

Registering a Domain and Setting Up a Static Website with Route 53

Introduction

Goals

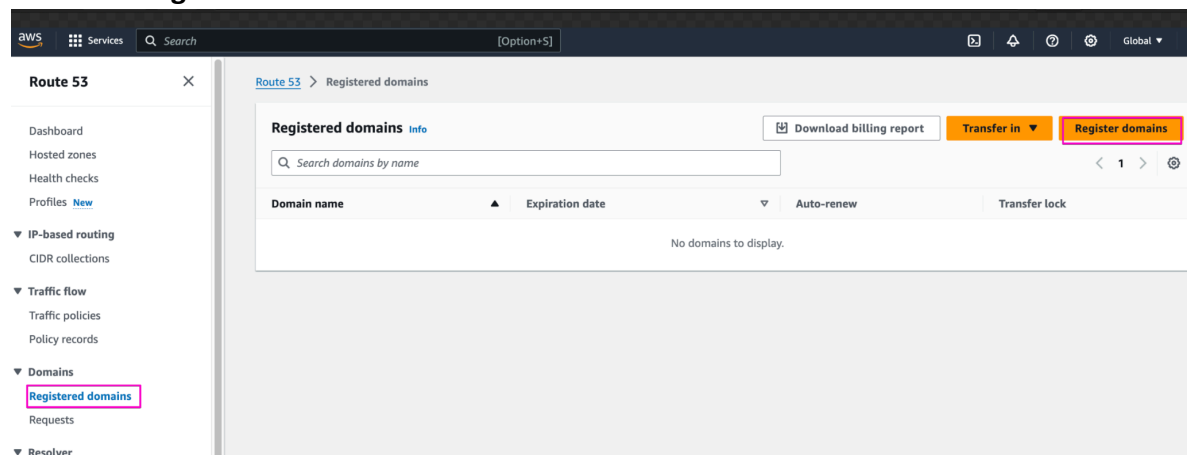
This runbook provides a detailed step-by-step guide to register a new domain or import an existing domain, set up a static website using Amazon S3, and configure Amazon Route 53 to route traffic to the website.

By the end of this runbook, you will:

- Register a new domain or import an existing domain into Route 53.
- Set up Amazon S3 buckets for your root domain and subdomain.
- Configure the S3 buckets for website hosting and redirection.
- Upload a sample HTML file to your root domain bucket.
- Configure Amazon Route 53 to route DNS traffic to your static website.

Register a New Domain

1. **Navigate to Route 53:**
 - o Open the AWS Management Console.
 - o Go to the Route 53 console by searching for "Route 53" in the search bar.
2. **Register a New Domain:**
 - o In the Route 53 console, click on "**Registered domains**" in the left-hand menu.
 - o Click the "**Register Domain**" button.



- o Enter your desired domain name (e.g., jjtech.com) and check its availability.

[Route 53](#) > [Registered domains](#) > Register domains

Register domains [Info](#)

Pricing for domain names varies by top-level domain (TLD). For more information, view [price with different TLDs](#).

Search for domain

Check availability for a domain

Search result

Domain	Price/year	Actions
mecfarmscm.com Exact match	14.00 USD	Select

Suggested available domains (10)

You can register up to five domains at a time.

Domain	Price/year	Actions
mecfarmscm.net	15.00 USD	Select
mecfarmscm.io	71.00 USD	Select
mec-farms-cm.com	14.00 USD	Select

Selected domains (0/5)

Search for domains and ma

- o If the domain is available, follow the prompts to complete the registration process. This will include providing your contact information and making a payment.

[Route 53](#) > [Registered domains](#) > [Register domains](#) > Checkout

Step 1

Pricing

Step 2

Contact information

Step 3

Review and submit

Pricing [Info](#)

Domain pricing options

Domain name	Duration (price)	Auto-renew
mecfarmscm.com	1 year (14.00 USD)	<input checked="" type="checkbox"/> On

Auto-renew is turned on for 1 domain.
We will send an email to the registrant contact before expiration to remind you that auto-renew is currently turned on. You can turn it off at any time by using the Route 53 console. For more information, see [Renewing Registration for a Domain](#).

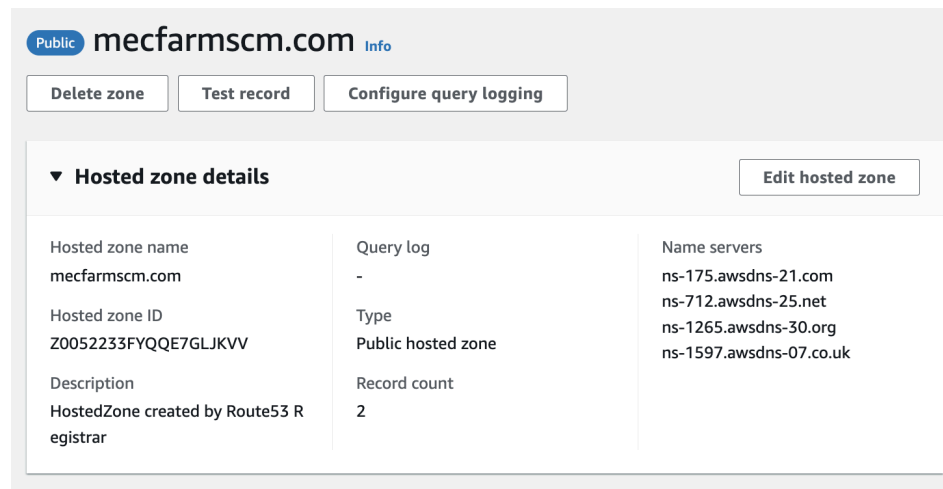
Subtotal: **14.00 USD**
Applicable taxes will be calculated at checkout.

o

3. Wait for Registration Confirmation:

- o It may take a few minutes to complete the registration process. You will receive an email confirmation once your domain is registered.

- o click on the verification link in your email to validate your email. After this, AWS will provision a public hosted zone in your account.



Transfer an Existing Domain into Route53

if you already own a domain, you could transfer that into AWS using the procedure below.

1. **Navigate to Route 53:**
 - o Open the AWS Management Console.
 - o Go to the Route 53 console by searching for "Route 53" in the search bar.
2. **Transfer Domain to Route 53:**
 - o In the Route 53 console, click on "Registered domains" in the left-hand menu.
 - o Click the "Transfer Domain" button.
 - o Enter your existing domain name and follow the prompts to transfer the domain to Route 53.
3. **Verify Domain Transfer:**
 - o Verify that the domain transfer is successful, and you can see the domain listed under "Registered domains" in Route 53.

Setting up

Step 1: Create a Bucket for Your Root Domain

1. **Navigate to S3:**
 - o Open the AWS Management Console.
 - o Go to the S3 console by searching for "S3" in the search bar.
2. **Create a Bucket for the Root Domain:**
 - o Click the "Create bucket" button.
 - o Enter the bucket name as your root domain (e.g., jjtech.com).
 - o Select the region closest to your target audience.

- o Leave the other settings at their defaults and click the "Create bucket" button.

[Amazon S3](#) > [Buckets](#) > [Create bucket](#)

Create bucket [Info](#)

Buckets are containers for data stored in S3.

General configuration

AWS Region
US East (N. Virginia) us-east-1

Bucket type [Info](#)

☒ **General purpose**
Recommended for most use cases and access patterns. General purpose buckets are the original S3 bucket type. They allow a mix of storage classes that redundantly store objects across multiple Availability Zones.

☐ **Directory - New**
Recommended for low-latency use cases. These buckets use only the S3 Express One Zone storage class, which provides faster processing of data within a single Availability Zone.

Bucket name [Info](#)

Bucket name must be unique within the global namespace and follow the bucket naming rules. [See rules for bucket naming](#)

Copy settings from existing bucket - optional
Only the bucket settings in the following configuration are copied.

Format: s3://bucket/prefix

Step 2: Create a Bucket for Your Subdomain

1. Create a Bucket for the Subdomain:

- o Repeat the steps to create another bucket, this time naming it with your subdomain (e.g., www.jjtech.com).

Create bucket [Info](#)

Buckets are containers for data stored in S3.

General configuration

AWS Region

US East (N. Virginia) us-east-1

Bucket type [Info](#)

- ☒ **General purpose**
Recommended for most use cases and access patterns. General purpose buckets are the original S3 bucket type. They allow a mix of storage classes that redundantly store objects across multiple Availability Zones.

- ☐ **Directory - New**
Recommended for low-latency use cases. These buckets use only the S3 Express One Zone storage class, which provides faster processing of data within a single Availability Zone.

Bucket name [Info](#)

www.mecfarmscm.com

Bucket name must be unique within the global namespace and follow the bucket naming rules. [See rules for bucket naming](#) [↗](#)

Copy settings from existing bucket - *optional*

Only the bucket settings in the following configuration are copied.

Choose bucket

Format: s3://bucket/prefix

Step 3: Set Up Your Root Domain Bucket for Website Hosting

1. Enable Static Website Hosting:

- o In the S3 console, click on the root domain bucket (e.g., jjtech.com).
- o Go to the **"Properties"** tab.

Amazon S3 > Buckets > mecfarmscm.com

mecfarmscm.com [Info](#)

Objects **Properties** Permissions Metrics Management Access Points

Bucket overview

AWS Region US East (N. Virginia) us-east-1	Amazon Resource Name (ARN) arn:aws:s3::mecfarmscm.com	Creation date July 26, 2024, 20:13:36 (UTC+02:00)
---	--	--

Bucket Versioning [Edit](#)

Versioning is a means of keeping multiple variants of an object in the same bucket. You can use versioning to preserve, retrieve, and restore every version of every object stored in your Amazon S3 bucket. With versioning, you can easily recover from both unintended user actions and application failures. [Learn more](#) [↗](#)

- o Scroll down to the "Static website hosting" section and click "Edit".

Static website hosting

Use this bucket to host a website or redirect requests. [Learn more](#)

Edit

Static website hosting
Disabled

- o select "**Enable**" and choose "**Host a static website**".
- o For the "Index document," enter **index.html**.
- o For the "Error document," enter **error.html**.

Edit static website hosting [Info](#)

Static website hosting

Use this bucket to host a website or redirect requests. [Learn more](#)

Static website hosting

☐ Disable

☒ **Enable**

Hosting type

☒ **Host a static website**

Use the bucket endpoint as the web address. [Learn more](#)

☐ Redirect requests for an object

Redirect requests to another bucket or domain. [Learn more](#)

i For your customers to access content at the website endpoint, you must make all your content publicly readable. To do so, you can edit the S3 Block Public Access settings for the bucket. For more information, see [Using Amazon S3 Block Public Access](#)

Index document

Specify the home or default page of the website.

index.html

Error document - *optional*

This is returned when an error occurs.

error.html

Redirection rules - *optional*

Redirection rules, written in JSON, automatically redirect webpage requests for specific content. [Learn more](#)

- o scroll down and click "**Save changes**".
- o Note the "Endpoint" URL under the "Static website hosting" section.

Static website hosting

Use this bucket to host a website or redirect requests. [Learn more](#)

Static website hosting

Enabled

Hosting type

Bucket hosting

Bucket website endpoint

When you configure your bucket as a static website, the website is available at the AWS Region-specific website endpoint of the bucket. [Learn more](#)

 <http://mecfarmscm.com.s3-website-us-east-1.amazonaws.com> 

Step 4: Set Up Your Subdomain Bucket for Website Redirect

1. Enable Redirection:

- o In the S3 console, click on the subdomain bucket (e.g., www.jjtech.com).
- o Go to the **"Properties"** tab.
- o Scroll down to the **"Static website hosting"** section and click **"Edit"**.
- o Select **"Enable"** and choose **"Redirect requests for an object"**.
- o In the "Target bucket" box, enter your root domain (e.g., jjtech.com).
- o For "Protocol," choose http.
- o Click "Save changes".

Amazon S3 > Buckets > www.mecfarmscm.com > Edit static website hosting

Edit static website hosting [Info](#)

Static website hosting

Use this bucket to host a website or redirect requests. [Learn more](#)

Static website hosting

☐ Disable

☒ **Enable**

Hosting type

☐ Host a static website
Use the bucket endpoint as the web address. [Learn more](#)

☒ **Redirect requests for an object**
Redirect requests to another bucket or domain. [Learn more](#)

Host name

Target bucket website address or personal domain

Protocol - *Optional*

☐ none

☒ **http**

☐ https

Cancel **Save changes**

Step 5: Upload index.html to Create Website Content

1. Create an index.html File:

- o Create a simple index.html file on your local machine with the following content:

```
html
Copy code
<!DOCTYPE html>
<html>
<head>
  <title>Amazon Route 53 DNS</title>
</head>
<body>
  <h1>JJTech Model Batch B is learning how to to use Route53 DNS for a static
website</h1>
  <p>For more information, checkout
  <a
href="https://academy.jjtechinc.co/our-courses/aws-foundational-and-advanced-
training/">JJTech's Advance training course outline</a>
  For more <emphasis>information on JJTech's detail
curriculum</emphasis>.</p>
</body>
</html>
```

2. Upload the index.html File:

- o In the S3 console, click on the root domain bucket (e.g., jjtech.com).
- o Go to the "Objects" tab.
- o Click the "Upload" button.
- o Drag and drop your index.html file or click "Add files" to upload it from your local machine.
- o Click "Upload".

Amazon S3 > Buckets > mecfarmscm.com > Upload

Upload [Info](#)

Add the files and folders you want to upload to S3. To upload a file larger than 160GB, use the AWS CLI, AWS SDK or Amazon S3 REST API. [Learn more](#)

Drag and drop files and folders you want to upload here, or choose **Add files** or **Add folder**.

Files and folders (1 Total, 467.0 B) Remove Add files Add folder

All files and folders in this table will be uploaded.

<input type="checkbox"/>	Name	Folder	Type
<input type="checkbox"/>	index.html	-	text/h

Destination [Info](#)

Destination
[s3://mecfarmscm.com](#)

► **Destination details**
Bucket settings that impact new objects stored in the specified destination.

► **Permissions**
Grant public access and access to other AWS accounts.

► **Properties**
Specify storage class, encryption settings, tags, and more.

Cancel Upload

Step 6: Edit S3 Block Public Access Settings

1. Disable Block Public Access:

- o In the S3 console, click on the root domain bucket (e.g., jjtech.com).
- o Go to the **"Permissions"** tab.
- o Click **"Edit"** under **"Block public access (bucket settings)"**.

Amazon S3 > Buckets > mecfarmscm.com

mecfarmscm.com [Info](#)

Objects | Properties | **Permissions** | Metrics | Management | Access Points

Permissions overview

Access finding
Access findings are provided by IAM external access analyzers. Learn more about [How IAM analyzer findings work](#)
[View analyzer for us-east-1](#)

Block public access (bucket settings) Edit

Public access is granted to buckets and objects through access control lists (ACLs), bucket policies, access point policies, or all. In order to ensure that public access to all your S3 buckets and objects is blocked, turn on Block all public access. These settings apply only to this bucket and its access points. AWS recommends that you turn on Block all public access, but before applying any of these settings, ensure that your applications will work correctly without public access. If you require some level of public access to your buckets or objects within, you can customize the individual settings below to suit your specific storage use cases. [Learn more](#)

Block all public access
☒ On

▼ Individual Block Public Access settings for this bucket

- ☒ **Block public access to buckets and objects granted through new access control lists (ACLs)**
S3 will block public access permissions applied to newly added buckets or objects, and prevent the creation of new public access ACLs for existing buckets and objects. This setting doesn't change any existing permissions that allow public access to S3 resources using ACLs.
- ☒ **Block public access to buckets and objects granted through any access control lists (ACLs)**
S3 will ignore all ACLs that grant public access to buckets and objects.
- ☒ **Block public access to buckets and objects granted through new public bucket or access point policies**

- o **uncheck** "*Block all public access*" and acknowledge the warning.
- o Click "**Save changes**", and **confirm** the change in settings.

Step 7: Attach a Bucket Policy

1. Set the Bucket Policy:

- o In the S3 console, go to the "**Permissions**" tab of the root domain bucket (e.g., jjtech.com).
- o Scroll down to the "**Bucket policy**" section and click "**Edit**".
- o Add the following bucket policy, replacing jjtech.com with your domain:


```
json
Copy code
{
  "Version": "2012-10-17",
  "Statement": [
    {
      "Sid": "PublicReadGetObject",
      "Effect": "Allow",
      "Principal": "*",
      "Action": "s3:GetObject",
      "Resource": "arn:aws:s3:::jjtech.com/*"
    }
  ]
}
```

Edit bucket policy [Info](#)

Bucket policy

The bucket policy, written in JSON, provides access to the objects stored in the bucket. Bucket policies don't apply to objects owned by other accounts.

Bucket ARN

 arn:aws:s3:::mecfarmscm.com

Policy

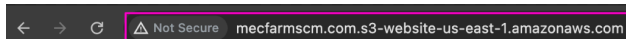
```
1 {  
2   "Version": "2012-10-17",  
3   "Statement": [  
4     {  
5       "Sid": "PublicReadGetObject",  
6       "Effect": "Allow",  
7       "Principal": "*",  
8       "Action": "s3:GetObject",  
9       "Resource": "arn:aws:s3:::mecfarmscm.com/*"  
10    }  
11  ]  
12 }  
13
```

- o Click "Save changes".

Step 8: Test Your Domain Endpoint

1. Verify Website Hosting:

- o Open a web browser and enter the URL for your root domain bucket. It should be in the format: `http://jjtech.com.s3-website-<region>.amazonaws.com`.
- o You should see your static website displayed.

 Not Secure mecfarmscm.com.s3-website-us-east-1.amazonaws.com

html Copy code

JJTech Model Batch B is learning how to use Route53 DNS for a static website

For more information, checkout [JJTech's Advance training course outline](#) For more information on JJTech's detail curriculum.

Step 9: Route DNS Traffic for Your Domain to Your Website

1. Open the Route 53 Console:

- o In the AWS Management Console, navigate to the **Route 53** console.
- o In the navigation pane, choose "**Hosted zones**" and select your hosted zone.

2. Create Record Sets for Your Domain:

- o Click "Create record".

The screenshot shows the AWS Route 53 console for the hosted zone 'mecfarmscm.com'. The 'Records (2)' tab is selected. The 'Create record' button is highlighted in red. Below the button, there is a table of existing records:

Record ...	Type	Routin...	Differ...	Alias	Value/Route traffic to
<input type="checkbox"/> mecfarms...	NS	Simple	-	No	ns-175.awsdns-21.com. ns-712.awsdns-25.net. ns-1265.awsdns-30.org. ns-1597.awsdns-07.co.uk.
<input type="checkbox"/> mecfarms...	SOA	Simple	-	No	ns-175.awsdns-21.com. aws

- o Choose "**Switch to wizard**".
- o Select "**Simple routing**" and choose "Next".

The screenshot shows the 'Choose routing policy' wizard. The 'Simple routing' option is selected, indicated by a blue circle. The description for 'Simple routing' is: 'Use if you want all of your clients to receive the same response(s)'. The diagram shows a shield with '53' and two server icons. The other options are 'Weighted', 'Geolocation', and 'Latency'.

o

o

- o Choose "Define simple record".

Configure records [Info](#)

You can create multiple records at a time that have the same routing policy.

Simple routing records to add to mecfarmscm.com [Info](#)

EditDelete

Define simple record

Use if you want all of your clients to receive the same response(s).

<input type="checkbox"/>	Record name	Type	Value/Route traffic to	TTL (seconds)
Define simple records to this list, then choose Create records .				
<div>Define simple record</div>				

- o In "Record name," accept the default value, which is the name of your hosted zone and your domain.
- o In "Record type," choose **A - Routes traffic to an IPv4 address and some AWS resources**.
- o In "Value/Route traffic to," choose **Alias to S3 website endpoint**.
- o Choose the region and select your S3 bucket for the root domain.
- o Click "Define simple record".

ord

Define simple record

×

Record name

Info

To route traffic to a subdomain, enter the subdomain name. For example, to route traffic to blog.example.com, enter *blog*. If you leave this field blank, the default record name is the name of the domain.

subdomain

mecfarmscm.com

Keep blank to create a record for the root domain.

Record type

Info

The DNS type of the record determines the format of the value that Route 53 returns in response to DNS queries.

A – Routes traffic to an IPv4 address and some AWS resources

▼

Choose when routing traffic to AWS resources for EC2, API Gateway, Amazon VPC, CloudFront, Elastic Beanstalk, ELB, or S3. For example: 192.0.2.44.

Value/Route traffic to

Info

The option that you choose determines how Route 53 responds to DNS queries. For most options, you specify where you want to route internet traffic.

Alias to S3 website endpoint

▼

US East (N. Virginia)

▼

Q s3-website-us-east-1.amazonaws.com

×

Evaluate target health

Select **Yes** if you want Route 53 to use this record to respond to DNS queries only if the specified AWS resource is healthy.

☒ Yes

Cancel

Define simple record

Finally click on **Create records**.

3. Create another A Record for Your Subdomain:

- o Repeat as above for creating the subdomain. Under "Configure records," choose "Define simple record".
- o In "Record name" for your subdomain, type www.
- o In "Record type," choose A - Routes traffic to an IPv4 address and some AWS resources.
- o In "Value/Route traffic to," choose Alias to S3 website endpoint.
- o Choose the region and select your S3 bucket for the subdomain.
- o Click "Define simple record".
- o On the "Configure records" page, choose "Create records".

Route 53 > Hosted zones > mecfarmscm.com > Create record

Step 1
[Choose routing policy](#)

Step 2
Configure records

Configure records [Info](#)

You can create multiple records at a time that have the same routing policy.

Simple routing records to add to mecfarmscm.com [Info](#)

Edit Delete Define simple record

Use if you want all of your clients to receive the same response(s).

<input type="checkbox"/>	Record name	Type	Value/Route traffic to	TTL (seco...
<input type="checkbox"/>	www.mecfarmscm.com	A	s3-website-us-east-...	-

▶ Existing records

Cancel Previous **Create records**

Step 10: Test Your Website

1. Verify Website Functionality:

- o Open a web browser and browse to the following URLs:
 - <http://your-domain-name> (e.g., jjtech.com) – Displays the index document in the root domain bucket.
 - <http://www.your-domain-name> (e.g., www.jjtech.com)