

VMWARE vCLOUD AIR DEDICATED DISASTER RECOVERY

What if you could...

- Build a disaster recovery plan that is fast, easy to implement, cost effective and meets your unique security and licensing requirements?
- Recover business critical workloads with zero downtime?
- Build a secondary datacenter in the cloud, scaling to accommodate all tiers of workloads and applications?
- Repurpose disaster recovery infrastructure to extend applications into the cloud?
- Seamlessly integrate and manage On-Premise and cloud networks as a single network?

Dedicated Disaster Recovery

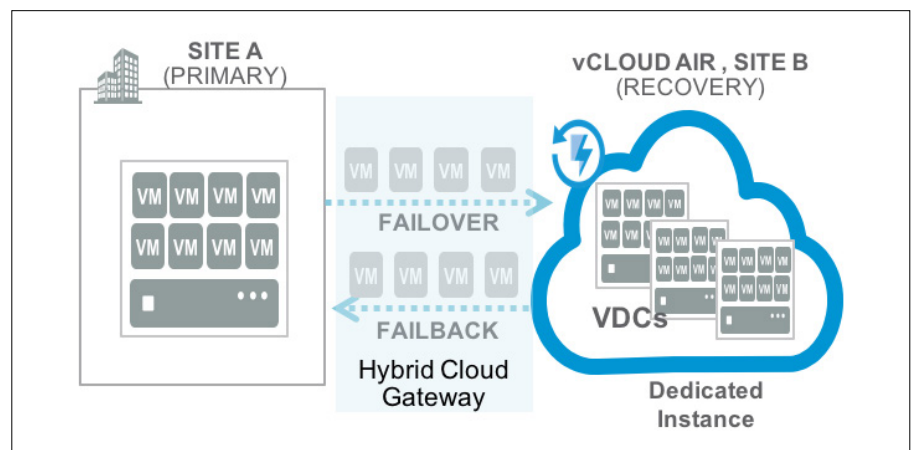
VMware vCloud Air Dedicated Disaster Recovery is a dedicated, single tenant, cloud based disaster recovery solution. It is an extension of the existing multi-tenant VMware vCloud Air Disaster Recovery service and is based off the vCloud Air Dedicated Cloud platform. Refer to the table below for key differences between the two offerings.

The solution comprises of VMware vCloud Air Dedicated Cloud combined with VMware vCloud Air Hybrid Cloud Manager and the VMware vSphere Replication™ Appliance. Together, these components provide a secure, fast and cost optimized approach to maintain a continuously available recovery site for VMware virtualized data centers.

AT A GLANCE

VMware vCloud® Air™ Dedicated Disaster Recovery provides enterprises a faster, secure and customized disaster recovery solution. vCloud Air Dedicated Cloud and vCloud Air Hybrid Cloud Manager are the core components of this solution. Dedicated Disaster Recovery offers:

- Single tenant cloud providing physical and logical isolation for compliance and licensing requirements.
- Disaster recovery with active-active or warm standby configurations or partial failover with VMware vSphere® vMotion®.
- Recovery Point Objectives (RPO) settings from 15 minutes to 24 hours per virtual machine. Multiple points in recovery.
- Reverse failback of virtual machines.
- Low Downtime and Zero Downtime (Cross-Cloud vMotion) capabilities.
- SD-WAN to cloud with WAN optimization and L2 stretched networking.
- Proximity Routing for symmetrical routing between on-premise and stretched networks.
- Dedicated Cloud storage and networking add-ons.



KEY BENEFITS

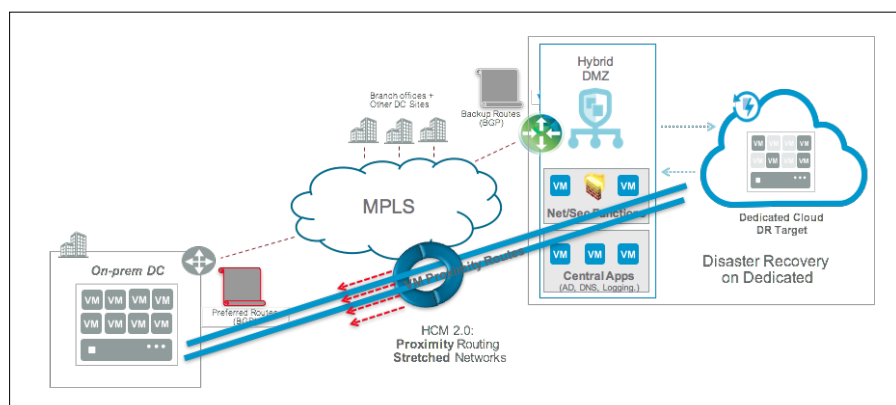
- **Portability and Compatibility** assured by a hybrid cloud solution for disaster recovery and business continuity, removing the need to re-architect workloads in the cloud.
- **Fast recovery** of business-critical applications with full or partial failover. Reserve compute upfront for near zero RTOs or add-on compute when needed.
- **Customize** your disaster recovery site to meet your unique security and compliance requirements.
- **Scalable** solution able to support 1000 virtual machines per service ID. Can concurrently failover in multiple batches.
- **Secure** solution as on-premises and cloud services use the same network IP and MAC addresses. No need to Re-IP.
- **Compliance:** Compute isolation helps meet compliance and licensing requirements. Enterprises can port applications from Oracle, Microsoft or SAP.
- **Optimize costs** by repurposing standby disaster recovery resources for other cloud use cases such as datacenter extension with L2 connections or eventual datacenter replacement

| | MULTI TENANT DISASTER RECOVERY | SINGLE TENANT DEDICATED DISASTER RECOVERY |
|----------------------------|---|--|
| Virtual Datacenter Support | Single | Multiple. Unlimited Scale. |
| Scope | Application Stack Protection | Entire Datacenter protection |
| Scale | vCenters with <100 VMs | Datacenter replacement/consolidation. |
| Configuration | Warm Standby | Warm Standby or Active-Active. |
| VMWare vSphere Support | vSphere 5.x or 6.x virtual machine (up to HW11) | vSphere 5.x or 6.x virtual machine (up to HW11) |
| VMware vSphere Replication | Included | Included and integrated with Hybrid Cloud Manager for replication or migrations |
| Sizing Strategy | Based on total vRAM and vCPU allocated to VMs. | Based on vSphere cluster and on-premise CPU and RAM peak demands. |
| Compute Repurposing | 100% reserved for failover | Oversubscription as needed. |
| Direct Connect | Up to 1Gbps, VPN IPsec | Direct Connect of 1Gbps or 10 Gbps, VPN IPsec, SSL VPN. |
| Network Services | NSX backed Firewall, NATing, Load Balancing, DHCP, Static Routing, IPsec VPN. | Stretched L2 networks with optional Advanced Network Services such as Dynamic Routing (BGP, OSPF), NSX distributed firewalls and load balancers. |
| Storage | Basic plus SSD-Accelerated after failover (1 TB increments) | Basic or SSD Accelerated (6TB increments) Optional - High Performance Storage (2TB increments) |
| SLA | 99.95% | 99.99% |
| Data Protection | Not Applicable | Optional - Daily full image backups. |
| Data Path | Not WAN Optimized. | WAN Optimized. Higher Performance. |

Dedicated Cloud is a robust cloud infrastructure offering, with dedicated hosts. Users can access the entire server and derive greater licensing and control benefits.

Hybrid Cloud Manager facilitates integration of on-premises and disaster recovery cloud as a single network to failover virtual machines and run applications without changes. vSphere Replication Appliance (host-based replication) asynchronously replicates business-critical workloads from a source site to the user's dedicated cloud instance for faster disaster recovery.

Users can customize their architectures based on their security and networking requirements. This can range from simple designs supporting basic egress traffic to architectures with zoned networking with DMZ. Hybrid DMZ (HDMZ) architecture options available include a light version and a full service version for advanced scale and security requirements. The Hybrid DMZ-Lite version provides one dedicated service ID, (SID) with a virtual datacenter (vDC) used for the DMZ. Hybrid DMZ-Full provides two dedicated SIDs, one for disaster recovery compute and another for a physically isolated DMZ. With the full version, users can port licensed applications such as Oracle, Microsoft with better control and compliance built in.



Features such as active-active, Always ON capacity, partial failover with vMotion, stretched layer 2 and SD-WAN capabilities provided with Hybrid DMZ reference designs help enterprises build custom disaster recovery solutions.

Use Cases

Back up entire data center - Protect the entire datacenter in the cloud instead of selected critical VMs. Single tenancy provides security and compliance especially for highly regulated industries. Tiered applications can be scaled accordingly in the recovery cloud.

Datacenter extension - Repurpose your dedicated disaster recovery cloud to extend your datacenter to burst mode or support web facing traffic.

Datacenter Replacement or Consolidation - Reduce OpEx costs by repurposing dedicated disaster recovery infrastructure to replace and consolidate existing data centers. Customers can test their data center replacement plans by replicating environments and failing over.

How to Buy

Dedicated Disaster Recovery is available to customers when they buy the Dedicated Cloud and Hybrid Cloud Manager (Advanced or Enterprise editions). Dedicated cloud is available as a term based service through SPP or PO. Hybrid Cloud Manager (HCM) is available as an add-on that co-terms with the Dedicated Cloud purchase. Add-ons such as additional compute or high performance storage are available.

SUPPORT

VMware offers 24x7x365 production level support for all vCloud Air services including Object Storage. For more self-sufficient users, Object Storage also offers Online support. Visit the OnDemand Support center for more details.

FIND OUT MORE

For more information or to purchase VMware products, call 1-877-4VMWARE (outside North America, +1-650-427-5000) or visit the VMware vCloud Air web page at <http://vcloud.vmware.com>.

| | DEDICATED DISASTER RECOVERY (CORE SUBSCRIPTION) |
|---|--|
| VMware vCloud Air - Dedicated Cloud - Core Subscription | 1x core subscription for Hybrid DMZ-Lite 2x core subscription for Hybrid DMZ-Full |
| Storage | 6TB of Standard or SSD-Accelerated 2TB All SSD Standard or Premium |
| Bandwidth | 50Mbps (Burst to 1Gbps) |
| Public IPs | 3 included with Dedicated Cloud 2 extra to be ordered for Hybrid Cloud Manager. |
| Hybrid Cloud Manager | Advanced or Enterprise editions 1 per vCenter 1 per additional Dedicated cloud |
| Optional Add Ons | Additional compute for failover. Storage- Basic, Standard or High Performance. |
| Advanced Networking Services Add On | Optional Standard or Premium. A Hybrid DMZ design will require Advanced Networking Services |
| Direct Connect Add On | Optional 1 Gbps or 10 Gbps |
| Additional Options | Data Protection Service (full image backup) |
| Support Production | Support 24x7x365 |
| Contract Terms | 1, 12, 24, & 36 month Subscriptions |

Customers can add Advanced Networking Services (ANS) and Direct Connect (DC) add-ons dependent on their HDMZ architecture requirements.

| | HYBRID DMZ -LITE | HYBRID DMZ- FULL |
|---|-------------------------|-------------------------|
| Resource isolation and role-based access control. | • | • |
| Run managed and shared services | • | • |
| Cost effective High Performance Design | • | • |
| Better SLA on Network Connectivity | • | • |
| NSX Distributed Firewall and Micro-segmentation | • | • |
| Direct Connect with internet Redundancy | • | • |
| Port security appliances from on-prem to cloud | • | • |
| Port network appliances from On-Prem to cloud. | • | • |
| Manual routing at failover for Disaster Recovery | • | • |
| Auto-routed at Disaster Recovery failover with your public IP/AS | • | • |
| Physically separate App and OS licensing | | • |
| Physical isolation of NetOps and Compute | | • |
| Higher scale and performance for DMZ appliances running on isolated compute | | • |

