



Alfonso Ponticelli

Tivoli Security Specialist

La soluzione IBM per la gestione dei log e l'audit degli accessi alle risorse elaborative





Le domande più frequenti

Le domande dell'IT e del Business management:

- Siamo in grado di controllare se esistono manipolazioni di info sensibili?
- Possiamo verificare le attività degli outsourcers?
- Possiamo ottenere segnalazioni a fronte di attività non autorizzate?
- Riusciamo a dimostrare la validità della segregation of duties?
- Possiamo investigare su quanto accaduto in modo tempestivo?

Le domande dell'IT e del Business management:

- Vengono tracciati e visionate i log di applicazioni, database, S.O. e device?
- Sono le attività dei system administrator, DBA e system operator tracciate nei log e verificate in maniera regolare?
- Sono tracciati gli accessi a dati sensibili – incluso root/administration e i DBA – nei vari log?
- Esistono dei tool automatici per i processi di audit?
- Sono gli incidenti di sicurezza o attività sospette analizzate al fine di intraprendere delle azioni correttive?





Cosa è rilevante ?

Categoria	Descrizione
Eventi di autenticazione	Eventi di logon / logoff
Eventi di gestione	Start di server, stop, back-up, restore
Change management	Modifiche di configurazione, modifiche sui processi di auditing, modifiche sulla struttura dei database, attività di manutenzione
Gestione utenze	Creazione di nuove utenze, modifica dei privilegi utente, attività di cambio password
Diritti di accesso	Comportamento di tutti i DBA includendo gli accessi ai dati, DBCC (Database Console Command), call a stored procedure
Accesso ai dati sensibili	Tutti gli accessi ai dati sensibili immagazzinati nei database e quindi operazioni di: select, insert, update, delete

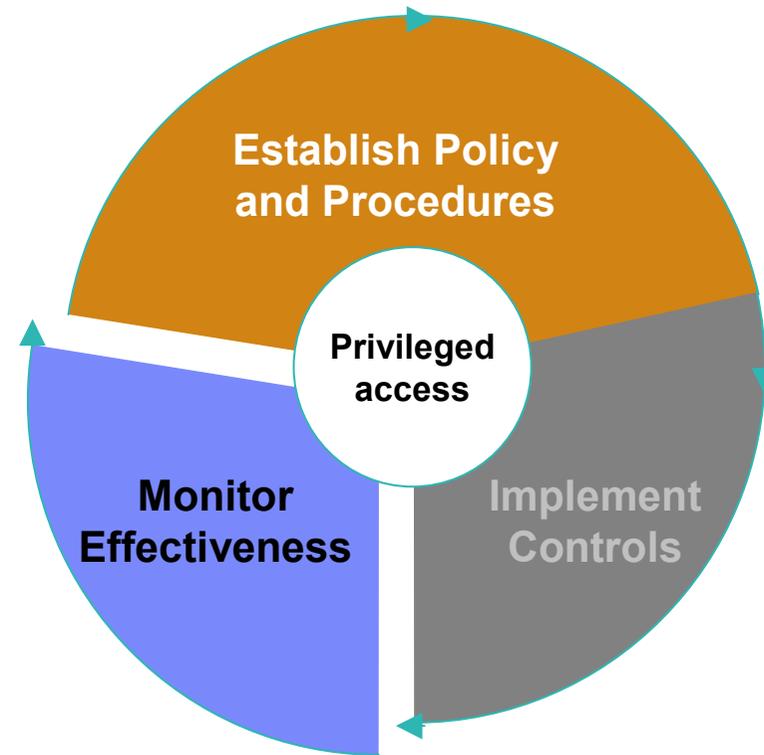




La soluzione: la gestione degli utenti

Le difficoltà

- Ogni sorgente ha la sua sintassi
- Non basta archiviare ma bisogna poter effettuare interrogazioni
- Enorme quantità di dati
- Interpretazione degli eventi





Quali sono gli ambiti per i quali serve aiuto ?

Problema



CFO/CIO

Dimostrare la compliance con le regolamentazioni



CISO/Audit

Proteggere la proprietà intellettuale ed assicurare correttamente la privacy



Amministratore della Sicurezza

Gestire la sicurezza operativa in maniera efficiente ed efficace

Funzionalità della Soluzione TSIEM

Dashboard per la Security compliance e reporting

- 1 Compliance dashboard
- 2 Regulatory reporting

Audit del comportamento degli utenti

- 3 Privileged user monitoring and audit (PUMA)
- 4 Audit di Database ed applicazioni
- 5 Audit di sistemi operativi e mainframe
- 6 Integrazione con strumenti di identity management

Security Operations Management

- 7 Incident mgt e dashboard per la sicurezza operativa
- 8 Log management e reporting
- 9 Correlazione di eventi real time
- 10 Integrazione con IT Operations





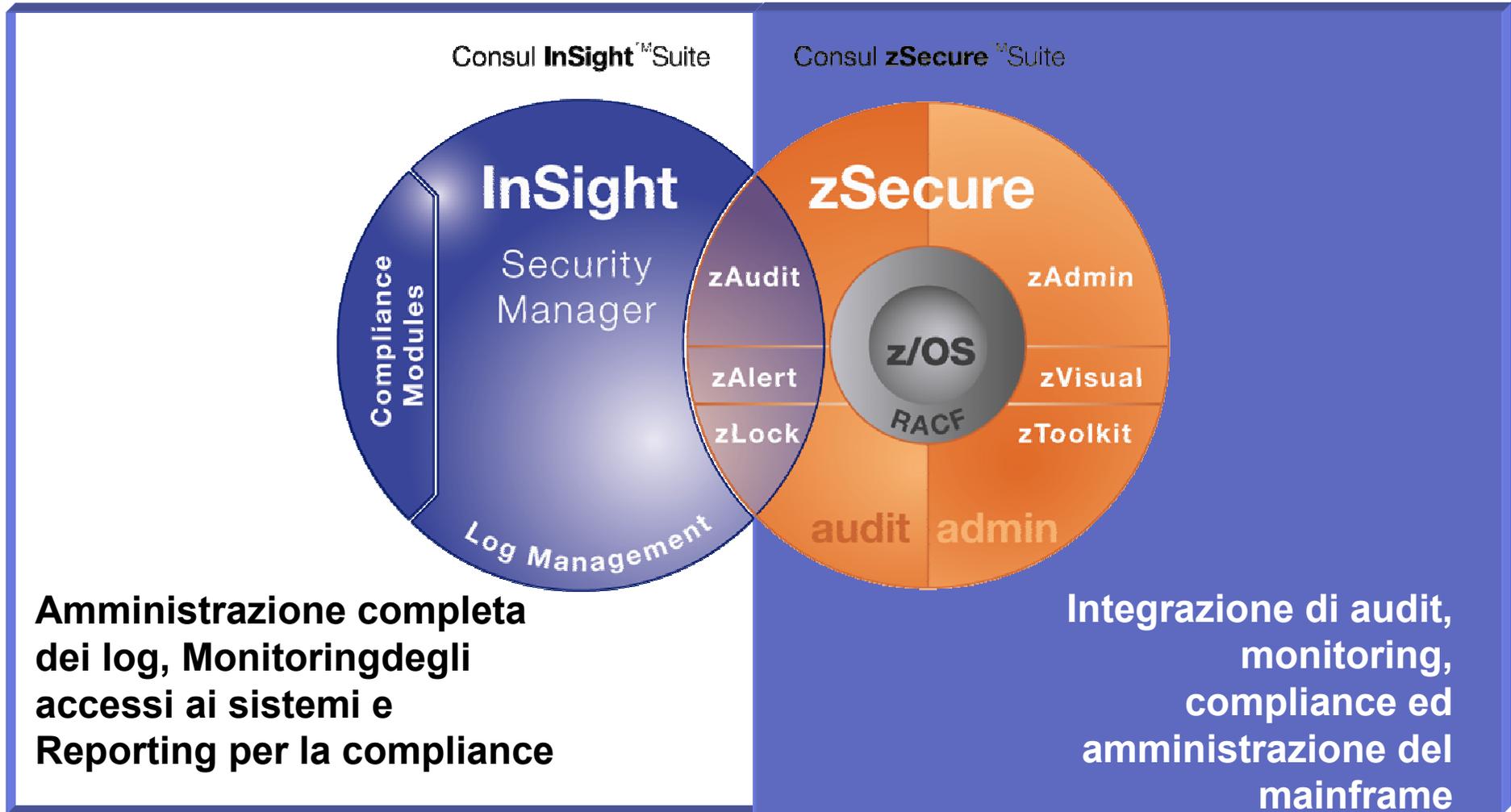
Tivoli Compliance Insight Manager

TCIM



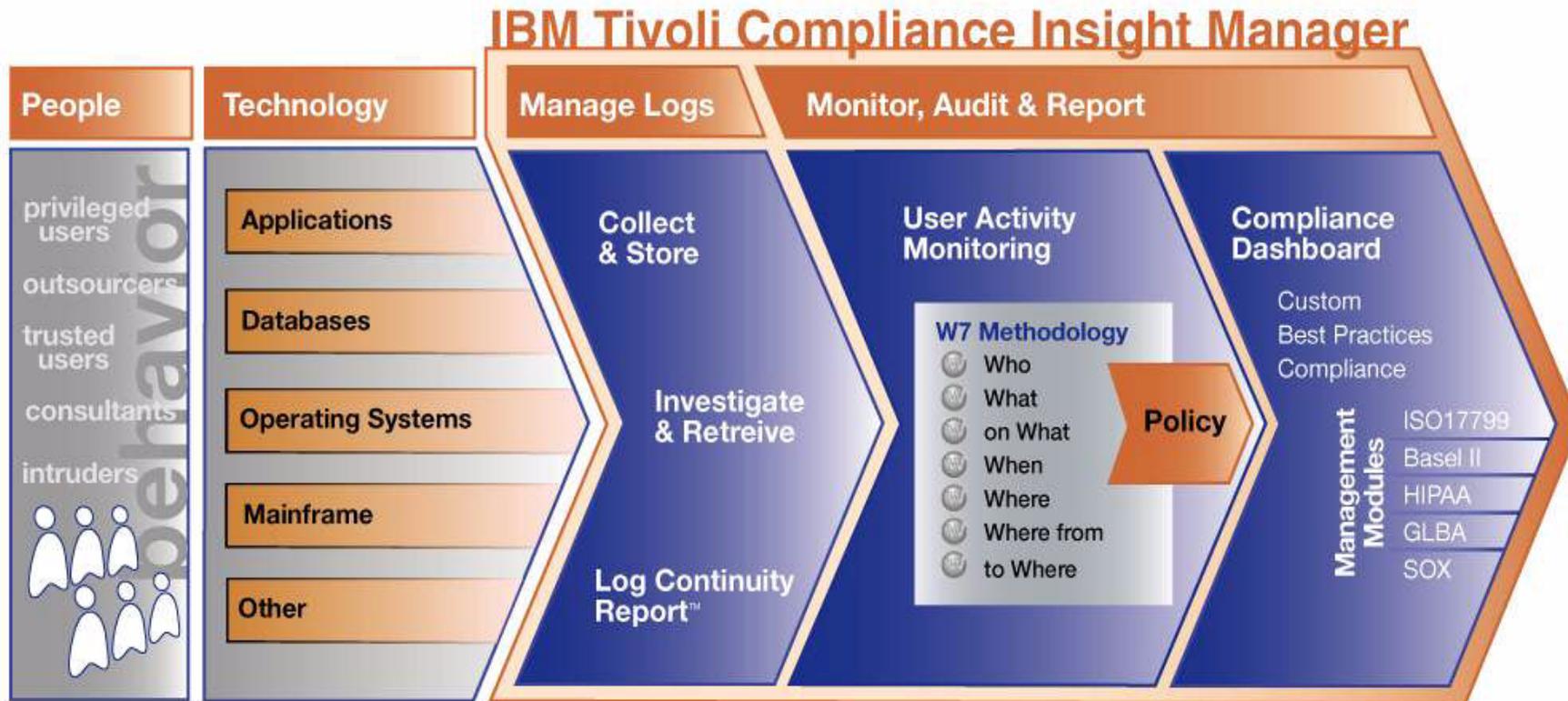


Tivoli Compliance: soluzione





La soluzione delle 3 C (Capture – Comprehend – Communicate)





TCIM: i problemi che aiuta a risolvere

“Ho bisogno di produrre report per i miei auditor”

“Ho bisogno di dimostrare di possedere una struttura di IT security controls”

“Il mio staff non possiede tempo ed esperienza ma necessita di eseguire la scansione dei logs”

“Sono interessato ad individuare i privilegi che permettono determinate azioni”

“Ho bisogno di storicizzare i log per analisi forense”

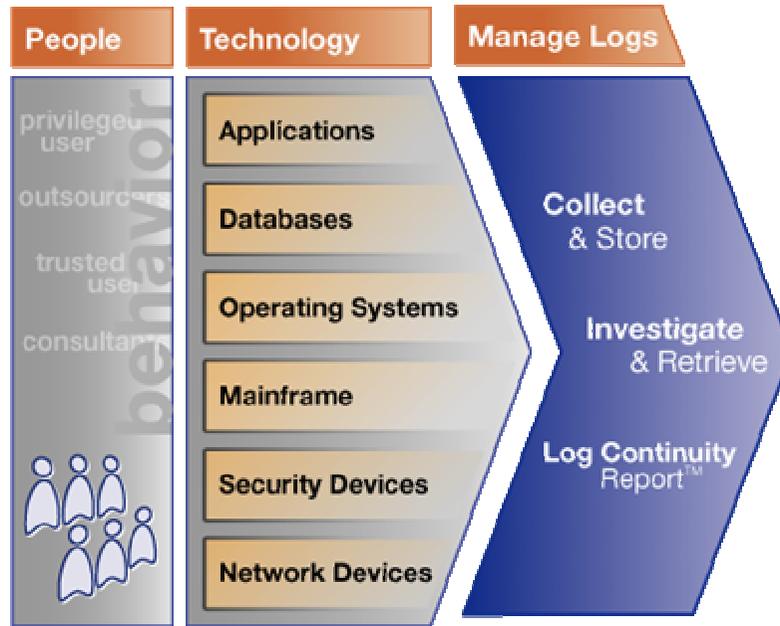
“Non ho idea di quale log collezionare e come farlo”





Enterprise Log Management

Capture



Funzionalità:

- Sicuro, affidabile accentratore di log da qualunque piattaforma
- Cattura in automatico i syslogs
- Pieno supporto su attività di collect di eventi da log nativi
- Immagazzina in modo efficiente e compresso i dati in un depot
- Accesso ai dati quando necessario
- Ricerca su tutti i log
- Reports sui dati raccolti

Benefici:

- Riduzione dei costi grazie all'automatizzazione e centralizzazione del collect dei dati
- Essere sempre "audit ready"!

Implementation time: plug and play.

BASTA PARLARE INIZIAMO A FARE

© 2008 IBM Corporation





Log Continuity Report
 Prova istantanea per auditors e regulators che evidenzia che il vostro processo di log management è completo e continuo.

Dashboard History Continuity Activity Investigate Retrieval

Portal > Log Manager > Continuity Report

Log Continuity Report

> Graph

June 24, 2005

location: CRM007, CRM013, CRM014, CRM015, CRM023, CRM024

type: Public Website, Web Server Public, Internet Banking Public, Private Banking Server, Private Banking Website, HR Data Server, FTP server Partners, Partner Webserver, IIS Partner Site, EMEA mail

0:00 4:00 8:00 12:00 16:00 20:00

hour day week month year

> List of Logfiles

#	Size	Start Date	Time	End Date	End Time	Eventsource Type	Eventsource Name	Machine
3	33 kb	June 25, 2005	10:00	June 25, 2005	12:00 (GMT +1)	IIS	Public website	CRM007
5	21 kb	June 25, 2005	11:00	June 25, 2005	12:00 (GMT +1)	Windows Server	Web Server Public	CRM007
2	1.3 Mb	June 25, 2005	12:00	June 25, 2005	13:00 (GMT +1)	SAP	Internet Banking Public	CRM007
3	5 kb	June 25, 2005	13:00	June 25, 2005	13:17 (GMT +1)	Windows Server	Private Banking Server	CRM013
3	213 kb	June 25, 2005	14:00	June 25, 2005	16:30 (GMT +1)	IIS	Private Banking Website	CRM013
1	94 kb	June 25, 2005	15:00	June 25, 2005	19:00 (GMT +1)	Windows Server	HR Data Server	CRM014

Help Actions

- Export to PDF
- Export to Excel
- Retrieve selected Logfiles
- Regenerate Report
- Adjust Schedule

View

- Hide Timezone (GMT +1)
- By Audited Timezone
- By Browser Timezone
- By Other Timezone

Filters

Sorting

- Start Date
- Start Time
- Audited Machine

Legend

- Continuity Logfile
- Missing Logfile
- Missing Sub Logfile
- Failed collect, not collected yet
- Delayed collect, possible lost
- Archived Logfile
- Corrupt Logfile

Report information

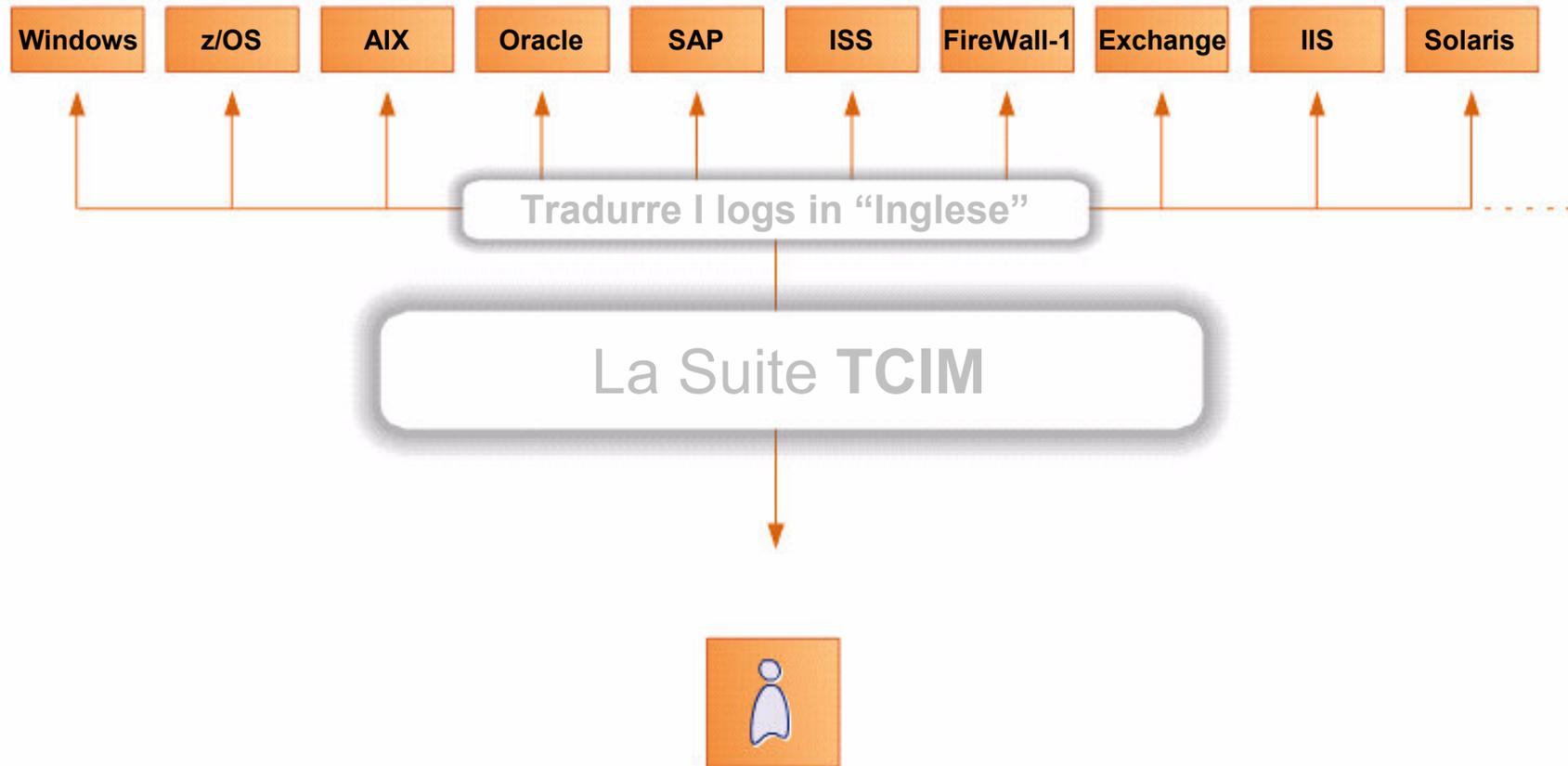
Done My Computer





Ora tutti i log della vostra azienda in un unico linguaggio

Comprehend



TCIM storicizza le vostre informazioni di security e compliance risparmiando tempo esodi attraverso l'automatizzazione di processi di monitoring sull'azienda.





Tradurre i Log in Inglese – con la metodologia Consul W7

Who l'ha fatto **What** tipo di azione **on What**?

When l'ha fatto e **Where, From Where e Where To**?

Comprehend

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



BASTA PARLARE **INIZIAMO A FARE**

© 2008 IBM Corporation

Compliance Dashboard
I log dopo W7 – Bilioni di log files riassunti in un unico grafico!

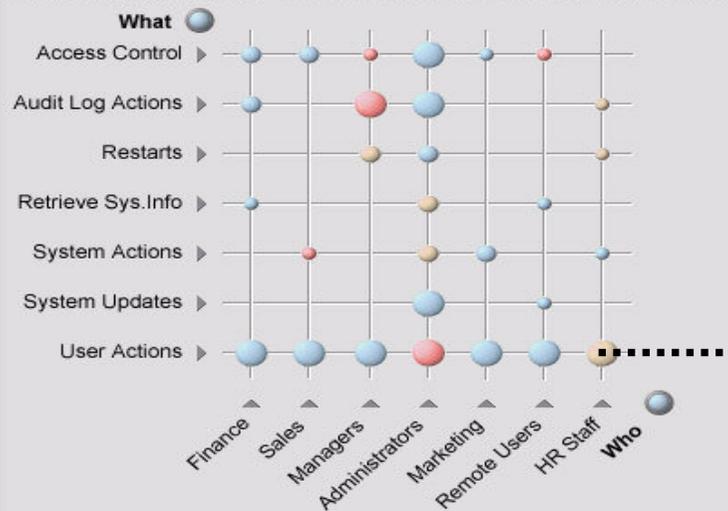
Dashboard Trends Reports Policies Groups Settings Regulations Log off

Dashboard

Compliance Dashboard

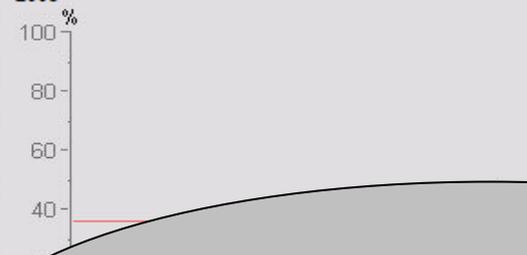
Enterprise Overview

Events by top event count by "What" and "Who" for Oct 1, 2005 till Nov. 28, 2005.



Trend graphic

Percentage of Policy Exceptions for Oct 1, 2005 till Nov 28, 2005



Who = HR Staff <and> When = orario lav <and>
On What = HR data <and> What = User Action <and>
Where = HR server <and>
Where from = Sap HR <and> Where to = Sap HR

Database Overview

AggrDb SOX Finance Basel II HR Banking Test

Name: AggrDb
Status: Loaded & Selected
Loading Date: Nov 29, 2005
Content: Aggregation of all collected material for the last 90 days.

Help
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



Full Audit and Compliance Reporting

Communicate

the **Consul InSight™ Suite**



Capabilities:

- Centinaia di reports
- Moduli di Compliance
- Alert di Special attention
- Reports Custom

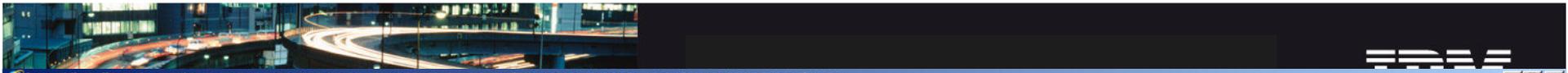
Benefits:

- Riduce l'impegno richiesto per l'audit
- Reports istantanei, salva tempo
- Riduce i rischi di minacce a dati sensibili:
 - Protezione dei dati
 - Controllo sui change
 - User management



BASTA PARLARE **INIZIAMO A FARE**

© 2008 IBM Corporation



My reports

Add custom report Import custom reports

Configuration tools

Type	Title	Description	Action
	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 define a policy and to verify the existing policy	
	W7 Summary	Summary of all events	

Daily verification

Type	Title	Description	Action
	Invalid Username or Password	Tentativi di login falliti per invalido username o password	
	login failure e account locked	account locked	
	verifica logon con recordtype 680	prova report	
	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

Tutto con un click

Dashboard > Reports > User by Event type

User by Event type

Parameter Setup

What (event type)

- | | | | |
|---|--|---|--|
| <input checked="" type="checkbox"/> Add : Privilege / Success | <input type="checkbox"/> Load : Module / Success | <input type="checkbox"/> Read : File / Success | <input type="checkbox"/> Stop : Service / Success |
| <input type="checkbox"/> Authenticate : User / Failure | <input type="checkbox"/> Logoff : User / Success | <input type="checkbox"/> Receive : Message / Success | <input type="checkbox"/> Update : Parameter / Failure |
| <input checked="" type="checkbox"/> Clear : Auditlog / Success | <input type="checkbox"/> Logon : User / Failure | <input type="checkbox"/> Restart : System / Success | <input type="checkbox"/> Use : Service / Success |
| <input type="checkbox"/> Complete : Process / Success | <input type="checkbox"/> Logon : User / Success | <input checked="" type="checkbox"/> Start : Process / Success | <input type="checkbox"/> Use : Service / Success |
| <input checked="" type="checkbox"/> Grant : Privilege / Failure | <input type="checkbox"/> Read : Access / Success | <input type="checkbox"/> Start : Service / Success | <input checked="" type="checkbox"/> Write : Config / Success |
| <input checked="" type="checkbox"/> Grant : Privilege / Success | <input type="checkbox"/> Read : Config / Success | <input checked="" type="checkbox"/> Start : System / Success | <input type="checkbox"/> Write : Log / Success |

Submit

Reset

Summary report

Who (Name)	Logonname	What (Event type)	#Events
Administrator	WINDOWS_NT01\Administrator	Add: Privilege / Success	294
Administrator	WINDOWS_NT01\Administrator	Clear: Auditlog / Success	1150
Administrator	WINDOWS_NT01\Administrator	Grant: Privilege / Success	334
Administrator	WINDOWS_NT01\Administrator	Start: System / Success	7
ROOT	LIN_SERV\ROOT	Add: Privilege / Success	5
ROOT	LIN_SERV\ROOT	Grant: Privilege / Success	7
ROOT	LIN_SERV\ROOT	Start: Process / Success	42
ROOT	LIN_SERV\ROOT	Start: System / Success	306
ROOT	LIN_SERV\ROOT	Write: Config / Success	42
System	NT AUTHORITY\SYSTEM	Start: Process / Success	494
System	NT AUTHORITY\SYSTEM	Start: System / Success	178
Michael Myers	WINDOWS_NT01\Managers\Michael076	Clear: Auditlog / Success	2
Michael Myers	WINDOWS_NT01\Managers\Michael076	Grant: Privilege / Failure	1
Eric Sanders	WINDOWS_NT01\Sales\Eric887	Start: Process / Success	18

1 2 3

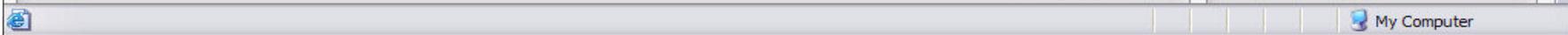
Extra Information

Help

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



BASTA PARLARE INIZIAMO A FARE

© 2008 IBM Corporation



[Dashboard](#)
[Summary](#)
[Reports](#)
[Policies](#)
[Groups](#)
[Settings](#)
[Regulations](#)
[Log off](#)

Filtrare le informazioni

Dashboard > Summary > All Events

All Events of Finance database

Time period setup

Start time: Month: Day: Year: Hour: Min:
 End time: Month: Day: Year: Hour: Min:

 Time zone:

Summary report

Severity	When	#	What	Where	Who	from Where	on What	Where to
1	Fri Nov 25, 2005 15:34:18 GMT					Finance Server	PROCESS : / Notepad.exe	Finance Server
70	Fri Nov 25, 2005 15:34:18 GMT					Finance Server	AUDITLOG : / -	Finance Server
1	Fri Nov 25, 2005 15:34:21 GMT					Finance Server	PROCESS : / Notepad.exe	Finance Server
1	Fri Nov 25, 2005 15:34:28 GMT					Mainframe FIN	PROCESS : / Notepad.exe	Mainframe FIN
1	Fri Nov 25, 2005 15:35:02 GMT					HR Server	PROCESS : / Process2212024768	HR Server
30	Fri Nov 25, 2005 15:35:02 GMT					Finance Server	FILE : DataSmartinvest / *	Finance Server
1	Fri Nov 25, 2005 15:35:24 GMT					Mainframe FIN	PROCESS : / Runemacs.exe	Mainframe FIN
1	Fri Nov 25, 2005 15:35:24 GMT					Mainframe FIN	PROCESS : / Emacs.exe	Mainframe FIN
1	Fri Nov 25, 2005 15:35:24 GMT					Mainframe FIN	PROCESS : / Runemacs.exe	Mainframe FIN
1	Fri Nov 25, 2005 15:37:34 GMT					Web Server	PROCESS : / Eventvwr.exe	Web Server
2	Fri Nov 25, 2005 15:37:35 GMT					Web Server	OBJECT : / Handle0	Web Server
2	Fri Nov 25, 2005 15:37:41 GMT					Web Server	OBJECT : / Handle0	Web Server
2	Fri Nov 25, 2005 15:37:48 GMT					Web Server	OBJECT : / Handle0	Web Server
2	Fri Nov 25, 2005 15:38:21 GMT					Web Server	OBJECT : / Handle0	Web Server
2	Fri Nov 25, 2005 15:38:28 GMT-5	1	Grant : Privilege / Success	Finance Server	Marcy Hoover	Finance Server	OBJECT : / Handle0	Finance Server
30	Fri Nov 25, 2005 15:38:28 GMT-5	1	Read : Access / Success	Finance Server	ROOT	Finance Server	FILE : DataSmartinvest / Default.cfg	Finance Server
30	Fri Nov 25, 2005 15:38:28 GMT-5	2	Read : File / Success	Finance Server	Administrator	Finance Server	FILE : DataSmartinvest / *	Finance Server
70	Fri Nov 25, 2005 15:38:28 GMT-5	7	Read : Access / Success	Finance Server	ROOT	Finance Server	FILE : DataSmartinvest inadmin / *	Finance Server

Filter settings

Column: Filter

What (detail):

Where (detail):

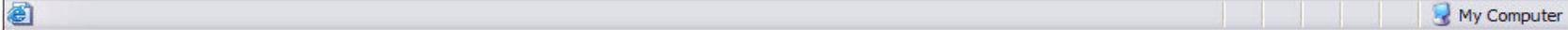
Who (detail):

Where From (detail):

On What (detail):

Where To (detail):

Use ? and * as wildcards and \ as escape character.



Dashboard
 History
 Continuity
 Activity
 Investigate
 Retrieval

Eseguire query sul depot

Portal > Log Manager > Investigation Tool
Portal

Depot Investigation Tool

Query builder

Step 1. Time period

from: month: April | day: 1 | year: 2001 | till: month: April | day: 21 | year: 2006

Step 2. Event Source

InSight server	Point of presence	Audited machine name	Event source type	Event source name
all	all	all	all	all
server-01	SERVER-05	SERVER-05	InSight Server Activit	InSight Server Activit
server-05		STYX	InSight Web Applica	Internet Information S
			Internet Information S	Oracle
			Microsoft Windows	
			Oracle	

Step 3. Select Fieldnames

You changed your selection in the eventsources, this may cause missing fields in this list. Refresh the list to see all relevant fieldnames

Select All Fields

<input checked="" type="checkbox"/> date	<input type="checkbox"/> s_port	<input type="checkbox"/> service
<input checked="" type="checkbox"/> dst	<input checked="" type="checkbox"/> number	<input type="checkbox"/> action
<input checked="" type="checkbox"/> type	<input type="checkbox"/> granularity	<input checked="" type="checkbox"/> scr
<input type="checkbox"/> eventclass	<input type="checkbox"/> resource	<input type="checkbox"/> sublogtype

Step 4. Content Search

clearlog*

Extra Information

Help

Actions

- Refresh Fieldname List
- Start Search
- Stop Search
- Retrieve selected Logfiles
- Restore default settings

View

- Show Timezone (GMT)
- By Browser Timezone
- By Other Timezone

Search information

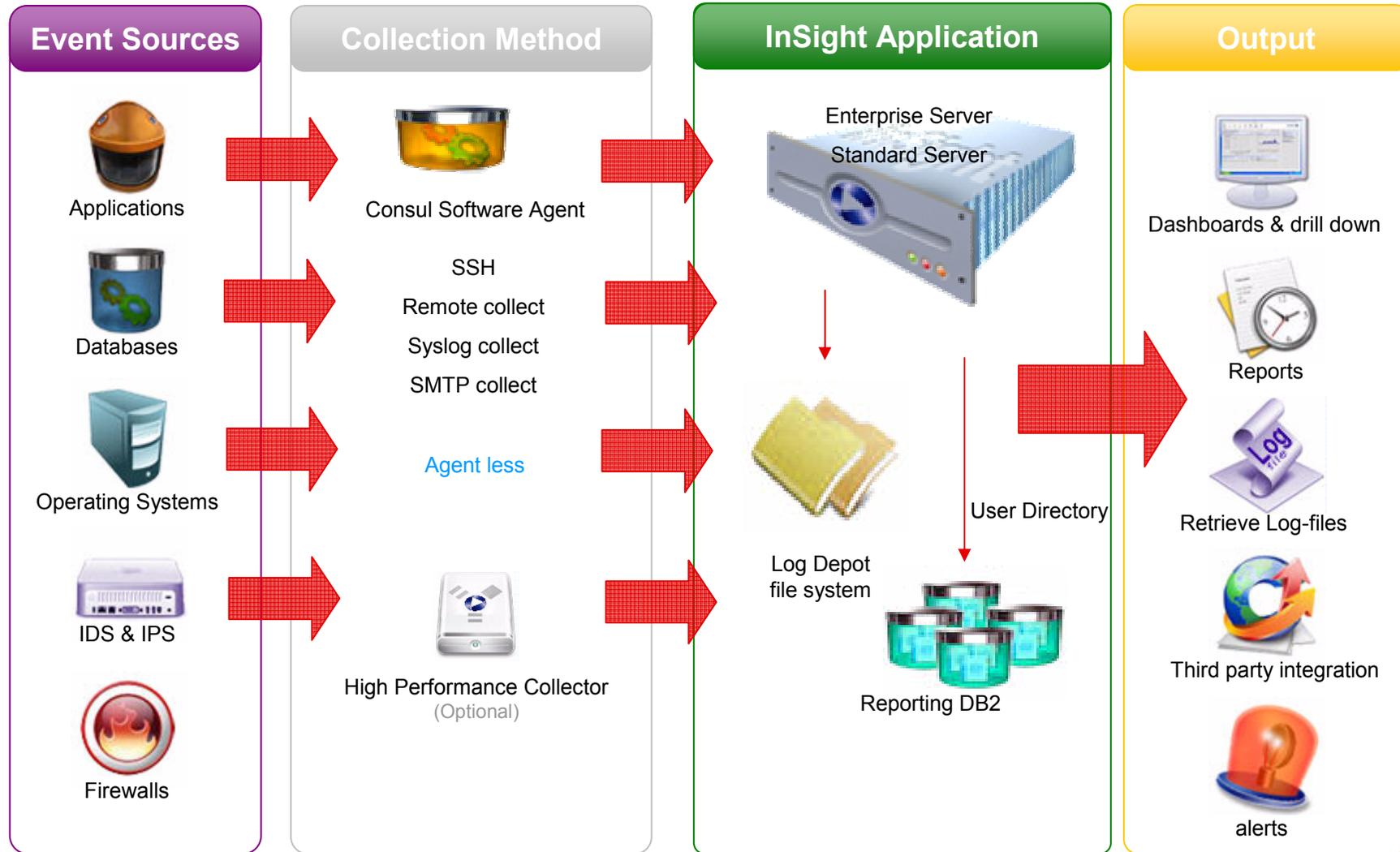
Status:	0%
Creation Time:	0
Logfiles:	0
Events:	0

Support

Done
Internet



Architecture





TCIM Supported event sources

Supported SERVERS:

- IBM AIX Audit logs
- IBM AIX syslog
- IBM OS/400 & i5/OS journals
- Hewlett-Packard HP-UX Audit logs
- Hewlett-Packard HP-UX syslog
- Hewlett-Packard NonStop (Tandem)
- Hewlett-Packard OpenVMS
- Hewlett-Packard Tru64
- Microsoft Windows
- Novell Netware
- Novell NSure Audit
- Novell Audit
- Novell Suse Linux
- RedHat Linux
- Stratus VOS
- SUN Solaris BSM Audit logs
- SUN Solaris syslog

Supported MAINFRAME:

- IBM z/OS + RACF
- IBM z/OS + CA ACF2
- IBM z/OS + CA Top Secret
- CA Top Secret for VSE/ESA

Supported APPLICATIONS:

- Tivoli Identity Manager
- Tivoli Access Manager for OS and for e-Business
- FUTURE (in engineering pipeline): TFIM, TDS, TDI, TSOM
- SAP R/3 on Windows, Solaris, AIX, HP-UX
- Misys OPICS
- BMC Identity Manager
- CA eTrust (Netegrity) SiteMinder
- RSA Authentication Server
- Microsoft Exchange
- IBM Lotus Domino Server on Windows
- Microsoft Internet Information server
- SUN iPlanet Web Server on Solaris

Supported DATABASES:

- IBM DB2 on z/OS
- IBM DB2 / UDB on Windows, Solaris, AIX
- Microsoft SQL Server application logs
- Microsoft SQL Server trace files
- Oracle DBMS on Windows, AIX, Solaris, HP-UX
- Oracle DBMS FGA on Windows, AIX, Solaris, HP-UX
- Sybase ASE on Windows, AIX, Solaris, HP-UX
- FUTURE (in pipeline): DB2 Viper 2, Informix, AME

Supported DEVICES:

- Cisco Router
- Hewlett-Packard ProCurve Switch
- Blue Coat Systems ProxySG Series
- Check Point Firewall-1
- Cisco PIX
- Cisco VPN Concentrator (3000 series)
- Symantec (Raptor) Enterprise Firewall
- ISS RealSecure
- ISS System Scanner
- McAfee IntruShield IPS Manager
- McAfee ePolicy Orchestrator
- Snort IDS
- Symantec Antivirus
- TrendMicro ScanMail for Domino
- TrendMicro ScanMail for MS Exchange
- TrendMicro ServerProtect for Windows





Minimum Requirements:

Tivoli Compliance Insight Manager Standard Server and Enterprise Server

Server dedicato (no virtualization)

Minimum Enterprise Server requirements

Quad Core Intel® Xeon™ 3.0 GHz processor

6 GB RAM + 0.5 GB per scheduled General Event Model (GEM) database

Minimum Standard Server requirements

Duo Core Intel Xeon 3.0 GHz processor

4 GB RAM

Disk space requirements

$1.5 * (\text{total GB of daily logs} / 10 \text{ compression factor}) * \text{number of days to keep in repository} + 25 \text{ GB}$

