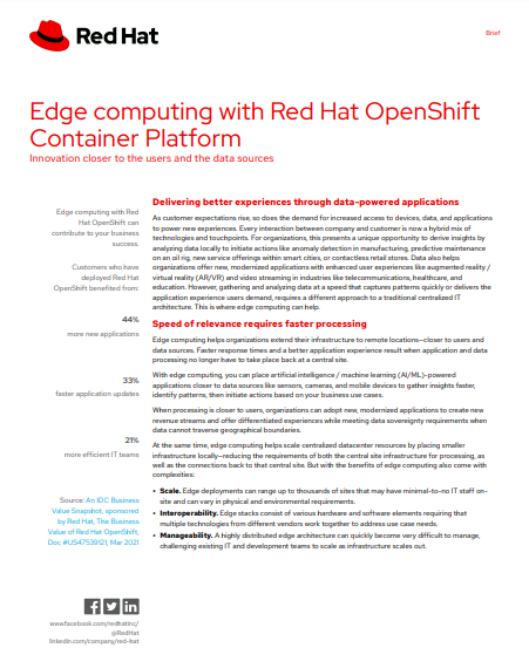
Datasheet: Edge Computing with OpenShift Container Platform



Red Hat

Brief

Edge computing with Red Hat OpenShift Container Platform

Innovation closer to the users and the data sources

Edge computing with Red Hat OpenShift can contribute to your business success.

Customers who have deployed Red Hat OpenShift benefited from:

44%
more new applications

33%
faster application updates

21%
more efficient IT teams

Source: An IDC Business Value Snapshot, sponsored by Red Hat, The Business Value of Red Hat OpenShift, Doc #US47539121, Mar 2021

Delivering better experiences through data-powered applications

As customer expectations rise, so does the demand for increased access to devices, data, and applications to power new experiences. Every interaction between company and customer is now a hybrid mix of technologies and touchpoints. For organizations, this presents a unique opportunity to derive insights by analyzing data locally to initiate actions like anomaly detection in manufacturing, predictive maintenance on an oil rig, new service offerings within smart cities, or contactless retail stores. Data also helps organizations offer new, modernized applications with enhanced user experiences like augmented reality / virtual reality (AR/VR) and video streaming in industries like telecommunications, healthcare, and education. However, gathering and analyzing data at a speed that captures patterns quickly or delivers the application experience users demand, requires a different approach to a traditional centralized IT architecture. This is where edge computing can help.

Speed of relevance requires faster processing

Edge computing helps organizations extend their infrastructure to remote locations—closer to users and data sources. Faster response times and a better application experience result when application and data processing no longer have to take place back at a central site.

With edge computing, you can place artificial intelligence / machine learning (AI/ML)-powered applications closer to data sources like sensors, cameras, and mobile devices to gather insights faster, identify patterns, then initiate actions based on your business use cases.

When processing is closer to users, organizations can adopt new, modernized applications to create new revenue streams and offer differentiated experiences while meeting data sovereignty requirements when data cannot traverse geographical boundaries.

At the same time, edge computing helps scale centralized datacenter resources by placing smaller infrastructure locally—reducing the requirements of both the central site infrastructure for processing, as well as the connections back to that central site. But with the benefits of edge computing also come with complexities:

- **Scale.** Edge deployments can range up to thousands of sites that may have minimal-to-no IT staff on-site and can vary in physical and environmental requirements.
- **Interoperability.** Edge stacks consist of various hardware and software elements requiring that multiple technologies from different vendors work together to address use case needs.
- **Manageability.** A highly distributed edge architecture can quickly become very difficult to manage, challenging existing IT and development teams to scale as infrastructure scales out.

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See faster response times and provide a better application experience with application and data processing closer to the users and the data sources