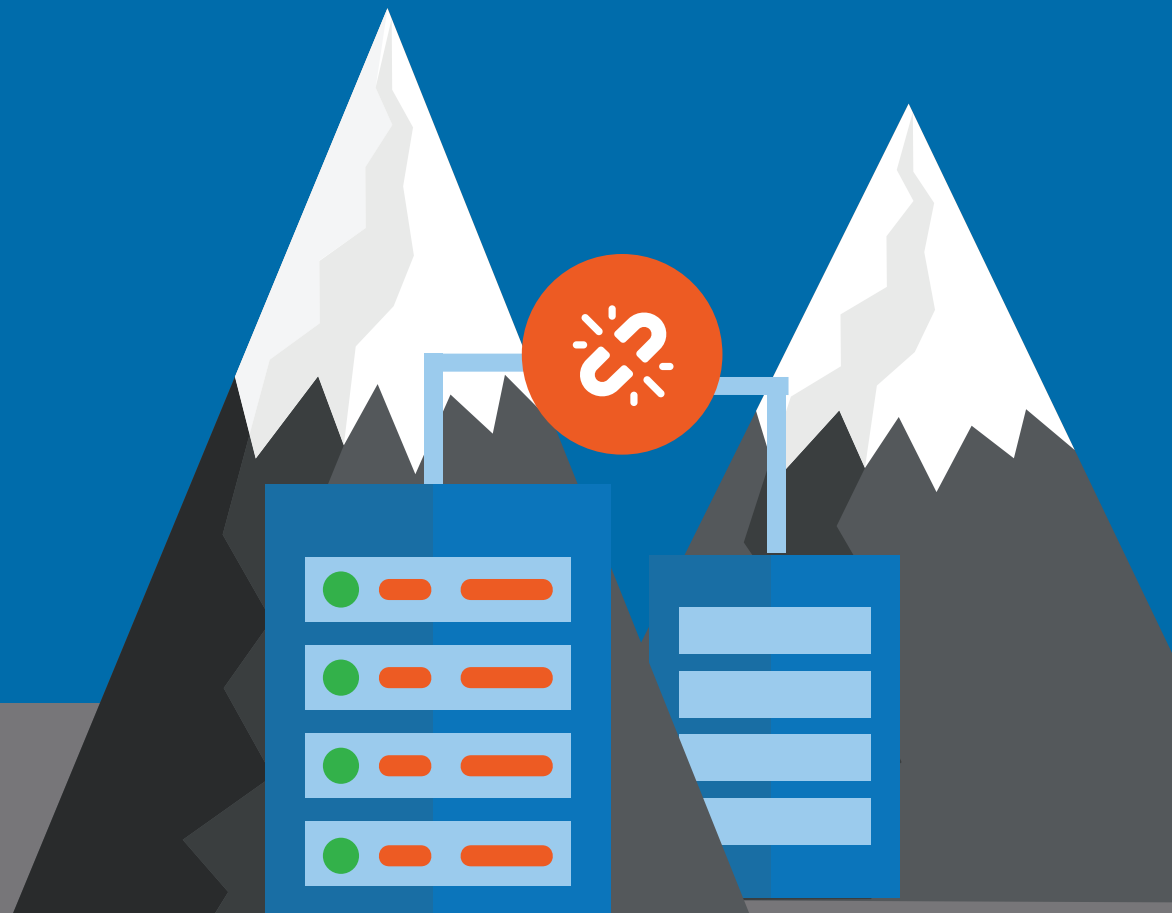# MOVING MOUNTAINS:

TACKLING DISPARATE SYSTEMS WITH DATA INTEGRATION

Your company didn't start out with vast, dispersed business units. As an organization matures, it might acquire or add a multitude of new talent, technologies, and processes. Often, the technologies are a mish-mash of homegrown or legacy systems and new solutions that all have their purpose, but ultimately don't work well when paired together. In today's ever changing technology landscape, it's possible for an organization to quickly outgrow its IT environment.

In this scenario, you may be faced with the maintenance and upkeep of various IT systems, but maintaining these disparate internal systems can be a huge headache, create potential security risks and ultimately be very costly.

By 2018, 35% of enterprises will consolidate their data integration and application competencies as one team for aligning disciplines and technologies. (Gartner)
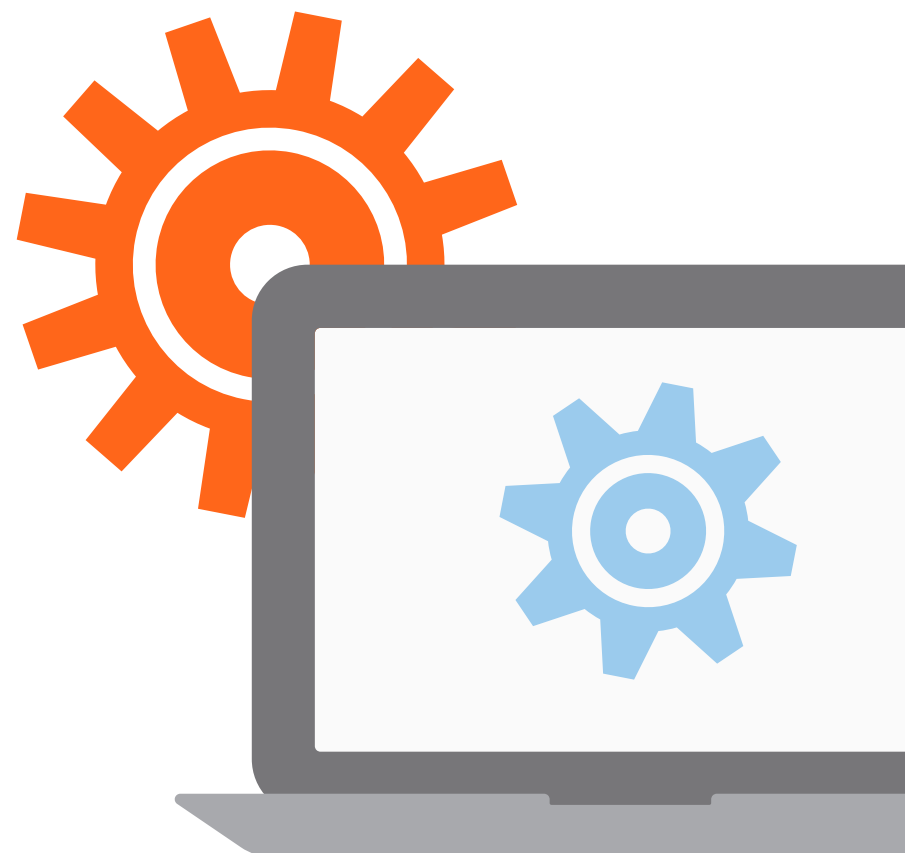
Four Signs That You Are Facing a Disparate Systems Challenges

1 **There have been changes or turnover in the IT department, resulting in different software, scripts, or methods used.**

If your business started out with outsourced IT support, or you've had turnover in your IT department, it means several different IT professionals have deployed their own methods, scripts, and software. Those scripts need to be maintained, each piece of software must be updated, and as employees and contractors move on, their knowledge of those tools moves on with them.

2 **You have different versions of the same software installed on different systems.**

If you have the same software programs being used across departments, branches, or divisions its care is left up to the team responsible, which may be outside of the purview of the greater IT team. Budgetary constraints may prevent a business owner, who resides outside of IT, from updating a system due to cost, leading to a disparity between versions throughout an organization.

> Approximately $8.3 billion in healthcare costs are being attributed to outdated, non-integrated systems – systems without interoperability. (Ponemon Institute)

3 **Security rules are different between business units and business partners with whom you must trade data (e.g., one system permits SFTP and the others might only permit FTP or HTTPS).**

As you connect with new business partners, you need to ensure your systems can communicate effectively and efficiently with their systems. Perhaps their security rules permit only SFTP, but your systems only connect with FTP or HTTP. This may introduce another system or piece of software to allow you to connect with your new partner or leave either party open to security vulnerabilities.

4 **You have one full-time IT employee who is solely dedicated to managing individual systems to keep them running.**

Managing disparate systems doesn't just cost time, ultimately they cost money. The inefficient nature of disparate systems can greatly affect overhead and increase employee costs over time. Can you afford to hire an IT resource for every legacy or disparate system you need to manage? The maintenance and support of disparate systems is often a 24/7 job, and when those systems lead to an inefficient use of employee time or unreliable workflows—daily operational costs can quickly get out of control.

All of these individually, are an IT and data management nightmare, let alone if you have any combination of these. So what do you do if you need to integrate disparate systems?

Putting You Back in Control of Disparate Systems

If you find that your organization is facing the challenge of integrating disparate systems there are five areas to focus on in order to get back in control over the data transfer infrastructure.

Create an Integration Roadmap

Eliminate Manual Processes

Invest in Scalable Technologies

What about Security…?

Quantifying the ROI of IT

60% of CFOs cite data integration as the primary technology hurdle standing in the way of gaining actionable information for reports, necessitating manual data integration that eats up time and leads to inaccuracies. (CPA Practice Advisor)

Create an Integration Roadmap

Integration roadmaps are an effective way to drive purpose-optimized integration strategies, while reducing middleware costs in the process.

IT leaders who create and continually improve their integration roadmaps are prioritizing purpose-optimized integration strategies to more efficiently scale operations. Enabling real-time, bi-directional data updates without requiring complex scripting, coding, and mapping of data is challenging, but deploying the right technologies and working with the right technology partner will strengthen your data integration posture.

Invest in Scalable Technologies

Investing in the latest technologies that enable the IT team in their data integration project management should make the team more responsive.

Any integration technology that gets introduced into an organization should be capable of scaling across the back and front office systems to make them more responsive. Having technologies that enable data integration management, reduces time-consuming and often error-filled manual tasks with automation, and enables new data transfer processes creating a faster, more efficient system for everyone. And, when IT can react faster, their bureaucratic reputation is also on the way out.
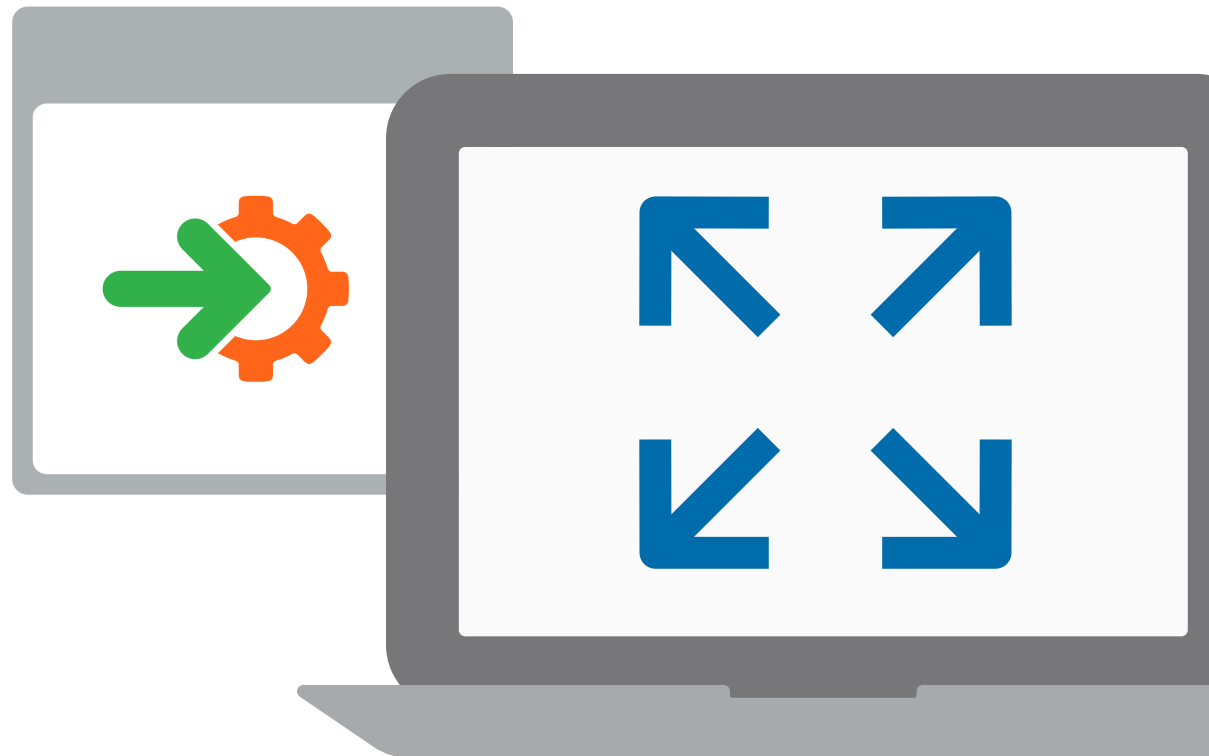
Quantifying the ROI of IT

Move closer to quantifying the value IT delivers by showing how an integration roadmap provides support for cutting maintenance costs, consolidating applications, and introducing new platforms.

The ROI of IT often hinges on how effective IT leadership is at reducing costs, while still delivering an average level of service. By having a plan in place to attack integration challenges and costs, IT leaders can immediately prioritize steps to improve service, reduce costs, and attain department and corporate goals.

01 REDUCE COSTS

02 IMPROVE SERVICE

03 ATTAIN CORPORATE GOALS

Eliminate Manual Processes

Choosing to reduce and eliminate hand-built data transfer and automation processes from IT infrastructures helps free up support funds and time on urgent IT projects.

For example, one large-scale healthcare organization had a staff of software developers and engineers who did nothing but keep manual processes running across their patient data systems, insurance processing systems, and healthcare partner systems. With multiple production centers across North American time zones, the IT team was always busy but never had the ability to innovate or bring disparate systems together. They were just 'keeping the lights on.' By having an integration roadmap, you will be able to avoid what this healthcare organization went through with a tedious manual process situation, which ultimately drained dollars and time from the IT team.

What about Security…?

Integration and security go hand in hand. Many times when an organization is working to integrate systems that do not already use a secure protocol.

The owners of these systems are not Secure File Transfer Protocol (SFTP) or file transfer experts. They are frequently forced to work with the individual application owners, business users or system support teams to discover if the individual system has SFTP or even File Transfer Protocol (FTP) functionality. Then figure out how to configure and use it.

This is not an uncommon situation and might come in to play with an enterprise that has multiple brands, divisions, and systems. For example, a company could have many IBM systems used throughout the organization. They may have programmers, engineers, and support teams that manage select systems used by a specific business unit. These support teams are often limited to accessing and managing systems specific to the environment they support. In this case, the focus of the support they provide is to the enterprise business unit or brand and its mission aka supporting the business application.

Many of these systems have the ability to use a secure protocol. However, this functionality may need to be purchased from the system or application vendor, or it may simply need to be enabled. This is not a normal routine support task for the enterprise teams supporting these systems. While these people are extremely skilled at their individual roles, there is often a lack of broader understanding at how best to connect disparate systems. When there is a lack of understanding of multiple systems and how best to get them integrated, often the best course of action is to turn toward a technology solution to help bridge the divide.

"Data breach incidents involving the loss or theft of data-bearing devices increased per record cost by as much as $18 per record." (Ponemon Institute)

A Solution to Aide Your Integration Project

Business integration should not be difficult. You don't have to rely on FTP servers that weren't designed for the high volume of data required to run the modern enterprise.

If you are you experiencing a lack of visibility over where your data is or has been, if your team productivity is lacking due to manual or antiquated processes, if you have lost control of your data, then a managed file transfer (MFT) solution might be just what you need to get your disparate systems back on track.

MFT refers to software or a service that manages the secure transfer of data and serves as a secure and efficient alternative to using ad-hoc file transfer solutions, such as FTP, HTTP and consumer file sharing solutions. MFT can be broken down into four categories:

✓ **Server to Server:** Automated transfer between two servers with no (error-prone) human interaction

✓ **Person to Person (also known as ad hoc):** Users send files to each other through email, such as Outlook, or an online portal

✓ **Server to Person:** A software application sends a file to a server or an email address, or sends a notification that a file is available for pickup

✓ **Person to Server:** A user sends a file to a server, such as a shared drive in your office, where it is available to your coworkers or the server itself

The success of managing your disparate systems or integrating your disparate systems can rely solely on how you move your data – ultimately a MFT solution can be a key piece of technology to help bridge the divide.

A MFT solution should provide flexibility to integration projects. Options for authentication, storage, client connections and logic-based event triggers will help you manage complex integrations with ease.

Once enabled, the programmers and owners of the systems will have the ability to connect to an MFT server and automate secure file transfers. This also provides the option to connect two independent business systems. As an example, using a MFT solution a customer service ordering system can start a process that drives the invoicing process from within an accounting application, ultimately taking individual systems and acting as the connection point.

In many cases customer programmers and business process owners experience a learning curve as they must configure jobs or processes to use the new connection. However when using a MFT solution to connect disparate systems, that learning curve can be curbed because process owners and programmers must just learn how their individual systems interact with the MFT solution. In addition to providing a much needed connection between systems, a MFT solution acts as one platform to work from which can reduce silos within the greater IT team and bringing any fringe institutional knowledge into the centers of excellence where they should be.

When integrating with internal systems, the MFT solution administrator will repeat this process for every system that they integrate with:

1. Discovery of the capabilities of internal business proccing systems

   a. Many internal systems owners don't know of existing SFTP options

2. Enabling and configuring a secure file transfer solution with internal systems

   a. Many internal systems owners are unfamiliar with using SFTP or other protocols from their systems

3. Access control between systems

   a. Governance should be applied as access control as MFT functionality is added

   b. Using a MFT solution prevents unauthorized SFTP access between internal systems

4. Define and build file transfer automation logic

   a. Existing process may need to be updated to include steps to transfer files to the MFT solution

   b. New processes will need to be defined for future processes on internal systems to take advantage of the added MFT functionality

   c. Once new processes are established, it allows you to proactively run the business going forward

When is a MFT Solution Necessary?

As previously described, many times internal application owners are very specialized and know the product they manage well, but they don't know how to make it move data efficiently and securely. Multiply this by a large number of internal applications that all talk to each other and exchange data. This becomes an unmanaged and undocumented mess. They lack an audit trail and have no means of applying or enforcing data management policies. Systems often go unpatched, exposing security holes on many different operating systems and environments.

Many customers have undocumented data exchanges happening as part of historically defined processes. The link between systems is often hard coded and was introduced during the initial development of a now mature process. Any documentation that was generated is now old and possibly lost. These shadow data exchanges are typically found when something breaks and support teams must scramble to restore service. Multiply this by several hundreds or thousands of internal systems and the data exchange map is a web.

Using a MFT solution allows you to build a hub and spoke file transfer solution. You can then define and govern any and all connections between internal systems. The result is a system that is well documented and provides secure access control between systems.

3 Ways a MFT Solution Can Make Integration Easier

1 It is very simple to create event-based logic through a MFT solution that can handle transactions for thousands of users. When using an enterprise-grade MFT solution organizations will not need to identify rules or logic for each individual data transfer process.

2 Moving your MFT server from the DMZ into the internal network allows you to take advantage of data transfer automation capabilities. If you do not protect the MFT server using a DMZ proxy you will need to expose and open firewall ports to allow access to and from the MFT server. This limits the file transfer server to being a storage location that users and systems access to drop off or pick up files. With your MFT solution behind the corporate firewall it is much easier and safer to automate file transfers, thus eliminating costly, manual processes.

3 MFT should integrate with many authentication types and be able to use alternate forms or factors to accept and grant access. The system should be able to accept a login request from a corporate domain user, allow an automated internal system to use key-based authentication or provide an anonymous secure download for a one off file share. The systems should be able to manage the use of protocols to allow secure connections or encrypted data. This will allow you to integrate with most systems including mainframes, Linux, desktops, network storage, and AS400's. MFT should also provide options for PUSH, PULL and file PICK-UP in both inbound and outbound directions.

> Non-integrated legacy healthcare systems that shift to an interoperable system can save taxpayers more than $30 billion USD a year on wasteful spending.
> (Healthcare IT News)

MFT and Integration – a Success Story

Now that it's clear how MFT can enable integration and reduce disparate systems, let's look at how one organization put a similar plan in place and the success they saw from it.

An organization began an integration project with a MFT solution to simplify and strengthen its invoicing processes. The original processes touched several hundred people, and ate up precious man hours on teams both inside and outside of the IT team, thus costing the organization significant amounts of money. Additionally, the original processes allowed for an insecure connection to internal endpoints, ultimately leaving the organization open to security vulnerabilities.

The organization's invoicing processes involved thousands of outbound invoice files for its customers. The invoices were generated by an internal system and had to be either staged for the customer to retrieve or pushed to an external site. The invoices were manually delivered by Customer Service Representatives who made mistakes. It was a manual process, after all. Being customer service experts and not MFT experts, they spent hours troubleshooting and retrying connections and transfers.

The IT team also allowed outbound FTP, SFTP and HTTP and HTTPS connections from the Customer Service Representatives desktops. This was a big concern as it created potential security vulnerabilities for the organization. The IT security team ultimately wanted to close this hole to stop allowing outbound connections from the desktop systems.

For the integration, a "service account" was created for the internal invoicing system, using a MFT solution. The invoicing system was configured to connect to the MFT solution using SFTP and key-based authentication. Data transfer event rules were then built that allowed the internal system service account to upload files that would redirect based on filename. Some of the outbound files required PGP encryption, a pain point with the original process.

The organization also had to figure out how to set up automated programming to account for some invoices that were staged in a local user's home folder and had a notification sent to announce that the file was ready for pick up. Other invoices were uploaded to the corresponding external site. Using the MFT solution a data transfer rule was configured to make a connection with the external site and then drop the file in a specific folder, removing the manual process. Additional data transfer rules were created that allowed specific files to be sent/received with PGP encryption, also reducing the amount of risk associated with this important file type.

In all cases, an archive was made of the file on a network share and a success notification was sent. Each unique invoice delivery action also had a unique failed action, so if there was a problem pertinent parties were notified. Based on this basic integration the MFT solution securely managed a process that was previous a touch point for several hundred people, saving the organization countless man hours, money, and increased the security of their entire invoicing process.

Globalscape, MFT, and Data Integration –
A Winning Combination

In today's digital business, MFT technology plays a significant role in creating a cohesive and comprehensive application and data integration strategy. This is particularly important when applying governance to both application and data services in order to enable consistent access and control to data.

MFT technologies can help improve systems integration, reduce disparate systems and processes, and provide overall greater value to the business, enabling IT to meet the integration demands required today. An advanced MFT solution provides you with:

- Improved operational visibility by offering a proactive and controlled approach to managing an organization's data flow inside and outside of the network infrastructure, helping to identify data problems as they occur, prevent problems;
- Unification of disparate systems for more efficient and fluid data workflows and processes;
- Enhanced data security for a layered approach to protection.

Since 1996, Globalscape has been a pioneer in the data management business, helping thousands of organizations solve their data challenges. Globalscape's award-winning MFT platform, Enhanced File Transfer (EFT) delivers military-proven security for achieving best-in-class control and visibility of data across multiple locations.

EFT provides enterprise-level security for collaboration with business partners, customers, and employees, while offering data automation capabilities to help with the integration of back-end systems or applications. Built-in regulatory compliance, governance, and visibility controls help keep data safe, while outstanding performance and scalability help boost operational efficiency and maintain business continuity. Administration is easy, yet granular enough for complete control of data exchanges across an organization's network.

The right tool for your data integration project will not only be compatible with your organization's technology environment, but will also go beyond IT considerations to provide real opportunities for the greater IT team help the organization achieve increased operational efficiency, ensure regulatory compliance, and drive a measurable impact on ROI. Globalscape can provide any organization – regardless of size or volume – with the freedom to exchange information quickly, securely, and reliably.

ABOUT GLOBALSCAPE

Globalscape is an innovative software company that secures mission critical exchanges of data across multiple platforms – including remote and mobility solutions – for businesses worldwide. Through superior software, standards compliance and experienced, reliable support, Globalscape secures information exchange for individuals, global enterprises, governments, and small and medium enterprises across a wide range of industries.

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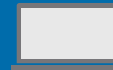
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