



Why Kubernetes Management Needs a Seat at the Strategy Table



Towards a Cloud Native World

Businesses around the world are taking advantage of the hundreds of solutions that the cloud native landscape offers. The reason is simple: **Organizations that successfully implement cloud native technologies clearly outperform their peers.** Cloud native is not new, but it has certainly gained popularity thanks to the multitude of success stories that are out there today. But what is cloud native actually?

Cloud native is much more than just an approach. It's a combination of technology and processes to ensure the building of future-ready applications with speed, agility, security, and scalability. **Those organizations that strategically combine the right elements of technology and processes can bring new ideas to market faster and respond quickly to changing customer demands.** Another important factor that often gets neglected is culture. A cultural shift is often underestimated, leading to an incongruent, unsuccessful adoption.

Containers are an important aspect of a cloud native strategy because they make cloudbased applications easier to deploy, manage and scale. And yet, according to a recent study by Gartner, only about 5% of all enterprise applications today are containerized. Why then is container technology not more widely adopted despite its proven benefits?

In this ebook, we explore:



Why a cohesive organizational strategy and management endorsement are critical to a successful cloud native adoption



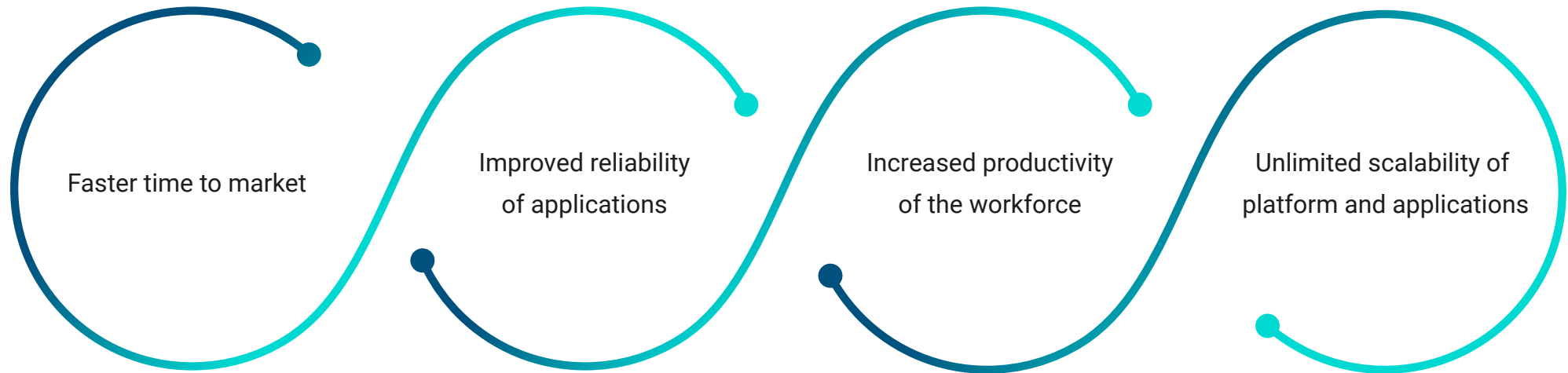
What aspects you need to consider to define a neatly aligned strategy



How to choose the right Kubernetes strategic partner

Cloud Native, Containers and Kubernetes Go Hand in Hand

The main benefits of cloud native are



As mentioned earlier, when it comes to deploying cloud native apps, containers are the best choice. Kubernetes, while not the only option when it comes to container management and orchestration, has become the de-facto standard thanks to its powerful capabilities: **91% of organizations running containers use Kubernetes for orchestration**. But implementing Kubernetes does have its own set of challenges.



Kubernetes Implementation & Operational Challenges

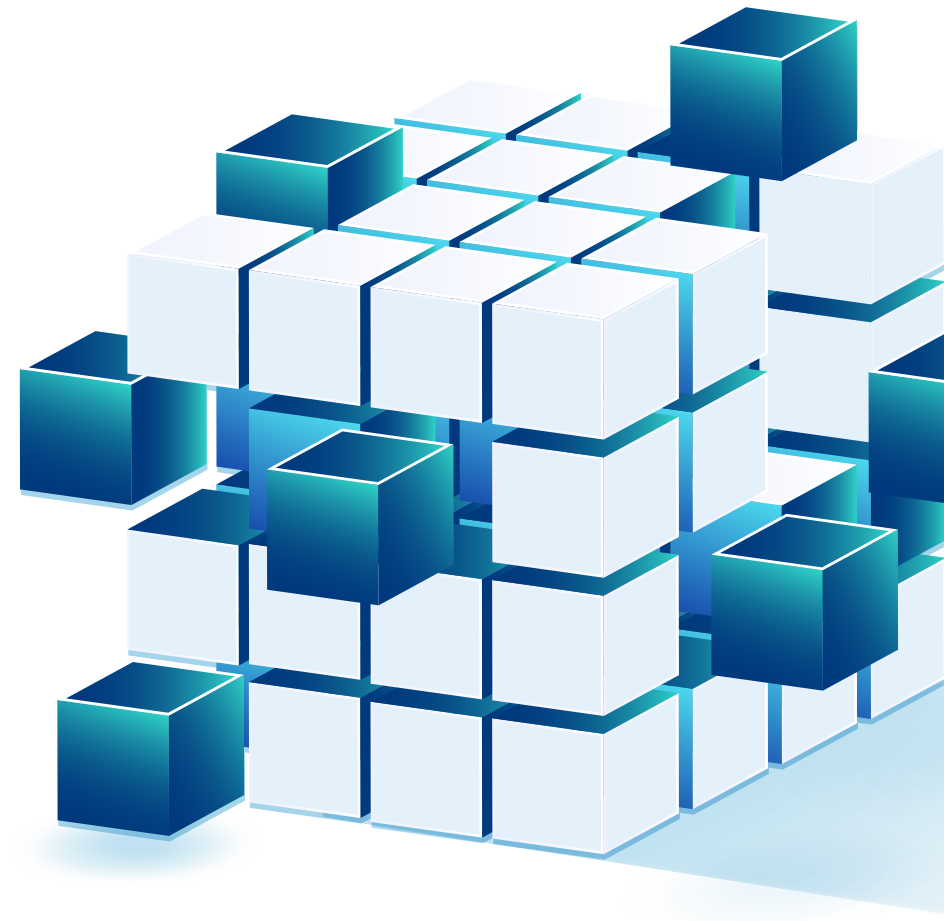
Developers are familiar with Kubernetes deployment challenges since many organizations face similar pain with other IT deployments; data and process integration, security isolation, and underestimating resistance to change to name a few. With Kubernetes, the stakes tend to be higher since it is often at the center of a cloud native journey.

Once organizations have overcome the initial challenges of installation and set up, Day 2 & Day 3 operations come knocking at the door.

Common challenges include (but are not limited to) productionizing or monetizing the platform, onboarding users, and managing a multitude of clusters over their lifecycle.

A survey by D2iQ found that while 78% of developers and architects claim that Kubernetes add-ons cause a great deal of pain and introduce complexity, only 56% of IT decision-makers echoed a similar sentiment.

This insight confirms our experience that decisions are not aligned with execution, resulting in less than efficient Kubernetes deployments. So one of the most important questions for every organization adopting cloud native technologies is: How can we bridge this gap between strategy and execution and what are the important aspects to ensure cohesiveness and success?



Establish a Long Term Vision

Every organization seeks to maintain its competitiveness by growing its market share, minimizing risks, and optimizing costs. A perfect combination of all three is easier said than done. To be successful, an organization must break down its long-term strategy into individual business unit goals, measurable metrics, and regular reviews.

Additionally, retracted economic conditions can shift organizational priorities. With volatile markets, this situation may arise more often now than it did in the past. **To be confident about decisions regarding Kubernetes deployment, it must be managed as part of a company's overarching long-term strategy.**

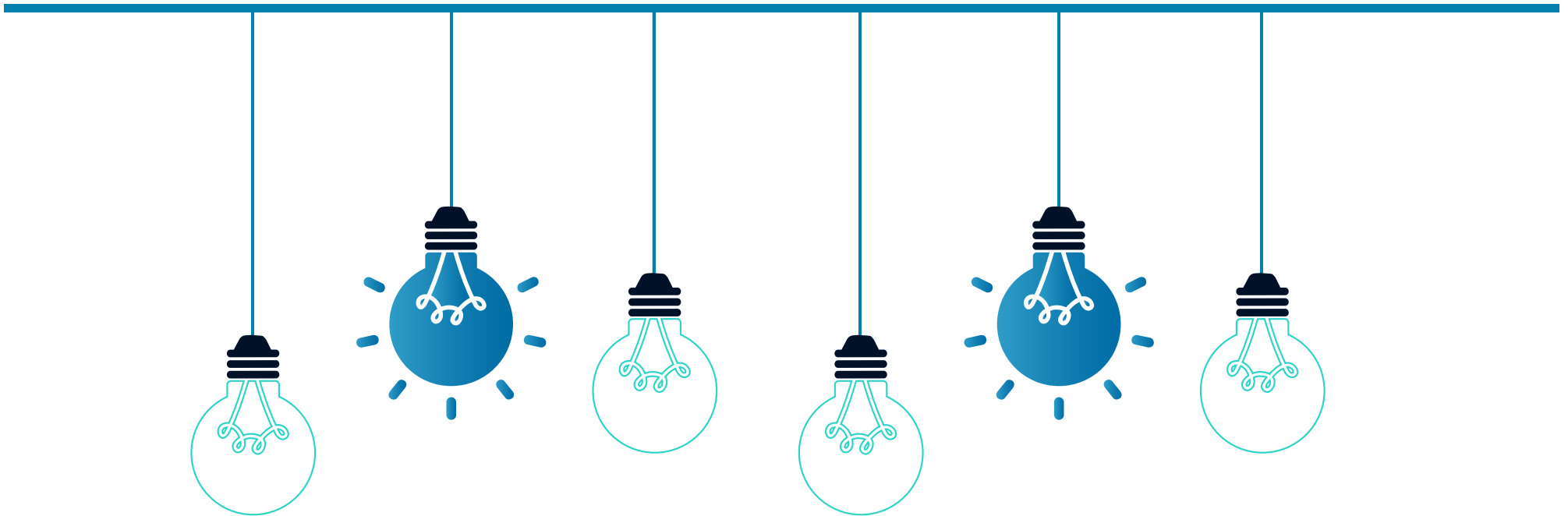
Understand & Prioritize Your Long Term Goals

Similar to other organization-wide technology enablements, implementing Kubernetes means prioritizing goals. What percentage of your goals are aligned with accelerated development vs. cost optimization? **To understand how Kubernetes will affect your KPIs, it's important to understand how it will be used over the next 5 years.** Will it require the re-alignment of your teams? Will they need reskilling or upskilling? What's the best way to communicate these changes? These are questions to think through carefully when embarking on your cloud native journey.



Prepare for a Disruption of Plans

Before Covid-19, not preparing for a "business apocalypse" was unthinkable but manageable, but it's unforgivable now. Crisis management, social and environmental issues, and rapid technological adoption have absorbed much of the time previously devoted to strategic leadership and financial viability. Moving forward, organizations need to think beyond traditional make-or-buy decisions. **It is imperative that any initiative that impacts an organization's go-to-market plan includes a strategic partner that not only has knowledge about tools and processes but also provides insights tailored to the organization's long-term vision and objectives.**



Drive Cultural Change

Cloud native is not just an approach, it's a transformation. It encompasses technology, process, and people in a manner that encourages innovation, scale, and productivity.

Think back to when DevOps first began; at its heart, it increased transparency, communication, and collaboration between previously siloed teams. On a cultural level, it became necessary to encourage continuous learning and continuous improvement. Teams gained greater autonomy through faster, more effective feedback and input.

Kubernetes management requires making cultural shifts on steroids. Teams need to move from a traditional “don’t experiment” mindset to one of “Experiment-Fail Fast-Repeat-Get it Right” as soon as possible. Team leads need to feel confident in taking calculated risks. Digital leaders excel at this mindset adjustment.

These cultural changes need to be nurtured as a strategic partnership between the organization and its employees. It's not just about getting it right, but about getting it right faster than everyone else in a consistent and scalable manner.



What Happens if the Misalignment Persists?

When your Kubernetes migration fails, there is a loss of value. How the organization defines value may vary. Some may consider the loss of revenue due to long development cycles, while others may consider a reduced perception as a brand innovator, as a business value. **Either way, ultimately it means your customers will look to your competitor when it comes to doing business.**



Choosing the Right Kubernetes Strategic Partner

Since the deployment of Kubernetes is closely intertwined with business outcomes, it becomes essential to select the right engagement strategy. **Cloud native journeys often begin with organizations taking on this task themselves. But as clusters grow in number and size, managing their growth becomes time-consuming and error-prone.**

Our experience is that once you get to about 30 homegrown Kubernetes clusters, they become unmanageable without automation, due to the amount of time and effort required to maintain them. Other challenges include:

- The added complexity of handling a multi-cloud or hybrid strategy and managing multiple vendors
- Limited control over consumption, leading to overspending on infrastructure
- Restricted identity tracking and loss of flexibility to define user roles, leading to ambiguous work distribution
- Problems with governance and compliance checks, resulting in gaping security loopholes

As organizations scale their business (which is what cloud native is intended to do), these problems become even more profound.

Hence, the need for a strategic partner who not only understands the organization's goals but can provide the expertise needed for a successful implementation.



Any strategic technical roll-out requires a partnership that addresses three pain points or areas of concern:

01 Identifying Organizational Needs

Every organization is unique, not just in its vision and goals, but also in its architecture. This is sometimes reflected in their IT infrastructure, sometimes not. (Our Kubermatic software, for example, takes into account the needs and challenges of our globally distributed team, which also benefits our customers!)

A strong partner would encourage and compel you to deal with reality, rather than viewing the world through rose-coloured glasses. It's not uncommon to see individual departments that have deployed clusters across multiple clouds. When they can't manage these on their own, central IT gets involved and discussions generally begin with security and governance. That's a good place to start, but the ultimate goal is to figure out what underlying needs prompted those business units to demand IT involvement. Identifying these needs will lead to a successful Kubernetes adoption and implementation.



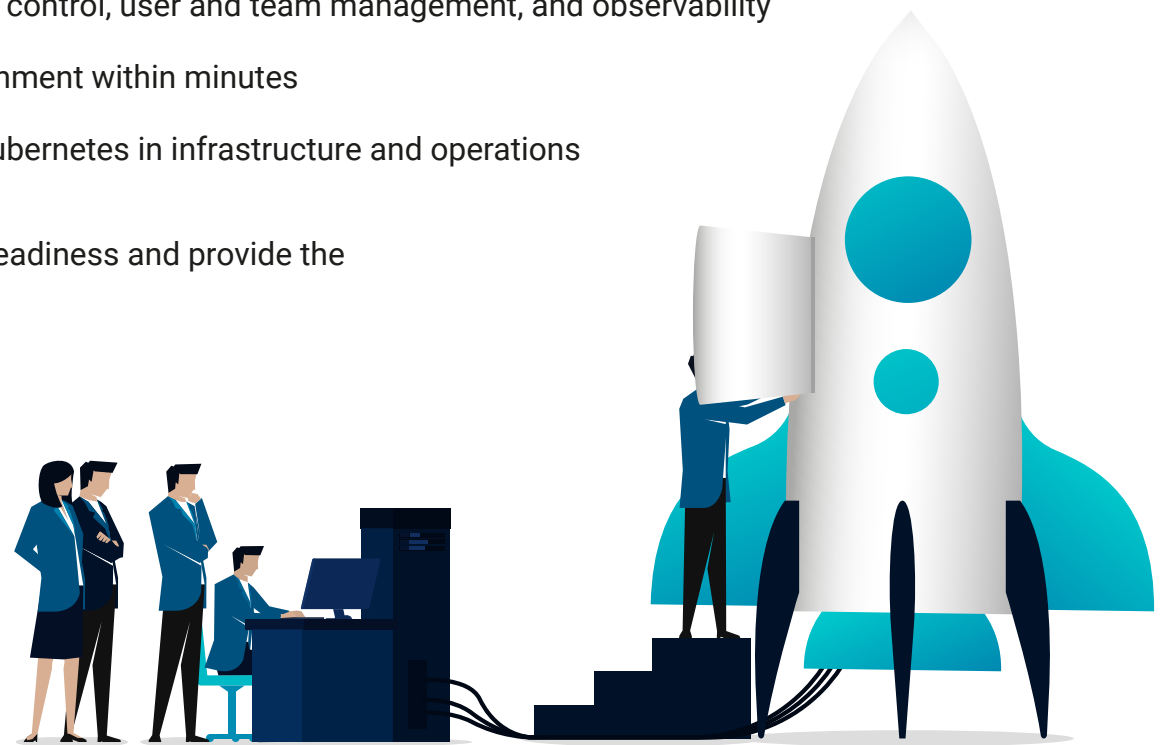
02 Setting up Interconnected Processes and Technologies

The goal of set-up is to provide all of the tools and infrastructure to seamlessly integrate an organization's existing technology landscape while also allowing it to embrace new technologies. **While you might not reinvent the wheel, you will improve your existing vehicle with worthwhile next-gen accessories.**

An ideal partner would provide an organization with:

- The freedom and benefit of choosing from the entire cloud native space from development to operations
- Enterprise-grade security and governance for improved app and workload reliability
- Easy, intuitive methods of streamlining authentication, access control, user and team management, and observability
- A self-service portal for provisioning and deploying any environment within minutes
- Enhance the savings brought about by containerization and Kubernetes in infrastructure and operations

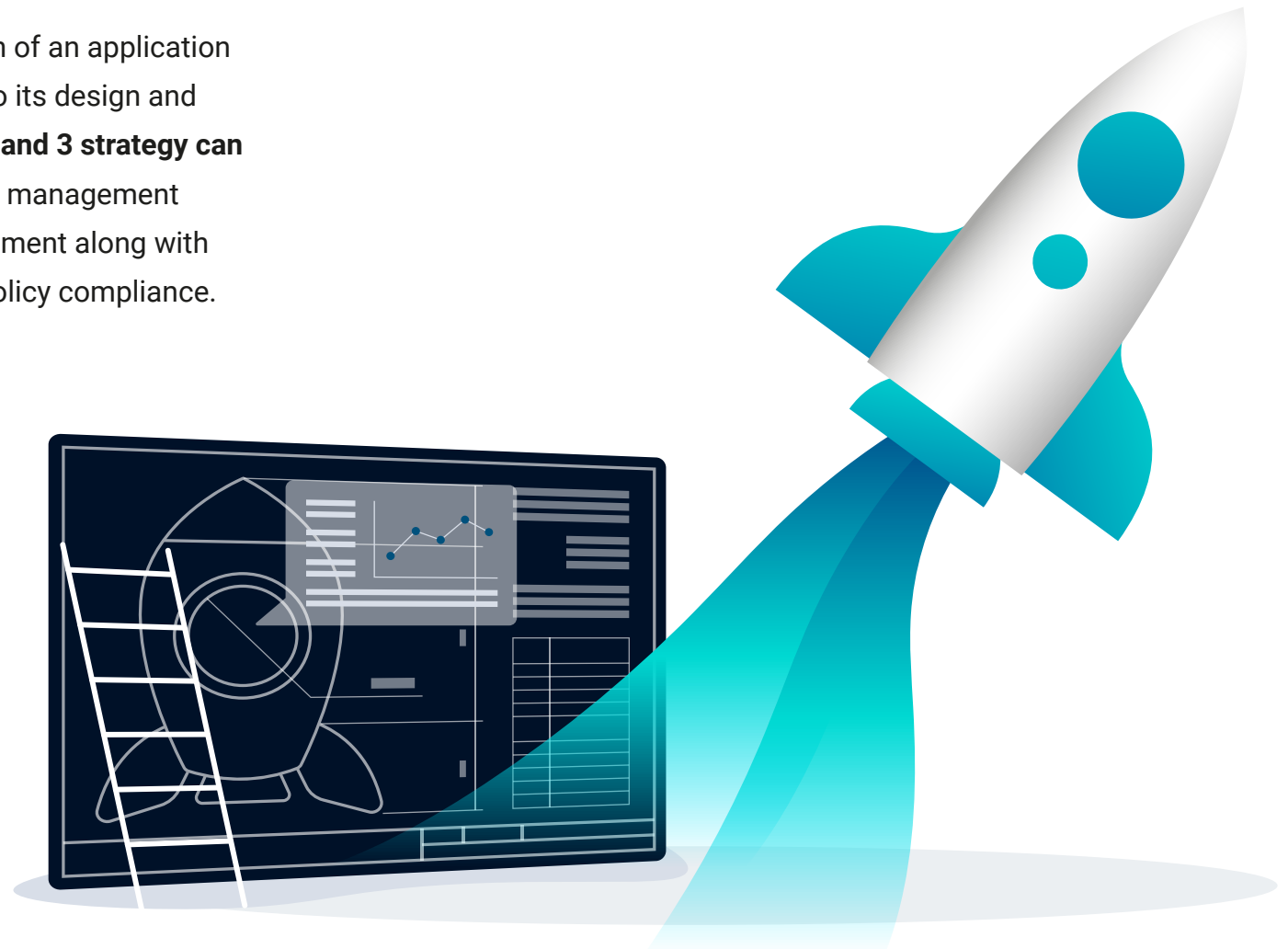
After the setup is complete, it's imperative to verify production readiness and provide the organization with a service plan that meets its needs.



03 Preparing for Day 2 & Day 3 Operations

While Day 0 (Design) and Day 1 (Deployment) challenges are the most obvious ones when organizations first move to Kubernetes, the longest phase of any application is still production. At this point, the stage and actors are all well-rehearsed and ready, but the production still needs to be closely monitored to avoid any mishaps and to ensure an encore at the end.

Another way of looking at this; the lifespan of an application requires a greater investment compared to its design and deployment phases. **Having a good Day 2 and 3 strategy can help you save money.** So your Kubernetes management partner must provide full lifecycle management along with automated deployments, upgrades, and policy compliance.



Final Thoughts

Change, while not easy, is essential. At Kubermatic, our vision is to empower human decision-making through automation. **At the end of the day, interaction with a system should be limited to changing workflows purposefully. Anything else has no value.** Kubernetes consolidates 20 years of operational experience into software and makes it available to everyone. Market leaders leverage this knowledge to the highest degree and reinvent their application service landscape along with their development workflows. Kubermatic fosters innovation because we free up resources, time, and ultimately money. Our platform unites and harmonizes workflows on infrastructure and container software levels with cloud native principles and cloud native software. **Kubernetes is the most powerful tool for running containers, and the Kubermatic Kubernetes Platform makes the most of this tool by optimizing automation to the highest degree.**



Before Kubermatic Kubernetes Platform our system would scale, but our staff wouldn't. We needed a new engineer with every 10th customer, resulting in a bottleneck. Kubermatic Kubernetes Platform helped us get rid of unnecessary work, freeing our engineers to focus on improving our products.

Simon Pearce, SysEleven

Curious?

If we've sparked your interest, feel free to reach out to us at sales@kubermatic.com for a personalized and no strings attached consultation.