



Redefining Finance's Role in Cybersecurity

Cybersecurity Trends and Analysis

Matthew Sharp

Chief Information Security Officer

Logicworks

Worldwide IT security spending will reach **\$86.4B in 2017**, an **increase of 7%** over 2016.

Source: Gartner, 2016

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However, only **22%** of companies benchmark IT security spending practices, and many struggle to **track and optimize spend.**

Source: SANS Institute, 2016

Cloud security is no longer just IT's responsibility –
finance must collaborate with IT to adequately track
and control cyber risk.

“Improved collaboration among business, digital
and IT” is the #1 cybersecurity spending priority,
according to PwC.



Matt Sharp

Chief Information Security Officer

- Served for 10+ years as a strategic advisor to CISOs of *Fortune* 500 and global institutions
- Former Head of Global Security at Crocs
- Certified Cloud Security Professional (CSSP)
- AWS Certified Solutions Architect - Associate

We design, build, automate, and manage enterprise AWS clouds.



Cloud Migration



Cloud Automation



24/7 Management



Cloud Security

Three sections of the presentation:

1. Are we investing optimally in security today to adequately control **financial risk**?
2. What causes **deviations in cloud spend**? How can security help control or predict those deviations?
3. How does **consumption billing** affect financial accountability?

Q1: Are we investing optimally in security today to adequately control financial risk?

ACTIONS:

- **Understand** the financial risks of migrating to cloud
- Measure your security spending and **benchmark** against others
- Collaborate with IT to **forecast** cloud security spending in the future

Q1: Are we investing optimally in security today to adequately control financial risk?

Average Cost of Lost or Stolen Record: **\$225**

Average Cost of Lost or Stolen Record, Finance Industry: **\$336**

Average Total Cost of Breach in 2017: **\$7.36 million** (up from \$5.4 million in 2013)

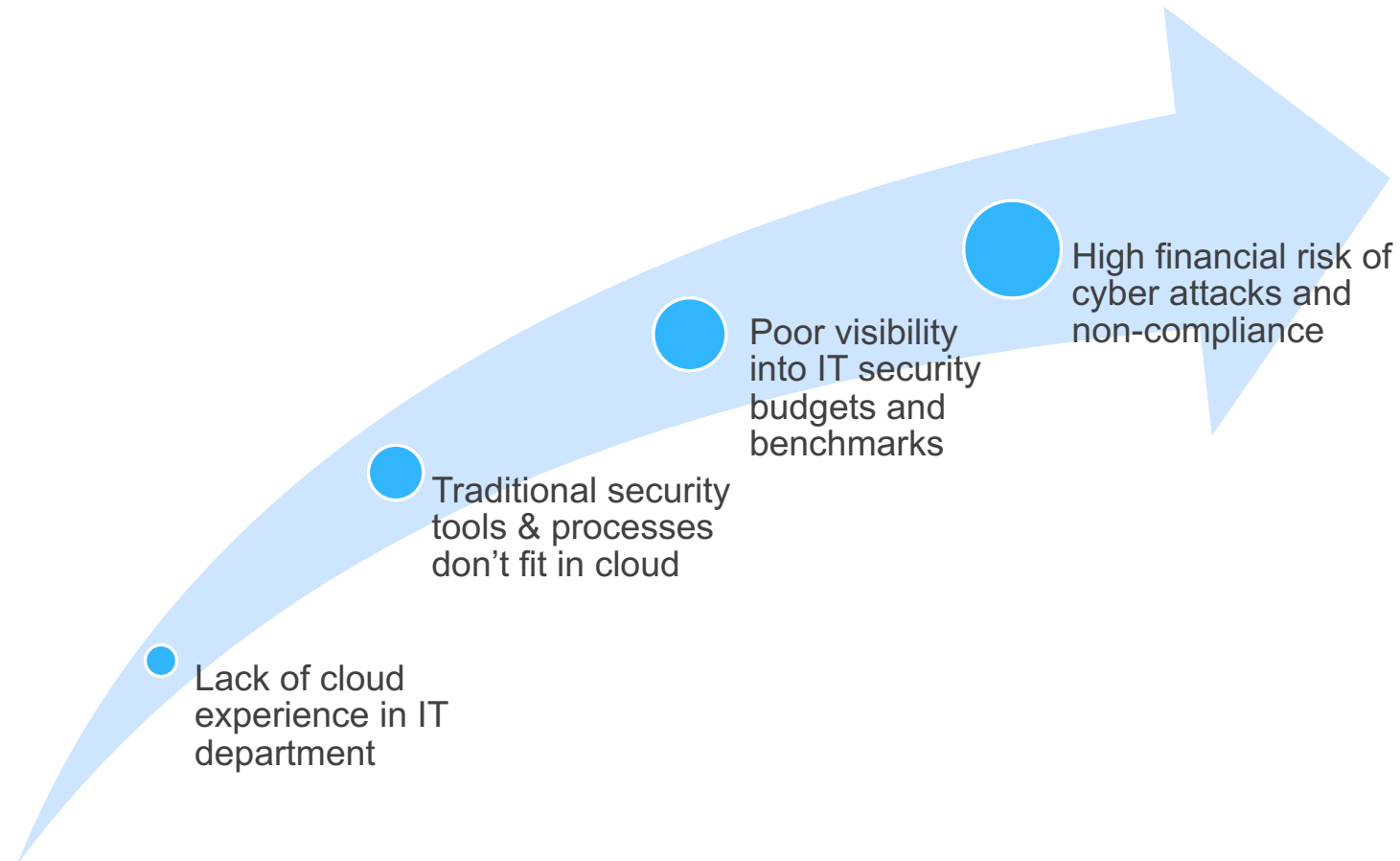
Average Lost Business Cost: **\$4.03 million**

Source: Ponemon Institute, 2017

“There are two types of companies: those that have been hacked, and those who don't know they have been hacked.”

John Chambers
CEO, Cisco Systems

Q1: Are we investing optimally in security today to adequately control financial risk?



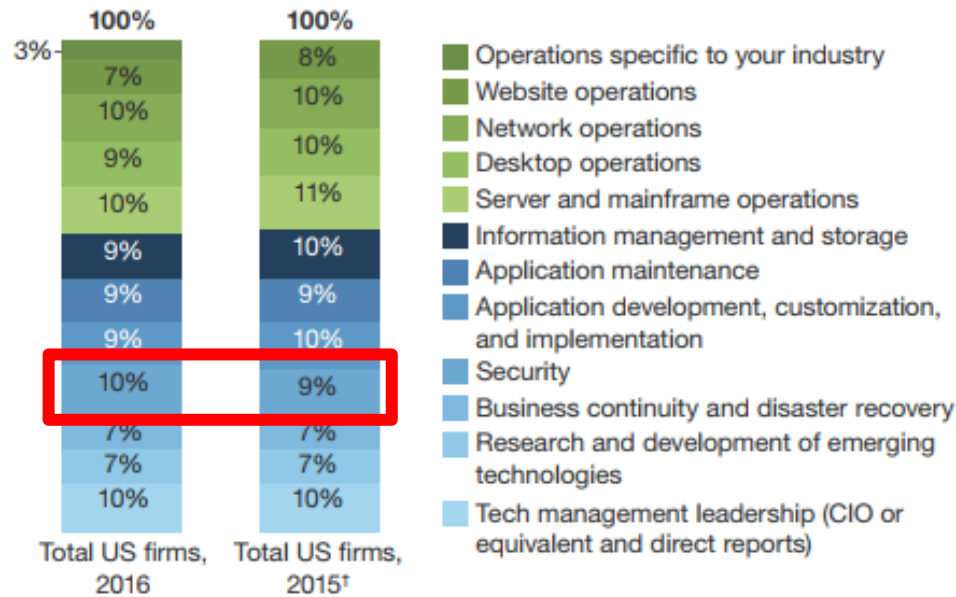
Q1: Are we investing optimally in security today to adequately control financial risk?

What percentage of IT spend is security?

- a) 0-5%
- b) 5-10%
- c) 10-15%
- d) 15%+
- e) Don't Know

Q1: Are we investing optimally in security today to adequately control financial risk?

2-5 Forrester's tech budget benchmarks for distribution by tech management function, 2016 versus 2015



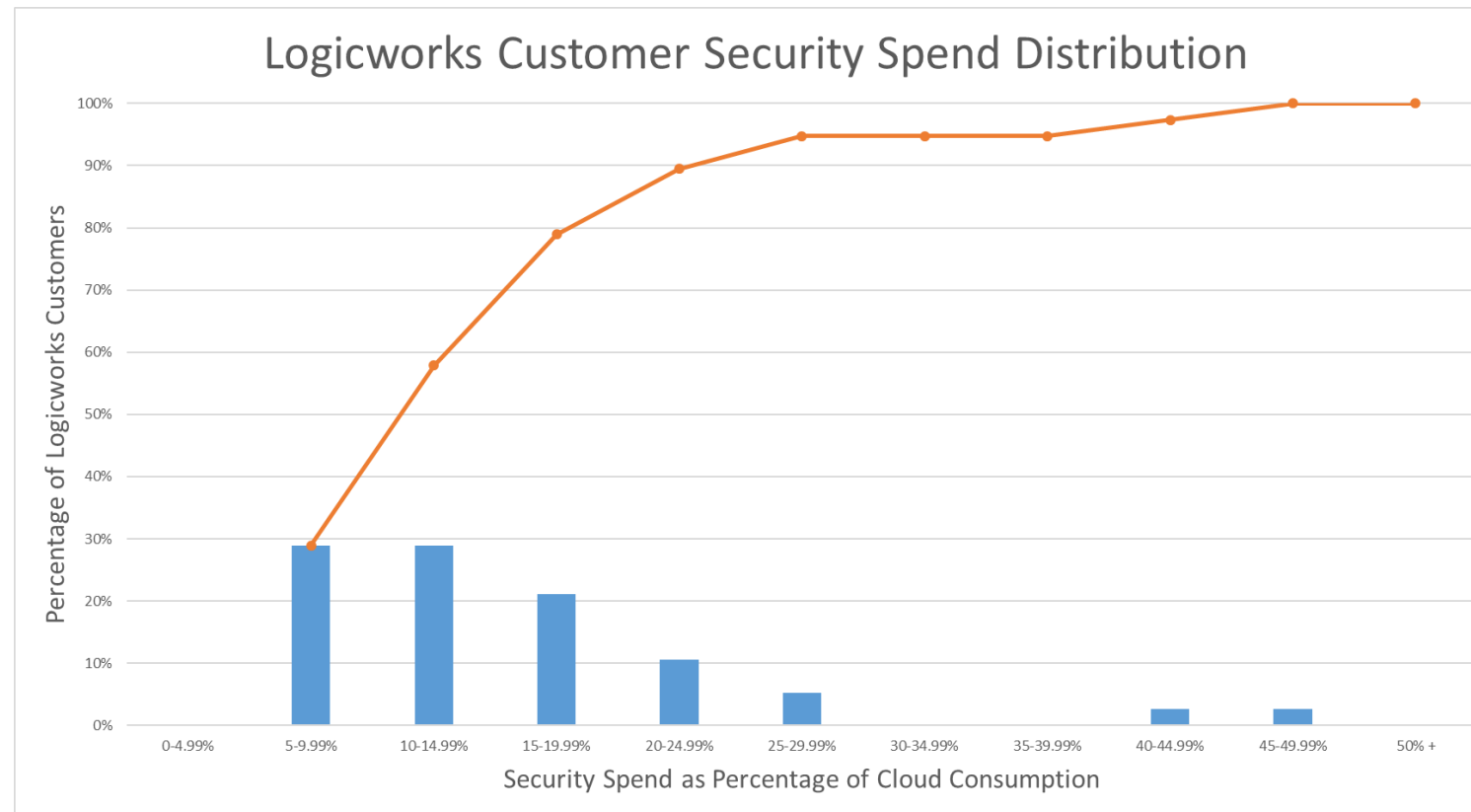
Base: 1,284 US budget decision-makers
[†]Base: 1,142 US budget decision-makers

Source: Forrester's Global Business Technographics® Budgets Survey, 2015
[†]Source: Forrester's Business Technographics Global Budgets Survey, 2014

Classification	IT Budget		
	FY 2014	FY 2015	FY 2016 (Projected)
Large	\$1M-\$10M	\$1M-\$10M	\$10M-\$50M
Medium	\$500K-\$1M	\$1M	\$1M-\$10M
Small	\$100K-\$500K	\$100K-\$500K	\$100K-\$500K
Classification	% Budget for Security		
	FY 2014	FY 2015	FY 2016 (Projected)
Large	4%-6%	4%-6%	7%-9%
Medium	4%-6%	4%-6%	7%-9%
Small	3%-4%	4%-6%	6%-7%

Source: SANS Institute, 2016

Q1: Are we investing optimally in security today to adequately control financial risk?



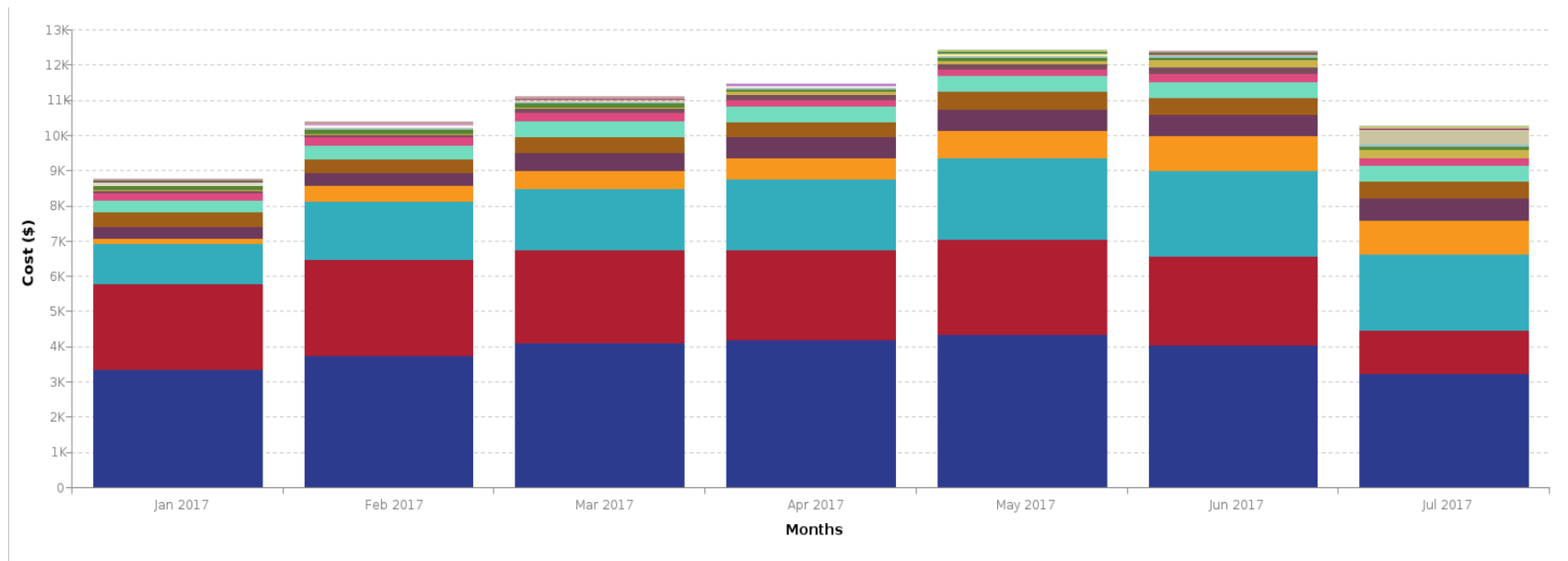
Source: Logicworks, 2017

Cloud Expense Trends from Our Clients



Q1: Are we investing optimally in security today to adequately control financial risk?

Total Amazon Web Services Spend



Source: Logicworks, 2017

Does security spend grow and shrink with workload spend?

Q2: What causes deviation in infrastructure spend?

ACTIONS:

- **Understand** the causes of unpredictable infrastructure spend
- Invest in methods to **track and control** infrastructure spend
- **Collaborate** with IT to develop proper alerts and “caps”

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CASE STUDIES:



Large Travel
Website



Healthcare SaaS
Company



Enterprise Software
Company

Q2: What causes deviation in infrastructure spend?



Large Travel
Website

Hackers Monetize Mistake with Bitcoin Mining Infrastructure

SITUATION:

- Exposed API Key
- A hacker took advantage within hours

SOLUTION:

- Proprietary scanners
- Prompt communication
- Avoid \$500K / day

Q2: What causes deviation in infrastructure spend?

Uncontrolled Development Resulted in Excessive Spending

SITUATION:

- Dev team given free rein in AWS
- Compute costs exceed budget
- Storage cost strategy missing

SOLUTION:

- Performed cost analysis
- No pruning of storage → TBs unattached EBS volumes
- Security restricted roles for developers, so that company's central IT had to approve new resources



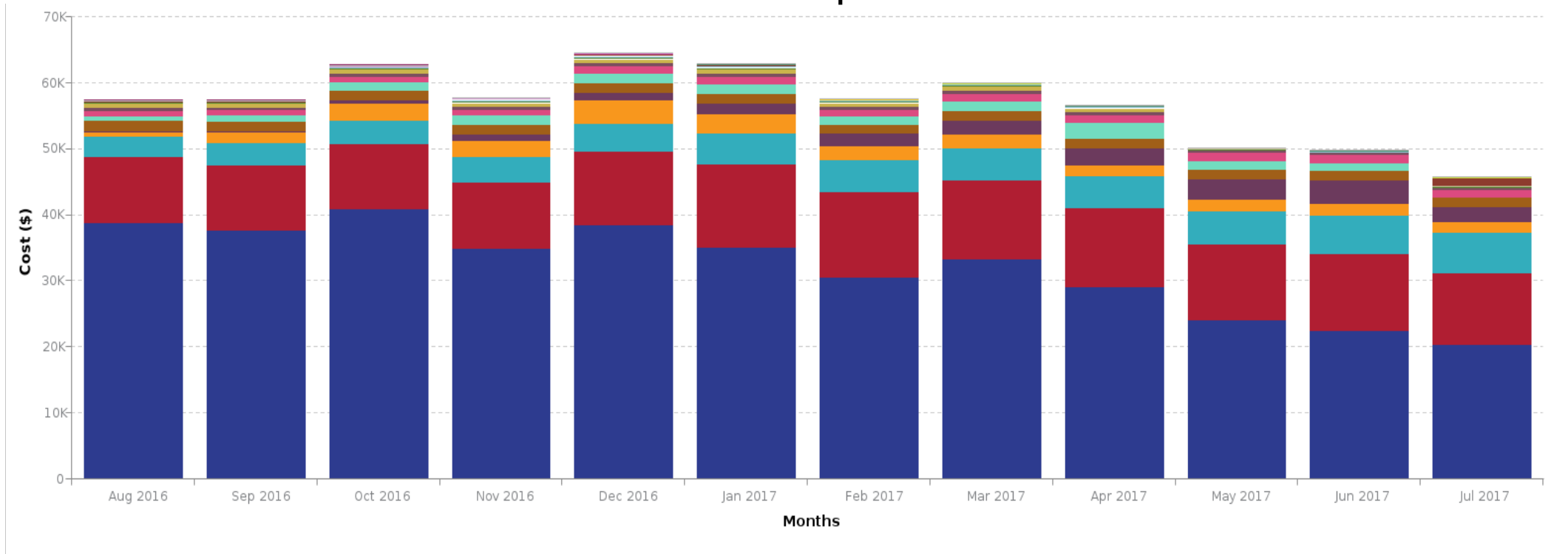
Healthcare SaaS
Company

Q2: What causes deviation in infrastructure spend?



Healthcare SaaS
Company

Total Amazon Web Services Spend



Q2: What causes deviation in infrastructure spend?

Communication Failure Between Finance and IT

SITUATION:

- Finance team purchased Reserved Instances (RIs)
- No controls to enforce use of RIs
- \$54,000 loss in a single month

SOLUTION:

- Logicworks implemented controls to “force” engineers to use RIs
- Set up notifications for “regular” On-Demand Instances
- Set up spend thresholds so that engineers could not spend more than a certain budget



Enterprise Software
Company

Q3: How does consumption-based billing affect my cost management strategy?

ACTIONS:

- Use **tagging** (informs Activity-Based Costing by BU or department)
- Use cloud management **platform** (CMP)
- **Partner** with AWS services firm to help you see around corners

Q3: How does consumption-based billing affect my cost management strategy?

Activity-Based Costing (ABC)

An approach to the costing and monitoring of activities which involves tracing resource consumption and costing final outputs.

Resources are assigned to activities, and activities to cost objects based on consumption estimates.

Source: Chartered Institute of Management Accountants (CIMA)

AWS allows **per second billing**, empowering very precise store, compute and network cost allocations.



Q3: How does consumption-based billing affect my cost management strategy?



Greetings from Amazon Web Services,
We're writing to provide you with an electronic invoice for your use of AWS services. Your account will be charged \$ 136.38. Additional information regarding your bill, individual service charge details, and your account history are available on the Account Summary Page.

Account ID	Invoice No	Statement Date	Payment Due Date
REDACTED	7758303	09/03/2010	09/03/2010

Bill To
Redacted

Service Provider
Amazon Web Services LLC
410 Terry Avenue North
Seattle WA 98109-5210

Billing Period: Aug 1 - Aug 31, 2010

Service Name	Amount Due
Amazon CloudFront	\$ 1.27
AWS Data Transfer	\$ 1.89
Amazon Simple Storage Service	\$ 41.34
Amazon SimpleDB	\$ 6.75
Amazon Simple Notification Service	\$ 0.00
Amazon Elastic Compute Cloud	3
Amazon Simple Queue Service	0
Taxes*	0
Total due in US Dollars	48



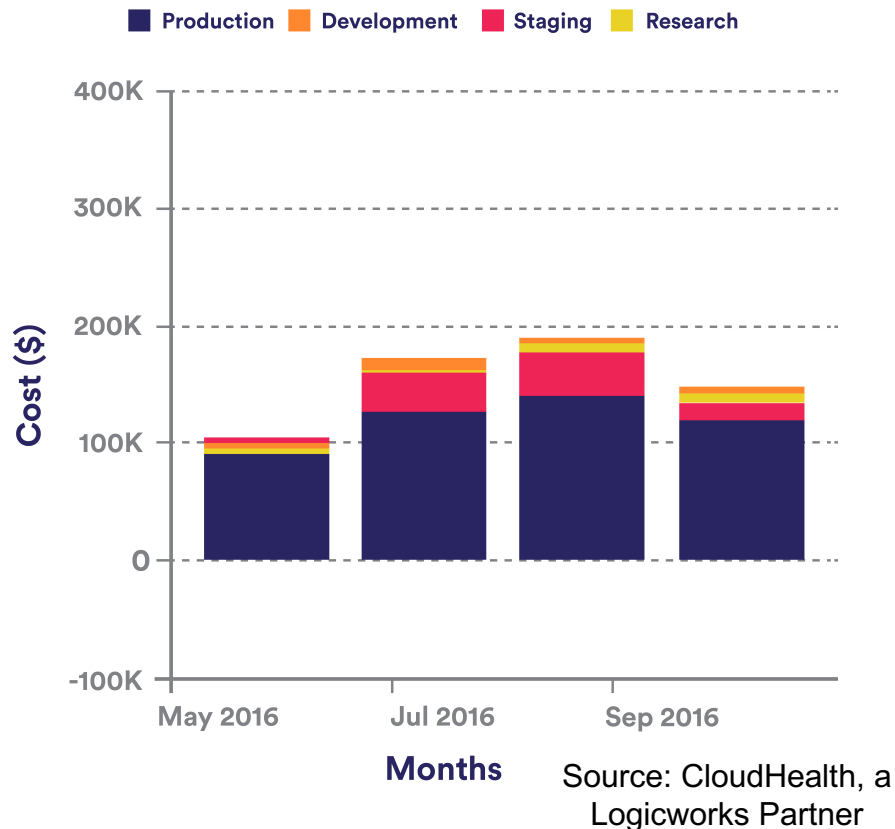
Not helpful!

*This is not a VAT invoice.
All web services are sold by Amazon Web Services LLC.
The above charges include charges incurred by your account as well as by all accounts you are responsible for through Consolidated Billing.
For customers who need to remit consumption tax in Japan, the Account Summary Page provides details of services from Japan.

Solution #1: Resource Tagging

- Tag *everything* using automation
- Get detailed bills
- Receive bills broken down by department / team
- Assign expenses to the right sources

Q3: How does consumption-based billing affect my cost management strategy?



Solution #2: Use Cloud Management Platform

- Empower your team with real-time cost dashboard
- Encourage IT to slice and dice information to find potential cost savings
- Automate regular cost reports to key stakeholders

Q3: How does consumption-based billing affect my cost management strategy?



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Cloud Security



Solution #3: Partner with Cloud Experts

- Leverage consultants to help establish mature cloud security practice
- Outsource cloud management to reduce risk of employee error, unexpected costs, mitigate high cost of hiring qualified staff
- Leverage 3rd party automation, scanners, alerts to keep cloud on-track

Topic we covered today include:

1. Are we investing enough in security today to adequately control **financial risk**?
2. What causes **deviations in cloud spend**? How can security help control or predict those deviations?
3. How does **consumption billing** affect our accounting & security strategy?

Thank You!

Matthew Sharp

LinkedIn: <https://www.linkedin.com/in/matthewsharp/>



155 Avenue of the Americas, Fifth Floor | New York, NY 10013
P: 212.625.5300 | www.logicworks.com

