



運用教育雲雙活中心 拓展新思維藍圖

VMware Cloud Foundation

Rick Chen 陳重瑞
零壹科技
技術顧問

Agenda

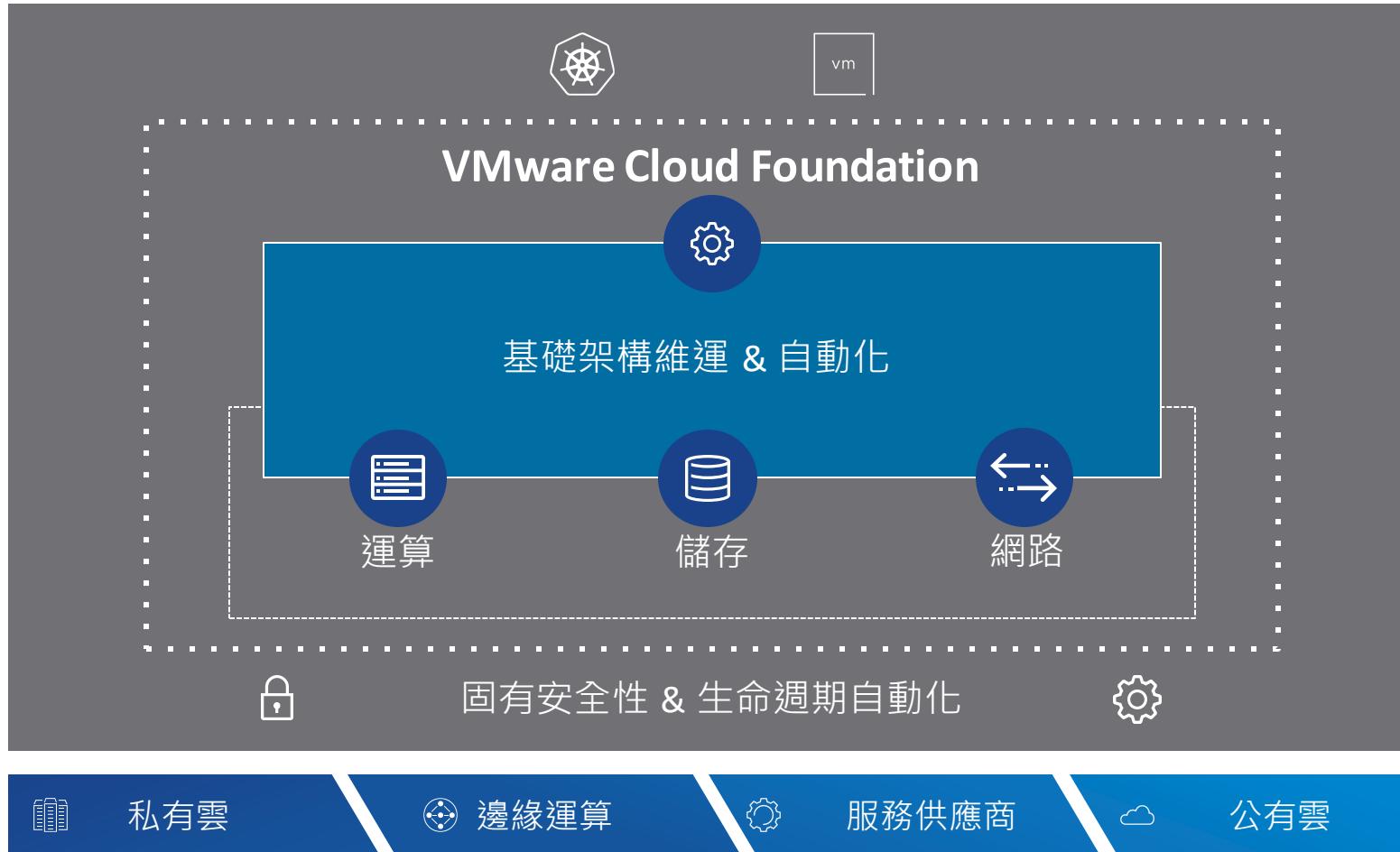
VMware Cloud Foundation 4.0

- VMware Cloud Foundation 架構概觀
- 開始使用 VMware Cloud Foundation
- VMware vRealize Suite 雲管理平台
- 案例說明與情境展示

Cloud Foundation 架構概觀

VMware Cloud Foundation 4

實現混合雲最簡單的途徑



最純正的軟體定義基礎架構

- 不受限硬體平台 & 有彈性的規劃

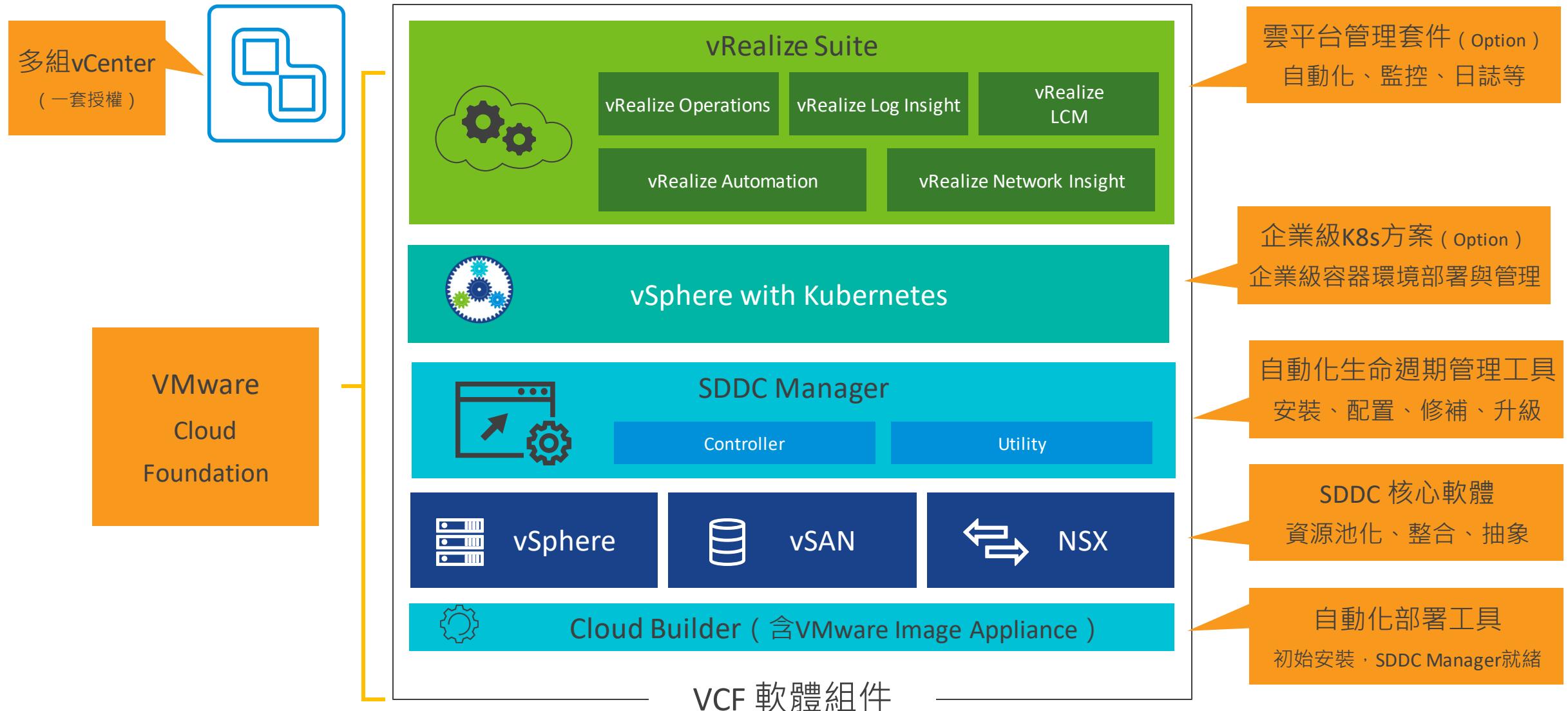
整合式混合雲平台

- 自助式、自動化和基礎架構營運

通往混合雲的途徑

- 內部部署
- 在公有雲上使用

VMware Cloud Foundation 4 中的核心軟體組件



VMware Cloud Foundation 的領導地位

vSphere

#1

Market Share

400K+
Customers

80+%

Market Share

vSAN

#1

HCI Vendor

20K+
Customers

60%
Global 2,000

500+
Cloud Partners

NSX

#1

SDN Vendor

13K+
Customers

88%
Fortune 100

8 of 10
Top Telcos

vRealize

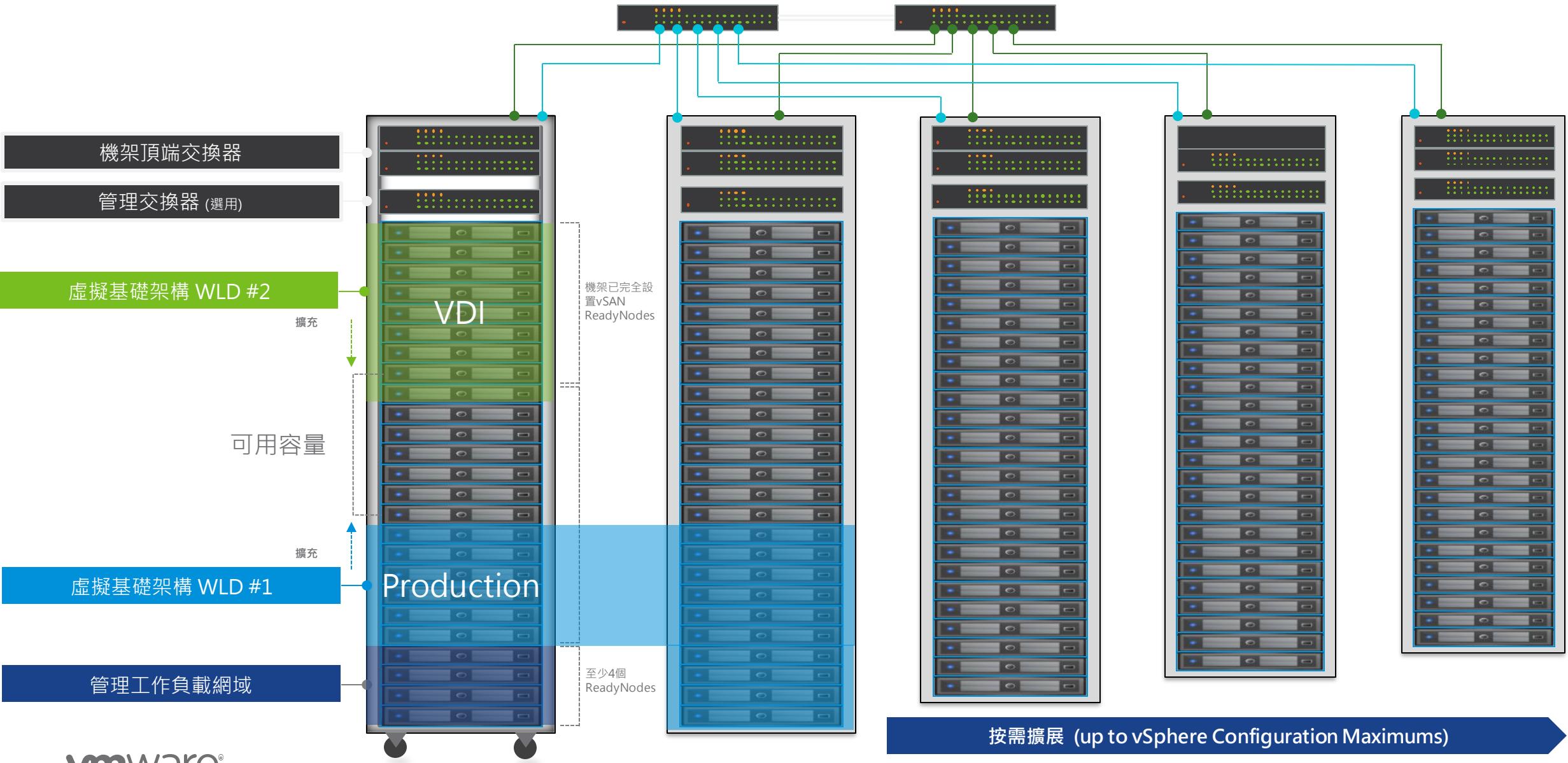
#1

CMP Market Share

40K+
Customers

99%
Fortune 100

實體硬體概觀



實體硬體詳情

靈活的硬體選項

異質伺服器

- 在相同機架中允許不同的品牌與型號
- 各個vSphere叢集內的硬體應相同

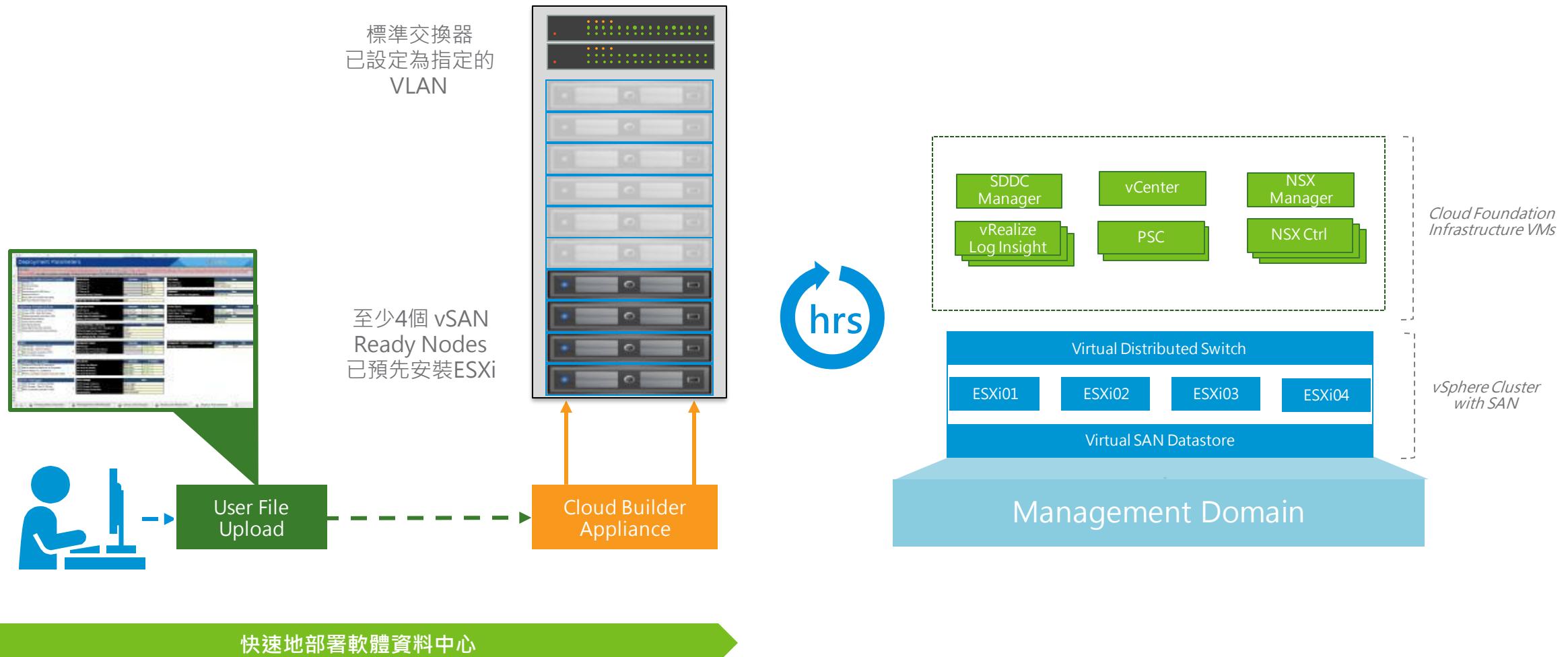
vSAN硬體相容清單

- 使用VMware vSAN 硬體相容性清單打造VMware Cloud Foundation 相容的ReadyNode
- 選擇混合式或All-Flash 節點
- 許多ReadyNode 型號提供可預先安裝ESXi 的購買選項

開始使用 VMware Cloud Foundation

全自動化的軟體定義資料中心

Cloud Foundation 啟動流程



VMware Cloud Builder 參數檔

預先配置參數文件

Deployment Parameters

Instructions: Use this tab to capture the configuration parameters required in order to deploy an SDDC platform. Supply information against each yellow box during the planning phase of the engagement in order for the platform to be built. If a value is not required enter 'n/a'. Existing values are just examples. If a cell turns red then the property is a required value or the data entered has failed some basic Excel validation and it should be fixed before proceeding. Grey cells are populated automatically, the values can be over-ridden but you will lose the original formula in such scenarios.

Existing Infrastructure Details		Infrastructure	Hostname	IP Address	DNS Zones	Value
		DNS Server #1		172.16.11.4	DNS Zone Name	sfo01.rainpole.local
		DNS Server #2		n/a		
		NTP Server #1		172.16.11.253		
		NTP Server #2		n/a		
		Single-Sign-On Site Name	sfo01		Datastores	Value
					vSAN Datastore Name - Management	sfo01-m01-vsan
vSphere Infrastructure		Management Cluster	Hostname	IP Address	vCenter Objects	Value
		vCenter Server	sfo01m01vc01	172.16.11.82	Datacenter Name - Management	sfo01-m01-dc
		Platform Service Controller #1	sfo01m01psc01	172.16.11.81	Cluster Name - Management	sfo01-m01-mgmt01
		Platform Service Controller #2	sfo01w01psc01	172.16.11.83	vSphere Networking	n/a
		vCenter Server Appliance Size (Default Small)	small		vSphere Distributed Switch Name	sfo01-m01-vds
		Virtual Networking - ESXi Hosts	Value		vSphere Distributed Switch MTU Size	9000
		Physical NIC to Assign to vDS - Management	vmnic1		Default vSS Portgroup Name	VM Network
		VMKernel Adapter for Management	vmk0			
		vSphere Standard Switch - Management	vSwitch0			
		vmnic Allocated to vSS - Management	vmnic0			
NSX		Management Cluster	Hostname	IP Address	vSphere Resource Pools	Value
		NSX Manager	sfo01m01nsx01	172.16.11.85	Resource Pool SDDC Mgmt	sfo01-w01-sddc-mgmt
		NSX Controller IP Pool Start Address		172.16.11.118	Resource Pool SDDC Edge	sfo01-w01-sddc-edge
		NSX Controller IP Pool End Address		172.16.11.120	Resource Pool User Edge	sfo01-w01-user-edge
					Resource Pool User VM	sfo01-w01-user-vm
vRealize Log Insight		Management Cluster	Hostname	IP Address	Management Domain - Segment IDs	Start
		vRealize Log Insight Servers				End
		vRealize Log Insight Node Load Balancer	sfo01vrl01	172.16.11.30	NSX Segment ID Range	5000
		vRealize Log Insight Node #1 (Master)	sfo01vrl01a	172.16.11.31		5200
		vRealize Log Insight Node #2 (Worker)	sfo01vrl01b	172.16.11.32		
		vRealize Log Insight Node #3 (Worker)	sfo01vrl01c	172.16.11.33		
		vRealize Log Insight Node Size (Default Medium)	medium			
SDDC Manager		SDDC Manager	Value			
		SDDC Manager Hostname	sddc-manager			
		SDDC Manager IP Address	172.16.11.60			
		SDDC Manager Subnet Mask	255.255.255.0			
		Host Pool Name	sfo01-networkpool			

XLSX Parameters File

- SDDC 相關配置參數
 - ESXi and VM Names
 - License Keys
 - Users and Groups
 - Passwords
 - Hosts and Networks
 - vRealize Suite Parameters
 - Deployment Parameters
- 導入到Cloud Builder中用於自動部署SDDC

Upload completed planning excel sheet

CloudBuilder Not secure

Apps R31

Configuration File Based Bring-up

Upload Configuration File

Upload the configuration file after entering the appropriate information.

[DOWNLOAD DEPLOYMENT PARAMETER SHEET](#)

UPLOAD

The screenshot shows a web-based interface for 'CloudBuilder'. At the top, there's a navigation bar with icons for back, forward, refresh, and a warning message 'Not secure'. Below the title 'Upload completed planning excel sheet', there's a section titled 'Configuration File Based Bring-up' featuring a blue and green geometric graphic and a cloud icon. The main area is titled 'Upload Configuration File' with instructions to upload a file after entering information. It includes a link to 'DOWNLOAD DEPLOYMENT PARAMETER SHEET'. At the bottom is a large blue 'UPLOAD' button. A cursor arrow is visible near the bottom center of the page.

包含內容豐富的儀表板和精簡工作流的 UI

跨所有 VMware 解決方案提供一致的 UI 體驗

清晰使用者介面

能夠根據個人需求而調整

跨所有 VMware 解決方案提供一致的外觀

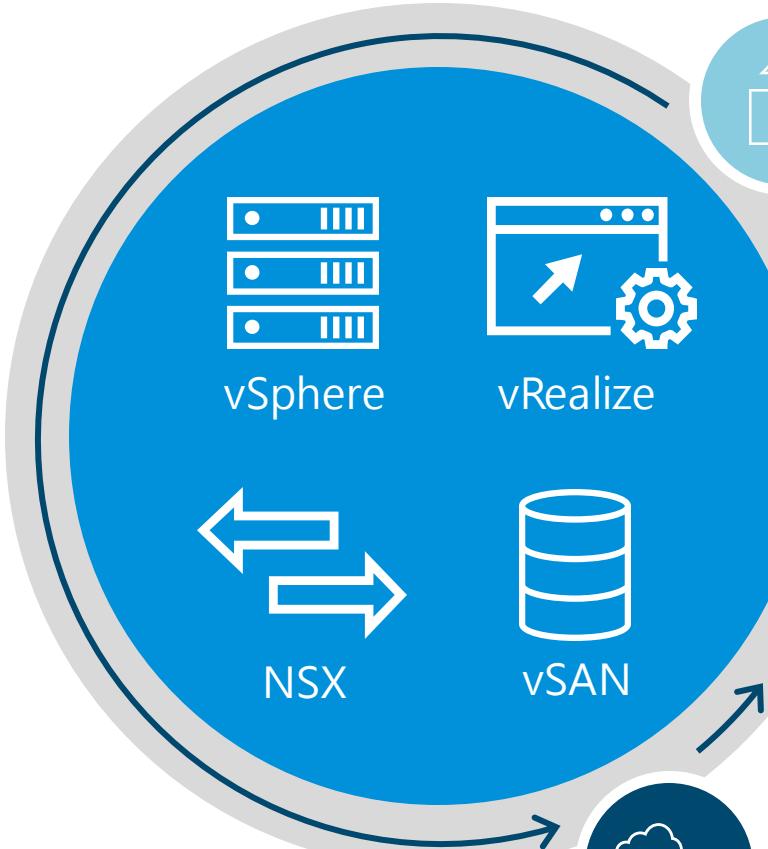
控制工作流程

The image displays two screenshots of VMware management interfaces. On the left is the 'SDDC Manager Dashboard' under 'Cloud Foundation'. It features a sidebar with 'Inventory' (Workload Domains, Hosts, Repository, Bundles, Download History, Administration, Network Settings, Licensing, Users, Update Management, vRealize Suite, Security, VMware CEIP), 'Tasks', and a bottom navigation bar. The main area shows '1 Workload Domains' (Management Domain, VI Domain), 'Ongoing and Scheduled Updates' (0/3 Resources Updated), and 'Host Type and Usage' (Hybrid Host, All Flash Host, Usage). It also includes performance metrics for CPU, Memory, and Storage usage with bar charts. On the right is the 'vSphere Client' interface, showing a tree view of vCenter environments. A specific cluster ('SDDC-Cluster') is selected, and its resources are listed, including several nodes and management services. A red oval highlights the list of nodes under the cluster.

由SDDC Manager控制平面彙集管理 整個雲基礎架構的Day 0 到 Day 2的自動化操作



SDDC Manager



生命週期管理
修補與升級



Policy Based
自動部署



配置環境



環境安裝

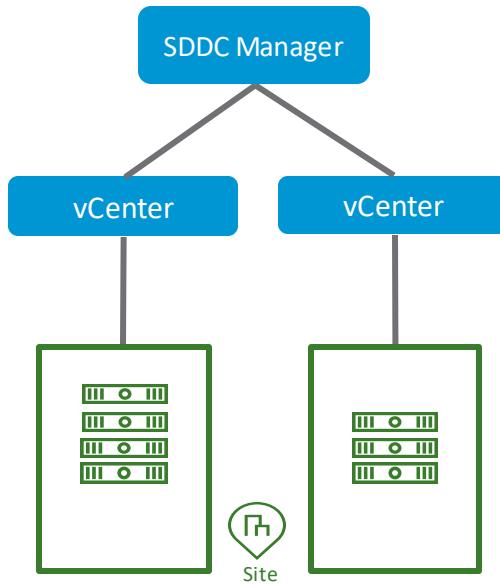
透過 VCF 實現資料中心自動化



Cloud Foundation 部署架構

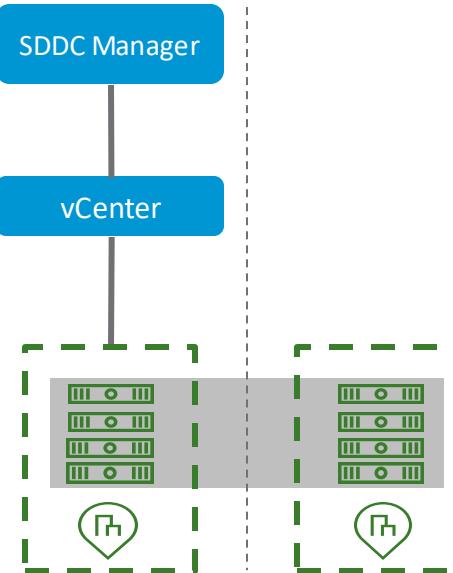
Single site, Stretched and Multi-site Deployments

1 VCF Single Site Deployment



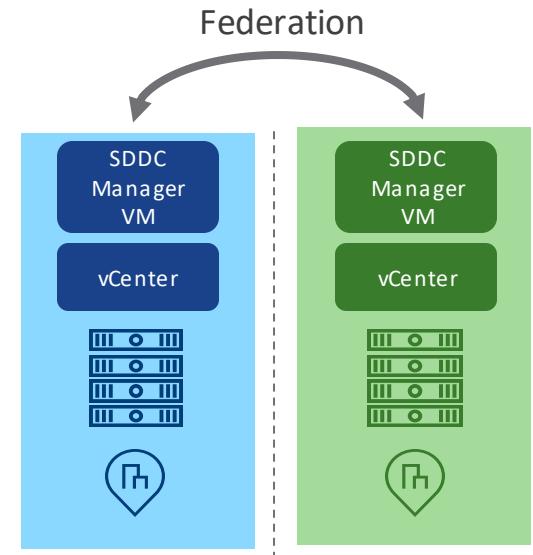
一個或多個工作負載域的單站點部署。每個工作負載域可以是多集群的

2 VCF Stretched Deployment



2個站點間的 vSAN延伸叢集工作負載域。每個群集都有具備延伸叢集能力

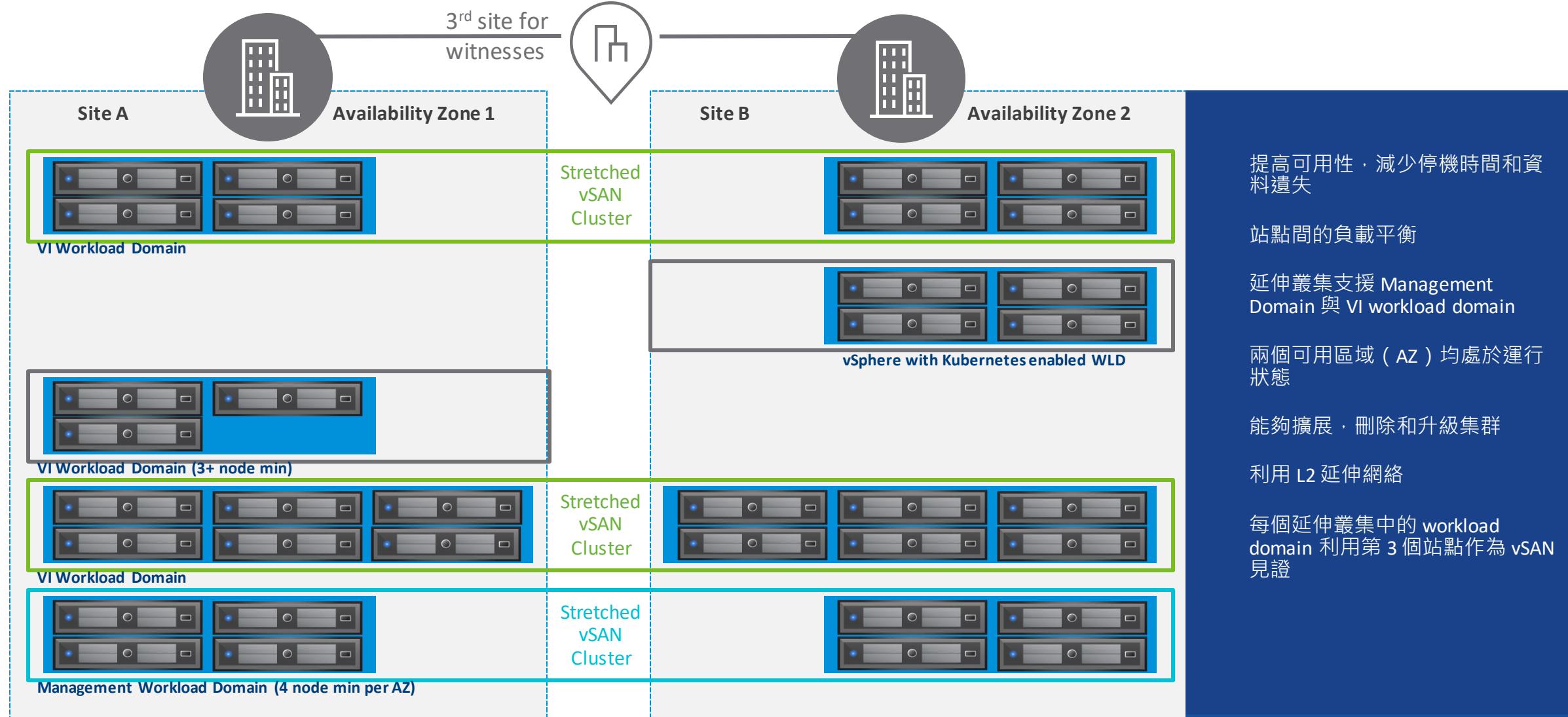
3 VCF Multi-instance Management



通過 Federation 驗證多個VCF實例，以增加可視性並簡化管理

----- Site Boundary

Cloud Foundation Stretched Cluster 效益

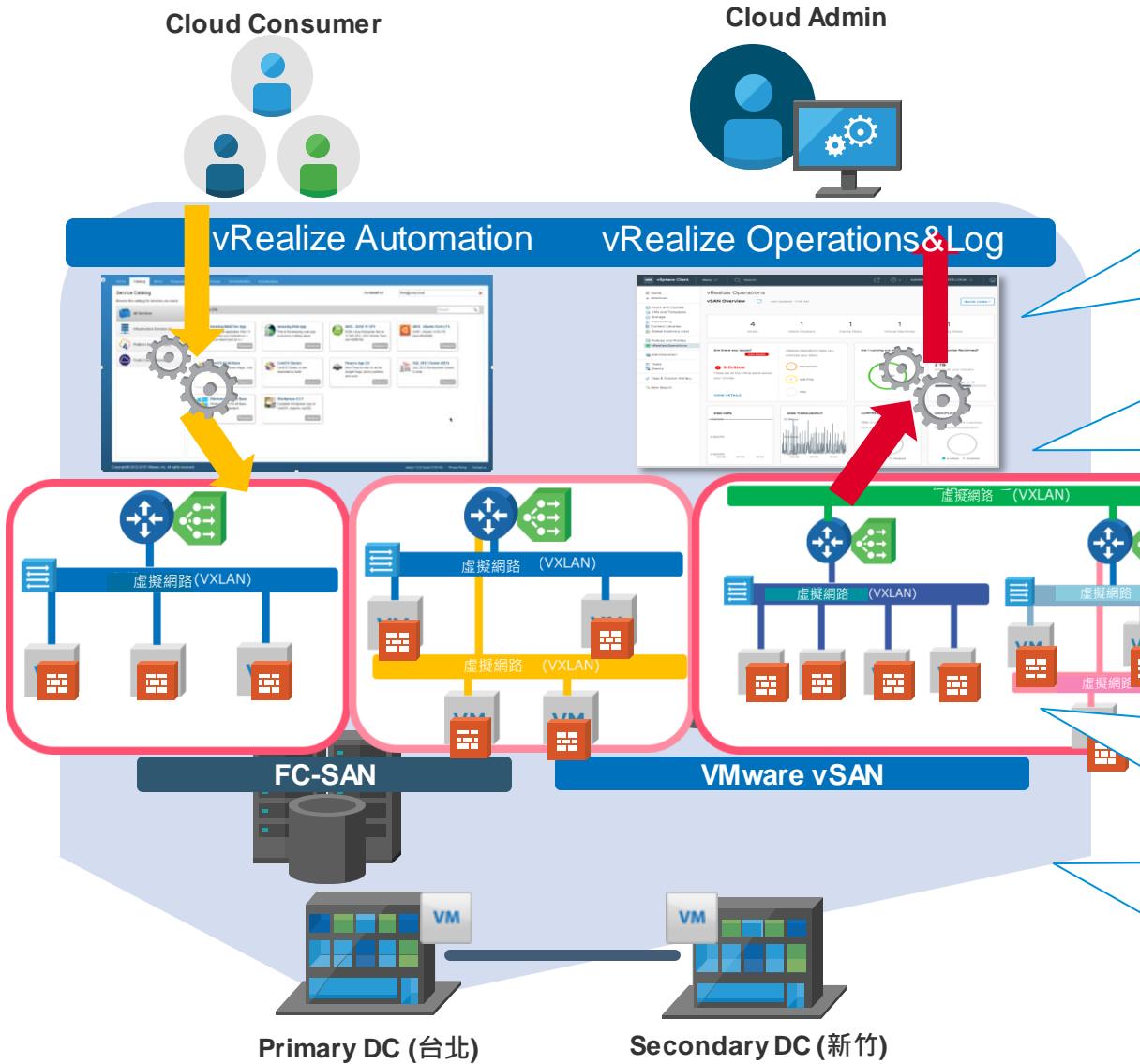


VMware 雲管理平台

vRealize Suite

vRealize Suite 多雲管理平台

vRealize Suite



主要管理項目

服務入口網 & 自動化佈建

效能 & 容量管理

組態與日誌管理

資源的回收與再利用

預期管理的效果

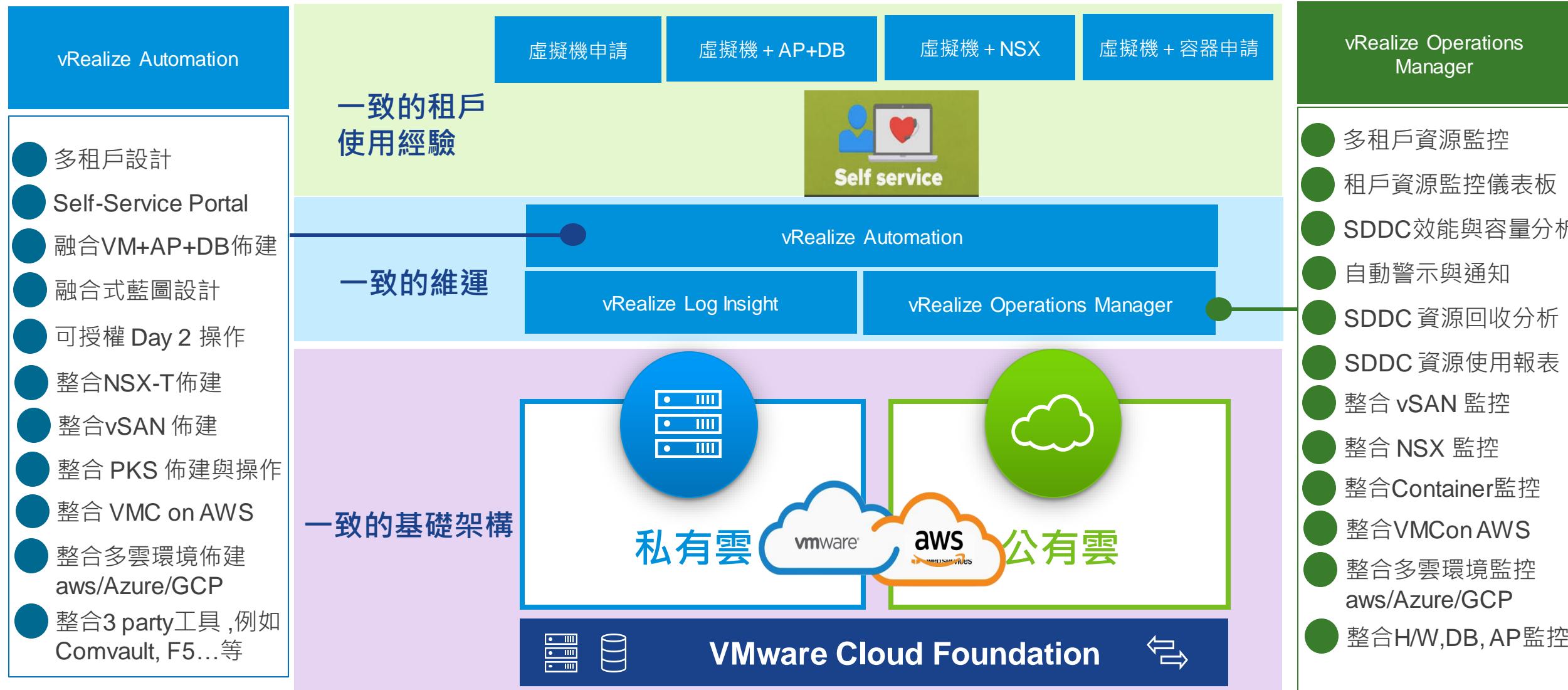
降低 OPEX

提升服務品質

強化安全與符規

降低成本

vRealize Suite 一致的維運管理與自動化



部署與維運自動化說明

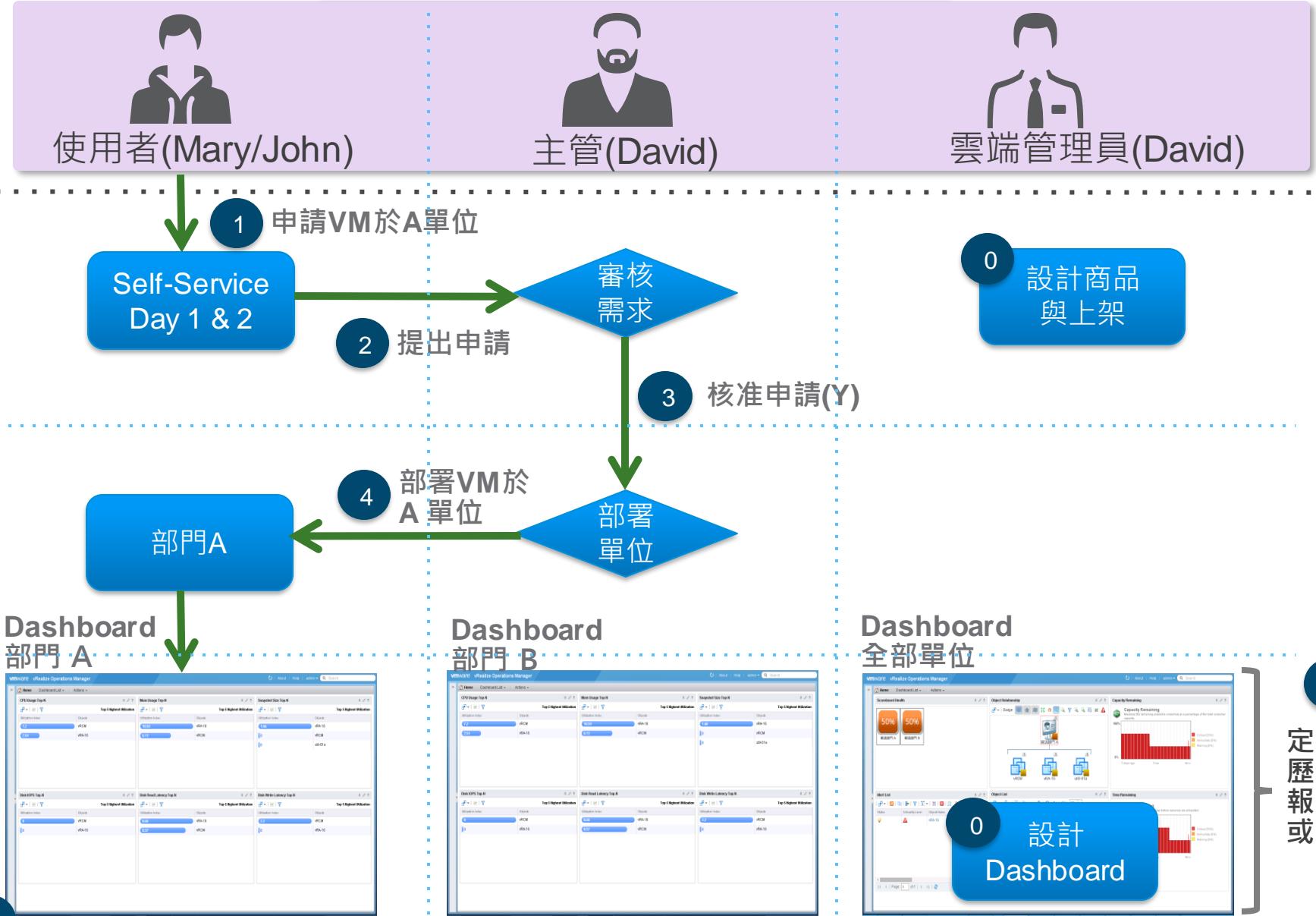
客戶端內部組織

Cloud Management
(雲端管理方案)

vRealize
Automation
& Orchestrator

VMware
vCenter/NSX/vSAN

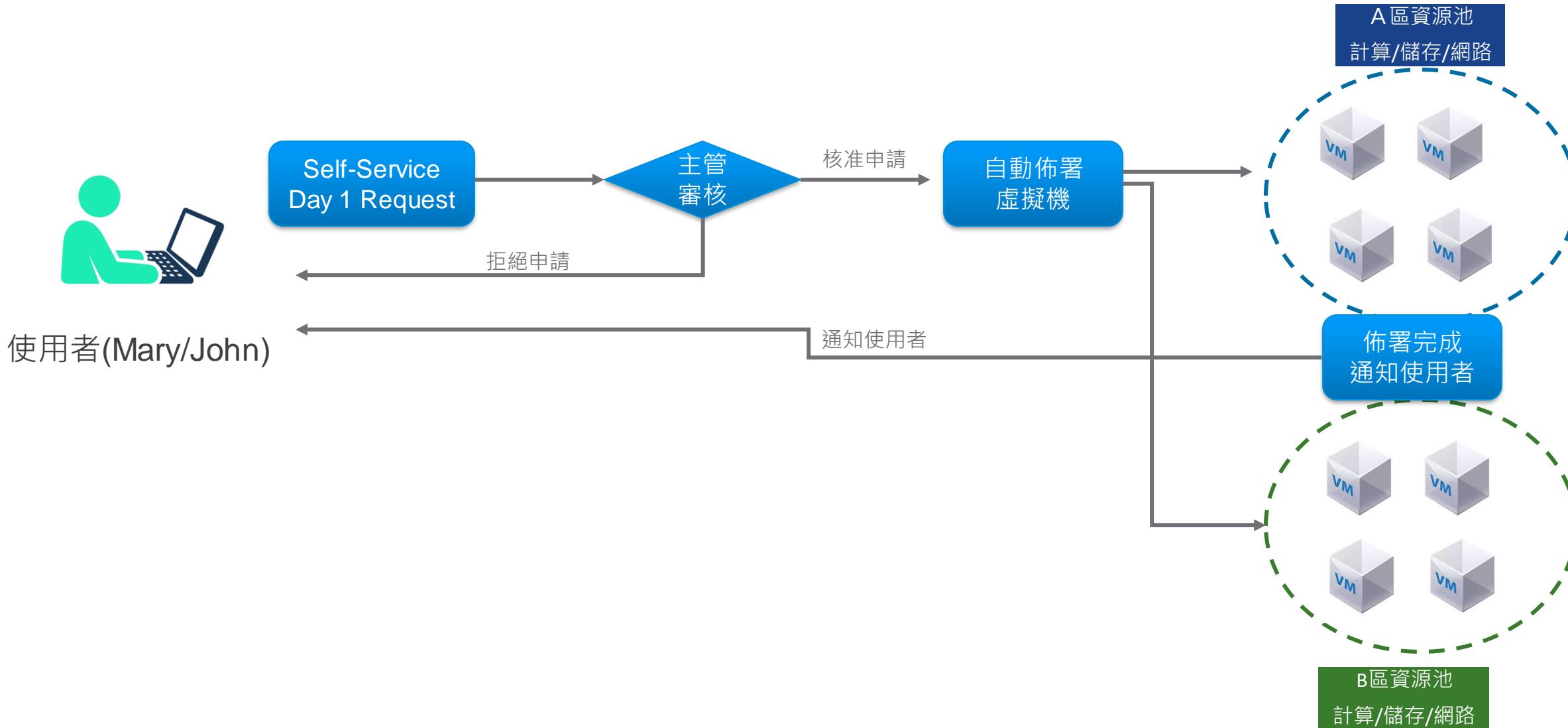
vRealize
Operation Manager
& Log Insight



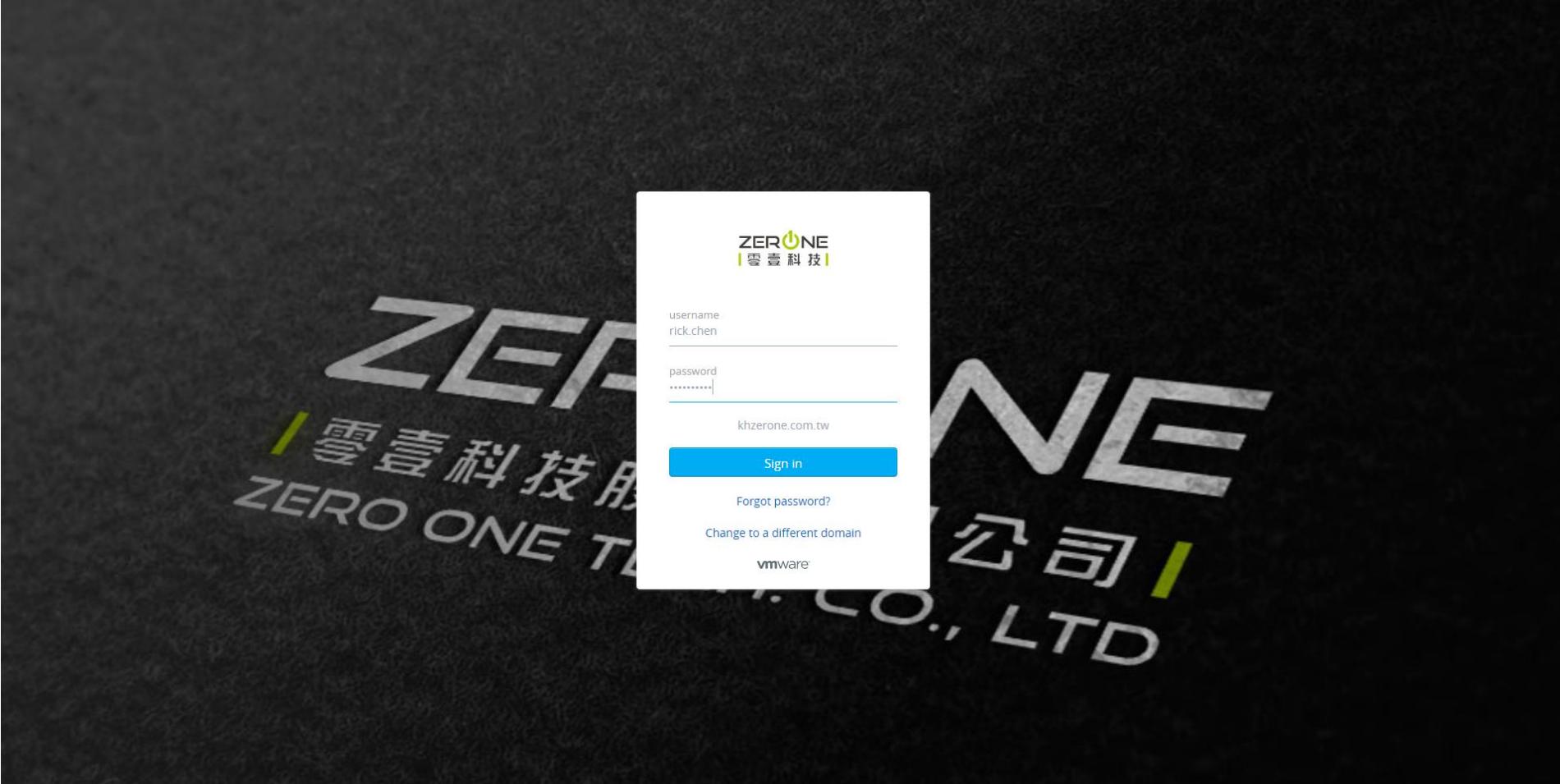
案例說明與情境展示

vRealize Suite

使用者申請虛擬機 (Day 1 Request)



使用者登入vRealize Automation 介面



使用者登入後可看到虛擬機的申請目錄

ZERONE 零壹科技 - 數位雲平台

Catalog Deployments Design Inbox Administration Infrastructure Containers

Catalog 6 items On behalf of: Search users

Search for catalog items by name or description

Sort: Name (ascending)

CentOS 7 No description Business group TNedu-vRA Service CentOS 7 REQUEST	CentOS 7 with Apache No description Business group TNedu-vRA Service CentOS 7 with Apache REQUEST	Ubuntu 18.04 LTS Pure No description Business group TNedu-vRA Service Ubuntu_18.04_LTS REQUEST	Windows 10 Pure No description Business group TNedu-vRA Service Windows 10 Pure REQUEST
Windows Server 2012 R2 No description Business group TNedu-vRA Service Windows Server 2012 R2 REQUEST	Windows Server 2016 No description Business group TNedu-vRA Service Windows Server 2016 REQUEST		

使用者申請虛擬機過程

The screenshot shows the ZERONE Cloud Platform interface. At the top, there is a navigation bar with the ZERONE logo, search icon, help icon, and 'Administrator' dropdown. Below the navigation bar, there is a menu with tabs: Catalog (underlined), Deployments, Design, Inbox, Administration, Infrastructure, and Containers.

In the main area, there is a search bar with the text 'Windows 10 Pure' and a dropdown for 'Business group' set to 'TNedu-vRA'. A preview window on the left shows a thumbnail of a Windows 10 Pure virtual machine.

The main configuration form is titled 'vSphere (vCenter) Machine: Window'. It has three tabs: General (selected), Storage, and Properties. The General tab contains the following fields:

- Instances: 1
- CPUs: 2
- * Memory (MB): 2048 (Select 2048-4096)
- Storage (GB): 40
- Description: (Empty text area)

At the bottom of the form are two buttons: 'SUBMIT' (blue) and 'CANCEL' (white).

申請虛擬機後須等管理員審核通過

ZERONE 零壹科技 - 數位雲平台

Catalog Deployments Administration Inbox Infrastructure Containers

Deployments 2 items 

Search for deployments by name, description, IP address, resource name or machine status | Sort: Created Date (descending) 

Deployment	Description	Status	Progress	Action
 Windows 10 Pure	No description	#15 - Provision Windows 10 Pure - Pending Approval	10%	CANCEL 0 minutes since submitted
 CentOS 7-24087786	No description	2 Resources Created 7 days ago IP21 TNedu-vR...	Never expires On 172.27.21.180	ACTIONS

管理員審核過程

The screenshot shows the ZERONE digital cloud platform interface. At the top, there is a navigation bar with the ZERONE logo, a search icon, a help icon, and a dropdown menu labeled "Administrator". Below the navigation bar, there is a horizontal menu with links: Catalog, Deployments, Design, Inbox (which is underlined), Administration, Infrastructure, and Containers. The main content area is titled "Inbox". It displays three tabs: Approvals (with 1 notification), Manual User Action, and Reclamation Requests. There is also a refresh button. Below the tabs, there is a search bar and filter options for "Filter By: Active" and "Owned By: Me". A table follows, showing a single item in the "Approvals" section. The table has columns: Approval, Request, Requested Item, Requested For, Status, Lease, Lease Cost, Estimated price, Assigned To, and Last Updated. The data in the table is as follows:

Approval	Request	Requested Item	Requested For	Status	Lease	Lease Cost	Estimated price	Assigned To	Last Updated
5	15	Window	rick.chen@khzerone.com.tw	Active	Unlimited	N/A	N/A	Administrators@khzerone.com.tw	03/10/2020

At the bottom right of the table, it says "1 - 1 of 1 items".

核准或拒絕

ZERONE 零壹科技 - 數位雲平台

Catalog Deployments Design **Inbox** Administration Infrastructure Containers

Approval # 5

Status	Active	Request #	15	Cost	N/A
Requested item	Window	Requestor	Rick Chen	Assigned to	Administrators@khzerone.com.tw
Description	Provisions a VMware vSphere (vCenter) machine.	Requested on	March 10, 2020 4:17 PM	Assigned on	March 10, 2020 4:17 PM
Requested for	Rick Chen	Lease	Unlimited	Policy name	verification Required Virtual Machine
		Estimated price	N/A		

Enter Details Request Information

* Justification:

APPROVE **REJECT** **CANCEL**

管理員核准後，使用者能看到申請虛擬機繼續佈署

The screenshot shows the ZERONE ZeroCloud Platform interface. At the top, there's a navigation bar with links for Catalog, Deployments (which is currently selected), Administration, Inbox, Infrastructure, and Containers. The user is logged in as rick.chen. Below the navigation, a deployment card for "Windows 10 Pure-16953787" is displayed, showing its status as "In Progress". The deployment details include:

No description	Owner: Rick Chen	Lease duration: Indefinite
	Provisioned on: March 10, 2020 4:17 PM	Expires: Never
	Business group: TNedu-vRA	Destroy date: Never
	Catalog item: Windows 10 Pure	

Below the details, there's a "HIDE DETAILS" button. The main content area has tabs for Components, History (which is selected), and Monitor. In the History tab, under Requests, there's a single entry from 3/10/2020 at 4:17 PM by Rick Chen, labeled "PROVISION ...". The Events section shows the provisioning process with several steps:

Step	Type	Details	Status	Timestamp
Pre-approval	Deployment	Approved	In Progress	March 10, 2020 4:17 PM - March 10, 2020 4:22 PM
Required VM	Window	Approved	In Progress	March 10, 2020 4:17 PM - March 10, 2020 4:21 PM
Require VM Ram >=	Window	Approved	In Progress	March 10, 2020 4:21 PM - March 10, 2020 4:22 PM
Provisioning	Deployment	In Progress	In Progress	March 10, 2020 4:22 PM
Post-approval	Deployment			
Completed	Deployment			

A red box highlights the "Approved" status of the "Require VM Ram >=" step, which is currently in progress.

使用者可看虛擬機的佈署過程

The screenshot shows the ZERONE ZeroCloud interface. At the top, there's a navigation bar with links for Catalog, Deployments (which is currently selected), Administration, Inbox, Infrastructure, and Containers. On the right side of the header, there are search, help, and user account icons.

The main content area displays a deployment titled "Windows 10 Pure-16953787" which is currently "In Progress". Below the title, there's a "No description" note and a table of deployment details:

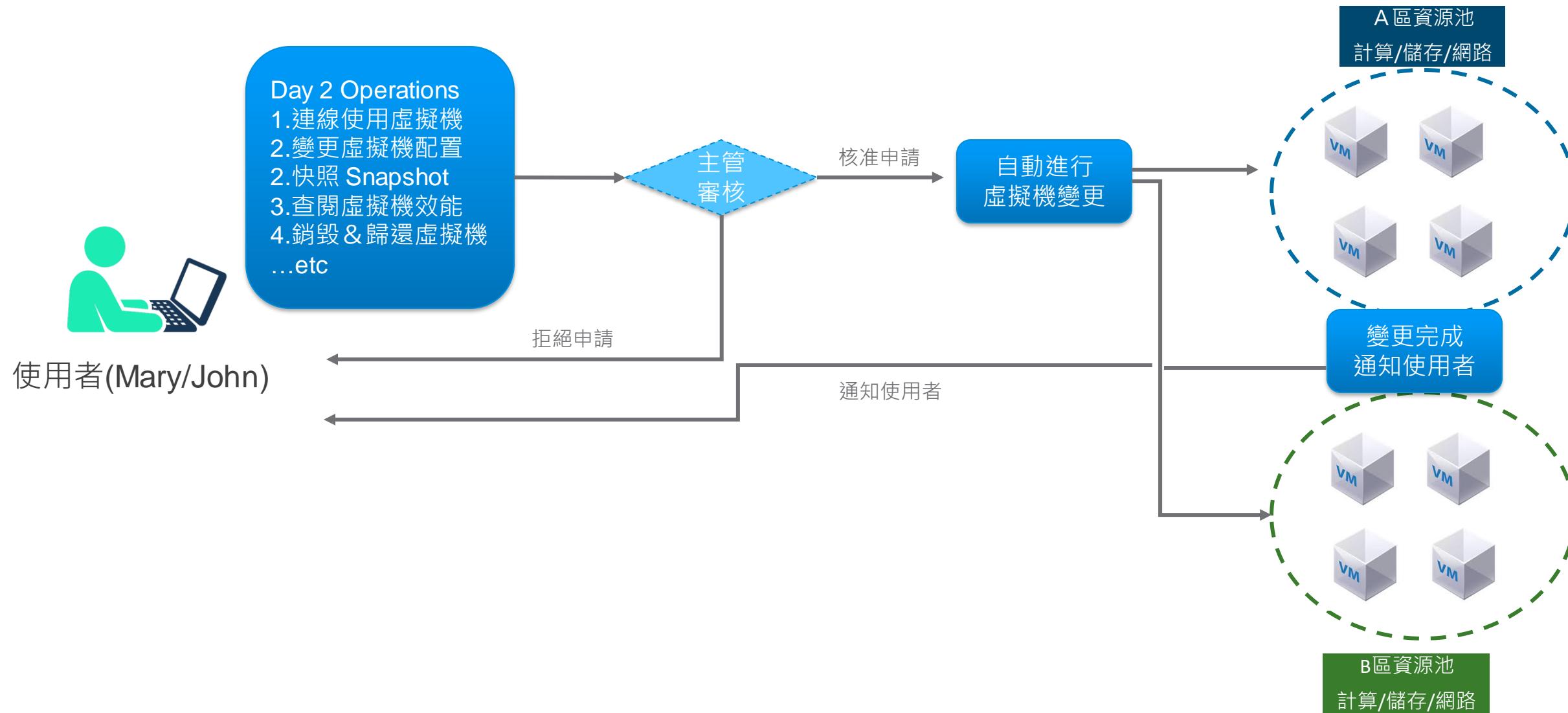
Owner	Rick Chen	Lease duration	Indefinite
Provisioned on	March 10, 2020 4:17 PM	Expires	Never
Business group	TNedu-vRA	Destroy date	Never
Catalog item	Windows 10 Pure		

A "HIDE DETAILS" link is located below the table.

The interface includes tabs for Components, History (which is selected), and Monitor. In the History section, there's a "Requests" tab showing one request from "Rick Chen" on "3/10/20 4:17 PM" with a "PROVISION ..." button. The "Events" tab is active, displaying the deployment events:

Event Type	Description	Status	Requested By	Requested On	Created On	Updated On
Pre-approval	Deployment	Approved	Rick Chen	March 10, 2020 4:17 PM	March 10, 2020 4:22 PM	
Required VM	Window	Approved	Rick Chen	March 10, 2020 4:17 PM	March 10, 2020 4:21 PM	
Require VM Ram >=	Window	Approved	Rick Chen	March 10, 2020 4:21 PM	March 10, 2020 4:22 PM	
Provisioning	Deployment	In Progress		March 10, 2020 4:22 PM		
Post-approval	Deployment					
Completed	Deployment					

使用者變更虛擬機配置 (Day 2 Operations)



使用者RDP連線至申請的虛擬機(Windows)

The screenshot shows the ZERONE ZeroCloud web interface. At the top, there's a navigation bar with tabs: Catalog, Deployments (which is currently selected), Administration, Inbox, Infrastructure, and Containers. Below the navigation bar, there's a back button labeled '< Back' and a title 'Windows 10 Pure-16953787'. To the right of the title is a 'SHOW DETAILS ▾' button. The main area has three tabs: Components (selected), History, and Monitor. Under Components, there's a list of components: Windows 10 Pure-16953787, IP21, and TNedu-vRA08. The TNedu-vRA08 item is highlighted with a blue border and has a dropdown menu. The dropdown menu contains several options: 'Connect to Remote Console', 'Connect using RDP' (which is highlighted with a red box), 'Connect using VMRC', 'Create Snapshot', 'Destroy', 'Install Tools', 'Power Cycle', 'Power Off', and 'Reboot'. To the right of the dropdown menu is a detailed view of the TNedu-vRA08 component. The 'General' tab is selected. The details shown include: Name: TNedu-vRA08, Component: Window, Status: On, CPUs: 2, Memory (MB): 4096, Storage (GB): 40, Description: (empty), Owner: rick.chen@khzerone.com.tw, Blueprint: Windows 10 Pure, Compute resource: KHdemo, and Business group: TNedu-vRA.

使用者VMRC連線至申請的虛擬機(Linux)

The screenshot illustrates the process of connecting to a virtual machine (VM) using the VMware Remote Console (VMRC). The interface is divided into several sections:

- Top Left:** ZERONE 零壹科技 - 數位雲平台 navigation bar with links to Catalog, Deployments, Administration, Inbox, Infrastructure, and Containers.
- Top Right:** A VMware Remote Console window titled "TNedu-vRA07.vmx - VMware Remote Console". The window shows the Linux login screen: "CentOS Linux 7 (Core)" and "Kernel 3.10.0-957.21.3.el7.x86_64 on an x86_64".
- Middle Left:** A detailed view of the VM configuration, including fields for Owner (Rick Chen), Provisioned on (March 10, 2020), Business group (TNedu-vRA), and Catalog item (CentOS 7).
- Bottom Left:** A sidebar for managing the VM, showing components (IP21, TNedu-vRA07), and options like "Connect to Remote Console", "Connect using RDP", and the highlighted "Connect using VMRC".
- Bottom Center:** The "General" tab of the VM properties, displaying details such as Name: TNedu-vRA07, Component: vSphere__vCenter__Machine_1, Status: On, CPUs: 2, Memory (MB): 2048, Storage (GB): 30, and Owner: rick.chen@khzerone.com.tw.

使用者可申請變更虛擬機資源

ZERONE 零壹科技 - 數位雲平台

Catalog Deployments Administration Inbox Infrastructure Containers

< Back

CentOS 7-24087786

No description

Owner	Rick Chen	Lease duration	Indefinite
Provisioned on	March 10, 2020 4:10 PM	Expires	Never
Business group	TNedu-vRA	Destroy date	Never
Catalog item	CentOS 7		

HIDE DETAILS ☰

Components History Monitor

Connect using VMRC

- Create Snapshot
- Destroy
- Install Tools
- Power Cycle
- Power Off
- Reboot
- Reconfigure**
- Reprovision
- Shutdown
- Suspend
- Unregister

General Storage Network Security Properties Snapshots

Name: TNedu-vRA07

Component: vSphere__vCenter__Machine_1

Status: On

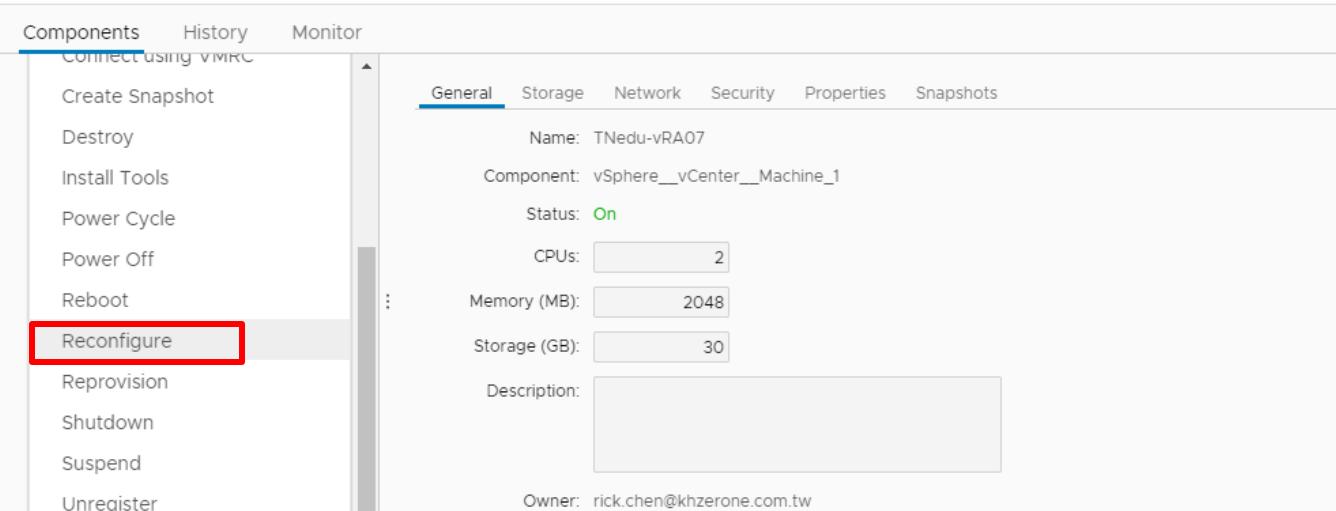
CPUs: 2

Memory (MB): 2048

Storage (GB): 30

Description:

Owner: rick.chen@khzerone.com.tw



變更虛擬機 CPU、RAM

ZERONE 零壹科技 - 數位雲平台

Catalog Deployments Administration Inbox Infrastructure Containers

Reconfigure - TNedu-vRA07

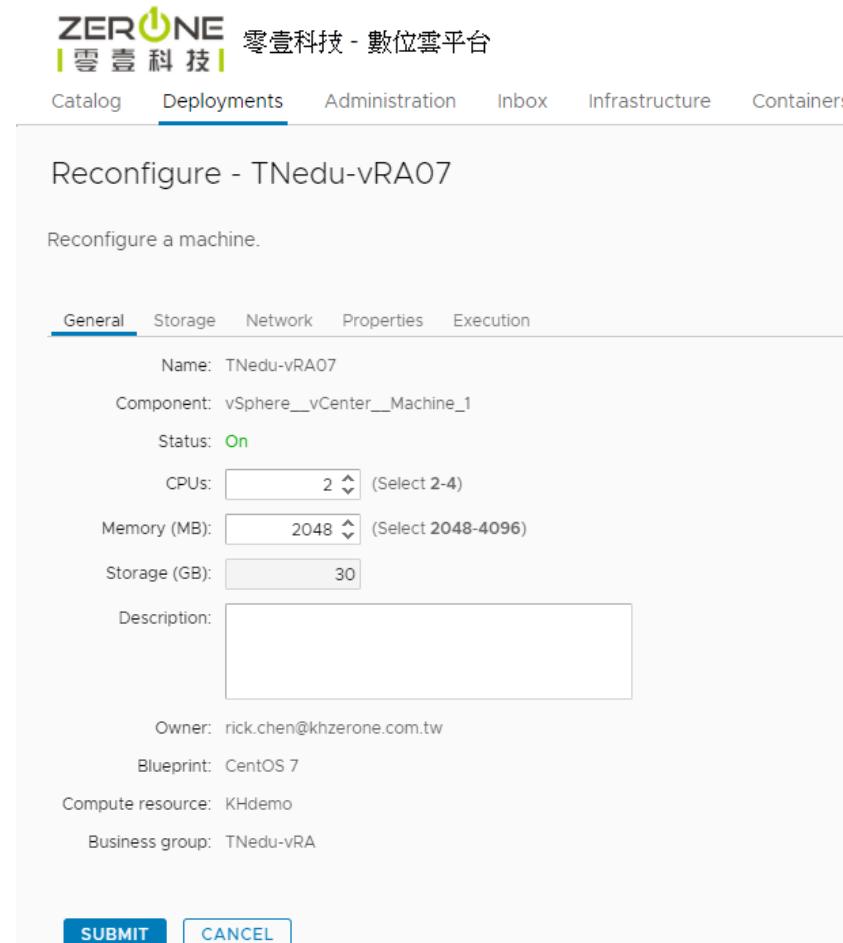
Reconfigure a machine.

General Storage Network Properties Execution

Name: TNedu-vRA07
Component: vSphere__vCenter__Machine_1
Status: On
CPUs: 2 (Select 2-4)
Memory (MB): 2048 (Select 2048-4096)
Storage (GB): 30
Description:

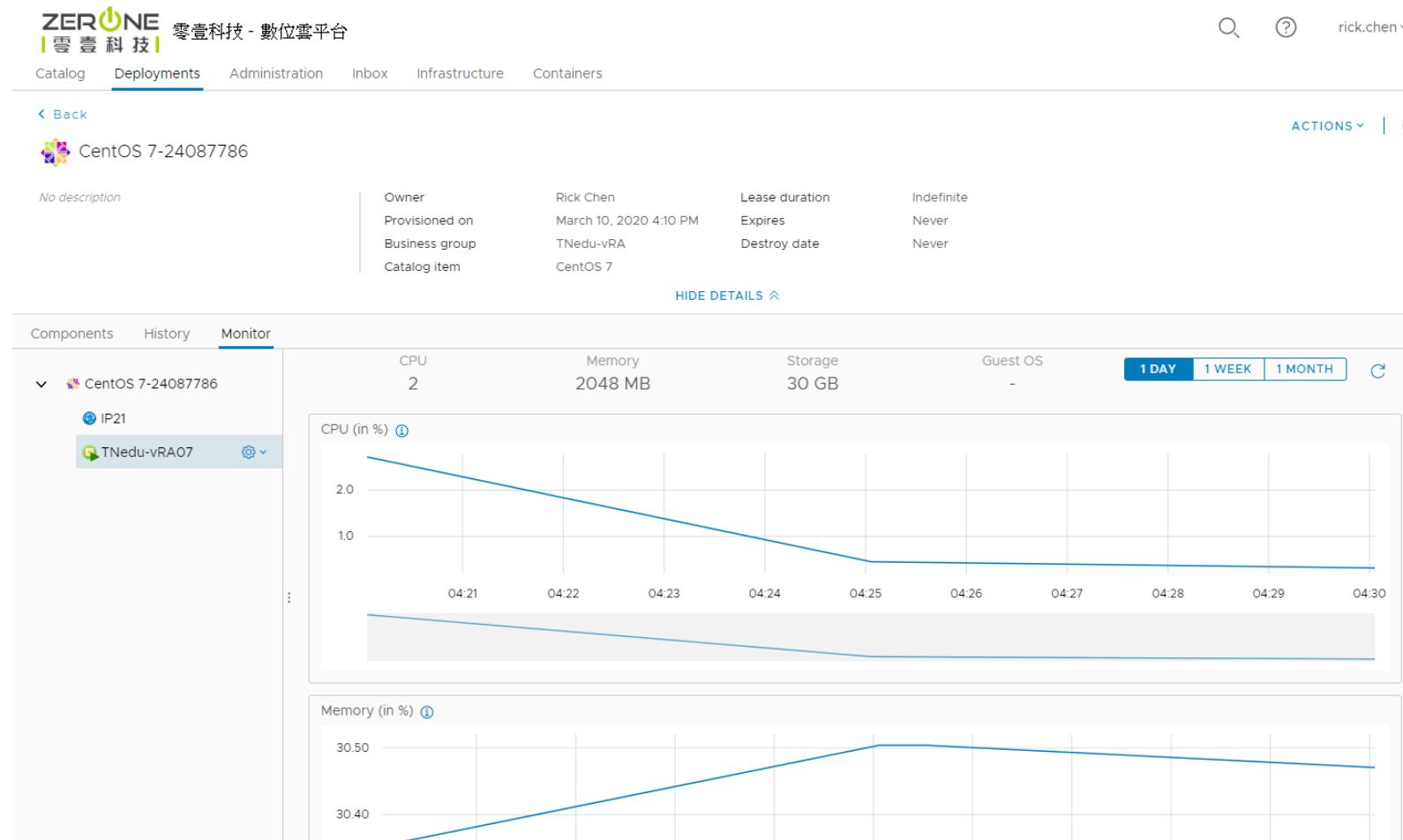
Owner: rick.chen@khzerone.com.tw
Blueprint: CentOS 7
Compute resource: KHdemo
Business group: TNedu-vRA

SUBMIT CANCEL

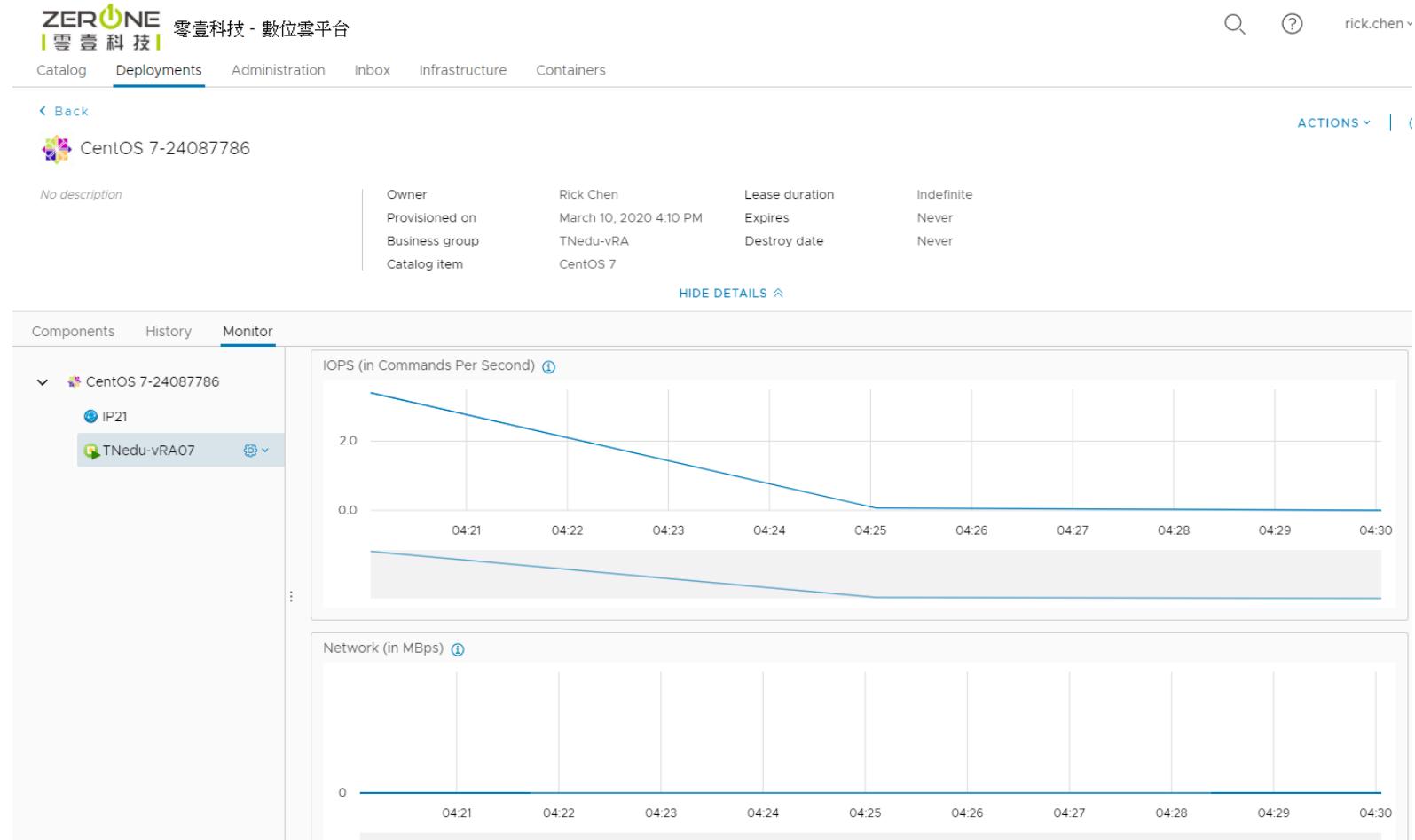


使用者可查閱虛擬機的效能

CPU、RAM



使用者可查閱虛擬機的效能 IOPS、網路



使用者可自行建立與刪除快照

預設只能保留一份快照

The screenshot shows the ZERONE Cloud Platform interface. At the top, there is a navigation bar with links: Catalog, Deployments (which is underlined), Administration, Inbox, Infrastructure, and Containers. Below the navigation bar, there is a back button labeled "Back". The main content area displays a VM named "CentOS 7-24087786". On the left, there is a sidebar with components: IP21 and TNedu-vRA07. The TNedu-vRA07 component has a dropdown menu with options: Connect to Remote Console, Connect using RDP, Connect using VMRC, Create Snapshot (which is highlighted with a red box), Destroy, Install Tools, Power Cycle, Power Off, and Reboot. On the right, there is a "General" tab with detailed information about the VM:

- Name: TNedu-vRA07
- Component: vSphere__vCenter__Machine_1
- Status: On
- CPUs: 2
- Memory (MB): 2048
- Storage (GB): 30
- Description: (empty)
- Owner: rick.chen@khzerone.com.tw
- Blueprint: CentOS 7
- Compute resource: KHdemo
- Business group: TNedu-vRA

At the bottom right of the main content area, there is a "SHOW DETAILS" link.

使用者可查看虛擬機申請/變更歷程

部署進度追蹤

The screenshot shows the ZERONE ZeroTech - Digital Cloud Platform interface. The top navigation bar includes Catalog, Deployments (selected), Administration, Inbox, Infrastructure, and Containers. The main content area displays a deployment for 'CentOS 7-24087786'. A 'SHOW DETAILS' button is visible above the task table. The 'History' tab is selected, showing a timeline of events:

- 3/10/2020 4:35 PM: CHANGE OWNER (Successful) by Rick Chen
- 3/10/2020 4:10 PM: PROVISION ... (Successful) by Rick Chen

The 'Events' tab is selected under Requests #16 - Change Owner. The table details the task steps:

Tasks	Component	Status	Depends On	Start Time	Completion Time
Submitted	Deployment	Successful		March 10, 2020 4:35 PM	March 10, 2020 4:35 PM
Pre-approval	Deployment	Approved		March 10, 2020 4:35 PM	March 10, 2020 4:35 PM
Change Owner	Deployment	Successful		March 10, 2020 4:35 PM	March 10, 2020 4:35 PM
Change Owner	vSphere__vCenter__Machine_1: vSphe	Successful	①	March 10, 2020 4:35 PM	March 10, 2020 4:35 PM
Post-approval	Deployment	Approved		March 10, 2020 4:35 PM	March 10, 2020 4:35 PM
Completed	Deployment	Successful		March 10, 2020 4:35 PM	March 10, 2020 4:35 PM

使用者使用完畢歸還資源

銷毀使用完畢的虛擬機

ZERONE 零壹科技 - 數位雲平台 enter.wu

Catalog Deployments Administration Inbox Infrastructure Containers

Deployments 2 items ▼

Search for deployments by name, description, IP address, resource name or machine status Sort: Created Date (descending) ⟳

Deployment	Description	Resources	Created	Expires	ACTIONS
 CentOS 7-24087786	No description	2 Resources IP21 TNedu-vRA07	Created 30 minutes ago	Never expires	Change Lease Change Owner Change Security Destroy Expire Scale In Scale Out View Details
 Windows 10 Pure-98688067	No description	2 Resources IP21 TNedu-vRA06	Created 1 day ago	Never expires	Change Lease Change Owner Change Security Destroy Expire Scale In Scale Out View Details

擴充更多的服務項目

ZERONE 零壹科技 - 數位雲平台

目錄 15 個項目 | 代表: 搜尋使用者

Q. 依名稱或說明搜尋目錄項目 | 排序: 名稱 (遞增) | C

 3Tier-APP Web+APP+DBS with NSX-T 服務群組 BG-PROD 服務 Product 申請	 CentOS CentOS Select folder 服務群組 BG-DEV 服務 Develop 申請	 CentOS-NSX-Tag CentOS Select folder & NSXT-Tag 服務群組 BG-DEV 服務 Develop 申請	 CentOS-Tag CentOS Select folder 服務群組 BG-DEV 服務 Develop 申請
 CentOS-vSAN Policy CentOS with vSAN Policy 服務群組 BG-DEV 服務 Develop 申請	 Create a user with a password in a group Creates a user and sets a password for the user. 服務群組 BG-DEV 服務 Develop 申請	 GitLab CE 11.11.3-0 This is a Single-Tier deployment for GitLab CE 11.11.3-0. GitLab blueprint published by Bitnami is secure, up-to-date, and pre-configured to work 服務群組 BG-DEV 服務 Develop 申請	 Jenkins 2.176.1-0 This is a Single-Tier deployment for Jenkins 2.176.1-0. Jenkins blueprint published by Bitnami is secure, up-to-date, and pre-configured to work 服務群組 BG-DEV 服務 Develop 申請
 JFrog Artifactory Open Source 6.10.4-0 This is a Single-Tier deployment for JFrog Artifactory Open Source 6.10.4-0. JFrog Artifactory Open Source blueprint published by Bitnami 服務群組 BG-DEV 服務 Develop 申請	 Kubernetes Installs current Kubernetes on CentOS 7 kubectl get nodes 服務群組 BG-DEV 服務 Develop 申請	 RHEL RedHat Enterprise Linux version 7.2 服務群組 BG-DEV, 1 更多 服務 Product 申請	 Windows 2012 size Windows 2012r2 select SIZE 服務群組 BG-DEV, 1 更多 服務 Product 申請
 Windows 2016 + IIS85 Windows 2016 and IIS 8.5 with audit logon policy 服務群組 BG-DEV 服務 Develop 申請	 Windows 2016 no admin Windows 2016 and rename admin 服務群組 BG-DEV 服務 Develop 申請	 Windows SQL Windows 2016 and Install MSSQL 2016 服務群組 BG-DEV, 1 更多 服務 Product 申請	

Thank You