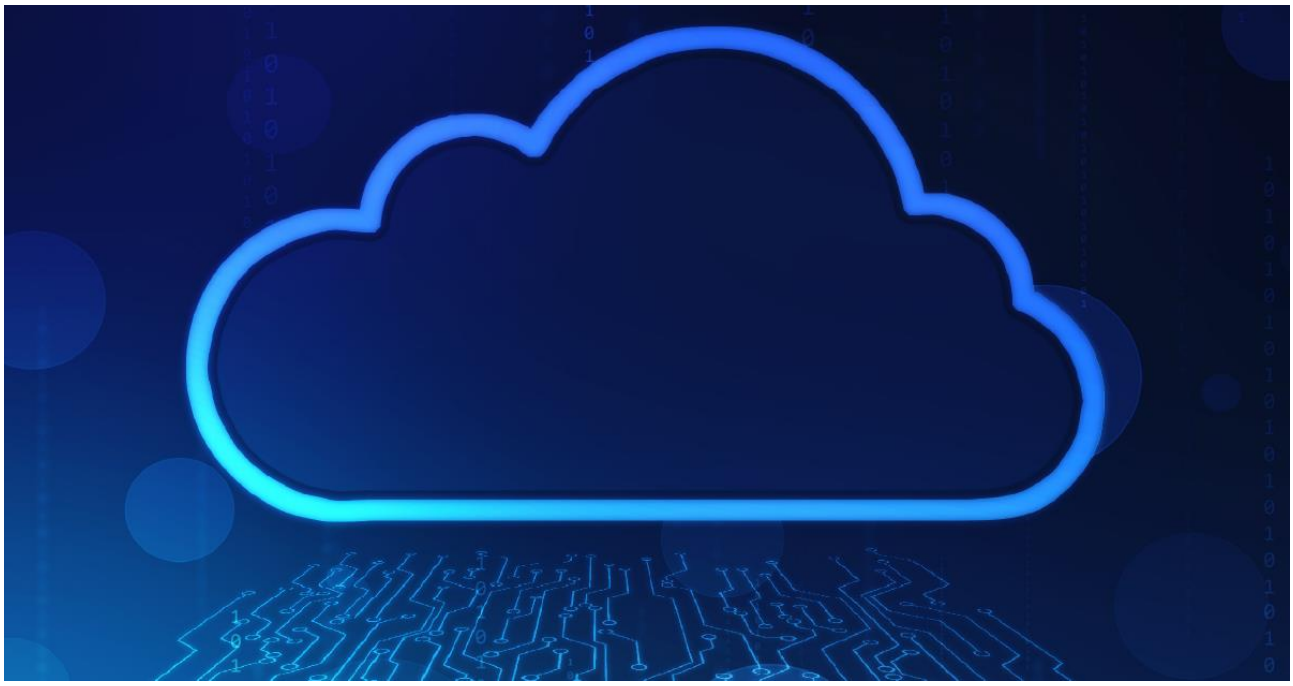
Benefits Of Cloud Computing for IoT Solutions

by Satya K Vivek | March 23, 2023



Cloud computing and IoT are both among the biggest technological developments in recent times. However, it's through cloud computing, we can truly unlock IoT's potential and develop smart solutions. If you're unsure why cloud computing and IoT go hand-in-hand, let's get a better understanding of the benefits of cloud computing in IoT solutions.

Reasons for Cloud computing being an integral part of an IoT solution.

Let's examine some of the most obvious and prominent reasons, why cloud computing is essential in any IoT solution.

Data mobility

IoT networks comprise number of smart devices, sensors, and facilities, ranging from smartphones to self-driven cars to smart factories. The issue, however, is that data needs to be accessed from multi-locations to make the solution effective. However, if the data is stored locally, then services within the premise only can access these data. Data mobility is critical for ensuring the portability of an IoT solution. When the data is stored in a cloud environment, it ensures full data mobility and allow users to access, process and manage the data from anywhere.

Cost-effectiveness

This is one of the biggest reasons to choose cloud computing over on-premises systems. Building your IoT solutions on cloud infrastructure will significantly reduce your infrastructure cost

including maintenance. With flexible cost models for cloud-based infrastructure businesses need to pay as they use. Overall leveraging cloud computing is a guaranteed way to reduce your cost of operation.

Collaboration
Adopting a cloud-based infrastructure certainly promotes collaborations between different teams. It connects employees from different departments of an organization, allowing them to work on a project more efficiently. Team members can use the cloud platform to share information securely and seamlessly.

Scalability
The scalability offered by cloud-computing infrastructures is far greater than that of on-premises structures. Cloud-based IoT solutions are extremely flexible and can be upscaled or downscaled with ease.

Key considerations for selecting a cloud provider for IoT solutions.
Choosing the right cloud provider for your IoT solutions might prove to be a daunting task. Make sure to consider the following factors:
Security: Information security should be of paramount importance when selecting a cloud provider. Check for security certifications and internal audit reports to make sure the provider's security controls are strong enough to support and compliment your own security processes.
Reliability: Of course, you'd want to work with a cloud provider that you can count on. Choose a service provider who has established good processes to deal with not only planned downtime but also for unplanned downtime.
Performance: The performance of the cloud computing platform would influence that of your IoT solution. Hence, make sure to check the performance of each provider against their service terms and historical performance records at least for last 12 months.

Case studies and examples of successful IoT solutions that leveraged cloud computing.

1. **Coca-Cola Içecek:** Coca-Cola Içecek (CCI) is one of the main bottlers in the Coca-Cola ecosystem. To improve efficiency by avoiding time-measurement errors, CCI started feeding their IoT data to the AWS cloud and created data models that helped them to improve efficiency of their systems.
2. **DHL Supply Chain:** Though DHL Supply Chain works in a primarily labour-intensive industry, the company is known for its extensive use of robotics and automation. The company implemented a centralized hub on the cloud to facilitate the simple and rapid integration of new sets of equipment.

Cloud computing and IoT – Best when they work together.

Both cloud computing and IoT are here to stay, and they best work together. If you're planning to incorporate IoT solutions into your business, building a cloud-based infrastructure is your best choice.