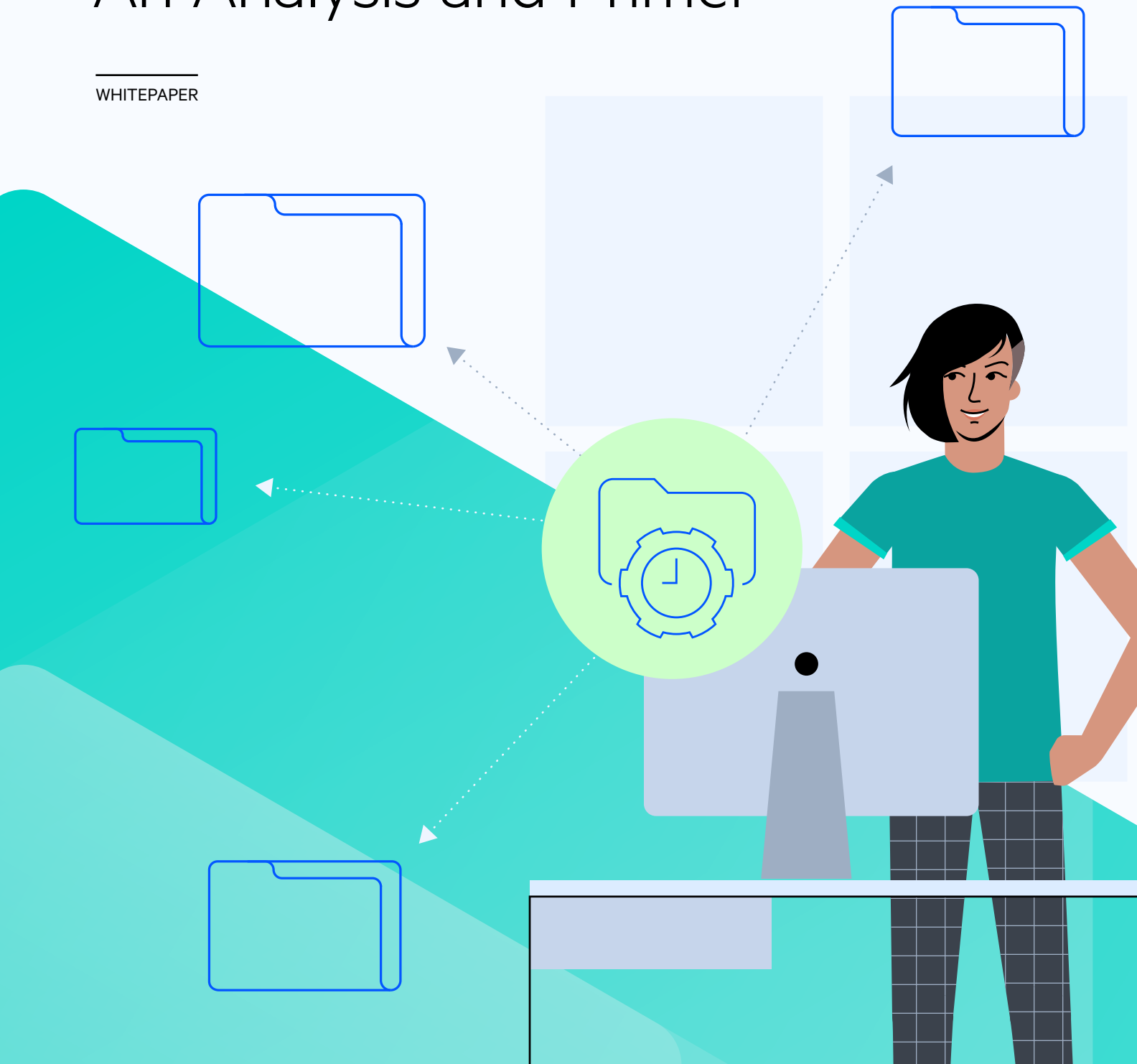
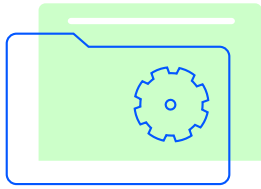


How to Automate and Integrate with Managed File Transfer: An Analysis and Primer

WHITEPAPER





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In today's fast-moving digital landscape, your time is precious. There's a constant battle for your attention between countless repetitive (but essential) tasks and the large strategic projects you should focus on instead.

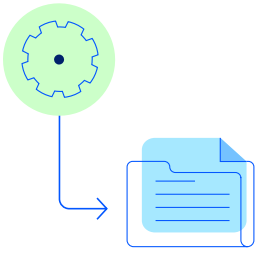
Manually transferring numerous files may seem like small potatoes – but it can easily chip away at your time, especially if you're doing it every day. Take back your time using file transfer automation, a powerful solution that gets you back to those mission-critical projects.

Fortunately, MOVEit Automation from Progress works with MOVEit Transfer—as well as other hosts like SFTP, FTPS, UNC, Azure Blob, S3 and others—to consolidate and automate file transfer activities. MOVEit can easily:

- Quickly automate new workflows and reduce the likelihood of error in repetitive processes
- Ensure compliance and security
- Design advanced workflow automation without scripting
- Integrate seamlessly with your existing environment

There's a constant battle for your attention between countless repetitive (but essential) tasks and the large strategic projects you should focus on instead.

This whitepaper tackles two main topics. It describes and analyzes what managed file transfer automation is and its benefits. The second section walks through accomplishing effective file transfer automation, discusses how to configure automation processes, and examines file transfer logging and visibility issues.



The Benefits of File Transfer Automation

If you have gotten to the stage where you're automating file transfers, you're probably using scripting such as PowerShell. While true PowerShell gurus easily create these types of scripts, that's only part of the process. Chances are you have no idea where these files wound up. Did they make it to their destination? Were they processed? What files were processed?

Scripts have other limitations. Often with scripts, you write out to a flat file. If you have a more built-out environment, you may be writing to a database to record that information, but that's uncommon. The most common scenario is there is no logging whatsoever. That process just runs with absolutely no record. Occasionally, the database might spot an error if there is an issue, but there's no real tracking of the file's journey.

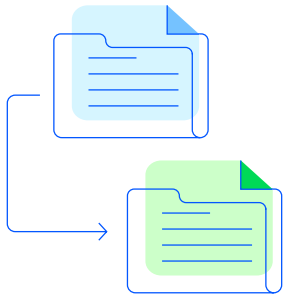


Zero Visibility

With no logging, there's no historical record. Imagine a business line manager complaining that a file expected a week ago never showed up. Today, they probably submit a ticket. Then IT reaches out to a vendor or a trading partner to hunt the file down.

The lack of visibility into file transfers creates huge hassles and can bother end users enough that they turn to Shadow IT for an alternative—likely an insecure solution. And without automation built-in, various departments are left writing scripts specific to their workflows. Holistically, IT doesn't see what is contained in these files, what the data is, which in a regulatory compliance environment is highly dangerous and a compliance violation just waiting to happen. If the enterprise goes through an audit, and the auditor discovers you are transmitting data without knowing where it's going or where it's coming from—it's a BIG issue.

More often, there is no automation at all, and everything is done manually. In many cases, the business turns to consumer-level solutions like Electronic File Sync-and-Share (EFSS) to establish a file transfer relationship with an external party, transmitting data back and forth over EFSS. Again, there is no visibility or traceability – especially if employees use a personal account. With most of the workforce today working from home, this is an all too common and risky scenario.



Three Potential File Transfer Solutions

(File Transfer Protocol) FTP: There are three different tiers of potential solutions to file transfer problems. One is plain FTP, often in the form of a consumer-level solution. This sorely lacks security, compliance and visibility since it is missing critical features like encryption at rest. Some of these tools don't even require secure protocols.

And plain FTP has its own set of issues, such as requiring a manual process for a worker running an FTP client on their workstation. To send a file, the user manually goes out to the source and destination locations and moves those files over—each time they move files! This is time-consuming and error prone.

A secure automated Managed File Transfer (MFT) solution alleviates those issues, so instead of struggling with low quality file transfers, the employee can focus on higher priority tasks. Instead of generating and transmitting a file every day at 1:00 PM, they are doing something more productive and core to their job, or even taking a late lunch.

Homegrown Solutions: There is a step up from low-level consumer solutions which we touched on earlier. Here IT, or someone in the company with technical chops, builds an in-house or homegrown solution relying on scripts, sometimes Python scripts, some sort of shell scripts like PowerShell, batch files, or other approaches.

These script-based transfers with low levels of automation tend to be dispersed, so IT doesn't know where the scripts are running from or what files they are sending. This is also a problem if the person that manages or created that process leaves the organization, as there is likely no support for these implementations and no way to train new users once the script's creator is gone. Finally, if changes need to be made to the process, who understands the script enough to do that?

There are myriad scripting languages. What happens if the script was written in a language no one in the company understands? How do you make sure the underlying scripting solution is up to date and secure, and the script itself up to date? If it is an open-source scripting module that is not been updated, that tool can be breached, which means your sensitive files can be compromised.

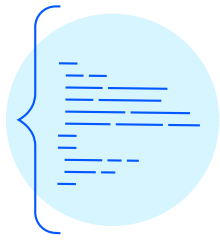
And of course, IT has zero visibility into what the process is doing. Where are these files being sent?

The Ultimate Solution – Managed File Transfer (MFT)

The third and uppermost tier is a Managed File Transfer solution. To begin, an MFT can be sized to meet your enterprise's sizing requirements, and scale from there.

Sizing can be based on workloads or something commonly overlooked such as business continuity. Do your processes have a high value in the sense of service level agreements (SLA) or does the transmitted data have a high value for the organization? If so, you MUST protect it from loss. Fortunately, with the right solution and configuration, if there is a failure in the production data center, you simply fail over to a secondary site or other backup and still process these files.

Availability is something to consider when looking at an MFT solution. Vendor stability is also crucial. There is quite a bit of movement in the MFT space right now, so you want to make sure that your MFT provider will be around tomorrow.

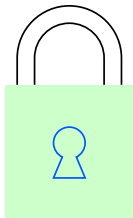


Just Say No to Scripting

Many IT pros love to script. They have mastered their language of choice and can quickly write code to do exactly what they want. For many things, scripting is great, but it is often far from the best answer. We already talked about what happens if your scripter leaves the company. Who understands the script, does anybody even use that scripting language? And if you are using scripting to automate, you must write a script for every single new thing you want to automate.

When automating file transfer processes, you really don't want to have to script. Simply put, scripting does not scale, is hard to support and is far from a full solution to secure file transfer problems. Scripts miserably fail the ease-of-use test.

The MOVEit solution from Progress is a web-based administrative portal—a “single pane of glass.” That ease of use allows the IT department, or whoever is administering the connections that are being established, to be productive immediately. This same ease of use opens the MFT solution up to lines of business to manage and operate, and IT can give them varying levels of permission to perform certain tasks. For example, they can give be given permission to look at their own logs, so they don't have to open tickets with IT when there's a problem. This can save an enormous amount of time for the infrastructure or IT administrative team.



Emphasis on Security

Chances are you consider all your company's data sensitive, but from a compliance standpoint, some data is more sensitive than others. Secure file transfers are **IMPORTANT** for your sensitive data and **CRITICAL** for compliance-regulated information. If you fall under compliance rules such as PCI or HIPAA, you want to ensure that data is being transmitted appropriately and through the correct channels. That is exactly where managed file transfer excels.

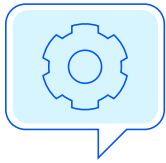
As the name implies, MFT manages how users interact with each other and ensures they use processes that are sanctioned and have the correct permission set. A big component of MFT is centralizing these processes.

We talked earlier about scripts, and how these scripts end up dispersed among many systems throughout your infrastructure. MFT replaces scripts and centralizes those automation processes through a single pane of glass, making these processes easy to perform through an intuitive Web-based management portal.

With MOVEit, the web interface offers **SAFE** access from any device, whether a workstation or any number of mobile devices.

In regulated environments, in the event of a breach or compliance violation IT must show where files came from, where they went, and who had access to them in the interim. Having a full audit log that shows **EXACTLY** what happened is critical.

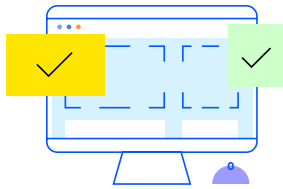
With our file orchestration tools, you can **SECURELY** centralize all file movement processes into a single pane of glass.



Calling Out to External Entities

Often file transfer processes need to call out to external entities. MOVEit Automation can call out to those external services to kick off a file movement process.

There's an API interface for MOVEit that an enterprise scheduler or SQL Server Integration Services (SSIS) Package can call in and essentially say, 'I just created the file. Go ahead and kick off that movement process.' MOVEit also has its own built-in scheduler, plus the MFT solution can be event-driven, so as soon as a file arrives in a location, a process will kick off.



Creating a Workflow

In MOVEit Automation, our workflows are called tasks. To create a workflow, IT specifies what processes look like. Where do these files need to come from? Where do they need to go to?

Let's assume we are pulling files from a MOVEit Transfer server, though you can specify any host types we previously defined by adding a step as source or destination. That process could include using PGP, and performing file encrypt, decrypt, zip, unzip, as well as additional custom processes. As far as the actual file movement, you select the source by picking from the hosts defined, then navigate out to see folders.

Say you only need to collect new files. Here, automation keeps track of files that were previously processed. That prevents the deletion of originals or renaming of originals on source.



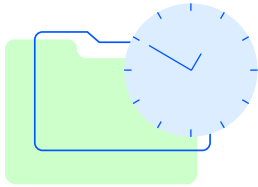
File Transfer SLAs

The transfer of critical files to and from vendors, partners and even within your internal organization are a key business function. You want these files transferred on time and done safely and successfully. Service Level Agreements (SLA) are key to ensuring file transfers are done right and on time.

MOVEit supports these SLAs and MOVEit is perhaps the only way you can guarantee meeting these performance and security agreements.

Say a file is scheduled to be delivered every day at 7:00 PM. If that file is not sent, the individuals responsible for this process must be alerted that something went wrong. With MOVEit, this is as simple as checking a box to log a failure. In doing so, MOVEit will not only record the event to the audit log which offers an historical record of that event, but also trigger an email alert. These alerts can go to one individual or a team and can include the information from the running task such as: name, status, if this was a failure, and a full error description.

These proactive alerts give a good idea of what happened on this system prior to IT having to log in and look at the logging record.



Schedule File Views

IT can schedule views into how file transfers are performing. For instance, MOVEit can show the latest results, how many files were sent, and the total size of data. More importantly, you can see all previous task runs for this information or for this task. This allows IT to respond when a business line asks to validate that they sent a file on March 17th for instance. IT can go to that March 17th run and view the individual file activity for that run.

Now this report could obviously be a list of thousands of files transmitted on that task run, and the business line is looking for a specific one. MOVEit can filter on that very quickly, and determine the file was in fact picked up from the source location, sent to the processing location, and MOVEit kept an archival copy.

The business line appreciates the information but needs to reprocess that file as something clearly went wrong further down the road. Now IT can pull out exactly what MOVEit stored as an archival copy and give to the business line quickly for reprocessing.

With MOVEit's ease of use, IT could potentially allow business lines to view their own logs. MOVEit has permissioning that limits the scope to tasks to only those relevant but allow the business line look at logging based on their domain credentials.

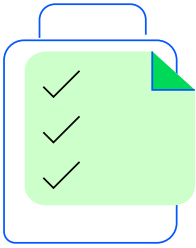


Traditional Versus Complex File Transfer Tasks

Traditional tasks are relatively linear: These include source, destinations, etc. MOVEit can also base tasks on complex business logic. These advanced tasks are like traditional tasks with a schedule, sources, and destinations. But now you introduce conditional logic.

Let's say it's a PGP file. The process starts out traditionally as MOVEit decrypts the file then send it to its location. If it's a ZIP, MOVEit will unzip the file, then send it out. This is simplistic logic. The task can get far more advanced. With custom scripts using either VBScript or PowerShell, you could do things like data validation, call out to external processes, and pass back and forth variables, which then determine the routing of a file. If the data validation fails, MOVEit would reference that variable in our conditional logic. MOVEit could also put it in a staging area and send an email notification to the party who can validate the data.

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Three Quick But Important MOVEit Questions

Q: What is the benefit of going with a Managed File Transfer solution over an FTP server or scripting it yourself?

A: Unlike general scripting or a more traditional FTP service, an MFT solution controls how users interact with either the defined processes or the access of those files. This is because you can tie in with external authentication sources or have redundancy on those systems. It's about determining when these files were sent, and answering other questions: Who were they sent to? How did they get routed? Who potentially had access to them in the interim?

With MFT you see the full life cycle of these files in the environment, rather than going out to a flat file or directly reading from a database. Visibility is the key component when it comes to Managed File Transfer.

Q: How would you use PowerShell with MOVEit?

A: PowerShell with MOVEit can be a great combo. PowerShell can run processes against files you are transmitting. MOVEit Automation, meanwhile, can create custom scripts, and one of those languages is PowerShell. The other is VBScript.

You can run processes in line in your task by creating a custom script in PowerShell. There is a script manager within the MOVEit Automation web interface.

I mentioned earlier advanced tasks that include conditional logic. You can pass variables between the MOVEit Automation service and PowerShell script and vice versa. This is handy for, say, parsing a file line by line for data validation and you need to pass back to ensure it ran through successfully.

Q: What are the High Availability (HA) features of MOVEit Transfer and MOVEit Automation?

A: There are a few ways to deploy MOVEit Transfer. Active-to-active in single data centers provides the highest level of availability. We could go active-passive to either single-data center or multi-data center. Regardless of whether you go active-active or active-passive, we can set up a disaster recovery site as well.

MOVEit Automation is always going to be active-passive. That's because we never want to have a duplicate task run occur or multiprocessing of a single file. That can be detrimental. We never want any split head syndrome or anything like that. MOVEit Automation can be single-data center, or span out to a multi-data center environment depending on your requirements.

MOVEit Components

MOVEit has several components which can be available as options, as well as an on-premises and cloud version.

MOVEit Transfer provides complete visibility and control over file transfer activities. With MOVEit Transfer you can assure the reliability of core business processes and the secure and compliant transfer of sensitive data between partners, customers, users and systems.

MOVEit Gateway, for instance, is an architectural piece for security in depth in front of MOVEit Transfer, and acts as a reverse proxy.

MOVEit Cloud, on the other hand, is the MOVEit Transfer service as a hosted solution, so our infrastructure team manages that backend service level component, and you provision user accounts, set up folders, permissions, etc. It simplifies the MFT quite a bit. MOVEit Cloud has high availability and disaster recovery already cooked in. It is a nice offering for getting up and running quickly, and not having to manage infrastructure.

MOVEit Automation handles internal transfers just between internal systems, and external transfers. You can reach out to a vendor or trading partner externally, and pick up or deliver files to their system, then pull them in internally or vice versa.

Learn to Master Secure File Transfer

Learn more about managed and secure file transfer at my webinar: [Automating and Integrating Managed File Transfer](#).



About the Author

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For a free trial of MOVEit Transfer, please visit:
www.ipswitch.com/forms/free-trials/moveit-transfer

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