

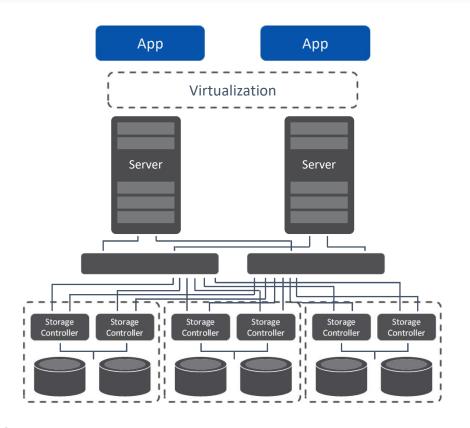
Flow Microsegmentation

單鍵建構企業東西向防火牆



陳永恆 Eternity Chen 資深技術顧問

傳統三層式架構之特性





採購

Purchase in big increments, incur prediction risk, overprovision



建置

Deployment takes weeks to months -- complex, big footprint



管理

Multiple management panes, manual operations



擴充

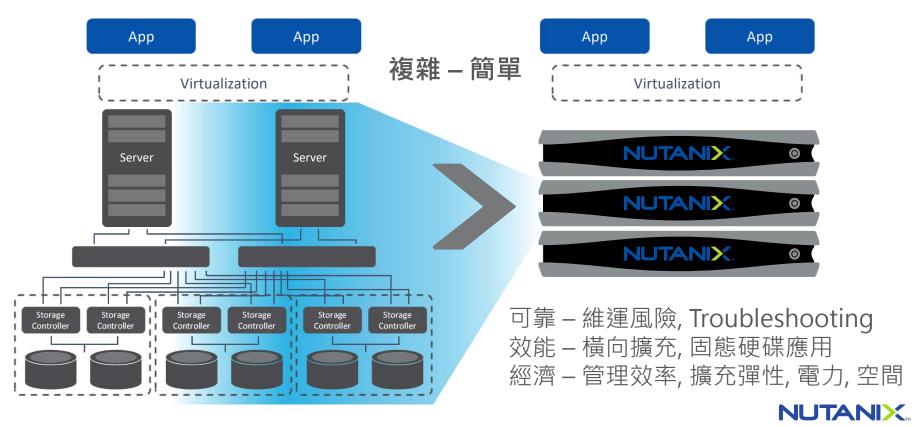
Difficult to grow quickly



支援

Multi-hop support, lack of end-to-end visibility, firefighting

Nutanix 新世代數據中心平台



>

Gartner 超融合基礎架構魔力象限 Jan 2018

Gartner



強項

"高度創新和無限制橫向擴充的基礎結構, 與大多數競爭對手相比, 有著跨世代的領先 地位。

"在虛擬化平台選擇方面的靈活性, 隨著基於 KVM的 AHV 的越來越多企業用戶採用, 成為企業用戶尋求更低成本的替代 VMware ESXi的首選。"

"經過驗證的使用者接受度和高客戶滿意度, 成功的在大型全球企業用戶中打造重複購買 模式和大量節點的建置 (100 +)。



IDC 報告證實的商業效益



提高建置與維運效率 有效降低成本 創造更大的經濟效益

商業價值



534%



Months



60%



效能增進



Faster



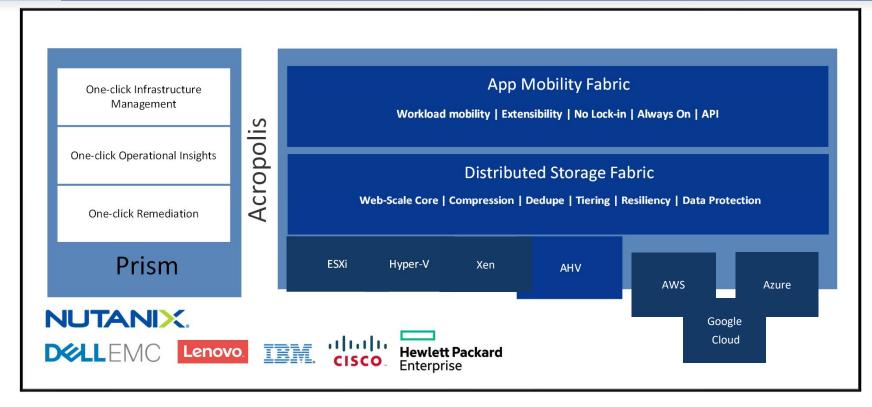
管理整體 環境時間節省

Less Time



Fewer Occurrences

> Nutanix 基礎架構平台





專為 Web Scale IT 打造的超融合一體機



Node#3 2U/4Node

Node#1

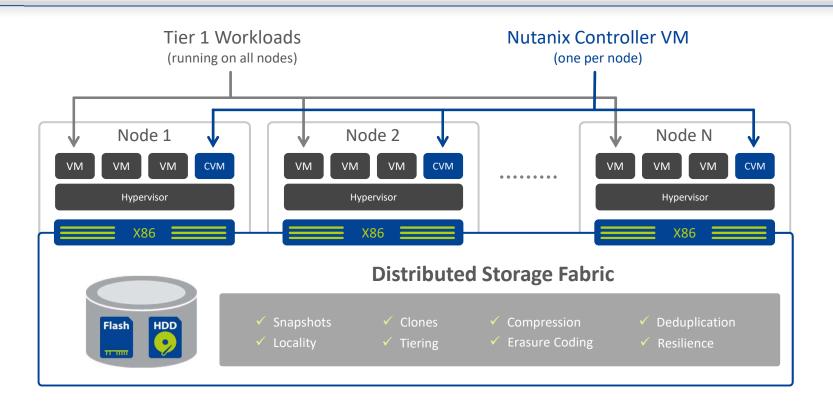
2U/2Node

2U/1Node

2U高度

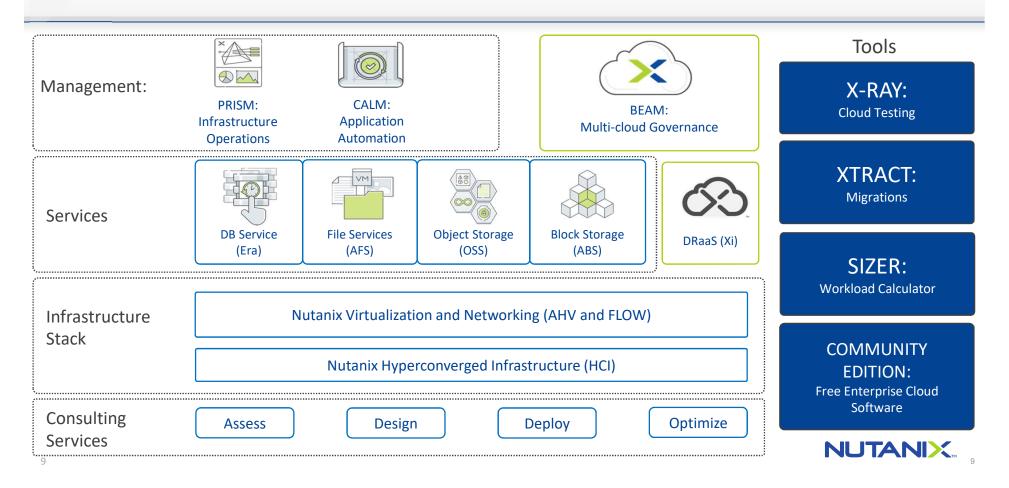


Nutanix 輕易擴展分散式的基礎架構

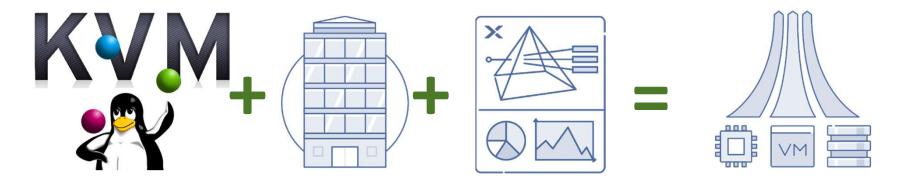




The Nutanix Portfolio



History of AHV



- Cumbersome management
- Missing enterprise features
- Manual monitoring
- Limited SW ecosystem

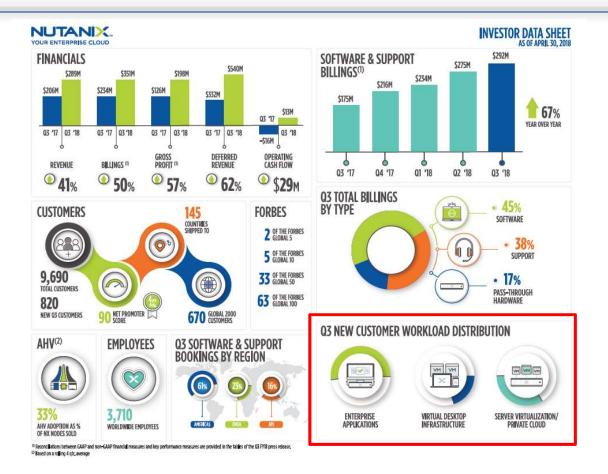
- One-click management
- Enterprise ready (HA, DRS, etc)
- Prism insights and forecasting
- Growing ecosystem



> AHV Evolution & Adoption

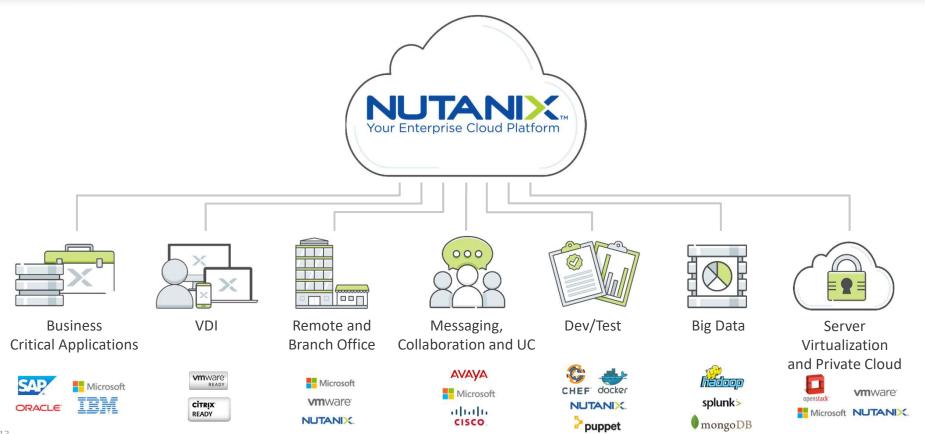


> Enterprise Apps Power Customers & Grow Your Base





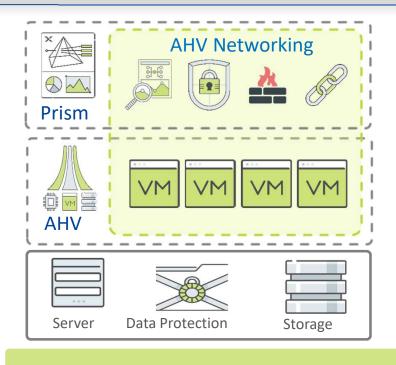
> Delivering All Applications - 滿足所有應用場景需求



Security-First Design



> SDN for the Enterprise Cloud



- Native SDN built into the Nutanix Enterprise Cloud
- Powerful visualization, policy, microsegmentation and networking capabilities
- Intuitive & scalable solution with no additional tools needed
- "1-Click" simplicity of Nutanix

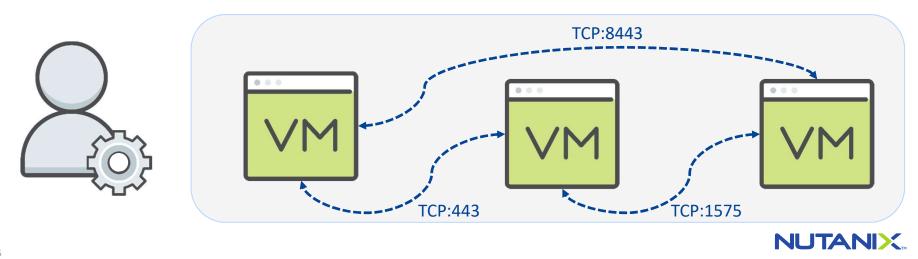
Comprehensive Visibility, Security, and Automation



Application Flow Visualization

- ✓ Automatic discovery of flows between VMs
- ✓ Visualize application Traffic and Relationships
- ✓ Minimal application domain knowledge required

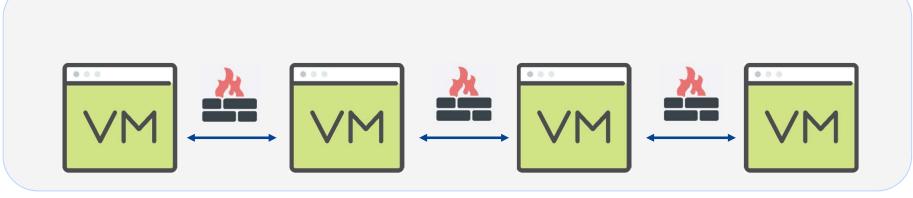




> VM Microsegmentation

- ✓ Always-on stateful VM level firewall
- ✓ Simple policy creation and application
- ✓ App centric decoupled from network ID
- ✓ Automated updates for VM change management

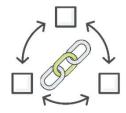


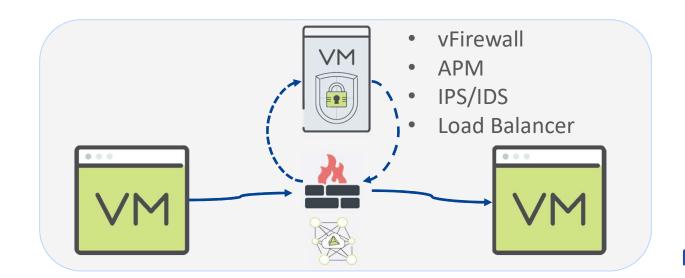




Service Chains / Network Functions

- ✓ Extend network functions via partner integration
- ✓ Connect multiple services between VMs
- ✓ Granular control of traffic redirection





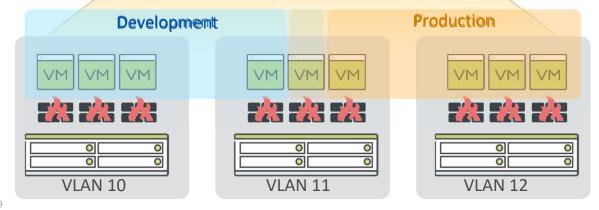


Environment Zoning with Isolation



"Development VMs should not talk to Production VMs"

"Promote VM from Dev to Prod"



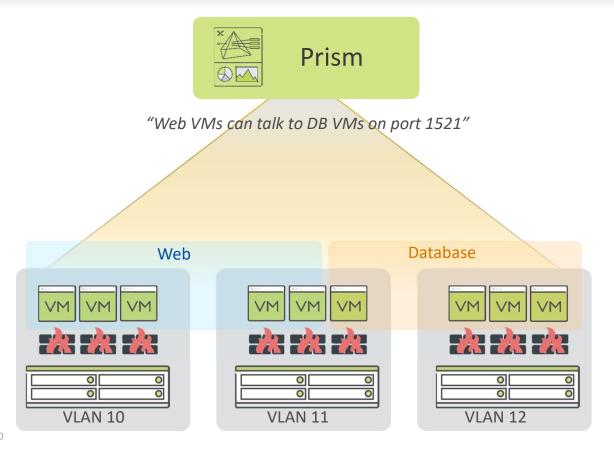
Isolating environments simplified through one-click policies.

Predefined categories for environment-type makes policy writing easy - simply add VMs to the desired category

Moving workloads across environments is simply swapping the categories from Dev to Prod



Application-centric Policy Decoupled from Networking



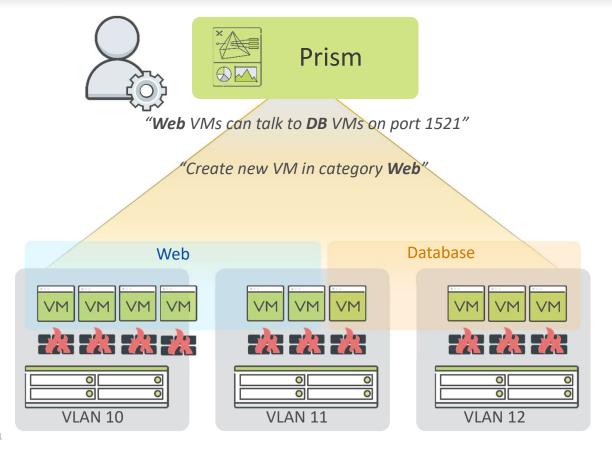
Simple and intuitive policy model meant for virtualization teams

Networking complexities (VLANs, subnets, routes) removed from policy language

Enforcement follows VM lifecycle and is independent of network topology



Automated Updates for Simplified Change Management



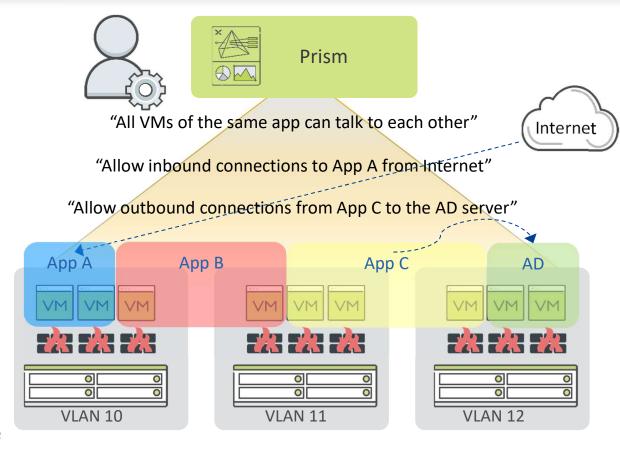
Policies specified on logical groups

Security rules are updated real time based on group membership changes

Adaptive security enforcement auto-detects IP address changes and updates rules



Application Separation (ring fencing)



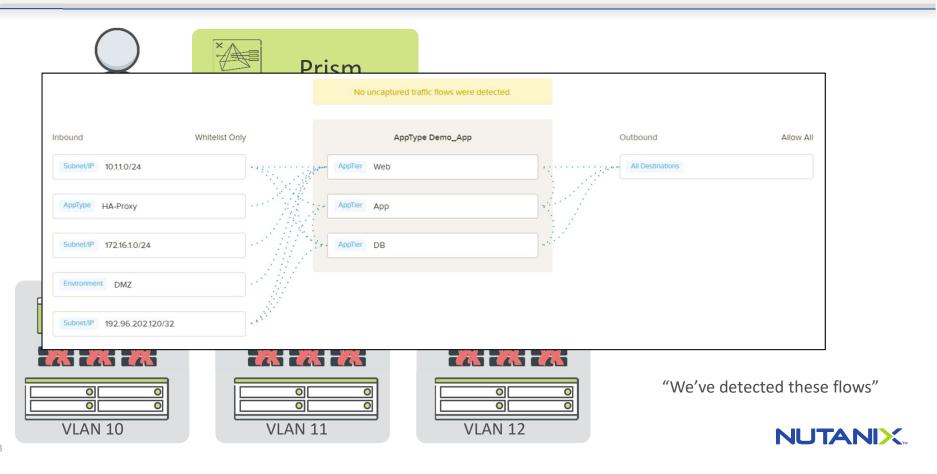
Isolating applications simplified through one-click policies.

Predefined categories for application-type makes policy writing easy - simply add the VM to the application category.

Policy language allows simple expression for well defined entry and exit points to/from the application.



> Rich Flow Visualization to Aid in Policy Authoring



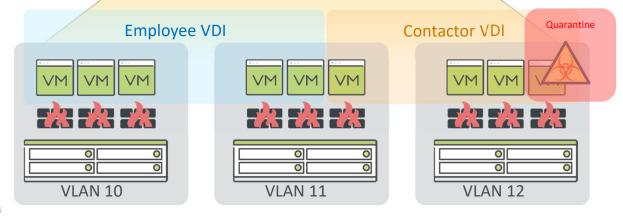
Scenario – VDI Isolation & Quarantine



"VMs flagged as infected by AV should be quarantined"

"Quarantined VMs are only allowed inbound forensic tools"

"Contractor infected - Quarantine VM!"



Admin can setup quarantine policies in advance – allowing for complete isolation or forensics ONLY

Quarantine policies have the same flexible model as regular policies.

Marking the VM as "Quarantine" and the policy will take effect

Prior policies are preserved and re-applied once quarantine remediation is complete

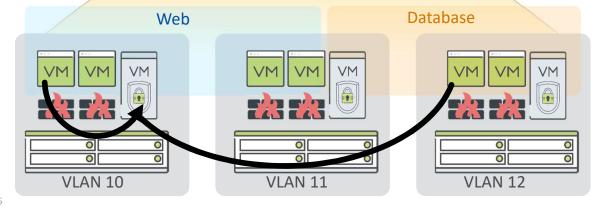


Service Chaining / Network Functions



"Deploy a virtual firewall service on my cluster"

"All database queries from Web to DB tier should go through the firewall service"



Cluster wide deployment of service chains

A single service chain can consist of 1 or more sequence of services

User can selectively redirect specific flows to a service chain for advanced processing



Flow Microsegmentation – Visibility, Security, Automation

Application Visualization Microsegmentation (East-West Firewall) **APM** Load Balancer **Service Chains** vFirewall **Network Functions**

