

## HashiScope – Realtime interactive display of a Nomad cluster

2-LINER description: Design and develop a real-time interactive visualisation of a Nomad Cluster that will be used as an operational monitoring tool.

[Description of the assignment]

- *“HashiCorp Nomad is a tool for managing a cluster of machines and running applications on them. Nomad abstracts away machines and the location of applications, and instead enables users to declare what they want to run and Nomad handles where they should run and how to run them.”*
- To ease the operational work, we’ll need to develop a real-time interactive visualization of the many components of a Nomad Cluster
- Using the existing Nomad REST API, we’ll need to visualize the real-time high-level overview of all the nodes and their current workloads. Next up we’ll add more detailed data such as metrics, tags and metadata, ... so we can make the whole cluster more interactive and make it so that an admin can execute certain actions through the tool (e.g. Check up on logs, restart certain jobs, ...)

[Goals]

- Functional analysis: what can be shown and in which way?
- Technical implementation:
  - Development of a UI (using an existing Nomad API)
  - If necessary: develop a backend to offer even more data

[What will you gain?]

- You’ll start using HashiCorp toolsuite applications such as Consul, Nomad, ...
- You’ll have an instructive experience in developing a frontend application using an existing API

[What do you need?]

- General interest in Javascript applications using frameworks such as Vue.js, D3.js, ...
- A creative mindset when it comes to visualisations
- The eagerness to learn a heck of a lot in a relatively short period in time

[Location of your assignment]

- Veldkant 33B, 2550 Kontich

[Your mentor]

- Johan Siebens – Business unit manager OnTheSpot

[Technologies you’ll be using]

- HashiCorp Consul/Nomad
- Javascript frameworks such as Vue.js, D3.js, ...