

HPE ProLiant Gen12 全新亮相

—
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企業面臨的主要挑戰



安全漏洞

缺乏可見性和即時的洞察能力

支援新的使用案例/工作負載

效率低下 – 能源使用、成本

HPE ProLiant Gen12

帶來更高水準的安全性、性能和效率



安全

更高級別的安全性

採用穩健、安全優先的設計，並針對當前和未來的威脅提供多層保護

優化

更高的性能和效率

提供量身定製的解決方案來支援從 VDI 到 AI 的工作負載的經濟性

自動化

AI 驅動自動化生產力

利用單一管理解決方案，實現從數據中心到邊緣的主動和預測性自動化

更高級別的安全性

多層保護

符合 **FIPS 140-3 3 級** 要求

抗量子破解

Rack Level 的可靠供應鏈

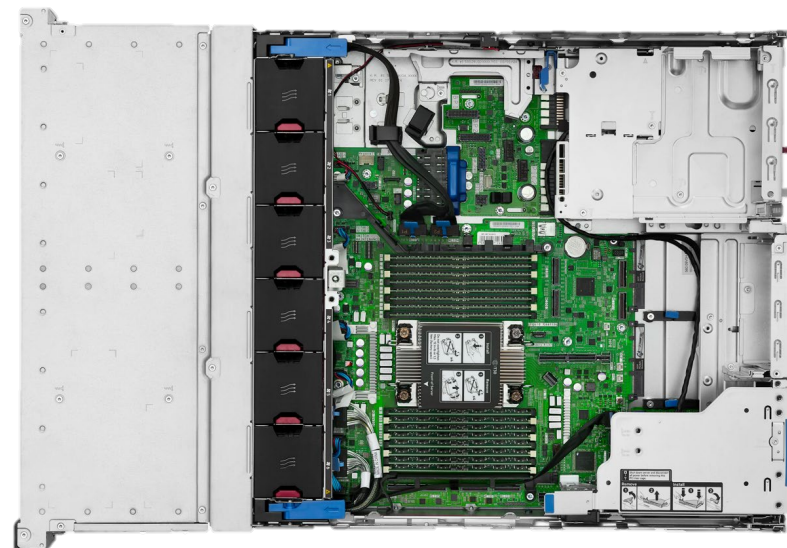


全新 HPE iLO 7 提供額外的保護層

HPE 領先業界的安全創新為基礎

NEW!

安全區域是一個獨立的安全處理器，可在 HPE iLO 7 中通過基於硬體的新保險庫提供多層保護



為密鑰、密碼和安全配置提供無與倫比的防篡改保護，這對於強化易受攻擊的邊緣環境尤為重要

現在就為未來的安全標準做好準備

NEW!

首款滿足 **FIPS 140-3** 第 3 級要求的行業標準伺服器，並將通過具有安全區域的 **HPE iLO 7** 獲得認證



NEW!

第一台支援 **NIST** 和 **CNSA 2.0** 抗量子破解伺服器*，具有針對未來量子計算攻擊的安全固件簽名



HPE 為更高級別的安全性設定了標準

HPE Compute Ops Management

Automated, AI-driven productivity

Centralized, cloud experience to automate lifecycle tasks

NEW!

Proactive Security Management

NEW!

HPE ProLiant Compute Gen12

Meets FIPS 140-3 Level 3 requirements*

NEW!



Quantum resistant

NEW!



Secure Enclave

NEW!



Silicon Root of Trust

HPE Unique IP



Trusted Supply Chain
Now at rack scale

NEW!



NEW HPE iLO 7



* Meets FIPS 140-3 Level 3 requirements and will be pursuing certification,

更高的性能和效率

Consolidate and save

AI 優化的伺服器平臺

卓越的冷卻效率



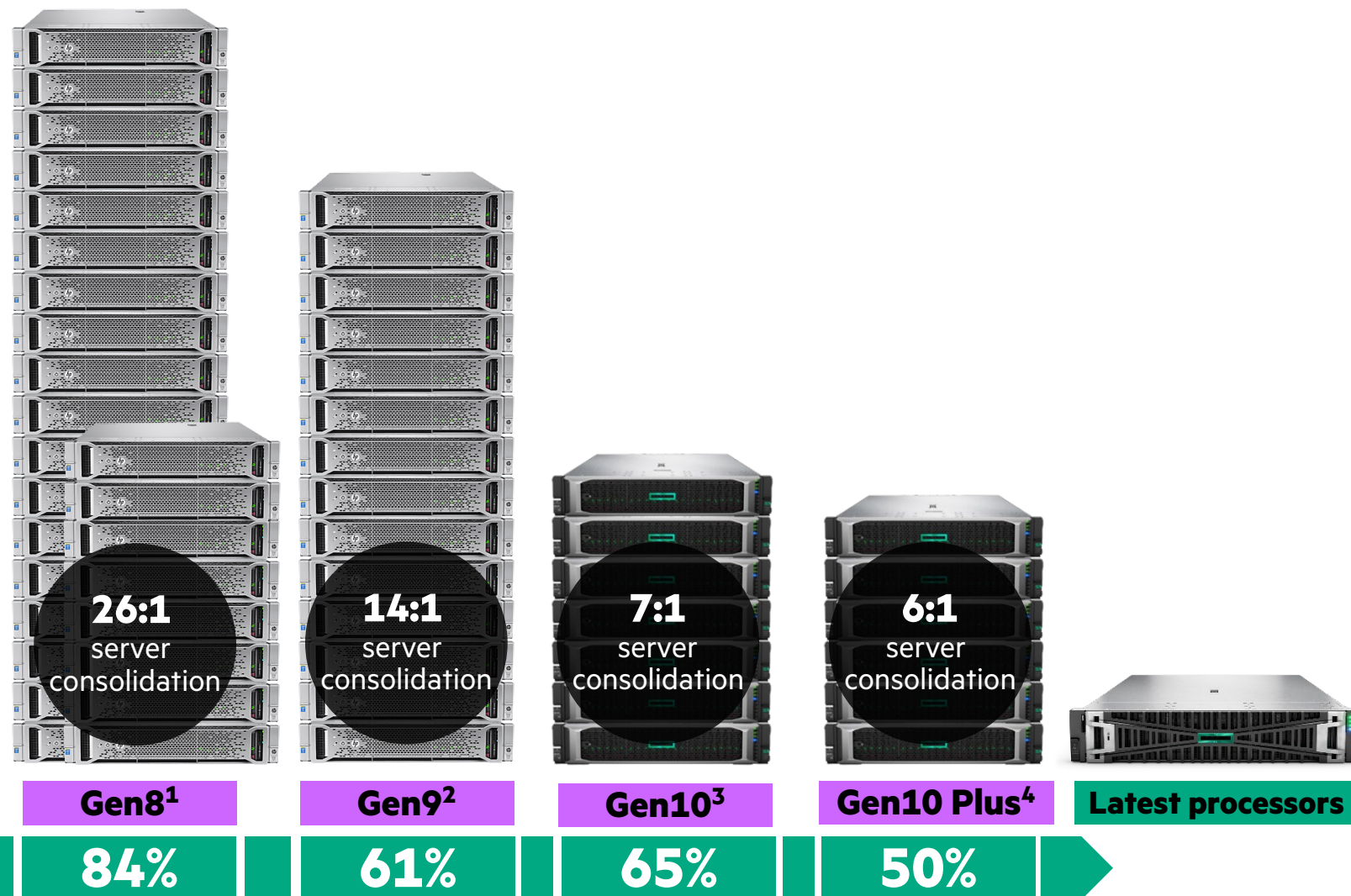
迄今為止最引人注目的伺服器更新案例

與 Gen10 相比，每瓦性能提高 **41%**

通過高達 **26 : 1** 的整合釋放資料中心容量 **2**

降低能耗並實現高達**84%**的節能**1**

降低過時的作系統和軟體帶來的風險和技術債務



AI 優化的伺服器平臺

NEW!

與 **NVIDIA** 聯合開發

ProLiant 是 **HPE AI** 私有雲的基礎

在不影響能效的情況下，**HPE ProLiant** 計算 **DL380a Gen12** 配備 **NVIDIA H200 NVL** 技術，最高可達 2 倍 GPU 加速

率先上市的 **HPE ProLiant** 計算 **DL384 Gen12**，配備 **NVIDIA GH200 NVL2,144GB**



2X

與上一代產品相比，GPU能力更強*

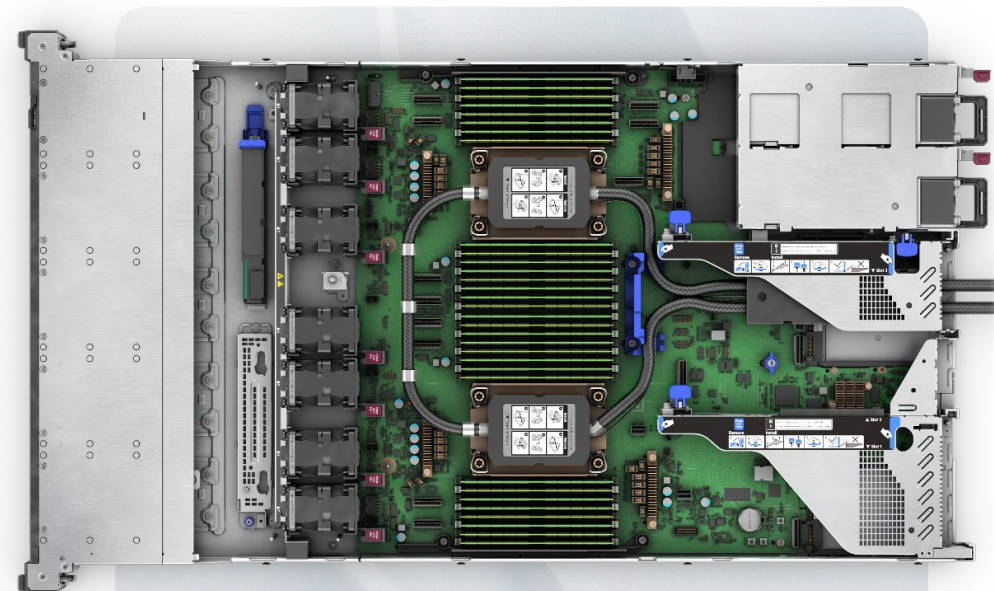
擴展的直接液體冷卻，提高效率

卓越的冷卻效率 for high performance workload needs, ideal for:

- **high performance processors**
- **data centers with limited power allocation**
- **regulatory requirements on inlet ambient temperatures**

HPE 在 DLC 伺服器部署方面處於領先地位

- 300+ patents and 50+ years of expertise
- 7 of the world's top 10 fastest supercomputers are 100% DLC
- 8 of the world's top 15 energy efficient supercomputers are 100% DLC



NEW!

ALL

Intel based 1 and 2-socket Gen12 rack servers will support DLC
(available in select Gen11 servers)

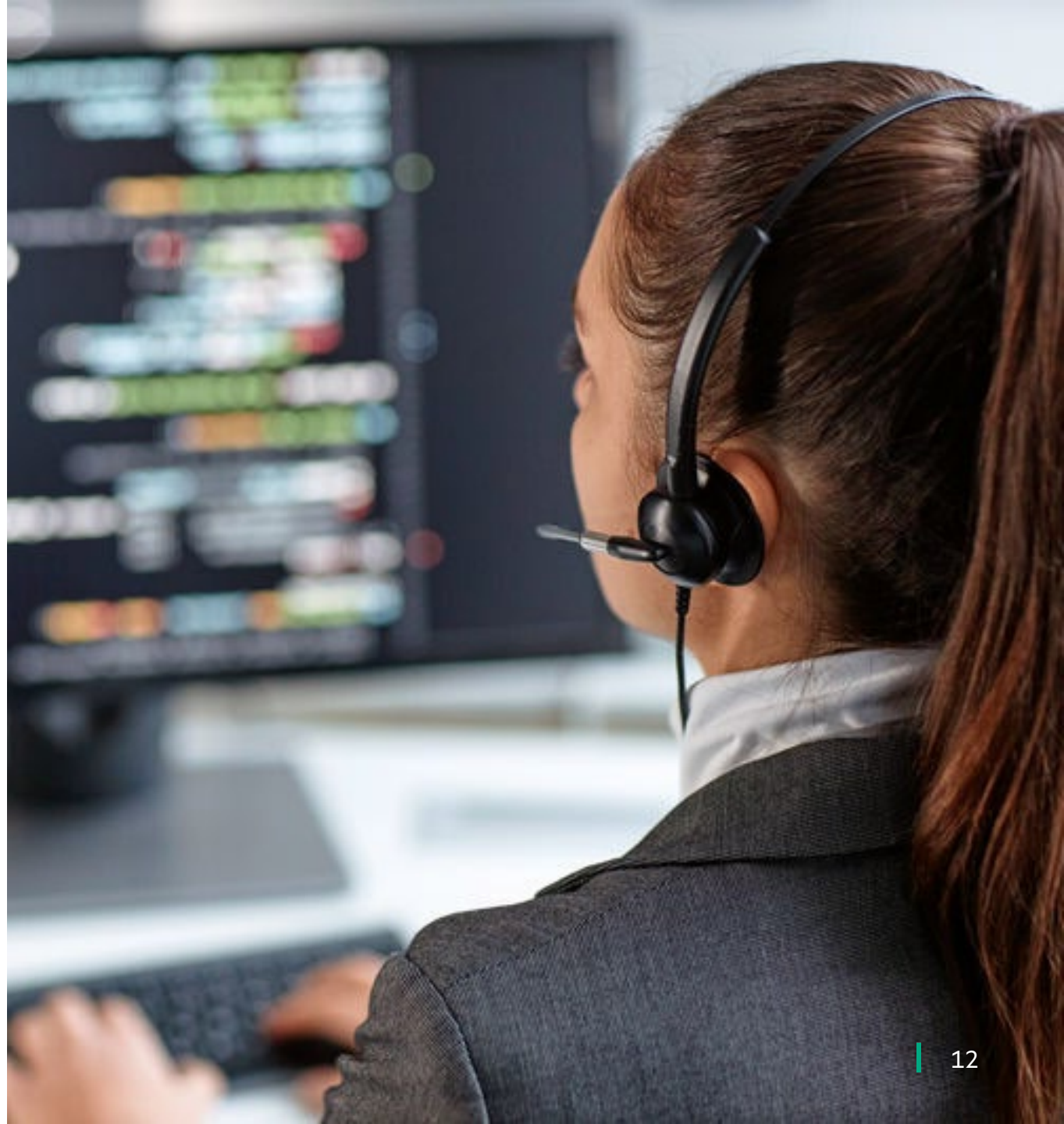
AI 驅動的自動化生產力

預測性 AI 洞察

能源和碳智慧

改進的基於地圖的可見性

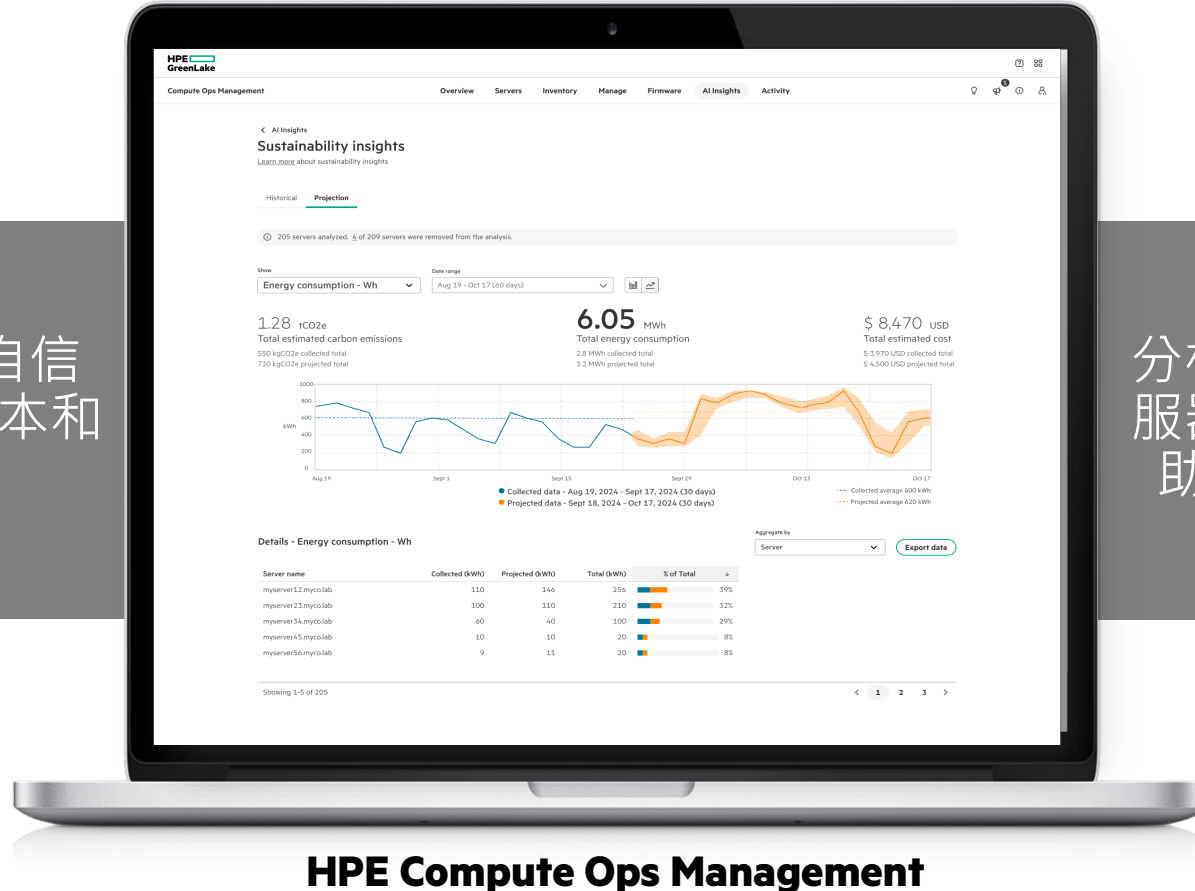
多供應商管理



針對能源和碳排放的預測性 AI 洞察

NEW!

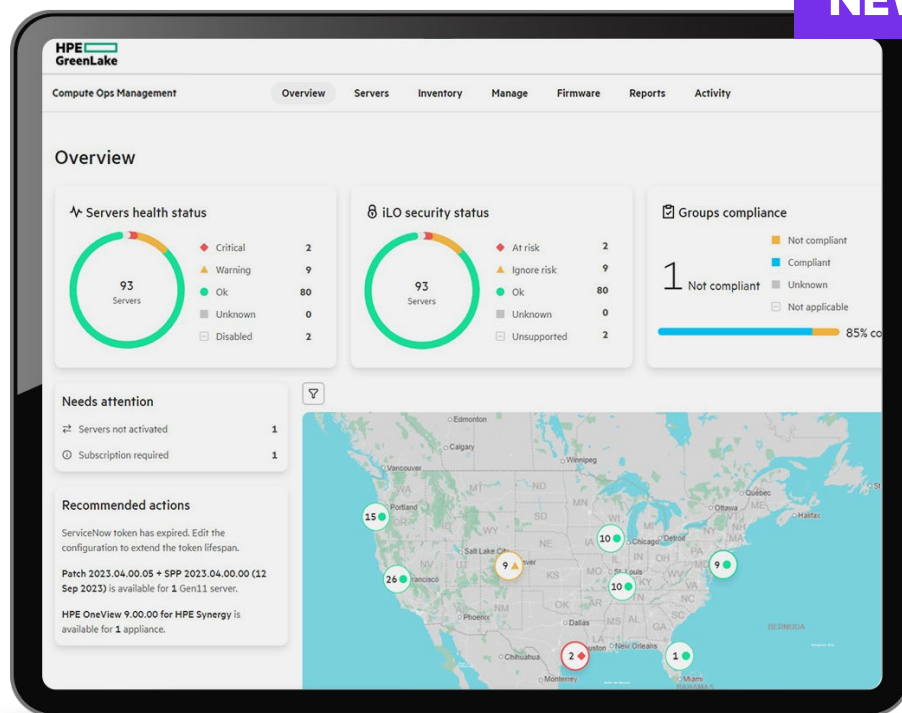
利用預測性 AI 洞察自信地預測未來的能源成本和碳排放。



分析歷史數據以提供對伺服器利用率的預測，以幫助實現能源和排放目標

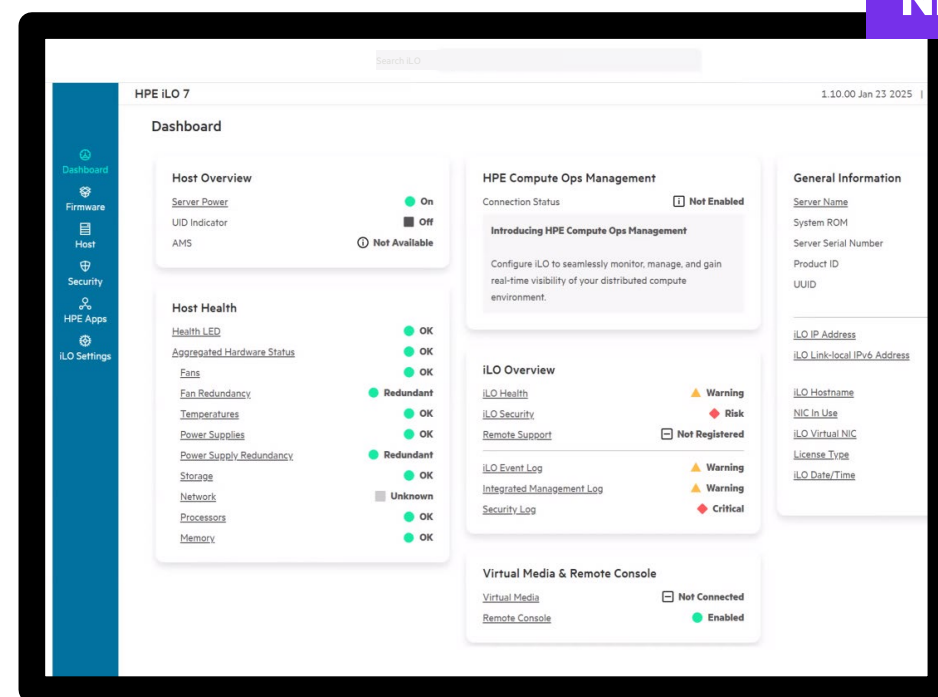
使系統管理者具有更大的智慧和控制力

NEW!



Improved map-based visibility
with **HPE Compute Ops Management**

NEW!



更快、更流暢的用戶體驗

with new **HPE iLO 7**

系統啟動時間縮短多達 30%，虛擬媒體作速度提高 3 倍，從而增強可用性*

HPE 主機運營管理

安全

伺服器訪問、監控和管理減少了安全風險
和合規性問題的風險

自動化

任務以提高效率，減少部署中的手動工作，
並實現無縫、簡化的管理

Up to

75%

減少管理伺服器所
花費的時間*

Up to

4.8 hours

每台主機每年的停
機時間減少*

Up to

\$152K

3 年內節省差旅和軟體成本*

NEW!

與多供應商環境中的現有工具集無縫集成

*Forrester Study: New Technology: The Projected Total Economic Impact™ Of HPE Compute Ops Management (April 2024)

HPE ProLiant 第 12 代主機

Available now

AI 優化



4U, 2P
HPE ProLiant Compute DL380a Gen12
Up to Eight NVIDIA H200 NVL



2U, 2P
HPE ProLiant Compute DL384 Gen12
NVIDIA GH200 NVL2

Available Q1 2025

TCO / 能耗 優化



1U, 1P
HPE ProLiant Compute DL320 Gen12
Intel Xeon 6 processor



2U, 1P
HPE ProLiant Compute DL340 Gen12
Intel Xeon 6 processor

密度優化



1U, 2P
HPE ProLiant Compute DL360 Gen12
Intel Xeon 6 processor



2U, 2P
HPE ProLiant Compute DL380 Gen12
Intel Xeon 6 processor

SMB/Edge optimized



2P Tower
HPE ProLiant Compute ML350 Gen12
Intel Xeon 6 processor

Available Summer 2025

Blade optimized



HPE Synergy 480 Gen12
Intel Xeon 6 processor

大數據優化



4U, 4P
HPE ProLiant Compute DL580 Gen12
Intel Xeon 6 processor

And more to come!

ProLiant 的最新進展



安全

NEW!

Secure enclave in HPE iLO 7
multi-layer protection

Top tier security
meets requirements FIPS 140-3 Level 3

Post Quantum-readiness
support NIST & CNSA 2.0

Proactive security management
via HPE Compute Ops Management

Trusted supply chain
now rack and server level

Secure decommissioning
Onsite collection services



優化

NEW!

Eight new Gen12 Servers
featuring Intel Xeon 6 processor

AI-optimized server platforms
DL380a and DL384

Direct Liquid Cooling (DLC)
Intel based 1 & 2-socket rack servers

Automated, on-demand
carbon footprint reporting



自動化

NEW!

Next-gen HPE iLO 7 improved UX
with faster boot and response

Predictive AI insights forecast
future energy and carbon usage

Threshold-based alerting
for critical energy and carbon limits

Improved map-based visibility
unified global map view

Multivendor management
integration with 3rd party toolsets

Gen-to-Gen Evolution

Specification	Gen10 Plus	Gen12	Gen11
CPU	Ice Lake – up to 40C	Sierra Forest– SP – up to 144C ; Granite Rapids- SP- Up to 86C	Sapphire Rapids (incl. HBM) – up to 60C Emerald Rapids – up to 64C
PCIe	64x PCIe Gen4	88x PCIe Gen5 lanes / socket for SP (Rich IO Single socket CPUs/136 lanes are excluded)	80x PCIe Gen5 lanes / socket
Memory channels	8x DIMM channels / socket Support for 2 DIMMs per channel	8x DIMM channels / socket Support for 2 DIMMs per channel	8x DIMM channels / socket Support for 2 DIMMs per channel
Memory support	DDR4, up to 3200 MT/s, 32DIMM Slots 8GB	DDR5 , up to 6400 MT/s, 32DIMM Slots, 16GB to 256GB	DDR5 , up to 4800 or 5600 MT/s 16GB to 256GB
CTO Server support	SFF/LFF	SFF/LFF/ Hybrid (NVMe & EDSFF)	SFF/LFF/EDSFF
NVMe	Gen4; U.2 and U.3	Gen5 ; x1, x2 & x4 connections U.3 & EDSFF drives	Gen5 ; x1, x2 & x4 connections U.3 & EDSFF drives (U.2 as Private option- Low attach rate)
EDSFF	No support	Gen5; E3.S 1T drives	Gen5; E3.S 1T drives
Power supplies	Up to 1600W	Up to 2200W	Up to 2200W
Cooling	Air cooling; DIMM blanks	Air & Liquid cooling*; DIMM blanks	Air & Liquid cooling*; DIMM blanks
Management engine	iLO 5	iLO 7	iLO 6

HPE ProLiant AI-optimized rack servers

INFERENCE AND FINE TUNE

Real-time Edge AI inference



HPE ProLiant DL320 Gen11
Up to 4 NVIDIA L4 GPUs

- Compact form factor
- Great for computer vision and intelligent video analytics

Scalable and high performing AI inferencing



HPE ProLiant DL380a Gen11
Up to 4 NVIDIA H100/L40s PCIe GPUs

- Advanced scalability
- Power a wide range of graphics and compute use cases

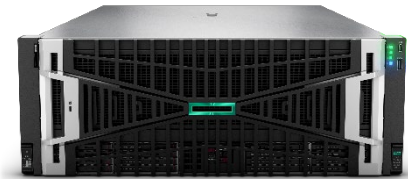
Memory intensive AI inferencing with RAG or non-AI workloads



HPE ProLiant DL384 Gen12
NVIDIA GH200 NVL2*

- NVIDIA GH200 NVL2 with combined fast, unified, coherent memory
- Up to 30% better performance per GPU compared to PCIe
- Ideal for mixed AI and non-AI memory intensive use cases
- 1 or 2 GH200 NVL2 Superchips

Ultra scalable GPU acceleration for large generative models



HPE ProLiant DL380a Gen12
Up to 8 NVIDIA H200 NVL GPUs

- Superior AI performance and scalability
- Larger & faster memory with the H200 NVL GPUs accelerates LLM inferencing
- Ideal for large-scale generative models
- NVLink Bridging of 2 or 4 GPU sets
- Designed for Blackwell

Accelerate enterprise AI time to value with HPE Private Cloud AI

NVIDIA AI Computing by HPE

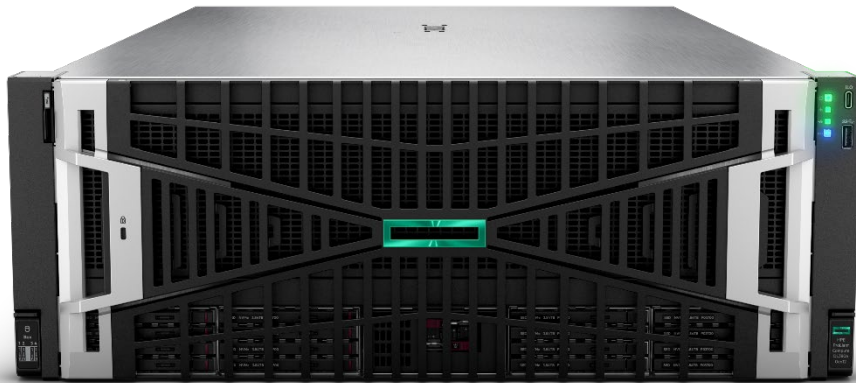
**Ultra-scalable GPU
acceleration for enterprise AI**

**Optimized for scale-up fine-tuning
and inference**

NEW

HPE ProLiant Compute DL380a Gen12

Up to Eight NVIDIA H200 NVL GPUs



**Next-level performance for
memory intensive AI**

**Optimized for scale-out fine-tuning
and inferencing with RAG**

NEW

HPE ProLiant Compute DL384 Gen12

NVIDIA GH200 NVL2



CRAY XD 6500 is the apollo gen 10 plus successor

The CRAY XD Series can handle HPC & Demanding AI Workloads with Air & Liquid Cooling Options

HPE CRAY XD6500 (2023 – Present)



CRAY XD670

x8 Nvidia H100 GPU

- AI Training | Deep Learning GPU-centric workloads
- 2x Intel Sapphire Rapids CPU + 8x NVIDIA H100 GPU



CRAY XD665

x4 Nvidia H100 GPU

- Hybrid CPU | GPU workloads for HPC | AI workloads
- 2x AMD Genoa CPU + 4x NVIDIA H100 GPU

HPE CRAY XD6500 (2024 – 2025)



CRAY XD675

x8 AMD MI300x

- AI Training | Deep Learning GPU-centric workloads
- 2x AMD Genoa CPU + 8x AMD MI300x GPU



CRAY XD670

x8 Nvidia H200 GPU

- AI Training | Deep Learning GPU-centric workloads
- 2x Emerald Rapids CPU + 8x NVIDIA H200 GPU



Air-Cooled & DLC options available



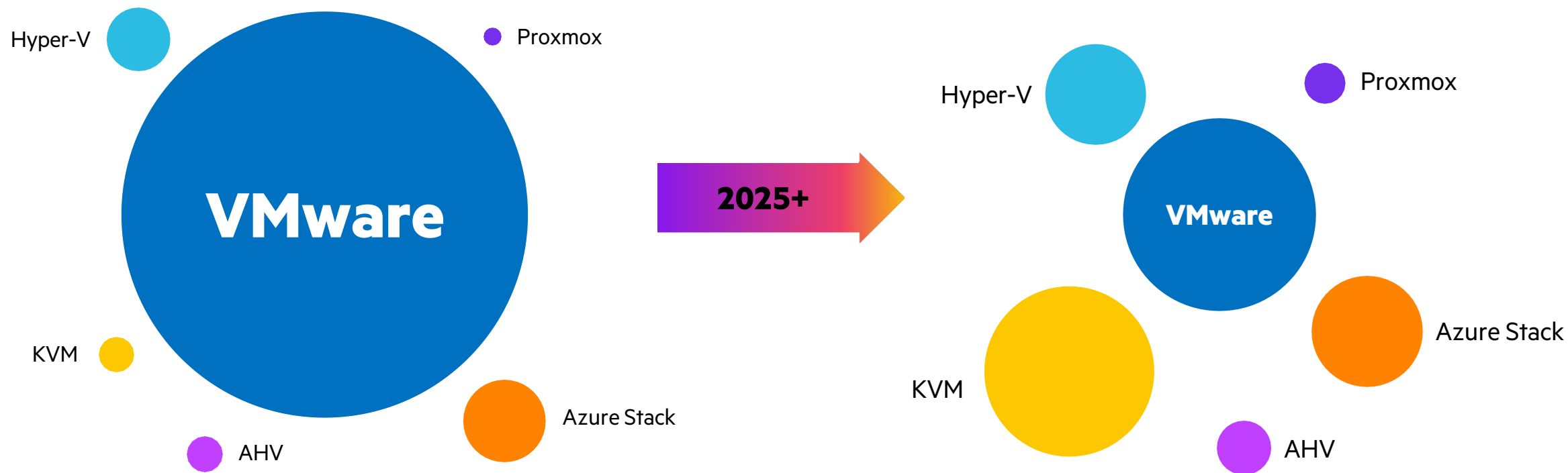
New

The industry's only full-stack virtualization solution

HPE VM Essential

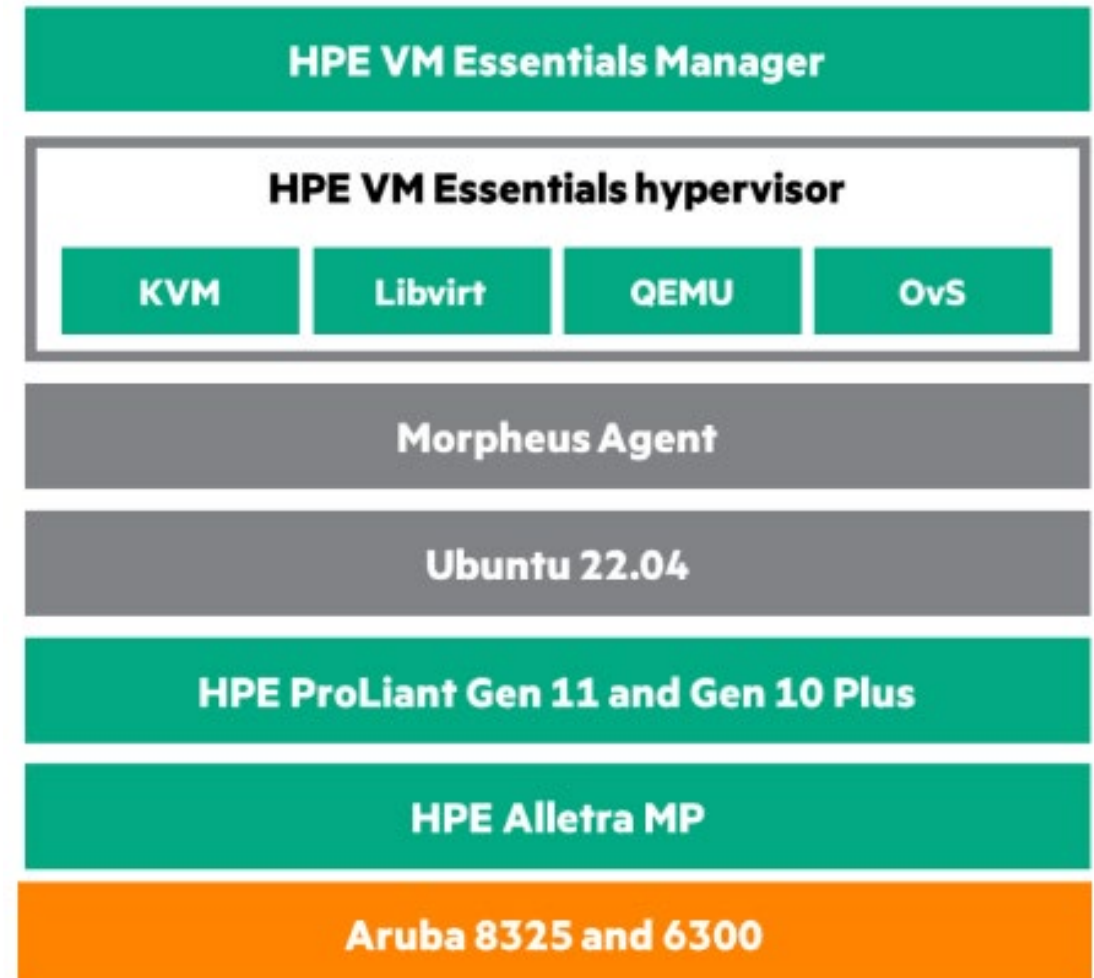


顛覆虛擬化市場



運作邏輯架構

- **HPE ProLiant Gen 11/Gen10 plus Servers**
 - The HPE VM Essentials hypervisor has been validated on the HPE ProLiant Generation 11 series servers.
- **Ubuntu 22.04**
 - The base operating system for the HPE VM Essentials hypervisor is **Ubuntu 22.04**. The installation of the base Ubuntu operating system is a requirement for deployment of the hypervisor.
- **Morpheus Agent**
 - The software that runs on each hypervisor host that **collects system stats, logs, and executes operations received from the management server**.
- **Kernel Virtual Machine (KVM)**
 - KVM is the underlying virtualization technology used in the HPE Virtualization solution.
- **QEMU**
 - **A generic machine emulator and virtualizer for running Windows and Linux operating systems.**
- **Libvirt**
 - A hypervisor **independent API for managing platform virtualization**.
- **Open vSwitch (OvS)**
 - OvS is the underlying virtual networking technology used in the HPE Virtualization solution.
- **HPE VM Essentials manager**
 - **The management server that provides KVM clustering, identity, virtual machine provisioning, monitoring, logging, and more.**



HPE VM Essentials軟體統一VMware和HPE VME虛擬機管理平台

- 使用 **HPE VM Essentials** 整合虛擬機監控程式降低成本

Featuring core capabilities to diversity VM estates including storage optionality (local, NFS, iSCSI, Fibre Channel), distributed workload placement, VM HA and live migration, data protection via snapshots and backup, and DR with Zerto.*

- 簡化 **VMware** 和 **HPE** 的管理

Connect existing VMW clusters for management and VM-vending into ESXi and HPE VME hypervisor from one interface. Also includes IPAM and DNS integration, automation execution, secrets management, and VMW to KVM image conversion.

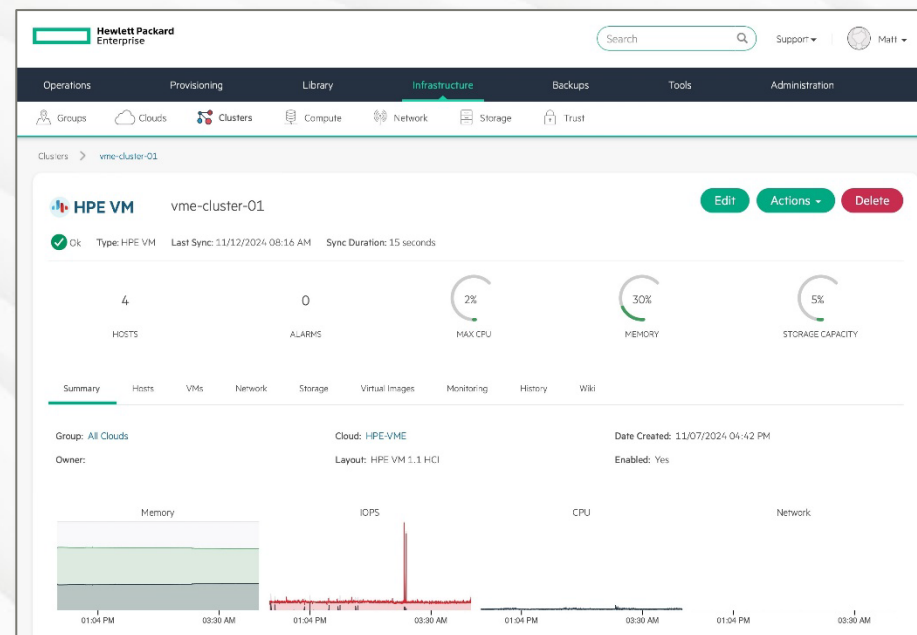
- 具有靈活消費和升級路徑的未來IT

Available as standalone software and integrated into HPE Private Cloud. Customers can upgrade to full Morpheus PlatformOps for hybrid cloud management, K8s support, governance, and FinOps capabilities.

- 通過企業級支持和生態系統降低風險

Building on a proven KVM core, HPE VM Essentials includes HPE's enterprise-class global support. HPE is working with its ecosystem of ISVs to expand HPE VME hypervisor certification and support for Data Protection, VDI, ERP, etc.

- Standalone Software for HPE & 3rd party hardware
- Will be fully Integrated HPE Private Cloud offerings
- Ubuntu pre-req today. Integrated installer in 1H25.



* Zerto integration with HPE VM Essentials on roadmap for 1H 2025

HPE VM Essentials 虛機管理功能

HPE 認證硬體

The HPE VM Essentials hypervisor has been validated on **HPE Gen 11** servers to **deliver an optimal experience and provide hardware compatibility assurance**.

VM 線上遷移

Migrate a running HPE VM Essentials virtual machine from one host to another within the same cluster with **zero downtime. (Vmotion)**

VM High Availability

Automatically restart HPE VM Essentials virtual machines on another host in the same cluster in the event of an unexpected host failure within the cluster. **(HA)**

動態工作負載調度

Dynamically schedule the placement of HPE VM Essentials virtual machines within a cluster based upon optimal workload distribution across the cluster. **(DRS)**

Storage 遷移

Migrate the virtual disk(s) of a running HPE VM Essentials virtual machine from one storage datastore to another with zero downtime. **(storage motion)**

VMware VM 移轉工具

Convert existing VMware virtual machines to the HPE VM Essentials hypervisor using the native conversion feature within the HPE VM Essentials solution.

HPE VM Essentials 功能

內建資料保護功能

Backup and restore HPE VM Essentials virtual machines using the solution's native data protection feature.

虛機快照

Create and revert snapshots for HPE VM Essentials virtual machines.

外部儲存支援

The HPE VM Essentials hypervisor supports running virtual machines on external storage via **iSCSI, NFS, and Fibre Channel**.

整合 **HPE Alletra MP Storage** 空間佈署

HPE VM Essentials includes an integration with the HPE Alletra MP storage array that enables HPE VM Essentials virtual machines to natively reference the Alletra MP storage for their storage (1:1 VM to disk mapping).

整合 **HPE Alletra MP** 磁碟陣列硬體快照

The Alletra MP storage integration provides the ability to **create and revert array-based snapshots** for HPE VM Essentials virtual machines through the HPE VM Essentials UI.

HPE VM Essentials 功能

多 Hypervisor 支援

HPE VM Essentials enables simple provisioning and management of **HPE VM Essentials** virtual machines as well as **VMware** virtual machines.

集中身份和單點登錄 **Single Sign-On (SSO)**

Enable external user authentication using Active Directory **(AD) or LDAP**. Enable single sign-on with Okta, OneLogin, Azure AD, or SAML.

IPAM 功能整合 (虛擬機 網路 IP 管理)

Integrate with external IPAM providers (Infoblox, phpIPAM, BlueCat) to **automate the reservation of an IP address** for the virtual machine during the provisioning process.

DNS 整合

Integrate with external DNS providers (Infoblox, Microsoft DNS, BlueCat) to **automate the creation of DNS records** for a virtual machine during the provisioning process.

虛擬機佈署自動化

Execute Bash or PowerShell scripts during virtual machine provisioning to automate system bootstrapping operations.

Day 2 自動化

HPE VM Essentials supports the execution of Bash and PowerShell scripts on provisioned and discovered virtual machines.

金鑰管理

Securely store and retrieve secrets from the native secrets manager for use with the solution's task automation feature.

HTML 5 Virtual Machine Console

Access the console of HPE VM Essentials virtual machines and VMware virtual machines via the HTML5 VM console.

HPE VM Essential 的價值主張

- 具有價格競爭力的 **VMware** 替代方案
 - Priced **per socket** on VME KVM hosts for significant savings in most configurations compared to per-core licensing found in VMware. Also eliminates un-needed software which is forced into VMware suites like VVF and VCF.
- 統一管理體驗
 - Connect existing ‘brownfield’ VMware vCenter clusters for management and VM-vending into ESXi and HPE VME from one simple interface.
- 垂直整合的硬體和軟體解決方案
 - Integrated into the HPE hardware portfolio to leverage software and hardware synergy to deliver differentiating technical capabilities.
- 具備升級至全功能的**Morpheus**路徑
 - Upgradable to full Morpheus PlatformOps suite to add additional hypervisors and public clouds, Kubernetes support, governance policy enforcement, and cloud cost management and optimization capabilities.



HPE VM Essential 展示



<https://www.hpe.com/psnow/ebook/a95a30e1-7f3b-4c68-b6de-7791310217a4?hf=hidden>

HPE VM Essential 總結

1. 超具價格競爭力的VMWare 替代方案
2. 垂直整合 HPE 硬體、軟體支援
3. 支援多個Hypervisor (VMWare /KVM)
4. 內建 VMWare 移轉至 HPE VME 工具
5. 內建 備份功能

Thank you
