

# Leveraging the Cloud for Law Enforcement

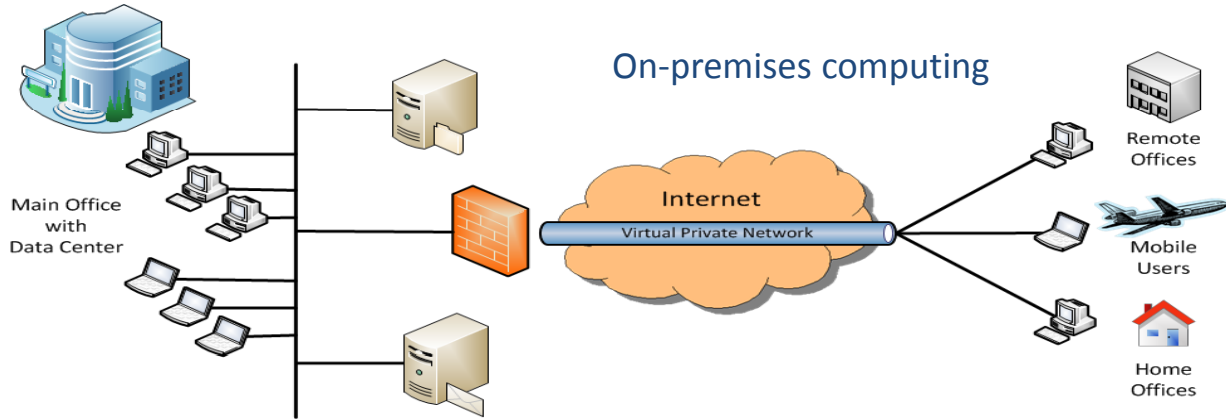
Richard A. Falkenrath, PhD  
Principal, The Chertoff Group

Law Enforcement Information Management  
Training Conference & Technology Exposition  
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## Outline

1. Cloud computing: Definitions
2. Cloud computing & law enforcement survey results
3. Key issues for law enforcement

## Cloud vs. On-premises Computing



- ✓ Typically involves CAPEX funding
- ✓ Compute resources typically managed by your org
- ✓ Organization retains full control over data and applications

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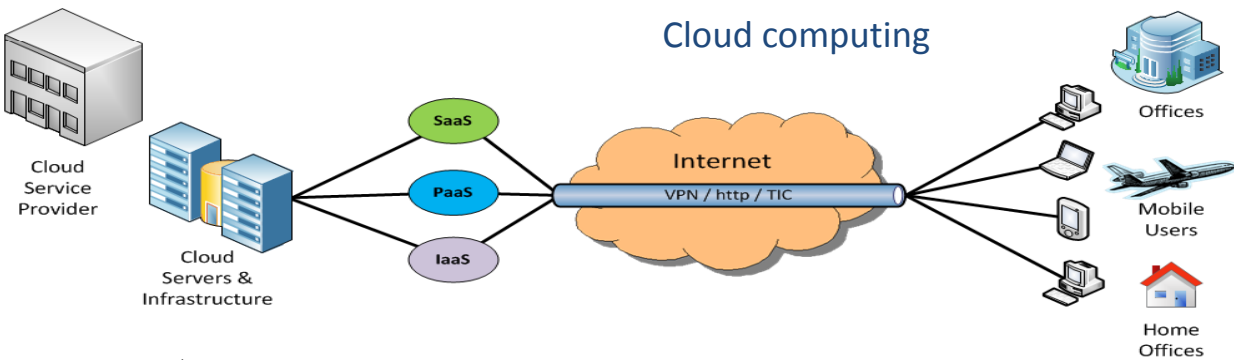
## Cloud Computing Definition



- “Cloud computing is a model for enabling **ubiquitous, convenient, on-demand network access** to a shared **pool of configurable computing resources** (e.g., networks, servers, storage, applications, and services) that can be **rapidly provisioned** and released with **minimal management effort** or service provider interaction.”
- This cloud model is composed of five essential characteristics, three service models, and four deployment models.

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## Cloud vs. On-premises Computing



- ✓ Typically OPEX funding or utility model with lower TCO
- ✓ Compute resources typically managed by provider
- ✓ Control and access to data should not be compromised

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## Cloud Characteristics

- Essential Characteristics
  - ✓ On-demand self-service
    - Users can provision themselves
  - ✓ Broad network access
    - Access from anywhere on broad range of devices
  - ✓ Resource pooling
    - Shared resource use
  - ✓ Rapid elasticity
    - Scale up or down, even automatically, based on need
  - ✓ Measured Service
    - Resource usage can be measured, optimized, metered and controlled

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# Cloud Service Models

- Service Models
  - Software as a Service (SaaS)
    - Microsoft Office 365, Google Apps, Salesforce.com
    - Can have sub models e.g., Email as a Service (EaaS)
  - Platform as a Service (PaaS)
    - Microsoft Azure, Force.com, OpenStack
  - Infrastructure as a Service (IaaS)
    - Amazon Web Services, AT&T, CGI

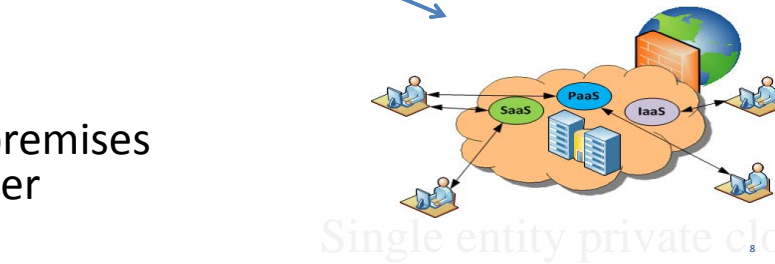
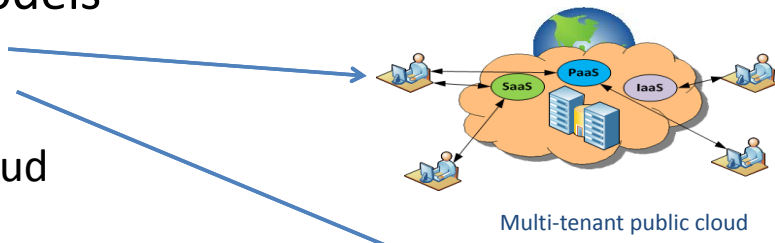
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# Cloud Deployment Models

- Deployment Models
  - Public cloud
  - Private cloud
  - Community cloud
  - Hybrid cloud

*Plus...*

  - Cloud and on-premises working together



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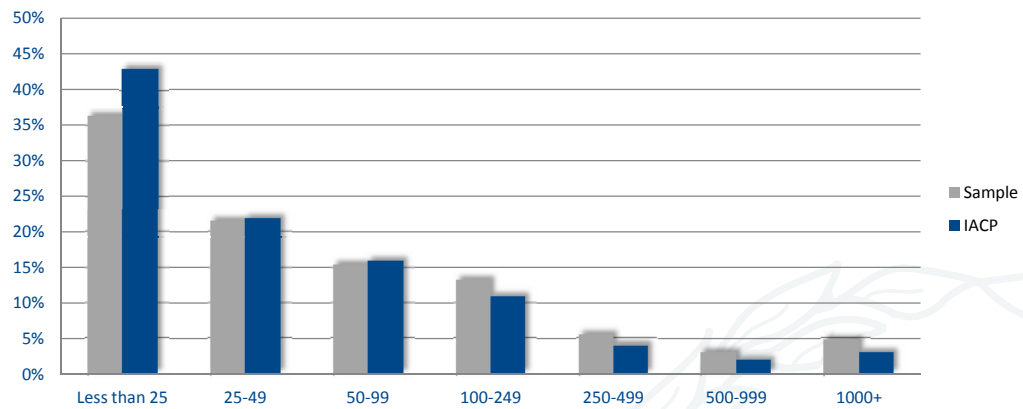


## Survey Results

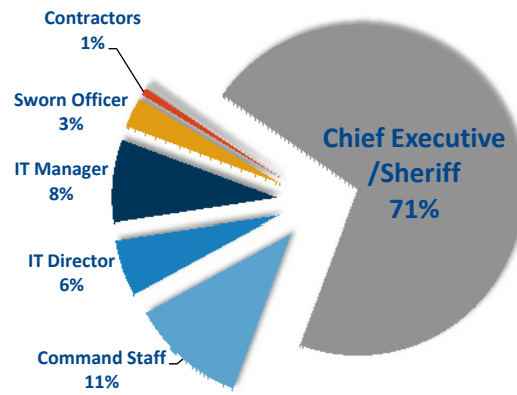
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## Number of Full-time Sworn Officers

Agency Size (n=272)  
Mean = 216/Median = 36



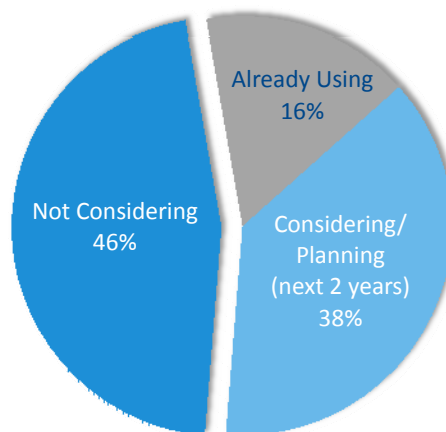
# Respondents



Total: 272 respondents

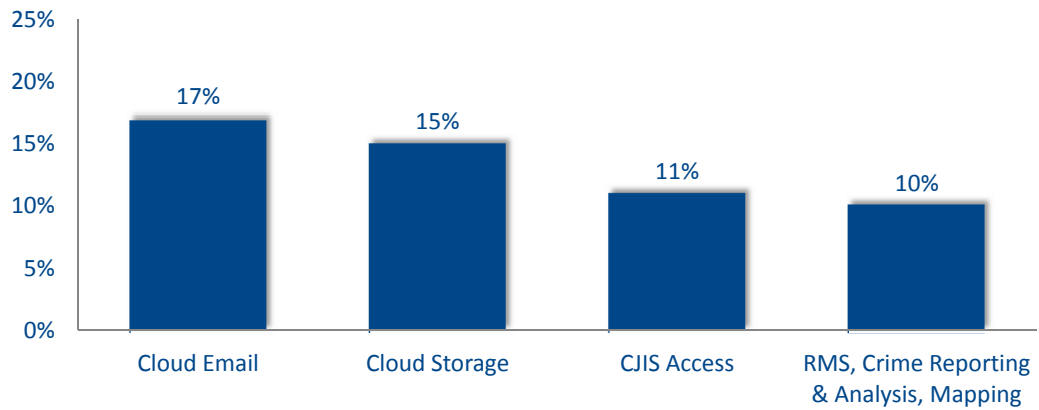
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# Over Half Already Use or are Considering Using the Cloud



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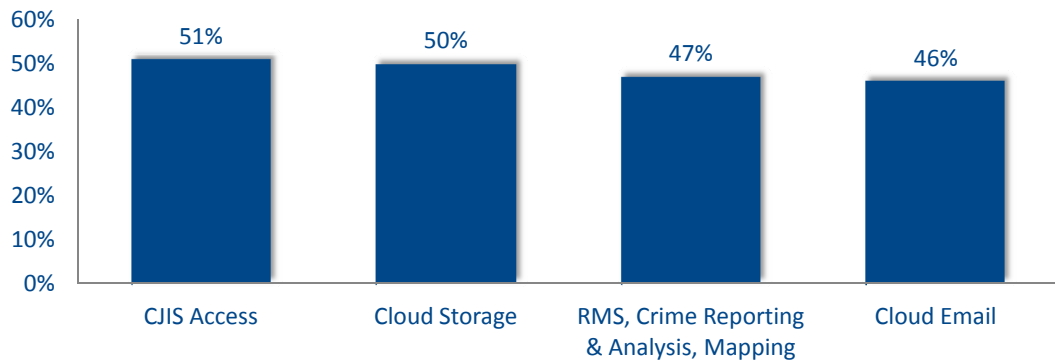
## Email is the Most Popular Law Enforcement Cloud App today...



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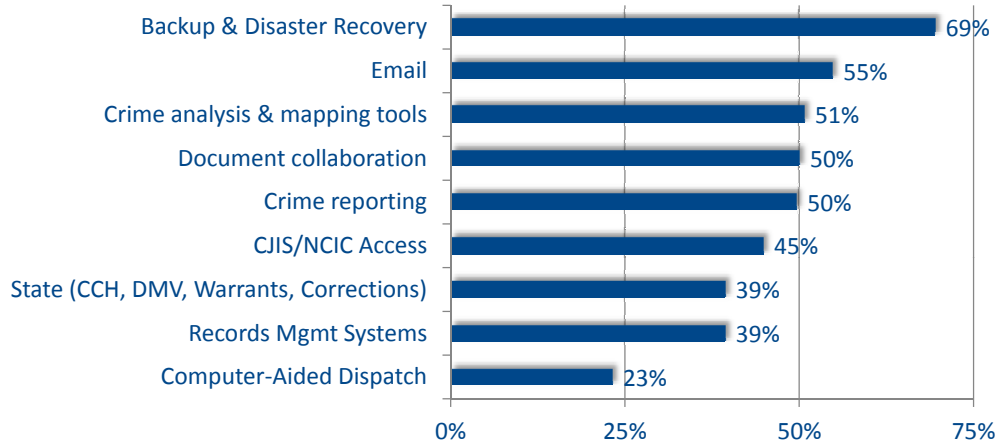
## But Agencies Expect to Use a Wider Range of Cloud Apps

Planning or Considering Cloud Implementation in the Next 2 Years



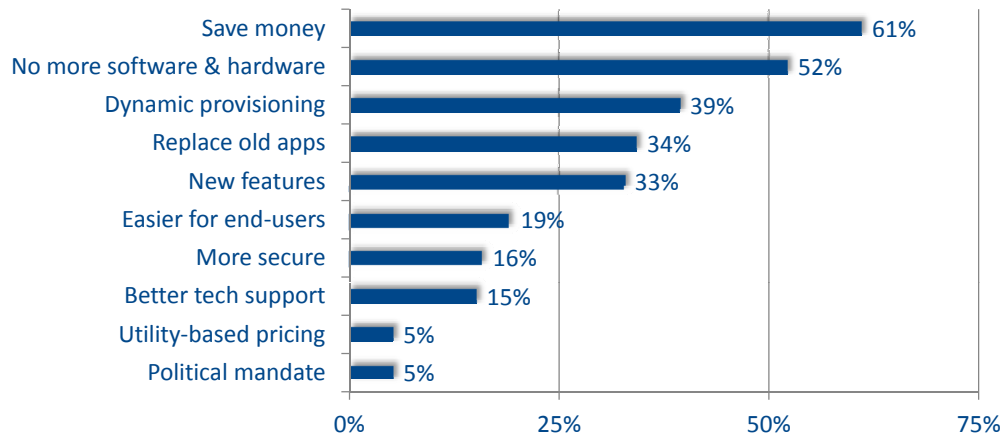
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## Apps Most Suited for Cloud



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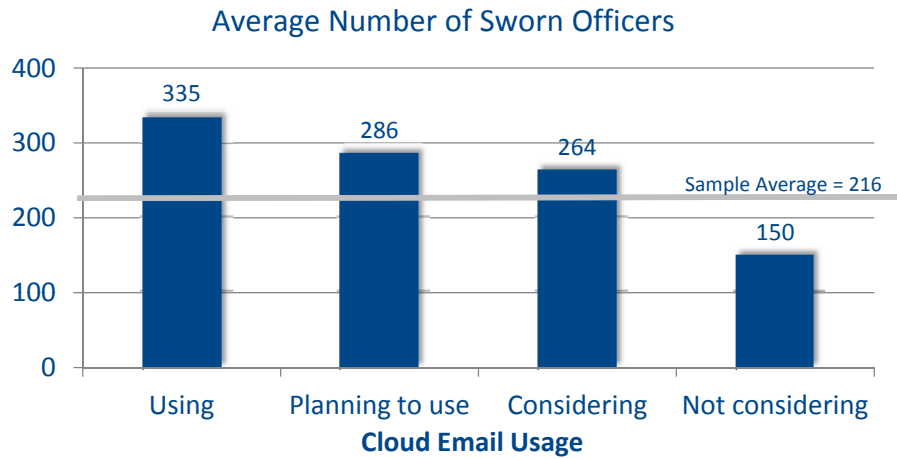
## Why Are They Going Cloud?



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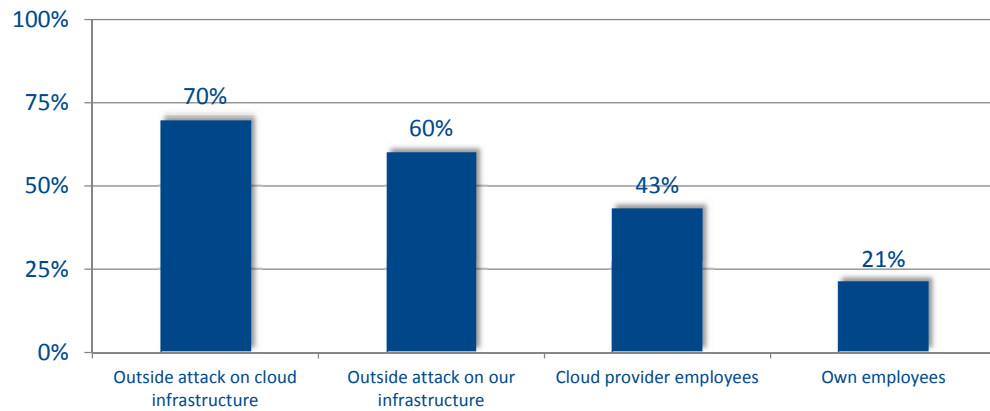


## Early Adopters Tend to be Larger



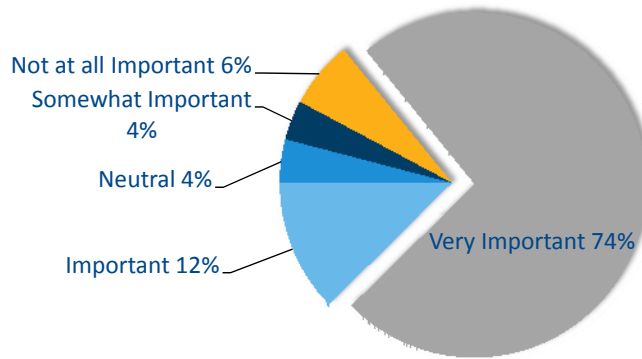
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## Greatest Cloud Security Risk



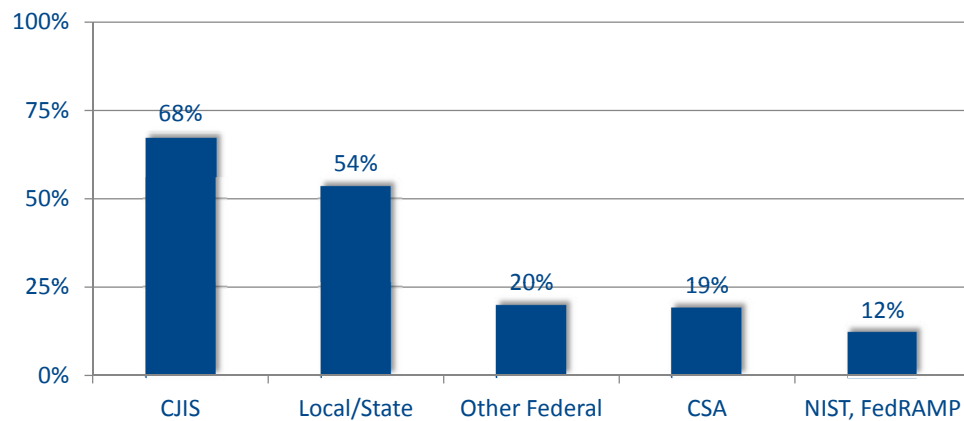
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## Should Cloud Provider Employees Pass Background Checks?



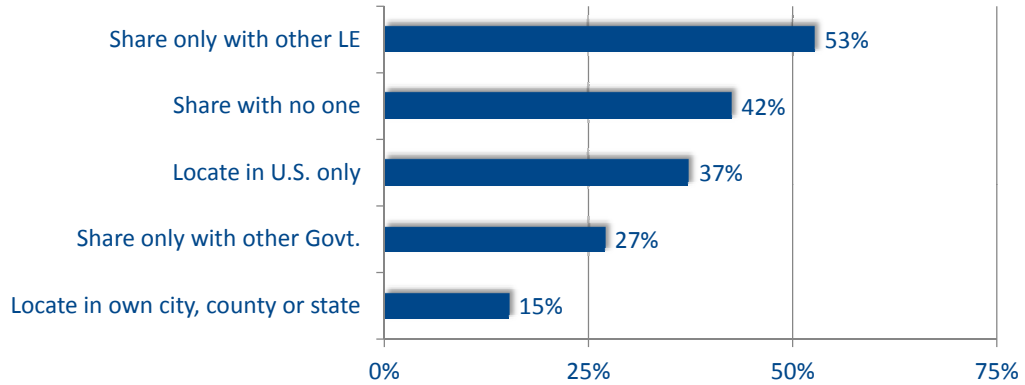
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## Preferred Cloud Security Standards



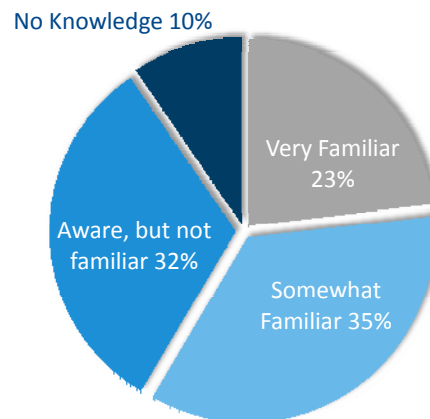
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## Who Should Share Law Enforcement Cloud Infrastructure?



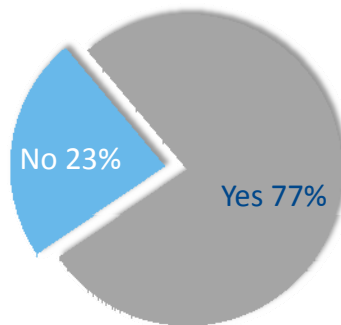
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## How Familiar Are You With CJIS?



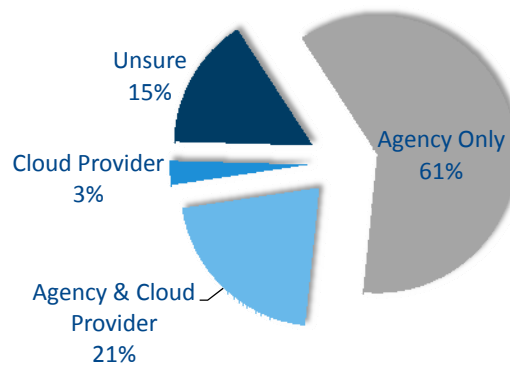
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## Aware that CJIS Rules Apply Even to Email?



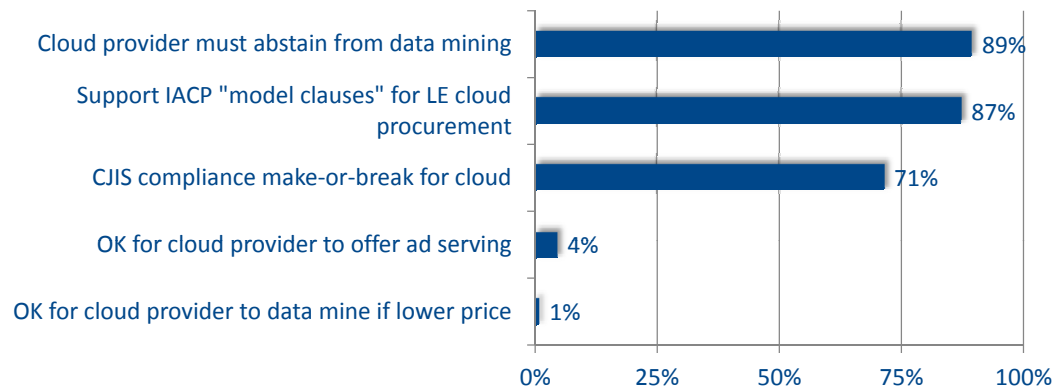
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## Who Should Control Cloud Encryption Keys?



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## Okay for Cloud Providers to Mine Law Enforcement Data?



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## Key Issues

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## Key Issues for Law Enforcement

1. Policy and legal impediments to
  - Innovation
  - Cost savings
2. Discovery and data integrity
  - Chain of custody
  - Encryption
  - Location of data
3. Risk of breach ... cybersecurity
4. Novel issues
  - Ubiquitous surveillance
  - New forms of social media
  - Power of the cloud providers

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# Thank you!

For more information, visit:

<http://www.SafeGov.org>

Or contact us at:

[info@safegov.org](mailto:info@safegov.org)



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