## **Problems with the Cloud**

## 1.1 What is a cloud?

Today, in many professions, we are dependent on tools that work in the cloud. This becomes especially true when we work in teams. We have to write collaboratively, share files, conduct video calls and invite each other to calendar events. What might have seemed almost impossible a few decades ago, has become so simple that it has become almost invisible to us as users: Right click, share, send, done.

What a lot of us are not always aware of is that this seamless experience is enabled by an expansive network of digital and physical infrastructure that runs around the clock for our convenience. Or, in more simple terms: For us to collaborate in the cloud, somewhere in the world there is a very fancy, very fast computer that facilitates this collaboration. Usually these computers are located in vast data centers around the world, many of which are controlled by a small number of hard- and software conglomerates which, in turn, have come to use a significant percentage of the world's energy production.

## 1.2 Why is that a problem?

As mentioned above, this infrastructure is incredibly expensive from an energy usage/environmental point of view. Even though many data centers around the world are run with 100% renewable energies, in many cases they use so much power, that there simply is no more green energy left for the rest of the power grid, which remains powered through the use of fossil fuels.

As mentioned above, large parts of the cloud are run by large corporations like Amazon, Apple, Google and the like. Companies (and monopolies) with histories of

- worker exploitation in the global south,
- of supply chains that include child labor and extraction from indigenous lands,
- of producing abhorrent amounts ofe-waste that ends up on land fills in the global south,
- of spying on their users to sell them ads,
- of sharing this information with governments,
- of profiting from political division and right wing radicalization,
- of intentionally making their products addictive,
- of locking their users in incomprehensible terms and conditions.
- and of being aware of all of the above while not changing any of it.

We urgently need to ask ourselves if we really want one of these companies to facilitate the infrastructure on which we run our businesses, collectives, foundations, associations or individual practices. But besides these ethical considerations, there is the more practical issue of being dependent on them.

Most cloud services give the users little to no control about the way their files and data are handled. Instead, they intentionally lock users into so-called *walled gardens*, beautifully designed interfaces that are difficult to escape from. In practice, this often means

- users can't edit or access their files and documents when they are not connected to the internet,
- users don't know where files are physically saved, or how to recover them when they are lost,
- users can't easily switch to another service and take their documents, files and data with them,
- by excluding users from the way things work behind the scenes, they are kept dependent on these services and unable to set things up by themselves,
- users have to pay monthly fees in order to be allowed to keep accessing their data (see: Software as a Service (SaaS)),
- if there is an issue (like lost or accidentally deleted data), there is no customer service to turn to,
- users have to trust that any sensitive data is handled appropriately and have no control over security measures taken by these companies. Large corporations have large amounts of data, which makes them a target. They get hacked all the time, data is leaked all the time.
- As was the case with Twitter in 2022, companies can change owners, business models or Terms of Service within a few weeks, potentially limiting access to users' data or forcing them into new payment plans or dependencies. There is no stability in these (often very young!) companies.

## **1.3 Some notes on expense**

As mentioned above, running services in the cloud is computationally expensive. All data is constantly fragmented, distributed and redundant, so that even if a whole data center were to break down, users wouldn't notice. But the cost (in compute power, bandwidth, energy consumption) of maintaining this level of availability is hidden behind the smooth interfaces that we as end users interact with: the edges are round and everything seems light, immediate, easy and immaterial.

As a result of this, our notion of the expense of the cloud is warped. Or, in other words, we are spoiled: any amount of *friction*—of something not happening immediately, or something not working exactly as intended—is perceived as an inconvenience, perceived as a divergence from the smooth *norm*. From this perspective, an effort like self-hosting (which almost certainly entails a process full of friction) can seem unfeasible or unpractical, while in reality it is the status quo that is unsustainable.

We urgently need to question whether everything really needs to be available 99.99% of the time and more. But we also need to rethink our notion of expense and accept that cloud services don't just happen by themselves. If we don't want companies like Amazon and Google to provide them to us at the aforementioned costs and ethical compromises, we need to invest the time and energy to set them up, and to maintain them ourselves. Maybe we have to stop looking at this as additional time that we have to invest on top of all the work we already do, but look at this as a key component of organizing—similarly to how we need to take care of finances, and how we would often have a dedicated member of any group, collective, foundation or association, that facilitates these tasks.

Luckily, there are actually a number of services and tools freely available for those that are willing and able to put in the necessary time and energy, which we will explore in this guide.

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