



**HONEY, I
BROKE
THE CLOUD**



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DRP

(Disaster Recovery Planning)

in a post-Cloud World

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*Imagine every family photo
you had stored
only
in the Cloud...*



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*Would you be
worried?*





Yet, at universities today...



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HUMAN

I.T.

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Y





We need a strategy



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...to address risk



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- ~~Avoid~~
- ~~Transfer~~
- ✓ Mitigate
- ✓ Accept

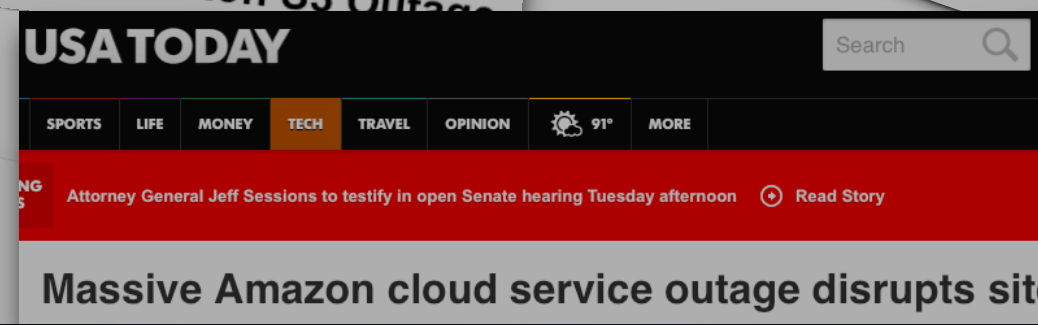
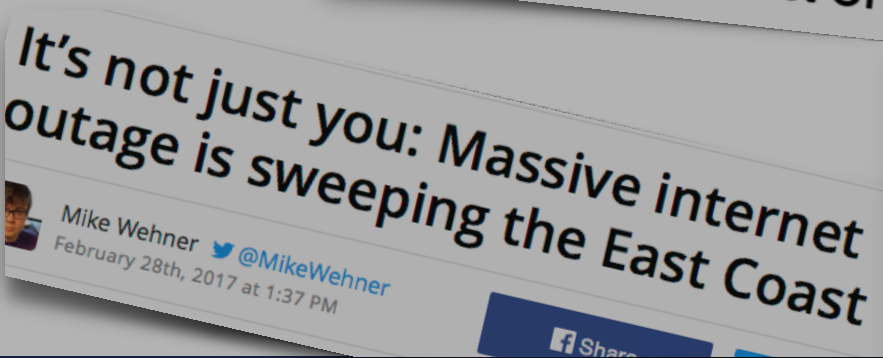


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Examples...

Amazon S3 Outage



Amazon S3 Example

- ✓ Identify Cloud dependencies
 - Images, Style Sheets, ... were stored on S3
- ✓ Fall back to on-site
 - Javascript to 1st check S3 availability

Ransomware



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Ransomware Example

- On-site authentication to Cloud email
 - compromised and so taken off-line
 - end-users were unable to access email, until authentication servers restored

Ransomware Mitigation

- ✓ Harden Cloud connections
 - Require 2-factor for Admin accts
 - Conduct Security assessment for AD/ADFS, on-site authentication servers



Ransomware Mitigation

✓ Other learnings:

- Plan for out-of-band communications
- Server virtualization can speed restoral
- Sync'd Cloud storage can simplify recovery of ransomed files on end-users' PCs



INTERNET

Alaska Cancels School Tests After a Fiber Optic Cable Was Cut in Kansas

KATE LUNAU
Apr 6 2016, 11:50am



Home / News

University of Kansas seeks to stop another fiber cable cut



By - Associated Press
Monday, June 6, 2016

Diversification

Diversification Example

✓ Campus Internet connectivity

- Application Level (e.g. 3 vendors)
- Transport level (e.g. 2 pipes)
- Physical Level (e.g. 1 duct bank)



Summary: DRP in post-cloud

- Identify Cloud dependencies
- Fallback if possible; else harden Cloud connections
- Diversify Internet connections
- Address out-of-band communications



“Identify. Mitigate. Ride out. Refine.”



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