Industry Talk

Regular Industry Development Updates, Opinions and Talking Points relating to Manufacturing, the Supply Chain and Logistics.

The benefits, obstacles & future of edge computing

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Industrial Internet of Things (IIoT) enabled devices generate a huge amount of data, but processing all of this data within the Cloud comes with challenges in latency and cost. Using the edge to complement the Cloud can help to overcome these hurdles.

Edge computing allows data to be filtered and streamlined locally, meaning minimal data is sent to the Cloud, which creates savings in bandwidth and storage costs. In addition, processing data at the edge means it has a shorter distance to travel, resulting in faster response times and almost instantaneous machine to machine (M2M) communication.

The edge analytics market is growing, with a survey of 900 IT professionals by AI-powered application resource management company Turbonomic finding that almost half are already leveraging edge computing or plan to do so in the near future. Despite this, there are still some obstacles that are preventing all companies from embracing the edge.

Overcoming obstacles

According to the Turbonomic survey, the biggest barrier to edge adoption is a fear of complexity. Many companies are hesitant to adopt new technologies as they view their IT landscape as something incredibly complex, making them cautious to make any changes. However, this perception can be changed by adopting a low code edge analytics platform that was built with simplicity in mind.

Instead of using extensive coding languages, low code platforms use visual interfaces and straight-forward drag and drop modules. This provides an intuitive system that doesn't require users to have any coding and programming experience. This means employees companywide can understand and work on the platform, thus assisting in IT projects when needed.

In addition, industrial businesses should not view their edge analytics journey as one huge challenge, but rather break it down into small steps. Taking on too many projects at once is bound to overwhelm companies. Instead, they should start with small projects that are easy to implement and finish, then gradually add layers to build a highly sophisticated analytic system that extracts value from data. It's a scalable technology, and organizations should capitalize on this.

Focusing on the future

The future of edge computing is bright. There's evidence that the market is growing rapidly, and more companies are looking to leverage it in their operations. Great potential lies in integrating artificial intelligence (AI) and Machine Learning (ML) at the edge, which can allow process decisions to be made in real time. According to Markets and Markets, the edge AI software market size is expected to reach USD 1.8 million by 2026, growing at a compound annual growth rate (CAGR) of 20.8 per cent.

Edge AI creates an efficient and reactive control system, allowing fast process optimization. For example, if there's a machine fault, the AI system can quickly make the decision to stop the machine to avoid product damage.

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