



Object Storage:

Foundational Technology for Top IT Initiatives

```
class MirrorX(bpy.types.Operator):
    """This adds an X mirror to the selected object"""
    bl_idname = "object.mirror_mirror_x"
    bl_label = "Mirror X"

    @classmethod
    def poll(cls, context):
        return context.active_object is not None

    def execute(self, context):
        #selection at the end, add back the unselected mirror modifier object
        mirror_ob.select= 1
        modifier_ob.select=1
        bpy.context.scene.objects.active = modifier_ob
        print("Selected" + str(modifier_ob)) # modifier is the active ob
        mirror_ob.select = 0
        #one = bpy.context.selected_objects[0]
        #bpy.data.objects[one.name].select = 1
        except:
            print("please select exactly two ob...")
            return {'CANCELLED'}

class MirrorY(bpy.types.Operator):
    """This adds a Y mirror to the selected object"""
    bl_idname = "object.mirror_mirror_y"
    bl_label = "Mirror Y"

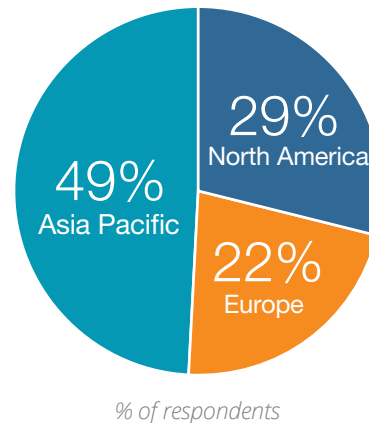
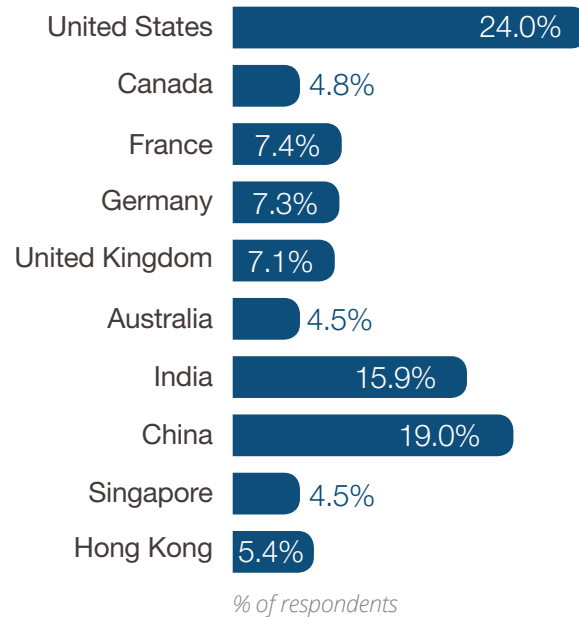
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    def poll(cls, context):
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    def execute(self, context):
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        #bpy.data.objects[one.name].select = 1
        except:
            print("please select exactly two ob...")
            return {'CANCELLED'}
```

In This InfoBrief

Hitachi Vantara and IDC partnered to understand how object-based storage (OBS) is currently being used in enterprises worldwide, and how IT decision-makers see the role of OBS evolving in the enterprise. This IDC InfoBrief summarizes the results of our study and will help you move forward with the strategic use of OBS in your organization.

Survey Scope and Key Characteristics



- **1,050** respondents worldwide (NA, Europe, AP) – **50%** from AP
- Nearly **50%** AP respondents, over **30%**, deploy less than 100TB capacity on-premises for unstructured data.
- **54%** respondents are from organizations with **500 – 2,499** employees.
- **Titles include:** CIO, Cloud Architect, IT VP/Director/Manager, Storage Admin., App Developer

Executive Summary



Object Storage Has Matured to Enterprise-Ready

80%

of organizations surveyed worldwide believe object storage can **support their top IT initiatives**



OBS is now the **top choice** for long-term retention of unstructured data

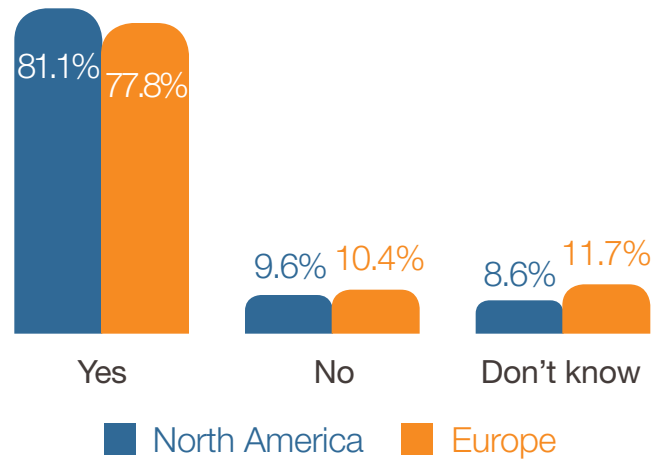
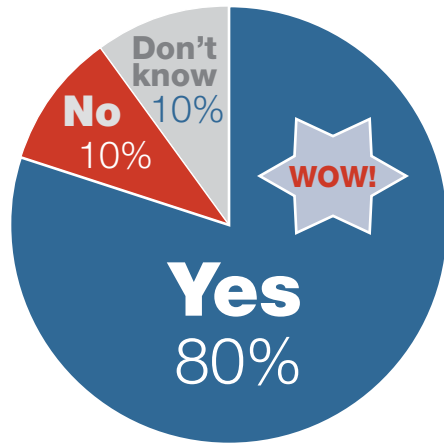
Object storage, originally used for tier-2 or archival storage, is now moving to support tier-1 workloads like security and enterprise resource management

38% of organizations believe OBS offers the **scalability** needed

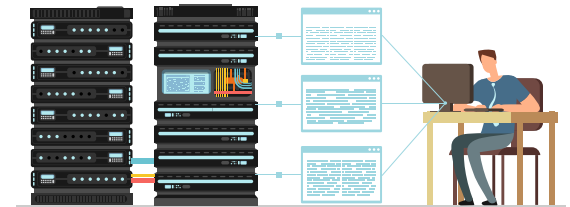
35% of organizations believe OBS offers the ability to **analyze** unstructured data and improve data quality

Object-Based Storage Can Support Top IT Initiatives

Companies That Believe Object Storage Can Support Their Top 3 IT Initiatives



80% of respondents believe OBS can support their top IT initiatives



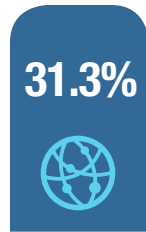
Source: Worldwide - HDS Object Storage, January 2019, IDC

#1 IT Initiative Worldwide: Security

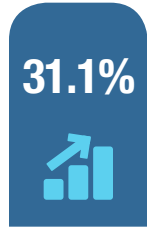
Top 3 IT Initiatives Related to Data Storage



Information Security



Internet of Things (IoT)



Data Analytics of Unstructured Data



Top IT Initiatives By Region



Security ranks #1, by highest margin overall (55.2% vs. #2 IoT at 31.3%) and in all regions



IoT ranks #2 NA and #3 Europe



Adopting private cloud within datacenter is the #2 initiative for Europe (trigger can be GDPR) vs. Adopting Public Cloud, which is #3 for NA



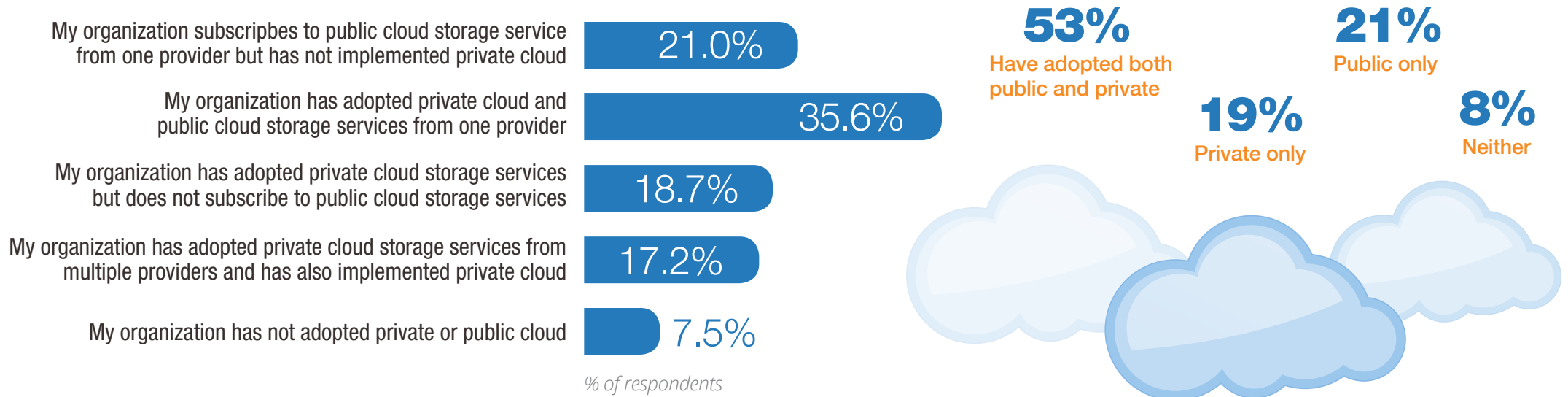
AP ranks Data Analytics for Unstructured Data as #2 and IT Automation/Process Automation as #3

Strong Use of Private & Public Cloud for Unstructured Data

Most respondents have either adopted public or private cloud from **one or more providers**.

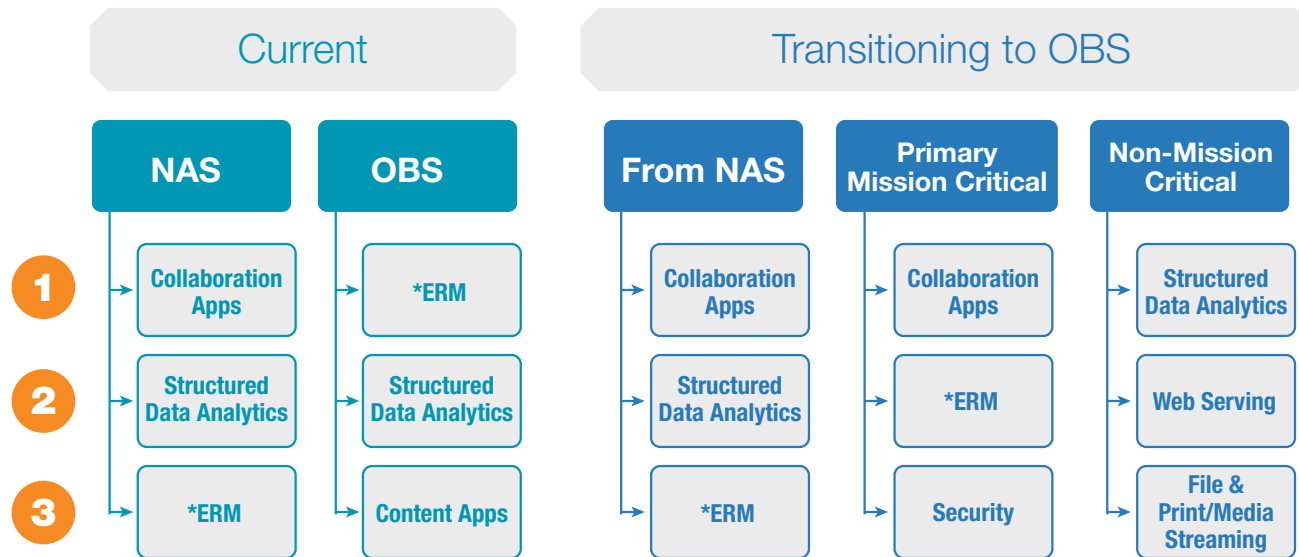
Only 8% respondents have **not** adopted private and public cloud. The majority of respondents have adopted public and private cloud services **from one provider**.

Private & Public Cloud Adoption



Object Storage: Not Just for Archiving Anymore

Workloads or applications for unstructured data are **now transitioning** to OBS, which originally served as secondary storage tier or archival tier. Applications moving from NAS to OBS are likely to be transitioned to OBS **serving as production/primary storage tier**.

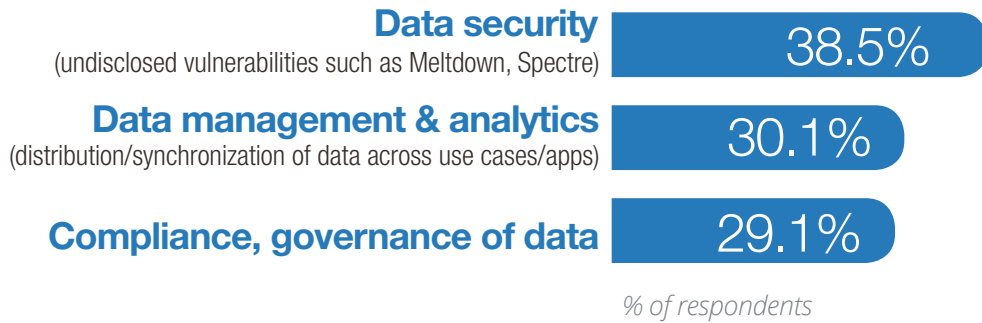


*ERM: Enterprise Resource Management Applications such as Finance, HR, Accounting, Procurement, Asset Management, etc.

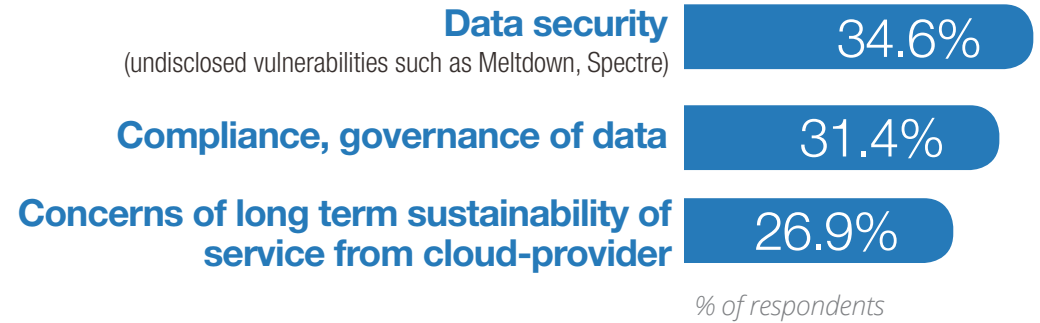
Source: Worldwide - HDS Object Storage, January 2019, IDC

Cloud Is a Top IT Initiative, But Concerns Remain

Top 3 Challenges of **Public** Clouds



Top 3 Challenges of **Private** Clouds



Concern
with adopting public
and private clouds as
top initiative:



#1 is
data security
due to **vulnerabilities**
(such as Meltdown,
Spectre)



Other key concerns:

- Compliance/
governance of data
- Data management
and analytics



These key concerns are
reasons for repatriation of
data from public/private
cloud storage services to
on-premises.

Most Organizations Store Unstructured Data Longer Than Three Years

In fact, **55%** of IT leaders surveyed indicated they retain their unstructured data for **5 years or more** with Europe retaining data slightly longer than North America and Asia Pacific.

Organizations are retaining a variety of unstructured data assets long term. Here are the top **5 most common types of data** they retain. Other types include healthcare records, video surveillance and media.

51%

Finance Related



48%

Sales Information



47%

Electronic Communication



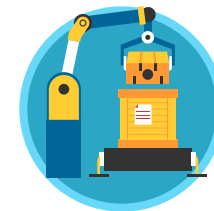
39%

User-Generated Content



32%

Sensor/Machine/ IoT Data



Reasons for Long-Term Data Retention: Compliance Today, Data Analytics Tomorrow

Top 3 Reasons to Keep Data Today



Top 3 Reasons to Keep Data: In 2 Years



Today



Regulatory Compliance is the top reason for organizations to retain unstructured data long term.



Data Analytics is #2 reason for long-term data retention today.

In 2 Years



Data Analytics will be the #1 reason for long-term data retention in 2 years for extracting value to gain insight on customers/products and drive profitability.

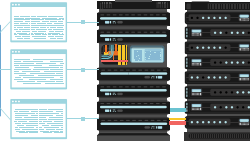


Organizations will adopt and integrate **AI and analytics strategies** in making business decisions in the near future.

Persistent Challenge: Identifying & Deleting Old Data



How often organizations identify and delete content:



Does your organization periodically follow a process to actively identify and delete content with little or no business value?

Only 18% respondents have inbuilt/integrated processes to identify and purge data.

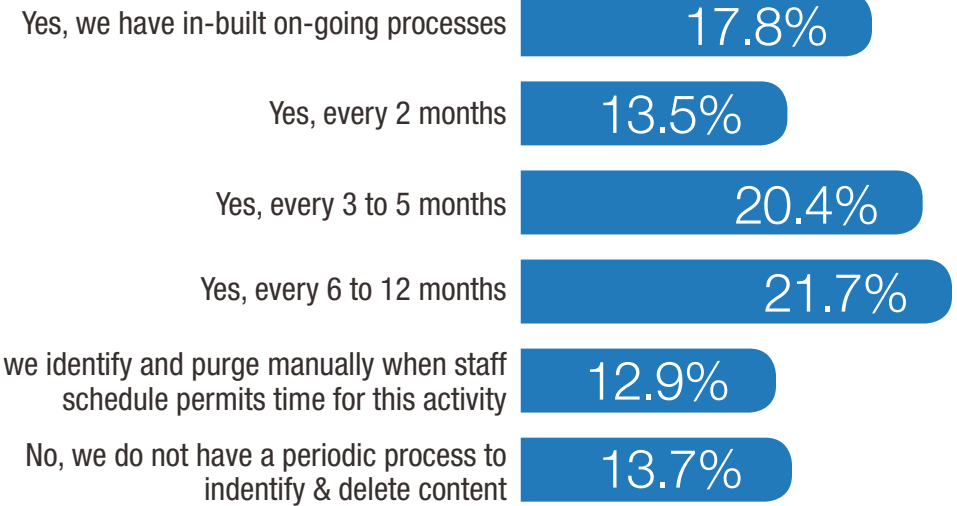
3-12 months is a popular timeframe for this task across all regions.

42% AP respondents either manually purge or do not have a process.



Respondents who **don't identify and delete data** do so because of:

- Legal & compliance/corporate policy
- Lack of policy/tools and clarity on what can be purged



% of respondents

Source: Worldwide - HDS Object Storage, January 2019, IDC

The Value of Object Storage for IT Initiatives

In 2 years over 40% of respondents feel “data is IP and it drives revenue for my organization” and want to “extract value out of data to enhance product/solution.” **OBS is a mature solution** for handling data at scale and supporting a variety of deployment models. Therefore, OBS can support top initiatives.

Top 3 Benefits of IT Initiatives



43.4%

Improve internal operational efficiency & productivity



37.0%

Reduce risk



36.8%

Reduced costs & increased profit margin

Top 4 Reasons OBS Can Support IT Initiatives



38.0%

OBS offers scalability needed



35.7%

OBS offers wide variety of platforms to choose from (traditional/private & public cloud)



35.4%

OBS offers the ability to analyze unstructured data/improve data quality



33.3%

OBS offers is a mature technology

Important Features When Adopting Object-Based Storage Solutions



Important features for OBS:



Data management across platforms and clouds



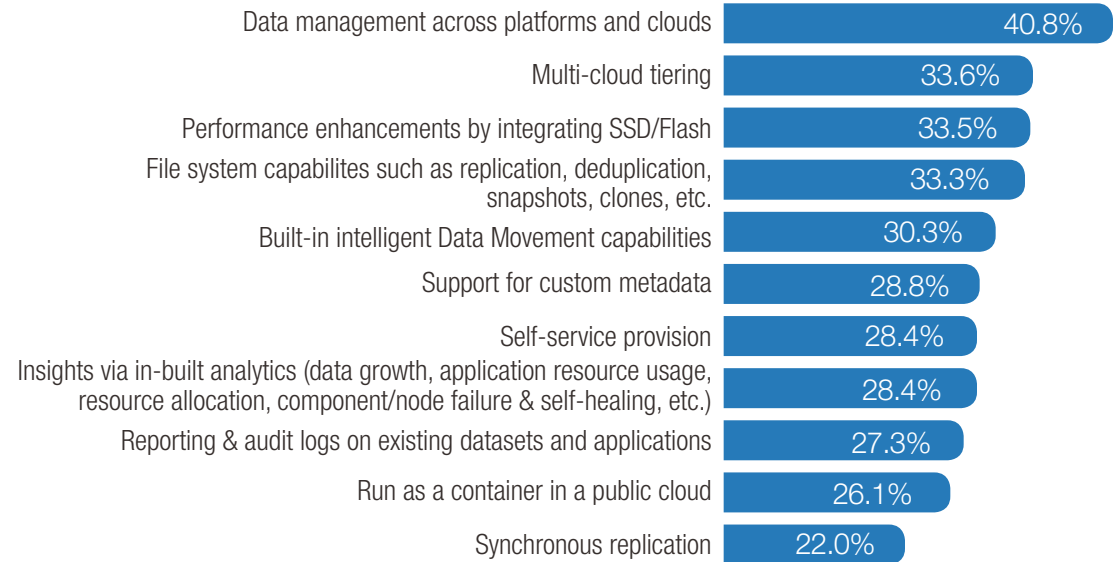
Multi-cloud tiering



Performance SSD/Flash



Which of the following features are most important to you when adopting object-based storage solutions?



Source: Worldwide - HDS Object Storage, January 2019, IDC

Reasons to Choose Object Storage



Reasons to choose OBS support correlate with feature requirements:

Commercial SW on Commodity HW or Public Cloud:



Increase security



Maintain better visibility and control of data



Reduced maintenance

OBS Appliance



Increase security

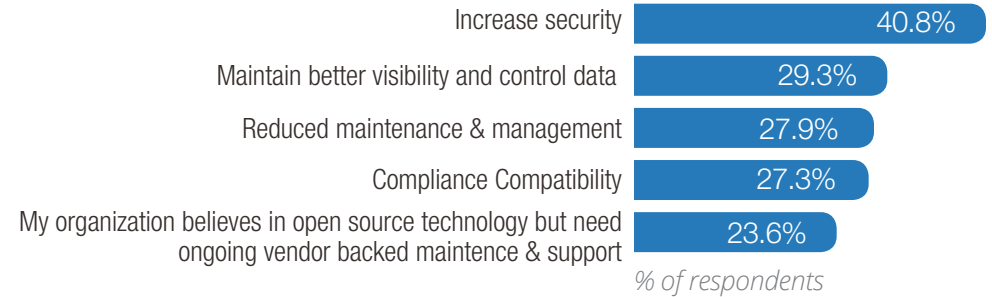


Ease of support, management & maintenance



Maintain better visibility and control of data

Top 5 Reasons to Prefer Commercial SDS OBS SW



Top 5 Reasons to Prefer Proprietary OBS Appliance



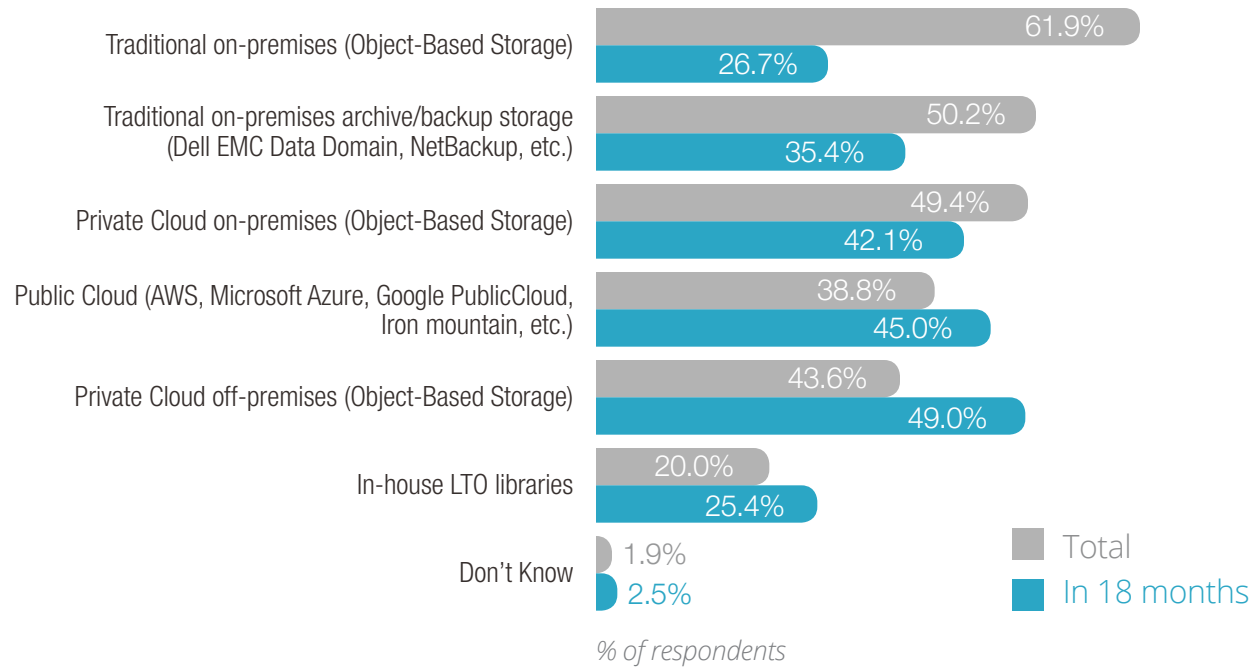
Source: Worldwide - HDS Object Storage, January 2019, IDC

OBS Top Choice for Long-Term Retention of Unstructured Data

Expected increase of OBS deployments in private cloud



Which of the following platforms does your company use for long-term retention of unstructured content today? And in 18 months?

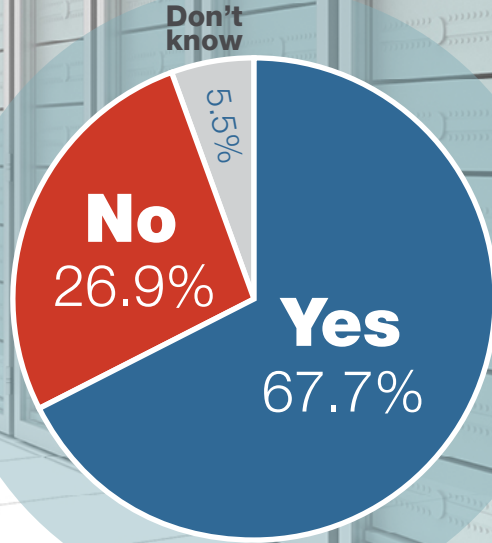


Source: Worldwide - HDS Object Storage, January 2019, IDC

The Future of Object-Based Storage



Does your organization feel the need to backup data from the cloud to on-premises object-based storage for data protection or cross-workload analytics, etc. (for example: Salesforce (SFDC), Eloqua, Marketo, JiRA)?



Source: Worldwide - HDS Object Storage, January 2019, IDC

The Role of OBS Looking Forward:

- **68%** want to back up data from cloud apps to on-premises OBS storage.
- **OBS is expected support tier-1 workloads**, as respondents indicate interest in procuring/deploying OBS All-Flash Arrays in next 12 months for top Initiatives such as IoT.
- **One-fifth of WW respondents** indicate they would like to run OBS as a container in public cloud.

Conclusion



In mature markets like North America and Europe, **awareness** of object-based storage is **high**.

As OBS data sets increase and span multiple deployment locations (i.e., on-premises and off-premises — private/public/multi-cloud), **data management and security will become a key feature** of object storage systems.



Object-based storage will eventually **support production-tier workloads**, and its adoption will continue to increase across all environments, on- and off-premises.

Are You Ready to Tackle Your Top IT Initiatives?

Learn how to build the right object storage foundation with Hitachi Content Platform

Please visit: <https://www.hitachivantara.com/en-us/products/cloud-object-platform/content-platform.html>

**Take an IT solution's assessment
at Hitachi Vantara data center
modernization portal**

<https://www.hitachivantara.com/en-us/interactive/data-center-modernization-solution-finder-tool.html>

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with governance solutions**

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