



CHAPTER 2

Use Cases

This section describes business use cases of Backup-as-a-Service (BaaS) for both Enterprise and Service Provider customers.

Business Use Cases

Continuing rapid data growth is driving enterprises to embrace new approaches for their backup and recovery needs. Cloud adoption offers many benefits technically and economically. This also provides opportunity for Cloud Service Providers to meet customer demands and further monetize their cloud investments with BaaS offerings.

For Enterprises

In most large organizations, the reality is that the level of IT complexity has funneled the majority of spending towards “keeping the lights on” versus funding innovation-driven efforts. The exponential growth of data and the underlying infrastructure to support that data is one of the primary sources of cost, operational complexity, and inflexibility.

Today, there are certain strategic drivers that must be tackled such as:

- How can customers leverage the cloud?
- How can customers harness data for greater insight or agility?
- How can customers secure and govern an ever-increasing data volume?

Cisco’s BaaS solution is a highly scalable yet operationally streamlined offering—built on Cisco UCS and Commvault’s Simpana software. Designed to deliver a flexible, SLA-driven approach to enterprise data management, this BaaS solution encompasses the Commvault Simpana suite of products. In addition, this solution also includes globally delivered services that ensure customer success in the deployment, ongoing management, and expansion of the platform.

For Cloud Service Providers

The business of delivering IT as a service—applications, infrastructure, or platform—is undergoing a significant transformation. Innovation cycles are faster and more compressed. Pricing and the ability to manage a large environment profitably is more challenging. And differentiating between large-scale, born-in-the-cloud providers and new entrants proves difficult, even for established brands.

How do you achieve revenue leverage when each new service requires incremental investment of infrastructure, tools, and operations staff? How do you compete in the market when the deployment, integration, training, and ongoing service delivery is measured in months or quarters?

Commvault Simpana delivers data efficiencies likened unto virtualization benefits.

Cisco's CCA reference architecture complements Commvault Simpana by providing a superior foundation for cloud computing by unifying computing, networking, storage, and management in a common platform designed to automate deployment and management across physical and virtual resources. CCA enables highly secure, multitenant deployments by embedding security at each layer of the data center.

Cisco's CCA architecture is also closely integrated with the service orchestration and service assurance subsystems that provide configuration and provisioning automation.

This solution is a fully-featured CSP offering—built on Cisco CCA, UCS, and Commvault Simpana platform—that enables rapid, profitable introduction of differentiated data management services.

As an infrastructure-agnostic platform designed to leverage existing storage investments, Commvault Simpana encompasses the complete Commvault product portfolio, covering a wide range of data protection and data archiving capabilities. In addition, the solution also includes globally delivered services that assist in the deployment and integration of Commvault into a service provider's back-office systems, including portals, billing systems, ticketing and service management.

Commvault Technology Use Cases

This solution enables the following use cases to provide backup and recovery services for enterprise workloads running at the customer's data centers and for the IaaS workloads running within the service provider's cloud.

In-Cloud BaaS

As enterprises embrace cloud to deploy their critical applications, CSPs are under more pressure to offer enterprise-grade services in the cloud in an efficient manner. Backup and recovery is becoming a common value-added service for IaaS workloads.

This use case provides backup and recovery services to workloads within the CSP's VPC environment and management domain. BaaS will enable customers to have backup and recovery capabilities for their IaaS workloads with various policy offerings.

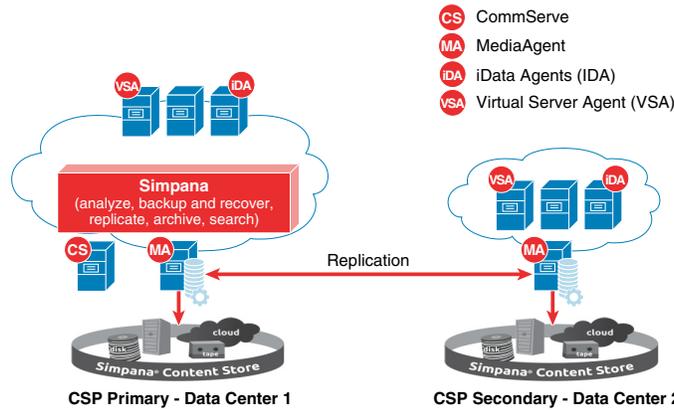
In-Cloud BaaS enables following functionality ([Figure 2-2](#)):

- Provides the ability to backup and recover the workloads within the primary VPC.
- Backup and Recovery functionality at the application, file, and VM level.
- Provides replication of backup data to a remote VPC for recovery against site failures.

In this solution for cloud backup of IaaS workloads, the CSP deploys the backup service consisting of multiple components from Commvault running on Cisco hardware, which will be used by all the cloud tenants enabling backup and recovery functionality. The service also provides backup data replication to a remote CSP data center offering site survivability as an option.

The solution provides tenants with full control by providing self-service capabilities to backup, restore, and monitor data.

Figure 2-1 In-Cloud BaaS Logical Diagram



BaaS - Backup as a Service for IaaS customers with management and data storage at primary cloud DC and a copy on the provider site.

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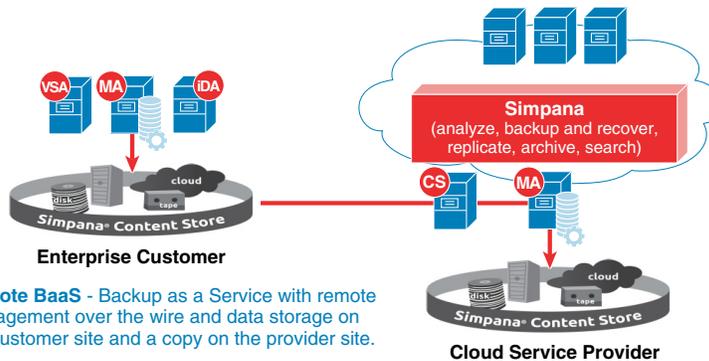
Remote BaaS

This use case enables customers to perform backups at their local data centers and also to replicate the backup data to the remote CSP's cloud without owning, managing, or incurring the expense of a remote site for recovery purposes. The local backup can be used for faster recovery, when needed.

The Remote BaaS service enables the following functionality (Figure 2-2):

- Backup and Recovery service for production physical and virtual servers from a customer data center to an CSP VPC along with local recovery capabilities.
- Backup and Recovery functionality at the application, file, and VM level.

Figure 2-2 Remote BaaS Logical Diagram



Remote BaaS - Backup as a Service with remote management over the wire and data storage on the customer site and a copy on the provider site.

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Remote BaaS Without Local Data Retention

This use case enables customers to backup their on-premises data to a remote CSP's cloud with zero capital investment and a low operational expense, without owning, managing, or incurring the expense of storage or a remote site for recovery purposes.

The Remote BaaS without Local Data Retention enables the following functionality (Figure 2-3):

- Secure backup storage capacity in the Cloud.
- Backup and Recovery service for production servers from a customer data center to an CSP VPC.
- Backup and Recovery functionality at the application, file, and VM level.

Figure 2-3 Remote BaaS without Local Retention

