

# Challenges of Security in Cloud Computing? Or A New Way of Thinking About Cloud Security



2011 Federal Computer Week Survey

# Information Security

confidentiality, integrity, and availability of *data*

# Computer Security

availability and operation of a *computer system*



# Outsourcing

## Payroll, HR, Law

People

Process

Data

Applications

OS

Hardware

Network

Data Center



Top Down

People

Process

Data

Applications

OS

Hardware

Network

Data Center



Figure 15. Threat action categories by percent of breaches and percent of records

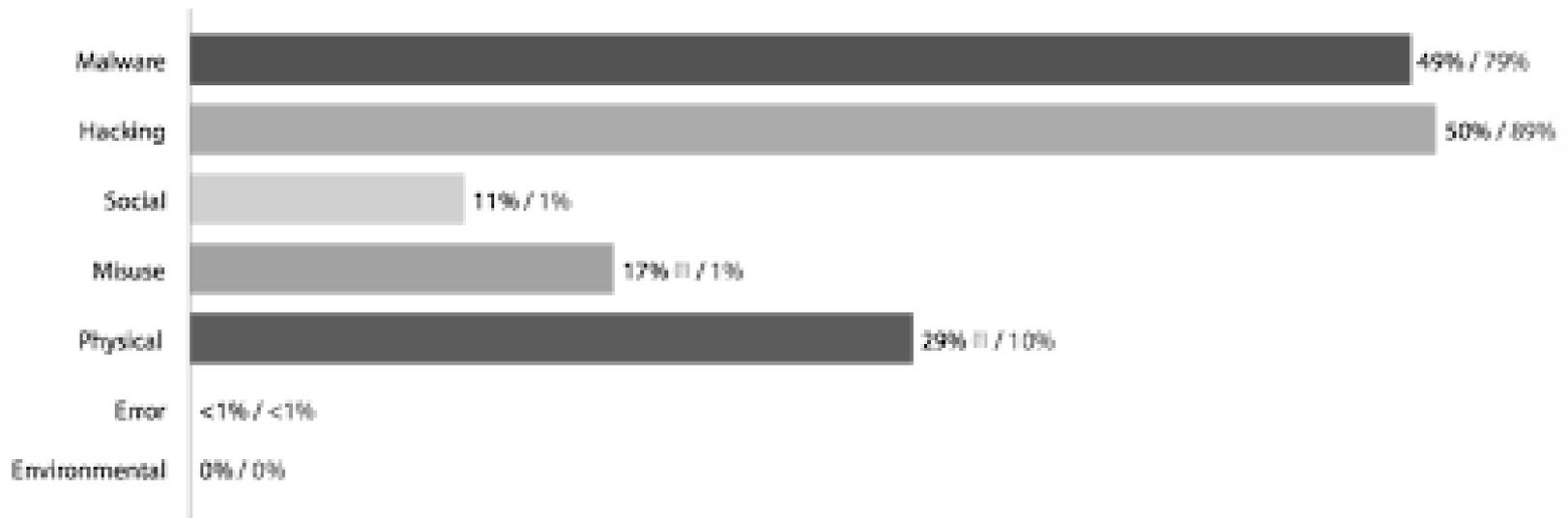
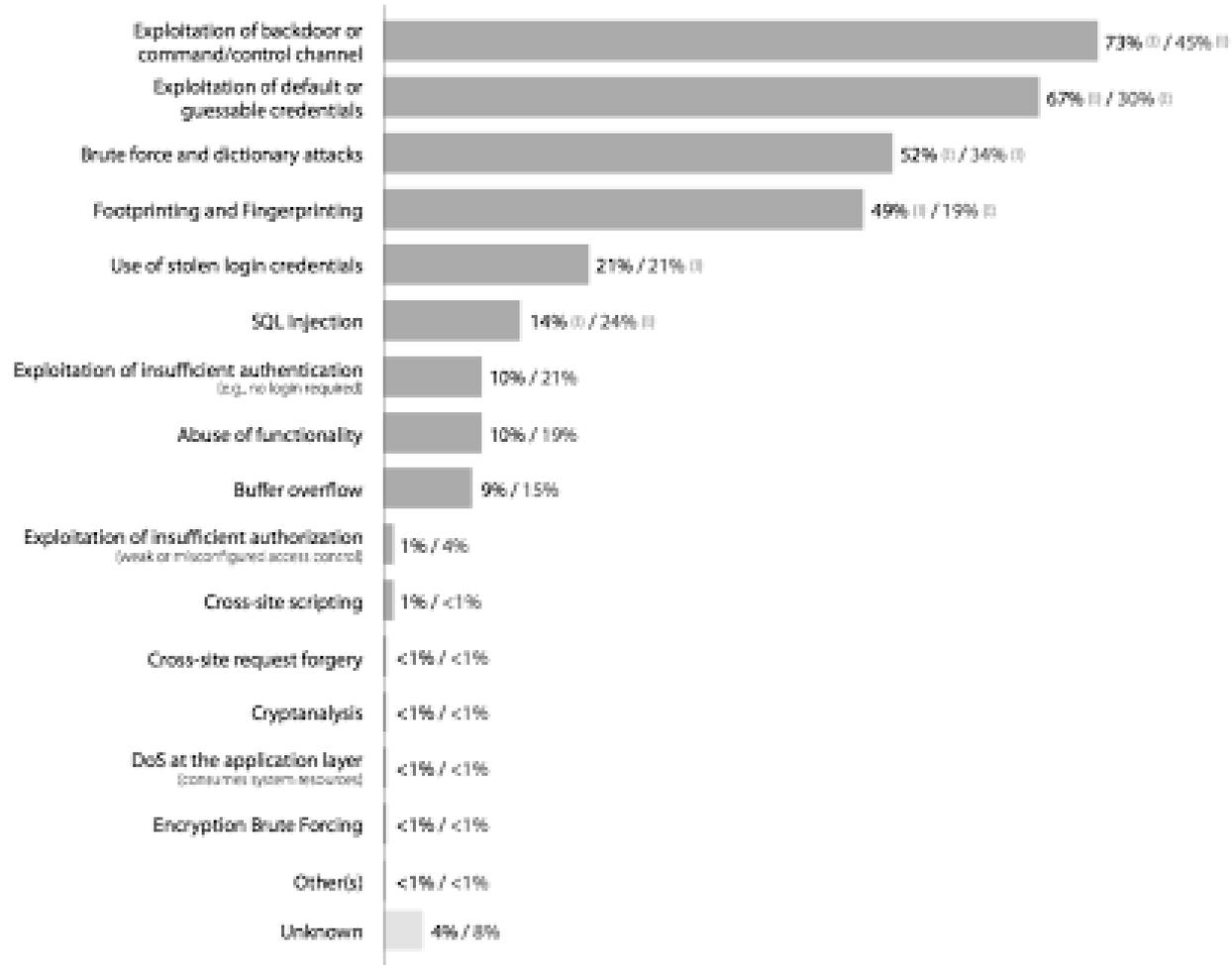


Figure 22. Types of hacking by percent of breaches within Hacking and percent of records



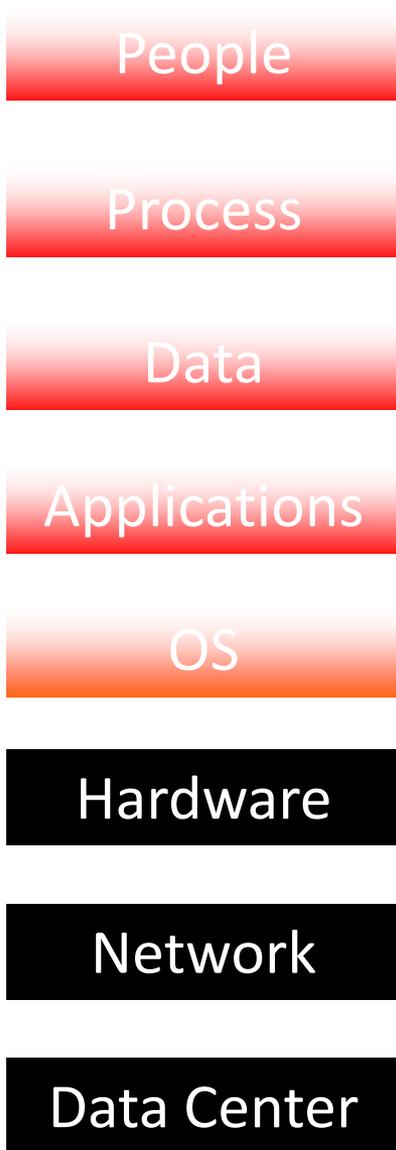
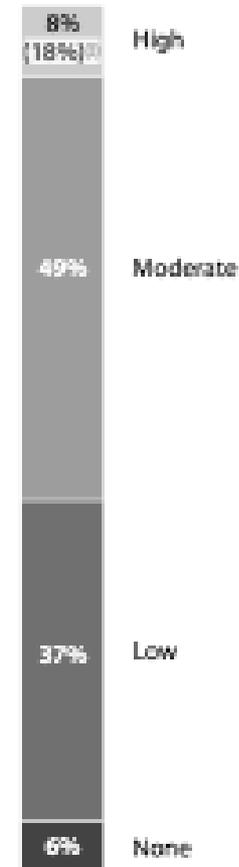


Figure 34. Attack difficulty by percent of breaches and percent of records\*



\* Verizon caseload only

# Top Recommendations

- Eliminate unnecessary data, keep tabs on what is left.
- Ensure essential controls are met.
- Check the above again.
- Access to remote access services.
- Test and review web applications
- Audit user accounts and monitor privileged activity.
- Monitor and mine event logs.

# Compliance

## SAS70 – ISO 27001

### PCI - HIPAA – FISMA

# Cloud Compliance?

## CSA – FedRamp - ODCA

Threat  
Prevention => Suppression

# Resources

2011 Verizon Data Breach Report -

[www.verizonbusiness.com/go/2010databreachreport/](http://www.verizonbusiness.com/go/2010databreachreport/)

Open Data Center Alliance - <http://www.opendatacenteralliance.org/>

Cloud Security Alliance - <https://cloudsecurityalliance.org/>

FedRamp - <http://www.info.apps.gov/content/federal-risk-and-authorization-management-program-fedramp>