

WHITE PAPER

Consolidate Your Data Integration

Table of Contents

Consolidate Your Data Integration	3
An Overview of Business Processes	5
A Hostage Situation	6
What Exactly Should I Be Looking For?	7
Tips for Sizing Up Integration Consolidation	8
Return on Investment	11
Summary	12
About the Author	13

Consolidate Your Data Integration

Business inertia, over time, results in a collection of varied data integration technologies within a business. Meanwhile as cloud, big data, and new secure protocols and standards proliferate, business finds itself redundantly supporting numerous data integration technologies as well as separately managing the underlying security, control, and governance. This paper discusses strategies and tactics to consolidate disparate integration technologies.

A business of any size has a revolving door of activity. Employees. Customers. Inventory. Suppliers. Shippers. Contract workers. Orders. Payroll. Invoicing. Inbound. Outbound. In today's information age, the speed and reliability at which an organization can move all of the critical data that drives the business is directly correlated to the firm's success. Moving the data to support employee and customer onboarding, order processing, benefits management, payroll, inventory management, data analytics, asset tracking, logistics, supply chain operations, and just about every other aspect of conducting business — large and small — is critical to keep business running.

Simply put, you can't keep the business moving unless you can keep the data moving — both within the business and beyond, and to and from customers, suppliers, and partners.

An intelligent enterprise needs to tackle frequent new integration requirements, such as securely connecting and exchanging data with a new customer or supplier using existing IT infrastructure. Yet a legacy of storied data integration tool sets may leave you with complicated choices about which one to utilize. How do we execute the next project without adding more complexity to the "spaghetti" that represents the topology of our integration infrastructure?

In other cases of integration needs, the business has silently declared a mutiny on IT and has taken matters into their own hands through rogue use of FTP servers and cloud file sharing storage that leaves the business at risk when it comes to data protection, IT governance, and control.

What is Information Integration?

Information integration is the collection, tracking, transformation, aggregation, merging, and/or movement of data from various sources to enable and facilitate application-to-application (A2A), business-to-business (B2B), system-to-human, and other forms of interaction, analysis, reporting, decisioning, transacting, and process execution.

Time for Action

There are a lot of reasons your company's integration infrastructure might further "spaghetti" as additional components are tacked on. A few examples:

- Mergers and acquisitions
- Adding new, large, demanding customers
- Automating operations
- Consolidating operations
- Supply chain management
- Product line expansion
- CRM, ERP and other three-letter acronyms

Benefits of Consolidation Integration

- Improved ability to meet business compliance mandates, customer SLAs, etc.
- Better competitiveness by more reliably ensuring movement of critical data to systems and people.
- Improved customer and supplier relationships.
- Reduced cost
- Increased visibility into enterprise data movement
- Better adherence to corporate security policy
- Significant reduction in exposure to data loss (whether intentional or accidental)

Integration Means Efficiency

Supporting a unified view of data and information for an entire organization simplifies mission-critical processes, improves operational efficiency, saves money, and improves customer and supplier satisfaction, allowing a business to perform at its optimal level and enable future growth. This doesn't necessarily mean that you handle all messaging the same way.

Certain data flows will require additional levels of high availability, control, archival, and business user access. Rather, the efficiencies gained by consolidating on a common technology platform (with, perhaps redundant layers) means your business spends less time and money to efficiently, securely, and reliably move data where, when, and how it needs to so that your apps and people can view it, and act on it earlier, with greater confidence than your competitive counterparts.

The essence of integration is the secure, governable, and reliable interconnectivity, exchange and consumption of documents, files, and messages within your firewall and beyond. But, sadly, after the evolution of business activities that generated spaghetti integration infrastructure, the result is often a network of disparate IT systems and custom glue code to "make things work," creating headaches and confusion, rather than efficiency and clarity.

An Overview of Business Processes

Any business requires communications within the organization and beyond, so the IT manager should be asking (and determining the answers to) these questions:

1. What kind of information must be exchanged, and why?

The answer will often depend on the industry that you're in and can encompass everything required for your business, including:

- Financial transactions
- Shipment notifications
- Orders
- Invoices
- Payments
- Product data
- Pricing
- Employee benefits
- Engineering/design drawings

Specific examples of information exchanged:

- Claims
- Legal filings
- Media assets
- Health care records, equipment and asset production sensor data
- Student records
- Equipment maintenance data
- Resource scheduling
- Inventory levels
- Entertainment media assets
- Scanned records

2. What are you connecting?

Internal applications, legacy systems, external gateways, human interfaces, cloud systems and/or mobile devices, big data systems, data centers, and more. What format is the source data in, and how does it get accessed?

3. Where is the information going?

Communities of all types: Customers, partners, suppliers, resellers, industry exchanges, and others. What data format do the receiving systems require?

4. What do you need to manage this?

Governance, compliance, reliability, visibility, security, and integration. Who needs to have access and visibility? Are there conditions under which certain people receive alerts and notifications? Are there special workflows that should be initiated upon specified events or non-events?

This is not a joke
Your spaghetti integration
infrastructure is holding your
company productivity hostage. If
you ever want to see your
business perform again, leave large
bags of cash near the consultants
cubicles

A Hostage Situation

Often, it takes a variety of hardware or software components to connect all of these endpoints and successfully manage the information transfer. This will apply to you if your business is using one or more of these IT components to facilitate mission-critical processes:

- MFT
- A2A/ESB
- CRM
- WMS
- TMS
- Legacy systems
- EDI
- Proxies
- AS2, SFTP, etc.
- B2B
- Big data/
Hadoop
- Cloud
- Data mapping
- Remote
storage
- FTP servers
- Secure email
- EFSS
- Data
transformation
- ERP
- AS3, AS4,
OFTP, etc.

Smaller organizations may employ two or three of these. Medium-size companies could rely on four or five components to carry out daily functions. The largest organizations could rely on dozens of these components — often several sets of each — to execute routine operations on a broader scale.

If a business process fails, would you want to be the person or team who must look under the hood of each of these components to determine which one failed? And what if there were multiple communications failures each day in multiple systems housed in multiple locations?

This sprawling web of IT infrastructure will be holding your data — and your business — hostage.



What Exactly Should I Be Looking For?

There isn't a magic alarm that tells you it's time to consolidate your integration pieces and parts. If you've read this far, it's time. Pull the proverbial trigger. But some people need verification. Your business may be in need of integration when you or your IT department:

- Are constantly in the dark as to whether file transfers were executed on time or even at all.
- Do not receive timely, informational alerts when a transaction fails.
- Know of employees using third-party online file sharing or email platforms to perform standard business functions.
- Routinely use multiple non-communicative systems to oversee all of your business transactions.
- Are constantly training users to moderate these systems.
- Enlist expensive support and consulting services to keep all of these systems running.
- Must log in to more than one portal to access auditing reports for a single process.
- Scramble to patch security holes because of gaps in the workflow.
- Must track down employees across various departments who each act as the troubleshooting expert for each integration component.

If any of these points applies to your enterprise, it has embraced, whether you know it or not, a fragmented approach to complete today's business tasks. When a single transfer bounces through several disparate components and multiple workflows, interoperability has gone by the wayside, and it is costing your company time and money.

Tips for Sizing Up Integration Consolidation

Want to improve your company's ability to adapt to new things, sever interdependencies between timing of legacy upgrades, ERP module adoption, bringing on new acquisitions, and more? Want to become a more nimble IT shop, capable of interfacing with interoperating with greater agility? You need to evolve your integration strategies. What if you had a platform to meet your present and forecast integration needs? A platform you could scale on?

A modern enterprise equipped to keep up with progressive and ever-evolving business demands is attainable regardless of a company's size. Here, we observe integration measures specific to the size of an organization.

Balancing Act

When does the need for security and governance outweigh the desire for fast and easy (rogue) end-user solutions?

The challenge many enterprises will face is balancing the utilization of secure file sharing/collaboration and system-to-system integration. The reason: It is easy to implement the quick, easy-to-use file sharing solutions that end users often seek out, while ignoring IT's demands for governance, regulation, and compliance.

One significant justification for consolidating integration onto a single platform is to meet ever-growing compliance requirements through improved visibility. Complete visibility into all transfer processes as well as transparent audit trails help meet those mandates for a variety of highly regulated industries. A well-integrated system allows IT to manage high-volume transfers efficiently while maintaining a smooth business flow.

The goal: A system in which a range of user and system-to-system workflows can be accommodated via business partner synchronization and intelligent control of on-premise and remote data transfers.

Looming Large

Imagine an enterprise with \$1 billion in annual revenue and thousands of employees, contract workers, and partners inside and outside of the company firewall, each trying to complete their respective tasks. These thousands of people are

likely facilitating millions of daily B2B and A2A transactions to move products and information across the enterprise every day, and the number of endpoints also is getting higher every day due to growth of their brand.

With a growing list of data standards and communication protocols to manage in order to do business, it becomes increasingly difficult to secure, manage, and gain insight into these communications within the company and among various community members. It also means a variety of technologies must be supported across internal/external ecosystems and some semblance of visibility must be maintained to monitor exchanges among all of these systems. In one large enterprise sample scenario, you might have:

- Multiple systems to exchange and process e-commerce documents from thousands of manufacturers, customers, suppliers, and vendors transmitted via a variety of protocols and data format standards.
- Multiple on-premise and cloud solutions to accommodate this data integration.
- Requirements to keep a "system of record" for compliance and auditing purposes.
- ERP systems running in multiple data centers that need to be linked.
- Confidential information from work with, for example, the Department of Defense in one division that cannot be part of the same internal system for security and compliance reasons.
- A Hadoop cluster powering big data analytics to pave future growth with intelligent business decisions.
- Internal employees using unauthorized, unsecure external services to send large attachments because their outside contacts never received the initial file transfer.
- HR systems transferring health insurance information for thousands of employees.
- Manual certificate management to keep the exchanges with existing trading partners flowing.
- Requirements to move data across various industries – retail, government, health care, financial, etc. – that require various standards of compliance, auditing, and transparency.
- Replicated data because of redundant databases, inherently non-communicative systems and lack of reliable alerts.

In the Large Enterprise

Such fragmented systems make it difficult to give large enterprises the security, governance, auditability, visibility, and the high availability needed for these high-volume, large-scale processes. The conclusion: Those thousands of users — internal and external — will use whatever transfer option they can find due to the lack of a standard, approved method which is fast and easy to set up, use, and manage. It's about this time that an enterprise will have to brace for exponential opportunity costs.

The Middle Ground

What about the \$200M company with several hundred employees and has made a name for itself as a staple in the industry? This medium-sized organization might have:

- An adequate amount of IT resources, with a fairly equipped IT department to manage multiple systems but not enough to oversee all actions from each of the hundreds of employees.
- Multiple solutions — often redundantly supporting numerous data integration technologies as well as underlying security, control, and governance — piecemealed together from years of rapid expansion.
- A number of rogue file sharing and FTP tools that staffers have downloaded because IT has not issued or executed formal policies on such solutions.
- More frequent work with larger customers who have more demanding SLAs for better visibility.
- Requirements to move data across a few industries that require various data format standards, compliance, and transparency but is looking to upscale the portfolio and break into more segments.
- Processes in place to onboard new trading partners, but those processes often are slow and cumbersome.
- C-level executives focused on gaining new customers, going public, and/or striving for a slot on some Fortune list as quickly as possible, even at the cost of a streamlined IT infrastructure.

In the Midmarket

A sprawling approach to technology limits vital business agility and can often keep a midmarket business in the minors while the pros play on another level. Consolidating your integration at this point in a company's existence eliminates unnecessary redundancy and lays the necessary foundation for short-term and long-term growth.

On the Smaller End

Now let's imagine a smaller company that's been in business a few years and has grown to become a quality player in the space. This organization with perhaps 150 employees and \$40M in annual revenue might experience some of the same issues as large and midmarket organizations, but on a smaller scale. Possible consolidation benefits for a small business:

- A smaller company often means fewer resources, which means there might only be two or three people in your IT department to manage multiple disparate systems.
- These few people likely have piecemealed solutions together over the years, and the company might still depend on outdated legacy systems from when it was a budding start-up.
- Smaller IT departments rarely have the time or resources to keep up-to-date on new products and solutions that may provide a solution to varied data exchange requirements
- Wanting to say yes to every new quality customer. Even if this company has never worked with a certain communication protocol or data format standard before, a nimble platform often supports growth with a swath of protocols with easy configuration.
- Getting connected to large new customers quickly
- Growth or acquisition of a key new customer means starting to work with large customers and a need to meet their SLAs for better alerts and visibility.
- Protecting the company and brand value from increasing security threats with a secure platform insulated from data breaches.
- Diversifying its customer base to lessen dependence on a few main customers as the primary revenue streams for business.

In the Small Business

In the case of a perfectly capable company that often competes against larger companies and doesn't quite reach the top of the podium, the step that puts them over the last hurdle to success might be implementing an enterprise-grade infrastructure to simplify processes and win big accounts. Consolidating integration capabilities not only positions a smaller company above other competitors, but also puts them in a position to successfully compete against larger competitors and win. That's a differentiator worth every penny of consolidation costs.

Return on Investment

What do a streamlined data integration infrastructure and a smaller IT footprint provide to a business? A lot. Some of the places your organization will gain a competitive edge:

- **Cost savings:** These may include lower technology maintenance costs, reduced fines from SLA violations, and better staff utilization with fewer silos to monitor.
- **Productivity:** Increase operational efficiency, empower workflows, and reduce employee frustration via automated processes.
- **IT leverage:** Consolidate multiple systems and legacy silos, and ditch the heavy hardware footprint and the ongoing service/upgrade costs.
- **More holistic approach:** Easily subdue daily network threats from hackers, system failures, or the inability of your staff to monitor multiple systems (some of which they may not even know exist).
- **Peace of mind:** Reliably integrate a complex web of disparate content and endpoints, protecting the integrity of your mission-critical information.

Common Reasons for Pushback

“If it’s not broke, don’t fix it”: While no one wants to risk touching the fragile infrastructure and risk disrupting business, the right vendor will help your company map out a step-by-step implementation strategy to minimize risk and maintain critical uptime.

It costs too much: How much would it cost if your e-commerce processing failed, or your employees’ and customers’ confidential financial information was accessed by an outside source?

It’s too complicated: It could require a lot of effort, but the right vendor will have the experience to point out the potential problem areas and help the business to manage the complications. **Analogy:** You might be able to change your vehicle’s oil and replace the windshield wipers, but call on the trained experts who have the experience and facilities to replace the transmission.

Summary

Consolidating your IT integration enables you to manage your data rather than allowing your data to manage you. This consolidated solution promotes harmony and visibility among the users, hardware, software, and platform. Ask yourself whether it's time to take advantage of advanced technology to securely transfer information with as little disruption as possible.

A consolidated IT infrastructure allows organizations to move, view, and act on data and:

- Free up your IT department from addressing single, tactical workflow problems and add business value via advanced operational systems.
- Standardize operations and gain visibility into all processes.
- Embrace inevitable business and IT changes and be a proactive company rather than a reactive one.
- Employ techniques that enable data to be managed according to enterprise-wide goals that support strategic, data-oriented business goals. Become an intelligent enterprise.
- Allow your business to grow organically without having to re-engineer your infrastructure in order to support future business requirements.

Recommendations for Implementation

- 1.** With an eye on the complete problem set, start with smaller victories. Start with a key point of pain in the organization, perhaps fixing a reliability issue or speeding up trading partner onboarding.
- 2.** Identify the stakeholders, as well as an executive sponsor.
- 3.** Draw the current spaghetti infrastructure (or a part of it). Revisit the questions earlier in this paper to understand what data is being moved, why, and its significance.
- 4.** Find a reputable vendor who can deliver the goods.

About the Author



Joe Dupree
Vice President, Marketing

Joe Dupree leads marketing at Cleo. His role includes leadership of product strategy, competitive analysis, demand generation, brand management, communications, and public relations. With more than 20 years of software industry experience in roles that span technology product marketing, product management, and software engineering, Joe has helped global enterprises implement cost effective, secure, and governable information management and integration solutions. Joe has an MBA from the University of Maryland as well as a bachelor's degree in Computer Science from Siena College in Loudonville, New York.

Copyright 2016 Cleo. All rights reserved.

Cleo is a trademark of Cleo Communications US, LLC. All other marks are the property of their respective owners. 2016-09-01.

CleoTM

Move View Act[®]