

# Helping Government and Education with Security and Compliance

Background

zSecure's role



**In the battle for  
information security, the  
public sector is  
more vulnerable  
and  
more of a target.**

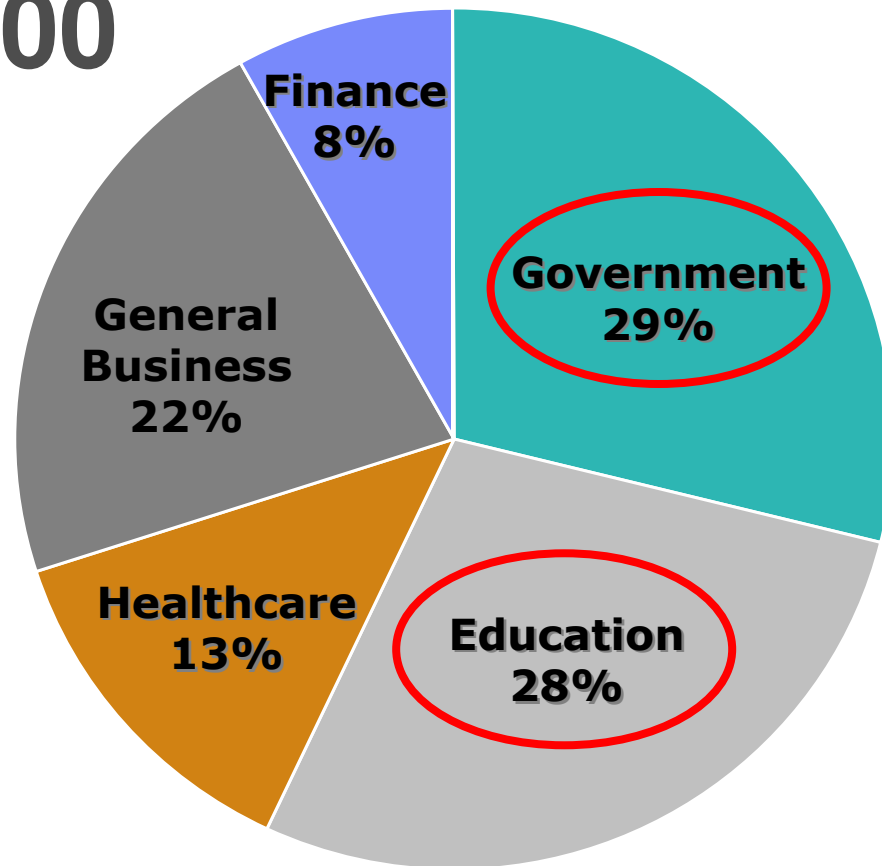
**Over 50% of data security breaches reported since 2005 were through state and local government and educational institutions.**

**Security is constantly number one or two on NASCIO's priority list for strategies, management processes and solutions.**

**2006.**

**More than 300  
breaches.**

**More than  
20 million  
people.**



# Between January 2003 and August 2004 the Commonwealth of Pennsylvania experienced cyber attacks that resulted in the following **business impacts:**



**Millions in revenue lost** due to interruptions in government operations

**Hundreds of hours in productivity lost** due to resource reallocation to address security vulnerabilities and system outages

The **inability to use technology** to address these types of attacks because of disparate and non-aligned technology solutions and insufficient enterprise-wide standardization and planning

# In May 2006 personal records of **26.5 million veterans** were compromised



An employee routinely **took records home** – and the laptop was stolen

Senior management remained **unaware** for two weeks

\$2000 theft may cost \$100M to remedy

# July 2007.

# A ten day period.

# Reported.

Yuba County Health and Human Services

A **laptop stolen** from a building contained personally identifiable information of individuals whose cases were opened before May 2001. The laptop was being used as a backup system for the county's computer system. The data include Social Security Numbers, birth dates, driver's license numbers and other private information.

Flexible Benefits Administrators, Virginia Beach

A **former employee allegedly stole** Virginia Beach city and school district employees' personal information and used it to commit prescription fraud. Police discovered a list of names and Social Security Numbers at the employees home

USMC/Penn State

Names and **Social Security Numbers** of Marines were found **through Google** Internet search engine

Hidalgo County Commissioner's Office

The **private medical information**, including Social Security Numbers and treatment details of people who sought medical assistance from the county was **posted on the Hidalgo County website**.

St Vincent Hospital, Indianapolis

A **security lapse** compromised names, addresses and Social Security Numbers.

University of Michigan

University **databases were hacked**. Names, addresses, Social Security Numbers, birth dates, and in some cases, the school districts where former students were teaching were exposed.

Jackson Local Schools, Ohio

The **Social Security Numbers** of present and former Jackson Local Schools' employees were at risk of **public access** on a county maintained Web site.

Connecticut General Assembly Transportation Committee

**Social Security Numbers** of former employees of defunct L.G. Defelice Inc. **posted on CT transportation committee website**.

# Objective – don't be “that guy”.

## **GLBA / PCI**

### **Wells Fargo**

Lost server  
caused first \$M  
notice cost

### **DSW**

Wireless attack  
\$6.5m reserve  
on 10K records

## **Privacy**

### **TJX**

45m stolen  
customer records

### **Choice Point**

\$10 million FTC  
fine

## **SOX**

### **ALL**

Poor planning  
wastes \$M

### **X REIT**

Could not  
complete a  
planned merger  
because of poor  
controls

## **e-discovery**

### **Intel**

Failure to  
produce email  
and other  
records => fine

### **Qwest**

Disgruntled IT  
staff recovered  
CEO's email

[23:56] <ccs4santa> hey  
[23:56] <ccs4santa> u selling fullz and cc# with cvv2?  
[00:03] <makdollar> yes  
[00:04] <ccs4santa> how much for a fullz?  
[00:13] <makdollar> 100\$  
[00:14] <ccs4santa> ok..how much for card number and ccv2 info?  
[00:15] <makdollar> same  
[00:16] <ccs4santa> ok..you also sellin bank logins...boa / wells / EU / UK?  
[00:17] <makdollar> yes  
[00:17] <ccs4santa> bank logins vary or...?  
[00:18] <makdollar> wbt?  
[00:20] <ccs4santa> how much for bank logins?  
[00:21] <makdollar> 320\$

[23:43] <phukincc> how bout bank logins? (boa, wells)  
[23:43] <CrueL> wells 3 logins . boa 2 logins  
[23:44] <CrueL> bussiness accts balances are all above 10k+  
[23:44] <CrueL> no scrnsht plz  
[23:44] <CrueL> rippers ask for it!  
[23:44] <phukincc> yeah that goes without saying  
[23:44] <phukincc> ?  
[23:45] <phukincc> how much per wells and boa acct?  
[23:45] <CrueL> 100\$ each login  
[23:46] <phukincc> mmmkay...the cvv2 that you have are like u posted?  
[23:46] <phukincc> \*are like what you posted?



The pace of regulation is increasing

Needs more and better compliance

Health Insurance Portability and Accountability

Federal Information Security Management

Gramm Leach Bliley

Family Educational Rights and Privacy

Payment Card Industry Data Standards

Sarbanes-Oxley

State regulations

Privacy and consent around dissemination of medical information

Requirements and best practices – **not YET for states, BUT...**

Privacy in financial institutions **BUT lending to students counts**

Privacy around dissemination of student information

Security standards for credit card transactions – affects **any merchant**, stringency based on volumes

Controls over financial reporting for public companies

Specific and growing

# The types of **incidents** vary...

**Lost or stolen laptops,  
computers, or other storage  
devices**

**Backup tapes lost in transit**

**Hackers breaking into systems**

**Employees stealing or allowing  
access to information**

**Poor business practices (e.g.  
postcards with SSNs**

**Malware of all kinds**

**Improper disposition of  
equipment**

# But what do states say are their **top** **risks?**

**Inadequate statewide policies,  
standards, and guidelines**

**Inability to stay current with  
existing policies and laws**

**Failure to comply with policies,  
regulations, and laws**

**Limited training and education  
for employees and contractors**

**Increased risks, threats and  
vulnerabilities**

# State officials are **focusing.**

## NASACT Conference Agenda, August 2007

Session Title/Speaker(s)	Session Description/CPE Field of Study
<p><i>Electronic Receipts</i></p> <p><i>Commonwealth of Pennsylvania: Merchant Services Overview</i>            Matt McCurdy, Vice President, Manager of Merchant Services, PNC Bank</p> <p><i>Payment Card Industry (PCI) Compliance</i>            John Flahive, Association Compliance Manager, NOVA Information Systems, Inc., a subsidiary of U.S. Bank</p> <p>Moderator: Harvey Eckert, Commonwealth Controller (PA)</p>	<p>This presentation addresses the current electronic payments landscape, and the benefits that the government sector can achieve through efficient credit card acceptance. The presentation will focus on the strategies the Commonwealth of Pennsylvania has implemented to adapt to the changing payments landscape.</p> <p>Also, this presentation will outline the Payment Card Industry Data Security Standards. These standards protect credit cardholder data, ensuring that merchants, and service providers maintain the highest information security standard. All entities that store, process, or transmit card data are required to be compliant with these payment card industry standards for security.</p> <p>CPE field of study: Finance</p>

# State legislators are taking **action.**

AR SB 1167	NE LB 876 Section 87-803
AZ SB 1338	NV SB 347, Business AB 334 Government
CA SB 1386	NH RSA 359-C:20
CO HB1119	NJ A4001
CT SB 650	NY 4254-A
DE HB 116	NC SB 1048
FL HB 481	ND SB 2251
GA SB 230	OH HB 104
HI SB2290	OK 74.49.3113.1
ID Title 28-51	PA SB 712
ILLINOIS (H.B. 1633)	RI H 6191
IN SB 503	TN SB 2220
KS SB196	TX SB 122
LA SB 205	UT 13-44-202
ME LD 1671	VT 9-62 §2435
MI SB 309	WA SB 6043
MN HF 2121, Business, HF 225, Government	WI 895.507
MT HB 732	

# What are some typical initiatives?

Ensuring that legislative language is established

Updating and revising existing policies

Continuing education and training awareness for information security and privacy

Developing more tools for risk self-assessment

Developing Information Security roles and responsibilities

Developing Internet usage policy and guidelines

Coordinating efforts to align operational recovery and business continuity plans

# What **benefits** are they looking for?

Reduce malicious code targeting desktops  
and servers

Protect mission critical, legally and  
personally sensitive information

Reduce drags on productivity

Enhance systems stability and availability

Increase flexibility and reduce complexity  
through standardization

Proactive assessments

Broad awareness programs around  
physical and information security

Reduce exposure to liabilities and costs of  
remediation

# It is a broadening challenge

Training

Security  
Policy

PCI

Quality

Security  
Design

SOX

Penetration  
Testing

HIPAA

Code  
Review

GLBA

ISO-17799

N/HIDS

Firewall

Privacy Laws

Hosting





# What can you do?



# A sound security program does many things...

## **Focuses on HR**

- Hiring and retention policies for IT/security staff and end users
- Adequate staffing, authority, responsibility, succession
- Key training policies
- Termination procedures

## **Performs electronic testing**

- Firewalls and routers
- Devices visible to the Internet
- Network segmentation
- Active/inactive modems
- OS levels and patches
- Anti virus software

## **Reviews network architecture**

- Segmentation
- Critical devices
- User rights and permissions

## **Institutionalizes InfoSec**

- IT in enterprise governance
- Management philosophy
- Enterprise culture
- Periodic training and review for all
- Policy development

## **Reviews business policies and procedures**

- Backup and failover contingency
- Redundancy, disaster recovery and continuity planning
- Current equipment inventory
- Vendor, partner and provider SLAs and liability
- User rights and permissions
- End user computing policies

## **Inspects physical security**

- Door locks and alarms
- Security cameras and monitoring
- Visitor access logs
- HVAC, fire suppression, etc
- Racks and cabling

# Think about your current security position and programs

**What is your biggest information security concern?**

**Have you experienced a data breach? How did it affect you?**

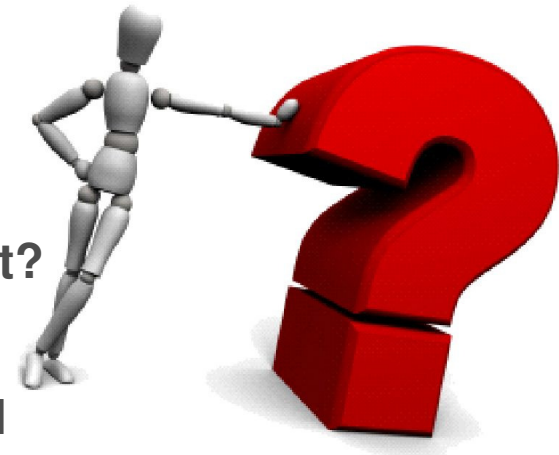
**Does your organization have the skills and experience to handle security breaches? What are your current resource constraints?**

**How would you handle a computer security incident? What is the state of your incident response plan?**

**Are you affected by legislation or regulation around security and data protection – HIPAA, PCI (where do you accept credit cards?) etc?**

**What kind of security assessments do you conduct on a regular basis?**

**How do you assure stakeholders that your network and information stores are secure?**



# Improving information security programs

## **Watch:** Monitor and act

- Central management of security events
- Correlation of events into threats
- Action to prevent malicious threats

## **Assess** the environment

- Detailed analysis of security posture enables understanding of exposures
- Governance management
- Scheduled and ad hoc assessments

## Control **access** to assets

- Control and manage user identities and privileges
- Manage access authorities
- Manage policies

## **Defend** outside and inside

- Pre-emptive perimeter protection against external threats
- Protection inside the enterprise against malicious insiders

# Tivoli zSecure Suite

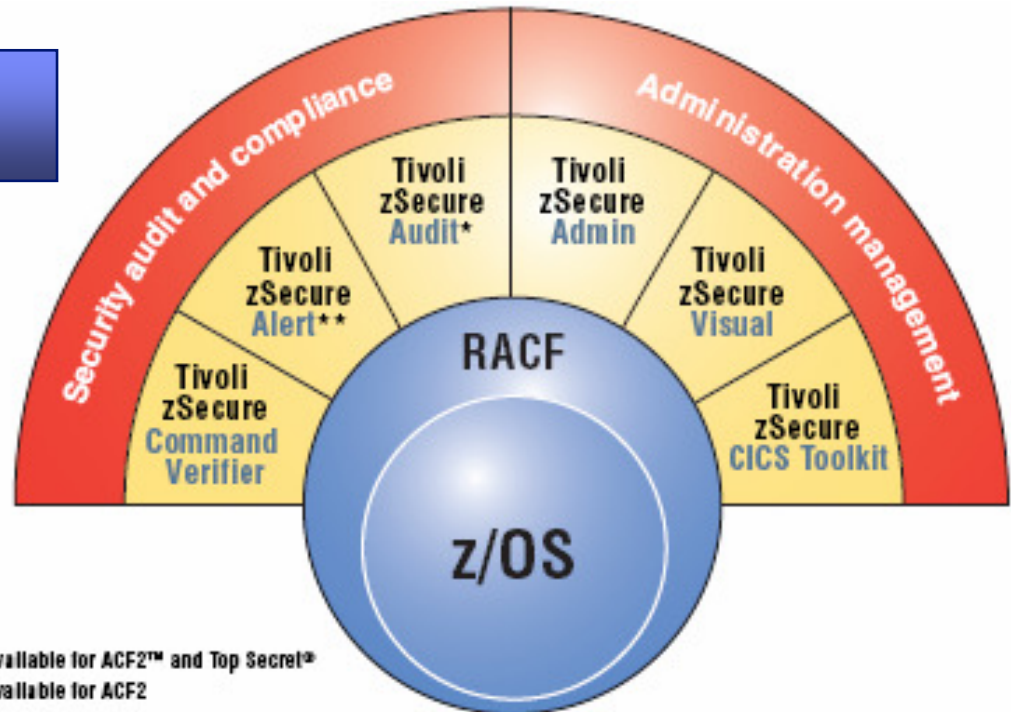
## Security Management and Administration for z/OS and RACF

Administration and provisioning:

- Reduce administration time, effort and cost
- Reduce training time needed for new administrators

Audit, monitoring and compliance:

- Helps to pass audits more easily
- Can improve security posture
- Save time and costs through improved security and incident handling
- Can increase operational effectiveness



## Components

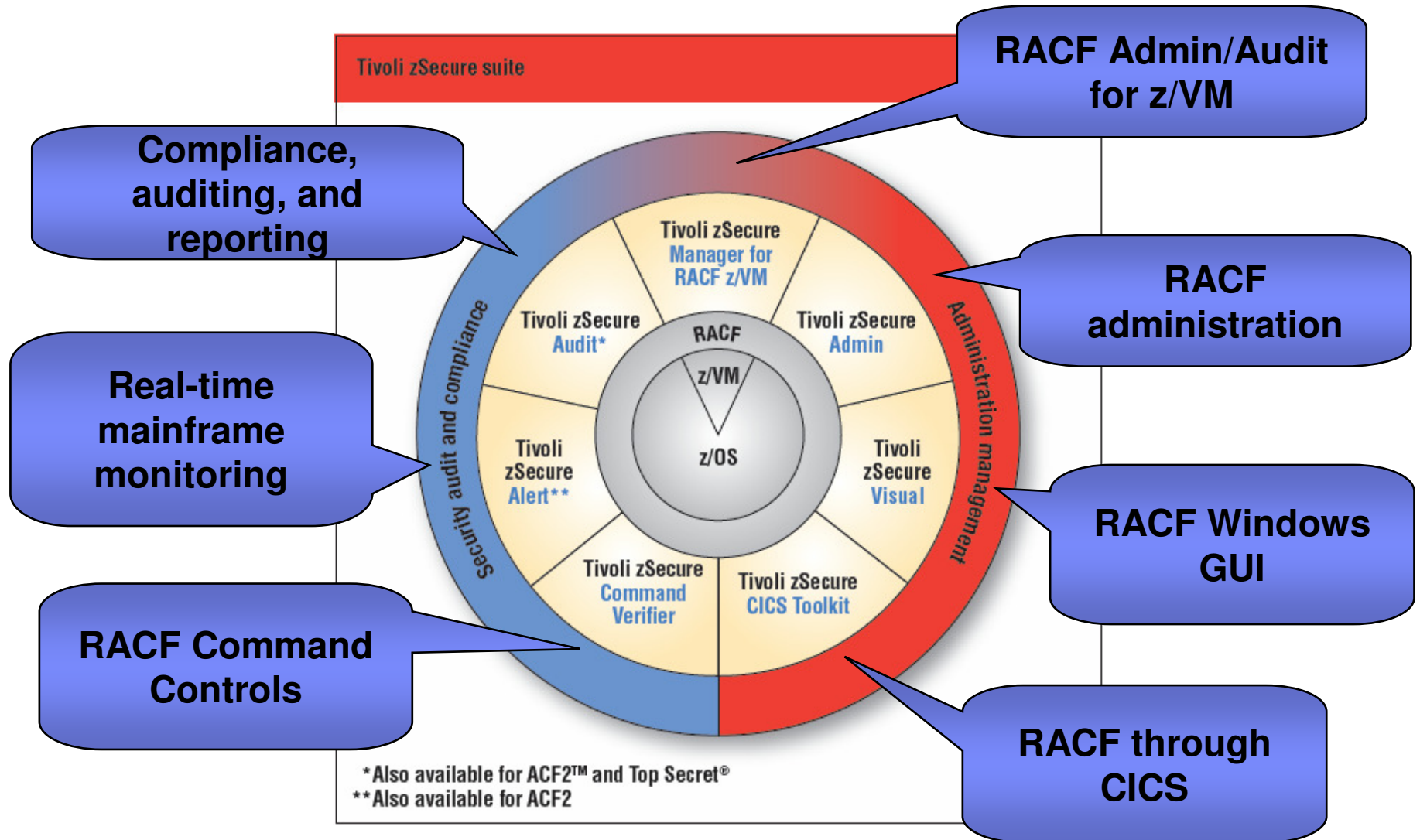
Administration and provisioning:

- **zSecure Admin** enhances user management
- **zSecure Visual** offers a Microsoft® Windows® GUI
- **zSecure CICS Toolkit** for simplified CICS security management

Audit, monitoring and compliance:

- **zSecure Audit** provides event detection, analysis & reporting and system integrity audit & analysis
- **zSecure Alert** provides intrusion detection and alerting
- **zSecure Command Verifier** offers automated security monitoring

# Tivoli zSecure Suite



Note: ACF2 and Top Secret are either registered trademarks or trademarks of CA, Inc. or one of its subsidiaries.

# Tivoli zSecure Admin

A user-friendly layer on top of RACF which enables security administration, user management and compliance management on the mainframe

## Highlights:

- Admin can help you quickly identify problems in RACF, such as missing or inconsistent definitions, enabling you to fix or prevent mistakes before they become a threat to security and compliance, thus reducing the chances of breaches.
- Admin enables you to automate recurring, time-consuming security tasks. By implementing a repeatable process for security management, Admin can help you reduce errors and improve the overall quality of service, ensuring you are addressing your compliance requirements.
- Admin enables you to display data from the active (live) RACF database. Administrators can view current information, including recent changes by other administrators. An administrator can immediately verify the effect of the changes that have just been made, without having to wait for a refresh of an unloaded RACF database.

# IBM Tivoli zSecure Audit

Compliance and audit solution that enables you to analyze, detect, and report security, z/OS, and Unix Systems Services exposures as well as cross reference events with RACF and system information

## Highlights:

- Once auditing and analyzing of the z/OS and critical information, is completed, Audit prioritizes and highlights security concerns. Problems are ranked by audit priority, and describes the potential security breach or exposure.
- Audit analyzes SMF from the live SMF data sets or from extracted SMF data. By using live data sets, information from the active system can immediately be viewed interactively after an event has taken place.
- Audit allows you to send Simple Network Management Protocol (SNMP) messages to an enterprise management console for policy exceptions or violations that indicate a security breach or weakness.
- Audit can identify changes in the individual members of partitioned data sets, thus identifying potential areas where proper policies have not been followed.



# zSecure Alert

Real-time mainframe threat monitoring allowing you to monitor intruders and identify mis-configurations that could hamper your compliance efforts

## Highlights:

- Threat knowledge base with parameters from your active configurations, which helps isolate relevant attack patterns, detect multiple types of attacks and configuration threats. Knowledge of these configuration mistakes and attacks can help you take action before others can exploit them.
- Broad range of monitoring capabilities, including monitoring sensitive data for misuse on z/OS, RACF, and UNIX subsystems. Monitoring critical data aids in maintaining data integrity and staying ahead of potential security policy violations
- Easily send critical alerts to enterprise audit, compliance and monitoring solutions. Alert can automatically send security information from the mainframe into TCIM, TSOM and network and enterprise consoles. This provides timely alerts which helps you respond quickly to prevent further damage, ease organization-wide inclusion of the mainframe in audit and compliance reports.

# zSecure Command Verifier

Policy enforcement solution that enforces compliance to organization and regulatory policies by preventing erroneous commands, and helps reduce the risk of security breaches

## Highlights:

- Automates the process of ensuring mandatory values are used in RACF and prohibits the use of inappropriate default values. Using these controls, ensures important policy and naming requirements are maintained in your security environment.
- Automatically verifies command keywords against your specified policies as soon as a RACF command is issued, which enforces compliance on RACF to help reduce the risks of security breaches.
- Command Audit Trail feature stores changes to profiles in the RACF database. Quickly determine which administrator made which changes without requiring labor intensive investigation of log files, with no guessing about timeframes or searching for the information.
- By providing access to the specific commands users require to do their jobs, you reduce the risks associated with accidental or malicious actions of privileged users.

# zSecure Visual

Enables efficient and effective RACF administration with a direct, easy-to-use, graphical interface which uses fewer resources and provides richer functionality.

## Highlights:

- Through a user-friendly GUI you can decentralize RACF administration, enabling tasks to be performed at various levels. This provides the experienced RACF administrator the ability to focus on higher-value activities that help improve both security and compliance.
- Central administrators can customize the administrative commands shown on the interface. This provides the ability for a person to view only the commands they are allowed to perform, reducing the risk of incorrect commands and insider breaches.
- New users can be added to the system simply by duplicating standard user templates. This feature helps reduce the risk of giving incorrect authorizations to a new user — an administrator can only use existing templates and assign authorizations to groups within their scope.

# zSecure CICS Toolkit

Allows you to perform mainframe administrative tasks from a CICS environment, freeing up native RACF resources

## Highlights:

- RACF administration from a CICS environment. CICS Toolkit menu enables users to stay within the CICS application, rather than forcing them into another environment, to issue security commands to the mainframe.
- Web-enablement of the CICS-RACF API. By leveraging this sophisticated API, Web applications can use RACF functions for security administration, authentication and access control.
- The API facilitates access checks of more than 2,000 resources, enabling you to easily replace an application's internal security with RACF security. CICS Toolkit also reduces the burden of maintenance programming and administration from CICS application developers, freeing them to focus on improving functionality.

# zSecure RACF Offline

zSecure Admin RACF Offline product provides the possibility to issue most RACF commands against an inactive RACF database

## Highlights:

- zSecure Admin RACF Offline provides the capability to issue RACF command against an offline RACF database. This allows you to make major changes to a RACF environment and review the changes before implementing them into production. This can decrease the chance of mistakes creating security exposures.

# Tivoli zSecure Manager for RACF z/VM

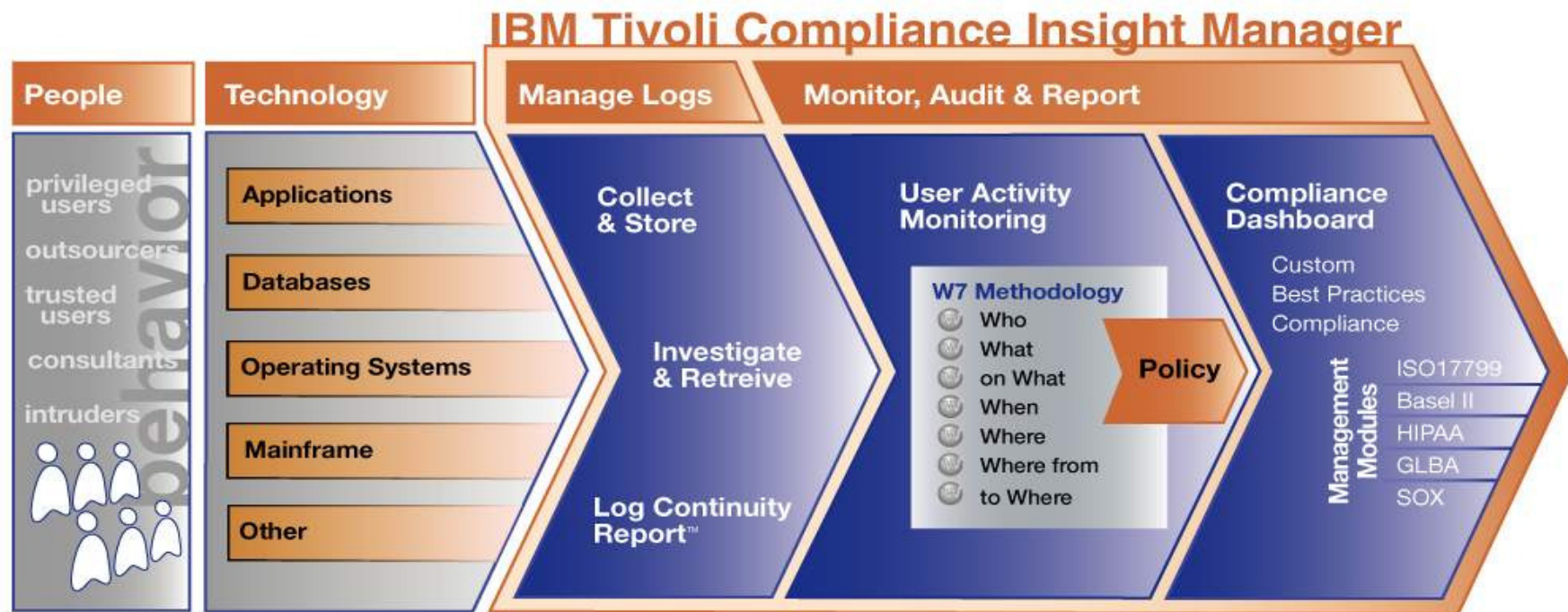
Allows you to perform mainframe administration and audit functions for RACF in the z/VM environment

## Highlights

- zSecure Manager for RACF z/VM can help you quickly identify problems in RACF on z/VM, such as missing or inconsistent definitions, enabling you to fix or prevent mistakes before they become a threat to security and compliance.
- zSecure Manager for RACF z/VM provides various analyses: displaying views of vital z/VM information, indicating where problems may occur, monitoring privileged users and requesting information about individual definitions in RACF.

# zSecure Compliance Insight Manager Enabler for z/OS

- Connect the mainframe to an enterprise compliance dashboard for reporting across applications, databases and operating systems
  - Auditors no longer need z/OS expertise to monitor activities



# Conclusion

**Technology has some strong solutions – but policy and culture remain critical**

**Ensuring that legislative language is established**

**Updating and revising existing policies**

**Continuing education and training awareness for information security and privacy**

**Developing more tools for risk self-assessment**

**Developing Information Security roles and responsibilities**

**Developing Internet usage policy and guidelines**

**Coordinating efforts to align operational recovery and business continuity plans**



http://www.ibm.com/security

**Security**

Enable innovation, protect your enterprise and meet compliance demands with a holistic, business-driven security approach.

Organizations often define IT security almost entirely as protection against the most publicized threats of the day. This protection is usually accomplished with an array of siloed security tools. But what happens when a new type of threat comes tomorrow? These tools aren't integrated, so they can't work together to protect against highly sophisticated and organized attacks. They can even hinder effective operations and impact the business's ability to drive innovation by creating complexity and redundancy. Frequently, they can't provide appropriate metrics to help managers truly understand the benefits to the business.

**Why IBM?**  
There's a reason why our clients trust IBM to provide the services and solutions to help them address their security and privacy needs. We're an industry leader, with the experience, knowledge and solutions to address a wide spectrum of challenges.

- Security Compliance
- People and Identity
- Data and Information
- Application and Process
- Network, Server, and End-point
- Physical Infrastructure

**A more comprehensive approach to enterprise security**

Build the foundation for an effective, organization-wide business driven security approach. This approach:

- Helps to identify gaps in your existing capabilities across the people, processes, applications, data, technology and physical facilities across your organization
- Helps you prioritize security initiatives and determine invest for optimal return
- Simplifies and speeds the planning and execution of enterprise-wide security program
- Provides repeatable, measurable planning process roadmap to help you manage security in a way that: competitiveness and growth
- Helps you reach a desired security posture that met business and regulatory requirements

**Additional Information**

- Podcast: The Insider's View of Security: Risk and

**We're here to help**

Easy ways to get the answers you need.

- Call me now
- E-mail us

or call us at  
877-426-3774  
Priority code  
104C8W62

**Related links**

- CIO Interaction Channel

**IEG**  
Institute for Electronic Government

**HELPING LEADERS LEAD**

The IEG helps leaders serve the public good through innovation.

**Why IBM**  
With decades of industry leadership and global experience at all levels of government, we can help fine-tune your transformation strategies and implementations.

**Featured webcast**

**Janet Caldwell interviews Don Tapscott, Co-Author, Wikinomics.**

In his bestseller book, Tapscott explores the world of mass collaboration and how to understand and channel its power.

**WIKINOMICS**

Play webcast

- High bandwidth video version
- Download podcast (MP3, 5.2MB)
- Video transcript

Get Macromedia Flash plugin

**Case study**

**Service Canada** - See how Canada launched its largest single e-government reform initiative nationwide.

Download report (223KB)

For more case studies see... Go

**New trend**

**The Greening of Government: A Study of How Governments Define the Green Agenda**

Download report (225KB)

**New Computer Study**

**Feeling the Pain**

Learn more

**Business of Government**

**Center for Business of Government**

**IEG briefing center**

Learn how to improve security and productivity, promote accountability, and keep abreast of latest technologies.

See for yourself

http://tinyurl.com/6l6j86

Welcome Business Resilience Security Service Management

Send to a friend RSS FEED

**Security**

Sustainable growth is dependent on a business-aligned security strategy. IBM solutions can help keep you ahead of security threats while supporting your compliance and business requirements. Please visit the [IBM Security site](#).

---

**Webinars**

- [The Danger Inside - The Top 5 Strategies for Addressing Insider Risk](#)
- [Security Virtual Jam Session: The Secured Enterprise](#)
- [Achieving and Maintaining PCI Compliance](#)
- [Moving out of PCI purgatory: Compliance roadblocks and real-world successes](#)
- [Innovation for Security Defense: A Unified Strategy for Enterprise Security](#)
- [Monitor and Respond to Security Incidents](#)
- [Proventia Network IPS GX6116 Overview](#)
- [Security Overview](#)
- [Know Your Security Posture](#)
- [Security and Privacy Policy](#)
- [Managing Security Information and Event Management compliance](#)
- [Dark web intelligence and internal security](#)
- [Endpoint security](#)
- [Secure your antivirus](#)
- [Secure your desktop](#)

**Podcasts**

- [IBM Smart Surveillance Solution - Turning Video into Intelligence](#)
- [Security Podcast Series: Information Security](#)
- [Making the shift - a business driven approach to security](#)
- [Identity and Access management - Strategies for a Successful Implementation](#)
- [Minimize Risk with IBM Application Security Solutions Application Security podcast](#)
- [Continuous Compliance Management: The CSO's Role](#)
- [Episode 1: Taking it to the Bank: Talk of how real security means knowing who you can trust](#)
- [Episode 2: Getting Fit: Chatting about how to use what we know to achieve healthy IT security](#)
- [Episode 3: Locked Out: A chat about the pitfalls of IT access](#)
- [Episode 4: Going Nowhere: Travel troubles spark discussion of User ID management](#)
- [Episode 5: Deeply Invested: Discussing how to handle all that information when security is on the line](#)
- [Episode 6: In Deep: A chat about one company in regulatory hot water leads to lessons for all](#)

**Video**

- [Forrester IT Forum Presentation: Security & Privacy with Julie Donahue](#)
- [Preemptive Security Strategies from IBM: Because threats aren't only from the outside](#)
- [RSA 2007 Keynote Speech](#)  
Thomas E. Noonan General Manager, IBM Internet Security Systems

IBM  
POWERED BY  
CNZ4

http://www.ibm.com/industries/government/ieg