

IBM Storage Scale Agentic AI Operations w/ Native REST API Orchestration

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The Problem: The “Command Line Tax”

Admin Constraints

Administrative teams spend up to 40% of their time verifying syntax for mm-commands or endpoint parameters. The complexity of high-performance clusters creates a "lookup bottleneck."

User Friction

End-users face multiday delays for simple operational requests. Waiting for a ticket just to check fileset quota or usage prevents real-time data productivity.

The Solution: The Agentic Bridge

We are evolving from **manual terminal entry** to **intelligent conversation**. By connecting LLM-driven agents to the **Storage Scale native REST API**, we create an orchestration layer that understands intent.



Zero-Syntax operational control



Governed API interaction



Multi-endpoint workflow chaining

Intent over Syntax and Data Democracy

Natural Language

Instead of "mmcrfileset fs1 data --inode-limit 1M", simply ask: "Create a 1TB fileset on the primary filesystem."

Intelligent Context

The agent understands cluster health and available pools before proposing the specific API call configuration.

Syntax Abstracted

Admins no longer need to be walking dictionaries of IBM Scale flags. The agent handles the V3 REST schema perfectly.

Empowering

Authorized users can now self-serve basic storage information. No more waiting for admin responses to verify current usage against hard limits.

CLI Complexity to API Simplicity including Trust & Security

Action	Traditional CLI Command	V3 REST API Tool Call
List Filesystems	mmlsfs all	GET /filesystems
Create Fileset	mmcrfileset	POST /filesets
Check Quota	mmlsquota -j	GET /filesets/{name}/quotas
...	...	...

Integrated RBAC

Integrates with IBM Storage Scale RBAC, ensuring agents never exceed human-defined permissions. The agent provides a transparent log of its reasoning before execution. You see why it chose specific parameters.

Role-Based Access Control (RBAC) - Key Points

Overview

- Security feature enabling granular user permissions at the resource level (file systems, filesets, etc.)
- Enabled with IBM Storage Scale native REST API deployment
- Enforced consistently across all access methods (scalectl CLI, REST API, curl, etc.)

Core Components

- **Domains:** Logical groupings of resources, users/roles, and actions
- **Resources:** Storage objects (file systems, filesets, quotas, NSDs) combined into logical **resource groups** for targeted access
- **Policies/Roles:** Rules mapping roles to specific actions (e.g., CREATE, DELETE) and effects (GRANT/DENY) on resources

Domain Filtering

- Users can only access resources in their authorized domain
- Resources inherit the domain of their creator
- List operations show only domain-specific resources
- Allows complete domain permission management without affecting other domains

Creating 2 file systems using different NSDs

**Orchestrated Agentic AI Chatbot**
by Khanh Ngo and Anthony Hsu

API Key

.....

Required for accessing the chatbot API

✓ API Key Verified

✓ API key verified. You can now chat!

Active Agents

Select which agents the orchestrator can use

☒ CAS Search Agent (Document Search)

☒ DB2 Agent (Database Queries)

☒ Chart Agent (Visualizations)

☒ Scale Agent (Storage Scale Cluster)

► Content-aware Storage

► DB2 Credentials

▼ IBM Storage Scale Credentials

Scale Host

9.114.204.70

Scale Port

46443

Username

root

Password

.....

Note: Scale agent will be able to:

- List filesystems and get details
- Monitor node status and health
- Manage filesets and snapshots
- Query quota information
- Check cluster health

Welcome! 🤖

I'm a **Multi-Agent AI Platform** powered by WatsonX with 10 specialized agents working together.
A master **Orchestrator Agent** intelligently delegates tasks to expert agents for semantic search, database operations, data visualization, and IBM Storage Scale management.

How it works:

- You ask a question or request a complex task
- **Orchestrator analyzes** your request and determines which specialized agents to engage
- **Expert agents execute** their tasks using domain-specific tools (CAS search, DB2 queries, Scale operations, chart generation)
- **Orchestrator coordinates** multi-step workflows, chaining agents together as needed
- You receive comprehensive, intelligent responses with context-aware reasoning

Available Agents: CAS Search • DB2 Database • Chart Creation • Scale Filesystem • Scale NSD • Scale Fileset • Scale AFM • Scale XCP • Scale Operations • Scale API Health

Configure your credentials in the side panel to get started.

Type your message... (Press Enter to send, Shift+Enter for new line)

Send

Creating filesets

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Configuring AFM for S3 to IBM Cloud

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Creating ILM Policy for LIST rule

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Highly parallelized file copies and synchronizations with mmxcp

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Impact on Operational Velocity

40%

Time Saved per Operation

Results that Matter

By eliminating syntax lookups and manual ticketing bottlenecks, organizations experience a massive shift in storage agility. Storage becomes a responsive concierge rather than a static silo

Why Agentic Scale?

- ✓ Unified Control: One chatbot interface for PBs of data management
- </> Native V3 Integration: High-performance API calls without the “mm-command” overhead
- 👥 Admin Liberation: Shift your talent from CLI maintenance to high-value operations
- 🚀 Future Ready: The infrastructure layer built to support your enterprise AI strategy