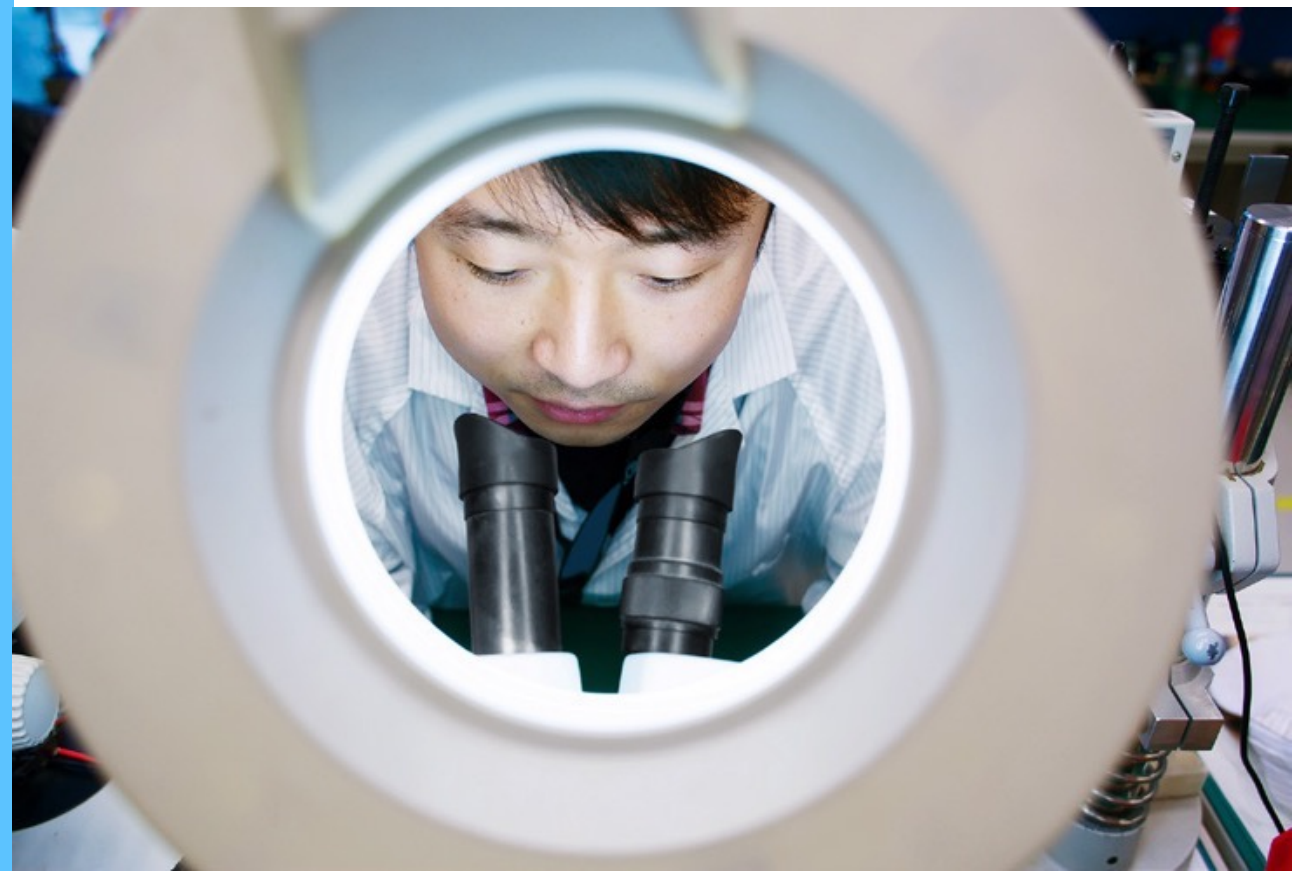


打造全方位 ESG 與資料防護的 校園儲存平台



Henry Chen
Solutions Engineer
2023



Agenda

- ESG 低碳綠能儲存平台
- 偵測與抵禦勒索病毒
- 全方位資料保護
- 混合雲平台與案例分享

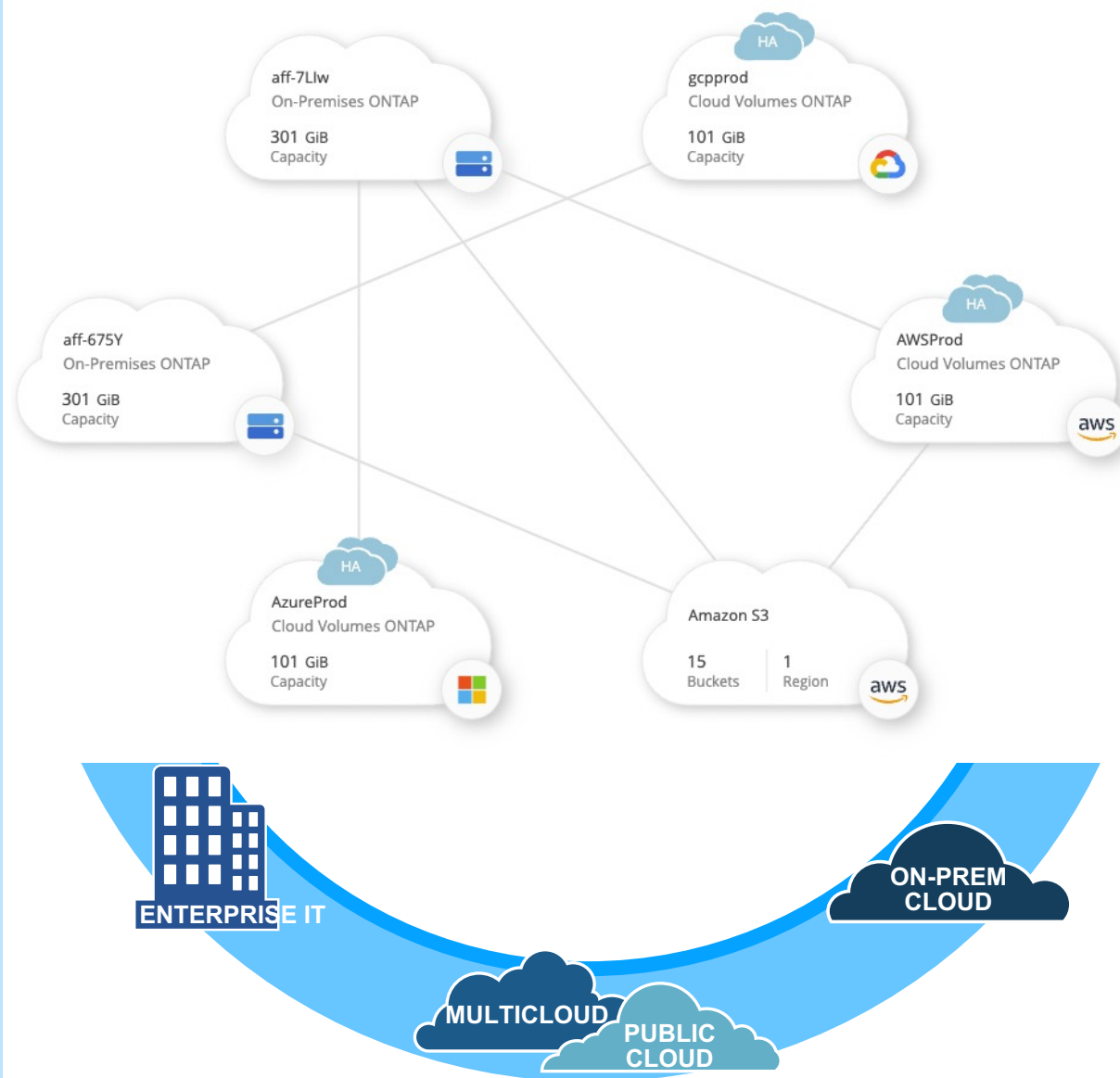
NetApp 是....

以雲為主導、資料為中心的
軟體公司

我們的目標

運用我們豐富的以資料為中心的軟體創新服務，以協助客戶在混合雲世界中蓬勃發展

讓您可以自由地將資料放入可提升業務的應用程式中



NetApp No.1 in Taiwan in 2021

#1 in CY2021 whole year & Q4

- NetApp is **#1** in **2021** with **33.6%** market share in Open Networked. **90.3%** Y/Y growth compare to 2020, outpacing market growth of 37.1%
- NetApp is **#1** in **2021** with **39.8%** market share in AFA. **95.9%** Y/Y growth compare to 2020, outpacing market growth of 36.7%
- In CY2021 Q4, NetApp continue to be the top storage vendor with the **#1 position** in **Open Networked** with market share of **30.6%** and **#1 position** in **AFA** with market share of **32.6%**

Taiwan Market Share CY2021 & CY2021 Q4

OPEN NETWORKED CY2021		
Ranking	Vendor	Share
1	NetApp	33.6%
2	Dell	23.9%
3	HPE	20.9%
4	IBM	5.6%
5	Hitachi	4.1%

AFA CY2021		
Ranking	Vendor	Share
1	NetApp	39.8%
2	Dell	22.0%
3	HPE	21.1%
4	IBM	7.9%
5	Pure	5.4%

OPEN NETWORKED CY2021 Q4		
Ranking	Vendor	Shares
1	NetApp	30.6%
2	Dell	25.0%
3	HPE	21.4%
4	IBM	6.3%
5	Hitachi	4.1%

AFA CY2021 Q4		
Ranking	Vendor	Shares
1	NetApp	32.6%
2	Dell	25.7%
3	HPE	21.8%
4	IBM	10.4%
5	Pure	6.6%

給您優於業界的高可用性 – 持續來自公正第三方的肯定

IDC 白皮書：滿足數位化轉型的高可用性要求



IDC White Paper 《 Meeting the High Availability Requirements in Digitally Transformed Enterprises 》 · 文件編號 US48442021 · 2022 年 3 月



IDC White Paper 《 Evolving Availability Requirements Demand More Than Just a Resilient Storage Infrastructure 》 · 文件編號 US46076020 · 2020 年 2 月

2022

including statistics about application and data availability. IDC has reviewed NetApp ONTAP system availability statistics between January 2019 and December 2021, noting that the data indicates a minimum of 99.9999x% availability across over 100,000 controller pairs running ONTAP 9 software. This population includes NetApp AFF80x0 and AFF A-Series systems as well as FAS25xx, FAS26xx, FAS27xx, FAS8xx0, FAS9000, and FAS500f systems. Clearly, NetApp can deliver "six-nines plus" availability and has done so consistently in mixed enterprise workload environments that include both block- and file-based applications.

2020

statistics about application and data availability. IDC has reviewed NetApp ONTAP system availability statistics for the period from June 2019 to December 2019, noting that the data indicates a minimum of 99.99993% availability across the tens of thousands of controller pairs running ONTAP 9 software. This population includes NetApp AFF80X0 and AFF A-Series systems as well as FAS25xx, FAS26xx, FAS27xx, FAS8xx0 arrays, and all FAS9000 systems. Clearly, NetApp can deliver "six-nines plus" availability in mixed enterprise workload environments for both block- and file-based applications.

IDC 審查自 2019 年 1 月至 2021 年 12 月期間運行於 NetApp ONTAP 系統的可可用性統計資料
數據顯示，於 ONTAP 9 系統的成千上萬對控制器中，其可用性高於 99.9999%

包括 NetApp AFF80x0 和 AFF A 系列系統以及 FAS25xx、FAS26xx、FAS27xx、FAS8xx0、FAS9000 和 FAS500f 系統，無論在 block and file-based 的混合企業負載中皆可確實的滿足"6個9"的可用性



符合最高規格加密認證

NetApp ONTAP 成為首個通過 美國國家安全局 (NSA) 安全和加密驗證的企業儲存平台

What is CSfC?

- 由美國國家安全局 (NSA) 領導的網路安全計劃，CSfC 是該組織商業網路安全戰略的關鍵組成部分
- CSfC 驗證商業 IT 產品是否滿足最高級別的嚴格加密標準以及軟硬體解決方案的嚴格安全要求
- NSA 已開始建議託管機密或絕密數據的聯邦機構使用已經過 CSfC 驗證的儲存解決方案

通過此 CSfC 驗證，NetApp ONTAP 可幫助企業用戶

- 資料儲存信賴可靠 – 適合儲存機密和最高機密級別的数据資料
- 節省時間 – 通過驗證的解決方案
- 節省成本 – 降低監控成本
- 零信任資訊安全架構基礎 – 同時在硬體和軟體層保護數據

Compliant Product - NetApp Storage Encryption (NSE) running ONTAP 9.7P13 硬體加密驗證

Certificate Date: 2021-05-01
Validation Report Number: CCEVS-VR-VID11174-2021
Product Type: Encrypted Storage
Conformance Claim: Protection Profile Compliant
PP Identifier: collaborative Protection Profile for Full Drive Encryption - Authorization Acquisition Version 2.0 + Errata 20190201
CC Testing Lab: Leidos Common Criteria Testing Laboratory

Compliant Product - NetApp Volume Encryption (NVE) Appliances running ONTAP 9.7P13 軟體加密驗證

Certificate Date: 2021-05-01
Validation Report Number: CCEVS-VR-VID11175-2021
Product Type: Encrypted Storage
Conformance Claim: Protection Profile Compliant
PP Identifier: collaborative Protection Profile for Full Drive Encryption - Authorization Acquisition Version 2.0 + Errata 20190201
collaborative Protection Profile for Full Drive Encryption - Encryption Engine Version 2.0 + Errata 20190201
CC Testing Lab: Leidos Common Criteria Testing Laboratory

<https://www.nsa.gov/Resources/Commercial-Solutions-for-Classified-Program/Components-List/>

<https://www.netapp.com/newsroom/press-releases/news-rel-20211215-870245/>



Cloud Insights



Cloud Manager – Hybrid Enterprise Storage Management



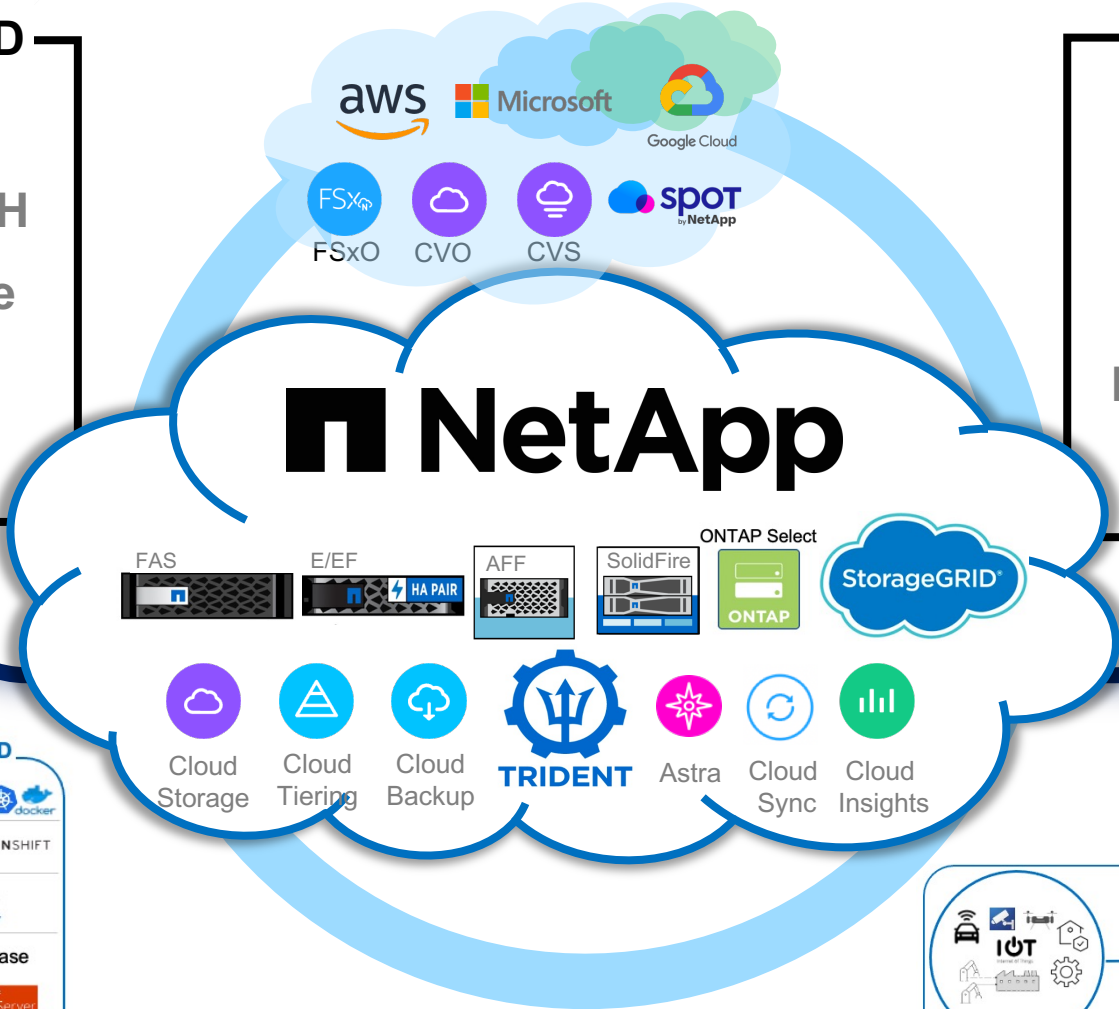
PROD

HDD
FLASH
NVMe

AI

DR

HDD
FLASH
NVMe
BYOHW



地端完整的解決方案

資料保存、應用、運算、災備

雲端彈性的多元架構

資料挪移、分析、備份、部署

專注客戶的工作負載

虛擬化、自動化、開發、資料庫

WORKLOAD

Logos for VMware, Microsoft, Docker, Red Hat, OpenShift, NetApp, TRIDENT, Oracle RAC, SAP HANA, Microsoft SQL Server, and MySQL.

AI

Diagram showing data flow from Edge (IoT, Real-time Data Movement, On-premises Data Movement) to AI (Data, Machine Learning, Analytics).

IDC Report : SSD 需求急速成長，HDD 往大容量的空間靠攏，小容量 SAS 不在發展趨勢內



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Search



14 Jun 2021

IDC Forecasts Solid Growth for the Hard Disk Drive and Solid State Drive Markets to Meet Increasing Demand for Data Storage Capacity

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NEEDHAM, Mass., June 14, 2021 – International Data Corporation ([IDC](#)) recently published new forecasts for the worldwide hard disk drive (HDD) and solid state drive (SSD) markets. While both markets were affected the COVID-19 pandemic, the outlook looks good as demand for storage remains strong in multiple areas.

Worldwide HDD industry petabyte shipments are expected to see a compound annual growth rate (CAGR) of 18.5% over the 2020–2025 forecast period and average capacity per drive is forecast to increase at a five-year CAGR of 25.5%.

"While the client HDD market continues a long-term secular decline due to rising SSD attach rates, the COVID-19 pandemic has over the near term increased the demand for certain types of HDDs, particularly mobile HDDs as well as capacity-optimized HDDs," said [Edward Burns](#), research director, Hard Disk Drive and Storage Technologies at IDC. "And the demand for storage capacity continues to grow at a steady pace as the world creates and stores more and more data."

The COVID-19 pandemic impacted the various segments of the HDD market – enterprise storage systems, personal computers (PCs), personal and entry-level storage (PELS) devices, video surveillance systems, and consumer electronics products – in different ways.

Key trends in the worldwide HDD market include:

Gartner Report : 2026 年 SSD 市場收益將達 35% ，大容量 HDD 佔有率 96 %

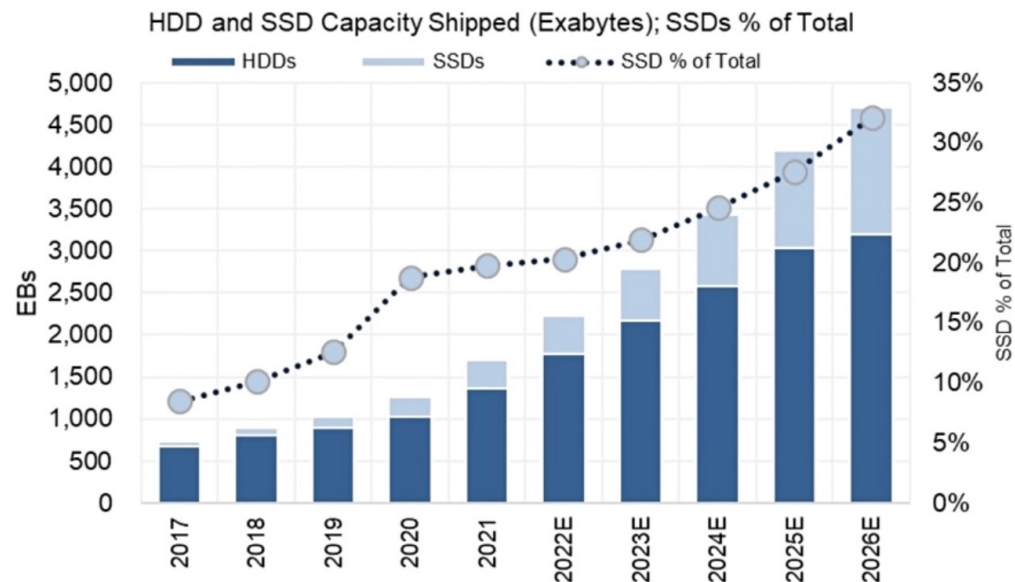
五年內未來儲存市場將只剩下 高效能的SSD 及 大容量的NL-SAS

Gartner: Enterprise SSDs will hit 35% of HDD/SSD exabytes shipped by 2026

By Chris Mellor - May 16, 2022



In four years' time over 95 percent of shipped hard disk drives will be high-capacity nearline 3.5-inch drives, and SSDs will outstrip the "other disk drive" categories, including notebook, desktop PC, external, and mission-critical 10K rpm 2.5-inch enterprise drives.



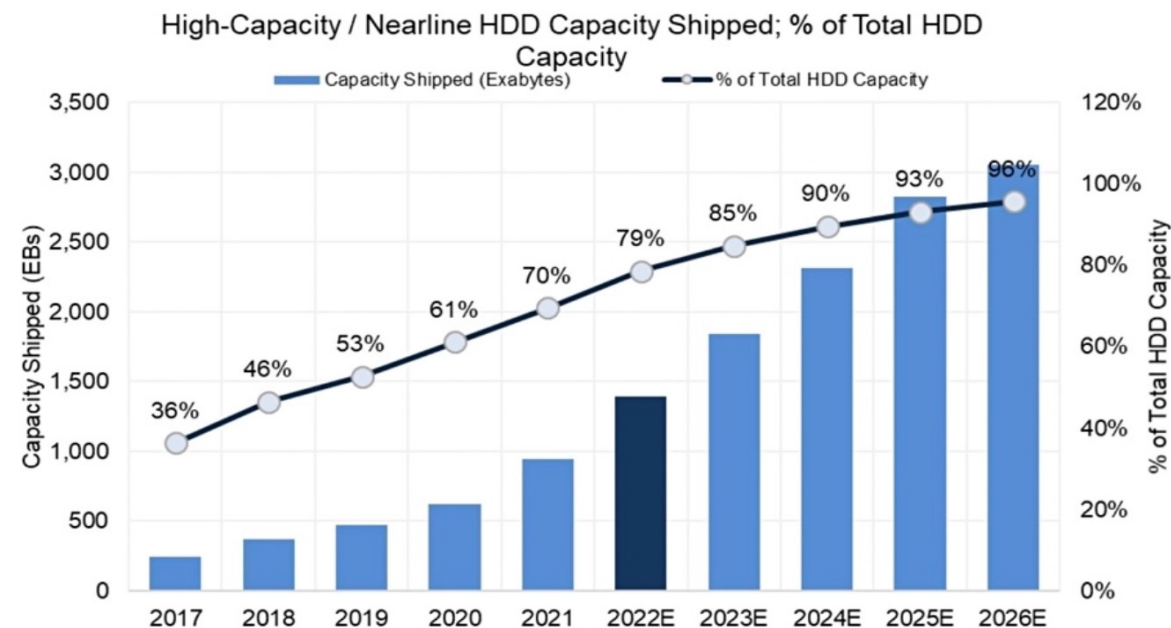
Gartner: Flash array revenue to overtake HDD

By Chris Mellor - October 3, 2022



在三年(2026年)後，SSD 將漸漸取代SAS HDD，SAS HDD被淘汰停產後，反而造成維護成本上升及維護的困難

According to Gartner, all-flash-array revenues will overtake HDD revenue next year and grow to 55 percent of all external storage revenues in 2026.



Source: Gartner; TrendFocus; Wells Fargo Securities, LLC.

客戶希望從混合式轉向全閃存

但價格往往是一個限制因素

混合式



5–10ms latency, \$



效能型閃存



Sub-ms latency, \$\$\$

利用容量型閃存加速全閃存轉型

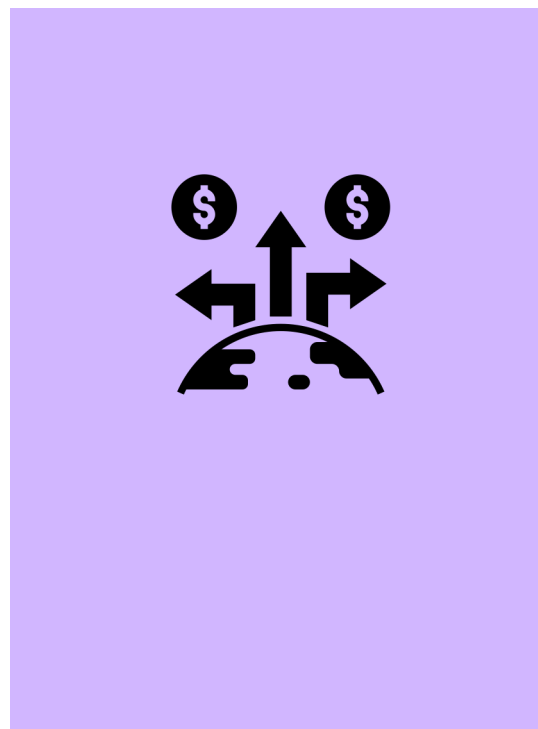
在不影響預算和永續發展目標的情況下

混合式



5–10ms latency, \$'s

容量型閃存



2–4ms latency, \$\$'s

效能型閃存



Sub-ms latency, \$\$\$'s

NetApp AFF C 系列

隆重推出我們最新的全閃存、大容量閃存陣列系列

永續的

- Outstanding price/performance
- Leading raw-to-effective data efficiency
- Tier to hybrid flash or cloud
- Better energy efficiency

可擴展

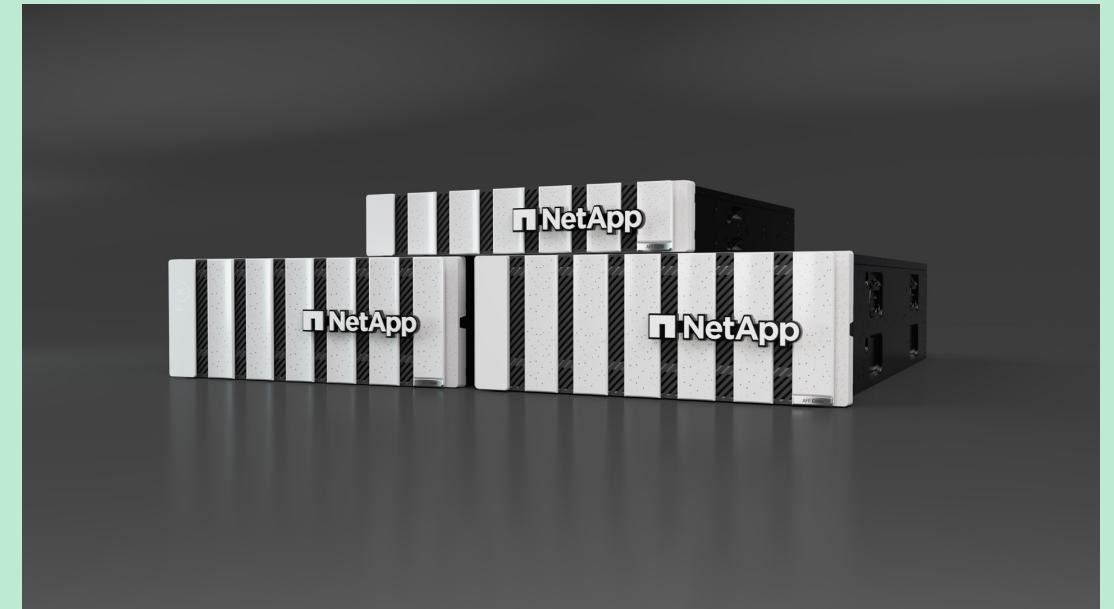
- Entry capacity aligned with needs
- Clustered scalability
- Connect to performance flash or hybrid flash

安全

- Ransomware protection
- Business continuity, disaster recovery
- Application-integrated backup and recovery

與雲連接

- Disaster recovery to cloud
- Back up to cloud
- Tier to cloud



NetApp® AFF C-Series HIGH-CAPACITY ALL-FLASH STORAGE SYSTEMS

The product images shown may represent the range of products or be for illustration purposes only. They may not be an exact representation of the product.

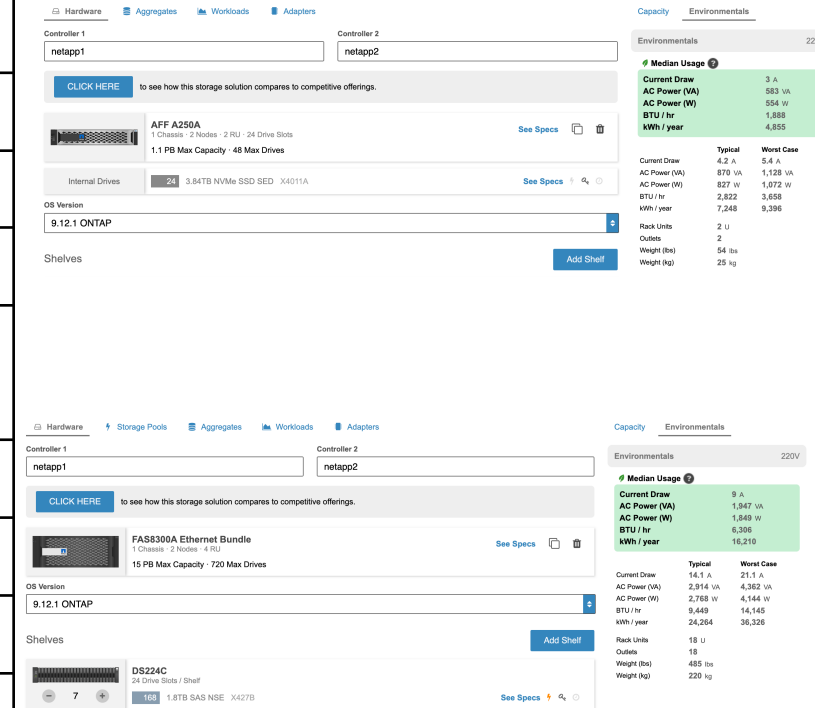
ESG 綠能機房

Power and cabinet saving – A250 vs. FAS8300

ALL Flash將大幅降低碳排放

*Average price of high-voltage industrial electricity: 3.1039 NTD per kWh; carbon dioxide emissions: 0.509 kgCO2e/kWh (Taiwan Ministry of Economic Affairs Bureau of Energy's 108 Annual Electricity Carbon Emission Coefficient)

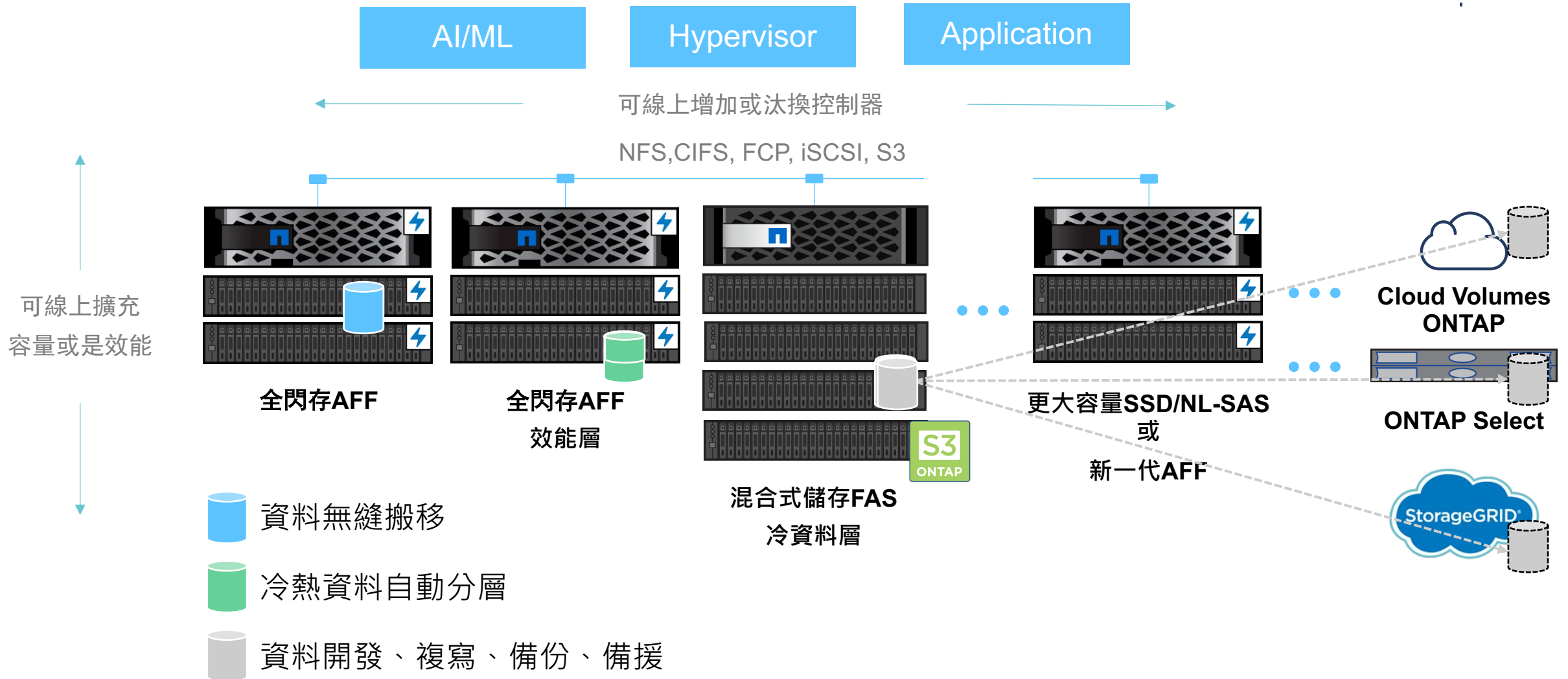
以單座為例	A250	FAS 8300
Configuration	3.84 TB NVME SSD *24	1.8 TB SAS *168
Capacity	210 TiB	214 TiB
Power (W)	554 (↓ 70%)	1,849
Power consumption	4,855 kwh/yr (↓ 70 %)	16,210 kwh/yr
Air-condition consumption	1,888 BTU/hr (↓ 80%)	9,449 BTU/hr
Cabinet space	2U (↓ 88%)	18U
Power Savings		11,355 (kwh/y)
Carbon Reductions		5780 kgCO2e/yr
Electricity Bill Savings		\$35,245 NTD/yr



打造下一代綠能機房、節能、省空間、符合未來趨勢

企業級資源池分享

因應需求，更新和擴展叢集群，而不會中斷業務



AFF C 系列是可擴展的

體驗 NetApp 專長的橫向擴展和管理的靈活性

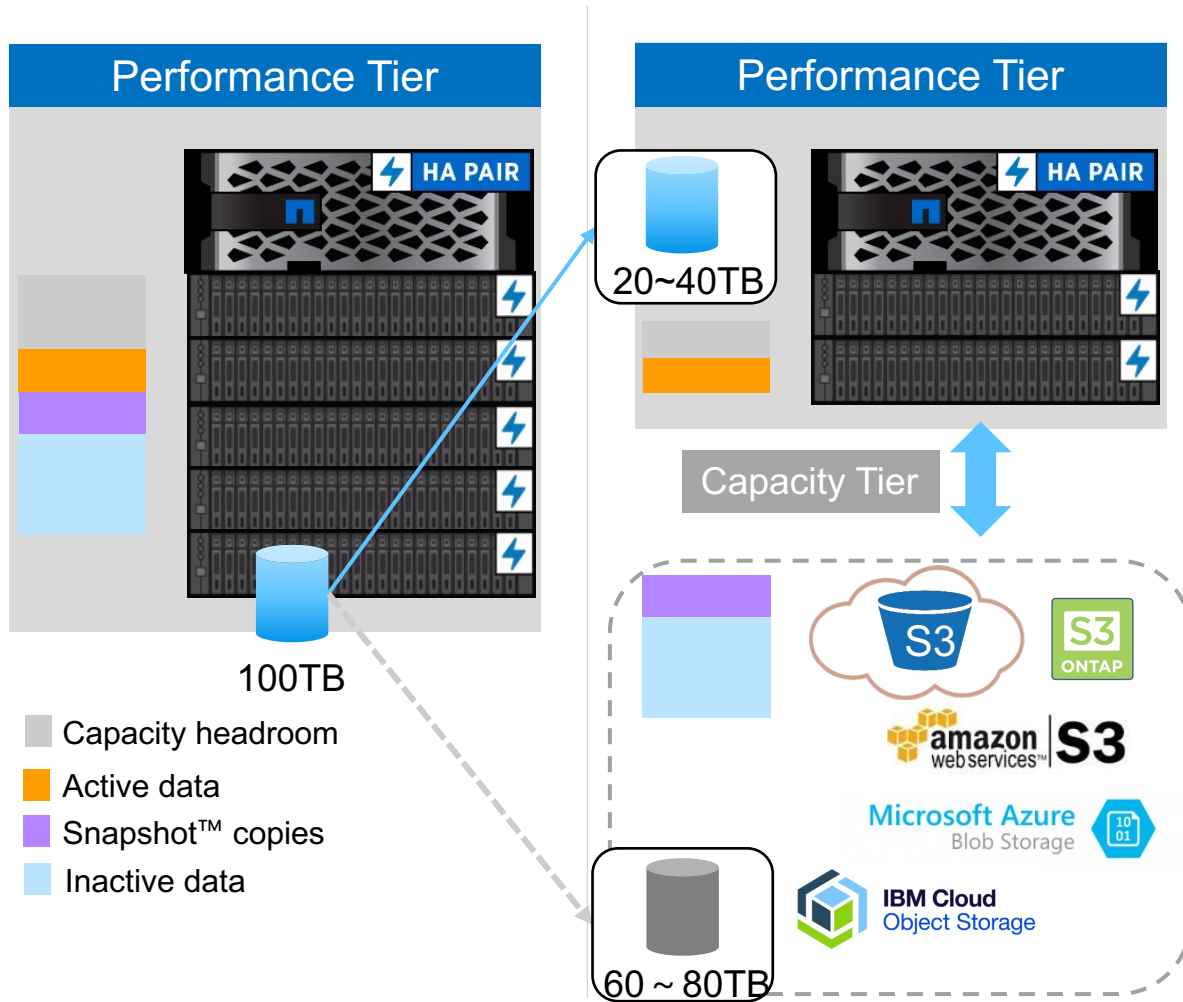
- 消除儲存孤島並無縫地擴展容量
- 將效能型閃存、容量型閃存和混合式儲存（跨 SAN、NAS 和物件儲存）組合在一個集群中

Cluster up to 24 nodes



FabricPool 技術優勢

智能的資料自動分層技術-快照備份、冷資料、長期保存



- NetApp 高效率的空間節省技術會繼承到冷資料層
- 可以套用在 FCP, iSCSI, NFS, CIFS 協定
- 檔案系統及使用者行為不需要改變
- 自動化冷熱資料分層
- 降低整體營運成本
- 設定即遺忘管理

NetApp Efficiency Guarantee Program

業界最有效的空間效率保證，提供企業滿滿的資料大平台 !!

空間效率保證，免簽署文件，一次性申請，簡單零風險 !!

全閃存設備空間效率保證

- 滿足現今企業多元的應用負載，提供對應的效率保障
- Virtual Servers 保證3:1, VDI (Full Clone) 保證 8:1
- 透過NetApp® Snapshot™ 技術，提供更多效率保障

- 提供更多儲存效率，更高效率與性價比
- 具備高效能與高效率全閃存方案
- 一旦未達保證於出貨180天內，提出申請
- 我們說到做到！未達空間效率保證立即修正補償，無任何補償限制(100%)

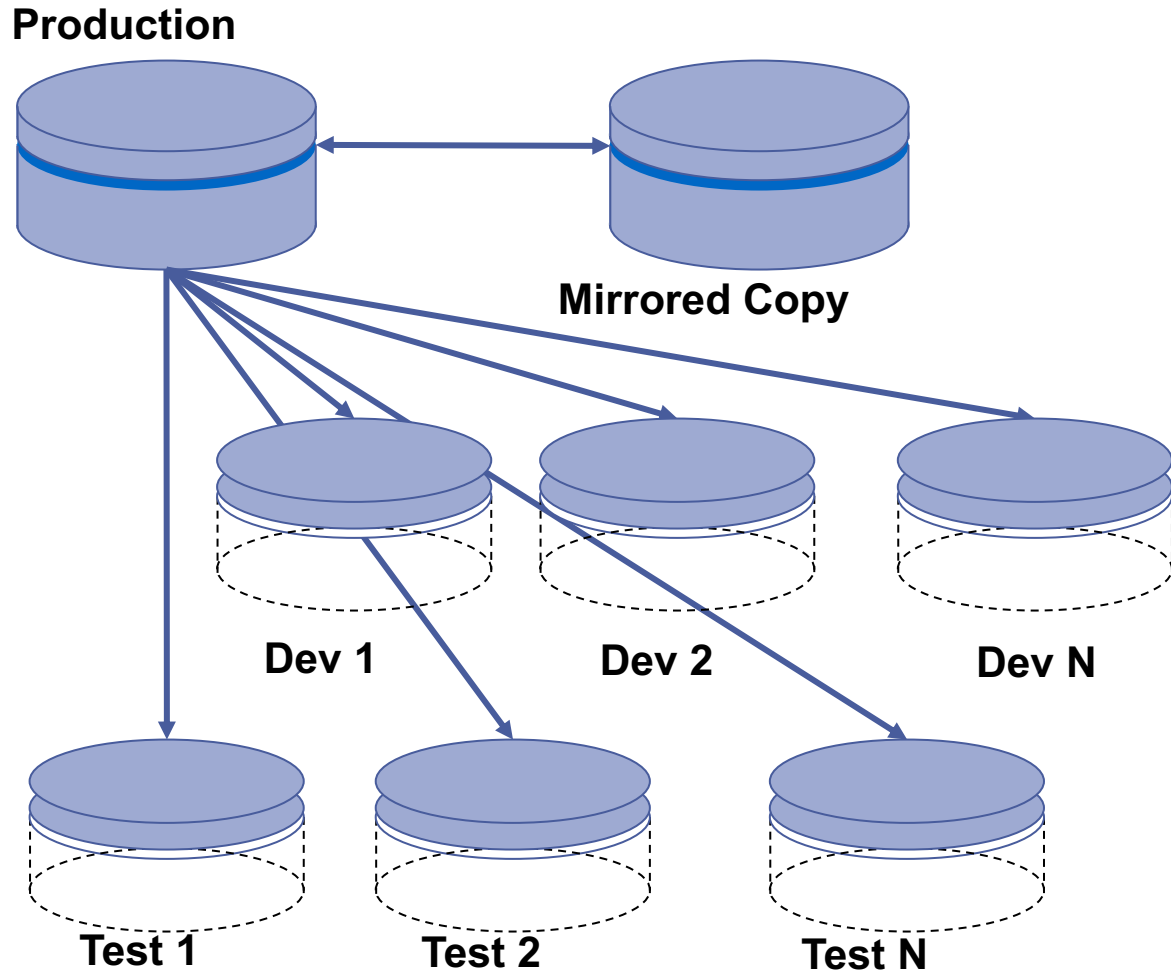
「應用容納更多，空間佔用更少，效能更勝以往」

適用於NetApp多元全閃存解決方案：AFF * + ASA* + FAS500f + ONTAP® Select (SSD) + SolidFire®

* AFF = All Flash FAS
ASA = All SAN Array

NetApp 優勢：即時且不佔完整空間的 FlexClone

FlexClone 大幅節省資料複製所需空間及時間



- 測試開發的環境不再需要預備大量儲存空間
- 只佔用資料有異動的儲存空間
- 可立即產生大量與多個虛擬線上環境的測試空間副本
- 可加速測試開發流程

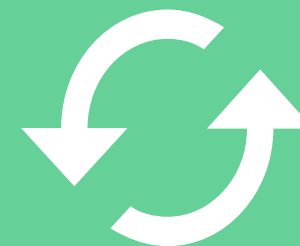
偵測與抵禦勒索病毒

ONTAP 9.10.1 Anti-Ransomware

NetApp 如何抵禦勒索軟體



偵測及防範



補救及還原

Wana Decrypt0r 2.0

Ooops, your files have been encrypted!

English



What Happened to My Computer?

Your important files are encrypted. Many of your documents, photos, videos, databases and other files are no longer accessible because they have been encrypted. Maybe you are busy looking for a way to recover your files, but do not waste your time. Nobody can recover your files without our decryption service.

Can I Recover My Files?

Sure. We guarantee that you can recover all your files safely and easily. But you have not so enough time. You can decrypt some of your files for free. Try now by clicking <Decrypt>. But if you want to decrypt all your files, you need to pay. You only have 3 days to submit the payment. After that the price will be doubled. Also, if you don't pay in 7 days, you won't be able to recover your files forever. We will have free events for users who are so poor that they couldn't pay in 6 months.

How Do I Pay?

Payment is accepted in Bitcoin only. For more information, click <About bitcoin>. Please check the current price of Bitcoin and buy some bitcoins. For more information, click <How to buy bitcoins>. And send the correct amount to the address specified in this window. After your payment, click <Check Payment>. Best time to check: 9:00am - 11:00am GMT from Monday to Friday.

Payment will be raised on
5/15/2017 11:23:24
Time Left
02:23:53:40

Your files will be lost on
5/19/2017 11:23:24
Time Left
06:23:53:40

[About bitcoin](#)
[How to buy bitcoins?](#)
[Contact Us](#)

 **Send \$300 worth of bitcoin to this address:**
12t9YDPgwueZ9NyMgw519p7AA8isjr6SMw

Ransomware as a Service

Example: Karmen

The screenshot shows a web dashboard for 'Karmen'. The top navigation bar includes 'Dashboard', 'Clients', and 'Settings'. The main content area is titled 'Dashboard Statistics Overview' and features four key metrics: 1 Client, 0 Payments, 0 Earned, and a Bitcoin price of 1284\$. Below these are two panels: 'Updates' with a list of recent activities and 'Infos' with system details like current version (2.4) and contact information.

Metric	Value
Clients	1
Payments	0
Earned	0
Bitcoin Price	1284\$

Update	Date
New Design + Bug fix	22 feb
Critical bug fixed	20 feb
New programm design	20 feb
Fix programm bug	18 feb
Release new version	15 feb
Test new version	14 feb

Info	Value
Current version	2.4
Price to unlock	1.2683 BTC
Don't forget update you key!	
Contact jabber	devbitox@sj.ms
Contact Telegram	@DevBitox

NetApp Solution for Ransomware

ONTAP Anti-ransomware 儲存設備自動偵測與保護

- ONTAP 9.10.1 On-Box Anti-Ransomware
- 儲存設備底層出發
- Volume 第一層級揭發潛在感染
- 7 至 30 天機器學習模式
- 自動產出受感染檔案報告

Anti-ransomware

STATUS

Enabled in learning mode

Started Time: 16 Sep 2021 6:51:PM

i The system has been auto-learning the workload characteristics of t

- A learning period of 7 to 30 days is recommended.
- You can switch from "learning" to "active" mode at any time.
- Switching early might lead to too many false positive results.

[Switch to active mode](#)

自動觸發快照保護

Overview Snapshot Copies SnapMirror (Local or R

+ Add

<input type="checkbox"/>	Name
<input type="checkbox"/>	Anti_ransomware_backup.2021-11-18_1506
<input type="checkbox"/>	hourly.2021-11-18_1505

- 完整
- 異常
- 使用
- 即時

嫌疑檔案列表

Suspected File Types

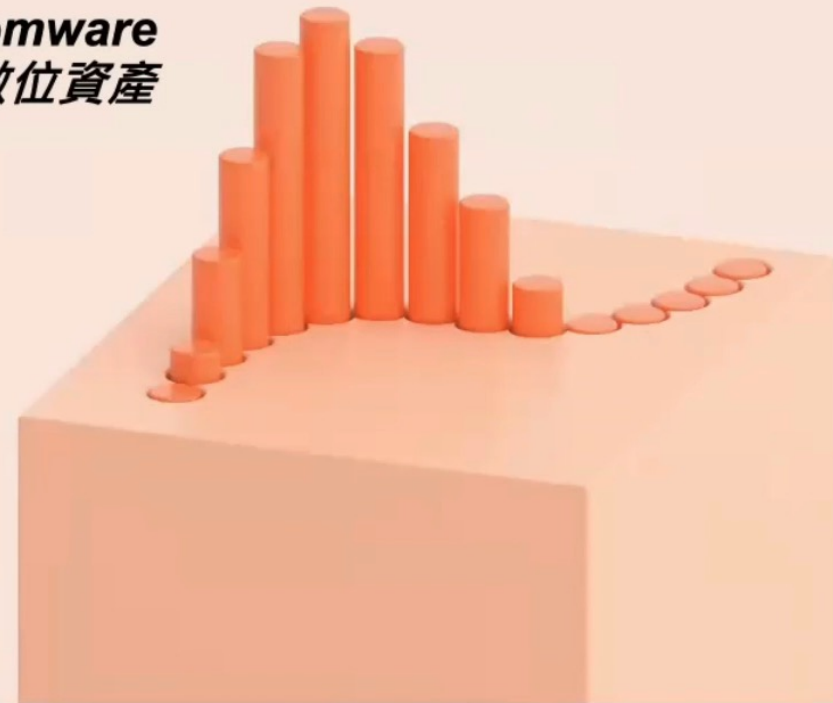
You can mark the suspected file types as false positive or potential ransomware attack. The system will make necessary adjustments to the way it detects abnormal activity in the future.

Search Filter

<input type="checkbox"/>	Type
<input type="checkbox"/>	> lckd
FILES (SHOWING A MAXIMUM OF 20 FILES)	
	/Top_Dir_1/Sub_Dir_11/test_file_8335.5.png.lckd
	/Top_Dir_1/Sub_Dir_11/test_file_27373.5.html.lckd
	/Top_Dir_1/Sub_Dir_11/test_file_27373.5.mp4.lckd
	/Top_Dir_1/Sub_Dir_11/test_file_27373.5.doc.lckd
	/Top_Dir_1/Sub_Dir_11/test_file_27373.5.gif.lckd
	/Top_Dir_1/Sub_Dir_11/test_file_103.2.jpg.lckd
	/Top_Dir_1/Sub_Dir_11/test_file_103.2.doc.lckd
	/Top_Dir_1/Sub_Dir_11/test_file_3040.5.html.lckd
	/Top_Dir_1/Sub_Dir_11/test_file_3040.5.mp4.lckd
	/Top_Dir_1/Sub_Dir_11/test_file_3040.5.doc.lckd
	/Top_Dir_1/Sub_Dir_11/test_file_3040.5.gif.lckd
	/Top_Dir_1/Sub_Dir_11/test_file_3040.5.xyz.lckd

Demo – Anti-Ransomware

I. 如何使用 ONTAP 9.10 on-box Anti-Ransomware 即時偵測勒索事件 透過快照還原 保護您的數位資產



資料保護

SnapMirror Business Continuity & MetroCluster

RPO=0 to, RTO= Zero

SnapMirror[®] Business Continuity

- Part of data protection and All-flash premium bundle
- ONTAP 9.8 – Public Preview
- Workload Level protection
- SAN Only

NetApp[®] MetroCluster[™]

- Site Level protection
- Multiple workloads can be protected
- Dedicated Network Fabric
- IP and FC variant
- TR 4592 – Oracle on Metrocluster

SPD-1039-2 Disaster Recovery and Business Continuity for Enterprise Applications

BRK-1067-2 NetApp Business continuity solutions (MetroCluster)

NetApp MetroCluster 客戶參考案例 – 台灣

資料保護與業務不中斷的最佳解決方案

RPO=0 零資料遺失

HA 高可用環境、多重資料保護

Pool 儲存資源池 Scale Up & Out





- 法務部調查局
- 交通部臺灣鐵路管理局
- 台北市政府
- 新北市政府
- 行政院主計處
- 行政院外交部
- 行政院交通部
- 經濟部智慧財產局
- 高雄捷運局



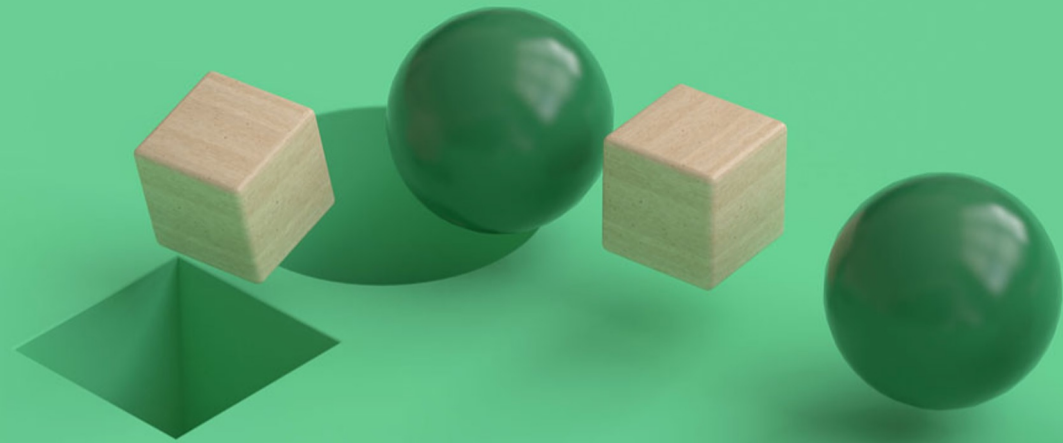
- 交通部公路總局
- 行政院環境保護署
- 財政部財政資訊中心
- 行政院衛福部
- 臺大醫院癌醫分院
- SGS台灣檢驗科技股份有限公司
- 薛長興工業股份有限公司
- 同欣電子
- 欣興電子



- 中國信託商業銀行
 - 將來銀行
 - 國泰產險
 - 南山人壽
 - 凱基銀行(前中華開發)
- 
- 中華電信資訊部
 - 中華電信商務應用處
 - 中華電信網際網路處
- 
- 遠鑫電子票券公司
 - 104人力銀行
 - 中租迪和股份有限公司


















SnapCenter Overview

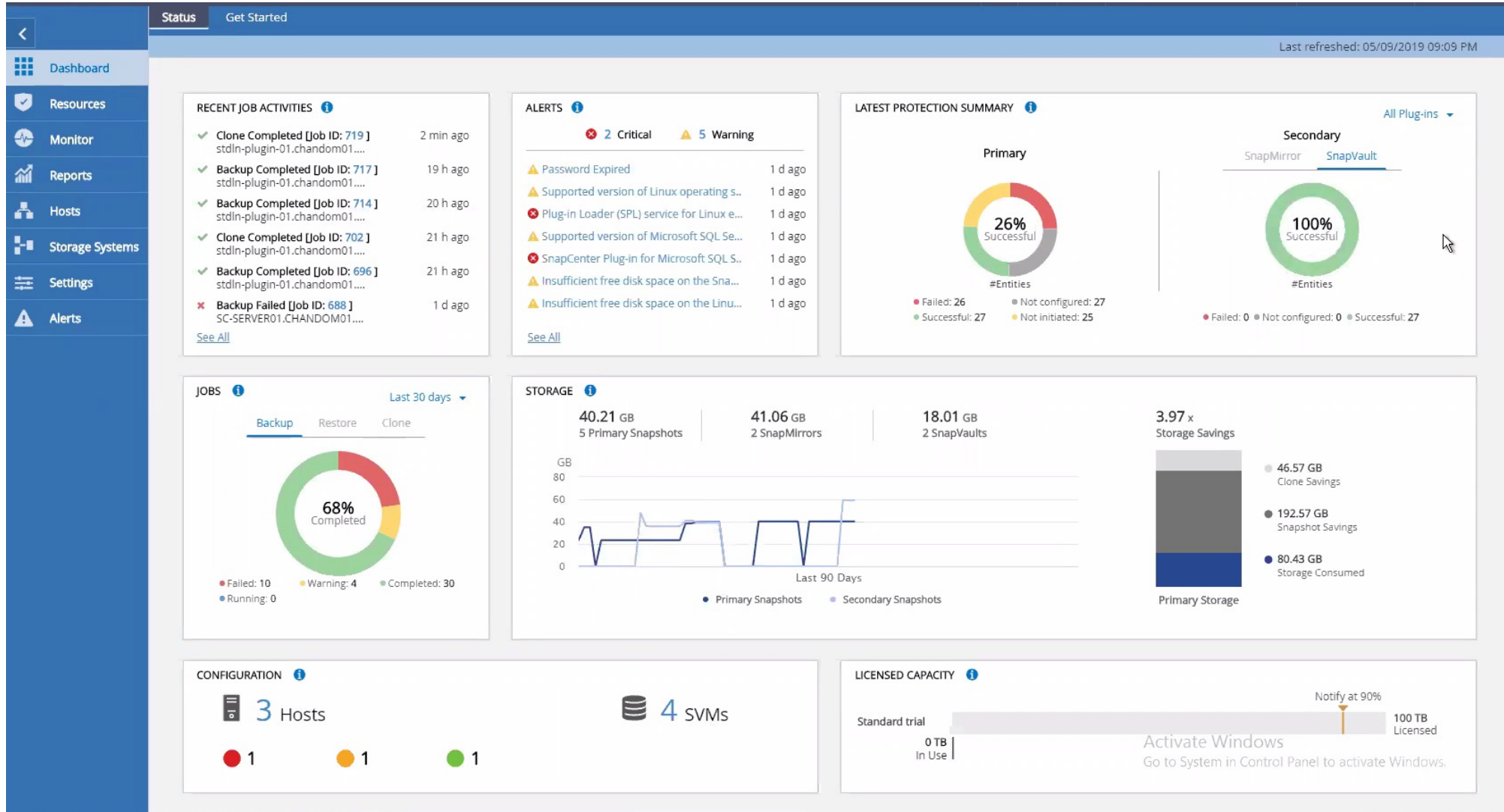


SnapCenter – Supported Plugins

Filesystems, Hypervisors, Databases and Storage Systems

Applications/ databases	 Exchange	 Microsoft SQL Server	 ORACLE DATABASE	 SAP HANA		
Filesystems	 Windows Server					
Hypervisors	 vmware					
Custom plug-in	 mongoDB	 SAP MaxDB The SAP Database	 SAP ASE Sybase	 IBM DB2	 MySQL	 PostgreSQL
Storage systems	 ONTAP				 ONTAP	 ONTAP

SnapCenter Dashboard – Monitoring workflows from a single screen



Demo - SnapCenter

透過 SnapCenter
即使不是資料庫管理員(DBA)也能輕鬆的備份與還原資料庫

登入我們的 SnapCenter ,

混合雲平台與案例分享

Cloud Volumes ONTAP

Demo

The screenshot displays the NetApp OnCommand Cloud Manager interface. The browser address bar shows the URL: `demous.tlvdemonetapp.com/occmui/#/main/working-environments?sITenantId=workspace-AuWQWTXD`. The navigation bar includes "Cloud Manager", "Working Environments", "Compliance", "Replication Status", "Backup & Restore", and "Timeline". The user profile is "henry2".

The main content area is titled "Working Environments" and features a "Visual View" toggle. It contains two sections: "Create Cloud Volumes ONTAP" and "Discover".

The "Discover" section shows five cloud environments represented by cloud icons:

- GCP bigdata** (US-EAST-1-B): < 0.01 TB Allocated Capacity
- AWS Cloud Volumes Service**: 0 Volumes | 0.00 Byte Capacity
- Azure AI** (WEST US): < 0.01 TB Allocated Capacity
- On-Prem OnPrem1**: 0.31 TB Allocated Capacity
- AWS ML** (US-EAST-1-B): < 0.01 TB Allocated Capacity

The right-hand sidebar, also titled "Working Environments", provides a summary:

- 1 On-Premises: 0.31 TB Allocated Capacity
- 3 Cloud Volumes ONTAP: < 0.01 TB Allocated Capacity
- 1 Cloud Volumes Service (AWS): 0.00 Byte Allocated Capacity

The footer of the interface shows "OnCommand Cloud Manager 3.7.5", build information, a UTC timestamp, a simulator URL, and links for "Help" and "API documentation". The Windows taskbar at the bottom shows the search bar and system tray with the time 12:37 AM on 1/10/2020.

CVO 成功案例 – 台灣 xxxx 大學

Why buy? 雲端異地備份 – 校務行政資訊系統

優化資安稽核核心系統 RTO / RPO 時效可用性

Recovery Data on Demand 備份與還原

Why now? 晶片缺料，交期過長，資料中心備份空間不足

資料中心空間不足，需進行地端設備冗長調度流程

透過雲端備份可充分利用機房資源

Why NetApp? 利用 ONTAP 去重壓縮，雲端成本最小化，支援三大公有雲

將資料中心儲存效率同步至雲端

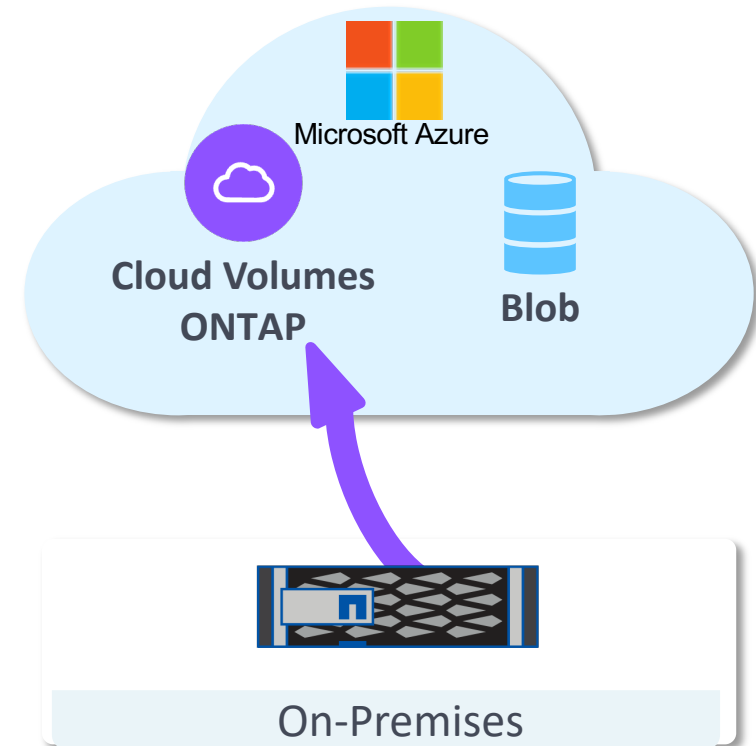
透過 NetApp SnapMirror 技術進行差異量資料抄寫

NetApp 原廠第一線負責維運

彈性計價模式，線上即時擴充需求

4 TB 起始容量，可依需求彈性擴充

未來考量納入會計系統、公文系統、校園網路管理等系統



成功案例 - 某政府單位 災備比您想得還容易

• 不需自建第二資料中心

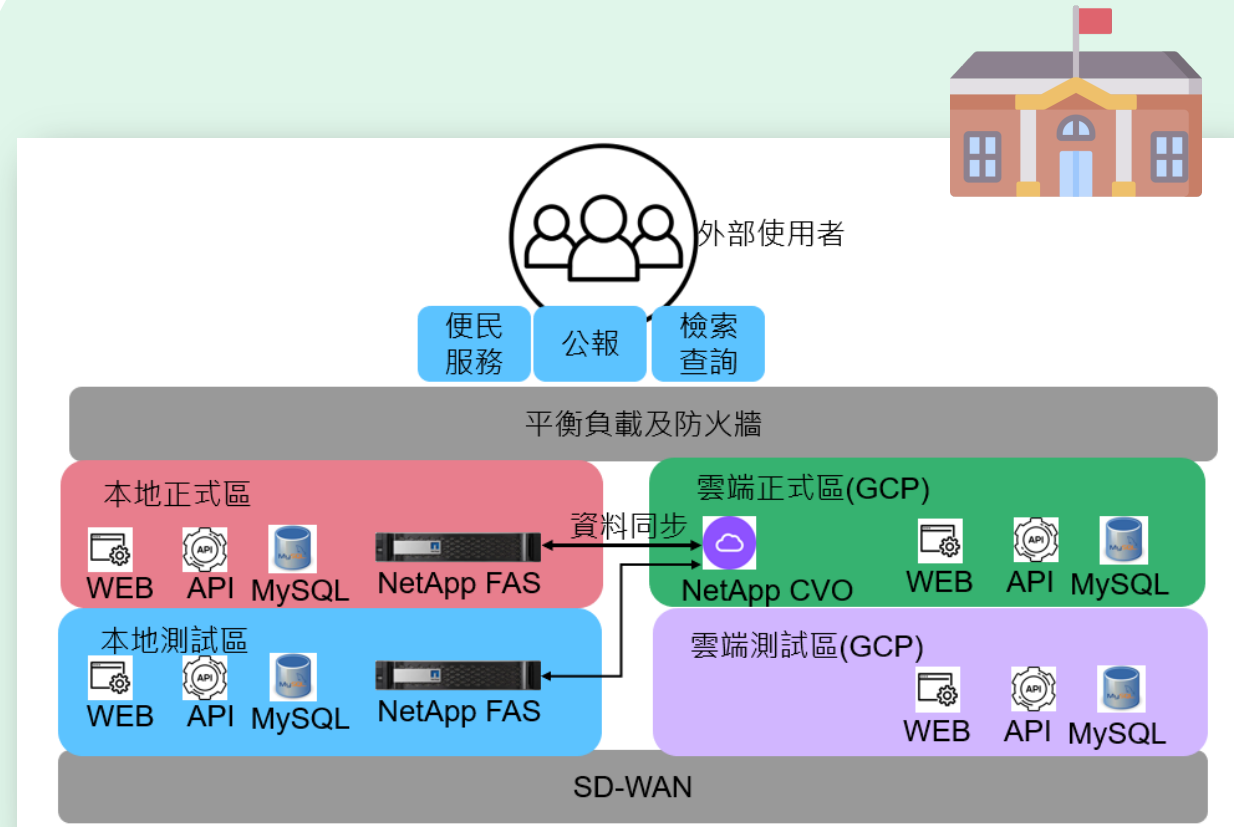
同一管理介面可以管理地端和雲端儲存
雲端業者為GCP，資料中心落地在台灣
儲存使用者及管理者上雲端後不需要重新學習及改變
透過NetApp SnapMirror 同步到雲端的CVO

• 本地端不需要進行架構更改, 即可將資料輕鬆複製到雲端

雲端服務主要使用對象為外部使用者
業務範圍：便民系統, 公報及檢索查詢
雲端正式區及測試區共用同一個 CVO
目前為36個月 Node License

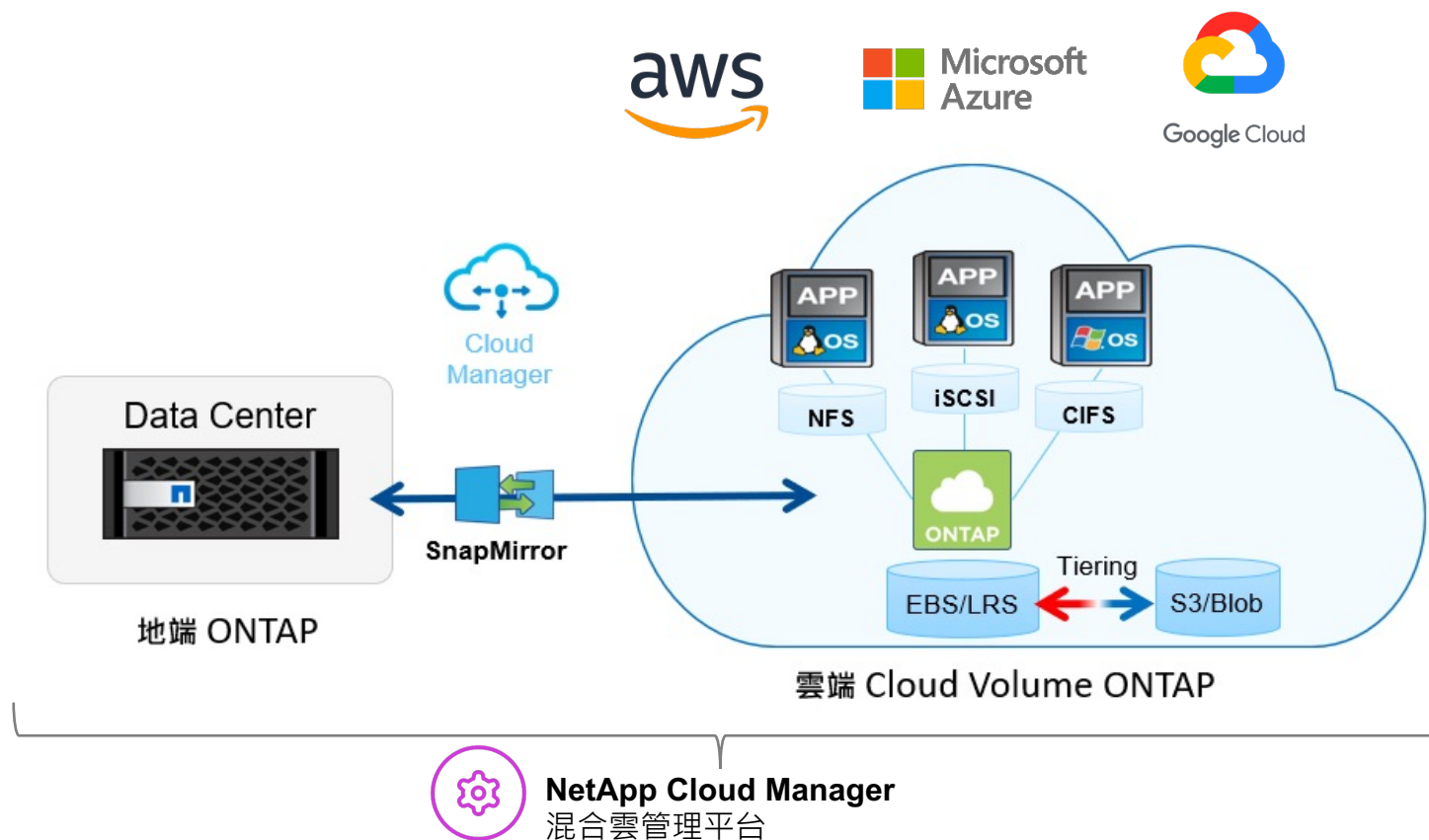
• 未來就算更換雲端業者資料也是一鍵帶走

資料上雲或下雲的主控權掌握在自己手上
雲端軟體定義式儲存可以滿足未來幾年或臨時的擴充性



Cloud Volumes ONTAP (CVO) 產品簡介

- 用公有雲的伺服器 and 硬碟來模擬 NetApp ONTAP OS
- 在公有雲享有 ONTAP 技術：
 - ✓ 去重複資料刪除技術
 - ✓ 可同時支援多種協定 NFS, CIFS, iSCSI
 - ✓ 可和地端NetApp做備份備援
 - ✓ 冷熱資料自動分離, 沒有選擇障礙
 - ✓ 快照保護
 - ✓ 快速產生副本



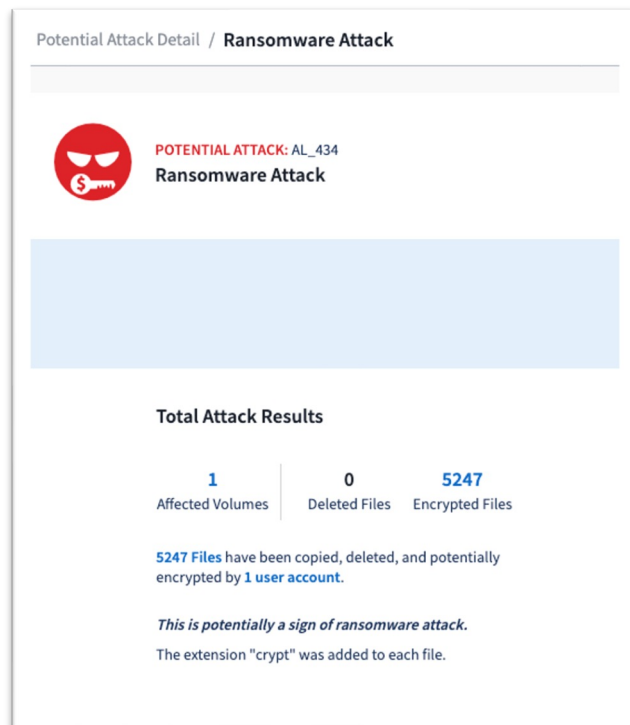
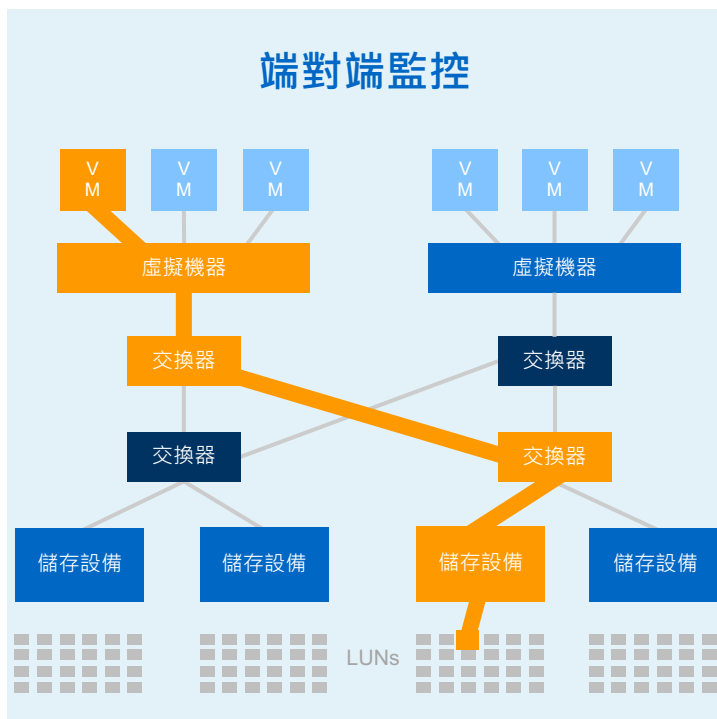
應用場景 & 客戶效益

- 異地備份 & 災害備援需求：IT 不需自建實體第二資料中心, 即可輕鬆抄寫資料
- 臨時性專案需求：設備來不及採購, IT 可暫時性使用公有雲資源, 完畢後再抄回地端, 確保資料自主權
- 發展多雲整合：NetApp CVO 支援三大公有雲, IT 可隨應用需求搬遷, 避免被單一公有雲綁架

有雲端、有地端 該如何管理？

為何使用 Cloud Insights - 因應不斷提高的複雜度 & 勒索病毒威脅

混合雲服務與基礎架構的多樣化與數量開始形成挑戰



現代化企業同時仰賴內部環境及雲端基礎架構

現有的工具已不敷使用：

- 它們監控的是物件而非關係
- 無法以雲端規模儲存並分析資料
- 無法跟上雲端的動態性質
- 無法尋找最佳化機會
- 無法偵測勒索病毒威脅

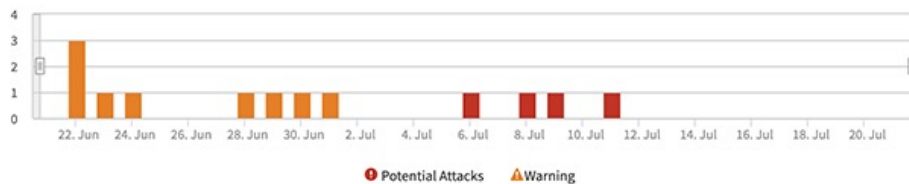
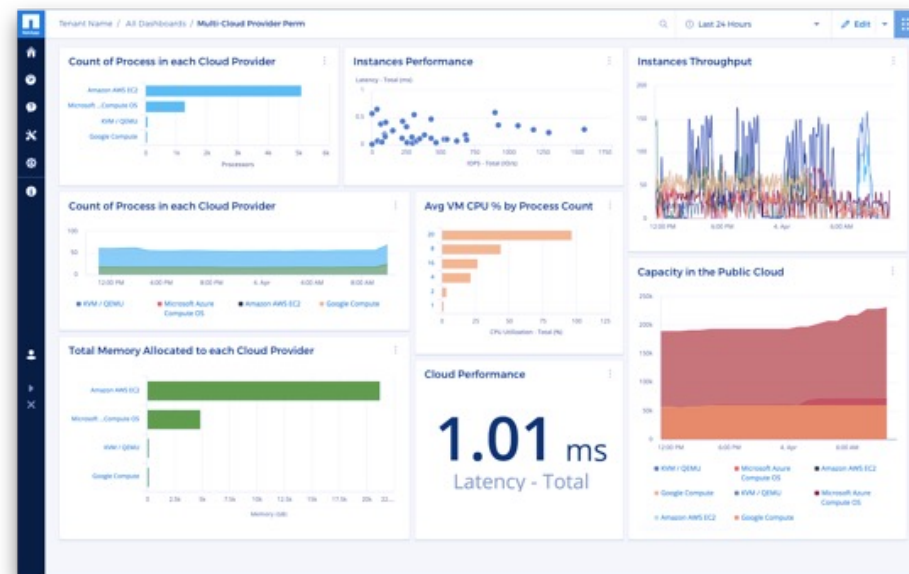
為解決以上問題，我們推出 Cloud Insights

Cloud Insights 產品簡介&優點

- 單一監控平台，可監控地端、雲端、混合雲
- 視覺化資源拓撲圖，秒看關鍵問題，並加以告警
- 內建人工智慧 + 機器學習模組，透過使用者行為分析提供
 1. 多元勒索病毒偵測及補救
 2. 使用者資料存取稽核

應用場景 & 客戶效益

- 越複雜越適合，多雲的異質平台，讓管理者可方便管理
- 勒索病毒偵測及補救，管理者即時掌握侵入時間點，取得乾淨快照並快速還原 (NetApp ONTAP NAS / CVO / AWS FSxO)



Potential Attacks (4)

Potential Attacks	Detected ↓	Status	User	Evidence
Ransomware Attack	10 days ago Jul 11, 2020 9:02 AM	New	Kristjan Egilsson	> 700 Files Encrypted
Ransomware Attack	12 days ago Jul 9, 2020 8:29 AM	In Progress	Armann Carlssonson	> 700 Files Encrypted
Ransomware Attack	13 days ago Jul 8, 2020 9:19 AM	Resolved	Reginald Carey	> 3300 Files Encrypted
Ransomware Attack	15 days ago Jul 6, 2020 2:55 PM	In Progress	Keeley Landry	> 1500 Files Encrypted

- DASHBOARDS
- QUERIES
- ALERTS
- REPORTS
- HELP

Duration Per Request

61.72ms

User Sessions

245 Users Sessions

Guest Sessions

489 Sessions Guest Sessions

Highest Request Duration (24h)

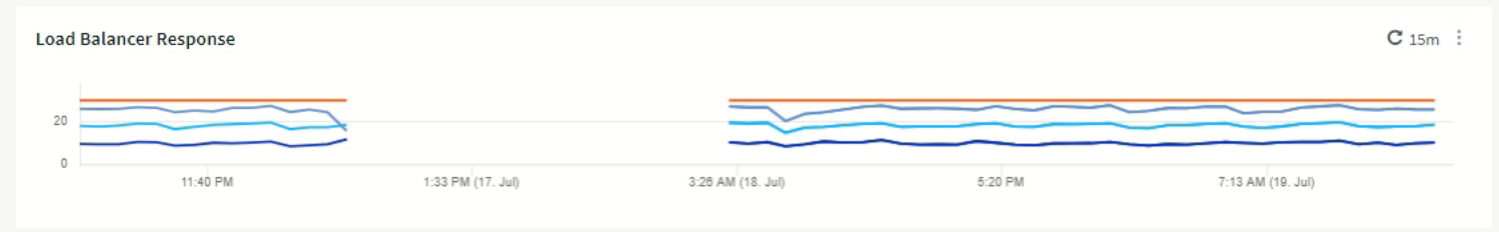
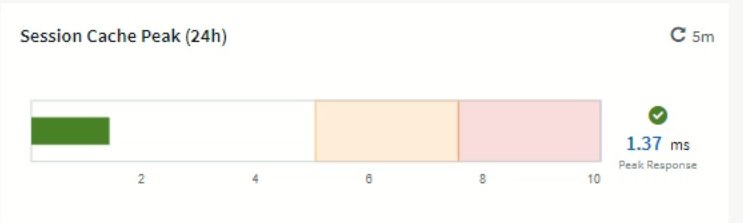
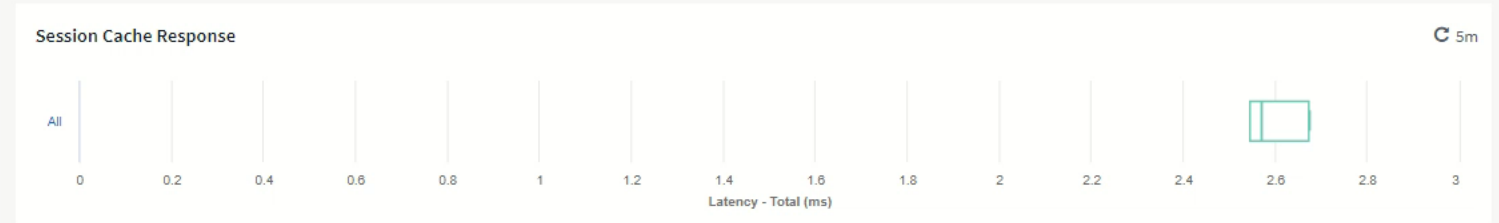
2.72sec Peak Duration

HTTP Errors

16 Errors Over 24h

Most Sessions (24h)

2,842 Sessions Most Sessions



MySQL Buffer Pool

76.20% Buffer Pool Current

MySQL Buffer Pool

99.36% Buffer Pool Max



NetApp

買得安心、事後放心

1 市佔第一

2 全面雙支援

3 多雲整合

4 四大備品倉

5 投資無浪費