Maxsoft corporation

VerticoData - Enterprise Security Solution

Quick User Guide







An Absolute Secure Technology

MaxSOFT Corporation
October 4, 2015

www.imaxsoft.com Telephone: 1-408-253-8808 P. O. Box 1222, Cupertino CA 95015 USA

Preface

This document is a quick reference guide for iMaxsoft/VerticoDATA Demonstration Portal. The iMaxsoft/VerticoDATA Demonstration Portal is developed as a running specification to identify the needs of sensitive and privacy data protection and security for ORACLE enterprise users.

Audience of this document is intended for CIO, IT security staff, ORACLE DBA, and Chief Security Officer.

Enterprise is morally and legally liable for leaks of personal private and sensitive information. Tighter legal responsibilities and hefty fines have drawn corporate top management attention to this serious issue. But rushing for a quick fix may lead you to a bigger security problem down the road. For example, when 'users login information' got hacked, 100,000 user-login-names and passwords were stolen, then you immediately revamp your customer's login process by adding instant text messaging and email confirmation process, sounds pretty promising, but you have just doubled your customer's sensitive information from "name and password" to "name, password, confirmation email, and mobile phone number". The end result is that you spent more investment doubling your liabilities and getting no guarantee of hacking free. You should always focus on 'how did the breach occur?' first, over 99 percent, it is an inside job, tighten-up your internal security procedure and deploy a precision security solution is the most effective option. Also, the rule of thumb for mitigating security risk is to stop collecting un-needed private and sensitive customers' information.

The root cause of today's data security problem is the high demands of customers services fulfillment. Huge data banks are forming in lighting speed and their sizes grow exponentially every second. Failure to safeguard data banks will lead you to a dream hotbed for hackers.

So, is that true, the quicker to adopt modern and advanced technology, the bigger the chances to be hacked. It is always risky to leverage new technologies for maintaining business competitive edge, but if you don't, you may loss your business completely. Today's technology requires so many elements that we can ever imagined, we all know how big the task is to simply conduct a thorough inventory of our hardware devices, so **how broad your** sensitive data security solution would be, to every internal and external device node, it is humanely impossible. VerticoDATA is a solution that protects the origin source of your sensitive and privacy data bank, and provides the **last line of defense** for your sensitive information.

Prepared by:

iMaxSOFT VerticoDATA Development Team October 2015, Saratoga California USA Copyright © iMaxSOFT Corporation 2015, All Rights Reserved.

Maxsoft Corporation

Absolute Secure Enterprise Security Solution

Login





VerticoDATA demonstration portal, you must click on the 'Login' to enter the demonstration.



Click on the button 'Add a New Login?' to create a new login if you are a new user. Click on 'Forgot Password?' if you don't remember your password, a temp will be generated and email to you. Or simply provide your email and password to login.



'Add a New Login?', be sure to enter your password twice. The Verification field is not case sensitive and **doesn't** contain numbers. You need to agree on the Terms of accessing our Vertico-DATA demonstration portal.

Maxsoft Corporation

Main Menu

nterprise Security Solutio





Once you have successfully logged in to Vertico-DATA demonstration portal, a list of all your ORACLE database servers are shown, and potential data breach alerts and warnings are also grouped and marked separately.

You may click on a server from the list via its location and perform further security breach investigation.

This page can be customized according to the configuration and setup of your data center and cloud hosting site, and integrated it into your enterprise **central operation console**. Security monitor is becoming the core focus of today's IT infrastructure.

How well an enterprise protecting their customers' sensitive and privacy information drives the faith of the business and its survival.

EETSAI - Lee Tsai Tuesday 20th of October 2015 01 + 430 PM

Home Washington,DC DBServer Legout

IMAXSOFT DBServer: WASHINGTON, DC

VerticoData GRACLE SECURITY MONITOR

Scan
Excessive Access Abnormal Access Malicous Access

Alert
Excessive Access Annoyes
EPH Brenches Miscous Programs

Annoyes
EPH Brenches Miscous Programs

Annoyes
Long Transactions

dvisc

*

This is the main menu of a specific ORACLE database server, i.e. database server at Washington, DC. This main menu has 2 sections, one is a security monitor and the other one is a set of ORACLE secure tools.

Security monitor demonstrates some core features of VerticoDATA, i.e. data leak detection, malicious access prevention, and cyber breach real-time blocking.

The secure ORACLE toolset is designed to allow end-users, business constituents and associates to securely and efficiently move sensitive and privacy data on the net and across mobile devices. Traditional user authentication and access authorities are a small portion of today's **comprehensive enterprise security solution**.

Maxsoft Corporation

Tel: (408) 253-8808
Fax: (408) 253-4008
E-mail: lee@imaxsoft.com
www.imaxsoft.com
P. O. Box 1222 Cupertino, CA 95015 USA

Home Washington,DC DBServer

VerticoData ORACLE TOOLSET

×

Server Specific Main Menu





VerticoDATA is the last line of safeguard that secures the source and the origin of sensitive privacy data bank.

VerticoDATA can be **privately labeled** and customized as an integral part of the enterprise comprehensive security solution. VerticoDATA can also be enterprises' security forensic experts, auditors and operators thru IMAXSOFT's cloud data center, which is a VerticoDATA security hosting services center, and these services provide 24 by 7 access to enterprise' security information world-wide from web and mobile.

VerticoDATA manages all enterprises' ORACLE applications and databases from a central control console, any potential security breaches and threats will be immediately alarmed and alerts will be delivered to designated security officials promptly.

This panel layout is **generic**, and it can be easily customized and integrated into the central enterprise operation console.

VerticoDATA offerings include a pre-built UI (user interface) as a general purpose model for enterprise's IT to adopt easily, and a set of **building blocks** which are used to established a proprietary security solution that meets each enterprise's specific business needs.

Absolute Secure Enterprise Security Solution

Maxsoft Corporation

VerticoDATA Quick User Guide **Enterprise Security Solution**

VerticoDATA - Threats Scanner







Enterprise Security Solution

Excessive Access Scan



Abnormal Access Scan





Malicious Access Scan

VerticoDATA demonstration includes 3 basic groups of threat scans from a database server. The excessive access, the abnormal access and the malicious access of sensitive and non-sensitive data from an ORACLE database server.

The excessive access scanner scans for database accesses that are exceeding VerticoDATA access security threshold rules, for example, a process reads or changes more sensitive or non-sensitive records than a pre-set of limits., a process takes longer than historical averaged time to run, or a user's connection time exceeds its allowable time, and so on.

The abnormal access scanner scans for database accesses occurred that are not within permissible time windows, for example, after normal working hours, weekends and holidays. VerticoDATA detects database access patterns that do not match their respective historical access patterns, and database access methods that do not comply with their historical normal access methods, i.e. a process that has never accessed credit card information, or a process execution logic is suddenly changed.

The malicious access scanner scans for a program, a script, a procedure, a subroutine, or a SQL statement that has never been registered in VerticoDATA Central Intelligent DNA Dictionary. We need to quickly identify this abnormal object, whether it is a new program, a Trojan implant, a SQL injection, or a run-away ghost process.

Maxsoft Corporation

P. O. Box 1222 Cupertino, CA 95015 USA

VerticoDATA - Excessive Access Scan





Absolute Secure Enterprise Security Solution

Excessive Access Scan

ome Newport,KY	DBSer	ver Lo	gout B	ack								
hreat scanner: pri	vacy da	ta secu	rity thre	at and s	uspicio	us bre	ich					
Check-in Selected	Disc	card Selec	ted		Check-i	n All		Discard All				
LastAccessed L		EPHIS	Select	Check	box -	Securi	ty va	ult Che	ck-in	or D	iscard	
Oct 24 12:47	32	1	III 151	024 12	0221 4			svr 273	60 00	,		
Oct 24 12:30	4							svr_273				
oct 24 12:30	32							svr 273				
Oct 24 12:30	4							svr 273				
oct 24 12:30	8							us 1965		-		
Oct 24 12:30	4							svr 273		1		
ort 24 12:30	32							svr 273				
Oct 24 12:30	8							us 1871				
Oct 24 12:30								us 1873				
Oct 24 12:30								svr 273		1		
Oct 24 12:30	8							us 1876				
Oct 24 12:30	10	none	B 151	018 13	2128 d	laemon	vdmon	svr 273	66.sa	1		
Oct 24 12:30	4							svr 273				
Oct 24 12:30	8	none	B 151	018 13	2214 c	laemon	sqlpl	us 1878	1.sql			
Oct 24 12:30	8	none	B 151	019_08	5517_d	aemon	sqlpl	us_2497	1.sql			
Oct 24 12:30	20	none	D 151	019_08	5523_0	racle	sqlpl	us_2499	1.sql			
Oct 24 12:30	4	none	B 151	019 08	5526 d	laemon	vdmon	svr 273	67.sq	1		
Oct 24 12:30	8	none	II 151	019_08	5539_0	aemon	sqlpl	us_2500	3.sql			
Oct 24 12:30	6	none	B 151	019_11	4743_c	laemon	vdmon	svr_273	66.sq	1		
Oct 24 12:30	4							svr_273		1		
Oct 24 12:30	8							us_2767				
Det 24 12:30	20	none	B 151	019_17	5827_c	racle	sqlpl	us_2769	5.sql			
22 new threats for	ind!											
Check-in Selected	Disc	card Selec	ted		Check-	n All		Discard All				

VerticoDATA Excessive Access Scanner scans for ORACLE database sensitive and non-sensitive data accesses that do not comply with access security rules.

This preliminary summary reports basic attributes of potential threats, which includes access time, accessor name, access program name, and whether sensitive and privacy data (**EPHI**¹) is affected.

Security officer may optionally transferring those of interested logs from each individual database server into enterprise level central security vault for further investigation.

You may use VerticoDATA's **building blocks** to create an automated process that pre-screens and transfers potential threats into your security vault.

The check-in and discard logic and customization building blocks are also applied to Abnormal Access Scan and Malicious Access Scan.

Footnotes:

 EPHI - Electronic Patient Health Information, it is a term used in healthcare industry. We use it as an example term of Sensitive and Privacy Data.

Maxsoft Corporation

VerticoDATA - Threats Alert







Enterprise Security Solution

Excessive Access Alert



Abnormal Access Alert



Malicious Access Alert

Once threats are checked into VerticoDATA security vault, alerts are generated according to the attributes of the threats, and alerts are routed to the proper personnel for further investigation.

The excessive access alerts are those database accesses that are exceeding VerticoDATA access security threshold rules, for example, a process reads or changes more sensitive or non-sensitive records than a pre-set of limits., a process takes longer than historical averaged time to run, or a user's connection time exceeds its allowable time, and so on.

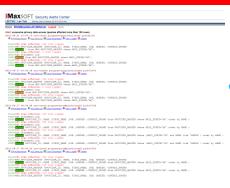
The **abnormal access alerts** are those database accesses occurred that are not within permissible time windows, for example, after normal working hours, weekends and holidays. VerticoDATA detects database access patterns that do not match their respective historical access patterns, and database access methods that do not comply with their historical normal access methods, i.e. a process that has never accessed credit card information, or a process execution logic is suddenly changed.

The malicious access alerts are those database access from a program, a script, a procedure, a subroutine, or a SQL statement that has never been registered in VerticoDATA Central Intelligent DNA Dictionary. We need to quickly identify this abnormal object, whether it is a new program, a Trojan implant, a SQL injection, or a run-away ghost process.

Maxsoft Corporation

VerticoDATA - Excessive Access Alert





The excessive access alert contains a list of potential threats that need further investigation for possible sensitive data breaches.

A summary view of incidents is shown chronologically. Each sensitive data access exceeded its respective access control threshold, i.e. maximum number of records per fetch, is preprocessed by VerticoDATA threat diagnosis engine for security staff for further investigating.

In the demo, each access alert is raised due to it has touched or affected more rows than allowed whether is sensitive or non-sensitive data related.

LECIAL CASE TO VerticoDATA Tracelle, Setting and Configuration

LECIAL CASE THE CASE TO A TRACELLE CASE TO A

EPHIDataViewer is a full list of all sensitive data that are affected (read or write) of an incident which can leads to a serious data leak and database sabotage.

Log SQL DML¹ statement is no longer an answer to today's highly sophisticated hacking skills, it doesn't truly reflect the impact to your sensitive data, you have no idea how may rows are physically transferred out to the accessor, and what data are actually viewed by the accessor. More often hackers are only focused on those persons of interest, which is a lot more difficult task to prevent and requires high precision-driven technology to detect.

A simple SELECT may cause ORACLE database core engine to fetch and to cache a lot more rows for performance and concurrency reason, but they are not necessary all been read by the accessor. What exactly are read is always a big challenge of today's security solution.

Footnotes:

 DML is data manipulation language, in general, they are SELECT, INSERT, UPDATE and DELETE.

Maxsoft Corporation

nterprise Security Solutio

VerticoDATA - Excessive Access Alert



Toppopular Scill Insert Description

All hights reserved. *

Toppopular Scill Insert Descripti

SQLStmtLog gives you a complete access map of a process. It logs each every ORACLE access DML¹ and DDL² statements from the beginning to the ending of the process.

The most importantly, each and every **binding variables** must be translated into their original and actual data form, so that you know the exact impact to your data. For example, "SELECT * **FROM** CUSTOMER_PROFILE WHERE CUSTOMER_NAME LIKE :b1;" is meaningless from data analysis stand point of view, but if we translated the binding variable :b1 to its runtime value '%O%', then immediately you know that somebody is trying to get information of all customers whose name contains a letter 'O', i.e. John, Joe, Brown, and etc.

In order to take advantage of powerful ORACLE **transaction** processor, VerticoDATA tracks and logs ORACLE internal transaction id for all DML, you can always map any transaction back to ORACLE archived log for further investigation in the areas of data replication/mirroring, data archiving, data warehouse, and high availability.

VerticoDATA can be configured to conduct program DNA only verification for your **batch** processes, which eliminated lengthy logs and zero impact to the performance.

VerticoDATA core is designed to seamlessly handle long-life and multi-threaded **daemon** process, each logical process unit is logged as one group, there are no transaction interleave and overlap logs.

Footnotes:

- DML is data manipulation language, in general, they are SELECT, INSERT, UPDATE and DELETE.
- DDL is database manipulation language, i.e., CREATE TABLE, CREAT INDEX, TRUNCATE TABLE, ..., etc.

bsolute Secure Enterprise Security Solution

Maxsoft Corporation

VerticoDATA - Excessive Access Alert



Excel Download allows you to download EPHI data of this specific process to your local storage along with VerticoDATA Tracker, so that the downloaded doc is traceable no matter where it goes. The document tracker solution needs to be purchased separately and is an customizable option.

Wiew Logfile allows you to examine the raw meta-data from our logfile, which is the base of all VerticoDATA analysis. It is one per process unit which is generated from a complete-run of a

):
supplies the state of the st

once you are familiar with and master the format of our logfile meta-data, you may apply your own intelligent forensic logic and rules, generate your

own alerts, and build your own security vault.

program, a script, or a procedure, or is generated

from a logical process cycle from a daemon proc-

The **meta-data format** is copyrighted, and iMaxsoft owns its sole proprietary right. iMaxsoft reserves the right to freely make changes to the meta-data format without the consents of its customers.

Delete allows you to remove this incident from your security vault.

Absolute Secure Enterprise Security Solution

MaxSOFT Corporation

VerticoDATA Quick User Guide **Enterprise Security Solution**

VerticoDATA - Threats Intelligent Analyzer







EPHI Breaches Analysis

VerticoDATA security vault is built for you to explore potential threats, to investigate the footprint of suspicious attacks, to diagnose the causes of data leaks, to assess the severity of a data breaches, and to detect and to block potential security vulnerability.

EPHI Breaches Analysis allows you to perform sensitive data breach research. Your historical sensitive and privacy access information is the most valuable assets for early breach discovery which can significantly reduce the chances of future more serious attacks.

Malicious Programs Analysis allows you to protect your data from being accessed by unknown and un-registered programs. There are hundreds of thousands of back doors that are reserved and created by hardware and software vendors to conduct real-time upgrades, debugging, performance tuning, storage devices synchronization, and many other viable purposes. Unfortunately, back doors are your worse vulnerabilities for hackers. At any given second, a hacker may trying to plant a Trojan onto your server which can be used to hijack your servers and to attack your precious sensitive and privacy data without any visible trace.

Long Transactions Analysis allows you to monitor and to control your sensitive and privacy data access within a pre-set of constraints. No general users can access data crossing certain boundaries, or exceeding certain time-limits. There is no way to 100% stop cyber-crimes, but you certainly can manage and mitigate the risks and damages to the minimum.





An Absolute Secure Enterprise Security Solution

Malicious Programs Analysis



Long Transactions Analysis

Maxsoft Corporation

P. O. Box 1222 Cupertino, CA 95015 USA

VerticoDATA - Sensitive and Privacy Data Breaches

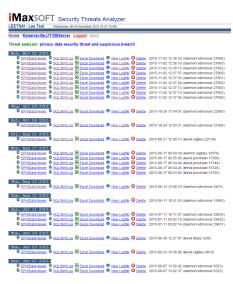




Absolute Secure Enterprise Security Solution

EPHI Breaches Analysis

EPHI Breaches Analysis allows you to conduct sensitive data breaches research. Electronic Patient Health Information (EPHI) is a synonym of Sensitive and Privacy Data in USA healthcare industry.



Suspicious breaches are isolated and reported for security staff to conduct further analysis to assess the seriousness of potential threats to the sensitive and privacy data.

Each potential incidence's activities are fully diagnosed and logged via VerticoDATA threat protection engine. You will learn when and how the breach was found, what and how many sensitive and privacy data were affected, and the user who was responsible for it.

A historical trend analysis can be done easily in diagrams by user, by process, by time window, by access point (i.e. IP), by data volume, and by data content.

The most difficult threats to detect are those deeply implanted Trojan processes which are invisibly co-existence with your normal operations, the routine threat behavior monitoring and analysis is the only way to dig them out before catastrophic damage.

There is no silver bullet for cybercrimes and data leaks preventions. A good security solution needs to be able to intelligently collect and analyze all aspects of data access methods and their contents, needs to be able to segregate those suspicious ones from good ones, and needs to be able to learn and tune its security rules via security staffs' decisions.

Maxsoft Corporation

VerticoDATA Quick User Guide **Enterprise Security Solution**

VerticoDATA - Malicious Programs





Malicious Programs Analysis

Malicious Programs are extremely difficult to detect, they can name itself to comply with your naming standard and can hibernated themselves for a long time before attacks.

Maxsoft Security Threats Analyzer Home Kanarraville,UTDBServer Log Threat analyzer: un-authorized accessor and malicious program

VerticoDATA program DNA technology is the core to detect malicious process effectively. Our approach is to catch malicious programs during their hibernation or when they are in act. Vertico-DATA intelligent engine quarantines and segregates malicious processes, procedures and scripts, and remove them before they attack.

VerticoDATA program DNA technology is only applied to ORACLE database accesses. You may leverage VerticoDATA source code and customization service offerings to extend the technology to your entire IT operation.

MaxSOFT VerticoDATA Tracefile, Setting and Configuration

An Absolute Secure Enterprise Security Solution

An active list of all ORACLE database access processes can be created via VerticoDATA program DNA scanner, and VerticoDATA maintains the accuracy of the list by automatically applying adjustments from each program's execution statis-

In a production environment, the ORACLE application execution footprints are rarely changed. The VerticoDATA patent pending program DNA dictionary can be quickly established and be validated with near zero performance degradation.

Maxsoft Corporation

P. O. Box 1222 Cupertino, CA 95015 USA

VerticoDATA Quick User Guide **Enterprise Security Solution**

VerticoDATA - Unexpected Long Transactions





Enterprise Security Solution

Long Transactions Analysis

Defining a Long Transaction is clearly a challenge. The criteria of a long transaction can be a database query that runs over a certain amount of time, a process that accesses a database exceeding its historical average runtime, or an unknown procedure that accesses a sensitive data table over a long while.

To define allowable runtimes for all your transactions is impossible and is not feasible, but it is vital not to alert security staff when a sensitive data access has been taking enormous amount of time to execute.

To block threats in-time is the best strategy for **risk mitigation**. But, how long is too long, what action needs to be taken when a long transaction occurred, why long transaction is a potential security threat. In years of our experience, the most commonly threats caught are those activities occurred irregular and abnormal, the long transaction scenario falls into this criteria and is one of the most important quantitative measurement for identifying abnormality.

A comprehensive operation statistics warehouse is required to conduct precise preventive measurement for securing your precious data. Vertico-DATA collects runtime statistics and creates your proprietary security forensic information warehouse automatically. VerticoDATA powerful forensic analytical building block can be leveraged to develop your own threats detection solution.

Maxsoft Corporation

P. O. Box 1222 Cupertino, CA 95015 USA

VerticoDATA - FREE ORACLE Toolset





In order to effectively safeguard your sensitive data bank, you must limit the usages of any general purpose database access tools to a small and controlled personnel, i.e. ORACLE query tool sqlplus, data import and export utilities, data warehouse utilities, and many more.

Database security is beyond a simple user authentication procedure, the "when and what can be accessed by who" security strategy is no longer sufficient to protect a database from hacking and leaking, instead the 'content access traceability' is a lot more powerful and feasible strategy for threats prevention in today's highly technological driven IT infrastructure.

Any dynamic general purpose tools from ORA-CLE, third-party vendors, or home-grown, must comply your enterprise security standard, these utilities must be capable to log and trace activities and contents of your sensitive data in and out from its data source, and an user defined routine is callable to format and to store auditable information to your central security vault.

VerticoDATA threat analytical tool, the broader auditing information are logged to VerticoDATA security vault, the more accurate threats are predicted.

VerticoDATA offers a full set of building blocks and libraries, you may create proprietary database access utilities with embedded security functions for all your internal and external enterprise users.

The subsequent pages illustrate sample utilities that are created on top of VerticoDATA security platform and their respective security measurements.

Maxsoft Corporation

Absolute Secure Enterprise Security Solution

VerticoDATA - FREE Secure Tools





DBAPlus - a database dynamically access tool. Data query, data manipulation, database structure manipulation, data piping, access control, and etc.



Enterprise Security Solution

DBAdvisor - a database table spaces and partitions management tool. Data storage allocation analysis and access performance impact analysis.



DBRescuer - a real-time data recovery tool. Roll back and damaged data on a production database. Redo and undo any data damages in a live production database environment.



ORACLE setup and configuration required for VerticoDATA core engine.



VerticoDATA can be configured dynamically via runtime parameters which can be set thru environment or a configuration file.



Document Tracer is a technology invented by iMaxsoft to track the transmission of sensitive documents among you, your customers, and your business constituents and partners.

Maxsoft Corporation

VerticoDATA - DBAPlus





Enterprise Security Solution

DBAPlus - a database dynamically access tool, which serves end-users, IT staff, DBA and security officers for database structure maintenance, performance analysis, data analysis and manipulation, data piping, access control, and etc.

DBAPlus contains built-in security measurements as followings:

- 1. seamlessly interact with VerticoDATA core engine to track and log auditing information for threats control
- 2. performance evaluation and turning assistance
- run-away query and long transaction prevention
- 4. enterprise global settings for user access time constraint, and retrieved data volume control
- 5. web and mobile version of sqlplus (full functions)



The main menu of DBAPlus contains 5 main functions, Secure SQLPLUS, Query Performance Tuner, SQL Parser, Database Structure and Data Quick Scanner, and DBAPlus Environment Settings.



Secure SQLPLUS - you may enter any valid DDL and DML in the text box, then hit RUN button, a confirmation page will be displayed with statistic information and wait for you to hit EXECUTE, DOWNLOAD or CANCEL button.

EXECUTE will continue and finish the query (DDL or DML) and show results if there are rows found and fetched.

Maxsoft Corporation

VerticoDATA - DBAPlus





DOWNLOAD will transfer fetched data to your local storage. Or you may CANCEL the query.

Query Performance Tuner - depends on the database structure, the ORACLE kernel optimizer, and how a query is constructed, the user query can be tuned for efficiency and performance.

Valuable statistics information are provided from ORACLE kernel query analyzer and optimizer at different stages of a query execution. Of course the most accurate estimate is to gather information after the query is completely done, but in most cases we need to know the guesstimate of a query before it starts draining database resources.

VerticoDATA provides you 3 ways to evaluate a query and get different degree of guesstimated runtimes before execution, they are **ExplainPlan**, **TraceOnly**, and **TKProf109**. The ExplainPlan is using ORACLE "EXPLAIN PLAN FOR <your query>;" and then display the result from table dbms_xplain.display. The TraceOnly is using the feature "set autotrace traceonly;" from ORACLE sqlplus. The TKProf109 is using ORACLE tkprof utility, temporarily sets "ALTER SESSION SET SQL_TRACE = TRUE", and reads the ORACLE trace logfile afterwards.

n Absolute Secure Enterprise Security Solution

Maxsoft Corporation

An Absolute Secure Enterprise Security Solution

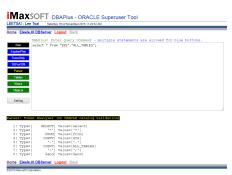
TraceOnly example.

	TSAI Saturday 7th of November 2015 11:33:22 AM
Home Elecie,	HDBServer Logout Back
	DBADDIST fitter (Darry Command - multiple statements are allowed for blue bottons, select * from "MROT. PMCDV_SPECIALTY";
S21590 rows S21590 rows Clapsed (MR: Execution Pl Plan hash va	ME_162.mlp O0:00:04.02 ab. Luce 311296584
Plan hash va	MARKET OF THE PROPERTY OF T
Plan hash va	Description

Maxsoft Corporation

VerticoDATA - DBAPlus

TKProf109 example.



Query Parser - this is an extremely important feature, and it should be used in conjugation with ExplainPlan, TraceOnly, or TKprof109 in order to precisely identify whether a query is touching sensitive data objects from your database or not.

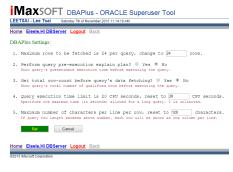
Query performance run tree contains a detail list of all accessed objects, so it is the best place to start investigate whether a particular query accesses your sensitive data source or not. In many case the sensitive data objects are hidden in complex views or are renamed to difference objects, the run tree from ExplainPlan, TraceOnly and TKProf109 breaks query to its base objects.

Parser and performance techniques are also part of VerticoDATA building blocks provided for you to integrate to your applications and create your access secure shield.

Maxsoft Corporation

VerticoDATA - DBAPlus





VerticoDATA **DBAPlus query runtime configu- ration** - a secure query tool provides a secure environment for users to safely conduct sensitive and non-sensitive accesses to and from databases. Any security measures are invisible to your endusers and are so comprehensive that you are not only can monitoring the traffic of data accesses, but also know the exact content accessed by users.

VerticoDATA DBAPlus setting demonstrates the fundamental requirements for a secure query tool.

- 1. limit the maximum number of fetched rows returned from users' queries
- show query's guesstimate runtime before its execution, so that users know the approximately execution time of their queries to avoid long-queries
- 3. show query's total qualified row count before its execution, so that users know the exact size of result set before commit it
- 4. limit the maximum time that is permitted for each query, this will prevent any run-away long queries
- 5. many others ,,,

The goal is to pre-set your enterprise security rules at tool level, so that your end-users can openly and freely access your database without accidently stepping on any your security landmines.

Today's sophisticated security hacking techniques has changed the way how we manage and distribute traditional tools and utilities. The old fashion and closed environment tools and utilities are the most vulnerable to data leaks and cyber attacks.

Maxsoft Corporation

Absolute Secure Enterprise Security Solution

VerticoDATA - DBAPlus



DBXray - "how comprehensive and secure the DBXray is" drives the success rates of your IT database centric application development.

In order to seamlessly synchronizing your software development team and be sure all members are always on the same page, your must have a secure tool that acts as a focal point and can be accessed 24 by 7, from anywhere and any devices internet and mobile.

VerticoDATA has created a set of tools that you can deployed as it or enhance them by adding more control and more database objects. DBXray contains database TABLE structure and data management, database VIEW structure and data management, and database PROCEDURE, TRIGGER, and SEQUENCE objects structure management.

TABLE name list, DBXray groups tables by their associated schemas. A "first | prev 500 | next 500 | last" is displayed for schema that contains more than 500 tables.

You may view each TABLE **structure** by clicking on the name of the table. A separate tab is opened for showing the table structure in details. You can switching between these 2 tables for viewing other tables.

If you click on the **ViewData** link, the table content will be shown, the maximum number of rows displayed depends on the settings set via hitting **Setting** button.

An <mark>Absolute Secure</mark> Enterprise Security Solution

iΝ	Taxsoft DBAPIus - OF	RACLE Superuser Tool
LEET	SAI - Lee Tsai Saturday 7th of November 201	15 11:14:49 AM
Home	Eleele,HI DBServer Logout Back	
Tra TX0	DBAPlus Enter Query Com Com Com Com Com Com Com Com	- multiple statements are allowed for blue buttons.
1 2 3	nput! so: 35 owners refresh all caches CMXFTS DESNMP DC2 EVERYS	(43 tables) - (53 tables) - (50 tables) - (52 tables)
5	FLORE_SILES FLORE_FILES FNO 1 ViewData PROVICER_MASTER 2 ViewData PROV SPECIALTY	(2)2 tables (1 table) (3 tables) - expanded
9 10 11 12 13	3 VIAMPATA PROV SPECIALTY DE HIGH IOCONN LOGRES CA LOG LOGRES CA LOG LOGRAD LOGRAD LOG LOGRAD LOG LOVENT DATA MOULTON	200 (7 tables) (7 tables) (8 tables) (8 tables) (14 tables) (14 tables) (15 tables) (15 tables) (15 tables) (15 tables) (15 tables) (15 tables) (16 tables) (17 ta
16	INVERSE DATA PRODUCTOR IX MDSYS	(25 tables) (15 tables) (108 tables)

Maxsoft Corporation

VerticoDATA - DBAPlus



LEETSAI - Lee Tsai Saturday 7th of Nov	rember 2015 11:16:17 AM		
Table Name: HMO.PROV SPEC	IAI TV		
Column Attributes - 12 columns	IALII		
PROVIDER ID		CHAR(10)	NOT NULL
DRIORITY		NUMBER (38)	NOT NULL
SPECIALTY CODE		CHAR(6)	NOT NULL
EFFECTIVE DATE		CHAR(8)	NOT NULL
EXPIRATION DATE		CHAR(8)	NOT NULL
CERTIFICATION ID		CHAR (20)	NOT NULL
GEO_CERTIFIED		CHAR (20)	NOT NULL
STATUS		CHAR (4)	NOT NULL
USER ENTERED		CHAR (40)	NOT NULL
DATE_TIME_ENTERED		CHAR (12)	NOT NULL
USER_UPDATED		CHAR (40)	NOT NULL
DATE_TIME_UPDATED		CHAR (12)	NOT NULL
1 associated index:			
PROVSPECIDX_02 (UNIQUE):			
PROVIDER_ID	ASC		
SPECIALTY CODE	ASC		

DBXray - TABLE structure display (on a separate tab)



DBXray - TABLE content display. If each row content can be fit in a pre-set (**Setting** button) line size, then each row is displayed horizontally, otherwise each row is displayed vertically with column name on the left and data on the right.



DBXray - horizontally display.

LETRAL Let Tax Manage melanted styles and the statements are allowed for blue buttons.

The Through England Letter (board Date of the styles and the styles and the styles and the styles are styles and the styles and the styles are free beng provider_master where name is ';

Letter through the styles are free beng provider_master where name is ';

Letter through the styles are free beng provider_master where name is ';

Letter through the styles are free beng provider_master where name is ';

Letter through the styles are styles and the styles are styles a

Maxsoft Corporation

Enterprise Security Solution

VerticoDATA - DBAdvisor





IMAXSOFT DBAdvisor - ORACLE Space Manager

LEETSAI - Lee Tail Monte 27th of November 2015 10:13 H AM

Home Palau_PW_DBServer Logout Back

DBAdvisor: ORACLE Tablespace and Partitionspace Manager

Tablespace Name or Partitioned Table Name:

Tablespace Name or Partitioned Table Name:

Tablespace Name or Partitioned Table Name:

Telegration Logout

Tablespace Name or Partitioned Table Name:

Telegration Logout

Tablespace Name or Partitioned Table Name:

Telegration Logout

Tablespace Control, Logout

Tablespace Name or Partitioned Table Name:

Tablespace Name or

DBAdvisor assists you to manage the allocation of logical database structures and physical storage spaces. The logical database structure is referred to tables and indexes, and the physical storage is referred to tablespaces, partitions, and OS data files. The physical storage contains devices with variant access speeds, and the properties of logical tables are variant from the size of tables, the access methods of tables, the indexes of tables, the partitions of tables, and the usages of tables. Properly mapping of logical structure and physical storage drives the overall performance of your database.

DBAdivsor - a database storage space management tool. DBAdvisor offers you a global view of

the layouts of tables, indexes, tablespaces, and

partitions. The appropriate allocation and mapping of logical data structure and physical storage is

crucial for database performance.

LETERAL Let Tail Monte, 20 in Household 20 in 12 20 in 14 in

Tablespace Usage - based on the tablespace name you entered, either a full or a partial tablespace name, a list of qualified tablespaces is shown along with their respective usage statistics.

You may click on a specific tablespace from *main tab* for a detail analysis report which is shown in a separated *second tab*, and you may switch back to the *main tab*, and select another tablespace whose detail report is refreshed to the *second tab*. You may go between *main* and *second tab*s for tablespace name list and their respective tablespace usage detail report.

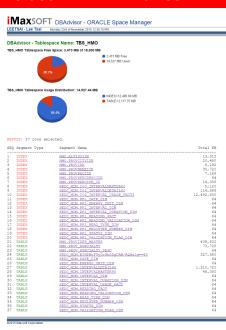
Maxsoft Corporation

Absolute Secure Enterprise Security Solution

VerticoDATA Quick User Guide **Enterprise Security Solution**

VerticoDATA - DBAdvisor





Enterprise Security Solutio

Tablespace Usage Report - the first chart shows tablespace available free space. The second chart shows the mapping of tables and indexes in tablespace used space. A full list of all indexes and tables are show below the charts.

You may click on an index or a table link and a third tab is created for a detail specification of the object. You may switch between second tab and third tab for details of all objects belonged to the specific tablespace.

MaxSOFT DBAdvisor - ORACLE Space Manager

NOT NULL ENABLE

The third tab contains detail specification of table SEDC MDM.DATE DIM.

Maxsoft DBAdvisor - ORACLE Space Manager

INIQUE INDEX "SEDC_MEM"."FRI_DATE_DIM" ON "SEDC_MEM"."DATE_DIM" ("FULL_DATE")
10 INITEANS 2 MANTEANS 255 COMEDUE STATISTICS
(INITIAL 6555 MANT 10455° MINIMENTERN'S INMARCTEN'S 2147463645
RASE O FREELISTS 1 FREELIST GROUPS 1 BUFFER_POOL DEFAULT)
ACCC TES_HEMO.

Maxsoft Corporation

(408) 253-8808 (408) 253-4008 P. O. Box 1222 Cupertino, CA 95015 USA The *third tab* contains detail specification of index SEDC MDM.PK1 DATE DIM.

VerticoDATA - DBAdvisor

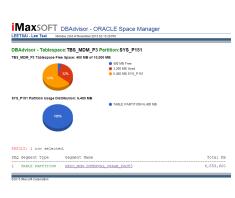




Partition Usage - based on the tablespace name you entered, either a full or a partial tale name, a list of qualified partitions is shown along with their respective capacity.



You may click on a specific partition from *main tab* for a detail analysis report which is shown in a separated *second tab*, and you may switch back to the *main tab*, and select another partition whose detail report is refreshed to the *second tab*. You may go between *main* and *second* tabs for partition name list and their respective partition usage detail report.



The detail analysis report for partition SYS_P151 which is the named tablespace TBS_MDM_P3. The partition SYS_P151 is used only by table SEDC_MDM.INTERVAL_USAGE_FACT3. The is the *second tab*, and you can click on the table link to view its detail specification in *third tab*.

Maxsoft Corporation

An Absolute Secure Enterprise Security Solution

VerticoDATA - DBAdvisor



LETTAL LAR THE MANUEL PROPERTY OF THE PROPERTY

You may click on an index or a table link and a *third tab* is created for a detail specification of the object. You may switch between *second tab* and *third tab* for details of all objects belonged to the specific tablespace.

The *third tab* contains detail specification of table SEDC_MDM.INTERVAL_USAGE_FACT3.

Maxsoft Corporation

An Absolute Secure Enterprise Security Solution

VerticoDATA - DBRescuer





DBRescuer - a complete security solution does not only detect and block data leaks, but also needs to recover damages caused by data sabotages. DBRescuer integrates with ORACLE logmnr utility, it ties user processes and ORACLE transactions as events, you can search, REDO and UNDO any specific transaction from your iPhone, iPad or a PC.

Thru VerticoDATA building foundation, you can develop an automate recovery process via a set of specific criteria.

DBRescuer ORACLE SwitchLog - in order to access most current transactions committed by ORACLE on your database server, VerticoDATA requires you to flush committed transactions from ORACLE redo-logfiles to logmnr archived-logfiles first.

Precisely matching VerticoDATA's audit logs and ORACLE logmnr archived logfiles is crucial for database forward and backward recovery.

DBRescuer Cache All OPEN - to minimize the load and the operational intervention on database server, and to speed up transaction search, VerticoDATA caches ORACLE redo and undo transactions to a recovery vault. This action will automatically caches checked-in but un-cached transactions from database server to VerticoDATA recovery vault all at once.

DBRescuer **Get Transaction** - you may locate transactions occurred in a period of time, from a specific process, through a specific user login, on a specific database server, or any combination of these search criteria. You may easily customize this powerful tool via VerticoDATA building block.

MaxSOFT VerticoDATA Tracefile, Setting and Configuration	
ETSAI - Lee Tsai Monday 23rd of November 2015 02:32:36 PM	
me Palau PW DBServer Logout Back	_
me Palau,PW DBServer Logout Back	
Rescuer: ORACLE Transaction Security and Recovery	
ORACLE Switchlog A graceful ORACLE switchlog that flushes redo-logs to archived-logs. VerticoDATA can only rescue transactions from ORACLE archived logfiles	
VerticoDATA caches UNIO and REDO transactions to a recovery vault object in SQL executable form which are then used for realizing database repairs action caches all checked-in but un-cached ORACLE transactions to VerticoDATA recovey vault (MySQL) for letter performance.	Σ.
Cd Turnstion Period (YYYY/Md/DD): 20150901 -20150901 Process Name: Csche SELECTED Database Server Name: Database Server Name:	
Click on the brown color process link to NMDO or MEDO GRACLE transactions. The / mark denotes that ORACLE transactions' recovery statements have been cached to local recovery yault (MySQL).	
DOLLEMICO 2015-08-21 12(90:11 usr-leved program-subulusi limuž pid-221M DOLLEMICO 2015-08-21 12(90:11 usr-leved program-subulusi limuž pid-221M DOLLEMICO 2015-08-13(91:04) usr-leved program-subulusi limuž pid-15076 DOLLEMICO 2015-08-22 10:10:05 usr-leved program-subulusi limuž pid-101M DOLLEMICO 2015-08-23 11:16:11 usr-leved program-prodelnisi limuž pid-101M DOLLEMICO 2015-08-23 11:16:11 usr-leved program-prodelnisi limuž pid-101M DOLLEMICO 2015-08-23 11:16:11 usr-leved program-prodelnisi limuž pid-101M DOLLEMICO 2015-08-23 11:16:12 usr-leved program-prodelnisi limuž pid-21M DOLLEMICO 2015-08-23 11:16:12 usr-leved program-prodelnisi limuž pid-21M DOLLEMICO 2015-08-12 11:16:15 usr-leved program-prodelnisi limuž pid-21M DOLLEMICO 2015-08-12 11:16:15 usr-leved program-prodelnisi limuž pid-21M DOLLEMICO 2015-08-12 11:16:16 usr-leved pid-21M DOLLEMICO 2015-08-12 11:16:16 usr-leved pid-21M DOLLEMICO 2015-08-12 11:16	
me Palau.PW DBServer Logout Back	

Maxsoft Corporation

Absolute Secure Enterprise Security Solution

VerticoDATA - DBRescuer



MaxSOFT VerticoDATA Tracefile, Setting and Configuration
EETSAI - Lee Teal Monday 23rd of November 2015 02:32:36 PM
iome Palau,PW DBServer Logout Back
BRescuer: ORACLE Transaction Security and Recovery
CRACLE Swholog A graceful ORACLE switchlog that flushes redo-logs to archived-logs. VerticoDATA can only rescue transactions from CRACLE archived logfiles.
CRIM-MOSEN WerlicoMATA caches UNIO and REDO transactions to a recovery vault obygoin in SQL executable form which are then used for realtime database repair, This action caches all checked-in but un-cached GRACE transactions to VerticoMATA recovery vault (Oygol) for better performance.
Cel Transaction Period (TYTY/RM/VED): 2015/09/01 -2015
Click on the brown color process link to UNDO or MEDO GRACE transactions. The / mark denotes that ORACLE transactions' recovery statements have been cached to local recovery wasts (MyDQL).
DOMESTICS POIN-SH-21 LP 20-11 usr-leved program-explosed from 2 nd-221M CONSTRUCT POINTS CONTROL
8 transactions found from 9 log events - Oracle READ and WRITE transactions
forme Palau_PW_DBServer_Logout Back 2015 Alazot Corporation

DBRescuer **Clear and Set Defaults** - to clear all search fields and set the period to default 2015/05/01 thru 2015/08/31.

DBRescuer Cache SELECTED - caches those un-cached transactions from database server to VerticoDATA recovery vault from the *selected list*.

ome Palau.PW DB	Server Logout Back
	Transaction Security and Recovery
ORACLE SwitchLog	A graceful CRACLE switching that flushes redo-logs to archived-logs. VerticoDATA can only rescue transactions from CRACLE archived logfiles.
Cache All OPEN	VerticoDATA caches UNIO and REDO transactions to a recovery vault (MySQL) in SQL executable form which are then used for realtime database repair. This action caches all checked-in but un-cached ORACE transactions to VerticoDATA recovey vault (MySQL) for better performance.
Get Transaction Clear and Set Defaults Cache SELECTED	Period (YYYY/86/DD): 2015/05/01 -2015/05/31 Process Name: OS User Name: Database Server Name:
Transactions' resident transactions' resident 25 Silistantion 25 Silistantion 26 Oracle XID=0 Or	133.125055 TRXTYPE=U, Rows-Affected=1 118582055 TRXTYPE=S, Rows-Affected=186, Rows-Logged=186, EPHI_ID=2001 133.125055 TRXTYPE=D, Rows-Affected=0

Transaction Event List - the default list is a list of transaction events occurred in the period of 2015-05-01 thru 2015-08-31 as an example. An event can be a program run, a script, a execution cycle of a daemon process, and etc.

You may view the ORACLE transaction summary by clicking on the event name, and get details of each transaction by clicking on transaction ID.

Get a summary of all executed SQL statements of an event, simply click on the SQLStmtLog link.

Was SOFT VertraCOMA Transfels, Setting and Configuration

William Committee Committee

SQLStmtLog link - in order to precisely analyzing the end result of a logical ORACLE transaction, you must have a complete view of all ORACLE SQL statements in their chronological order. For example, the transaction 1.13.94202 deleted 185 rows, but they were all roll-backed, the end result was nothing deleted. But if you simply checking the detail of transaction 1.13.94202 from logmnr archived logfile, you would never be able to tell.

Maxsoft Corporation

Enterprise Security Solution

VerticoDATA - DBRescuer





Transaction Details - click on the colored ORA-CLE XID, you will get a detail transaction report which contains the transaction origin form, the data it touched, redo executable SQL statements, undo executable SQL statements, EPHI related information, the correlation with other SQL statements, and many more.

REDO SQL statement - statement that was executed by ORACLE, but the end results depends upon whether it was COMMITED or ROLL-BACKED.

UNDO SQL statement - statement that can be used to undo the above SQL statement. But be sure that the above SQL statement was committed, and be sure there are no subsequent updates or associations to the rows affected by above SQL statement.

We highly recommend that you develop a integrity validation program to cross-check the impact by undoing a SQL statement. VerticoDATA recovery vault and building blocks can be leveraged for speedy development of this powerful transaction integrity checking utility.

Maxsoft Corporation

Absolute Secure Enterprise Security Solution

VerticoDATA Quick User Guide **Enterprise Security Solution**

VerticoDATA - ORACLE Setup





iMaxSOFT ORACLE Configuration and Setup

This utility is created on top of VerticoDATA building blocks, and you may easily customize for your own environment.

ORACLE Setup - to validate the ORACLE setup for VerticoDATA. The most important one is to

turn on ORACLE archived logging facility, it is

not only for the sake of high availability, and it is important for VerticoDATA Rescuer utility.

An Absolute Secure Enterprise Security Solution

Maxsoft Corporation

(408) 253-8808 (408) 253-4008 P. O. Box 1222 Cupertino, CA 95015 USA

VerticoDATA - VerticoDATA Setup





VerticoDATA Setup - VerticoDATA configuration and setup can be grouped into 3 main categories, security rules and policies creation, application and database server runtime environment settings, and VerticoDATA vaults creation and maintenance.



Security Rules and Policies Creation - define sensitive and privacy data from your database, set policies for sensitive and privacy data access, and establish alert thresholds for sensitive and privacy data access violation. *VerticoDATA policy builder* can assist you to quickly define and create rules and policies, and store them into a security rule database.

Application and Database Server Runtime Environment Settings - there are many runtime parameters that can be set to alter VerticoDATA kernel internal logic to best fit your computing environment.

LEETAN-Lee Tabl Tents 20 of theorete 2015 11.02 to M

those Palauff (DBSERVE Logout Back

* Copyright SOUSS IMMODOF All Reference .*

**Copyright SOUSS IMMODOF All Reference .*

**VariousDATA - Electronic Health Protected Information(sORE) Builder

**Papers Souther - Delice (or tenthologis)

Syntam Soltman fable - Outline

**FIELD(1): 800-MODIFE | MARTEN - SOUTHER | MODIFE |

**FIELD(1): 800-MODIFE | MARTEN - SOUTHER | MODIFE |

**FIELD(1): 800-MODIFE | MARTEN - SOUTHER |

**FIELD(1): 800-MODIFE | MARTEN |

**FIELD(1): 800-MODIFE | MAR

VerticoDATA Vaults Creation and Mainte- nance - VerticoDATA vaults are created either by pre-defined script or from generated scripts via the security rules and policies engine.

VerticoDATA building block is well documented and can be used to create tools that are best fit to your computing environment and security requirements. Our sample policy builders include a Microsoft Visual Basic version, a HTML version, and a UNIX Character Mode version.

Enterprise Security Solution

Maxsoft Corporation

VerticoDATA - Document Tracer





Home Palau,PW	DBServer Logout Back	
	er: Document Access Track	king System that were created and distributed by you.
Begin Date	2012/11/24	End Date 2015/11/24
Doctor Email		Partial email search is allowed.
Patient Email	leeusr5	Partial email search is allowed.
OK Home Palau,PW	DBServer Logout Back	
02015 iMaxsoft Corpora	tion	
@2015 iMaxsoft Corpor.	ition	

Enterprise Security Solution

Maxsoft Document Manager	
ome Palau.PW DBServer Logout Back	_
	
cument Manager: 13 records found!	
cess Log Status Issued Date Doctor	
Year Log Ameling 2013-12-16 10:22:54 kanderson@imaxsoft.com(karenanderson)	
Patient/Issuer: leeusrS@imaxsoft.com(LeeusrS)/EL CANINO HOSPITAL-LABCRATORY	
Patient/Issuer: leguerSRimaxsoft.com(LeguerS)/EL CAMINO HOSPITAL-LABORATORY	
Patient/issuer: leeusrsgimaxsort.com(Leeusrs)/EL CARINO HOSPITAL-LABORATORY Annihor 2013-11-08 10:05:15 kandersonSimaxsoft.com(karenanderson)	
Patient/Issuer: leeusr5@imaxsoft.com(Leeusr5)/EL CANING MOSPITAL-LARGRATORY	
Denied 2013-11-08 10:05:15 rbaks@imaxsoft.com(rolandbaks)	
Patient/Issuer: legusr58imaxsoft.com(Legusr5)/EL CAMINO HOSPITAL-LABORATORY	
law Log Denied 2013-11-08 09:42:58 rbaks@imaxsoft.com(rolandbaks)	
Patient/Issuer: leeusr58imaxsoft.com(Leeusr5)/EL CANINO HOSPITAL-LABORATORY	
iew Log Pending 2013-11-08 09:42:55 kandersonSimaxsoft.com(karenanderson)	
Patient/Issuer: leeusr5@imaxsoft.com(Leeusr5)/EL CAMINO HOSPITAL-LABORATORY	
View Log Demind 2013-11-05 15:50:04 rarakawa@imaxsoft.com(richardarakawa)	
Patient/Issuer: leeusr58imaxsoft.com(Leeusr5)/EL CAMINO HOSPITAL-LABORATORY	
Fig. 1. Accepted 2013-11-05 15:50:02 macosta@imaxsoft.com(miriamacosta) Patient/Issuer: leeusr5@imaxsoft.com(Leeusr5)/EL CAMINO HOSPITAL-LABORATORY	
Patient/issuer: leedsrsylmaxsort.com(Leedsrs)/EL CAMINO HOSPITAL-LABORATORY	
Patient/Issuer: leeusr58imaxsoft.com(Leeusr5)/EL CANINO HOSPITAL-LABORATORY	
Partient/issuer: leedsr59imaxsort.com(Leedsr5)/EL CARINO ROSPITAL-LABORATORI Deprior 2013-10-19 12:19:42 macosta8imaxsoft.com(miriamacosta)	
Patient/Issuer: legusrSSimaxsoft.com(LegusrS)/EL CAMINO HOSPITAL-LABORATORY	
Denied 2013-10-19 12:19:42 rbaks@imaxsoft.com(rolandbaks)	
Patient/Issuer: legusr58imaxsoft.com(Legusr5)/EL CANINO HOSPITAL-LABORATORY	
low Log Denied 2013-10-19 08:05:57 daveSimaxsoft.com(dave)	
Patient/Issuer: leeusrS@imaxsoft.com(LeeusrS)/EL CAMINO HOSPITAL-LABORATORY	
low Log Pending 2013-10-18 11:41:02 macosta@imaxsoft.com(miriamacosta)	
Patient/Issuer: leeusr5@imaxsoft.com(Leeusr5)/EL CAMINO HOSPITAL-LABORATORY	
ome Palau PW DRServer Longut Back	

Maysort				
MaxSOFT Document Manager EETSAI - Lee Tsai				
ome Palau,PW.DBServer Logout Back				
ocument Manager: 8 log records found!				
eport ID Access Datetime Accessor Name				
0237 2015-10-30 09:49:11 leetsai Action: Viewed: / verticodata/ labtest/LabcorpSample2.pdf				
0237 2015-10-12 19:31:17 leetsai Action: Viewed: /_verticodata/_labtest/LabcorpSample3.pdf				
2015-09-21 20:39:54 leetsai Action: Viewed: /_verticodata/_labtest/LabcorpSample5.pdf				
2037 2015-06-25 17:06:20 leetsai — Action: Viewed: 'verticodata'_labtest/LabcorpSample1.pdf 2037 2015-06-25 17:04:35 leetsai				
2015-06-25 17:04:35 leetsal Action: Viewed: /_verticodata/_labtest/LabcorpSamplel.pdf 2015-05-15 09:56:53 leetsal				
Action: Viewed: /_verticodata/_labtest/LabcorpSample4.pdf				
0237 2014-11-22 14:03:26 leetsai Action: Viewed: /_werticodata/_labtest/LabcorpSample2.pdf				
0237 2014-01-22 11:02:05 karenanderson Action: Recevied Alerts from Main Oracle Server				
ome Palau,PW DBServer Logout Back				
2015 Maxsoft Corporation				

Document Tracer - sensitive and privacy data access activities for read and write, must be 100% traceable.

In order to 100% protecting sensitive and privacy data, you must know its access activity *origin*, its access activity *traveling map*, and its each and every *accessor's identification*.

With today's powerful encryption and noneditable file feature, any sensitive and privacy reports can be created in a secure form along with a password protection. If we can seamlessly integrate password, encryption and traceability into one black box, then we can easily solve the document traceability issue.

This VerticoDATA proprietary technology is *under developing* and has been scheduled for beta in mid of 2016.

Maxsoft Corporation

VerticoDATA - Conclusion



Facts - we cannot completely prevent threats and data leaks. There is no bullet-proof security solution. Enterprise IT security infrastructure covers hundreds of thousands of devices and people, any access point can be the weakest link, once a link breaks, the entire enterprise will become a vulnerable target for hackers.

It is impossible to 100% stop data leaks, what can we do to mitigate our risks?

What can we do - we must first identify what's our the most sensitive and privacy information, where are they stored, and how do they get created and accessed. Next, we need to layout an access road map of our *sensitive and privacy data* and see whether we can create an isolated and secure domain to streamline the management of *sensitive and privacy data*. At last, an access authorization map is required in order to create a enterprise wide comprehensive security authentication rule base.

For the sake of efficiency, an in-house IT security team is required, and we must understand that conducting a thorough inventory of enterprise's *sensitive and privacy data* is very time consuming. But, in order to protect, we must first know what to protect.

VerticoDATA deployment - VerticoDATA can be deployed as it, and makes enterprise specific customization concurrently. The sooner we deploy VerticoDATA, the quicker VerticoDATA learns and strengths the quality of enterprise's security rule base.

Security breaches will never go away and it is a forever war. We must learn how to live with it comfortably. When an cyber attack occurs or a data leak incident occurs, as long as we learn it soon enough to reduce our risk to minimum, we win.

We should not act like that our customers' *sensitive and privacy data* is 100% protected and our security system is bullet-proof and data never leaks. When data leaks occurred, we shouldn't downplay the seriousness of those leaks, lie about the impacts to our customers, and misleads our customers with meaningless recovery solution. A successful business ranks the security of customers' *sensitive and privacy data* as the highest priority, and is dead serious about pretesting the invaluable customers' trust and business goodwill.

In today's digital world, the *sensitive and privacy data protection effort* is vital for the survival of a business. Public can be very quickly to loss faith of a business that is not properly protecting their sensitive and privacy data, and a business can be totally destroyed, if a business is not telling their customers and the public the real impacts caused by a data leak promptly and honestly. **Promptly and precisely detection of what has been stolen and leaked is a fundamental requirement of any security solution.** We should never challenge the intelligence of the public.

Maxsoft Corporation

An <mark>Absolute Secure</mark> Enterprise Security Solution

Fax: (408) 253-4008 E-mail: lee@imaxsoft.com www.imaxsoft.com P. O. Box 1222 Cupertino, CA 95015 USA iMaxSOFT VerticoDATA Development Team October 2015, Saratoga California USA

Copyright © iMaxSOFT Corporation 2015, All Rights Reserved.