



# A last line of defense against ransomware, why?

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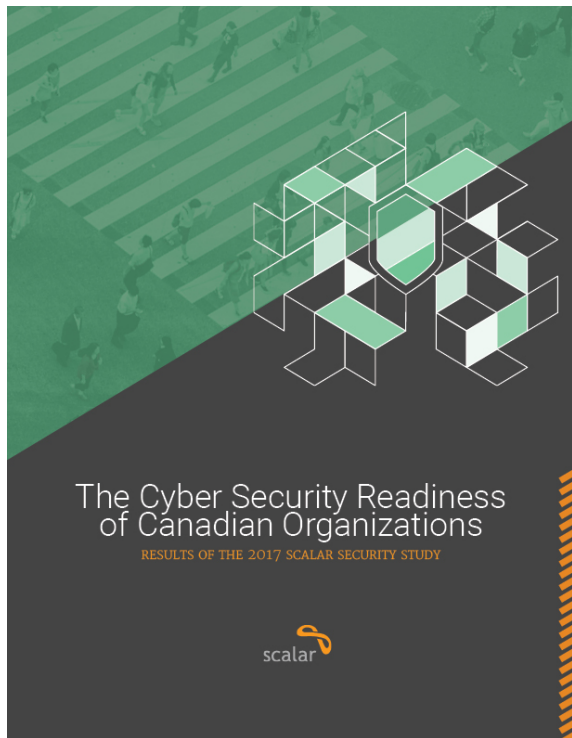
April 27<sup>th</sup>, 2017



Why do we still care?



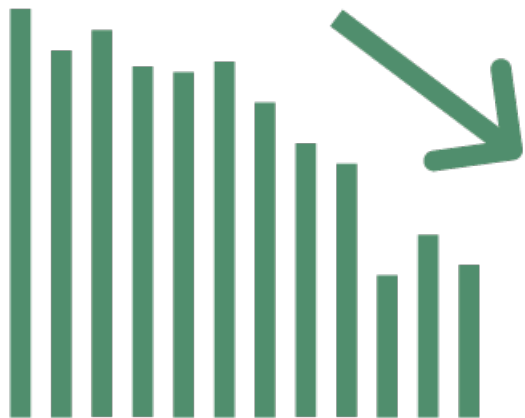
# The Third Annual Scalar Security Study



- How **prepared** are Canadian organizations to deal with cyber attacks?
- How have cyber attacks **changed** over the past year?
- What is the **cost** of cyber attacks to Canadian organizations?
- What are the most **effective** ways to reduce cyber security risk?



# Confidence Continues to Erode as Cyber Threats Evolve



## Only 34%

of organizations believe they are winning the cyber security war

- Attacker sophistication on the rise
- Greater losses of data
- Traditional defenses ineffective
- Lack of advanced technology
- Skill gap persists



# Building an Effective Information Security Program

Align Strategies to  
Enterprise Business Risk



## PREPARE



Security Framework



Assess Risk



Implement Controls

Deploy the Most  
Effective Technologies



## DEFEND



Design Solutions



Protect critical assets



Manage Project Risk

Rapid Remediation of  
Security Incidents



## RESPOND



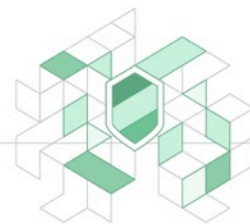
Advanced Analytics



Business Context



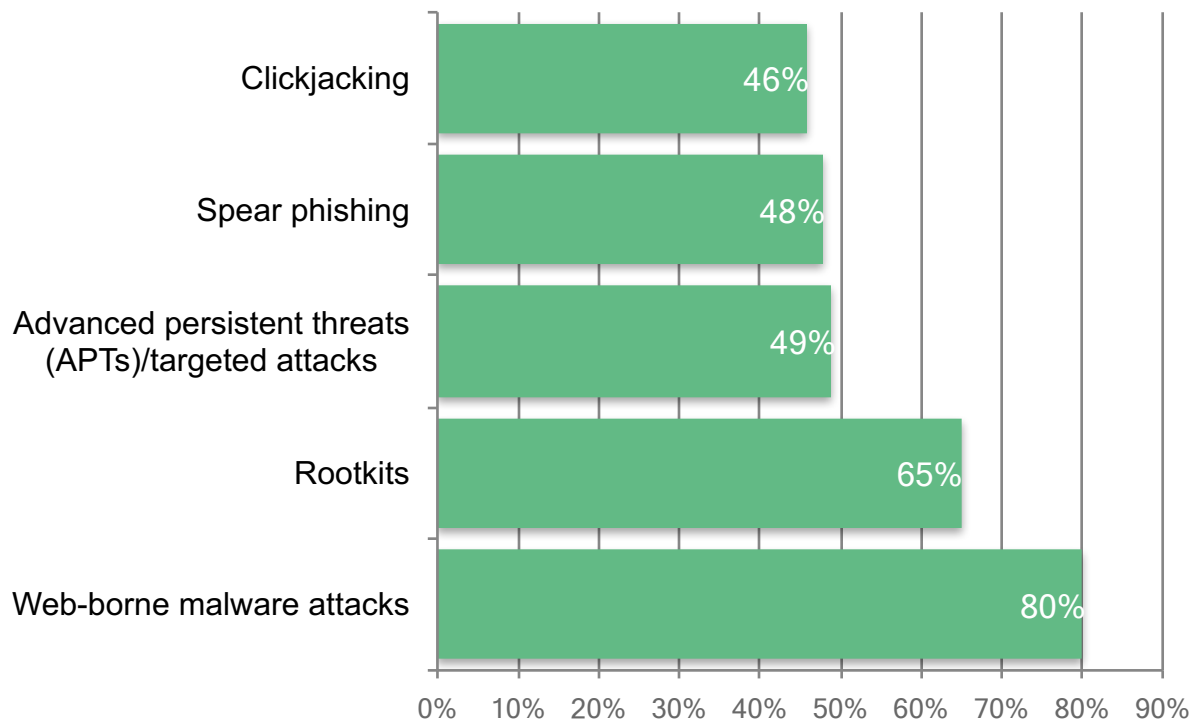
Continuous Validation



# Changes in the Threat Landscape



# Interesting Data on Advanced Threats



- Most threats are considered "advanced"
- Targeted attacks to gain access to data (loss of IP)
- Users as targets
- High number exploits > 3 months old
- Only 41% of Companies have invested in mitigating technologies



# Top Threat Sources



1. Criminal Syndicates
2. Insider Threats
3. Third Party Negligence





# A “Less-Sophisticated” Phishing Email Targeting Scalar

-----Original Message-----

From: Paul Kerr [<mailto:paul.kerr@scalar.ca>]

Sent: May-07-16 9:12 AM

To: [rob.crocker@scalar.ca](mailto:rob.crocker@scalar.ca)

Subject: Bank Transfer

Rob,

Kindly contact the bank today and transfer an amount of \$ 100,000 per the instructions below.

HNS Contracting  
33 Swinimer Rd  
Nova Scotia, Canada.

CIBC Bank  
18 Parkland, Halifax, Nova  
Scotia, Canada.

Transit # 00503  
Institution # 010  
Account # 9943218  
Swift code: CIBCCATT

Please come back to me once this transfer has been sent.

Thanks,

Paul Kerr  
President and Chief Executive Officer  
+1.416.202.0020 +1.416.202.0002  
[paul.kerr@scalar.ca](mailto:paul.kerr@scalar.ca)  
Scalar Decisions Inc.



# Looks Legit.....

Return-Path: <[paul.kerr@scalar.ca](mailto:paul.kerr@scalar.ca)>

**Received: from [host.homearab.net](https://host.homearab.net) (host.homearab.net. [108.163.190.98])**

From: Paul Kerr <[paul.kerr@scalar.ca](mailto:paul.kerr@scalar.ca)>

To: [rob.crocker@scalar.ca](mailto:rob.crocker@scalar.ca)

**Reply-To: [chief.ceo@mail.com](mailto:chief.ceo@mail.com)**

Subject: Bank Transfer



Why do we still care?





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# Where Business and Technology Converge, You'll Find Us



Infographic: Results of the 2016 Scalar Cloud Study

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# Storage Security – Last Line of Defense

Keith Aasen  
Solution Architect

# What are you trying to Protect?

- Data is the crown jewel of a customer environment
- Preventing loss of or theft of data is primary concern
- Network design and attack surface design is important
- Difficult to control human behaviors
- Must have multiple layers of defense



# Customer Case Study

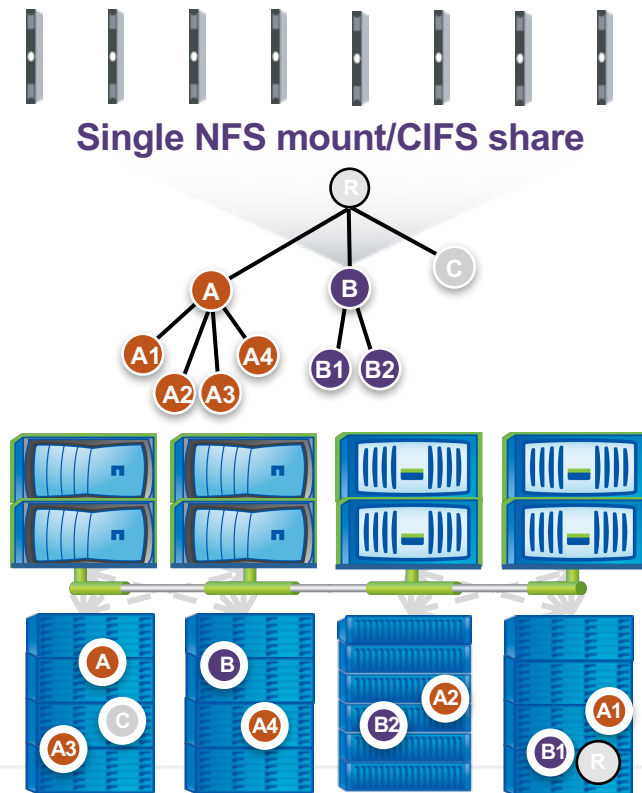
## Major city in BC

- 8:45 AM –Client Reports discovery of Ransomware dialog box
  - Ransomware has encrypted all file shares that the client had access to
  - Ransom for the encryption key is approximately \$350,000
- 9:00 AM – IT cuts access to main file shares and begins sweep of clients
- 9:45 AM – Client environment is determined “clean”
  - Encrypted shares are identified (approximately 65% of files in share)
  - “Clean” snapshot is identified
- 10:15 –Primary share is “SnapRestored” from 7:00 AM SnapShot
  - 9:00AM Snapshot is mounted from DR site and unaffected files are copied back to primary
- 11:15 – File shares are returned online

# Customer Case Study

## Lessons Learned

- Customer was taking hourly snapshots, will move to 15 min snaps to reduce data loss and improve restore granularity
- Minimize failure domains







# Security for Data Backup and Archive

# Security of Backup Data



## Data security

- Impact of competitor or public gaining access to the backup media
- “Tape off the back of the truck”



## Data integrity

- What is the state of the data over time
- “Silent rot” of tape

# Object Storage Platforms



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## **Management of unstructured data across geographically distributed locations**

Single view, single policy enforcement across all sites

Bring data closer to applications, wherever they may be

# Object Storage Platforms



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## Data management over time

Determined by cost, security, performance, durability, availability

Across on-premises and public cloud infrastructures

Secured with encryption and multi-site dispersion

# Security of Backup Data – With Object Repository



## Data security

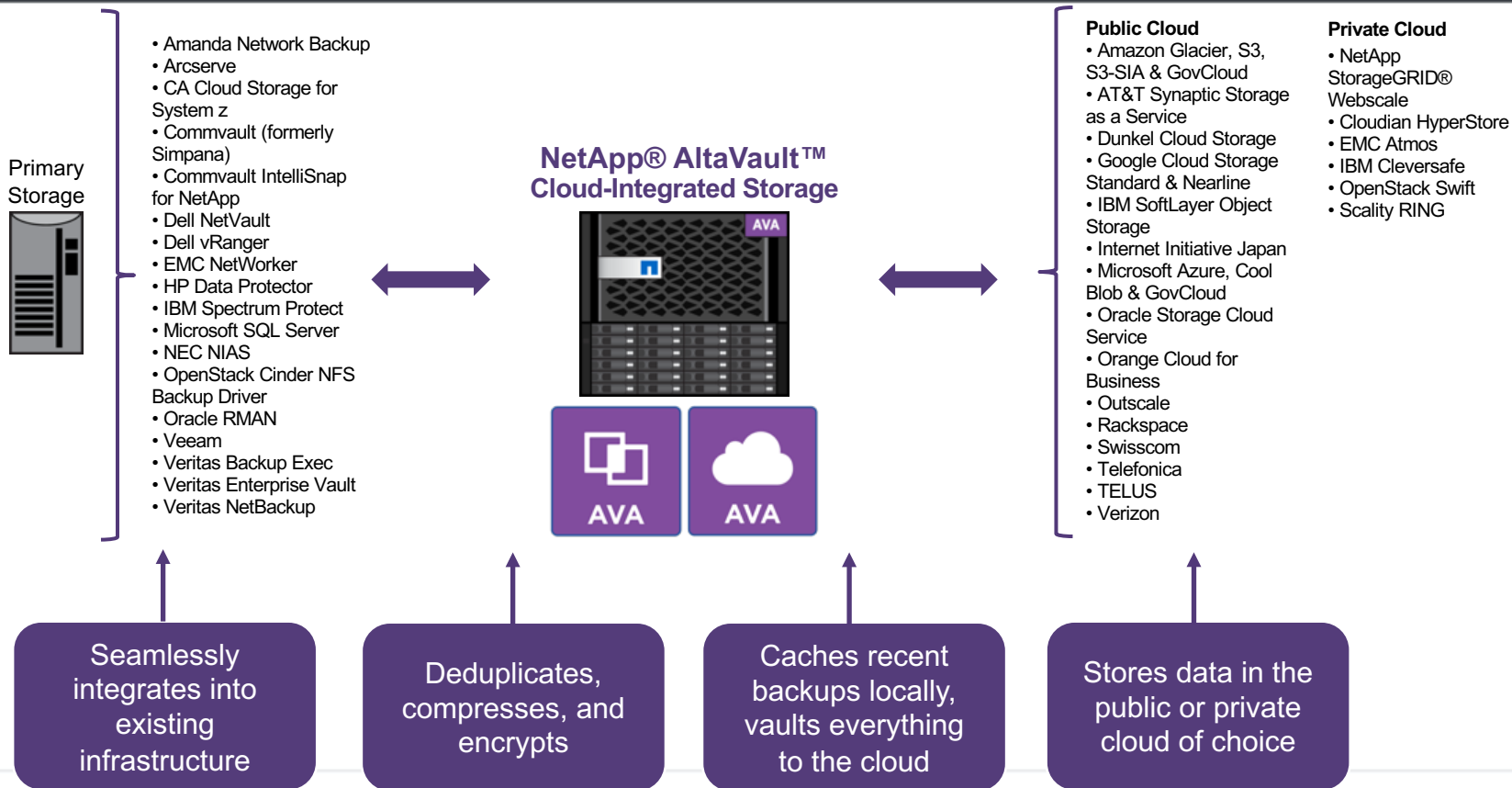
- StorageGRID® Webscale will create a digital fingerprint as data is ingested
- Multiple, interlocking layers of integrity protection including hashes, checksums, and authentications
- Data object integrity verification on ingest, retrieval, replication, migration, and at rest
- Suspect objects are automatically regenerated
- Geo-distributed erasure coding for cost-effective data integrity protection across sites



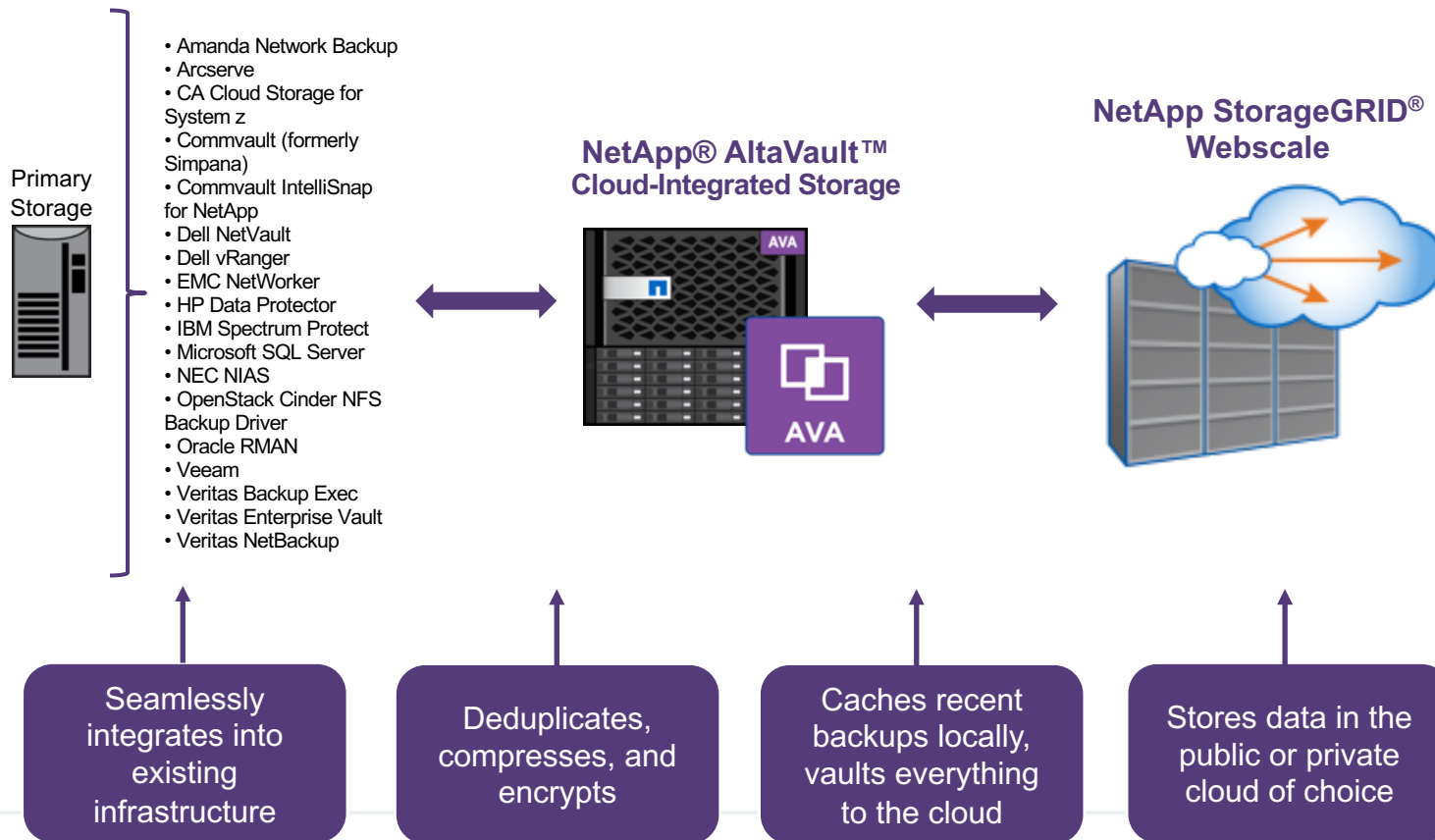
## Data integrity

- End-to-end per-object encryption from ingest through transport and at rest
- Encrypted, geo-distributed erasure coding offers additional security with multi-site data dispersion
- Access security via S3 and Swift authentication and security mechanisms

# Integrating Object Storage with Backup using AltaVault



# Webscale storage for on-premises archives







Thank you



# Thank You

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