



## Cloud Director™



### The Leading Cloud Services Platform for Cloud Services Providers

#### AT A GLANCE

VMware Cloud Director® (VCD) is a leading cloud service-delivery platform that some of the world's most popular Cloud Services providers use to operate and manage successful cloud-service businesses. VMware Cloud Director helps Cloud Services Providers derive maximum efficiency from their cloud infrastructure and enables the creation and provisioning of differentiated and value-added cloud services. VMware Cloud Director is available globally through the Cloud Services Provider.

#### KEY BENEFITS

- » VMware Cloud Director delivers a hyperscale-class cloud platform in and across Cloud Provider's datacenters, helping save operational cost and capital expenditure.
- » VMware Cloud Director is highly automated, operationally efficient, and scale-tested for global cloud environments.
- » VMware Cloud Director delivers a suite of native cloud services and Kubernetes Native & Tanzu clusters, along with custom self-service capabilities. Hundreds of Cloud Services Providers across the world have used VMware Cloud Director to up-level from pure IaaS / hosting to a full-fledged portfolio of profitable cloud services.
- » VMware Cloud Director delivers a unified platform to manage applications, VMs, and containers. VCD offers several ways to code and extend its functions in a developer environment, such as Python and REST API as well as Terraform Provider support to drive infrastructure as code.
- » VMware Cloud Director has proven cost saves and revenue generation for Cloud Services Providers, enabling business growth with minimal operational headcount increase.

#### What is VMware Cloud Director?

VMware Cloud Director is VMware's flagship cloud services platform for Cloud Services Providers. It is a pervasive cloud infrastructure control plane for Cloud Services Provider's service-delivery needs, and the management entity for a global VMware cloud estate. VMware Cloud Director allows seamless provisioning and consumption of cloud computing resources and services to geographically distributed lines of business and IT teams in an API-driven approach.

#### What are the key features of VMware Cloud Director?

**Multi-tenant Resource Pooling:** VMware Cloud Director helps create virtual data centers from common or distributed infrastructure to cater to heterogeneous enterprise customer needs. With VMware Cloud Director, a Cloud Services Provider can host and serve multiple customers from a single vCenter that may be stretched across distributed physical servers.

**Cloud-native Offerings:** VMware Cloud Director provides an easy on-ramp to cloud-native application development for enterprise DevOps by delivering enterprise-grade native and Tanzu-based Kubernetes runtime, lifecycle management of K8S clusters managed by K8S provider (Tanzu via CSE). With Kubernetes delivered by self-service, tenants can deploy K8S clusters with VMware Cloud Director through Container Services Extension (CSE); they can upgrade, spin up, and scale in/out, one or more Kubernetes K8S clusters via native GUI or API and CLI.

**Deep Automation:** VMware Cloud Director delivers unparalleled infrastructure efficiencies with context-aware automation across workflows. Terraform Provider for VMware Cloud Director enables complete provisioning of compute and network resources as code and enables simple architecture design of a service-ready cloud stack.

**Service Suite and Service Stitching:** VMware Cloud Director has an open extensible form factor leveraged by leading data protection, storage, network, security, and other cloud software vendors to natively integrate their offerings with VMware Cloud Director UI. Moreover, Cloud service providers can offer their customers bespoke user experiences by publishing their custom services and user views in App Launchpad with automatic delivery on both containers (Helm charts) and VM.

**Policy-driven Cloud Management:** VMware Cloud Director ensures enterprises have secure, isolated virtual resources and intelligent dynamic distributed firewalling for integral malware spread prevention. Cloud Director provides independent role-based authentication at the levels of Cloud Services Providers and their customers and fine-grained access control across data centers, sites, virtual machines, and applications. Moreover, intelligent workload placement allows Cloud Services Providers to drive higher efficiency from their cloud infrastructure licensing and utilization while delivering outstanding performance and exceeding SLAs.



**Global Hybrid Cloud Management:** VMware Cloud Director helps Cloud Services Provider manage and gain deep visibility into datacenters across sites and geographies and monitor cloud resources across sites from a single pane of glass. VMware Cloud Director is proven to connect and scale seamlessly across thousands of sites. Multi-site is a core requirement for hybrid customers and is supported by Cloud Director and Cloud Director service bi-directionally.

**Cloud Migration and Availability:** VMware Cloud Director helps enable simple, secure VM migration and data center extension with VMware Cloud Availability. This allows for secure hybridity, simple Layer 2 connectivity and cold or warm migrations to Cloud Director and Cloud Director service on VMware Cloud on AWS and Google Cloud VMware Engine (GCVE). The integration with VMware Cloud Availability makes it easy for Cloud Services Providers to run data protection offerings compatible with on-premises vSphere enterprise environments.

**Networking and Security as an inclusive offering:** VMware Cloud Director supports NSX-T with dynamic distributed firewalling, cross VDC networking, vApp Edge Networking services, overlapping IP support for tenants using VRF-lite, IPv4 and v6 coverage and layer 2 VPN services natively. NSX Advanced Load Balancer brings application intelligence to load balancing services for customers and, combined with basic (standard) Load Balancing self-service from VMware Cloud Director, fully covers the services that used to be provided by NSX-V. Now introducing WAF services.

**Operational Visibility and Insights: Leveraging** integration with VMware vRealize Operations' Tenant App for VMware Cloud Director, Cloud Services Provider can use multi-layer analytics and predictive remediation to better serve their enterprise customers. The integration also provides visibility into virtual machine costs and accountability to understand the granular costs of virtual infrastructure required to support business services.

## What are the key benefits of VMware Cloud Director for the Cloud Services Provider?

**Operational Efficiency:** VMware Cloud Director enables Cloud Services Providers to obtain extreme operational efficiencies out of their cloud infrastructure and also reduces operational overheads that come with maintaining silo private and multi-cloud environments. VMware Cloud Director significantly reduces time-to-market for Cloud Services Provider services and scales these services globally without external dependencies and ballooning costs.

**Service expansion and Monetization:** VMware Cloud Director enables Cloud Services Provider to spin up new cloud services on Day 1. Cloud Services Providers can drive more revenue by publishing their own service suite or 3rd party ISV-provided backup, DR, security, migration, and other leading cloud services that are tenant and site-aware. Content Hub or App Launchpad can also launch services, negating customer knowledge of infrastructure and security to any endpoint, containers and VMs. VMware Cloud Director forms a unified management plane for the entire service portfolio of a Cloud Services Provider. VMware Cloud Director is also key to getting the 'Cloud Verified' certification, a mark of the world's most capable and differentiated VMware Cloud Services Provider.

**Developer-Readiness:** VMware Cloud Director provides an open platform for Cloud Services Providers and customer developers to build on. Using the programmatic interfaces, automation tools, and extensibility frameworks of VMware Cloud Director, Cloud Services Providers can differentiate themselves by providing unique experiences to their customers and helping them get to application-building faster. Using VMware Cloud Director, providers are able to

offer tenants various tiers of cloud-native services, secure K8s cluster infrastructures (now including Tanzu Kubernetes Grid for vSphere and Multi-Cloud) and marketplace application portfolios/interfaces to meet developer needs.

## What are the key benefits of VMware Cloud Director to the end customer?

**VMware Cloud-as-a-Service:** Consume turnkey cloud services, including the full VMware Software-Defined Datacenter, as a service from a trusted Cloud Services Provider, with full self-service controls or delivered as part of a managed service.

**Easy-to-Provision and Easy-to-Consume VMware Cloud:** Experience a single access point for all your virtual data centers via an intuitive UI or APIs. Enjoy easy, self-service consumption and provisioning of cloud services, including 3rd-party services and Cloud Services Provider-built services, through a single pane of glass to any target platform. Leverage simplified workflows and container services to build better and faster.

**Easy Workload Migration Across Virtual Datacenters:** Backup, evacuate, or replicate VMs or entire datacenters in a few clicks to a resilient VCD-powered cloud.

**Fast Path to Hybrid Services:** VMware Cloud Director provides a feature-rich, self-service, modern cloud environment with on-demand elasticity, streamlined onboarding, and hybrid cloud operations across multiple clouds.

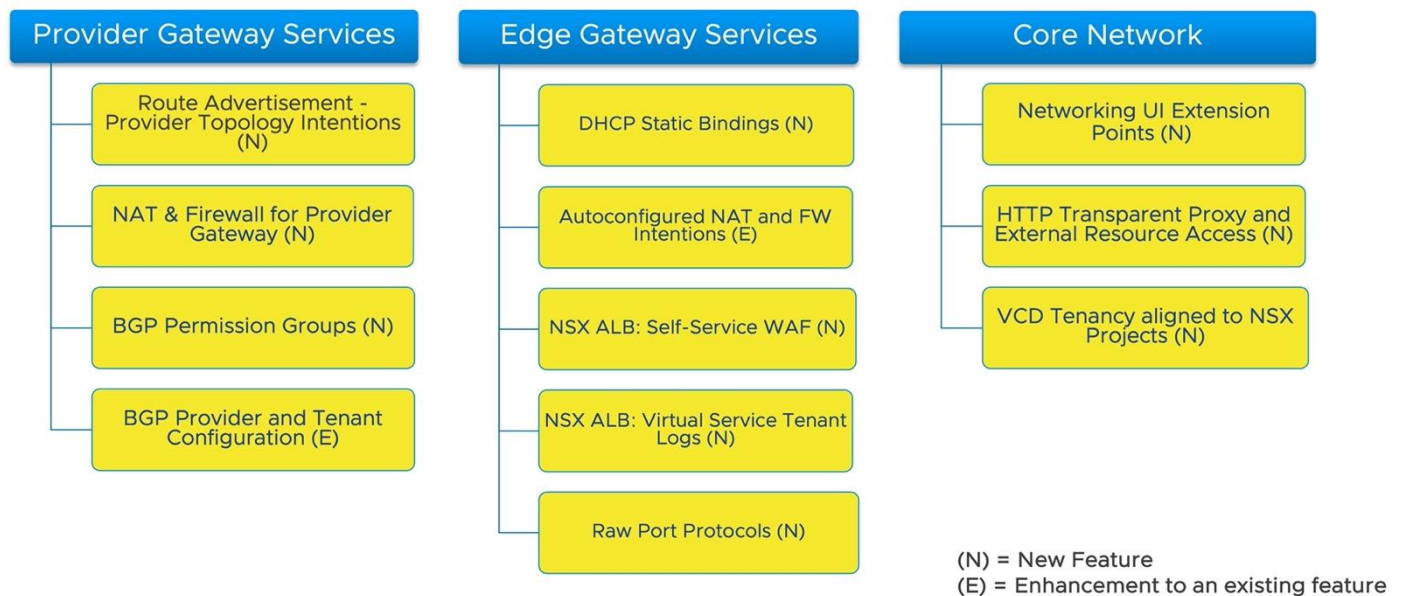
**Developer Ready Clouds:** VMware Cloud Director provides Terraform Provider infrastructure-as-Code a range of API capabilities and Kubernetes K8S Tanzu cluster services from the Container Service Extension supporting Tanzu Kubernetes Grid (TKGs & TKGm) or native Kubernetes that enterprise developers can consume as code. Tenants can deploy and manage the K8S cluster using VMware Cloud Director cluster API/CLI/UI. Equally, now Cloud Services Provider can offer Platform as a Service VMware Marketplace or custom applications to consumers via the App Launchpad, essentially negating the need for customers to understand underlying infrastructure.

## What is new in VMware Cloud Director 10.5.1?

To learn in detail about the new features in this release, see the [VMware Cloud Director 10.5.1 is now GA](#) blog.

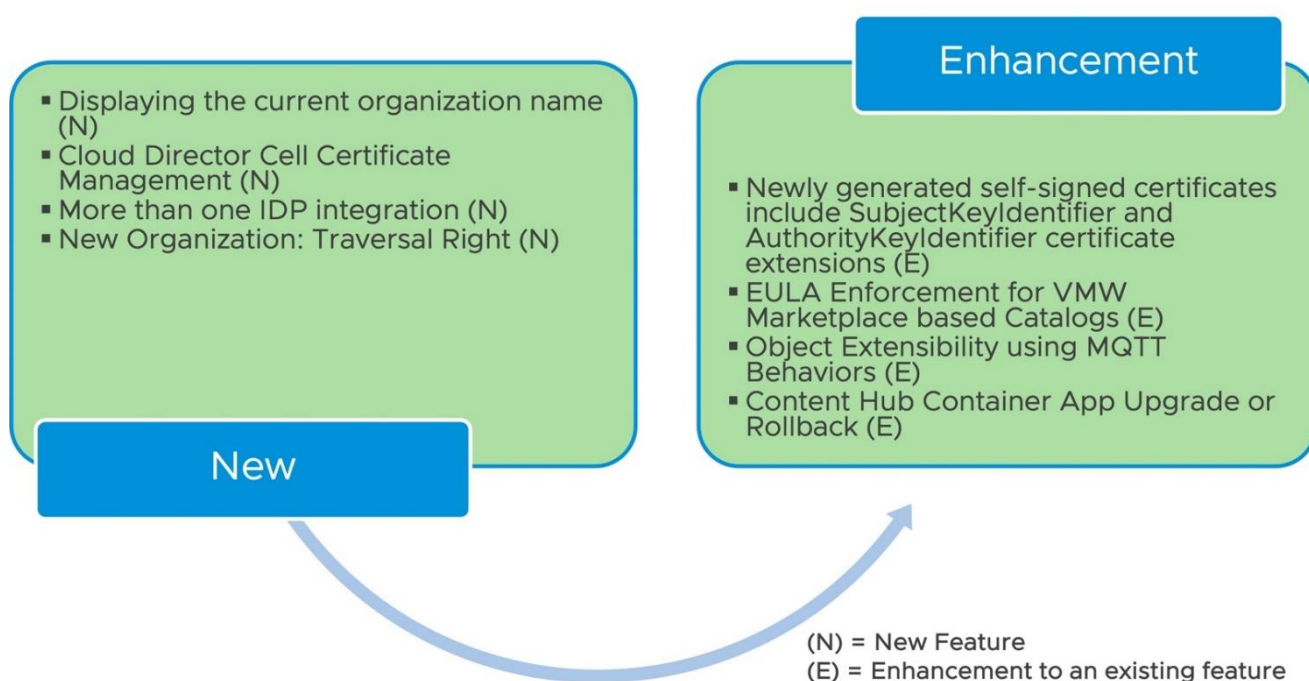
### Networking

The significance of networking updates cannot be overstated in any product, as they play a pivotal role in enabling smooth and effective communication between various elements, systems, and users. Regularly updating the networking infrastructure is crucial for addressing security risks, amplifying performance, improving compatibility, and introducing innovative functionalities. Furthermore, these updates facilitate the incorporation of emerging technologies, protocols, and standards, ensuring flexibility in evolving network landscapes and fostering enhanced interoperability. In the context of VMware Cloud Director 10.5.1, these updates introduce fresh capabilities and enhance existing networking features, delivering a heightened networking experience for users.



## Core Platform

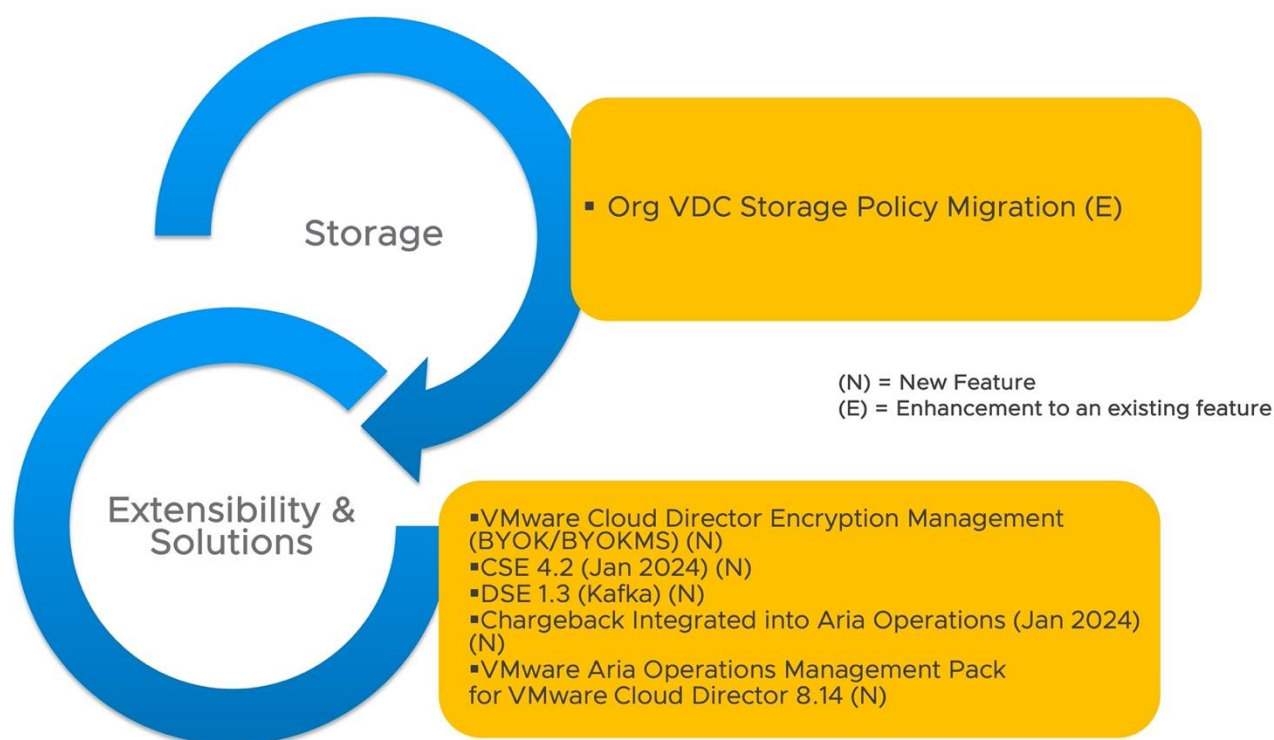
Foundational updates within any product hold paramount importance as they establish the bedrock upon which the entire system operates. Consistent updates to this foundational core are critical to address software glitches, security vulnerabilities, and performance inefficiencies. Sustaining an updated core platform guarantees stability, reliability, and optimal performance, ensuring developers can maintain and enhance functionality effectively. Moreover, these updates facilitate the integration of novel technologies, frameworks, and libraries, fostering improved features, enhanced user experiences, and heightened scalability. Additionally, keeping the core platform current ensures compatibility with evolving hardware and software landscapes, resulting in a product adaptable to changing market needs. Overlooking these core updates can lead to system instability, security breaches, and decreased competitiveness in the market. Hence, prioritizing regular updates to the core platform is indispensable to uphold a robust, secure, and high-functioning product. Specifically, in the context of VMware Cloud Director 10.5.1, these updates introduce fresh capabilities and enhance existing features, thus elevating the overall user experience.



## Storage, Extensibility and Solutions

### Storage:

Updates to storage systems carry substantial importance for any product as they wield a direct influence on data integrity, availability, and performance. Consistent updates to storage infrastructure are vital to tackle possible issues, optimize storage usage, fortify data safeguarding, and elevate overall system effectiveness. The act of updating storage systems enables product developers to harness technological progressions, resulting in accelerated data access speeds and decreased storage expenses. In the context of VMware Cloud Director 10.5.1, these updates introduce several enhancements to current features, thereby enriching the overall user experience.



### Extensibility and Solutions:

Around the VMware Cloud Director 10.5.1 release, we will also be rolling out extensibility enhancements as follows:

#### VMware Cloud Director Encryption Management

##### Use Cases of this Solution:

- Tenants bringing their own Key (BYOK)
- Tenants bringing their own Key Management Server (BYOKMS)

## Container Service Extension 4.2 (Jan 2024)

### Some of the updates (*subject to change*):

- Support for TKG versions:
  - 2.3.1 and
  - 2.4
- Key Features:
  - Full Integration with Tanzu Mission Control Local (TMC Local)
  - K8SaaS on Air gapped deployments.

## DSE 1.3

- Support & cater to the modern customer's needs with Apache Kafka.

## Chargeback Integration into Aria Operations (Jan 2024)

- The improved functionality enables monitoring of VCD through Aria Operations, providing diverse services directly to tenants. Essentially, this advancement eliminates the need for Chargeback, also known as the tenant app.

## VMware Aria Operations Management Pack v8.14

### What's New:

- Supports the collection of the CEIP enabled property by the Sovereign cloud compliance pack.
- VCD 10.5.1 client jar is updated to resolve issues.



To learn more about how VMware Cloud Director works, please visit <https://www.vmware.com/products/cloud-director.html>.

Also, watch and subscribe to our YouTube Channel or any of the resources below:

- [HTTP://BIT.LY/VCPP\\_TWITTER](http://bit.ly/vcpp_twitter)
- [HTTP://BIT.LY/VCPP\\_FB](http://bit.ly/vcpp_fb)
- [HTTP://BIT.LY/VCPP\\_LINKEDIN](http://bit.ly/vcpp_linkedin)
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