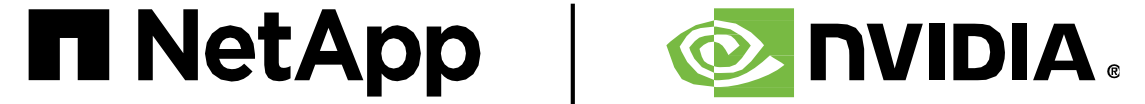


強強聯手！ NetApp + NVIDIA AI智能的極致表現

NetApp 攜手 NVIDIA
推出預先設定的AI 基礎架構解決方案

許宏俊/Lawrence Hsu
資深技術顧問
2021/09



Data is critical to AI, but it presents manageability and infrastructure challenges

51%

Data silos

Eliminate silos with
multiworkload quality of
service (QoS)

37%

Tech complexity

Simplify deployment and
management of the edge-to-
core-to-cloud pipeline

35%

Data access

Access data at the edge, the
core, and the cloud

35%

Data preparation

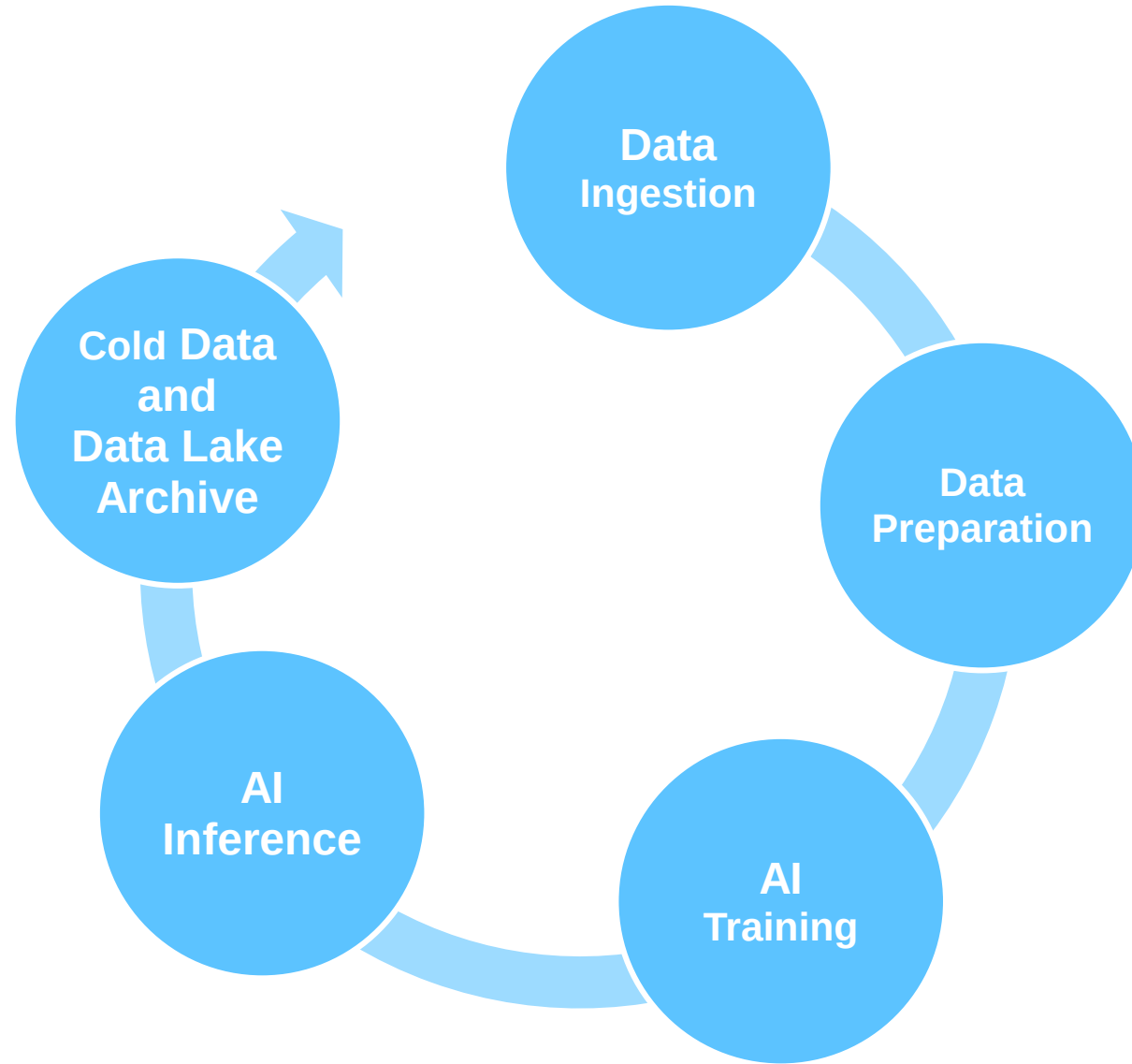
Get the performance and
simplicity that you need to
power your AI data
preparation, training, and
inference

“Artificial Intelligence (AI) has **moved well beyond prototyping** and into the phase of execution and implementation.”

- IDC Customer Insights & Analysis

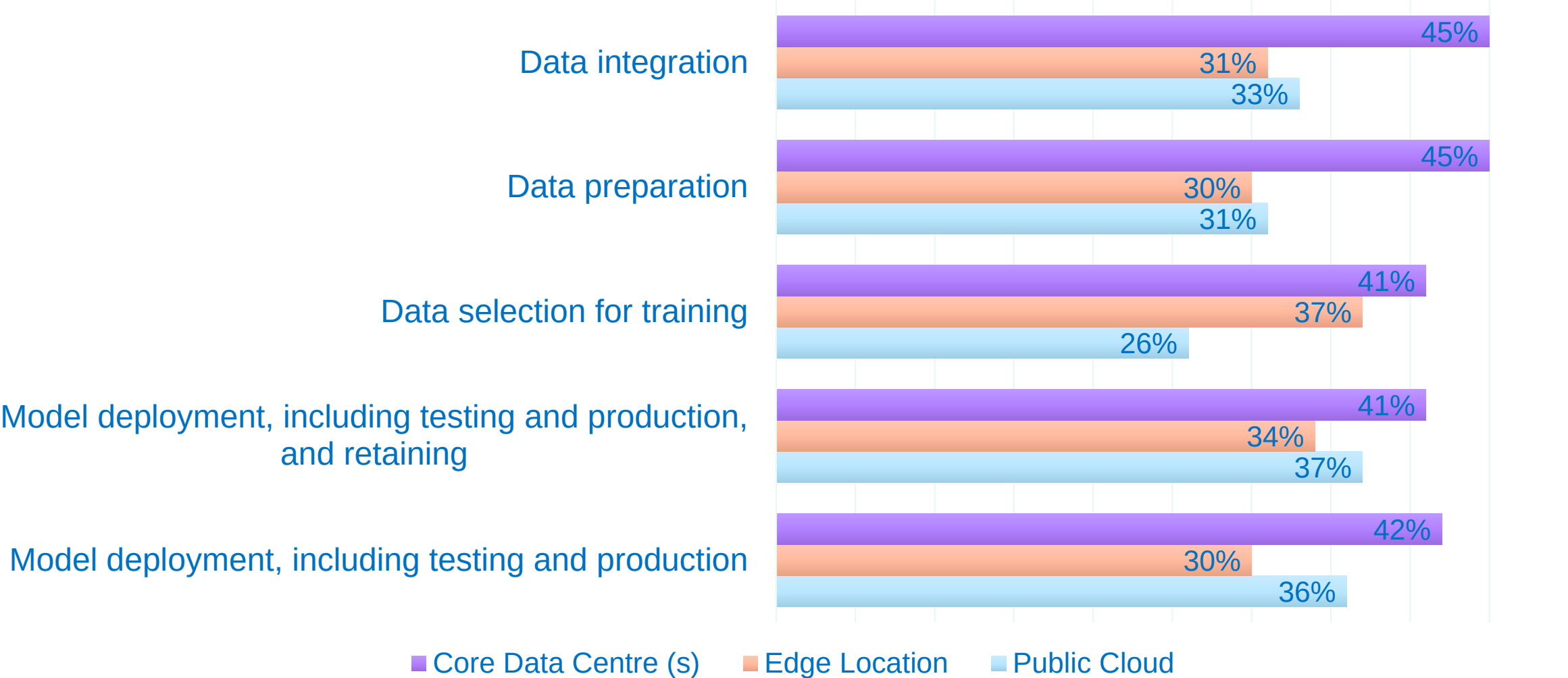
Source: IDG Research

The AI Development Life Cycle – the AI Pipeline



Where are you doing each stage of your AI pipeline

Cloud, On Prem or Edge



如果...

- 您可以提高研究人員的生產力？
- 您可以將AI 基礎架構部署相關風險降至最低？
- 您可以輕鬆部署標準化的AI 解決方案，並享有便捷的支援服務？
- 企業領導者可以更快看到投資報酬 (ROI)？



Matthew Hull, Vice President, Global AI Data Center Solution Sales at NVIDIA -

“Simplifying and accelerating the adoption of AI remains a fundamental challenge for many enterprises.

NVIDIA and NetApp are helping organizations achieve their AI goals more quickly with DGX systems. Our latest joint offerings provide multiple paths to success, simplifying the deployment of proven AI infrastructure.”

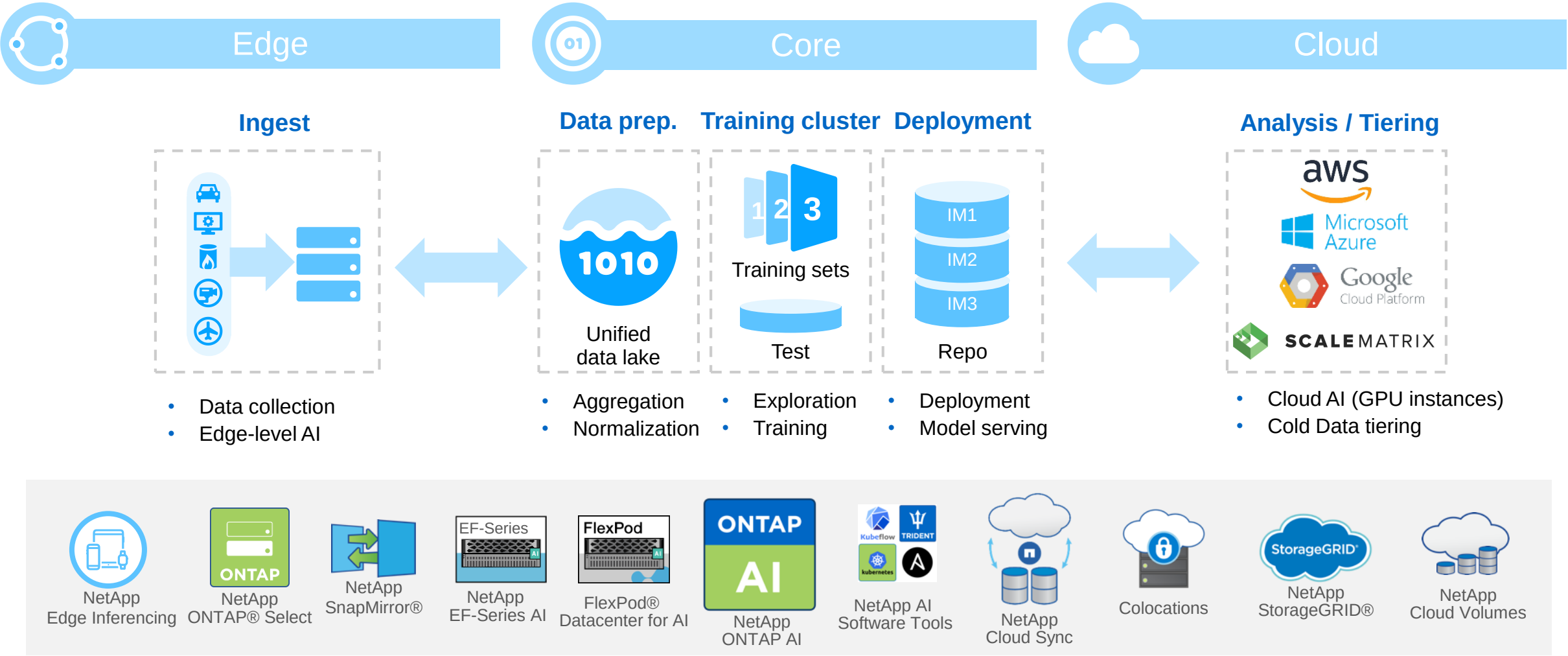


“If data is the fuel of AI, NetApp is the fuel of NVIDIA” **Jensen Huang - CEO NVIDIA**

*Quote taken from recent call between Jensen & George Kurian – NetApp CEO

AI requires a portfolio – The NetApp Data Fabric

*\$10B worldwide AI storage market by 2023



*IDC research, 2021

NetApp ONTAP AI 整合式解決方案

NetApp 和 NVIDIA 提供的規範式產品可簡化AI 工作負載的相關採購、設定、安裝和支援工作



規模

四種組態：入、門小、中、大型



容量

每項產品都有兩個容量選項，
並可隨需擴充



支援

一通電話即可取得支援

預先定義的組態，帶來簡易的操作體驗，多種組態更可滿足您的業務需求

Portfolio of AI infrastructure bundles

Meet today’s needs and scale in-place to meet tomorrow’s

s needs and scale in-place to meet tomorrow's



	Starter	Small	Medium	Large
GPU Compute	1x DGX A100	2x DGX A100	4x DGX A100	8x DGX A100
File Storage	1x NetApp A400	1x NetApp A400	1x NetApp A700	1x NetApp A800
Networking	1x SN3700, 1x AS4610	2x Mellanox SN3700, 2x Mellanox QM8700, 1x Mellanox AS4610		
Infrastructure	Mgt Svrs, 1x Rack, PDUs	Management servers, racks, PDUs		
Integration	Performed by SI			
Installation	Performed by SI			
Coordinated Support	Delivered by NVIDIA enterprise support			

All bundles are available through single SKUs at Arrow Electronics

效能驗證

Figure 11) MLPerf v0.7 average images per second.

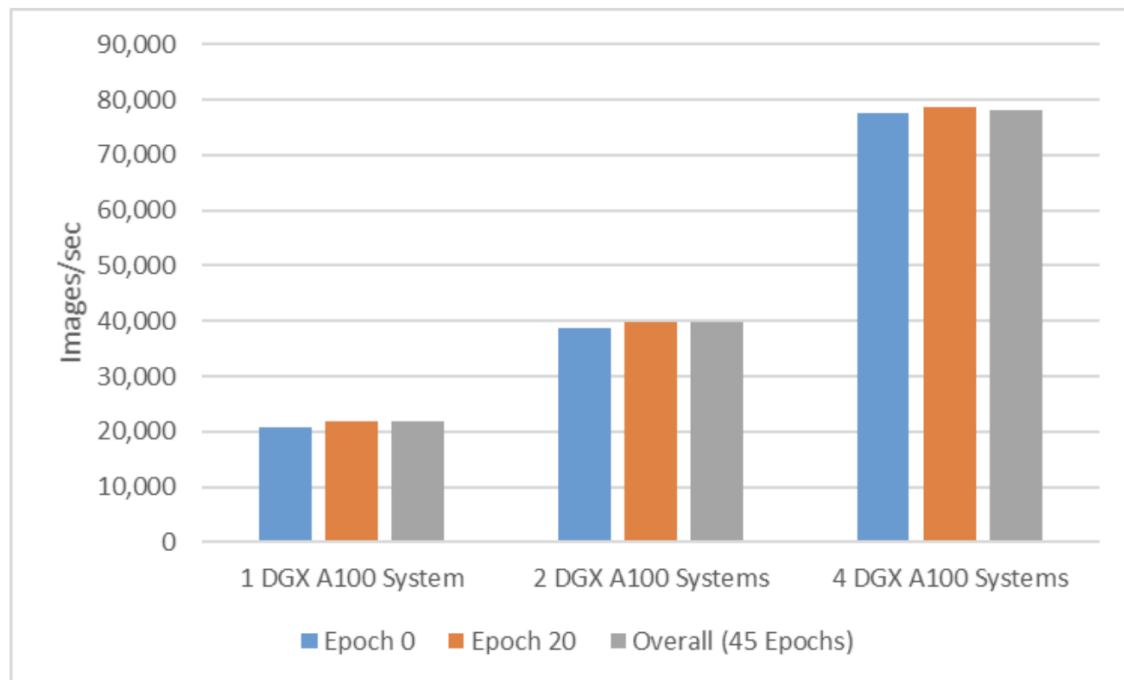
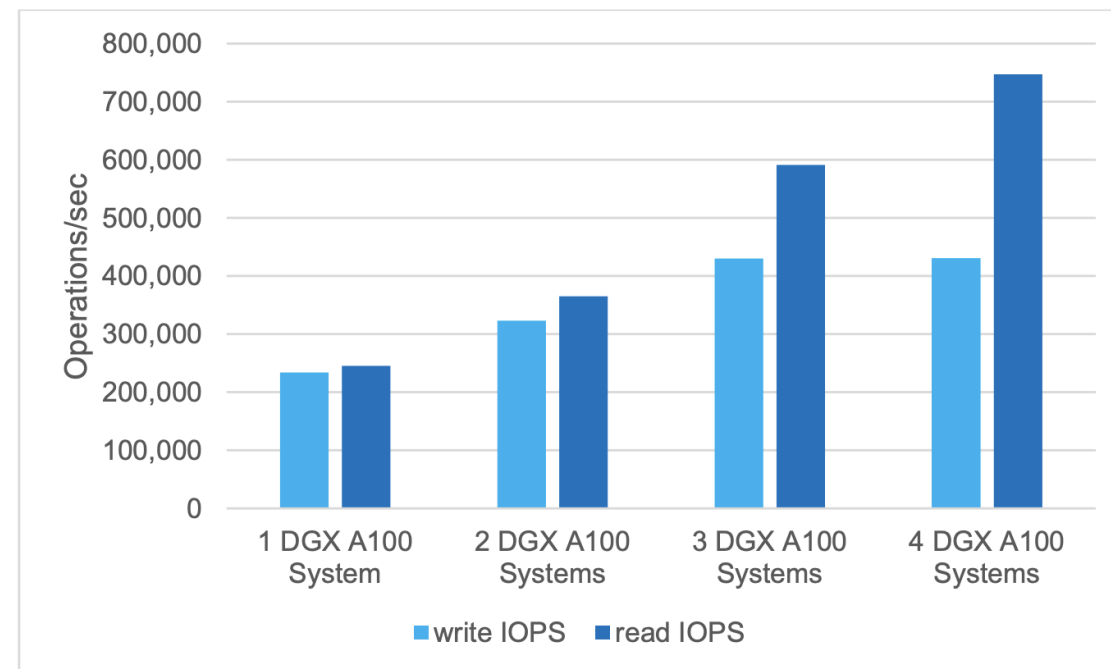


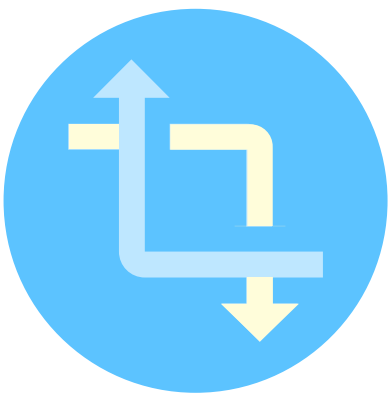
Figure 10) FIO IOPS test results (operations/sec).



NetApp AFF 系統

協助資料中心順利轉型到 Flash 架構

利用連接雲端的 Flash 設備進行現代化



全面簡化
混合雲環境作業



加速所有應用程式



確保資料隨時可用、
受到保護且安全無虞

客戶開心就是我們最大的成就

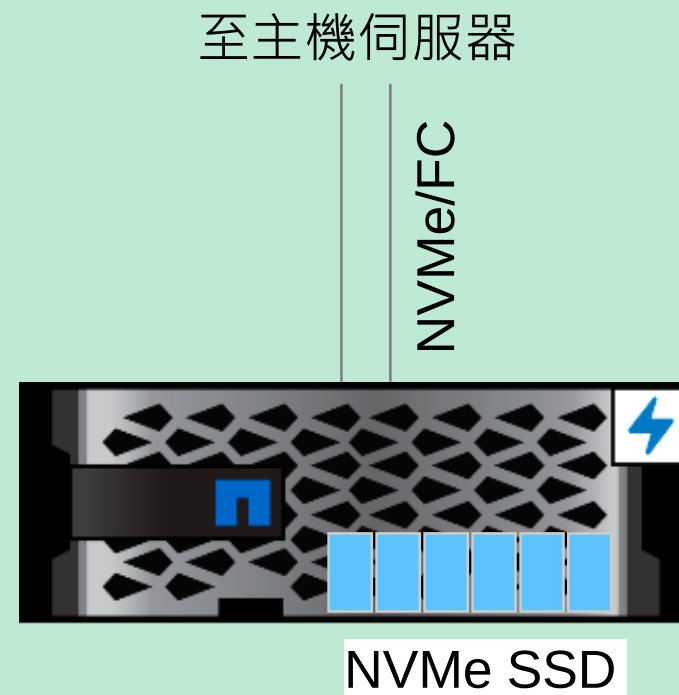


- NVME 架構大幅縮短 I/O 處理延遲時間
- NVME 架構大幅提升 IOPS

端點對端點 NVMe 儲存設備

適合要求最嚴苛的工作負載

- 加速企業應用程式，延遲極低 (100μs)
 - 傳統企業應用程式：Oracle、SAP、SQL Server
 - 新一代應用程式：人工智慧、深度學習、資料分析
- 可將多種工作負載整合於高密度儲存設備中，大幅降低資料中心成本
- 整合 NVMe 技術、高頻寬網路連線和雲端，輕鬆因應未來需求



AFF A 系列：功能強大且值得信賴的智慧型端點對端點 NVMe 系統



AFF A800

適合需要高效能及超低延遲的最嚴苛工作負載



AFF A700

適合需要效能、容易維修及恢復能力的
關鍵任務型工作負載及資料中心



AFF A400

適合需要在效能與豐富功能之間取得平衡的
大部分企業應用程式



AFF A250 新推出

適合需要物超所值效能的 MSE 及小型企業

全新入門級 AFF A250： 更簡單、更快速、更高效



NetApp® AFF A250

- 2U 機箱配備 24 個嵌入式 NVMe SSD
- NVMe/FC、32Gb FC、25GbE
- 統一化及全 SAN 陣列 (ASA) 組態



主要效益

- 簡化資料服務及雲端整合
 - 整合式管理工具 (ONTAP System Manager、Active IQ®、Cloud Insight)
 - 最具成本效益的營運不中斷
- 以現代基礎架構推動企業應用程式
 - 提升 45% 效能推動更多工作負載，消除封閉環境
 - 適合 SAN 的最佳化恢復能力
- 轉變資料中心的經濟效益
 - 體積精巧的 2U 設計可減少實體佔用空間，特別是在取代硬碟機的時候
 - 更簡單、更快速、更高效 - 無需負擔額外成本

適用對象

- 具有分公司的 MSE 及大型企業
- 企業應用程式、虛擬化及整合

AFF C190：以磁碟價格享有雲端就緒 All Flash 儲存設備

- All Flash 儲存設備起價低於 \$20,000 美元
- 包含 NetApp® ONTAP® Premium Flash 軟體
- 以相同價格享有混合式系統/硬碟機系統的 10 倍效能
- 精巧的 2U 系統，同時適用於檔案及區塊
- 4 種容量選項，有效容量最高可達 55TB，提供 3:1 效率保證
- 2 種網路選項：乙太網路或統一化介面



NetApp AFF C190

簡單易用，聰明智慧，安全可靠

2 Seconds

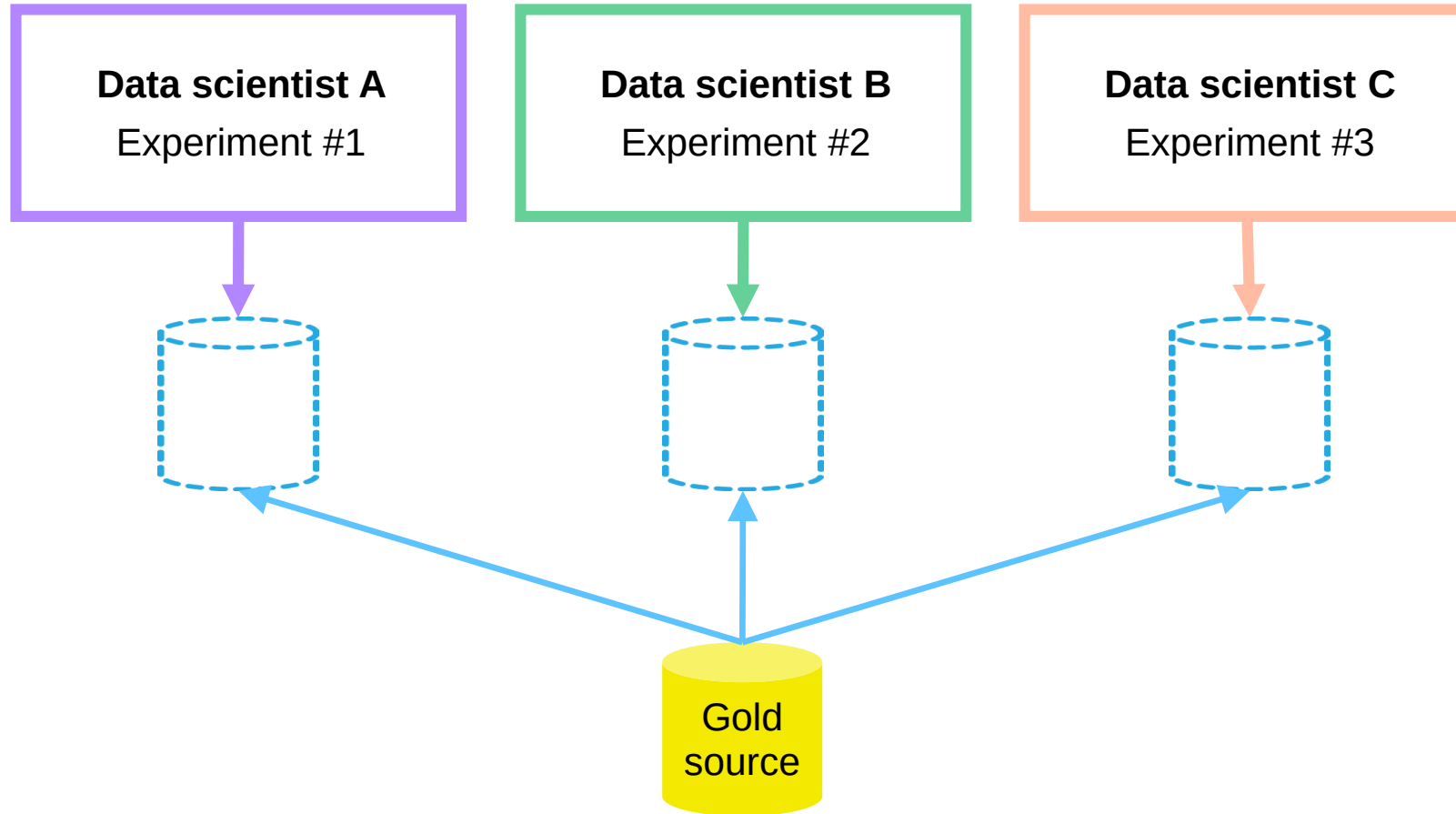
vs 17 hours

Accelerating AI training workflow efficiently

- Copying a dataset takes seconds instead of hours/days
 - Example: 10TB dataset – 2 seconds vs 17 hours
- Copies of datasets are stored efficiently
 - Example: 10 copies of each dataset – up to 90% reduction in storage space

Near-instantaneous dataset clones

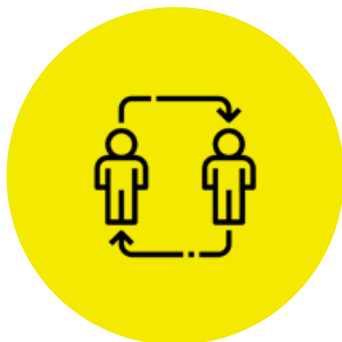
Modify datasets while preserving the gold source



NetApp ONTAP AI 簡化了 AI 基礎架構的部署



一張 PO
多合一解決方案



無風險安裝
交付並安裝事先封裝的
解決方案



便捷的支援服務
集中式支援，單一服務窗口



更快看到投資報酬
加速取得洞見

在低風險並獲得全面支援的情況下，讓您的AI 基礎架構更快上線

King's College London

First clinical provider in Europe to adopt AI to rethink the practice of radiology

Business challenge

- Transform clinical care for 8 million patients
- Build an AI platform to allow specialists in the U.K.'s National Health Service (NHS) to automate radiology interpretation

Solution

- Powered by NVIDIA DGX-2 systems, NVIDIA Clara AI toolkit, and NetApp cloud-connected storage

Use case

- AI for radiology and pathology

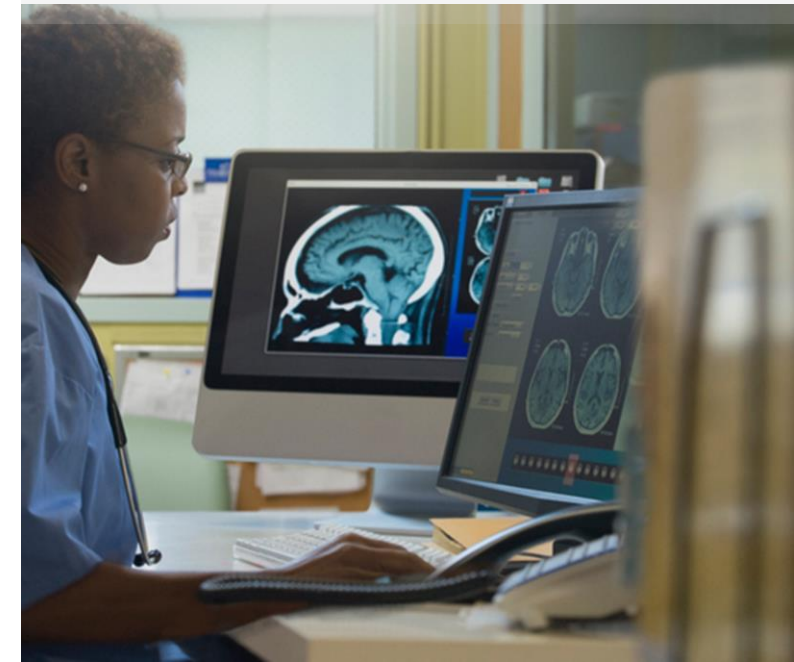
Why NetApp

- Extreme performance and nondisruptive scale-out
- Proven data services for demanding environments

- [Video](#)



[King's College London](#) is a public research university located in London, United Kingdom, and a worldwide leader in medical research.



Hannover Medical School

Business challenge

- Streamline diagnostics to be much faster and less costly
- Improve patients' quality of life

Solution

- [Video](#)

Use case

- Diagnostic imaging, Chronic Obstructive Pulmonary Disease

Why NetApp

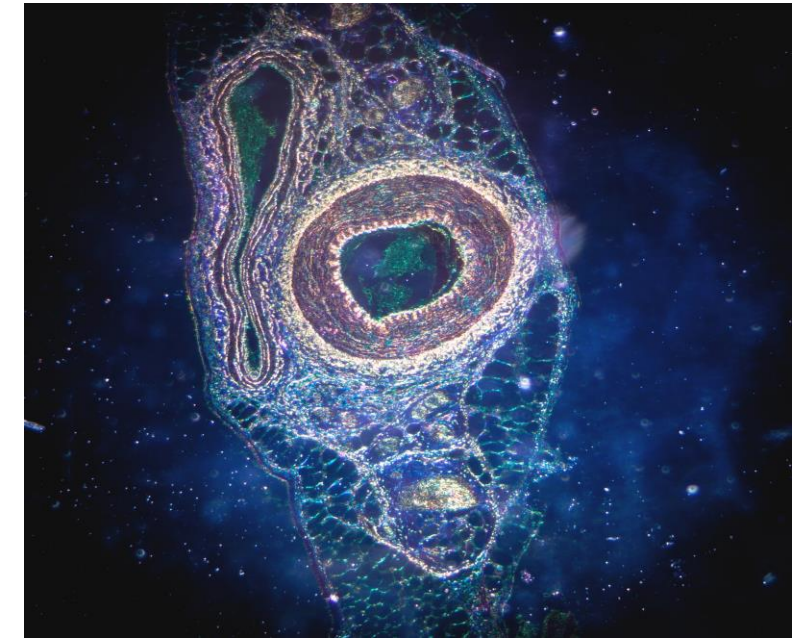
- Run five times more data in the same time
- Provided the right balance of performance and reliability
- Improved image quality, accelerated the data pipeline

“NetApp was immensely valuable in providing performance and reliability to gain sustained flows of data.”

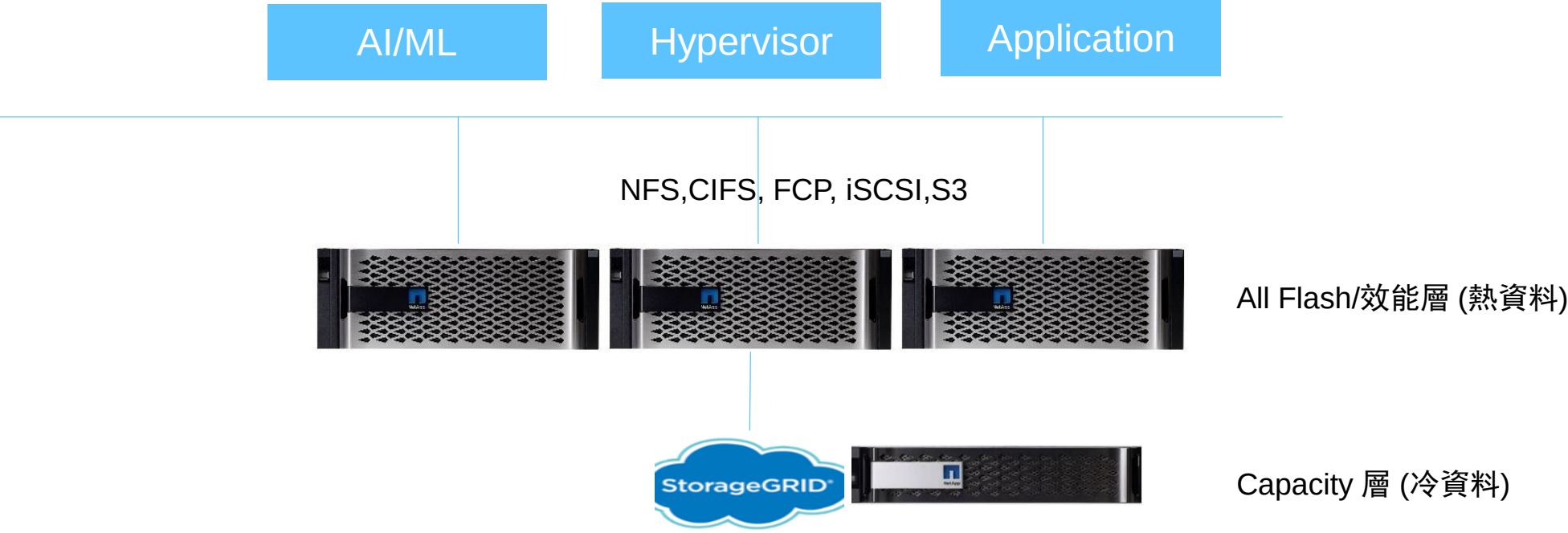
- Dr. Hinrich Winther, resident, Hannover Medical School



[The Hannover Medical School](#), founded in 1965, is a university medical centre in the city of Hanover, in Germany, part of a regional medical network



企業級資源池分享



謝謝

