

VMware vCloud Air Direct Connect

AT A GLANCE

VMware vCloud® Air™ Direct Connect is a dedicated, high-throughput networking link that connects remote data centers and those in the same colocation facility to an instance in vCloud Air. Available for Dedicated, Disaster Recovery, and Virtual Private Cloud service options, Direct Connect provides an additional connection method into vCloud Air that offers:

- High throughput up to 1 or 10 Gbps
- Dedicated path with low latency
- Privacy and security
- Support for secure multi-point connections

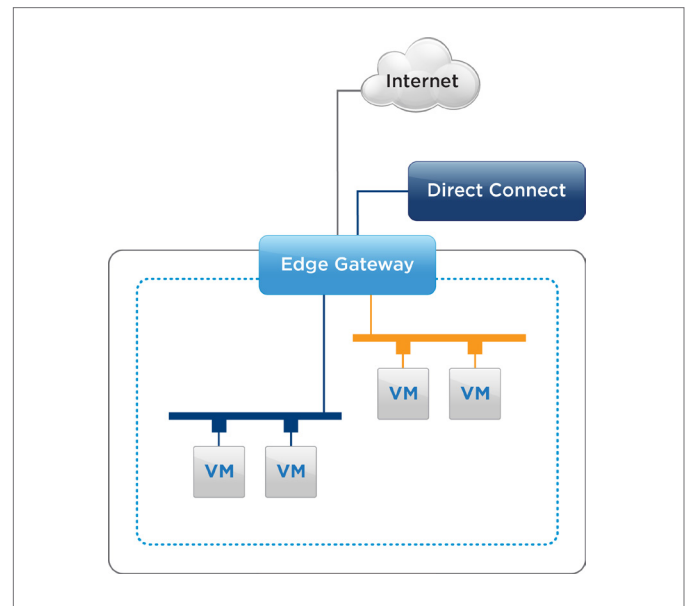
KEY BENEFITS

- **Seamless Network Integration - Extend Beyond Your Current Data Center** Direct Connect enables new ways to connect one or more data centers to vCloud Air, including those in the same colocation facility. These high-speed connections enable new hybrid architectures from secure multi-point networks to analytics applications that transfer large amounts of data between data centers.
- **Better Performance** Direct Connect can be connected to a dedicated virtual circuit, enabling high-throughput and low-latency connections for performance-sensitive applications.
- **Improved Security** Direct Connect allows a dedicated link to be shared among multiple endpoints, making it easier to support branch and remote offices within the same vCloud Air instance.
- **Service Flexibility** A high-throughput, low latency connection enables custom architectures where vCloud Air is connected to specialized network, storage, or compute hardware and appliances. This expands the ways companies can leverage the extended capacity of vCloud Air.

What Is VMware vCloud Air Direct Connect?

Direct Connect is an additional method of connecting into a vCloud Air instance beyond standard Internet-based traffic and IPsec VPN tunnels. It provides the ability to create a high-throughput, dedicated link from your data center – either located remotely or within the same colocation facility – into your instance of vCloud Air.

Direct Connect is jointly delivered by VMware and your Network Service Provider (NSP). VMware provides a 1 or 10 Gbps port connection and cross connect from the vCloud Air instance to the NSP's network termination point in a vCloud Air location; the NSP provides the dedicated network link from the termination point back to your data center.



vCloud Air supports two port connection options: Standard Internet and Direct Connect

Direct Connect comes in two varieties: 1) Direct Connect with Cross Connect for private line and connections from co-located equipment, and 2) Direct Connect for Network Exchange to support Network Exchange-based network service providers.

What Does Direct Connect Enable?

High-Throughput Connection for Distributed Hybrid Applications

Dedicated Cloud instances can support up to 1 or 10 Gbps port connections, while Disaster Recovery and Virtual Private Cloud instances can support up to 1 Gbps. These high-throughput connections allow you to transfer large amounts of data to and from servers in different locations of vCloud Air. This is critical for distributed hybrid applications where servers in different locations share information. A common example of this is a 3-tier application where the database tier sits in one location (e.g., on-premises) and the application or web tiers sit in another location (e.g., vCloud Air). Having a higher bandwidth connection can make these distributed applications operate just as smoothly as if they were in the same data center.

Direct Path for Performance-Sensitive Workloads

Standard Internet-based traffic is connectionless – packets are routed from one switch to another until they arrive at the destination. That means packets of the same file can take different routes to the destination, introducing variable latency and the need to reorder the packets at the destination. Direct Connect supports the use of connection-oriented virtual circuits, which means that latency is fixed and packets arrive in the correct order. This improves performance and consistency for latency-sensitive applications such as voice, video, and Desktop-as-a-Service.

Secure Multi-Point Connections

Setting up an IPsec VPN connection between your data center and vCloud Air provides a more secure, encrypted tunnel for passing data. However, it is limited to a point-to-point connection. That means connecting to a second data center or remote/branch office requires yet another VPN connection. With Direct Connect, you can create a dedicated link between multiple endpoints and vCloud Air – all with reserved bandwidth. This makes it easier to support distributed development teams and remote/branch offices.

Service Flexibility

A high-throughput, low-latency connection enables custom architectures where vCloud Air is connected to specialized network, storage, or compute hardware and appliances. This provides more ways for companies to leverage the extended capacity of vCloud Air. Some examples include connecting to existing IDS/IPS appliances, custom encrypted storage solutions, or special GPUs for imaging applications.

Where is Direct Connect available?

Direct Connect is offered in vCloud Air locations around the world. Below is a list of available locations and network termination addresses.

vCLOUD AIR LOCATION	NETWORK TERMINATION ADDRESS
US Northern California	VMware / Savvis (SC5) 2403 Walsh Ave Santa Clara, CA 95051, USA
US Nevada	VMware / SwitchNap 7135 S Decatur Blvd Las Vegas, NV 89118, USA
US New Jersey	VMware / Savvis (NJ1) 34 Exchange Pl, Suite 802 Jersey City, NJ 07311, USA
US Texas	VMware / Digital Realty Trust 850 East Collins Blvd Richardson, TX 75081, USA
US Virginia	VMware / Savvis (DC4) 21110 Ridgetop Circle Sterling, VA 20166, USA
Europe Germany	VMware / Equinix (FR2) Friesstrasse 26 Frankfurt, Germany 60388
Europe UK	VMware / Equinix (LD5) 8 Buckingham Ave Slough Trading Estate Slough, Berkshire SL1 4AX, England
Japan West	VMware / SoftBank Telecom Yahatahigashi-Ku Kitakyushu-Shi, Fukuoka, Japan
Australia South	VMware / Telstra 1822 Dandenong Rd. Clayton, VIC 3168, Australia

Support for network exchange connections is currently available in conjunction with key NSP partners in US Texas, Japan West, and Europe UK locations, with more locations to come.

How to Buy

As Direct Connect is jointly delivered by VMware and its partners, there are typically two points of purchase:

1. Users work with NSP partners to establish networking links from their data center to the network termination point in a vCloud Air location. (Connections from co-located infrastructure do not require an NSP partner)
2. Users work with VMware to establish the port connection and cross connect from the network termination point or co-located infrastructure to the user's vCloud Air instance.

vCloud Air offers Direct Connect as an add-on service to the term-based core cloud subscription service. Available for Dedicated, Disaster Recovery, and Virtual Private Clouds, you can request Direct Connect ports through My VMware®.

DEDICATED CLOUD	DISASTER RECOVERY AND VIRTUAL PRIVATE CLOUDS
1 or 10 Gbps port connection	1 Gbps port connection

Find Out More

For more information or to purchase VMware products, call 1-877-4VMWARE (outside of North America dial +1-650-427-5000), visit the VMware vCloud Web page at <http://vcloud.vmware.com>, or search online for an authorized reseller.

