The Extraordinary Cloud Services Catalog

Service Providers transform with Actifio-Powered Data Virtualization Services

actifio

Radically Simple

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Service Providers and the Actifio-Enabled Service Catalog

Actifio's Data Management Platform enables Service Providers to offer efficient and profitable service delivery across a broad spectrum of business cases. Service Providers (SPs) can create differentiated services that allow customers to achieve the transformational promise of cloud while helping Providers to consolidate infrastructure, integrate flexible services, increase efficiency and reduce costs.

Service Providers are playing a central role in cloud's transformation of business and IT. They have the potential to move IT from a cost center to a value creator—reshaping possibilities, accelerating delivery and creating new business opportunities.

Actifio supports versatility in Service Providers sales and consumption models. From Actifio's single data management platform, Providers can profitably support multiple discrete services for physical and virtual systems. Data can be efficiently ingested and virtualized from any operating system or storage platform. Data is available in native format for near-immediate provisioning or emergency recovery, as well as deduplicated and compressed for long-term retention.

Actifio-Powered Virtual Data Services Deliver:

- New revenue streams and reduced capital expenses
- Expanded and automated Services Catalogs
- Accelerated service and application development
- Operational simplicity and scalability with security, multi-tenancy and deployment flexibility
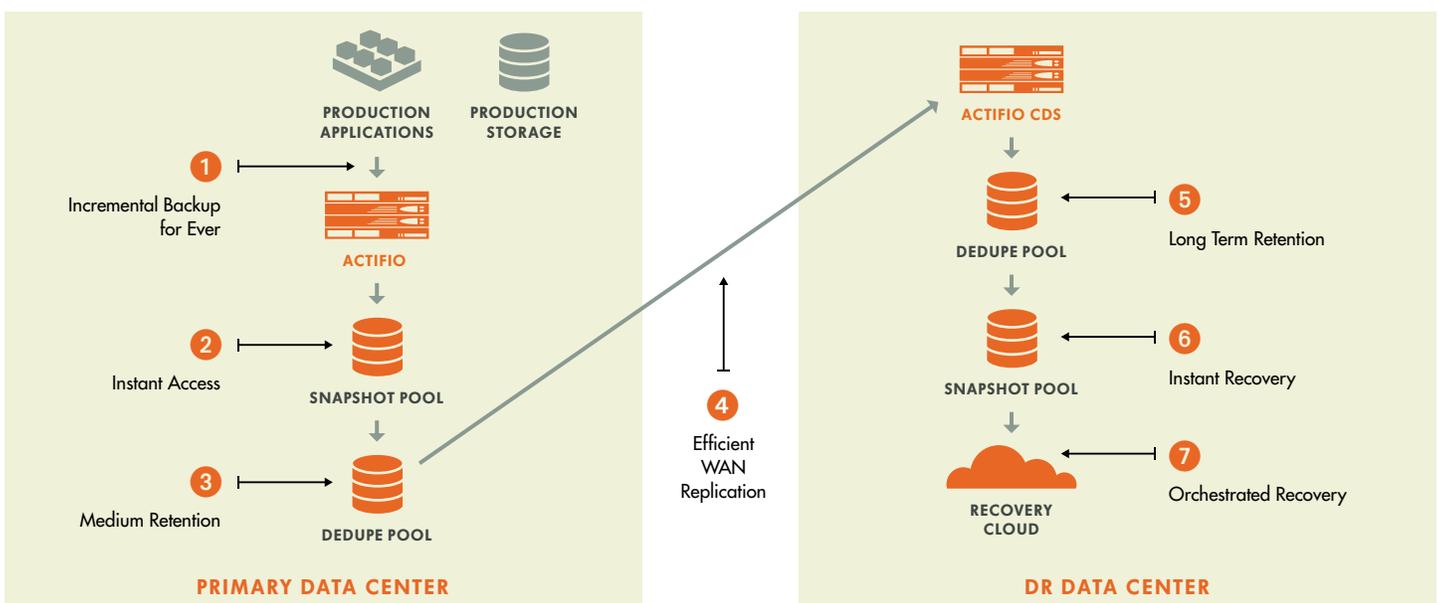
Speed

The rapidly evolving marketplace demands differentiated cloud service offerings and cutting-edge technology. Providers must respond quickly and cost effectively as client strategies swiftly transform.

The single Actifio platform powers multiple cloud services to transform service economics and accelerate time-to-market.

- Launch services faster
- Onboard customers faster
- Deliver services on your infrastructure
- Deliver services on public cloud infrastructure
- Replace multiple point tools with Actifio automation

FIGURE 1: **Review of Services framework, Customer's data migration and management from Premise to Cloud**

Actifio-Powered Virtualized Data Services

BACKUP SERVICES

- Assured backup execution within adjustable service windows
- Recover full data copies in minutes, not hours
- Dramatically reduce bandwidth and storage expenses
- Eliminate backup windows

BUSINESS CONTINUITY AND DISASTER RECOVERY SERVICES

- Near immediate recovery and restart of Applications, including Data, Operating Systems, VM, Server, and Network Settings
- Ensure Compliance and provide on-demand failover
- Provide simple and frequent recoverability testing

AGILE APPLICATION DEVELOPMENT AND TEST SERVICES IN SUPPORT OF DEVOPS (TEST DATA MANAGEMENT)

- Near-instant access to development resources
- Automated refresh from production snapshots
- Faster application development cycles with better code quality

DATA VAULTING-AS-A-SERVICE

- Virtualized data and tapeless DR for speedy recoveries
- Space-efficient long-term data retention in the cloud
- Dramatically improved access time over physical vault

DATA MIGRATION AND MOBILITY SERVICES

- Migration accelerated and simplified
- On-board customers quickly, moving data non-disruptively to and from any cloud or enterprise location over distance
- Eliminate movement headaches for tens or hundreds of terabytes

Simple, Versatile, Data Management and Protection Services

Actifio's unique technology gives Service Providers broad flexibility to provide all of the listed services and more. SPs can create versatile, differentiated and profitable data management offerings using a single platform that virtualizes data and dramatically reduces infrastructure while allowing near-instant data recovery.

Actifio powered services begin with software capturing a full application data copy sourced from the customer premises or production systems (Figure 1). This "Golden Copy" becomes the single source for all **Backup, Disaster Recovery, Development, Vaulting and Data Migration Services**. After the Golden Copy is established, only changed blocks are recorded. Because all new data blocks are merged in the Golden Copy, users can roll back to any point in time snapshot to have accurate virtual access. Each customer can control precise SLAs for each application to govern the frequency of backups, recovery times and retention policies. Timing can be adjusted for each data set to control how long it will be held in original data formats for near-instant access. Data is also deduplicated and compressed before efficient WAN replication moves only changed blocks to the Service Provider's DR cloud. Long-term retention policies are assigned, with discrete SLAs for automated protection and near-instant recovery. Customers can be given multiple options to operate Actifio within their data center and in the SP cloud. It's a virtualized data platform that provides the foundation for multiple discrete and profitable service offerings.

It's All About Service Levels

Actifio is exceptional data management technology because it effectively replaces multiple technologies and tool sets across heterogeneous environments. It performs each supplanted function more effectively and cost efficiently. Users can apply discrete SLAs and data retention requirements for any individual application or data pool. Application data is automatically discovered and managed throughout its lifecycle. As data ages, Service Level Agreements (SLAs) can be set to automate removal from the performance pool while longer term retention objectives are satisfied in the dedup pool.
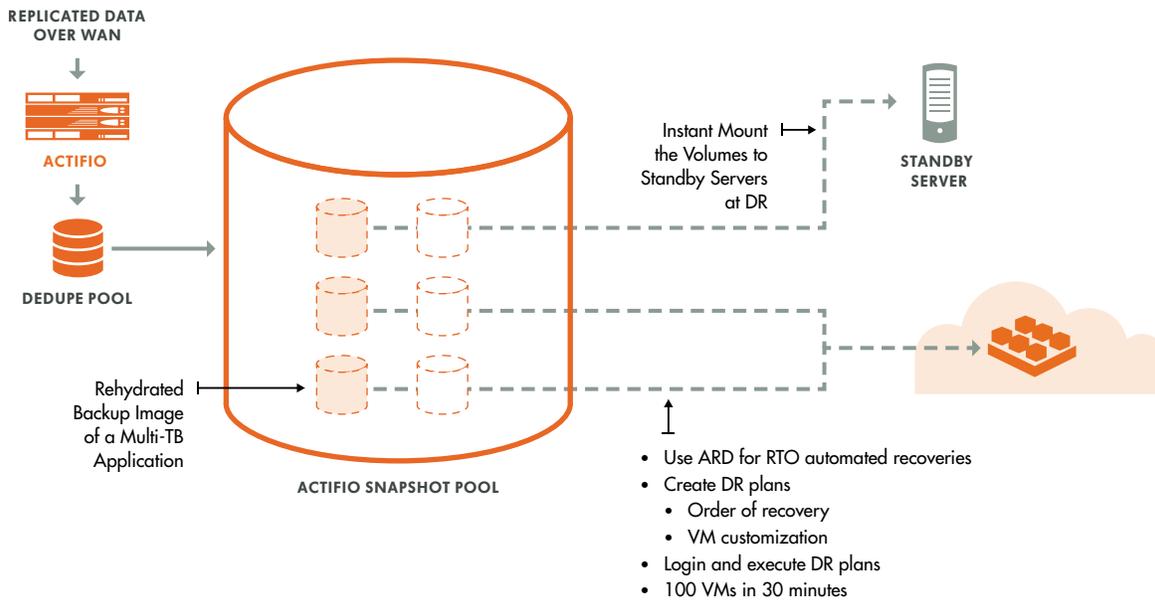
Actifio delivers powerful data management benefits while accelerating improved business capabilities across heterogeneous environments.

- BC moves from reactive to carefully planned business resilience
- Recoverability for Backup, Business Continuity and Disaster Recovery can be tested and demonstrated with no production impact
- SLAs can be aligned with RTO and RPO objectives and finely tuned by individual application
- Improved resilience avoids customer costs of system downtime
- Multiple layers of software and hardware are eliminated, significantly reducing licensing, capital and staff expenses for both the customer and the MSP
- Fewer storage systems are required and remaining resources are more efficiently and flexibly utilized with heterogeneous connectivity
- Cloud data migrations are easily and seamlessly managed over distance
- WAN/bandwidth requirements are greatly reduced, as are associated network costs for data movement
- SLAs become closely aligned with specified business objectives and C-suite KPIs

DISTINCT ADVANTAGES:

- **Virtualized data copies** can be created from any brand of production storage. As data is virtualized and moves to the provider cloud and it can be placed on any available storage type. Because no storage brand matching is required, SPs gain a much more cost-effective way to provide SLAs.
- **Virtual data in the SP "recovery cloud"** can interface with whatever compute platform customers choose.
- **Actifio "orchestrated recovery"** reinstates data as well as the application, operating system, and network settings. It's a complete, virtualized Backup, Business Continuity, Archiving and Data Protection solution that can be offered as a bundle or as individual services.
- **Any virtual or physical** system can be a data source using any OS, application, or storage system.
- **SLAs are tuned** individually for each specific application to include RTO/RPO elements such as frequency of snaps per day, scheduled data movement from customer premises to the provider cloud, data recovery plans and long-term retention specifications
- **The Resiliency Director** discovers and stores all metadata and monitors changes for each VM and application to create simple, scripted and automated recovery plans that execute automatically.
- This is **more than a data protection tool**. It's a sophisticated DevOps platform.
- And it's all done behind a **single pane of glass**.

- Use ARD for RTO automated recoveries
- Create DR plans
  - Order of recovery
  - VM customization
- Login and execute DR plans
- 100 VMs in 30 minutes

Actifio technology is the industry's fastest and most efficient means to capture application-consistent data copies. This is all easily managed from an application-centric single pane control. Previously impossible SLAs mean that every application can have copies tailored to specific slices of time while eliminating hopeless backup windows. Simply select snapshot, backup and replication policies. Use any storage device you choose. Save the settings and customers are ready to instantly recover selected point-in-time data.

Actifio Powered Backup Services

All backup data is created to satisfy a few common business objectives. First, protect the data. Make it available. Do it as efficiently and cost effectively as possible. Don't interfere with application performance. Assure service levels. Make it simple.

That is what MSPs do with Actifio.

Traditional backup applications handle backup copies with specialized software and store data in proprietary vendor-specific formats. Now, it is possible to flexibly mix on-premise and cloud based IT infrastructures to provide much faster and more useful alternatives that:

- Assure backup execution within adjustable service windows
- Recover full data copies in minutes, not hours
- Dramatically reduce bandwidth and storage expenses
- Eliminate backup windows
- Deliver Managed or Unmanaged Backup offered at Silver – Gold – Platinum service levels

Actifio is a disruptive and innovative multi-tenant data protection platform that links a customer's data to an MSP DR cloud from any production location. Managed or unmanaged, silver, gold or platinum, MSPs can offer a selection of lucrative service options that suit every customer requirement.

But this is more than backup. It's data management that begins at a higher level in the copy process, acting across physical and virtual data environments. Precise RTO/RPO objectives economically maintain data protection targets while eliminating redundant storage capacity and copy processes. Because the Actifio copy is stored in a readable application format, it can be used immediately for any purpose and essentially reduces backup recovery time to near zero.

Actifio replaces all of the backup complexity with a remarkable new copy data management approach. It virtualizes copy data, providing backup, snapshot, test and development, analytics, and archival preservation - all through a single platform. It creates a new class of service offerings for data management and protection, consolidating all those functions to recover anything instantly. And it's simple, radically simple.

Business Continuity and Disaster Recovery Services

The connected world has no tolerance for downtime. If systems aren't operating, businesses don't run and customers aren't happy. Applications should always work. Fast. Customers expect it. And every business is looking for certainty that their customers, employees, partners, suppliers and investors will always be satisfied.

Actifio streamlines MSP BC/DR services with compelling and powerful SLAs that automate immediate restoration of failed applications inside the DR cloud.

MSP offerings:

- Create near immediate recovery and restart services for applications, including Data, Operating Systems, VM, Server, and Network Settings
- Ensure Compliance and provide on-demand failover
- Provide simple and frequent recoverability testing

Remote Data Protection

When deployed at two or more sites, Actifio greatly simplifies remote data protections. Core features provide powerful business continuity and disaster recovery safeguards that are more versatile and cost effective than traditional approaches. Using a mirrored Actifio CDS system, or Actifio Sky software at their primary site, customers can smoothly move encrypted data to an MSP cloud. The simple SLA interface combined with Actifio Resiliency Director can automate an entire system failover and test it in real time with no disruption to production systems.

Individual application SLAs are controlled across synchronous or asynchronous distances. Bandwidth is optimized through deduplication at the primary site and by sending only unique blocks of data to the remote system to save both time and network expense. Both synchronous and asynchronous transmission is available for data updates coincident with each application IO. This provides instant restore capabilities at the remote site. If a disruption does cause production to transfer to the remote site, operations can restart as many as 100 virtual machines in as little as 30 seconds. The entire application can be running again in a matter of minutes and continue until the primary production systems are restored.

MSPs have an opportunity to present this as a new reality for business continuity. They can upend the status quo and use Actifio to transform common infrastructure-centric approaches to data management. They can provide high-performance services tied to SLAs that ensure recoverability, heterogeneous diversity, and affordability that meets the always-on imperative modern enterprises demand.

Transformative Data Virtualization for DevOps

- Near-instant access to development resources
- Automated refresh from production snapshots
- Faster application development cycles with better code quality

Application developers need access to a copy of production data. But it's often a slow and cumbersome process. It involves multiple steps, terabytes of data and weeks of waiting. Separate functions must provision storage, network, and OS, then mask sensitive data before a copy is made available. It's a technical problem, a security problem, a business problem, a time wasting problem.

Using Actifio technology SPs solve the enterprise DevOps problem and create profitable business opportunities (Figure 3). It automates workflows, enables on-demand self-service data access and delivers provisioning measured in minutes instead of days. Data management is decoupled from production infrastructure. SLA-driven automation offers a simple solution that efficiently virtualizes production data to maintain a single golden copy for protection as well as application development, test, analytics, and more. Virtual data processes can also automate data masking to protect sensitive data. Developers can get immediate access to a masked, any point-in-time data copy.

MSPs efficiently replicate a Golden Copy from Customer Premise to the MSP Site. Authorized users choose point-in-time access for cloud-based development and test, mounting the data to a Cloud Compute and reversing the instance once work is completed. The resulting impacts dramatically ease complexity of operations and provide customer cost savings by using Cloud Compute only when needed.

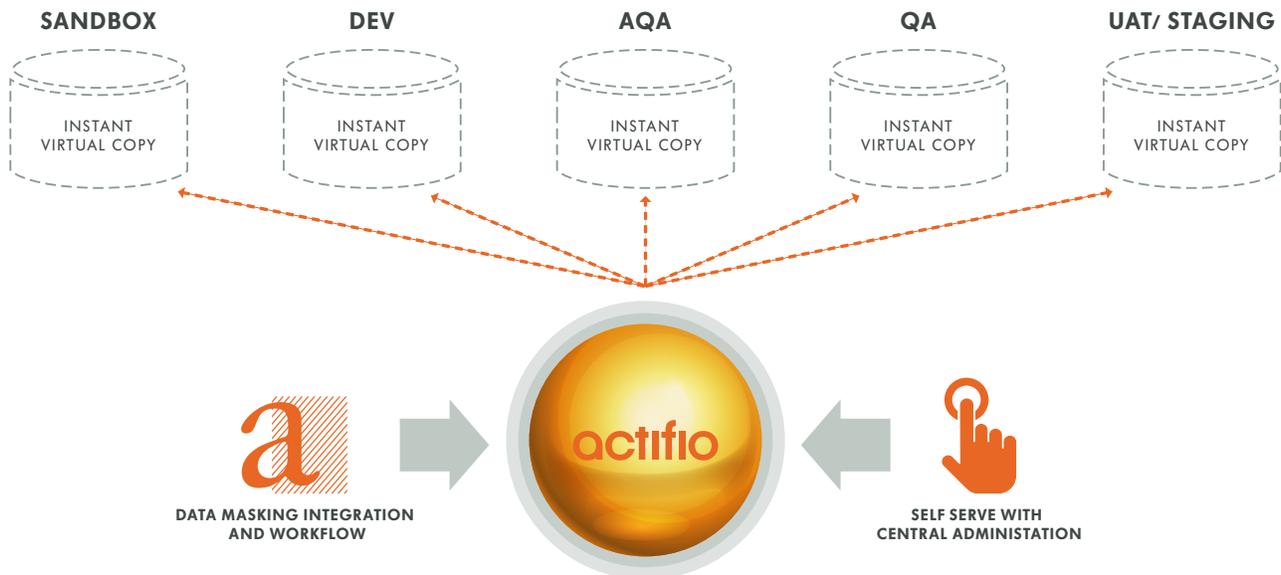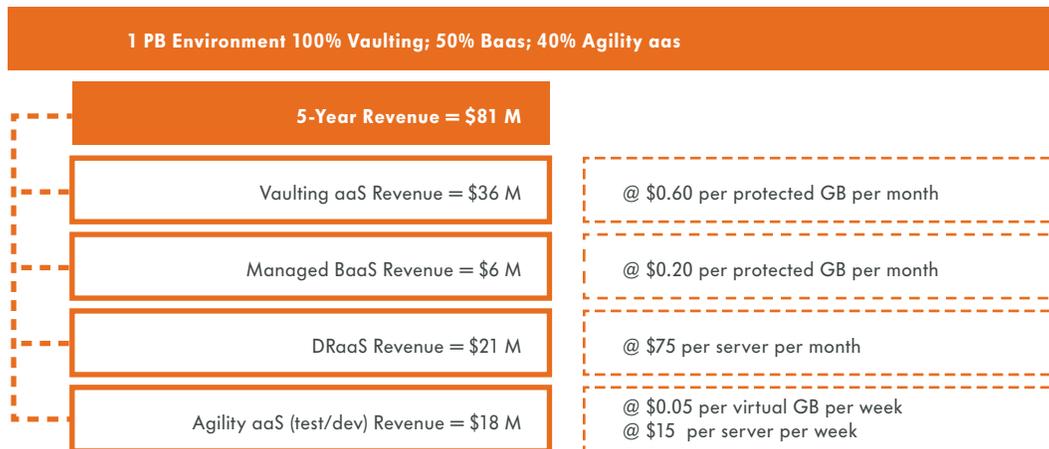FIGURE 3: **Actifio Golden Copy Used for Dev Ops Processes**

1 PB Environment 100% Vaulting; 50% Baas; 40% Agility aas

5-Year Revenue = $81 M

Vaulting aaS Revenue = $36 M	@ $0.60 per protected GB per month
Managed BaaS Revenue = $6 M	@ $0.20 per protected GB per month
DRaaS Revenue = $21 M	@ $75 per server per month
Agility aaS (test/dev) Revenue = $18 M	@ $0.05 per virtual GB per week @ $15 per server per week

Actifio DevOps workflows collapse multiple, disparate, time-consuming steps into single-click automated tasks creating the basis for self-service automation. The single Golden Copy simultaneously supports development, testing, QA, pre-production and support. From the customer perspective, virtual copies dramatically reduce storage capacity requirements while substantially improving quality and accelerating application release cycles.

Data Migration and Mobility Cloud Services

Data migration and mobility create painful, complex and expensive obstacles for enterprise clients moving to cloud-based services. Actifio solves the problem of cloud data movement with the simple power to virtualize data and eliminate excess copies. Migration is accelerated and simplified—even over distance.

- Execute in minutes
- Identify remote servers and storage at target destinations.
- Use a simple click to move source servers and data without disruption.
- Eliminate application downtime.
- Move data and on-board customers quickly

Service Providers increase revenue opportunities using Actifio to streamline data movement and mobility. Offered as a distinct service or incorporated into broader offerings, they can eliminate common migration headaches for tens to hundreds of terabytes. Production systems stay up and running while data moves non-disruptively behind the scenes.

This is more than data movement. It's the flexible and efficient cloud-based data movement that enterprises require. It demonstrates speed and simplicity with no application impact. It's safe, fast and reliable.

It's time.

Data Vaulting-as-a-Service

Actifio helps Service Providers to offer Enterprise efficient Data Vaulting-as-a-Service

- Virtualized data and tapeless DR for speedy recoveries
- Space-efficient long-term data retention in the cloud
- Dramatically improved retrieval access time over physical vaults

Actifio versatility provides MSPs a single platform for multiple cloud-based services including long-term Data Vaulting. It satisfies enterprise requirements for scalability and performance from terabytes-to-petabytes. Beyond backup, DR, migration, and DevOps, it easily enables long-term data vaulting services that manage data retirement through simple orchestration tools.

As application data is captured, it's placed in a high performance storage pool and simultaneously placed in a separate de-duplicated and compressed storage pool. The process can be applied to both virtual and physical environments. Customers can specify individual service level assignments for each application or data pool to guarantee appropriate application performance while governing long-term data retention and reducing overall storage capacity demands.

An example business model for a 1 PB environment, generating an $80M revenue stream over 5 years (Figure 4). Detailed business models are available to assist in defining your specific potential.

- Actifio lowers infrastructure and operational costs by eliminating multiple point technologies
- Providers can launch multiple services *anywhere*—built on your infrastructure or public cloud.
- The focus jumps from declining infrastructure to an ascending application centric curve
- Actifio differentiated services help profitably transform business

Speed, Savings, Customer Satisfaction and Profitability

The ROI here is huge. Actifio helps Service Providers to offer Enterprise services that simplify and accelerate business. They can support more services with smaller, faster and more nimble infrastructure. Clients can improve data management while developing more applications at greater speed with more certainty and creativity.

Beyond simplicity in operations, Actifio provides simplicity through elimination. Multiple layers of legacy equipment, software, overhead and process can be fully purged. At the same time, economic leverage and business agility are gained for multiple services, from backup to DevOps. In each, Actifio unlocks added MSP value.