



Fujifilm 2014 IT Executive Summit

Even if Disk Were Free, You'd Still Want Tape



About George Crump



- Founder of Storage Switzerland and its lead analyst
 - Areas of expertise include performance optimization and data protection
 - Recognized for his talks, white papers and ChalkTalk videos on such current technology as all-flash arrays, SSDs and software-defined storage
 - He has 25 years of experience designing storage solutions for data centers across the US
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Background

- Analyst firm focused on storage, cloud and virtualization
- Knowledge of these markets is gained through product testing and interaction with users and suppliers
- The results of this research can be found in the articles, videos, webinars, product analysis and case studies on our web site:
<http://storageswiss.com>

The screenshot shows the homepage of Storage Swiss, a website focused on storage, virtualization, and cloud. The page features a navigation bar with 'Home', 'About', and 'Content' links. The main content area is divided into several sections:

- Newest Posts:** A list of recent articles, including 'Top 5 Tape Takeaways for 2014' (January 10, 2014), 'Is All-flash Ready for the Data Center?' (January 9, 2014), and 'Designing Enterprise-class Multi-Tenant Storage' (January 9, 2014).
- Top Posts:** A list of popular articles, including 'New Strategies To Control The Data Epidemic in State and Local Government' (January 8, 2014) and 'How Do I Know My Virtual Environment is Ready For SSD?' (January 7, 2014).
- Our Analysts:** A section highlighting the expertise of the firm's analysts, including Coim Keegan, Eric Stack, and George Crump.
- Home:** A central section featuring the Storage Switzerland, LLC logo and a brief description of the firm's focus on storage, virtualization, and cloud marketplaces.
- Featured Content:** A section highlighting key articles, such as 'Top 5 Tape Takeaways for 2014' and 'Designing Enterprise-class Multi-Tenant Storage'.

The website also includes a search bar in the top right corner and a 'Go' button.

The Disk Backup/Archive Pitch

- Disk is faster than tape
- Disk is more scaleable than tape
- Disk is more reliable than tape
- Disk is more transportable than tape
- Disk is more cost effective than tape



What if Disk Were Free?



What if Disk Were Free?

There is More To It Than Spindles



The Disk Backup/Archive Tax

- The Disk “System” Is Not Free
- Space, Power and Cooling Is Not Free
- Deduplication is Not Free
- 8TB Drive Rebuilds Are Not Free
- Data Protection is Not Free
- The Cloud is Not Free



What if Disk Were Free?

Disks Don't Just Plug Into a Switch



What if Disk Were Free?

The System Wouldn't Be

What if Disk Were Free?

The Space, Power and Cooling Problem



What if Disk Were Free?

The Space, Power and Cooling Problem

*“Storage May Scale-Out,
Data Centers Don’t”*

What if Disk Were Free?

The Deduplication Problem



What if Disk Were Free?

The Deduplication Problem

What if Disk Were Free?

Drive Rebuilds Aren't Free



What if Disk Were Free?

Drive Rebuilds Aren't Free

What if Disk Were Free?

Data Protection Isn't Free



What if Disk Were Free?

Data Protection Isn't Free



RAID 5/6

A red arrow originates from the text 'RAID 5/6' and points diagonally upwards and to the right, ending at the wooden handle of the pitchfork lying on the ground.

What if Disk Were Free?

Data Protection Isn't Free



What if Disk Were Free?

Data Protection Isn't Free

So What Should We Do With Disk?



What if Disk Were Free? The Cloud Will Save Us All!



What if Disk Were Free?

The Cloud Will Save Us All????

WHAT THE **2013 VERIZON DATA BREACH REPORT** TELLS US ABOUT PHISHING

The Verizon Data Breach Report is the information security industry's own annual "State of the Union" address for data breaches. No other industry report compares, analyzes, and reports on as much breach data from organizations around the globe. This year, ThreatSim was invited to contribute phishing data to the report. Let's look at what the data tells about the state of data breaches.

1.1 BILLION COMPROMISED RECORDS COVERED BY THE REPORT OVER THE LAST NINE YEARS

621 BREACHES IN THIS YEAR'S REPORT

DATA ELEMENT DESIRED BY ALL THREAT ACTORS: **CREDENTIALS**

1 SIZE FITS ALL
CONCEPT THAT MAKES SENSE FOR BASEBALL CAPS BUT NOT SECURITY PROGRAMS

45/120 NUMBER OF ESPIONAGE VICTIMS THAT ARE SMALLER THAN 1000 EMPLOYEES

95% OF ESPIONAGE ATTACKS INVOLVE PHISHING

47% OF MALWARE VECTORS INVOLVE ATTACHMENTS

4x MORE PHISHING ATTACKS IN 2013 COMPARED TO THE 2012 REPORT

80% LIKELIHOOD OF GETTING AT LEAST 1 TARGET TO CLICK ON A PHISH IF YOU RUN A CAMPAIGN TWICE

29% OF BREACHES USED SOCIAL ENGINEERING

12 HRS AMOUNT OF TIME THAT ELAPSES BETWEEN SENDING A PHISHING CAMPAIGN & RECEIVING 1/2 THE TOTAL TARGET CLICKS

2 MINIMUM NUMBER OF AUTHENTICATION FACTORS THAT WILL GREATLY REDUCE USE OF STOLEN CREDENTIALS

& USER EDUCATION & BEACON MONITORING

BREACHES WERE DISCOVERED BY USERS MORE THAN TWICE AS OFTEN AS NETWORK IDS IN LARGE ORGANIZATIONS

1 NOTORIOUS B.I.G REFERENCE

Source: <http://www.verizonenterprise.com/2013DR01/>

ThreatSim www.threatsim.com @ThreatSim

1	Microsoft's Windows Azure October 30 >20hrs	A sub-component of the system failed worldwide
2	Google August 16 <5mins	Services went down, causing global Internet traffic volume to plunge by about 40%
3	Amazon Web Services September 13 <3hrs	Connectivity issues affected a single availability zone, disrupting a notable portion of Internet activity
4	NASDAQ August 22 3hrs	Software bug, and inadequate built-in redundancy capabilities, triggered a massive trading halt in the U.S.
5	OTC Markets Group Inc November 7 >5hrs	Network failure prompted a shutdown in over-the-counter stock trading in the U.S.
6	HealthCare.gov October 27-28 >16hrs	Downtime caused by a service outage at Verizon Terremark data center
7	Amazon.com January 31 49mins	1hr of interrupted service may have translated to \$5M in lost revenue
8	Microsoft /Hotmail/Outlook.com March 13 <16hrs	Firmware update caused servers to overheat. Hotmail and Outlook.com suffered a service loss
9	Google Drive March 18-20 17hrs	Slow download times caused by a network control software glitch, resulted in latency and recovery problems
10	Google's Gmail September 23 12hrs	Slow download times triggered by dual network failure affected 29% of users

- Adobe Customer Care @AdobeCare · 14m**
@kabbie1882Adobe ID issue is resolved. We're bringing services back online. We will share details once we confirm everything is working. ^S
- Adobe Customer Care @AdobeCare · 31m**
We know we let you down. We apologize and are working to ensure it doesn't happen again.
- Adobe Customer Care @AdobeCare · 32m**
We have restored Adobe login services and all services are now online. We will be sharing a complete update on the outage soon.
- Adobe Customer Care @AdobeCare · 1h**
Adobe ID issue is resolved. We are bringing services back online. We will share more details once we confirm everything is working.

Dropbox @DropboxOps

Client Syncing, and Uploading via the website, will be affected for approximately the next hour. Thank you for your patience.

51 RETWEETS

3:26 PM - 10 Jan 13

Reply to @DropboxOps

Bryan C @BChabrow @dropboxops @dropbox you're killing me, Dbox. If I get fired b/c I can't send files, you'll pay my severance, right?



Questions?



Questions?

Thank you!



Storage Switzerland

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StorageSwiss on Twitter:

<http://twitter.com/storageswiss>

StorageSwiss on YouTube:

<http://www.youtube.com/user/storageswiss>

