Let’s learn how to upload images to AWS S3 instead of using local storage!

Cloud Architecture

These days, cloud hosting providers are all the rage and for very good reasons! In the past, your app runs on one of your own servers. Your users will upload the pictures to the servers and life is all good. But what happens if your app receives too many requests (too many users). Your server will likely run out of memory and hang/crash. It’s just like your own computers, try opening 10 Excel files with 5 million rows of data each. Your computer, too, will hang/crash.

Cloud hosting providers offer the flexibility of running your app on as many servers as you need. So if one server can’t cope with the amount of traffic you are getting (congratulations! it’s a really good business problem), you need 2 or more servers right? Yeap! Cloud hosting providers will allow you to scale horizontally, which means, you can spin up new ‘identical’ servers to handle more request concurrently. Think of it like adding a second drain pipe to a swimming pool which allows the water to drain much faster with 2 pipes.

This sounds good and all, but there is a problem. The problem is that your pictures will now be store in the harddisk of Server 1 but not in Server 2. And if a user goes to your website and uses server 2 to upload her pictures, her pictures will not be on Server 1. If a user is browsing listings using Server 1, they will not see her pictures! Oh no!

Syncing files might sound like a good way to do it. But it’s technically too troublesome and error prone. Not to mention the delay between syncing and the unexpected nature of a web request coming in before you are able to sync.

The better way to do it is to upload the images to another server that is dedicated to storing and subsequently serving files (i.e. decoupling your app and file servers). Instead of spinning up a new server of your own, the easy way to do it is through Amazon Web Services’ S3.

Objectives

1. Sign up for an AWS account and open an S3 bucket.
2. In your app, get your images to upload to a remote server (S3) instead of storing it locally whenever a user uploads a new picture.
3. Don’t forget to configure your keys properly! Make sure they don’t get exposed!

***Hint**: check out this Google search result.