DELLTechnologies

Using predictive analytics to deliver vital efficiency and safety

Atos chose Dell PowerEdge and Dell PowerScale to ensure that amusement parks, major manufacturers and others stay up and running.

Customer profile

Atos

Information Technology | France

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>
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> Global Edge & IoT Senior Product Director at Atos

Business needs

Atos works with a range of organizations providing sophisticated predictive analytics to improve its customers' operational efficiency and reliability. This requires powerful compute and all-flash, scale-out storage to seamlessly collect and rapidly analyze streams from hundreds or thousands of data points to provide needed insights.

Business results

- Avoids downtime by predicting component failures 30 days in advance.
- Delivers 10–30% less downtime, saving up to millions of dollars annually.
- Efficiently analyzes as many as 180 billion data points per hour.
- Helps organizations reduce maintenance and cut carbon emissions.
- Ensures Zero Trust environments for end-to-end safety and security.

Solutions at a glance

- Dell PowerEdge
- Dell PowerScale
- Dell Streaming Data Platform

Atos is a leader in digital transformation and innovation — providing cyber security, cloud and high-performance computing for customers across various industries in over 70 countries. Atos provides its customers with an end-to-end value chain. Services and solutions range from IT outsourcing and managed services to specialized hardware and more.

Among the company's strengths are its capabilities in AI and machine language-driven predictive analytics. Running anywhere from the core to the edge, these intelligent solutions leverage streams of sensor data to identify and resolve potential issues before they occur — delivering key benefits.

To help organizations modernize and transform their businesses, Atos turned to PowerEdge servers and PowerScale storage.
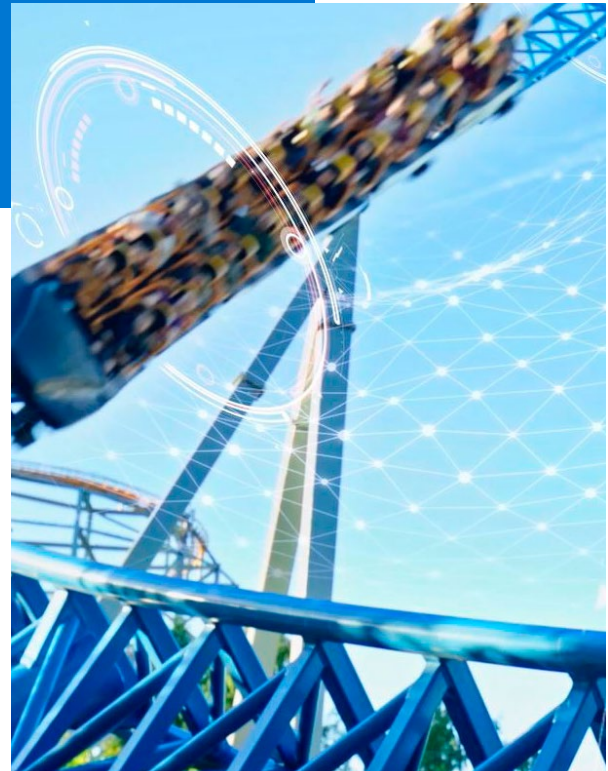
"We chose Dell PowerEdge servers because they offer the compute performance to handle complex data analytics right at the edge," says Arnaud Langer, Global Edge & IoT Senior Product Director at Atos. "At the same time, with all-flash PowerScale at the edge we're able to run analytics and deliver insights faster, including both training and inference."

Keeping amusement parks rolling

Relying on Dell Technologies compute and storage, Atos provides its customers with innovative, end-to-end Business Outcomes-as-a-service (BOaaS) solutions designed for a variety of use cases.

For example, a well-known amusement park uses predictive analytics to ensure that its rides operate without fail. Rollercoasters are automated with the help of programmable logic controllers (PLCs). Data is streamed using the Dell Streaming Data Platform from hundreds or thousands of input/output (I/O) points with sensor readings such as excessive vibration or a motor's increased temperature sampled as often as every two milliseconds — resulting in as many as 180 billion data points per hour.

PowerEdge XR11 ruggedized servers are used to run predictive analytics on this datastream in real time, applying anomaly detection models to predict component failures up to 30 days before they occur to avoid stopping the ride.

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"Using Dell Technologies solutions, we've already achieved a 10% reduction in downtime," Langer explains. "This can save up to millions of dollars annually by ensuring that guests take the ride and shop in the store at the end. In the future, we expect to triple that to 30% lower downtime, saving untold millions per customer, per location."

Big benefits for manufacturers

In a manufacturing environment, Atos counts on PowerEdge servers and PowerScale F600 scale-out network-attached storage to maintain unstructured data for big data analytics, HPC, safety and security.
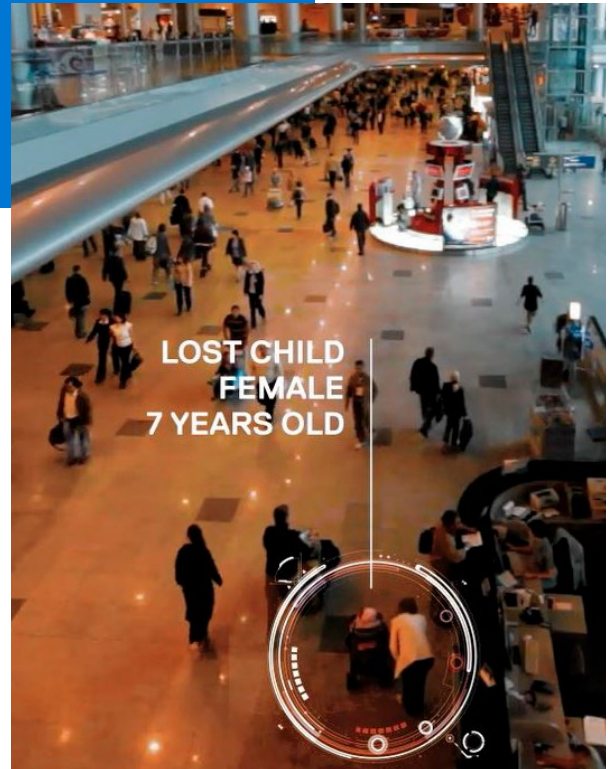
Atos uses Dell Technologies solutions for predictive analytics, monitoring and dashboards to highlight maintenance requirements for a growing number of manufacturers — decreasing component failures that can impact performance and efficiency or shut down entire assembly lines, causing factories to come to a halt.

Safer travel, sustainable stores and faster 5G

Atos has also designed an end-to-end computer vision platform integrated with PowerEdge servers, which identifies events and behaviors in airports that might pose risks for travelers or their belongings.

"Dell Technologies solutions deliver capabilities right to the edge to improve airport safety — for instance, enabling parents to quickly locate lost children or tracking errant luggage and packages," comments Langer.
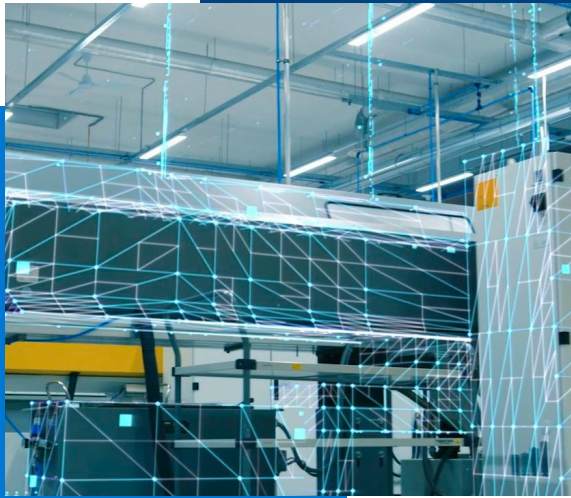
In retail environments, Atos enhances sustainability by leveraging highly available gateway clusters to minimize downtime, and simplifies implementation and maintenance thanks to Dell Technologies hardware-as-a-service solutions. "For one retailer with a thousand stores, Atos used PowerEdge to reduce labor by 66,000 hours annually, which helps with decarbonization by eliminating 480 metric tons of CO_2," Langer relates. "That's obviously a huge benefit in terms of both operational efficiency and sustainability."

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Global Edge & IoT Senior Product Director at Atos

He continues, "In short, we can tackle any use case where data needs to move from the field to the edge and the core — where it can be analyzed using sophisticated algorithms."

Atos is partnering as well with a large technology and communications services provider to help the company monetize its 5G investment at the edge, with computer vision and video analytics running at the base of the provider's cellular towers.

"We like the Dell Technologies gateways because they're small, easily deployable on the far edge and are robust and reliable — so we can bring the data we're ingesting right to the edge," remarks Langer.

Maintaining trusted security

ith the help of PowerEdge servers' trusted platform modules (TPMs), Atos has significantly strengthened the security of the services it delivers to customers.

"We've created Zero Trust environments that require users — whether inside or outside a network — to be authenticated, authorized and continuously validated," Langer states. "This ensures end-to-end safety and security for services."

He concludes, "We look forward to our continued collaboration at the edge with Dell Technologies for both our Streaming Data Platform and edge devices.".