

Number of the year 2021:

Data traffic at DE-CIX Internet Exchanges jumps to over 38 exabytes

Frankfurt am Main, 21 January, 2022. [DE-CIX](#), the world's leading Internet Exchange operator, measured a significant increase in its traffic in 2021. A total of more than 38 exabytes of data were exchanged at the global DE-CIX Internet Exchanges¹ in 2021. 38 exabytes is equivalent to the storage capacity of more than 300 million smartphones, each with 128 GB of storage space, or the data volume consumed by the population of a small city if every inhabitant were to spend their entire life watching a video stream in HD quality. Compared with the previous year and the start of the Covid-19 pandemic, the figure has increased by around 20 percent. In 2020, the total data throughput was 32 exabytes.

“Overall, global data traffic stabilized at a high level in 2021, after the outbreak of the pandemic and the record-breaking year in 2020, and continues to grow steadily,” says Dr. Christoph Dietzel, Global Head of Products & Research at DE-CIX. “This shows that concepts such as work-from-home with video conferencing, and home entertainment with video streaming and gaming, have become established in everyday life, and this growth will only continue.”

The data throughput of video conferences via the Internet Exchange in Frankfurt was especially high in the first months of the year, up to the end of lockdown and contact restrictions. In the summer months, with lower infection rates and vacation time, however, it was only half as much as at the beginning of the year. For video streaming via Netflix, Disney Plus, Amazon Prime Video and others, the distribution was similar, but with smaller seasonal differences. The picture was different for gaming traffic: Here, the final months of the year saw new peaks.

DE-CIX in Frankfurt is one of the largest Internet Exchanges in the world, with over 29 exabytes of data traffic in 2021, a peak data throughput of nearly 11 terabits per second (Tbps), and over 1100 connected networks. DE-CIX currently operates a total of 32 Internet Exchanges worldwide, either alone or in various cooperation and partnership models.

¹ DE-CIX sites fully owned and operated by DE-CIX – excluding partner sites

Some background information: **How much is 38 exabytes?**

- The transmission speed of data is specified in terabits per second (Tbps).
- 1 terabit per second is 10^3 Gbit/s, 10^6 Mbit/s, 10^9 kbit/s, or 10^{12} bit/s, or 1,000,000,000,000 bit/s.
- 8 Terabits = 1 Terabyte (TB) and 1,000,000 TB = 1 Exabyte (EB)
- 38 EB is the storage capacity of more than 300 million smartphones (each with 128 GB of storage). If you were to place that number of smartphones end-to-end, they would more or less reach around the Earth at the equator.
- 38 EB is the data volume of a video stream in HD quality lasting nearly 1.5 million years. This corresponds to the data volume that a small city with a population of around 18,000 would consume if every inhabitant streamed an HD video for their entire life.

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About DE-CIX

DE-CIX (German Commercial Internet Exchange) is the world's leading operator of Internet Exchanges. In total, in its 32 locations in Europe, North America, the Middle East, and Asia, DE-CIX interconnects close to 2500 network operators (carriers), Internet service providers (ISPs), content providers, and enterprise networks from more than 100 countries, offering peering, cloud, and interconnection services. The combined connected customer capacity of all DE-CIX locations worldwide exceeds 90 Terabits, making it the largest neutral interconnection ecosystem in the world. DE-CIX in Frankfurt, Germany, with a data throughput of more than 10 Terabits per second (Tbps) and over 1000 connected networks, is one of the largest Internet Exchanges in the world.

Further information at www.de-cix.net

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