



OST

Eastern Switzerland
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Distributed Systems (DSy)

In the news

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Distributed Systems & Blockchain in the News

- 05.04.2022: New block scale Intel ASIC technology revealed offering 580 GH/s blockchain hash rates [\[link\]](#)
 - Energy Efficient Hashing for the Future [\[link\]](#)
 - Efficiency: 26 J/TH
 - Fall 22: Bitcoin Miner S19 XP **21.5 J/TH**
- 04.04.2022: Single-Chip Processors Have Reached Their Limits [\[link\]](#)
 - Slide L01S05
 - Apple's M1 Ultra ~114b transistors
 - Nvidia Hopper H100 GPU ~80b transistors
 - AMD 64-core Epyc ~39.5b transistors
 - Multichip modules / chiplet / tiles → more cores?
- 31.03.2022: Crypto assets: new rules to stop illicit flows in the EU [\[link\]](#)
 - Reminder: reason for Bitcoin & Ethereum: decentralize finance with unhosted wallets
 - “...all transfers of crypto-assets will have to include information on the source of the asset and its beneficiary, information that is to be made available to the competent authorities. The rules would also cover transactions from so-called unhosted wallets”
 - Exception, pure P2P transactions
 - **Monero** could not be used directly via Kraken/Coinbase/etc?

Distributed Systems & Blockchain in the News

- 02.04.2022: Explaining Spring4Shell: The Internet security disaster that wasn't [\[link\]](#)
 - Lecture 6: Unclear situation: 2 different RCEs published recently. One has a CVE and the other doesn't.
 - CVE-2022-22963 → medium severity
 - RCE ? Spring4Shell? Medium, high, critical?
 - It was a “normal” weekend :)
 - Only when deployed as war file – Spring boot not affected [\[link\]](#)
- Lecture 6: Performance tuning – some ideas
another idea: use **kTLS**
 - Kernel TLS, encrypted in kernel, no need to copy data – boost ~8% - 29%
- 05.04.2022: Evaluating Graviton 2 for data-intensive applications: an Arm vs Intel comparison [\[link\]](#)
 - Measurements: ARM better performance/cost?
 - vCPU/Cores does not say anything about speed
 - Measurement of AWS limiter? 1st figure vs. 4th figure