# "Busting the Top 6 Myths that Expose Your CU to Risk"

## UPCOMING 2016 RISK FORUM DATES

- *WHEN:* Thursday, May 5th
- *WHERE:* Hilton Washington Dulles Airport, Herndon, VA

- *WHEN:* Thursday, May 17th
- *WHERE:* Chicago Marriott, Naperville, IL

Symitar®
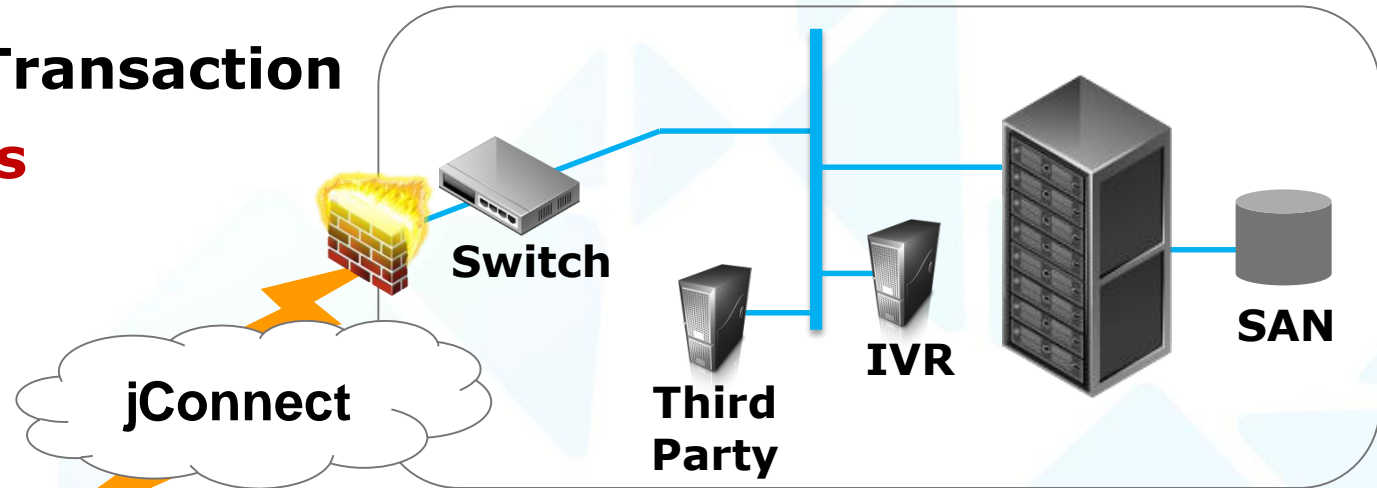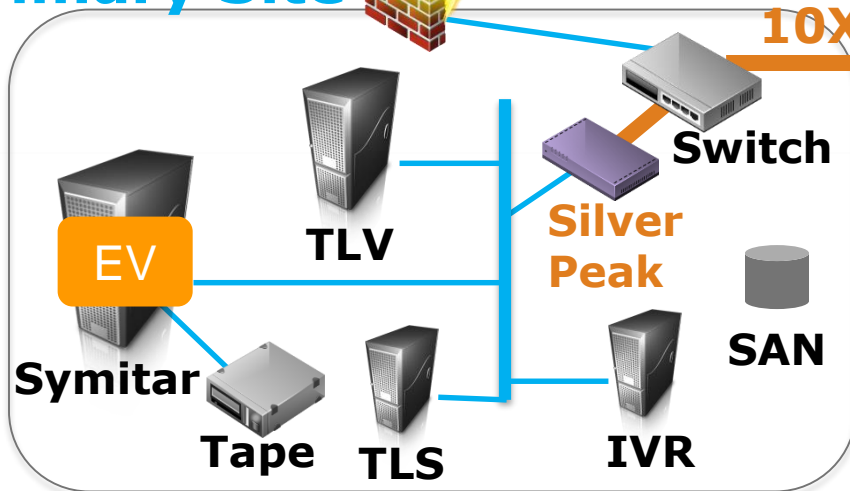A JACK HENRY COMPANY

# CELR Core Vaulting

(121)

**RPO = Last Transaction**

**RTO = ~4 hrs**

# CELR Non-Core Vaulting & VSR

(28)

**Centurion**

**Standby virtual infrastructure for testing and recovery**

Silver Peak

Switch

Third Party

SAN

10X-20X

**Primary Site**

**Secondary Site**

10X-20X

Appliance

Switch

Silver Peak

SAN

Network

Switch

Silver Peak

SAN
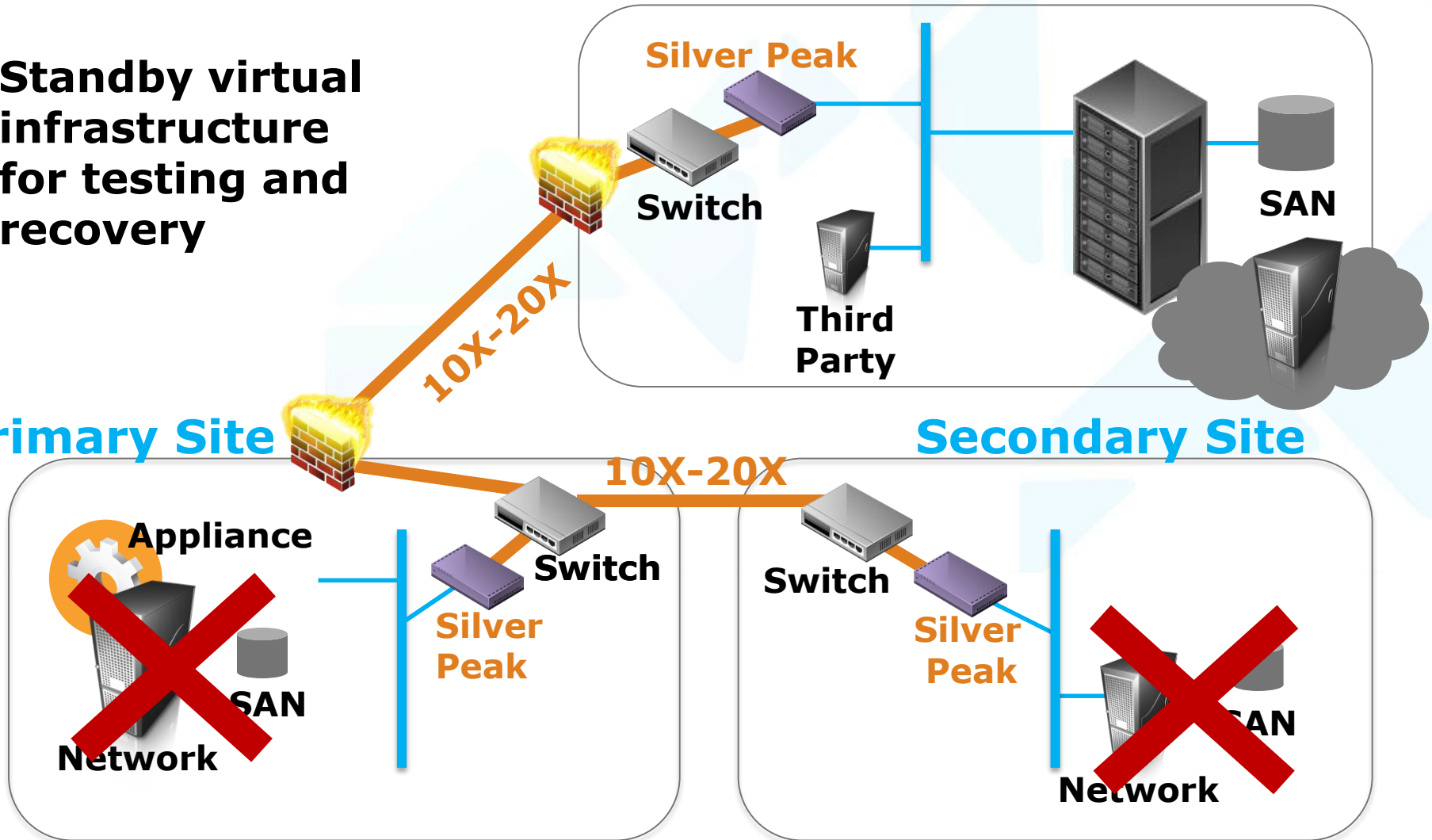
Network

# Hosted Failover

(32)



Hosted Failover

Silver Peak

Sym3

NetScaler

Third Party

IVR

10X-20X

Primary Site

NetScaler

TLV

Silver Peak

Symitar

IVR

Sym2
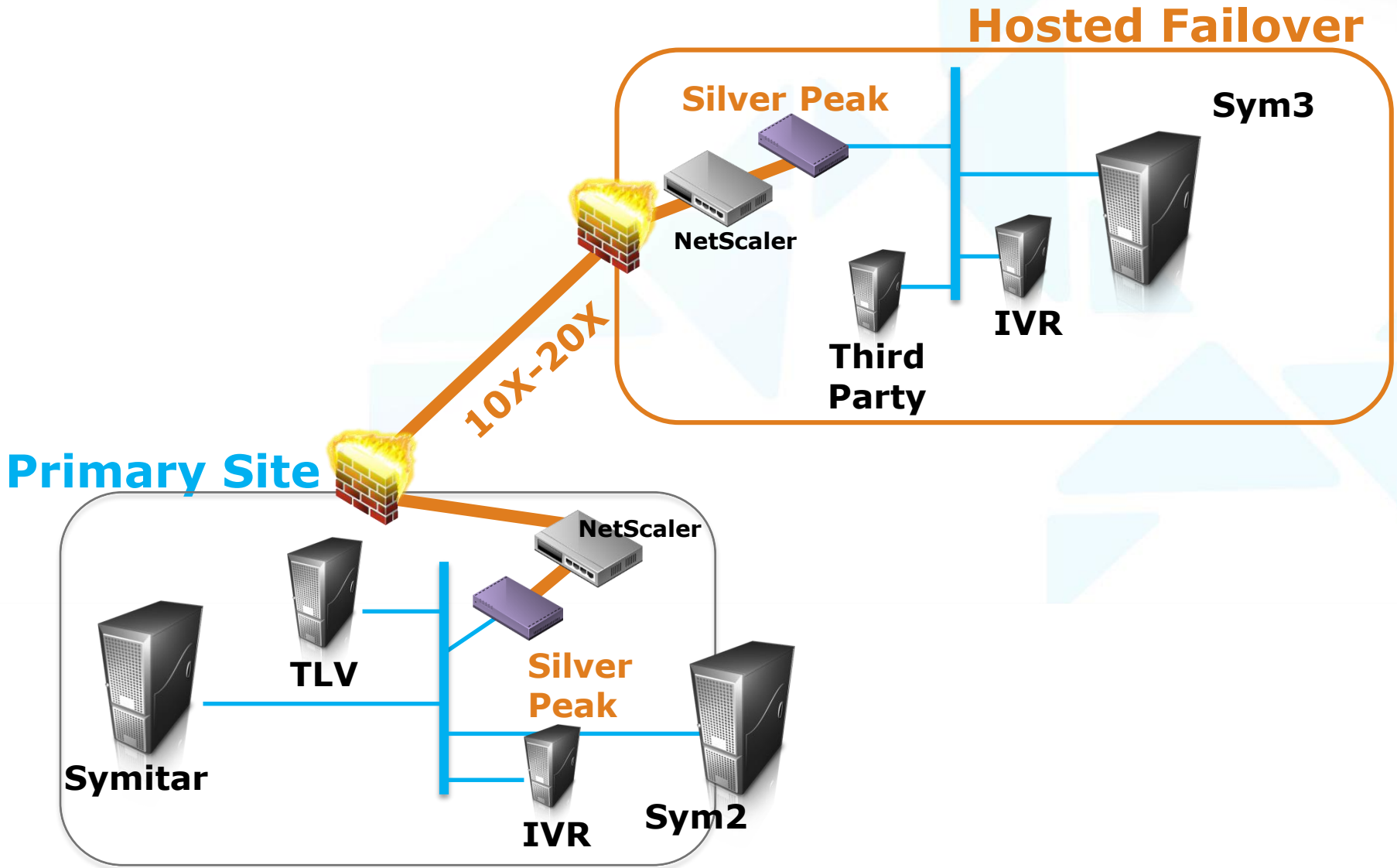
# Hosted Network Solutions™

## The Private Cloud Advantage: Raising the Bar on Risk Mitigation, Security, and Compliance

## Gladiator Technology

Presenter:    Bob Bredenberg, Senior Sales Executive
716.834.4301
**bbredenberg@profitstars.com**

Date: April 20, 2016

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# Agenda

- Current State of IT
- Strategic IT Decisions
- Journey to the Cloud
- Security & Risk Mitigation
- JHA and the Cloud
- HNS Disaster Avoidance
- The Gladiator® Advantage

# Current State

- Virtualization
- Storage Area Networks
- Unified communications
- Continuous data protection
- WAN optimization

Seldom are business decisions made that do not involve IT

Doing more with less

Big data

IT IS A KEY ENABLER OF BUSINESS SUCCESS

TECHNOLOGY REVOLUTION

RESOURCE CONSTRAINTS

DATA EXPLOSION

# Network Lifecycle

# HNS Overview

Offload server, storage, network, and other services to offsite provider

Offsite provider owns, manages, and maintains infrastructure

OFFSITE PROVIDER

INFRASTRUCTURE

CLOUD BASED SERVICE

IaaS

VARIOUS IMPLEMENTATIONS

- Private
- Public
- Hybrid
- Community

# IT Challenges for the Industry

- Business Continuity & Disaster Avoidance

- IT Regulatory Compliance

- Attracting & retaining qualified IT personnel

- Managing the technology lifecycle

  - *IT is changing faster than ever before*

- Cybersecurity & patch management

- Ability to quickly respond to changing market needs for new products & services

- Increasing Credit Union & Member demands

- 24/7/365 support

- Unbudgeted Capital Expense

# Strategic IT Decisions

> **CORPORATE RISK**
- **Security**
- **Business Continuity**

**REGULATORY COMPLIANCE**

**KEY PERSONNEL**

## Security
**Electronic and Physical System Security**

## Compliance
**Regulatory Compliance**

## BCP
**Business Continuity**

# Strategic IT Decisions

**CORPORATE RISK**
- **Security**
- **Business Continuity**

**REGULATORY COMPLIANCE**

**KEY PERSONNEL**

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# Strategic IT Decisions

**CORPORATE RISK**
- **Security**
- **Business Continuity**

**REGULATORY COMPLIANCE**

**KEY PERSONNEL**

| | |
|---|---|
| LENDING | 56% |
| REGULATORY COMPLIANCE | 50% |
| RISK | 39% |
| AUDIT COMPLIANCE | 31% |
| BUSINESS DEVELOPMENT | 22% |
| MERGERS AND… | 21% |
| GOVERNANCE | 21% |
| TECHNOLOGY | 12% |
| OTHER | 10% |
| COMPENSATION | 7% |

0%  10%  20%  30%  40%  50%  60%

© Bank Director 2015
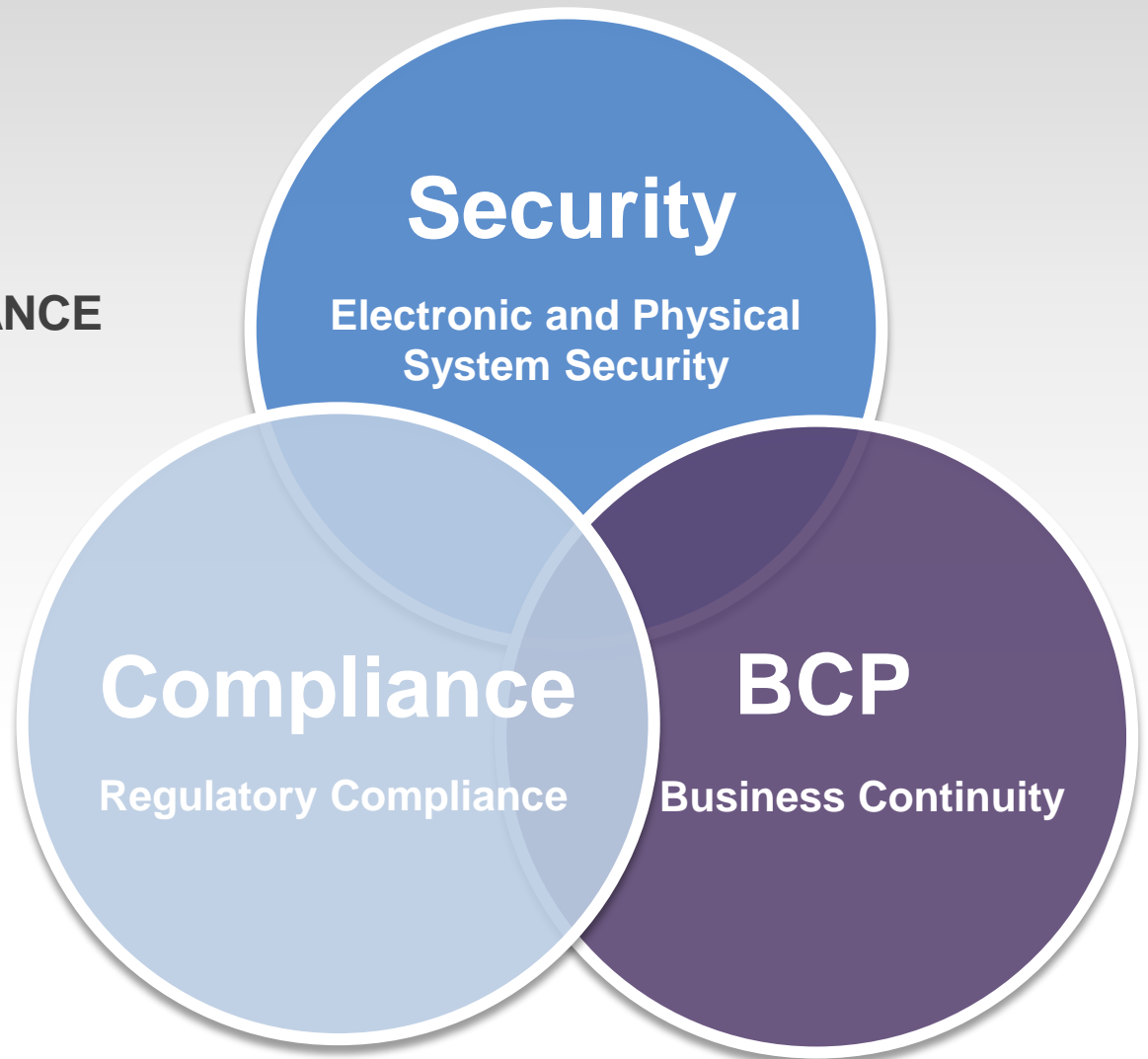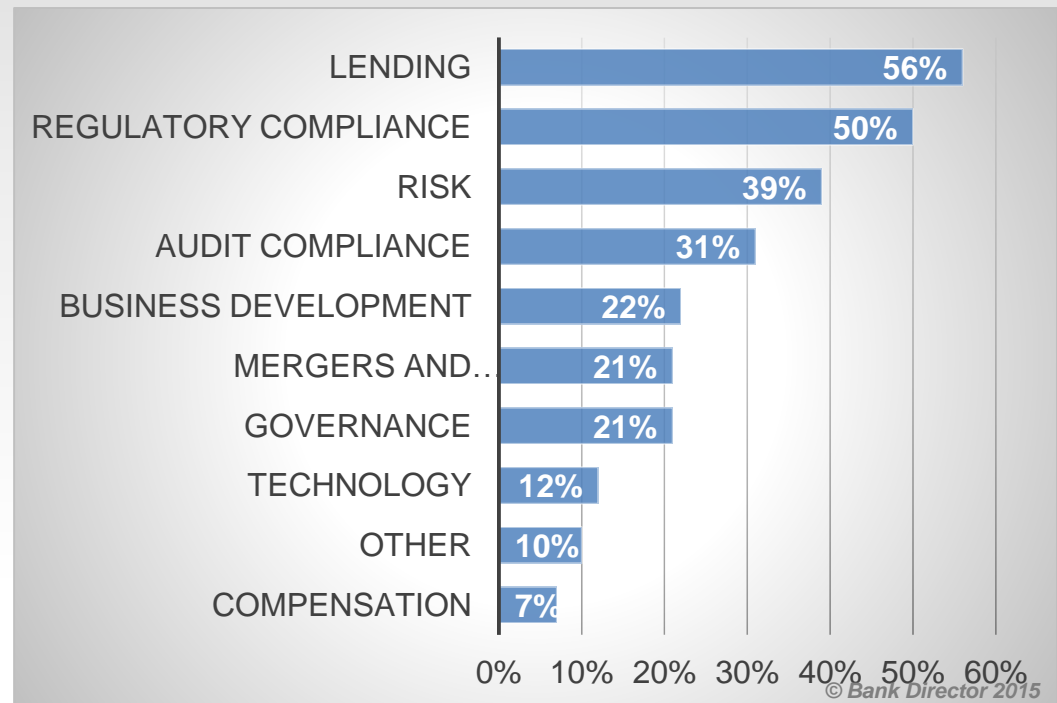
On what issues is your board spending the most time?
*Respondents were asked to select up to three.*

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# Strategic IT Decisions

**CORPORATE RISK**
- **Security**
- **Business Continuity**

**REGULATORY COMPLIANCE**

> **KEY PERSONNEL**



Chart: In which areas did the FI lose key executives in 2014?
- LENDING — 40%
- OTHER — 39%
- TECHNOLOGY AND/OR INFORMATION SECURITY — 18%
- RISK MANAGEMENT — 13%
- COMPLIANCE — 12%
- HUMAN RESOURCES — 9%
- MARKETING — 6%
- UNSURE

© Bank Director 2015
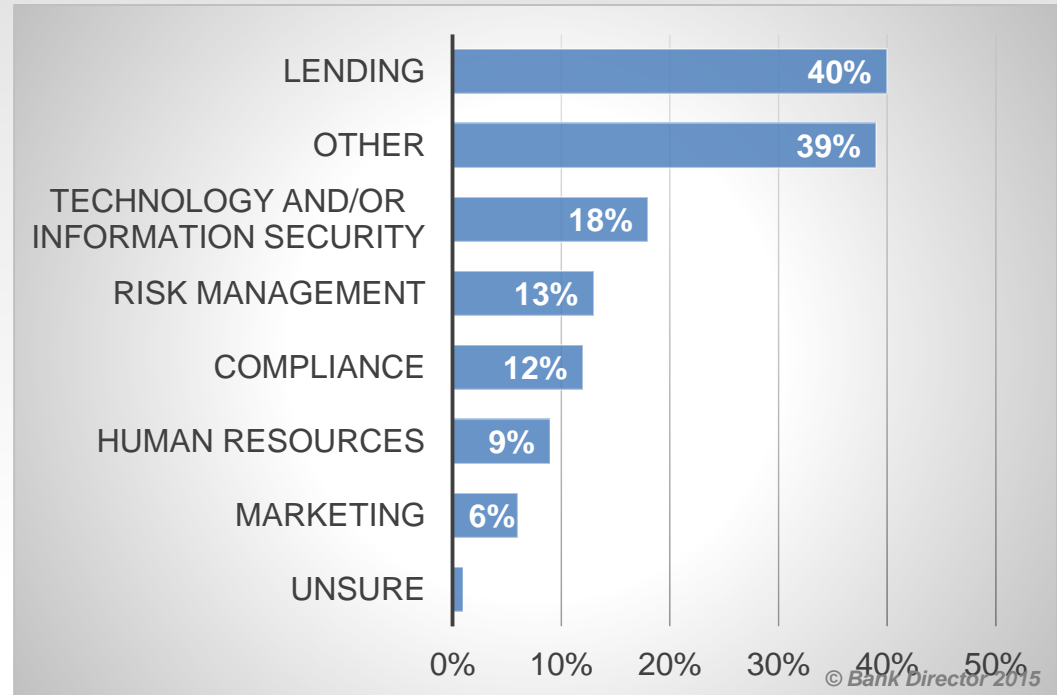
**In which areas did the FI lose key executives in 2014?**
*Respondents were asked to select all that apply. Only those who indicated their FI lost executive personnel in 2014 were asked to respond.*

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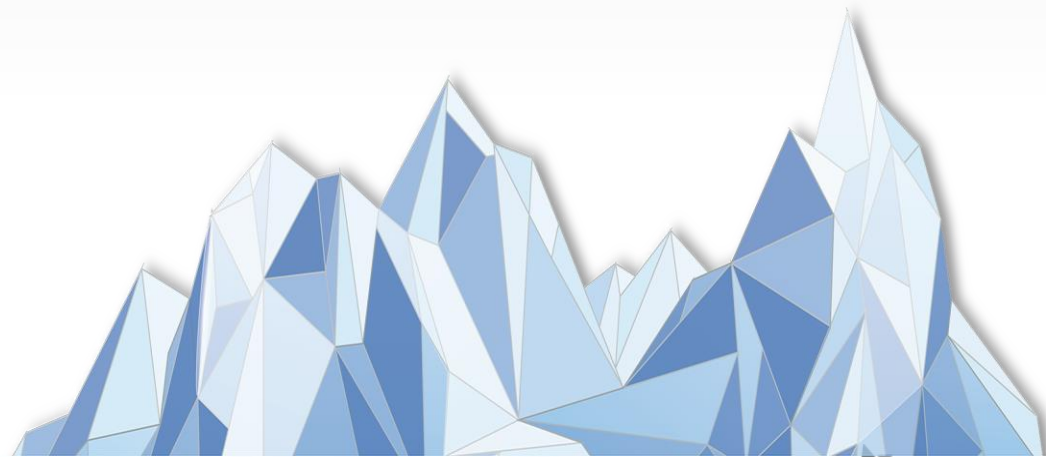A JACK HENRY COMPANY

# Cloud Computing and Compliance

- Compliance is often an afterthought

- Focusing on compliance and risk management ensures that new technologies and services will be implemented correctly and efficiently

- Senior management buy-in needed to keep focus on compliance and risk management efforts

- These efforts will help determine cybersecurity maturity levels & requirements

# Who are We?

**Gladiator® Network Services** is a division of ProfitStars, a Jack Henry & Associates Company

Gladiator® Network Services is specifically focused on providing:

- Secure, reliable *network services* to financial institution clients
- Server and desktop *virtualization solutions*
- The ability to *outsource* these IT and infrastructure resources to our **private cloud** environment – Hosted Network Services (HNS)

# Why is Gladiator® a Good Partner?
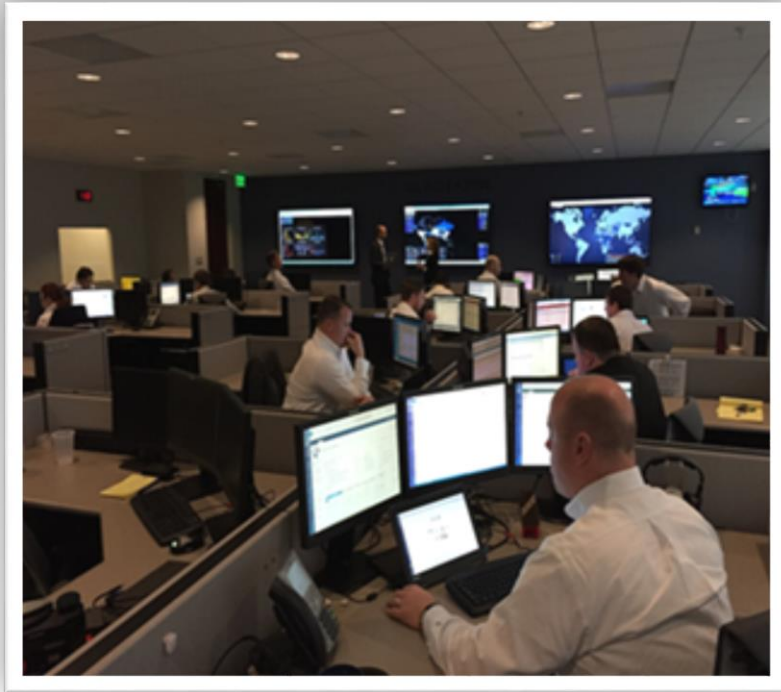


> Nationally recognized 24/7/365 Managed network security services provider (MSSP)

> Division of ProfitStars, a Jack Henry & Associates Company

> Experts in regulatory requirements for financial institutions

> Over 1,000 FI's customers monitored and growing

> 2 Redundant Security Operations Centers

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# HNS Benefits Overview

- Hosted Server infrastructure in JHA's Private Cloud

- Includes Server Hardware and MS SPLA licensing

- Virtual Desktop Client Delivery
  - › Can also do "thick" client

- Eliminates most hardware and software annual maintenance.

- Can include all JHA and 3rd party apps

# What is the Gladiator® HNS LANdscape?

HNS is a unique approach to outsourcing the IT LANdscape that focuses on your business needs as well as your technology needs.

**BUSINESS NEEDS**
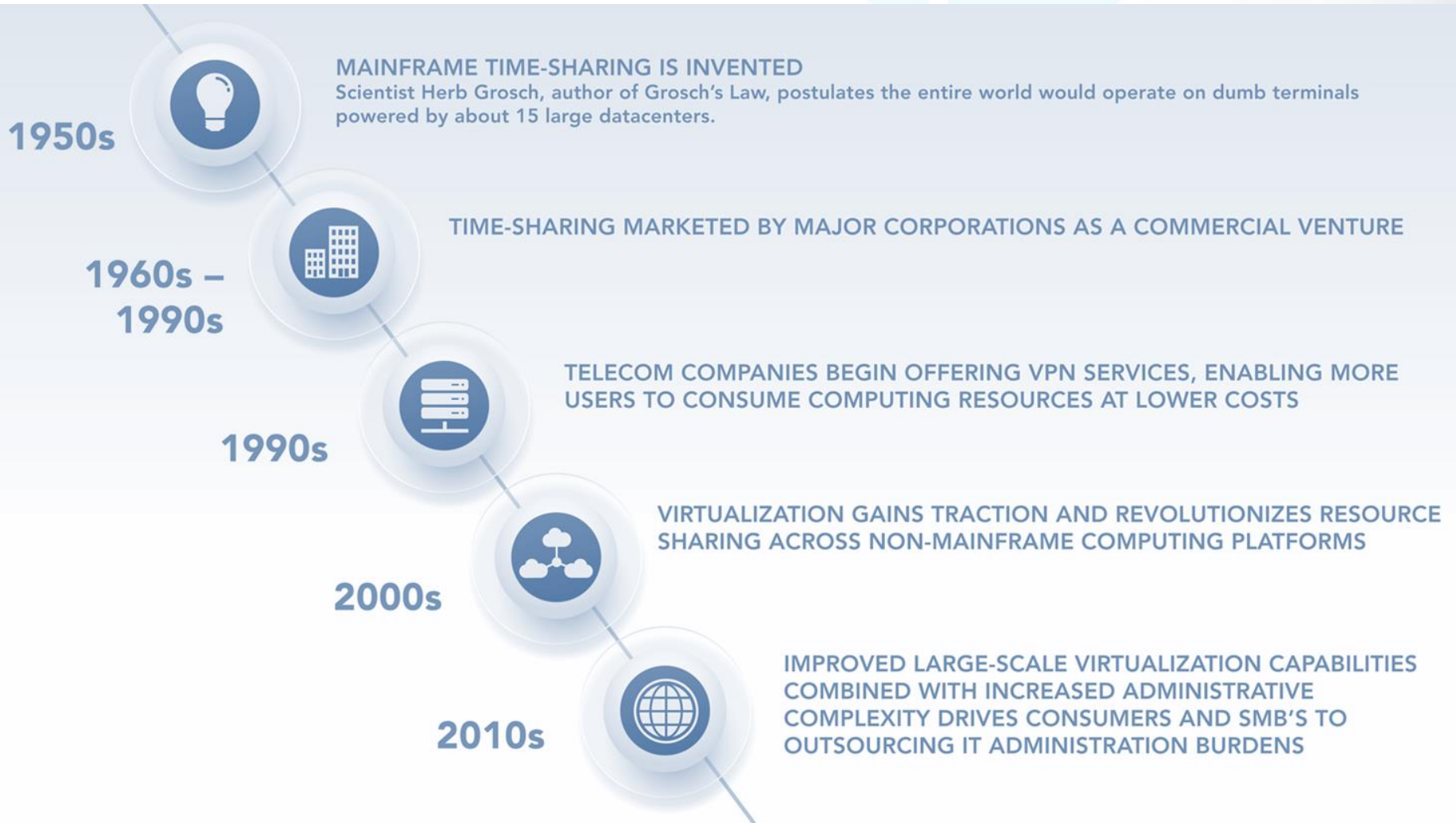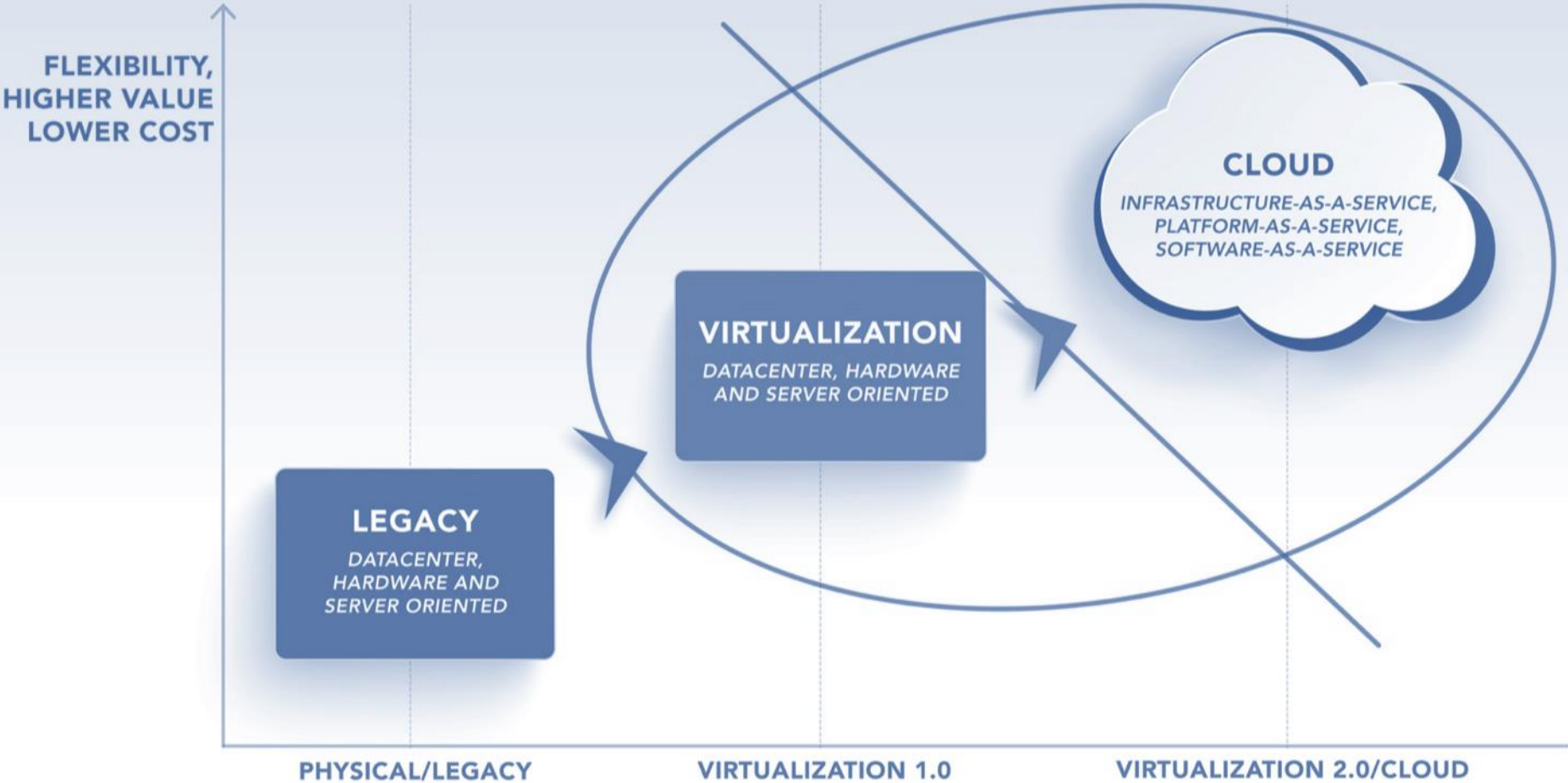
**L**egal & Regulatory
**A**udit & Reporting
**N**et Value

**TECNOLOGY NEEDS**

**D**isaster Avoidance
**S**calability
**C**ompliance
**A**vailability & Access
**P**hysical Security
**E**lectronic Security

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# What is Cloud

**1950s**

**MAINFRAME TIME-SHARING IS INVENTED**
Scientist Herb Grosch, author of Grosch's Law, postulates the entire world would operate on dumb terminals powered by about 15 large datacenters.

**1960s – 1990s**

TIME-SHARING MARKETED BY MAJOR CORPORATIONS AS A COMMERCIAL VENTURE

**1990s**

TELECOM COMPANIES BEGIN OFFERING VPN SERVICES, ENABLING MORE USERS TO CONSUME COMPUTING RESOURCES AT LOWER COSTS

**2000s**

VIRTUALIZATION GAINS TRACTION AND REVOLUTIONIZES RESOURCE SHARING ACROSS NON-MAINFRAME COMPUTING PLATFORMS

**2010s**

IMPROVED LARGE-SCALE VIRTUALIZATION CAPABILITIES COMBINED WITH INCREASED ADMINISTRATIVE COMPLEXITY DRIVES CONSUMERS AND SMB'S TO OUTSOURCING IT ADMINISTRATION BURDENS

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# Journey to the Cloud

# What is a Cloud?

Big Idea: **RISK AVOIDANCE** – Lower your risk profile with HNS

JHA's Hosted Network Solutions (HNS) is a hosted computing service model that enables FI's to seamlessly move IT infrastructures to the JHA "cloud" to leverage its many benefits and *reduce the associated risks of on-premise hardware*.

By moving your infrastructure to JHA's private cloud, you can transfer management responsibilities to the trusted advisers and engineers at JHA. This allows you to free internal IT resources to focus on more strategic initiatives and at the same time lower your FI's Risk profile.

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# What is a Cloud?

"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."

Simplification: A pool of resources that provides what you need, where you need it, when you need it with a reduced management burden.

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# What is a Cloud?

## 5 ESSENTIAL CHARACTERISTICS
- On-demand provisioning
- Broad access
- Pooled resources
- Rapid elasticity
- Measured service

## 3 SERVICE MODELS
- Software-as-a-Service (SaaS)
- Platform-as-a-Service (PaaS)
- Infrastructure-as-a-Service (IaaS)

## 4 DEPLOYMENT MODELS
- Private cloud
- Public cloud
- Community cloud
- Hybrid cloud

(Source: NIST SP 800-145, Sept 2011)

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# FIs and the Cloud

## DUE DILIGENCE

A financial institution's use of third parties to achieve its strategic plan does not diminish the responsibility of the board of directors and management **to** ensure that the **third-party activity** is conducted in a **safe** and sound manner and **in compliance** with applicable laws and regulations.

Outsourcing to a cloud service provider can be advantageous to financial institutions because of potential benefits such as **cost reduction, flexibility, scalability, improved load balancing, and speed**. Before approving any outsourcing of significant functions, it is important to ensure such actions are consistent with the institution's strategic plans and corporate objectives approved by the board of directors and senior management.

(Source: http://ithandbook.ffiec.gov/media/153119/06-28-12_-_external_cloud_computing_-_public_statement.pdf )

# Cloud Compliance-Vendor Management

http://www.ffiec.gov/press/PDF/FFIEC_Appendix_J.pdf

Standard due diligence requirements apply, but additional factors have to be considered:

Data Classification

- How sensitive is the information being stored?

- Vendor has to protect data to the same standards an FI has internally.

- Third party reports demonstrate adherence to data protection.

# Cloud Compliance-Vendor Management

- ## Data Segregation

  - Will resources be shared with other clients?

  - Vendor has to ensure integrity and confidentiality.

- ## Recoverability

  - Understand how the vendor plans to respond to disasters and provide continued service.

# Cloud Compliance and BCP

- Sufficient plans and resources to keep services operating

- BCP and Incident Response Plans are integrated and practiced

- Understand the role played by a cloud service provider during an incident and ensure these responsibilities are documented within Incident Response Plans

# Cloud Compliance and Vendor Management

- Additional controls may be necessary for cloud service providers who are not familiar with the banking industry and regulatory requirements

- FFIEC has advised that it may not be prudent to work with a vendor who is not able or unwilling to meet regulatory requirements

- SLAs need to clearly indicate ownership of data

- In the event of disengagement, a vendor should be able to demonstrate FI data has been permanently removed

- Vendor Risk Assessment

# Cloud Compliance and Information Security

- Revision of policies, standards, and procedures may be necessary.


  - *Cloud Computing and Storage Policy*
  - Structure of Accountability
  - Cybersecurity

# Making Security a Priority

## Defense in Depth

- Physical
- Cyber

## Environmental

- Data Center in a mountain 168 feet below ground
- Naturally fortified
- Impervious to natural or man-made disasters

## HNS Physical Security

- Entrance Controls
    - Scheduled Visitation
    - On Premise Security Team
    - Positive Confirmation
        - Surrender Government ID
- Access Controls
    - Time of Day Restrictions
    - Swipe Entry
    - Authorized Locations Only
- Remote Video Monitoring
    - All Access Points
    - Video Recording

# Making Security a Priority

**Wanted at Banks: Young Tech Pros with Old-Tech Smarts**
by PENNY CROSMAN
JUL 15, 2014 2:32pm ET
One item is rising to the top of many bank chief information officers' list of worries: the concern that one or a few key people

**Cyber Threats Pose Systemic Concerns, OCC's Curry Says**
by IAN MCKENDRY
JUN 3, 2015 5:23pm ET
WASHINGTON — Comptroller of the Currency Thomas Curry on Wednesday highlighted steps regulators are taking
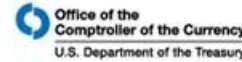
**Small Banks Should Team Up to Fight Cyberattacks**
DARREN R. HAYES
JUL 7, 2014 12:00pm ET
While major cybersecurity breaches like the recent attack on Target tend to grab headlines, smaller banks

Federal Financial Institutions Examination Council

**GAO: Commerce Department easily hacked**
By Patrick Thibodeau
Computerworld | Aug 3, 2001 1:00 AM PT

Office of the Comptroller of the Currency
U.S. Department of the Treasury

*Office of the Comptroller of the Currency*
*Ensuring a safe and sound Federal Banking System for All Americans*

OCC BULLETIN 2015-31

Subject: Cybersecurity
Date: June 30, 2015

To: Chief Executive Officers of All National Banks, Federal Branches and Agencies, and Federal Savings Associations; Technology Service Providers; Department and Division Heads; All Examining Personnel; and Other Interested Parties

**Description: FFIEC Cybersecurity Assessment Tool**

3501 Fairfax Drive • Room B7081a • Arlington, VA 22226-3550 • (703) 516-5588 • FAX (703) 562-6446 • http://www.ffiec.gov

*NOTE: This document, issued by the FFIEC Information Technology Subcommittee, is for information purposes only. July 10, 2012*

**Outsourced Cloud Computing**

**Summary**

**10 Realms of Cloud Security Services**
by ERIC CHABROW
SEP 26, 2011
Security poses a major challenge to the widespread adoption of cloud computing, yet and association of cloud users and vendors

**FFIEC Statement on Outsourced Cloud Computing**
by ADAM CHERNICHAW | ADAM ORZECHOWSKI
JUL 26, 2012
On July 10, 2012, the Federal Financial Institutions Examination Council (FFIEC)[1] issued a statement (the

**The Interview: A guide to the cyber attack on Hollywood**
🕐 29 December 2014 | Entertainment & Arts

**Hacking Grounds Flights of Poland's National Airline**
By JAD MOUAWAD
If confirmed, the attack would be one of the first instances in

From: Network World Security Alert
Sent: Friday, October 2, 2015 9:49 AM

**Network World Security**

**Report: Target failed to execute security basics**
Verizon consultants probed Target's network for weaknesses in the

**Cyber Security Concerns**

**Compliance Concerns**          **Executive Level Concerns**          **Member Concerns**

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# Regulation Vs. Risk

# Making Security a Priority

St. Peter's Square during the conclave of Pope Benedict the 16th

# Making Security a Priority

St. Peter's Square during the conclave of Pope Francis

# Making Security a Priority

# Making Security a Priority

**CyberSecurity** requires a multi-layered defense involving perimeter protection as well as effective internal protection against malware and data exfiltration, plus user education.

**Firewall Monitoring & Management**
- ✓ *First layer of defense*
- ✓ *Protect ports of entry to the financial institution*
- ✓ *Raw traffic analysis*
- ✓ *Cloud Services DDOS Mitigation*

**Intrusion Prevention**
- ✓ *Monitor all incoming and outgoing traffic*
- ✓ *Looking for virus and hacker signatures*
- ✓ *Provided by Cisco IDS, Fortinet, SonicWall, SourceFire*

**Server Management- Host Intrusion Monitoring**
- ✓ *Event log monitoring*
- ✓ *Vulnerability security scanning*

**Advanced Malware Protection**
- ✓ *Hosted DNS Anomaly Detection Service*
- ✓ *Effectively blocks malware downloads, unsafe web redirects, data exfiltration, command & control activity and malicious phishing links*
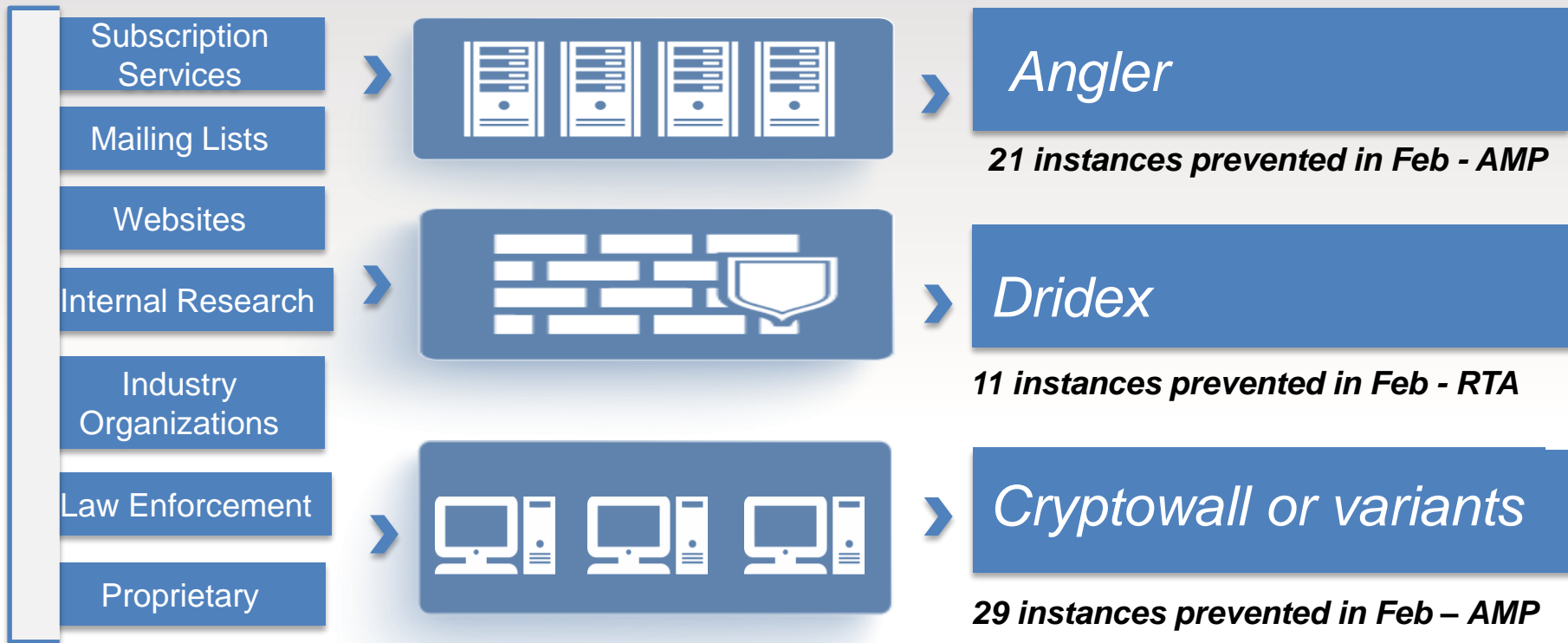
**eSAT – Employee Security Awareness Training**
- ✓ *Web based training w/ quiz & reporting*
- ✓ *Content updated regularly*
- ✓ *Separate module for Board members*
- ✓ *Monthly Security Timely Tips email newsletter*

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# Threat Intelligence– The Challenge

**Threat Intelligence**

- Subscription Services
- Mailing Lists
- Websites
- Internal Research
- Industry Organizations
- Law Enforcement
- Proprietary

*Angler*

*21 instances prevented in Feb - AMP*

*Dridex*

*11 instances prevented in Feb - RTA*

*Cryptowall or variants*

*29 instances prevented in Feb – AMP*

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# Making Security a Priority

**Raw Traffic Analysis**

**Adaptive Threat Management**

**Advanced Malware Protection**

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# JHA and the Cloud

**THE "CLOUD" IS NOT NEW AT JHA.**

- OutLink Processing Services began in 1995 and provides core processing and item processing services.

- Payment Processing Solutions (PPS) began in 1992 and provides ATM switch and transaction processing services.

- Internet Solutions (NetTeller®) began in 1997 and provides an extensive catalog of internet and mobile banking solutions.

- JHA Cloud Services began in 2009 as JHA Hosting Operations and currently manages over 60 Jack Henry products and services.
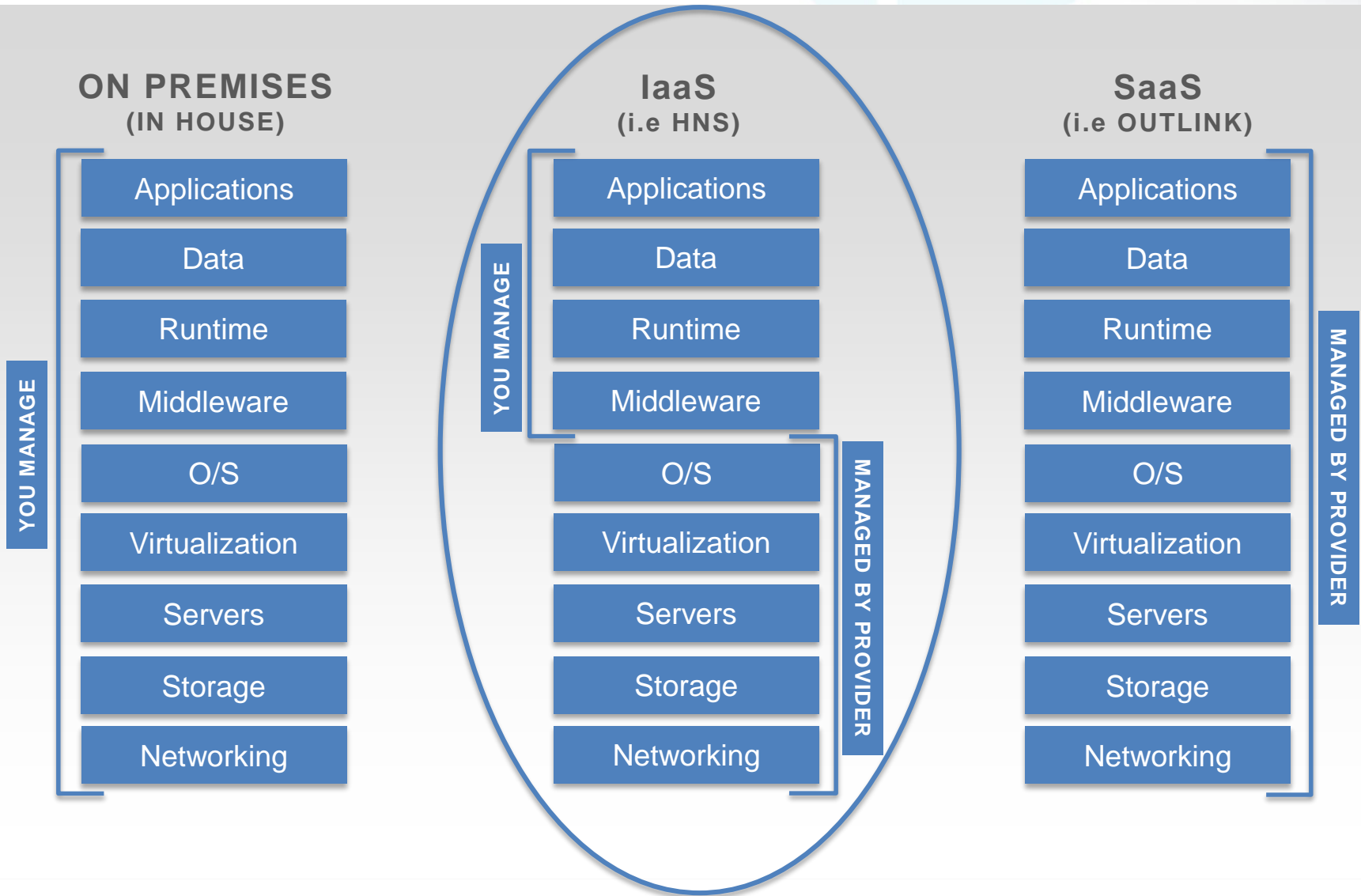
**WHY NOW FOR HOSTED NETWORK SERVICES?**

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# JHA and the Cloud

# Cloud Overview

**ON PREMISES**
(IN HOUSE)

**IaaS**
(i.e HNS)

**SaaS**
(i.e OUTLINK)

**YOU MANAGE**

| ON PREMISES | IaaS | SaaS |
|---|---|---|
| Applications | Applications | Applications |
| Data | Data | Data |
| Runtime | Runtime | Runtime |
| Middleware | Middleware | Middleware |
| O/S | O/S | O/S |
| Virtualization | Virtualization | Virtualization |
| Servers | Servers | Servers |
| Storage | Storage | Storage |
| Networking | Networking | Networking |

**YOU MANAGE**

**MANAGED BY PROVIDER**

**MANAGED BY PROVIDER**

# Benefits of HNS

**BUSINESS AGILITY**
 » Competitive advantage
 » Ensure the needs of the organization are met

**GUARANTEED UPTIME**

**ACCESS TO THE NEWEST TECHNOLOGY**

**ENHANCED SECURITY**

**IT CAN FOCUS ON THE STRATEGIC INITIATIVES**
 » Reduce pressures on IT staff

# Benefits of HNS

**PAY FOR WHAT YOU CONSUME**

» Eliminate wasted compute resources

**ENHANCED BUSINESS RESILIENCY**

» Disaster avoidance

**ELIMINATE LARGE CAPITAL OUTLAY'S FOR INFRASTRUCTURE**
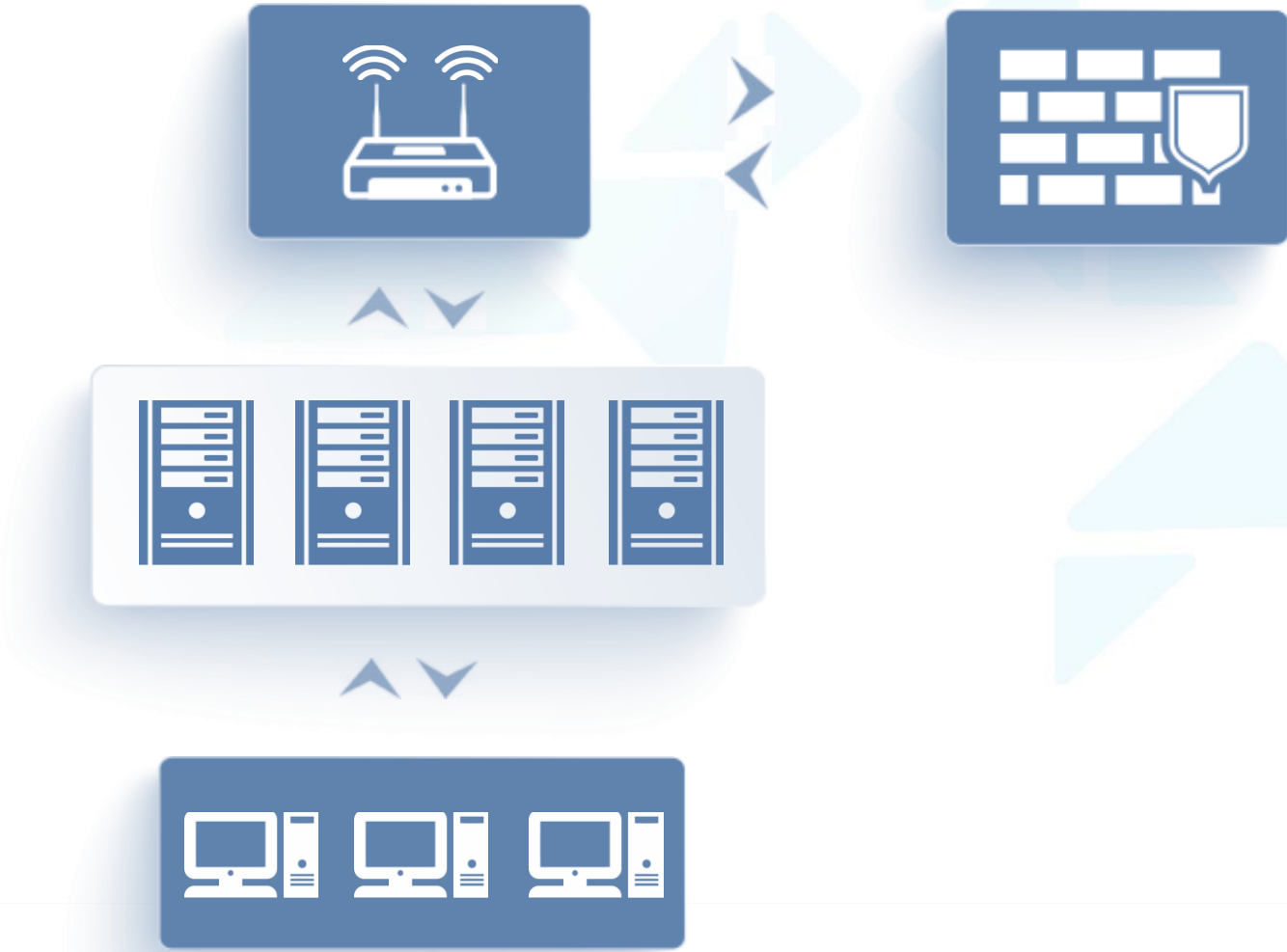
**SOLVES THE ISSUE OF THE INEVITABLE SYSTEM UPGRADES**

**ELIMINATE SOFTWARE & HARDWARE MAINTENANCE EXPENSE**

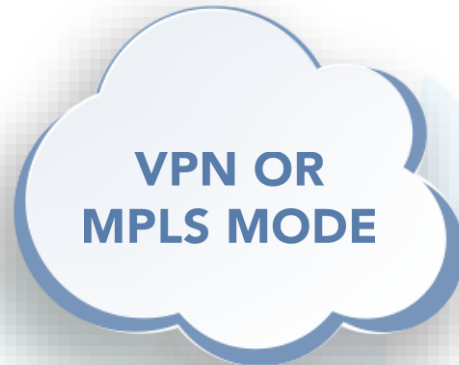# Select Only the Services You Need



**SELECT ONLY THE SERVICES YOU NEED**

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# ABC Financial Institution: On-Premises Network

# ABC Financial Institution: Migration to HNS
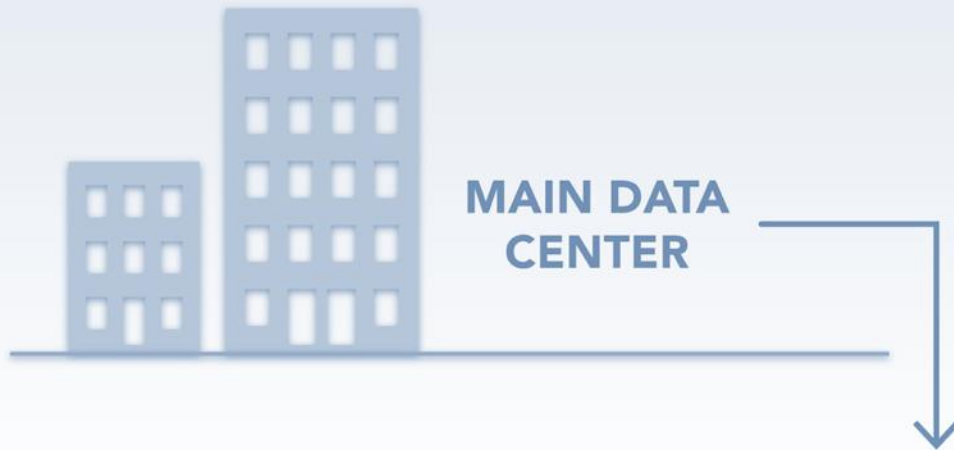


**VPN OR MPLS MODE**

ABC FINANCIAL INSTITUTION

PROFITSTARS

» ANALYZE

» REGULATORY BURDEN

» PURCHASE

» MANAGE & MAINTAIN

» SECURITY

» HARDWARE REFRESH

# Disaster Avoidance



MAIN DATA CENTER

» CLIMATE CONTROLLED

» 168 FT UNDERGROUND

# Branson, MO – Mountain Host Site

**REDUNDANT POWER**
Two separate electrical transmission feeds from different states

**REDUNDANT COMMUNICATIONS**
Multiple levels of telecommunications and ISP resiliency

**ROBUST HARDWARE**
Configurations to support all OutLink sites in business interruption or disaster avoidance scenarios
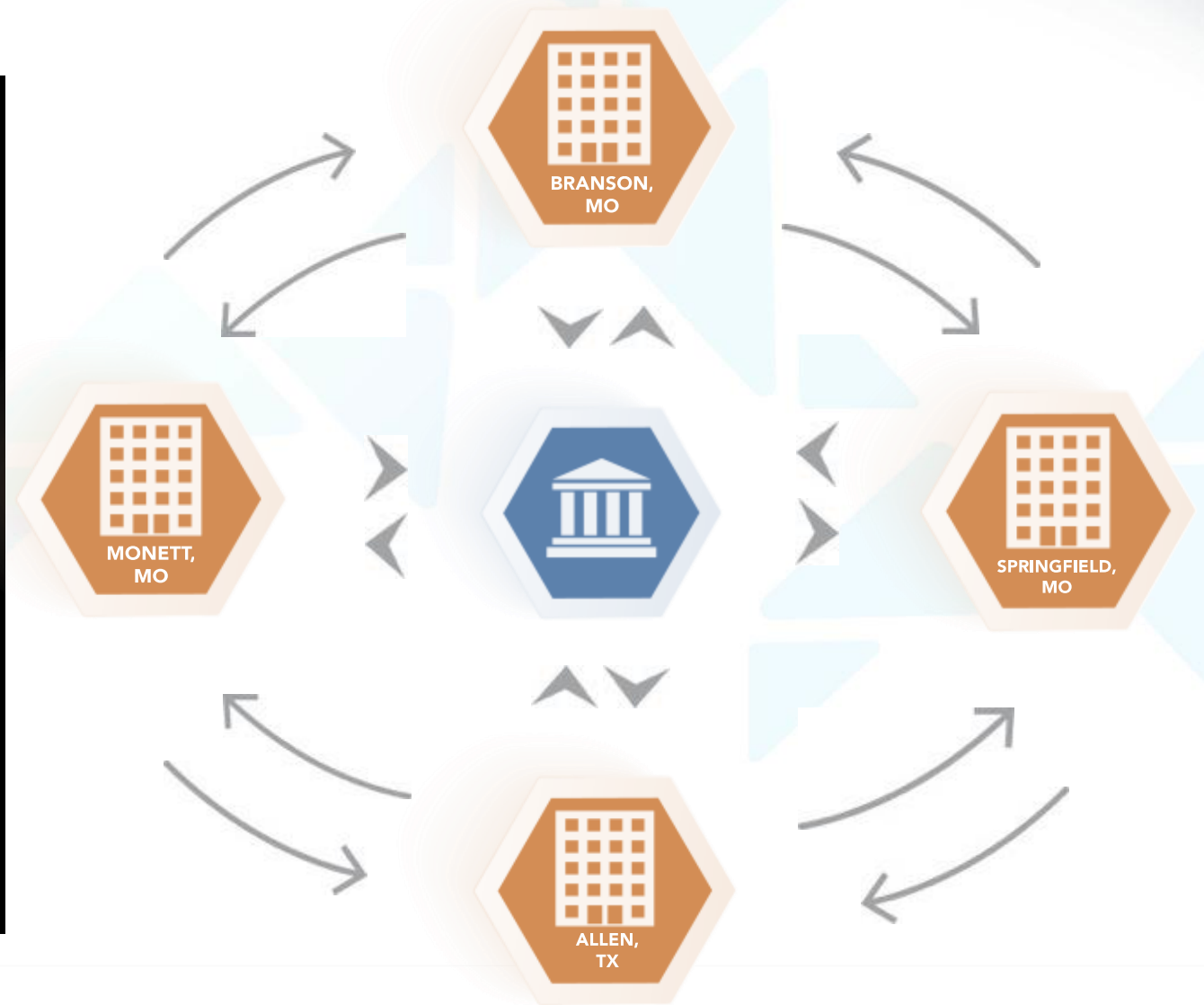
**REPLICATION**
Full data replication technology ensures complete recovery of services

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# Disaster Avoidance

**BUT WHAT IF DISASTER STRIKES THIS SITE?**

BRANSON, MO

MONETT, MO

SPRINGFIELD, MO

ALLEN, TX

# Gladiator®

# Data Flow

» **ANALYZE**

» **REGULATORY BURDEN**

» **PURCHASE**

» **MANAGE & MAINTAIN**

» **SECURITY**

» **HARDWARE REFRESH**

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# Summary

## Why Gladiator®?

- ➤ Focused solely on the financial industry and regulated by the FFIEC
- ➤ Providing hosting services for 25 years
- ➤ Publicly traded, financially sound corporation with the capital and commitment to continually invest in infrastructure
- ➤ State of the art data center with experts in security, technology, compliance and banking
- ➤ Seamless integration with JHA products
- ➤ One single point of contact – **we do it all**
- ➤ Significantly reduce your risk of outages

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# Where to Start?



[http://discover.profitstars.com/gladiatorcybersecurityawarenessknowledgecenterhome](http://discover.profitstars.com/gladiatorcybersecurityawarenessknowledgecenterhome)

**ProfitStars®/Gladiator® Cybersecurity Awareness Knowledge Center**

**Helping Financial Institutions Understand and Adhere to FFIEC Cybersecurity Directives**

# Questions and Comments?

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***Gladiator Technology***
***716.834.4301***
***bbredenberg@profitstars.com***