High performance managed Edge

Powering complex video and data analytics for business-critical applications

Advances in Internet of Things (IoT) technology are enabling new use cases

Traffic management

Visual quality control on manufacturing lines

Theft prevention in retail

Smart cities protection through video surveillance

These new use cases are creating additional demands on the network and infrastructure architectures.
In order to drive business value, the solution needs

Real-time, autonomous decisions powered by complex video and data analytics

100% uptime and predictability

Data security and privacy

IoT implementations at scale drive business outcomes. But they come with challenges

Complexity – Connectivity, guaranteed uptime and security, management of a complex technology stack to process data and run analytics, end-to-end control and predictable service levels are required to derive any meaningful business value.

Upfront costs – Heavy upfront investments are required to deploy IoT at scale; this includes investment in IoT devices, the entire technology stack and resources to manage this deployment.

ROI considerations – Heavy upfront investments mean that business value must be proven quickly. This can be a major stumbling block.

These challenges are leading to future digital transformation projects that need a hybrid architecture that embraces both cloud and edge computing. This way data can be collected and analyzed in real time, with no latency and close to data sources.

Atos's Codex Managed IoT services, combined with its BullSequana Edge, the highest-performing edge computing server on the market enables organizations to drive new business outcomes through pioneering commercial models for IoT and Edge deployments. Atos enables real-time and autonomous decision-making by analyzing complex video and image data, at scale, and with high levels of security, privacy, and compliance.

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Make better insight-based, real-time, business-critical decisions through the analysis of complex, high volumes of image and video data at the Edge.

Challenge

Making real-time business-critical decisions based on insights gathered through real-time analysis of high volumes of complex video and image data.

Solution

BullSequana Edge device, powered by the 16 core Intel® Xeon® D processor for fast analysis, combined with the feature-extraction capabilities of Edge Computer Vision, enables data to be captured and analyzed and alerts to be sent in real time. Layered on this, the Codex Managed IoT services portfolio provides end-to-end control, predictability, security, and enterprise grade Service Level Agreements (SLAs) for 100% uptime. This ensures the implementation is delivering the desired business outcomes.

Analysts expect, by 2020, 99% of enterprise-captured video/image will be analyzed by machines.[1]

Powering Triple Five Group's American Dream Mall

Atos enables Triple Five Group to bridge the gap between the physical and digital experiences for customers and 400+ tenants of American Dream Mall, a 3 million-square foot entertainment and retail complex. Edge-computing, Digital/IoT devices, smart parking, ticketing, and wayfinding technologies enable proactive surveillance and reveal trends in shopping, traffic, timing, and rides.

Customers benefit from next-generation shopping, navigation, and entertainment experiences through IoT and Artificial Intelligence (AI) solutions and services.

Make autonomous and real-time decisions, without any latency in data analysis at the edge

Challenge

Making autonomous and instant business-critical decisions, without any delay in data analysis, latency, or bandwidth congestion.

Solution

BullSequana Edge device, powered by the 16 core Intel® Xeon® D processor for fast analysis, combined with the feature-extraction capabilities of Edge Computer Vision, enable data to be captured and analyzed and alerts to be sent in real time. Layered on this, the Codex Managed IoT services portfolio provides end-to-end control, predictability, security, and enterprise grade Service Level Agreements (SLAs) for 100% uptime to ensure the implementation is delivering the desired business outcomes.

Optimizing vessel operations at sea

A global shipping company wanted to save fuel and optimize energy consumption by inserting data into the decision-making process.

To overcome cost and connectivity challenges, we implemented autonomous intelligent edge solutions on the vessels. This improved operational efficiency and reduced fuel consumption by 7%.

Drive desired business outcomes and value from IoT implementations, by simplifying complexity at scale

Challenge

Scaling IoT implementations in a cost effective, risk free, and simple manner to deliver business outcomes. The entire IoT set-up needs to run together in an integrated and seamless manner, with end-to-end control and predictable service levels in order to derive any meaningful business value.

Solution

Through our suite of Codex Managed IoT services, full edge lifecycle management, 24/7 support, enterprise grade SLAs, and a continuously growing partner eco-system, we deliver a simple and scalable solution to deliver a better Return on Investment (ROI). Pioneering commercial models like Right-of-Use (RoU) and outcome-based pricing, plus a fully managed service reduces financial pressure and risk for customers.

Forrester reports that 66% of global manufacturers believe their Digital organizations need assistance from third party partners to fill in skill sets necessary to successfully implement IoT.[2]

With a leading entertainment organization

Atos provides a Ferris Wheel solution as a Right-of-Use (RoU) Asset. We worked with a financing firm to finance the Ferris Wheel and bundled IoT predictive failure analytics on edge computers to guarantee uptime of the ride. We provide Ride Control as a service solution.

With a global shipping company

An IoT Edge solution has been delivered in a joint collaborative approach. Once the IoT solution is deployed to a vessel, the customer pays a percentage (%) of savings rather than an upfront cost or usage costs.

Enable business continuity, data sovereignty, regulatory compliance, and security at the edge

Challenge

Ensuring that IoT Edge implementations run with security, data security, and privacy, with 100% uptime and in a compliant manner.

Solution

We secure IoT and edge deployments at all levels. BullSequana Edge server is equipped with an Intrusion Sensor which disables the machine in case of physical attacks. Intrusion detection and data encryption systems protect business data from external threats. Our IoT Cyber Security services deliver a consistent management and monitoring framework at scale. Keeping data locally and only sending compliant data to the cloud maintains data sovereignty and compliance.

Consistent management and monitoring framework at scale.

2 Forrester Analytics Business Technographics Global Networks and Telecommunications Survey, 2019.

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Our solutions

BullSequana Edge

The BullSequana Edge server has been designed to be used securely for the Internet of Things (IoT), in environments in which fast response times are critical - such as manufacturing 4.0, traffic management, healthcare and retail/airport security – where data needs to be processed and analyzed at the edge in real-time.

The server securely manages and processes IoT data, close to the source where it is generated, so that it is treated immediately. It analyzes and runs Artificial Intelligence (AI) applications in real-time for instant insight, so that actions and decisions can be made swiftly to optimize operations.

Edge Computer Vision	Edge Data Analytics	Edge Data Container
• Realtime Video Analytics • Complex AI Inference at the Edge • Video Analytics features	• Data Collection and management • Real time Data Analytics • Scalable to absorb Data growth	• Complete Infrastructure at the Edge • Secure and Rationalize IT outside datacenters • Large data storage anywhere

Codex IoT Services

Deliver smart business services that harness the value of your IoT data at scale. The Atos portfolio of Codex Managed IoT services ensures that you have a complete set of automated processes and tools for infrastructure and device management, with support services, metering, and billing. This comes wrapped in a Service Level Agreement (SLA) for your IoT capabilities across the IoT value chain. This unique IoT service management framework ensures your IoT investments deliver business outcomes and a return on your investment.

Integrating the high performance BullSequana Edge server and associated solutions, Atos provides a complete end-to-end solution that includes hardware, software, managed services and ready-to-go use cases, leveraging an extensive best-of-breed IoT partner eco-system.

Why Atos?

✔ Global presence, proven scale, and industry expertise with millions of devices securely in production

✔ True partnership and risk sharing through pioneering, business outcome-based commercial models such as right-of-use and outcome-based pricing

✔ Security for the full IoT value chain on every level, including devices, data and networks

Atos has been recognized as a Global Leader in IoT services
by Everest Group[3] (2019 and 2020) and IDC (2020).[4]

3   Internet of Things (IoT Services PEAK Matrix™ Assessment) 2020

4   IDC MarketScape: Worldwide Business and Industrial IoT Engineering and Managed Services 2020 Vendor Assessment

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