Empowering Oil and Gas Operations

Mission Critical Edge Computing for the Oil and Gas Industry

SOLUTION BRIEF

Mission Critical Edge Computing for Oil and Gas Operations

Mission critical Edge Computing is important for the oil and gas industry because it provides the necessary reliability and availability for operations that have a direct impact on the production and profitability of the business. In this industry, systems and processes must be able to operate continuously and accurately to ensure safe and efficient extraction and processing of oil and gas. Downtime can result in significant financial losses, as well as potential harm to people and the environment. Mission critical computing helps to mitigate these risks by providing the necessary computing infrastructure and software to support the control, monitoring and management of the critical processes in real-time.

Overcoming Challenges

- Remote & harsh environment
- Connectivity
- Downtime and data loss
- Security
- Integration
- Maintenance and upgrades
- 24/7 availability

Benefits of Mission Critical Edge Computing

Improved operational efficiency: By automating and streamlining processes, mission critical computing helps reduce downtime and improve the overall efficiency of operations.

Improved reliability and availability: Processing data closer to the source reduces the risk of network failures and delays, increasing the reliability and availability of oil and gas operations.

Enhanced data management: With real-time data processing and analytics, mission critical computing provides a centralized platform for managing and analysing large amounts of data from various sources.

Increased safety: By providing real-time monitoring and control of critical processes, mission critical computing helps reduce the risk of accidents and improve safety in oil and gas operations.

Better decision making: With access to real-time data and analytics, decision-makers in the oil and gas industry are better equipped to make informed decisions that drive business growth and optimise operations.

Advanced analytics Implementing advanced analytics and machine learning capabilities at the edge, allows for better decision making and optimisation of oil and gas operations

Protecting critical operations at the edge, where speed and efficiency meet.

Use Cases for Edge Computing

Remote wellhead monitoring and control: Collecting real-time data from sensors and devices at wellheads and analysing it at the edge to optimise production and ensure safety.

Pipeline monitoring and control: Supervising the condition of pipelines and controlling their flow to prevent leaks, spills, and other environmental hazards.

Offshore platform monitoring and control: Monitoring and controlling offshore oil and gas platforms to ensure safety and efficiency of operations.

Refinery process control: Monitoring and controlling key processes in oil refineries to optimise production and reduce downtime.

Tank farm management: Controlling the levels of liquids and gases in tanks to optimise storage and prevent spills.

Drilling rig monitoring: Analysing drilling rigs in real-time to improve operational efficiency and ensure safety.

Natural gas processing plant monitoring: Monitoring and controlling the processes involved in processing natural gas to ensure safety and efficiency.

Predictive maintenance: Analysing real-time data from oil and gas equipment to predict when maintenance is needed, reducing downtime and improving efficiency.

Not all Mission Critical Computing Platforms are Equal!

Our secure, rugged, highly automated computing solution delivers redundant virtualised industrial applications quickly and easily, improving productivity and reducing risk.

- Integrated virtualisation and availability
- Redundant server design
- Automated protection and recovery
- Industrial interoperability
- OT maintainability
- Health monitoring and fully managed support

About Stratus

Stratus ensures the continuous availability of business-critical applications for the most demanding environments. For over 40 years, we have provided reliable and redundant zero-touch computing, enabling organisations to turn data securely and remotely into actionable intelligence at the Edge, cloud, and data center – driving uptime and efficiency.

Our Service offering:

- System design and sizing
- Proof of Concept and testing
- Full solution stack deployment
- Site commissioning
- Education and certifications
- Fully managed services

Expand your knowledge.
Talk to us today!

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