**BusinessConnect and SolutionsConnect**
It's time to make bold moves.

# Next generation security analytics

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# We are in an era of continuous breaches

## Operational Sophistication

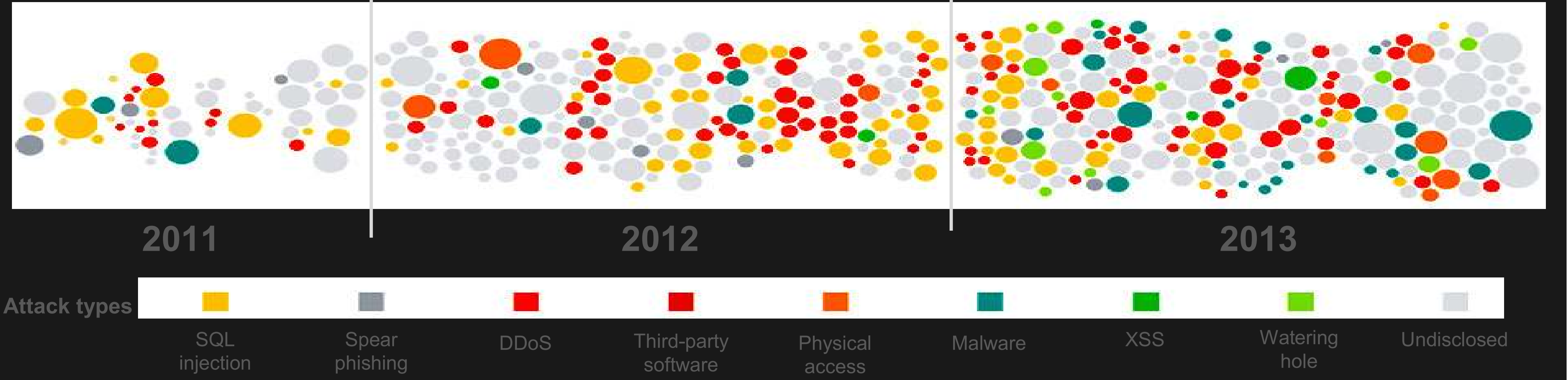
IBM X-Force® declared
**Year of the Security Breach**

## Near Daily Leaks of Sensitive Data

**40% increase**
in reported data breaches and incidents

## Relentless Use of Multiple Methods

**500,000,000+ records**
were leaked, while the future shows no sign of change

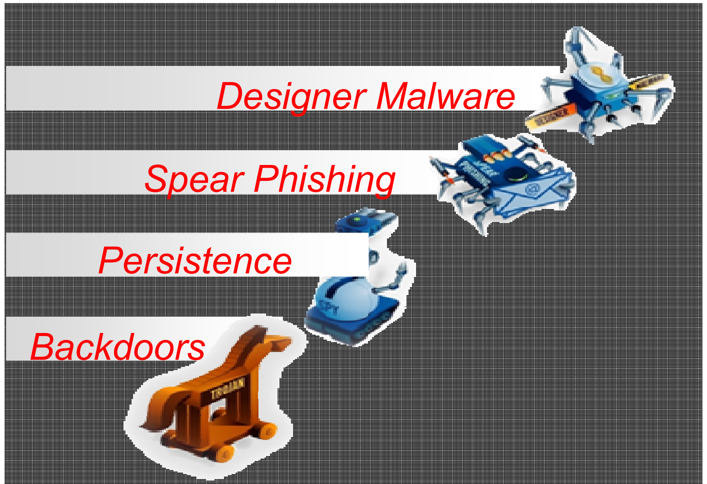


*Source: IBM X-Force® Research 2013 Trend and Risk Report*

*Note: Size of circle estimates relative impact of incident in terms of cost to business.*

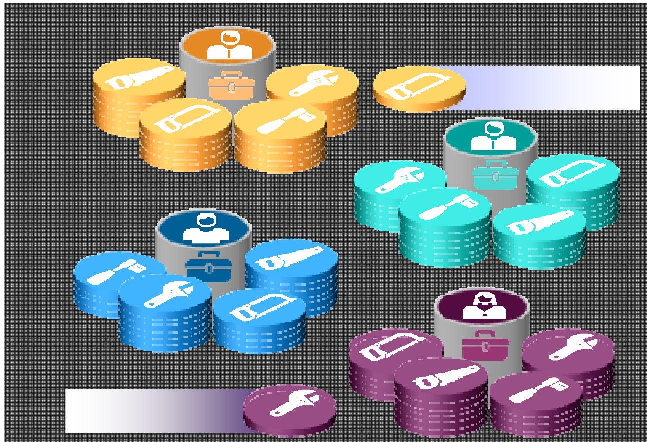
# Today’s challenges

## Escalating Attacks



- Increasingly sophisticated attack methods
- Disappearing perimeters
- Accelerating security breaches

## Increasing Complexity



- Constantly changing infrastructure
- Too many products from multiple vendors; costly to configure and manage
- Inadequate and ineffective tools

## Resource Constraints

- Struggling security teams
- Too much data with limited manpower and skills to manage it all
- Managing and monitoring increasing compliance demands

# Challenges compounded by volume of data/transactions/issues

200,000+ face book, twitter, linked-in etc accesses a day

500+ files uploaded to internet sites a day

2,000+ files a day downloaded from the internet

30% of network use is remote

2 laptops a week go AWOL

20 new IT assets a week

3000+ SPAM/Fishing emails a week

External network scanned 10 times a day

100,000+ vulnerabilities in the network

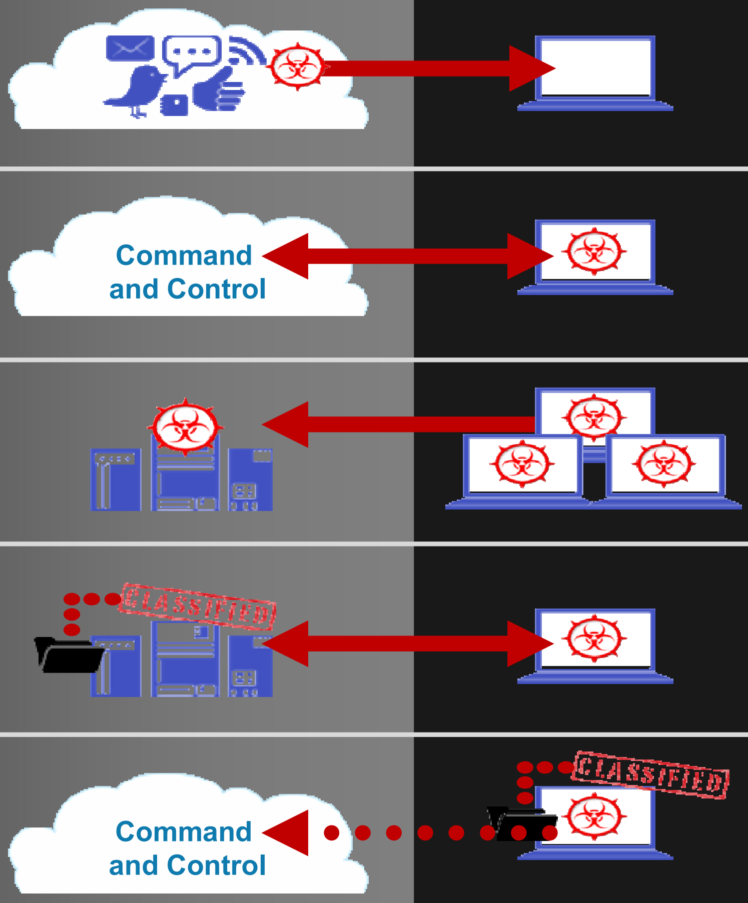
5 network alerts per minute

100+ potentially malicious web site visits per day

20 Network configuration changes a week

# Advanced attackers follow a five-stage attack chain

ATTACK CHAIN



| | | |
|---|---|---|
| 1 | Break-in | Reconnaissance, spear phishing, and remote exploits to gain access |
| 2 | Latch-on | Malware and backdoors installed to establish a foothold |
| 3 | Expand | Lateral movement to increase access and maintain a presence |
| 4 | Gather | Acquisition and aggregation of confidential data |
| 5 | Exfiltrate | Data exfiltration to external networks |

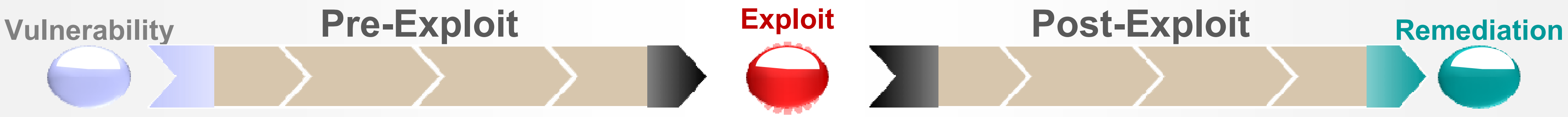
# Ask the right questions

What are the major risks and vulnerabilities?

Are we configured to protect against advanced threats?

What security incidents are happening right now?

What was the impact to the organization?



Vulnerability

Pre-Exploit

Exploit

Post-Exploit

Remediation

**PREDICTION / PREVENTION PHASE**

- Gain visibility over the organization's security posture and identity security gaps
- Detect deviations from the norm that indicate early warnings of APTs
- Prioritize vulnerabilities to optimize remediation processes and close critical exposures before exploit

**REACTION / REMEDIATION PHASE**

- Automatically detect threats with prioritized workflow to quickly analyze impact
- Gather full situational awareness through advanced security analytics
- Perform forensic investigation reducing time to find root-cause; use results to drive faster remediation

**Security Intelligence**

The actionable information derived from the analysis of security-relevant data available to an organization

# Embedded intelligence offers automated offense identification

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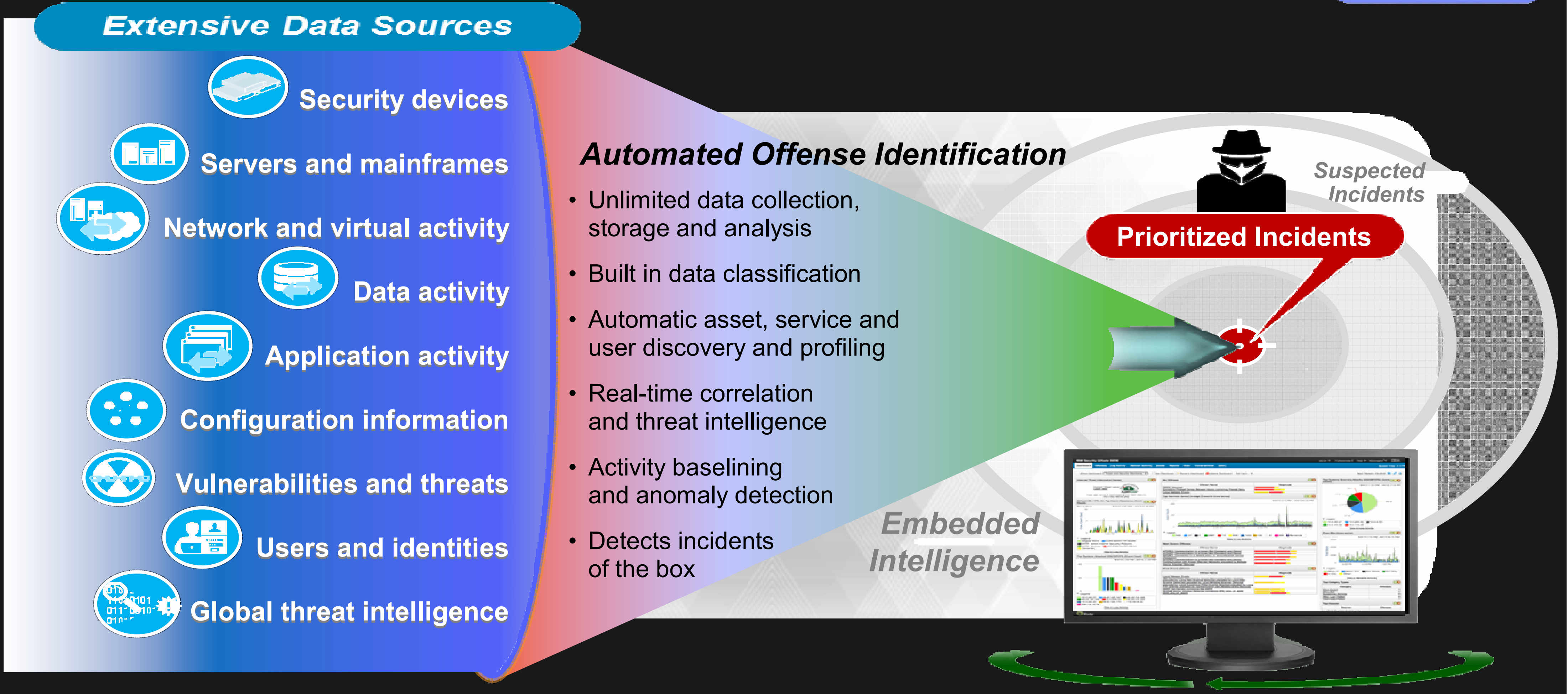

**Extensive Data Sources**

- Security devices
- Servers and mainframes
- Network and virtual activity
- Data activity
- Application activity
- Configuration information
- Vulnerabilities and threats
- Users and identities
- Global threat intelligence

***Automated Offense Identification***

- Unlimited data collection, storage and analysis
- Built in data classification
- Automatic asset, service and user discovery and profiling
- Real-time correlation and threat intelligence
- Activity baselining and anomaly detection
- Detects incidents of the box

# Security Intelligence goes beyond detecting an incident: Extend clarity around incidents with in-depth forensics data

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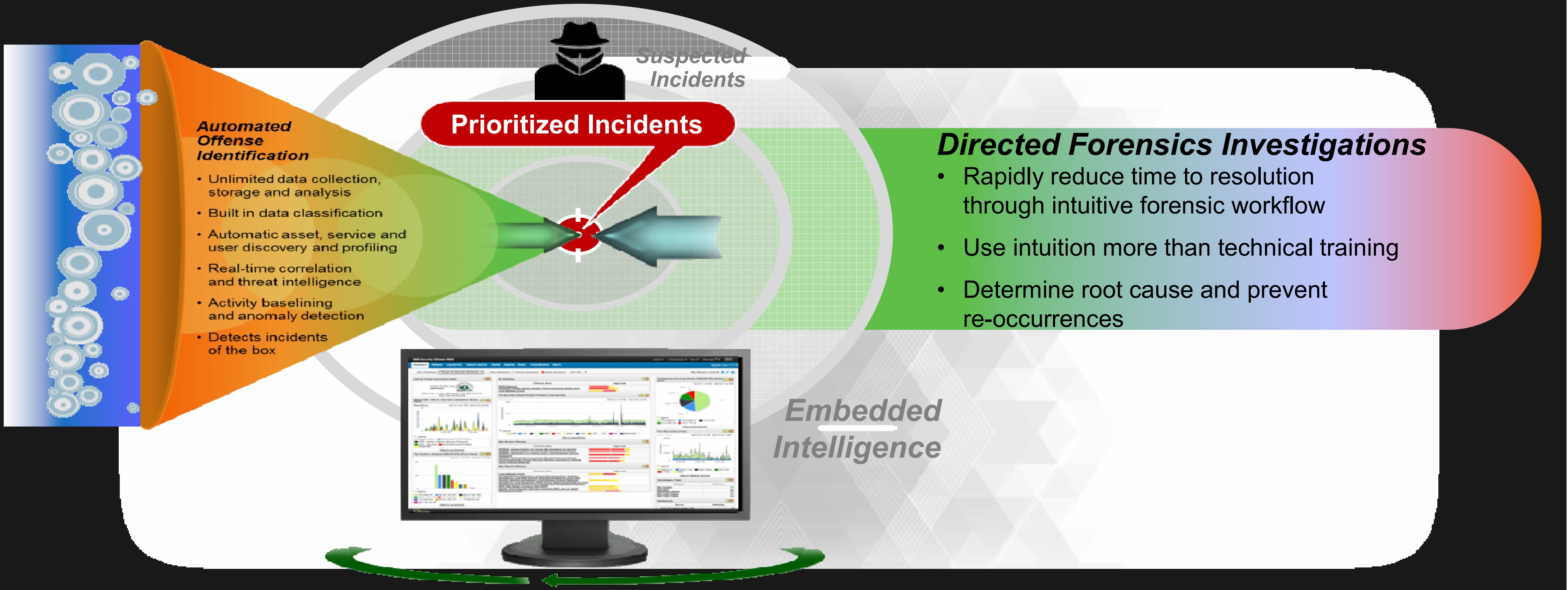

Suspected Incidents

Prioritized Incidents

***Automated Offense Identification***

- Unlimited data collection, storage and analysis
- Built in data classification
- Automatic asset, service and user discovery and profiling
- Real-time correlation and threat intelligence
- Activity baselining and anomaly detection
- Detects incidents of the box

***Directed Forensics Investigations***

- Rapidly reduce time to resolution through intuitive forensic workflow
- Use intuition more than technical training
- Determine root cause and prevent re-occurrences

*Embedded Intelligence*

# Answering questions to help prevent and remediate attacks

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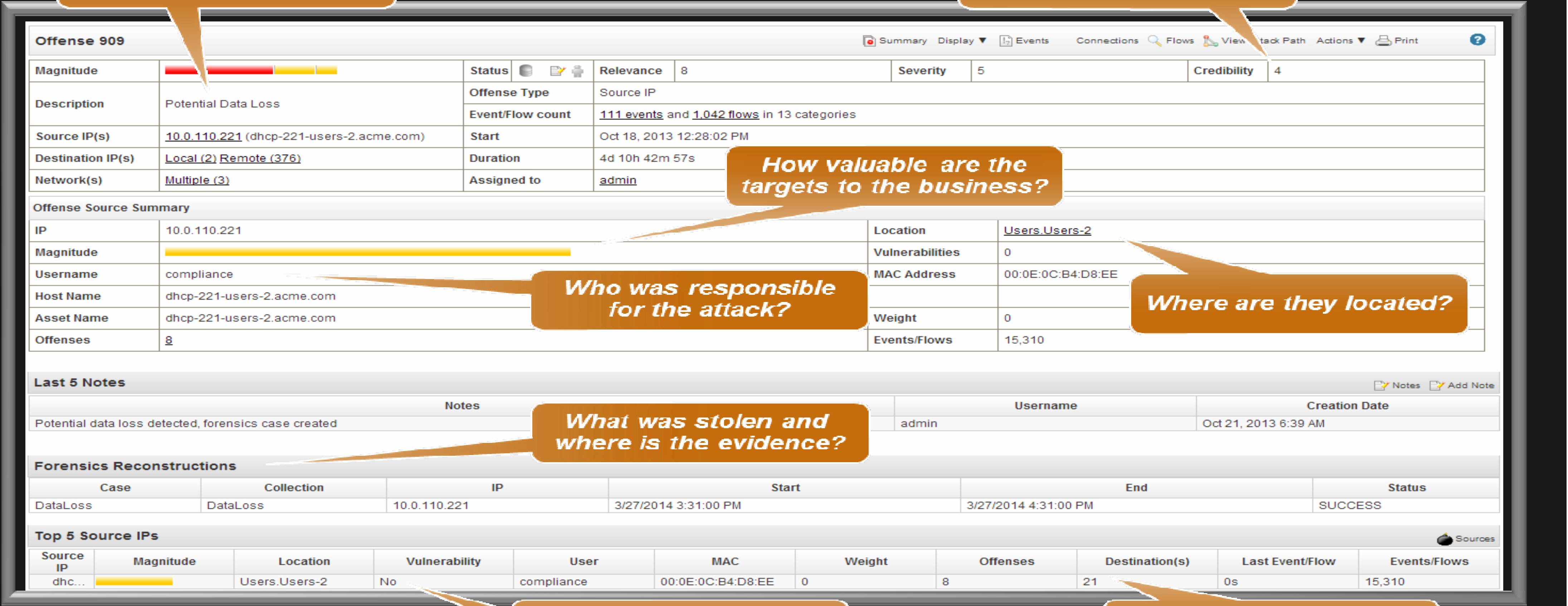


**Offense 909**

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| Magnitude | | Status | | Relevance | 8 | Severity | 5 | Credibility | 4 |
| Description | Potential Data Loss | Offense Type | Source IP | | | | | | |
| | | Event/Flow count | 111 events and 1,042 flows in 13 categories | | | | | | |
| Source IP(s) | 10.0.110.221 (dhcp-221-users-2.acme.com) | Start | Oct 18, 2013 12:28:02 PM | | | | | | |
| Destination IP(s) | Local (2) Remote (376) | Duration | 4d 10h 42m 57s | | | | | | |
| Network(s) | Multiple (3) | Assigned to | admin | | | | | | |

**Offense Source Summary**

| | | | |
|---|---|---|---|
| IP | 10.0.110.221 | Location | Users.Users-2 |
| Magnitude | | Vulnerabilities | 0 |
| Username | compliance | MAC Address | 00:0E:0C:B4:D8:EE |
| Host Name | dhcp-221-users-2.acme.com | | |
| Asset Name | dhcp-221-users-2.acme.com | Weight | 0 |
| Offenses | 8 | Events/Flows | 15,310 |

**Last 5 Notes**

| Notes | Username | Creation Date |
|---|---|---|
| Potential data loss detected, forensics case created | admin | Oct 21, 2013 6:39 AM |

**Forensics Reconstructions**

| Case | Collection | IP | Start | End | Status |
|---|---|---|---|---|---|
| DataLoss | DataLoss | 10.0.110.221 | 3/27/2014 3:31:00 PM | 3/27/2014 4:31:00 PM | SUCCESS |

**Top 5 Source IPs**

| Source IP | Magnitude | Location | Vulnerability | User | MAC | Weight | Offenses | Destination(s) | Last Event/Flow | Events/Flows |
|---|---|---|---|---|---|---|---|---|---|---|
| dhc... | | Users.Users-2 | No | compliance | 00:0E:0C:B4:D8:EE | 0 | 8 | 21 | 0s | 15,310 |

What was the attack?

Is the attack credible?

How valuable are the targets to the business?

Who was responsible for the attack?

Where are they located?

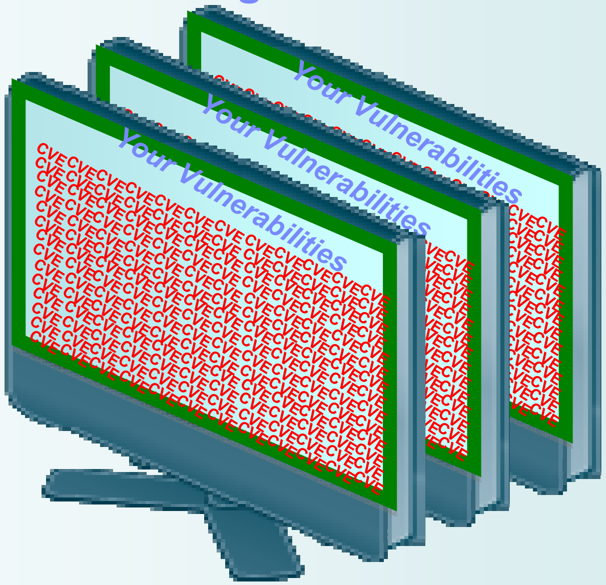
What was stolen and where is the evidence?

Are any of the assets vulnerable?

How many targeted assets are involved

# Strengthened by integrated vulnerability insights

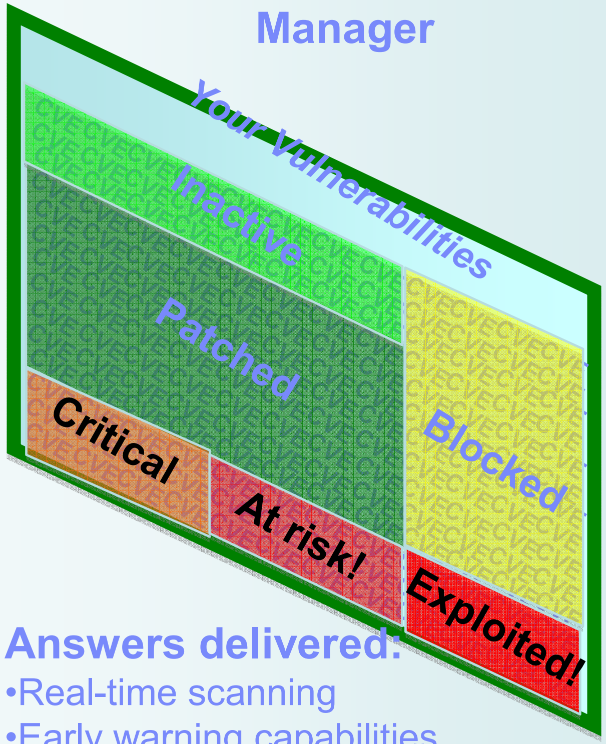
## Existing vulnerability management tools



## Security Intelligence Integration

- Improves visibility
  - Intelligent, event-driven scanning, asset discovery, asset profiling and more
- Reduces data load
  - Bringing rich context to Vulnerability Management
- Breaks down silos
  - Leveraging all QRadar integrations and data
  - Unified vulnerability view across all products

## QRadar Vulnerability Manager

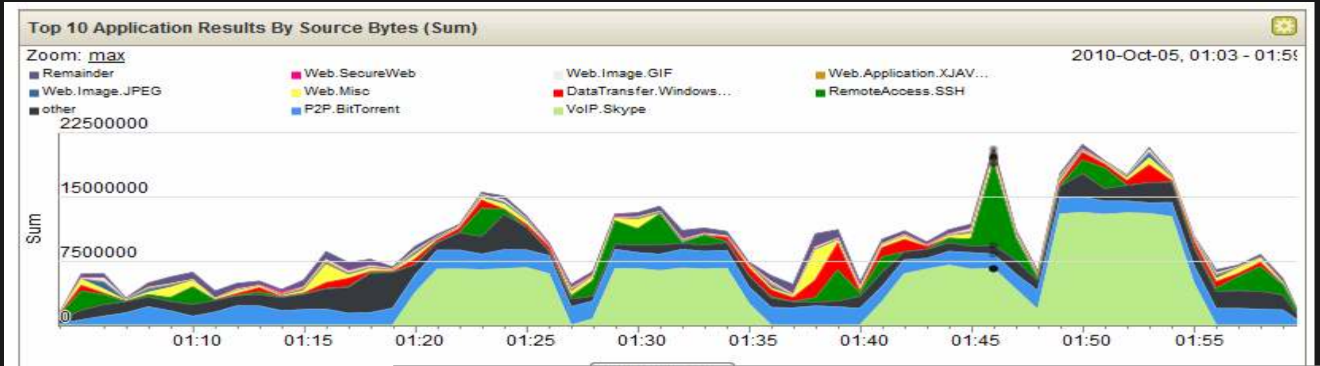


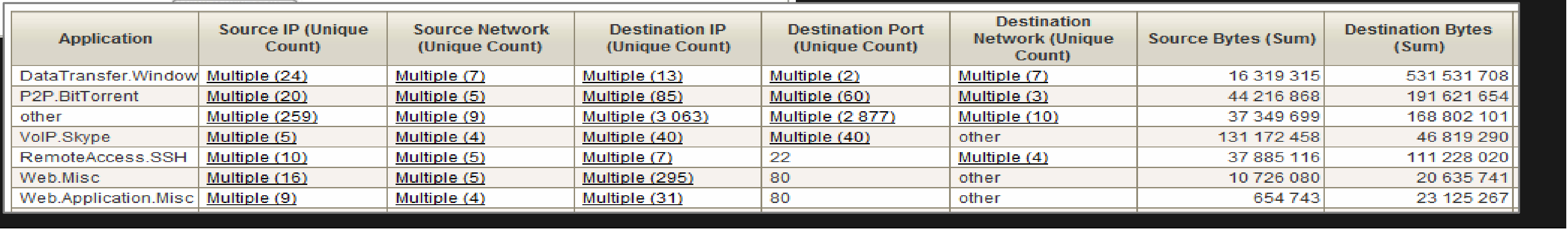
**Answers delivered:**

- Real-time scanning
- Early warning capabilities
- Advanced pivoting and filtering

# Differentiated by Deep network activity analytics

- Network traffic doesn't lie.  Attackers can stop logging and erase their tracks, but can't cut off the network (flow data)
  - Deep packet inspection for Layer 7 flow data
  - Pivoting, drill-down and data mining on flow sources for advanced detection and forensics
- Helps detect anomalies that might otherwise get missed





| Application | Source IP (Unique Count) | Source Network (Unique Count) | Destination IP (Unique Count) | Destination Port (Unique Count) | Destination Network (Unique Count) | Source Bytes (Sum) | Destination Bytes (Sum) |
|---|---|---|---|---|---|---|---|
| DataTransfer.Window | Multiple (24) | Multiple (7) | Multiple (13) | Multiple (2) | Multiple (7) | 16 319 315 | 531 531 708 |
| P2P.BitTorrent | Multiple (20) | Multiple (5) | Multiple (85) | Multiple (60) | Multiple (3) | 44 216 868 | 191 621 654 |
| other | Multiple (259) | Multiple (9) | Multiple (3 063) | Multiple (2 877) | Multiple (10) | 37 349 699 | 168 802 101 |
| VoIP.Skype | Multiple (5) | Multiple (4) | Multiple (40) | Multiple (40) | other | 131 172 458 | 46 819 290 |
| RemoteAccess.SSH | Multiple (10) | Multiple (5) | Multiple (7) | 22 | Multiple (4) | 37 885 116 | 111 228 020 |
| Web.Misc | Multiple (16) | Multiple (5) | Multiple (295) | 80 | other | 10 726 080 | 20 635 741 |
| Web.Application.Misc | Multiple (9) | Multiple (4) | Multiple (31) | 80 | other | 654 743 | 23 125 267 |

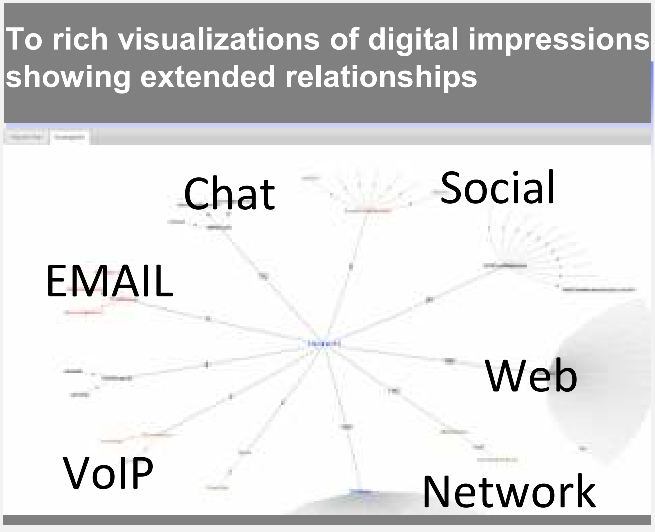
# Clarity Through Forensics

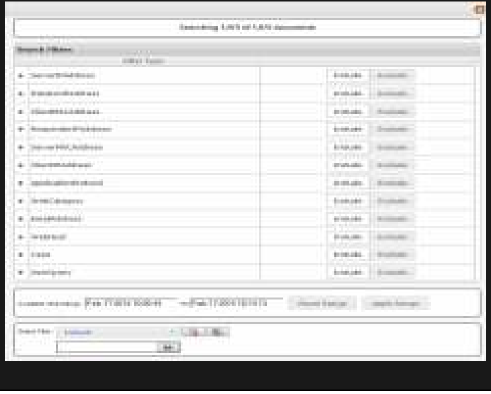
QRadar Incident Forensics has several features to deliver intelligence to the security analyst to assist in the forensics investigation

Digital Impressions: Compiled set of associations to identify identity trails

Suspect Content: Defined set of rules on content that signify suspicious activity

Content Categorization: Dynamic categorization of content based metadata and XForce feeds enables analyst to filter out the noise


To rich visualizations of digital impressions showing extended relationships

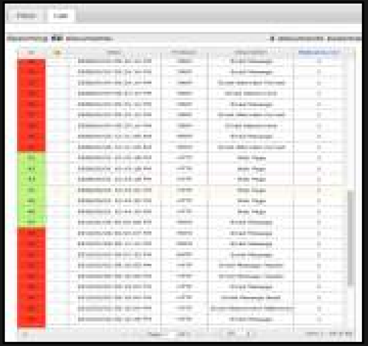


Entity Alert
Scanning IP
Botnet

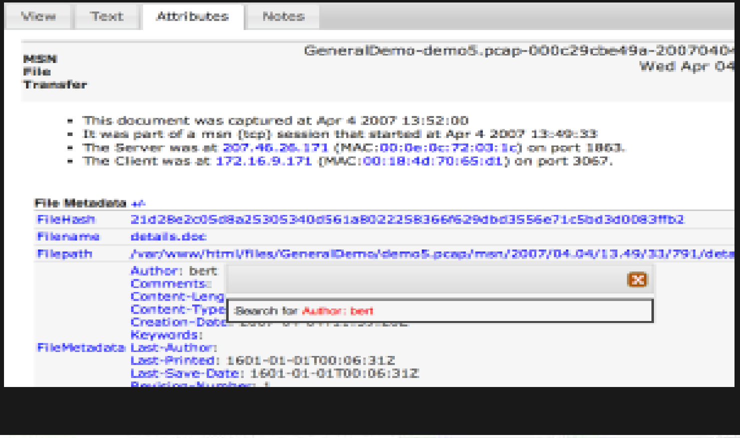
# Intuitive Data Exploration and Navigation Reduces Impact

Empower security analysts to operate like seasoned forensics specialists by offering capabilities that can be powered by intuition and logical deduction

**Survey:** Retrace the activities in a chronological order



**Searchable Results:** Quickly pivot on data items to go where the data takes you



MSN File Transfer

GeneralDemo-demo5.pcap-000c29cbe49a-2007040
Wed Apr 04

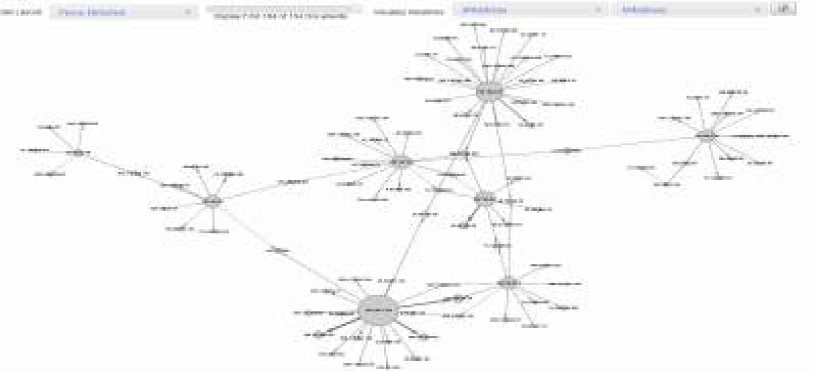
- This document was captured at Apr 4 2007 13:52:00
- It was part of a msn (tcp) session that started at Apr 4 2007 13:49:33
- The Server was at 207.46.26.171 (MAC:00:0e:0c:72:03:1c) on port 1863.
- The Client was at 172.16.9.171 (MAC:00:18:4d:70:65:d1) on port 3067.

File Metadata +/-

| | |
|---|---|
| FileHash | 21d28e2c05d8a25305340d561a8022258366f629dbd3556e71c5bd3d0083ffb2 |
| Filename | details.doc |
| Filepath | /var/www/html/files/GeneralDemo/demo5.pcap/msn/2007/04.04/13.49/33/791/deta |
| FileMetadata | Author: bert<br>Comments:<br>Content-Leng<br>Content-Type<br>Creation-Date<br>Keywords:<br>Last-Author:<br>Last-Printed: 1601-01-01T00:06:31Z<br>Last-Save-Date: 1601-01-01T00:06:31Z |

Search for Author: bert

**Visual Analytics:** Navigate the data using visual indications of correlations between data items



# An integrated, unified architecture in a single web-based console

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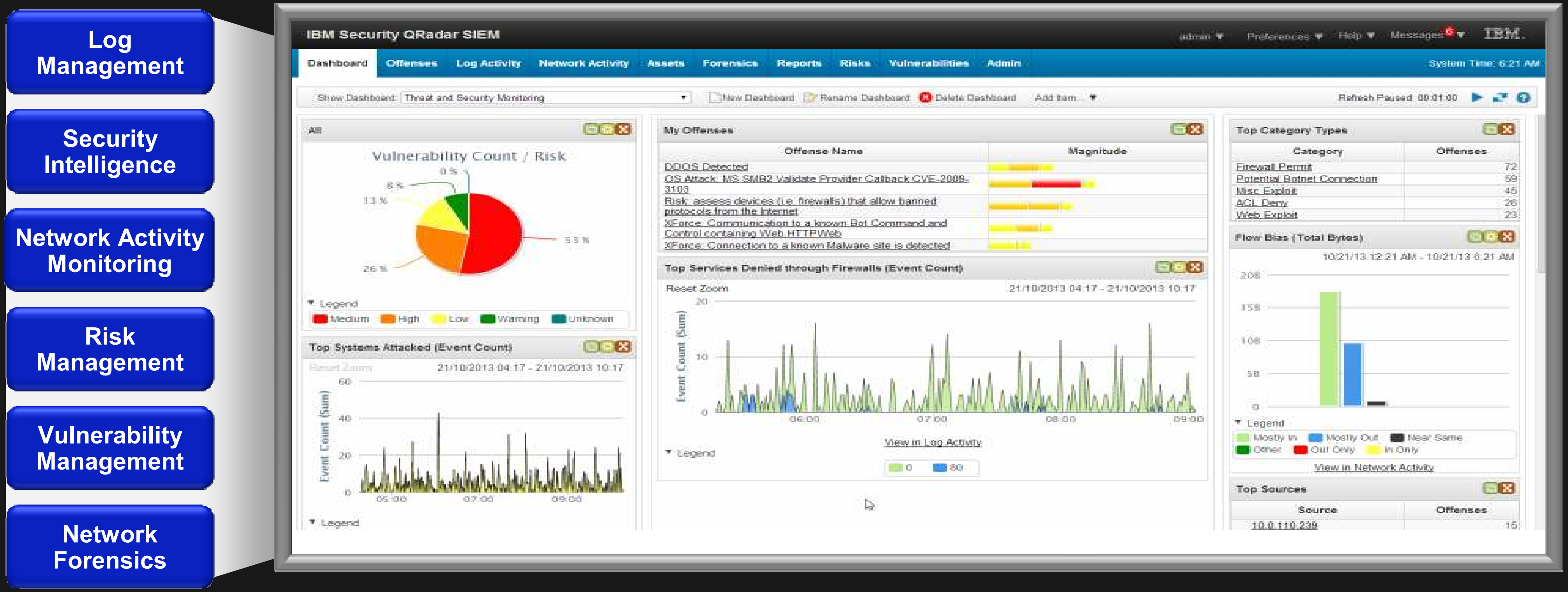

Log Management

Security Intelligence

Network Activity Monitoring

Risk Management

Vulnerability Management

Network Forensics

IBM Security QRadar SIEM

System Time: 6:21 AM

Show Dashboard: Threat and Security Monitoring

Refresh Paused: 00:01:00

All

Vulnerability Count / Risk

Top Systems Attacked (Event Count)

My Offenses

| Offense Name | Magnitude |
|---|---|
| DDOS Detected | |
| OS Attack: MS SMB2 Validate Provider Callback CVE-2009-3103 | |
| Risk: assess devices (i.e. firewalls) that allow banned protocols from the Internet | |
| XForce: Communication to a known Bot Command and Control containing Web HTTPWeb | |
| XForce: Connection to a known Malware site is detected | |

Top Services Denied through Firewalls (Event Count)

Top Category Types

| Category | Offenses |
|---|---|
| Firewall Permit | 72 |
| Potential Botnet Connection | 59 |
| Misc Exploit | 45 |
| ACL Deny | 26 |
| Web Exploit | 23 |

Flow Bias (Total Bytes)

Top Sources

| Source | Offenses |
|---|---|
| 10.0.110.239 | 16 |

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# Driving simplicity and accelerated time to value

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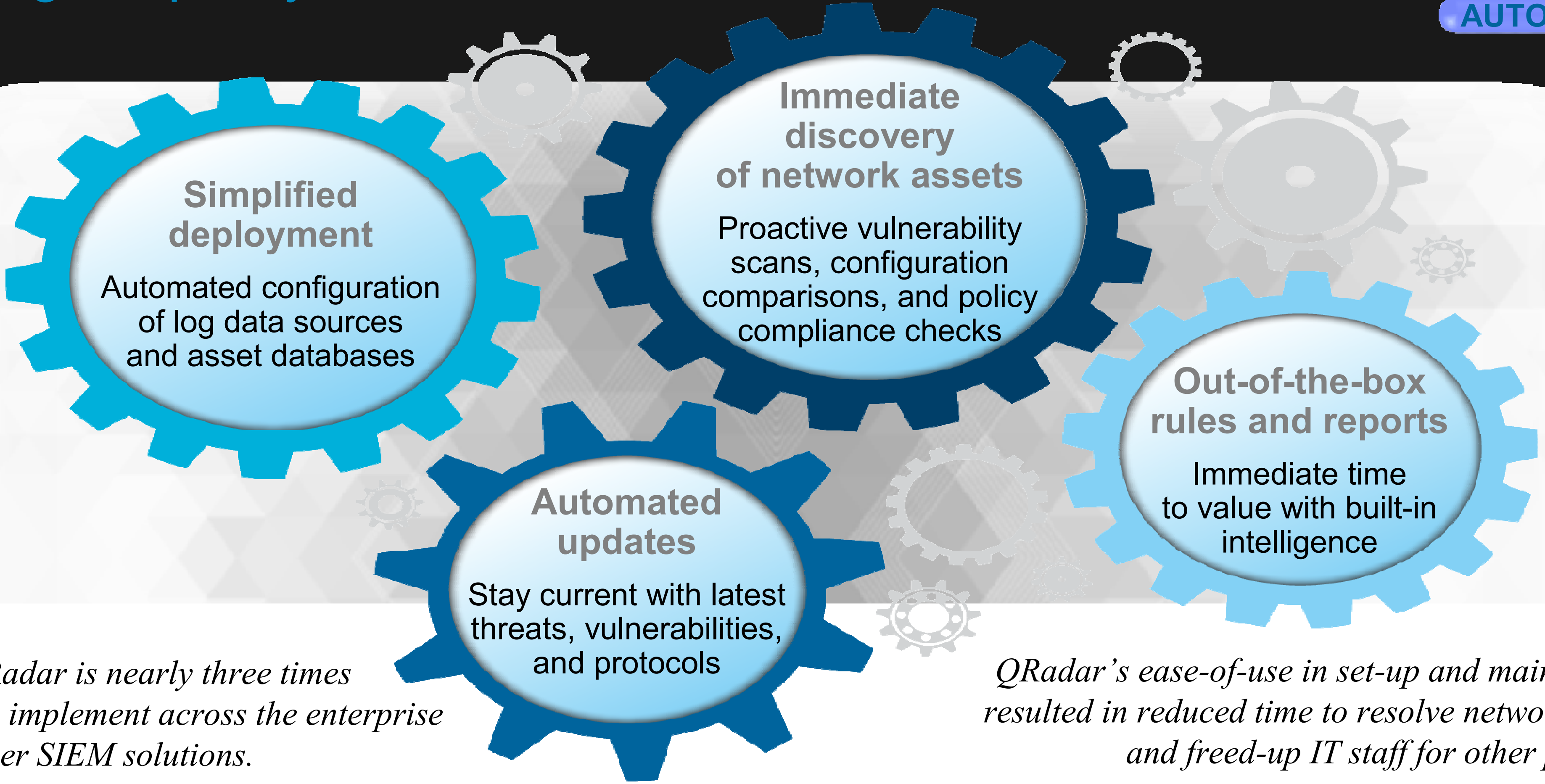


**Simplified deployment**

Automated configuration of log data sources and asset databases

**Immediate discovery of network assets**

Proactive vulnerability scans, configuration comparisons, and policy compliance checks

**Automated updates**

Stay current with latest threats, vulnerabilities, and protocols

**Out-of-the-box rules and reports**

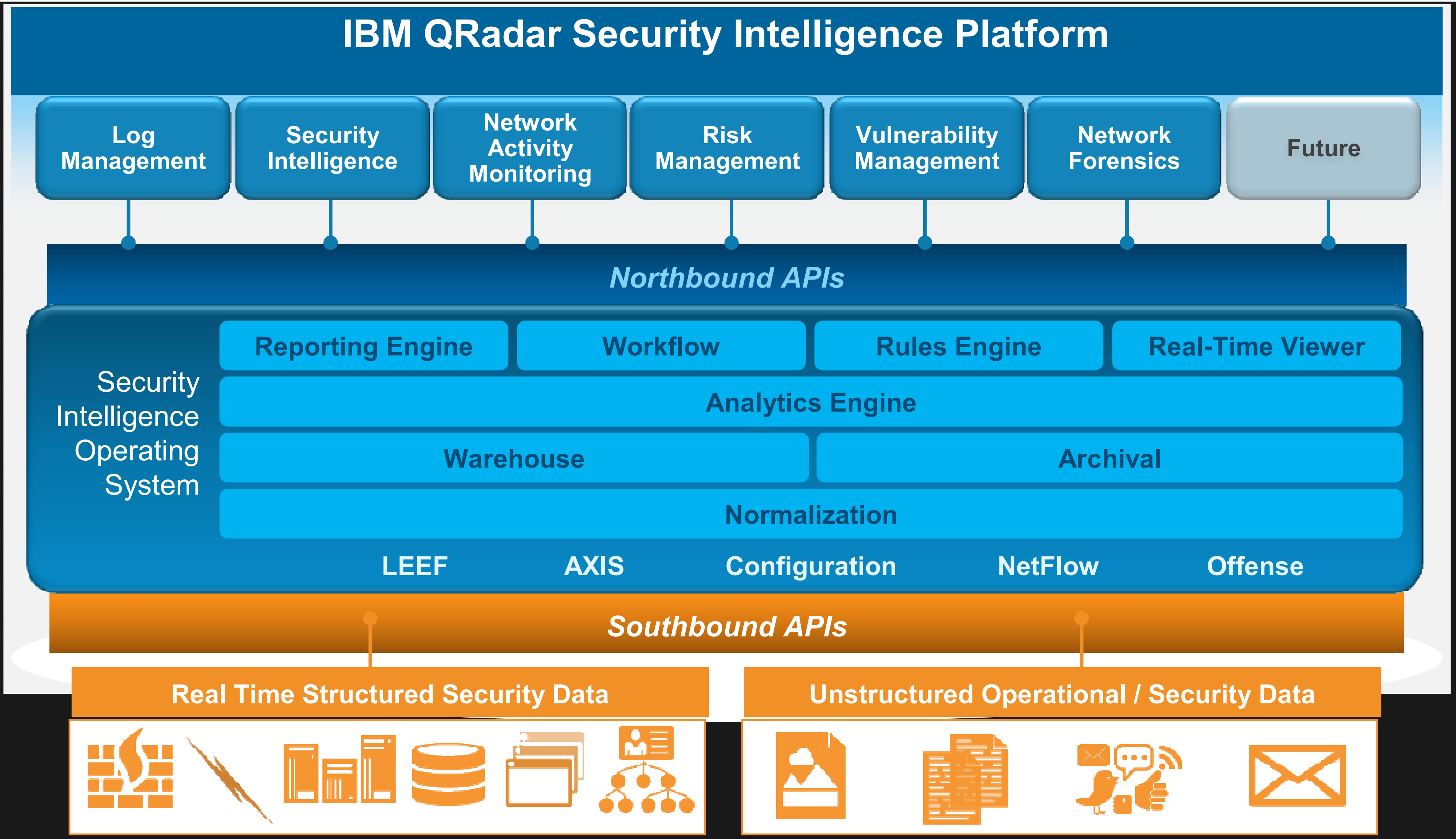
Immediate time to value with built-in intelligence

*IBM QRadar is nearly three times faster to implement across the enterprise than other SIEM solutions.*

2014 Ponemon Institute, LLC
Independent Research Report

*QRadar's ease-of-use in set-up and maintenance resulted in reduced time to resolve network issues and freed-up IT staff for other projects.*

Private U.S. University
*with large online education community*



# IBM QRadar Security Intelligence Platform

Log Management

Security Intelligence

Network Activity Monitoring

Risk Management

Vulnerability Management

Network Forensics

Future

*Northbound APIs*

Security Intelligence Operating System

Reporting Engine | Workflow | Rules Engine | Real-Time Viewer

Analytics Engine

Warehouse | Archival

Normalization

LEEF | AXIS | Configuration | NetFlow | Offense

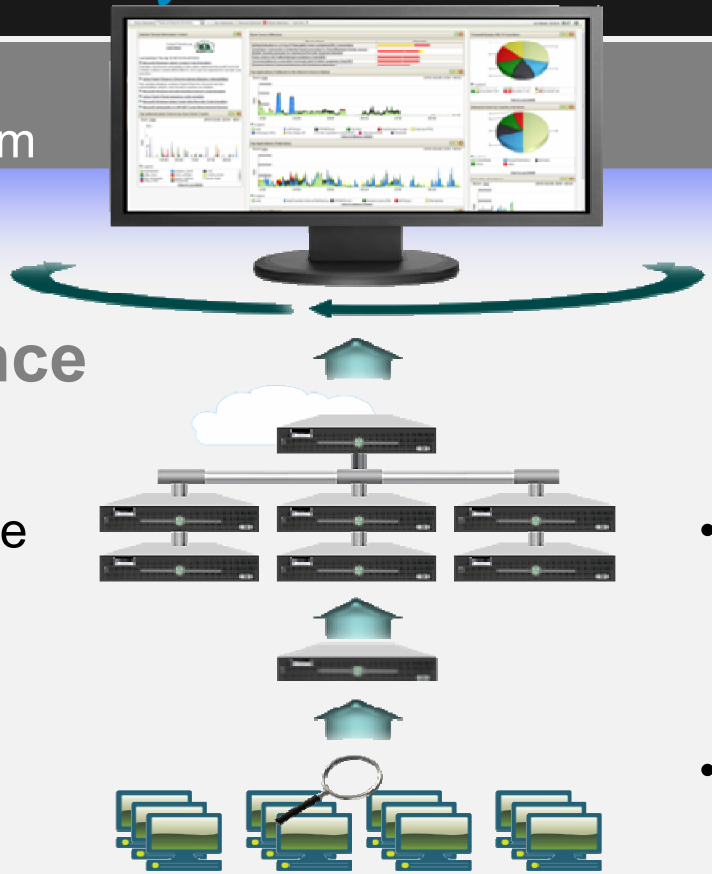
*Southbound APIs*

Real Time Structured Security Data

Unstructured Operational / Security Data

# Optimized appliance and software architecture for high performance and rapid deployment in any environment

**IBM QRadar**
Security Intelligence Platform



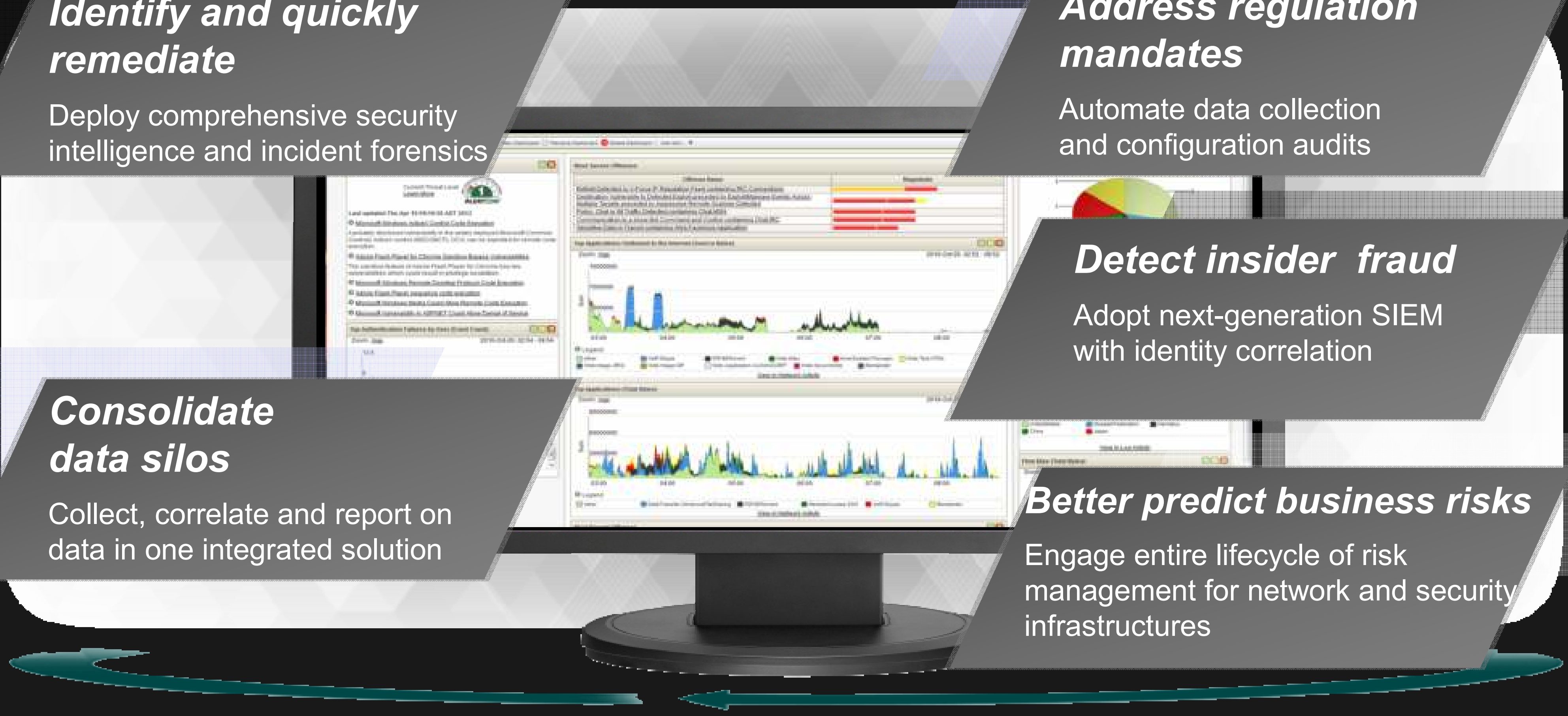
## Scalable appliance architecture

- Easy-to-deploy, scalable model using stackable distributed appliances
- Does not require third-party databases or storage

## Shared modular infrastructure

- Offers automatic failover and disaster recovery
- Virtual deployments well suited for cloud environments

# Intelligence, integration, automation to stay ahead of the threat



### *Identify and quickly remediate*

Deploy comprehensive security intelligence and incident forensics

### *Address regulation mandates*

Automate data collection and configuration audits

### *Detect insider fraud*

Adopt next-generation SIEM with identity correlation

### *Consolidate data silos*

Collect, correlate and report on data in one integrated solution

### *Better predict business risks*

Engage entire lifecycle of risk management for network and security infrastructures

Statement of Good Security Practices: IT system security involves protecting systems and information through prevention, detection and response to improper access from within and outside your enterprise. Improper access can result in information being altered, destroyed or misappropriated or can result in damage to or misuse of your systems, including to attack others. No IT system or product should be considered completely secure and no single product or security measure can be completely effective in preventing improper access. IBM systems and products are designed to be part of a comprehensive security approach, which will necessarily involve additional operational procedures, and may require other systems, products or services to be most effective. IBM DOES NOT WARRANT THAT SYSTEMS AND PRODUCTS ARE IMMUNE FROM THE MALICIOUS OR ILLEGAL CONDUCT OF ANY PARTY.

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