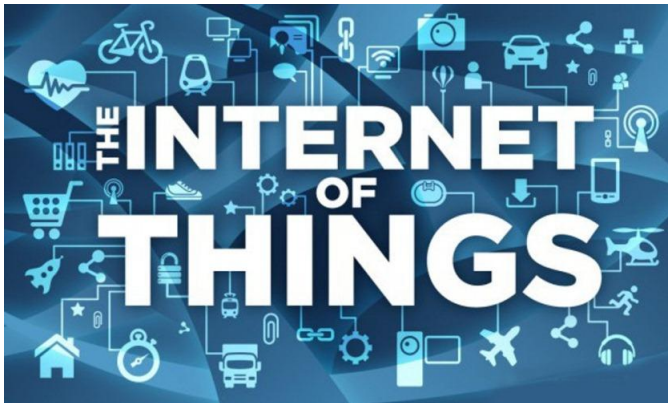


The Internet of Things (IoT) has a potential "transformational effect" on the data centre industry Gartner reports, with IoT-related revenues (mostly in services) set to exceed \$300 billion by 2020.



"IoT deployments will generate large quantities of data that need to be processed and analysed in real time," the analyst says. "Processing large quantities of IoT data in real time will increase as a proportion of workloads of data centers, leaving providers facing new security, capacity and analytics challenges."

The IoT connects remote assets via data streams between assets and centralised management systems. In turn the assets are integrated in new and existing processes to provide real-time status, location and functionality information. Such a large amount of devices and the volume, velocity and structure of IoT data create security, data, storage management and server challenges within data centres, as real-time processes are at stake.

"Data center managers will need to deploy more forward-looking capacity management in these areas to be able to proactively meet the business priorities associated with IoT," Gartner continues before pointing out the following challenges.

- **Security:** The increasing digitisation and automation of multiple devices across different environments create new security challenges.
- **Enterprise:** The above mentioned security challenges impact growing availability requirements.
- **Consumer Privacy:** The vast amount of personal usage data IoT devices (such as smart metres) generate can lead to privacy breaches if not secured.
- **Data:** Significant data is generated through app use and devices learning about users.
- **Storage Management:** Can businesses harvest and use IoT data in a cost-effective

manner?

- **Server Technologies:** Investment should increase in key vertical industries and organisations making most profit out of IoT.
- **Data Centre Network:** IoT will increase inbound data centre bandwidth requirements, as it pushes massive amounts of small message sensor data to the data centre.

"Data center operations and providers will need to deploy more forward-looking capacity management platforms that can include a data center infrastructure management (DCIM) system approach of aligning IT and operational technology (OT) standards and communications protocols to be able to proactively provide the production facility to process the IoT data points based on the priorities and the business needs," Gartner concludes. "Already in the data center planning phase, throughput models derived from statistical capacity management platforms or infrastructure capacity toolkits will include business applications and associated data streams. This will reduce the complexity and boost on-demand capacity to deliver reliability and business continuity."

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