

The virtual side of IoT The Cloud

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30.10.2023

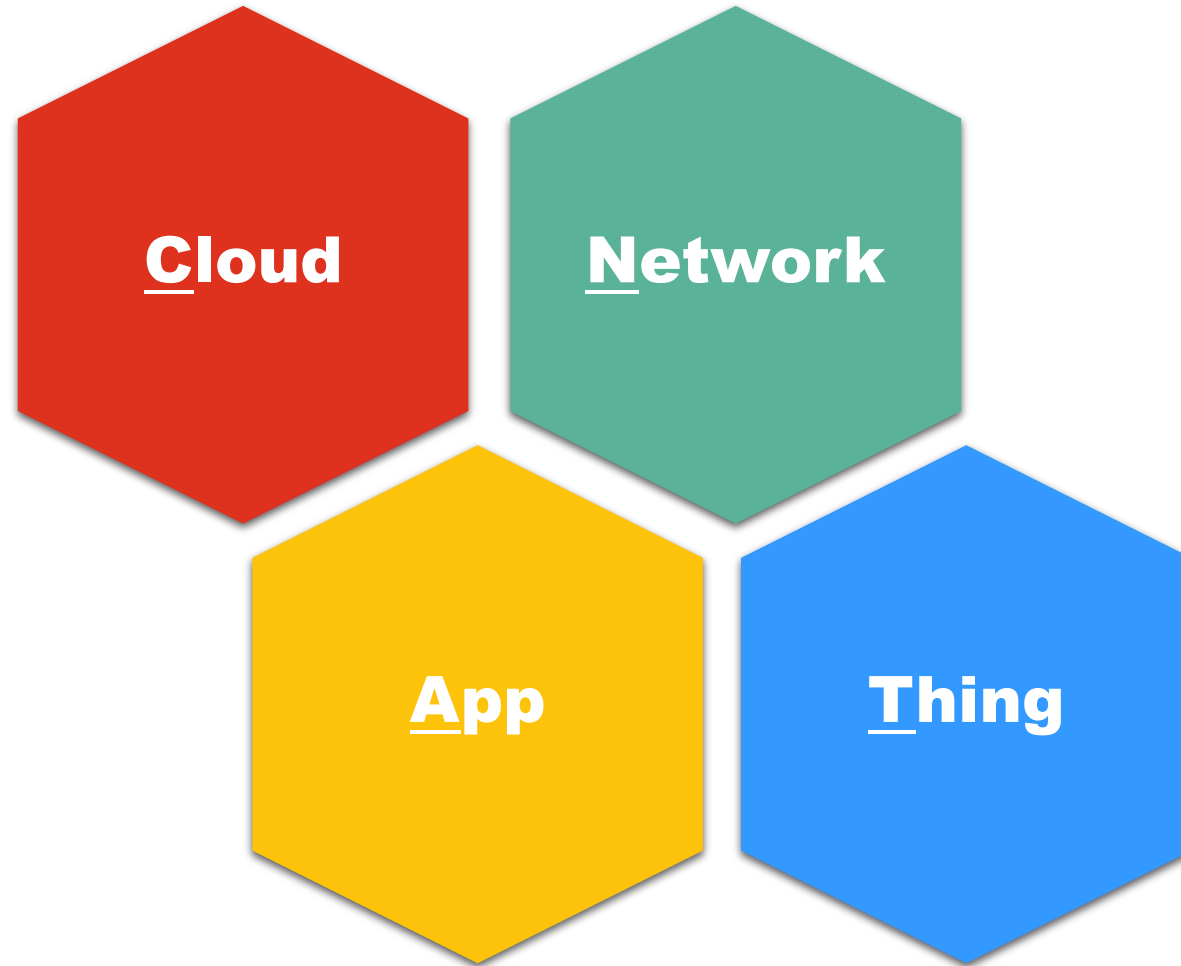
Recap of last week's lecture

- What is meant by the term IoT?
- What are the typical main components of an IoT system?

Key parts of IoT system

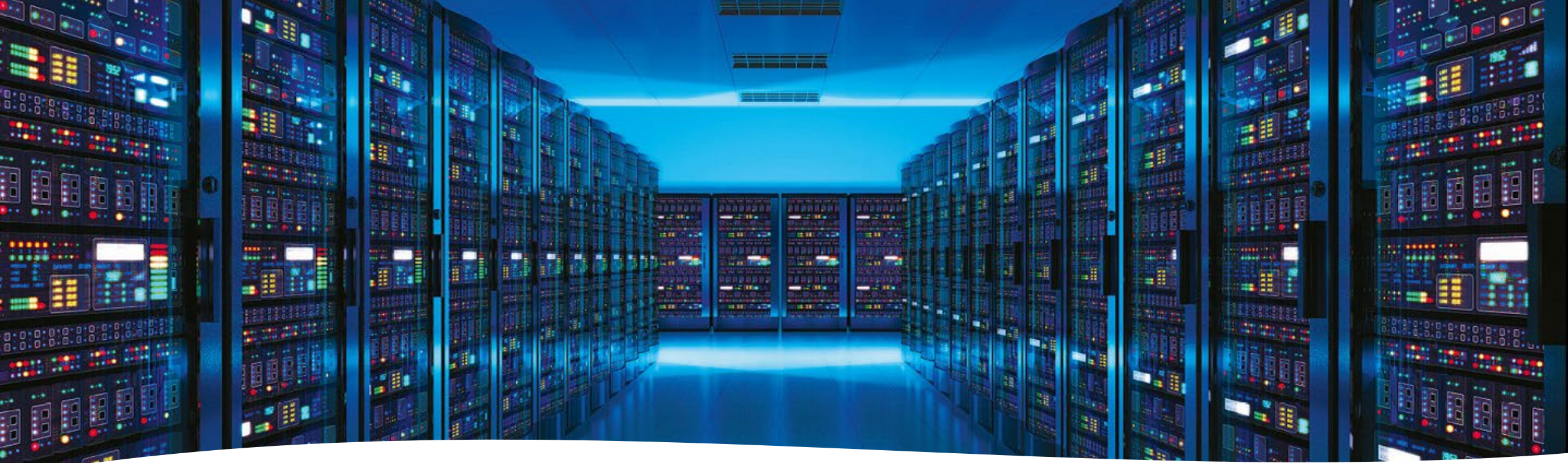


Key parts of IoT system



Learning Goals

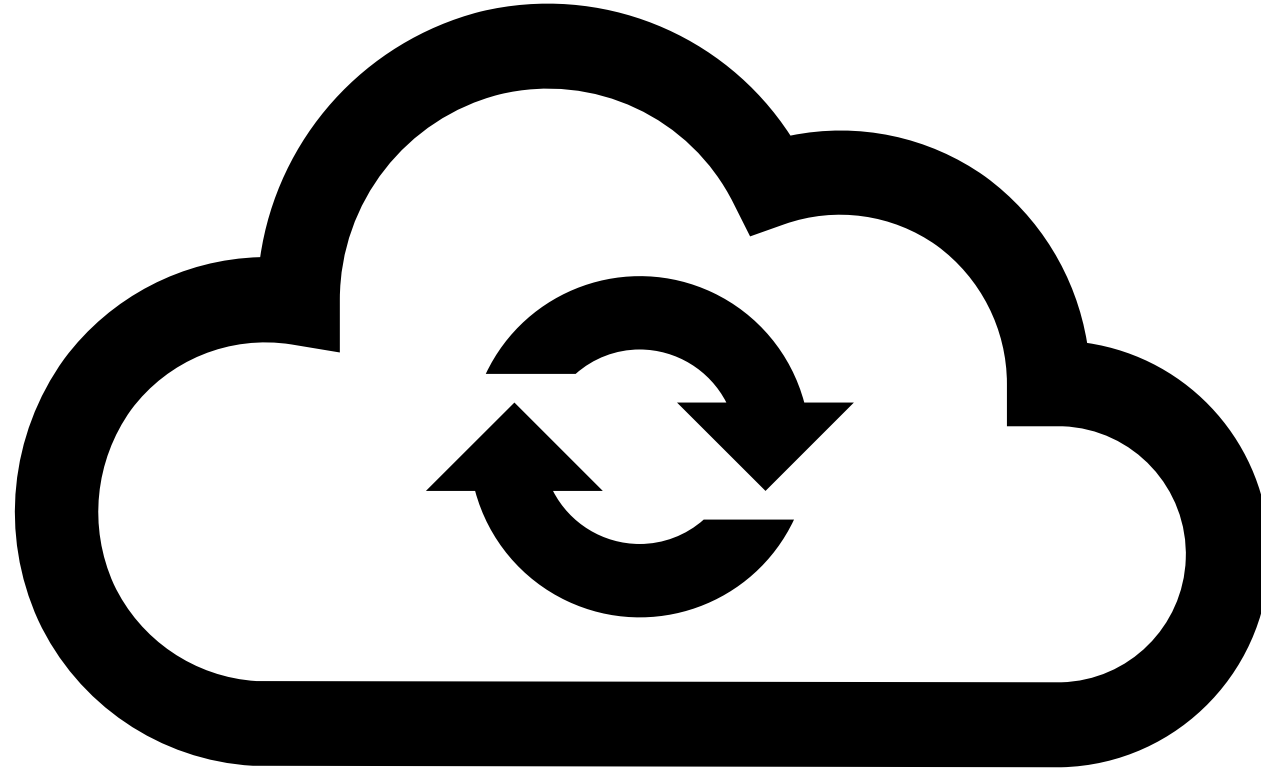
- What are cloud services
- What are the typical uses for cloud services
- What cloud services are relevant for IoT applications
- Trying out an example together as a class



The Cloud

- Essentially an **over-simplified idea** of different kinds of online services.
- They run on data centers, which have servers (=computer that does not have a display) as the foundation

Cloud services?



Cloud services:

- AWS – Amazon Web Services
- Oracle Cloud
- Azure, Google Cloud, iCloud

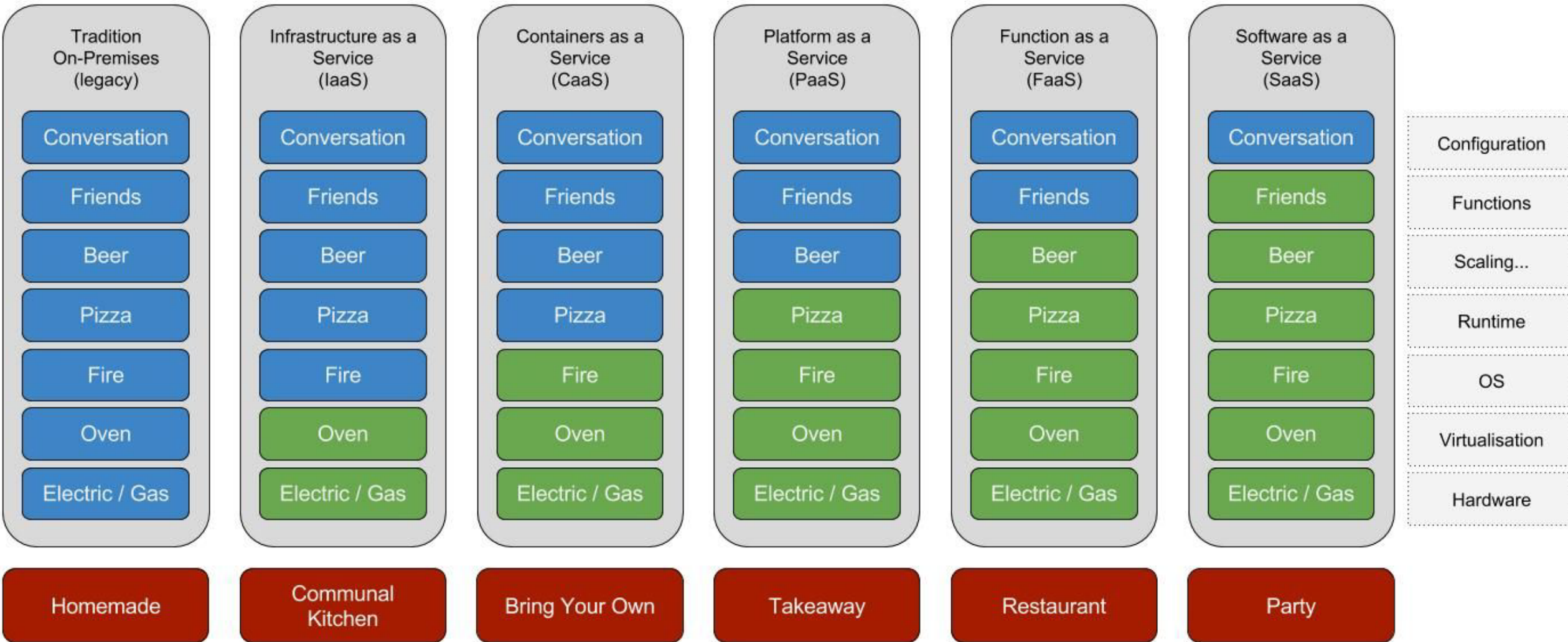
- Microsoft 365, Google docs
- DropBox, OneDrive
- Steam, Spotify, Netflix
- Autodesk, Adobe
- Uber, AirBnB, Wolt, Foodora, ...
- Unreal Engine – not really cloud service, but connected

XaaS – X as a Service



Pizza as a Service 2.0

<http://www.paulkerrison.co.uk>



■ You Manage

■ Vendor Manages

Use case: A web shop

What do you need?

- We need a Web Domain: neppi.store (from service provider)
- We need the Data Centre Service
- Graphical User Interface (GUI) for customers to place orders
- Warehouse to collect the physical items
 - Inventory management, logistics, delivery
- Product information
 - Photos, data sheets, leaflets,
- Payment Processing
 - Accounting, ..
- Legal stuff: privacy statement, terms of service, ...

Some web shop alternatives

Web Shop Platforms

- Wix
- Shopify
- Squarespace
- Zyro
- Volusion

Opensource Web Shop software

- WooCommerce
- Magento Open Source
- PrestaShop
- OpenCart

A web shop on own website: What do you need?

1. Domain name
2. Webhosting service (storage and database)
3. Web pages/web app
4. Payment system

What did we learn?

- What are cloud services
- What are the typical uses for cloud services
- What are the typical ways for IoT devices to connect to the cloud, and what is their practical difference

IaaS, CaaS, PaaS, FaaS, SaaS