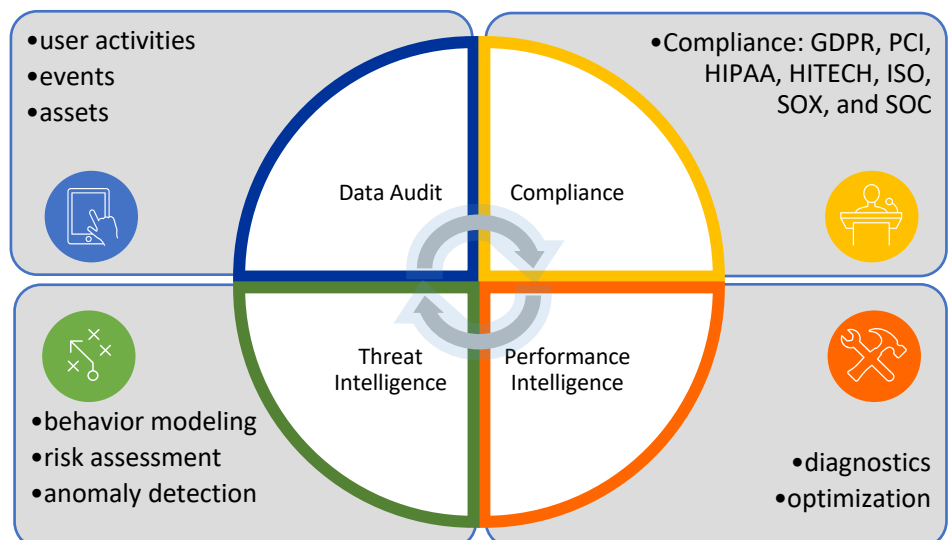## Data Sheet

Datiphy Entrprise Overview 1
Data Model and Architecture 2
Specification and Requirement 3

Datiphy Enterprise Solutions – Next Generation Database Auditing and Security

Data is the greatest asset for enterprises. Datiphy patented technology enables enterprises secure the most sensitive data against internal and external threats. All deployments are fast, light-weight, and customizable in supporting of data on-premise and in the cloud. The complete solution outlined below is built for the most demanding requirement.
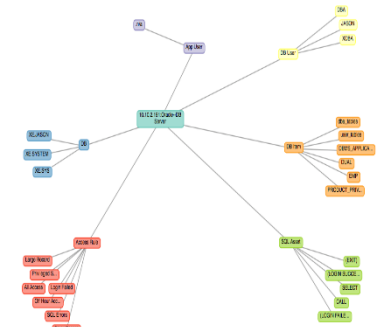
Datiphy Enterprise solutions secure, protect, and analyze data asset to optimize values for business intelligence.

- Data Auditing: continuous monitoring of all database transactions; collecting forensics evidence for data investigation and fraud detection
- Compliance assessment: establish common regulatory controls to determine violations and access privileges, and generate customizable reports
- Threat intelligence: real-time intelligence of all threat vectors; risk assessment for daily monitoring of data assets and risk metrics
- Performance intelligence: detect system bottleneck and genearte diagnostics for performance optimization

- user activities
- events
- assets

Data Audit

- Compliance: GDPR, PCI, HIPAA, HITECH, ISO, SOX, and SOC

Compliance

Threat Intelligence

Performance Intelligence

- behavior modeling
- risk assessment
- anomaly detection

- diagnostics
- optimization

1

Data model for security and analytics

Datiphy intelligence is based on assets modeling, machine learning of behaviors, and analysis of the change details.

Datiphy data model is based on the notion of *assets*. An asset is defined as an entity involved in the data transaction process such as user, program, and server. Assets can traverse, access, and change the data in the transaction process. The relationship and interaction between assets is called *behavior*. The behaviors that are *changing* over time constitute the base for security analytics and intelligence.

Datiphy engine and smart agents capture the changing behavior details in database, servers, and network. Through machine learning, the solution establishes normal behavior model for each asset; and therefore be able to detect and identify changes that are considered as anomalies, unauthorized accesses, or potential threats.

Server ▶	DB Server
Client ▶	DB User
Others ▶	DB
	DB Item
	Column Name
	Error Code
	SQL Asset
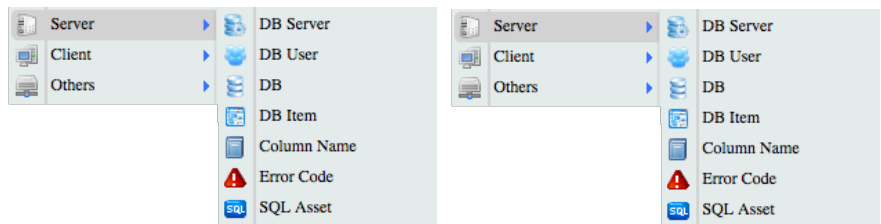
Auditing and Forensics

Once potential risky behavior or data loss has been identified, Datiphy can assist with real-time or post-mortem analysis and remediation. Having the full audit trail at your fingertips enabled by a simple Google-like search query reduces the hunting and gathering process significantly

Compliance Asssessment and Report

Datiphy's Compliance Assessment Report enables enterprises to enforce data governance policies and identify violations. Customizable reports give details of all assets, escalated privileges, applications, users and database entities or an overview of your organization security health status. Security analysts and auditors can utilize the reports to define and prioritize a plan of action.

Datiphy Compliance pre-defined reporting templates quickly gather the required audi details for compliance purposes.

Pre-defined reporting templates allow users to quickly gather the required audit details for compliance purposes. For example, for PCI reports, separation of duties violations must be documented for auditors. Report templates can be setup daily, weekly or monthly for periodic analysis by auditor teams.

Integration with 3rd party data platforms

With Datiphy's solution in place, audit data can easily forward to 3rd party platforms for further analysis. Datiphy solutions have various connectors for customers to choose, including Splunk, ELK, Kafka, and SIEMs products. This allows customer's Security Operation Center (SoC) to be much nimbler and responsive to potential database breaches.

3
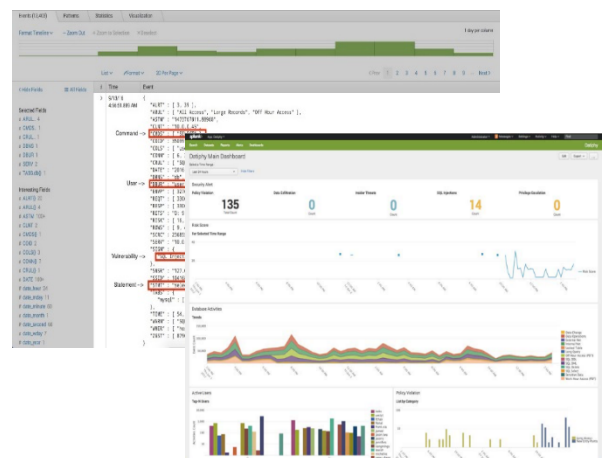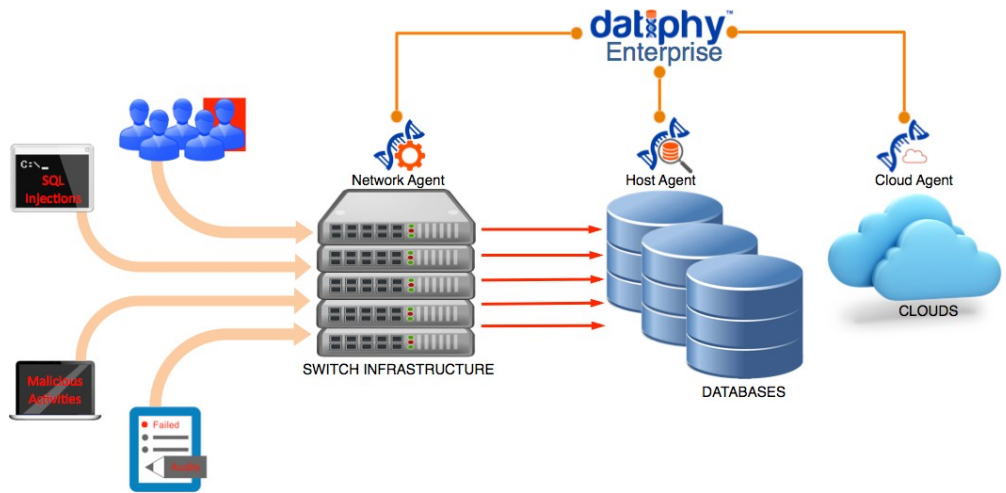
Datiphy Management Center (DMC)

Datiphy Management Center provides real-time compliance, alerting and reporting functions. It gives a holistic view of the environment insight into risky behavior, access anomalies, vulnerabilities and threats against data. It also provides top talkers, asset behavior and full data audit trails. Syslog/SNMP/Email alerts can be forwarded to your SoC, and automated reports can be generated on a pre-defined interval. DMC is a manager utilized for long term reporting capabilities. When data is archived to an external network storage device, the DMC is used to retrieve such archived data and generate reports on data access.

Network Agent

The Network Agent is deployed on a bare metal server or as a VM to capture data transactions, parse and index the data assets, and then forward JSON format data to the DMC for more advanced analytics and reporting.

Host Agent

The Host Agent software lives on database servers running on-premise. Similar to the Network Agent, the Host Agent captures data transactions by running in active memory on the DB server. It parses out the necessary data assets and forwards JSON format data to DMC.

Cloud Agent

The Cloud Agent software lives on database servers running in both private and public clouds. Currently supported IaaS platforms are AWS, Microsoft Azure, Google GCP, and Oracle Cloud.

Datiphy Enterprpise Solutions can be delivered in a format of Hardware Appliance or Software offering that can be installed on the bare-metal industry standard server such as Dell PowerEdge R640 Series or HP ProLliant DL380 or eqivalent, and VMWare's ESXi (Version 6 above) Virtual Server Environment.

PowerEdge R640

Features	Technical Specification	
Processor	Up to two 2nd Generation Intel® Xeon® Scalable processors, up to 28 cores per processor	
Memory	24 DDR4 DIMM slots, Supports RDIMM /LRDIMM, speeds up to 2933MT/s, 3TB max Up to 12 NVDIMM, 192 GB Max Up to 12 Intel® Optane™ DC persistent memory PMem, 6.14TB max, (7.68TB max with DPCMM + LRDIMM) Supports registered ECC DDR4 DIMMs only	
Storage controllers Internal boot	Internal Controllers: PERC H330, H730P, H740P, HBA330 External Controllers: H840, 12 Gbps SAS HBA Software RAID:S140 Boot Optimized Storage Subsystem (BOSS):HWRAID 2 x M.2 SSDs 240GB, 480GB Internal Dual SD Module¹	
Drive bays	Front drive bays: Up to 10 x 2.5" SAS/SATA (HDD/SSD) with up to 8 NVMe SSD max 76.8TB or up to 10 NVMe drives max 64TB, or up to 4 x 3.5" SAS/SATA HDD max 64TB Rear drive bays: Up to 2 x 2.5" SAS/SATA (HDD/SSD), NVMe SSD max 15.36TB Optional DVD-ROM, DVD+RW	
Power supplies	495W Platinum 750W Platinum 750W 240HVDC Platinum* 1100W 48VDC 1100W Platinum 1100W 380HVDC Platinum*	1600W Platinum 750W Titanium Hot plug power supplies with full redundancy option Up to 8 hot plugs fans with full redundancy *Available in China and Japan only
Dimensions	Form factor: Rack (1U)	Height: 42.8mm (1.69") Width*: 482.0mm (18.98") Depth*: 808.5mm (31.8") Weight: 21.9kg (48.3 lbs.) *Dimensions include bezel.
Embedded management	iDRAC9, iDRAC Direct, iDRAC RESTful API with Redfish, Quick Sync 2 wireless module (optional)	
Bezel	Optional LCD bezel or security bezel	
OpenManage™ Software	OpenManage Enterprise OpenManage Mobile	OpenManage Power Center
Integrations and connections	Integrations: Microsoft® System Center VMware® vCenter™ BMC Truesight Red Hat Ansible Modules	Connections: IBM Tivoli® Netcool/OMNIbus IBM Tivoli® Network Manager IP Edition Micro Focus® Operations Manager I Nagios® Core Nagios® XI
Security	TPM 1.2/2.0, TCM 2.0 optional Cryptographically signed firmware Secure Boot	Silicon Root of Trust Secure erase System Lockdown (requires iDRAC Enterprise or Datacenter)
I/O & Ports	Network Options: 4 x 1GbE 2 x 10GbE + 2 x 1GbE 4 x 10GbE 2 x 25GbE Front Ports: 1 x Dedicated iDRAC direct USB 1 x USB 2.0 1 x USB 3.0 (optional) 1 x Video	Rear Ports: 1 x Dedicated iDRAC network port 1 x Serial 2 x USB 3.0 1 x Video PCIe: 3 x Gen3 slots all x16 Video Card: 2 x VGA
Accelerator options	Up to 3 single-width GPU (NVIDIA T4) or up to 1 FPGA	See Dell.com/GPU for latest information.
Supported operating systems	Canonical® Ubuntu® LTS Citrix® Hypervisor Microsoft Windows Server® LTSC with Hyper-V Oracle® Linux	Red Hat® Enterprise Linux SUSE® Linux Enterprise Server VMware® ESXi For specifications and interoperability details, see Dell.com/OSsupport.
OEM-ready version available	From bezel to BIOS to packaging, your servers can look and feel as if they were designed and built by you. For more information, visit Dell.com/OEM.	
Recommended support	Dell EMC ProSupport Plus for critical systems or Dell EMC ProSupport for premium hardware and software support for your PowerEdge. Consulting and deployment offerings are also available. Contact your Dell EMC representative today for more information. Availability and terms of Dell EMC Services vary by region. For more information, visit Dell.com/ServiceDescriptions.	

Reference link: https://www.dell.com/zh-tw/work/shop/productdetailstxn/poweredge-r640

Datiphy Enterprise Product Category

Recommended Miminum Requirement

Category Database Query per day (QPD)	Datiphy Enterprise i3 Series – S QPD<50 millions	Datiphy Enterprise i3 Series – M QPD<100 millions	Datiphy Enterprise i3 Series – L QPD<200 millions	Datiphy Enterprise i3 Series –XL QPD>200 millions
Datiphy Enterprise Data Managaement Center (DMC)				
CPU (or vCPU)	8	16	32	64
Memory	32 GB	32 GB	64 GB	128 GB
HDD(Estimated for 30 day on-line raw data)	5TB after RAID	8TB after RAID	10TB after RAID	20TB after RAID
Throughput	1 Gbps	10 Gbps	10 Gbps	10Gbps
Disk Speed	7200 to 15,000 RPM *15,000RMP Optional	7200 to 15,000 RPM *15,000RMP Optional	7200 to 15,000 RPM *15,000RPM Optional	7200 to 15,000 RPM *15,000RPM Oprional
Datiphy SARC				
CPU(or vCPU)	8	16	32	64
Memory	32 GB	32 GB	64 GB	128 GB
HDD (data)	2TB after RAID	3TB after RAID	4TB after RAID	5TB after RAID
Datiphy Net Agent				
CPU	8	8	16	16
Memory	8 GB	16 GB	32 GB	64 GB
HDD (30 day on-line data)	100 GB	100 GB	100 GB	100 GB
Throughput	1 Gbps	10 Gbps	10 Gbps	10Gbps
Recommended Archive Server (Non-Datiphy Product)				
HDD (Estimated for 6 months offline data)	10TB after RAID	16TB after RAID	24TB after RAID	48 TB after RAID

datiphy
Know Your Data