



# Beyond Storage 2021

Data & AI에 특화된 스토리지 솔루션

2021. May.

박대성 본부장

Software Defined Storage Sales & Solutions



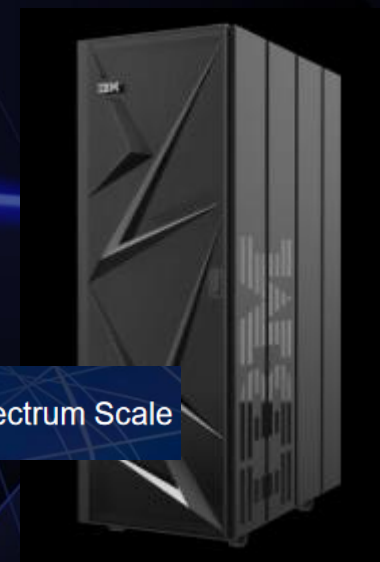
IBM Spectrum Scale



# AI & 하이브리드 클라우드 시대의 스토리지



IBM Spectrum Scale



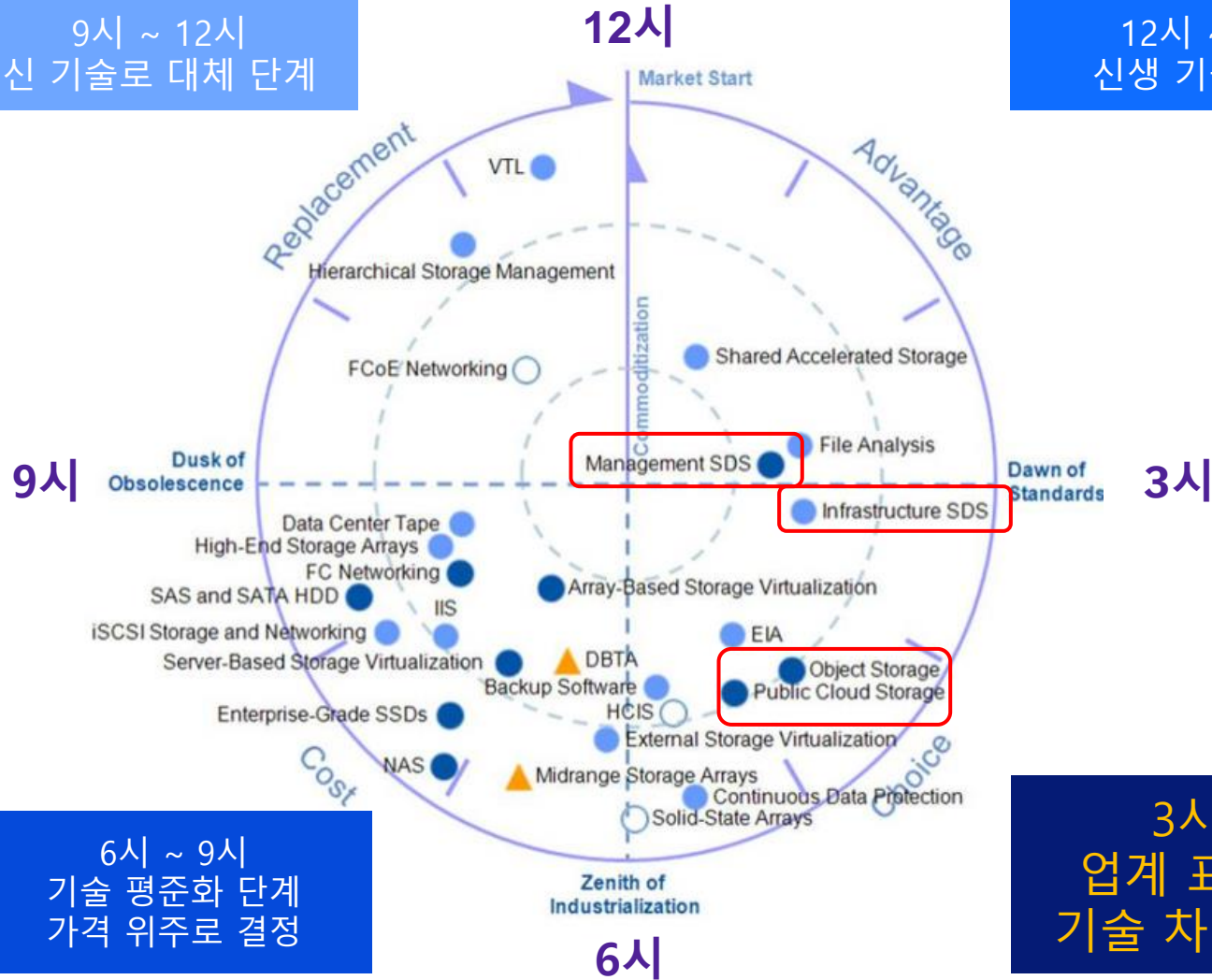
**The simplest way**

to deploy IBM Spectrum Scale for AI and high-performance workloads

## IT Market Clock - Storage

9시 ~ 12시  
신 기술로 대체 단계

12시 ~ 3시  
신생 기술 단계



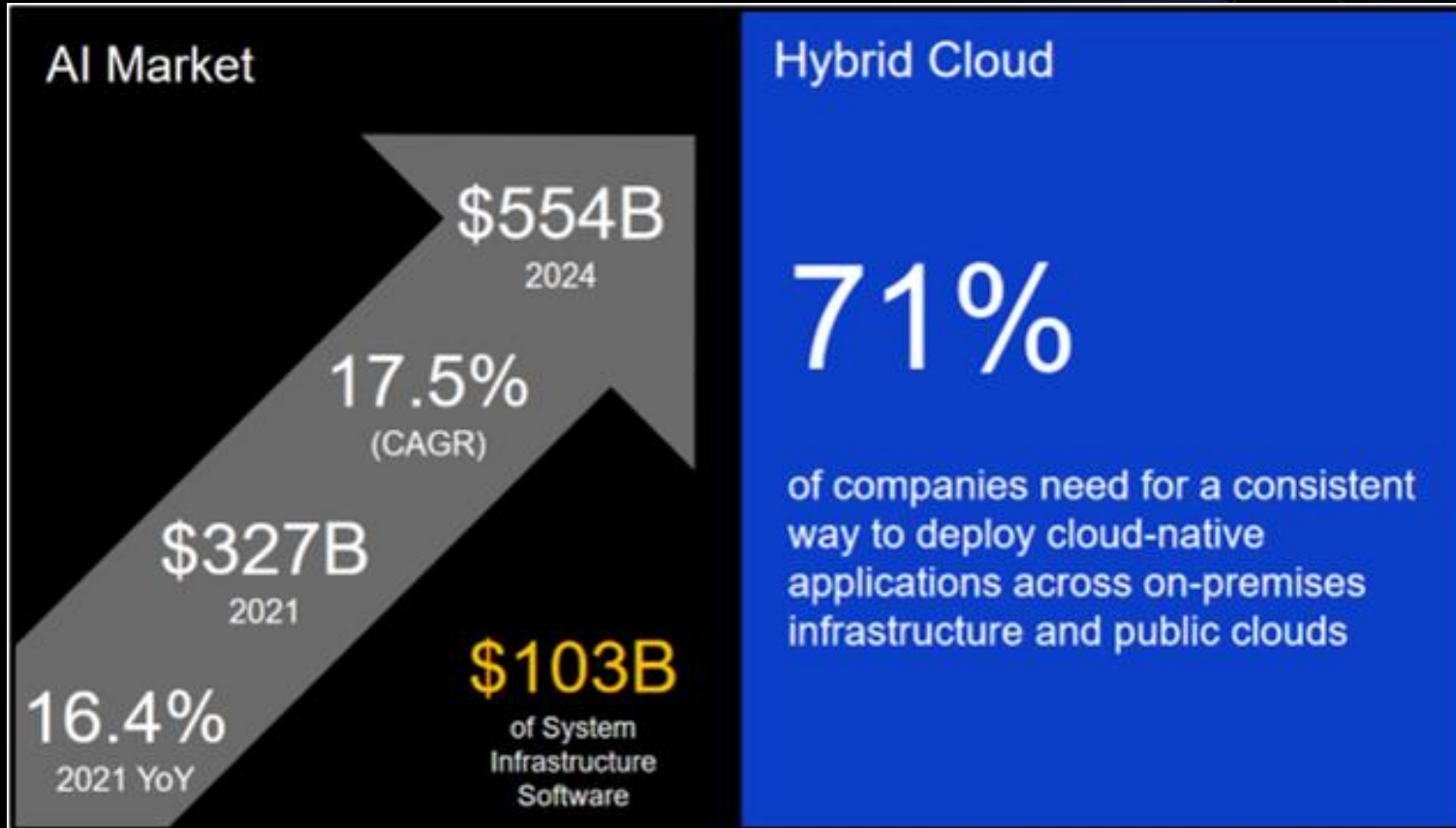
6시 ~ 9시  
기술 평준화 단계  
가격 위주로 결정

3시 ~ 6시  
업계 표준화 단계  
기술 차별화로 결정

### • 2021 현재

- AI & 빅 데이터 급성장 (Driven by AI, ML/DL, Data Lake, AI hpc)
- 하이브리드 클라우드 지원
- 오브젝트 스토리지 본격화 대고객 서비스(클라우드, 멀티 Region IDC) vs. 백업/아카이브용
- Internal Storage 시장 성장 (driven by HCI, SDS)

# 시장 성장의 원동력 : AI & 하이브리드 클라우드



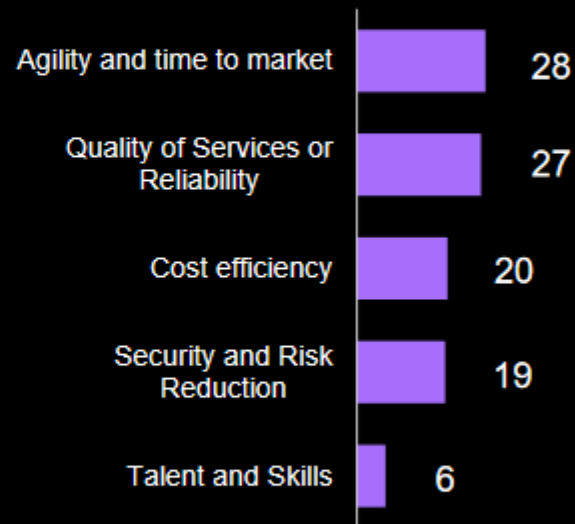
# AI & 하이브리드 클라우드를 위한 경쟁 : Agile & Modernize

The race is on to become agile and modernize for AI and the hybrid cloud

“ Many organizations are racing to become agile. New research suggests that agile transformation can have a powerful impact on the bottom line – in addition to other widely recognized benefits

McKinsey&Company

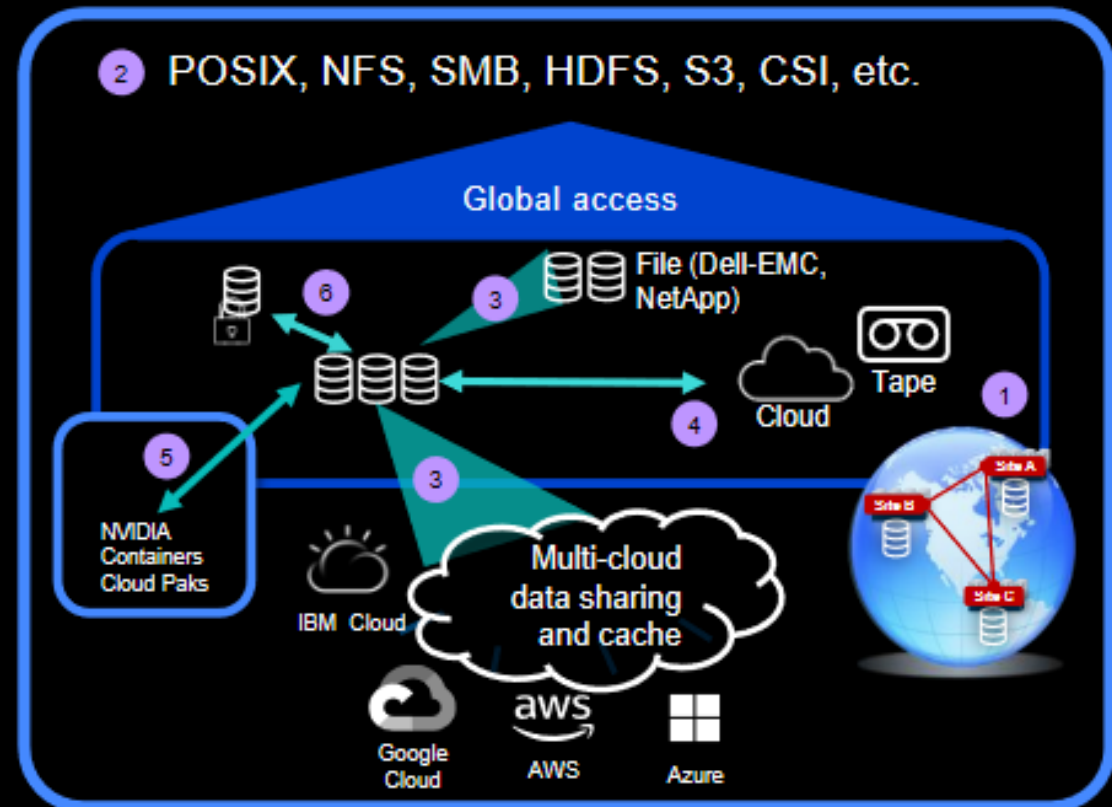
## CIO reasons for pursuing Infrastructure Modernization



# AI & 하이브리드 클라우드를 위한 스토리지 플랫폼

An architecture that is built for the next generation of applications

- 1 Active File Management (HA/DR/global access)
- 2 Simultaneous multi-protocol access
- 3 High performance storage caching
- 4 Archive to tape or cloud
- 5 Optimized for AI use cases
- 6 Data security (immutability and encryption)



## Gartner

Leader File/Object MQ  
2020-2016

#1 Ranked for 3 use cases  
2020-2018

#1 Ranked HPC and Analytics  
2020 - 2019

## IDC

Leader Object-Based Storage  
MarketScape  
2019, 2018, 2016

Leader Scale-Out File-Based  
Storage MarketScape  
2019

## coldago

Leader Map for File Storage  
2020, 2019

Leader Map for Object Storage  
2019

Readers Choice Awards  
HPC Wire  
2020

**Best Distributed File  
and Object Storage**  
2021

Global Product Line Strategy  
Leadership  
2019

**Object Storage  
Vendor of the Year**  
2020

## • IBM 시장 리더십

- Spectrum Scale/ ESS & IBM Object Storage (ICOS)
- 포춘 100대 기업 중 87%

Gartner: Critical Capabilities for Scale-out File Storage,  
October 2020

#1 Ranked Storage for Analytics and HPC Use Cases

A comprehensive AI information architecture for  
NVIDIA GPU exploitation and DGX Support

**AWS AI reference architecture**

Create a hybrid cloud with AWS for AI applications



Faster, more agile data storage and AI support for autonomous driving solutions

Continental Automotive AG

Continental has pushed the boundaries of automotive innovation for

150 years

Continental improved AI training time

70%

using IBM Spectrum Scale and NVIDIA DGX system

Continental can run at least

14x

more deep learning experiments per month at the same time

“As a result of our new infrastructure, we can now run 20, 40, 80 GPUs simultaneously to really speed up our training.”

Balazs Lorand, PhD  
Head of AI Competence Centre,  
at Continental.

“The collaboration between Continental, IBM Storage and NVIDIA is bringing a promise to life in terms of safety.”



IBM Spectrum Scale and ESS



## The University of Queensland

Faster time to insights with high-performance data storage for AI research

A world-class research institution, The University of Queensland (UQ) sought to simplify data capture, storage, analysis, and management for it

### Transformation

UQ built a high-performance data storage solution using IBM Spectrum Scale, recently adopted as a solution to support its fastest HPC

“With the ESS solution, we get all the benefits of a high-speed parallel file system inside a supercomputer with the data management transparency that AFM and other IBM Spectrum Scale features provide. That integration fits into the workflow of our users, and in scientific outputs, workflow is king. That’s why we leverage software-defined storage.”

— Jake Carroll, Chief Technology Officer, Research Computing Centre, The University of Queensland

### Results

2 hours to achieve ROI on software-defined storage

that saves researchers hundreds of hours of processing time per week

~74% faster runtimes for medical imaging analysis

to help speed time to discovery for critical research

Exponentially increasing data volumes

supported by a highly scalable, cost-effective storage fabric



# IBM의 AI 인포메이션 아키텍처

Use Cases	AI / ML	Edge Collaboration	Kubernetes Applications	HPC	Video/Digital Workloads	Cloud Services	ADAS or IoT Workloads	Big Data Analytics	Research	Backup and Archive
Solutions		IBM Cloud Paks 	IBM Archive 							
Data Discover and Orchestration	IBM Spectrum Discover									
Storage Capabilities	Security		Optimization			Protection		Access		
Storage Platform	AFM   Multi-protocol   Caching   Archive   AI-optimized   Security IBM Spectrum Scale and ESS									


# Beyond Storage 2021

이전 : +170 PB 국내 구축 경험

지금 : 최신 기술, 최고 성능의 ESS3200

이후 : One More Thing



The image features the IBM logo centered on a dark blue background. The background is composed of various geometric shapes, including triangles and polygons, some of which are highlighted with bright blue lines, creating a dynamic, crystalline effect. The IBM logo itself is rendered in white, using its characteristic eight horizontal stripes. The stripes are of varying lengths, with the top and bottom stripes being the longest and the middle stripes being shorter, creating a sense of depth and movement. The overall composition is balanced and modern, with a strong emphasis on geometric forms and a cool color palette.

IBM