

# Data Protection

Nick Turner

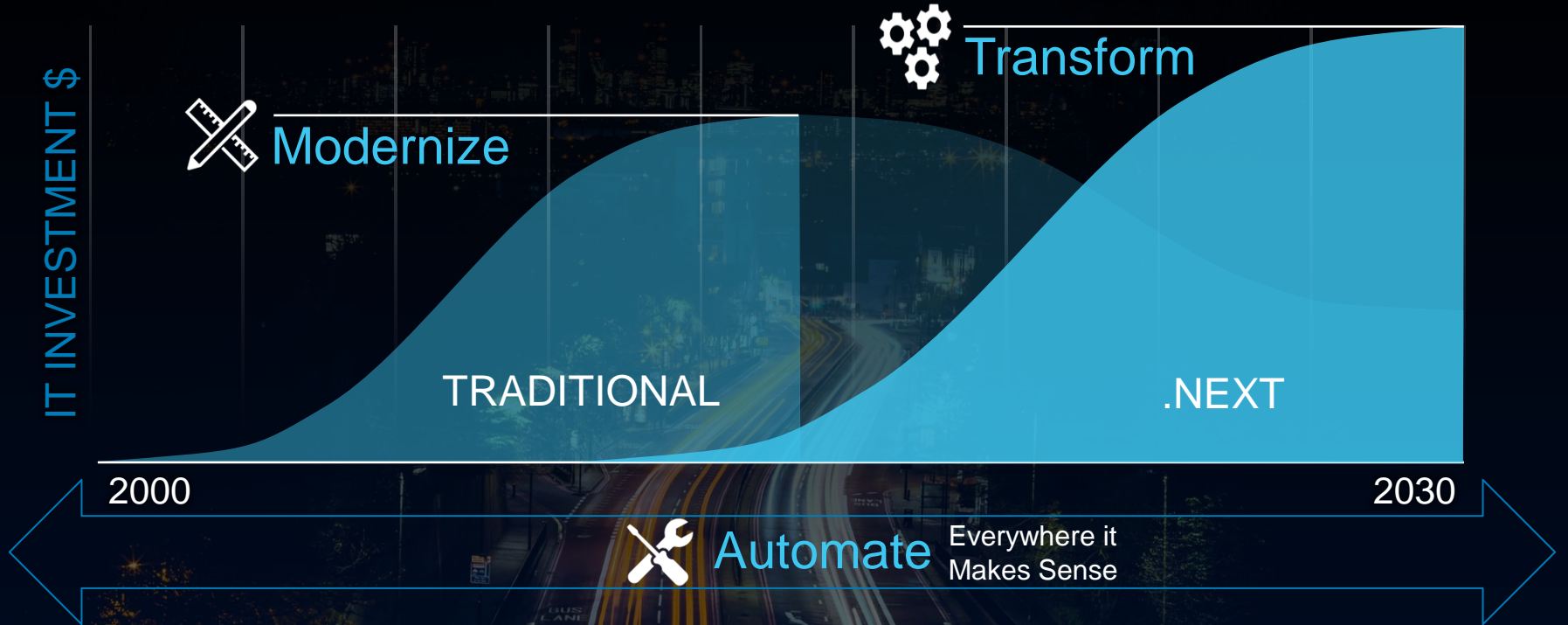
Senior Director, Dell EMC

Data Protection Solutions UK&I

@nickjturner

**DEL**EMC

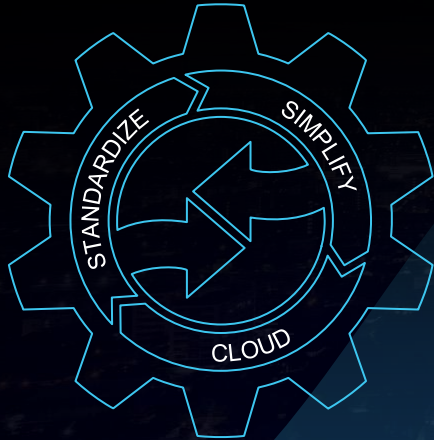
# Data Protection must EVOLVE



# DELL EMC Data Protection Strategy



Modernize



People



Automation



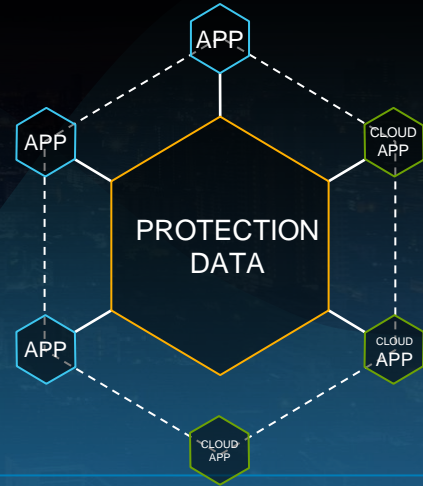
Process



Technology



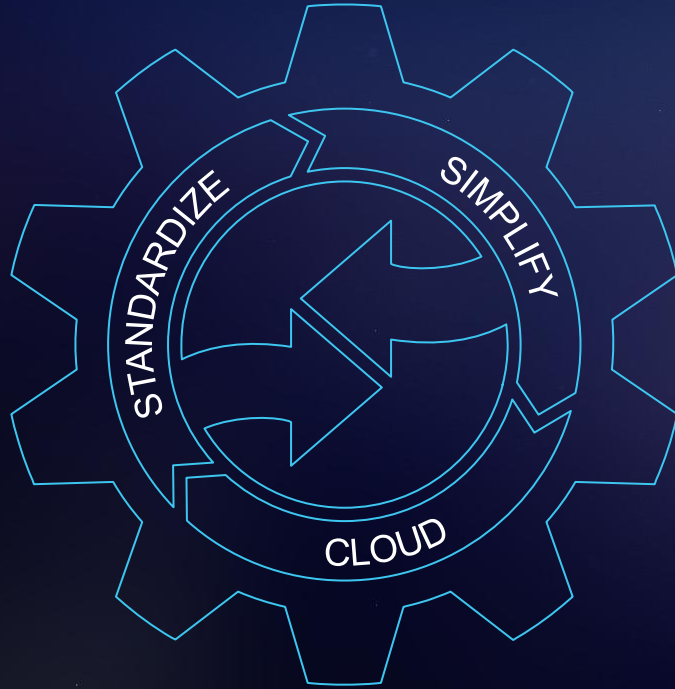
Transform



Automate

Everywhere it Makes Sense

# MODERNIZE

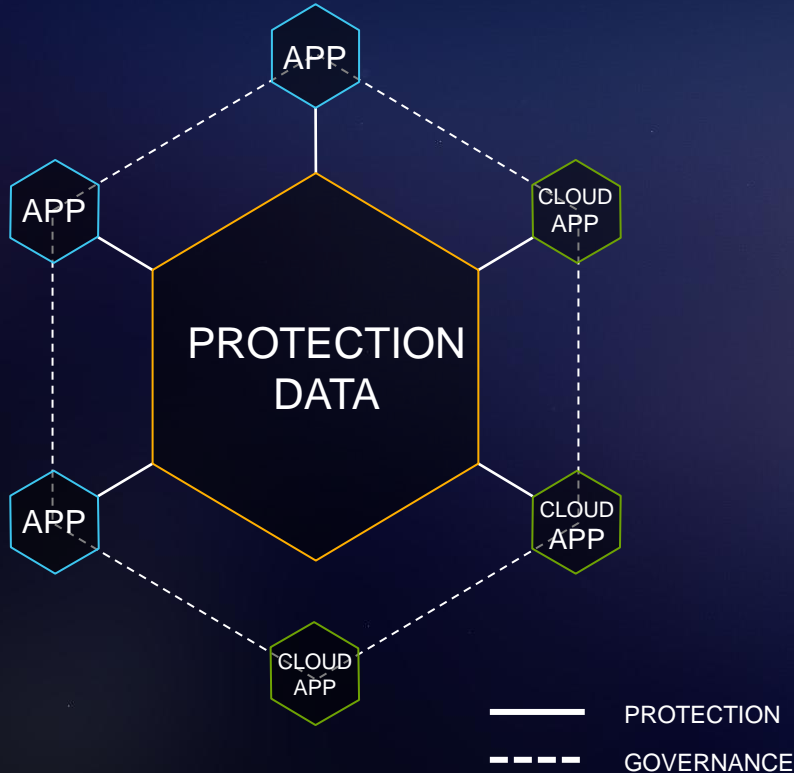


STANDARDIZE deployments

SIMPLIFY management

CLOUD Extensible  
everywhere

# TRANSFORM



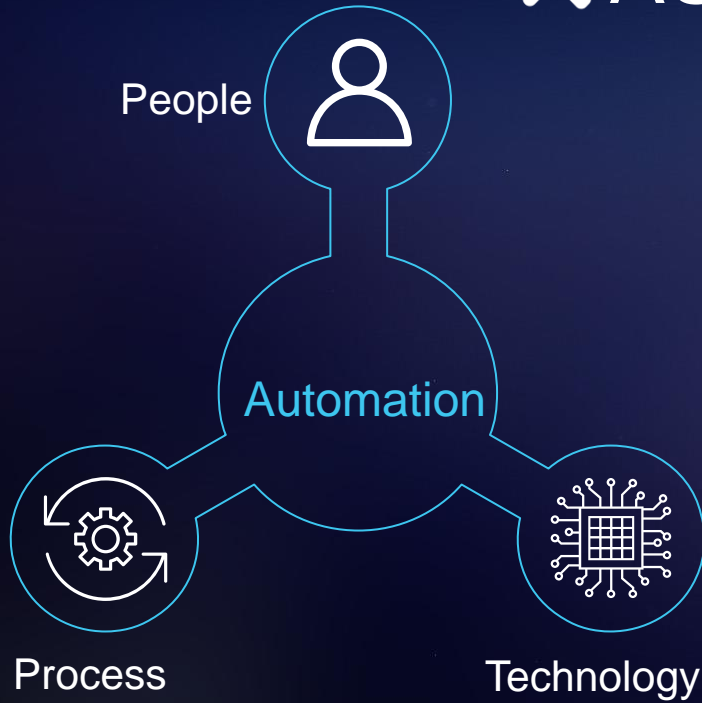
Express Data Path for Turbo Performance

APPLICATION driven with...  
Central VISIBILITY and  
Prescriptive OVERSIGHT

Built from ground up for  
SDDC

& CLOUD Optimized

# AUTOMATE



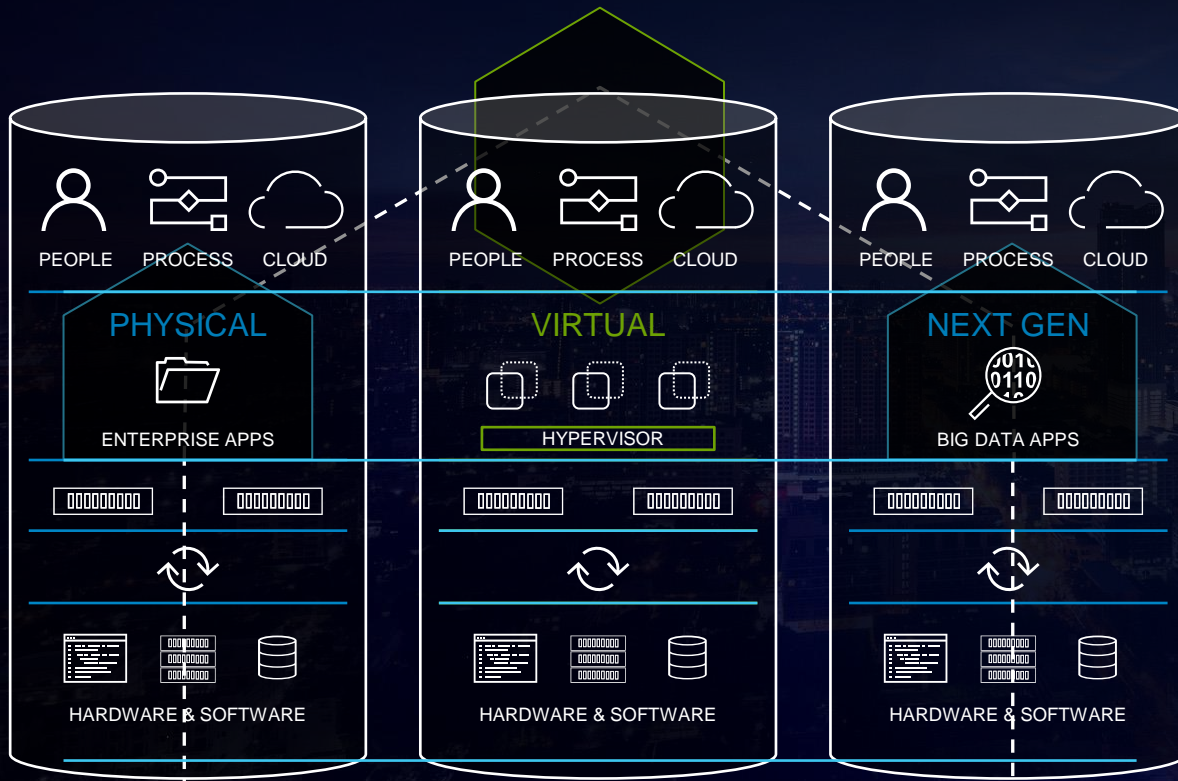
Data protection Deployment & Processes

Scheduled lights out execution- ROBO, Apps etc

Reporting and risk mitigation

Scaling and Performance Optimization

# Dell EMC Data Protection



TRANSFORM



AUTOMATE



MODERNIZE

# Why Dell EMC for Data Protection

Dell EMC data Protection delivers it all....uniquely positioned to help you Modernize, Automate and Transform protection across what you value MOST....your data

## Reliability

A single proven technology partner to **unify** your protection today and tomorrow

## Flexibility

Whether CapEx or Utility Pricing Dell EMC has options to meet your financial needs

## Simplicity

Dell EMC TLAs allows consumption flexibility

## Architecture *Matters*

**Lowest cost to protect** on prem, SDDC and in the cloud



- in Data Protection
- in De-dup ratios
- in Recovery performance

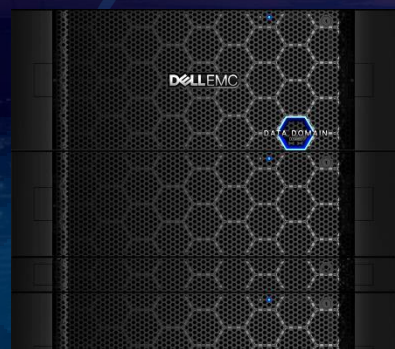
Best “Cost to protect” in the industry



MODERNIZE, TRANSFORM and AUTOMATE DATA PROTECTION with

# Dell EMC Data Protection Portfolio

Protection and recovery for cloud



PROTECTION  
STORAGE

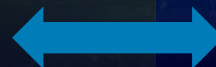


PROTECTION  
SOFTWARE



PROTECTION  
APPLIANCE

Best of breed



Integrated

# Dell EMC Protection Storage – How You Want It

Data Domain



Integrated  
Data Protection  
Appliance



Data Protection  
for Converged  
Infrastructures



Data Domain  
Virtual Edition



Data Domain  
delivered by a  
Service Provider



How  
You  
Want  
It

Best of Breed



Integrated



Converged



Software Defined



As-a-Service



# Modernized Data Domain Portfolio



Data Domain  
Virtual Edition

Small Enterprise/ROBO – Midsize Enterprise

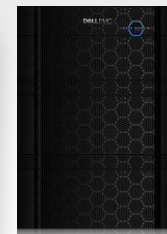
Speed (DD Boost): 5.6 TB/hr (16TB), 11.2 TB/hr (96 TB)

Usable capacity: 0.5 TB – 96 TB, Logical capacity: Up to 4.8 PB

Large Enterprise

Midsize Enterprise

Small Enterprise  
/ ROBO



	DD3300	DD6300	DD6800	DD9300	DD9800
Speed (DD Boost)	7.0 TB/hr	24 TB/hr	32 TB/hr	41 TB/hr	68 TB/hr
Speed (other)	4.2 TB/hr	8.5 TB/hr	14 TB/hr	20 TB/hr	31 TB/hr
Logical capacity	200 TB–1.6 PB <sup>1</sup> 600 TB–4.8 PB <sup>2</sup>	1.8–8.9 PB	2.8–14.4 PB <sup>1</sup> 8.4–43.2 PB <sup>2</sup>	7.2–36 PB <sup>1</sup> 21.6–108 PB <sup>2</sup>	10–50 PB <sup>1</sup> 30–150 PB <sup>2</sup>
Usable capacity	4 TB–32 TB <sup>1</sup> 12 TB–96 TB <sup>2</sup>	Up to 178TB	Up to 288 TB <sup>1</sup> Up to 864 TB <sup>2</sup>	Up to 720 TB <sup>1</sup> Up to 2.16 PB <sup>2</sup>	Up to 1 PB <sup>1</sup> Up to 3 PB <sup>2</sup>

<sup>1</sup> Total capacity on Active Tier only

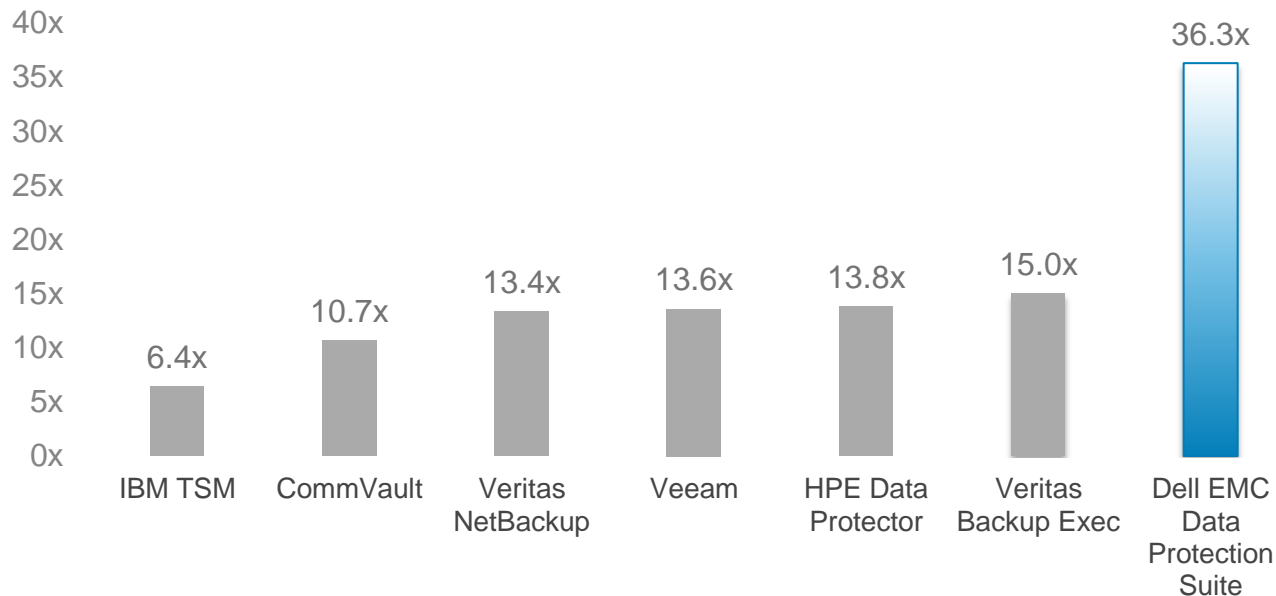
<sup>2</sup> Total capacity with DD Cloud Tier software for long-term retention

# Data Domain + Data Protection Suite for Backup

Better Together



## Average dedupe rate by backup software



# Data Protection Continuum

## Protection and Continuity

Based on Data Value and  
Business Objectives



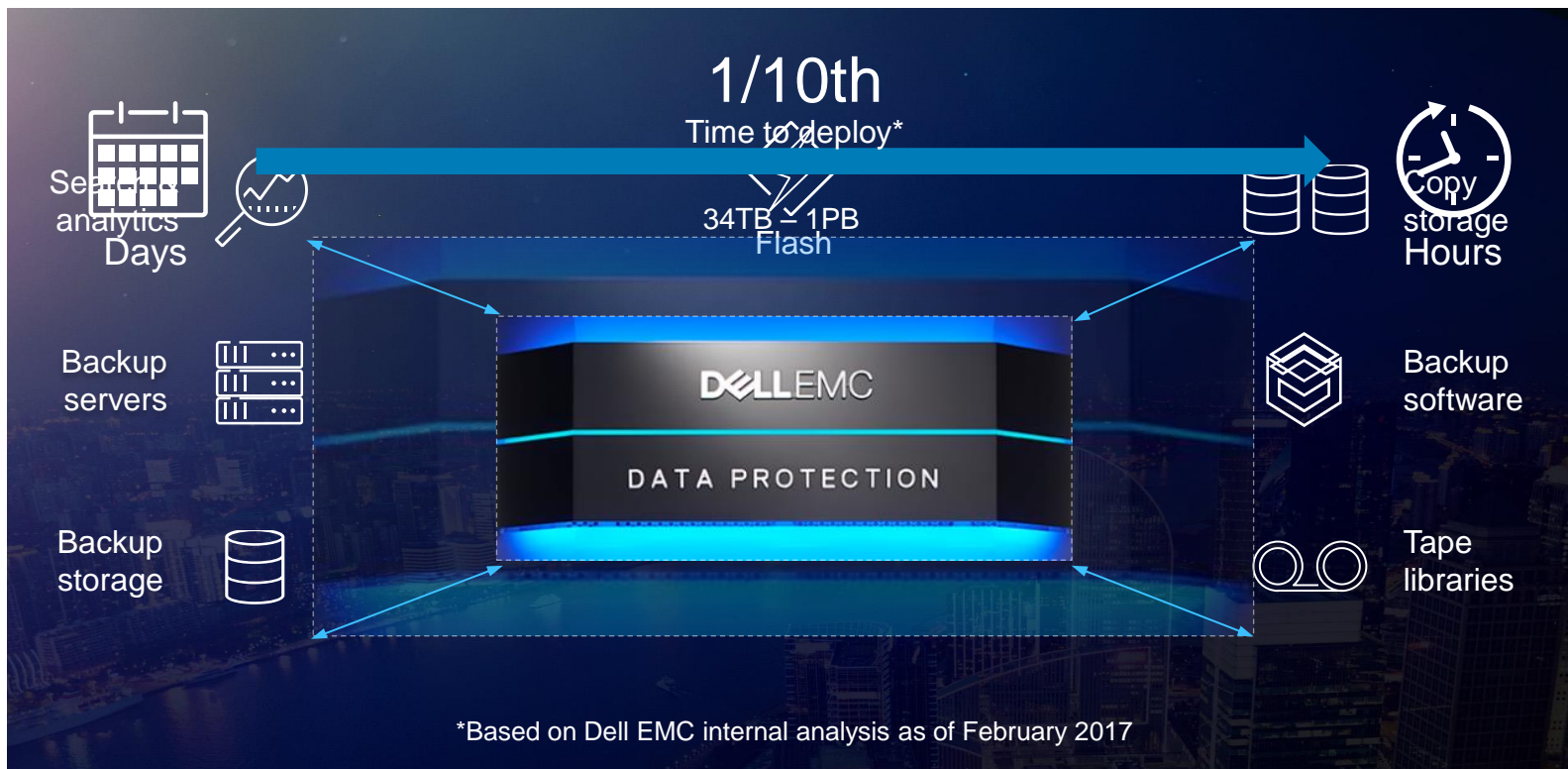
# Data Protection Suite Family

- Comprehensive, industry-leading data protection

**Choose the right solution for your environment:**



# Converged and comprehensive



# Traditional Strategies Are Not Enough

## Data Encryption



Not preventative against attacks

Hacktivists can encrypt your encrypted data

For data protection, not recovery

Potential negative impacts on cost to store, replicate and protect

## Tape Backups



Too long to recover

Difficult to validate data

Requires backup infrastructure to recover

May not protect:

Backup Catalog

PBBA [Data Domain]

Tape Library Meta Data DB

## Cyber Insurance



All breaches may not be covered

Policies have baseline security requirements

Monetary limits may not cover all damages

Does not protect:

Patient needs

Brand

Lost trust





# Layered Cyber-Security for Data Protection

## Traditional Data Protection Best Practices

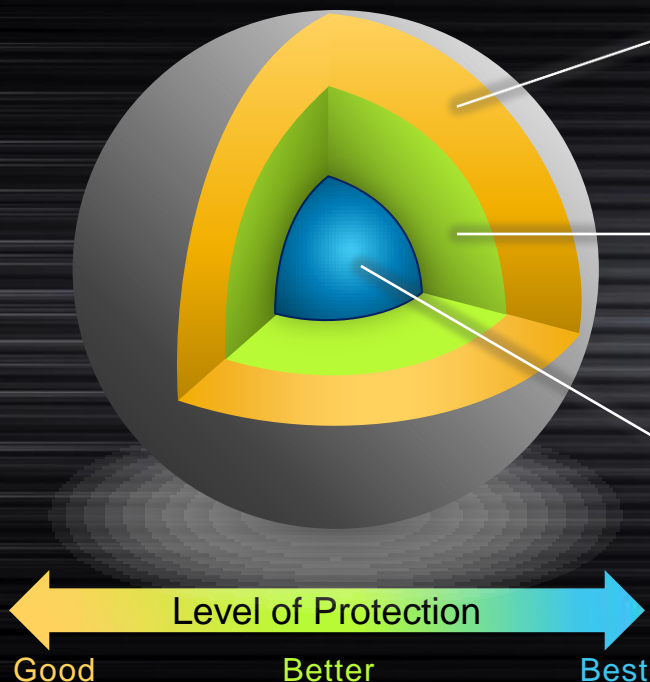
- Deploy a layered data protection approach (“the continuum”) for more business critical systems but always include a point in time off array independent backup with DR Replication (N+1)
- Protect “Born in the Cloud” and endpoint Data

## Additional Hardening and Protection Features

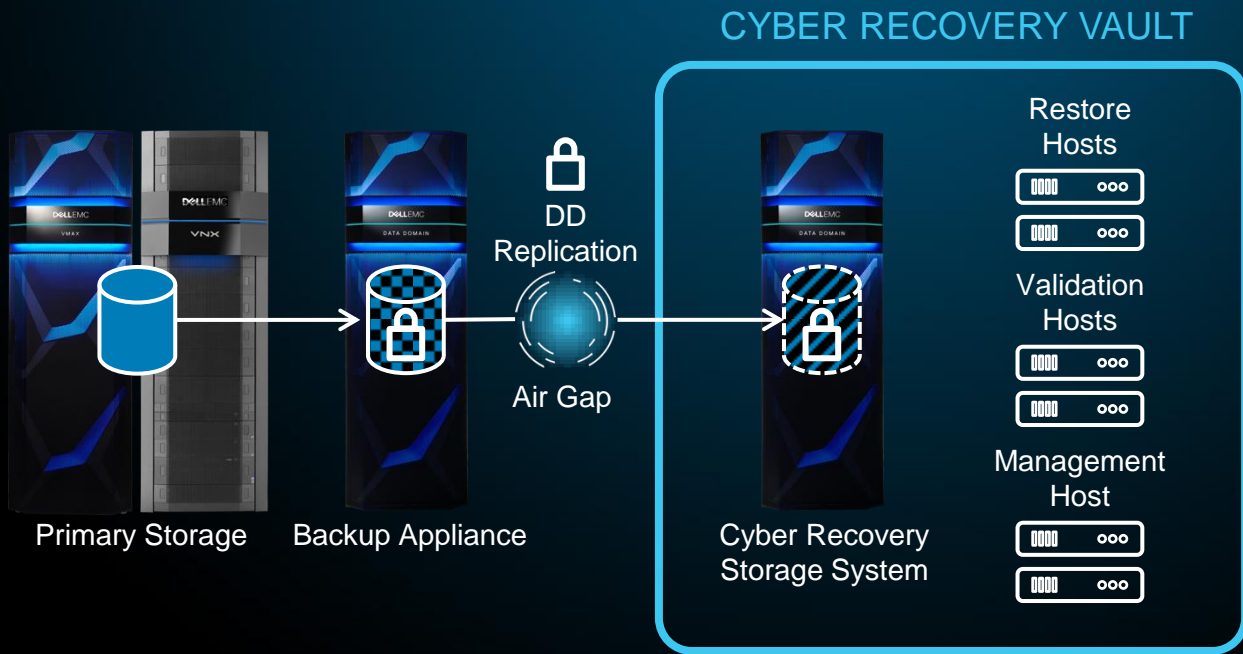
- Product specific hardening guides
- Encryption in flight and/or at rest
- Retention lock with separate security officer credentials

## Advanced Protection Services

- Cyber Recovery Solution
- EMC/EY service offerings: assess, plan, implement, and validate
- Use of evolving security analytics: RSA & Secureworks



# Cyber Recovery – Dell EMC Data Domain



- Create backup of data
- No management connectivity to IR Vault
- Enable data link and replicate to isolated system
- Complete replication and disable data link
- Maintain WORM locked restore points
- Optional security analytics on data at rest
- Professional Services

**D**  **LEMC**