

# VMware vCloud Director

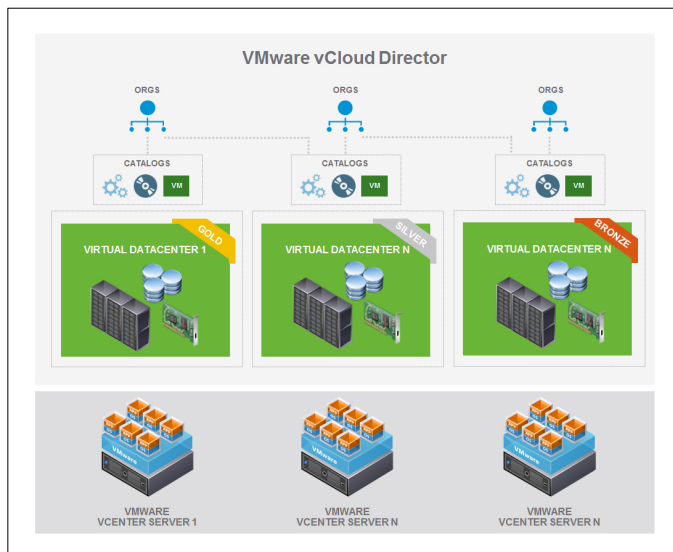
Complete Public and Hybrid Cloud Services Delivered in Minutes

## AT A GLANCE

VMware vCloud Director® orchestrates the provisioning of public and hybrid cloud services to deliver complete virtual datacenters for easy consumption in minutes. Public and hybrid cloud services and virtual data centers fundamentally simplify infrastructure provisioning and enable Service Providers to respond promptly to enterprise demands.

## BENEFITS

- Enable infrastructure to be ready for easy consumption in minutes
- Ensure workload security and automated resource control
- Available exclusively for Service Providers via the VMware vCloud® Air™ Network Program to address their unique public and hybrid cloud use cases



VMware vCloud Director enables a pragmatic approach to automated provisioning by transforming today's data center running vSphere into an infrastructure-as-a-service environment you can trust.

## What Is VMware vCloud Director?

VMware vCloud Director orchestrates the provisioning of software-defined data center services as complete virtual data centers that are ready for consumption in a matter of minutes. Virtual data centers provide virtualized compute, networking, storage, and security that can be provisioned to make relevant workloads operational in minutes. Software-defined data center service and the virtual data centers fundamentally simplify infrastructure provisioning, and enable IT to move at the speed of business.

## How Does VMware vCloud Director Work?

VMware vCloud Director applies the principles of pooling, abstraction and automation to all data center services like storage, networking, and security. By dramatically simplifying the provisioning of these services, VMware vCloud Director enables Service Providers to provision complete and operationally ready infrastructure without worrying about the underlying physical configuration of hardware.

vCloud Director accelerates and simplifies access to infrastructure. Open Virtualization Format-based vApp templates of multi-tier applications are made available via catalogs for rapid deployment. This template-based approach also enables applications to be flexibly ported between data centers.

vCloud Director also leverages VMware vSphere® technology like linked clones and snapshots to dramatically expedite access to infrastructure. This faster infrastructure delivery is also available to third-party technology alliance partners through an expanded API and SDK.

vCloud Director leverages a policy-driven approach to provisioning that embeds software-defined security and resource consumption controls so that pre-configured policies are automatically enforced. VMware vCenter™ Single Sign-On enables SAML and OAuth 2 tokens generated by any identity provider to be used to login to vCloud Director.

Beyond security, vCloud Director enables authorized consumption using a flexible role-based access control (RBAC) model that enables different users to have different levels of functional access within vCloud Director. Quotas, leases, and limits can also be set to limit consumption that exceeds prescribed boundaries.

## How Is VMware vCloud Director Used?

The virtual data center is a logical container that provides all infrastructure services, including virtualized networking, storage, and security. With virtual data centers, infrastructure services related workloads could be made operational in minutes.

Service Providers also face ever increasing pressure to react quickly to the end users' needs that is often constrained by the rate at which IT infrastructure can be provisioned. By accelerating infrastructure delivery, Service Providers can ensure that they immediately respond to the needs of their end users while maintaining security and control.

## Key Features of VMware vCloud Director

**Virtual data centers** – Virtual data centers are complete sets of hybrid or public cloud services that include compute, storage and networking capacity to enable complete separation between the consumption of infrastructure services and the underlying hardware.

**Snapshot and Revert** – Unwind changes made to a virtual machine for rapid destructive testing without the need to re-provision multiple times.

**Integrated vSphere Profile** – Driven Storage and vSphere Storage DRS™ – Deeper integration with vSphere storage features enable storage in the vCloud Director environment to be tiered and load-balanced to maximize performance and simplify provisioning.

**Security** – Integrated VMware vCloud® Networking and Security™ technologies such as perimeter protection, port-level firewall, and NAT and DHCP services, offer virtualization-aware security, simplify application deployment and enforce boundaries required by compliance standards. Integration with vCloud Networking and Security or NSX offerings adds advanced services such as VXLAN, VPN, firewall high availability, network isolation, and web load balancing.

**vCenter Single Sign-On** – Simplify administration by allowing users to log-in once and then access all instances of vCenter Server and vCloud Director without the need for further authentication.

**Fast Provisioning** – Using VMware's unique linked clone technology, end users are able to rapidly clone base vApps into "children" vApps by only storing changes made by children and reading all other data from the base. This enables significant storage savings for IT and acceleration for end users who have highly cloned applications.

**vApp Catalog** – Multi-tier applications can be deployed and consumed as pre-configured virtual appliances containing virtual machines, operating system images, and other media with the click of a button from catalogs. This enables IT to standardize offerings, simplifying troubleshooting, patching, and change management.

**Isolated Multi-tenant Organizations** – Administrators can group users into organizations that can represent any policy group such as a business unit, division or subsidiary company. Each has isolated virtual resources, independent LDAP-authentication, specific policy controls, and unique catalogs. These features enable a multi-tenant environment with multiple organizations sharing the same infrastructure.

**Self-service Web Portal** – Users have direct access to their catalogs and virtual data centers through a user-friendly Web portal or via APIs.

**VMware vCloud API, OVF, and custom extensions** – The vCloud API is an open, REST-based API that allows scripted access to cloud resources, such as vApp upload and download, catalog management, and other operations. Custom extensions enable VMware vCloud Director to send outbound messages to other integrated systems.

**VM Monitoring** – Tenants now have the ability to access current and historical VM performance metrics through a tenant visible, multi-tenant safe API. Using the API, tenants have the ability to troubleshoot application performance problems, auto-scale their applications, and perform capacity planning.

**VM Disk-Level Storage Profiles** - vCloud Director now allows unlocking of storage centric workloads such as databases and email servers by enabling associated VMs to access different tiers of disks. This allows users to balance cost vs. performance.

## Find Out More

For information on vCloud Director or the VMware vCloud Air Network Program, call 877-4-VMWARE, or visit <http://www.vmware.com/partners/service-provider>

