Making File Transfer Automatic, Secure, Reliable and Maintainable

- *File Transfer Automation*

White Paper

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Making File Transfer Automatic, Secure, Reliable and Maintainable

Abstract

File Transfer Protocol (FTP) is an extremely useful tool and as most companies support an FTP Server it s often the simplest choice when it comes to moving files between cooperating companies, customers and business partners. However for the user and IT department using File Transfer Protocol is costly to master and monotonous to use. It provides yet another set of login/passwords to worry about and can be hard work to get right on a regular basis. Frequently transfers may be forgotten or not documented leading to commercial problems. Manually using File Transfer Protocol distracts users from more important core business and is expensive for an IT department to support. Even semi automated file transfer using a windows package can quickly become unworkable, especially if more than a small number of well trained users are involved. The existing approach of having individual users manage their own transfers will not scale to cope with hundreds of users and large numbers of sites, handling potentially thousands of transfers a day.

Introduction

Before the advent of the World Wide Web a number of standards had already been created to support the remote access to computer systems (Telnet) and the movement of files (File Transfer Protocol). The later became a standard for use by broadcasters when transferring data between departments or even different companies. However using File Transfer Protocol requires a disciplined approach to using a command line based system, this is not easy for the average user and hard for support departments to maintain. Windows based interfaces can help, but are in themselves awkward to set up, and they still require a good understanding of how File Transfer Protocol operates. Once a company has more than one or two users working with File Transfer Protocol it soon becomes evident that this approach does not scale well, handling user problems, connection failures and keeping interfaces correctly configured is an expensive logistical problem. This white paper looks at how File Transfer Protocol may be centralised and automated, outlining the securiy and reliability benefits this brings to even relatively small environments.

The Data Movement Problem

Companies are cooperating at ever increasing levels, and along with the transfer of data and files, it’s easy and common to share the development of ideas using computer systems. This gives rise to great benefits such as economies in time and cost. However this also gives rise to the need to reliably move files between possibly competing companies, where giving full access to internal file stores would be out of the question.

It is easy to send a file of data between companies allowing shared co-operative work on specific projects. Sometimes this is achieved using email, via a web server or by using File Transfer Protocol. However none of these file transfer methods work very well when the task starts to become a key part of a business process.

File Transfer Protocol is a very popular method that can reliably transfer files, however, It does suffer from a number of problems. It was designed to be used via command line. This gives rise to typing in strange commands that make very little sense to anyone outside of IT or telecommunications. Even using a windows based application can be quite problematic as it often seems that the user must understand the concept of File Transfer Protocol to be able to set things up and then to solve problems when errors occur. This also applies to support staff who could waste valuable time and money supporting individual users.

Giving individual users accounts on remote machines so they may deliver or pick up data also has a serious security impact. It is yet more detail for the user to handle and can easily become compromised in the usual ways, if the user is careless, leaves or is malevolent. This may give access to sensitive information to third parties. Sometimes just giving users access to File Transfer Protocol tools themselves may be a security risk.

Providing a desktop based approach to many users will not work efficiently; managing users, and their lack of communications knowledge makes this approach hard to support - it will not scale up to mass use.

This white paper looks at how File Transfer can be centralised, automated, and secured. Resulting in a reliable system that is made easy to support and use, and will scale to provide support for many users.

Solution

Providing a means to automatically transfer files on the users behalf, whilst removing the complexity for the user must be the priority. This must integrate into the existing IT infrastructure and deliver files into the users normal sphere of working. It must work seamlessly with third party companies with whom data is being exchanged, without the need for major network changes or additional software installation to the desktop or complex changes to the firewall infrastructure. Centralising the operation, management and support of the system would ease IT deployment and reduce overheads.

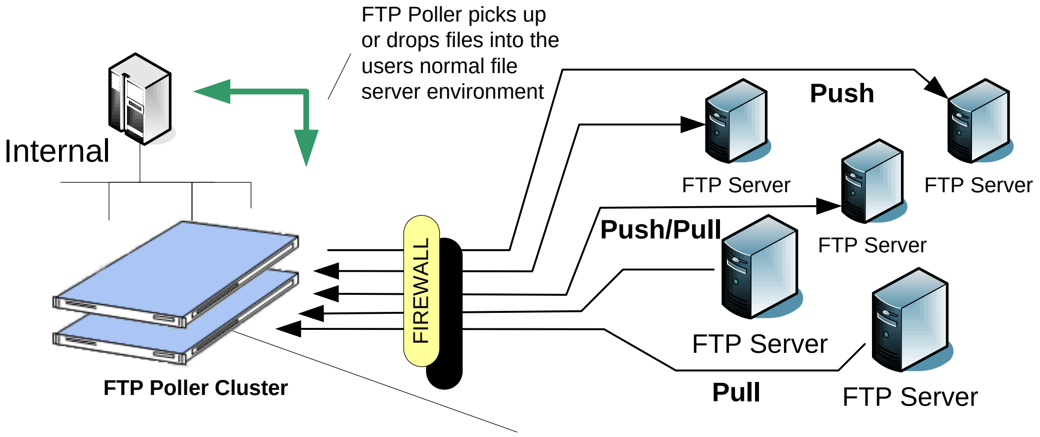
Security would be enhanced as the user would not need to have access to logins on remote systems and there is a reduced risk of security being compromised.

A further benefit of centralisation comes with the certainty that an FTP security policy can be securely implemented, ensuring at a stroke that all users are enforced to use the specified standard. In many cases this would enable organisations to remove general access to FTP programs, again ensuring that there are fewer ways that users can contravene both the companies security policy and the user Acceptable Use Policy.

Once a login to an FTP server has been setup the automation would simply look for files to transfer, there is no ongoing maintenance. Implementing such a system will reduce staff wasting time and money, reduce support costs and work effortlessly 24 hours a day seven days a week. The result will scale to provide support for many users and many sites. Control would be centralised and audit trail and email transfer confirmation would be provided. File transfer failures would be notified to email groups with a diagnostic trace of the problem.

Layer3 Systems have developed such a software device, the FTP-Poller. This has been supporting a number of top 100 companies (Discovery Channel, Sky, Flextech, Teachers'TV, Ascent and NTL) for a number of years.

Based on industry standard File Transfer Protocol and is completely compatible with all standards based FTP servers. It has proven to be reliable, running automatically for months and sometimes years without a problem.



FTP Poller picks up or drops files into the users normal file server environment

Automated external access to remote FTP servers, files may be delivered or picked up on a frequent or infrequent basis

Benefits

- Reduces costs by centralising administration and support.
- Eases user work load and reduces support calls.
- Increases security by reducing security burden on users.
- Enhances security by locking away sensitive passwords.
- Maintains security by forwarding files between external sites and specific internal servers.
- Centralised control makes audit logging possible.
- Enhances productivity by running continuously.
- Configured into groups for different frequency of polling .
- Provides email confirmation of success or failure notification with a diagnostic trail.
- Supports all types of standard web server regardless of operating system.
- Runs on Unix/Linux for reliability and security.

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Advanced Features

Data Distribution

Another feature that is often required is the movement of data from one place with copies being distributed to a number of destinations. The design of the FTP Poller provides for the ability to securely send copies to multiple recipients, whilst still maintaining a full audit trail.

Security

The modular design of the FTP Poller means that all the current versions of FTP can be supported, from basic and standard FTP, through to SFTP and FTPS. This adds a further layer of security such that files are encrypted during transfer.

High Availability

The design of the FTP Poller ensures that any single file transfer is carefully handled, this allows the implementation of a High Availability Cluster. If one machine handling a transfer fails, then the other systems in the cluster switch themselves in and take over the file transfers.

Remote Management

We have seen many people in the past attempt to automate FTP transfers, it really is quite straightforward. However there are a very large number of ways that failures take place which are beyond the control of the software itself. For example firewall failures, password changes, or network problems all of which may be on remote sites. For that reason any automated system must be able to gracefully handle all possible failures, ideally it should give as much support information as possible so that engineers can diagnose the problem quickly and raise the issue with third party companies who are responsible for the problem. The design of the FTP Poller software can actually be viewed as mainly error recovery. One of its biggest strengths is that it produces a complete diagnostic trace of activity. This is often detailed enough to diagnose remote network problems!

Conclusion

The Abstract at the start of this note states that the manual deployment and desktop use of File Transfer Protocol (or many other file transfer means, http, email etc) is costly, difficult to use and expensive to support. It may be insecure, unreliable and very difficult to scale to large numbers of users accessing many sites.
Our automated FTP Poller software can greatly reduce complexity, enhance security and improve reliability, producing a fast return on investment often within three months of implementation.
Centralising the deployment and control of an automated FTP service that integrates tightly into existing infrastructure will reduce costs and ease use.

More Information...

If you would like more details of this product or would like to discuss arranging a demonstration please contact us on: **020 8769 4484**

Alternatively please see our web site:

www.ftppoller.com

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