



OST

Eastern Switzerland
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Distributed Systems (DSy)

In the news

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09.03.2024

Distributed Systems & Blockchain in the News

- Lecture 2: The Billion Row Challenge (1BRC) - Step-by-step from 71s to 1.7s [[link](#)]
 - Other languages?
 - Golang: from 105s to 4s [[link](#)] [[others](#)], 1.1s [[link](#)]
 - C: from 480s to 1.6s [[link](#)]
 - Rust: 1.6s [[link](#)]
 - Node.js: 23s [[link](#)], bun failed (14s [[link](#)] partial)
 - Number on different machines: don't compare it's about the magnitude
 - In production code: start simple, only optimize where necessary!
- Lecture 3: Broken seacables, damaged allegedly by terrorists (not confirmed) [[link](#)]
 - Confirmed: 06.03.24: Seekabel im Roten Meer durchtrennt – Bedrohung für das Internet in Europa wächst [[link](#)]
 - 3 cables broken (AAE1, TGN-Gulf), due to attacks of Huthi rebels that attacked a ship, the ships anchor damaged these cables
 - 4 cables (Seacom, TGN, AAE-1, EIG) [[link](#)]
 - 05.03.2024: Facebook, Instagram, and Threads were all down [[link](#)]
 - Massive Meta outage

Distributed Systems & Blockchain in the News

- Lecture 3 (admin): Web Push Notifications
 - 03.2024: Why don't users in the EU have access to Home Screen web apps? [\[link\]](#)
 - “Developers and users who may have been impacted by the removal of Home Screen web apps in the beta release of iOS in the EU can expect the return of the existing functionality for Home Screen web apps with the availability of iOS 17.4 in early March.”
- 29.02.2024: Deploying Fiber In The Home [\[link\]](#)
 - Deploying fiber optic cable
- 08.03.2024: Home Lab Beginners guide (Hardware) [\[link\]](#)
 - Upgrades over time
- Docker
 - [dockur](#): Windows in Docker
 - Windows does not run in a container, but uses KVM, docker is used for the installation process
 - [dockerc](#): Compile docker images to binaries, its still containerized, e.g., uses crun to run container, but does not need docker to be installed