CHAPTER 2

Use Cases

This section describes the use cases in focus for this solution.

Business Use Cases

Backup data growth is out of control and this is generating a need for the enterprises to embrace cloud for their backup and recovery needs, as cloud offers many benefits technically and economically. This situation is also providing an opportunity for service providers to offer backup as a service to their customers, which helps them in monetizing the investments made on their cloud infrastructure.

For Enterprise

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 geometric 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 Actifio's patented Virtual Data Pipeline platform – which delivers complete resiliency, agility, and cloud mobility solutions. Designed to deliver a flexible, SLA-driven approach to enterprise data management, this BaaS solution encompasses the Actifio CDS and Sky 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 Service Provider

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?

The answer is virtualization. Just as server virtualization enabled cost consolidation and greater agility in compute, Copy Data Virtualization from Actifio delivers the same efficiencies for data.

Cisco's VMDC reference architecture complements Actifio Copy Data Virtualization 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. VMDC enables highly secure, multitenant deployments by embedding security at each layer of the data center.

Cisco's VMDC 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 VMDC and Actifio's patented Virtual Data Pipeline platform – that enables rapid, profitable introduction of differentiated data management services.

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

Technology Use Cases

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

Remote BaaS

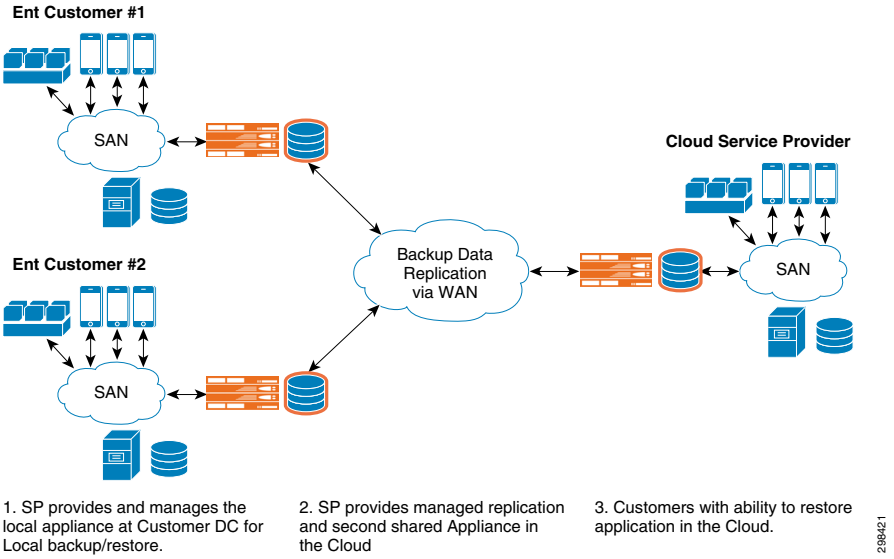
This use case enables customers to perform backups at their local data centers and also to replicate the backup data to the remote SP's cloud without owning, managing, or incurring the expense of a remote site for recovery purposes. The local backup can be used for faster recovery, when needed.

The Remote BaaS service enables the following functionality:

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

As shown in Figure 2-1, the SP deploys an appliance locally at the customer data centers. The on-premises appliance provides local backup and restore capabilities for faster recovery and the appliance also replicates data to a shared remote backup appliance deployed in the cloud. The remote data can be used for restoring customer applications in the cloud, in the event of a local data center failure.

Figure 2-1 Remote Backup as a Service



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 is becoming a common value-added service for IaaS workloads.

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

Cloud BaaS enables the following functionality (Figure 2-2):

- Provides the ability to backup and restore the workloads within the primary VPC
- 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 a backup appliance, which becomes the target for all the cloud tenants and provides a secure, centralized pool of storage for backup. The appliance also replicates data to a remote appliance in to another CSP data center for site survivability.

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

Figure 2-2 Cloud Backup as a Service