Distributed Systems & Blockchain (DS1)

In the news

Thomas Bocek

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Distributed Systems & Blockchain in the News

- 03.03.2021: Bitsquatting Windows.com

  - Lecture 1: HW eventually breaks

    - Bitsquatting in 2011 (ikamai.net, microsmft.com):

      - "59 unique IPs per day made HTTP requests to my 32 bitsquat domains"

01110111	01101001	01101110	01100100	01101111	01110111	01110011
w	i	n	d	o	w	s

01110111	01101000	01101110	01100100	01101111	01110111	01110011
w	h	n	d	o	w	s

  - 32 domains with 1 bitflip for $126

  - NTP, HTTP

    - With HTTP: not sure if mistyped or bitsquatted

  - ~45 unique IPs per day made NTP requests

- Addendum to QLC

  - A student had to replace his QLC SSD in a server setting – performance was really bad.

    - QLC: 4 bits (16 states) ~ 1'000? write cycles
    - PLC: 5 bits (research)
    - Consumer, server SSD (example / example)

- 03.03.2021: Mars-Rover läuft mit mehr als 20 Jahre altem Apple-Prozessor

  - Ist not an Apple processor. It shares the same architecture.

  - Much more bitflips in outer space

    - Mars Rover: RAD750

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Distributed Systems & Blockchain in the News

- 18.02.2021: Nvidia Limits RTX 3060 Hash Rate, Unveils New 'Cryptocurrency Mining Processor' Line of GPUs

  - Currently difficult to get a decent GPU

  - Cryptocurrency Mining Processor (CMP)

    – Ethereum Mining

  - "RTX 3060 software drivers are designed to detect specific attributes of the Ethereum cryptocurrency mining algorithm, and limit the hash rate, or cryptocurrency mining efficiency, by around 50 percent."

  - But still the same GPU goes to CMP or GeForce/Quandro

    – While miners can use any GPU, consumers cannot use CMP, due to lack of display ports

- 25.02.2021: Speed is the killer feature

  - Lecture 2: latency QUIC vs. HTTP/TLS1.2

  - Places where speed matters

    – Websites, VR, UI

- 20.02.2021: Life of an HTTP request in a Go server

  - Example of serving HTTP requests in go

    – Based on: https://gobyexample.com/http-servers

    – With explanations

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