**What is edge computing?**

Edge computing is a distributed, open IT architecture that features decentralized processing power, enabling mobile computing and Internet of Things (IoT) technologies. Edge computing allows data from IOT devices to be analysed at the edge of the network before being sent to a data centre or cloud.

In edge computing the data is locally managed, stored, processed, and analysed. Basically, in this technique the data is not sent to the centralized data-processing warehouse called as cloud, edge is responsible for data processing.

Edge devices process the data and send only relevant data to the cloud which reduces bandwidth needs. These devices can be IOT sensor, security camera or the latest smartphone. Edge computing helps to break limitations imposed by traditional cloud-based networks. Bringing computation to the networks edge minimizes the amount of long-distance communication that has to happen between a client and server.

**How is edge different from cloud ?**

In Cloud computing the data is sent to the cloud and whenever needed it is sent back from that central location. The distance between client and server is very

huge which creates latency. Also, the data obtained is not that accurate in cloud architecture. Edge computing is a part of cloud but here the data processing is brought closer to the devices. This leads to reduction in latency and real time retrieval of information.

CCTV Cameras are used for security purposes the recording is done live and transferred to the cloud. Thousands and lakhs of devices transmits data to the cloud, but the data obtained has decline in quality. In this scenario edge can used for real time and good quality of information.

**Uses/benefits**

Reduced latency: Latency can result in dangerous hazards, when it comes to safety. For Autonomous vehicles, cars should be capable of reacting to upcoming danger signals. While using cloud for this purpose it takes 100 milliseconds for data transmission. This delay can have negative effects and lives can be in danger. Edge computing can be used for faster retrieval of data and in Realtime.

5G services will help in faster computing. Instead of just offering the faster speeds and telling companies to continue processing data in the cloud, many carriers are working edge-computing strategies into their 5G deployments in order to offer faster real-time processing, especially for mobile devices, connected cars and self-driving cars.

Reduced costs: Bandwidth and cloud require money; edge computing reduces bandwidth use and server resources. IOT devices are widely used like printers, smart cameras, etc. In future IOT devices will be rising and to support that computation will be done by edge.

**Privacy**

There are some cybersecurity issues with edge computing. The hacker can manipulate the device to modify the collected data. Thus, edge-powered devices are required to physically shield the data stored in them.

**Future scope**

Edge computing is going to grow rapidly. It will have much impact on enterprise world as smartphones did for the world of consumer computing.

Considering the ongoing research and developments in AI and 5G connectivity technologies, and the rising demands of smart industrial IoT applications, Edge Computing may reach maturity faster than expected. Till 2025, 75% companies will be using edge.