

Enterprise-scale data storage and protection



Seagate Lyve Cloud with IBM Spectrum Protect



About This Guide

This paper details the steps and best practices to deploy Seagate's Lyve Cloud, as a new cloud tier to an existing IBM Spectrum Protect Server.

Audience

This paper is written for storage and backup administrators familiar with administering and managing backup environments.

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Challenge Summary

From exponential data growth and new workloads, to the rise of cloud, and the risk of cyberattack, businesses must respond to a fast-changing landscape of threats to business continuity. Data is vulnerable, and as ransomware attacks hit the headlines, there has never been a more urgent time to move beyond back-up with key capabilities to drive simplicity, security, and compliance.

Organizations need storage and data protection that seamlessly scales and extends across the entire IT infrastructure; gives control over cost and performance, avoids complexity, and improves resiliency against cyber threats. Seagate Lyve Cloud with IBM Spectrum Protect combines Seagate's best-in-class data storage performance with market-leading IBM multi-workload data protection and management. The combined solution delivers predictable cloud storage economics, data mobility, cyber resiliency, and an easy-to-use gateway for efficient ingestion and backup retrieval from Lyve Cloud.

Solution Summary

The Lyve Cloud with IBM Spectrum Protect solution addresses exponential data growth, and the need for a solution that scales seamlessly, while delivering a simplified and more cost-efficient approach to data storage protection.

The joint solution enables advanced data protection, securing applications and workloads on hybrid, multi-cloud architectures, centralizes storage management, and reduces cost. Seagate Lyve Cloud's data storage focuses on security, flexibility, and predictable economics. Integrated with IBM Spectrum Protect's built-in cloud integration and data efficiency capabilities, it offers security-rich and cost effective data protection and back-up in the cloud.



Benefits of using LyveCloudwithIBM Spectrum Protect

Seagate Lyve Cloud and IBM Spectrum Protect is the easy choice for accelerating cloud adoption and modernizing data protection. With IBM Spectrum Protect and Seagate Lyve Cloud, storage admins get access to:

Simplified Backup and Recovery—Lyve Cloud with IBM Spectrum Protect simplifies backup and recovery with fast, simple, and flexible recovery that minimizes data loss. Rapid recovery with no need for data hydration ensures access to data is restored almost immediately. Utilize Seagate's best-in-class Lyve Cloud Storage Object, S3-compatible data storage for always on availability to facilitate easy back-up and reliable retrieval without wait.

Business Continuity—Ensure business continuity with Seagate Lyve Cloud's high-availability cloud storage management. Easy-to-understand, simple pricing with no API charges or egress fees empowers customers to back up and move all back-up data in a single repository for compliance without lock-in concerns.

Multi-Workload Protection—Lower operational cost with flexible, scalable storage options, unifying and simplifying data protection for file servers, virtual environments, applications, and data sent from API or S3.

Scalable Performance—Scale up to support massive data growth with flexible, scalable, storage options and the capacity to manage billions of objects per backup server, with less disruption and complexity, as backup workloads grow.

Storage Efficiency—Drive exceptional storage efficiency with incremental "forever" backup version protection, compression, deduplication, and policy-based life cycle management.

Cyber Resiliency—Protect your storage investment with encryption, always-on data monitoring, secure communication, and proactive security notifications.

Hybrid, Multi-cloud Performance—Manage complexity across hybrid environments through a unified platform that simplifies management, and gives you control of your data wherever it resides. Back-up to cloud or back-up in the cloud with security-rich built-in cloud integration.



Deploying Seagate Lyve Cloud with IBM Spectrum Protect

Deployment Prerequisites

Lyve Cloud Storage Account, this includes:

1. Obtain Access and Secret Keys for the storage account.
 - Have the ability to read/write/list and create buckets and objects and the ability to delete objects
2. IBM Spectrum Protect Account
 - Follow IBM Spectrum Protect Best Practices for your workload and environment

Configuration Overview

The configuration for Lyve Cloud with IBM Spectrum Protect is divided into 2 simple tasks.

- Task 1: Create a Lyve Cloud Service Account. For more information, see the Lyve Cloud reference guide: [Lyve Cloud Quick Start Guide](#)
- Task 2: Add a cloud container storage pool to IBM Spectrum Protect. For more information, see the Spectrum Protect reference guide: [Configuring a Cloud Container Storage Pool](#)

Task 1: Create Lyve Cloud Service Account

It is assumed that a Lyve Cloud Storage Account has been created and configured. This consists of the following steps:

- Set up an S3 Bucket
- Create Bucket Permissions (*Do not enable compliance mode/immutability - this feature is not currently supported by IBM Spectrum Protect.*)
- Create a Service Account - establishing access key, secret key, and associated URL for your account; see example below

Create Service Account

In the Lyve Cloud Console, select “Service Accounts.” On the Service Accounts page, select the “Create Service Account” button.

LYVECLOUD

Service Accounts

Service Accounts allow applications to authenticate and access Lyve Cloud resources and services.

+ Create Service Account

1

2

3

Test

Home

STORAGE

Buckets

Permissions

Service Accounts

IDENTITY & ACCESS

Users

MFA

Federated Login

Notification Recipients

YOUR ACCOUNT

Settings

Support

Create Service Account

Service Account Name

company-app1-key Enter unique name

Select Permissions

☐ Permission Name ↑

☐ 34-a

☒ Master permission Select permission

New Service Account Created

Make sure to copy or download secret to secured location, as these won't be available for copy or download once this dialog box is closed.

Service Account Name

company-app1-key

Access

2LAJ00UZK00DATAL

SECRET

AOAG2DM3I0IEUWG1VT3L3YUATIF0VIJ5

Copy

Download as

CSV JSON

Confirmation box displays:

- Access Key
- Secret Key

Copy or download access key and secret key information before closing.

Note: You must have at least one bucket with at least one associated permission before you can establish the credentials needed to add Lyve Cloud, as a new Cloud Tier

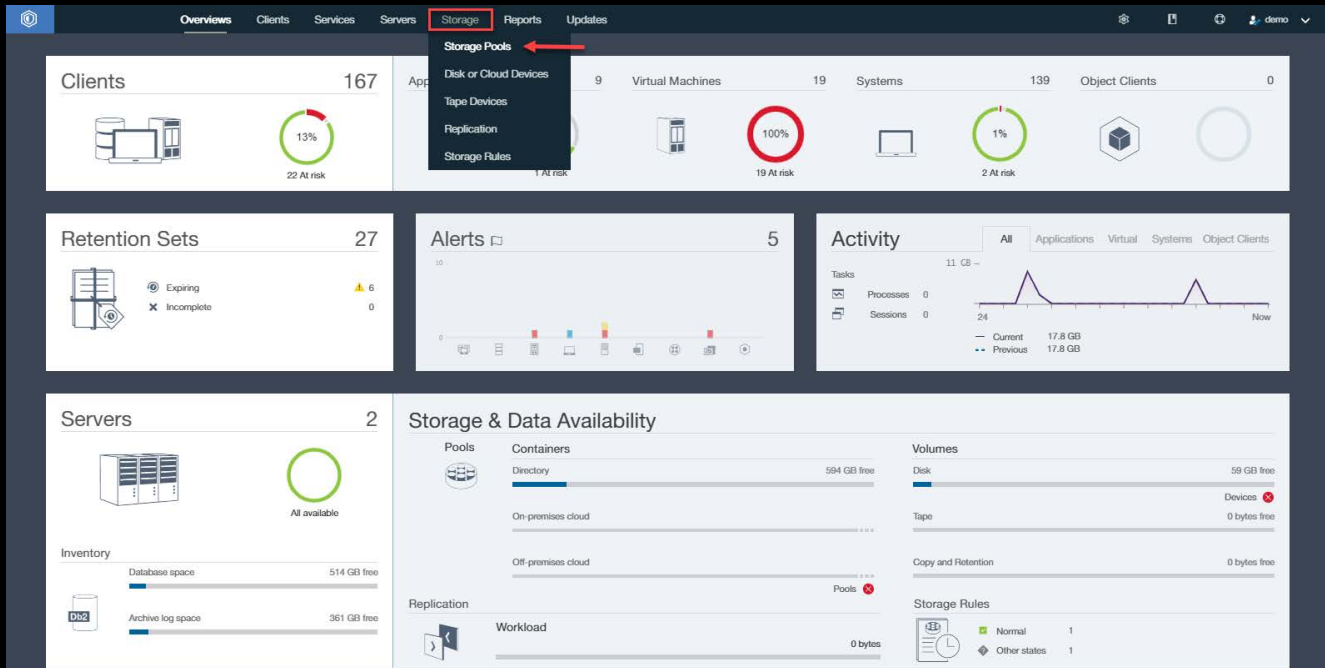


Task 2: Add a Cloud Tier on IBM Spectrum Protect Server

IBM Spectrum Protect environment readiness is assumed.

Step 1: Add a Cloud Container Storage Pool

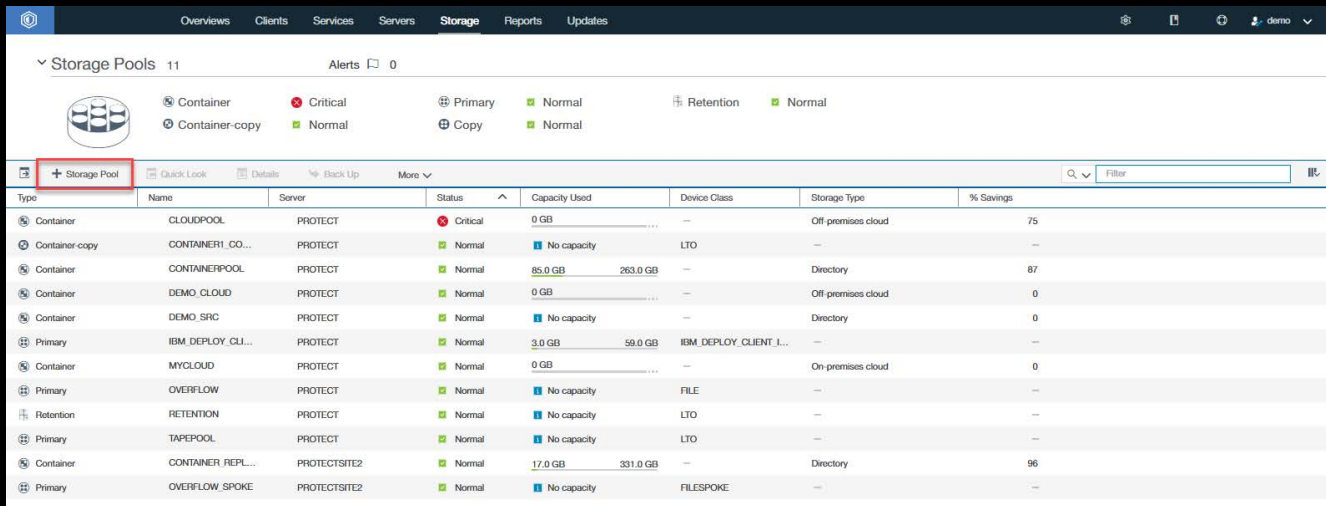
In the IBM Spectrum Protect Operations Center, select "Storage Pools" from the "Storage" menu.



Task 2: Add a Cloud Tier on IBM Spectrum Protect Server

Step 2: Add Storage Pool

On the "Storage Pool" page of the IBM Spectrum Protect Operations Center, select "+ Storage Pool" to start the storage pool wizard, and complete the steps to create a storage pool.

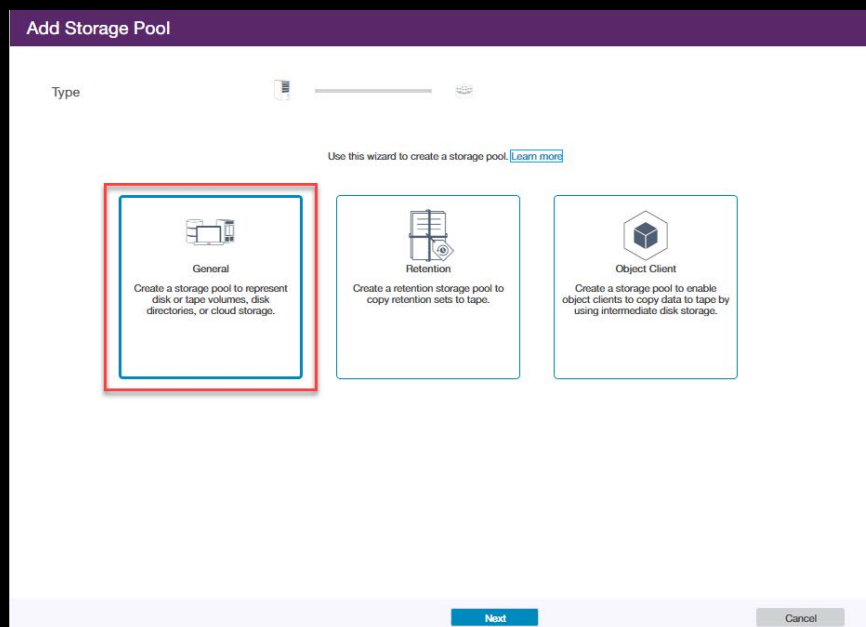


The screenshot shows the 'Storage Pools' page with 11 pools listed. The '+ Storage Pool' button is highlighted with a red box. The table below lists the existing storage pools:

Type	Name	Server	Status	Capacity Used	Device Class	Storage Type	% Savings
Container	CLOUDPOOL	PROTECT	Critical	0 GB	---	Off premises cloud	75
Container-copy	CONTAINER1_CO...	PROTECT	Normal	No capacity	LTO	---	---
Container	CONTAINERPOOL	PROTECT	Normal	85.0 GB / 263.0 GB	---	Directory	87
Container	DEMO_CLOUD	PROTECT	Normal	0 GB	---	Off premises cloud	0
Container	DEMO_SRC	PROTECT	Normal	No capacity	---	Directory	0
Primary	IBM_DEPLOY_CLI...	PROTECT	Normal	3.0 GB / 59.0 GB	IBM_DEPLOY_CLIENT_I...	---	---
Container	MYCLOUD	PROTECT	Normal	0 GB	---	On-premises cloud	0
Primary	OVERFLOW	PROTECT	Normal	No capacity	FILE	---	---
Retention	RETENTION	PROTECT	Normal	No capacity	LTO	---	---
Primary	TAPEPOOL	PROTECT	Normal	No capacity	LTO	---	---
Container	CONTAINER_REPL...	PROTECTSITE2	Normal	17.0 GB / 331.0 GB	---	Directory	96
Primary	OVERFLOW_SPOKE	PROTECTSITE2	Normal	No capacity	FILESPOKE	---	---

Step 3: Create Storage Pool

In the "Add Storage Pool Wizard", select the type as "General" to configure a cloud container storage pool.



The screenshot shows the 'Add Storage Pool' wizard with three options: General, Retention, and Object Client. The 'General' option is selected and highlighted with a red box. The description for 'General' is: 'Create a storage pool to represent disk or tape volumes, disk directories, or cloud storage.'

✓ Select "General" to configure a cloud container storage pool.

Task 2: Add a Cloud Tier on IBM Spectrum Protect Server

Step 4: Create Cloud Container Identity

At the "Identity" step of the wizard, specify a name for the storage pool and the server, as an identifier for the Storage Pool.

The screenshot shows the 'Add Storage Pool' wizard at the 'Identity' step. The progress bar indicates the current step. Below the title, there's a sub-header 'PROTECT' and a link 'Create a storage pool to store client data. Learn more'. The form has three fields: 'Name' with the value 'S3-CLOUD', 'Server' with a dropdown menu showing 'PROTECT', and 'Description' which is empty. A tooltip points to the 'Name' field with the text 'The pool name must be unique for the selected server. Learn more'. Another tooltip points to the 'Server' dropdown with the text 'Select server from drop down'. At the bottom, there are 'Back', 'Next', and 'Cancel' buttons.

✓ Specify the Name and Server, as an identifier for the Storage Pool.

Step 5: Specify Storage Pool Type

At the "Type" step of the wizard, select off-premises cloud to configure a cloud-container storage pool in Lyve Cloud.

The screenshot shows the 'Add Storage Pool' wizard at the 'Type' step. The progress bar indicates the current step. Below the title, there's a sub-header 'PROTECT' and 'S3-CLOUD'. A link 'Choose the type of pool that best supports your business goals. Learn more' is present. A blue information icon is followed by the text 'To copy data from an existing directory-container pool, cancel the wizard, select the pool, and click More > Add Container-copy Pool.' The form is divided into two columns: 'Container-based storage' and 'Traditional volume-based storage'. Under 'Container-based storage', there are three options: 'Directory' (File-based storage on disk with optional copy pools), 'On-premises cloud' (Object-based storage that is managed by internal IT staff in your data center. For example, IBM Cloud Object Storage and other certified S3 providers), and 'Off-premises cloud' (Storage in vendor-managed repositories, using IBM Cloud, OpenStack Swift, Amazon S3, or Microsoft Azure). The 'Off-premises cloud' option is selected. Under 'Traditional volume-based storage', there are three options: 'Disk (primary)' (Storage on disk or in a mountable deduplicating appliance), 'Tape (primary)' (Storage on tape or in a deduplicating VTL), and 'Tape (copy)' (Copies of primary storage on tape or in a VTL). At the bottom, there are 'Back', 'Next', and 'Cancel' buttons.

✓ Select "Off-premises Cloud" to configure a cloud-container storage pool in Lyve Cloud



Task 2: Add a Cloud Tier on IBM Spectrum Protect Server

Step 6: Add Credentials

At the "Credentials" step of the wizard, enter connection information.

Add Storage Pool

Credentials

PROTECT S3-CLOUD

Select the cloud type and enter connection information for accessing the cloud. [Learn more](#)

Pool type: Off-premises cloud

Encryption: ☒ Enable

Cloud type: Amazon - S3 API

Access key ID: *

Secret access key: *

Bucket name:

Region:

URL:

Cloud storage class: S3 Standard

Back Next Cancel

✓ Specify credentials for connection information

Step 7: Add Local Storage

At the "Local Storage" step of the wizard, specify existing file system directories for disk storage.

Add Storage Pool

Local Storage

PROTECT S3-CLOUD

Specify one or more existing directories where S3-CLOUD can temporarily store data before it is transferred to the cloud. Local storage is not required if the pool is only used as a tiering target. If data is backed up directly to the pool, local storage is required and can improve performance. [Learn more](#)

Directories

+

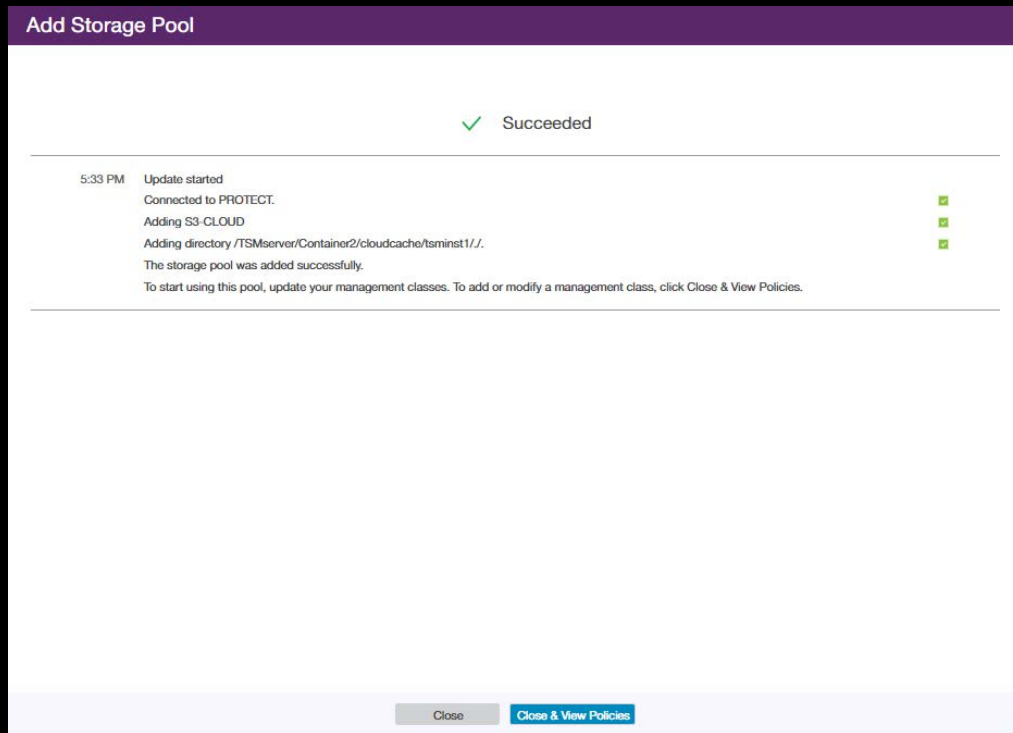
Back Add Storage Pool Cancel

✓ Specify existing file system directories for Local Storage

Task 3: Add a Cloud Tier on IBM Spectrum Protect Server

Step 6: Finish Working with Wizard

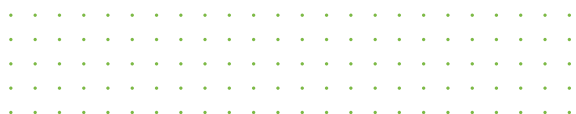
At the Summary step of the wizard, review configuration.



Review the "Storage Pool Configuration." Close the wizard, and view "Policies" to start using the new data pool.

Summary

The Lyve Cloud with IBM Spectrum Protect solution delivers enterprise-scale data storage and protection with frictionless movement, storage, backup, and fast recovery, in one limitlessly, scalable package. Easy-to-understand, simple pricing frees customers from lock-ins and egress fees, and allows enterprises to meet the challenge of storing and protecting all their data.



Ready to Learn More?

For more information on Lyve Cloud,
visit: <http://www.seagate.com/lyvecloud>

For more information on IBM Spectrum Protect visit:
<http://www.ibm.com/products/data-protection-and-recovery>

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