

## Edge Computing

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### ABSTARCT

Edge computing is a distributed computing paradigm that brings data storage and computation closer to data sources. Edge computing is a topology- and location-sensitive form of distributed computing; the term refers to architecture rather than a specific technology. It was created in the late 1990s to serve video and web content, its origin lies in content delivery networks. In the early 2000s, these networks evolved to host applications and application components at the edge servers,[5] resulting in the first commercial edge computing services that hosted applications such as dealer locators, shopping carts, real-time data aggregators, and ad insertion engines.

### INTRODUCTION

Edge computing can be defined as the computer program that delivers low latency nearer to the requests or all computing outside the cloud happening at the edge of the network, and more specifically in applications where real-time processing of data is required. Edge computing operates on "instant data" that is real-time data generated by sensors or users. Edge nodes used for game streaming are known as gamelets. Despite the improvements of network technology, data centers cannot guarantee acceptable transfer rates and response times, which, however, often may be a critical requirement for several applications.

The aim of edge computing is to maneuver the computation faraway from data centers towards the sting of the network,

exploiting smart objects, mobile phones, or network gateways to perform tasks and supply services on behalf of the cloud. The distributed nature of this paradigm introduces a shift in security schemes utilized in cloud computing. In edge computing, data may travel between different distributed nodes connected through the Internet and thus requires special encryption mechanisms independent of the cloud. Edge nodes can also be resource-constrained devices.

As centralized as this all sounds, the truly amazing thing about cloud computing is that a seriously large percentage of all companies within the world now believe the infrastructure, hosting, machine learning, and compute power of a really select few cloud providers: Amazon, Microsoft, Google, and IBM. Security isn't the sole way that edge computing will help solve the issues IoT introduced. The other hot example I see mentioned tons by edge proponents is that the bandwidth savings enabled by edge computing.

### CONCLUSION

Self-driving cars are, as far as I'm aware, the ultimate example of edge computing. Due to latency, privacy, and bandwidth, you can't feed all the various sensors of a self-driving car up to the cloud and await a response. Your trip can't survive that sort of latency, and albeit it could, the cellular network is just too inconsistent to believe it for this type of labor.

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