

Automotive Cybersecurity

Cyber-protection for commercial fleets is critical

Cybersecurity is a hot topic and it's been a priority for the automotive industry since 2015, when Charlie Miller and Chris Valasek hacked a 2014 Jeep Cherokee, taking control of the vehicle's braking, steering and acceleration. Fiat Chrysler recalled 1.4 million Jeep Cherokees to patch the vulnerability.

While that hack put the focus on the vehicles, a recent Frost & Sullivan release on automotive cybersecurity as a strategic priority notes that some of the most pressing threats include attacks on pre- or retro-fitted telematics systems. In fact, hackers' ability to control and manipulate such systems' data can have a significant, adverse effect on productivity and profitability.

Past hacks demonstrate that a robust cybersecurity solution with multi-layer protection for commercial fleets is critical, because telematics have been used to stop large commercial fleets. Not that long ago, a large US transportation company's fleet management and logistics software was locked down, halting operations. Every piece of data needed to run the business was only available digitally. No one had access to orders, truck and driver schedules, optimal routing and related information until the attacker was paid off.

"Most feel it's cheaper and faster to pay the ransomware, which may be hundreds of thousands of dollars, so that you can get back to business," says Daniel

Thunberg, global head of connected transport, with Netherlands-based Irdeto. "However, this could just result in additional attacks as the hackers know this business is willing to pay. Deterring and preventing such attacks is the most effective strategy of all."

Experienced security teams work to identify the information and systems that are most crucial to a business, then allocate security principles and strategies. What value does the data have to the fleet in question and is it worth anything to anyone else? As the transportation company above discovered, specific data, like order, driver and truck scheduling, enabled its operations, protecting that data was important. Meanwhile, while relevant, fuel consumption and maintenance schedules data didn't affect real-time deliveries.

"Consider the commercial consequences when a security incident occurs, such as lost revenue and the impact on customer satisfaction and public trust," says Thunberg. "Look beyond that to the effect of a leak that makes employees' home addresses or health information public and the resulting impact on reputation as well as the likelihood of a hefty fine or penalty."

Security experts must stay ahead of attackers. As Thunberg says, security is never static and updates are a necessity not an option.

"Make it such a headache to hack your system that the hackers

move onto to an easier target," says Thunberg. "Invest in what's necessary to protect your systems and spend just a bit more than what's enough in the right areas—it's a fine and challenging balance but cost-effective and results-focused."

Hacking a single telematics system residing across a company and all its vehicles offers a better ROI than fleet vehicles, which need to be individually hacked. Not only are they sourced from multiple OEMs, the model years and trim



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levels vary and most likely, each system will be different. The hack that gives the attacker access to a 2017 entry-level Camry won't work on the 2016 or the 2015.

"It's attacker bang-for-the-buck! If you hack an application, you've hacked one application, but if you hack an operating system, you own all the applications," says Mark Kuhr, CTO and co-founder of Synack, which relies on hackers to identify vulnerabilities and improve their resistance to attack.

Irdeto's Secure Environment detects tampering and anomalies in vehicle software to protect against and respond to cyberattacks. "Cybersecurity is a pure cost of doing business—it's a preventive measure, and as insurance, it's a cost, typically five to 10 per cent of a fleet's total operating cost," says Thunberg.

Irdeto's Keystone solution allows fleet and vehicle owners to create and control policies around multi-user vehicle access, settings and usage and managers can create, transfer and revoke digital keys. Through the Keystone app, they determine when, where and how drivers can use vehicles and customize vehicle settings for each user. It can help prove driver access and use to insurers. The app is functional whether there's phone coverage or internet access and managers can change the profiles.

While vehicle manufacturers and telematics providers and users invest in solutions to protect fleet telematics and vehicle data, Ryan D'Souza, regional director, Prairies, Jim Pattison Lease notes fleet operators and drivers play a role. Because thieves have used remote amplifiers to augment the signal from a keyless entry device to unlock and even start vehicles, JP Lease recommends remote covers with signal block technology. D'Souza also suggests vehicles' keyless fobs be stored as far from parked vehicles as possible.

When decommissioning vehicles for resale, all aftermarket, peripheral devices, such as telematics, navigational devices, garage remotes and cameras must be unpaired, removed and the data and history deleted. **FM/SP**

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