Gladiator Hosted Network Solutions
Raising the Bar on Risk and Compliance: Hosted Network Services and your Cloud Service Provider.

Presenter(s):
Ray Kline - Gladiator® Sales Engineering
Jenny Roland-Vlach - Gladiator® Compliance Analyst, Advanced

Date: Tuesday December 15th – 1:00PM CT
Agenda

- Current State of IT
- Strategic IT Decisions
- Cloud Compliance
- Risk Mitigation
- What is a Cloud?
- JHA and the Cloud
- HNS Security Review
- HNS Services Overview
- HNS Disaster Avoidance
Current State of IT

Seldom are business decisions made that do not involve IT.

IT is a key enabler of business success.

Virtualization, Storage Area Networks, Unified Communications, Continuous Data Protection, WAN Optimization.

Doing more with less.

Resource constraints, Data explosion, Technology revolution, Big data.
Network Lifecycle

ANALYZE

REGULATORY BURDEN

PURCHASE

HARDWARE REFRESH

SECURITY

MANAGE & MAINTAIN
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 bank user & customer 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
On what issues is your board spending the most time?

Respondents were asked to select up to three.
Cloud Computing and Compliance

• Compliance is often unintentionally deferred
• Remaining focused on compliance and risk management ensures that new technologies and services will be implemented correctly and efficiently
• Senior Management personnel must help to keep the focus on compliance and risk management efforts
• These efforts will factor into determining cybersecurity maturity levels
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.
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) LANdscape
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
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**
- Legal & Regulatory
- Audit & Reporting
- Net Value

**TECHNOLOGY NEEDS**
- Disaster Avoidance
- Scalability
- Compliance
- Availability & Access
- Physical Security
- Electronic Security
What is a 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
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.
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.
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)
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.

Cloud Compliance-Vendor Management

• **Standard due diligence requirements apply, but additional factors have to be considered:**
  – Data classification;
  – Data segregation;
  – Recoverability.

• **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 linked together.

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

- Data Classification
  - Without data classification system, FIs cannot ensure that data is being protected properly.

- Risk Assessments

- 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

Naturally fortified
Impervious to natural or man-made disasters
Making Security a Priority

Small Banks Should Team Up to Fight Cyberattacks

Wanted at Banks: Young Tech Pros with Old-Tech Smarts

Cyber Threats Pose Systemic Concerns, OCC's Curry Says

Compliance Concerns

Executive Level Concerns

Customer Concerns
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** |
Threat Intelligence – The Challenge

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

Angler
Dridex
Cryptowall
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 1997 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?
Jack Henry and Cloud

FOCUSED ON YOUR INDUSTRY

YOUR REGULATORY AND COMPLIANCE REQUIREMENTS

YOUR TRUSTED PARTNER

SUPPORT FOR TAKING YOUR BUSINESS TO THE CLOUD

UNIQUELY SUITED TO PROVIDE THESE SERVICES

JACK HENRY & GLADIATOR
Cloud Delivery

IaaS
Infrastructure-as-a-Service
HOST

PaaS
Platform-as-a-Service
BUILD

SaaS
Software-as-a-Service
CONSUME
IaaS Overview

- Offload server, storage, network and other services to offsite provider
- Offsite provider owns, manages and maintains infrastructure
- Cloud based service
- IaaS
- Various implementations:
  - Private
  - Public
  - Hybrid
  - Community
Benefits of IaaS

**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 IaaS

**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**
ABC Financial Institution
ABC Financial Institution – On-Premise Network
Select Only The Services You Need
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
Disaster Avoidance

BUT WHAT IF DISASTER STRIKES THIS SITE?
Data Flow

- Analyze
- Regulatory Burden
- Purchase
- Manage & Maintain
- Security
- Hardware Refresh
Why Gladiator®?

- Focused solely on the financial industry and regulated by the FFIEC
- Providing hosting services for over 15 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
Where to Start?

http://discover.profitstars.com/gladiatorcybersecurityawarenessknowledgecenterhome

ProfitStars®/Gladiator® Cybersecurity Awareness Knowledge Center

Helping Financial Institutions Understand and Adhere to FFIEC Cybersecurity Directives
Questions and Comments?

Thank You for your Time!