SmarterCommerce

Managed file transfer: Minimizing risk and strengthening compliance in data exchange

The Smarter Commerce approach to security, reliability and governance with MFT

IBM

Your weak link in enterprise security and compliance

Every day, your organization transfers thousands of files across your workforce, systems, customers, suppliers and partners both inside and outside the firewall. Are those files secured, governed and reliable? In many cases, the answer is no.

Inherent weaknesses in traditional file transfer protocol (FTP) and email-based file exchange of are growing concern to IT risk and compliance professionals, including chief security officers, chief compliance officers and network infrastructure management. As data volumes and business complexity grow, so does the risk that unsecure FTP or email will expose sensitive customer or financial data, undermine compliance or impact operational performance and profitability.

Security risk and compliance concerns are driving rapid adoption of managed file transfer, or MFT, technology. MFT provides control, stability and oversight of the exchange of data in ways that FTP cannot. But most organizations aren't taking full advantage of the productivity, security and cost benefits that MFT offers.

The right MFT solution makes it possible for your organization to meet the increasing demands of customers as part of a Smarter Commerce™ approach that puts customers at the center of the business. When you align internal processes like file transfer to create seamless customer experiences across your value chain, you can synchronize your business to be more secure, compliant, productive and profitable.

About this Smarter Commerce series

Explore IBM resources for every role in the commerce value chain at www.rethinkyourcustomer.com

- Executives
- Supply chain
- Procurement
- IT: B2B integration
- Marketing
- Merchandising
- Trade planning
- E-commerce
- Legal
- IT: Compliance and risk management
- Customer service

Big data, big files, big complexity

In tandem with the surge in big data, the number and size of files that your organization needs to exchange is accelerating at a rapid pace. Also on the rise is the number of file producers and consumers you deal with, in terms of organizations, individuals and applications. Depending on industry and line of business, file types can range from e-commerce orders to credit card records to videos in marketing or entertainment.

Between 2012 and 2020, the analyst firm IDC predicts a 14-fold increase in the amount of information managed directly by enterprise data centers,[1] with much of that information in file form. This large-scale increase is forcing enterprises to rethink their approach to file transfer and underscores the continued reliance on files as a means of exchanging data, in favor of online data movement that is typically costly and complex to develop and maintain.

Originator	Files	Destination
Marketing department	Proofs | Video | Images	Agencies
Manufacturer	Orders | Forecast | Design	Suppliers
Corporate customer	Payments | Lock box | Treasury	Banks
Retail store	Credit card transactions	Credit card processor
Web store front	File based integration	Order fulfillment system

Figure 1: File types, sources are targets are on the rise across industries

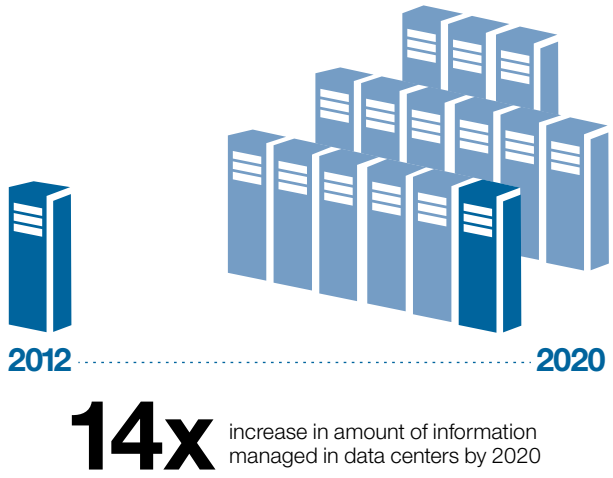


Figure 2: Data center information growth by 2020

Source: IDC, "IDC Digital Universe Study, sponsored by EMC," December 2012.[1]

A study of 700 decision-makers by the research firm Vanson Bourne found that 56 percent of system-to-system integration is accomplished through file transfer.[2] That figure is only slightly less than the 60 percent of a decade ago, by industry analyst benchmarks, when it was widely believed that online data exchange would replace file-based mechanisms.

Industries typically have unique file transfer requirements that are increasingly critical to operations as organizations continue to mature in the digital business environment, heightening complexity in file transfer management:

- **Manufacturing.** Supply chain transactions, collaborative design and manufacturing, product launch collateral
- **Financial services and insurance.** Loan applications, claims processing and payments, video/imagery of loss incidents, credit card and ACH transactions, securities and banking clearing processes
- **Healthcare.** Collaborative diagnostics, patient imagery exchange for claims settlement, remote radiology analysis file exchange, clinical and genomic data in pharmaceuticals
- **Government.** Intelligence processing, inter- agency information sharing, defense threat analysis, geospatial mapping, satellite and video surveillance imagery
- **Retail.** Signage, display and promotion distribution, in-store and online promotions, synchronization with advertising campaigns, product launch collateral
- **Energy and utilities.** Geo-seismic exploration and mapping, infrastructure and engineering blueprints and analytics
- **Telecommunications.** Triple play convergence of web, phone and TV, multi-party billing processes
- **Marketing and advertising.** Internal and client collaboration in creative process, distribution of video, audio and content products
- **Entertainment.** Video production and dissemination, production collaboration on-demand distribution

Growth in people-centric and extreme file transfers

Traditionally, the bulk of file transfer has been among systems and/or applications—for instance, EDI processing in a business-to-business (B2B) environment or automated workflows for loan application in financial services. Increasingly, file transfer encompasses more individuals in "people-centric" file transfer, more community-oriented file transfers and more extreme use cases involving massive file sizes.

For instance, people-centric, or ad hoc, file transfer is on the rise in entertainment, marketing, advertising, retail and manufacturing as teams collaborate in creative processes across multiple geographic locations. People-centric file transfer also drives case management processes across industries, such as dispute resolution, social services cases and legal actions.

Community-centric file transfer is in play in numerous industries, from manufacturing supply networks to creative entertainment and advertising production. Extreme transfer of files that total many hundreds of gigabytes may use both systems-oriented and people-centric processes to exchange extremely large files—geospatial mapping data, genomic or clinical data, audio/visual media production and manufacturing design and development information.

More organizations are looking to the cloud to take advantage of economies of scale, reduce start-up costs and free up IT resources.

Whatever the use case, file transfer is increasingly a core technological and business process and a critical component for achieving cost-efficient B2B integration across a complex global supply network that can involve thousands of suppliers and partners. But as it is, many enterprises entrust this vital operation to FTP or email, mechanisms that fail to provide the security, reliability and governance that mission-critical file transfer requires.

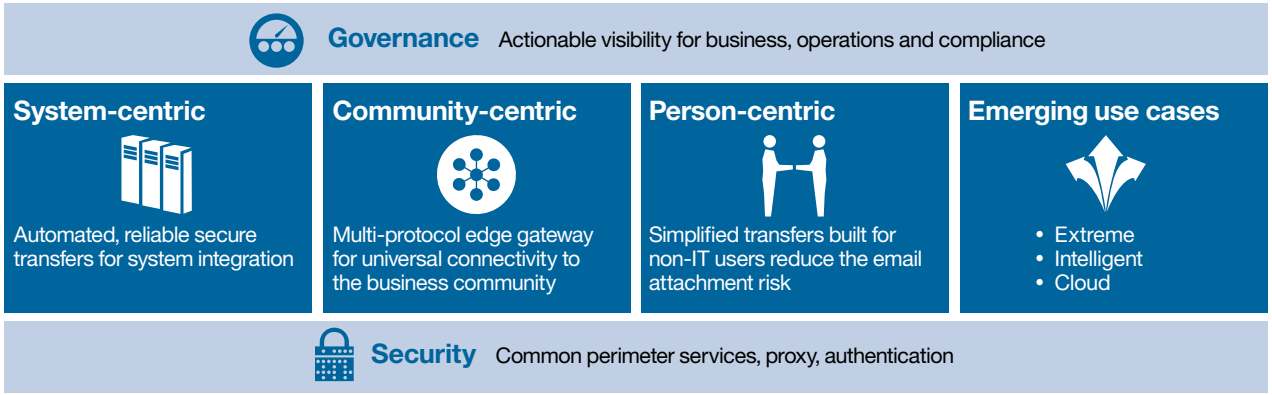


Figure 3: File transfer is evolving beyond its traditional system-centric model

The FTP risk to security, reliability and compliance

Since its emergence in the 1970s, FTP has become the prevailing method for moving sizable files. Built in with operating systems, FTP presented a relatively simple and ostensibly free means of file exchange that drove widespread adoption. As complexity increases, FTP is penalizing companies with high costs for manual processes around setting up new connections and handling exceptions.

Today, with the growth of mission-critical transfers in terms of file numbers and sizes, and senders and recipients, FTP's limitations are becoming glaringly obvious:

- **Limited reliability.** Lacking checkpoint recovery capabilities, FTP can be prone to failure in the event of a network interruption, resulting in partial or corrupt files at the destination. Such problems typically require costly and time-consuming troubleshooting and remediation.
- **Limited security.** FTP transmits client IDs and passwords as plain text, while standard FTP commands can be used to create denial of service attacks or exploit other network vulnerabilities. Many FTP implementations also lack multi-function authentication, encryption and privacy.
- **Limited auditability and visibility.** With no centralized monitoring or management, FTP transfers can be nearly impossible to track from start to finish. Limited logging capabilities require users to check logs and at source and destination servers for every transfer.
- **Limited flexibility and scalability.** Single-threaded FTP works only in a one-to-one model, requiring tedious scripting if an organization wants to send the same file to multiple recipients in a single transfer, a common requirement in B2B trading networks.

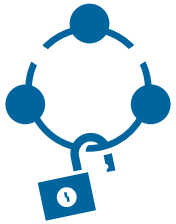
"In most situations, the traditional FTP approach to supporting external file transfers will no longer be adequate for meeting enterprise file transfer needs, as FTP offerings lack the enhanced security, governance and administrative features that corporate auditors are demanding."[3]

–Forrester Research

FTP's weaknesses introduce a host of risk and compliance problems that can impact operational performance, customer service and profitability:

- Data loss or exposure of sensitive customer or other business information inadvertently or by an attack on an FTP server
- Inability to comply with internal and external auditing and reporting requirements, including Sarbanes-Oxley, Gramm-Leach-Bliley and Basel III
- Risk to HIPAA regulation compliance governing patient privacy in healthcare
- Failure to meet PCI standards and auditability requirements for credit card processing
- Disruption in web storefronts passing orders to back-end fulfillment systems
- Shortcomings in service-level agreement (SLAs) metrics across both internal and external customers and partners
- Interruption to core business processes, causing delays, revenue loss and potential penalties

When FTP fails:	
Banking	When files connecting a web-based bill pay application to accounting aren't delivered, customer bills aren't paid and the bank incurs a large penalty
Telecommunications	When the customer data file is not synchronized between a carrier and retail outlets, a customer is denied an upgrade when visiting a store and switches carriers
Disaster recovery	When daily backup files fail to synchronize across data centers, critical information can become unavailable and the company is not prepared for disaster
Supply chain	When a B2B customer order is not received and processed, the sale is lost and the customer switches suppliers



$6.75 million
average cost to an organization suffering a data breach

$204
data breach cost per compromised customer record

Figure 4: Data breach costs

Source: Ponemon Institute, "2012 U.S. Cost of a Data Breach Study."[4]

Unilever customer success

Unilever, the manufacturer of 400 brands in personal care, home care and food and beverage, relies on IBM Sterling Managed File Transfer to move about 50,000 files a day in its North American operations ranging from sales orders, shipping notices, invoices, purchase orders and more.

IBM supplies a single MFT platform that spans multiple business functions to enable reliable and secure file transfers, rapid partner onboarding, SLA compliance and reduced operational costs. "Due to the flexibility and scalability of IBM Sterling Managed File Transfer, Unilever was able to expand the solution to support the entire North American organization without a single increase in resource or cost," said a Unilever official.

MFT: A proven solution for secure and reliable data exchange

With MFT, your organization can strengthen file transfer processes with security, reliability and governance that are not possible with FTP or email. MFT gives you a proven way to minimize risk, support compliance and improve service to customers and partners while standardizing on a cost-efficient platform scalable to meet growing data exchange requirements for years to come.

Key drivers for MFT

- Strengthened security and privacy
- Improved compliance
- Enhanced customer service
- Value chain synchronization
- Cost-efficient standardization

Security

With data encryption, MFT keeps user IDs and passwords secured while in flight. Checksum capabilities enable an organization to ensure that data is transferred in its original form and had not been corrupted or tampered with. Non-repudiation features notify senders with a digital signature when a file has been received by a recipient, minimizing risk of conflict or litigation.

Reliability

MFT helps guarantee delivery through automated scheduling, checkpoint restart and automatic recovery or retry. If a file transfer is interrupted, the solution attempts to resume the transfer at a predefined interval for a specified duration of time or until successful delivery, with no manual intervention required.

Flexibility

MFT enables one-to-many file delivery at any time, independent of source and target systems being available, and offers capabilities for reconfigure and deploy a file transfer instantaneously from anywhere in the infrastructure. Partner onboarding can be sped with reusable templates to set up automated file transfers and centralized control of and visibility into partner file distribution.

Performance

MFT is designed for enterprise-scale capacity to handle tens of thousands of trading partner, terabyte-sized files and hundreds of thousands of payloads per day. Stateless protocol can speed transfers by up to 400 percent, while transparent compression can reduce the size of large files, accelerating delivery.

Visibility and auditability

MFT solutions provide centralized visibility and monitoring with detailed audit logs of a file's journey—where a file originated, who sent it, where it went, who received it when, and more. It proactively alerts administrators to any problem areas, supports SLA and exception management, and enables centralized control over a broad file transfer environment.

Cost

MFT effectively eliminates the resource costs of manually devising, updating and troubleshooting homegrown FTP systems while standardizing on a single MFT solution to handle a range of file transfer needs in a scalable, repeatable and cost-effective way. IBM MFT customers enjoy continual functionality enhancements to meet changing business demands and derive value from MFT.

Do you need MFT?

Ask yourself whether your organization:

- Has business processes based on rapidly recurring file transfers at predictable or unpredictable intervals
- Runs business processes that depend on the transfer of large files of 1 GB or more
- Needs to transfer of data among hundreds or thousands of partners or customers
- Has multiple lines of business using disparate applications that need to exchange data
- Faces corporate or regulatory mandates that require you to track and monitor data transfers
- Wants to make IT more strategic to the organization
- Worries that enterprise data transfers are not secure and susceptible to interruption

Kookmin Bank customer success

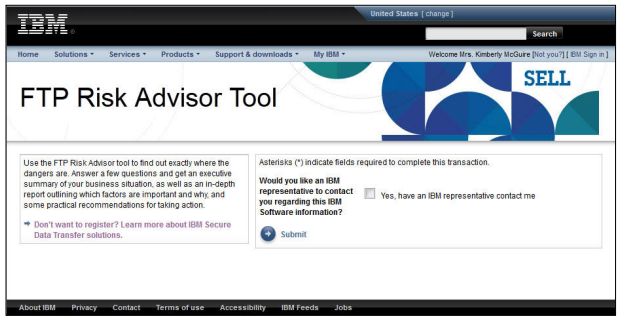
Kookmin Bank, one of the largest financial services institutions in South Korea, uses IBM Sterling Connect:Direct to transfer high volumes and large files with no limits on file sizes, achieving enterprise-scale performance, supporting its focus on strong customer relationship management and strengthening regulatory and internal compliance.

"Sterling Connect:Direct provides the sheer capacity of transfer rates that simply cannot be done manually," a Kookmin Bank official said. "And Sterling Connect:Direct performs such a task securely, efficiently and quickly between a host and server."

The Smarter Commerce approach to managed file transfer

Featuring the capabilities described earlier, the IBM leading MFT solution is in use at leading organizations around the world, providing an assurance of secure and reliable data exchange that spans the enterprise and a broad universe of internal and external stake-holders. With MFT, your organization can take a Smarter Commerce approach to an often-overlooked risk and security liability, improving your ability to create the seamless experience that customers and partners expect.

FTP risk advisor



Get a customized report with recommendations to remediate your FTP risk.
Visit https://ibm.biz/BdxaNP

For example, IBM Sterling Connect:Direct ensures your ability to prove compliance with government regulations and to secure the data that moves across your network. IBM Sterling Control Center gives you the visibility you need to better manage data and proactively manage to service level agreements. Our solutions span core functional areas, giving your organization flexibility in implementing MFT to support unique requirements.

System-Centric MFT

IBM Sterling Connect:Direct: Point-to-point file transfer software optimized for high-volume, assured data delivery of files within and between enterprises.

IBM WebSphere MQ File Transfer Edition: Reliable, enterprise wide file transfer software using messaging that leverages MQ.

Community-Centric

IBM Sterling File Gateway: An service-oriented solution to incorporate file transfer communities into business processes with web-based interfaces for customer self-services and rapid onboarding.

People-Centric

IBM QuickFile: A solution for person-to-person managed file transfers that offers business users easy self-service capabilities while allowing IT to apply MFT best practices for security, reliability and governance.

Security

IBM Sterling Secure Proxy: An application proxy for securing file transfers across your organization's secure demilitarized zone (DMZ).

Transfer-as-a-Service

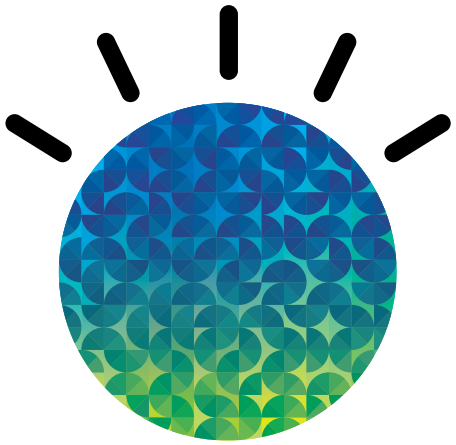
IBM Sterling File Transfer Service: A cloud service for file based business interactions with trading partners. Delivered as a Software-as-a-Service model, this offering leverages the cloud to drive agility without IT impact.

Webcast: The IBM roadmap for MFT

IBM experts outline the emerging challenge of secure file transfer and MFT solutions.
Visit https://ibm.biz/Bdxa2f

Smarter Commerce: An integrated approach

IBM Smarter Commerce is designed to help companies orchestrate the ecosystem to consistently deliver optimum experiences throughout the customer journey and drive profitable growth. It includes buy, market, sell and service processes that put the customer at the center of decisions and actions to improve customer loyalty, profitability and agility.



Smarter Commerce solutions are available on premise or through Cloud and Software-as-a-Service (SaaS). IBM offers more than 100 SaaS solutions that are designed to help organizations accelerate business process innovation, make impactful and informed decisions through analytics, and collaborate throughout the value chain to become a truly customer-centric organization.

The IBM integrated portfolio for Smarter Commerce includes consulting and services, advanced analytics, infrastructure, managed services and a set of industry-leading solutions for the commerce cycle core business processes of buy, market, sell and service. Learn more at ibm.com/smartercommerce.

IBM Corporation
Software Group
Route 100
Somers, NY 10589

Produced in the United States of America
October 2013

1 IDC, "IDC Digital Universe Study, sponsored by EMC," December 2012. www.emc.com/collateral/analyst-reports/idc-the-digital-universe-in-2020.pdf.

2 Vanson Bourne, "Synchronize the Value Chain," August 2012. **ibm.com**/common/ssi/cgi-bin/ssialias?infotype=SA&subtype=WH&htmlfid=ZZW03139USEN

3 Forrester Research, "Market Overview: Managed File Transfer Solutions," July 2011. www.forrester.com/Market+Overview+Managed+File+Transfer+Solutions/fulltext/-/E-RES58585

4 Benchmark Research sponsored by Symantec, Ponemon Institute LLC, March 2012. www.ponemon.org/local/upload/file/2011_US_CODB_FINAL_5.pdf

Please Recycle

UVB12356-USEN-03