

“Some people consider the internet a cloud, as if it's floating around in the sky, but it's not, it's a real physical thing. The internet is a physical building just like this, interconnected through miles and miles of fiber and cable, all throughout the world, and all of these buildings can talk to each other and share data back and forth.” Says the Facebook Data center specialist. After reading chapter 3 and watching the video, I thought to myself “I'm one of these people that thought of the internet as a cloud floating on the sky”, which can sound silly, but it's only because I had no idea about these huge buildings where all data is stored. After having a deeper understanding about this chapter, I learned that Facebook is a social network where 1 in 7 people in this world have, and for this reason, the storage of the information for all these people is massive. For example, in the video they show a storage facility for the Facebook data of millions of people in Prineville, Oregon. Their data center is the size of three football fields, and there's a lot of money involved in the process of building these structures that can cost hundreds of millions of dollars in the end. All the memory is stored in cutting-edge servers and massive memory banks that will pass the information from one another in a millisecond when people access their Facebook accounts. There is so much data going around these machines that they have to keep a cool temperature at all times so they don't overheat. Another important factor is the amount of electricity that is demanded by these centers. Even trying to locate them in colder places to try to save some, we are still talking about 100 billion kilowatts-hour energy, with each one of them representing 20 billion kilowatts-hour energy. All this energy requires a backup service at all times in case something goes wrong. The Oregon center has 14 diesel generators with each one being capable of 3 megawatts in case of a power generation.

According to the video, Facebook hires 1 engineer for each one million users. At 2.3 billion users, in 2018, Facebook has approximately 2,300 engineers. However, at a growing pace of 100 million users every six months, as we are in 2023, 5 years later, this means, 10 x 6 months (each year has 2 x 6 months, so it's 10 times six months after 5 years), so 10 x 100 million users, resulting in 1 billion new users the past 5 years. Given that, as we follow the same rate as started in this video, we currently have 3.3 billion users, resulting in 3,300 engineers.