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EDGE COMPUTING

Edge computing is a distributed IT architecture which moves computing resources from clouds and data centers as close as possible to the originating source. Rather than sending all data to a central server or cloud for processing, edge computing allows for the processing to occur at the 'edge'

of the network, closer to where the data is generated. This approach can offer several benefits, including reduced latency, reduced congestion, and lower network bandwidth requirements.

One of the primary advantages of edge computing is its ability to reduce latency. By processing data closer to the source, edge computing can minimize the time it takes for data to travel back and forth between devices and a central server. This is particularly important for real-time applications like autonomous vehicles, where even a few milliseconds of delay could have serious consequences.

Another benefit of edge computing is reduced congestion. Despite the advancements in the internet infrastructure, the massive amount of data generated daily by billions of devices can still cause significant congestion.

With edge computing, there is the availability of local storage and servers, which can conduct crucial edge analytics even during network disruptions.

In addition to these benefits, edge computing can also help to reduce network bandwidth requirements. This is because only relevant data needs to be transmitted to a central server, rather than all data generated by devices and sensors. This can result in significant cost savings for organizations that need to transmit large amounts of data over a network.

However, there are also some challenges associated with edge computing. One of the main challenges is the security. The level of physical security at edge sites is typically lower compared to that of core sites. Therefore, an edge strategy needs to consider a higher possibility of both intentional and unintentional occurrences.

Overall, edge computing is a promising technology that can offer several benefits for organizations looking to process and analyze data closer to the source. With continued advancements in hardware and software, edge computing is likely to become an increasingly important component of many industries in the years to come.