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Utility Fleet Management Solution

Optimize crew and fleet operations using advanced information technology

Challenges for fleet operations

A utility's operating performance affects its profitability, regulatory standing, and ability to make capital investments. Operating Expense (OpEx) is directly affected by the utility's ability to quickly identify and resolve outages and efficiently administer mobile assets while leveraging its entire information infrastructure. The Cisco® Utility Fleet Management Solution provides a robust, **always-on** network in and around the vehicle, upon which innovative capabilities can be built. Field workers can collaborate with key resources more easily to optimize their safety, reliability, and efficiency.

When adverse situations occur, field workers, their tools, and their time are critical resources. Utilities must send the right crews with the right tools and assets to the right locations in the most efficient manner. Simply sending the next free crew can result in crews that show up without the necessary tools. This causes customers to experience longer-than-necessary service outages, resulting in lost revenues and higher OpEx. And that negatively affects a utility's SAIDI and SAIFI metrics and its ability to justify future rate increases and capital projects.

Adverse conditions place additional stress on field crews that face some of the most hazardous work environments: driving in congested traffic, engaging in middle-of-the-night service calls, and working on high-voltage lines. With real-time data, the utility can monitor field workers' physical health and stress levels and ensure their safety — even during adverse weather conditions and mutual aid events.

With a rich collaboration environment, field crews are not left to try to solve problems on their own. Centralized subject matter experts can quickly and seamlessly engage at the worksite. Job aids, documentation, vendor resources, and information systems can be leveraged for faster and more efficient completion of work orders, thus reducing OpEx and avoiding costly re-dispatches.

Benefits

- Improve customer response time and reduce carbon footprint with location-aware dispatch

- Increase employee safety with wearable health monitors

- Decrease fuel costs with real-time location, speed, and idle time tracking

- Increase field productivity with office-in-the-truck technology to enable real-time access to applications and data in the field

- Confirm accurate onboard inventory and work order fulfillment with real-time asset monitoring inventory control

- Improve crew communications using text, voice, and video with Cisco Spark™

- Lower OpEx through improved vehicle maintenance planning, and reduce unnecessary downtime

- Extend corporate IT security to field mobile assets

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Recommendations for solution components

The Cisco Utility Fleet Management Solution consists of the following components:

- Cisco IR 829 Industrial Integrated Services Routers: Compact, ruggedized Cisco IOS® Software routers with support for integrated dual 4G LTE wireless WAN and wireless LAN capabilities intended for fleet and mass transit vehicles.

- Telematics applications: Provide real-time monitoring, tracking, and management of fleet-based assets while managing the large data set that a fleet generates, to drive actionable business insights.

- Cisco Instant Connect: IP-based communications and dispatch platform that enables a cost-effective information exchange between a large-scale fleet and headquarters.

- Asset management: Cisco offers the platform and solutions for improved asset monitoring, inventory control, and logic.

- Omni-ID asset tagging and sensors for inventory accuracy and location-aware asset tracking (track and trace).

- Video Surveillance Manager and HD cameras: An IP-based solution that uses the network to deliver and receive live and recorded video surveillance with excellent scalability, reliability, and bandwidth management.

- Ignition sense technology: Maintains network device power while helping ensure that the vehicle's battery is not drained.

Optimize fleet performance and reduce operating expenses

The Cisco Utility Fleet Management Solution enables utilities to optimize fleet performance and reduce OpEx by seamlessly integrating the fleet and driver into existing enterprise systems.

- Reduced fuel costs: With real-time location, speed, and idle time tracking, the Cisco solution provides real-time and historical feedback to: improve driver performance, reduce fuel expense by optimizing fleet dispatch, and accurately and automatically measure idle time for fuel tax credits — resulting in millions of dollars in return to the utility.

- Improved fleet up-time: Real-time vehicle telemetry allows utilities to make use of proactive maintenance applications and respond to real-time alarms to maintain an **always-on and available** fleet that is operating at optimal performance.

- Real-time vehicle tracking: The Cisco solution enables geo-fencing for alarming on an off-route or out-of-region vehicle, automated work orders upon leaving a job site, and optimal location-based dispatching.

- Real-time inventory management: Cisco's always-on fleet network tracks valuable assets and tools so that crews and supervisors are sure they have the right materials for each work order. The solution also enables crews to locate the closest source of needed equipment, tools, and resources.

- Cisco cybersecurity to the fleet: Cisco security enables the utility to confidently deploy applications with sensitive data to the fleet without compromising ease of deployment, sustainability, or privacy.

- Fleet network and application convergence: With the Cisco Utility Fleet Management Solution, utilities can consolidate multiple networks to support fleet and field crew applications. Vehicle telemetry, location, wireless hotspot, worker health and safety, and other applications can be converged in a single Cisco in-vehicle solution – resulting in lower network management OpEx and lower carrier fees with improved productivity.

- In-cab applications: Enable utilities to digitize manual driver processes for pre-and post-trip reports, automate hours-of-service reports to maintain compliance, and track and improve customer satisfaction scores.

Why Cisco?

Cisco's Utility Fleet Management Solution is a platform for utilities to increase worker safety and productivity, drive operational innovation, optimize resources, reduce operating expenses, and deliver more value to their customers. The solution can help reduce fuel costs by as much as 30 percent while gaining thousands of hours of increased fleet and crew productivity. The solution can also help reduce employee speeding and citations by up to 80 percent. The reduction in OpEx and improvements in fleet management and worker efficiency have allowed customers to achieve a payback on investment in less than one year and directly improve the utility's earnings and ROI.

For more information

Contact your Cisco representative or visit us online at cisco.com/go/smartgrid