**Research about Heroku**

**What is Heroku?**

Heroku is a cloud platform as a service. That means you do not have to worry about infrastructure; you just focus on your application.

**Features of Heroku:**

* Instant Deployment with Git push - build of your application is performed by Heroku using your build scripts
* Plenty of Add-on resources (applications, databases etc.)
* Processes scaling - independent scaling for each component of your app without affecting functionality and performance
* Isolation - each process (aka dyno) is completely isolated from each other
* Full Logging and Visibility - easy access to all logging output from every component of your app and each process (dyno)
* Heroku provides very well written tutorial which allows you to start in minutes.
* Also they provide first 750 computation hours free of charge which means you can have one processes (aka Dyno) at no cost.
* Also performance is very good e.g. simple web application written in node.js can handle around 60 - 70 requests per second.

We are planning to use Nodejs Framework on heroku. The steps are given in the below link:

<https://devcenter.heroku.com/articles/getting-started-with-nodejs#introduction>

**Using AWS S3 to Store Static Assets and File Uploads**

[**https://devcenter.heroku.com/articles/s3**](https://devcenter.heroku.com/articles/s3)

[AWS Simple Storage Service](http://aws.amazon.com/s3/), e.g. S3, is a “highly durable and available store” and can be used to reliably store application content such as media files, static assets and user uploads. It allows you to offload your entire storage infrastructure and offers better scalability, reliability, and speed than just storing files on the file system.

AWS S3, or similar storage services, are important when architecting applications for scale and are a perfect complement to **Heroku’s**[**ephemeral file system**](https://devcenter.heroku.com/articles/dynos#isolation-and-security)**.**

What is S3?

S3 is a different kind of file service and has different semantics from other file-based services.

All files in S3 are stored in [buckets](http://www.labnol.org/internet/tools/amazon-s3-buckets-tutorial/3890/) which act as a top-level container much like a directory. All files sent to S3 belong to a bucket and bucket names must be unique across the whole Amazon system.

Access to the S3 API is governed by an Access Key ID and a Secret Access Key. The access key identifies your S3 user account while the secret key is akin to a password and should be kept secret.

heroku config:set AWS\_ACCESS\_KEY\_ID=xxx AWS\_SECRET\_ACCESS\_KEY=yyy

Adding config vars and restarting app... done, v21

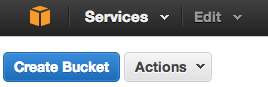
AWS\_ACCESS\_KEY\_ID => xxx

AWS\_SECRET\_ACCESS\_KEY => yyy

We will use Heroku’s config:set to connect to aws using access key id and aws secret key.

**S3 BUCKET:**

A single bucket typically stores the files, assets and uploads for an application. To create a bucket access the [S3 section of the AWS Management Console](https://console.aws.amazon.com/s3/home?) and create a new bucket in the US Standard region.



Whilst you have a lot of freedom in choosing a bucket name, [we suggest taking care in naming buckets](https://devcenter.heroku.com/articles/s3#naming-buckets) for maximum interoperability. Store the bucket name in a config var to give your application access to its value.

$ heroku config:set S3\_BUCKET\_NAME=appname-assets

Adding config vars and restarting app... done, v22

S3\_BUCKET\_NAME => appname-assets

File Uploads

There are two approaches to processing and storing file uploads from a Heroku app to S3: direct and pass-through.

* Direct – Upload
* Pass-through Upload

Note: Information about this is provided in the above link