

AWS Device

Team Emertxe



AWS Device

What?



- An IoT AWS Device is a representation and record of your physical device in the cloud
- Any physical device needs a AWS Device record in order to work with AWS IoT

AWS Device

Creation



- In order to create a AWS Device interface we need to use IoT services provided by cloud
- Open your favorite browser and type (or click) the following URL

<https://aws.amazon.com/>

- If you don't have one, you may **create** one. You may follow [2_aws_account_creation.pdf](#) for reference if required
- To start with its better to create a Free Tier account

Note: The there is a possibility of version updation in the cloud side, so some slides may vary!

AWS Device Creation

File Edit View History Bookmarks Tools Help

Amazon Web Services (AWS) X +

https://aws.amazon.com

Search



Products Solutions Pricing Documentation Learn Partner Network AWS Marketplace Explore More

Contact Sales Support English My Account

Sign Up

Open Distro for Elasticsearch

New: 100% open-source, community driven distribution of Elasticsearch with enterprise-grade security and alerting

[Learn more »](#)

• [Login to the console](#)



Amazon Lightsail

Everything you need to get started on AWS—for a low, predictable price



Amazon DynamoDB

Fully managed nonrelational database for any scale



Serverless Application Development

Find tools for testing, deploying, and monitoring serverless applications



110,000+ Databases Migrated to AWS

Save time & cost—migrate to fully managed databases

Explore Our Products

AWS Device Creation

File Edit View History Bookmarks Tools Help

Amazon Web Services (AWS) X +

https://aws.amazon.com

Search



Products Solutions Pricing Documentation Learn Partner Network AWS Marketplace Explore More

Contact Sales Support English My Account Sign Up

- AWS Management Console
- Account Settings
- Billing & Cost Management
- Security Credentials
- AWS Personal Health Dashboard

Open Distro for Elasticsearch

New: 100% open-source, community driven distribution of Elasticsearch with enterprise-grade security and alerting

[Learn more »](#)



• [Login to the console](#)



Amazon Lightsail

Everything you need to get started on AWS—for a low, predictable price



Amazon DynamoDB

Fully managed nonrelational database for any scale



Serverless Application Development

Find tools for testing, deploying, and monitoring serverless applications



110,000+ Databases Migrated to AWS

Save time & cost—migrate to fully managed databases

Explore Our Products

AWS Device Creation

File Edit View History Bookmarks Tools Help

Amazon Web Services (AWS) X +

https://aws.amazon.com

Search



Products Solutions Pricing Documentation Learn Partner Network AWS Marketplace Explore More

Contact Sales Support English My Account Sign Up

AWS Management Console
Account Settings
Billing & Cost Management
Security Credentials
AWS Personal Health Dashboard

Open Distro for Elasticsearch

New: 100% open-source, community driven distribution of Elasticsearch with enterprise-grade security and alerting

[Learn more »](#)



• [Login to the console](#)



Amazon Lightsail

Everything you need to get started on AWS—for a low, predictable price



Amazon DynamoDB

Fully managed nonrelational database for any scale



Serverless Application Development

Find tools for testing, deploying, and monitoring serverless applications



110,000+ Databases Migrated to AWS

Save time & cost—migrate to fully managed databases

Explore Our Products

AWS Device Creation

File Edit View History Bookmarks Tools Help

Amazon Web Services Sign X +



https://signin.aws.amazon.com/signin?redirect_uri=https%3A%2F%2Fconsole.aws.amazon.com%2Fconsole%2Fhome%3Fstate%3DhashArgs%2523%26isau



Search



Sign in

Email address of your AWS account

Or to sign in as an IAM user, enter your account ID or account alias instead.

Next

New to AWS?

Create a new AWS account



AWS Accounts Include
12 Months of Free Tier Access

Including use of Amazon EC2,
Amazon S3, and Amazon DynamoDB

Visit aws.amazon.com/free for full offer terms

- Enter your registered email id

About Amazon.com Sign In

Amazon Web Services uses information from your Amazon.com account to identify you and allow access to Amazon Web Services. Your use of this site is governed by our Terms of Use and Privacy Policy linked below. Your use of Amazon Web Services products and services is governed by the AWS Customer Agreement linked below unless you have entered into a separate agreement with Amazon Web Services or an AWS Value Added Reseller to purchase these products and services. The AWS Customer Agreement was updated on March 31, 2017. For more information about these updates, see [Recent Changes](#).

© 2019, Amazon Web Services, Inc. or its affiliates. All rights reserved. [Terms of Use](#) | [Privacy Policy](#) | [AWS Customer Agreement](#)

English

AWS Device Creation

File Edit View History Bookmarks Tools Help

Amazon Web Services Sign x +



https://signin.aws.amazon.com/signin?redirect_uri=https%3A%2F%2Fconsole.aws.amazon.com%2Fbilling%2Fhome%3Fstate%3DhashArgs%2523%252F...



Search



Sign in

Email address of your AWS account

Or to sign in as an IAM user, enter your account ID or account alias instead.

Next

New to AWS?

Create a new AWS account



AWS Accounts Include
12 Months of Free Tier Access

Including use of Amazon EC2,
Amazon S3, and Amazon DynamoDB

Visit aws.amazon.com/free for full offer terms

- Enter your registered email id

About Amazon.com Sign In

Amazon Web Services uses information from your Amazon.com account to identify you and allow access to Amazon Web Services. Your use of this site is governed by our Terms of Use and Privacy Policy linked below. Your use of Amazon Web Services products and services is governed by the AWS Customer Agreement linked below unless you have entered into a separate agreement with Amazon Web Services or an AWS Value Added Reseller to purchase these products and services. The AWS Customer Agreement was updated on March 31, 2017. For more information about these updates, see [Recent Changes](#).

© 2019, Amazon Web Services, Inc. or its affiliates. All rights reserved. [Terms of Use](#) | [Privacy Policy](#) | [AWS Customer Agreement](#)

English

AWS Device Creation

File Edit View History Bookmarks Tools Help

Amazon Web Services Sign X +



https://signin.aws.amazon.com/signin?redirect_uri=https%3A%2F%2Fconsole.aws.amazon.com%2Fbilling%2Fhome%3Fstate%3DhashArgs%2523%252F...



Search



Sign in

Email address of your AWS account

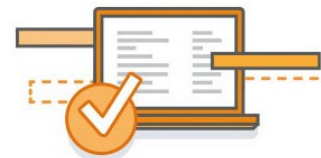
Or to sign in as an IAM user, enter your account ID or account alias instead.

user@domain.com

Next

New to AWS?

Create a new AWS account



AWS Accounts Include
12 Months of Free Tier Access

Including use of Amazon EC2,
Amazon S3, and Amazon DynamoDB

Visit aws.amazon.com/free for full offer terms

- Enter your registered email id

About Amazon.com Sign In

Amazon Web Services uses information from your Amazon.com account to identify you and allow access to Amazon Web Services. Your use of this site is governed by our Terms of Use and Privacy Policy linked below. Your use of Amazon Web Services products and services is governed by the AWS Customer Agreement linked below unless you have entered into a separate agreement with Amazon Web Services or an AWS Value Added Reseller to purchase these products and services. The AWS Customer Agreement was updated on March 31, 2017. For more information about these updates, see [Recent Changes](#).

© 2019, Amazon Web Services, Inc. or its affiliates. All rights reserved. [Terms of Use](#) | [Privacy Policy](#) | [AWS Customer Agreement](#)

English

AWS Device Creation

File Edit View History Bookmarks Tools Help

Amazon Web Services Sign X +



https://signin.aws.amazon.com/signin?redirect_uri=https%3A%2F%2Fconsole.aws.amazon.com%2Fconsole%2Fhome%3Fstate%3DhashArgs%2523%26isau



Search



Root user sign in ⓘ

Email: user@domain.com

Password [Forgot password?](#)

Sign in

[Sign in to a different account](#)

[Create a new AWS account](#)



AWS Accounts Include 12 Months of Free Tier Access

Including use of Amazon EC2,
Amazon S3, and Amazon DynamoDB

Visit aws.amazon.com/free for full offer terms

- Enter your password

About Amazon.com Sign In

Amazon Web Services uses information from your Amazon.com account to identify you and allow access to Amazon Web Services. Your use of this site is governed by our [Terms of Use](#) and [Privacy Policy](#) linked below. Your use of Amazon Web Services products and services is governed by the [AWS Customer Agreement](#) linked below unless you have entered into a separate agreement with Amazon Web Services or an AWS Value Added Reseller to purchase these products and services. The AWS Customer Agreement was updated on March 31, 2017. For more information about these updates, see [Recent Changes](#).

© 2019, Amazon Web Services, Inc. or its affiliates. All rights reserved. [Terms of Use](#) | [Privacy Policy](#) | [AWS Customer Agreement](#)

English ▼

AWS Device Creation

File Edit View History Bookmarks Tools Help

Amazon Web Services Sign X +



https://signin.aws.amazon.com/signin?redirect_uri=https%3A%2F%2Fconsole.aws.amazon.com%2Fconsole%2Fhome%3Fstate%3DhashArgs%2523%26isau



Search



Root user sign in ⓘ

Email: user@domain.com

Password [Forgot password?](#)

Sign in

[Sign in to a different account](#)

[Create a new AWS account](#)



AWS Accounts Include 12 Months of Free Tier Access

Including use of Amazon EC2,
Amazon S3, and Amazon DynamoDB

Visit aws.amazon.com/free for full offer terms

- Enter your password

About Amazon.com Sign In

Amazon Web Services uses information from your Amazon.com account to identify you and allow access to Amazon Web Services. Your use of this site is governed by our [Terms of Use](#) and [Privacy Policy](#) linked below. Your use of Amazon Web Services products and services is governed by the [AWS Customer Agreement](#) linked below unless you have entered into a separate agreement with Amazon Web Services or an AWS Value Added Reseller to purchase these products and services. The AWS Customer Agreement was updated on March 31, 2017. For more information about these updates, see [Recent Changes](#).

© 2019, Amazon Web Services, Inc. or its affiliates. All rights reserved. [Terms of Use](#) | [Privacy Policy](#) | [AWS Customer Agreement](#)

English ▼

AWS Device Creation

File Edit View History Bookmarks Tools Help

Amazon Web Services Sign X +



https://signin.aws.amazon.com/signin?redirect_uri=https%3A%2F%2Fconsole.aws.amazon.com%2Fconsole%2Fhome%3Fstate%3DhashArgs%2523%26isau



Search



Root user sign in ⓘ

Email: user@domain.com

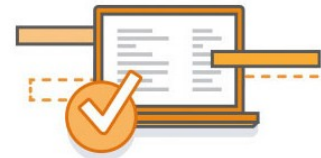
Password [Forgot password?](#)

.....

Sign in

[Sign in to a different account](#)

[Create a new AWS account](#)



AWS Accounts Include 12 Months of Free Tier Access

Including use of Amazon EC2,
Amazon S3, and Amazon DynamoDB

Visit aws.amazon.com/free for full offer terms

- Enter your password

About Amazon.com Sign In

Amazon Web Services uses information from your Amazon.com account to identify you and allow access to Amazon Web Services. Your use of this site is governed by our [Terms of Use](#) and [Privacy Policy](#) linked below. Your use of Amazon Web Services products and services is governed by the [AWS Customer Agreement](#) linked below unless you have entered into a separate agreement with Amazon Web Services or an AWS Value Added Reseller to purchase these products and services. The AWS Customer Agreement was updated on March 31, 2017. For more information about these updates, see [Recent Changes](#).

© 2019, Amazon Web Services, Inc. or its affiliates. All rights reserved. [Terms of Use](#) | [Privacy Policy](#) | [AWS Customer Agreement](#)

English ▼

AWS Device Creation

File Edit View History Bookmarks Tools Help

Amazon Web Services Sign X +



https://signin.aws.amazon.com/signin?redirect_uri=https%3A%2F%2Fconsole.aws.amazon.com%2Fconsole%2Fhome%3Fstate%3DhashArgs%2523%26isau



Search



Root user sign in ⓘ

Email: user@domain.com

Password

[Forgot password?](#)

.....

Sign in

[Sign in to a different account](#)

[Create a new AWS account](#)



AWS Accounts Include 12 Months of Free Tier Access

Including use of Amazon EC2,
Amazon S3, and Amazon DynamoDB

Visit aws.amazon.com/free for full offer terms

- Enter your password

About Amazon.com Sign In

Amazon Web Services uses information from your Amazon.com account to identify you and allow access to Amazon Web Services. Your use of this site is governed by our [Terms of Use](#) and [Privacy Policy](#) linked below. Your use of Amazon Web Services products and services is governed by the [AWS Customer Agreement](#) linked below unless you have entered into a separate agreement with Amazon Web Services or an AWS Value Added Reseller to purchase these products and services. The AWS Customer Agreement was updated on March 31, 2017. For more information about these updates, see [Recent Changes](#).

© 2019, Amazon Web Services, Inc. or its affiliates. All rights reserved. [Terms of Use](#) | [Privacy Policy](#) | [AWS Customer Agreement](#)

English ▾

AWS Device Creation

File Edit View History Bookmarks Tools Help

• AWS Management Console X +

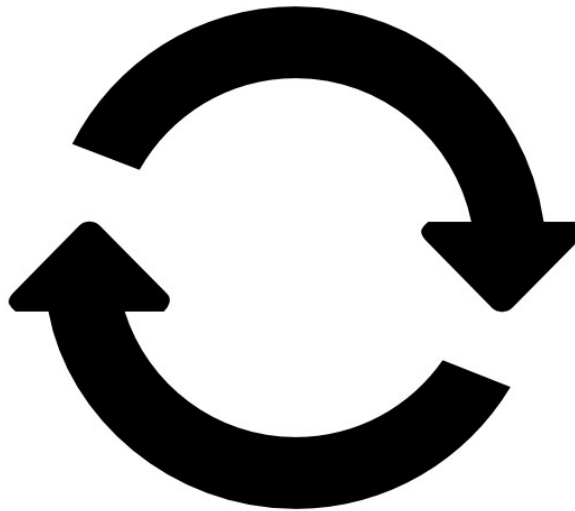
https://us-east-2.console.aws.amazon.com/console/home?region=us-east-2#



Search



- May take a while first time login



AWS Device Creation

File Edit View History Bookmarks Tools Help

AWS Management Console X +



https://ap-south-1.console.aws.amazon.com/console/home?region=ap-south-1#

Search



Services Resource Groups

Syed Adil Mumbai Support

AWS Management Console

AWS services

Find Services

You can enter names, keywords or acronyms.

Example: Relational Database Service, database, RDS

All services

Build a solution

Get started with simple wizards and automated workflows.

Launch a virtual machine

With EC2

2-3 minutes



Build a web app

With Elastic Beanstalk

6 minutes



Build using virtual servers

With Lightsail

1-2 minutes



Connect an IoT device

With AWS IoT

5 minutes



Start a development project

With CodeStar

5 minutes



Register a domain

With Route 53

3 minutes



Deploy a serverless microservice

With Lambda, API Gateway

2 minutes



Create a backend for your mobile app

With Mobile Hub

5 minutes



Access r



- You should see your user ID and the selected region here
- Pick the required region, since the device created in a specific region will not be available in other
- Note that, there are some services available in some specific regions. So make sure you plan your application properly

Explore

Run Serve

AWS Fargate
manage ser

AWS Mark

Find, buy, a
AWS. Learn

Visit AWS around the world at a Summit

AWS Global Summits bring the cloud computing community together to connect, collaborate, and learn about AWS. [Learn more](#)

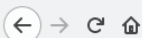
Amazon SageMaker

Machine learning for every developer and data scientist. [Learn more](#)

AWS Device Creation

File Edit View History Bookmarks Tools Help

AWS Management Console X +



https://ap-south-1.console.aws.amazon.com/console/home?region=ap-south-1#

Search



Services ▾ Resource Groups ▾

Syed Adil ▾ Mumbai ▾ Support ▾

AWS Management Console

AWS services

Find Services

You can enter names, keywords or acronyms.

Example: Relational Database Service, database, RDS

▼ All services

Compute

EC2
Lightsail
ECR
ECS
EKS
Lambda
Batch
Elastic Beanstalk
Serverless Application Repository

Storage

S3
EFS
FSx
S3 Glacier
Storage Gateway
AWS Backup

Database

RDS
DynamoDB

Developer Tools

CodeStar
CodeCommit
CodeBuild
CodeDeploy
CodePipeline
Cloud9
X-Ray

Robotics

AWS RoboMaker

Blockchain

Amazon Managed Blockchain

Satellite

Ground Station

Management & Governance

AWS Organizations
CloudWatch
AWS Auto Scaling

Machine Learning

Amazon SageMaker
Amazon Comprehend
AWS DeepLens
Amazon Lex
Machine Learning
Amazon Polly
Rekognition
Amazon Transcribe
Amazon Translate
Amazon Personalize
Amazon Forecast
Amazon Textract
AWS DeepRacer

Analytics

Athena
EMR
CloudSearch
Elasticsearch Service
Kinesis
QuickSight

Mobile

AWS Amplify
Mobile Hub
AWS AppSync
Device Farm

AR & VR

Amazon Sumerian

Application Integration

Step Functions
Amazon MQ
Simple Notification Service
Simple Queue Service
SWF

Customer Engagement

Amazon Connect
Pinpoint
Simple Email Service

Business Applications

Access resources on the go



Access the Management Console using the AWS Console Mobile App. [Learn more](#)

Explore

Run Servers

AWS Fargate runs and scales your containers without having to manage servers or clusters. [Learn more](#)

AWS Marketplace

Find, buy, and deploy popular software products that run on AWS. [Learn more](#)

Visit AWS around the world at a Summit

AWS Global Summits bring the cloud computing community together to connect, collaborate, and learn about AWS. [Learn more](#)

Amazon SageMaker

Machine learning for every developer and data scientist. [Learn more](#)

- As the concentration is on IoT Application, let's look for IoT Core service

AWS Device Creation

File Edit View History Bookmarks Tools Help

AWS Management Console X +

https://ap-south-1.console.aws.amazon.com/console/home?region=ap-south-1#

Search



Services Resource Groups

Syed Adil Mumbai Support

AWS Management Console

AWS services

Find Services

You can enter names, keywords or acronyms.

Example: Relational Database Service, database, RDS

- Alexa for Business
Alexa for Business Provides Tools to Manage Alexa in Your Organization
- Amazon Chime
Amazon Chime is a communications service that transforms online meetings
- Amazon Comprehend
Analyze Unstructured Text
- Amazon Connect
Amazon Connect is a contact center that enables engagement at any scale.
- Amazon DocumentDB
Fully-managed MongoDB-compatible database service
- Amazon Forecast
Amazon Forecast is a fully-managed service for accurate time-series forecasting
- Amazon FreeRTOS
Amazon FreeRTOS is an IoT Operating System for Microcontrollers
- Amazon GameLift
Deploy and Scale Session-based Multiplayer Games
- Amazon Lex
Build Voice and Text Chatbots
- Amazon Macie
Amazon Macie classifies and secures your business-critical content.
- Amazon Managed Blockchain
Easily create and manage scalable blockchain networks
- Amazon MQ
Managed message broker service for Apache ActiveMQ
- Amazon Personalize

DynamoDB

CloudWatch

AWS Auto Scaling

QuickSight

Business Applications

Access resources on the go



Access the Management Console using the AWS Console Mobile App. [Learn more](#)

Explore

Run Serverless

AWS Fargate runs and scales your containers without having to manage servers or clusters. [Learn more](#)

AWS Marketplace

Find, buy, and deploy popular software products that run on AWS. [Learn more](#)

Visit AWS around the world at a Summit

AWS Global Summits bring the cloud computing community together to connect, collaborate, and learn about AWS. [Learn more](#)

Amazon SageMaker

Machine learning for every developer and data scientist. [Learn more](#)

- As the concentration is on IoT Application, let's look for IoT Core service

AWS Device Creation

File Edit View History Bookmarks Tools Help

AWS Management Console X +



https://ap-south-1.console.aws.amazon.com/console/home?region=ap-south-1#

Search



Services Resource Groups

Syed Adil Mumbai Support

AWS Management Console

AWS services

Find Services

You can enter names, keywords or acronyms.

IoT

IoT 1-Click

Trigger AWS Lambda functions from simple devices

IoT Analytics

Collect, preprocess, store, analyze and visualize data of IoT devices

IoT Core

Connect Devices to the Cloud

IoT Device Defender

Connect Devices to the Cloud

IoT Device Management

Securely Manage Fleets as Small as One Device, or as Broad as Millions of Devices

IoT Events

Monitor device fleets for changes and trigger alerts to respond

IoT Greengrass

Deploy and run code on your devices

IoT SiteWise

Data driven decisions in Industrial operations

IoT Things Graph

Easily connect devices and web services to build IoT applications

AWS Marketplace Subscriptions

Digital catalog where you can find, buy, and deploy software

Amazon FreeRTOS

Amazon FreeRTOS is an IoT Operating System for Microcontrollers

Amazon Lex

Build Voice and Text Chatbots

Kinesis

DynamoDB

CloudWatch

AWS Auto Scaling

QuickSight

Business Applications

Access resources on the go



Access the Management Console using the AWS Console Mobile App. [Learn more](#)

Explore

Run Serverless

AWS Fargate runs and scales your containers without having to manage servers or clusters. [Learn more](#)

AWS Marketplace

Find, buy, and deploy popular software products that run on AWS. [Learn more](#)

Visit AWS around the world at a Summit

AWS Global Summits bring the cloud computing community together to connect, collaborate, and learn about AWS. [Learn more](#)

Amazon SageMaker

Machine learning for every developer and data scientist. [Learn more](#)

- As the concentration is on IoT Application, let's look for IoT Core service

AWS Device Creation

File Edit View History Bookmarks Tools Help

AWS Management Console X +



https://ap-south-1.console.aws.amazon.com/console/home?region=ap-south-1#

Search



Services Resource Groups

Syed Adil Mumbai Support

AWS Management Console

AWS services

Find Services

You can enter names, keywords or acronyms.

IoT

- IoT 1-Click**
Trigger AWS Lambda functions from simple devices
- IoT Analytics**
Collect, preprocess, store, analyze and visualize data of IoT devices
- IoT Core**
Connect Devices to the Cloud
- IoT Device Management**
Securely Manage Fleets as Small as One Device, or as Broad as Millions of Devices
- IoT Events**
Monitor device fleets for changes and trigger alerts to respond
- IoT Greengrass**
Deploy and run code on your devices
- IoT SiteWise**
Data driven decisions in Industrial operations
- IoT Things Graph**
Easily connect devices and web services to build IoT applications
- AWS Marketplace Subscriptions**
Digital catalog where you can find, buy, and deploy software
- Amazon FreeRTOS**
Amazon FreeRTOS is an IoT Operating System for Microcontrollers
- Amazon Lex**
Build Voice and Text Chatbots
- Kinesis**

DynamoDB

CloudWatch
AWS Auto Scaling

QuickSight

Business Applications

Access resources on the go



Access the Management Console using the AWS Console Mobile App. [Learn more](#)

Explore

Run Serverless

AWS Fargate runs and scales your containers without having to manage servers or clusters. [Learn more](#)

AWS Marketplace

Find, buy, and deploy popular software products that run on AWS. [Learn more](#)

Visit AWS around the world at a Summit

AWS Global Summits bring the cloud computing community together to connect, collaborate, and learn about AWS. [Learn more](#)

Amazon SageMaker

Machine learning for every developer and data scientist. [Learn more](#)

- As the concentration is on IoT Application, let's look for IoT Core service

AWS Device Creation

File Edit View History Bookmarks Tools Help

AWS IoT x +



https://ap-south-1.console.aws.amazon.com/iot/home?region=ap-south-1#/home

Search



Services

Resource Groups



Syed Adil

Mumbai

Support



AWS IoT

AWS IoT is a managed cloud platform that lets connected devices - cars, light bulbs, sensor grids, and more - easily and securely interact with cloud applications and other devices.

Get started

- NOTE: This page may not appear if you have already visited the AWS IoT page



Connect and manage your devices

Connect devices to the cloud using the protocol that best fits your requirements - HTTP, MQTT, or WebSocket. Devices can communicate with each other even if they are using different protocols.

Learn more



Process and act upon device data

Filter, transform, and act upon data from devices on the fly, based on business rules. AWS IoT can be easily integrated with AWS services like Amazon DynamoDB, Amazon Kinesis, Amazon Machine Learning, and AWS Lambda.

Learn more



Read and set device state at any time

AWS IoT stores the latest state of a device so that it can be read or set anytime, even when the device is offline.

Learn more

AWS Device Creation

File Edit View History Bookmarks Tools Help

AWS IoT x +



https://ap-south-1.console.aws.amazon.com/iot/home?region=ap-south-1#/home

Search



Services

Resource Groups



Syed Adil

Mumbai

Support



AWS IoT

AWS IoT is a managed cloud platform that lets connected devices - cars, light bulbs, sensor grids, and more - easily and securely interact with cloud applications and other devices.

Get started

- NOTE: This page may not appear if you have already visited the AWS IoT page



Connect and manage your devices

Connect devices to the cloud using the protocol that best fits your requirements - HTTP, MQTT, or WebSocket. Devices can communicate with each other even if they are using different protocols.

Learn more



Process and act upon device data

Filter, transform, and act upon data from devices on the fly, based on business rules. AWS IoT can be easily integrated with AWS services like Amazon DynamoDB, Amazon Kinesis, Amazon Machine Learning, and AWS Lambda.

Learn more



Read and set device state at any time

AWS IoT stores the latest state of a device so that it can be read or set anytime, even when the device is offline.

Learn more

AWS Device Creation

File Edit View History Bookmarks Tools Help

AWS IoT x +



https://ap-south-1.console.aws.amazon.com/iot/home?region=ap-south-1#/learnHub

Search



Services

Resource Groups



Syed Adil

Mumbai

Support



Monitor

Onboard

Manage

Secure

Act

Test

Software

Settings

Learn

Welcome to the AWS IoT Console

To get started, you can jump into the recommended starting points below, or explore other learning resources as needed.



See how AWS IoT works

Explore an interactive tutorial through the components of AWS IoT.

Start the tutorial

It takes 5 minutes



Connect to AWS IoT

Connect a device, a mobile or web app to AWS IoT in a few easy steps!

View connection options



Explore documentation

The AWS IoT documentation is a great resource for more details.

Go to documentation

• NOTE: The first time visit may these default pages, as you keep on working different section, the page look will vary

AWS Device Creation

File Edit View History Bookmarks Tools Help

AWS IoT x +



https://ap-south-1.console.aws.amazon.com/iot/home?region=ap-south-1#/learnHub

Search



Services

Resource Groups



Syed Adil

Mumbai

Support



Monitor

Onboard

Manage

Secure

Act

Test

Software

Settings

Learn

Welcome to the AWS IoT Console

To get started, you can jump into the recommended starting points below, or explore other learning resources as needed.

- Since we are here to create the device we need to get into the manage page



See how AWS IoT works

Explore an interactive tutorial through the components of AWS IoT.

Start the tutorial

It takes 5 minutes



Connect to AWS IoT

Connect a device, a mobile or web app to AWS IoT in a few easy steps!

View connection options



Explore documentation

The AWS IoT documentation is a great resource for more details.

Go to documentation

AWS Device Creation

File Edit View History Bookmarks Tools Help

AWS IoT x +



https://ap-south-1.console.aws.amazon.com/iot/home?region=ap-south-1#/thinghub

Search



Services Resource Groups

Syed Adil Mumbai Support



Monitor
Onboard
Manage Things
Types
Thing Groups
Billing Groups
Jobs
Secure
Act
Test
Software
Settings
Learn

- You will land into Thing page by default
- A device is generally referred as a "Thing"



You don't have any things yet

A thing is the representation of a device in the cloud.

Learn more

Register a thing

AWS Device Creation

File Edit View History Bookmarks Tools Help

AWS IoT x +



https://ap-south-1.console.aws.amazon.com/iot/home?region=ap-south-1#/thinghub

Search



Services

Resource Groups



Syed Adil

Mumbai

Support



Monitor

Onboard

Manage

Things

Types

Thing Groups

Billing Groups

Jobs

Secure

Act

Test

Software

Settings

Learn



You don't have any things yet

A thing is the representation of a device in the cloud.

[Learn more](#)

[Register a thing](#)

- Click here to register a thing

AWS Device Creation

File Edit View History Bookmarks Tools Help

AWS IoT x +



https://ap-south-1.console.aws.amazon.com/iot/home?region=ap-south-1#/create/provisioning

Search



Services

Resource Groups



Syed Adil

Mumbai

Support

- Here we have options to create thing
 - Single
 - If you want to control only one thing
 - Multiple
 - You may use if you have a huge network of things
 - Need to upload a JSON data with the required information
- The scope of this document is to just get started with AWS platform, so let's try to keep it as simple as possible to start with
- Let's create a single thing

Creating AWS IoT things

An AWS IoT thing is a representation and record of your physical device in the cloud. Any physical device needs a thing record in order to work with AWS IoT. [Learn more.](#)

Register a single AWS IoT thing

Register a thing in your registry

Create a single thing

Register many AWS IoT things

Register many things in your registry for a large number of devices already using AWS IoT, or register new devices so they are ready to connect to AWS IoT.

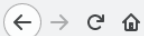
Create many things

Create a single thing

AWS Device Creation

File Edit View History Bookmarks Tools Help

AWS IoT x +



https://ap-south-1.console.aws.amazon.com/iot/home?region=ap-south-1#/create/provisioning



Search



Services

Resource Groups



Syed Adil

Mumbai

Support

Creating AWS IoT things

An IoT thing is a representation and record of your physical device in the cloud. Any physical device needs a thing record in order to work with AWS IoT. [Learn more.](#)

Register a single AWS IoT thing

Create a thing in your registry

Create a single thing

Bulk register many AWS IoT things

Create things in your registry for a large number of devices already using AWS IoT, or register devices so they are ready to connect to AWS IoT.

Create many things

Cancel

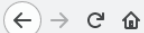
Create a single thing

- Click here to register a single thing

AWS Device Creation

File Edit View History Bookmarks Tools Help

AWS IoT x +



https://ap-south-1.console.aws.amazon.com/iot/home?region=ap-south-1#/create/single-provision

Search



Services

Resource Groups



Syed Adil

Mumbai

Support

CREATE A THING

Add your device to the thing registry

STEP
1/3

This step creates an entry in the thing registry and a thing shadow for your device.

Name

Give your thing a name

Apply a type to this thing

Using a thing type simplifies device management by providing consistent registry data for things that share a type. Types provide things with a common set of attributes, which describe the identity and capabilities of your device, and a description.

Thing Type

No type selected

Create a type

Add this thing to a group

Adding your thing to a group allows you to manage devices remotely using Jobs.

Thing Group

Groups /

Create group

Set searchable thing attributes (optional)

Enter a value for one or more of these attributes so that you can search for your things in the registry.

Attribute key

Provide an attribute key, e.g. Manufacturer

Value

Provide an attribute value, e.g. Acme Corporation

- This page contains multiple field related to thing's identity like, its name, the type and group under which it falls etc
- We will fill only the major required field to keep it simple to start with

AWS Device Creation

File Edit View History Bookmarks Tools Help

AWS IoT x +



https://ap-south-1.console.aws.amazon.com/iot/home?region=ap-south-1#/create/single-provision

Search



Services Resource Groups

Syed Adil Mumbai Support

CREATE A THING

Add your device to the thing registry

STEP 1/3

This step creates an entry in the thing registry and a thing shadow for your device.

Name

Give your thing a name

Please fill out this field.

Apply a type to this thing

Using a thing type simplifies device management by providing consistent registry data for things that share a type. Types provide things with a common set of attributes, which describe the identity and capabilities of your device, and a description.

Thing Type

No type selected

Create a type

Add this thing to a group

Adding your thing to a group allows you to manage devices remotely using Jobs.

Thing Group

Groups /

Create group Change group

Set searchable thing attributes (optional)

Enter a value for one or more of these attributes so that you can search for your things in the registry.

Attribute key

Provide an attribute key, e.g., Manufacturer

Value

Provide an attribute value, e.g., Acme Corporation

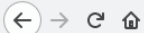
Clear

- Enter the desired thing name here
- Let the name be meaningful so that it becomes easy to identify

AWS Device Creation

File Edit View History Bookmarks Tools Help

AWS IoT x +



https://ap-south-1.console.aws.amazon.com/iot/home?region=ap-south-1#/create/single-provision

Search



Services

Resource Groups



Syed Adil

Mumbai

Support

CREATE A THING

Add your device to the thing registry

STEP
1/3

This step creates an entry in the thing registry and a thing shadow for your device.

Name

MyFirstDevice

Apply a type to this thing

Using a thing type simplifies device management by providing consistent registry data for things that share a type. Types provide things with a common set of attributes, which describe the identity and capabilities of your device, and a description.

Thing Type

No type selected

Create a type

Add this thing to a group

Adding your thing to a group allows you to manage devices remotely using Jobs.

Thing Group

Groups /

Create group

Set searchable thing attributes (optional)

Enter a value for one or more of these attributes so that you can search for your things in the registry.

Attribute key

Provide an attribute key, e.g. Manufacturer

Value

Provide an attribute value, e.g. Acme Corporation

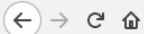
Clear

- Enter the desired thing name here
- Let the name be meaningful so that it becomes easy to identify

AWS Device Creation

File Edit View History Bookmarks Tools Help

AWS IoT x +



https://ap-south-1.console.aws.amazon.com/iot/home?region=ap-south-1#/create/single-provision

Search



Services

Resource Groups



Syed Adil

Mumbai

Support

Apply a type to this thing

Using a thing type simplifies device management by providing consistent registry data for things that share a type. Types provide things with a common set of attributes, which describe the identity and capabilities of your device, and a description.

Thing Type

No type selected

Create a type

Add this thing to a group

Adding your thing to a group allows you to manage devices remotely using Jobs.

Thing Group

Groups /

Create group Change

Set searchable thing attributes (optional)

Enter a value for one or more of these attributes so that you can search for your things in the registry.

Attribute key

Provide an attribute key, e.g. Manufacturer

Value

Provide an attribute value, e.g. Acme-Corporation

Clear

Add another

Show thing shadow

Cancel

Back

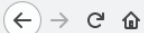
Next

- As mentioned lets keep everything default and lets go and press next

AWS Device Creation

File Edit View History Bookmarks Tools Help

AWS IoT x +



https://ap-south-1.console.aws.amazon.com/iot/home?region=ap-south-1#/create/single-provision



Search



Services

Resource Groups



Syed Adil

Mumbai

Support

Apply a type to this thing

Using a thing type simplifies device management by providing consistent registry data for things that share a type. Types provide things with a common set of attributes, which describe the identity and capabilities of your device, and a description.

Thing Type

No type selected

Create a type

Add this thing to a group

Adding your thing to a group allows you to manage devices remotely using Jobs.

Thing Group

Groups /

Create group Change

Set searchable thing attributes (optional)

Enter a value for one or more of these attributes so that you can search for your things in the registry.

Attribute key

Provide an attribute key, e.g. Manufacturer

Value

Provide an attribute value, e.g. Acme-Corporation

Clear

Add another

Show thing shadow

Cancel

Back

Next

- Press next to proceed to next screen

AWS Device Creation

File Edit View History Bookmarks Tools Help

AWS IoT x +



https://ap-south-1.console.aws.amazon.com/iot/home?region=ap-south-1#/create/single-provision

Search



Services

Resource Groups



Syed Adil

Mumbai

Support



CREATE A THING

Add a certificate for your thing

STEP
2/3

A certificate is used to authenticate your device's connection to AWS IoT.

One-click certificate creation (recommended)

This will generate a certificate, public key, and private key using AWS IoT's certificate authority.

Create certificate

Create with CSR

Upload your own certificate signing request (CSR) based on a private key you own.

Create with CSR

Use my certificate

Register your CA certificate and use your own certificates for one or many devices.

Get started

Skip certificate and create thing

You will need to add a certificate to your thing later before your device can connect to AWS IoT.

Create thing without certificate

- The page helps to create certificates for the which is being created
- Its an important aspect of securing your device while they are communicating with the cloud
- Eventually if your device want to communicate to the AWS IoT a certificate is required
- It act as an identity document

AWS Device Creation

File Edit View History Bookmarks Tools Help

AWS IoT x +



https://ap-south-1.console.aws.amazon.com/iot/home?region=ap-south-1#/create/single-provision

Search



Services

Resource Groups



Syed Adil

Mumbai

Support



CREATE A THING

Add a certificate for your thing

STEP
2/3

A certificate is used to authenticate your device's connection to AWS IoT.

One-click certificate creation (recommended)

This will generate a certificate, public key, and private key using AWS IoT's certificate authority.

Create certificate

Create with CSR

Upload your own certificate signing request (CSR) based on a private key you own.

Create with CSR

Use my certificate

Register your CA certificate and use your own certificates for one or many devices.

Get started

Skip certificate and create thing

You will need to add a certificate to your thing later before your device can connect to AWS IoT.

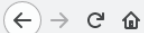
Create thing without certificate

- Click here to create the certificates

AWS Device Creation

File Edit View History Bookmarks Tools Help

AWS IoT x +



https://ap-south-1.console.aws.amazon.com/iot/home?region=ap-south-1#/create/single-provision

Search



Services

Resource Groups



Syed Adil

Mumbai

Support

Certificate created!

Download these files and save them in a safe place. Certificates can be retrieved at any time, but the private and public keys cannot be retrieved after you close this page.

In order to connect a device, you need to download the following:

A certificate for this thing	7c72dc344a.cert.pem	Download
A public key	7c72dc344a.public.key	Download
A private key	7c72dc344a.private.key	Download

You also need to download a root CA for AWS IoT:

A root CA for AWS IoT [Download](#)

Activate

Cancel

Done

Attach a p

- 4 types of certificates are created
- Download all in some safe place
- Don't lose any of these certificates (except public key), you will not be able to retrieve it again

AWS Device Creation

File Edit View History Bookmarks Tools Help

AWS IoT x +



https://ap-south-1.console.aws.amazon.com/iot/home?region=ap-south-1#/create/single-provision



Search



Services

Resource Groups



Syed Adil

Mumbai

Support

Certificate created!

Download these files and save them in a safe place. Certificates can be retrieved at any time, but the private and public keys cannot be retrieved after you close this page.

In order to connect a device, you need to download the following:

A certificate for this thing	7c72dc344a.cert.pem	Download
A public key	7c72dc344a.public.key	Download
A private key	7c72dc344a.private.key	Download

You also need to download a root CA for AWS IoT:

A root CA for AWS IoT [Download](#)

Activate

Cancel

Done

Attach a policy

AWS Device Creation

File Edit View History Bookmarks Tools Help

AWS IoT x +



https://ap-south-1.console.aws.amazon.com/iot/home?region=ap-south-1#/create/single-provision

Search



Services

Resource Groups



Syed Adil

Mumbai

Support

Certificate created!

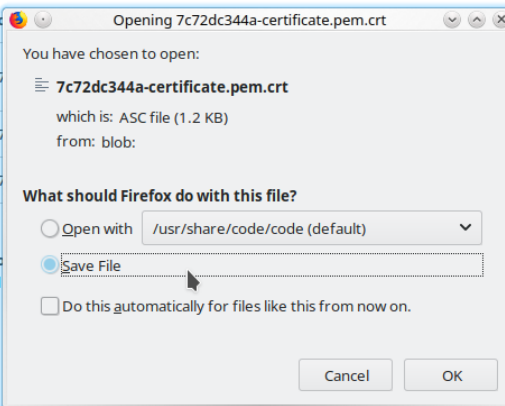
Download these files and save them in a safe place. Certificates can be retrieved at any time, but the private and public keys cannot be retrieved after you close this page.

In order to connect a device, you need:

A certificate for this thing	7c72dc344a-certificate.pem.crt
A public key	7c72dc344a-certificate.pem.pub
A private key	7c72dc344a-certificate.pem.key

You also need to download a root CA for AWS IoT. Download the root CA for AWS IoT.

Activate



Cancel

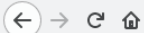
Done

Attach a policy

AWS Device Creation

File Edit View History Bookmarks Tools Help

AWS IoT x +



https://ap-south-1.console.aws.amazon.com/iot/home?region=ap-south-1#/create/single-provision

Search



Services

Resource Groups



Syed Adil

Mumbai

Support

Certificate created!

Download these files and save them in a safe place. Certificates can be retrieved at any time, but the private and public keys cannot be retrieved after you close this page.

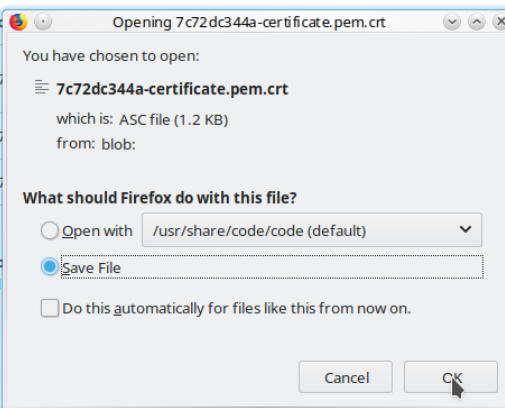
In order to connect a device, you need:

A certificate for this thing	7c72dc344a-certificate.pem.crt
A public key	7c72dc344a-certificate.pem.pub
A private key	7c72dc344a-certificate.pem.key

You also need to download a root CA for AWS IoT

[Download](#)

Activate



Cancel

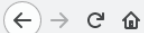
Done

Attach a policy

AWS Device Creation

File Edit View History Bookmarks Tools Help

AWS IoT x +



https://ap-south-1.console.aws.amazon.com/iot/home?region=ap-south-1#/create/single-provision

Search



Services

Resource Groups



Syed Adil

Mumbai

Support

Certificate created!

Download these files and save them in a safe place. Certificates can be retrieved at any time, but the private and public keys cannot be retrieved after you close this page.

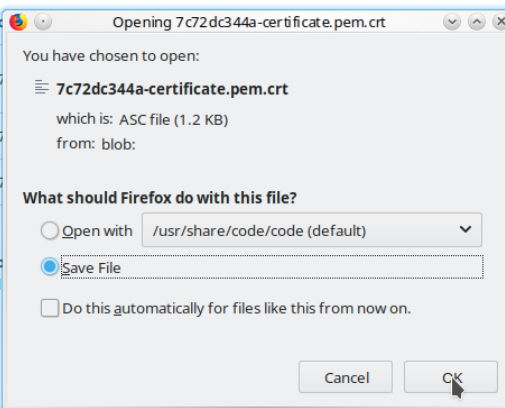
In order to connect a device, you need:

A certificate for this thing	7c72dc344a-certificate.pem.crt
A public key	7c72dc344a-certificate.pem.pub
A private key	7c72dc344a-certificate.pem.key

You also need to download a root CA for AWS IoT

[Download](#)

Activate

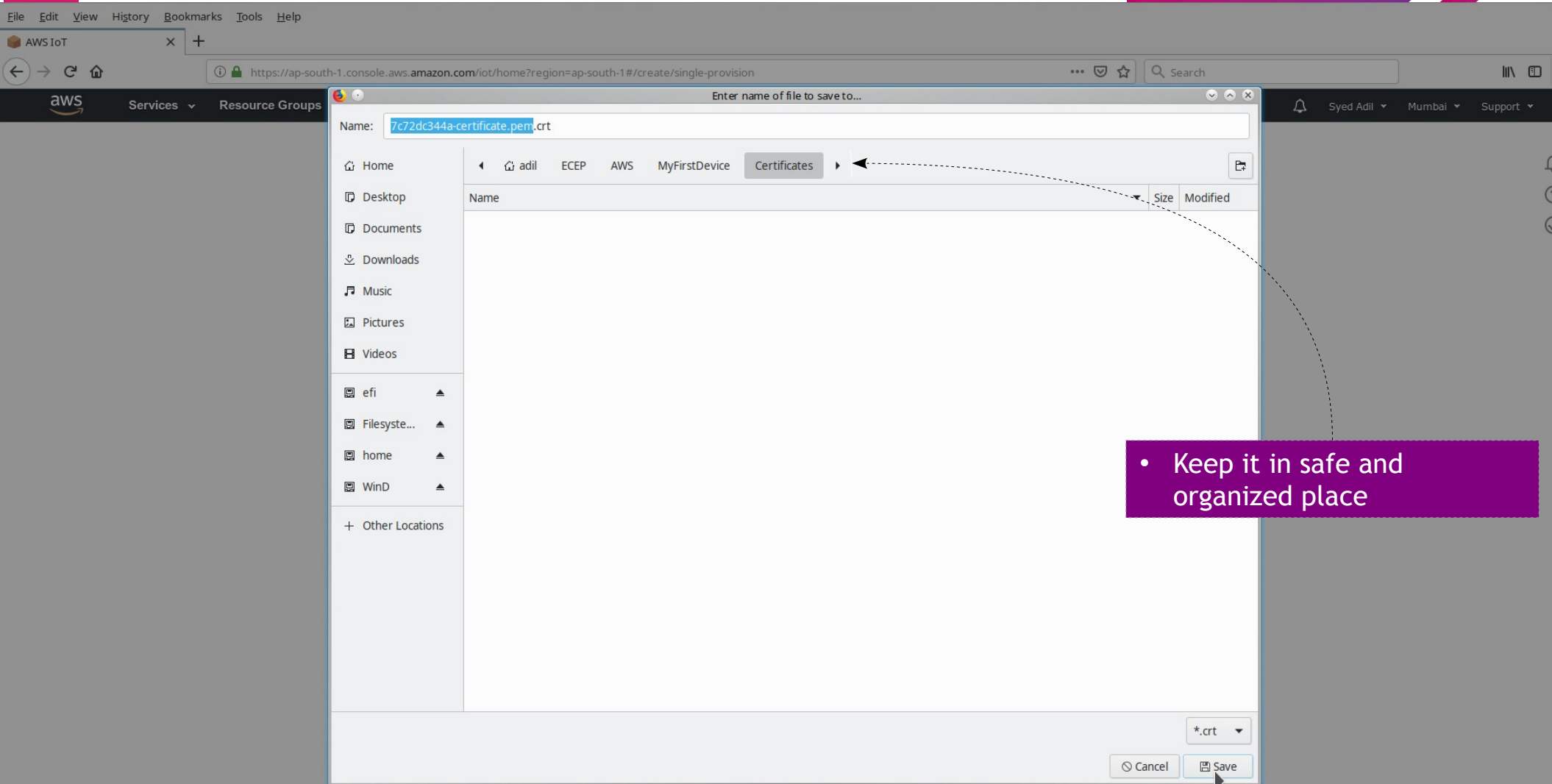


Cancel

Done

Attach a policy

AWS Device Creation



The screenshot shows the AWS IoT console interface. A file save dialog is open, titled "Enter name of file to save to...". The "Name" field contains "7c72dc344a-certificate.pem.crt". The dialog shows a file explorer view with a sidebar on the left listing locations like Home, Desktop, Documents, Downloads, Music, Pictures, Videos, efi, Filesystem, home, WinD, and Other Locations. The main area shows a table with columns "Name", "Size", and "Modified". A dashed arrow points from a text box to the "Certificates" tab in the breadcrumb navigation. At the bottom right, there are "Cancel" and "Save" buttons, with a file type dropdown set to "*.cert".

File Name: 7c72dc344a-certificate.pem.crt

Location: Home > Desktop > Documents > Downloads > Music > Pictures > Videos > efi > Filesystem > home > WinD > Other Locations

File Type: *.cert

Buttons: Cancel, Save

- Keep it in safe and organized place

AWS Device Creation

File Edit View History Bookmarks Tools Help

AWS IoT x +



https://ap-south-1.console.aws.amazon.com/iot/home?region=ap-south-1#/create/single-provision

Search



Services

Resource Groups



Syed Adil

Mumbai

Support

Certificate created!

Download these files and save them in a safe place. Certificates can be retrieved at any time, but the private and public keys cannot be retrieved after you close this page.

In order to connect a device, you need to download the following:

A certificate for this thing	7c72dc344a.cert.pem	Download
A public key	7c72dc344a.public.key	Download
A private key	7c72dc344a.private.key	Download

You also need to download a root CA for AWS IoT:

A root CA for AWS IoT [Download](#)

Activate

Cancel

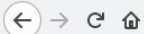
Done

Attach a policy

AWS Device Creation

File Edit View History Bookmarks Tools Help

AWS IoT x +



https://ap-south-1.console.aws.amazon.com/iot/home?region=ap-south-1#/create/single-provision

Search



Services

Resource Groups



Syed Adil

Mumbai

Support

Certificate created!

Download these files and save them in a safe place. Certificates can be retrieved at any time, but the private and public keys cannot be retrieved after you close this page.

In order to connect a device, you need to download the following:

A certificate for this thing	7c72dc344a.cert.pem	Download
A public key	7c72dc344a.public.key	Download
A private key	7c72dc344a.private.key	Download

You also need to download a root CA for AWS IoT:

A root CA for AWS IoT [Download](#)

Activate

Cancel

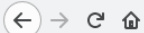
Done

Attach a policy

AWS Device Creation

File Edit View History Bookmarks Tools Help

AWS IoT x +



https://ap-south-1.console.aws.amazon.com/iot/home?region=ap-south-1#/create/single-provision

Search



Services

Resource Groups



Syed Adil

Mumbai

Support

Certificate created!

Download these files and save them in a safe place. Certificates can be retrieved at any time, but the private and public keys cannot be retrieved after you close this page.

In order to connect a device, you need to download the following:

A certificate for this thing	7c72dc344a.cert.pem	Download
A public key	7c72dc344a.public.key	Download
A private key	7c72dc344a.private.key	Download

You also need to download a root CA for AWS IoT:

A root CA for AWS IoT [Download](#)

Activate

Cancel

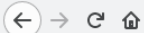
Done

Attach a policy

AWS Device Creation

File Edit View History Bookmarks Tools Help

AWS IoT x +



https://ap-south-1.console.aws.amazon.com/iot/home?region=ap-south-1#/create/single-provision

Search



Services

Resource Groups



Syed Adil

Mumbai

Support

Certificate created!

Download these files and save them in a safe place. Certificates can be retrieved at any time, but the private and public keys cannot be retrieved after you close this page.

In order to connect a device, you need to download the following files:

A certificate for this thing	7c72dc344a-public.pem.cert
A public key	7c72dc344a-public.pem.key
A private key	7c72dc344a-private.pem.key

You also need to download a root CA for AWS IoT.

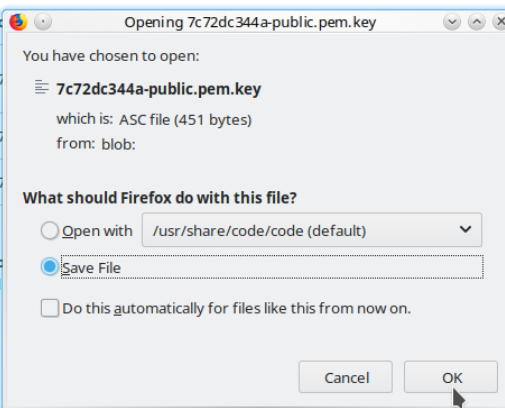
[Download](#)

Activate

Cancel

Done

Attach a policy



AWS Device Creation

File Edit View History Bookmarks Tools Help

AWS IoT x +



https://ap-south-1.console.aws.amazon.com/iot/home?region=ap-south-1#/create/single-provision

Search



Services

Resource Groups



Syed Adil

Mumbai

Support

Certificate created!

Download these files and save them in a safe place. Certificates can be retrieved at any time, but the private and public keys cannot be retrieved after you close this page.

In order to connect a device, you need to download the following:

A certificate for this thing	7c72dc344a.cert.pem	Download
A public key	7c72dc344a.public.key	Download
A private key	7c72dc344a.private.key	Download

You also need to download a root CA for AWS IoT:

A root CA for AWS IoT [Download](#)

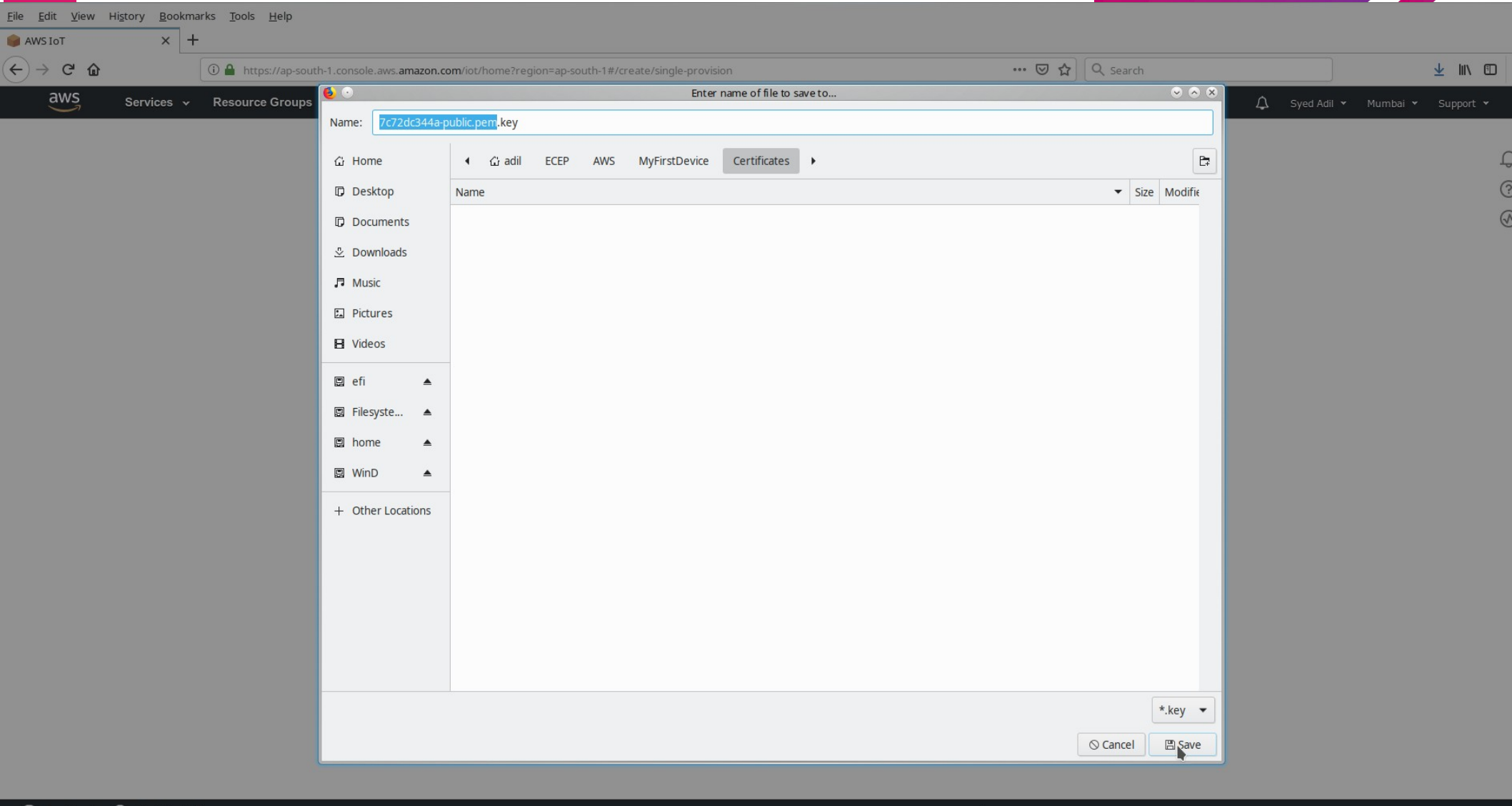
Activate

Cancel

Done

Attach a policy

AWS Device Creation



AWS Device Creation

File Edit View History Bookmarks Tools Help

AWS IoT x +



https://ap-south-1.console.aws.amazon.com/iot/home?region=ap-south-1#/create/single-provision

Search



Services

Resource Groups



Syed Adil

Mumbai

Support

Certificate created!

Download these files and save them in a safe place. Certificates can be retrieved at any time, but the private and public keys cannot be retrieved after you close this page.

In order to connect a device, you need to download the following:

A certificate for this thing	7c72dc344a.cert.pem	Download
A public key	7c72dc344a.public.key	Download
A private key	7c72dc344a.private.key	Download

You also need to download a root CA for AWS IoT:

A root CA for AWS IoT [Download](#)

Activate

Cancel

Done

Attach a policy

AWS Device Creation

File Edit View History Bookmarks Tools Help

AWS IoT x +



https://ap-south-1.console.aws.amazon.com/iot/home?region=ap-south-1#/create/single-provision

Search



Services

Resource Groups



Syed Adil

Mumbai

Support

Certificate created!

Download these files and save them in a safe place. Certificates can be retrieved at any time, but the private and public keys cannot be retrieved after you close this page.

In order to connect a device, you need to download the following:

A certificate for this thing	7c72dc344a.cert.pem	Download
A public key	7c72dc344a.public.key	Download
A private key	7c72dc344a.private.key	Download

You also need to download a root CA for AWS IoT:

A root CA for AWS IoT [Download](#)

Activate

Cancel

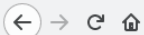
Done

Attach a policy

AWS Device Creation

File Edit View History Bookmarks Tools Help

AWS IoT x +



https://ap-south-1.console.aws.amazon.com/iot/home?region=ap-south-1#/create/single-provision

Search



Services

Resource Groups



Syed Adil

Mumbai

Support

Certificate created!

Download these files and save them in a safe place. Certificates can be retrieved at any time, but the private and public keys cannot be retrieved after you close this page.

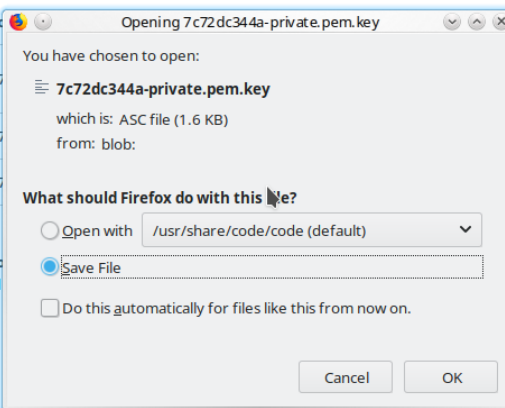
In order to connect a device, you need:

A certificate for this thing	7c72dc344a-private.pem.key
A public key	7c72dc344a-public.pem
A private key	7c72dc344a-private.pem.key

You also need to download a root CA for AWS IoT

A root CA for AWS IoT

Activate



Cancel

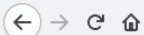
Done

Attach a policy

AWS Device Creation

File Edit View History Bookmarks Tools Help

AWS IoT x +



https://ap-south-1.console.aws.amazon.com/iot/home?region=ap-south-1#/create/single-provision

Search



Services

Resource Groups



Syed Adil

Mumbai

Support

Certificate created!

Download these files and save them in a safe place. Certificates can be retrieved at any time, but the private and public keys cannot be retrieved after you close this page.

In order to connect a device, you need:

A certificate for this thing	7c72dc344a-private.pem.key
A public key	7c72dc344a-public.pem.key
A private key	7c72dc344a-private.pem.key

You also need to download a root CA for AWS IoT

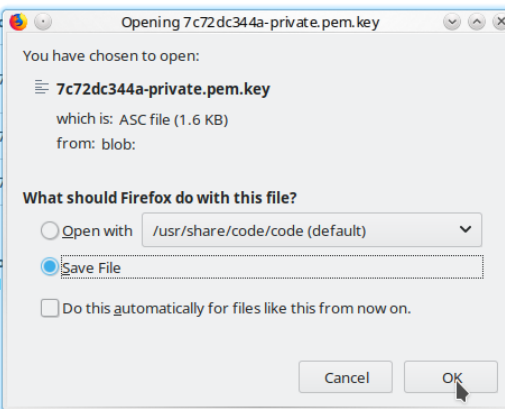
A root CA for AWS IoT

Activate

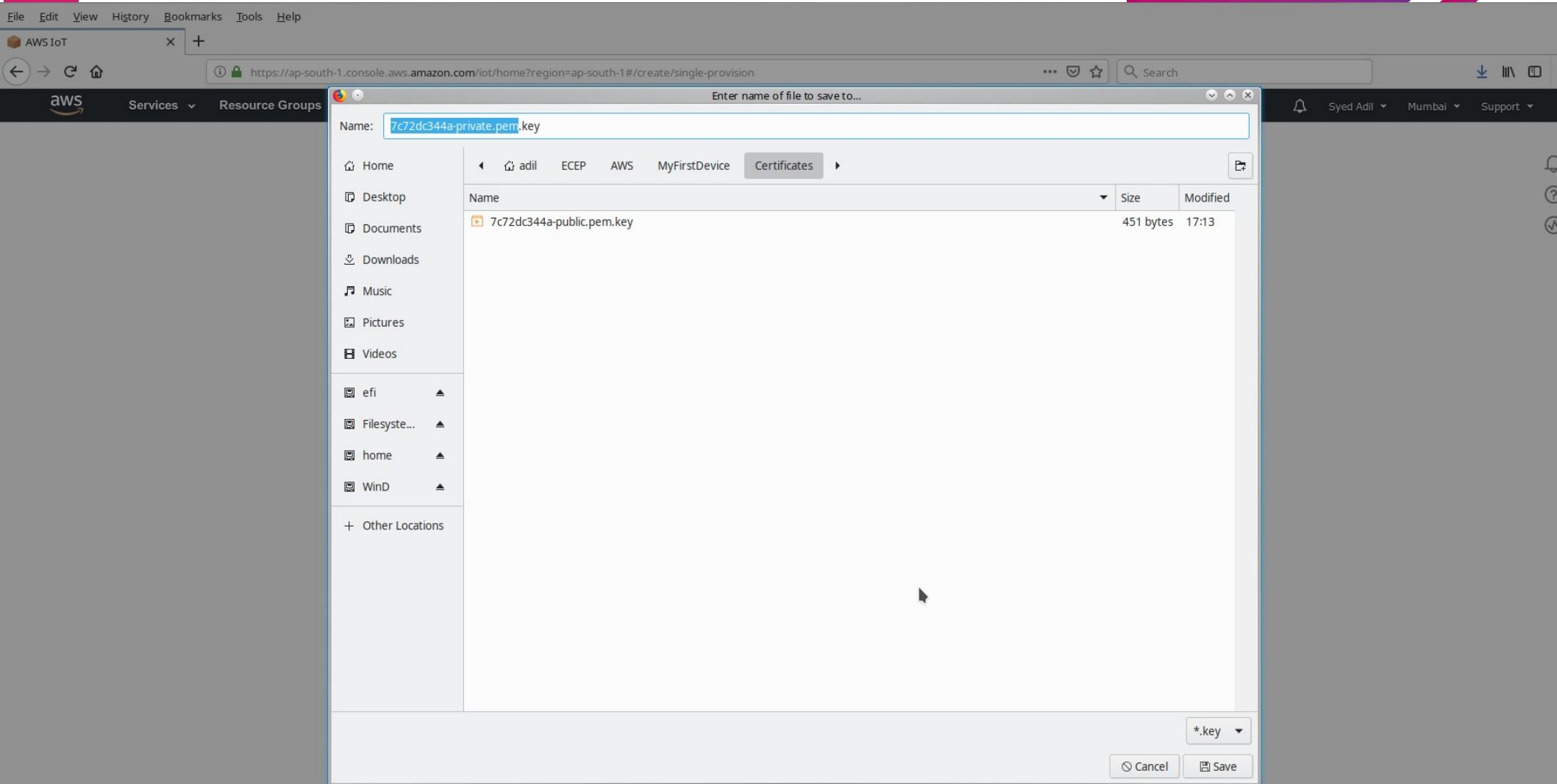
Cancel

Done

Attach a policy



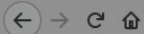
AWS Device Creation



AWS Device Creation

File Edit View History Bookmarks Tools Help

AWS IoT x +



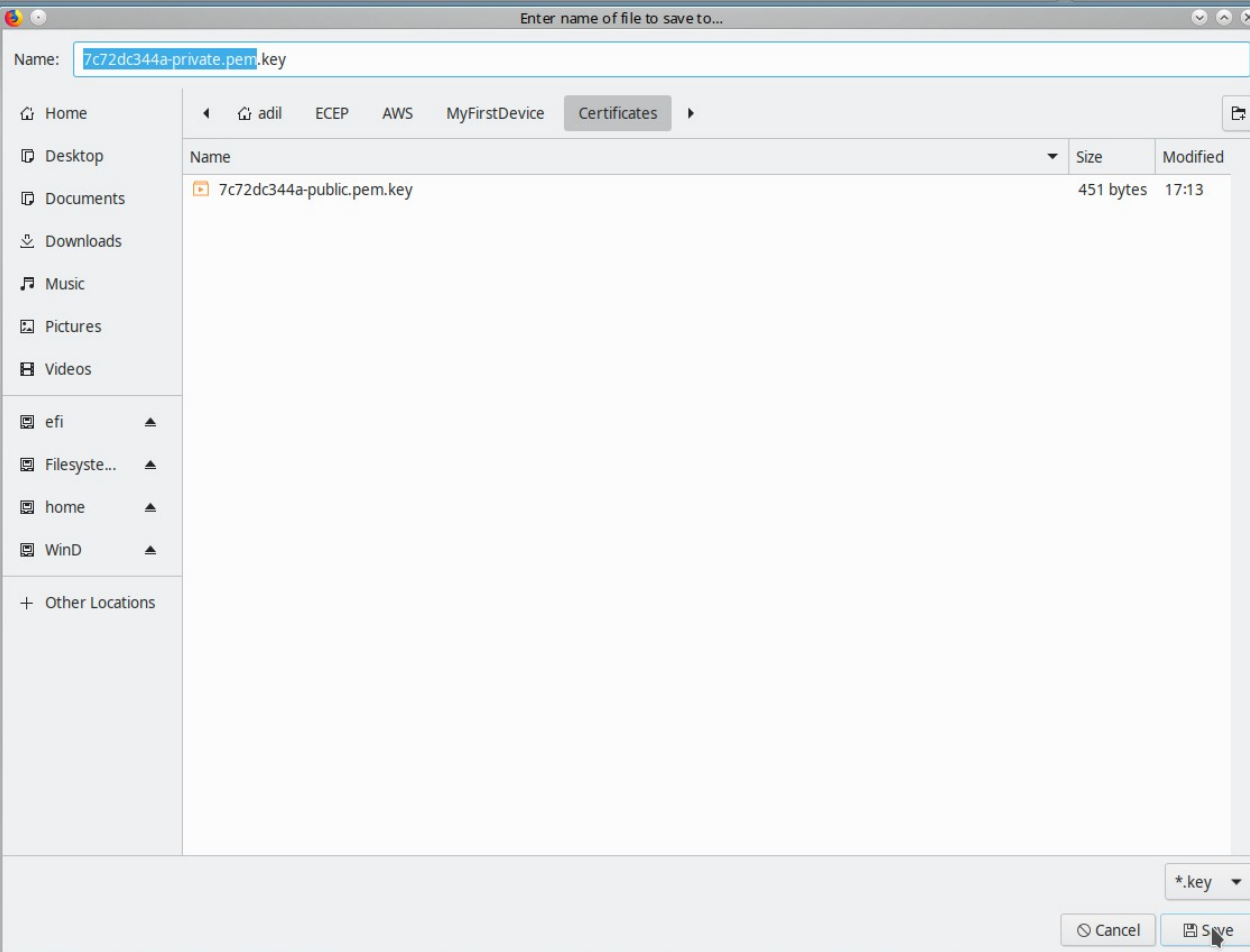
https://ap-south-1.console.aws.amazon.com/iot/home?region=ap-south-1#/create/single-provision

Search



Services Resource Groups

Syed Adil Mumbai Support



AWS Device Creation

File Edit View History Bookmarks Tools Help

AWS IoT x +



https://ap-south-1.console.aws.amazon.com/iot/home?region=ap-south-1#/create/single-provision

Search



Services

Resource Groups



Syed Adil

Mumbai

Support

Certificate created!

Download these files and save them in a safe place. Certificates can be retrieved at any time, but the private and public keys cannot be retrieved after you close this page.

In order to connect a device, you need to download the following:

A certificate for this thing	7c72dc344a.cert.pem	Download
A public key	7c72dc344a.public.key	Download
A private key	7c72dc344a.private.key	Download

You also need to download a root CA for AWS IoT:

A root CA for AWS IoT [Download](#)

Activate

Cancel

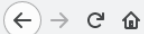
Done

Attach a policy

AWS Device Creation

File Edit View History Bookmarks Tools Help

AWS IoT x +



https://ap-south-1.console.aws.amazon.com/iot/home?region=ap-south-1#/create/single-provision

Search



Services

Resource Groups



Syed Adil

Mumbai

Support

Certificate created!

Download these files and save them in a safe place. Certificates can be retrieved at any time, but the private and public keys cannot be retrieved after you close this page.

In order to connect a device, you need to download the following:

A certificate for this thing	7c72dc344a.cert.pem	Download
A public key	7c72dc344a.public.key	Download
A private key	7c72dc344a.private.key	Download

You also need to download a root CA for AWS IoT:

A root CA for AWS IoT [Download](#)

[Activate](#)

[Cancel](#)

[Done](#)

[Attach a policy](#)

- This one is bit different as it doesn't get downloaded as file
- Instead a link will be opened to allow you choose the authentication model

AWS Device Creation

File

Edit

View

History

Bookmarks

Tools

Help

AWS IoT

X.509 Certificates and AWS IoT

←

→

↺

🏠

🔒

🌐

🔍

https://docs.aws.amazon.com/iot/latest/developerguide/managing-device-certs.html#server-authentication

⋮

🔒


🌟

🔍 Search

⬇️

📄

📱



🇬🇧 English

Sign In to the Console

AWS IoT

Developer Guide

🔍

Documentation - This Guide

Search

What Is AWS IoT?

Getting Started with AWS IoT

AWS IoT Rules Tutorials

AWS IoT SDK Tutorials

AWS IoT Additional Tutorials

Managing Devices with AWS IoT

Tagging Your AWS IoT Resources

Security and Identity

AWS IoT Authentication

X.509 Certificates

X.509 Certificates and AWS IoT

Create and Register an AWS IoT Device Certificate

Use Your Own Certificate

IAM Users, Groups, and Roles

Amazon Cognito Identities

Custom Authentication

Authorization

Server Authentication

Server certificates allow your devices to verify that they're communicating with AWS IoT and not another server impersonating AWS IoT. Service certificates need to be copied onto your device and referenced when connecting to AWS IoT. For more information, see the [AWS IoT Device SDKs](#). AWS IoT server certificates are signed by one of the following CA certificates:

VeriSign Endpoints (legacy)

- RSA 2048 bit key: [VeriSign Class 3 Public Primary G5 root CA certificate](#)

Amazon Trust Services Endpoints (preferred)

- RSA 2048 bit key: [Amazon Root CA 1](#)
- RSA 4096 bit key: [Amazon Root CA 2](#)
- ECC 256 bit key: [Amazon Root CA 3](#)
- ECC 384 bit key: [Amazon Root CA 4](#)

We recommend that all customers create an Amazon Trust Services (ATS) endpoint and load these CA certificates onto their devices to avoid by browsers of Symantec CAs (including VeriSign) that occurred in October 2018. For backward-compatibility reasons, we still support customers can create an ATS endpoint by calling the `describe-endpoint` API with the `iot:Data-ATS` endpointType. Devices operating on ATS endpoints operating on Symantec endpoints in the same account and do not require any reregistration.

```
aws iot describe-endpoint --endpoint-type iot:Data-ATS
```

Storing all of these certificates on your device can take up valuable memory space. If your devices implement RSA-based validation, you can use [Amazon Root CA 4](#) ECC certificates. If your devices implement ECC-based certificate validation, you can omit the [Amazon Root CA 1](#) and [Amazon Root CA 2](#) certificates.

All new AWS IoT Core regions, beginning with the May 9, 2018 launch of AWS IoT Core in the Asia Pacific (Mumbai) Region, will serve only ATS endpoints.

Note

CA certificates have an expiration date after which they cannot be used to validate a server's certificate. CA certificates might have to be replaced before their expiration date. Make sure that you can update the root CA certificates on all of your devices to ensure ongoing connectivity and to keep up-to-date with security best practices.

For a complete list of CA certificates used by AWS IoT see, [Amazon Trust Services](#).


On this page:

Client Authentication

Server Authentication

- You may choose any endpoint
- But would be better to choose the preferred one
- You may do a study on which model works better for your product and then decide

Terms of Use | Privacy | © 2019 Amazon Web Services, Inc. or its affiliates. All rights reserved. Have a question? Try the Forums Did this page help you? Yes No Feedback



AWS Device Creation

File Edit View History Bookmarks Tools Help

AWS IoT X.509 Certificates and AWS IoT

https://docs.aws.amazon.com/iot/latest/developerguide/managing-device-certs.html#server-authentication

Search



English

Sign In to the Console

AWS IoT

Developer Guide



Documentation - This Guide

Search

- + What Is AWS IoT?
- + Getting Started with AWS IoT
- + AWS IoT Rules Tutorials
- + AWS IoT SDK Tutorials
- + AWS IoT Additional Tutorials
- + Managing Devices with AWS IoT
- + Tagging Your AWS IoT Resources
- Security and Identity
 - AWS IoT Authentication
 - X.509 Certificates
 - **X.509 Certificates and AWS IoT**
 - Create and Register an AWS IoT Device Certificate
 - Use Your Own Certificate
 - IAM Users, Groups, and Roles
 - Amazon Cognito Identities
 - + Custom Authentication
 - + Authorization

Server Authentication

Server certificates allow your devices to verify that they're communicating with AWS IoT and not another server impersonating AWS IoT. Service certificates need to be copied onto your device and referenced when connecting to AWS IoT. For more information, see the [AWS IoT Device SDKs](#). AWS IoT server certificates are signed by one of the following CA certificates:

VeriSign Endpoints (legacy)

- RSA 2048 bit key: [VeriSign Class 3 Public Primary G5 root CA certificate](#)

Amazon Trust Services Endpoints (preferred)

- RSA 2048 bit key: [Amazon Root CA 1](#)
- RSA 4096 bit key: [Amazon Root CA 2](#)
- ECC 256 bit key: [Amazon Root CA 3](#)
- ECC 384 bit key: [Amazon Root CA 4](#)

We recommend that all customers create an Amazon Trust Services (ATS) endpoint and load these CA certificates onto their devices to avoid any issues with the widespread distrust by browsers of Symantec CAs (including VeriSign) that occurred in October 2018. For backward-compatibility reasons, we still support customers using these endpoints. Customers can create an ATS endpoint by calling the `describe-endpoint` API with the `iot:Data-ATS` endpointType. Devices operating on ATS endpoints are fully interoperable with devices operating on Symantec endpoints in the same account and do not require any reregistration.

```
aws iot describe-endpoint --endpoint-type iot:Data-ATS
```

Storing all of these certificates on your device can take up valuable memory space. If your devices implement RSA-based validation, you can omit the [Amazon Root CA 3](#) and [Amazon Root CA 4](#) ECC certificates. If your devices implement ECC-based certificate validation, you can omit the [Amazon Root CA 1](#) and [Amazon Root CA 2](#) RSA certificates.

All new AWS IoT Core regions, beginning with the May 9, 2018 launch of AWS IoT Core in the Asia Pacific (Mumbai) Region, will serve only ATS certificates.

Note

CA certificates have an expiration date after which they cannot be used to validate a server's certificate. CA certificates might have to be replaced before their expiration date. Make sure that you can update the root CA certificates on all of your devices to ensure ongoing connectivity and to keep up-to-date with security best practices.

For a complete list of CA certificates used by AWS IoT see, [Amazon Trust Services](#).

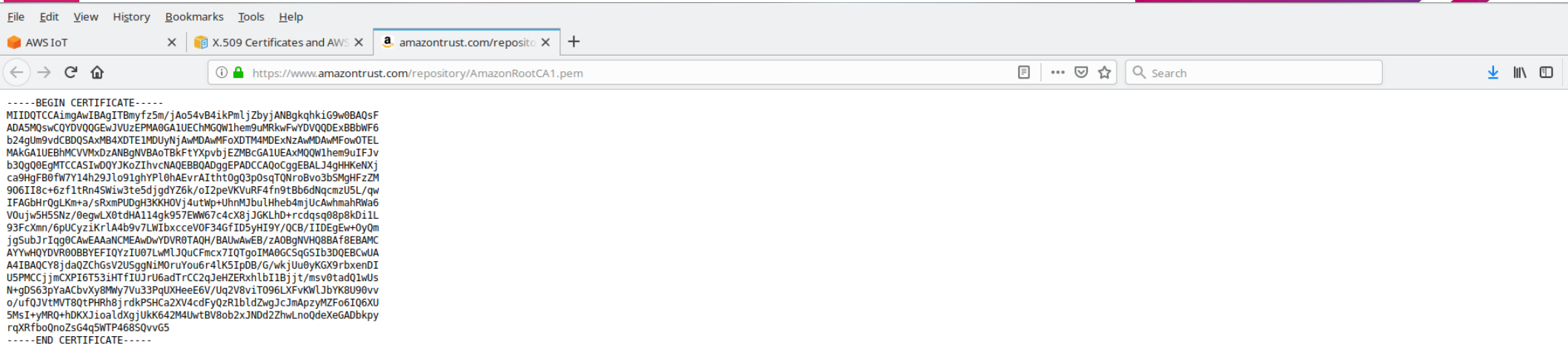
On this page:

[Client Authentication](#)

[Server Authentication](#)



AWS Device Creation

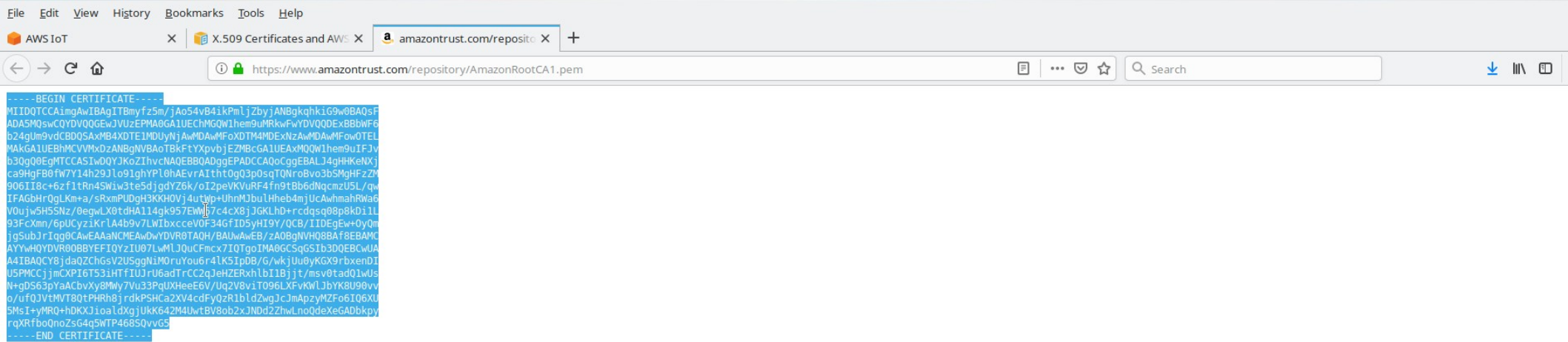


The screenshot shows a web browser window with the address bar displaying `https://www.amazontrust.com/repository/AmazonRootCA1.pem`. The page content is a long string of text representing a certificate, starting with `-----BEGIN CERTIFICATE-----` and ending with `-----END CERTIFICATE-----`. The text is a base64-encoded PEM format certificate for Amazon Root CA 1.

Press **Ctrl a**

- Copy the content of this page in a text file shown in the following slides

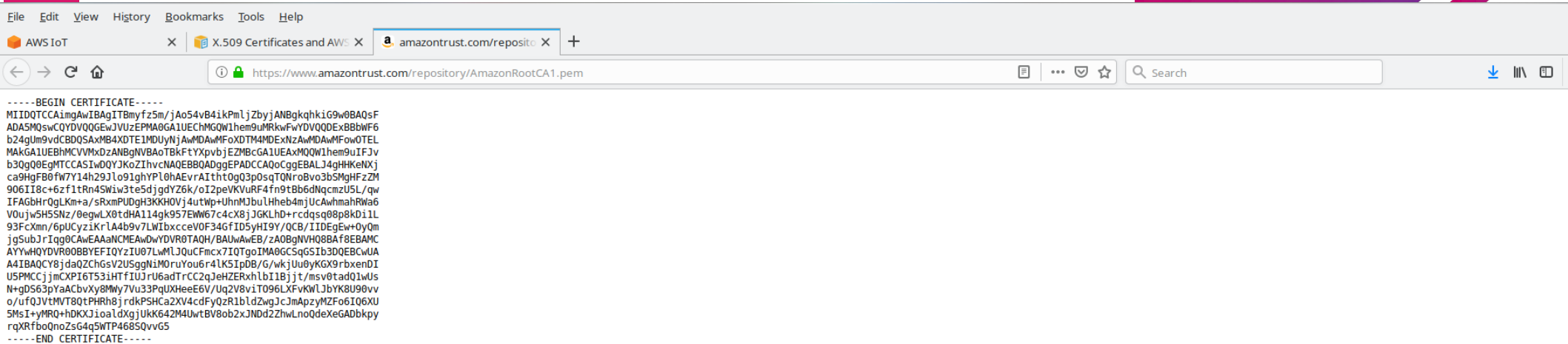
AWS Device Creation



Press **Ctrl c**

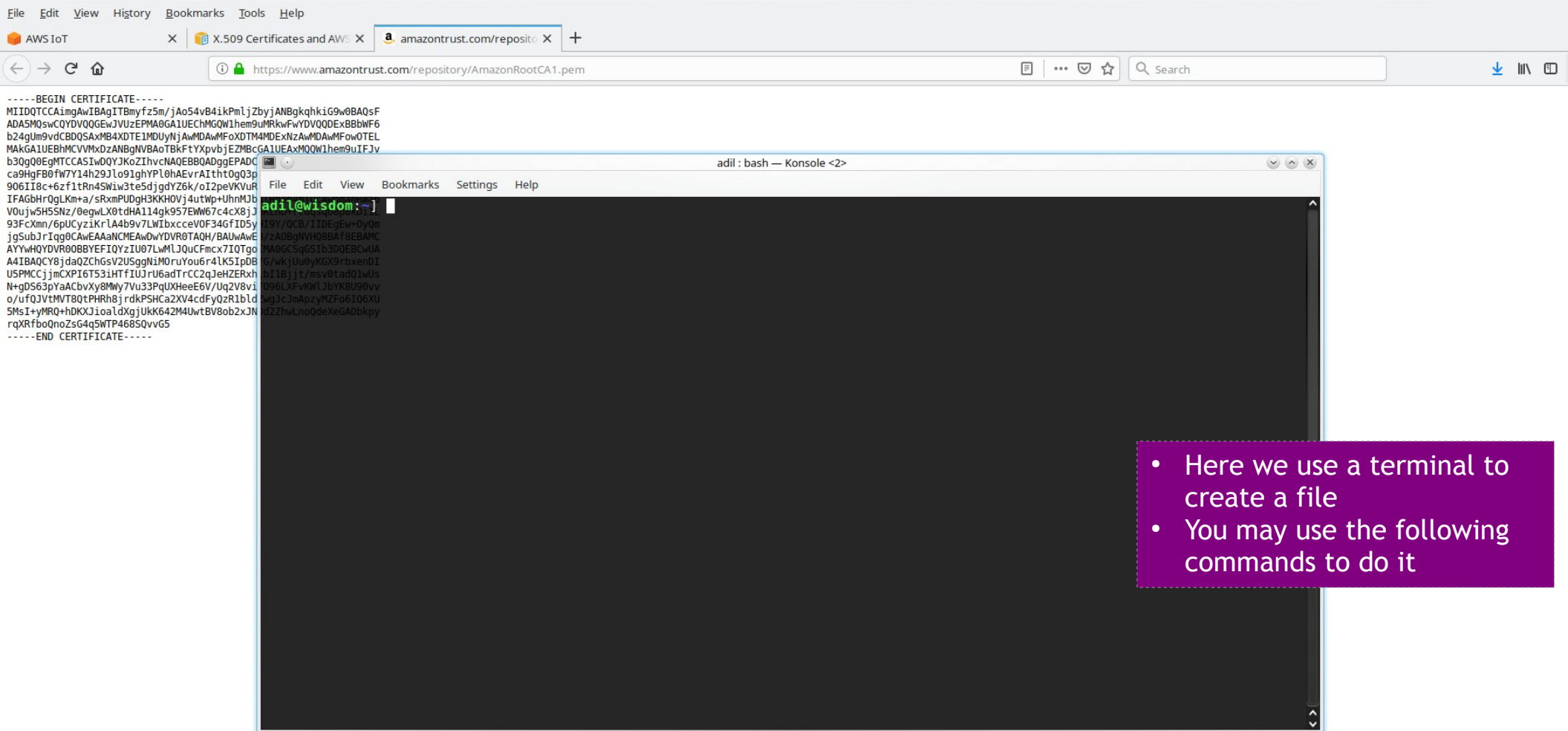
- Select all the contents properly and copy
- You may store in a text file any method you prefer

AWS Device Creation



- Select all the contents properly and copy
- You may store in a text file any method you prefer

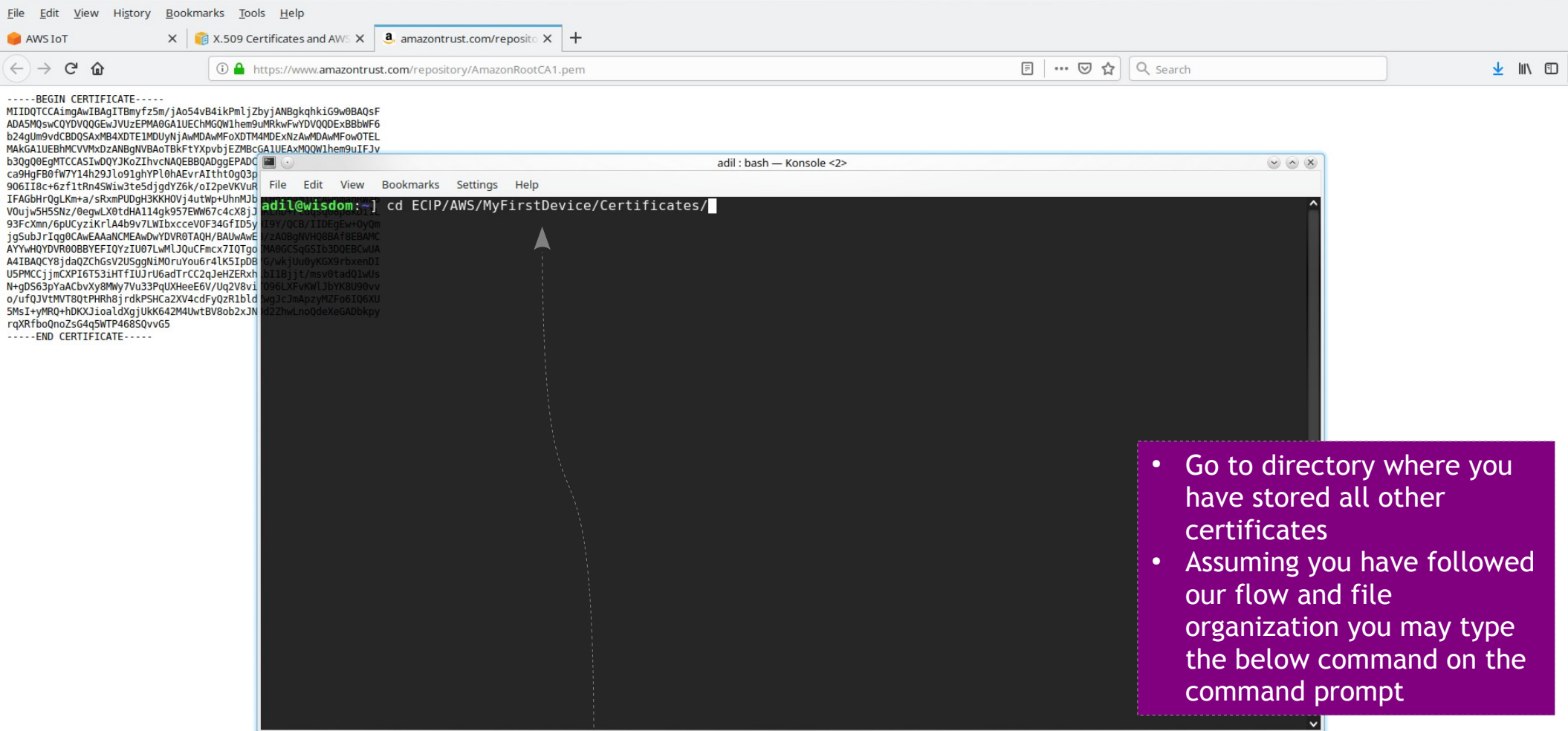
AWS Device Creation



- Here we use a terminal to create a file
- You may use the following commands to do it

Press **Ctrl Alt t** to open a terminal

AWS Device Creation

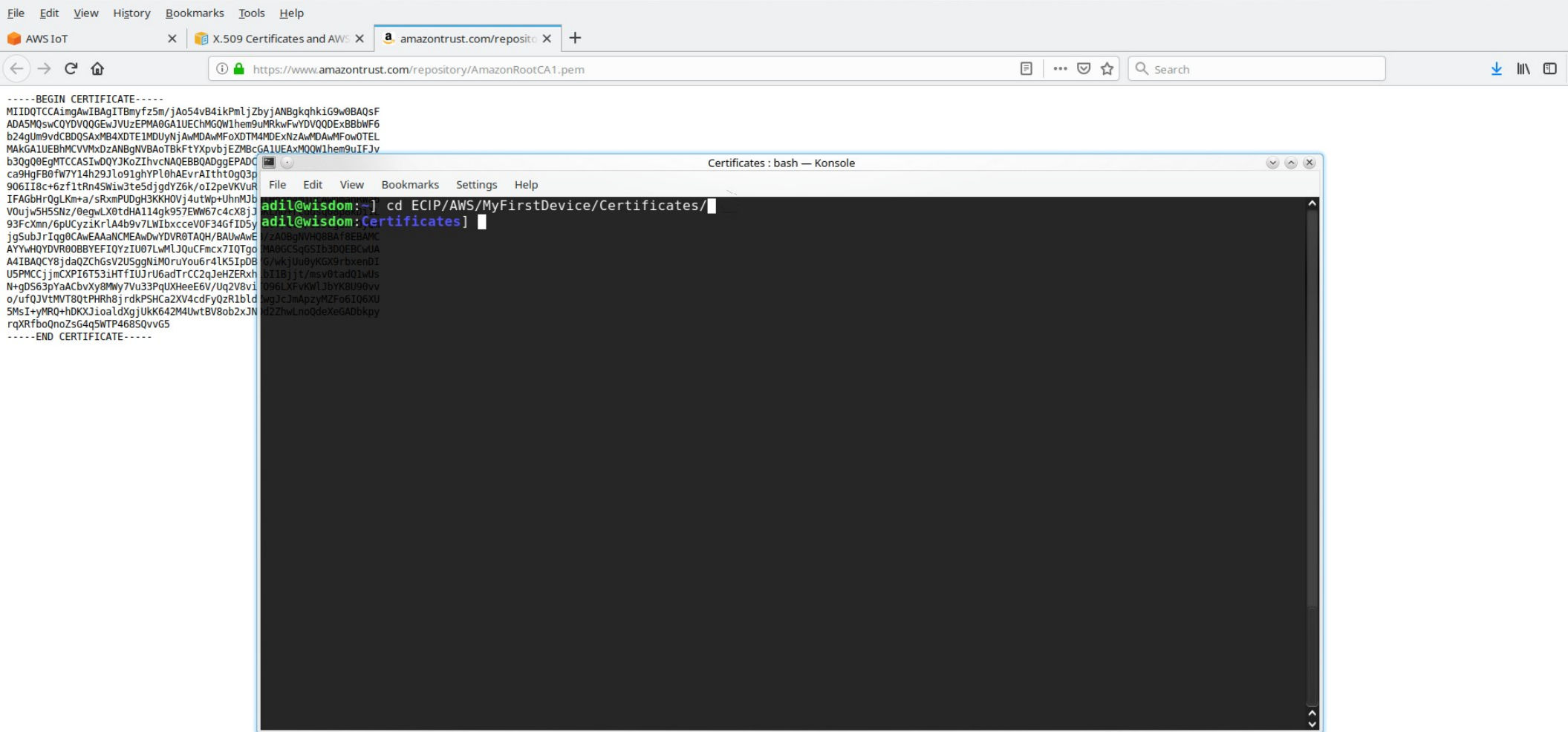


The screenshot shows a web browser window with the address bar displaying `https://www.amazontrust.com/repository/AmazonRootCA1.pem`. The page content displays a large block of text representing a certificate, starting with `-----BEGIN CERTIFICATE-----` and ending with `-----END CERTIFICATE-----`. Overlaid on the bottom right of the browser window is a terminal window titled `adil : bash — Konsole <2>`. The terminal shows the command `cd ECIP/AWS/MyFirstDevice/Certificates/` being entered at the prompt `adil@wisdom:~`.

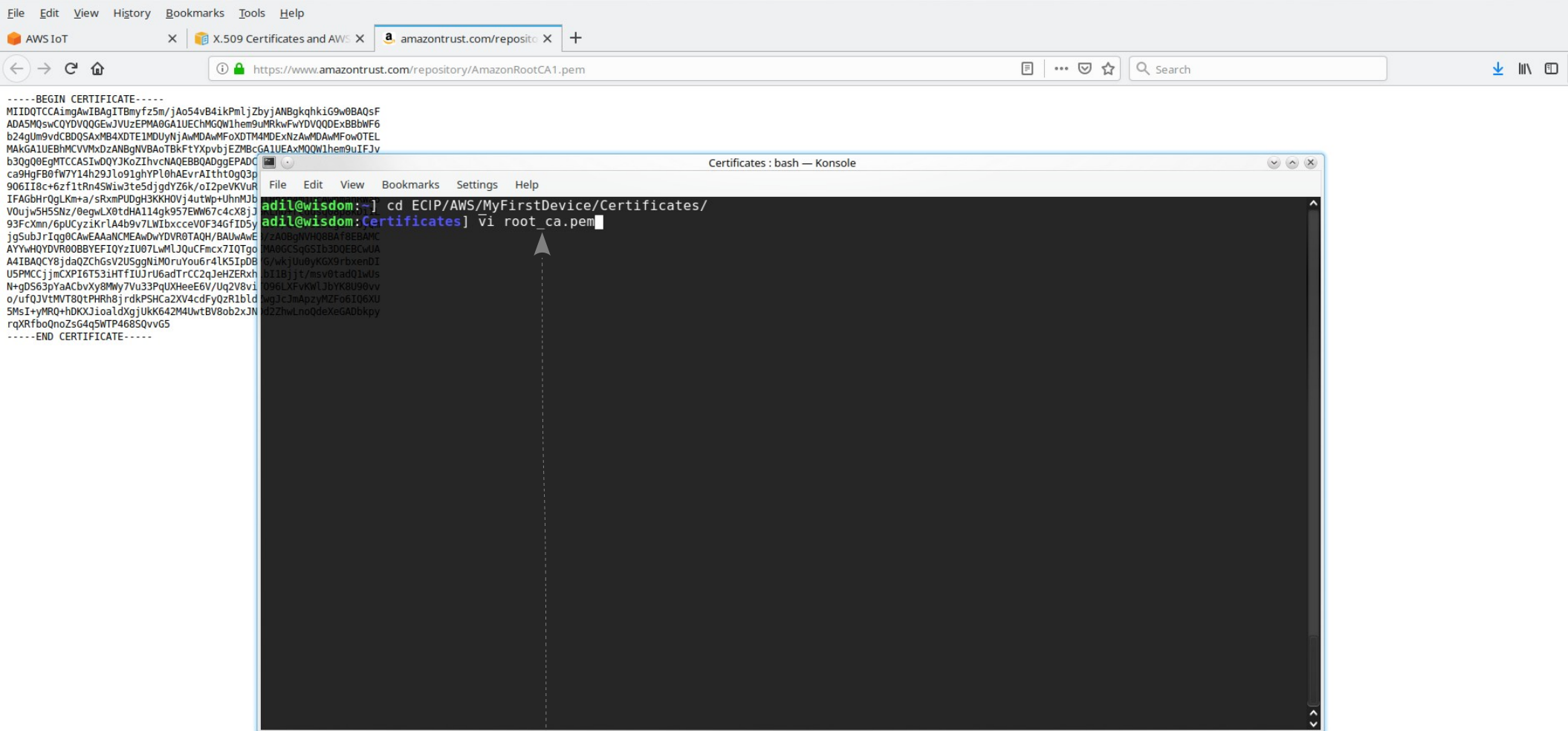
- Go to directory where you have stored all other certificates
- Assuming you have followed our flow and file organization you may type the below command on the command prompt

```
cd ECIP/AWS/MyFirstDevice/Certificates
```

AWS Device Creation



AWS Device Creation



The screenshot shows a web browser window with the address bar displaying `https://www.amazontrust.com/repository/AmazonRootCA1.pem`. The browser tabs include "AWS IoT", "X.509 Certificates and AWS", and "amazontrust.com/repositio". The browser's address bar also shows a search bar and navigation icons.

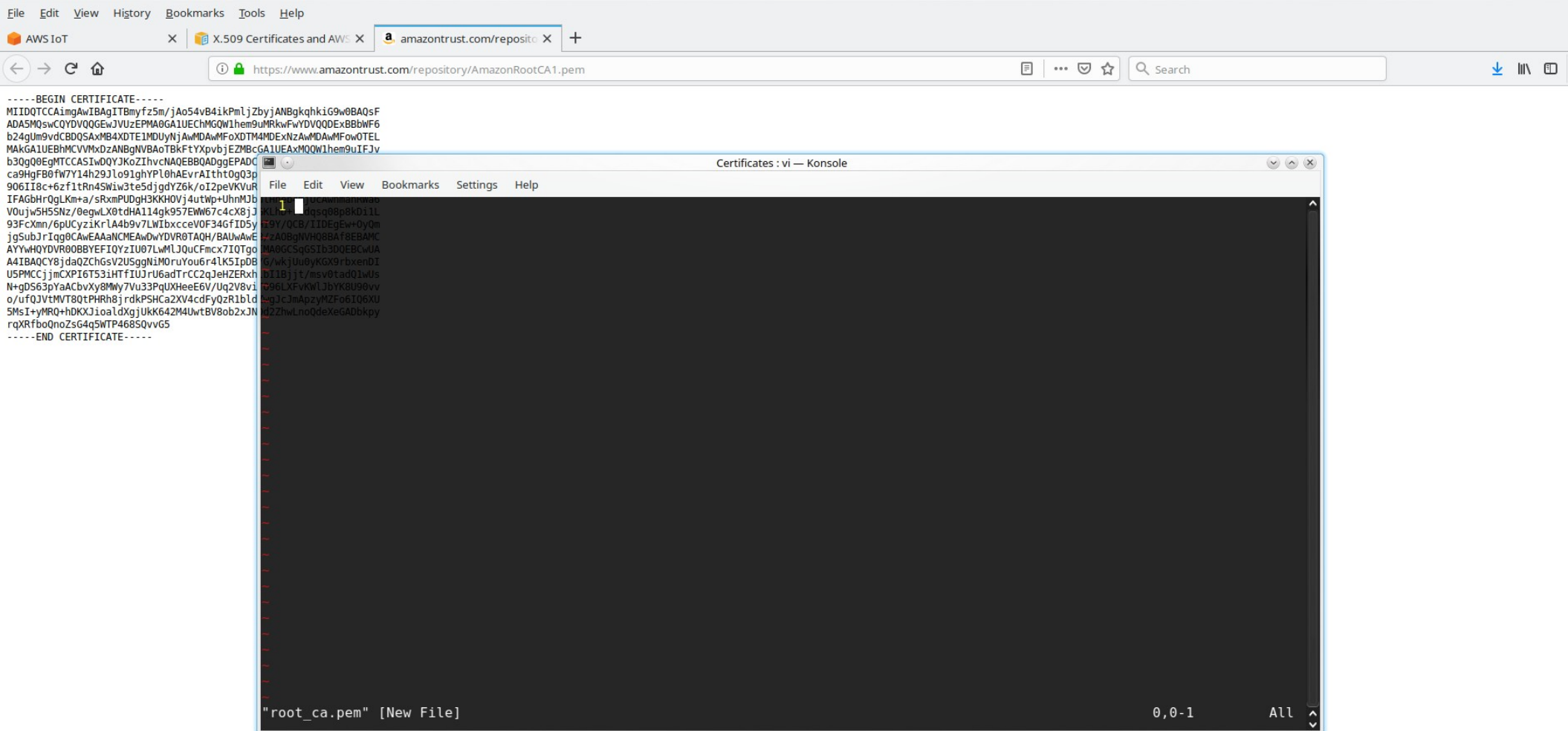
Below the browser window, a terminal window titled "Certificates : bash — Konsole" is open. The terminal shows the following commands and output:

```
adil@wisdom:~$ cd ECIP/AWS/MyFirstDevice/Certificates/
adil@wisdom:~/ECIP/AWS/MyFirstDevice/Certificates$ vi root_ca.pem
```

The terminal window also displays a large block of text, which appears to be a certificate or a list of certificates, starting with "-----BEGIN CERTIFICATE-----" and ending with "-----END CERTIFICATE-----".

vi root_ca.pem

AWS Device Creation



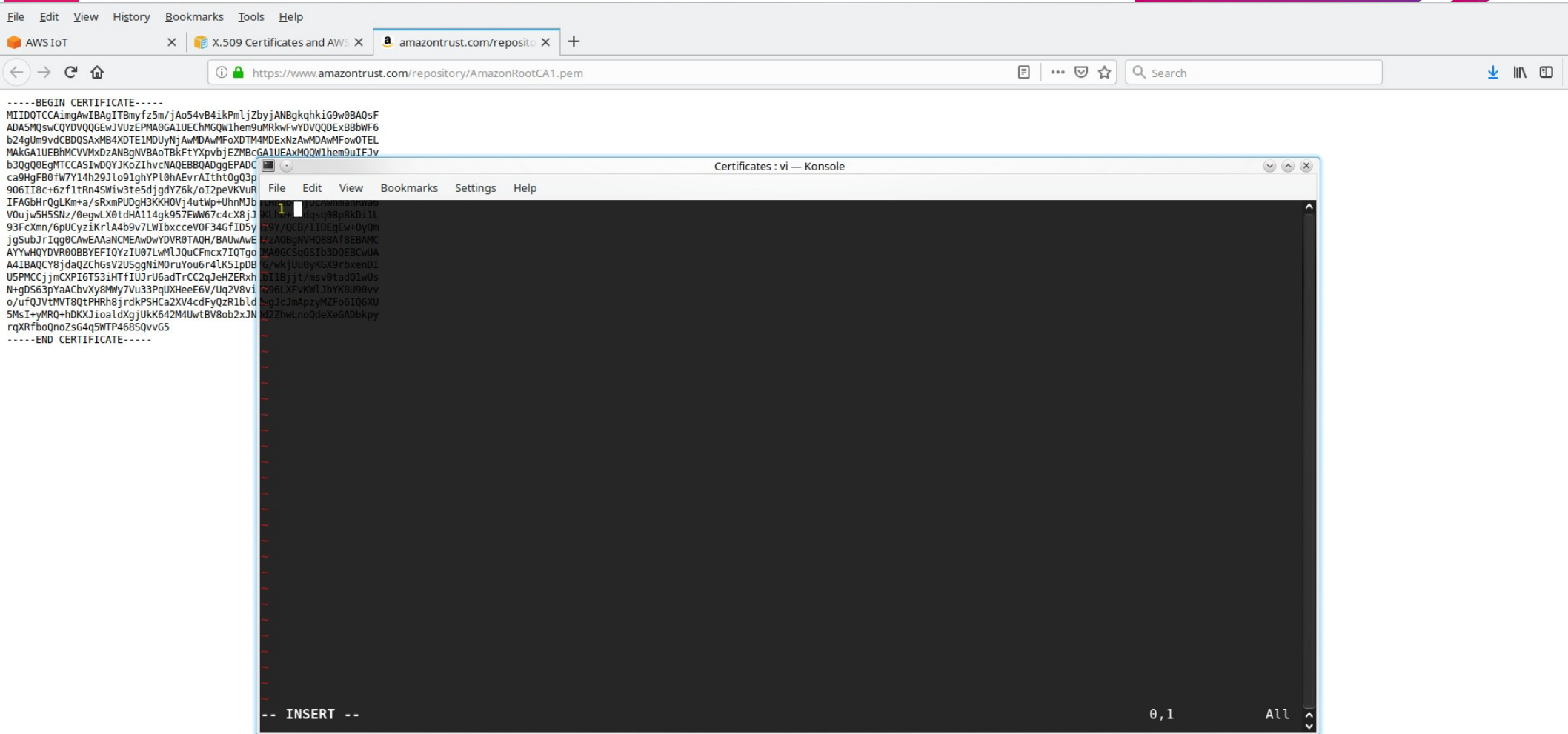
The screenshot shows a web browser window with the address bar displaying `https://www.amazontrust.com/repository/AmazonRootCA1.pem`. The browser tabs include "AWS IoT", "X.509 Certificates and AWS", and "amazontrust.com/reposito". The browser's address bar also shows a search bar and navigation icons.

Below the browser window, a terminal window titled "Certificates : vi — Konsole" is open, displaying the content of the certificate file. The terminal shows the following text:

```
-----BEGIN CERTIFICATE-----
MIIDQTCCAimgAwIBAgITBmyfz5m/jAo54vB4ikPmljZbyjANBgkqhkiG9w0BAQsF
ADA5MQswCQYDVQGEwJVUzEPMA0GA1UEChMGW1hem9uMRkwFwYDVQQDExB8bWf6
b24gUm9vdCBDQSAxMB4XDTE1MDUyNjAwMDAwMFoXDTE4MDEwNzAwMDAwMFowOTEL
MAKGA1UEBhMVCVMxZDZANBgNVBAoTBKFTYXpvcjE2ZmBcGA1UEAxMOMQW1hem9uIFJv
b3Qg00EgMTCCASiwDQYJKoZIhvcNAQEBBQADggEPADCCAQoQKIh3EgE8F7o1Q03p
906I8c+6zf1tRn4Swiw3te5djdYZ6k/oI2peVKVuR
IFAGbHrQgLKm+a/sRxmPUDgH3KKH0Vj4utWp+UhnMJb
V0ujw5H5SNz/0egwLX0tdHA114gk957EWW67c4cX8jJ
93FcXmn/6pUCyziKrlA4b9v7LWIbxcceV0F34GfID5y
jgSubJrIqg8CAwEAANCMCAwDwYDVR0TAQH/BAUwAwE
AYYwHQYDVRR0BBEYFIQYzIU07LwMLJQuCFmcx7IQTgo
A4IBAQC8jdaQZChGsV2USggNiM0ruYou6r4lK5IPDB
U5PMCCjmmCXPI6T53iHTfIUJru6adTrCC2qJehZERxh
N+uDS63pYaCbnXy8Mw7Vu33PqUXHeeE6V/Uq2V8vi
o/uF0JvtMVT80tPHRh8jrdKPSHCa2XV4cdFY0zR1bld
5MsI+yMRQ+hDKXJioaldXgJUKK642M4UwtBV8ob2xJN
rqXRfboQnoZsG4q5WTP4685QvvG5
-----END CERTIFICATE-----
```

The terminal window also shows the file name "root_ca.pem" [New File] and the cursor position 0,0-1.

AWS Device Creation



The screenshot shows a web browser window with the address bar displaying `https://www.amazontrust.com/repository/AmazonRootCA1.pem`. The page content displays the text of the Amazon Root CA1 certificate, starting with `-----BEGIN CERTIFICATE-----` and ending with `-----END CERTIFICATE-----`. Overlaid on the browser is a terminal window titled `Certificates : vi — Konsole`. The terminal shows a `vi` editor in insert mode, with the cursor at the end of the first line of the certificate text. A dashed arrow points from a yellow box labeled `Press i` to the terminal, indicating the next step in the process.

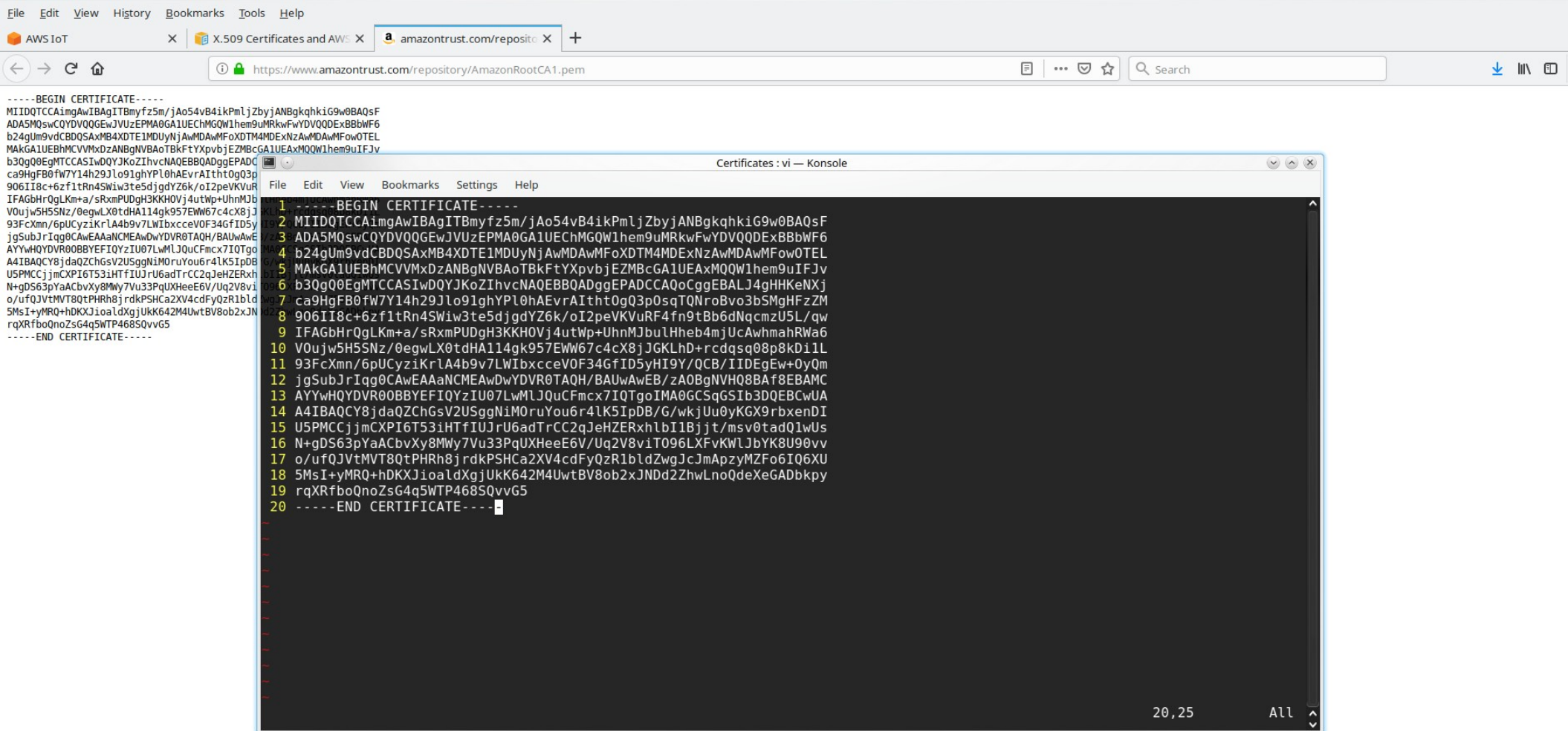
Press i

AWS Device Creation

```
-----BEGIN CERTIFICATE-----
MIIDQTCCAimgAwIBAgITBmyfz5m/jAo54vB4ikPmljZbyjANBgkqhkiG9w0BAQsF
ADA5MQswCQYDVQQGEwJVUzEPMA0GA1UEChMGQW1hem9uMRkwFwYDVQQDExBBBW
b24gUm9vdCBDQSAxMB4XDTE1MDUyNjAwMDAwMFoXDTE1MDUyNjAwMDAwMFow
TELMAKGA1UEBhMCVVMxZDANBgNVBAoTBKFTYXpvcjE2ZmBcGA1UEAxMQQW1hem9uIFJv
b3QgQ0EgMTCCASIwDQYJKoZIhvcNAQEBBQADggEPADCCAQoCggEBALJ4gHHKeNXj
ca9HgFB0fW7Y14h29Jlo91ghYPL0hAEvrAItht0gQ3p0sqT0NroBvo3bSMgHFzZM
906II8c+6zf1tRn4SWiw3te5djdYz6k/oI2peVKVuRF4fn9tBb6dNqcmzU5L/qw
IFAGbHrQgLKm+a/sRxmPUDgH3KKH0Vj4utWp+UhnMJbulHheb4mjUcAwhmahRWa6
V0ujw5H5SNz/0egwLX0tdHA114gk957EWW67c4cX8jJGKLHd+rcdqsq08p8kDi1L
93FcXmn/6pUCyziKrLa4b9v7LWIbxcceV0F34GfID5yHI9Y/QCB/IIIEgEw+OyQm
jgSubJrIqg0CAwEAANCMCAwDwYDVR0TAQH/BAUwAwEB/zA0BgNVHQ8BAf8EBAMC
AYYwHQYDVRR0BBEYFIQYzIU07LwMLJQuCFmcx7IQTgoIMA0GCSqGSIb3DQEB
AUA4IBAQCjY8jdaQZChGsV2USggNiM0ruYou6r4LK5IpDB/G/wkjUu0yKGX9rbx
enDIU5PMCCjY8jdaQZChGsV2USggNiM0ruYou6r4LK5IpDB/G/wkjUu0yKGX9rb
xenDIN+gDS63pYaACbvXy8Mwy7Vu33PqUXHeeE6V/Uq2V8viT096LXFvKWLJbYK
8U90vvu/o/ufQJVTMT80tPHRh8jrdkPSHca2XV4cdFyQzR1bldZwgJcJmApzyM
ZFo6I06XU5MsI+yMRQ+hDKXJioaldXgJukK642M4UwtBV8ob2xJNDd2ZhwLnoQde
XeGADbkpyrqXRfboQnoZsG4q5WTP468Sqvvg5
-----END CERTIFICATE-----
```

Press **Ctrl Shift v**

AWS Device Creation

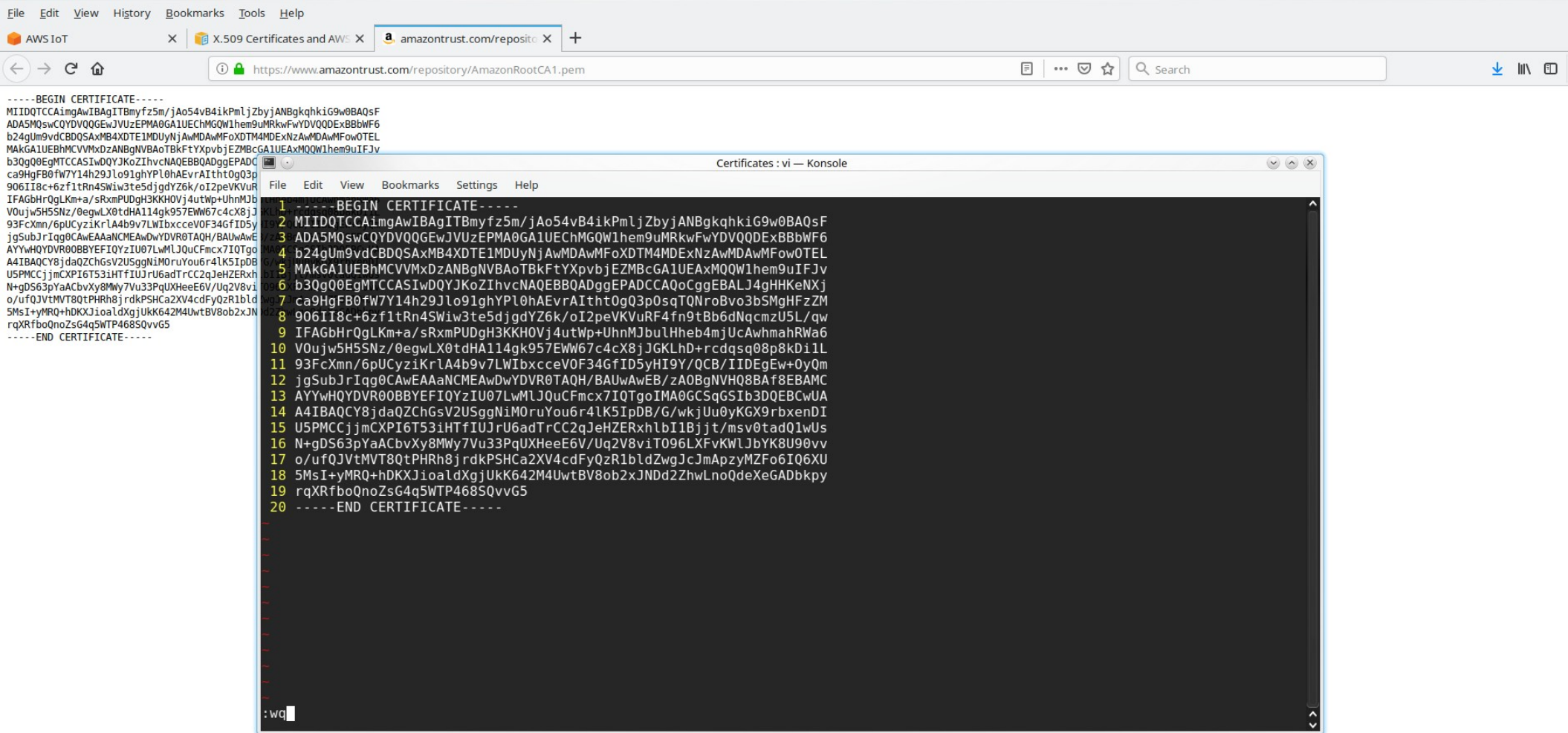


The screenshot shows a web browser window with the address bar displaying `https://www.amazontrust.com/repository/AmazonRootCA1.pem`. The browser tabs include "AWS IoT", "X.509 Certificates and AWS", and "amazontrust.com/reposito...". The browser interface includes a menu bar (File, Edit, View, History, Bookmarks, Tools, Help), a search bar, and navigation icons. The main content area displays the text of the Amazon Root CA1 certificate, starting with `-----BEGIN CERTIFICATE-----` and ending with `-----END CERTIFICATE-----`. The certificate text is wrapped across multiple lines. Below the browser window, a terminal window titled "Certificates : vi — Konsole" is open, showing the same certificate content. The terminal window has a menu bar (File, Edit, View, Bookmarks, Settings, Help) and a scroll bar on the right. The certificate text in the terminal is highlighted in yellow. At the bottom right of the terminal window, the text "20,25 All" is visible.

```
-----BEGIN CERTIFICATE-----
MIIDQTCCAimgAwIBAgITBmyfz5m/jAo54vB4ikPmljZbyjANBgkqhkiG9w0BAQsF
ADA5MQswCQYDVQQGEwJVUzEPMA0GA1UEChMGQW1hem9uMRkwFwYDVQQDExBBBWf6
b24gUm9vdCBDQSAxMB4XDTE1MDUyNjAwMDAwMFoXDTE1MDUyNjAwMDAwMFowOTEL
MAKGA1UEBhMVCVMxZDANBgNVBAoTBKFTYXpvcjE2ZmBcGA1UEAxMQQW1hem9uIFJv
b3QgQ0EgMTCCASIdDQYJKoZIhvcNAQEBBQADggEPADCCAQoCggEBALJ4gHHKeNXj
ca9HgFB0fW7Y14h29Jlo91ghYPL0hAEvrAItht0gQ3p0sqT0NroBvo3bSMgHFzZM
906II8c+6zf1tRn4S4w3te5djdYz6k/oI2peVKVURF4fn9tBb6dNqcmzU5L/qw
IFAGbHrQgLKm+a/sRxmPUDgH3KKH0Vj4utWp+UhnMJbulHheb4mjUcAwhmahRWa6
V0ujw5H5SNz/0egwLX0tdHA114gk957EWW67c4cX8jJGKLhd+rcdqsq08p8kDi1L
93FcXmn/6pUCyziKrLA4b9v7LWIbxcceV0F34GfID5yHI9Y/QCB/IIIEgEw+OyQm
jgSubJrIqg0CAwEAANCMEEAwDwYDVR0TAQH/BAUwAwEB/zA0BgNVHQ8BAf8EBAMC
AYYwHQYDVRR0BBEYFIQYzIU07LwMLJQuCFmcx7IQTgoIMA0GCSqGSIb3DQEBEUA
A4IBAQC8jdQZChGsV2USgNiM0ruYou6r4LK5IpDB/G/wkjUu0yKGX9rbxendI
U5PMCCjjmCXPI6T53iHTfIUJrU6adTrCC2qJehZERxh1b1Bjtt/msv0tadQ1wUs
N+gDS63pYaACbvXy8Mwy7Vu33PqUXHeeE6V/Uq2V8viT096LXFvKWLJbYK8U90vv
o/ufQJVTMT80tPHRh8jrdkPSHca2XV4cdFyQzR1bldZwgJcJmApzyMZfO6IO6U
5MsI+yMRQ+hDKXJioaldXgjUkK642M4UwtBV8ob2xJNDd2ZhwLnoQdeXeGADbkpy
rqXRfboQnoZsG4q5WTP468Sqvvg5
-----END CERTIFICATE-----
```

Press **Esc**

AWS Device Creation



```
---BEGIN CERTIFICATE-----
MIIDQTCCAimgAwIBAgITBmyfz5m/jAo54vB4ikPmljZbyjANBgkqhkiG9w0BAQsF
ADA5MQswCQYDVQQGEwJVUzEPMA0GA1UEChMGQW1hem9uMRkwFwYDVQQDExBBBWf6
b24gUm9vdCBDQSAxMB4XDTE1MDUyNjAwMDAwMFoXDTE4MDEwNzAwMDAwMFowOTEL
MAKGA1UEBhMCVVMxZDANBgNVBAoTBKFTYXpvcjE2b2cGA1UEAxMQQW1hem9uIFJv
b3QgQ0EgMTCCASIdDQYJKoZIhvcNAQEBBQADggEPADCCAAQoCggEBALJ4gHHKeNXj
ca9HgFB0fW7Y14h29Jlo91ghYPL0hAEvrAItht0gQ3p0sqT0NroBvo3bSMgHFzZM
906II8c+6zf1tRn4SWiw3te5djdYz6k/oI2peVKVuRF4fn9tBb6dNqcmzU5L/qw
IFAGbHrQgLKm+a/sRxmPUDgH3KKH0Vj4utWp+UhnMJbulHheb4mjUcAwhmahRWa6
V0ujw5H5SNz/0egwLX0tdHA114gk957EWW67c4cX8jJGKLhd+rcdqsq08p8kDi1L
93FcXmn/6pUCyziKrLA4b9v7LWIbxcceV0F34GfID5yHI9Y/QCB/IIIEgEw+OyQm
jgSubJrIqg0CAwEAANCMEEAwDwYDVR0TAQH/BAUwAwEB/zA0BgNVHQ8BAf8EBAMC
AYYwHQYDVRR0BBEYFIQYzIU07LwMLJQuCFmcx7IQTgoIMA0GCSqGSIb3DQEBBCUA
A4IBAQC8jdaQZChGsV2USggNiM0ruYou6r4LK5IpDB/G/wkjUu0yKGX9rbxendI
U5PMCCjjmCXPI6T53iHTfIUJrU6adTrCC2qJehZERxh1b1bjt/msv0tadQ1wUs
N+gDS63pYaACbvXy8Mwy7Vu33PqUXHeeE6V/Uq2V8viT096LXFvKWLJbYK8U90vv
o/ufQJvMT80tPHRh8jrdkPSHca2XV4cdFyQzR1bldZwgJcJmApzyMZfO6IO6U
5MsI+yMRQ+hDKXJioaldXgjUkK642M4UwtBV8ob2xJNDd2ZhwLnoQdeXeGADbkpy
rqXRfboQnoZsG4q5WTP468Sqvvg5
-----END CERTIFICATE-----
```

File Edit View Bookmarks Settings Help

Certificates : vi — Konsole

1 ---BEGIN CERTIFICATE-----
2 MIIDQTCCAimgAwIBAgITBmyfz5m/jAo54vB4ikPmljZbyjANBgkqhkiG9w0BAQsF
3 ADA5MQswCQYDVQQGEwJVUzEPMA0GA1UEChMGQW1hem9uMRkwFwYDVQQDExBBBWf6
4 b24gUm9vdCBDQSAxMB4XDTE1MDUyNjAwMDAwMFoXDTE4MDEwNzAwMDAwMFowOTEL
5 MAKGA1UEBhMCVVMxZDANBgNVBAoTBKFTYXpvcjE2b2cGA1UEAxMQQW1hem9uIFJv
6 b3QgQ0EgMTCCASIdDQYJKoZIhvcNAQEBBQADggEPADCCAAQoCggEBALJ4gHHKeNXj
7 ca9HgFB0fW7Y14h29Jlo91ghYPL0hAEvrAItht0gQ3p0sqT0NroBvo3bSMgHFzZM
8 906II8c+6zf1tRn4SWiw3te5djdYz6k/oI2peVKVuRF4fn9tBb6dNqcmzU5L/qw
9 IFAGbHrQgLKm+a/sRxmPUDgH3KKH0Vj4utWp+UhnMJbulHheb4mjUcAwhmahRWa6
10 V0ujw5H5SNz/0egwLX0tdHA114gk957EWW67c4cX8jJGKLhd+rcdqsq08p8kDi1L
11 93FcXmn/6pUCyziKrLA4b9v7LWIbxcceV0F34GfID5yHI9Y/QCB/IIIEgEw+OyQm
12 jgSubJrIqg0CAwEAANCMEEAwDwYDVR0TAQH/BAUwAwEB/zA0BgNVHQ8BAf8EBAMC
13 AYYwHQYDVRR0BBEYFIQYzIU07LwMLJQuCFmcx7IQTgoIMA0GCSqGSIb3DQEBBCUA
14 A4IBAQC8jdaQZChGsV2USggNiM0ruYou6r4LK5IpDB/G/wkjUu0yKGX9rbxendI
15 U5PMCCjjmCXPI6T53iHTfIUJrU6adTrCC2qJehZERxh1b1bjt/msv0tadQ1wUs
16 N+gDS63pYaACbvXy8Mwy7Vu33PqUXHeeE6V/Uq2V8viT096LXFvKWLJbYK8U90vv
17 o/ufQJvMT80tPHRh8jrdkPSHca2XV4cdFyQzR1bldZwgJcJmApzyMZfO6IO6U
18 5MsI+yMRQ+hDKXJioaldXgjUkK642M4UwtBV8ob2xJNDd2ZhwLnoQdeXeGADbkpy
19 rqXRfboQnoZsG4q5WTP468Sqvvg5
20 -----END CERTIFICATE-----

:wq

Type :wq and Enter

AWS Device Creation

File Edit View History Bookmarks Tools Help

AWS IoT X.509 Certificates and AWS amazontrust.com/repository

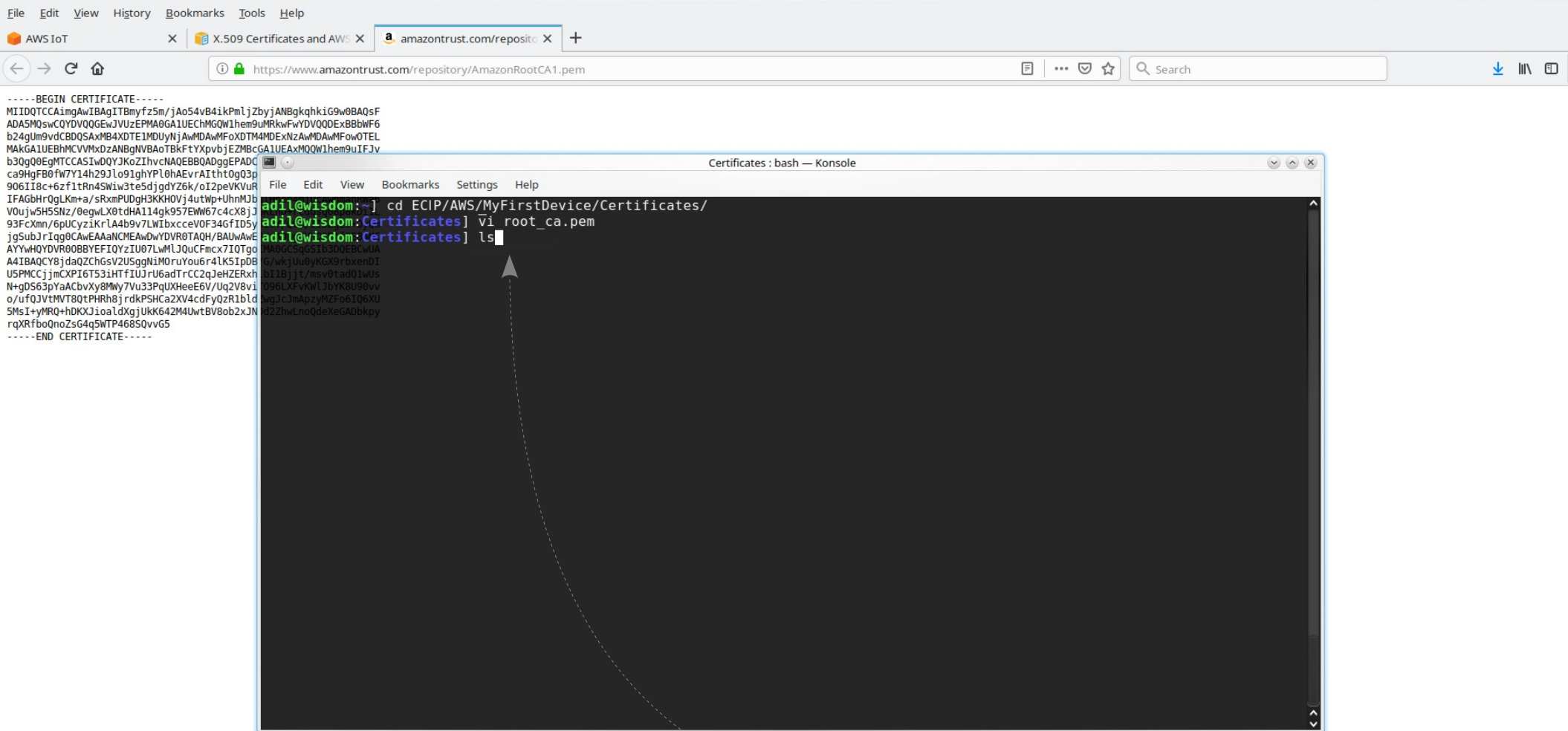
https://www.amazontrust.com/repository/AmazonRootCA1.pem

```
-----BEGIN CERTIFICATE-----
MIDQTCaimgAwIBAgITBmyfz5m/jAo54vB4ikPmljZbyjANBgkqhkiG9w0BAQsF
ADA5MQswCQYDVQGEwJVUzEPMA0GA1UEChMGQW1hem9uMRkwFwYDVQQDExB8bWf6
b24gUm9vdCBDQSAxMB4XDTE1MDUyNjAwMDAwMFoXDTE4MDEwNzAwMDAwMFowTEL
MAKGA1UEBhMCVVMxZDZANBgNVBAoTBKFTYXpvcjE2ZmBcGA1UEAxMOMQW1hem9uIFJv
b3QgOGEgMTCCASIwDQYJKoZIhvcNAQEBBQADggEPADCCa9HgFB0fW7Y14h29Jlo91ghYPL0hAEvRAItht0g03p
906I8c+6zf1tRn4S5iw3te5djdYZ6k/oI2peVKVuRIFAGbHrQgLKm+a/sRxmPUDgH3KKH0Vj4utWp+UhnMJb
V0ujw5H5SNz/0egwLX0tdHA114gk957EWW67c4cX8jJ93FcXmn/6pUCyziKRLA4b9v7LWIbxcceV0F34GfID5y
jgSubJrIgg0CAwEAANCMCAwDwYDVR0TAQH/BAUwAwEAYYwHQYDVRR0BBEYFIQYzIU07LwMLJQuCFmcx7IQTgo
A4TBAQCY8jdaQZChGsV2USggNiM0ruYou6r4lK5IPDBU5PMCCjmmCXPI6T53iHTfIUJru6adTrCC2qJehZERxh
N+gDS63pYaAcBvXy8MwY7Vu33PqUXHeE6V/Uq2V8vi0/uf0JvtMVT80tPHRh8jrdkPSHCa2XV4cdFyQzR1bld
5MsI+yMRQ+hDKXJioaldXgjUKK642M4UwtBV8ob2xJNrQXRfboQnoZsG4q5WTP4685QvvG5
-----END CERTIFICATE-----
```

Certificates : bash — Konsole

```
adil@wisdom:~$ cd ECIP/AWS/MyFirstDevice/Certificates/
adil@wisdom:Certificates$ vi root_ca.pem
adil@wisdom:Certificates$
```

AWS Device Creation



The screenshot shows a web browser window with the URL `https://www.amazontrust.com/repository/AmazonRootCA1.pem`. The browser tabs include "AWS IoT", "X.509 Certificates and AWS", and "amazontrust.com/reposito".

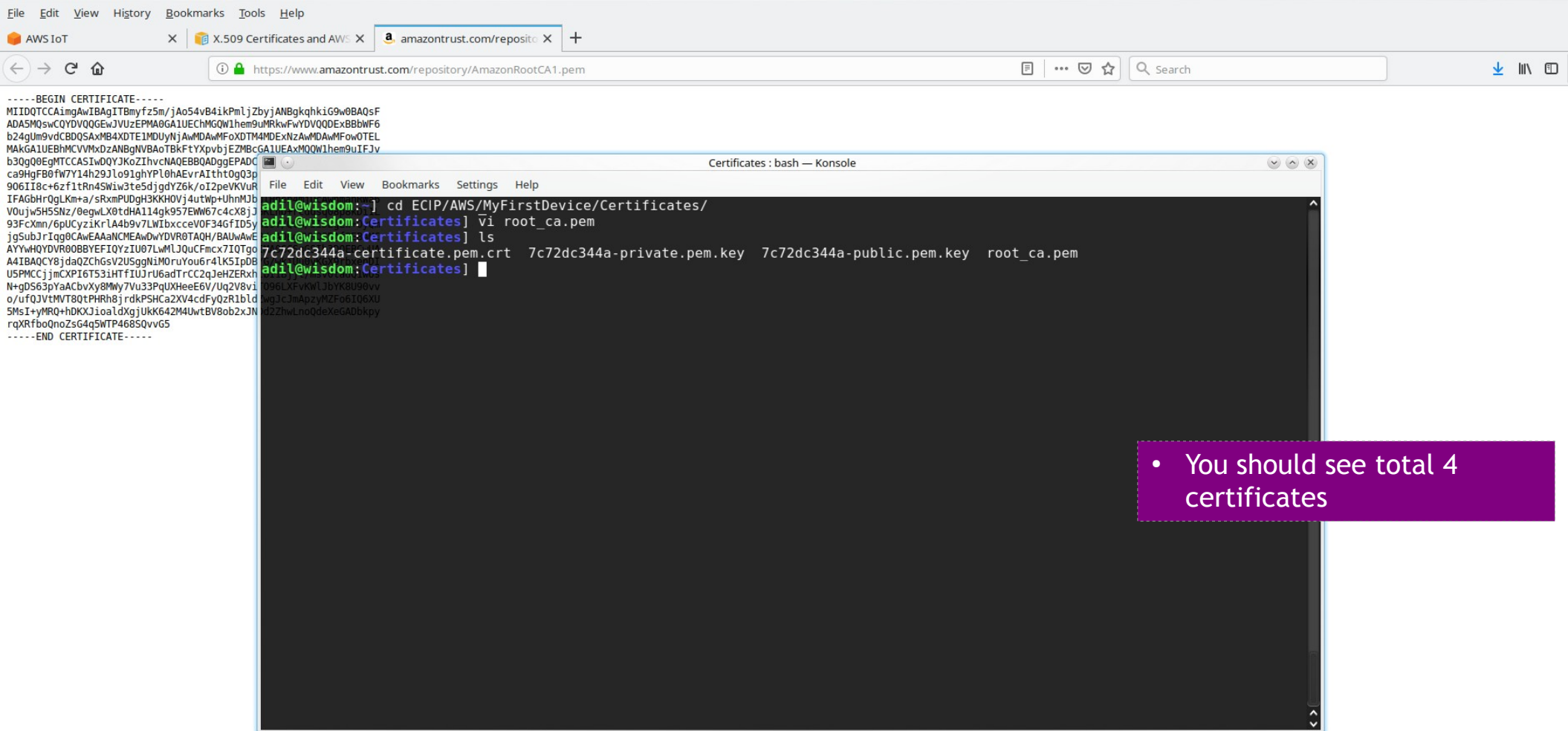
Below the browser, a terminal window titled "Certificates : bash — Konsole" is open. The terminal shows the following commands and output:

```
adil@wisdom:~$ cd ECIP/AWS/MyFirstDevice/Certificates/
adil@wisdom:~/ECIP/AWS/MyFirstDevice/Certificates$ vi root_ca.pem
adil@wisdom:~/ECIP/AWS/MyFirstDevice/Certificates$ ls
```

The terminal output displays a long string of base64-encoded text, which is the Amazon Root CA 1 certificate. The text is wrapped across multiple lines. A dashed arrow points from the `ls` command in the terminal to a callout box.

Type **ls**

AWS Device Creation



The screenshot shows a web browser window with the address bar displaying `https://www.amazontrust.com/repository/AmazonRootCA1.pem`. The browser tabs include "AWS IoT", "X.509 Certificates and AWS", and "amazontrust.com/reposito".

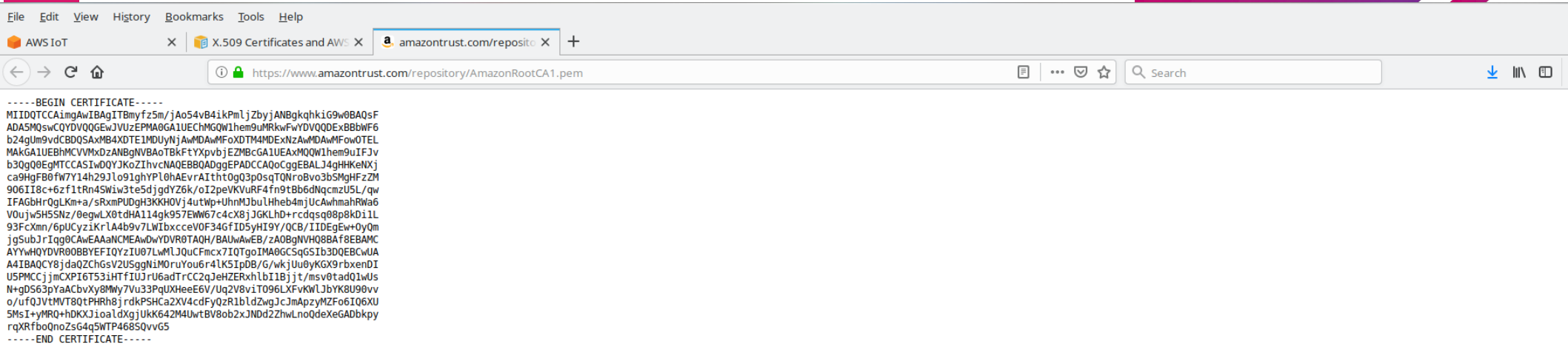
Below the browser, a terminal window titled "Certificates : bash — Konsole" is open. The terminal shows the following commands and output:

```
adil@wisdom:~$ cd ECIP/AWS/MyFirstDevice/Certificates/
adil@wisdom:~/ECIP/AWS/MyFirstDevice/Certificates$ vi root_ca.pem
adil@wisdom:~/ECIP/AWS/MyFirstDevice/Certificates$ ls
7c72dc344a-certificate.pem.crt  7c72dc344a-private.pem.key  7c72dc344a-public.pem.key  root_ca.pem
adil@wisdom:~/ECIP/AWS/MyFirstDevice/Certificates$
```

The terminal also displays a large block of text representing a certificate, starting with "-----BEGIN CERTIFICATE-----" and ending with "-----END CERTIFICATE-----".

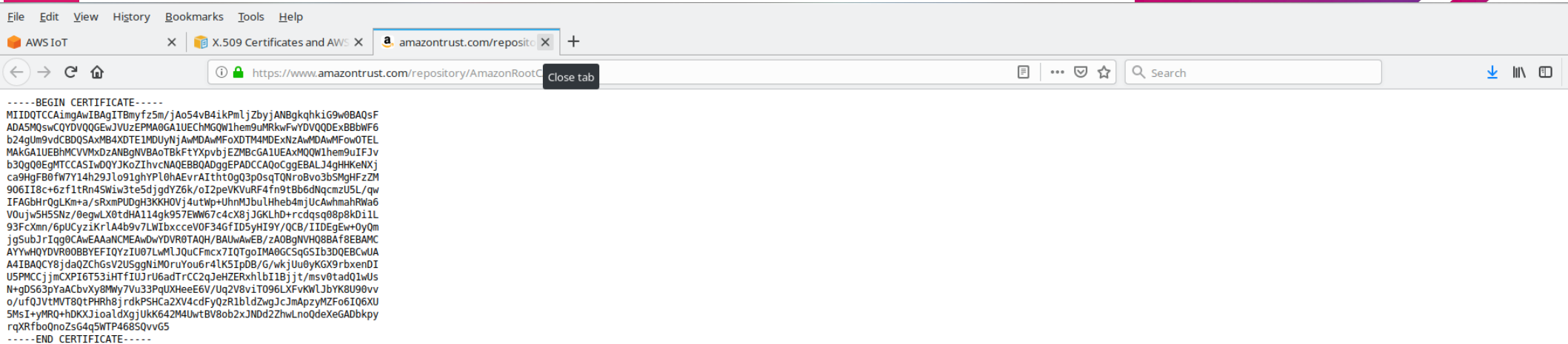
- You should see total 4 certificates

AWS Device Creation



- Close all the unnecessary windows

AWS Device Creation



- Close all the unnecessary windows

AWS Device Creation

File Edit View History Bookmarks Tools Help

AWS IoT X.509 Certificates and AWS IoT

https://docs.aws.amazon.com/iot/latest/developerguide/managing-device-certs.html#server-authentication

Search



English

Sign In to the Console

AWS IoT

Developer Guide

Documentation - This Guide

Search

- What Is AWS IoT?
- Getting Started with AWS IoT
- AWS IoT Rules Tutorials
- AWS IoT SDK Tutorials
- AWS IoT Additional Tutorials
- Managing Devices with AWS IoT
- Tagging Your AWS IoT Resources
- Security and Identity
 - AWS IoT Authentication
 - X.509 Certificates
 - X.509 Certificates and AWS IoT**
 - Create and Register an AWS IoT Device Certificate
 - Use Your Own Certificate
 - IAM Users, Groups, and Roles
 - Amazon Cognito Identities
 - Custom Authentication
 - Authorization

Server Authentication

Server certificates allow your devices to verify that they're communicating with AWS IoT and not another server impersonating AWS IoT. Service certificates need to be copied onto your device and referenced when connecting to AWS IoT. For more information, see the [AWS IoT Device SDKs](#). AWS IoT server certificates are signed by one of the following CA certificates:

VeriSign Endpoints (legacy)

- RSA 2048 bit key: [VeriSign Class 3 Public Primary G5 root CA certificate](#)

Amazon Trust Services Endpoints (preferred)

- RSA 2048 bit key: [Amazon Root CA 1](#)
- RSA 4096 bit key: [Amazon Root CA 2](#)
- ECC 256 bit key: [Amazon Root CA 3](#)
- ECC 384 bit key: [Amazon Root CA 4](#)

We recommend that all customers create an Amazon Trust Services (ATS) endpoint and load these CA certificates onto their devices to avoid issues caused by browsers of Symantec CAs (including VeriSign) that occurred in October 2018. For backward-compatibility reasons, we still support customers who do not have an ATS endpoint. To create an ATS endpoint, you can create an ATS endpoint by calling the `describe-endpoint` API with the `iot:Data-ATS` endpointType. Devices operating on ATS endpoints will not require any reregistration. Devices operating on Symantec endpoints in the same account and do not require any reregistration.

```
aws iot describe-endpoint --endpoint-type iot:Data-ATS
```

Storing all of these certificates on your device can take up valuable memory space. If your devices implement RSA-based validation, you can omit the [Amazon Root CA 3](#) and [Amazon Root CA 4](#) ECC certificates. If your devices implement ECC-based certificate validation, you can omit the [Amazon Root CA 1](#) and [Amazon Root CA 2](#) RSA certificates.

All new AWS IoT Core regions, beginning with the May 9, 2018 launch of AWS IoT Core in the Asia Pacific (Mumbai) Region, will serve only ATS certificates.

Note

CA certificates have an expiration date after which they cannot be used to validate a server's certificate. CA certificates might have to be replaced before their expiration date. Make sure that you can update the root CA certificates on all of your devices to ensure ongoing connectivity and to keep up-to-date with security best practices.

For a complete list of CA certificates used by AWS IoT see, [Amazon Trust Services](#).

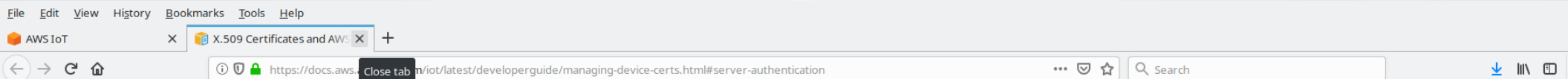
On this page:

- [Client Authentication](#)
- [Server Authentication](#)**

• Close all the unnecessary windows



AWS Device Creation



English

Sign In to the Console

AWS IoT

Developer Guide



Documentation - This Guide



Search



- + What Is AWS IoT?
- + Getting Started with AWS IoT
- + AWS IoT Rules Tutorials
- + AWS IoT SDK Tutorials
- + AWS IoT Additional Tutorials
- + Managing Devices with AWS IoT
- + Tagging Your AWS IoT Resources
- Security and Identity
 - AWS IoT Authentication
 - X.509 Certificates
 - **X.509 Certificates and AWS IoT**
 - Create and Register an AWS IoT Device Certificate
 - Use Your Own Certificate
 - IAM Users, Groups, and Roles
 - Amazon Cognito Identities
 - Custom Authentication
 - Authorization

Server Authentication

Server certificates allow your devices to verify that they're communicating with AWS IoT and not another server impersonating AWS IoT. Service certificates need to be copied onto your device and referenced when connecting to AWS IoT. For more information, see the [AWS IoT Device SDKs](#). AWS IoT server certificates are signed by one of the following CA certificates:

VeriSign Endpoints (legacy)

- RSA 2048 bit key: [VeriSign Class 3 Public Primary G5 root CA certificate](#)

Amazon Trust Services Endpoints (preferred)

- RSA 2048 bit key: [Amazon Root CA 1](#)
- RSA 4096 bit key: [Amazon Root CA 2](#)
- ECC 256 bit key: [Amazon Root CA 3](#)
- ECC 384 bit key: [Amazon Root CA 4](#)

We recommend that all customers create an Amazon Trust Services (ATS) endpoint and load these CA certificates onto their devices to avoid issues caused by browsers of Symantec CAs (including VeriSign) that occurred in October 2018. For backward-compatibility reasons, we still support customers who do not create an ATS endpoint. To create an ATS endpoint, you can create an ATS endpoint by calling the `describe-endpoint` API with the `iot:Data-ATS` endpointType. Devices operating on ATS endpoints will not require any reprogramming. Devices operating on Symantec endpoints in the same account and do not require any reprogramming.

```
aws iot describe-endpoint --endpoint-type iot:Data-ATS
```

Storing all of these certificates on your device can take up valuable memory space. If your devices implement RSA-based validation, you can omit the [Amazon Root CA 3](#) and [Amazon Root CA 4](#) ECC certificates. If your devices implement ECC-based certificate validation, you can omit the [Amazon Root CA 1](#) and [Amazon Root CA 2](#) RSA certificates.

All new AWS IoT Core regions, beginning with the May 9, 2018 launch of AWS IoT Core in the Asia Pacific (Mumbai) Region, will serve only ATS certificates.

Note

CA certificates have an expiration date after which they cannot be used to validate a server's certificate. CA certificates might have to be replaced before their expiration date. Make sure that you can update the root CA certificates on all of your devices to ensure ongoing connectivity and to keep up-to-date with security best practices.

For a complete list of CA certificates used by AWS IoT see, [Amazon Trust Services](#).

On this page:

[Client Authentication](#)

[Server Authentication](#)

• Close all the unnecessary windows



AWS Device Creation

File Edit View History Bookmarks Tools Help

AWS IoT x +



https://ap-south-1.console.aws.amazon.com/iot/home?region=ap-south-1#/create/single-provision

Search



Services

Resource Groups



Syed Adil

Mumbai

Support

Certificate created!

Download these files and save them in a safe place. Certificates can be retrieved at any time, but the private and public keys cannot be retrieved after you close this page.

In order to connect a device, you need to download the following:

A certificate for this thing	7c72dc344a.cert.pem	Download
A public key	7c72dc344a.public.key	Download
A private key	7c72dc344a.private.key	Download

You also need to download a root CA for AWS IoT:

A root CA for AWS IoT [Download](#)

[Activate](#)

[Cancel](#)

[Done](#)

[Attach a policy](#)

AWS Device Creation

File Edit View History Bookmarks Tools Help

AWS IoT x +



https://ap-south-1.console.aws.amazon.com/iot/home?region=ap-south-1#/create/single-provision

Search



Services

Resource Groups



Syed Adil

Mumbai

Support

Certificate created!

Download these files and save them in a safe place. Certificates can be retrieved at any time, but the private and public keys cannot be retrieved after you close this page.

In order to connect a device, you need to download the following:

A certificate for this thing	7c72dc344a.cert.pem	Download
A public key	7c72dc344a.public.key	Download
A private key	7c72dc344a.private.key	Download

You also need to download a root CA for AWS IoT:

A root CA for AWS IoT [Download](#)

Activate

Cancel

Done

Attach a policy

- Activate the created certificate

AWS Device Creation

File Edit View History Bookmarks Tools Help

AWS IoT x +



https://ap-south-1.console.aws.amazon.com/iot/home?region=ap-south-1#/create/single-provision

Search



Services

Resource Groups



Syed Adil

Mumbai

Support

Certificate created!

Download these files and save them in a safe place. Certificates can be retrieved at any time, but the private and public keys cannot be retrieved after you close this page.

In order to connect a device, you need to download the following:

A certificate for this thing	7c72dc344a.cert.pem	Download
A public key	7c72dc344a.public.key	Download
A private key	7c72dc344a.private.key	Download

You also need to download a root CA for AWS IoT:

A root CA for AWS IoT [Download](#)

Deactivate

Cancel

Done

Attach a policy

AWS Device Creation

File Edit View History Bookmarks Tools Help

AWS IoT x +



https://ap-south-1.console.aws.amazon.com/iot/home?region=ap-south-1#/create/single-provision

Search



Services

Resource Groups



Syed Adil

Mumbai

Support

Certificate created!

Download these files and save them in a safe place. Certificates can be retrieved at any time, but the private and public keys cannot be retrieved after you close this page.

In order to connect a device, you need to download the following:

A certificate for this thing	7c72dc344a.cert.pem	Download
A public key	7c72dc344a.public.key	Download
A private key	7c72dc344a.private.key	Download

You also need to download a root CA for AWS IoT:

A root CA for AWS IoT [Download](#)

Deactivate

Cancel

Done

Attach a policy

AWS Device Creation

File Edit View History Bookmarks Tools Help

AWS IoT x +



https://ap-south-1.console.aws.amazon.com/iot/home?region=ap-south-1#/thinghub

Search



Services

Resource Groups



Syed Adil

Mumbai

Support



Things

Create

Search things



Configure fleet indexing

Card

MyFirstDevice
NO TYPE

• Your device is ready now

We've added a new, powerful fleet index

You can use search queries to find your devices and you can use attributes to narrow the results.

Next

[Skip quick tour](#)

Thank You