



Enterprise Cloud
One OS. One Click.

Simon Cheng, Nutanix Taiwan



@nutanix



— 企業雲平台
一個系統. 一個點擊.

Simon Cheng, Nutanix Taiwan



Nutanix: The Enterprise Cloud Company

使資訊中心基礎設施和雲服務管理簡易透明，
提升IT部門專注於應用與服務

7100+ customers

Over **125** countries

6 continents



Founded in **2009**



2,600+
employees

NUTANIX™

對企業雲的期待與要求

快速上線

I can deploy my application in five minutes.

順暢消費

I use and pay for just what I need, only when I need it.



簡單使用

I don't spend time on low-level infrastructure management.

持續創新

My infrastructure gets better on a regular basis.

企業雲基礎



企業雲基礎



伺服器



資料保護



儲存系統

超融合平台 (HCI)

- ✓ 全球評價與市佔率最高的 HCI 方案
- ✓ 運行與強化應用程式
- ✓ 彈性操作, 無限制的擴充力

企業雲基礎

支援最受歡迎虛擬平台，開放多選擇



CITRIX
XenServer

企業雲基礎



原生的虛擬平台 (AHV)

- ✓ 高效能, 高安全虛擬平台
- ✓ 整合管理, 單一主控
- ✓ 授權免費, 企業支援

企業雲基礎



單點擊操作

- ✓ 基礎建設部署
- ✓ 安排計劃與擴充
- ✓ 透明洞察與報告

企業雲基礎



網路

- ✓ 微分割安全 (micro-segmentation)
- ✓ 網路自動化與協同運作
- ✓ 端點到端點的網路透明管理

企業雲基礎

應用自動化

- ✓ 以應用為中心的協同運作, 周期管理
- ✓ 基於策略的管理
- ✓ 自助服務部署



企業雲基礎

多雲管理

- ✓ 來自雲基礎的摘要應用
- ✓ 任何雲基礎的部署與管理
- ✓ 公有雲的可見性與消費控制



多雲管理



應用自動化



單點擊操作



虛擬平台 (AHV)



伺服器



資料保護



儲存系統



網路

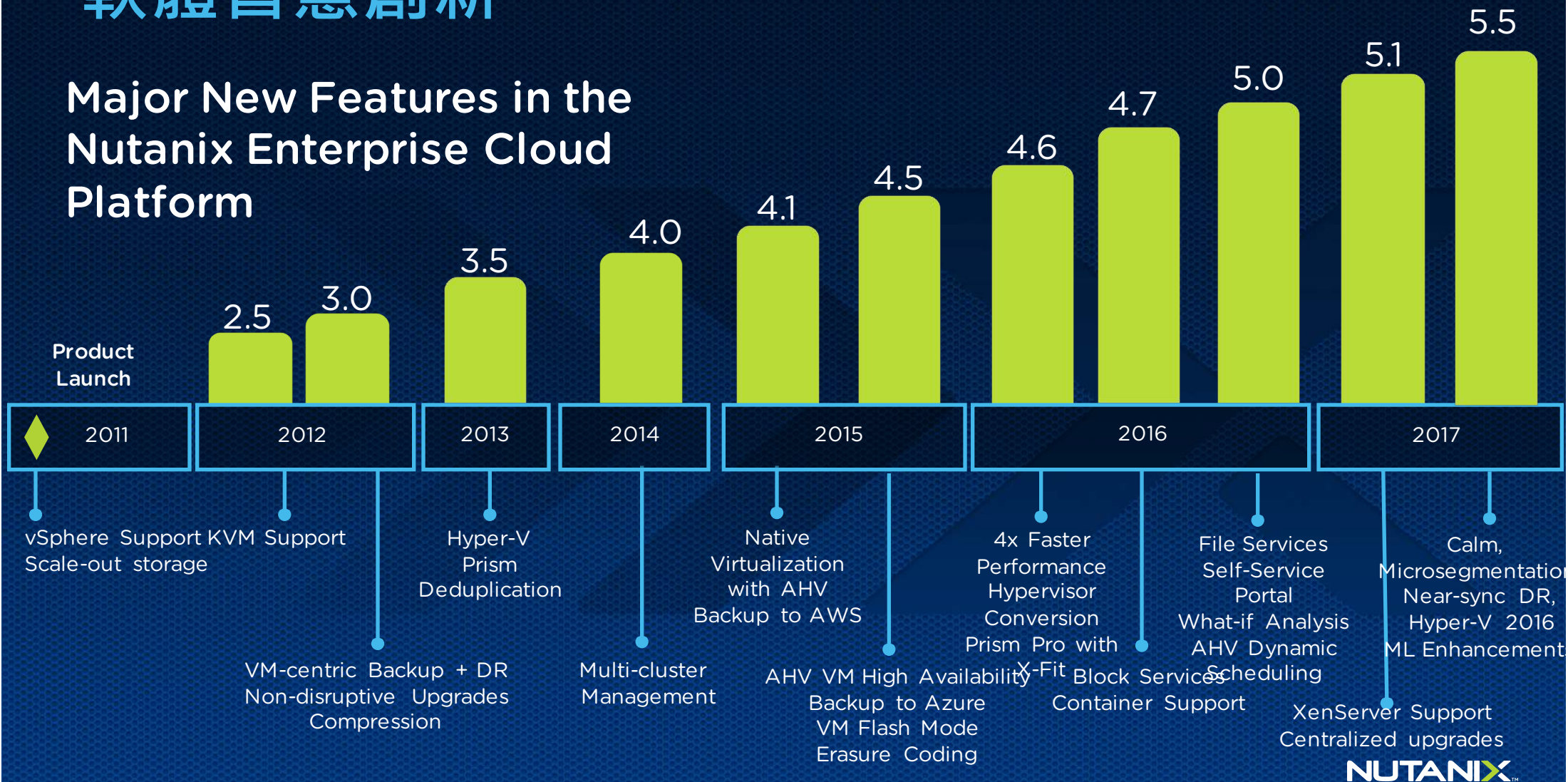
企業雲基礎



- ✓ 平台存在為了一個理由：部署應用
- ✓ 快速, 敏捷, 安全, 靈活

軟體智慧創新

Major New Features in the Nutanix Enterprise Cloud Platform



順暢遷移

Evaluate with
Community Edition



Test with
X-Ray



Size with
Sizer



Deploy with
Foundation



Migrate with
Xtract

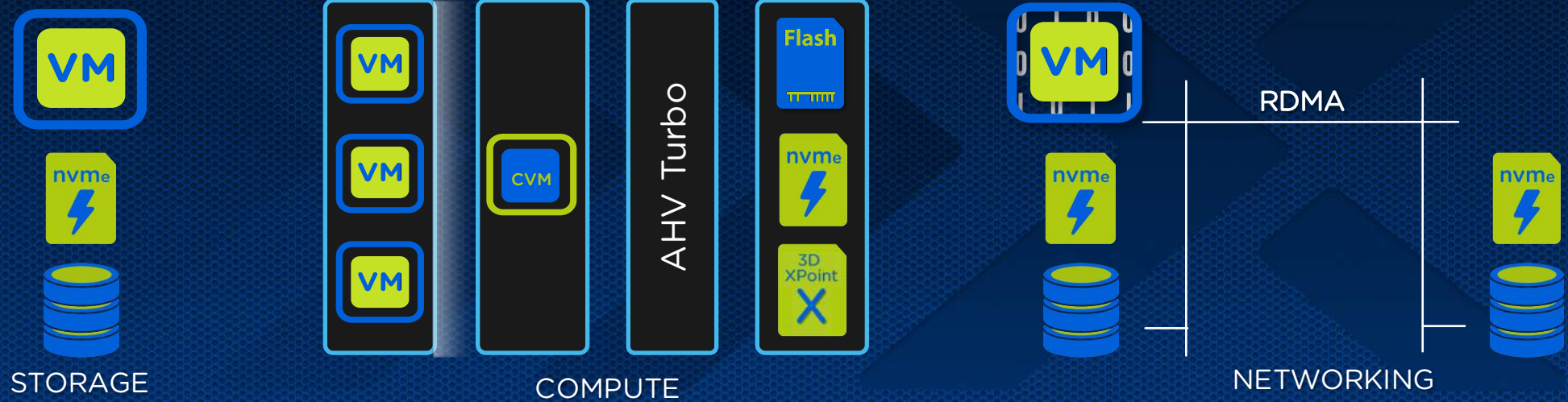


Extend with
Xi

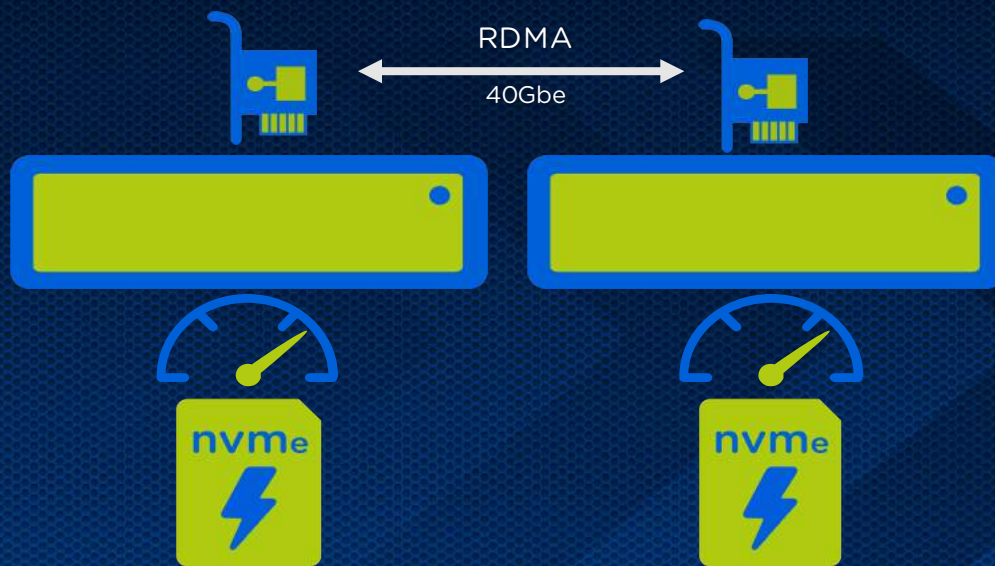


One Click

每一層面架構持續創新



介紹 NX-9030



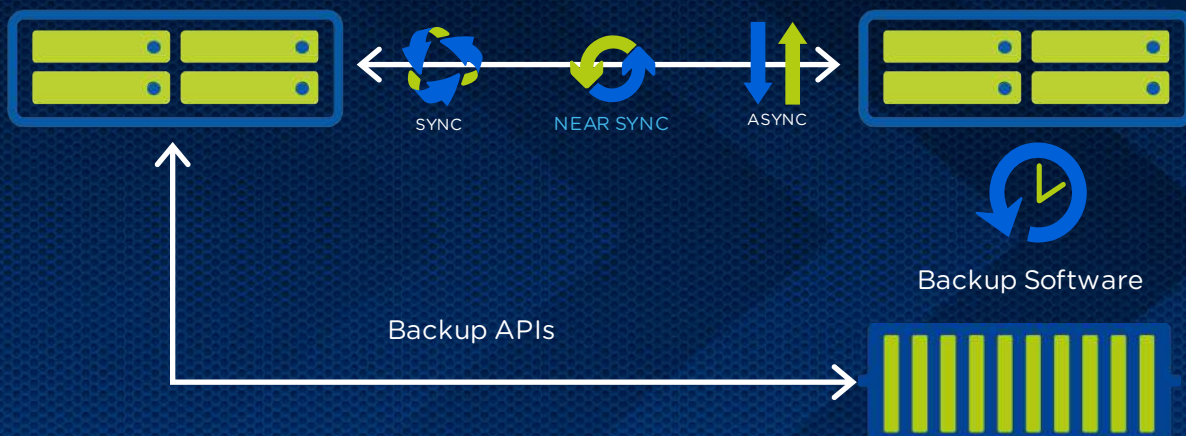
>1M IOPS

低於 ms 的延遲

NVMe, RDMA, 40GbE

單點擊資料保護

ORACLE[®] SAP
Microsoft[®]
SQL Server[®]



原生的 DR

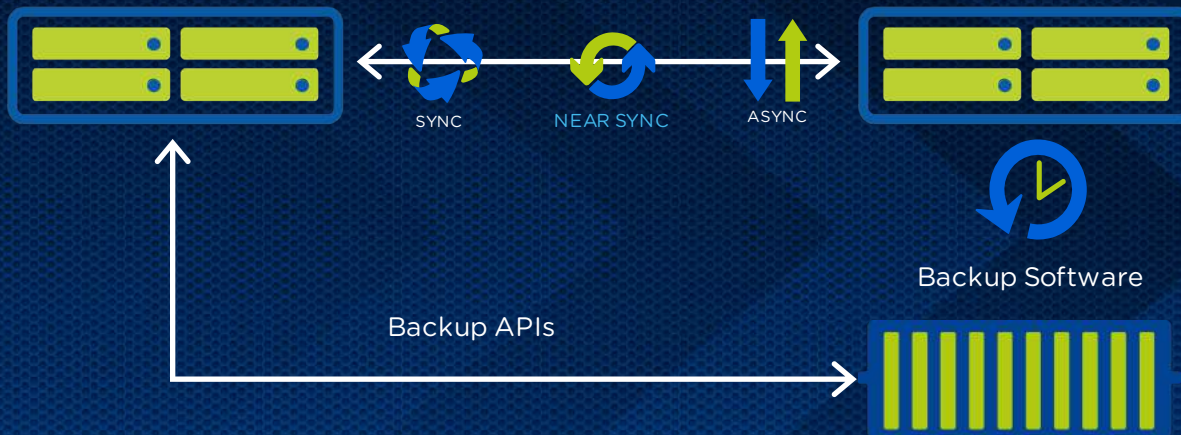
0 ~ hr RPO 的選擇

單點擊整合備援備份

15 Minute RPO

單點擊資料保護

ORACLE[®] SAP
Microsoft[®]
SQL Server[®]



原生的 DR

0 ~ hr RPO 的選擇

單點擊整合備援備份

1 Minute RPO

Overview · Table

Async DR

Remote Site

NAME

RPlan_prod

Summary

DATA PROTECTION SUMMARY

Remote Site(s)

Protection Domain(s)

Protection Domain (Async DR)

Name · Entities · Schedule

Configure your local schedule

☒ Repeat every 1 minute(s) ?☐ Repeat every hour(s) ?☐ Repeat every day(s) ?☐ Repeat weekly☐ S ☐ M ☐ T ☐ W ☐ T ☐ F ☐ S☐ Repeat monthly

Day of month: e.g., 1,10,20 ?

Start on 12/20/2017 at 3:40 AM ?

☐ End on at

Retention policy

☒ Local 1 Months ?

Remote Sites

☒ DR_Taipei 1 Months ?☐ DR-Taichung Select ?

Cancel

Create Schedule

Total Pending (0)

軟體式的加密

在標準的磁碟上運行, 不需要硬體加密磁碟

FIPS 140-2 Level 1 security



不再是單一雲計算, 而是多雲支援



Public Cloud

- Scalable and elastic
- Cloud-native applications



Private Cloud

- Predictable and secure
- Performance sensitive
- Mission-critical applications



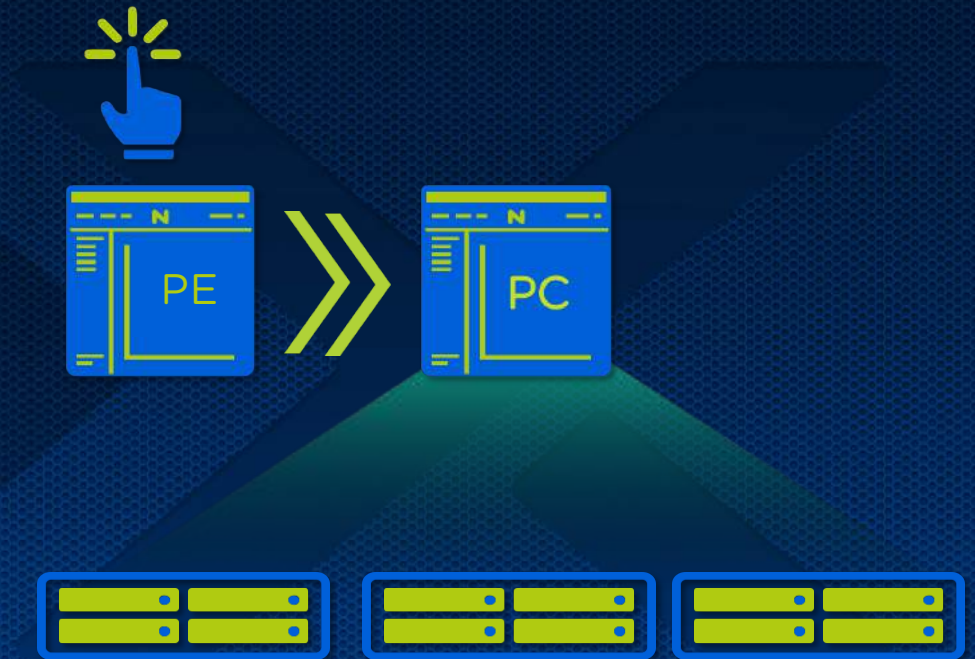
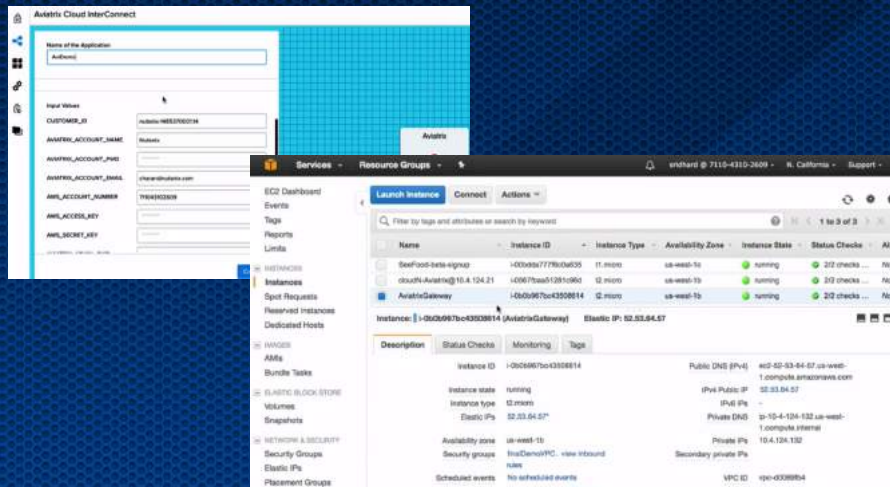
Distributed Cloud

- Dispersed and small
- ROBO, Edge and IoT applications

Prism Central 單點擊部署

單點擊 Prism Central 部署

達成多叢集、多雲集中管理



Prism Pro – 排程式產出報告

輕鬆將報告/關鍵績效指標與相關人員連結起來

讓應用程式擁有都與外部相關人員存取有價值的性能資訊

輕鬆的查看到浪費的證據與資源的限制



Prism Pro – 動態告警

根據行為自動產生告警的 KPI，而不是靜態觸發水位

當最重要的指標偏離規範時，可以輕鬆看到

降低管理開銷 - 專注於重要的事

消除手動建立報警，靠機器自動學習



The screenshot shows the "Create Security Policy" interface. It includes a search bar, a table of security policies, and a sidebar with filters.

NAME	PURPOSE	POLICY	STATUS	LAST MODIFIED
App Exchange	All Exchange Apps	2 Sources → AppScan → Exchange → 2 Destinations	Applied	2 months ago
HR_Employee...	Survey management for employee...	New Source → AppScan → HR → New Destination	Monitoring	17 days ago
Isolate Apps	Isolation policy for apps	AppScan → JIRA	Monitoring	4 months ago
Quarantine	System Quarantine rule for VMs	Quarantine	Applied	4 months ago



Prism Pro – 智慧型合理配置



閒置的虛擬機與合理配置建議

根據虛擬機實際的負載分析與機器學習演算法, 提供資源的合理配置指南

產生相關的報告以回收資源



可預測的應用

靈活的消費

Nutanix Calm

以應用程式驅動的自動化

自動服務應用市場

多虛擬平台, 多雲

CITRIX®

Lenovo

VEEAM

COMTRADE
SOFTWARE

silver peak

Bitdefender

COMMAVAULT

Nutanix App Catalog Interface

Navigation: Home | Explore | Analysis | **Apps** | Planning | Alerts | Admin

Search: All Apps | Search Apps

ON NUTANIX™

One-click Deploy Kubernetes on Nutanix

App	Vendor
Microsoft VDI	Nutanix
Cloudfoundry	Nutanix
Aviatrix Cloud Int...	Nutanix
LAMP Stack	Nutanix
Kubernetes	Nutanix
Hadoop	Nutanix
Avamar	Nutanix
Commonvault	Nutanix
Comtrade HYCU	Nutanix
Palo Alto Networ...	Nutanix
Illumino	Nutanix
Arista	Nutanix

MySQL®

mongodb®

aviatrix

PostgreSQL

TensorFlow™

elasticsearch

NUTANIX™

Industry Leading Support

Over 100

Countries

7

WW Support
Centers

24x7x365

“Follow the Sun” Support

Proactive Support
with **Pulse**

<30 min

Mission critical
support response
time

97%

Customer
Satisfaction

+90

Net Promoter Score
for > 4 years

★ Support Centers
● NBD Depots

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IT 面臨的挑戰

- 如何跟上業務增長的速度？
- 如何有效水平擴充？
- 架構的汰換更新如何無縫與最小影響？
- 疊床架屋式的傳統架構風險，是否改善？
- 管理與資源利用率是否可以最佳化？
- 異地備援與演練體制，是否可以有效落實與簡易執行？
- 企業平台是否俱備持續創新的要求？
- 如何把營運重心移回服務與應用？而非基礎維護？

資訊透明的管理

虛擬平台的快速操作

POC087Prism Central10.21.87.117

Not secure | https://10.21.87.37:9440/console/#page/dashboard

POC087Home12N

Admin

Hypervisor Summary

AHV

VERSION NUTANIX
20170830.58

Prism Central

OK

10.21.87.60
Launch

Cluster-wide Controller IOPS

3,371 IOPS

3,529 IOPS

4:00 PM5:00 PM6:00 PM

Storage Summary

14.61 TiB free (physical) of 15.09 TiB

Cluster-wide Controller IO B/W

110.86 MBps

112.33 MBps

4:00 PM5:00 PM6:00 PM

VM Summary

23

VM(S)

Availa...

Best Effort

On21

Off2

Suspend...0

Paused0

Cluster-wide Controller Latency

2.85 ms

4.99 ms

4:00 PM5:00 PM6:00 PM

Hardware Summary

41

HOSTS BLOCK

NX-1065-G5

MODEL

Cluster CPU Usage

11.31%

OF 134.38 GHz

Cluster Memory Usage

33.31%

OF 755 GiB

Health

CRITICAL

Services100

VMs0023

Disks0012

Data Resiliency Status

OK

Data Resiliency possible

Rebuild capacity availableYES

Critical Alerts

1

CRITICAL

SMTP Error

10 days ago

Warning Alerts

5

WARNING

42 minutes ago

External Client Authentication

Info Alerts

No Info Alerts

Events

183

EVENTS

Last event ago

Windows Taskbar

下午 06:25
2018/1/7

儲存系統的簡化

Windows taskbar showing various application icons (Start, Search, Task View, Edge, File Explorer, Shopping, Music, Photos, Mail, Chrome, Excel, PowerPoint, Word, OneDrive, Camera, Mail, Photos, Settings, Task View) and the system clock displaying 下午 06:28 on 2018/1/7.

單鍵升級與水平擴充

異地備援的快速實踐

網路的微分段

Impacted Cluster

POC087

PerCapConfAvaSys

Alerts10

Anomalies (last 24 hours)0

Runway-

Inefficient VMs3

Cluster Quick Access

POC087

Cluster Storage

CLUSTER	USED STORAGE	DATA REDUCTION RA...
POC087		

Tasks

☒ View All Task(s) DETAILS

No task activity for the last 48 hours.

Cluster Runway

POC087CPU-

Cluster CPU Usage

POC08711.14%

Cluster Memory Usage

POC08733.31%

VM Efficiency

3 Overprovisioned0 Inactive

1 Constrained0 Bully

View all inefficient VMs

Cluster Latency

POC0872.82 ms

Controller IOPs

POC0873,347 IOPS

持續的創新、專注於帶給客戶價值

2015

AOS 4.6 2/16

- 4x Performance Improvement
- 1-click hypervisor conversion
- Cross-hypervisor Backup and DR
- Distributed Storage Fabric – Native File Services (Tech Preview)
- Volume Groups in Prism
- Self Service Restore (GA)
- 1-Click Upgrades of Foundation, BIOS, BMC
- Metro Availability Non-Disruptive vMotion and Site Migrations
- Application Mobility Fabric
- Cross Hypervisor Disaster Recovery
- Project Dial: In Place Hypervisor Conversion (Tech Preview)
- Openstack Integration
- AHV Guest Customization
- AHV VLAN Trunking
- Actionable Capacity Forecasting
- Customizable Dashboards
- Entity Explorer
- SaltStack Self Healing Baseline
- Single CG Restriction Removal for Linked Clone Deployment
- Foundation 3.1 updates
- Network Integration – Phase 2
- Nutanix Guest Tools
- Replication Factor Migration / Conversion (Convert RF2 → RF3)
- Application Consistent Snapshots

2016

AOS 4.7 6/28

- Acropolis Block Services (ABS) TP
- Acropolis File Services GA
- Cluster Resiliency (degraded Node Detection)
- Docker Container Support
- 1-Click HBA Firmware Update
- In-Place Hypervisor Conversion GA
- Intel Broadwell Refresh
- Nutanix Xpress (SMB)
- Citrix-AHV Integration GA
- InstantON VDI for Citrix
- Nutanix-Microsoft CPS Feature Support
- Prism Internationalization Support
- Prism Central Entity Explorer Enhancements
- CVM NUMA Tuning for AHV

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持續的創新、專注於帶給客戶價值

2016

12/29 | AOS 5.0

- XenServer Hypervisor Support (TP)
- Hot Plug RAM+CPU on VMs (AHV) (TP)
- Async DR for Acropolis File Services
- Single Node Replication Target Clusters
- AHV Affinity Policies
- Acropolis Dynamic Scheduling
- REST API 2.0
- Metro Availability Witness
- Self-Service Portal
- Acropolis Block Services
- NCC Checks and Alerting – Prism
- Network Visualization
- ESXi CRUD Operations in Prism
- Licensing Workflow Improvements
- LZ4HC Compression Enhancement
- Protection Domain Related Entities Inclusion
- Increase Size of vDISK or Volume Group with VMs running
- Flash Mode Support for Volume Groups
- Cluster Latency Visualization
- Chinese and Japanese Localization (Prism Dashboards)
- Dynamic RF/Stripe Size Changes for Erasure Coding
- NGT Silent Installer
- 1-Hour RPO for Storage Heavy Platforms
- Self Service Restore – In Guest UI
- Simplified SATADOM Replacement

2017

5/1 | AOS 5.1

- vSphere 6.5 Support
- XenServer Support (GA)
- Cisco UCS B-Series Blade Support (TP)
- Acropolis Container Services 1.0 (GA)
- Life Cycle Manager (LCM)
- Support for SATA-DOM firmware updates
- Support for mixing hybrid and all-flash nodes in same cluster
- Support for Metro and Sync Replication between HW Platforms
- 1-click CVM Memory Upgrade
- Post Process Compression Always-On
- 1-Click Centralized Upgrades from Prism Central
- 1-Click Prism Central Deployment
- 1-Click Prism Central Cluster Registration
- Pulse Enabled for Prism Central
- Prism Alert Auto Resolution
- Integration with Network Functions in AHV (TP)
- NVIDIA Tesla M60 graphics and compute mode support
- GPU Passthrough for Guest VMs on AHV (TP)
- CHAP Auth for Discovery Sessions
- Erasure Coding Space Savings Improvements
- VM Hot Plug Memory and CPU (AHV)
- AFS 2.1 (SSR for file servers, Scale-Up, Access User Shares)

AOS 5.5 12/7

- Intel Skylake CPU Support
- Microsoft Hyper-V 2016
- Support for Windows Server 2016
- CALM
- Microsegmentation Policies in Prism
- Network Segmentation
- Async DR with Near Sync (1 min RPO)
- Data At Rest Encryption (software)
- Scale Out Prism Central
- Single Node Clusters
- AHV Turbo Data Path
- vNUMA support
- RDMA support for Dual Nic NX Systems
- vGPU Support for AHV
- Machine Learning in Prism Central
- Self Service Portal Integration into Prism Central
- Linux support for Self Service Restore
- Connect to Citrix Cloud
- Nutanix APlv3 (TP)

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Thank You

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