**Multi-Service Configuration on AWS Including Website Hosting**

**Project Synopsis**

Project (IAI-851)

Degree

**BACHELOR OF TECHNOLOGY (CSE)**

|  |  |
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**FACULTY OF ENGINEERING & COMPUTING SCIENCES**

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# Project Title

**Multi-Service Configuration on AWS Including Website Hosting**

# Domain

Amazon Web Services, (AWS) is a subsidiary of [Amazon](https://en.wikipedia.org/wiki/Amazon.com) that provides [on-demand](https://en.wikipedia.org/wiki/Software_as_a_service) [cloud computing](https://en.wikipedia.org/wiki/Cloud_computing) [platforms](https://en.wikipedia.org/wiki/Computing_platform) and [APIs](https://en.wikipedia.org/wiki/Application_programming_interface) to individuals, companies, and governments, on a metered, pay-as-you-go basis. Often times, clients will use this in combination with autoscaling (a process that allows a client to use more compute in times of high application usage, and then scale down to reduce costs when there is less traffic). These cloud computing [web services](https://en.wikipedia.org/wiki/Web_services) provide various services related to networking, compute, storage, middleware, IOT and other processing capacity, as well as software tools via AWS [server farms](https://en.wikipedia.org/wiki/Server_farms). This frees clients from managing, scaling, and patching hardware and operating systems. One of the foundational services is [Amazon Elastic Compute Cloud](https://en.wikipedia.org/wiki/Amazon_Elastic_Compute_Cloud) (EC2), which allows users to have at their disposal a [virtual](https://en.wikipedia.org/wiki/Virtualization) [cluster of computers](https://en.wikipedia.org/wiki/Computer_cluster), with extremely high availability, which can be interacted with over the internet via [REST](https://en.wikipedia.org/wiki/REST) APIs, a CLI or the AWS console. AWS's virtual computers emulate most of the attributes of a real computer, including hardware [central processing units](https://en.wikipedia.org/wiki/Central_processing_unit) (CPUs) and [graphics processing units](https://en.wikipedia.org/wiki/Graphics_processing_unit) (GPUs) for processing; local/[RAM](https://en.wikipedia.org/wiki/Random-access_memory) memory; hard-disk/[SSD storage](https://en.wikipedia.org/wiki/Solid-state_drive); a choice of operating systems; networking; and pre-loaded application software such as [web servers](https://en.wikipedia.org/wiki/Web_server), [databases](https://en.wikipedia.org/wiki/Database), and [customer relationship management](https://en.wikipedia.org/wiki/Customer_relationship_management) (CRM).

# Problem Statement

When you enable static website hosting for your bucket, you enter the name of the error document (for example, **404.html**). After you enable static website hosting for the bucket, you upload an HTML file with this error document name to your bucket.

1. Create an error document, for example 404.html.
2. Save the error document file locally.

The error document name is case sensitive and must exactly match the name that you enter when you enable static website hosting. For example, if you enter 404.html for the **Error document** name in the **Static website hosting** dialog box, your error document file name must also be 404.html.

1. Sign in to the AWS Management Console and open the Amazon S3 console at <https://console.aws.amazon.com/s3/>.
2. In the **Buckets** list, choose the name of the bucket that you want to use to host a static website.
3. Enable static website hosting for your bucket, and enter the exact name of your error document (for example, 404.html). For more information, see [Enabling website hosting](https://docs.aws.amazon.com/AmazonS3/latest/userguide/EnableWebsiteHosting.html).

After enabling static website hosting, proceed to step 6.

1. To upload the error document to your bucket, do one of the following:
   * Drag and drop the error document file into the console bucket listing.
   * Choose **Upload**, and follow the prompts to choose and upload the index file.

# Project Description

The goal of this project is to host a highly secure and reliable website using AWS S3 and configure with Cloudfront and configure with Route53 by domain name. It is a virtual private server that is used to host numerous websites. You can experiment with working on AWS by hosting a website. You can create a website connected to the Route53. To host the website building task easier, you can use S3 with AWS Cloudfront. It provides SSD-based storage and comes pre-configured.

## Scope of the Work

We include generally available services in the scope of our compliance efforts based on the expected use case, feedback and demand. If a service is not currently listed as in scope of the most recent assessment, it does not mean that you cannot use the service. It is part of the [shared responsibility](https://aws.amazon.com/compliance/shared-responsibility-model/) for your organization to determine the nature of the data. Based on the nature of what you are building on AWS, you should determine if the service will process or store customer data and how it will or will not impact the compliance of your customer data environment.

# Implementation Methodology

Static websites deliver HTML, JavaScript, images, video and other files to your website visitors and contain no server-side application code, like PHP or ASP.NET. They typically are used to deliver personal or marketing sites.

Static websites are very low cost, provide high-levels of reliability, require no server administration, and scale to handle enterprise-level traffic with no additional work.

# Technologies to be used

## Software Platform

* AWS Platform
* Operating System(linux)

## Hardware Platform

* RAM - Minimum 4gb.
* Hard Disk - Minimum 32gb.
* Processor i-3, AMD 3 upwards**.**

## Tools

* S3 bucket.
* CloudFront.
* Route53.

# Advantages of this Project

* User-friendly.
* Flexible.
* Secure.
* Cost-effective.
* Reliable.
* Scalable and Elastic.
* Highly Performant.

# Future Scope and further enhancement of the Project

The AWS Certification helps you pursue career paths like AWS Solutions Architect, AWS Engineer, DevOps Engineer, and Cloud Architect among others. In order to avail of these opportunities, you need structured AWS training with an updated curriculum as per current industry requirements and best practices.

# Team Details

| **Project Name & ID** | **Course Name** | **Student ID** | **Student Name** | **Role** | **Signature** |
| --- | --- | --- | --- | --- | --- |
| Multi-Service Configuration on AWS Including Website Hosting | B.tech, CSE-A.I(i-Nurture) | TCA196006 | Siddhartha Mishra | Developer, Testing etc. |  |
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# Conclusion

There are numerous architectural and conceptual considerations when you are contemplating migrating your web application to the AWS Cloud. The benefits of having a cost-effective, highly scalable, and fault-tolerant infrastructure that grows with your business far outstrips the efforts of migrating to the AWS Cloud.

# References

* *https://www.google.com/search?q=Conclusion+of+website+hosting+in+aws&sxsrf=AJOqlzXEZFpTMfeQSuaUOgxqCDfsGIJGXA%3A1677773903700&ei=T8wAZKqwKtTV4-EPjcikyAk&ved=0ahUKEwjqk6zs0r39AhXU6jgGHQ0kCZkQ4dUDCA8&uact=5&oq=Conclusion+of+website+hosting+in+aws&gs\_lcp=Cgxnd3Mtd2l6LXNlcnAQAzIFCAAQogQyBQgAEKIEMgUIABCiBDIFCAAQogQ6BAghEApKBAhBGABQAFj9L2CQNGgAcAF4AIABzQOIAb0YkgEKMC4yLjEwLjAuMZgBAKABAcABAQ&sclient=gws-wiz-serp*