



VMware Container Service Extension (CSE)

Version 4.0



Requirements

VMware CSE is delivered as an easy-to-deploy appliance. It requires VMware Cloud Director 10.3.1 or newer, or Flex Core, the VMware Cloud Provider baseline that includes VCD, Tanzu Basic, VMware NSX® Data Center, and more.

Integrated container capabilities help cloud providers address the changing application landscape. More than five million developers are now using Kubernetes (K8s), an increase of 67% over 2020.¹ Cloud native is the platform you need for modern applications.

VMware Cloud Director Container Service Extension (CSE) is a plug-in for VMware Cloud Director® (VCD) to run native multi-tenant K8s with VMware Tanzu. CSE brings Kubernetes as a Service (KaaS) to VCD by allowing providers to create customized K8s templates and import standard VMware Tanzu Kubernetes Grid OVA (TKG templates). This enables users to deploy and manage fully functional K8s clusters as self-contained vApps. The rich feature set of this extension will attract developers working on and wishing to use K8s.



Delivering more value in developer K8s

- Build and manage highly available VMware Tanzu Kubernetes Grid (TKG) clusters directly through the easy-to-use interface that lets developers upgrade, scale, and apply automation
- Get improved debugging and self-management of clusters



Ensuring scalability and resiliency

- Offer a Resilient platform with Multi Master node plane supporting HA deployments.
- Automate scaling of clusters thru CLI.
- Automate networking with VMware Avi Load Balancer to secure L4 traffic and Contour open source K8 ingress controller for secure L7 traffic.



Advanced Computing solutions

- Create heterogeneous clusters using “node pools” with custom sized nodes to build clusters that can accommodate memory or CPU intensive containers based on business needs
- Run AI and deep learning workloads with Nvidia GPU-based clusters



Ecosystem benefits

- Integrate with the VMware Tanzu ecosystem, including attaching clusters to Tanzu Mission Control and using the Tanzu command line interface to deploy Tanzu Standard packages into a cluster
- Run containerized VMware RabbitMQ using the VCD Data Solutions Extension
- Deploy ready-to-run applications and environments from the Bitnami Application Catalog into clusters with VMware App Launchpad



Cloud Provider Solution Benefits

Container Service Extension helps cloud providers build a developer-ready cloud to expand their business by:

- Delivering enterprise-grade, standards-based Kubernetes cluster services for developers
- Reducing operational costs for tenants
- Decreasing infrastructure costs for providers
- Providing concurrency, scale, and performance in an easy-to-use solution

Kubernetes is only one piece of the service stack. Cloud providers can offer complementary services from curated catalogs, third-party vendors, or the VMware Marketplace using the VMware App Launchpad (ALP) to create a complete developer-ready cloud portfolio.

For more information about how to install and configure VMware Container Service Extension, please see [the solution brief and blog](#).

1. Cloud Native Computing Foundation, New SlashData report: 5.6 million developers use Kubernetes, an increase of 67% over one year, December 2021