# Performance Dashboard for Continuous Benchmarking of HPC Libraries

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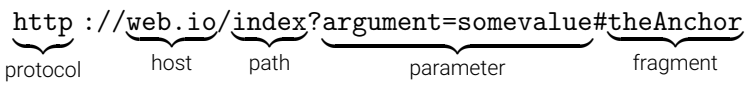
## 1 Introduction

Glossary acronym example:
CI
Continuous Integration
Continuous Integration (CI)




more placeholder

# 2 Goals

## 2.1 Required

**heading** NICHT IMPLEMENTIERT **M1**

yet more placeholder

**Schnelle Weiterleitung Kurz- zu Lang-URL** **M2**
Implementiert durch: FR1

**Authentifizieren mit E-Mail oder Facebook** **M3**
Implementiert durch: FR2

**Rechtlichte Vorgaben werden eingehalten** **M4**
Implementiert durch: FR3 FR4

template

## 2.2 Optional

**Authentifizieren mit Github** **K1**
Implementiert durch: FR2

**Seite mit Betreiberinfo** keine entsprechende Anforderung **K2**

template

## 2.3 Limitation

**Keine Wahl Kurz-URL** **A1**

template

# 3 Usage

template

# 4 Product Environment

template

# 5 Functional Requirements

**Schnelle Weiterleitung** NICHT GETESTET **FR1**
Implementiert: M2

template

**template** NICHT GETESTET **FR2**
Implementiert: M3 K1

template

**Auf jeder Seite ist ein Link “Impressum”** NICHT GETESTET **FR3**
Implementiert: M4

template

**Auf jeder Seite ist ein Link “Datenschutz”** NICHT GETESTET **FR4**
Implementiert: M4

template

**Daten werden persistent gespeichert** NICHT GETESTET **FR5**
Implementiert:

template

# 6 Nonfunctional Requirements

**Modernes Design** **NF1**

template

**Persistenz** **NF2**

template

**Erweiterbarkeit** **NF3**

template

# 7 Tests

# 8 Scenarios

**Scenario name:** pushAndInspect
**Participating actor:** Ted: Developer

- Ted pushes his work to a git repository and fires off a benchmarkt test
- Ted opens the web app and selects his last pushed change
- Ted chooses a type of visualization
- The app creates the given type of visualization with the benchmark results from the selected change

**Scenario name:** visualizeFromTemplate
**Participating actor:** Greta: User

- Greta opens the web app
- Greta chooses a template for a visualization
- Greta chooses which commit she wants to visualize
- The app creates the given type of visualization with the commit

**Scenario name:** saveTemplate
**Participating actor:** Greta: User

- Greta opens the web app
- Greta configures a visualization
- Greta saves her visualization as a template for future use

**Scenario name:** inspect
**Participating actor:** Greta: User

- Greta wants to see the latest performance benchmarks for the project
- Greta opens the web app and selects the latest change
- Greta chooses a benchmark to compare

- Greta chooses a type of visualization by selecting which value to plot on the x axis and which value on the y axis
- The app creates the given type of visualization with the benchmark results from the selected change

**Scenario name:** compareImplementations
**Participating actor:** Greta: User

- Greta wants to know which implementation is the fastest
- Greta opens the web app and selects a benchmark
- Greta selects commits from different branches containing different implementations
- Greta chooses a type of visualization by selecting which value to plot on the x axis and which value on the y axis.
- The app creates the given type of visualization with the benchmark results from the selected change

**Scenario name:** pushAndCompare
**Participating actor:** Ted: Developer

- Ted pushes his work to a git repository, and fires off a benchmark test.
- Benchmark results are fed into the database.
- Ted opens the webapp and selects his last pushed change>
- Ted selects a previous change that he wants to compare to.
- Ted chooses a type of visualization.
- The app creates the given type of visualization with the benchmark results from the selected changes.

**Scenario name:** badPerformance
**Participating actor:** Ted: Developer

- Ted pushes his work to a git repository, and fires off a benchmark test.
- Benchmark results are fed into the database.

- Our dashboard-backend realizes that the benchmark data for this change is far worse than usual.

- Ted gets notified that his last pushed change significantly worsened the performance and the related details about that.

**Scenario name:** impossiblePerformance
**Participating actor:** Ted: Developer

- Ted pushes his work to a git repository, and fires off a benchmark test.

- Benchmark results are fed into the database.

- Our dashboard-backend realizes that the benchmark data for this change is theoretically impossible.

- Ted gets notified that his last pushed change has improved the performance above the theoretical maximum and the related details about that.

**Scenario name:** shareVisualization
**Participating actor:** Greta: User

- Greta found an interesting visualization for something.

- Greta clicks a *share* button next to the visualization.

- Greta gets a link she can share with others that redirects them to the exact same visualization.

**Scenario name:** visualizeCommitWithoutBenchmark
**Participating actor:** Greta: User

- Greta opens the web app and wants to visualize benchmarkdata for a specific commit. This commit has no benchmark data attached to it, only the commit before and the commit after.

- Greta can't click on the commit because it is greyed out.

**Scenario name:** takeVisualizationFromHistory
**Participating actor:** Greta: User

- Greta opens the webapp and visualizes something. She then visualizes something else. Her previous visualizations are stored in a list somewhere.

- Greta decides to take another look at a previous visualization.
- Greta picks her previous visualization and gets the previous visualization.

**Scenario name:** postBenchmarkResults
**Participating actor:** bencharkCI: CI

- The benchmarkCI processes a benchmark and gets some results.
- The benchmarkCI posts the results to the backend of the system using the API supplied by the system.
- The benchmark results are stored in the backend database system.

## Glossary

**CI** Continuous Integration.

**Developer** Person working on the project that is to be benchmarked.

**template** Configuaration of a visualization.