

Veritas Backup Exec 家族產品介紹

應有盡有的全方位資料保護。
簡單、安全！
只有 BE 家族

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VERITAS™

當今的資料管理挑戰



雲端

92% 的組織戰略涉及向雲端的過渡,超過 1/3 的遷移到複雜性是一個挑戰



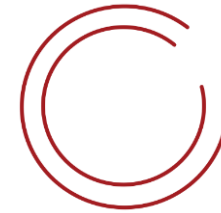
儲存成本

到 2020 年, IDC 估計我們將看到 44 ZB (10^{21}), 導致儲存需求和成本增加



大數據

IDC 估計,到 2020 年,37% 的資料如果進行分析,將帶來價值,從而實現 4300 億美元的生產率提升。



合規

Gartner 估計,超過 80% 的企業資料是非結構化的,可能包含個人身份資訊 (PII)



業務連續性

根據 Ponemon 研究所的一份研究報告,資料中心的中斷成本約為每分鐘 9000 美元。

然後, 還有勒索軟體的威脅...



12%

企業越來越有針對性
2019年損失成本高達115億美元

勒索軟體在 2019 年給企業造成了超過 115 億美元的損失，預計到 2021 年，全球經濟將損失6 兆美元。



20%

消費者攻擊正在減少，因為肇事者意識到針對企業的價值

• 賽門鐵克資訊安全報告,2019

客戶的攻擊體驗

2020 年導致勒索軟體感染的交付方法

- 惡意活動, 例如網路釣魚電子郵件和惡意廣告
- 人員缺乏安全培訓
- 薄弱的存取控制和風險意識的密碼管理



預防勒索軟體攻擊的保護週期(Ransomware Protection Cycle)

保護 (Protect)

阻止勒索軟體 (Keeping Ransomware Out)

- 人員教育訓練
- 惡意軟體防護工具
- 認證/存取管理
- 無法變動資料的儲存環境
- 強化軟體/硬體

檢測 (Detect)

尋找勒索軟體 (Finding Ransomware)

- 生產、備份、其他環境
- 啟發式：加密中的峰值、檔案重新命名
- 檢測工具：防病毒、入侵

恢復 (Recover)

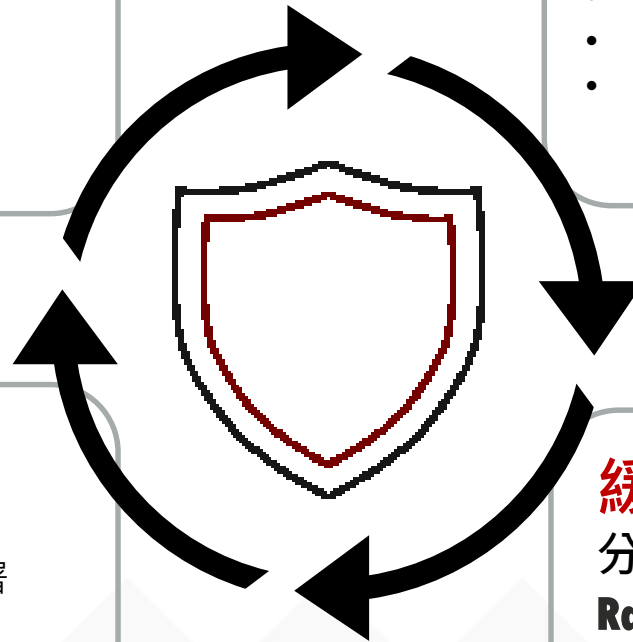
恢復操作 (Resume Operations)

- 查找並恢復最近一次的良好備份環境部署
- 業務/程序部署

緩和 (Mitigate)





分析並刪除勒索軟體 (Analyze & Remove Ransomware)

- 感染範圍
- 修復工具
- 防止重新引入



Backup Exec 家族系列產品

了解產品不同處與定位- 全方位保護企業重要數位資產

	Backup Exec (BE) <ul style="list-style-type: none">• 保護 Windows、Linux 和 Unix 作業系統• 保護各種應用程式和資料庫工作負載,包括從這些工作負載中精細恢復的能力• 保護及即時復原 VMware 和 Hyper-V 虛擬機器 (VM)
	Desktop & Laptop Option (DLO) <ul style="list-style-type: none">• 以使用者為中心的備份解決方案,為組織的 Windows 和 Mac 桌機和筆記型電腦的終端資料保護提供靈活的實現和集中式管理
	Veritas System Recovery (VSR) <ul style="list-style-type: none">• 使用保護伺服器、筆記型電腦和 VM 的單一解決方案降低複雜性• 通過基於影像的備份,快速、高效且頻繁地保護資料和系統• 通過快速、靈活和可靠的恢復,最大限度地減少系統故障中斷
	Veritas SaaS Backup (VSB) <ul style="list-style-type: none">• SaaS 應用程式的備份和復原託管服務• 支援 Office 365、微軟 Dynamic 365、Salesforce 和 Google Suite• 在任何等級都提供具有多個還原選項的時間點還原

Veritas BE家族產品預防勒索軟體攻擊的保護週期

保護 (Protect)

Backup Exec

- 勒索軟體防護v2
- 支持MFA和Keberos
- 支援WORM
- 支持雲端儲存
- 針對VMware和Hyper-V的VM驗證安全性

Veritas System Recovery

- 多個異地副本

Veritas SaaS Backup

- 雙因素身份驗證
- 資料中心間遠端複製

Desktop and Laptop Option

- 回滾Windows
- 氣隙備份到雲端
- 使用Backup Exec保護DLO伺服器

檢測 (Detect)

- 利用第三方惡意軟體/病毒檢測
- 備份異常：增量差異、AI、其他
 - **APTARE \ InfoStudio**
 - **Data Insight**
- 環境儀表板和警報

恢復 (Recover)

Backup Exec

- 虛擬機即時恢復
- 即時將雲恢復到Azure站點恢復
- P2V和B2V恢復
- 簡化災難恢復

Desktop and Laptop Option

- 回滾還原
- 增強的代理程式禁用
- 使用Backup Exec備份恢復DLO伺服器

Veritas System Recovery

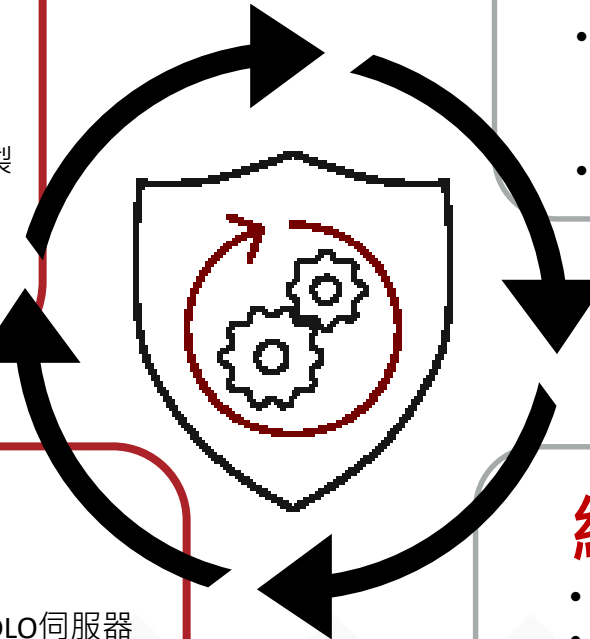
- 任何地方還原的技術- LightsOut

Veritas SaaS Backup

- 時間點還原

緩和 (Mitigate)

- 鎖定備份操作
- 全局圖像搜索和刪除
- 封閉環境分析
- 利用第三方-掃描並刪除惡意軟體
- 儀表板

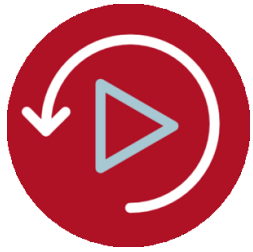


Veritas Backup Exec™ 21 新功能介紹

應有盡有的資料保護。
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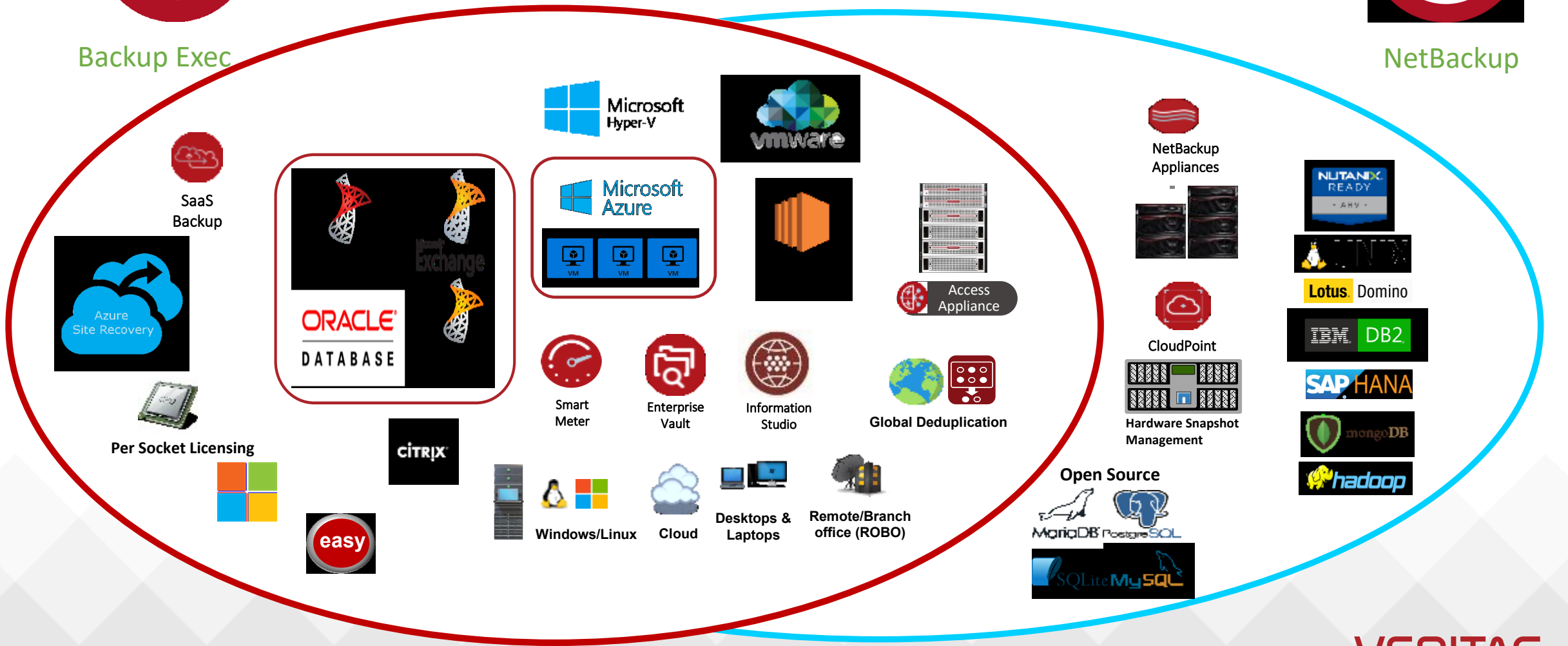
一家親

比您想的多更多



Backup Exec

NetBackup





Backup Exec 或 NetBackup

NetBackup
“Formula 1方程式賽車”



Backup Exec
“房車賽Touring-Car”

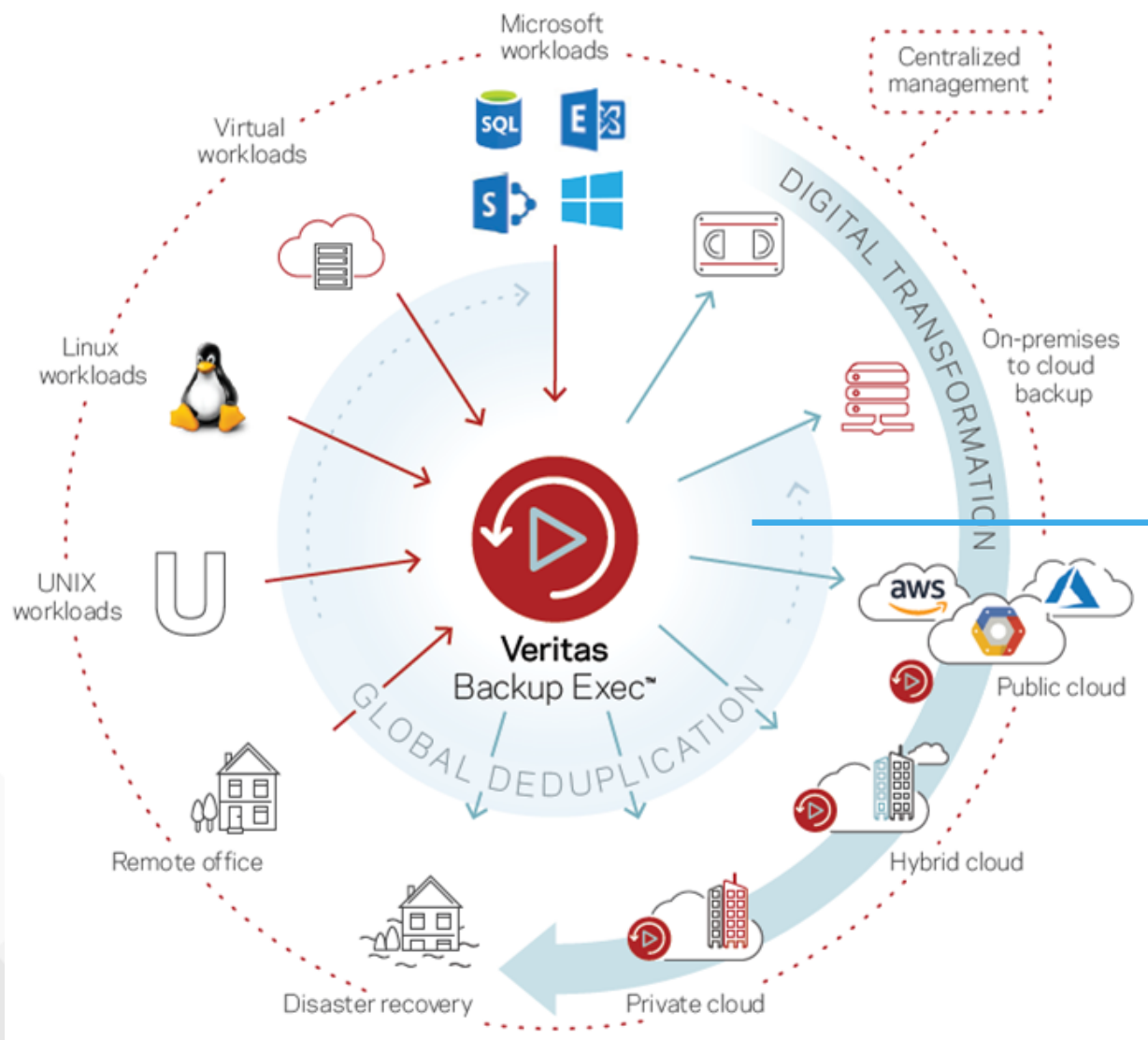


總覽

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Veritas Backup Exec



簡易、安全、統一管理!
適用於虛擬、實體和雲端環境

“簡直是最佳的備份和恢復解決方案，以最高的價格提供頂級的平台支持和便捷的管理”

PC Pro Magazine, September 2019

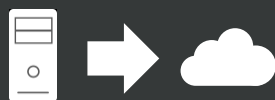
重點摘要

BE 21
2020年4月6日釋出



安全性

- ✓ 雙因子認證(2 Factor Authentication)
- ✓ 惡意軟體防禦 (Ransomware Resilience) (v2)
- ✓ GDPR防護
- ✓ 支付卡行業和TLS 1.2安全合規性
- ✓ 備份全程加密 (Encryption in flight and at rest)



往雲端的旅程

- ✓ Google Cloud-Seoul
- ✓ 整合Azure Site Recovery.DRaaS
- ✓ 支援AWS Glacier, Glacier Deep Archive
- ✓ 資料去重到雲端 (Dedup to Cloud)
- ✓ Azure Archive
- ✓ AWS One Zone-IA 和 Intelligent Tier



效能提升

- ✓ Global Deduplication DD12
- ✓ BE加速備份 Accelerator – 永久增量功能(Forever Incremental)
- ✓ Resilient Change Tracking for HyperV
- ✓ Change Block Tracking for VMware
- ✓ 立即精細還原 (Instant GRT)



更多新增功能

- ✓ 依照要備份的前端TB資料量(FETB) 和 依照執行項次(Instance)數量計價, 有銅/銀/金三種版本
- ✓ Windows Server 2019 version H2
- ✓ RHEL 和 Oracle Linux 8/8.1
- ✓ VEMS Call Home
- ✓ 整合Veritas SaaS Backup報表功能

Backup Exec 21 – Beta版使用回饋

- “到目前為止, 我對Backup Exec 21 Beta的體驗很棒。安裝非常迅速, 我在不到20分鐘的時間內就完成了安裝和運行。”

“借助最新功能, Backup Exec使企業可以從勒索軟體攻擊中恢復信心。即將推出的版本提供的廣泛功能、多雲功能、向雲的災難恢復、更快的備份加速器給我留下了深刻的印象。”

“我的意思是您將通過Backup Exec 21提供下一代資料保護體驗。”



從資料去重複化儲存進行立即恢復(Instant Recovery)

BE 21現在支援備份到重複資料刪除的
虛擬機進行立即恢復(Instant Recovery)

Groups	Server	Status	Last 7 Days of Backup Jobs	Last Backup	N
All Servers All servers and appli... 12 servers	vCenter	Backed up	✓ We Th Fr Sa Su Mo Tu	2/6/2018 1:26:49 PM	2
Retired Servers Servers in this group... 0 servers	VM-2012.lab.vrts	Backed up, VMs recovered	✓ We Th Fr Sa Su Mo Tu	2/6/2018 1:26:49 PM	
	VM-2012EXCH.lab.vrts	Backed up	✓ We Th Fr Sa Su Mo Tu	2/5/2018 11:00:01 PM	
	VM-2012SQL.lab.vrts	Backed up	✓ We Th Fr Sa Su Mo Tu	2/6/2018 1:26:49 PM	

使用變更區塊追蹤(change block tracking)來實現更快的VM備份

將實體機備份轉換為虛擬機並立即恢復新虛擬機(instantly recover the new VM)

安全性

Security

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卓越的安全性和資料隱私

加密 Backup Exec 控制台 & 2FA

存取BE控制台(2FA)所需的憑證

加密

資料進行與靜止/ AES 256位元/密
鑰管理中的加密

PCI DSS 3.1/3.2

支付卡行業資料安全標準合規性

IPv6 和防火牆功能提升

由更多選項使用並限制入站端口

TLS 1.2

傳輸層安全性–應用之間的通信

FIPS 140-2

聯邦資訊處理標準–密碼模組

GDPR 防衛

阻止還原標記的資料以保護隱私



惡意軟體防禦

Ransomware Resilience

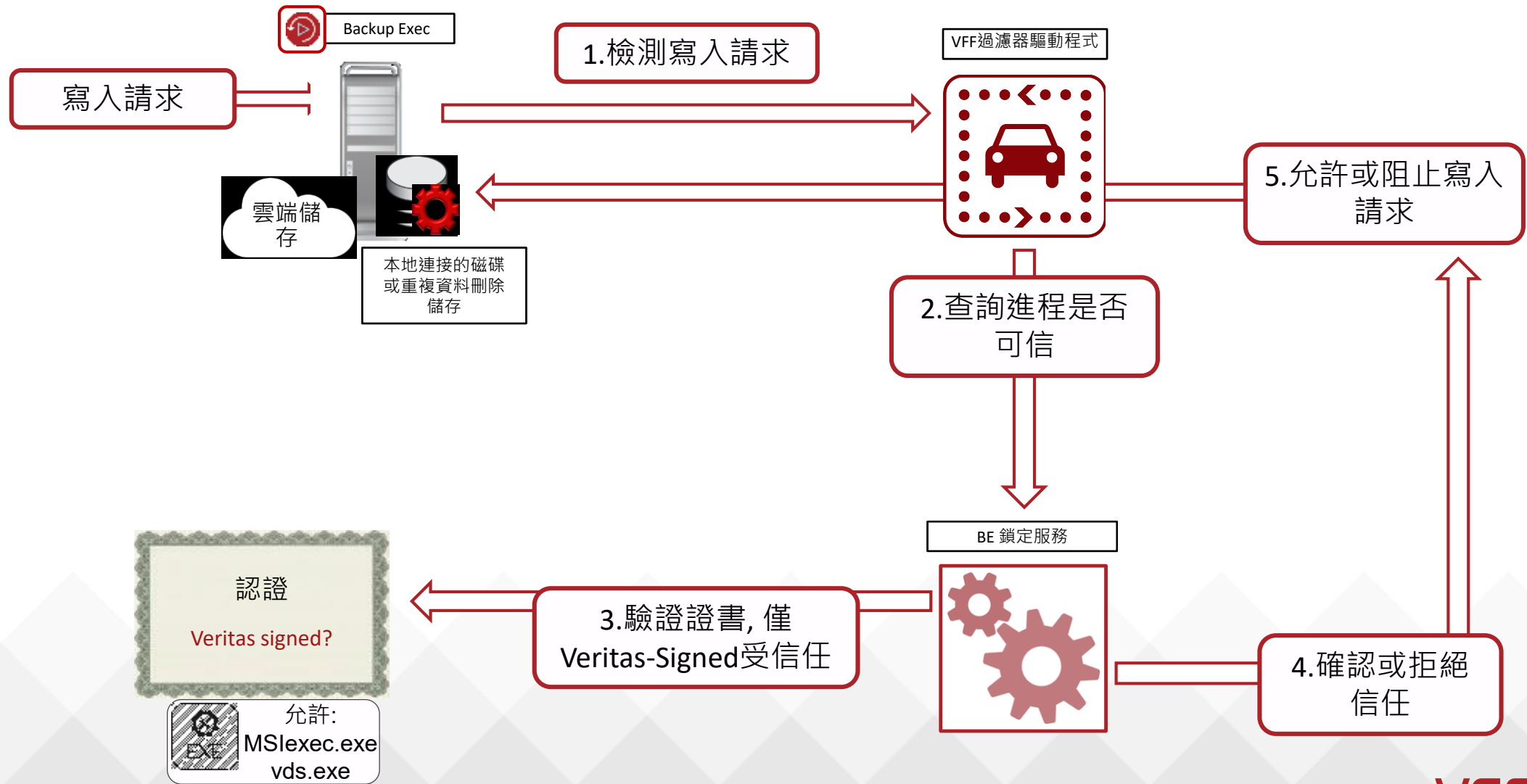
通過兩種方式保護基於磁碟的儲存上的資料免受惡意軟體的攻擊：

- 僅允許受信任的Backup Exec進程寫入基於磁碟的儲存 (在Backup Exec 20.4中引入)
- 防止外部代碼執行Backup Exec進程 (Backup Exec 21中引入)

支付或不支付



磁碟寫入保護 (Disk Write Protection)



默認情況下啟用儲存鎖定

The image shows the Backup Exec settings interface. On the left is a navigation pane with categories like Network and Security, Storage, and Cloud Storage. The main area displays 'User access settings' and 'Disk storage lockdown setting'. The lockdown status is currently 'Enabled'. A tooltip explains that this setting protects disk-based backup storage and can only be disabled by Backup Exec with System Logon Account credentials.

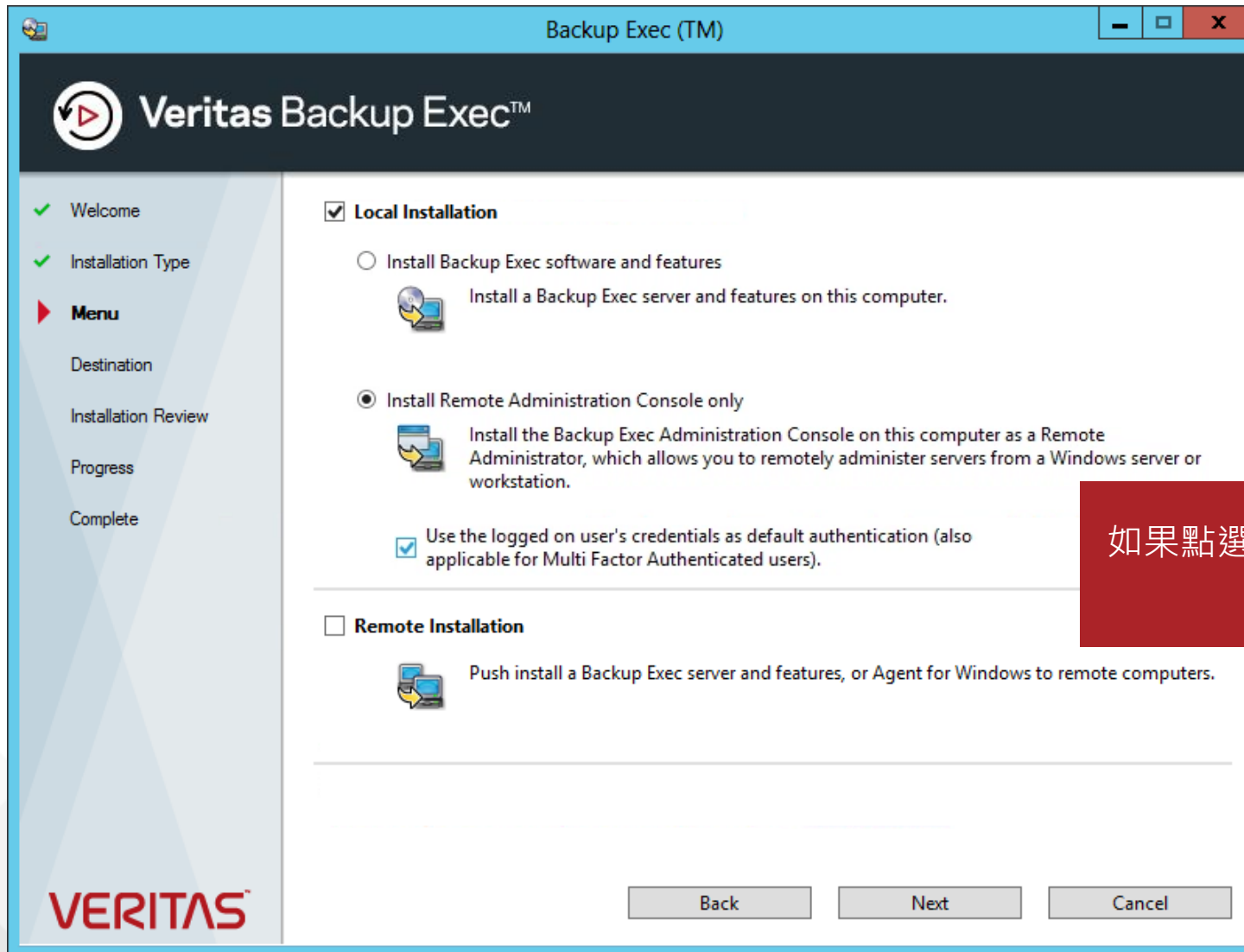
A red callout box on the right states: 啟用/禁用登錄的審核日誌和事件日誌 (Enable/disable login audit logs and event logs).

A second dialog box titled 'Disable disk storage lockdown' is shown in the foreground. It contains fields for 'User name' (pre-filled with MSFT\administrator), 'Password', and 'Reason to disable lockdown'. A tooltip below the dialog explains that the lockdown setting protects disk-based backup storage and can be disabled by providing System Logon Account credentials.

A red callout box at the bottom left states: 需要系統登錄帳戶的憑證 (Requires system login account credentials).

(2FA) 雙重認證-遠程管理

(2FA)Two- Factor Authentication – Remote Admin



如果點選了選框，則預設情況下在連接窗口中啟用SSO

連接到單一登入 (Connecting with Single Sign-On)

RAC 連接窗口顯示 “單一登錄 (SSO)” 複選框 “使用當前用戶的憑據連接”

如果選了SSO複選框，則不需要憑證即可連接

Connect to Backup Exec server

Connection status

Not connected
Services are running. Manage services

Enter a Backup Exec server name and the appropriate credentials

Server name: WINDOWS172SM

User name: test
Use the following format: Domain\Username

Password:

Domain: SQL

Connect with the current user's credentials (also applicable for smart card users)

Help Connect Cancel

保護隱私 (Protecting Privacy)

- 備份和災難恢復副本中的資料必須按照**保留**策略進行保留
- 提供一種**阻止**還原備份中儲存的檔案並管理刪除(DLM)的方法



- **確保**

- 使用加密和加密功能可以很好地保護資料
- 無法查看資料以及元數據(metadata), 也無法將其還原回生產系統
- **離線資訊無法在線獲得**

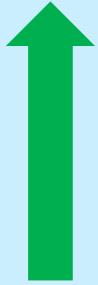
資料去重複化引擎升級

Deduplication Upgrade

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資料去重複化引擎升級總覽



BE 21將BE 20從DD10升級到DD12, 將BE 16/15從DD7升級到DD10然後升級到DD12



將現有的重複資料刪除儲存轉換為DD12

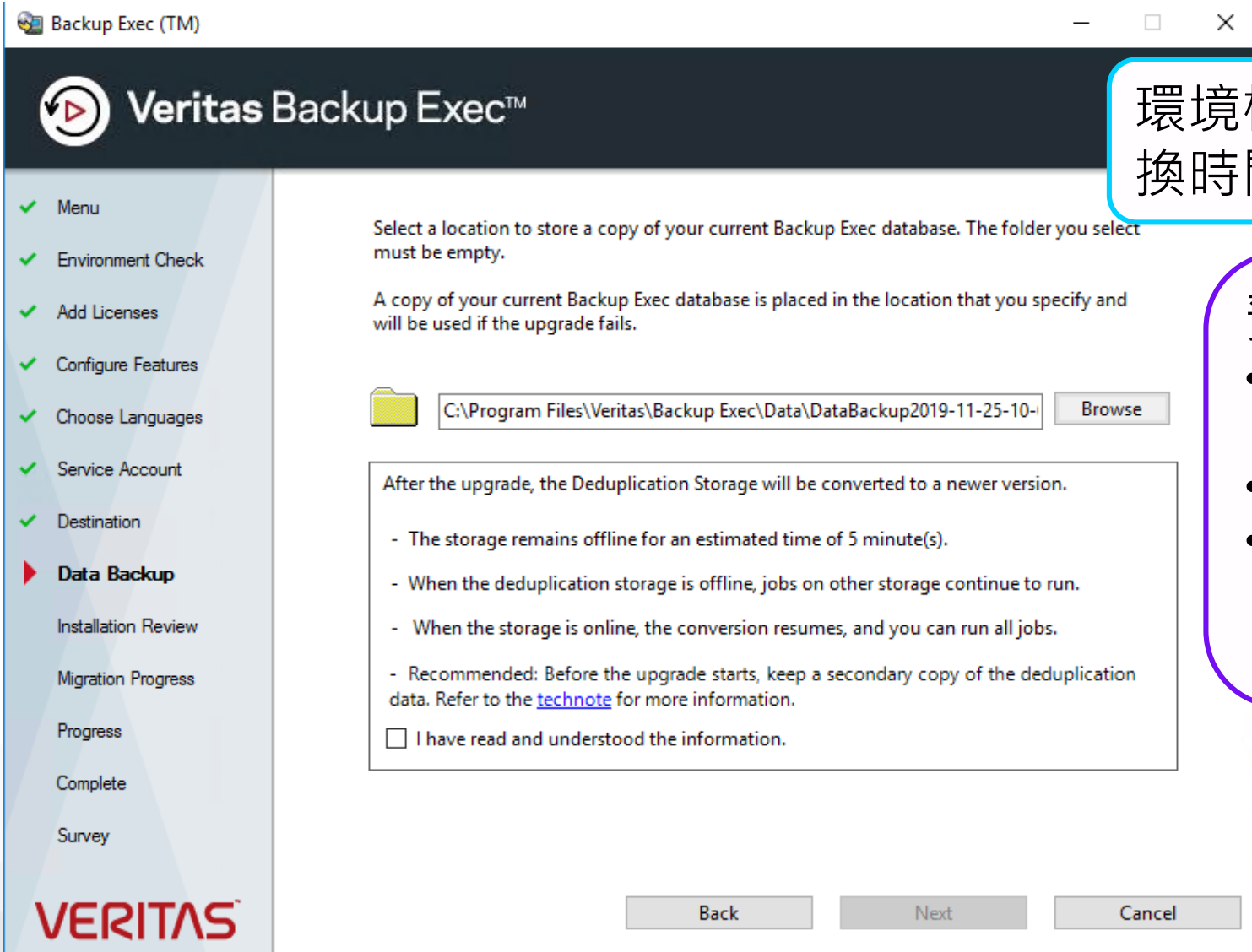


Backup Exec的新安裝包括DD12



與DD10中使用的MD5相比，DD12使用SHA-2哈希算法(hash algorithm)

從BE 16/15 升級到 BE 21



環境檢查估計DD7到DD10升級的轉換時間

預計的時間：

- 重複數據刪除儲存將離線(offline)多長時間
- 僅適用於DD7至DD10升級
- 不包括DD10到DD12升級, 因為重複資料刪除儲存保持在線(remains online)

複選框必須標記為“Next”按鈕
才會變為點擊

從BE 20升級到BE 21

The screenshot shows the Veritas Backup Exec (TM) software interface. The main window title is "Backup Exec (TM)". The interface includes a sidebar on the left with navigation options: Welcome, Menu, Environment Check (highlighted), Add Licenses, Configure Features, Choose Languages, Service Account, Destination, Data Backup, Installation Review, Migration Progress, Progress, and Complete. The main content area displays the "Backup Exec SQL Upgrade" status as "Passed" with a green checkmark. Below this, there is a "Backup Exec Deduplication storage version 12 conversion check" section. A warning message is displayed in a yellow box with a warning icon, stating: "An older version of the Backup Exec Deduplication Storage folder is available on this machine. The existing data in the folder is converted to a new version after the Backup Exec upgrade is complete. The conversion process is resource intensive and may cause the backup and restore jobs to slow down. It is recommended that you delay the upgrade if you have to run some backup jobs immediately." The warning message is highlighted with a blue box. At the bottom of the interface, there is a "Save results to:" field with the path "C:\Users\ADMINI~1\BEA\AppData\Local\Temp\2\backup exec\43753.2050805324" and a "Change" button. Below the field are buttons for "Print", "Back", "Next", and "Cancel". The Veritas logo is visible in the bottom left corner of the interface.

Enterprise Server Option

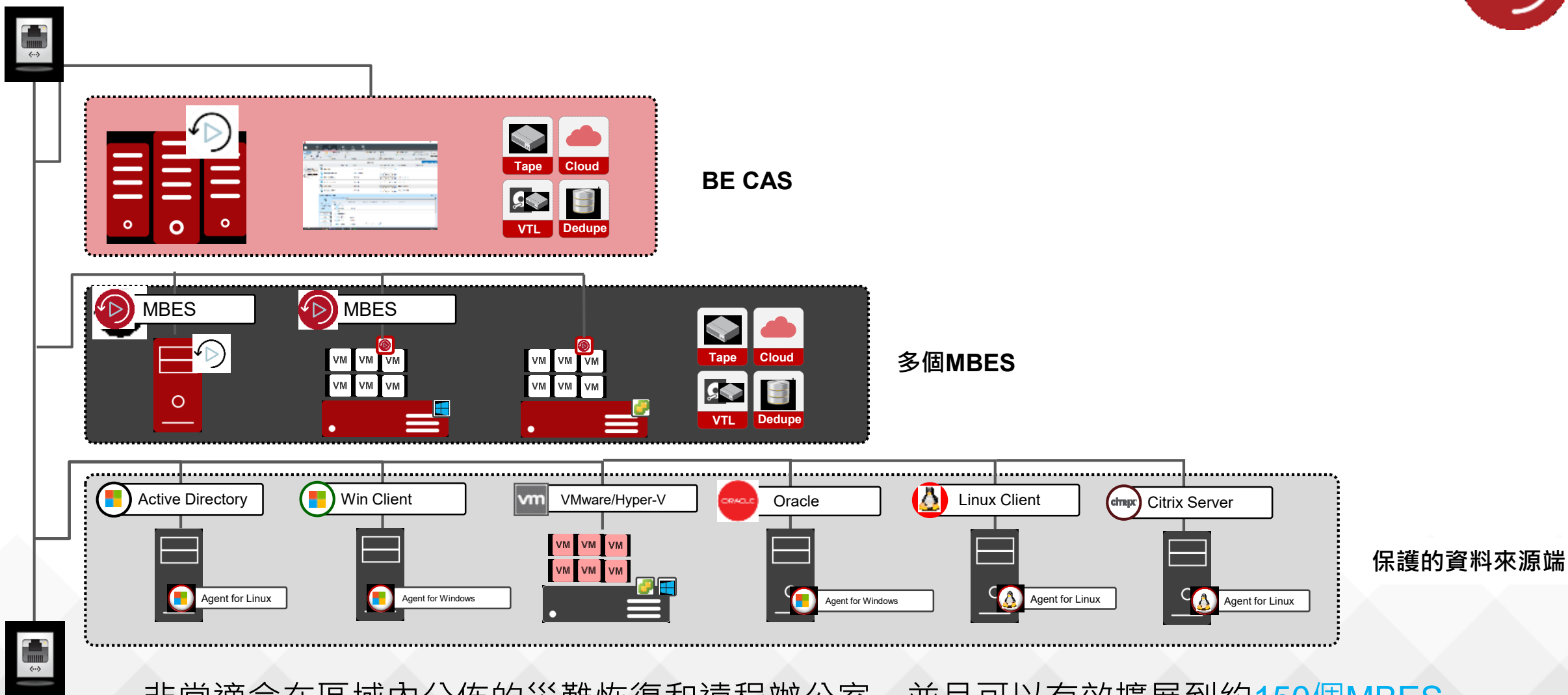
安全通訊

Secure Communications

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Backup Exec的ESO (Enterprise Server Option)選項



非常適合在區域內分佈的災難恢復和遠程辦公室，並且可以有效擴展到約150個MBES

安全的CAS-MBES通信

CAS和MBES使用MessageQ通道進行通信

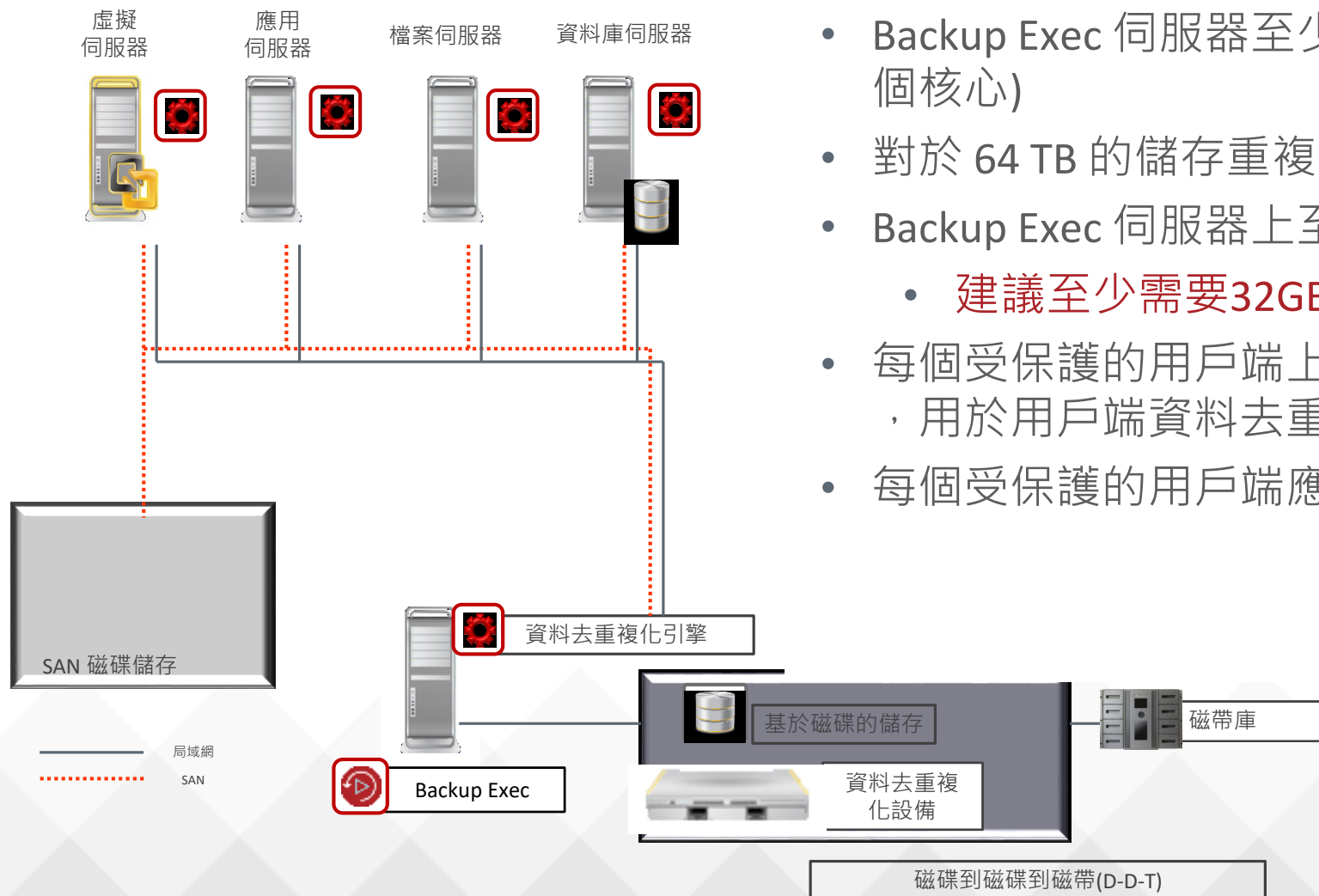
現在，所有的MessageQ資料和通訊都使用TLS /
SSL通訊進行了加密

SSL連接是使用CAS和MBES上已經可用的Backup
Exec認證建立的

可以使用WireShark等網絡嗅探工具來驗證加密的
通信

Backup Exec最低硬體要求

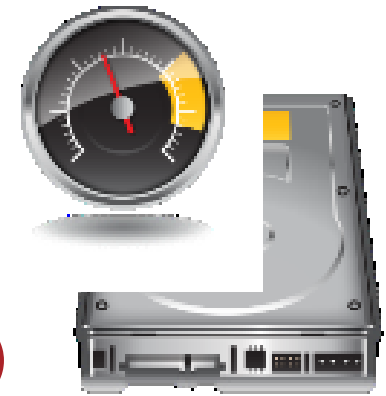
資料去重複化最佳實踐



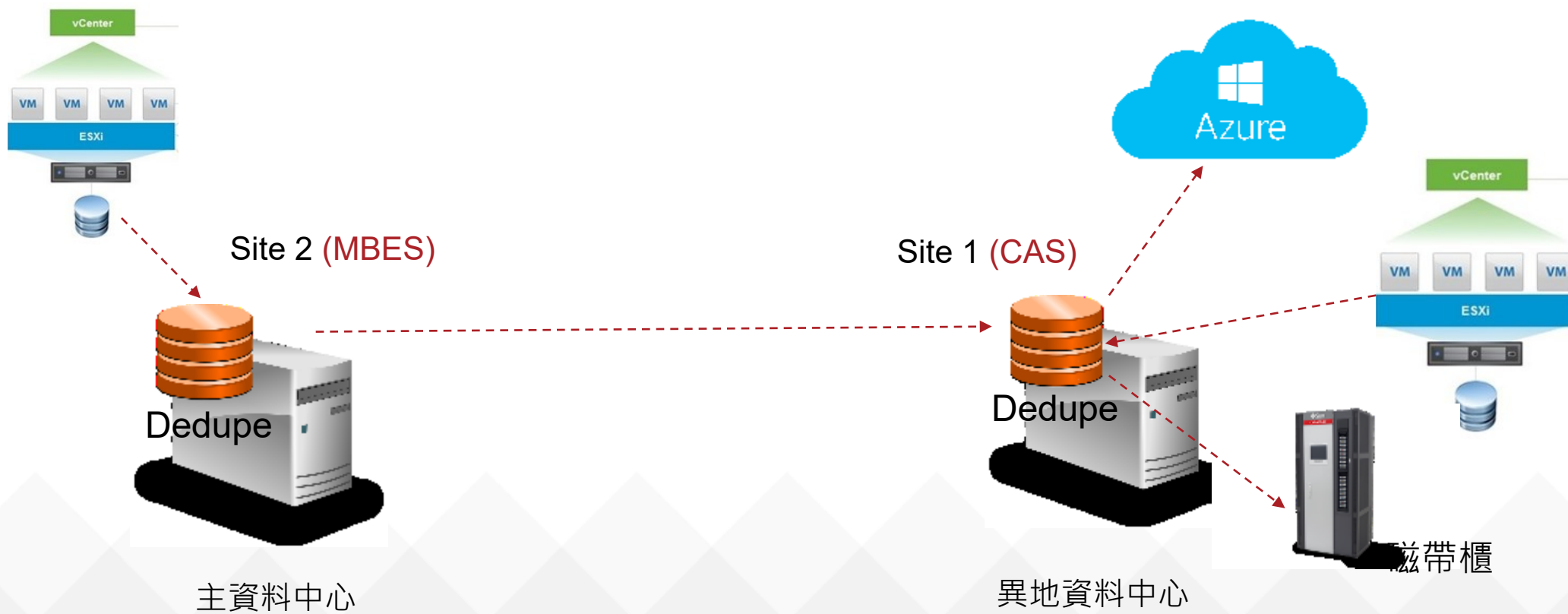
- Backup Exec 伺服器至少包含4 個核心 (Veritas 建議 8 個核心)
- 對於 64 TB 的儲存重複資料，需要 8 個核心
- Backup Exec 伺服器上至少 8 GB 的可用記憶體
 - 建議至少需要32GB~64GB記憶體
- 每個受保護的用戶端上至少有 1.5 GB 的實體記憶體，用於用戶端資料去重複化
- 每個受保護的用戶端應至少具有 1 個雙核處理器

磁碟建議

- Veritas 建議以下操作作為每個讀取、寫入或驗證操作的最小磁碟速度：
 - 儲存高達 32 TB：
 - 每秒 130 MB
 - 企業級性能每秒 200 MB
 - 32 到 48 TB 的儲存：每秒 200 MB
 - 48 到 64 TB 的儲存：每秒 250 MB
 - 建議以區塊(Block)儲存為主 (FC/SAS/iSCSI), 不要用網路磁碟機(SMB/CIFS/NFS)
- 磁碟建議用於單個操作的性能
 - 您可能需要更多功能，具體取決於寫入和從磁碟讀取的目標
 - 您應該瞭解電腦磁碟速度對資料去重複化性能的影響



BE 異地備份範例架構 (資料去重複化)



CAS伺服器的**最小資源規格建議**

- CAS伺服器的最小資源規格**這裡**有寫, 但內容資訊仍不容易判斷實際所需資源需求, 建議參考下列資料去重複化伺服器需求
- **Requirements for the Deduplication feature**
 - https://www.veritas.com/content/support/en_US/doc/59226269-99535599-0/v53929920-99535599
- Backup Exec 伺服器至少包含4 個核心 (建議至少需要8 個核心)
- 對於 64 TB 的儲存重複資料, 需要 8 個核心
- Backup Exec 伺服器上至少 8 GB 的可用記憶體 (建議至少需要32GB~64GB記憶體)

CAS伺服器的**最小資源規格建議(續)**

- CAS伺服器要與BE伺服器相同資源規格,除了記憶體部分不同之外。分散備份索引架構(distributed catalog)下, WAN的效率和穩定性很重要。但為集中備份索引(centralized catalog)的架構下, CAS伺服器規格需要比MBES高。
- **Best practices for Backup Exec catalogs**
 - https://sort.veritas.com/doc_viewer/#/content?id=72686287-139301530-0%2Fv71453368-139301530
- **The system requirements for the Central Admin Server feature (CAS) are the same as the minimum requirements for Backup Exec Gold and Trial editions, with the exception of RAM.**

CAS伺服器的最小資源規格建議(續)

- The following recommendations are to help you choose the best catalog location to use in a Central Admin Server Option (CAS) environment:
 - The distributed catalog location is the default location, and is efficient and suitable for a CAS environment that uses a wide area network (WAN). **An example of this environment is if the central administration server is located in a cloud and the managed Backup Exec servers are on a local network.**
 - The centralized catalog location is best suited for use in a CAS environment that uses SAN-connected shared storage with a stable, high-bandwidth network between the central administration server and the managed Backup Exec servers. **Use a centralized catalog location if the managed Backup Exec servers have minimal CPUs and disk space, and if the central administration server has significantly more CPUs and memory.**
 - The replicated catalog location is best suited for a CAS environment that has a **stable, high-bandwidth network between the central administration server and the managed Backup Exec servers.** A replicated catalog location can provide better performance through catalog redundancy since queries for catalog information are performed locally.

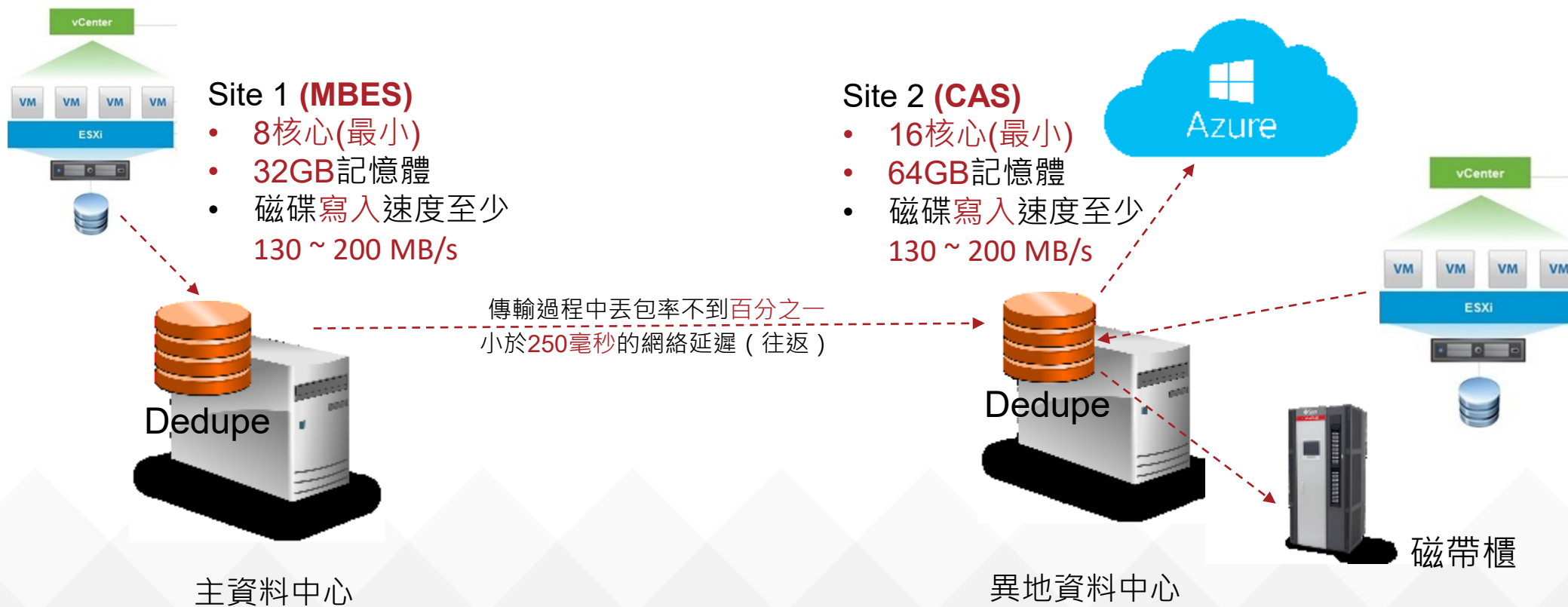
CAS伺服器與MBES之間WAN頻寬有**必須**滿足的需求

- **Best practices for using Backup Exec Deduplication Option with the Central Admin Server Option**
 - https://sort.veritas.com/doc_viewer/#/content?id=72686287-139301530-0%2Fv70445313-139301530
- To perform optimized duplication between a central administration server and a managed Backup Exec server, the following WAN requirements must be met:
 - Less than **one percent packet loss** during transmissions
 - Less than **250 milliseconds network latency** (round trip)

BE異地備份架構建議

- 需使用本地磁碟儲存(block storage)進行重複資料刪除。
- 在異地資料中心上安裝具有本地重複資料刪除功能的CAS。
- 在您有一堆VM要備份的站點上安裝MBES→將這些VM備份到本地重複資料刪除磁碟空間內
- 從CAS可以委派備份以在MBES上運行, 並將一堆VM備份到本地MBES重複資料刪除空間內。
- 與MBES共享CAS Dedupe, 以便可以將MBES上的資料集複製到CAS Dedupe。
- CAS站點還可以將幾個VM備份到CAS重複資料刪除磁碟空間。
- 然後, 您可以從CAS重複資料刪除複製到“磁帶和雲端”。
- 使用重複資料刪除, 客戶可以從MBES到CAS運行opt dupe, 這樣的速度會比較快。
- 使用NAS來當BE儲存空間, 備份的時間會比本地磁碟儲存更久。從VM主機備份到BE, 然後將資料儲存到NAS。

BE 異地備份範例架構 (資料去重複化)



Backup Exec – 要求效能的客戶配置

BE-Server

128 GB MEM

2 x 12 Core CPU

10Gb Teaming

Backup of approx. 120 Hyper-V Servers parallel with 4 data streams to disk (Raid 50 – 100 TB)

17'670.00 MB/min

9'553.00 MB/min

11'279.00 MB/min

19'543.00 MB/min

In average 58'045 MB/min!!!

Backup to Tape reaches approx. 11'000 to 16'000 MB/min max. Average is at 6800 MB/min

Disk layout



Replication from Disk to Deduplication

Name ▲	Server	Storage	Job Type	State	Job Status	Byte Count	Average Job Rate	Elapsed Time
▶ TEST FUSTSERVICE03	SRVHPVCLU001.fust.local	DeDupDiskStorage	Backup	Active: TEST...	▶ Active: Running - Backup	1.16 TB	16'128.00 MB/...	01:33:02
▶ TEST FUSTSERVICE01	SRVHPVCLU001.fust.local	DeDupDiskStorage	Backup	Active: TEST...	▶ Active: Running - Backup	756 GB	10'745.00 MB/...	01:33:02
▶ TEST FUSTSERVICE04	SRVHPVCLU001.fust.local	DeDupDiskStorage	Backup	Active: TEST...	▶ Active: Running - Backup	598 GB	8'870.00 MB/min	01:33:01
▶ TEST FUSTSERVICE05	SRVHPVCLU001.fust.local	DeDupDiskStorage	Backup	Active: TEST...	▶ Active: Running - Backup	402 GB	6'300.00 MB/min	01:33:01

我們雲端的故事

Our Cloud Story

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<https://www.savetime.com.tw>

Backup Exec 和雲端的關係？

1

使用雲端進行長期保留 – 替換磁帶

2

將雲端用於災難恢復站點

3

打包並將本地資源移動到雲端

4

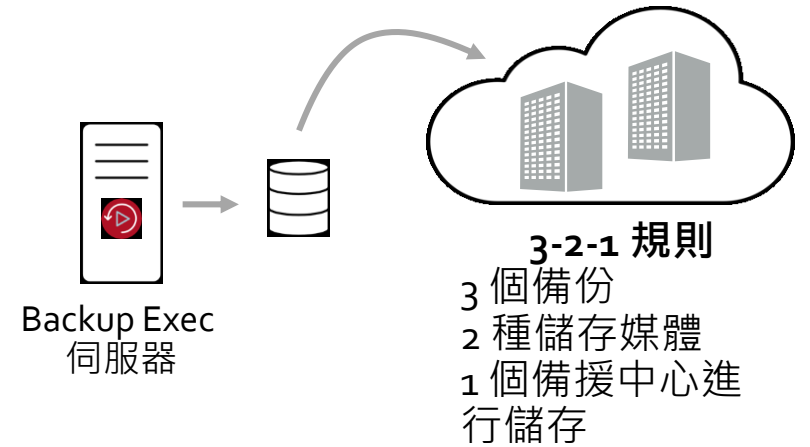
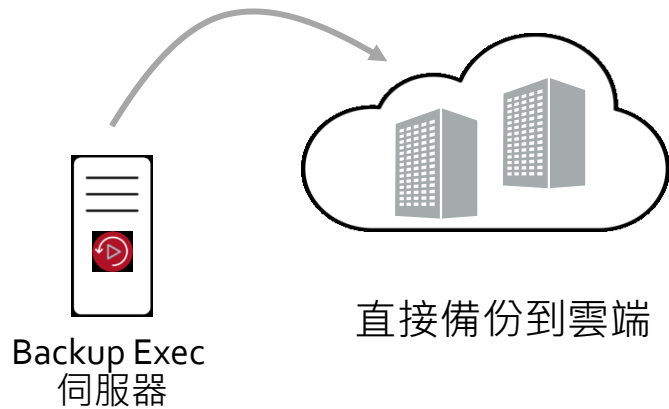
保護您的雲端基礎架構

5

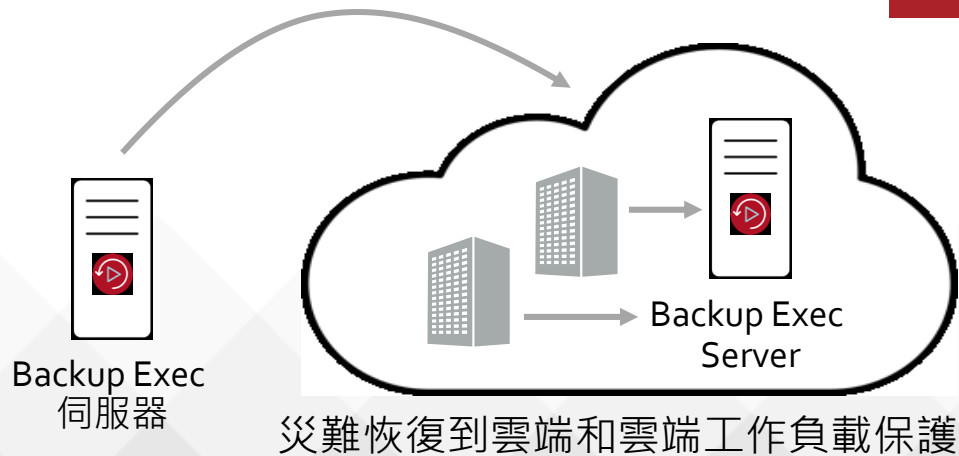
對於合作夥伴 – 向您的雲端供應商進行消費的最簡單方法

Backup Exec和雲端

SSL Secured  AES 128-bit / 256-bit

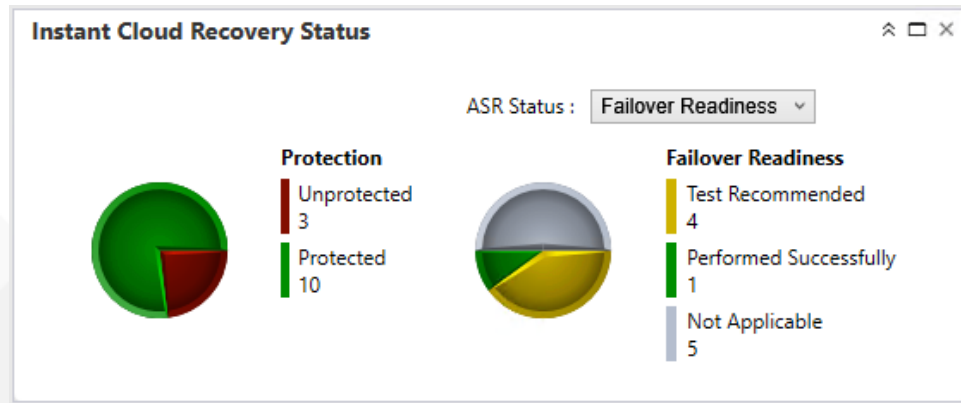
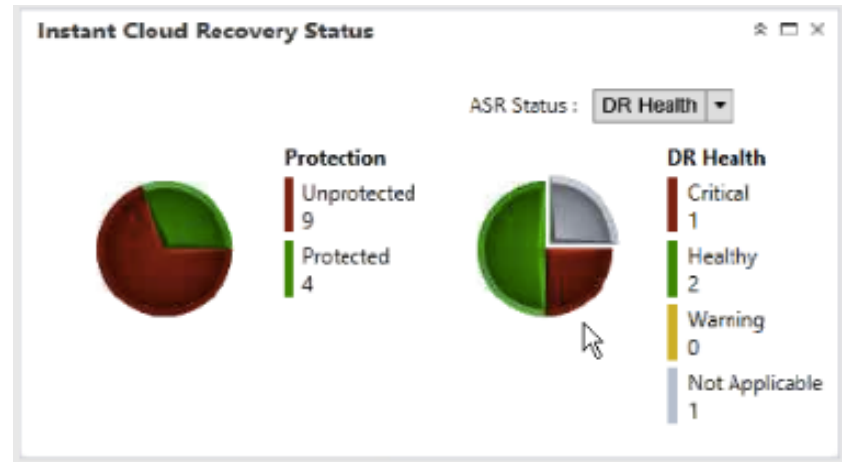


免費連接到雲端



Backup Exec和Azure Site Recovery

Name	Replication Health	Protection Status	Configuration Issues	Last Successful Failover	RPO	Validation Error
Ritu-HyperV-VM	Healthy	Protected	1	1 minute [As on 7/13/2018 11:16:49 AM]		
ASR-HyperV	Healthy	Protected		2 minutes [As on 7/13/2018 11:01:50 AM]		
Ritu-VM2	Healthy	Protected		10 minutes [As on 7/13/2018 11:01:50 AM]		
TestHyperVOff	Not-Replicated	Unprotected				1
H2O-CFG-SVR2	Not-Replicated	Unprotected				1
H2O-CFG-SVR	Not-Replicated	Unprotected				
UbuntuMiniAR1	Not-Replicated	Unprotected				
ritu-w2k8	Not-Replicated	Unprotected				
2K12R2_Sandb...	Not-Replicated	Unprotected				1
Ritu-Sandbox_...	Not-Replicated	Unprotected				



在Azure和AWS Marketplace上可用



Azure Marketplace Apps Consulting Services Search Marketplace

Products > Veritas Backup Exec™ - BYOL

 Veritas Backup Exec™ - BYOL [save for later](#)

VERITAS

★★★★★ (0) [Write a review](#)

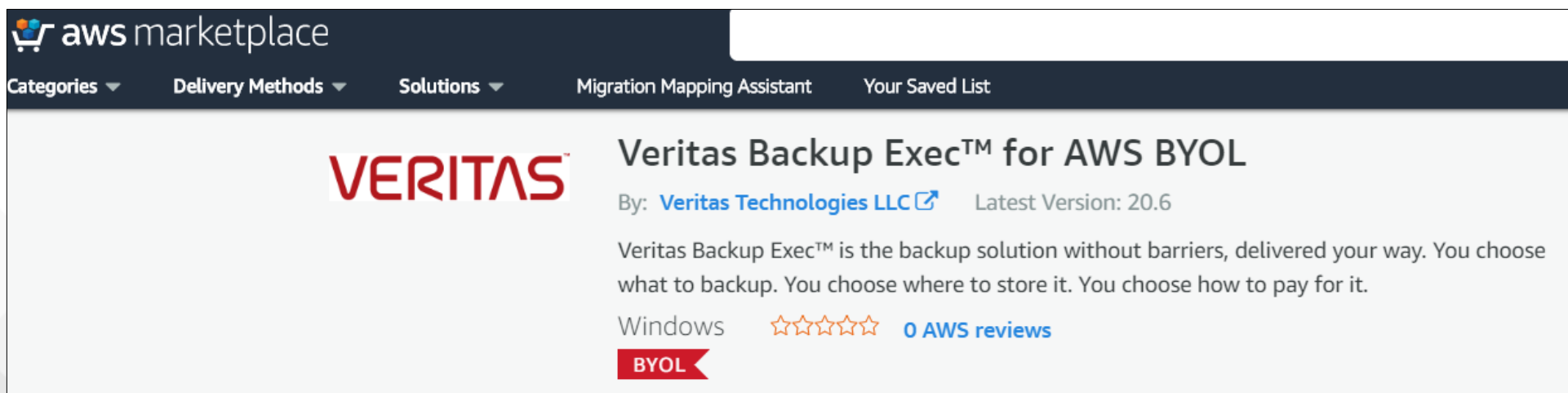
[Preferred solution](#)

Overview [Plans](#) [Reviews](#)

[GET IT NOW](#)


[Pricing information](#)

Unified backup and recovery for virtual, physical and Azure cloud data




aws marketplace

Categories ▾ Delivery Methods ▾ Solutions ▾ Migration Mapping Assistant Your Saved List

 Veritas Backup Exec™ for AWS BYOL

By: [Veritas Technologies LLC](#) Latest Version: 20.6

Veritas Backup Exec™ is the backup solution without barriers, delivered your way. You choose what to backup. You choose where to store it. You choose how to pay for it.

Windows  [0 AWS reviews](#)

[BYOL](#)

Veritas Backup Exec certified for Microsoft Azure and Windows Server 2019

VERITAS

Trusted, easy to use and tailored data protection with integrated Disaster Recovery as a Service across physical, virtual and cloud environments

**Windows
Server
2019**

Certified

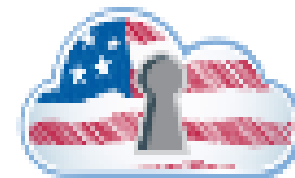
**Microsoft
Azure**

Certified

**Microsoft Preferred
Solution for Azure**

 Preferred solution

我們支援的一些雲端服務供應商



AWS GovCloud (US)



NetApp



中華電信
Chungwa Telecom



Alibaba Cloud



ceph

Quantum.



SAFESWISS
CLOUD

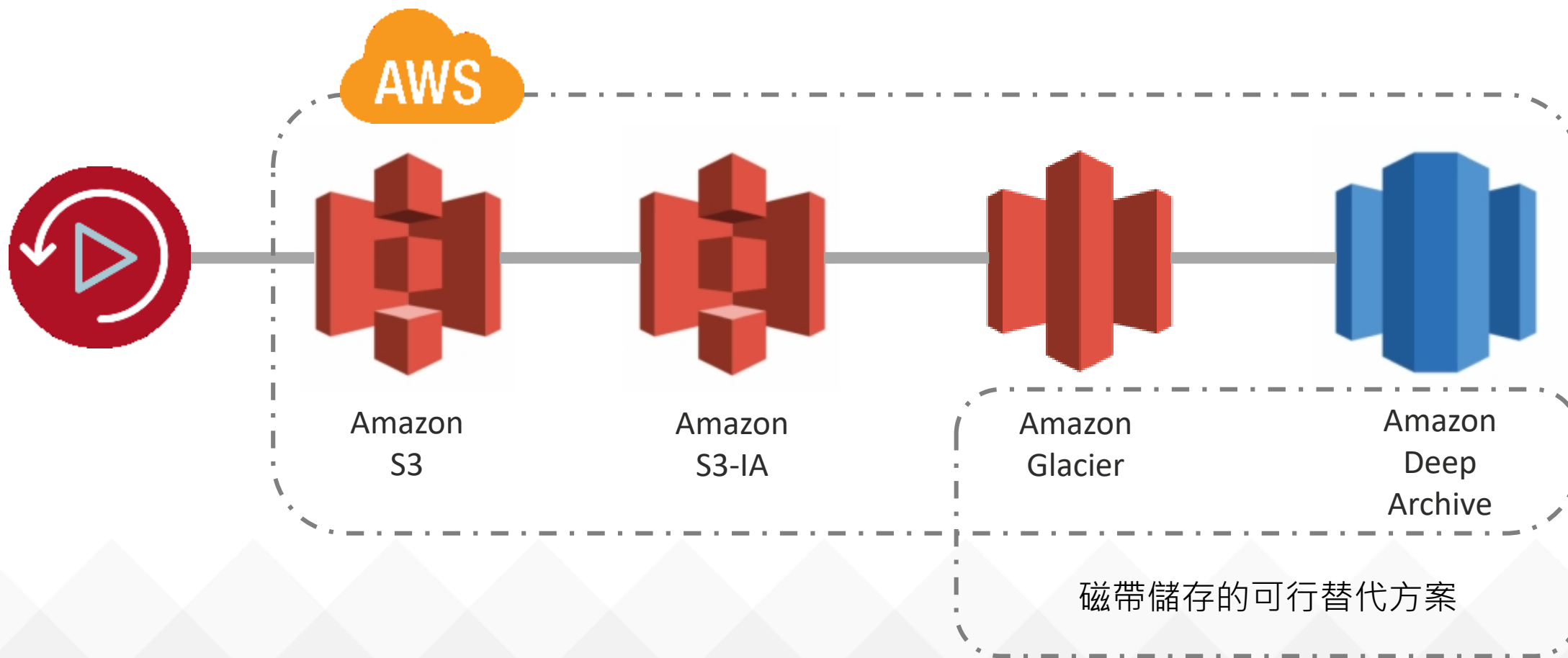


SCALITY



CLOUDIAN

將資料備份到Amazon Glacier和Deep Archive



配置 Glacier或Deep Archive Device

Configure storage on CAS

What is the connection information for the cloud storage device?

Cloud storage: Amazon

Storage tier: Glacier

Logon account: Standard
Standard_IA
Glacier
Deep Archive

The logon account that you selected is configured as a default logon account and should not be used to access a cloud device

To create a new storage account or manage an existing storage account, go to the following link:
<https://console.aws.amazon.com/s3/home>

For more information about cloud vendor storage tiers, refer to the following technote [TECH125231](#)

Restore from Glacier and Deep Archive storage device will be time consuming. For more information, refer to the following technote: [100045578](#) .

< Back Next > Cancel

從這些設備檢索資料需要時間
Glacier最多3個小時
Deep Archive最多12個小時

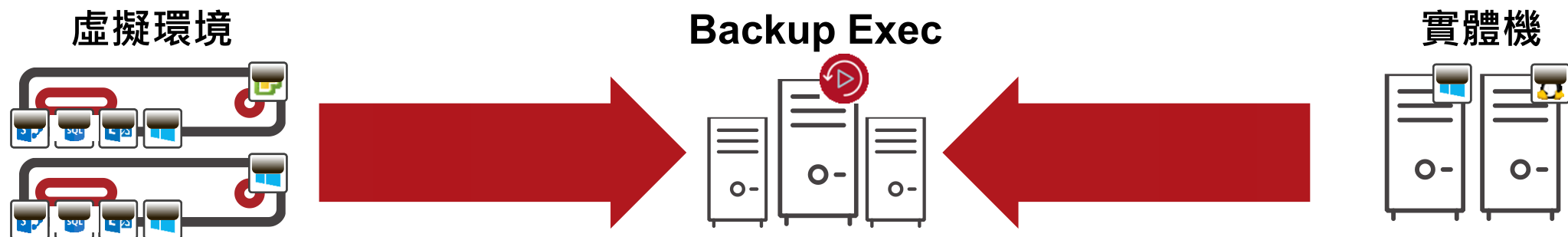
我們的虛擬環境故事

Our Virtual Story

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虛擬環境保護 (Virtual Protection)



虛擬機備份

- 代理(Agent)和無代理(Agentless)方式備份
- 一次還原VM和檔案 (Single-pass VM and file recovery)
- 永久增量加速備份 (Incremental Forever)
- 立即還原 (Instant Recovery, 從資料去重複磁碟)
- 還原就緒驗證 (Recovery Ready Verify)
- 立即雲端恢復到Azure (Instant Cloud Recovery to Azure)

應用程式備份

- 支援應用程式和資料庫
- 精細應用程式物件恢復
- 非整合應用程式支援使用 VSS

實體機備份

- 轉換為虛擬機
- 裸機、硬體獨立災難恢復

Backup Exec如何幫助虛擬機管理員？



體驗簡單

輕鬆使用所有功能

單一操作介面

檔案和應用程式的一次完成備份

精細還原

確保所有虛擬機都受到保護

自動探索新增虛擬機

備份效能

永久增量備份
Forever Incremental backups

BE加速備份

淺層備份索引(shallow cataloging)提高了性能

立即精細還原技術

精細度選擇可加快備份速度

VM特定磁碟排除

VM 可靠性

通過接近0的RTO存取Windows和Linux VM

立即還原

通過自動化測試確保可恢復性

還原就緒

通過雲端異地複製將RTO和RPO降至最低

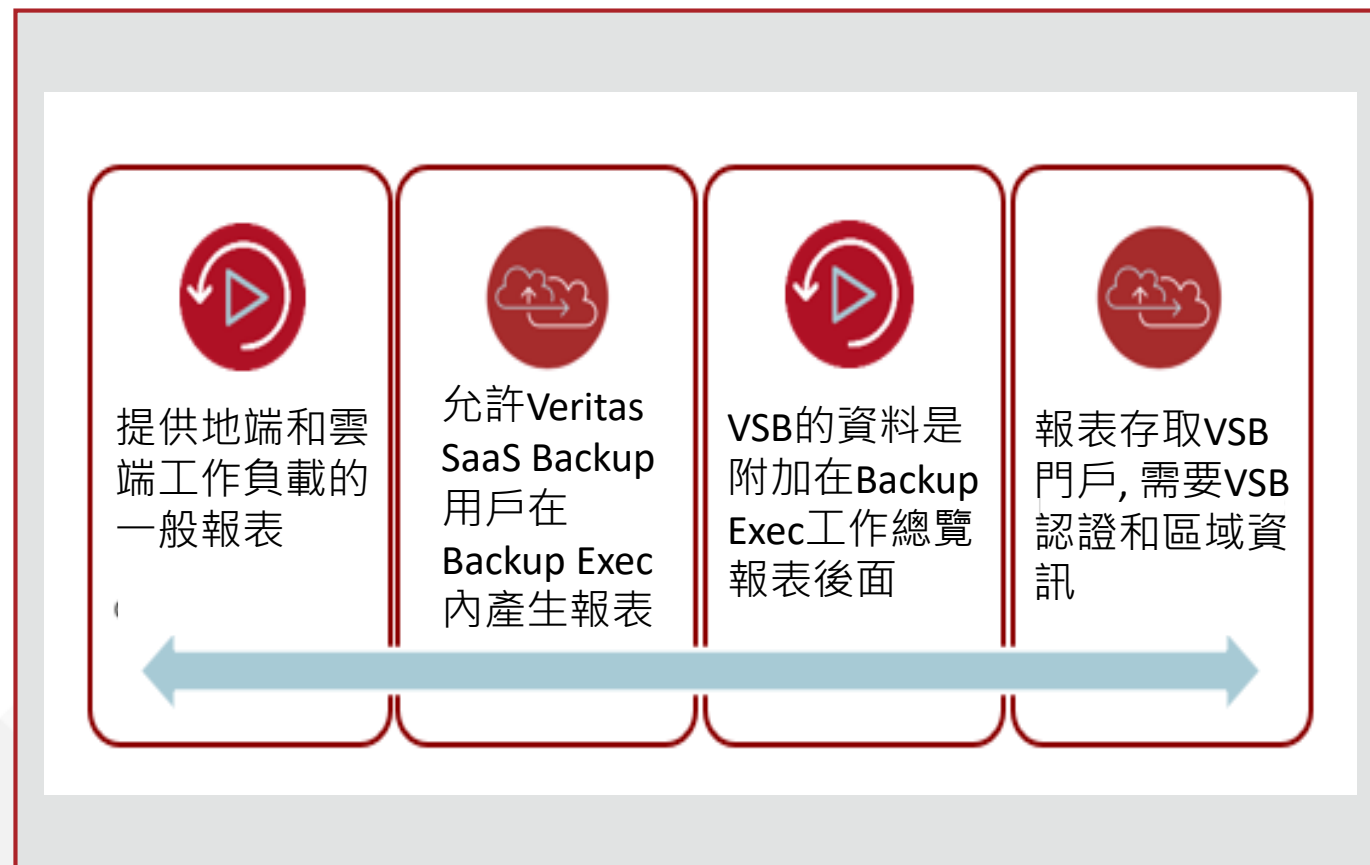
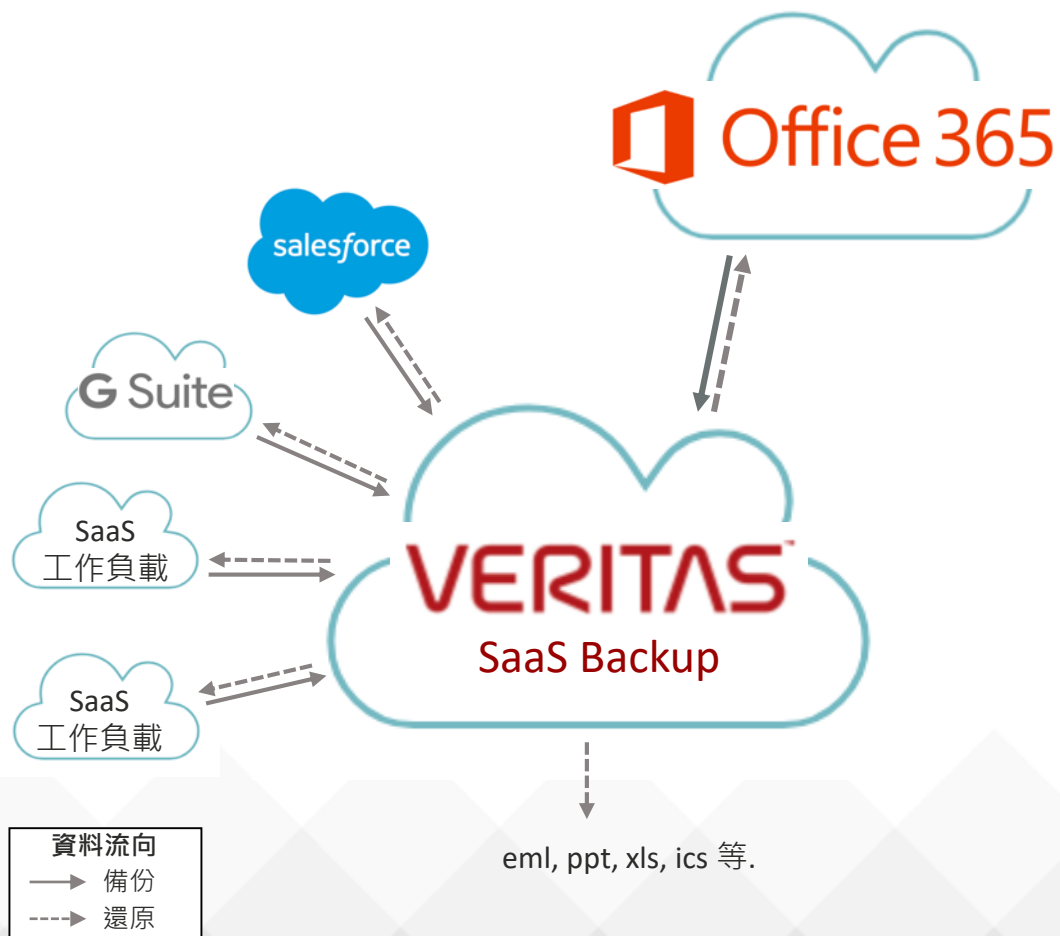
立即雲端還原

BE整合Veritas其他產品

VSB, Information Studio & Access

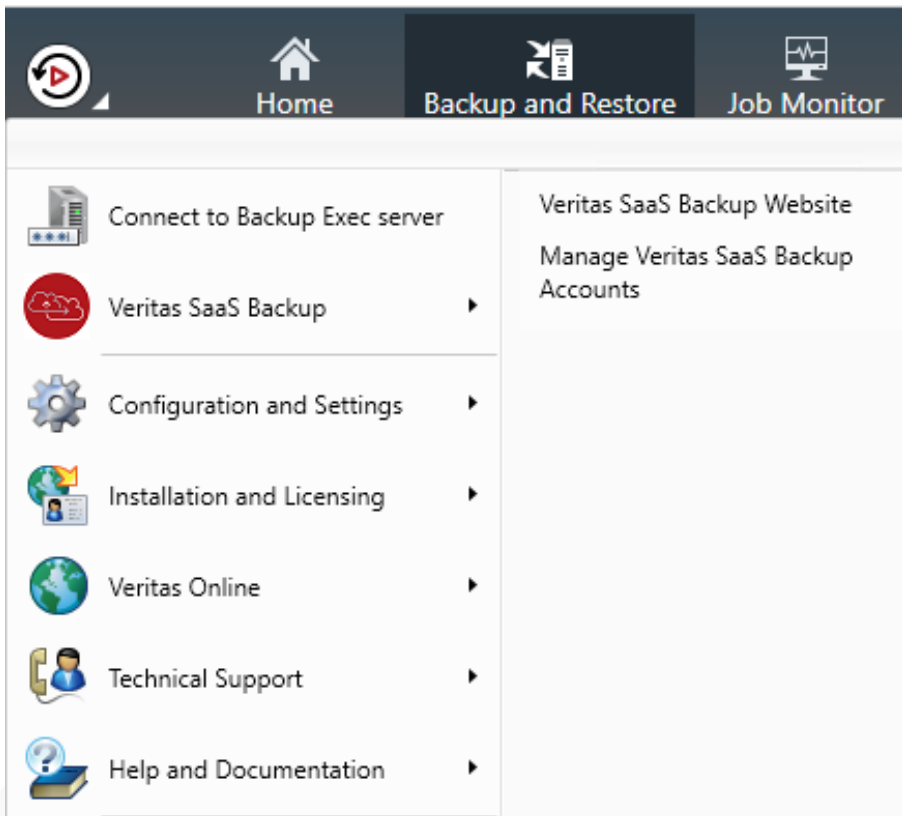
Veritas SaaS Backup (VSB) 與 Backup Exec 整合

保護O365



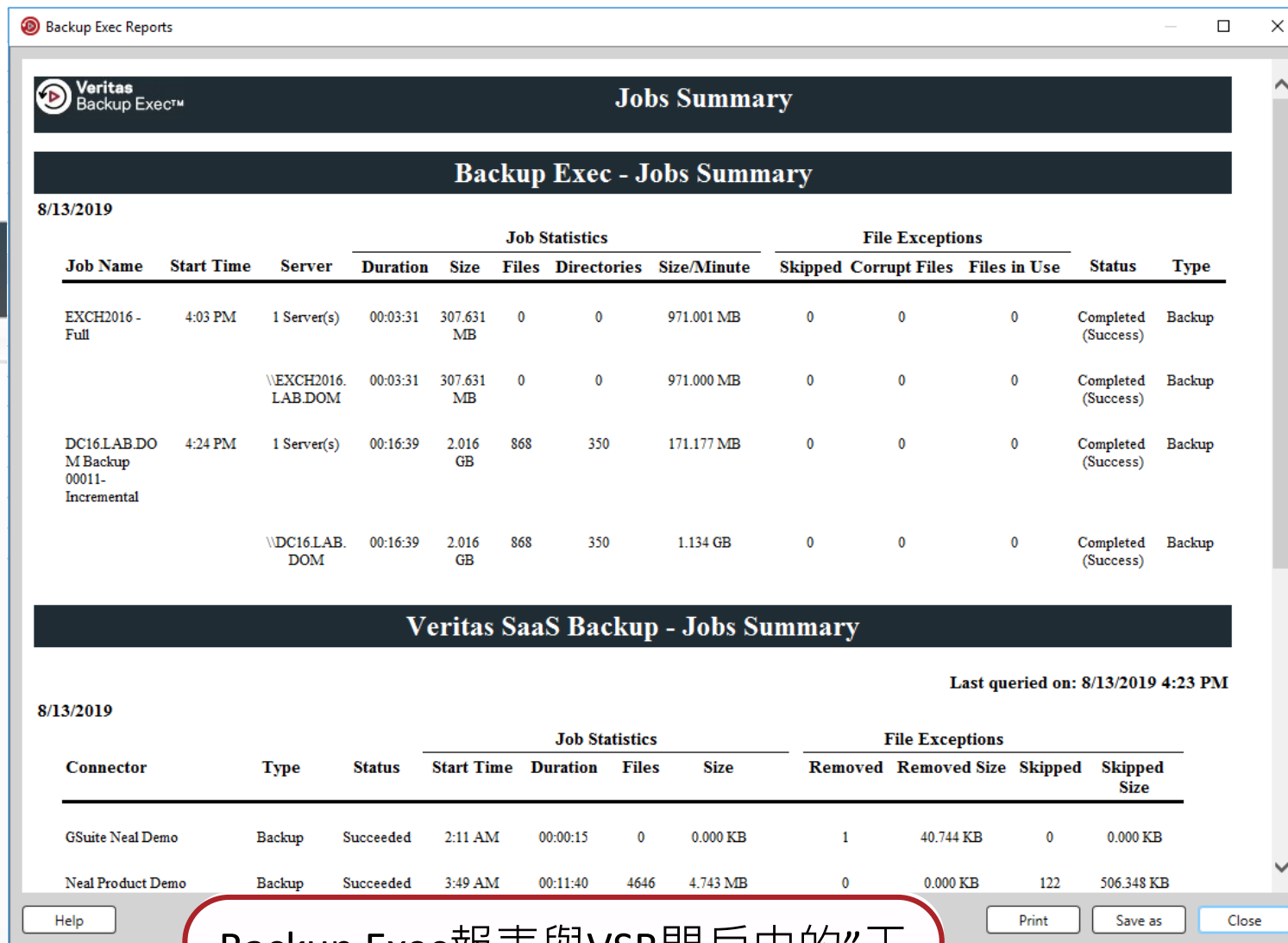
整合VSB

Veritas Backup Exec™



Home Backup and Restore Job Monitor

- Connect to Backup Exec server
- Veritas SaaS Backup Website
- Manage Veritas SaaS Backup Accounts
- Veritas SaaS Backup
- Configuration and Settings
- Installation and Licensing
- Veritas Online
- Technical Support
- Help and Documentation



Backup Exec Reports

Jobs Summary

Backup Exec - Jobs Summary

8/13/2019

Job Name	Start Time	Server	Job Statistics					File Exceptions			Status	Type
			Duration	Size	Files	Directories	Size/Minute	Skipped	Corrupt Files	Files in Use		
EXCH2016 - Full	4:03 PM	1 Server(s)	00:03:31	307.631 MB	0	0	971.001 MB	0	0	0	Completed (Success)	Backup
		\\EXCH2016.LAB.DOM	00:03:31	307.631 MB	0	0	971.000 MB	0	0	0	Completed (Success)	Backup
DC16.LAB.DOM Backup 00011- Incremental	4:24 PM	1 Server(s)	00:16:39	2.016 GB	868	350	171.177 MB	0	0	0	Completed (Success)	Backup
		\\DC16.LAB.DOM	00:16:39	2.016 GB	868	350	1.134 GB	0	0	0	Completed (Success)	Backup

Veritas SaaS Backup - Jobs Summary

Last queried on: 8/13/2019 4:23 PM

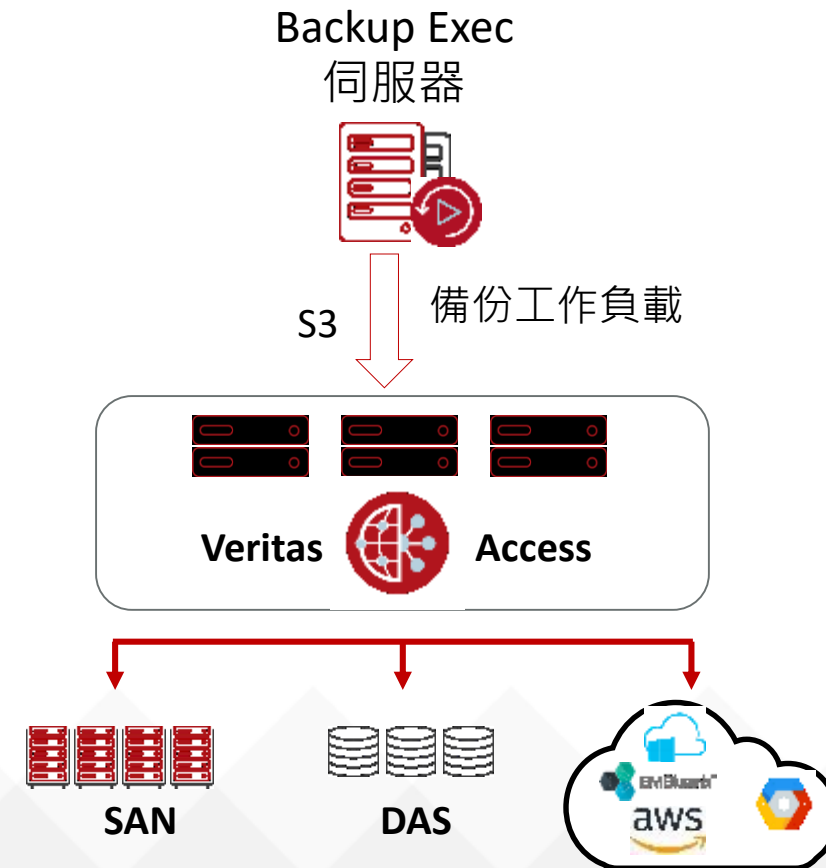
8/13/2019

Connector	Type	Status	Job Statistics				File Exceptions			
			Start Time	Duration	Files	Size	Removed	Removed Size	Skipped	Skipped Size
GSuite Neal Demo	Backup	Succeeded	2:11 AM	00:00:15	0	0.000 KB	1	40.744 KB	0	0.000 KB
Neal Product Demo	Backup	Succeeded	3:49 AM	00:11:40	4646	4.743 MB	0	0.000 KB	122	506.348 KB

Help Print Save as Close

Backup Exec報表與VSB門戶中的“工作監控(Job Monitor)”視圖對齊; 工作類型、狀態、檔案計數等應與VSB工作監控匹配

Backup Exec + Access + Information Studio



通過資料可視化降低風險

Veritas Information Studio

- 在可視上下文中呈現非結構化資料
- 引導用戶實現無偏見的資訊治理決策



使用Information Studio, 客戶可以

- 確定價值領域，風險領域和廢物領域
- 減少無用資料儲存的不必要成本
- 優先考慮合規性和安全性調查的目標

資料受Backup Exec保護，並通過資訊映射可視化



使用者透過Web於
企業內部了解BE備
份的資料可視性



支援的資料來源格式

File & Object Based Data Stores Individual object & extension

- *Cloud*
 - Amazon S3
 - Box Enterprise
 - Google GCP Storage
 - Google G-Suite G Drive
 - Microsoft Azure Blob Storage
 - [Microsoft O365 One Drive*](#)
 - Microsoft O365 SharePoint Online
- *On-Premises*
 - EMC Celerra/VNX & Isilon
 - Hitachi NAS
 - IBM FileNet
 - Microsoft SharePoint
 - NetApp Cluster & Standalone
 - OpenText Documentum & LiveLink
 - [Windows File Server \(CIFS\)*](#)

Container Based Data Stores Summary data

- *Cloud*
 - Microsoft O365 Exchange Online
 - Google G-Suite Gmail
- *On-Premises*
 - Oracle Database
 - Microsoft Exchange
 - Microsoft SQL Server

Veritas Integrations Portfolio visibility

- *On-Premises*
 - Backup Exec
 - File Based
 - NetBackup
 - File Based
 - NetBackup Appliance
 - File Based
 - Veritas File System
 - File Based

為何選擇Backup Exec?

Why Backup Exec?

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Backup Exec的故事

Backup Exec的整體功能

防範勒索軟體

虛擬能力

輕鬆與雲端整合

保護Office 365和SaaS工作負載的簡化方法

簡單.....安全.....統一管理

附件

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<https://www.savetime.com.tw>

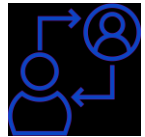
立即採取行動 (Take Action Today)!



學習 更多關於 Backup Exec 在 www.backupexec.com



試用 Backup Exec [Trialware](http://BackupExec.com) 於 BackupExec.com, 且嘗試著進行體驗



聯繫 您的 Veritas 負責業務或代理商人員, 以了解 Backup Exec 如何幫助企業簡化資料保護並降低成本

Backup Exec家族

- **Veritas Backup Exec – 60天試用**
 - <https://www.veritas.com/form/trialware/backup-exec>
- Veritas Backup Exec – 論壇
 - <https://vox.veritas.com/t5/Backup-Exec/bd-p/backup-exec>
- Veritas Backup Exec – 技術支援
 - https://www.veritas.com/content/support/en_US/dpp.BackupExec.html
- **Veritas SaaS Backup – 30天試用**
 - <https://www.veritas.com/protection/saas-backup>
- Veritas SaaS Backup – 論壇
 - <https://vox.veritas.com/t5/SaaS-Backup/bd-p/SaaS-Backup>
- Veritas SaaS Backup – 技術支援
 - https://www.veritas.com/content/support/en_US/dpp.SaaSBackup.html



- **Veritas System Recovery – 60天試用**
 - <https://www.veritas.com/protection/system-recovery>
- Veritas System Recovery – 論壇
 - <https://vox.veritas.com/t5/System-Recovery/bd-p/system-recovery>
- Veritas System Recovery – 技術支援
 - https://www.veritas.com/content/support/en_US/dpp.SystemRecovery.html
- **Veritas Desktop and Laptop Option – 60天試用**
 - <https://www.veritas.com/protection/desktop-and-laptop-option>
- Veritas Desktop and Laptop Option – 論壇
 - <https://vox.veritas.com/t5/System-Recovery/bd-p/system-recovery>
- Veritas Desktop and Laptop Option – 技術支援
 - https://www.veritas.com/content/support/en_US/dpp.DesktopLaptopOption.html



BE資訊的相關連結

- BE 20.x 試用:
<https://www.veritas.com/content/trial/en/us/backup-exec-20>
- Updates, Patches and Late Breaking News for Backup Exec 20.x
https://www.veritas.com/support/en_US/article.100043266.html#Documentation?q=*%&undefined&docRepo=true
- 影片
 - Backup Exec Virtual Capabilities
 - <https://www.youtube.com/watch?v=1RKgzyPhFj8>
 - Backup Exec and the Cloud
 - <https://www.youtube.com/watch?v=4uThVJd60SU>
 - Backup Exec Instant Cloud Recovery
 - <https://www.youtube.com/watch?v=VpSOOBrWdjE>
 - Backup Exec + SaaS Backup for O365 Workloads
 - <https://youtu.be/pNVTrIFUvVw>
- BE 技術支援：
https://www.veritas.com/content/support/en_US/BackupExec.html
- End of Support for Prior Backup Exec Versions:
https://www.veritas.com/support/en_US/article.100038900.html
- BE Master Compatibility List:
https://www.veritas.com/support/en_US/article.000017788
- Backup Exec 20.5 Tuning and Performance Guide
https://www.veritas.com/content/support/en_US/doc/40056030-139024710-1
- Configuring S3-Compatible Cloud Storage for use with Backup Exec
https://www.veritas.com/content/support/en_US/article.100039077.html

Thank you!

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<https://www.savetime.com.tw>

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VERITAS

Backup Exec 21 使用授權介紹

了解Veritas BE備份軟體的使用授權方式

- BE架構:有三大元件-

- 1. 備份/核心主程式(Core); 2. 代理程式(Agent); 3. 選項模組功能(Option)

- 授權計價方式

- 1. 標準授權以模組計價：按備份伺服器、代理程式或選項模組功能，依需求選購。
- 2. 虛擬平台吃到飽的方案:V-Ray Edition，是以處理器插槽數量(CPU數量)計價。
- 3. 以備份來源端的容量，按 TB 數量計價，分銅銀金三種等級。
- 4. 執行項次授權模式 (Instance Licensing Model) 分銅銀金三種等級

- 這四種授權沒有哪一種一定比較划算，看每個客戶的環境不一

- 要備份的總資料量多，但客戶端主機數量少→或許標準及執行項次授權比較划算
- 要備份客戶端主機多，但備份的資料量少→或許容量使用授權比較划算

Veritas BE使用授權模式總覽

	標準授權方式 (Standard Licensing)	虛擬環境使用授權 (V-Ray Edition Licensing)	容量授權方式 (Capacity Licensing)			執行項次授權方式 (Instance Licensing)		
使用權	買斷(Perpetual)	買斷(Perpetual)	買斷(Perpetual)	訂閱(Subscription)		買斷(Perpetual)	訂閱(Subscription)	
配置需知	<ul style="list-style-type: none"> 一、以模組計價：按備份伺服器、代理程式或選項模組功能，依需求選購 二、適用在實體與虛擬主機的混合架構 <p>建議：要清楚客戶的備份標的及架構 避免漏買或買錯。</p>	<ul style="list-style-type: none"> 一、Backup Exec V-RAY 產品為支援純虛擬化環境之備份產品 (Vmware & Hyper-V)，以實體 CPU 數量計算授權方式 二、可以與傳統授權方式(Custom Edition)的搭配，來備份實體機環境 <p>建議：適用在純虛擬環境且 VM 數多的架構</p>	<ul style="list-style-type: none"> 一、需要備份的資料總量(金銀銅) 二、有資料庫 (金銀) 三、要走 SAN Backup (金) <p>建議：主機數量大於容量，可用容量方式來規劃</p>	<ul style="list-style-type: none"> 一、以 10 個執行項次為一組出售 二、執行項次可隨意搭配 <p>建議：客戶的架構及標的會變動，可改 Instance 方式來規劃，授權更有彈性，成本也較划算</p>				
授權數量	<ul style="list-style-type: none"> 一、需要備份檔案的伺服器台數 二、需要備份資料庫伺服器台數 三、有幾顆磁頭？ 四、SAN Backup 買一套，Deduplication 買一套，裝在主控站上面 	V-RAY 已含主控站(Backup Exec 主控程式)、檔案伺服器、資料庫&應用程式、重複資料刪除等虛擬機上之授權，讀寫頭授權*1(實體或是 VTL)。除此之外其他備份授權需另購，如 SAN backup、NDMP 等(可選用標準授權內選項)。	<ul style="list-style-type: none"> 一、Front-End Terabytes (FETB)最小單位為 1TB 二、必須全部為同一版本：銅、銀或金 三、不能與自定義(點菜)、V-Ray 或舊版容量使用授權結合使用 四、買斷和訂閱不能混合使用 	<ul style="list-style-type: none"> 一、每一台虛擬機都需納入計算 二、必須全部為同一版本：銅、銀或金 三、不能與自定義(點菜)、V-Ray 或舊版容量使用授權結合使用 四、買斷和訂閱不能混合使用 				
版本	主控站*1/各種 Agent*15	V-Ray	金級	銀級	銅級	金級	銀級	銅級

標準使用授權(Standard Licensing Model) 配置步驟

1.決定核心架構元件：

- 每個備份環境一定都需要至少一個主控站 (Backup Exec Server)

2.決定要被備份架構元件：

- 檔案：分為Windows/Linux/Unix，BE支援Windows/Linux/Unix檔案備份
- 資料庫 & 應用程式：支援列表如下：

Microsoft Exchange	Microsoft SQL Server	Microsoft SharePoint	Active Directory
Oracle DB	Lotus Domino	Enterprise Vault	

3.決定進階功能

- 重複資料刪除
 - 企業級進階備份功能：可以進行SAN Backup
 - NDMP傳輸協定
 - 虛擬磁帶櫃驅動授權
 - 磁帶機磁頭驅動授權

V-RAY 授權選項

	V-Ray Edition
License Meter	Per CPU
Backup Exec Server	✓
Agent for Windows	Unlimited*
Agent for VMware& Hyper-V	Unlimited*
Agent for Linux	Unlimited*
Agent for Applications and Databases	Unlimited*
Deduplication Option	✓

- Backup Exec 主控站
- VMware / Hyper-V代理程式（無限制）
- Windows / Linux代理程式（無限制）
- Applications and Databases代理程式（無限制）
- 資料重複性刪除模組
- ※如要採用SAN Backup，需要加購企業級進階備份功能*1套

容量授權 (FETB) – 訂閱(Subscription)、買斷(Perpetual)

Bronze	Silver	Gold
<ul style="list-style-type: none"> File server protection for on-premise and cloud Install and protect physical, virtual and cloud file servers Data Deduplication across all your data, including to cloud Backup to tape, disk or cloud 24x7 support² 	<ul style="list-style-type: none"> File server, database and application protection for on-premise and cloud Install and protect physical, virtual and cloud file servers Protection and granular recovery of applications and databases Windows and Linux protection Data Deduplication across all your data, including to cloud Tape library up to 4 drives Backup to tape, disk or cloud 24x7 support² 	<ul style="list-style-type: none"> File server, database and application protection for on-premise and cloud with centralized management of backup servers for multi-site locations Central backup server management Install and protect physical, virtual and cloud file servers Protection and granular recovery of applications and databases Windows and Linux protection NDMP and SAN shared storage protection Data Deduplication across all your data, including to cloud Unlimited physical or virtual tape libraries Backup to tape, disk or cloud 24x7 support²

容量授權產品功能組合列表:

授權組合		銅級	銀級	金級
計價方式		依前端 TB	依前端 TB	依前端 TB
保護涵蓋範圍	虛擬	√	√	√
	實體	√	√	√
	雲端	√	√	√
支援平台	Windows	√	√	√
	Linux	√	√	√
	AIX	√	√	√
	Solaris	√	√	√
	VMware	√	√	√
	HyVer-V	√	√	√
支援應用程式	Microsoft Exchange		√	√
	Microsoft SQL Server		√	√
	Microsoft ShareVoint		√	√
	Active Directory		√	√
	Oracle		√	√
	EnterVrise Vault		√	√
其他重要功能	實體至虛擬的轉換	√	√	√
	重複資料刪除	√	√	√
	集中化管理			√
	實體磁帶櫃支援能力	1 台磁碟機	4 台磁碟機	不限數量的磁碟機
	虛擬磁帶櫃支援	1 台磁碟機	1 台磁碟機	不限數量的磁碟機
	NDMP 支援能力			√
支援服務	複製伺服器組態			√
	原廠全年無休的支援 (7 天 24 小時全年無休的 Veritas 專家支援、版本升級和迅速的回應。)	√	√	√

**B/S/G不能
與其他使用授
權選項結合使
用**

12, 24, 36 month terms

執行項次授權 (INSTANCE) - 訂閱(Subscription)、買斷(Perpetual)

執行項次是..(An instance is)

- 單個資源要保護 (An individual resource to be protected)
- 可以恢復的實體機或虛擬機(在虛擬機管理程式上或在雲端中) (A physical or virtual machine (on a hypervisor or in the cloud) that can be recovered)
- 跨實體、虛擬和雲端工作負載的通用指標 (A universal metric across physical, virtual and cloud workloads)

執行項次授權 (Instance Licenses)

- 以10個執行項次為一組出售 (Are sold in groups of 10)
- 必須全部為同一版本：銅、銀或金 (Must all be the same edition: Bronze, Silver or Gold)
- 不能與自定義(點菜)、V-Ray或舊版容量使用授權結合使用 (Cannot be combined with Custom (a la carte), V-Ray or legacy Capacity licenses)
- 買斷和訂閱不能混合使用 (Cannot be mixed perpetual and subscription)

資源保護 Resources to be Protected 銀和金版本內含資料庫和應用程式支援 Silver and Gold Editions include Database and Application support	執行項次數量 Instances
Backup Exec Servers	3
Windows Servers (physical or virtual)	18
Linux, Solaris or AIX Servers (physical or virtual)	6
小計	27

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共27 個執行項次 客戶需要購買3組，每組有10個執行項次

怎麼樣配置BE的執行項次授權？

- 了解客戶要進行備份的**整體環境**(有架構圖示意為佳)
- 先用**傳統授權Custom Edition (à la carte)**的計價方式來評估
- 檢視傳統授權評估總共有多少個**下列**執行項次(instance)
 - Backup Exec Server
 - Agent for Windows (實體機數量)
 - **Agent for VMware & Hyper-V (每一台虛擬機都需納入計算)**
 - Agent for Linux and Unix (實體機數量)
 - Agent for Applications and Databases (實體機與虛擬機上的都需要納入計算)
 - Agent for Remote Media for Linux Servers
- 然後再依照客戶備份環境架構選擇決定是要**金/銀/銅**哪一級 及 **足額**的執行項次
網綁包(一包有10個執行項次)
- 如果將Backup Exec伺服器安裝在多個不同位置，則所有位置都必須具有**相同**的
使用授權才能共享一個金/銀/銅的容量(FETB)或執行項次(Instance)授權

依照執行項次計價 (Per Instance License)

- 跨實體機、虛擬和雲端工作負載的通用指標
- 每個工作負載均被平等對待，每個使用授權消耗一個執行項次(Instance)
- 僅適用於銅、銀和金版，每一個網綁包內含10個執行項次

僅計算工作負載 ONLY Workloads to be Counted	執行項次
Backup Exec Server	3
Agent for Windows	15
Agent for Linux and Unix	5
Agent for Applications and Databases	3
Agent for Remote Media for Linux Servers	1
合計	27

☐ 27個執行項次 ☐ 客戶需要購買3個網綁包

BE使用 Instance方式計價範例

Example E:

Customer environment and needs	Customer purchase option
<ul style="list-style-type: none"> • 3 Windows Servers running Backup Exec • 18 Windows Servers (physical or virtual) • 6 Linux, Solaris or AIX Servers (physical or virtual) 	<ul style="list-style-type: none"> • 3 Bundles of 10 instances Backup Exec Bronze. (Bronze does not include application and database support)

Example F:

Customer environment and needs	Customer purchase option
<ul style="list-style-type: none"> • 3 Windows Servers running Backup Exec • 18 Windows Servers (physical or virtual) with supported application and databases • 6 Linux, Solaris or AIX Servers (physical or virtual) 	<ul style="list-style-type: none"> • 3 Bundles of 10 instances Backup Exec Silver or Gold with application and database support. Gold includes centralized backup management

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BE使用Instance 計價好處

優：

- 1、配置彈性，客戶不用擔心標的物變動。
- 2、授權簡易，不用擔心規劃錯授權。
- 3、適用小型企業，降低成本。
- 4、訂閱制減輕客戶負擔，每年簽約CP值高。

缺：

- 1、不適合在虛擬主機多的環境（每一個虛擬主機都要算）

客戶環境需求	傳統授權 (Custom Edition)	執行項次 (INSTANCE)
1、Backup exce*1 2、Windows Server*2	13670-M0008*1：85626 13131-M0008*2：102094 費用合計：187720 (未)	24746-M0008*1 (銅級 10個Instance) 用掉3個Instance，還有7個可以用 費用合計：178500 (未)
1、Backup exce*1 2、Windows Server*2 3、Windows SQL*1	13670-M0008*1：85626 13131-M0008*2：102094 13112-M0008*1：85626 費用合計：273346 (未)	24750-M0008*1 (銀級 10個Instance) 用掉4個Instance，還有6個可以用 費用合計：246500 (未)

分配執行項次 (Allocating Instances)

Select a Backup Exec edition license to install on the computer:

Backup Exec Silver Edition - Instance

Review the licensed count that will be installed on the Backup Exec server:

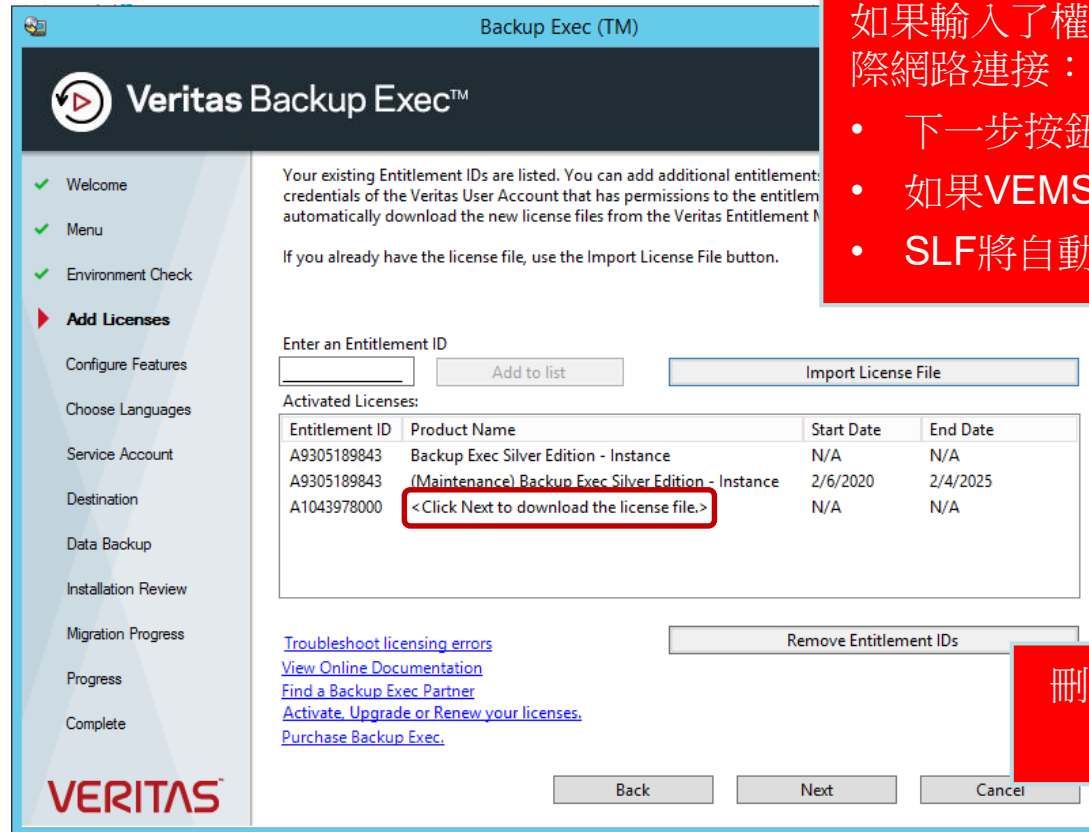
Entitlement ID	Edition Name (click name for description)	Allocated Count	Available Count
A9305189843	Backup Exec Silver Edition - Instance	27	50

Maintenance contract Entitlement IDs do not appear in the list because they cannot activate Backup Exec products.

Back Next Cancel

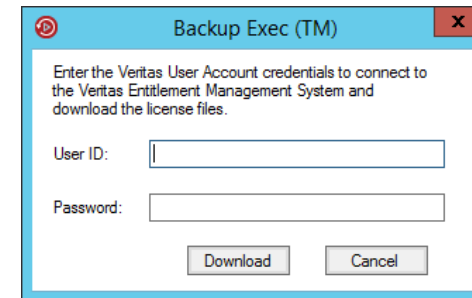
可以將可用使用授權 (執行項次或FETB)
分配給多個Backup Exec伺服器

自動使用授權下載



如果輸入了權利ID (Entitlement ID)，並且伺服器具有網際網路連接：

- 下一步按鈕將提示您輸入VEMS憑證
- 如果VEMS憑證經過驗證
- SLF將自動下載並導入



刪除權利<單擊下一步以下載使用授權文件>以防止出現VEMS憑證提示

VEMS Call Home – 自動同步

Settings

- Show splash screen at startup
- Display progress indicators for backup jobs. This requires additional time to pre-scan resource.
- Enable auto synchronization of the licenses with the Licensing Portal.
- Allow Backup Exec to report anonymous usage information.
(No personally identifiable information will be shared).
- Use alternating row colors

To re-enable disabled messages, click Re-enable:

All messages are currently enabled.

Licensing Information

- Active Alerts
- Alert History
- Backup Status
- Backup Size
- Storage Status
- Instant Cloud Recovery Status
- Configuration Tasks
- Simplified Disaster Recovery
- Database Encryption Key
- Virtual Machine Backups
- Licensed Status
- Technical Support
- Documentation
- Licensing Information
- Backup Exec RSS Reader

Synchronize Entitlements with Licensing Portal
Synchronize the updated entitlement information on Veritas portal.

Veritas Backup Exec™

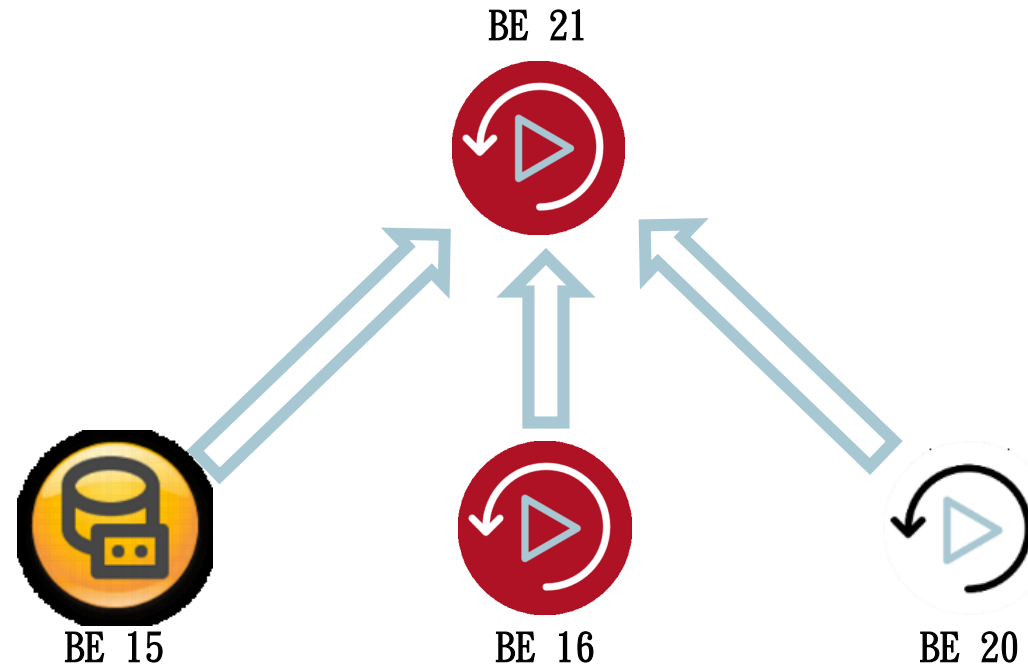
Backup Exec synchronizes the Entitlements from the Licensing Portal. The synchronization may take some time.

License Portal Synchronization Information

Server: BEMSR2.lab.vrts
Storage: N/A
Job Name: N/A
Message: There is no update available for license synchronization.

1. Backup Exec將定期檢查更新
2. 如果使用授權可用，它將下載並安裝
3. 安裝時引發資訊警報

支援的升級方式



BE 21 CAS只能與BE 20.x MBES通信
不支持BE 16或更舊的MBES

Backup Exec遷移助理 (BEMA) v3
支持遷移到BE 21