



GO ANYWHERE[®]
A HelpSystems Solution



GoAnywhere MFT System Architecture Guide



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Introduction

GoAnywhere MFT is a managed file transfer solution which streamlines the exchange of data between your systems, employees, customers and trading partners. It provides a single point of control with extensive security settings, detailed audit trails, and reports.

GoAnywhere MFT's intuitive interface and comprehensive workflow features will help to eliminate the need for custom programs/scripts, single-function tools and manual processes that were traditionally needed. This innovative solution will reduce costs, improve the quality of your file transfers, and help your organization to comply with data security policies and regulations.

With integrated support for clustering, GoAnywhere MFT can process high volumes of file transfers for enterprises by load balancing processes across multiple systems. The clustering technology in GoAnywhere MFT also provides active-active automatic failover for disaster recovery.

GoAnywhere MFT can be scaled horizontally by adding additional systems to the cluster. When paired with a load balancer like GoAnywhere Gateway, inbound connections to the File Servers can be distributed to the available systems in the cluster. For file transfers performed in Advanced Workflows (Projects), clustering allows the workload to be distributed across all systems to increase performance and throughput. As your business and transfer requirements grow, GoAnywhere MFT can easily grow with it by adding additional systems to the cluster.

This guide describes several common GoAnywhere MFT architectures, demonstrating support for high availability (clustering) and load balancing, as well as the advantages of each configuration.

Ensuring data backup, disaster recovery, and high availability for your GoAnywhere MFT system focuses on three key areas:

- **GoAnywhere MFT Software and License** - The program files required for GoAnywhere MFT to run.
- **Product Database** - Stores the configuration settings and application data used to run GoAnywhere MFT.
- **User Files** - The folders for storing user documents and misc. GoAnywhere settings and files.

High Availability Environments (Clustering)

Clustering allows two or more GoAnywhere MFT systems to work together to allow workloads to be distributed horizontally across multiple GoAnywhere MFT installations. In a clustered environment, two or more GoAnywhere MFT systems within a cluster can connect to the same product database and user files at the same time. This allows these systems to share security settings, trading partner user accounts, configurations, audit logs and other product tables. If one GoAnywhere MFT system fails, the remaining systems in the cluster will automatically continue to process workloads and file transfer requests.

This active-active clustered environment also provides the best high availability option for handling potential system failures. If one GoAnywhere MFT system fails, the remaining systems in the cluster will automatically continue to service the trading partners.

GoAnywhere Gateway

Reverse Proxy

GoAnywhere Gateway™ is both an enhanced reverse proxy and forward proxy. It provides an additional layer of network security when your organization needs to safely exchange data with your trading partners. When using GoAnywhere Gateway as a reverse proxy, no inbound ports need to be opened into the private/internal network and no sensitive data needs to be stored in the demilitarized zone (DMZ).

GoAnywhere Gateway is a software-only solution which is installed in the DMZ or public-facing network. Trading Partners only connect to authorized ports on GoAnywhere MFT, which routes requests over a proprietary channel to back-end services (for example, FTP, SFTP, HTTPS) in the private/internal network. This approach allows your organization to keep sensitive information (for example, data files, user credentials, keys, certificates) in the private/internal network, keeping your DMZ in compliance.

When GoAnywhere Gateway is used as a forward proxy for outbound connections, it will hide the identities and locations of those internal systems.

In essence, GoAnywhere Gateway serves as a transparent interface between internal systems and external systems without exposing sensitive files and the private/internal network. This is an essential solution for meeting strict security policies and complying with state privacy laws, HIPAA, PCI DSS, SOX, ISO 27000 and GLBA.

Load Balancing

GoAnywhere Gateway can serve as a load balancer for distributing connections across multiple GoAnywhere MFT systems within a cluster. This active-active framework provides greater high availability for mission-critical environments.

As a load balancer, GoAnywhere Gateway spreads connections evenly across the clustered systems. This load balancing algorithm is called “round-robin”, which is a common load balancing standard.

Single MFT System (default)

In this architecture, GoAnywhere MFT is installed behind the corporate front-end firewall. If file transfer services are enabled, ports to the HTTP/S, FTP, FTPS, SFTP, and AS2 protocols are opened on the firewall to allow all inbound connections to GoAnywhere.

The default stand-alone system uses the embedded Derby database, and the user files are located within the GoAnywhere MFT installation directory.



Strengths

- Ideal for small operations where high availability is not needed.

Single MFT System with External Database and User Files

In this architecture, the product database has been externalized to use a database vendor of your choice. The user files have been configured to use an external file server.



Strengths

- Data loss is mitigated, since the product database and user files are stored on a separate server than the GoAnywhere MFT system.
- Leverages the performance improvements of an enterprise database system and file storage solution.

Single MFT System With Gateway

In this architecture, GoAnywhere MFT is installed in the Private Network and GoAnywhere Gateway is installed in the DMZ. No inbound ports are opened into the Private Network, and no files are stored in the DMZ.

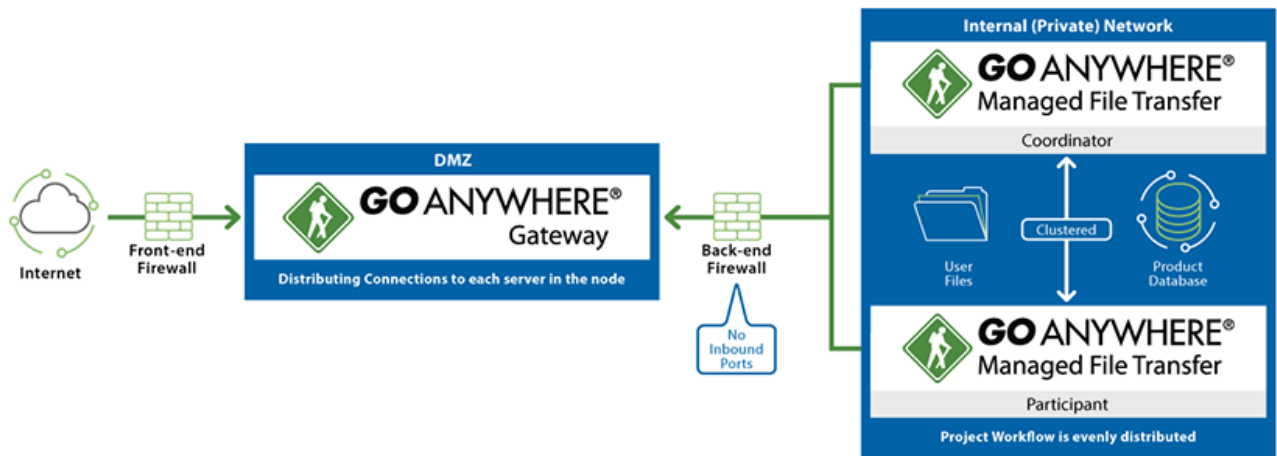


Strengths

- GoAnywhere MFT is protected by the GoAnywhere Gateway proxy server in the DMZ. No inbound ports need to be opened into the private network. No files need to be stored in the DMZ.
- Data loss is mitigated, since the product database and user files are stored on a separate server than the GoAnywhere MFT system.
- Leverages the performance improvements of an enterprise database system and file storage solution.

Clustered MFT Systems with Gateway

In this architecture, GoAnywhere MFT is clustered with 2 or more systems for high availability, and the systems are installed in the Private Network. GoAnywhere Gateway is installed in the DMZ and no inbound ports are opened to the Private Network. The product database and user files have been externalized in order to share across each system in the cluster. GoAnywhere Gateway is providing load balancing for incoming connections, and the clustered GoAnywhere MFT systems are distributing the project workloads evenly across each system in the cluster.

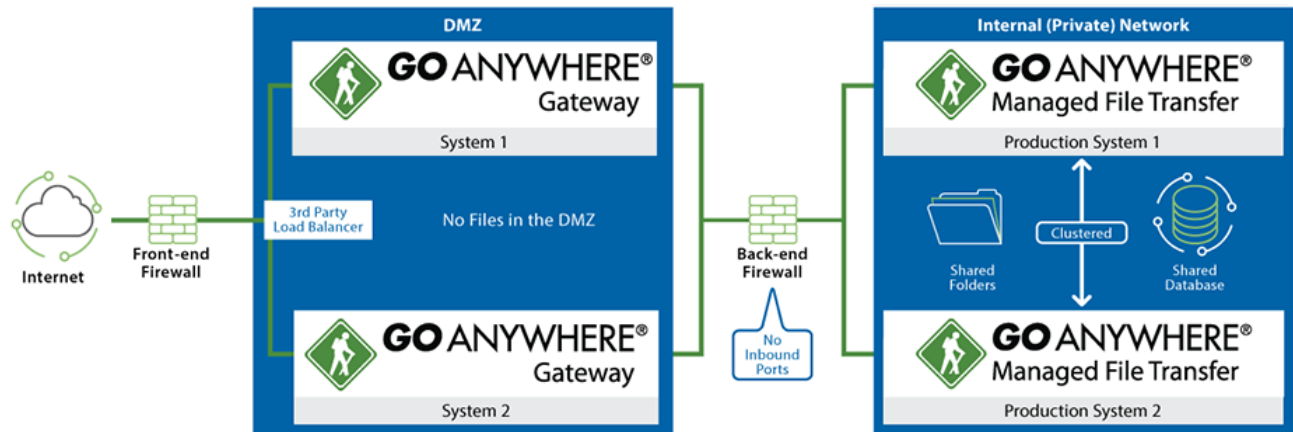


Strengths

- GoAnywhere MFT is protected by the GoAnywhere Gateway proxy server in the DMZ. No inbound ports need to be opened into the private network. No files need to be stored in the DMZ.
- All incoming connections are equally distributed across each system in the cluster.
- Workflow Jobs are distributed across multiple systems.
- If one GoAnywhere MFT system experiences a failure, another system in the cluster will automatically take over.
- Leverages the performance improvements of an enterprise database system and file storage solution.

Clustered MFT with Two Gateways

In this architecture, GoAnywhere MFT is clustered with two or more systems for high availability, and the systems are installed in the Private Network. A 3rd party load balancer is distributing inbound connections across two GoAnywhere Gateways, which are installed in the DMZ, and no inbound ports are opened to the Private Network. The product database and user files have been externalized in order to share across each system in the cluster. Each GoAnywhere MFT system in the cluster is configured to use each Gateway, and the clustered GoAnywhere MFT systems are distributing the project workloads across each system in the cluster.



Strengths

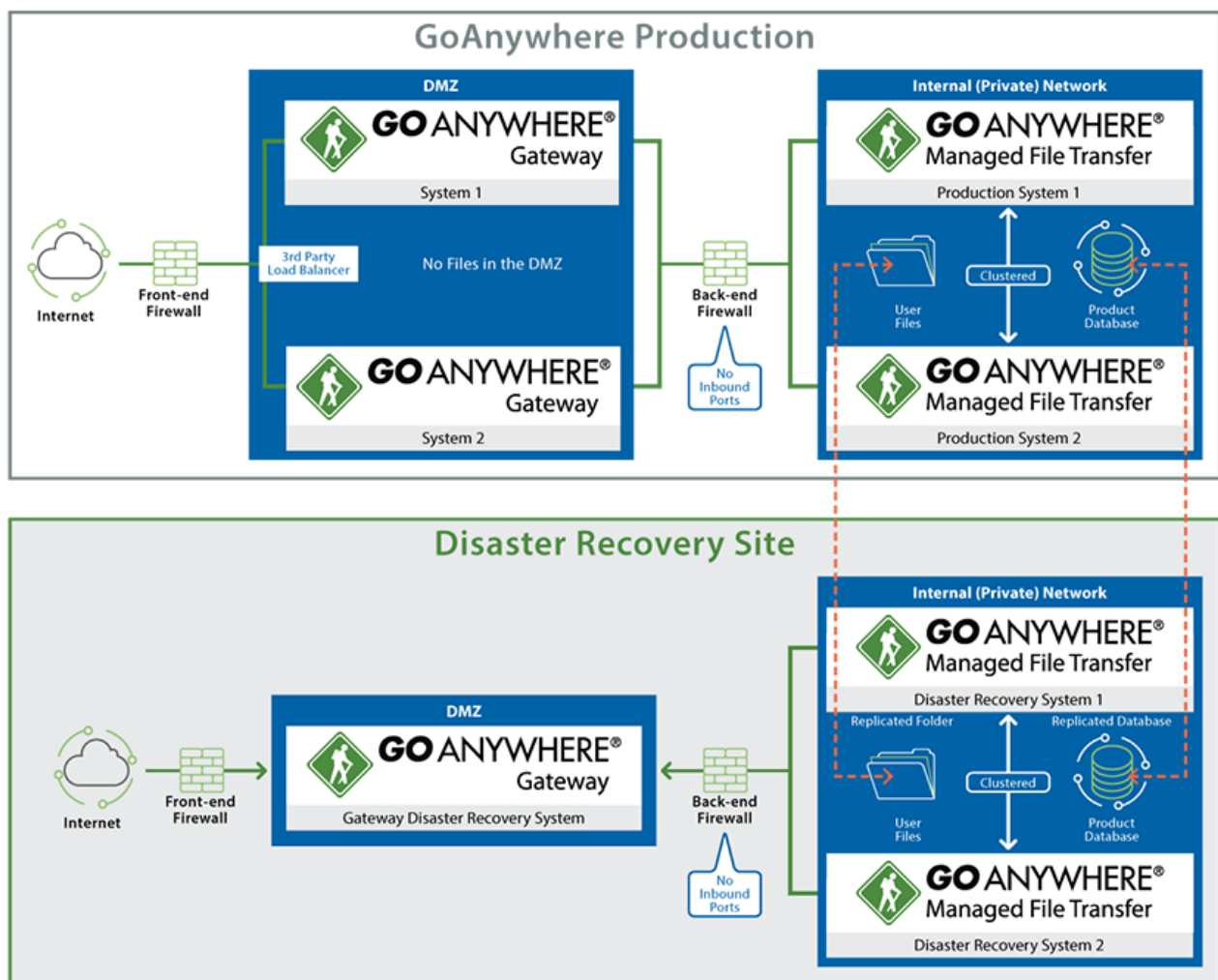
- Multiple GoAnywhere Gateway systems are providing high availability for the reverse proxy.
- GoAnywhere MFT is protected by the GoAnywhere Gateway proxy servers in the DMZ. No inbound ports need to be opened into the private network. No files need to be stored in the DMZ.
- All incoming connections are distributed across each system in the cluster.
- Advanced Workflow Projects and Jobs are distributed across multiple systems.
- If one GoAnywhere MFT system experiences a failure, another system in the cluster will automatically take over.
- Leverages the performance improvements of an enterprise database system and file storage solution.

Disaster Recovery

While clustering ensures the GoAnywhere MFT system will continue running if a single system has failed, disaster recovery ensures you have an adequate backup and recovery solution in a situation where your entire production site fails.

In this disaster recovery example, the production GoAnywhere MFT is clustered with two or more systems for high availability, and the systems are installed in the Private Network. A 3rd party load balancer is sending inbound connections across two GoAnywhere Gateways, which are installed in the DMZ, and no inbound ports are opened to the Private Network. The product database and user files have been externalized in order to share data across each system in the production cluster and for replication to the disaster recovery site.

The disaster recovery site contains a single Gateway and clustered GoAnywhere MFT systems. If the production system becomes unavailable, the DR site can come online with the replicated user files and replicated product database. Please note that it is your responsibility to replicate the user files and product database using a 3rd party solution.



Development & Quality Assurance

HelpSystems recommends that customers purchase an additional GoAnywhere MFT license for development and/or testing purposes. This extra license is helpful for providing change control and quality assurance of new workflows that you build in GoAnywhere MFT. It will also allow you to test new releases/patches provided by HelpSystems in an isolated environment.

GoAnywhere MFT includes tools to allow authorized users to promote workflows, schedules and other items from a development/test environment into production.

