ADVANCED TECHNOLOGY GROUP (ATG)

Accelerate with ATG Webinar: Exploring the IBM Storage Scale GUI

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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.

2024 Upcoming Webinars – Register Here!

IBM Copy Services Manager V6.3.9.0 & DS8900F R9.4 Updates - January 30th, 2024

IBM Storage Ceph Updates for Versions 6 and 7 - February 6th, 2024

IBM Storage Fusion: Exploring the Differences between Data Foundation & Global Data Platform – February 13th, 2024

IBM Storage Virtualize CDR 8.6.1 Technical Update - February 27th, 2024

Important Links to bookmark:

ATG Accelerate Site: https://ibm.biz/BdSUFN

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

Offerings

Client Technical Workshops

- **IBM DS8900F Advanced Functions:** Feb. 7-8 in Dallas, TX
- **IBM Cyber Resiliency with IBM Storage Defender:** Feb. 14-15 in Dallas, TX
- **IBM Storage Fusion:** Feb. 21-22 in Dallas, TX
- **IBM Storage Scale & Storage Scale System:** Feb. 28-29 in Costa Mesa, CA
- **IBM FlashSystem Deep Dive & Advanced Functions:** March 6-7 in Dallas, TX
- **IBM Storage Ceph:** March 20-21 in Costa Mesa, CA
- IBM FlashSystem and Storage Virtualize
- IBM Cloud Object Storage

TechZone Test Drive / Demo's

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

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

IMPORTANT The ATG team serves clients and Business Partners in the Americas, concentrating on North America.

Save the date

Storage @ IBM TechXchange Conference 2024

(Registration opens March)

October 21-24, 2024
Mandalay Bay | Las Vegas
#IBMTechXchange

Key Learnings
- Practical how-to advice
- Patterns and best practices
- Success stories, IBM PoV, proven techniques

Featured Products

IBM Storage Defender   IBM Storage Fusion

IBM Storage Scale + IBM Storage Ceph   IBM Tape + IBM SAN

IBM Storage FlashSystem + IBM Storage DS8000

Collaborate. Learn. Play.

Community
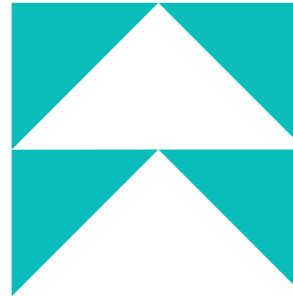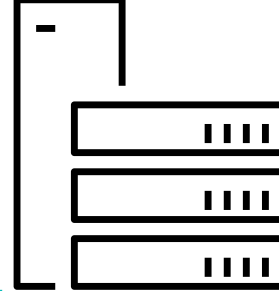IBM Champions
User Groups
Tech Peers
Business Partners

Sandbox
Network   Learn
Collaborate   Play

Accelerate your Career
Labs (Instructor-Led, Self-paced)
IBM Certification Testing
Earn up to 25 hours in CPE credits

Roadmaps
Go deep with people in the know and set the stage for where IBM is going in the future

Breakout Sessions
Trends and Directions   User Groups
Product Deep Dives   Meet the Expert
Professional Development   Show the Code
Birds of a Feather
Academic/Research

https://www.ibm.com/community/ibm-techxchange-conference/

Game On! →

Accelerate with ATG Survey

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

You can access this 6-question survey via Menti.com with code 1708 6924 or

Direct link https://www.menti.com/alwhyze7z1gz
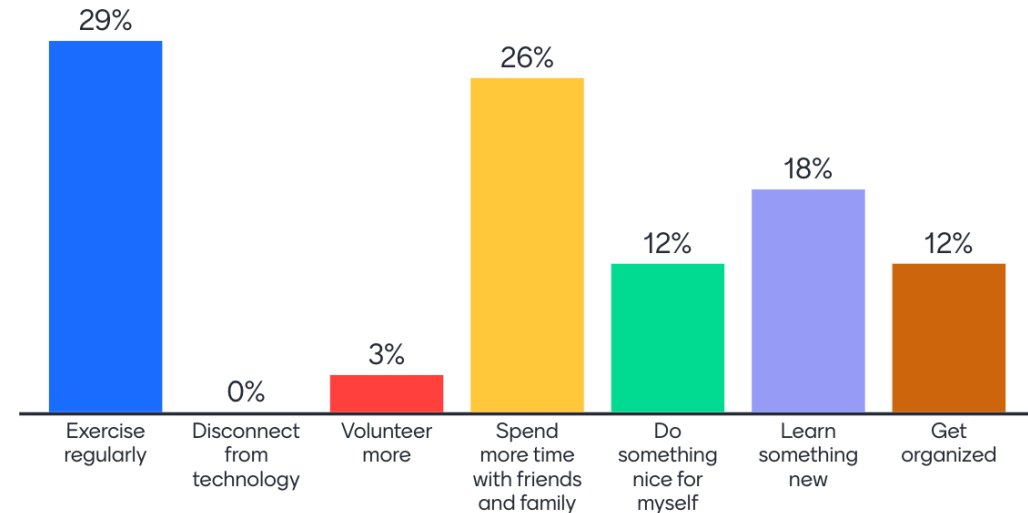
Or

QR Code

Join at menti.com | use code 1708 6924

Mentimeter

What's your New Year's resolution?

29%	0%	3%	26%	12%	18%	12%
Exercise regularly	Disconnect from technology	Volunteer more	Spend more time with friends and family	Do something nice for myself	Learn something new	Get organized

ADVANCED TECHNOLOGY GROUP (ATG)

Accelerate with ATG Webinar: Exploring the IBM Storage Scale GUI

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Meet the Speaker

Shu Mookerjee is a Level 2 Certified Technical Specialist with over twenty years at IBM, working in a variety of roles including sales, management and technology. For the last decade, he has focused exclusively on storage and has been the co-author of four (4) Redbooks. Currently, Shu is part of the Advanced Technology Group where he provides education, technical guidance, Proofs of Concept and Proofs of Technology to IBMers, business partners and clients.

Agenda

- Goals and Objectives

- IBM Storage Scale Overview

- Introducing the Storage Scale GUI
  - Architecture and Requirements
  - Installation Prerequisites
  - Available Functions

- Scale GUI Demo
  - Deployment Comparison (ESS vs. ECE vs. Standard Scale)
  - Component Monitoring
  - Creating/Managing a Filesystem
  - Creating a Fileset
  - Performance Monitoring with the Statistics Tab

- Bonus Demo! Storage Insights or Scale GUI?

Goals and Objectives

Objective:
Showcase the major capabilities of the Storage Scale GUI

We WILL:
- Demonstrate the key features and functions
- Cover high level management and monitoring
- Compare and contrast with Storage Insights

We WILL Not:
- Provide a full tutorial on all aspects of the GUI
- Cover the detailed implementation and installation process
- Compare and contrast GUI vs. CLI

IBM Storage Scale – Overview

What is Storage Scale?

- Highly scalable distributed parallel POSIX file system
- Runs on any Open System OS (AIX, Windows, Linux) environment
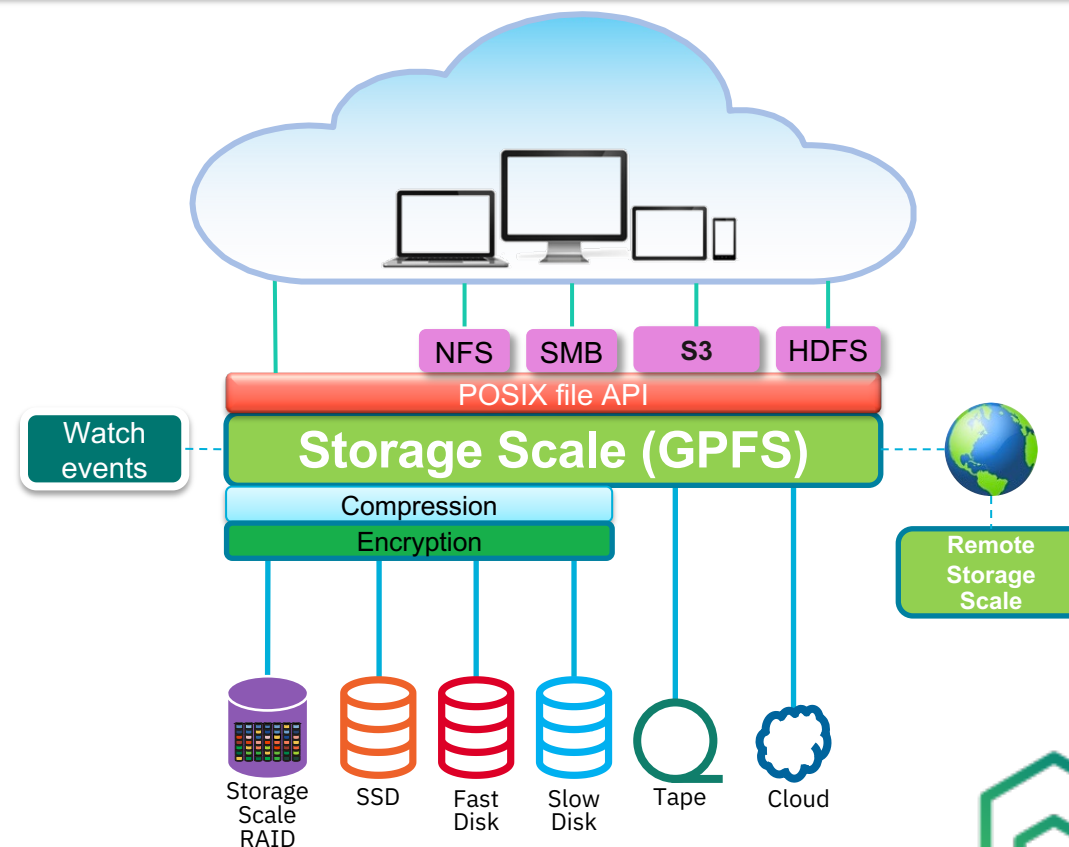- Stores its file data on any block storage device

Under the file system

- Use any block storage usable by the OS (internal drives or SAN storage)
- Built-in encryption and compression
- Information Lifecycle Management features enable tiering
- Tape and cloud-based storage usable as tiers

Above the file system – since not everything will run Scale directly...

- Export the data through multiple protocols (SMB,NFS, Object, HDFS)
- Container Storage Interface (CSI) extends storage access to containers
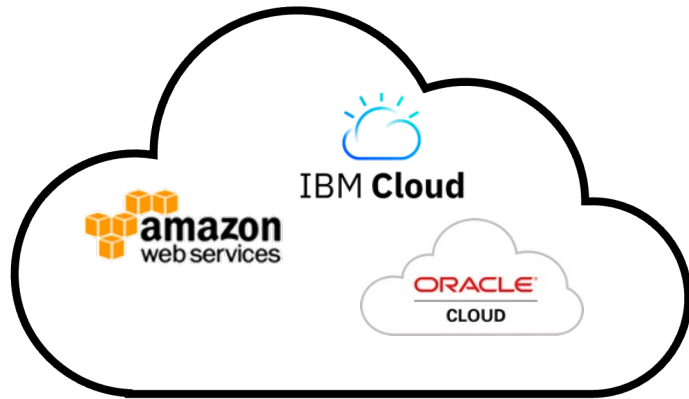
Beside the file system

- Replication capabilities for robust Disaster-Recovery capabilities
- Watch events in the file system with Watch Folders and File Audit Logging
- Peer with remote Storage Scale file systems for efficient remote access

NFS   SMB   S3   HDFS

POSIX file API

Watch events

Storage Scale (GPFS)

Compression

Encryption

Remote Storage Scale

Storage Scale RAID   SSD   Fast Disk   Slow Disk   Tape   Cloud

In a single name space, vastly simplify administration and reduce costs by eliminating storage islands.
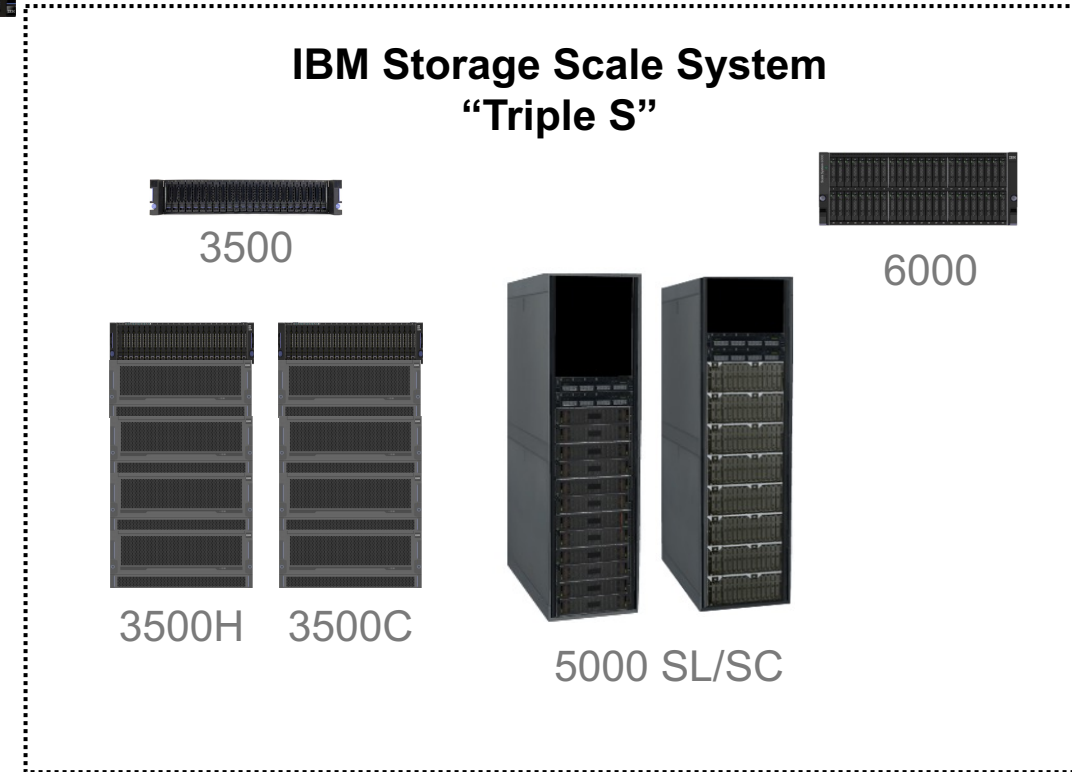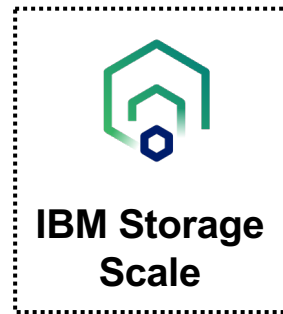
IBM Storage Scale – Deployment Options

Cloud

"Traditional"

Hardware

X86
Bare Metal
VM

zLinux

IBM Power
AIX

IBM Storage
Scale

**IBM Storage Scale System
"Triple S"**

3500

6000

3500H   3500C

5000 SL/SC

Introducing the IBM Storage Scale GUI – Architecture and Requirements

Overview
- Runs on a WebSphere Liberty application server
- These application servers provide infrastructure and API
- Communicates with multiple Scale cluster components
- Acts as collector node for performance data

Features
- No additional license required
- Can be installed on any node (including client nodes)
- Relatively low resource consumption (512 MiB limit with 2GiB for all child processes)
- Connects via HTTP among local node with cluster nodes

Scale Requirements
- Supported on Scale software running at 5.0.3 or higher
- All IBM Spectrum Scale packages to be installed on the GUI node must be of the same release
- The minimum release level of the cluster must be on the latest release level to display the latest GUI features

Deployment Options
- Storage Scale Toolkit
- Manual
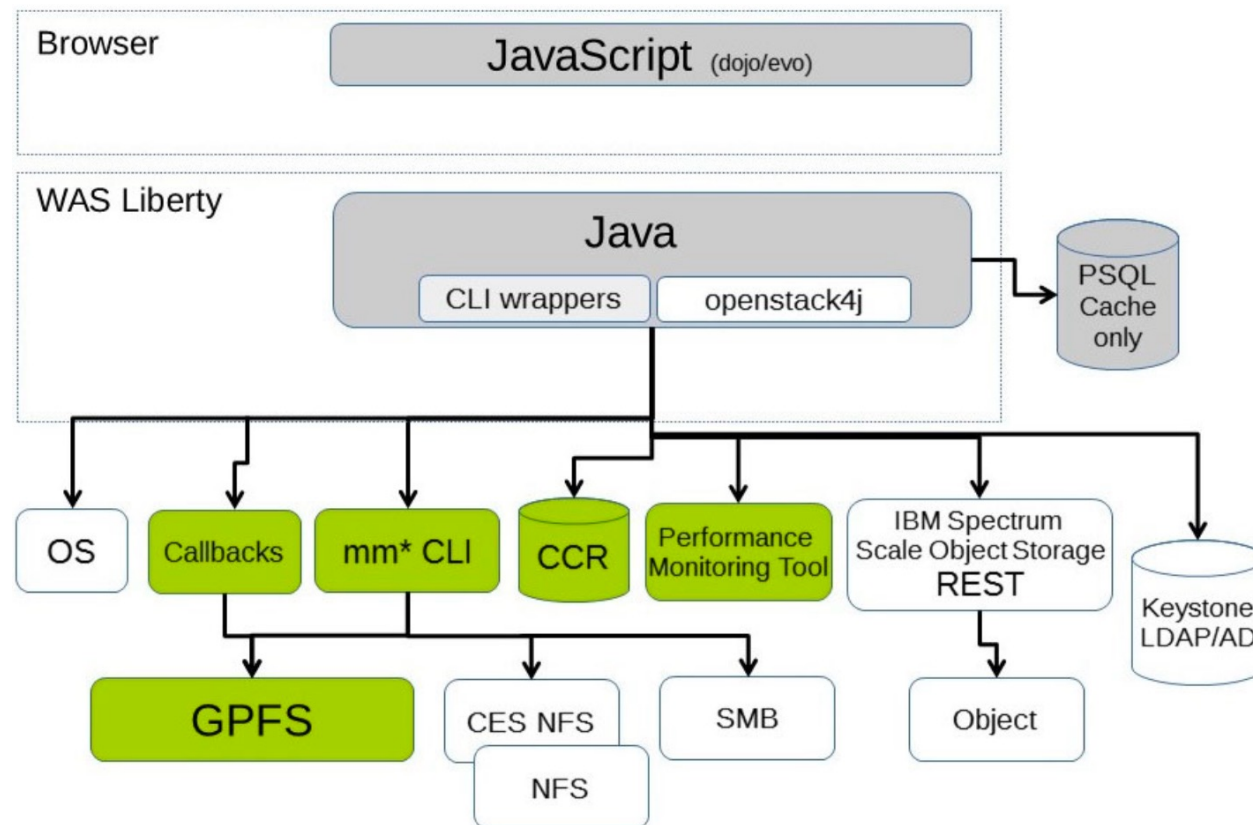
Introducing the IBM Storage Scale GUI – Installation Prerequisites

Traditional Scale Deployment:
- The IBM Storage Scale GUI package is part of the Scale installation package, but must be extracted prior to GUI installation

- The performance tool packages must also be extracted prior to installation.

- These enable the performance monitoring tool that is integrated into the GUI:
  - <u>Performance Tool Collector package</u> - Placed only on the collector nodes. By default, every GUI node is also used as the collector

  - <u>Performance Tool Sensor package</u> - Applicable for the sensor nodes, if not already installed. Recommended for installation across all cluster nodes

ESS/SS Deployment:
- GUI packages are installed *however…*

- The services must be **started** via *sysctl* command

- An initial user must be created before GUI use can continue
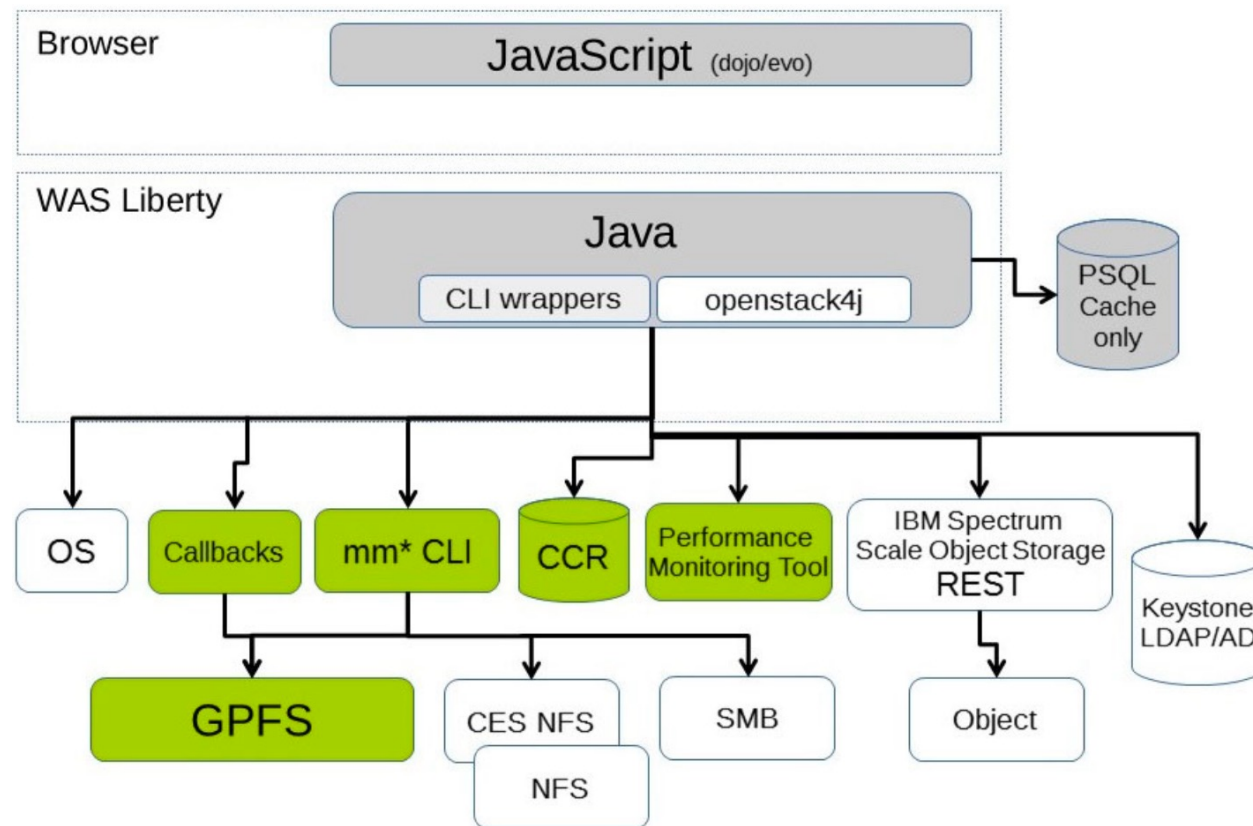
Introducing the IBM Storage Scale GUI – Available Functions

GUI Page	Function
Home	Provides an overall summary of the IBM Storage Scale system configuration, status of its components, and services that are hosted on it.
Monitoring > Dashboards	Provides a dashboard to display the predefined performance charts and the customized charts that are marked as favorite charts in the **Monitoring > Statistics** page.
Monitoring > Events	Monitor and troubleshoot the issues that are reported in the system.
Monitoring > Tips	Monitor events of type "tips". The tip events give recommendations to the user to avoid certain issues that might occur in the future.
Monitoring > Statistics	View performance and capacity data in customizable charts.
Monitoring > Thresholds	Configure various thresholds based on the performance monitoring metrics. You can also monitor the threshold rules and the events that are associated with each rule.
Monitoring > Command Audit Log	Logs the commands that are issued and tasks that are completed by the users and administrators. These logs can also be used to troubleshoot issues that are reported in the system.
Monitoring > Event Notifications	Configure event notifications to notify administrators when events occur in the system.
Nodes	Monitor the performance and health status of the nodes that are configured in the cluster. You can also create and manage user-defined node classes from the Nodes page.
Cluster > Network	Monitor the performance and health status of various types of networks and network adapters.
Cluster > Remote Connections	Request access to the GUI node of the remote cluster to establish communication between the local and remote clusters. You can also use the Remote Connections page to grant access to the remote clusters when an access request is received.

REFERENCE

Introducing the IBM Storage Scale GUI – Available Functions (continued)

| GUI Page	Function
Files > File Systems	Create, view, and manage file systems.
Files > Filesets	Create, view, and manage filesets.
Files > Snapshots	Create snapshots or snapshot rules to automate snapshot creation and retention.
Files > User Capacity	Monitor the capacity details of users and user groups.
Files > Quotas	Create and manage default, user, group, and fileset quotas at the file system level.
Files > Information Lifecycle	Create, manage, and delete policies that manage automated tiered data storage.
Files > Transparent Cloud Tiering	Provides both a summarized and attribute-wise details of the Transparent Cloud Tiering service, which is integrated with the IBM Storage Scale system. The Transparent Cloud Tiering page is displayed if the feature is enabled on the cluster.
Files > Active File Management	Helps to monitor the performance, health status, and configuration aspects of AFM, AFM DR, and gateway nodes. You can see the Active File Management page in the GUI that is part of the AFM cache cluster with at least one AFM-enabled fileset.
Files > File System ACL	Define ACL templates and apply ACLs on files and directories.
Files > Clustered Watch Folder	Provides the list of the clustered watch folders that are configured in the system. You can also view the details of each watch folder and the events that are raised against each record from the detailed view.
Files > Fileset tiering	Helps to run AFM policy to tier MU filesets for a specific file system.
Storage > Pools	Helps to monitor the performance, health status, and configuration aspects of all available pools in the IBM Storage Scale cluster.

REFERENCE

Introducing the IBM Storage Scale GUI – Available Functions (continued)

GUI Page	Function
Storage > NSDs	Helps to monitor the performance, health status, and configuration aspects of all the network shared disks (NSD) that are available in the IBM Storage Scale cluster.
Protocols > NFS Exports	Create and manage NFS exports. Protocols pages are displayed in the GUI only when the protocol feature is enabled on the cluster.
Protocols > SMB Shares	Create and manage SMB shares. Protocols pages are displayed in the GUI only when the protocol feature is enabled on the cluster.
Protocols > Data access service	Configure, edit and delete Data Access Service (DAS) accounts, services and exports.
Object > Accounts	Create and manage accounts and containers in the object storage. Object pages are displayed in the GUI only when the object feature is enabled on the cluster.
Object > Users	Create object users.
Object > Roles	Define roles for the object users.
Services	Monitor and manage various services that are hosted on the system.
Support > Diagnostic Data	Download diagnostic data to troubleshoot the issues that are reported in the system.
Support > Call Home	Configure call home feature that automatically notifies the IBM® Support personnel about the issues that are reported in the system. You can also manually upload diagnostic data files and associate them with a PMR through the GUI.

REFERENCE

Introducing the IBM Storage Scale GUI – Welcome to the GUI!

So…let's see what can we DO with the Storage Scale GUI!
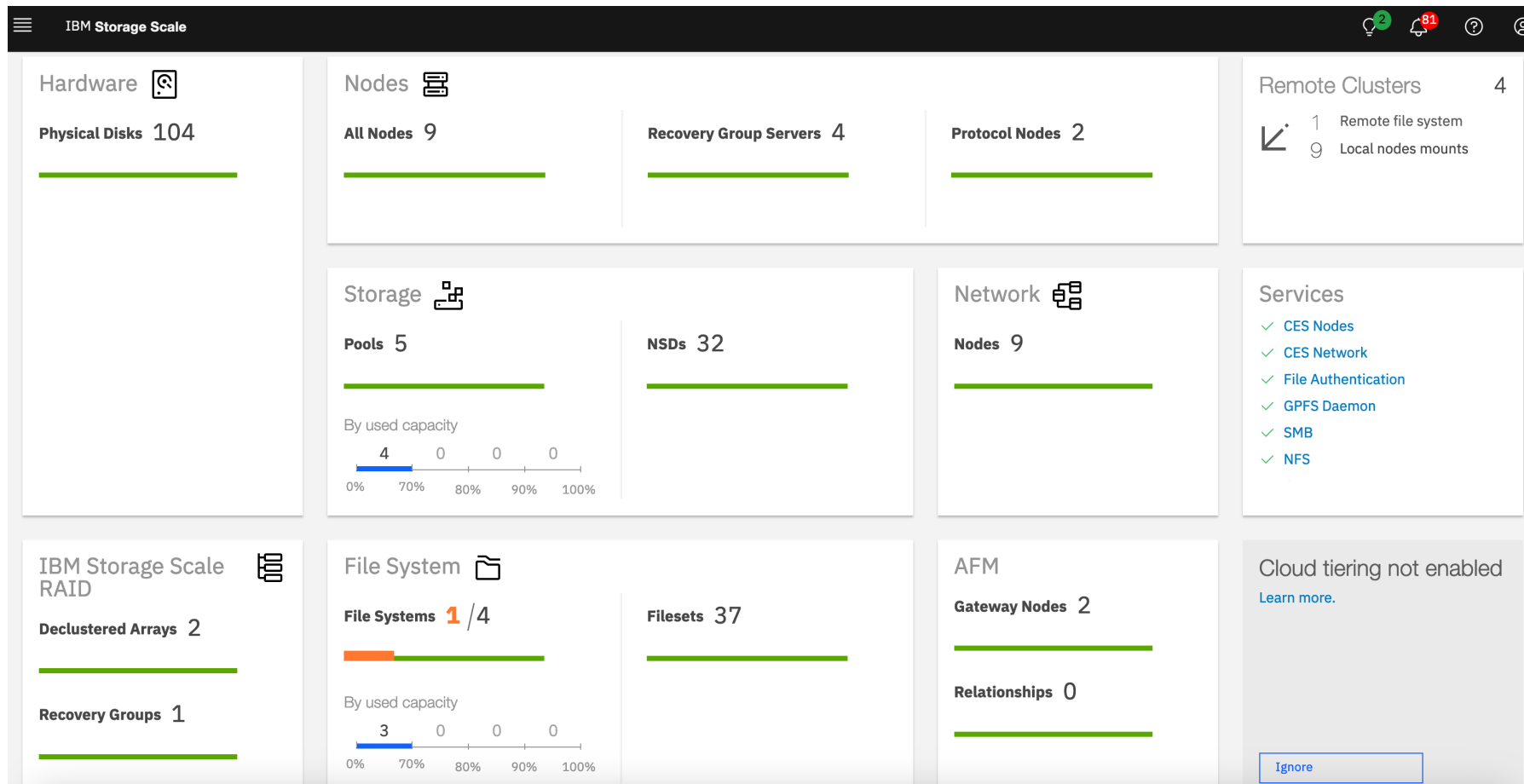
Alright Stop.

Demo Time!

Thank you!

Accelerate with ATG Survey

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

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Or

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