Press release

DE-CIX Internet Exchanges:
Global data traffic in 2023 jumps by
23 percent to 59 exabytes

8 November 2023: the strongest day of data traffic, with 22.36 terabits per second

Frankfurt am Main (Germany), 29 January 2024. Data traffic at the global DE-CIX Internet Exchanges increased significantly again in 2023. Worldwide, the more than 3,100 connected networks exchanged a total of almost 59 exabytes at the locations operated by DE-CIX, corresponding to an increase of around 23 percent compared to the previous year: In 2022, the figure stood at 48 exabytes. Global data throughput reached a record level of 22.36 terabits per second (Tbit/s), the highest throughput for the year on the evening of November 8, 2023, in parallel with the 4th match day of the UEFA Champions League. The peak coincided with the latest record at DE-CIX Frankfurt: the traffic exchanged by the close to 1,100 local, regional and global connected networks reached a peak of 16.62 Tbit/s on November 8. DE-CIX Frankfurt continues to be Europe's largest Internet Exchange, with 40 exabytes of data throughput in 2023.

Internet-based applications drive development

The growing use of Internet-based applications has been driving the development of data traffic at DE-CIX for years. While the figure was 32 exabytes in 2020 and 38 exabytes in 2021, the current total of 59 exabytes corresponds to around 9.8 billion two-hour video streams, for example. This is equivalent to the number of bits and bytes generated if every man, woman, and child on the planet were to watch more than two hours of video streaming. The amount of data can also be equated to the storage space on smartphones: totaling over 460 million devices, each with a storage capacity of 128 gigabytes.

DE-CIX Internet Exchanges keep the world connected

From video conferencing and streaming services to gaming – there were significant differences in terms of usage over the course of the year: Gaming services were in particularly high demand at the beginning and in mid-2023. The same goes for video conferencing, which found regular

usage in spring and late summer, outside of vacation months. In line with this seasonal activity, the peaks in video streaming can be seen in summer and winter. "Whether for emails, artificial intelligence, data-based products, the immersive Internet, or the transmission of global sports highlights – the fast and secure connections at DE-CIX Internet Exchanges are essential for our digital daily lives," says Ivo Ivanov, CEO at DE-CIX. "Our Internet Exchanges not only connect people and societies worldwide, but also bring individual companies and entire economies together to do business."

This is also demonstrated by the developments at the individual DE-CIX locations around the globe. For example, data throughput at peak times at DE-CIX New York has increased by around 22% to 1.61 Tbit/s compared to the beginning of 2023. This trend is also visible at DE-CIX Dallas (Peak: 1.01 Tbit/s, comparison January 2023: +61 percent), DE-CIX Madrid (Peak: 1.54 Tbit/s, comparison January 2023: +44 percent) and at DE-CIX Mumbai (Peak: 1.48 Tbit/s, comparison January 2023: +32 percent). The positive trend is also reflected in the broader regions in which the company is active. For example, in 2023, data traffic amounted to around 3.1 exabytes in Southern Europe, 5.7 exabytes in India, and around 6.4 exabytes in North America. DE-CIX now offers its peering, cloud connectivity and other interconnection services in over 50 metro markets worldwide.

Some background information: How much is 59 exabytes?

- The transmission speed of data is specified in terabits per second (Tbit/s).
- 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)
- 59 exabytes (EB) is the storage capacity of 460,625,000 smartphones (each with 128 gigabytes of storage space).

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seamless, fast, and secure data exchange between people, enterprises, and organizations at its locations around the globe.
Further information at www.de-cix.net

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