IBM Software Group

# Consul InSight Overview


**Evento Audit & Risk Management**

**Hotel Flora, Roma, 10 Maggio 2007**

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**IBM Software Group**

# Security and compliance challenges

- **Increasing Requirements**
  - Hundreds of compliance initiatives
  - Compliance requirements are increasing in many industries
  - Improved monitoring and control are needed to manage risks and avoid penalties, and lost business
- **Increasing Complexity**
  - Disparate technologies and infrastructures fragment and hamper compliance efforts
  - Linking infrastructure-level to business-level compliance is desirable, but challenging
- **Increasing Cost**
  - Lack of predictability and visibility across complex infrastructures drives rapid cost inflation
  - Failure to achieve compliance or to prevent security breaches can impose enormous costs

- **43% of CFOs think that improving governance, controls and risk management is their top challenge.**

*CFO Survey: Current state & future direction,*
IBM Business Consulting Services

# The Business Cost Of Poor Governance & Risk Management Can Be Staggering

**January 29, 2007 03:00 PM**
**TJX Stored Customer Data, Violated Visa Payment Rules** The company held on too long to cardholder data… InformationWeek
By Larry Greenemeier

**Bacs system failure hits 400,000 salary payments** Up to 400,000 people will receive their salary three days late because the Bacs payment processing system - used by every bank in the UK - experienced a failure on Wednesday. By Will Hadfield Friday 30 March 2007
ComputerWeekly.com

**FBI loses 3-4 laptops a month, auditor says**
Associated Press **February 12, 2007**

BusinessWeek Sidestepping Disaster; Raynor argues for a governance structure that will allow for safer growth by Dean Foust March 19, 2007

CIO **Telstra's $11M Network and IT Overhaul in Trouble** February 14, 2007 — CIO — Australian telecommunications giant Telstra is struggling to successfully upgrade its IT infrastructure…

**IT glitch 'could hit elections'**
Burnley Council says problems could be nationwide IT problems could cause disruption for more than 100 councils at May's local elections, the BBC has learned.
March 27, 2007, BBC Staff Write BBC NEWS

Bill Would Punish Retailers For Leaks of Personal Data by Joseph Pereira *(February 22, 2007)*
THE WALL STREET JOURNAL.

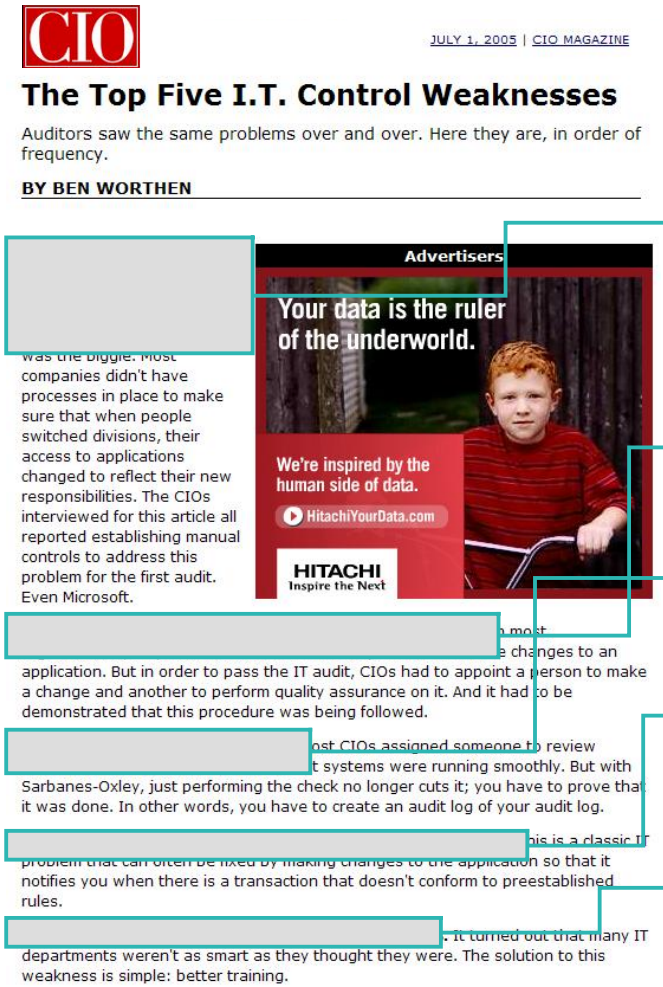
**February 15, 2007**
**Massive Insider Breach At DuPont**
A research chemist who worked for DuPont for 10 years before accepting a job with a competitor downloaded 22,000 sensitive documents and viewed 16,706 more in the company's electronic library.
By: Larry Greeenemeier EETIMES ONLINE

**Head Of Nuclear Agency Leaving Under Pressure Over Security Lapses**
AP Press Release, January 5, 2007
USA TODAY

abc NEWS

**iTunes back to normal after holiday traffic quadruples**
ABC News: December 28, 2006

# The Top Five I.T. Control Weaknesses



CIO

JULY 1, 2005 | CIO MAGAZINE

## The Top Five I.T. Control Weaknesses

Auditors saw the same problems over and over. Here they are, in order of frequency.

BY BEN WORTHEN



was the biggie. Most companies didn't have processes in place to make sure that when people switched divisions, their access to applications changed to reflect their new responsibilities. The CIOs interviewed for this article all reported establishing manual controls to address this problem for the first audit. Even Microsoft.

most
e changes to an application. But in order to pass the IT audit, CIOs had to appoint a person to make a change and another to perform quality assurance on it. And it had to be demonstrated that this procedure was being followed.

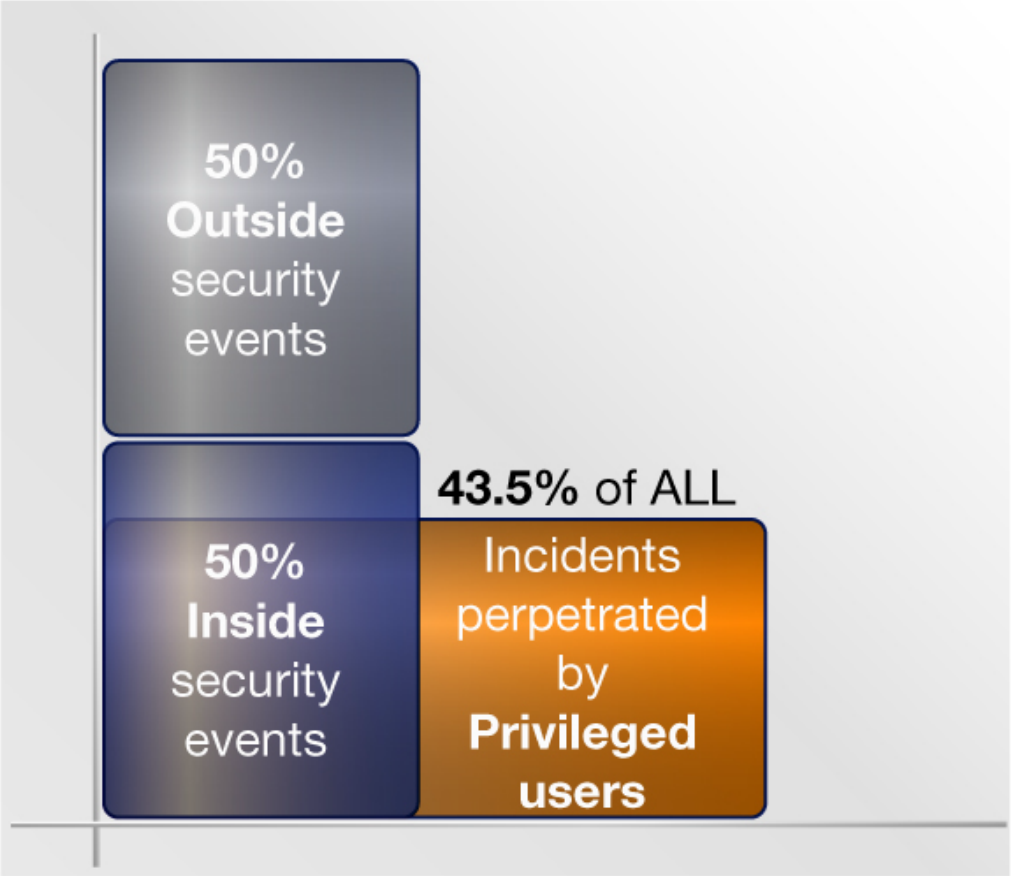
ost CIOs assigned someone to review
t systems were running smoothly. But with Sarbanes-Oxley, just performing the check no longer cuts it; you have to prove that it was done. In other words, you have to create an audit log of your audit log.

his is a classic IT problem that can often be fixed by making changes to the application so that it notifies you when there is a transaction that doesn't conform to preestablished rules.

. It turned out that many IT departments weren't as smart as they thought they were. The solution to this weakness is simple: better training.

- **Failure to segregate duties within applications, and failure to set up new accounts and terminate old ones in a timely manner**
- **Lack of proper oversight for making application changes**
- **Inadequate review of audit logs**
- **Failure to identify abnormal transactions in a timely manner**
- **Lack of understanding of key system configurations**

# Insider attacks are almost always privileged



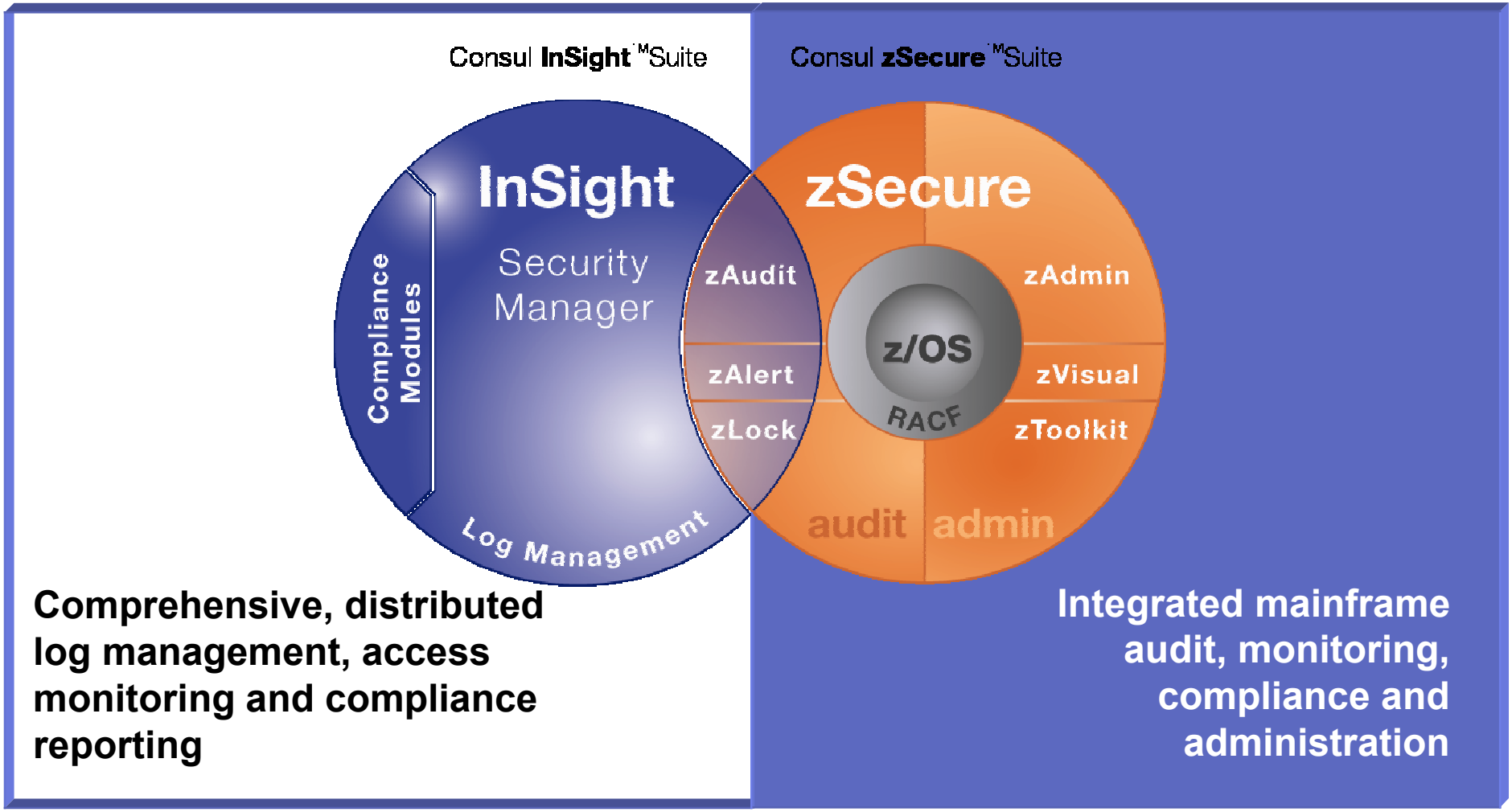

SUMMARY:

- The number of attacks attributed to the inside vs. outside is approximately equal (Source: CSI/FBI Survey 2005)
- 87% of all “insider attacks” can be attributed to the privileged user (Source: USSS/CERT Insider Threat Survey 2005)
- Therefore, 43.5% of the total number of security incidents experienced globally can be attributed directly to the privileged user group.
- *The privileged user group generally represents < 5% of any given organization.*

# What is relevant ?

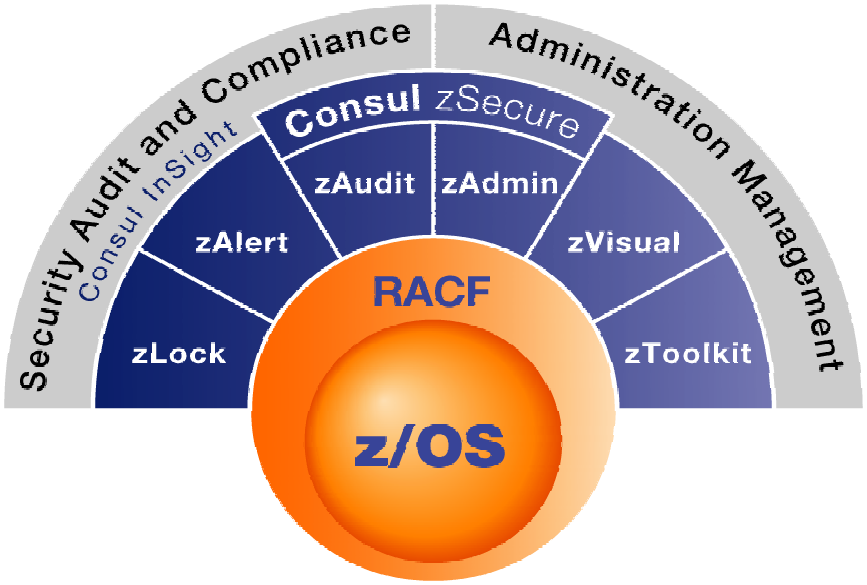
| Category | Description |
|---|---|
| Authentication events | **Includes logon / logoff events** |
| Operational events | **Server start, stop, back-up, restore** |
| Change management | **Configuration changes, audit settings changes, database structure changes, maintenance activities** |
| User and privilege mgt | **New users, changes to user privileges, password changes** |
| Privileged user access | **All DBA behavior, including data access, DBCC, stored procedure calls** |
| Sensitive data access | **Includes all user access to sensitive data stored in the database: selects, inserts, updates, deletes** |

# Consul's Portfolio: Consul InSight Suite



# zSecure Suite

The Consul zSecure Suite adds a user-friendly layer onto the mainframe that enables superior administration coupled with audit, alert and monitoring capabilities for z/OS Resource Access Control Facility (RACF)



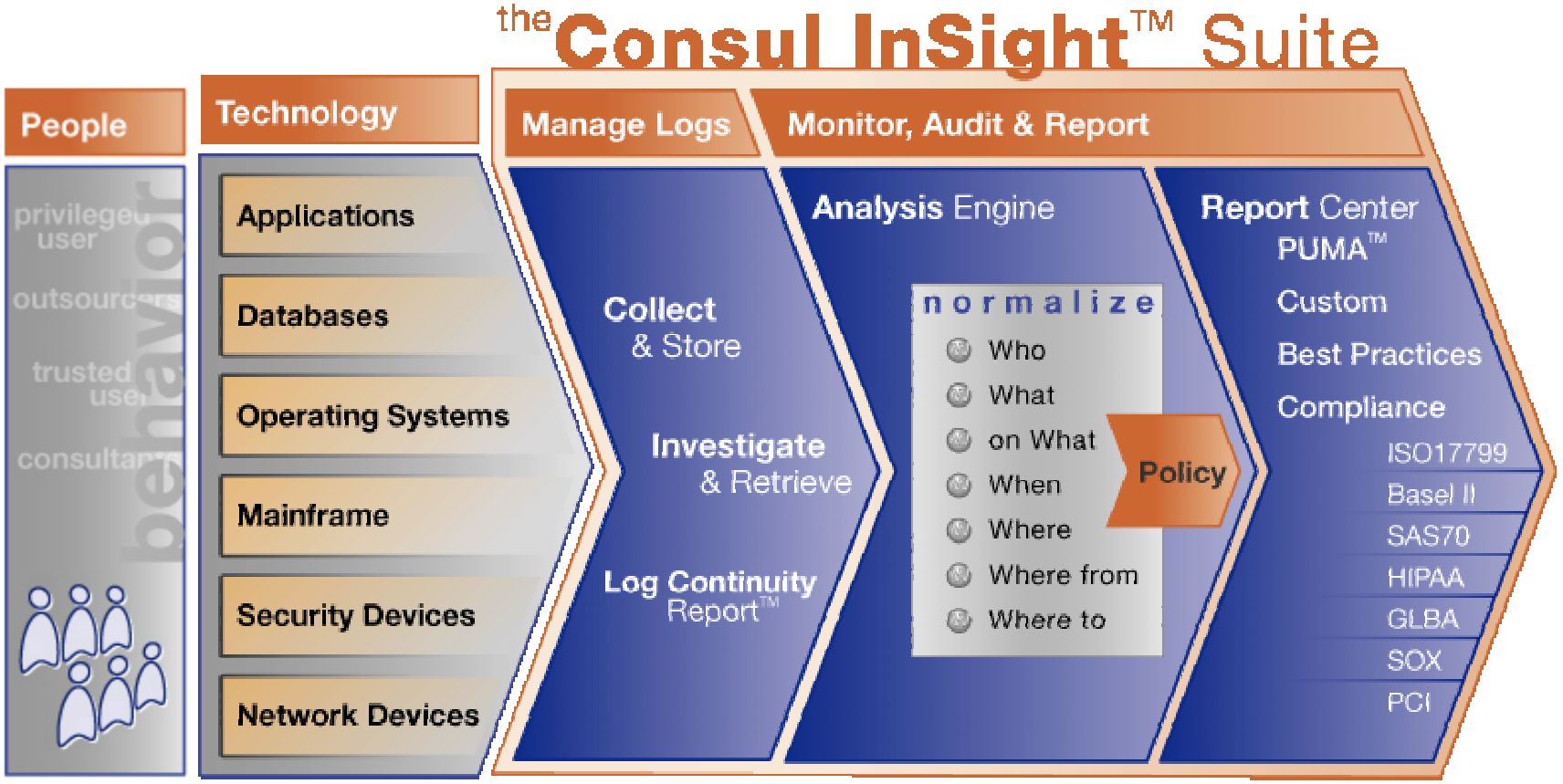

## Key Features

- The zSecure suite improves mainframe security, improves the efficiency of administration and enhances the ability for the mainframe to be the hub of enterprise security.
- **Administration and provisioning:**
  - zAdmin **enhances security administration and user management for RACF**
  - zVisual **offers a Windows GUI to RACF**
  - zToolkit **for Extensibility with CICS support**
- **Audit, monitoring and compliance:**
  - zLock **offers automated security monitoring, protection**
  - zAlert **provides intrusion detection and alerting.**
  - zAudit **provides event detection, analysis & reporting and system integrity audit & analysis**

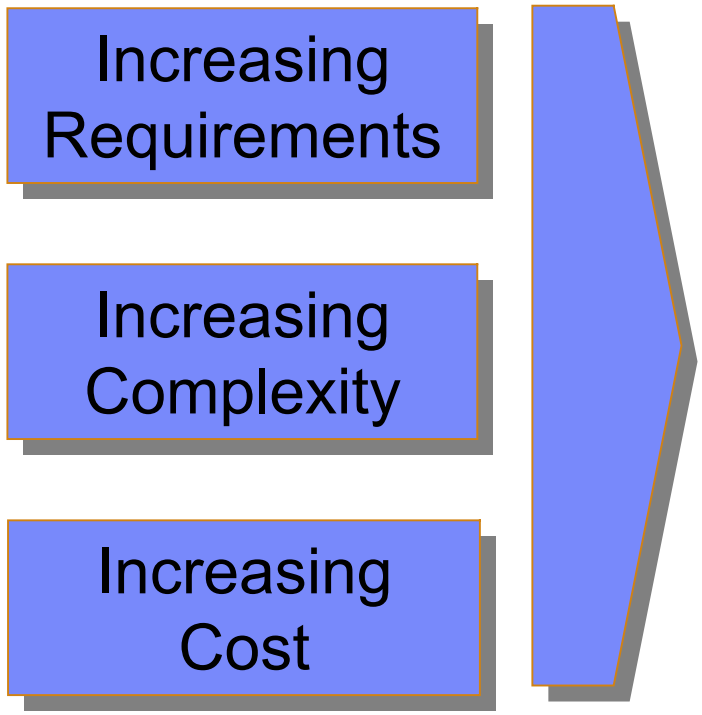
## Benefits Summary

- **Administration and provisioning:**
  - Reduce administration time, effort and cost
  - Enable de-central administration
  - Quick response time, enabling business
  - Reduce training time needed for new administrators
- **Audit, monitoring and compliance:**
  - Pass audits more easily, improve security posture
  - Save time and costs through improved security and incident handling
  - Increase operational effectiveness

# Consul InSight Suite



# More Specifically, Challenges InSight can Help




1. Security Compliance Dashboard and Reporting

**User Identity and Behavioral Audit**

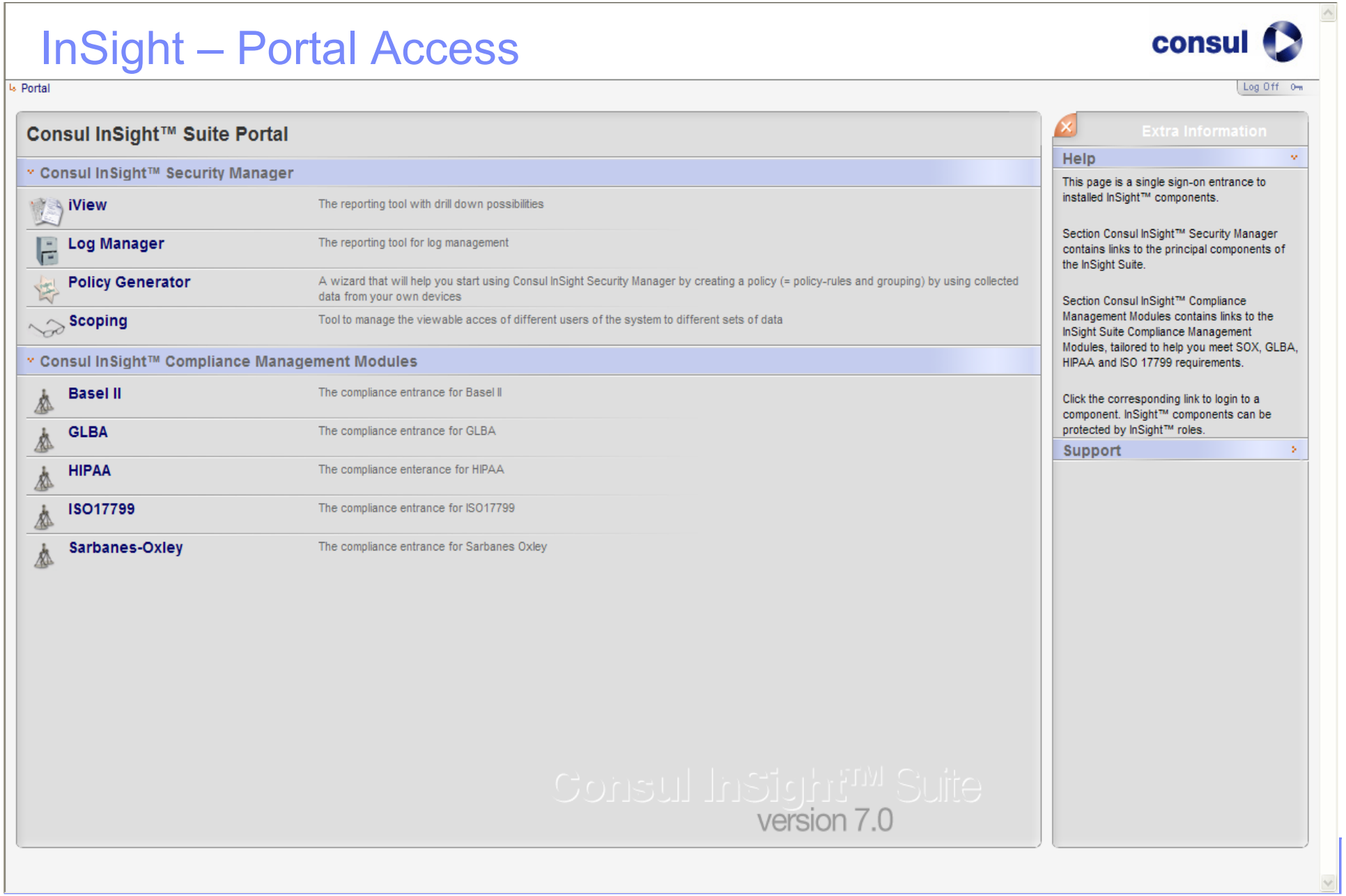
2. Privileged User Monitoring and Audit (PUMA)
3. Database Monitoring and Audit

4. Log and Audit Trail Management

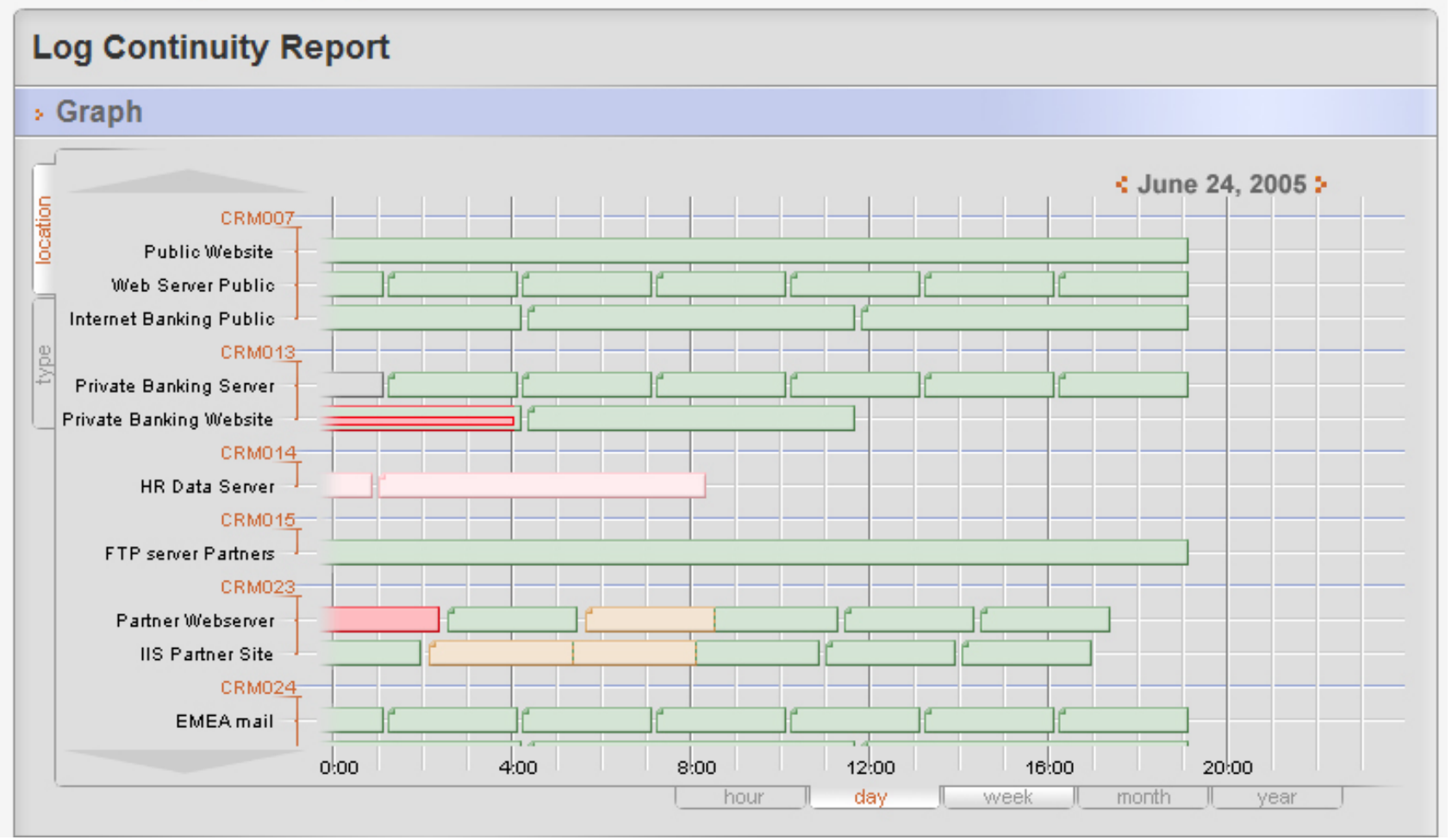
# Questions the auditor will ask

- **Breach of privacy:**
  - Are DBAs accessing confidential information?
  - Are trusted users abusing HR data?
  - Did a disgruntled administrator engage in identity theft?
- **Violation of system policies:**
  - Were unauthorized system changes made?
  - Did any root users turn off auditing?
  - When did OS administrators clear the audit logs?
  - Who stopped key system processes without permission?
- **Administrators violating segregation of duties:**
  - Did anyone initiate and approve transactions on applications?
  - Did an admin create and approve identity/privileges in system?

# InSight – Portal Access

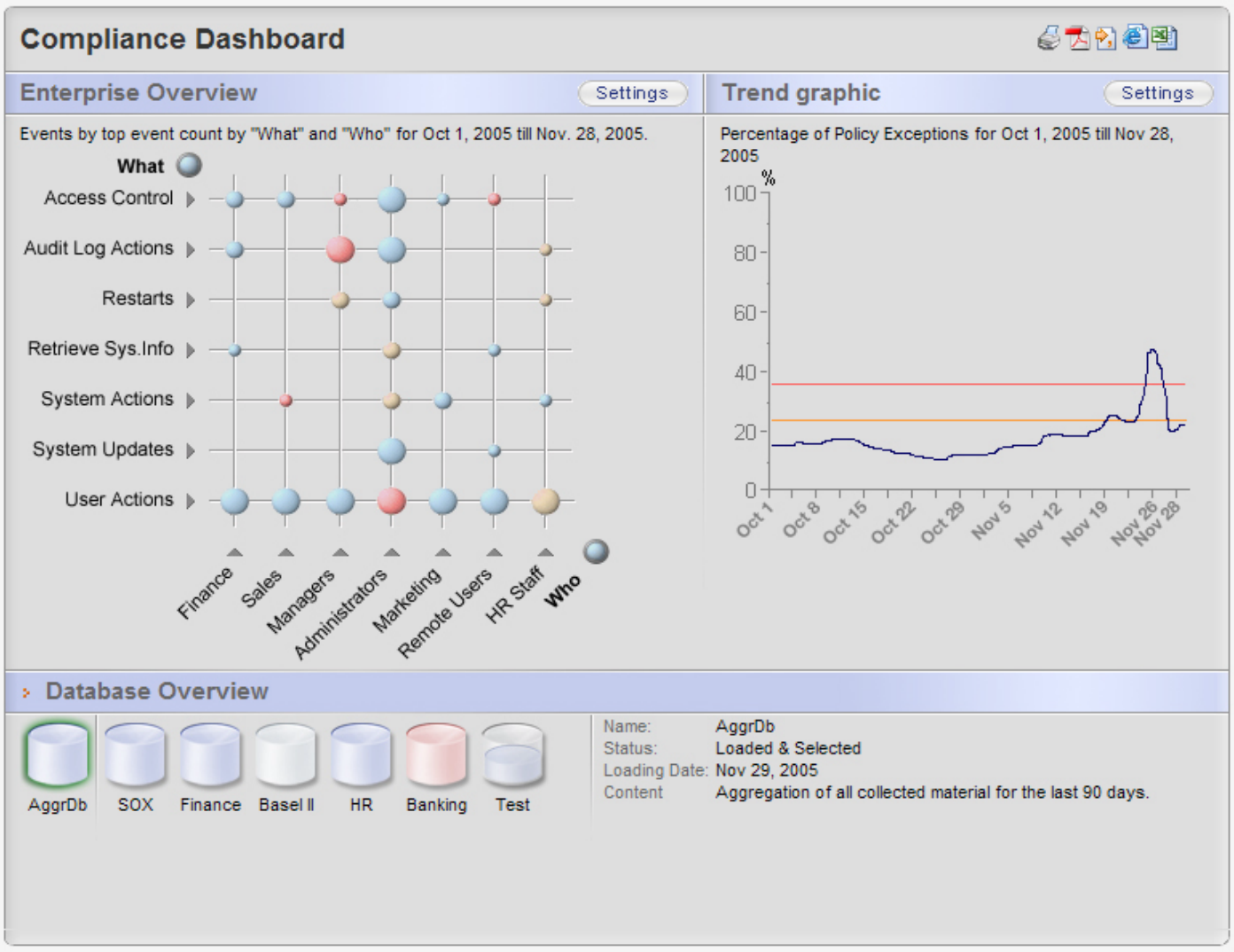


# InSight - Log Management




**"Prove continuous collection from all monitored event sources"**

# InSight - Monitor/Report using Compliance Dashboard




***Quick Drill-down***

***Policy Exceptions***

***Special Attentions***

***Failures***

***Trends***

***Reporting DBs***

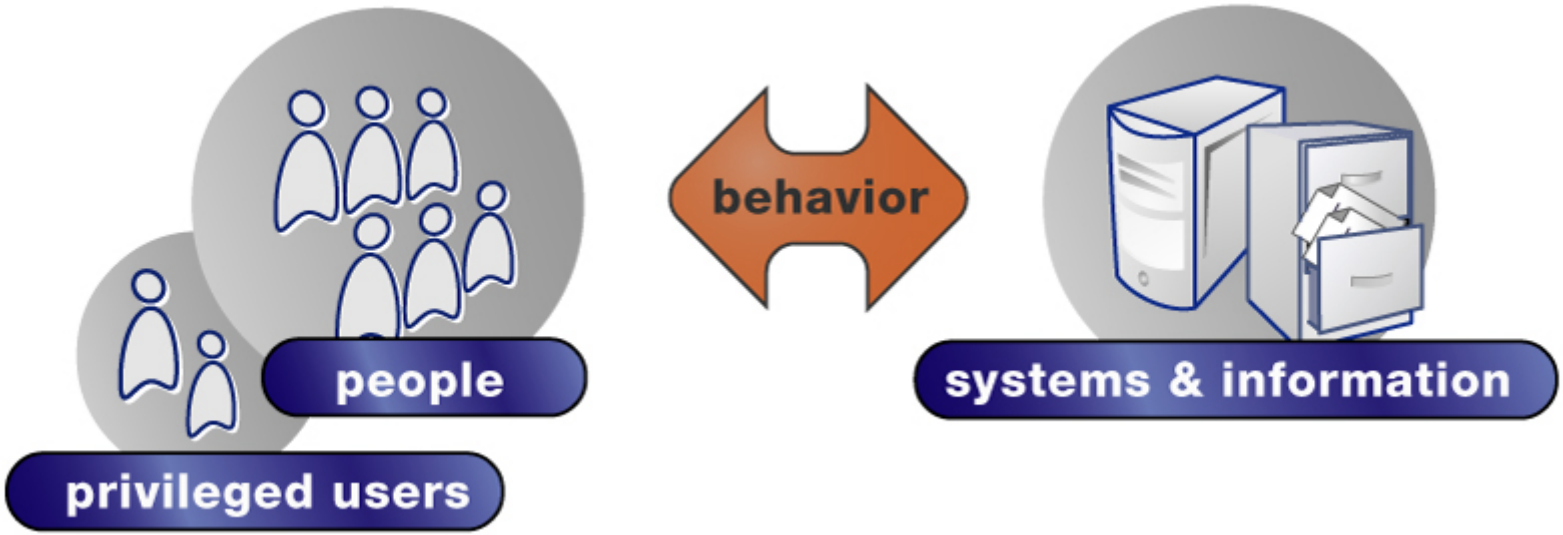
***Aggregation DBs***

***Enterprise Overview***

***Reports Distribution***

***Self-audit***

# What are People Doing on My Network?




***87% of insider incidents are caused by privileged and technical users.***

# The Consul InSight Suite:
# Audit users as they access systems and information

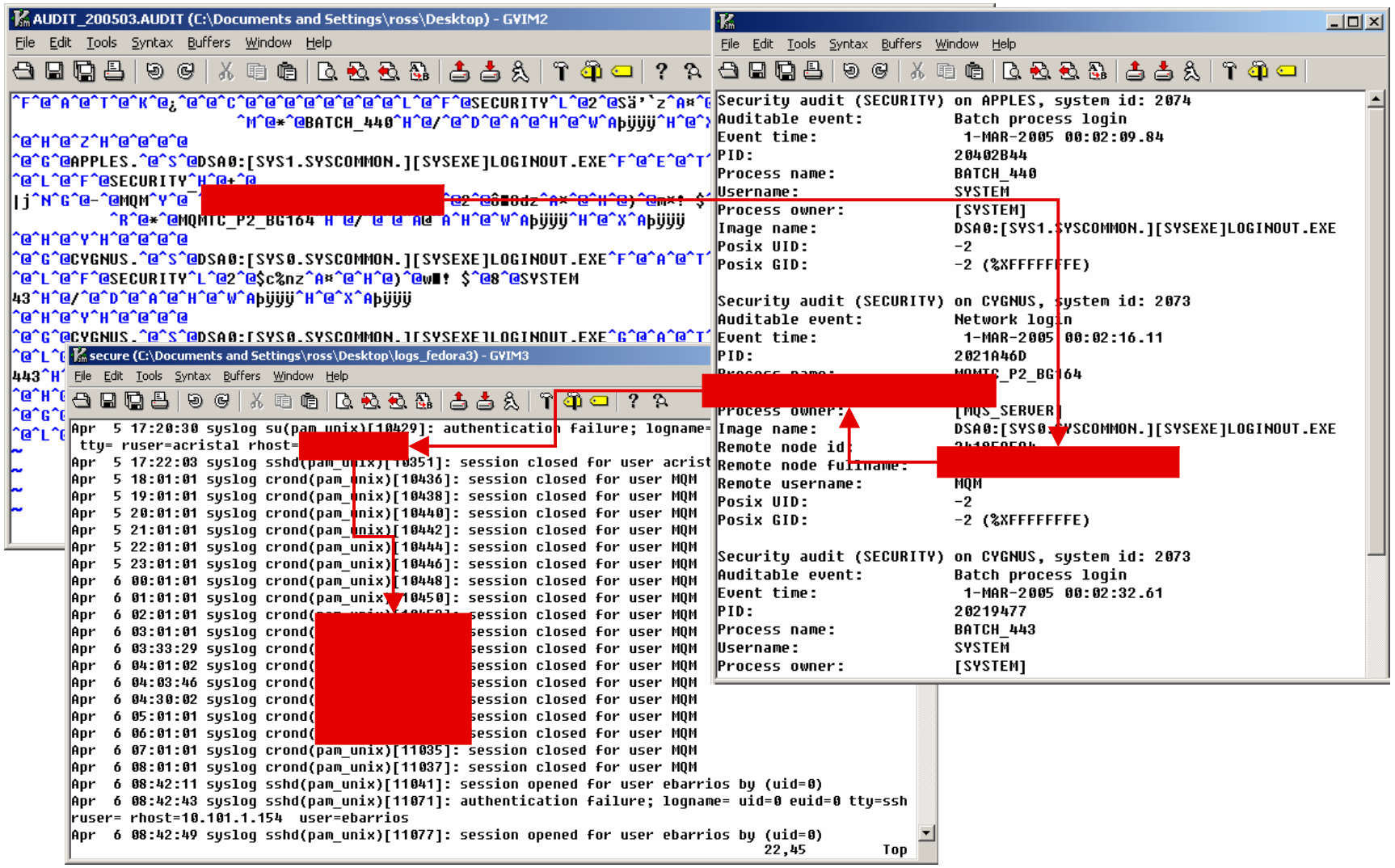

**People:**
- Privileged users
- Outsourcers
- Consultants

**Behavior:**
- Mistakes, human error
- Sabotage of data or systems
- Theft/release of information assets
- Introduction of bad code
- Installation of unauthorized software

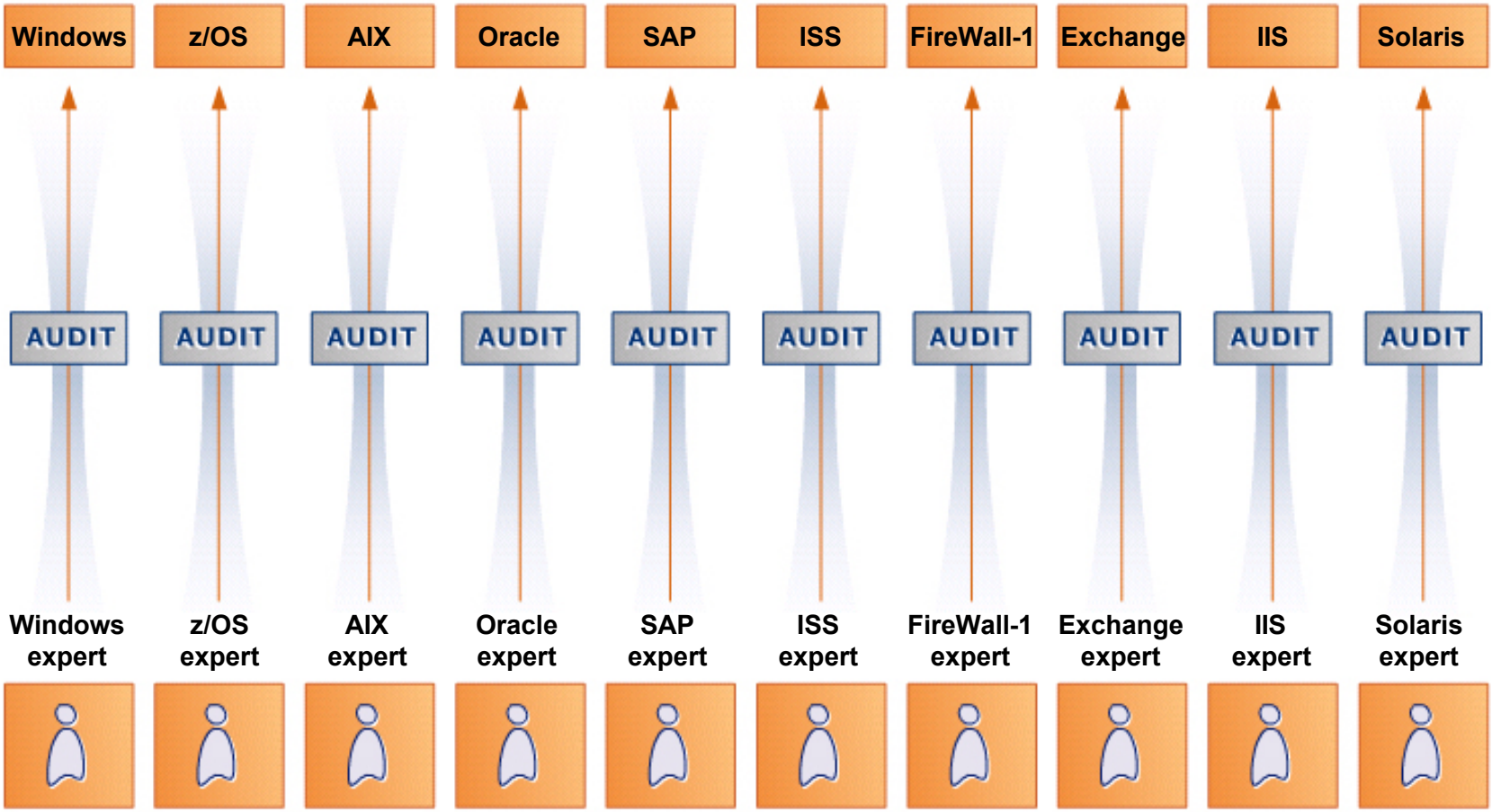
**Systems and Information:**
- Applications
- Databases
- OS's
- Mainframes
- Devices
- Customer data
- Patient files
- Financial info
- HR record

***These actions may result in lengthy outages, lost business, lost customers, legal liability or audit deficiencies – at cost of 6% of annual revenue.***

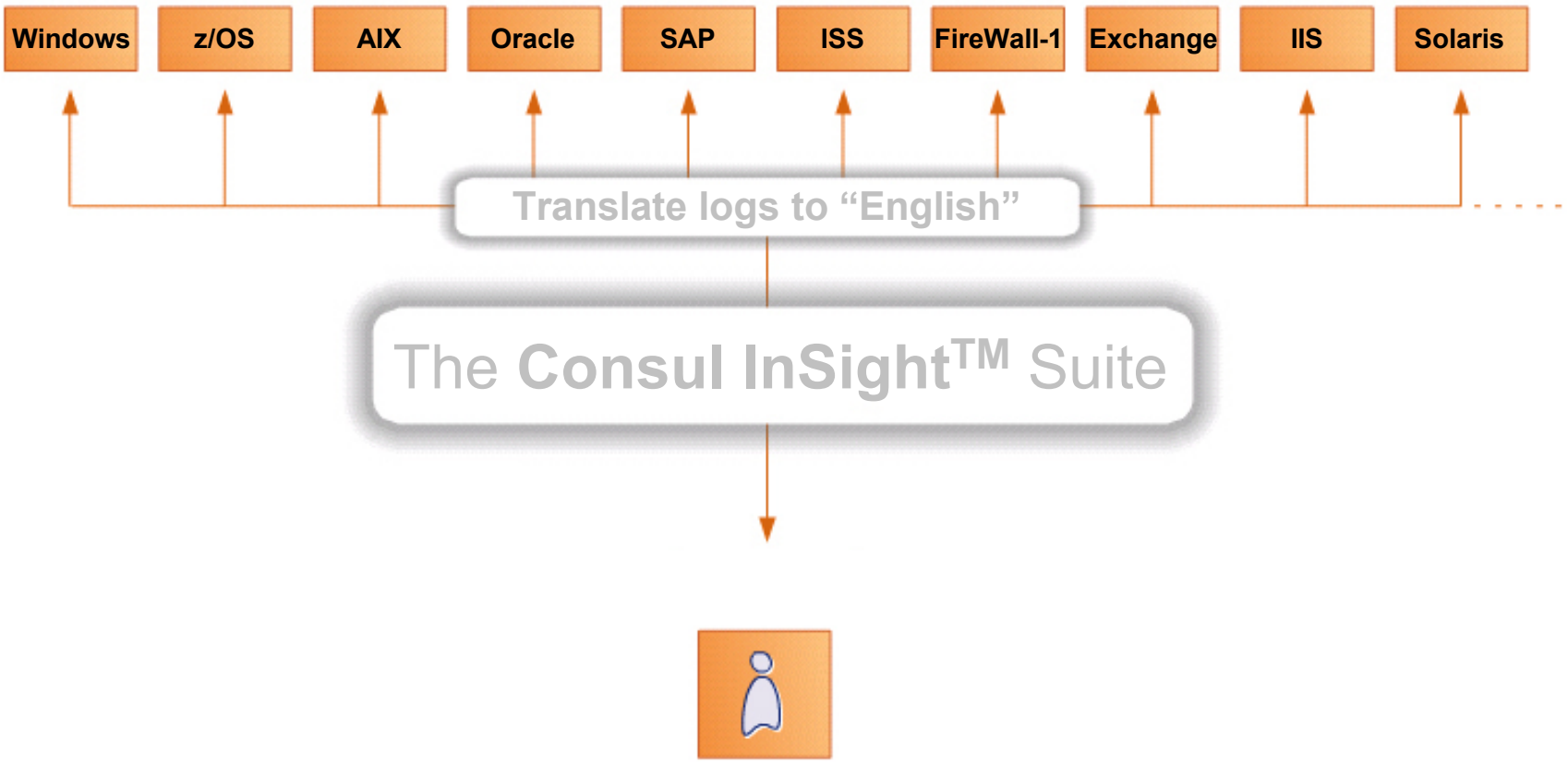
# How do I make sense of all this?



# After Log Capture, Translation is Next



# Now all Logs in Your Enterprise in a Single Language



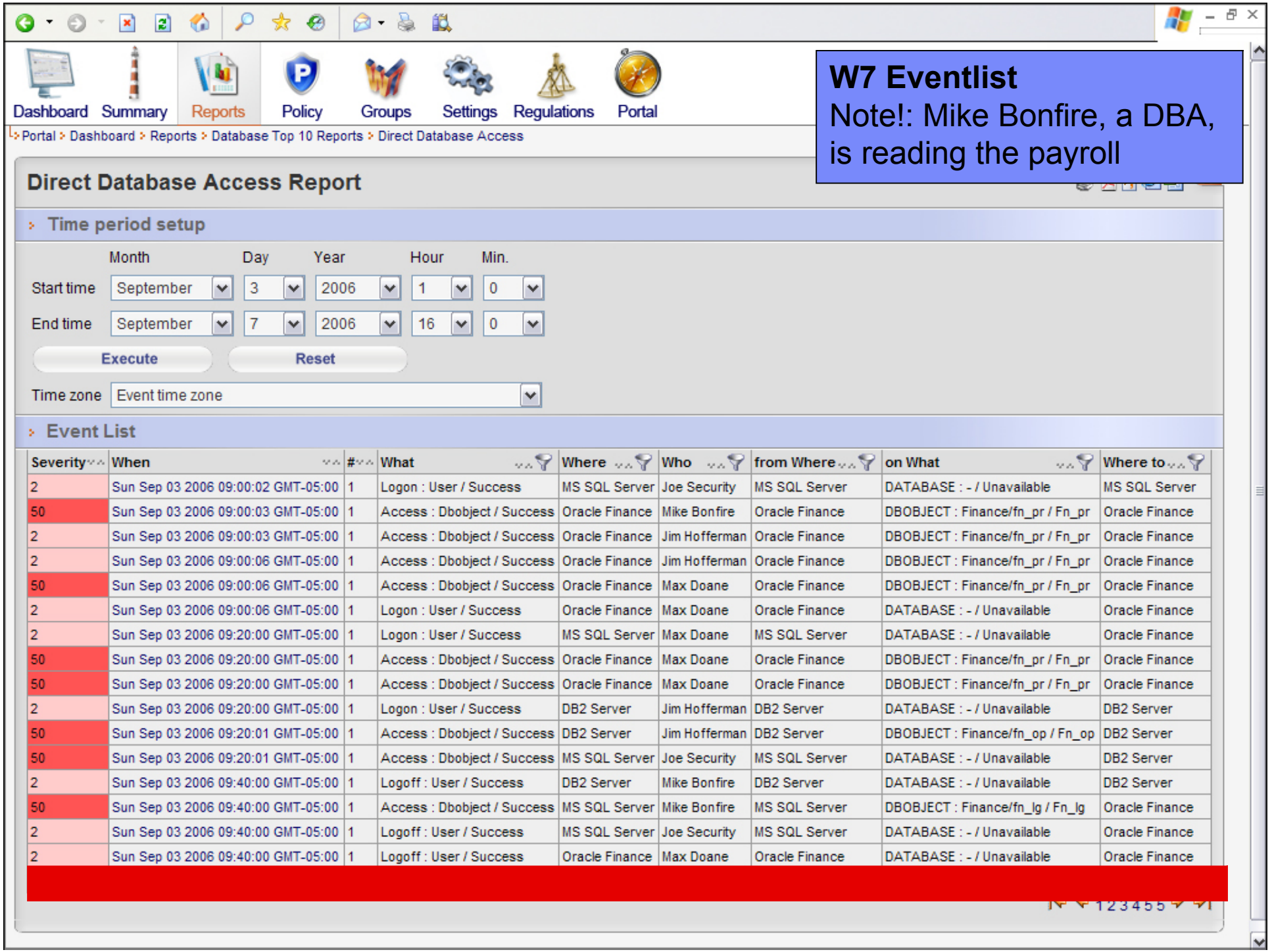

***Consul InSight saves your information security and compliance staff time and money by automating monitoring across the enterprise.***

# Translate Logs into English - Consul's W7 Methodology

Who did What type of action on What?

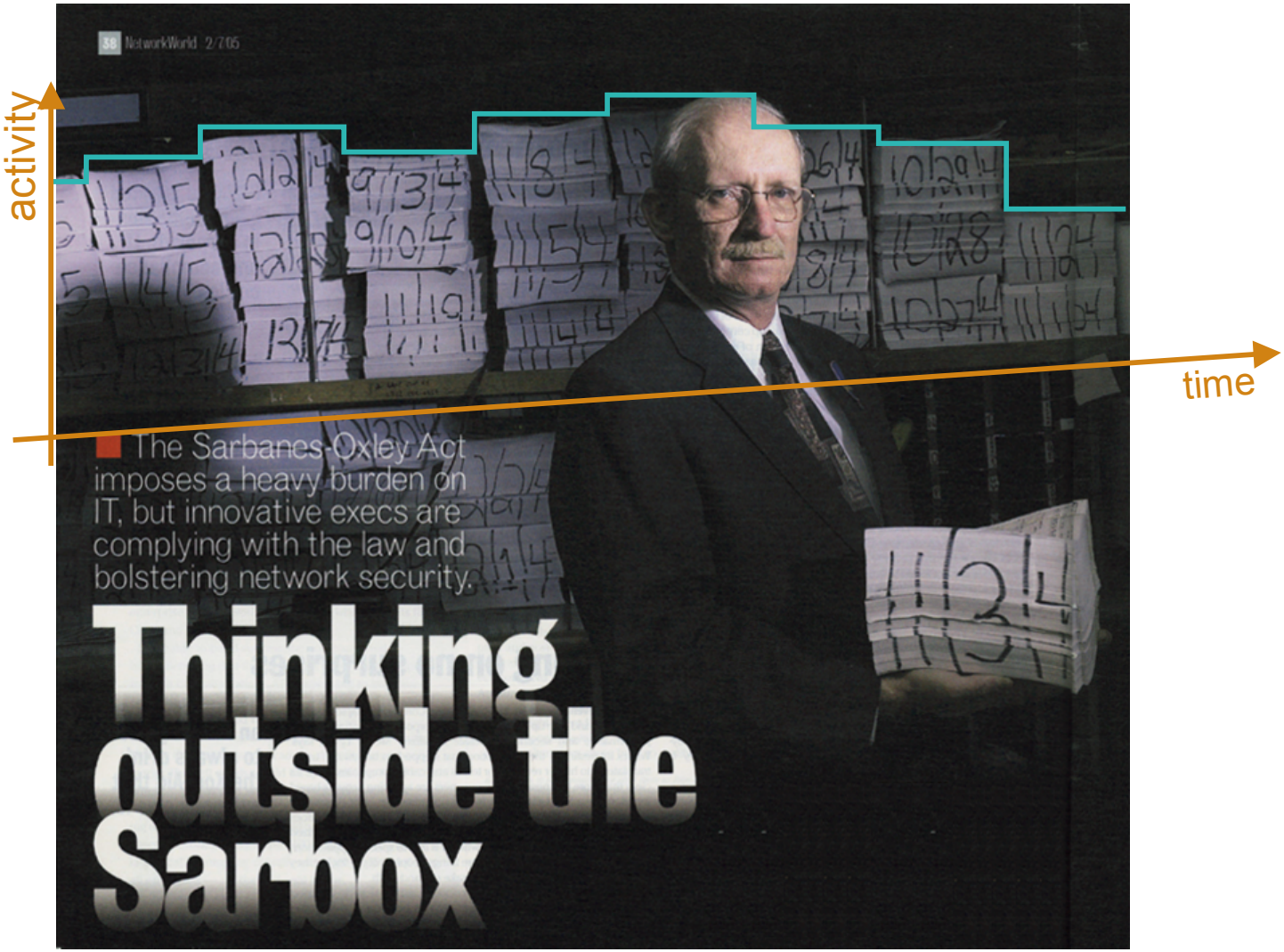
When did he do it and Where, From Where and Where To?

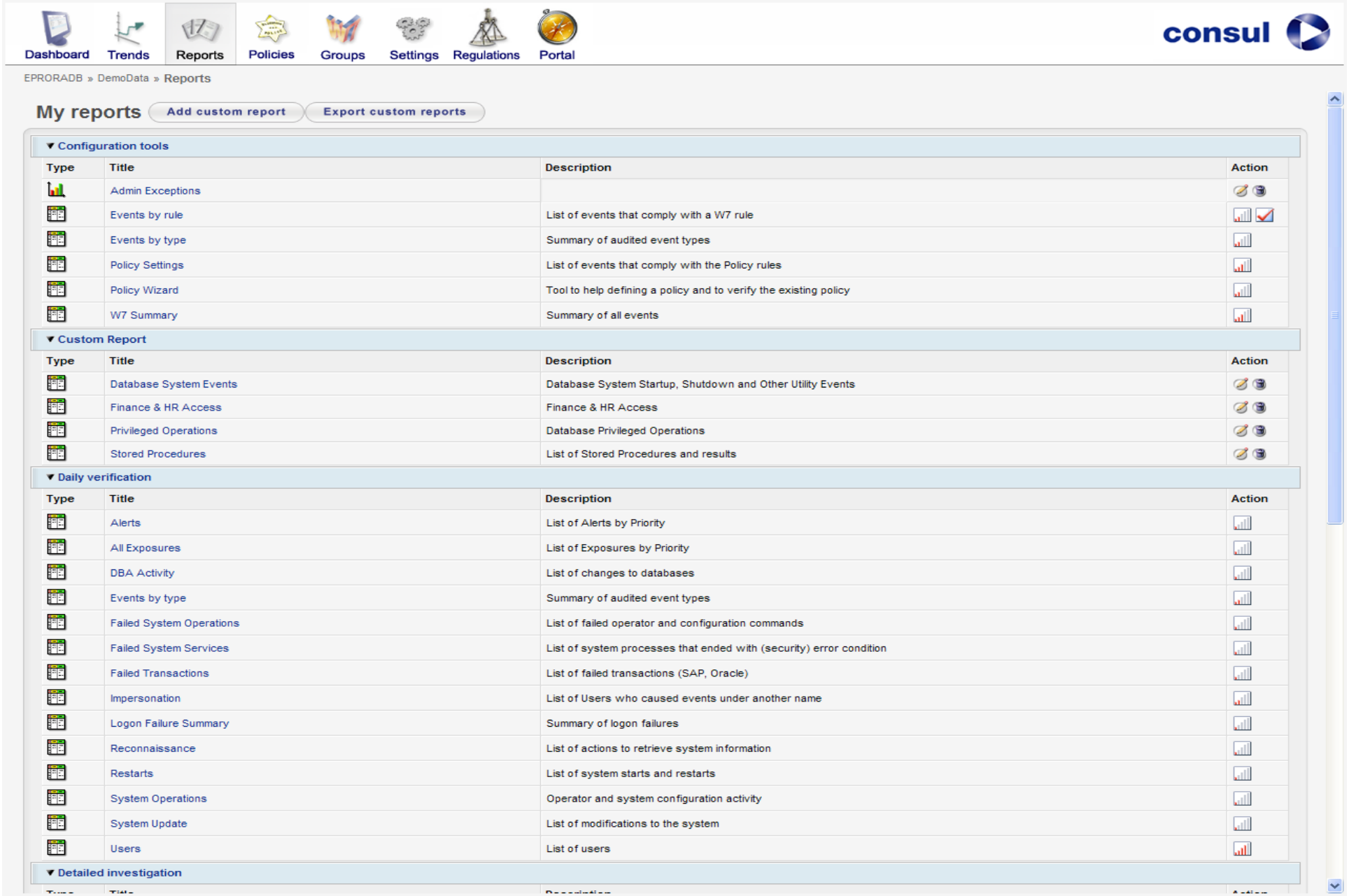
We do the hard work, so you don't have to!!

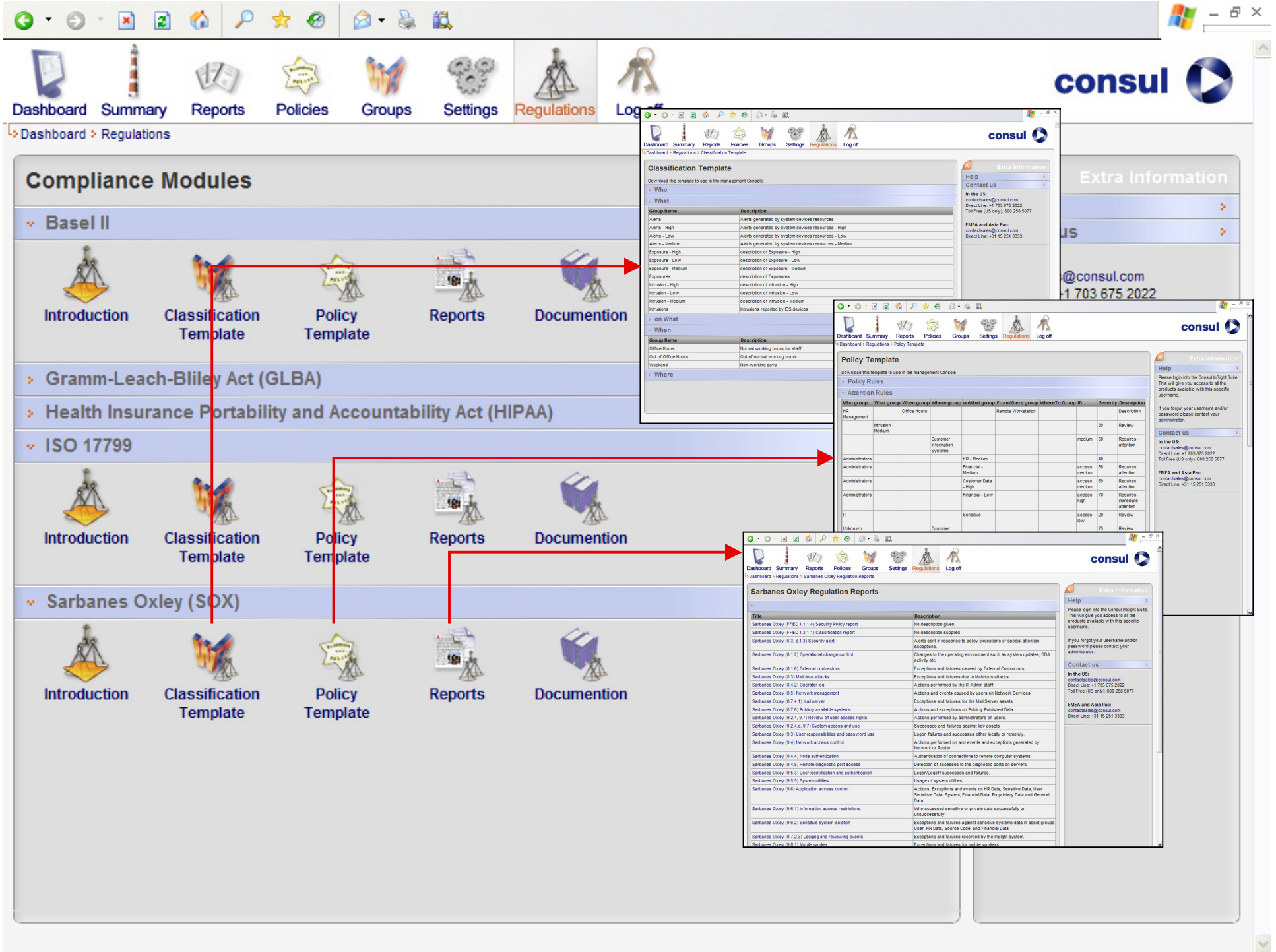

Dashboard
Summary
Reports
Policy
Groups
Settings
Regulations
Portal
Portal > Dashboard > Reports > Database Top 10 Reports > Direct Database Access
W7 Eventlist
Note!: Mike Bonfire, a DBA, is reading the payroll
Direct Database Access Report
Time period setup
Month
Day
Year
Hour
Min.
Start time
September
3
2006
1
0
End time
September
7
2006
16
0
Execute
Reset
Time zone
Event time zone
Event List
Severity
When
#
What
Where
Who
from Where
on What
Where to
2
Sun Sep 03 2006 09:00:02 GMT-05:00
1
Logon : User / Success
MS SQL Server
Joe Security
MS SQL Server
DATABASE : - / Unavailable
MS SQL Server
50
Sun Sep 03 2006 09:00:03 GMT-05:00
1
Access : Dbobject / Success
Oracle Finance
Mike Bonfire
Oracle Finance
DBOBJECT : Finance/fn_pr / Fn_pr
Oracle Finance
2
Sun Sep 03 2006 09:00:03 GMT-05:00
1
Access : Dbobject / Success
Oracle Finance
Jim Hofferman
Oracle Finance
DBOBJECT : Finance/fn_pr / Fn_pr
Oracle Finance
2
Sun Sep 03 2006 09:00:06 GMT-05:00
1
Access : Dbobject / Success
Oracle Finance
Jim Hofferman
Oracle Finance
DBOBJECT : Finance/fn_pr / Fn_pr
Oracle Finance
50
Sun Sep 03 2006 09:00:06 GMT-05:00
1
Access : Dbobject / Success
Oracle Finance
Max Doane
Oracle Finance
DBOBJECT : Finance/fn_pr / Fn_pr
Oracle Finance
2
Sun Sep 03 2006 09:00:06 GMT-05:00
1
Logon : User / Success
Oracle Finance
Max Doane
Oracle Finance
DATABASE : - / Unavailable
Oracle Finance
2
Sun Sep 03 2006 09:20:00 GMT-05:00
1
Logon : User / Success
MS SQL Server
Max Doane
MS SQL Server
DATABASE : - / Unavailable
Oracle Finance
50
Sun Sep 03 2006 09:20:00 GMT-05:00
1
Access : Dbobject / Success
Oracle Finance
Max Doane
Oracle Finance
DBOBJECT : Finance/fn_pr / Fn_pr
Oracle Finance
50
Sun Sep 03 2006 09:20:00 GMT-05:00
1
Access : Dbobject / Success
Oracle Finance
Max Doane
Oracle Finance
DBOBJECT : Finance/fn_pr / Fn_pr
Oracle Finance
2
Sun Sep 03 2006 09:20:00 GMT-05:00
1
Logon : User / Success
DB2 Server
Jim Hofferman
DB2 Server
DATABASE : - / Unavailable
DB2 Server
50
Sun Sep 03 2006 09:20:01 GMT-05:00
1
Access : Dbobject / Success
DB2 Server
Jim Hofferman
DB2 Server
DBOBJECT : Finance/fn_op / Fn_op
DB2 Server
50
Sun Sep 03 2006 09:20:01 GMT-05:00
1
Access : Dbobject / Success
MS SQL Server
Joe Security
MS SQL Server
DATABASE : - / Unavailable
DB2 Server
2
Sun Sep 03 2006 09:40:00 GMT-05:00
1
Logoff : User / Success
DB2 Server
Mike Bonfire
DB2 Server
DATABASE : - / Unavailable
DB2 Server
50
Sun Sep 03 2006 09:40:00 GMT-05:00
1
Access : Dbobject / Success
MS SQL Server
Mike Bonfire
MS SQL Server
DBOBJECT : Finance/fn_lg / Fn_lg
Oracle Finance
2
Sun Sep 03 2006 09:40:00 GMT-05:00
1
Logoff : User / Success
MS SQL Server
Joe Security
MS SQL Server
DATABASE : - / Unavailable
Oracle Finance
2
Sun Sep 03 2006 09:40:00 GMT-05:00
1
Logoff : User / Success
Oracle Finance
Max Doane
Oracle Finance
DATABASE : - / Unavailable
Oracle Finance
1 2 3 4 5 5

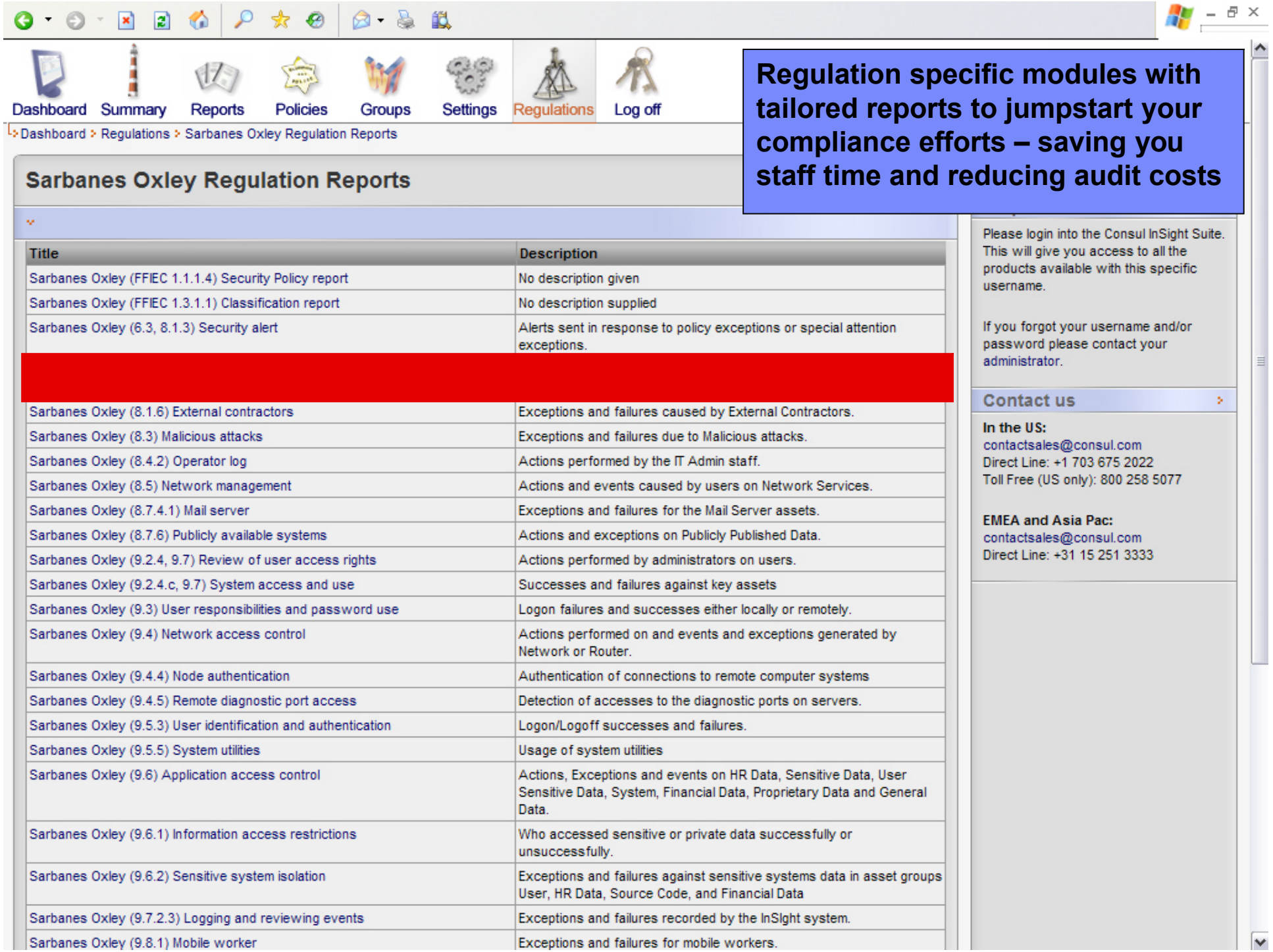
# You Need Reports to Communicate

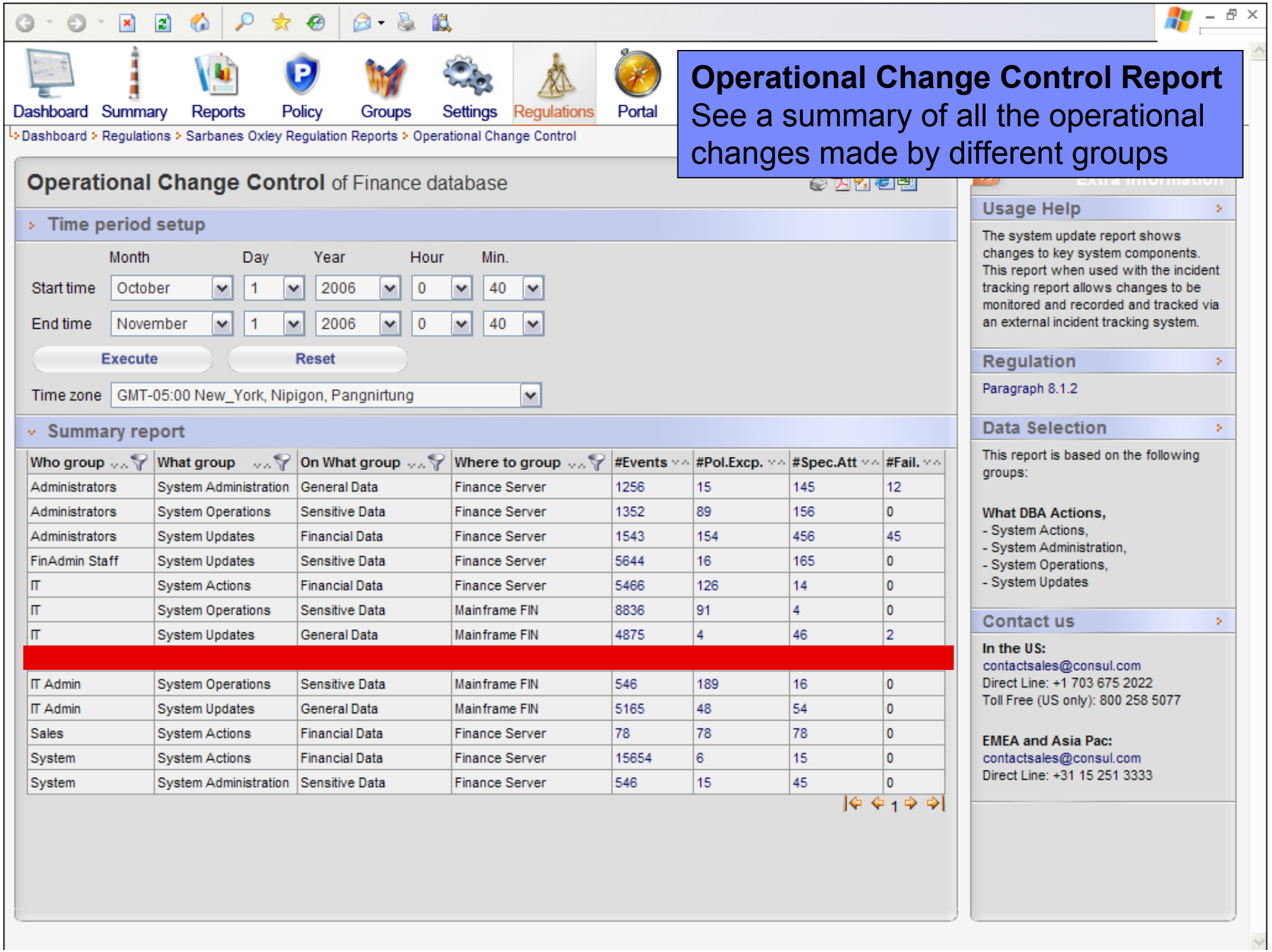
Communicate




Dashboard
Trends
Reports
Policies
Groups
Settings
Regulations
Portal
consul
EPRORADB » DemoData » Reports
My reports
Add custom report
Export custom reports
Configuration tools
Type
Title
Description
Action
Admin Exceptions
Events by rule
List of events that comply with a W7 rule
Events by type
Summary of audited event types
Policy Settings
List of events that comply with the Policy rules
Policy Wizard
Tool to help defining a policy and to verify the existing policy
W7 Summary
Summary of all events
Custom Report
Database System Events
Database System Startup, Shutdown and Other Utility Events
Finance & HR Access
Finance & HR Access
Privileged Operations
Database Privileged Operations
Stored Procedures
List of Stored Procedures and results
Daily verification
Alerts
List of Alerts by Priority
All Exposures
List of Exposures by Priority
DBA Activity
List of changes to databases
Events by type
Summary of audited event types
Failed System Operations
List of failed operator and configuration commands
Failed System Services
List of system processes that ended with (security) error condition
Failed Transactions
List of failed transactions (SAP, Oracle)
Impersonation
List of Users who caused events under another name
Logon Failure Summary
Summary of logon failures
Reconnaissance
List of actions to retrieve system information
Restarts
List of system starts and restarts
System Operations
Operator and system configuration activity
System Update
List of modifications to the system
Users
List of users
Detailed investigation


Dashboard
Summary
Reports
Policies
Groups
Settings
Regulations
Log off
consul
Dashboard > Regulations
Compliance Modules
Basel II
Introduction
Classification Template
Policy Template
Reports
Documention
Gramm-Leach-Bliley Act (GLBA)
Health Insurance Portability and Accountability Act (HIPAA)
ISO 17799
Introduction
Classification Template
Policy Template
Reports
Documention
Sarbanes Oxley (SOX)
Introduction
Classification Template
Policy Template
Reports
Documention
Extra Information
Classification Template
Policy Template
Sarbanes Oxley Regulation Reports


Dashboard
Summary
Reports
Policies
Groups
Settings
Regulations
Log off
Dashboard > Regulations > Sarbanes Oxley Regulation Reports
Regulation specific modules with tailored reports to jumpstart your compliance efforts – saving you staff time and reducing audit costs
Sarbanes Oxley Regulation Reports
Title
Description
Sarbanes Oxley (FFIEC 1.1.1.4) Security Policy report
No description given
Sarbanes Oxley (FFIEC 1.3.1.1) Classification report
No description supplied
Sarbanes Oxley (6.3, 8.1.3) Security alert
Alerts sent in response to policy exceptions or special attention exceptions.
Sarbanes Oxley (8.1.6) External contractors
Exceptions and failures caused by External Contractors.
Sarbanes Oxley (8.3) Malicious attacks
Exceptions and failures due to Malicious attacks.
Sarbanes Oxley (8.4.2) Operator log
Actions performed by the IT Admin staff.
Sarbanes Oxley (8.5) Network management
Actions and events caused by users on Network Services.
Sarbanes Oxley (8.7.4.1) Mail server
Exceptions and failures for the Mail Server assets.
Sarbanes Oxley (8.7.6) Publicly available systems
Actions and exceptions on Publicly Published Data.
Sarbanes Oxley (9.2.4, 9.7) Review of user access rights
Actions performed by administrators on users.
Sarbanes Oxley (9.2.4.c, 9.7) System access and use
Successes and failures against key assets
Sarbanes Oxley (9.3) User responsibilities and password use
Logon failures and successes either locally or remotely.
Sarbanes Oxley (9.4) Network access control
Actions performed on and events and exceptions generated by Network or Router.
Sarbanes Oxley (9.4.4) Node authentication
Authentication of connections to remote computer systems
Sarbanes Oxley (9.4.5) Remote diagnostic port access
Detection of accesses to the diagnostic ports on servers.
Sarbanes Oxley (9.5.3) User identification and authentication
Logon/Logoff successes and failures.
Sarbanes Oxley (9.5.5) System utilities
Usage of system utilities
Sarbanes Oxley (9.6) Application access control
Actions, Exceptions and events on HR Data, Sensitive Data, User Sensitive Data, System, Financial Data, Proprietary Data and General Data.
Sarbanes Oxley (9.6.1) Information access restrictions
Who accessed sensitive or private data successfully or unsuccessfully.
Sarbanes Oxley (9.6.2) Sensitive system isolation
Exceptions and failures against sensitive systems data in asset groups User, HR Data, Source Code, and Financial Data
Sarbanes Oxley (9.7.2.3) Logging and reviewing events
Exceptions and failures recorded by the InSIght system.
Sarbanes Oxley (9.8.1) Mobile worker
Exceptions and failures for mobile workers.
Please login into the Consul InSight Suite. This will give you access to all the products available with this specific username.
If you forgot your username and/or password please contact your administrator.
Contact us
In the US:
contactsales@consul.com
Direct Line: +1 703 675 2022
Toll Free (US only): 800 258 5077
EMEA and Asia Pac:
contactsales@consul.com
Direct Line: +31 15 251 3333


Dashboard
Summary
Reports
Policy
Groups
Settings
Regulations
Portal
Dashboard › Regulations › Sarbanes Oxley Regulation Reports › Operational Change Control
Operational Change Control Report
See a summary of all the operational changes made by different groups
Operational Change Control of Finance database
Time period setup
Month Day Year Hour Min.
Start time October 1 2006 0 40
End time November 1 2006 0 40
Execute
Reset
Time zone GMT-05:00 New_York, Nipigon, Pangnirtung
Summary report
Who group | What group | On What group | Where to group | #Events | #Pol.Excp. | #Spec.Att | #Fail.
Administrators | System Administration | General Data | Finance Server | 1256 | 15 | 145 | 12
Administrators | System Operations | Sensitive Data | Finance Server | 1352 | 89 | 156 | 0
Administrators | System Updates | Financial Data | Finance Server | 1543 | 154 | 456 | 45
FinAdmin Staff | System Updates | Sensitive Data | Finance Server | 5644 | 16 | 165 | 0
IT | System Actions | Financial Data | Finance Server | 5466 | 126 | 14 | 0
IT | System Operations | Sensitive Data | Mainframe FIN | 8836 | 91 | 4 | 0
IT | System Updates | General Data | Mainframe FIN | 4875 | 4 | 46 | 2
IT Admin | System Operations | Sensitive Data | Mainframe FIN | 546 | 189 | 16 | 0
IT Admin | System Updates | General Data | Mainframe FIN | 5165 | 48 | 54 | 0
Sales | System Actions | Financial Data | Finance Server | 78 | 78 | 78 | 0
System | System Actions | Financial Data | Finance Server | 15654 | 6 | 15 | 0
System | System Administration | Sensitive Data | Finance Server | 546 | 15 | 45 | 0
1
Usage Help
The system update report shows changes to key system components. This report when used with the incident tracking report allows changes to be monitored and recorded and tracked via an external incident tracking system.
Regulation
Paragraph 8.1.2
Data Selection
This report is based on the following groups:
What DBA Actions,
- System Actions,
- System Administration,
- System Operations,
- System Updates
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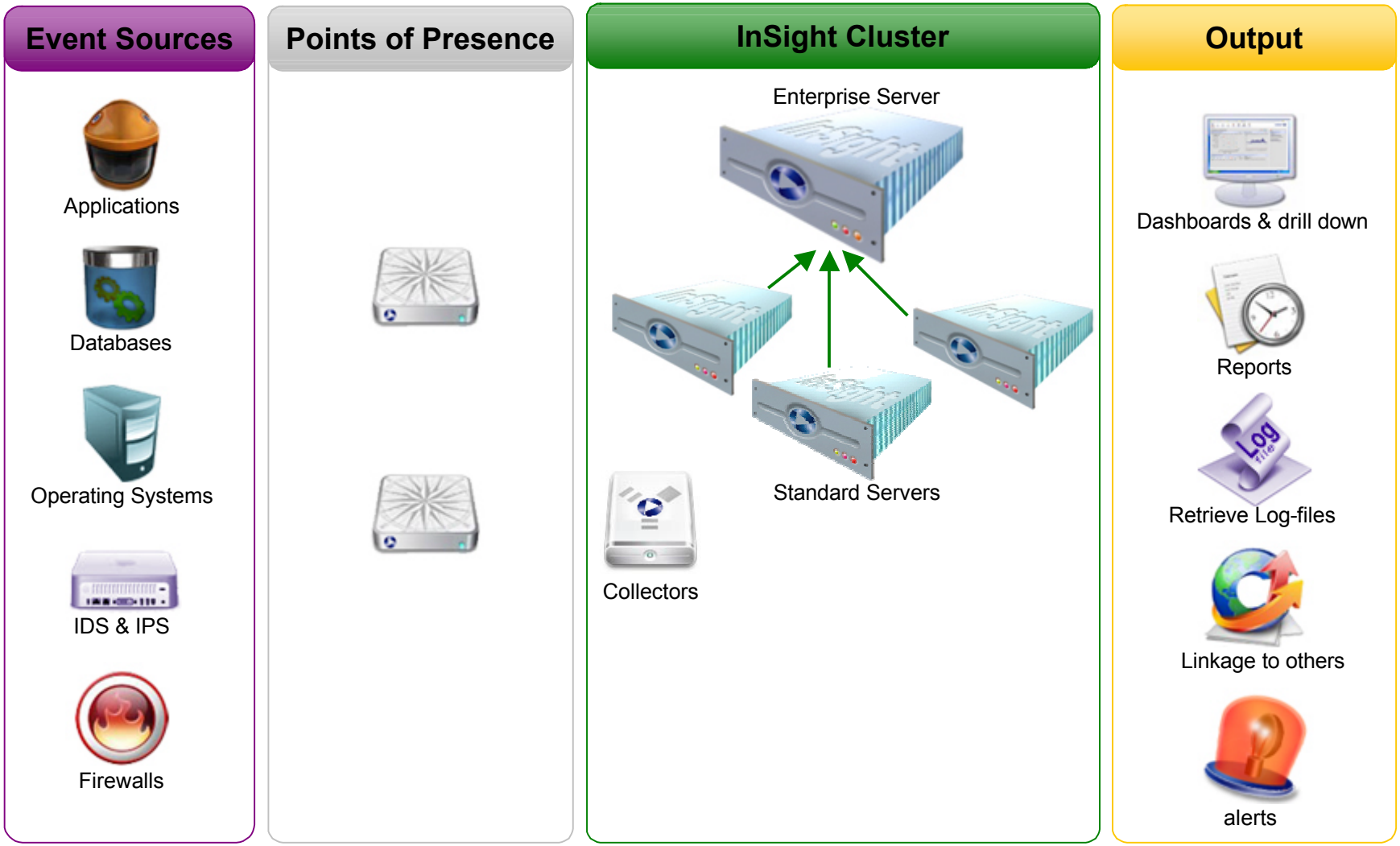
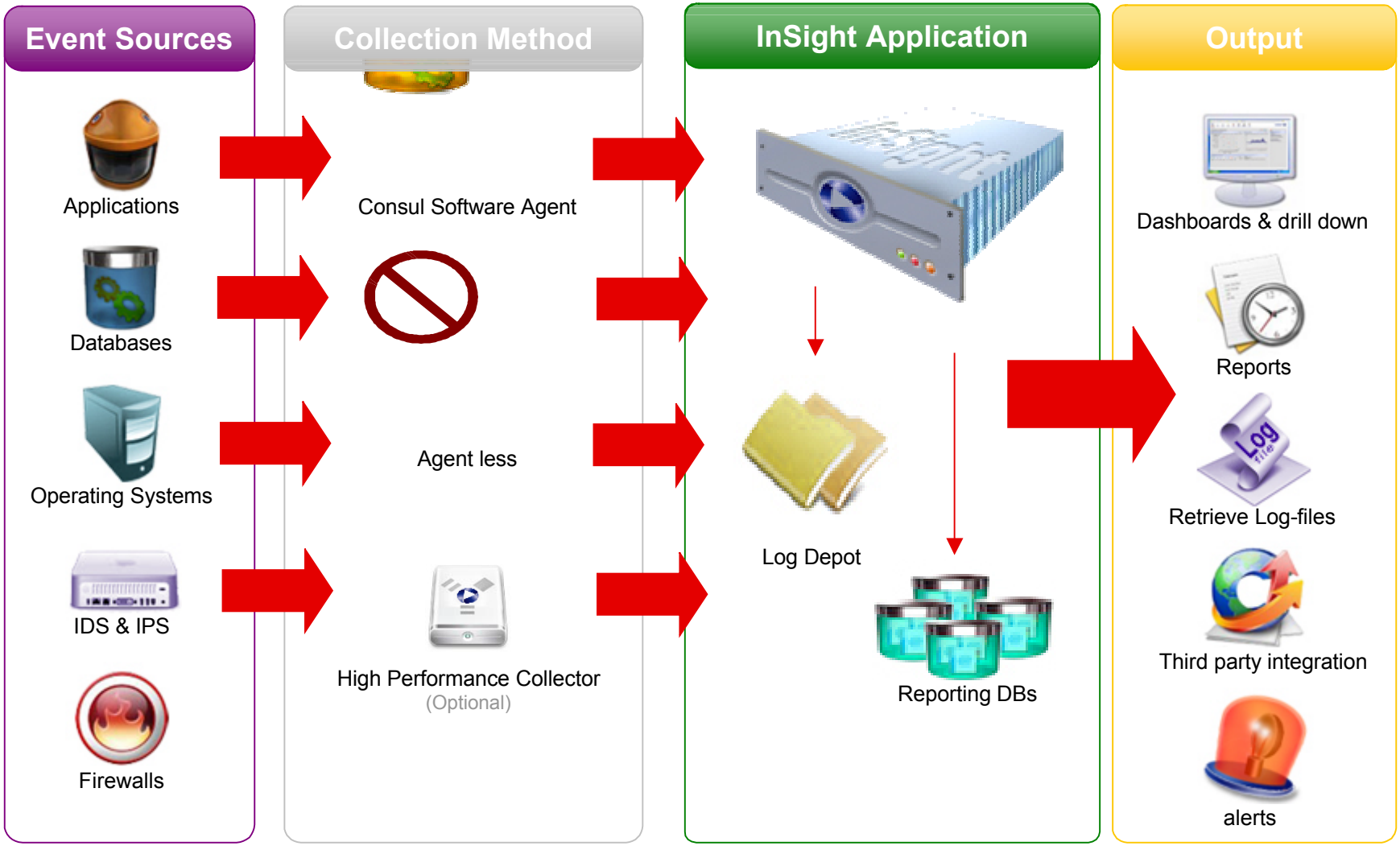
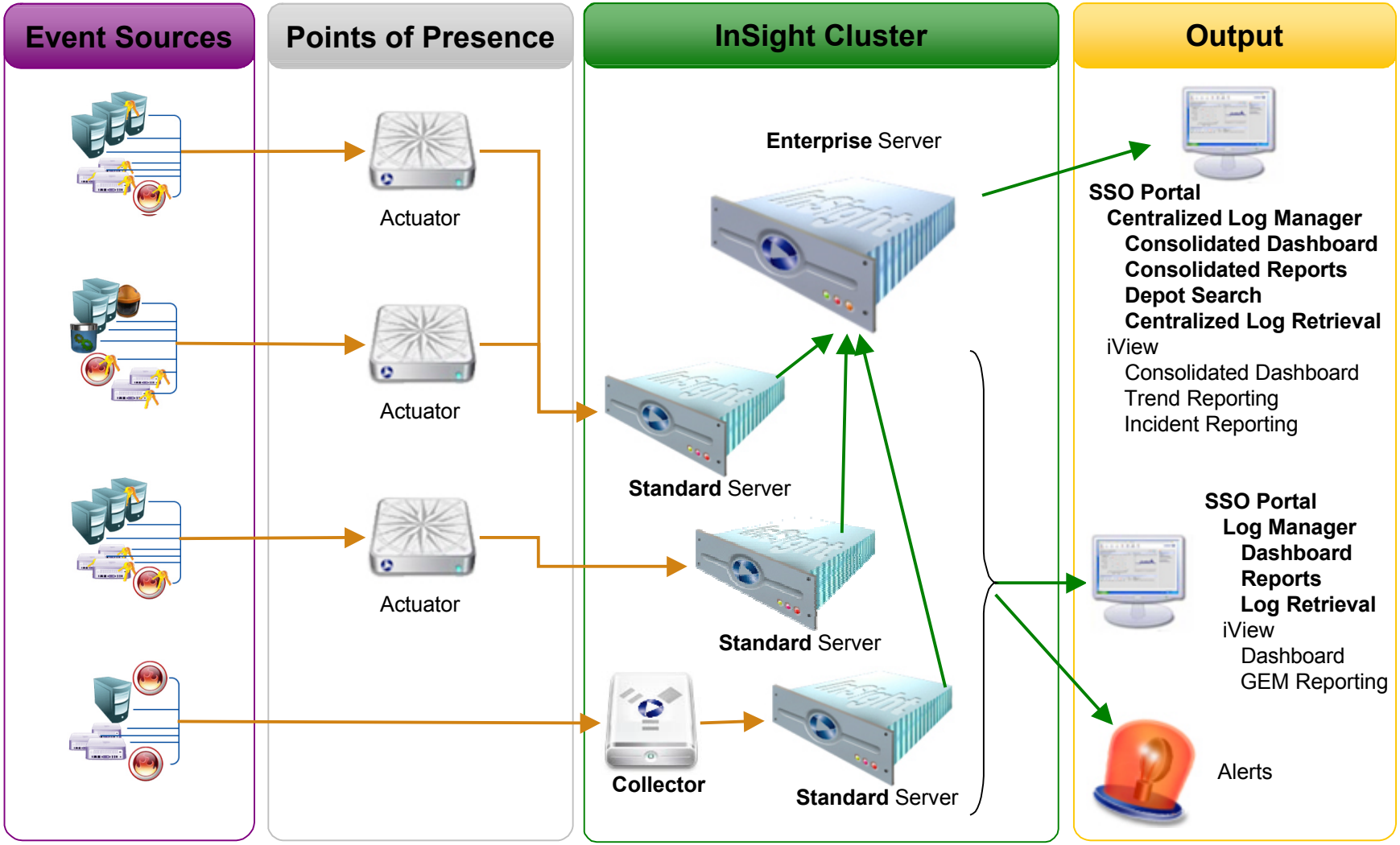
# InSight – Functional Component Overview



# Architecture



# Single Cluster



# IBM's security management vision and strategy:
## *Integrated capabilities from Tivoli, Consul, ISS, STG and IGS*