

ouees-202106 topic 09:

Cloud computing basics

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On the internet

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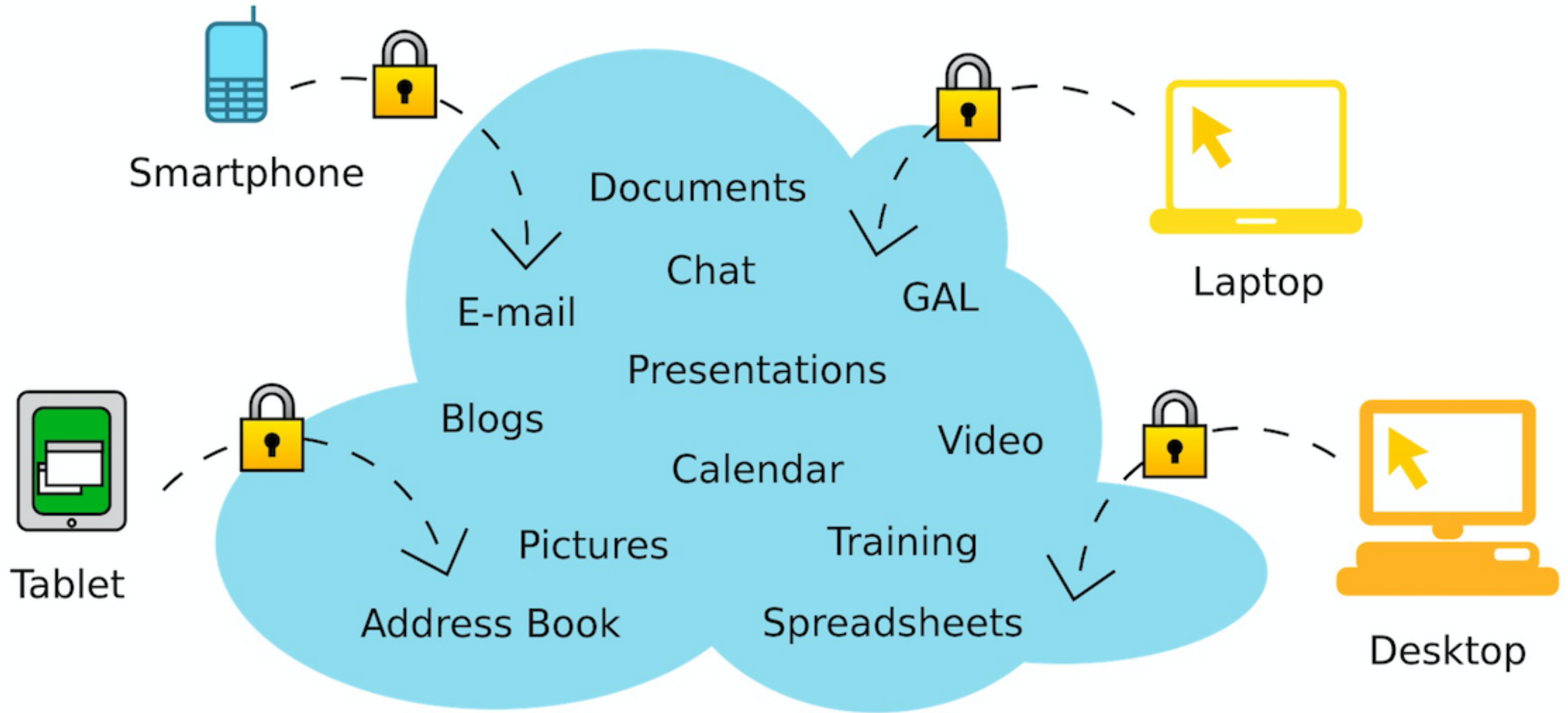
- <https://github.com/jj1bdx/oueees-202106-public/>
- Check out the README.md file and the issues!
- Keyword at the end of the talk
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Topic of this video:

Cloud computing basics



Modern computing *is cloud
computing*



Cloud Computing

Having secure access to all your applications and data from any network device

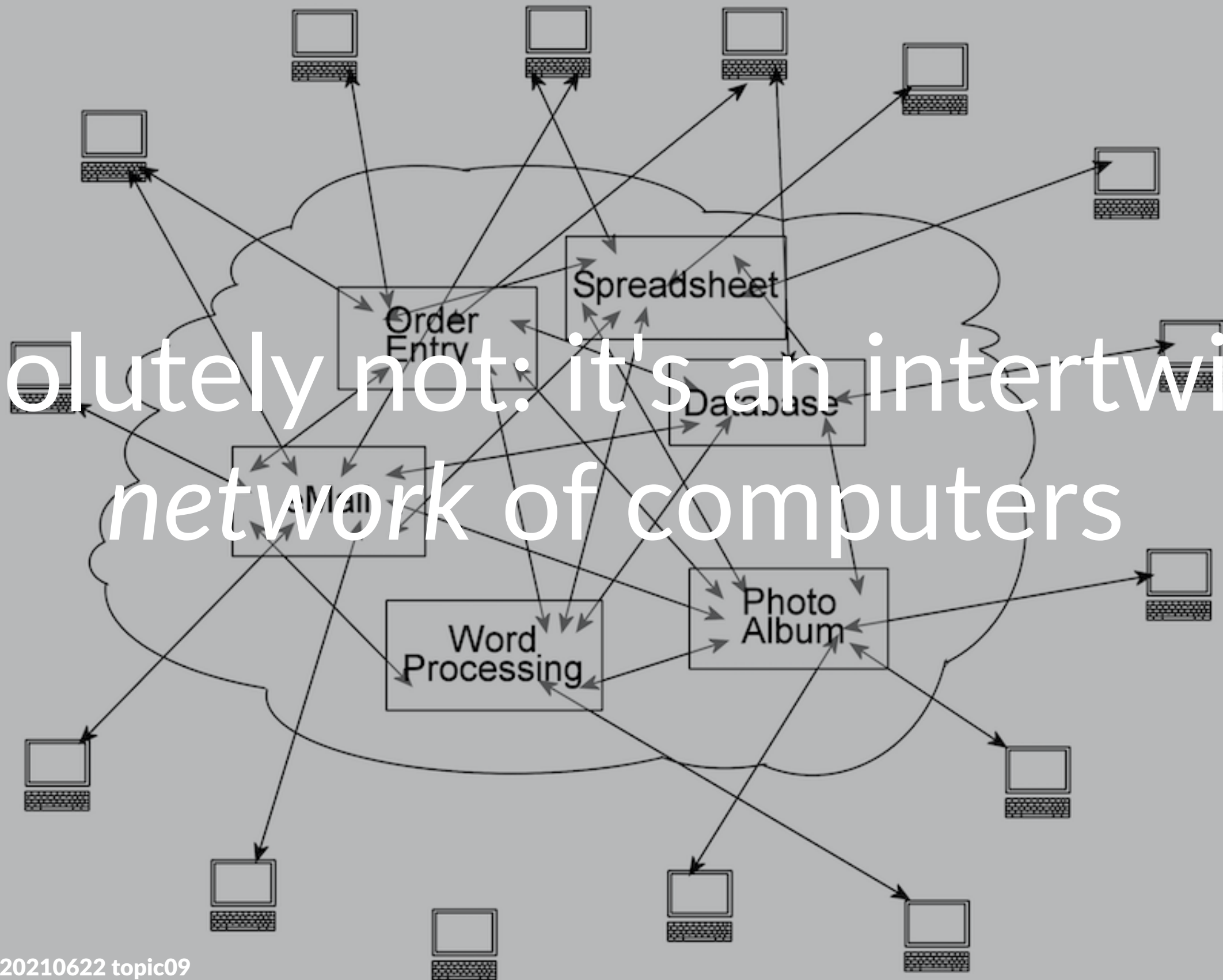
A diagram illustrating cloud computing. A central blue cloud contains various application labels: Documents, Chat, GAL, E-mail, Presentations, Blogs, Video, Calendar, Pictures, Training, Address Book, and Spreadsheets. Surrounding the cloud are four device icons: a Smartphone (top left), a Laptop (top right), a Tablet (bottom left), and a Desktop (bottom right). Each device is connected to the cloud by a dashed line that passes through a yellow padlock icon, symbolizing secure access.

Is cloud really a uniform and single entity?

Cloud Computing

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Having secure access to all your applications and data from any network device

Absolutely not: it's an intertwined
network of computers



Web services are clusters of computers and networks

Thousands or millions of servers
connected together

A physical server is separated into multiple
virtual machines



Cloud computing *is* centralization

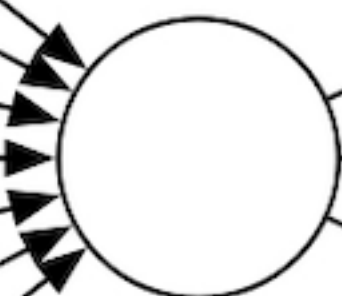
An example of cloud computing: Internet of Things (IoT) and telemetry

“Things” or devices



Collecting data

internet



Transport

Servers in the cloud



Data analytics,
visualization,
and storage

Telemetry

- Mostly unidirectional (not really *the true and genuine internet*)
- Sensors/devices gathering data through internet and feed them to the servers in the cloud computing platforms
- *The servers compute*
- *Extremely centralized*

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- Intertwined network of computers: https://en.wikipedia.org/wiki/File:Cloud_Computing.jpg, licensed under [Creative Commons CC0 1.0 Universal Public Domain Dedication](#)
- Web services are clusters of computers: Kenji Rikitake, at Kyoto University ACCMS, April 2017