

Breakthrough Award Winner: Rivian Automotive, Cloud Champion



Rivian Automotive is disrupting the electric vehicle industry with its lineup of electric SUVs, trucks, and commercial vehicles. Whether taking families on new adventures or electrifying fleets at scale, Rivian vehicles all share a common goal of preserving the natural world for generations to come.

Renowned for its innovation, Rivian produces technologically advanced vehicles that excel at work or play. But its disruptive ethos begins with development, manufacturing, and technology. To that end, Rivian is dedicated to maximizing efficiency so that it can get more electric vehicles on the road as quickly as possible.

Josh Crater, Staff Software Engineer at Rivian, plays a key role in driving this



purpose forward with a modern application strategy that accelerates development, improves critical system performance, and supports innovation. To achieve this, Rivian uses [Portworx](#)® by Pure Storage as its Kubernetes data service platform along with Rancher by SUSE for container orchestration.

For its role in using technology to help revolutionize and electrify the automotive industry, Rivian earns the distinction of Cloud Champion in this year's Pure Storage Breakthrough Awards.

Speeding Up Production with Containers

Manufacturing traditionally runs on monolithic databases and applications. Crater and his team containerized those applications to unlock potential for greater speed, scale, and flexibility.

Rivian's key management system runs in Kubernetes with Redis backed by [Portworx Data Services](#). This simplifies management, while driving performance and availability. With the solution, Rivian was able to reduce downtime for provisioning vehicle keys. In addition, control engineers gain better visibility into the status of shop machinery via dashboards within a development tool.

Containerization also supports more flexibility in the manufacturing process. If there is a delay with one part of production—for example, while waiting for a shipment of batteries—the assembly line no longer needs to shut down. The plant can quickly move pods and reconfigure workflows to keep production running.

“Portworx plays a key role in supporting the containerization efforts that are driving an increase in production across the board,” says Crater. “It helps us achieve significant operational efficiency as we scale our business and serve more customers.”

For example, the efficiencies help increase throughput and prevent system disruptions that impact manufacturing costs and timelines.

From Days to Minutes: Kicking Development into High Gear

Portworx also accelerates development with self-service deployment that allows developers to move at the speed of their ideas. Previously, developers had to spend time setting up their own environments or requesting them from the IT team. This could take days of back-and-forth communication to iron out requirements for their PostgreSQL database environment.

Now, developers can spin up environments on their own in minutes. They can begin iterating right away, supporting a fast fail development strategy where developers work through concepts quickly, leading to a much faster time to market.

“All you need to do is define what you need for your deployment,” says Crater. “Before you know it, it’s there and it works. By making deployments self-service, we can make sure that everything is built out using best practices without any extra work needed even as demand increases.”

Bringing Electric Vehicles to Market at Scale

In addition to Portworx for containerization, Rivian also uses the Pure Storage platform to support storage needs across the company. This includes Pure



Storage® [FlashBlade](#)® consumed via an [Evergreen//One](#)™ subscription and [FlashArray](#)™. Together, they provide the best throughput available for handling large data sets, logging data, and historical data to help operations run smoother.

“The Pure Storage platform allows us to scale quickly with minimum effort so that we can keep growing,” says Crater. “Pure Storage also has fantastic support. If we run into a roadblock, the team is just a phone call away.”

Pure Storage is proud to help Rivian drive innovation in the electric vehicle industry. Congratulations to Crater and Rivian Automotive for earning this year’s Pure Storage Cloud Champion Award.

Written By:

[Michele Jackson](#)