Press Release

12 terabits per second data throughput:

New record at DE-CIX Frankfurt Internet Exchange

Frankfurt am Main, 10 August 2022 – New data throughput record at the Frankfurt Internet Exchange DE-CIX. Yesterday evening, shortly after 9 p.m. CET, the barrier of 12 terabits of data throughput per second was broken for the first time. 12 terabits per second correspond to over 2.6 million videos in HD quality streamed simultaneously. This is already the second record this year, as the world's leading Internet Exchange operator was already able to measure a data throughput of 11 terabits per second at its Frankfurt site on 1 February. Yesterday evening, exactly 12.43 terabits per second were recorded.

With this new record, data traffic at the Frankfurt Internet Exchange has already increased by 14 percent this year and by as much as 50 percent since the start of the Covid-19 pandemic in 2020. DE-CIX Chief Technology Officer Dr. Thomas King explains why there has been such a significant increase in such a short time: "Since the beginning of the Covid pandemic, there has been a surge in digitalization. At DE-CIX, we notice this in the strong increase in data traffic on our platform and in a real bandwidth boom. More and more customers are demanding ever greater capacities. While bandwidths of 100 Gigabit Ethernet (GE) were the gold standard a few years ago, 400 GE ports are already in use today. We are already preparing the next capacity level with 800 GE ports." Commenting on yesterday's data surge, King explains, "Such a traffic spike in the middle of summer – when people are out enjoying the good weather – is unusual. But experience also shows that, in addition to Internet use for entertainment, software updates for PCs or other devices rolled out simultaneously worldwide are a significant driver of data throughput."

With the new record data throughput and nearly 1,100 connected customers, DE-CIX in Frankfurt is one of the largest Internet Exchanges in the world. Including Frankfurt, DE-CIX operates nearly 40 Internet Exchanges in Europe, North America, the Middle East, India and Asia, to which almost 3,000 networks are connected. These DE-CIX Internet Exchanges form the world's largest neutral interconnection ecosystem with a connected customer capacity of over 100 terabits.

What is a terabit per second? This what a data throughput of 12 terabits per second means (for those who don't work with bits and bytes everyday)**:**

- A terabit per second, Tbit/s or Tbps, is a dimension for the transmission speed of data.
- 1 Terabit per second is 10^3 Gbit/s, 10^6 Mbit/s, 10^9 kbit/s or 10^{12} bit/s, i.e. around 1,000,000,000,000 bits per second.
- The next lower data rates are expressed in gigabits per second (Gbit/s) and megabits per second (Mbit/s).
- 12 terabits per second is as much as 2.64 million HD-quality videos streamed simultaneously

Background:

What exactly is an Internet Exchange?

DE-CIX interconnects Internet providers, content providers, hosting and cloud providers directly at its Internet Exchanges, for example, so that they can exchange data with each other in a cost-neutral manner (peering). The advantage of this direct connection: The data does not have to travel long distances to the next exchange point, where both network operators happen to be in the same data center and network via a direct optical fiber. To connect to the Internet Exchange, network operators book so-called ports with different maximum bandwidths. In Frankfurt, DE-CIX is seeing increasing demand for ports with high bandwidths, with 100 GE or even 400 GE.

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