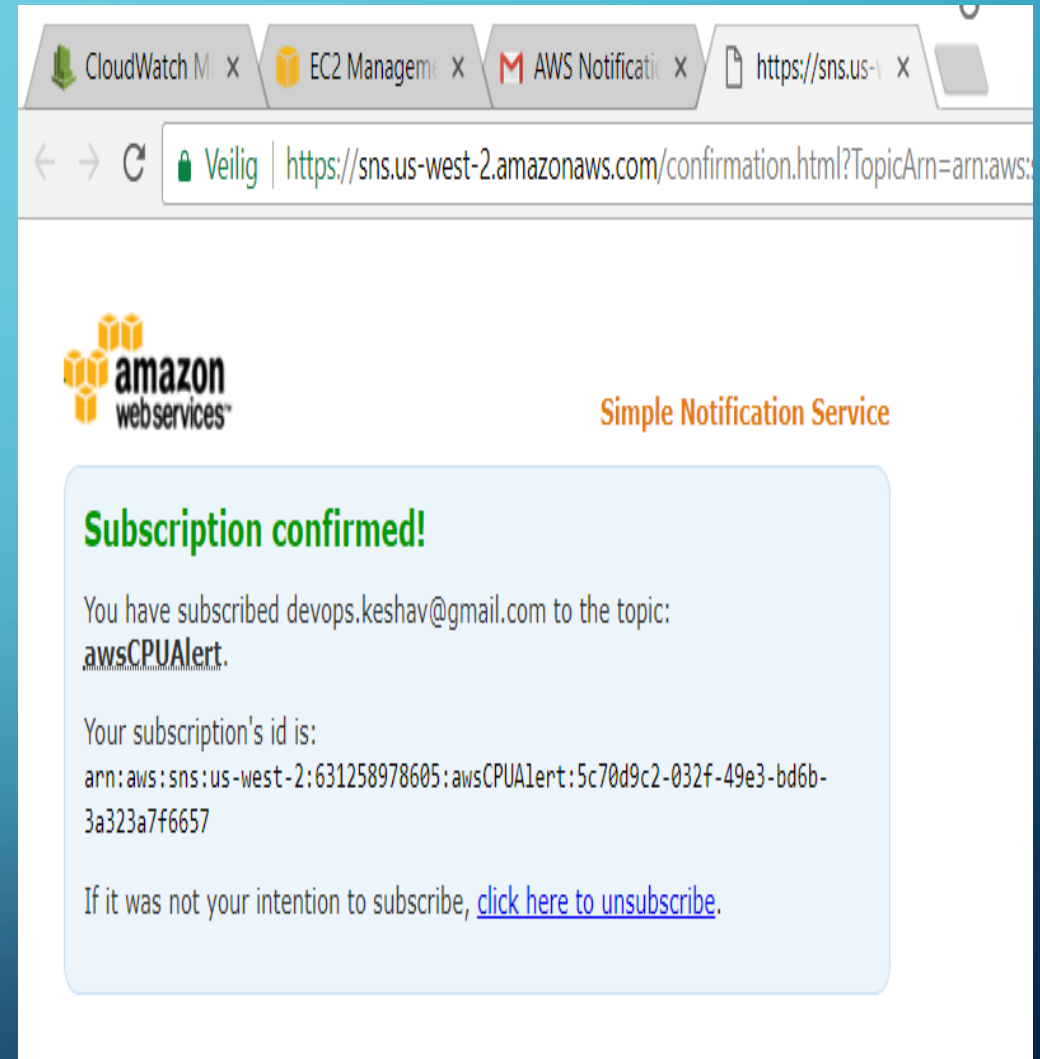
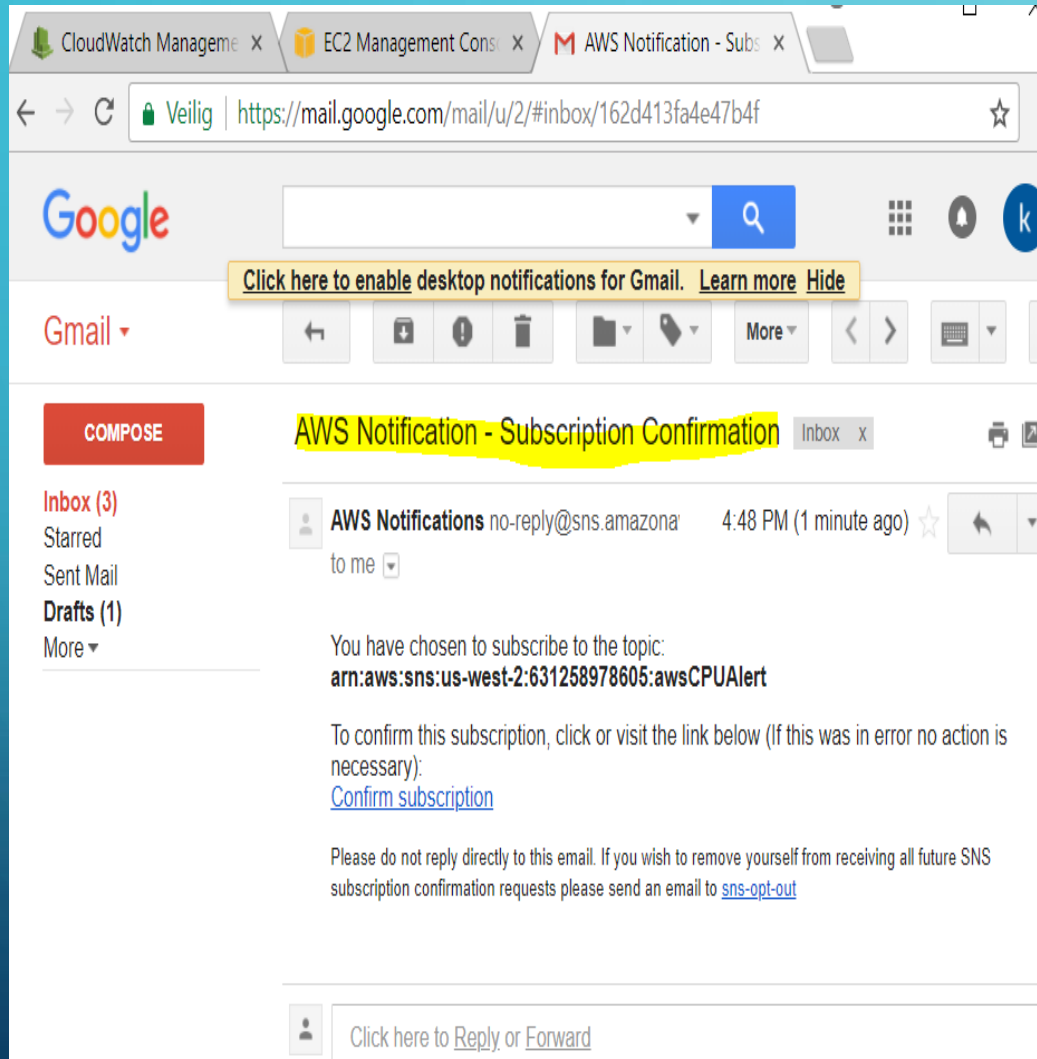
Waiting for confirmation of 1 new email address

devops.keshav@gmail.com [Resend confirmation link](#)

Note: You have 72 hours to confirm these email addresses

At the bottom of the dialog, there are two buttons: 'I will do it later' and 'View Alarm'.

STEP-1 4: CLICK ON CONFIRM SUBSCRIPTION



STEP-1 5: CHECK THE ALERT

The screenshot shows the AWS CloudWatch console interface. At the top, there's a navigation bar with the AWS logo and various service links like Services, Resource Groups, Route 53, VPC, EC2, EFS, S3, IAM, and RDS. The left sidebar contains a menu with options like CloudWatch, Dashboards, Alarms, Billing, Events, Rules, Event Buses, Logs, and Metrics. The 'Alarms' section is selected, showing a summary of alarm states: 0 ALARM, 0 INSUFFICIENT, and 1 OK. The main content area displays a green success message: 'Your alarm digital_cpuUtilization has been saved.' Below this, there are buttons for 'Create Alarm', 'Add to Dashboard', and 'Actions'. A table lists the created alarm:

State	Name	Threshold
OK	digital_cpuUtilization	CPUUtilization >= 5 for 1 datapoints within 5 minutes

EVENTS : IT'S ONLY FOR SYSOPS TASK

← → ↻ Veilig | <https://us-west-2.console.aws.amazon.com/cloudwatch/home?region=us-west-2#events:>

aws Services ▾ Resource Groups ▾ Route 53 VPC EC2 EFS S3 IAM RDS AWS_DevOps_KK ▾ Oregon ▾

CloudWatch
Dashboards
* aws_digitallync
Alarms
ALARM 0
INSUFFICIENT 0
OK 1
Billing
Events
Rules
Event Buses
Logs
Metrics
Favorites
+ Add a dashboard


Welcome to CloudWatch Events

CloudWatch Events helps you to respond to state changes in your AWS resources. When your resources change state they automatically send events into an event stream. You can create rules to select events in the stream and route them to targets to take action. You can also use rules to take action on a pre-determined schedule. For example, you can configure rules to:

- Automatically invoke an AWS Lambda function to update DNS entries when an event notifies you that Amazon EC2 instance enters the Running state
- Direct specific API records from CloudTrail to a Kinesis stream for detailed analysis of potential security or availability risks
- Take a snapshot of an Amazon EBS volume on a schedule

Create rule

Start Responding to CloudWatch Events



Determine events of interest in the CloudWatch Events stream

Create rules to select events of interest

Specify actions to take when a rule matches an event

LOGS : IT'S ONLY FOR SYSOPS TASK

→ ↻ Veilig | https://us-west-2.console.aws.amazon.com/cloudwatch/home?region=us-west-2#logs:

aws Services ▾ Resource Groups ▾ Route 53 VPC EC2 EFS S3 IAM RDS

CloudWatch
Dashboards
* aws_digitallync
Alarms
ALARM 0
INSUFFICIENT 0
OK 1
Billing
Events
Rules
Event Buses
Logs
Metrics
Favorites
+ Add a dashboard

Welcome to CloudWatch Logs


CloudWatch Logs helps you to aggregate, monitor, and store logs. For example, you can:

- Monitor HTTP response codes in Apache logs
- Receive alarms for errors in kernel logs
- Count exceptions in application logs


To start sending your logs to CloudWatch, click the Quick Start Guide and follow the instructions. To explore CloudWatch Logs before sending any data, click "Create Log Group" to create your first Log Group.

[Quick Start Guide](#) [Create log group](#)


Start Sending Log Data to CloudWatch

**1**
Install the Agent
Install and configure the CloudWatch Logs agent to send your logs to the CloudWatch Logs service.

>

**2**
Monitor
Create metric filters to automatically monitor the logs sent to CloudWatch Logs.

>

**3**
Access
View the log data you have sent and stored in CloudWatch Logs.

WHAT CAN I DO WITH CLOUDWATCH?

- Dashboards - Creates awesome dashboards to see what is happening with your AWS environment.
- Alarms - Allows you to set Alarms that notify you when particular thresholds are hit.
- Events - CloudWatch Events helps you to respond to state changes in your AWS resources.
- Logs - CloudWatch Logs helps you to aggregate, monitor, and store logs.