Digital Infrastructure Overview and Specifications

Infrastructure specifications

Inception and Design

The CommsLabs digital infrastructure was designed as online spaces to support the CommsLabs events. The idea originated when the CommsLabs were being redesigned to be remote or hybrid events as opposed to fully in person events as they have been held previously. The event required platforms for text, audio and video communication, online storage and simultaneous collaborative document editing, and document publishing. Although commercial and also non-commercial options were available, we decided that hosting our own digital infrastructure was the best approach. We took this decision based on our evaluation of the requirements in terms of privacy, security and digital sovereignty of the activists taking part in the events.

Services

We currently run a series of services in a bare metal server hosted by Hetzner in Germany. Each individual service is hosted in a separate virtual machine using kvm virtualization. The services form the digital infrastructure used in during all phases of the events: inception, design, implementation, evaluation and archival.





BigBlueButton – videoconference tool



Nextcloud+OnlyOffice – document storage and simultaneous collaborative editing



Drupal – document publishing



Mattermost – text and audio communication



HAProxy – routing traffic



Firewall – securing access to the individual virtual machines



LDAP – user storage, authentication and authorization



Borg backups – automated backups

Load

The digital infrastructure overall size and load changes through the different stages of the events. During the inception and design, around a dozen users will be active in the platforms, while during the implementation of the actual event this number might jump to up to 80 active users.

Maintenance and Backups

- Backups are done every two hours, sent and stored in a external online storage space.
- Maintenance is performed weekly.

Web design specifications

Download Terms of Reference for Web designer / Graphic designer

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