**Project objective:**

You have to deploy ELK Stack on a Docker container to implement continuous monitoring.

**Background of the problem statement:**

Your manager has asked to create an elegant user interface for data analysis and data visualization as you have worked on ELK stack previously and have the idea of how it works. This will help the DevOps team to monitor and analyze the application behavior.

**Core Concepts:**

**Amazon EC2**: Amazon Elastic Compute Cloud (Amazon EC2) provides scalable computing capacity in the Amazon Web Services (AWS) Cloud. Using Amazon EC2 eliminates your need to invest in hardware up front, so you can develop and deploy applications faster. You can use Amazon EC2 to launch as many or as few virtual servers as you need, configure security and networking, and manage storage. Amazon EC2 enables you to scale up or down to handle changes in requirements or spikes in popularity, reducing your need to forecast traffic. Some Features of Amazon EC2: Amazon EC2 provides the following features:

* Virtual computing environments, known as instances
* Preconfigured templates for your instances, known as Amazon Machine Images (AMIs), that package the bits you need for your server (including the operating system and additional software)
* Various configurations of CPU, memory, storage, and networking capacity for your instances, known as instance types

**Instances:** An instance is a virtual server in the cloud. Its configuration at launch is a copy of the AMI that you specified when you launched the instance.

**AMI:** An Amazon Machine Image (AMI) is a template that contains a software configuration (for example, an operating system, an application server, and applications). From an AMI, you launch an instance, which is a copy of the AMI running as a virtual server in the cloud. You can launch multiple instances of an AMI, as shown in the following figure.

**CloudFront**: Amazon CloudFront is a web service that speeds up distribution of your static and dynamic web content, such as .html, .css, .js, and image files, to your users. CloudFront delivers your content through a worldwide network of data centers called edge locations. When a user requests content that you're serving with CloudFront, the request is routed to the edge location that provides the lowest latency (time delay), so that content is delivered with the best possible performance.

**Bootstrap:** Bootstrap is the most popular HTML, CSS and JavaScript framework for developing a responsive and mobile-friendly website. It is absolutely free to download and use. It is a front-end framework used for easier and faster web development. It includes HTML and CSS-based design templates for typography, forms, buttons, tables, navigation, modals, image carousels, and many others. It can also use JavaScript plug-ins. It facilitates you to create responsive designs.

**Pushing the code to your GitHub repositories:**

* Open your command prompt and navigate to the folder where you have created your files.

cd <folder path>

* Initialize your repository using the following command:

git init

* Add all the files to your git repository using the following command:

git add.

* Commit the changes using the following command:

git commit. -m “Changes have been committed.”

* Push the files to the folder you initially created using the following command:

git push -u origin master