**Grafana**:

What is Grafana?

* Grafana is an open-source data visualization and analysis tool designed by Torkel Odegaard in January 2014.
* It enables us to create a dashboard for collecting, processing, storing, and analyzing data from various different sources.
* It allows us to query, visualize, alert on, and understand our metrics without worrying about the location where it is stored on the memory.
* It includes a variety of visualization option that helps us to understand our data, beautifully.
* Grafana is written in Go and Node.js LTS language with a strong API (Application Programming Interface).

### Features of Grafana

The most important features of Grafana are listed below:

**1. Plugins Platform**

Grafana provides an advanced platform to users for easier, faster, and most efficiently create new high-quality plugins.

**2. Transformation**

Transformation is the most important feature of Grafana that allows us to transform non-time series data into tables within seconds without any additional overhead.

**3. Dynamic Dashboards**

Grafana helps us to create a dynamic and reusable dashboard with good looking templates that appear at the top of the dashboard.

**4. Authentication**

Grafana supports authentication techniques like LDAP and Google Auth to map users to the organization.

**5. Explore Metrics and Logs**

In Grafana, we can explore our data metrics through ad-hoc queries. We can also split-view using different time range and data range.

**6. Alerting**

Grafana helps us to continuously evaluate and send alert notification to a number of different notifiers, including systems such as Slack, VictorOps, OPsGenie, SMS, email, and PagerDuty.

**7. Annotations**

Annotations are useful for correlating data if something went to wrong.

**8. Mixed Data Sources**

Grafana supports various storage backends for data sources such as **AWS CloudWatch, Azure Monitor, Elasticsearch, Loki, Microsoft SQL Server (MSSQL), OpenTSDB, PostgreSQL, and Stackdrier**.

**9. Beautiful Dashboard**

Grafana contains a well-designed dashboard with beautiful Graphs, Text, Alert messages, tables, clock, Logs, plugin lists, and more.

**10. Big community**

Grafana community has more than 600 developers all over the world. Its community includes large organizations such as **VMware, Paypal, AWS, RedHat**, and more.

Download Grafana:

[Download Grafana | Grafana Labs](https://grafana.com/grafana/download?platform=windows)

[Download the installer](https://dl.grafana.com/enterprise/release/grafana-enterprise-8.2.2.windows-amd64.msi) (grafana-enterprise-8.2.2.windows-amd64.msi) and run it.

Default user name/password : admin/admin

**WCAG standards:**

Web Content Accessibility Guidelines:

The WCAG documents explain how to make web content more accessible to people with disabilities. Web “content” generally refers to the information in a web page or web application, including:

* natural information such as text, images, and sounds
* code or markup that defines structure, presentation, etc.

Accessibility Testing:

Accessibility Testing is defined as a type of Software Testing performed to ensure that the application being tested is usable by people with disabilities like hearing, color blindness, old age and other disadvantaged groups. It is a subset of [Usability Testing](https://www.guru99.com/usability-testing-tutorial.html).

People with disabilities use assistive technology which helps them in operating a software product. Examples of such software are:

* Speech RecognitionSoftware – It will convert the spoken word to text , which serves as input to the computer.
* Screen reader software – Used to read out the text that is displayed on the screen
* Screen Magnification Software– Used to enlarge the monitor and make reading easy for vision-impaired users.
* Special keyboard made for the users for easy typing who have motor control difficulties

## What is scope?

Scope for Accessibility testing is just like scoping of any other project/application. It's all about seeing exactly where and how you want to add/implement accessibility around your app and its components. For example,

You may only want to add accessibility needs to your homepage and instruct users to call in for more information or further assistance.  You would set the testing scope for the home page and test that the accessibility features and components are working exactly how you planned them to work.

## How you measure it?

Measuring accessibility requires just a little bit of empathy, it’s really all about making sure that you’ve considered all potential caveats for those who may need a little help when accessing your application. Well, that and using tools like Azure Boards to keep track of all accessibility tasks and any potential bugs you may face when developing.

**LightHouse and aXe:** Tools to test the Accessibility and WCAG standards.

These are added as plugins into Chrome browser.