



Rancher Government Solutions at the Edge

The Prominence of Data Analytics at the Edge

Full operational reliance on the cloud, especially in isolated or hostile environments, can be detrimental in circumstances of lost or no connectivity. The need to support not only the collection of data, but the processing and analysis of that data in real time, at the far and tactical edge continues to grow for the Federal Government.

Operators at the tactical edge need the ability to decouple computing from traditional infrastructures and still run applications. Supporting them involves extending computing power, processing and hosting beyond traditional datacenters or cloud environments. Rancher Government Solutions (RGS) provides a stable, secure and lightweight Kubernetes containerization platform for deploying and running applications at the edge.

Harvester & RKE2: Bringing Your Data-Focused Workloads to the Edge

Hyper-converged infrastructure (HCI) edge systems provide a high-speed interface for accelerated data operations. [Harvester](#), Rancher's HCI solution, can enable edge-based hardware to provide highly available, highly resilient storage and compute for high-capability data logging and analytics.

[RKE2](#), the hardened security-minded distribution of Kubernetes from Rancher, is perfect for edge hardware devices (HPE EL8000, Pacstar's 400-series, and beyond) and is designed for sustaining enterprise solutions in production. [K3s](#) is the transformational Kubernetes distribution built specifically for running production workloads at the edge on a smaller compute footprint in resource constrained environments. With RKE2, K3s, and Rancher you can:

- Run Rancher's hyper-converged infrastructure Harvester.
- Create virtual machines and spin up containers side-by-side in the same network space.
- Install the entire Rancher product suite as its own infrastructure.
- Install everything you need to run in an air-gapped environment and not connect to the public internet.
- Take edge hardware out into the field and use it locally without a connection to the cloud.

Rancher offers users unparalleled flexibility. It is easy to use, and built to manage workloads from the Edge to the Cloud.

Outcomes Oriented Technology that Advances the Mission

- **Run a team of developers and build an entire development platform, all from this single box.** Your developers can connect to it with no internet. Run it in a vault, a SCIF or a high-side classified environment.
- **Deliver everything from bare metal and extend it all the way up the stack.** This includes your infrastructure, your clusters, platform, build environment, and any support and cybersecurity applications like Rancher's container security solution [NeuVector](#).
- **Run a full stack of software with no vendor lock-in.** Rancher delivers the hyper-converged infrastructure and Kubernetes platform as well as service applications

that run on top of it. From monitoring and observability to management to security, all Rancher products plug-in and can be installed and run in an automated way.

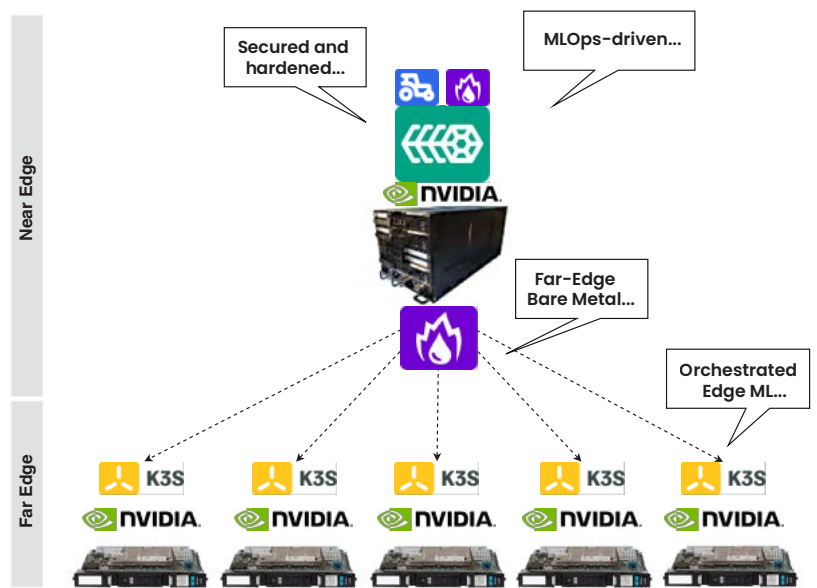
- **Meet the needs of many different types of users.** Platform operators and engineers can use it as part of a DevSecOps platform to enable developers to build, test, and run their code in a development environment or in production in a secure manner.
- **Consistently access top-tier support.** Rancher has assembled the very best Kubernetes talent available for our support subscription customers. Our professional services team members have a collaborative, proactive and mission-oriented mindset and are currently supporting programs across the Department of Defense, the Intelligence Community, and civilian agencies.

Support Next-Gen Edge Capabilities Today

Graphical processing units (GPUs) are a major compute component for artificial intelligence and machine learning workloads. Rancher’s powerful suite of Kubernetes tools can take advantage of this and enable mission success for you and your developer teams at the edge.

Additionally, Rancher’s new Elemental is a software stack enabling centralized, full cloud-native OS management with Kubernetes. Elemental can manage many bare metal devices in the far-edge and deploy them in a pattern of decentralized machine learning ops (MLOps) where data is gathered and processed at the far-edge to create models which are then aggregated in the near-edge.

Rancher providing infrastructure and services for next generation MLOps in the field.



About Rancher Government Solutions

Rancher Government Solutions delivers secure solutions specifically designed for government. We offer open-source software that is:

- Secure by default Kubernetes Management
- Easy to install and manage
- Designed to operate in air-gapped environments
- Fully open and interoperable across all operating platforms
- Eliminates vendor lock-in with our 100% open-source stack
- Provides unlimited scalability across any enterprise from the data center to the tactical edge
- Meets or exceeds all federal government and DoD security requirements
- Is successfully ATO'd across the Department of Defense (DoD) & Intelligence Community (IC)

RGS addresses the unique security needs of the U.S. Government while supporting a complete open-source software stack for teams using containers at the tactical edge. We address the operational and security challenges of managing multiple Kubernetes clusters at scale, while providing DevOps teams with integrated tools for running containerized workloads wherever the mission requires them.

Interested in Learning More?

Contact us to learn more about how RGS is enabling digital transformation and application modernization for the U.S. Government to run Kubernetes securely everywhere, from the data center to the tactical edge.

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