場次: Track B-2
公司名稱: EMC
主題: EMC Software-Defined Data Protection
主講人: 藍基能
Three Transformational IT Waves
Evolving Backup to Data Protection

SERVER CENTRIC BACKUP

INFRASTRUCTURE CENTRIC DATA PROTECTION

CLOUD-SERVICE CENTRIC DATA MANAGEMENT
Evolving Data Protection Requirements

PUBLIC CLOUD

VM

VM

VM

Hybrid

Application Resiliency

Self-Service

Automation

Reporting

Commodity Hardware / DAS

Data Domain

Data Protection Suite

VPLEX

Recover Point

Storage Arrays & Data Protection Appliances

DATA CENTER

VM

VM

VM

Analytics

EMC DATA PROTECTION

Storage System Resiliency

VM

VMAX

VNX

Isilon

XtremIO

Software-Defined

ANYTHING

SDx

SDN

SDS

SDDC

SDSec

Evolving Data Protection Requirements

Commodity Hardware / DAS

Storage Arrays & Data Protection Appliances
Data Protection for a Software-Defined World

DATA PROTECTION AS A SERVICE
Integration with hypervisors, segregated tenant workloads, support for public, private and hybrid clouds

VISIBILITY & CONTROL
Attacking accidental architectures by empowering application, virtual and storage admins to manage data protection from native interfaces

SPANNING THE CONTINUUM
Meeting SLA requirements @scale, from continuous availability, to backup & replication, to archive and compliance
資料保護連續性
可用性、複製、備份與歸檔

可因應所有還原需求的互補階層

Avamar、Data Domain、NetWorker SourceOne、RecoverPoint、VPLEX…

VPLEX  RecoverPoint
可用性  複製  快照  備份  歸檔
零秒 分鐘 小時
資料保護和可用性解決方案
全方位保護與可用性的互補性解決方案

關鍵任務應用程式

CVPLEX

CDP、Replication
資料遺失暴露：0 秒至數小時
還原時間：數秒至數分鐘

備份/還原/歸檔
資料遺失暴露：最多 24 小時
還原時間：幾分鐘至幾小時

RecoverPoint

Data Domain + Data Protection Suite
Protection Storage Architecture
Blueprint for Transformation and Investment Protection

DATA MANAGEMENT SERVICES
Policy & Storage Management, Monitoring, Analytics, Discovery

DATA SOURCE INTEGRATION
Virtual & Physical, Applications, Primary Storage

PROTECTION STORAGE
Consolidated Pools Of Storage For Data Protection
Cloud Read Protection Storage - Multi-tenancy

Delivering data protection-as-a-service

- Enables enterprises to deliver Data Domain in a private cloud
- Enables service providers to deliver Data Domain in a private/public cloud
- Features:
  - Logical data isolation and administration
  - Roles for users and admin
  - Tenant management and reporting
Secure Multi-tenancy Overview

- Tenant User A
- Tenant User B
- Tenant User A
- Tenant User B
- Tenant Admin

- Secure Isolation
- Data Domain Admin (Landlord)
- Tenant Admin
  - Management
  - Reporting and Metering
## Secure Multi-tenancy Use Cases

<table>
<thead>
<tr>
<th>Cloud Model</th>
<th>Large Enterprise (Private Cloud)</th>
<th>Service Providers (Public/Hybrid Cloud)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Local Backup</strong></td>
<td><img src="local_backup.png" alt="Diagram" /></td>
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<tr>
<td><strong>Replicated Backup</strong></td>
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<tr>
<td><strong>Remote Backup</strong></td>
<td><img src="remote_backup.png" alt="Diagram" /></td>
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</table>
Data Domain Boost Ecosystem

Supported over LAN
Supported over SAN
Supported over WAN
Avamar with Data Domain Systems

All Workloads to Data Domain Systems
VMware vCloud Director
“Orchestrator for the Public Cloud”

- vCloud Director (VCD) provisions SDDC services
- vApp is a collection of VMs
- Access vApp templates from catalogs
- Virtualized Datacenter is a new logical container
Avamar Plug-in for vCloud Director
Cloud-Ready Data Protection

vCloud Director provisions software-defined data center services as virtual data centers that provide virtualized compute, networking, storage and security.

- Protect native vCD constructs and their hierarchy
- Easy policy management
- Fully featured GUI
- Extensible through APIs
Cloud-Ready Data Protection from EMC
Avamar Plug-in for vCloud Director

- Comprehensive backup and recovery service built right into vCloud Director for backup in the cloud
  - Powerful policy management
  - Ease of administration
  - Multi-tenant protection storage
  - Extensible through REST APIs
Management APIs
Create and manage tenant portals

- Full Operational Control
- Multi-System Management
- Capacity Management
Protection Policy Configuration and Assignment

- Configure Policy Template
  - Schedule
  - Retention
  - Options
- Assign Policy Templates to Org Catalog

- Apply Policy from Catalog to vApps
  - As-Is
  - Custom
Data Protection Service Portal in vCHS

Built using Avamar Plug-in for vCD
EMC Data Protection for vCloud Director

**Value to Customers**

- Beyond basic VM-level protection
  - Data protection policies applied at the vApp and Org-level
- Protect workloads hosted in any vCD based hybrid cloud
- Stay protected with the same backup technology you use in-house
- True backup and recovery service
  - Faster recovery
  - Catalog to choose from a variety of restore points

**Value to Service Providers**

- Deep integration into VCD platform
- Extensible through APIs
  - Customize, extend, automate and manage policies at cloud scale
- Facilitate workload migration between any VMware based clouds
Backup and Recovery Manager 1.2
All of the capabilities of BRM in the palm of your hand

• BRM Mobile App
  – Installs directly on your mobile device
  – Supports Android and iOS devices
  – Monitors Avamar, NetWorker and Data Domain systems

• Job Management Capabilities
  – Stop, Start, Restart, Recover
https://www.youtube.com/watch?v=6cocd502B4M
6 million individual users
100,000 Businesses
>1,000 Enterprises

**millions of backups per day**

Over 20 billion user files protected
Global, multi-tenant operations
>90 PB of customer data
120 TB added daily
EMC Mozy
Enhanced Cloud Security and Server Coverage

Encryption
Corporate Key encryption now for Mozy Sync

Federated ID
LDAP push for more efficient management

Compliance
Custom config settings ensure HIPAA compliance

Protection
Extends cloud server protection to Linux

Enhanced Cloud Security
Server Coverage
Thank you