DCIG *Solution Profile*
SME AWS Cloud Backup Solution Profile

by Jerome Wendt, DCIG President & Founder

SME 2020-21 DCIG TOP 5 AWS CLOUD BACKUP

SOLUTION
IBM Spectrum Protect Plus

COMPANY
IBM
One New Orchard Road
Armonk, NY 10504

(914) 499-1900
www.ibm.com/spectrum/protect-plus

DISTINGUISHING AWS CLOUD BACKUP FEATURES OF IBM SPECTRUM PROTECT PLUS
- A hybrid deployment option
- Protects logical application groupings of containers hosted in Kubernetes
- Supports multiple object stores for cost-effective data retention and archiving

DISTINGUISHING FEATURES OF TOP 5 SME AWS CLOUD BACKUP SOLUTIONS
- Available in all compatible AWS regions
- May place backup stores on S3 object stores in different AWS regions
- Provide technical support in four hours or less

SOLUTION FEATURES EVALUATED:
- Backup administration
- Backup capabilities
- Configuration, licensing, and pricing
- Recovery and restores
- Snapshot administration
- Support

AWS a Major Beneficiary of Public Cloud Adoption

The percentage of small and midsize enterprises (SMEs) (250 – 5,000 employees) running their application workloads on public cloud platforms continues to grow. Consider:

- 96 percent of organizations of all sizes already use at least one public cloud platforms[1]
- Public cloud platforms will host more than 50% of enterprise workloads and data by 2021[2]
- 87 percent of companies experience business acceleration from their use of cloud services[3]

These statistics reflect what many anecdotally know to be true: SME adoption of public cloud platforms continues to grow unabated. Among these platforms, Amazon Web Services (AWS) represents one of this trend's primary beneficiaries. AWS already owns nearly 50% of the public cloud infrastructure as-a-service (IaaS) market outdistancing its nearest competitor by more than 3:1.[4]

SMEs select AWS over its competitors for many reasons. It offers over 100 platform services from basic compute, networking, and storage services to analytics, end user computing, and relational databases. It has data centers throughout the world. Taken together, these benefits make a compelling argument for SMEs to adopt and embrace AWS.

The State of SME AWS Cloud Backup Solutions

The solutions that perform backup and recovery in the AWS cloud got their start in one of three ways doing:

1. Physical machine backups
2. Virtual machine backups
3. Cloud-native backup.

Nine of the sixteen SME backup solutions DCIG evaluated got their start in physical and virtual machine backup. SMEs deploy these backup solutions in the AWS cloud like they do in physical or virtual environments, with minor differences.

They obtain an appropriately sized Elastic Cloud Compute (EC2) instance from AWS to host the backup software. They license, install, and maintain the backup solution themselves. They configure it to back up their applications hosted in the AWS cloud, often installing agents on the EC2 hosts. In many respects, they configure and manage this backup software once deployed in the AWS cloud like they do on-premises.

These SME AWS cloud backup solutions do face one primary challenge going forward. Fewer SMEs want to manage backup software the same way they did in the past. Instead, they want to subscribe and pay for backup software like they do other services in the AWS cloud.

The other seven solutions provide this new cloud-native subscription model that SMEs want. They got their start as cloud-native backup applications, operating either in the AWS cloud or another cloud. They architected their backup software and made it available as a cloud-native service.

Delivered this way, these seven solutions automatically scale up or down based on demand. The providers also handle all the backup software's ongoing maintenance, such as fixes, patches, and upgrades. This frees SMEs to focus on using the backup software while removing the task of maintaining it.

The cloud-native backup solutions based in the AWS cloud often support backing up other cloud-native AWS applications. However, they tend to lack the breadth of features SMEs need to protect applications they lift-and-shift to the AWS cloud. As these cloud-native providers introduce features to better protect these applications, their solutions will become more attractive to SMEs.

1. https://resources.flexera.com/web/pdf/report-state-of-the-cloud-2020.pdf. Referenced 8/12/2020. Pg. 19.
2. https://resources.flexera.com/web/pdf/report-state-of-the-cloud-2020.pdf. Referenced 8/12/2020. Pg. 10.
3. Cloud Adoption and Risk Report. https://www.mcafee.com/enterprise/en-us/assets/reports/restricted/rp-cloud-adoption-risk-report-business-growth-edition.pdf . Reference 8/28/2020. Pg. 3
4. https://www.forbes.com/sites/jeanbaptiste/2019/08/02/amazon-owns-nearly-half-of-the-public-cloud-infrastructure-market-worth-over-32-billion-report/#377293c229e0. Referenced 8/12/2020.

Over the next few years, look for the gap between the two classes of products to begin to close. Expect current providers to make their software available as cloud-native SaaS offerings. Conversely, expect cloud-native providers to add more features to better protect applications that SMEs lift-and-shift to the cloud.

Distinguishing Features of SME AWS Cloud Backup Solutions

DCIG identified over 30 solutions in the marketplace that offer backup capabilities for the AWS cloud. Of these, DCIG identified and classified sixteen as meeting DCIG's definition of an SME AWS backup solution. Attributes that help distinguish these solutions from those targeted at large enterprises include support for the following:

1. *Diversity of approaches to protecting applications and data in the AWS cloud.* Their diversity in features and functionality perhaps best defines SME AWS cloud backup solutions. This diversity shows up almost immediately in how they protect applications and data in the AWS cloud. Cloud-native backup solutions do particularly well at protecting AWS cloud-native applications. Solutions that got started doing physical or virtual machine backups tend to better protect applications that SMEs lift-and-shift to AWS.

2. *Varying technical support levels.* SMEs should not assume all these solutions provide the levels of technical support that large enterprise AWS cloud backup solutions offer. SMEs often expect same day if not 4-hour response times when requesting support. Only 75 percent of these solutions can deliver these response times. Only 62 percent of these solutions offer response times of 15 minutes or less. In contrast, all large enterprise AWS cloud backup solutions provide technical support response times of 15 minutes or less.

3. *Broader support for AWS databases.* SMEs building applications in the cloud will find these backup solutions offer more options to protect AWS databases. All SME AWS cloud backup solutions do not protect all AWS databases. However, these solutions offer more choices to protect AWS databases than large enterprise AWS cloud backup solutions. SMEs will find solutions that protect their data stored in Aurora, DocumentDB, DynamoDB, RedShift, and AWS RDS databases, among others.

4. *Broad support for using and managing backup data on S3 storage.* 75 percent of SME AWS cloud backup solutions already support using Amazon S3 as a backup storage target. Half of the solutions also support storing data in S3 targets in different AWS regions while 40 percent can manage S3 Glacier in the same AWS region. Many large enterprise AWS cloud backup solutions do support S3.

However, as a group, they currently lag SME backup solutions in their abilities to manage S3's various storage tiers.

IBM Spectrum Protect Plus SME AWS Cloud Backup Solution Profile

Upon DCIG's completion of reviewing multiple, available SME AWS cloud backup solutions, DCIG ranked IBM Spectrum Protect Plus as a TOP 5 solution. IBM demonstrates its continuing ability to adapt Spectrum Protect Plus to meet the new demands of AWS cloud backup. Available in the AWS marketplace, SMEs may deploy Spectrum Protect Plus as an AWS VM or on an AWS Bare Metal or EC2 instance. IBM makes an AWS CloudFormation template available to accelerate and simplify its provisioning and configuration in the AWS cloud.

IBM Spectrum Protect Plus offers the following features that help distinguish it from other TOP 5 offerings:

- *A hybrid deployment option.* SMEs adopting AWS may need to continue protecting applications on-premises in addition to those running in the AWS cloud. SMEs may deploy IBM Spectrum Protect Plus on-premises and in the AWS Cloud to protect VMs, databases, and applications, including SaaS offerings such as Microsoft Office 365, running in a hybrid cloud environment. AWS workload support includes EC2 instances, VMware virtual machines, databases, Windows file systems, and Microsoft Exchange.

- *Protects logical application groupings of containers hosted in Kubernetes.* In 2019, the Cloud Native Computing Foundation surveyed individuals in the software, technology, and professional services industries. It found 78 percent of them already use Kubernetes in production.[5] When deployed on-premises, Spectrum Protect Plus protects persistent volumes in a Kubernetes environment. It can create SLA policies that govern snapshots, backups, replication, and data retention. As SMEs build new applications using containers, developers can use these labels to protect logical application groupings instead of individual volumes. They may also back up and recover logical persistent volumes associated with Kubernetes namespaces.

- *Supports multiple object stores for cost-effective data retention and archiving.* SMEs cannot always keep all their backup data in the AWS S3 storage cloud. Some need to bring this data back on-premises or store it in other clouds to satisfy application, archival, or compliance requirements. Using Spectrum Protect Plus, they may copy data to other object stores, to include on-premises object stores. They can also use Spectrum Protect Plus to further lower storage costs in Amazon S3 by placing data on S3 Glacier. ∎

---

5. https://insights.stackoverflow.com/survey/2020. Referenced 8/14/2020.