

Outline

- Background and Why We're Here
- AWS Console
- Setting up your S3 Bucket (URL not important)
- Purchasing your domain name on Amazon's Route 53 (Custom URL)
- Setting up your S3 Bucket (Custom URL)
- Glossary

Background

- Instructional designer and I specialize in technology, web design, and elearning development.
- I wanted to build a static web page with AWS and thought it would be easy using the dozens of help documents online but it took about three days to figure it out
- The language used to develop a regular web page is similar but not the same as building a web page in AWS and it's not completely straightforward.
- Once you learn how to build a web page in AWS it is usually much cheaper and easier to maintain than buying a hosting service. If you use AWS for all of the development process and do not have a flood of users it can cost around \$9 a year to make a static website. If you use a domain name registry service, it can cost as little as a dollar.
- Free tier year
- Number of users accessing the site will change the cost
- <https://aws.amazon.com/getting-started/projects/host-static-website/services-costs/>
- ALWAYS make sure to check out the cost estimator before using AWS as your website choice so you don't end up with a billing surprise.

AWS Console

- The console is the menu of all of the AWS services and you will need an Amazon account in order to access AWS.
- Site: www.console.aws.amazon.com

Setting up your S3 Bucket (URL not important)

- Go to AWS Console > Storage > S3
- Click "+ Create bucket"
- Give your bucket a name
- Leave "set properties" the way it is, but on "set permissions" under "Manage public permissions" you will select "Grant public read access to this bucket" There will be a warning tab that pops up – ignore his. I think S3 buckets were intended to store private data and then later used for web development so the system to make sure you are ok with your stuff being publically available.
- Create bucket on step 4
- Find your bucket and click on it
- Upload your html files (and any supporting files like JavaScript, PHP, CSS), click next, and under "manage public permissions" select "Grant public read access to this object(s)" and disregard the warning sign that appears. Click through and upload your file.
- Find your file in bucket and click on it.
- Under the "Link" heading at the bottom is your URL that you can distribute as your web page.

Purchasing your domain name on Amazon's Route 53 (Custom URL)

- Navigate to the AWS console
- You will go to Route 53 ... I have no idea why it is called this and this will not be the last weirdly named feature you will use in the AWS console
- Networking & Content Delivery > Route 53
- In the center of the page you will see a title "Register Domain" where you will type in your idea for a domain name and the prices for each extension will come up when you click "check"
- There is a lag time between purchasing your domain name and it showing up in the hosted zone. If you don't see it immediately don't panic – just check back later
- You should check out the "Hosted Zone" tab in the upper left side to see what types of information is there. If you decide to buy a domain name outside of Amazon, you will have to manually set up this information in Amazon and transfer the information Amazon adds to it back to the company where you purchased the domain name.
- Since we're using Route 53 for this project, Amazon pre-populates this information for us so we do not have to work with manual entry.
- Remember your domain name and bring it back to S3 for setup similar to what we did in the first section.

- **A note about domain names:**
- com addresses might be more expensive
- Newer extensions that are cheaper and sometimes funny
- fun .xyz .lol .tech .wine .win .party .science .online .space .website .health .art .eco .observer .life
- I strongly recommend checking to make sure the extension you want does not have a meaning or restrictions. For example, you may not want a .uk extension for you class in the US for students living in the US.
- There are fewer options using a domain name that you buy through Amazon and other sites have more options for cheaper (around a dollar per year)
- You can transfer a domain name after purchasing it from another registration service, like namecheap.com, however, this would be a presentation in itself.

Setting up your S3 Bucket (Custom URL)

- You will go through a similar process to create a S3 bucket in the first section, however, there are a few differences.
- You're going to be creating **two buckets**.
- Here's why: Think about when you enter in a URL for a webpage. Sometimes you use **example.com** and sometimes you include the www for www.example.com (please note that example.com is for an example and should not be used in your configurations)
- One bucket is for www.example.com (a bucket that redirects to example.com)
- The other bucket is for example.com (where your content will live)
- Create the **example.com** bucket (the www.example.com bucket will be created next)
- Go back to S3 and click "+ Create Bucket"
- Bucket name: example.com
- Keep the region as whatever is already pre-populated and click "Next"
- Keep "Set Properties" the same, click "Next"
- Choose "Grant public read access to this bucket" under "Set Permissions"
- Create the bucket
- The bucket is now created – click on the newly created link in S3
- Click on "Properties" on the tabbed menu
- Click on "Static website hosting"
- Choose "Use this bucket to host a website"
- Name your index document "index.html"
- Save this page
- Click on "Permissions" on the tabbed menu
- Click on "Bucket Policy"

- Paste in the code that I have provided below
- Change example.com to your URL that you picked in Route 53
- Click save and you are done creating your first bucket
- Now let's create the **redirect bucket**, or the www.example.com bucket
- Create bucket
- Enter in your web page with the leading "www"
- Move all the way through and "complete bucket"
- Navigate back to the bucket you just created
- In the tabbed menu select "Properties"
- Select "Static website hosting"
- Select "Redirect requests"
- In the "Target bucket or domain" type in the name of the non-www site. Do not use www. In this blank because you want to redirect to the other bucket.
- Note: This bucket does not need to be public.

Create a basic HTML page and upload it to your example.com S3 bucket not the one that starts with www

- Name the file "**index.html**" – Index and index are very different make sure to be consistent
- You don't need CSS or other files to do this test
- Navigate back to S3
- Click into your **non-www bucket**
- Click on "upload" and upload your index.html file.
- Under the "Set Permissions" select the "Grant public read access to this object(s)"
- Click through the menus and finish uploading the file.
- Go to the URL you selected in Route 53 and you now have a website!
- Note: If you do not see your website, wait about 20 minutes and check again. Sometimes there is a lag time. If you still don't see it, go back through the instructions and make sure you have all the settings correct

Mistakes I've made:

- When you paste in the code below you forgot to change example.com to your web address
- You forgot to make everything public
- You typed in the URL that you purchased incorrectly
- You created two www buckets or two non-www buckets
- You forgot to set the properties to "host a static web page"

Glossary

AWS – Amazon Web Services

Route 53 – Amazon’s Domain Name Service, in real human words this is where your web address is registered on the internet and what content is pointing toward

S3 Bucket – A space at AWS that holds your website content, sometimes referred to as “the cloud”

AWS Console – The main console where you can access and search for all of the AWS functions

URL – Uniform Resource Locator, basically a web address down to the last word. For example `www.example.com/examplesection/example.pdf`

Domain name – Similar to a URL but it translates into an IP address that pulls up the content of your web page for the user. Each section has its own organizational level

<https://www.lifewire.com/what-is-a-domain-name-2483189>

<https://techdifferences.com/difference-between-url-and-domain-name.html>

static web page – a web page that you just view and do not upload any files or comments

dynamic web page – a web page where you enter in information, buy an item, upload files etc.

hosting service – a service that manages your domain name, file storage, and provides other services such as databases, and helps you create spaces, such as Moodle, Omeka etc.

hosted zone – An area in the AWS Route 53 that helps you set up the details of your domain name

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