

Decision Time: OS Kubernetes and Managed Kubernetes
















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A [Kubernetes](#) platform operates containers at scale without sacrificing app uptime. Despite any challenges, the benefit of implementing and operating Kubernetes outweighs the costs. As an open-source project, there are a number of pathways to the implementation of Kubernetes. But it comes down to three basic means:

- 1) **Do-it-yourself Kubernetes:** anyone can download a Kubernetes release, as suited to their purpose, and attempt to implement it for small projects or enterprise systems.
- 2) **Self-managed Kubernetes Package:** if you host your applications on AWS, you can use Kubernetes in AWS (EKS), if on Azure, then Azure Kubernetes Service (AKS) and likewise for GCP with Google Kubernetes Engine (GKE). Cloudera has recommended Red Hat OpenShift for CDP (Cloudera Data Platform). Whatever PaaS and IaaS your enterprise has chosen, there is likely a pre-packaged solution available.
- 3) **OS Kubernetes managed by Ultra Tendency.** This approach combines the advantages of Kubernetes as managed by a major provider while keeping costs lower and remaining agnostic towards infrastructure solutions. A consultancy like Ultra Tendency can run Kubernetes cheaper, while providing top expertise and better service.

While the challenges presented by the deployment of Kubernetes are not few, [The New Stack](#) wrote in March of 2018 that Kubernetes' complexity was not the biggest challenge. Rather **security, networking, storage, and monitoring** all presented greater difficulties. Nevertheless, the value of **Kubernetes implementation** outweighs the challenges. Kubernetes offers the most efficient resource and application management available. Yet the complexity of Kubernetes cannot be waved away. Unless you are an expert in Kubernetes and its implementation at the enterprise level, DIY Kubernetes will cost more in time and headaches than it will save in money.

The DIY options for Kubernetes present too many difficulties to be viable at scale. If your company has the technical expertise to deploy Kubernetes in cloud infrastructure, then this might be the cheapest option. Otherwise, how do you want to tackle the challenges of Kubernetes implementation? Do you want a large partner with standard solutions or do you want to take full advantage of the **open-source community** and remain cloud agnostic? Should a firm implement Kubernetes with third-party help or opt for an enterprise distribution of Kubernetes with additional services?

 Do-it-yourself kubernetes	Managed Kubernetes  AmazonEKS  Azure Kubernetes Service (AKS)  Google Kubernetes Engine  OPENSIFT redhat
 Gives the user the advantage of a high level of flexibility	Paid subscriptions and with services 
 Does not offer a predefined solution	Offer an enterprise-ready distributions of Kubernetes 
 High value of implementation	You may deploy the solution faster using fewer resources 
 The user must define and test the configuration	More user-friendly and intuitive for beginners 
 Complexity that can be eased by a proficient consultancy	Automated scaling of clusters 

By itself, Kubernetes does not offer a **predefined solution**, which gives the user the advantage of a high level of **flexibility**. Yet the user must define and test the configuration in order to maintain proper functionality. For those with high-level technical skills or the assistance of a **proficient consultancy** like **Ultra Tendency**, this is unproblematic. Technical help may also be found with the open-source community. Implementing Kubernetes with help and supervision from Ultra Tendency offers the best of both worlds: you maintain control of your resources, the solution you need to implement, and the infrastructure you want to use, while easing the complexity of Kubernetes.

OS Kubernetes managed by Ultra Tendency will also offer a lower cost path to Kubernetes deployment. Contrary to self-managed Kubernetes from a cloud provider like AWS, Google, or Microsoft, where one must pay to utilize a Kubernetes master node and other compute units, at Ultra Tendency we use cloud infrastructure to spin up standard, open source Kubernetes. With Ultra Tendency one pays only for the virtual machines on the IaaS, not for PaaS too.

AWS, Azure, Red Hat, and others offer an **enterprise-ready distribution** of managed Kubernetes, through a paid subscription and with services. Here your solution is pre-defined and you will have less flexibility, but you may deploy the solution that you need faster using **fewer resources**, albeit at high monetary costs. For example, OpenShift is more **user friendly** for beginners and more intuitive than Kubernetes, providing a single user experience wherever it is deployed throughout an organization, while bringing the assurance of Red Hat company support for **technical help**. The same is likewise true for the public cloud versions of Kubernetes. However, if you go with a subscription service, get ready for large monthly bills.

Choosing a managed Kubernetes solution does not change the resource management goal of containerization, and the solution's web console will make it easy to manage containers. On OpenShift, for example, **Jenkins** has been integrated, making it is easy to **test** and **deploy applications**. Also great for end users is the rapid and **automated scaling of clusters** through an autoscaling operator or the easier management of nodes through MachineSets. Still, implementing OpenShift may reduce your options if your firm is thereby encouraged to deploy on IBM Cloud.

As we have seen, the complexity of Kubernetes is not the most significant problem, so adopting a more user-friendly packaging may not solve other problems like networking or storage. If you implement an **open-source version of Kubernetes** managed by Ultra Tendency, you have access to a wide ecosystem and open-source support tools that you and your partners can tailor more exactly to your enterprise needs.

Your choice depends on the culture of your organization, your resources, and what sort of partnerships you want to foster. If your firm has the engineering resources, deploying an open-source version of Kubernetes can make sense. Alternately, outside expertise is often more economic than purchasing subscription services from a licensing organization like Red Hat, AWS, GKE, or other providers based in the United States. A contract with a **third-party provider** puts you in **control of your IT resources**. [Ultra Tendency](https://www.ultratendency.com) is a European firm offering the best **know-how in Kubernetes** on any private or public Cloud at competitive pricing. Get in touch with us by writing to info@ultratendency.com or calling +49 89 2080 46609.

