

The Total Economic Impact™ Of IBM Spectrum Scale

To better understand the benefits, costs, and risks associated with an investment in IBM Spectrum Scale, Forrester interviewed five decision-makers with experience using Spectrum Scale. For the purposes of this study, Forrester aggregated the interviewees' experiences and combined the results into a single composite organization.

These interviewees said that prior to using Spectrum Scale, their organizations struggled with a need to improve the performance and reliability of their storage environments. However, prior attempts yielded limited success and left them with siloed, multivendor environments that created nebulous performance issues and bloated costs of ownership.

INVESTMENT DRIVERS

The interviewees said their organizations struggled with common challenges, including:

- **Siloed, multi-vendor environments.** As organizations grow and different groups have multiple requirements, they accumulate a variety of disparate storage technologies and solutions. One decision-maker said: "We tended to use other siloed file systems. ... There was a mixture of things. People tended to buy disk arrays and technologies from [other vendors], and we put mixtures of file systems on top."

The interviewee also said: "When you have multiple namespaces, people tend to do bad things because they move data between places. They'll copy things, and they'll make extra copies of data."

- **Need to improve environments.** The growing complexity of storage environments that results



Return on investment (ROI)
380%



Net present value (NPV)
\$1.39M

from multiple namespaces and file systems can lead to performance issues and other challenges as organizational needs and requirements continue to grow. One interviewee told Forrester: "There was a need for more and more resources more and more compute capacity, and — together with that — more and more storage capacity and storage performance. There were a lot of issues with performance with [our] previous data storage solution."

Another interviewee said: "Using [our] previous solution, the storage was the bottleneck. [The provider] couldn't even figure out if there was a performance bottleneck in their data pipeline or in the application itself."



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One interviewee said their organization sought a solution that could meet federal government requirements for improving research data storage infrastructure. The interviewee said: “My organization was picked as one of the national tier-one facilities to host one of these services. ... The scope was to have highly available, highly resilient, and highly reliable storage so research data wouldn’t be at risk or have any problem with being retained and accessed. It basically had to be relied upon to provide net operating incomes [NOIs] on research data service.”

“Using commodity hardware, we’re able to achieve greater than InfiniBand speed and manage the file system in less than a minute using the policy engine. We get compression, encryption in real time, incredibly useful statistics, and zero downtime. It’s hard to beat [and it’s] way cheaper than hardware-based solutions.”

Senior application engineer, financial services

KEY RESULTS

After investing in Spectrum Scale, the organizations utilized features such as the policy engine and active file management (AFM) to create a single unified view and take control of all data across their storage environments. Key results from the investment include:

Reduction of downtime and disruptions worth \$806,000. Spectrum Scale improves the reliability and performance of organizations’ storage environments, which helps them avoid costly downtime that can impact user productivity. Interviewees said:

- “[Spectrum Scale] significantly reduced downtimes because we had daily and weekly

issues with [our] previous solution. [Since deploying Spectrum Scale], I have never heard anyone complain that storage is a bottleneck.”

- “[Having] the ability to basically do a live migration when we expanded the storage was invaluable. We basically could move data from our old disk arrays into our new disk arrays without any downtime.”

Increased storage admin productivity worth

\$565,000. The global data fabric enabled by Spectrum Scale provides organizations with a single source of truth that simplifies the work of the storage admin team. Interviewees said:

- “We’re able to do a scan of our 1.3 million files in our file system in less than a minute. I’m able to build a report of every type of file whether it’s compressed or not compressed [and specify] who the owner is, and what the file names are, [and] and be able to do it in less than a minute. ... Our other file system is a lot bigger, but it takes a week to build a file index. [With Spectrum Scale,] I can do it in a minute.”
- “The policy engine is really helping with security-related tasks because it’s able to quickly select [relevant files]. We have multiple tens of millions of files, and that’s really not easy with any of the [other] file systems you can find on the market.”

Avoided cost of licensing and supporting siloed storage technology worth \$388,000.

Organizations can retire legacy storage solutions and reduce the cost of ownership for data centers. Interviewees said:

- “We were able to retire [a legacy] tool. ... [We] migrated all the data out of that system, and then we could decommission it. We were saving ourselves approximately \$80,000 per [year] worth of support. ... We consolidated a number of smaller independent file systems [and] removed a couple of network-attached storage (NAS) filers. [We saved] about \$100,000 per [year], so

we rolled those two functions into this portal and this file system.”

- “We’re licensing one technology now. ... We’re better than we were because we don’t have five technologies, all of which [were] arcane and weird. ... We’re not costing five or eight different buckets of money. We are costing one, and we can cost-control better for the organization. ... [The cost] was [\$59,000] per site for [our previous] technologies, and there were five of those sites.”

THE BOTTOM LINE

After a single year, the benefits of the Spectrum Scale solution will exceed the three year total costs.

Year 1 Benefits	\$547k
Three Year Total Costs	\$440k

In the following years, the benefits of the Spectrum Scale solution will continue to expand.

Three Year Total Benefits	\$2.2M
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“We’re putting power in the hands of the researcher to leverage millions of dollars’ worth of supercomputing storage [with] the click of a webpage. That is the special stuff.”

– CTO of research and advanced computing, research/academic

“[IBM Spectrum Scale is] trusted by a number of Fortune 500 companies and banks [because] it’s extremely reliable. If it’s trusted by banks and finance organizations, we were assured we could trust it with research data.”

— Senior system administrator, research/academic

DISCLOSURES

The reader should be aware of the following:

- The study is commissioned by IBM and delivered by Forrester Consulting. It is not meant to be a competitive analysis.
- Forrester makes no assumptions as to the potential ROI that other organizations will receive. Forrester strongly advises that readers use their own estimates within the framework provided in the report to determine the appropriateness of an investment in IBM Spectrum Scale.
- IBM reviewed and provided feedback to Forrester. Forrester maintains editorial control over the study and its findings and does not accept changes to the study that contradict Forrester’s findings or obscure the meaning.
- IBM provided the customer names for the interview(s) but did not participate in the interviews.

ABOUT TEI

Total Economic Impact™ (TEI) is a methodology developed by Forrester Research that enhances a company’s technology decision-making processes and assists vendors in communicating the value proposition of their products and services to clients. The TEI methodology helps companies demonstrate, justify, and realize the tangible value of IT initiatives to both senior management and other key business stakeholders. The TEI methodology consists of four components to evaluate investment value: benefits, costs, risks, and flexibility.

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