# VMware Hybrid Cloud Management for Disaster Recovery

## IBM CIS provides a security layer for data protection

**Highlights:**

- DDoS protection ensures cloud and on-premise applications are always available
- Standardize security SLAs across on-premise and multi-cloud environments
- Global load balancing helps route traffic to only healthy servers
- Simplified DNS management across cloud environments

### Standardize your VMware Stack with IBM Cloud

Many enterprise data centers depend on VMware to manage a variety of business-critical workloads in virtualized environments. However, the public cloud continues to grow and, according to Gartner, it is now estimated that "cloud shift" across key enterprise IT markets will increase to 28% by 2022, up from 19% in 2018. As a result, more and more IT organizations are challenged by a variety of management tools that will only increase in complexity in the coming years.

Besides the growing use of cloud-based workloads, businesses still must maintain secure backup and recovery of customer data, regardless of where it resides. This can be a challenge as disparate data stores task IT organizations with maintaining pre-established SLAs.

### The benefits of hybrid cloud management with IBM Cloud

IBM Cloud was designed to support a variety of application workloads and environments, including hybrid cloud models. With IBM, you benefit from an open and integrated platform that supports DevOps and IT management with tools to migrate, modernize, and run cloud-native applications while ensuring business continuity. Furthermore, you are supported by a team of experts in cloud migration, modernization, and SaaS-based applications. All of this comes with a resilient networking tier that protects your information from DDoS attacks and handles load balancing to avoid network downtime.

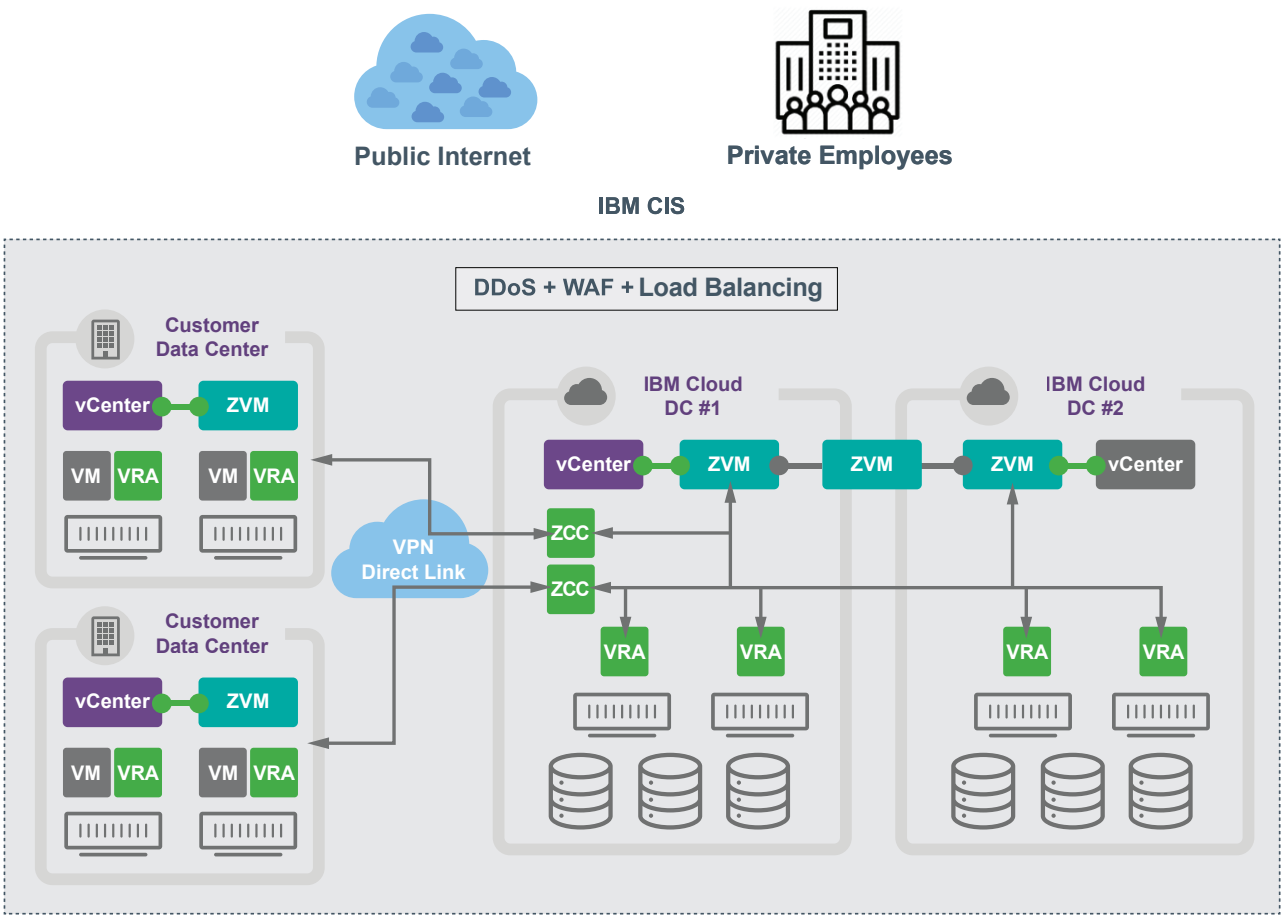
**How IBM CIS provides business continuity**
Organizations today are increasingly aware of their vulnerability to cyber attacks that can cripple a business or destroy its IT systems. IBM Cloud Internet Services (CIS) helps customers manage network security and

performance like load balancing that allow IT managers to automatically route internet traffic to healthy servers. Active availability monitoring, running from IBM CIS's global network, can check the health of a server or data center as often as every 15 seconds. As soon as a server or data center is marked as unhealthy, multi-region failover happens within seconds to intelligently route traffic to the next available server, allowing organizations to remain online during disaster scenarios.

In the event the outage affects multiple data centers, organizations can also deliver holding pages and temporary content directly from IBM's global edge network, removing any requirement from origin infrastructure.

## VMware Hybrid Cloud Management

The VMware Hybrid Cloud Management solution is a reference architecture by IBM CIS that ensures high availability across multiple clouds and workloads. It is based on the combination of VMware vSphere, vSAN, NSX, and vRealize Suite with IBM Cloud. By scaling existing VMware on-premise workloads on the IBM Cloud, you benefit from added reliability across your cloud-based applications while end users are protected from cyber attacks.




Disaster recovery and intra-cloud architecture

As you can see in the reference architecture above, IBM CIS is layered in front of the entire infrastructure. Using global load balancing, the Operations team doesn't have to worry about service going down; each server or data center is monitored via global health checks that will intelligently route traffic to the next available server or data center when an issue is detected.

Additional benefits that are gained by leveraging IBM CIS include:

- **An "always-on" solution that provides security at a global scale against some of the largest denial of-service threats.**
- **With 30 Tbps of capacity, CIS can handle modern distributed attacks, including those targeting DNS infrastructure.**
- **The IBM CIS enterprise-class web application firewall (WAF) protects your hybrid cloud environment from vulnerabilities like cross-site scripting, SQL injection attacks, and cross-site forgery requests with no changes to your existing infrastructure.**
- **Smart routing helps avoid network congestion by making routing decisions based on real-time conditions.**

More information about IBM Cloud, IBM CIS, and the Vmware and IBM Alliance:

**IBM Cloud:**
https://www.ibm.com/cloud/vmware

**IBM CIS:**
https://www.ibm.com/cloud/cloud-internet-services

**Vmware and IBM Alliance:**
https://www.vmware.com/partners/siso/ibm-software-solutions.html