

Advanced Technology Group



Accelerate with ATG

IBM Storage Ceph 30 Minute Installation Challenge

John Shubeck – ATG Storage Technical Specialist

Date: March 21, 2023



Storage Ceph



Accelerate with ATG Technical Webinar Series

Advanced Technology Group experts cover a variety of technical topics.

Audience: Clients who have or are considering acquiring IBM Storage solutions. Business Partners and IBMers are also welcome.

To automatically receive announcements of upcoming Accelerate with IBM Storage webinars, Clients, Business Partners and IBMers are welcome to send an email request to accelerate-join@hursley.ibm.com.

2023 Upcoming Webinars – click on the link to register for the live event:

March 28 - [How to Size for FlashSystem Safeguarded Copy 201 – Using IBM Storage Insights to Gather Data](#)

April 18 – [IBM TS7700 Best Practices for Disaster Recover Testing](#)

April 25 – [IBM Storage Virtualize 8.5.4 and Storage Sentinel Technical Update](#)

May 2 – IBM Storage Ceph S3 Object Storage Demo

Important Links to bookmark:



ATG Accelerate Support Site: <https://www.ibm.com/support/pages/node/1125513>

ATG MediaCenter Channel: <https://ibm.biz/BdfEgQ>



ATG-Storage Offerings

CLIENT WORKSHOPS

- IBM Cloud Object Storage System
- IBM Storage Scale and Storage Scale System
- IBM DS8900F Advanced Functions – **May 9-10, 2023, in Dallas, TX**
- IBM Storage Point of View on Cyber Resiliency
- IBM FlashSystem 9500 Deep Dive & Advanced Functions
- IBM Storage Fusion

Please reach out to your IBM Rep or Business Partner for future dates and to be nominated.

TEST DRIVE / DEMO'S

- North America ATG Storage - IBM Storage Scale and Storage Scale System GUI
- North America ATG Storage - IBM Storage Virtualize Test Drive
- North America ATG Storage - IBM DS8900F Storage Management Test Drive
- North America ATG Storage - Managing Copy Services on the DS8000 Using IBM Copy Services Manager Test Drive
- North America ATG Storage - IBM DS8900F Safeguarded Copy (SGC) Test Drive
- North America ATG Storage - IBM Cloud Object Storage Test Drive - (Appliance based)
- North America ATG Storage - IBM Cloud Object Storage Test Drive - (VMware based)
- North America ATG Storage - IBM Storage Protect Live Test Drive
- North America ATG Storage - IBM Storage Protect Plus Live Test Drive
- **North America ATG Storage - IBM Storage Ceph Test Drive - (VMware based)**

Please reach out to your IBM Rep or Business Partner for more information.

Accelerate with ATG Technical Webinar Series - Survey

Please take a moment to share your feedback with our team!

You can access this 6-question survey via [Menti.com](https://www.menti.com) with code 2243 3599 or

Direct link <https://www.menti.com/albneqj15g57>

Or

QR Code



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Storage Ceph



About the Presenter



John Shubeck is an information technology professional with over 41 years of industry experience spanning both the customer and technology provider experience. John is currently serving as a Senior Storage Technical Specialist on IBM Object Storage platforms across all market segments in the Americas.

Introducing our panelists



Lloyd Dean is an IBM Principal Storage Technical Specialist in IBM Storage Solutions. Lloyd has held numerous senior technical roles at IBM during his 22 plus years at IBM. Lloyd most recently is leading efforts in the Advanced Technology Group as the IBM Storage for Red Hat OpenShift focal and as a Hybrid Cloud storage solution SME covering IBM Block, File and Object storage solutions and their use cases supporting IBM Cloud Paks.



Shawn Houston is a programmer and Software Defined Storage Specialist with over 30 years of professional experience. Shawn's career so far has included Electrical Engineering, Space Communications, High Performance Computing, Web Security, and Bioinformatics prior to his career's current Software Defined Storage trajectory. Shawn is currently a Senior Solution Architect at IBM on the America's Fusion Team.

Agenda



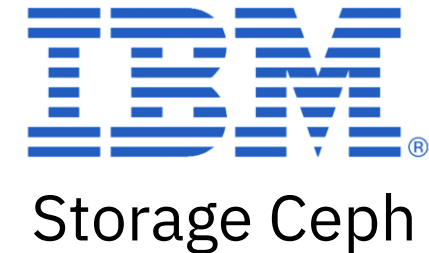
- What is IBM Storage Ceph
- IBM Storage Ceph Basics
- IBM Storage Ceph POC Node topology
- Installing IBM Storage Ceph
- IBM Storage Ceph bootstrap on the first node
- Expanding the cluster to a total of four (4) nodes
- Incorporating the Object Storage Daemons/Devices (OSDs)
- Day 2 bonus topic
- Summing it all up

What is IBM Storage Ceph?

IBM Storage Ceph is a scalable, open, software-defined storage platform that combines an enterprise-hardened version of the Ceph storage system, with a Ceph management platform, deployment utilities, and support services.

IBM Storage Ceph is a bundled product containing Ceph, IBM Spectrum Control, and Red Hat Enterprise Linux (RHEL).

It is packaged as two deployment options and is fully supported by IBM.



IBM Storage Ceph Offering

IBM Storage Ceph and Red Hat Ceph packaging



IBM Storage Ceph

On-prem S3 storage at scale and performance

- Object storage
- Block storage
- File storage
- Presence at the on-prem object market at 10-Petabyte+ scale
- S3 compatibility with AWS



Ceph for OpenStack

1 in OpenStack storage

- Cinder block storage
- Nova ephemeral storage
- Glance image storage
- Swift object store
- Manila file storage
- Advanced integration
- Unified management
- Hyperconverged and Edge capabilities

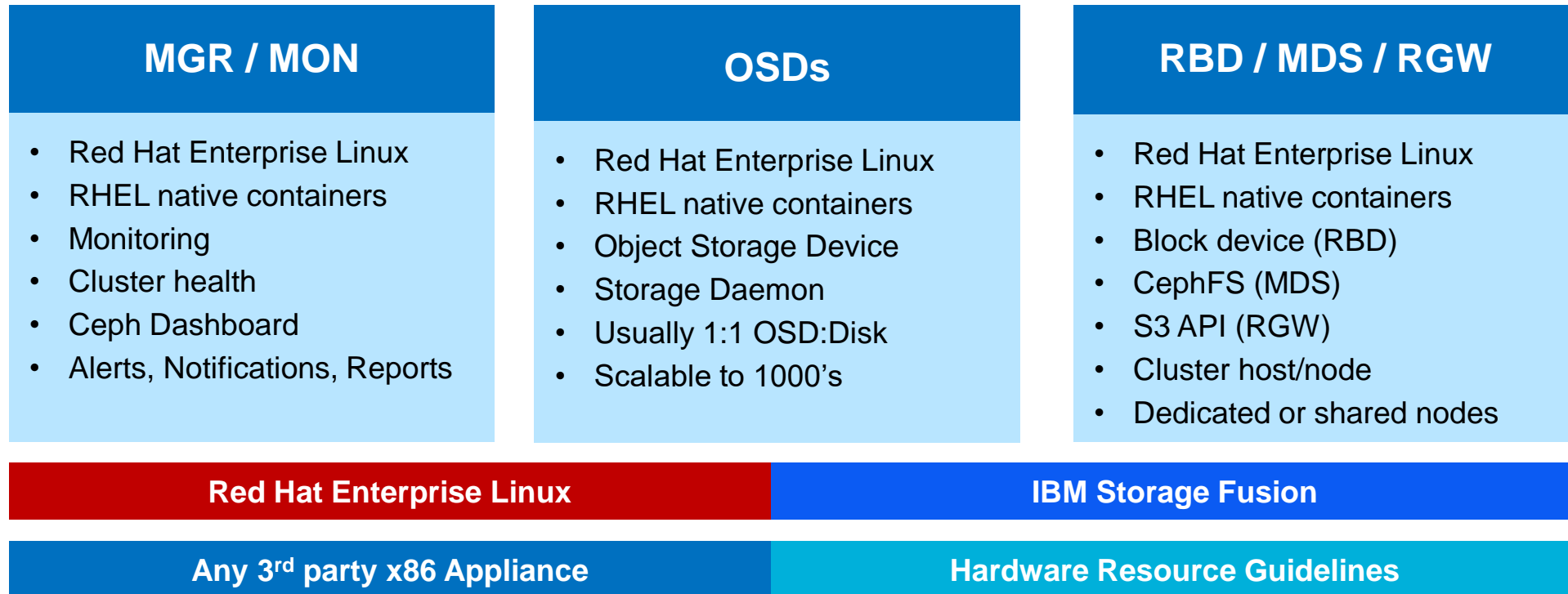


IBM Storage Fusion

Ceph for OpenShift

- Self-managing storage powered by Red Hat Ceph Storage
- Automated by Rook and completed with Multicloud object gateway (MCG)
- Advanced integration, automation, ease of use
- Persistent storage for OpenShift stateful workloads

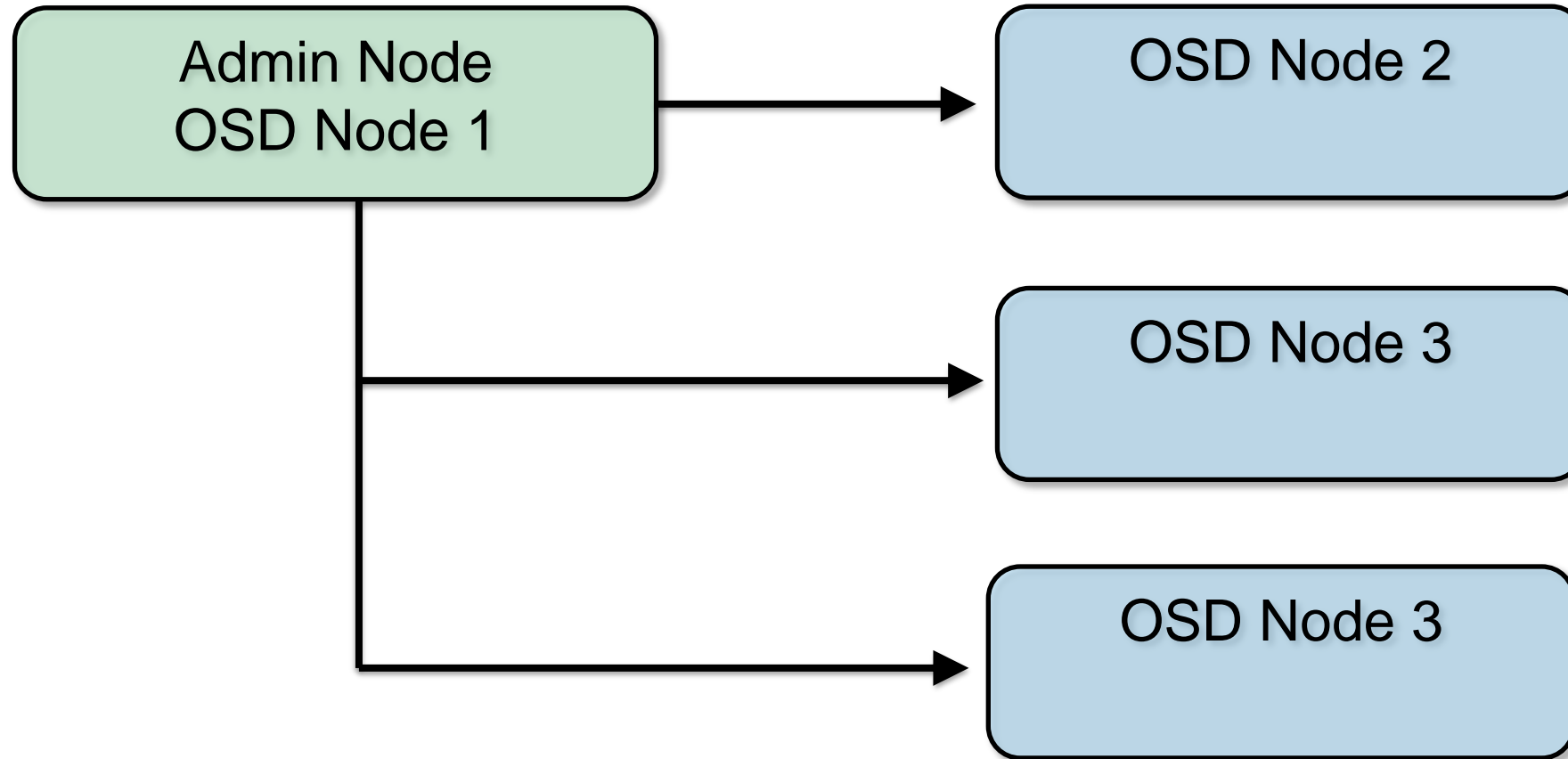
IBM Storage Ceph high level overview



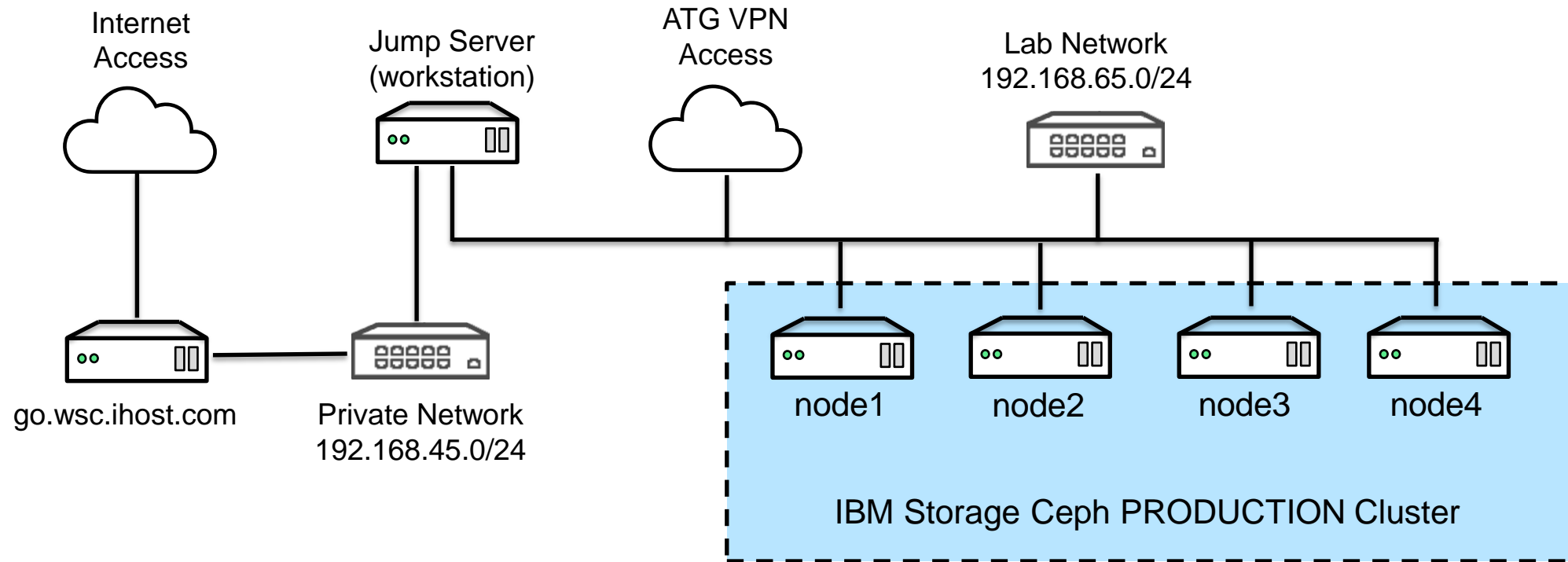
IBM Storage Ceph Demo Configuration



IBM Technology Zone: Ceph Test Drive Cluster Layout



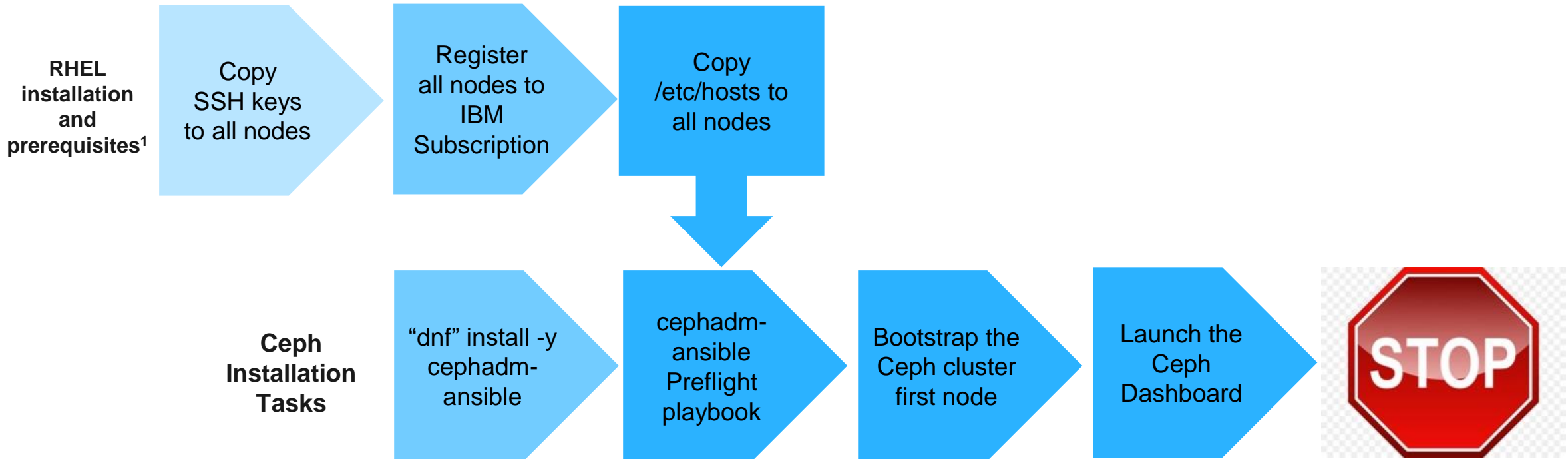
IBM Storage Ceph – Minimum production cluster



IBM Storage Ceph Installation Challenge

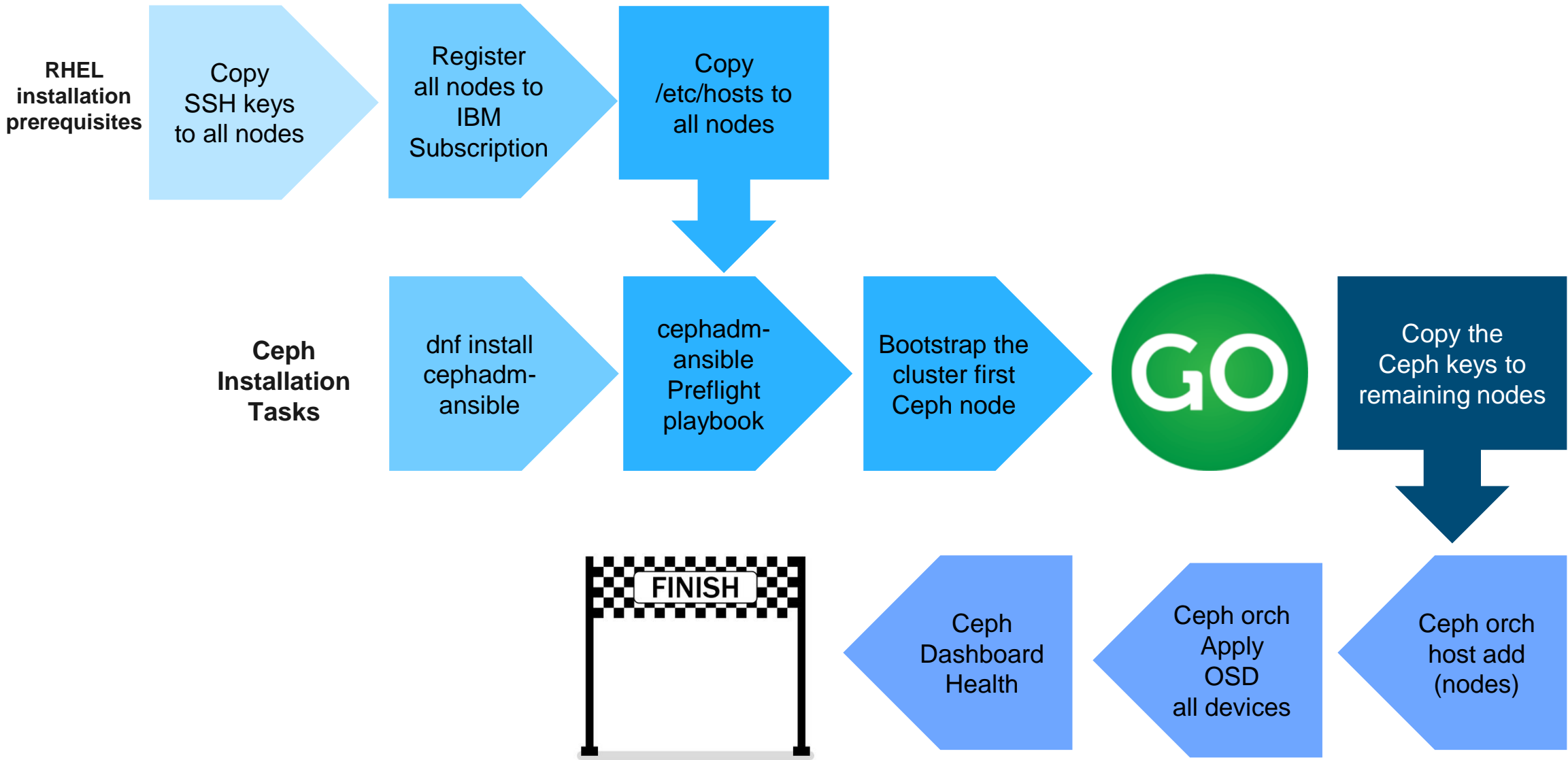


IBM Storage Ceph S3 Object Storage tasks



1. <https://www.ibm.com/docs/en/storage-ceph/5?topic=installation-registering-storage-ceph-nodes>

IBM Storage Ceph S3 Object Storage tasks



IBM Storage Ceph Installation – Summing it all up



“cephadm” – The Command Line Interface



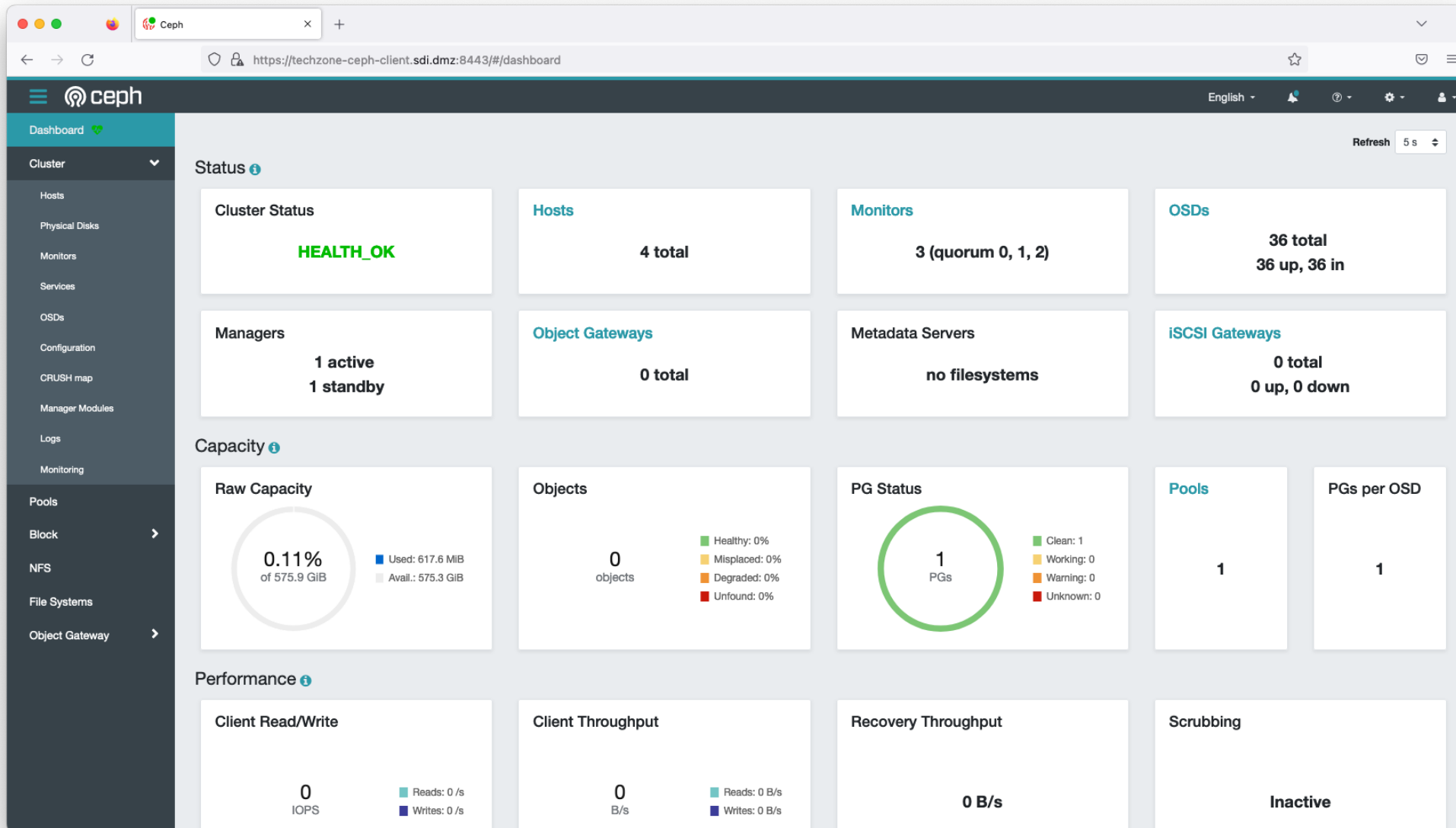
```

IBM Ceph TechZone Demo - November 2022.sh
UNREGISTERED

446 #
447 # Create a zone group
448 # Create the zone
449 # Commit the changes.
450 #
451 [ceph: root@ceph-mon01 /]# radosgw-admin zonegroup create --rgw-zonegroup=default --master --default
452 [ceph: root@ceph-mon01 /]# radosgw-admin zone create --rgw-zonegroup=default --rgw-zone=test_zone --master --default
453 [ceph: root@ceph-mon01 /]# radosgw-admin period update --rgw-realm=test_realm --commit
454 #
455 #
456 # Deploy the RGW daemons now
457 #
458 [ceph: root@ceph-mon01 /]# ceph orch apply rgw test --realm=test_realm --zone=test_zone --placement="2 proxy01.example.com ceph-mon03.example.com"
459 #
460 #
461 # Verification tasks
462 #
463 [ceph: root@ceph-mon01 /]# ceph -s
464 [ceph: root@ceph-mon01 /]# ceph orch ls
465 [ceph: root@ceph-mon01 /]# ceph orch ps
466 #
467 #
468 # Next command on the Proxy01
469 #
470 [root@proxy01 ~]# netstat -tuln | grep radosgw
471 # tcp        0      0 0.0.0.0:80          0.0.0.0:*           LISTEN        6970/radosgw
472 # tcp6      0      0 :::80              :::*                  LISTEN        6970/radosgw
473 #
474 #
475 # Back on the Ceph Monitor
476 #
477 [root@ceph-mon01 ~]# curl http://192.168.56.24:80
478 # <?xml version="1.0" encoding="UTF-8"><ListAllMyBucketsResult xmlns="http://s3.amazonaws.com/doc/2006-03-01/"><Owner><ID>anonymous</ID><DisplayName></DisplayName></Owner>
479 [root@ceph-mon01 ~]# rados lspools
480 # device_health_metrics
481 # .rgw.root
482 # test_zone.rgw.log
483 # test_zone.rgw.control
484 # test_zone.rgw.meta
485 #
486 #
487 # Create a RADOS Gateway (RGW) user for S3 access
488 #
489 [ceph: root@ceph-mon01 /]# radosgw-admin user create --uid='user1' --display-name='First User' --access-key='S3user1' --secret-key='S3user1key'
490 [ceph: root@ceph-mon01 /]# radosgw-admin user info --uid='user1'
491 #
492 #
493 # Set up the Ceph RGW front end dashboard Front End now
494 #
495 [ceph: root@ceph-mon01 /]# radosgw-admin user create --uid=rgw-admin --display-name=rgw-admin --system
496 #
497 #
498 #
499 #
500 #
501 #
502 # If you lose the access key, use the next command to list it
503 #

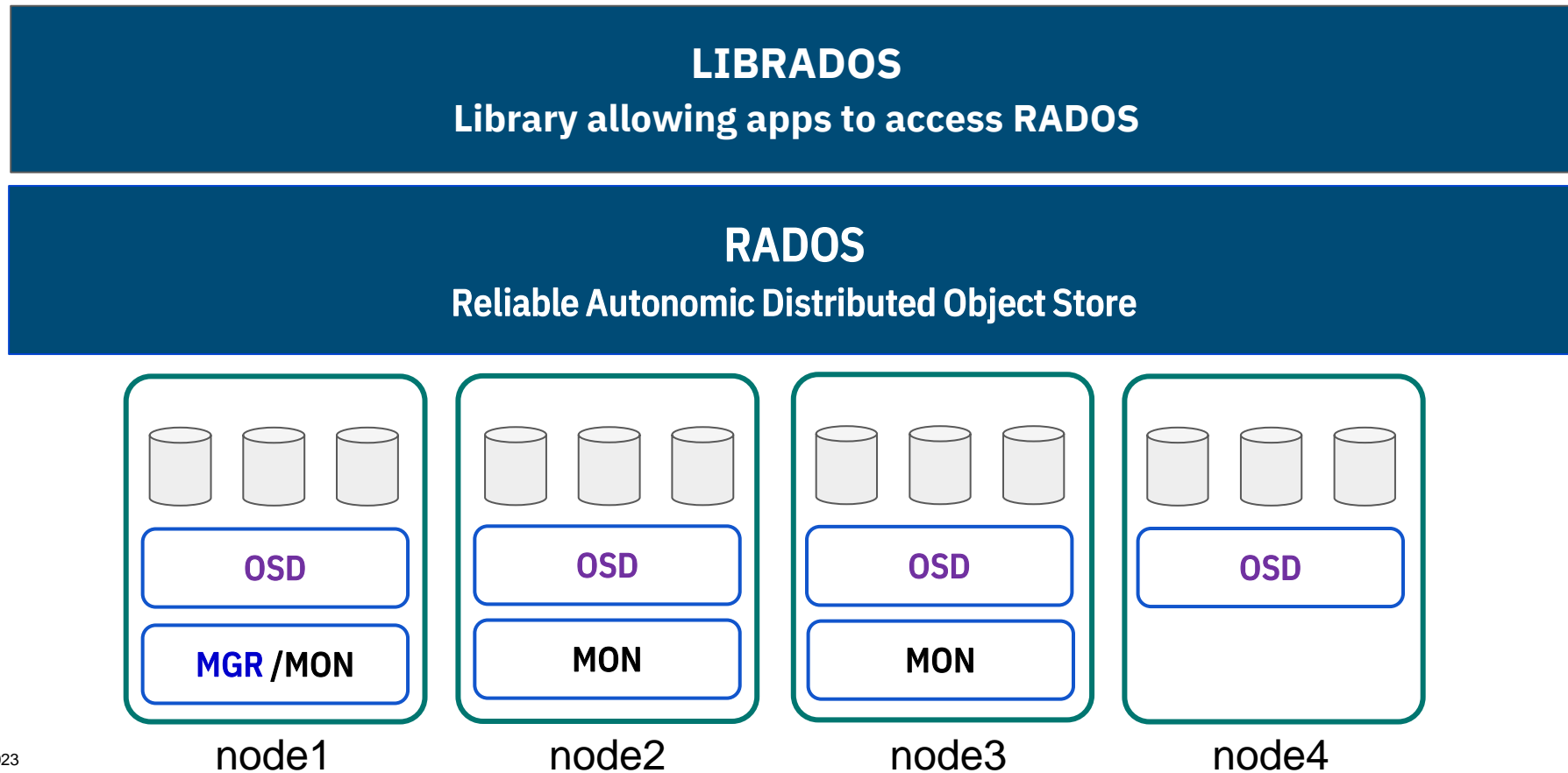
```

Ceph Dashboard – The Browser Interface

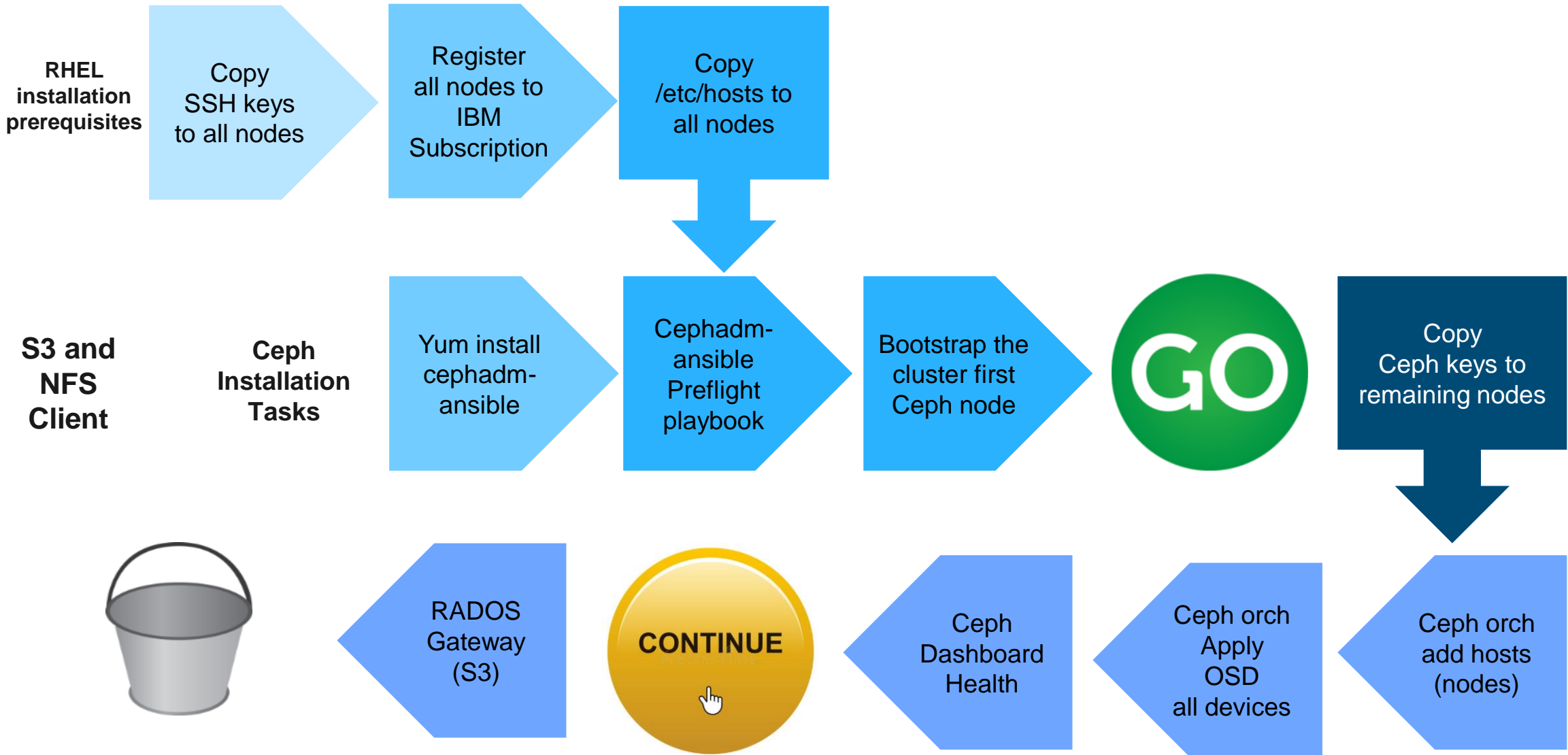


IBM Storage Ceph – Colocated daemons

Installation challenge node layout



IBM Storage Ceph Day 2 Storage tasks – Day 2



IBM Storage Ceph – Summing it all up



IBM Storage Ceph Product Page

IBM Storage Ceph

IBM Storage Ceph

Consolidate data with software efficiency and cloud scalability when you need it

[Read the data sheet \(258 KB\)](#) [Schedule a free demo](#)

[Product documentation](#)

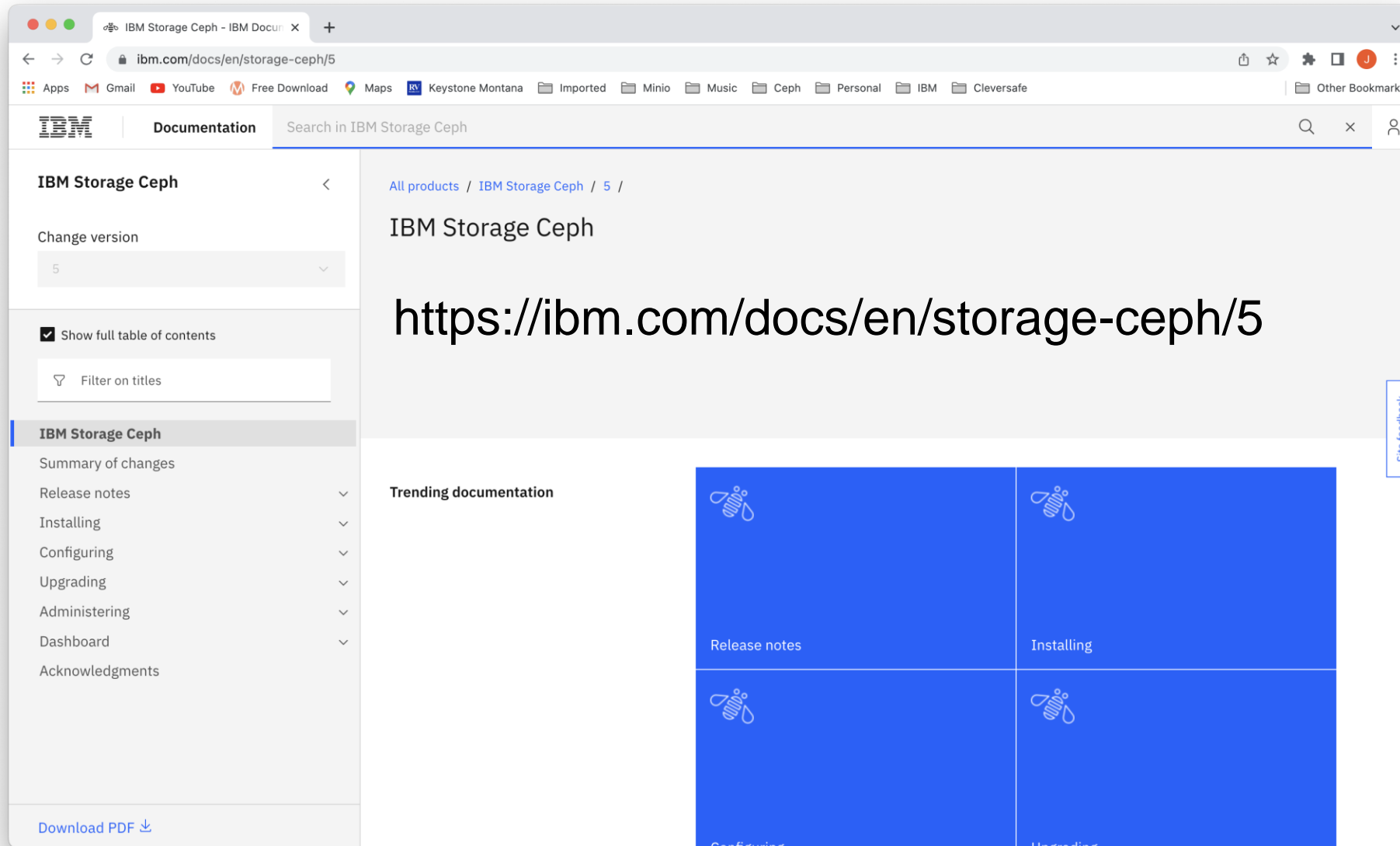
Overview

Optimize the enterprise with cloud scalable object storage

IBM Storage Ceph provides an open, scalable and software defined multi-protocol storage solution designed to consolidate data anywhere and with the

Site feedback

IBM Storage Ceph Documentation



IBM Technology Zone Test Drive

The screenshot shows a browser window with the URL `https://techzone.ibm.com/collection/north-america-atg-storage-ibm-storage-ceph-test-drive-vmware-based`. The page header includes 'IBM Technology Zone', 'My library', and 'Help'. The main content area features a large title: 'North America ATG Storage - IBM Storage Ceph Test Drive - (VMware based)'. Below the title, it indicates 'Visibility IBMers, Business Partners' and 'Status Active'. There is a 'Bronze' badge in the top right corner and a 'Rate this resource' section with five stars and '(0)' reviews. A sidebar on the left lists navigation options: Business value, Authors, Resources, Environments, Metadata, and Comments. The main content area under 'Business value' contains two paragraphs of text and a 'Please Note' section.

ATG Accelerate – May 2, 2023

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IBM Storage Ceph S3 Object Storage Demo

John Shubeck – ATG Storage Technical Specialist

Date: May 2, 2023



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Direct link <https://www.menti.com/albneqj15g57>

Or

QR Code



