Volanté
Business Information Agility

Volante Data Services Accelerators

For Service-Oriented Architectures

A data services approach to application integration simplifies the challenges of multi-faceted transaction chains and enterprise-wide standardization. Volante supports data services with innovative solutions that integrate, transform and manage complex data.

The financial data and message integration software
for the global financial services industry

Volante highlights

- » Runs natively on any ESB, message broker or application server.
- » Can be implemented within local, distributed or cloud-based SOA deployments.
- » Consistent, virtualized representation of disparate standards-based and proprietary data/message formats and service envelopes/wrappers.
- » Model-driven development.
- » Data service models which are entirely XML-based for ease of metadata management and integration within governance and source control frameworks.

Glossary of Terms

ACH:	Automated Clearing House
AML:	Anti-Money Laundering
BPM:	Business Process Management
COBOL:	COmmon Business-Oriented Language
CRM:	Customer Relationship Management
CSV:	Comma-Separated Value (also often referred to as "Delimited")
DTCC:	Depository Trust & Clearing Corporation
EDI:	Electronic Data Interchange
ERP:	Enterprise Resource Planning
ESB:	Enterprise Service Bus
FIX :	Financial Information eXchange
FpML:	Financial products Markup Language
HSM:	Hardware Security Module
HTTP:	Hypertext Transfer Protocol
ISO:	International Organization for Standardization
JVM:	Java Virtual Machine
KYC:	Know Your Customer
OTC:	Over-The-Counter
SaaS:	Software as a Service
SECOM:	Settlement Communication System (Swiss)
SEPA:	Single Euro Payments Area
S/FTP:	Secure File Transfer Protocol
SOA:	Service-Oriented Architecture
SOAP:	Simple Object Access Protocol
SWIFT:	Society for Worldwide Interbank Financial Telecommunication
WSDL:	Web Services Description Language
XML:	eXtensible Markup Language

Background

SOA initiatives endeavour to create a coherent landscape of enterprise services comprised of disparate (very often legacy) applications and resources, typically connected together via some form of enterprise service bus (in the generic sense of the term, being a logical "grouping" of mediation resources as opposed to a specific vendor's technology stack). One of SOA's guiding principles is the loose coupling of applications and resources to provide these coordinated business services by employing standardized interfaces, protocols and data formats. These components provide an abstraction layer that masks the underlying interface differences between applications and resources which form part of the SOA landscape. Whilst the main SOA data "currency" is almost always XML-based, one of the key challenges of implementing enterprise SOA infrastructure is having the ability to handle the myriad different message/data formats that the connected applications and resources natively work with.

Volante has been recognized across the financial services world for delivering truly platform-agnostic solutions capable of handling any data/messaging format, with out-of-the-box support for most major financial services standards.

Why data services?

Data formats themselves are a resource that can be managed independently from the applications, workflows or reporting they support. Managing integration projects in a way that gathers and maintains metadata – that is, descriptions of data formats, elements, sources, destination, users, etc. – enables the creation of data-centric architectures, model-driven application development, service-oriented enterprise application integration and other initiatives that increase business and computing efficiency.

Volante technology serves its users both at the tactical level of point integration and at the strategic level for enterprise-wide SOA implementations. Volante's model-driven approach to data services delivers a common framework to support any standards-based or proprietary service-driven "enveloping" metadata along with support for any canonical data model metadata, which are foundation elements of typical SOA infrastructures. Once data service models have been developed, the in-built Volante code generators can automatically create native runtime packages from these models for any Java-based industry-standard execution platform. (C# and C++ generation capability is also provided.)

Volante data service applications can be integrated seamlessly within any SOA infrastructure, either as standalone components or natively embedded within other services such as ESB/BPM orchestration workflows. Volante provides the data services "glue" that underpins the application- and infrastructure-independent loose-coupling of components and resources required by any SOA approach to integration.

Benefits of using Volante

Using Volante in any SOA infrastructure provides two primary benefits:

» Ease of deployment – based on native code – within any infrastructure such as ESB/BPM frameworks, message brokers, application servers or standalone JVMs.

» Massively increased efficiency in handling complex standards-based and/or proprietary message/data formats.
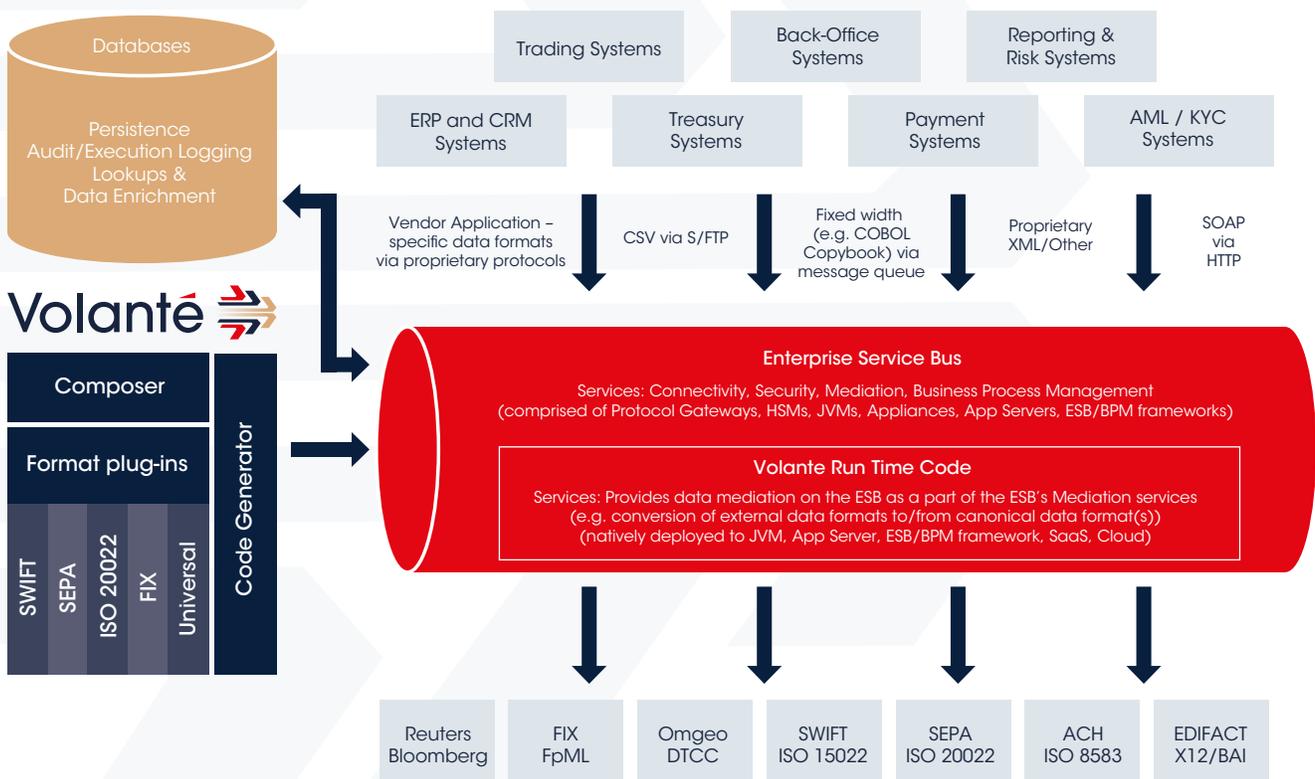
Volante's quick-to-implement integration tools enable customers to model data processing rules that include parsing, serialization, validation, enrichment, normalization, routing, exception management and database operations to deal with complex formats without needing to write a single line of programming code.

Volante provides domain-aware plug-ins to reduce integration time for standard financial messaging formats and related rules. Handlers for many applications and vendor feeds are also available.

On point integrations alone, Volante customers discover their projects run faster, cost less and are easier to maintain and enhance than using any other approach, including in-house development.

Unique features

» Model-driven approach enables rapid development.

» Visually define message flows and exception processing.

» Supports all major financial industry message formats including SWIFT MT & MX, ISO 20022, FIX, FpML, SECOM, SEPA, ISO 8583, etc.

» Supports any proprietary message/data format (including home-grown and standards-based canonical data models) via generic format plug-ins including XML, COBOL Copybook, binary codes, etc.

» Executable code packages are generated directly from the data models which are then deployable to any environment and include native support for service-oriented integration frameworks such as WSDL, SOAP, etc. The models themselves are the source "code" – no code needs to be hand-written.

Databases

Persistence
Audit/Execution Logging
Lookups &
Data Enrichment

Trading Systems

Back-Office Systems

Reporting & Risk Systems

ERP and CRM Systems

Treasury Systems

Payment Systems

AML / KYC Systems

Vendor Application – specific data formats via proprietary protocols

CSV via S/FTP

Fixed width (e.g. COBOL Copybook) via message queue

Proprietary XML/Other

SOAP via HTTP

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Composer

Format plug-ins

SWIFT | SEPA | ISO 20022 | FIX | Universal

Code Generator

Enterprise Service Bus

Services: Connectivity, Security, Mediation, Business Process Management
(comprised of Protocol Gateways, HSMs, JVMs, Appliances, App Servers, ESB/BPM frameworks)

Volante Run Time Code

Services: Provides data mediation on the ESB as a part of the ESB's Mediation services
(e.g. conversion of external data formats to/from canonical data format(s))
(natively deployed to JVM, App Server, ESB/BPM framework, SaaS, Cloud)

Reuters Bloomberg

FIX FpML

Omgeo DTCC

SWIFT ISO 15022

SEPA ISO 20022

ACH ISO 8583

EDIFACT X12/BAI

Unique features (continued)

» Native code generation ensures high performance running in any infrastructure such as IBM, Tibco, Oracle, Microsoft, J2EE and open source platforms (e.g. Camel, Mule, etc.).

» Customizable dashboards to monitor transactions and errors.

» Support for both real-time and batch data services using the same data modeling and code generation tool set.

» Auto-generated HTML documentation directly from the Volante data services models ensures documentation is always in step with the implemented solutions.

Summary of Volante services within an SOA environment

Provision of any/all data management services including:

» Parsing/validation of all input external, standards-based and proprietary message and data formats processed via the ESB.

» Transformation to/from canonical data format(s).

» Transformation to/enrichment of all output, external standards-based and proprietary message and data formats processed via the ESB.

» Persistence of message data for audit purposes.

» Data service execution logging and exception handling.

Getting ahead for SOA

Volante's ability to deal with proprietary, legacy or standards-based message/data formats gives our customers a head start for their SOA. Volante goes well beyond any other data integration technique in capturing and maintaining metadata in every data transformation.

Metadata is the fundamental building block of data services, enabling an architectural "substrate" that federates between legacy applications and external systems. In addition, since Volante's data service models are entirely XML-based, it is straightforward to integrate them into version/source control and SOA governance frameworks/repositories for complete metadata visibility, ease of management, maintenance and control.

In contrast to early SOA implementations which employed "wrappers" around existing legacy and proprietary message brokers, Volante's metadata-based technology reduces lags and bottlenecks in data access, producing the low-latency response necessary for today's business demands. Since Volante imposes no architectural or technical constraints on the customer, data services can be deployed and leveraged in a variety of ways, including participating as Web services, operating within messaging-based infrastructure, invoked via simple API calls or any combination thereof. This makes Volante perfect for the provision of data management services within any SOA environment. Volante's total adaptability, combined with the coordination of integration and metadata, offers a fast start to any data services initiative.

Nobody does it better

Volante has a long track record in supporting the complex messaging requirements of some of the world's largest financial organizations and corporates.

For a demonstration of how Volante can accelerate and enhance your SOA infrastructure, please contact us at info@volantetech.com or contact one of our regional offices below.

www.volantetech.com

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