Cloud Security for Hybrid Cloud Implementations with OpenShift

Web layer security across all cloud environments with IBM CIS

Highlights:

- The Web Application Firewall provides seamless integration with security and performance products including DDoS, Bot Management, CDN
- DDoS protection ensures cloud and on-premise applications are always available
- Standardize security SLAs across on-premise and multi-cloud environments
- Global load balancing and performance optimizations can reduce visitor latency by over 2x
- Simplified DNS management across cloud environments

OpenShift Flexibility

The public cloud continues to grow and, according to Gartner, it is estimated that "cloud shift" across key enterprise IT markets will increase to 28% by 2022, up from 19% in 2018. IT organizations are increasingly challenged by a variety of management tools that will only increase in complexity in the coming years.

CIOs are stretched thin to maintain the SLAs of the past while supporting the latest usage models that employees and customers are demanding. As a result, enterprises need the right combination of security and flexibility.

Many enterprise data centers depend on Red Hat OpenShift to manage a variety of business-critical workloads while providing DevOps the flexibility of deploying containers on any cloud environment.

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 platform that supports Kubernetes container infrastructure, integrated solutions, and DevOps support. IBM helps with cloud migration, modernization, and cloud-native applications. You get all of this with a resilient networking tier that protects your data from DDoS attacks and handles load balancing to avoid network downtime.

How IBM CIS provides resilience and security

Defending your business against cyber attacks is especially important when critical data is flowing between employees, customers, and data centers scattered around the world. Even the most well-protected companies have experienced denial-of-service attacks or SQL injections that paralyze customer transactions.

IBM CIS offers a Web Application Firewall (WAF) that blocks malicious attacks that aim to exploit vulnerabilities, including SQLi and XSS. This added layer of security provides a uniform solution to protect enterprise applications, no matter where they reside: within on-premise data centers or across multiple public clouds.

Crucially, IBM CIS integrates with existing third-party tools and systems. Programmatically create rules that block potential threats in near-real-time by integrating the API with third-party SIEMs, internal alerting systems, or vulnerability scanners.

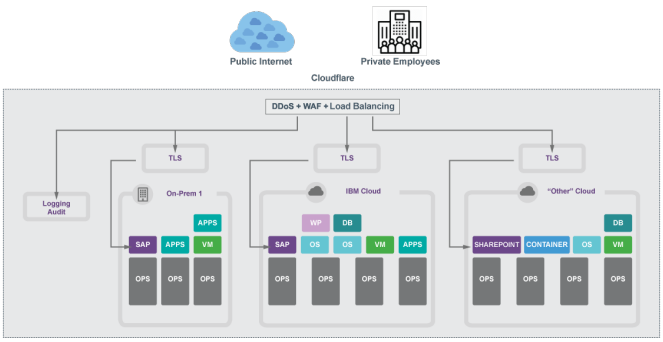
Hybrid Cloud Management with OpenShift

Hybrid Cloud Management with OpenShift is a reference architecture that ensures high availability across multiple clouds and workloads. It is based on the combination of OpenShift, IBM CIS, and IBM Cloud services. When scaling existing OpenShift containers on-premise or in the IBM Cloud, you can increase reliability across all cloud-based applications while protecting end-users from cyber attacks.

As you can see in the reference architecture, Hybrid Cloud Management with OpenShift provides support to all remote employees looking to access both critical and non-critical applications behind the firewall. IT managers don't have to worry about providing specialized VPNs to every employee because this architecture uses a cloud-based identity and access management service that authenticates and monitors user ingress to any domain, application, or path.

Other key features of Hybrid Cloud Management with OpenShift include:

- DDoS attack mitigation with an "always-on" denial-of-service solution that provides security at a global scale against some of the largest threats. With over 30 Tbps of capacity, CIS can handle any modern distributed attack, including those targeting DNS infrastructure.
- Load balancing ensures that cloud-based applications don't suffer performance degradation as a result of increased utilization or extended distance between the end user and application server.



IBM CIS multi-cloud security for high availability

For more information about IBM Cloud, IBM CIS, and OpenShift, check out the following online resources.

IBM Cloud:
https://www.ibm.com/cloud/openshift

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