

Overview

The Cisco® Backup as a Service (BaaS) reference architecture provides a new set of cloud-based backup and restore capabilities. Cisco Powered cloud providers can now enhance their total addressable market, ease renewals, improve margins, and grow revenues by differentiating from other commodity service providers. This CVD certified BaaS offering is powered by Actifio, which;

- Virtualizes customer data.
- Eliminates backup windows.
- Provides immediate data restoration.
- Easily creates powerful SLAs.

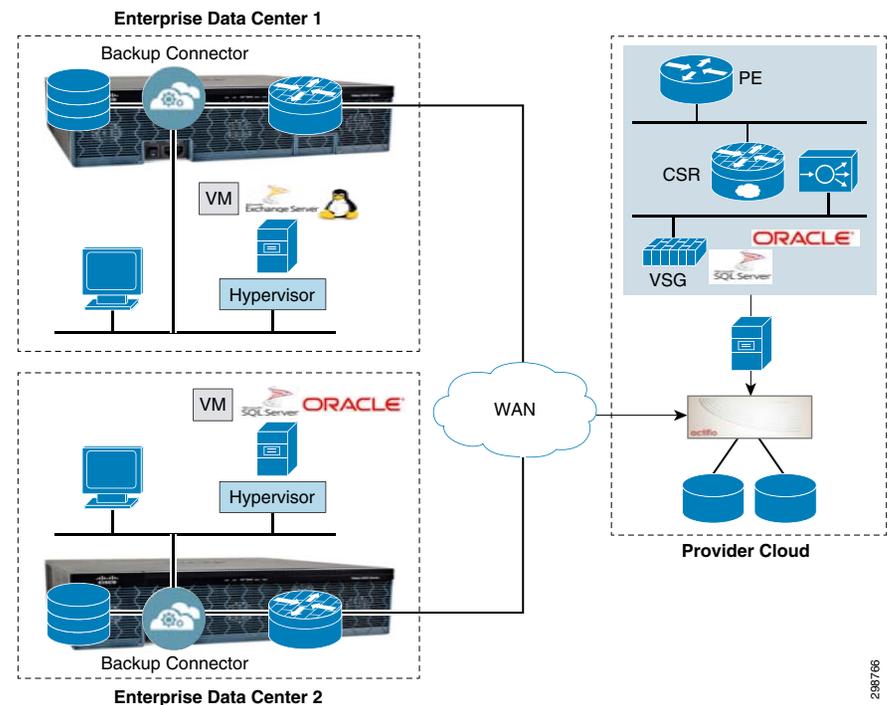
The Cisco BaaS reference architecture for cloud providers is built as an overlay for the Cisco Virtualized Multiservice Data Center (VMDC) reference architecture for Infrastructure as a Service (IaaS). BaaS incorporates partner-based software solutions, providing software-based replication capabilities for storage-independent backup and recovery. The solution architecture encompasses advanced capabilities such as encryption for integrated data security and data optimization to reduce WAN costs.

The Cisco BaaS reference architecture offers a design template to provide backup and recovery services for enterprise customer data center physical and virtual servers to a service provider's Virtual Private Cloud (VPC). BaaS is designed to be deployed as a Cisco Powered cloud provider-managed service for a provider's mid-market and distributed enterprise customers. The Cisco BaaS reference architecture, which is supplemented by a Cisco Validated Design (CVD) and an implementation guide, offers a fully integrated design with broad functional and at-scale testing for in-depth validation of features and functions, performance, scalability, and operations.

The Cisco BaaS reference architecture allows cloud providers to offer new monetized backup and recovery services for workloads outside the service provider's management domain that are either on the customer's premises or in co-located environments. The cloud provider can also offer data protection and data survivability services for workloads within its VPC environment and management domain.

Figure 1 summarizes the overall Cisco BaaS reference architecture approach. The Cisco BaaS Validated Design allows service providers to turn up cloud-based backup and recovery services with a proven architecture and rapid implementation time.

Figure 1 Depicts Cisco Validated Design Backup Service using Actifio



For More Information

- To learn more about DRaaS architecture, visit: <http://www.cisco.com/go/baas>
- To learn more about Cisco VMDC, visit <http://www.cisco.com/go/vmdc>

Business Reasons for Using BaaS

Backup as a service offers secure and automated protection of business critical data. A growing number of enterprises chose BaaS service rather than implementing backup infrastructure in-house. Using a cloud based BaaS provides a number of business benefits:

- No or minimal CAPEX costs compared to in-house backup infrastructure implementation
- No specialized IT expertise required
- Quick implementation and a guaranteed success
- Guaranteed data security and availability
- Automated backup based on agreed frequency
- Demand flexibility
- Cost effective, smaller business can afford it as well while in-house implementation has a cost barrier
- Ease customer renewals by providing superior QoS
- Increases overall margins and provides additional revenue stream

In summary, BaaS offers several key business benefits compared to in-house backup infrastructure implementation. Service providers can monetize on enterprise private workloads as well by providing backup services to application data, VMs, and servers, and also provide value-added backup services on in-cloud workloads.

Enterprises Use of BaaS

Backup/Recovery is not a core deliverable for most organizations, however efficient data recovery is a critical function. BaaS presents an opportunity for Enterprises to:

- make better use of the existing IT resources.
- maintain and ensure survivability of the business-critical applications.
- focus their IT staff on more demanding tasks.

With additional monitoring and service-assurance capabilities, service provider-managed BaaS provides end customers with "pay-as-you-grow" capabilities. Enterprises can save both on CAPEX and OPEX of their IT infrastructure by taking advantage of new cloud-based BaaS services.

Typical Cloud Provider Benefits from BaaS

The Cisco BaaS reference architecture allows cloud providers to offer an attractive revenue-generating service to their enterprise customers who continue to have on-premises workloads that require regular data backup plans.

BaaS architecture provides a complete solution for replicating and protecting on-premises environments at a low cost and gives the provider a robust tool set for runbook automation and replication monitoring. These capabilities, coupled with the secure multitenancy features of Cisco VMDC, allow cloud providers to offer low-cost BaaS on a multi-tenant platform.

Cisco BaaS Architecture Key Features

- Storage-agnostic BaaS implementation—leverage existing/lower cost disk capacity
- Multitenant implementation—allowing secure individual user access
- Application-aware replication—create SLA by data type
- Bandwidth optimization—replication on only changed data
- No impact on production workload—immediate snapshot, agent-less
- Highly secure implementation—data encrypted in-flight and at-rest
- Multi-hypervisor support
- BaaS process automation—Customer self-service portal

Why Use Cisco BaaS Reference Architecture

The Cisco BaaS reference architecture solution for cloud providers is a design template for BaaS solution implementation. It includes a CVD that uses Cisco partner products to provide data backup and restoration functionality on top of the Cisco VMDC reference architecture.

BaaS presents a new revenue opportunity for cloud providers using their existing cloud and network infrastructure assets. BaaS increases end-customer retention, providing enhanced end-to-end use cases and operation efficiencies that enable service providers to differentiate their services offerings through innovative use of their current and future infrastructure investments.

BaaS provides an opportunity for enterprises to reduce their backup infrastructure complexity and costs while gaining the use of multitenant virtual private cloud or public cloud capabilities as a service. BaaS enables transparent migration to hybrid architectures and operating models. It also provides a proven data backup and recovery solution from Day One, without the need for capital expenditures (CapEx) and without distracting IT from business initiatives.