The Kubernetes Revolution

EBOOK

How to Streamline Engineering Processes and Conserve Company Resources with One Simple Platform

What Exactly is Kubernetes, and How Does It Work?

Kubernetes (often referred to as K8s), as previously mentioned, is a container-based platform that specializes in the management of containerized services, applications, and workloads. Kubernetes was open-sourced by Google in 2014 and has since been adopted by enterprises, startups, and development teams worldwide.

The platform delivers on the promise of cloud computing by creating several containers, which are an advancement on virtual machines that work together to provide services. **K8s interact through orchestration, with each container handling a specific task** (often with others performing the same task) to deliver scalability and reliability.

While Kubernetes can be boiled down to just container orchestration, the benefits this platform can provide businesses of all sizes, industries, and operations are unparalleled. The benefits of this powerful platform largely depend on your specific business need, though with the flexibility that Kubernetes provides, the pros should be a no-brainer.

Kubernetes clusters
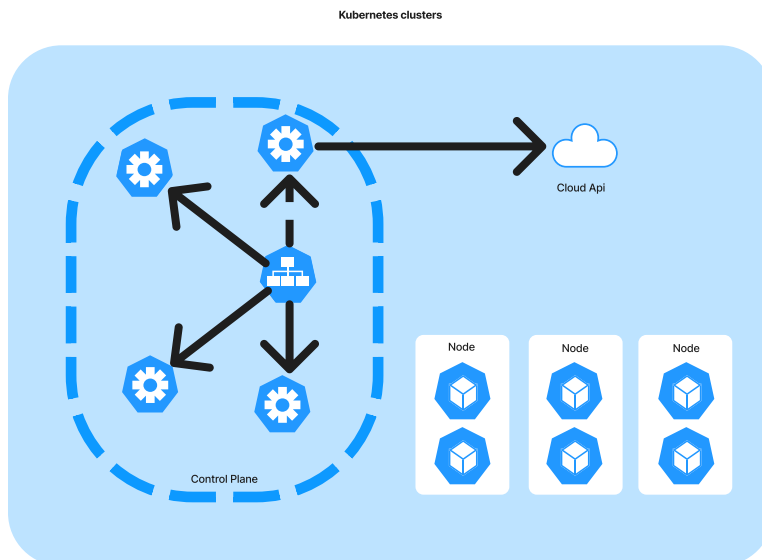
How Using Kubernetes Can Benefit Your Business

Why should you consider switching to Kubernetes for your business? Whether you create a public-facing application or focus on enhancing in-house services, Kubernetes provides plenty of benefits that make switching worth considering.

Faster Time to Market

A fast time to market is a competitive advantage, whether you're focused on internal services or external applications. **Kubernetes provides quicker app development timeframes and better deployment efficiency due to its containerization.**

Public-facing applications that are regularly updated to fix bugs and add in-demand features are seen as industry leaders. **Customers benefit from a more stable app and will likely appreciate the new features**. Additionally, startups or enterprises launching a new service will **benefit from beating the competition to launch**, making them the leader in the space.

Alternatively, internal services that are regularly improved and deployed will enable the entire company to operate more effectively. If necessary services are constantly going down or struggling to keep up, every aspect of the business will be impacted. **Kubernetes-based platforms equip the company with the speed employees need.**

Autoscaling to Ensure Apps Are Always Available

Apps that are always available when users need them will create loyalty among the user base. However, it can be challenging to forecast when your user base will put pressure on the backend infrastructure. Even if you expect a rise in usage, you may underestimate the pressure it will put on your legacy system, resulting in slower speeds or the app being entirely unavailable.

Kubernetes solves this problem with autoscaling. More containers will be spun up to deliver the resources you need, then spun down once the demand returns to normal.

Imagine you offer a straightforward web app that allows users to rate and review movies. Then, a popular movie takes the world by storm, which you didn't expect. People flock to your website to share their praise and criticisms, but your backend services aren't ready. As a result, the site becomes slow and even unavailable for some users.

Enter Kubernetes.

As more people visit your site and create the demand for increased processing power, **new containers are spun up to deliver that power**. Once the flurry of reviews dies off, Kubernetes returns to normal. All of this happens automatically based on pre-configured criteria.

Cost Savings with Multi-Cloud Flexibility

Multi-cloud environments **allow organizations to leverage the services they need between two or more cloud providers**. For example, one service may be cheaper with AWS, while another necessary service is more affordable with Microsoft Azure. A multi-cloud environment uses both, **creating flexibility and cost savings**.

Kubernetes empowers organizations to quickly capitalize on the benefits of cloud providers by **allowing containers to operate on multiple providers while still working in unison**.

Additionally, if one cloud service provider has technical issues, your application services can be provided by another cloud vendor. **When your competition, which relies on AWS for example, has unavailable services, your application will be there to leverage this by serving their customer base.**
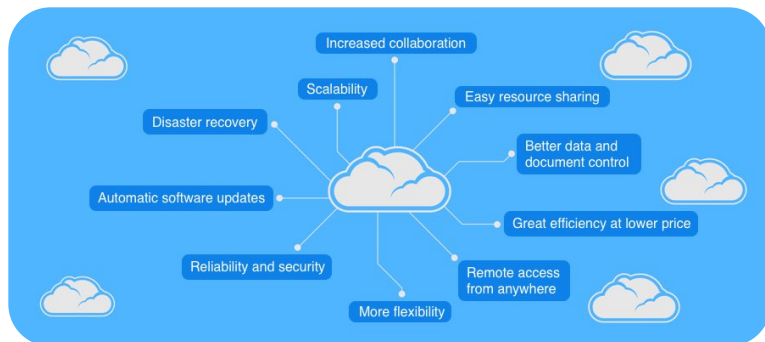
Improved Customer Experience with Reliable Services

A positive customer experience begins with fast, available services. UX design is almost obsolete if your application doesn't load or is frustratingly slow. Your customers expect your services to be available at all times, which also applies to employees using internal applications.

Kubernetes provides the reliability your user base demands by scaling up and down as necessary. Need more storage space? Kubernetes will expand the existing database with more containers. Need to further divide app traffic with an on-demand load balancer? Kubernetes is ready to keep up with your configuration and keep bandwidth under control.

Kubernetes is Nearly Future Proof

Anyone looking to adopt a new technology should look to the future. Will Kubernetes still be around and under development in five or ten years?

All signs point to yes — Kubernetes isn't going anywhere. Organizations continue to adopt the platform for the reasons above and many more. For example, **Kubernetes is well-suited for artificial intelligence and machine learning applications already spreading throughout industries**. In addition, with the widespread adoption and offering of Kubernetes, engineer focus is going to be shifted towards the **experience enhancement through simplification and postivite quality of life changes for both the developer and operator**.

While nobody can predict the future, all signs point to Kubernetes being a future-proof platform that replaces virtual machines with a lightweight containerization system that developers and IT professionals embrace.

Make Deploying Kubernetes Easier with Lyrid Platform

Kubernetes provides many incredible benefits, but it is infamously complex to deploy. The complexity is why it provides the above advantages over legacy systems, but it can also be a significant hindrance to your business adopting K8s.

How can you deploy Kubernetes seamlessly? Lyrid's multi-cloud services are built on a customized Kubernetes platform that makes using the platform significantly easier. **Our platform provides easy-to-use tools and features that make Kubernetes less complex — allowing you to get right to the business-changing benefits**.

Ready to learn more? **Book a demo** with one of our Kubernetes' experts today to get started.
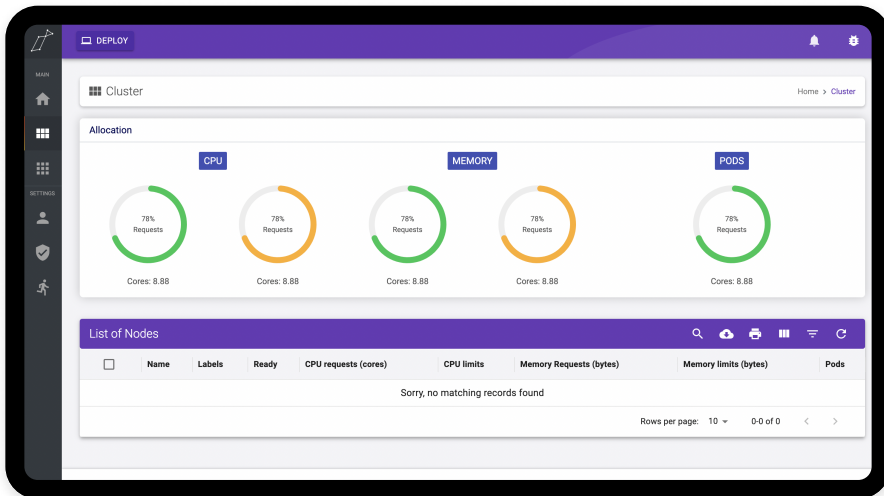
About Lyrid

Lyrid is the premier multi-cloud solution that aims to optimize your multi-cloud experience by making it fast, affordable, accessible, and simple. Established in 2019, Lyrid had one mission: to remove any stresses and opimize any disrupting processes so teams can focus on innovation and development.

We offer a plethora of tools and services to make your cloud-native developments automated and affordable. With Lyrid, you can:

- Host multiple cloud vendors with ZERO lock-in and in a single platform
- Deploy your solutions and applications automatically
- Unify your multicloud data and analytics in one convenient space
- And more!

Learn About Lyrid