10 Ways to Make File Transfers Easier, Automated and Secure
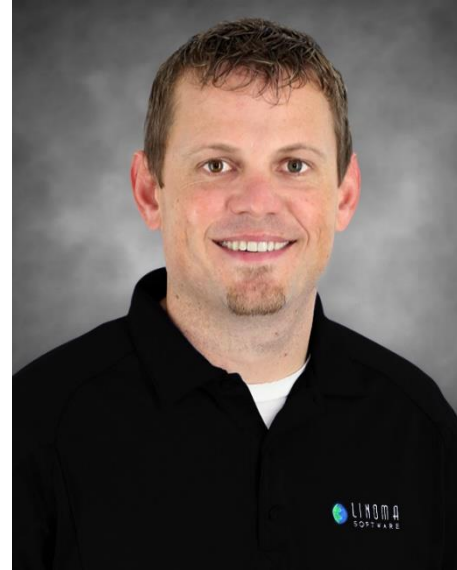
Presented by

Linoma Software

GO ANYWHERE™
Managed File Transfer

Introductions

Bob Luebbe
Chief Architect

Steve Luebbe
Software Development Mgr.

Agenda

- About Linoma Software

- File Transfer Challenges

- What is Managed File Transfer (MFT)?

- 10 Ways to Make File Transfers easier with GoAnywhere MFT™
  - **Secure File Transfer**
    - SFTP, FTPS, AS2 or HTTPS, AS2 and Open PGP
  - **Data Translation**
    - Read and write XML, Excel, CSV and text documents
  - **Full Automation**
    - Scheduled and On-Demand

- Live Demonstration

- Q&A

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Linoma Software Background

- Founded in 1994 - based in Nebraska

- Growing and profitable - No debt or outside funding

Inc. 5000 2014
Linoma Software ranks
★ #14 in Nebraska
★ Only MFT Company Listed
Fastest Growing
Private Companies

- Active R&D with focus on Data Automation and Security

- Responsive technical support – Phone, Web, Email

- Over 3,000 customers around the world

- Over 98% renew their maintenance each year

> "I would definitely recommend your product to anyone, not just because it is a great product, but also because you can count on having the support when you need it!"
>
> **Linda Humbert, American Management Corporation**

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Linoma Partnerships

- Partnered with all major OS vendors including IBM, Microsoft, VMware, Oracle, Red Hat and Novell

- Member of the PCI Security Standards Council

# File Transfer Challenges

Old Technology Still Being Used

Time Consuming Processes

No Error Alerts or Audit Logs to Meet Compliance Rules

Employees Are Still Sending Files Unchecked

- PC transfers are often manual, consuming valuable employee time

- Manual processes are prone to errors:
    - Employee may accidently download/upload the wrong file
    - Forgot to encrypt the file
    - Sent the file to wrong place!
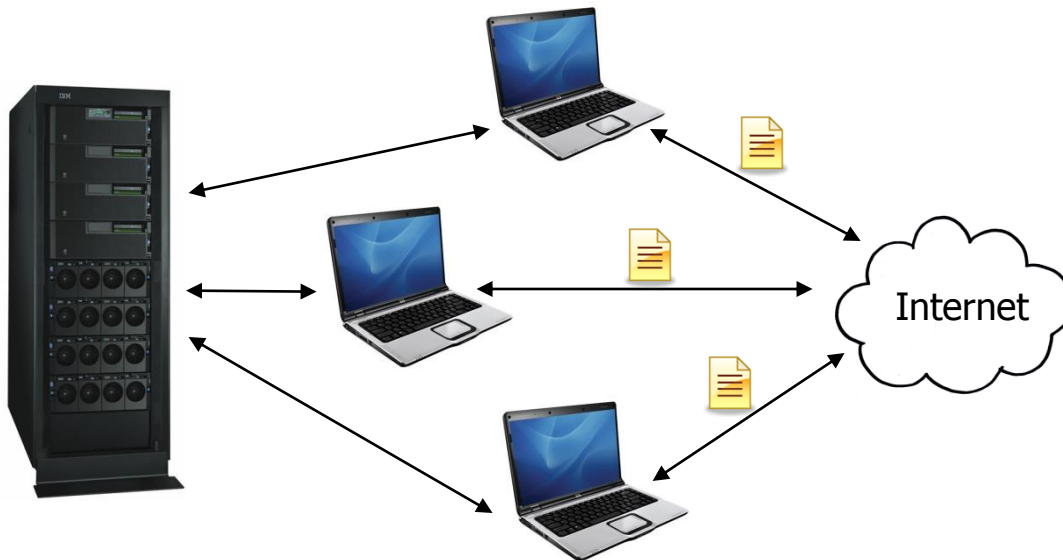
- What happens if the user is gone for the day?

- Sensitive files are more vulnerable on PCs and laptops

- Limited (or no) audit trails

- Compliance issues…

PC tools save money…
…or do they?

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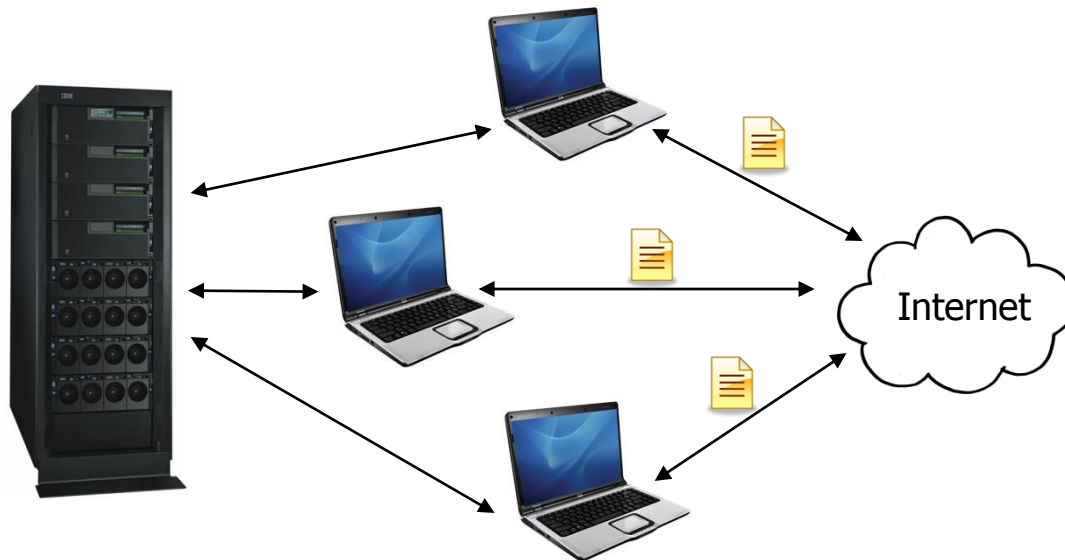
FTP Scripts

- Programmers have traditionally written
    Scripts to perform file transfers

- Passwords are often stored in the scripts
    (in the clear)

- Scripts need to be maintained by Programmers:
    - When host names and IP addresses change
    - When user ids and passwords change
    - When file names change

- Can become very complex and unmanageable,
  especially as you add more trading partners

- No auto-retry or auto-resume capabilities

- Difficult to know when it fails

```
HOST='192.168.1.54'
PORT='10021'
USER='user1'
PASSWD='s3cr3t'
FILE='user_log.log'
LDIR='/home/test'

echo "Running FTP transfer from $HOST"
ftp –n $HOST $PORT <<END_SCRIPT
quote USER $USER
quote PASS $PASSWD
passive
lcd $LDIR
get $FILE
quit
END_SCRIPT
```

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What is Managed File Transfer
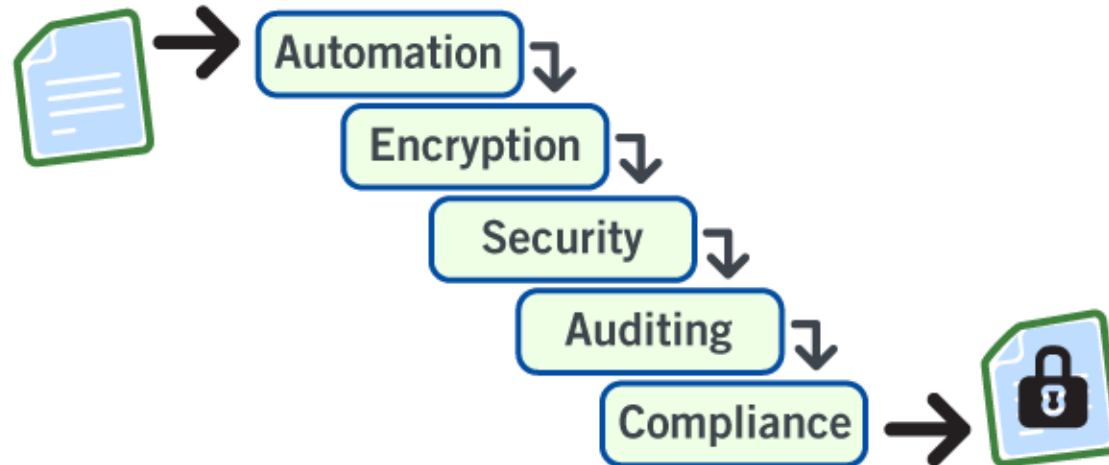
File Transfer = Sharing files with others

Batch **Email** **Cloud**

Managed File Transfer = Automating and Securing file transfers using a centralized enterprise-level approach.

Automation → Encryption → Security → Auditing → Compliance →

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Managed File Transfer – Top 3

Things to look for when evaluating a MFT solution…

Easy To Use

Centralized Security and Control

Auditing and Alerts

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GoAnywhere MFT

Access Anywhere

Web Browser,
Command Line, API...

- Workflow Automation
- Encryption
- Compression
- ETL - Data Translation
- Scheduler

- Ad Hoc File Transfers
- SFTP and FTP/s Server
- Triggers and Monitors
- User Management
- AD, LDAP, SAML Auth

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Alerts

Audit Logs & Reports

FTP
SFTP, SCP, FTP/s

File Systems
Windows, Linux, Unix,
AIX, IFS, Solaris, UNC...

Web Servers
AS2, HTTP, HTTPS,
Web Services

Databases
DB2, SQL Server, Oracle,
Informix, MySQL, Sybase...
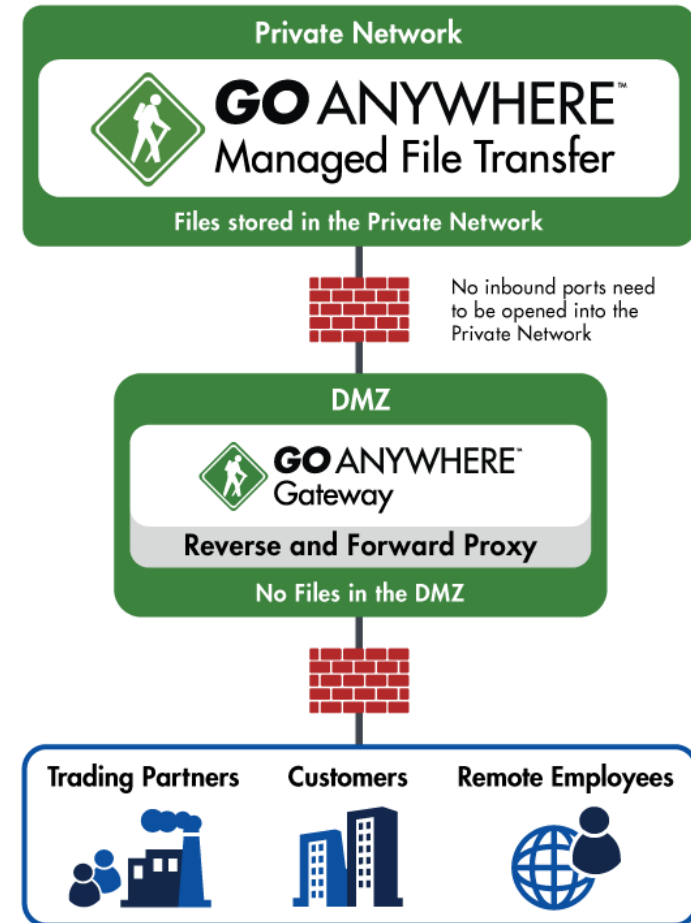
Applications
Scripts, Programs,
Commands, MQ
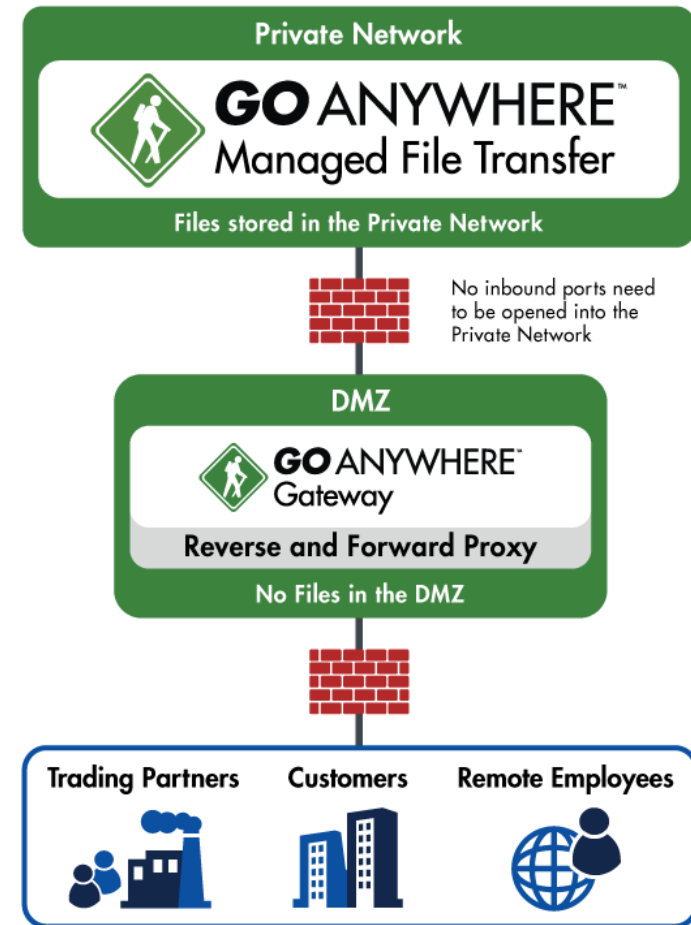
Mail Servers
SMTP, POP3, IMAP

✔ Supports multiple platforms including Windows, Linux, UNIX and IBM i

✔ Includes a browser-based interface for all administration

✔ No programming or scripting is required

✔ Provides High Availability and Load Balancing with Clustering

✔ Supports all popular protocols including SFTP, SCP, FTP/s, HTTP/s, Open PGP, AS2, SMTP, POP3 and IMAP

✔ Integrates with backend systems (SQL, APIs, Web Services, Java, .NET)

Private Network

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Files stored in the Private Network

No inbound ports need to be opened into the Private Network

DMZ

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Gateway

Reverse and Forward Proxy

No Files in the DMZ

**Trading Partners**   **Customers**   **Remote Employees**

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Managed File Transfer

✔ Authenticates users with AD, LDAP, IBM i and SAML

✔ Keeps files in the Internal Network with a DMZ Reverse Proxy (Gateway)

✔ Supports large files with auto-resume and integrity checks

✔ Protects files "at rest" and "in-motion" with FIPS 140-2 validated AES encryption

✔ Controls user access with role-based permissions and extensive security controls

✔ Allows jobs to be prioritized and segmented with job queues and run priorities

✔ Logs all file transfer activity with centralized auditing and reporting

Private Network

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Managed File Transfer

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GO ANYWHERE™
Gateway

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Trading Partners   **Customers**   **Remote Employees**

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GoAnywhere Administrator

- Browser-based Dashboard
- Intelligent Gadgets
- Drag-n-Drop
- Latest HTML5 Technology
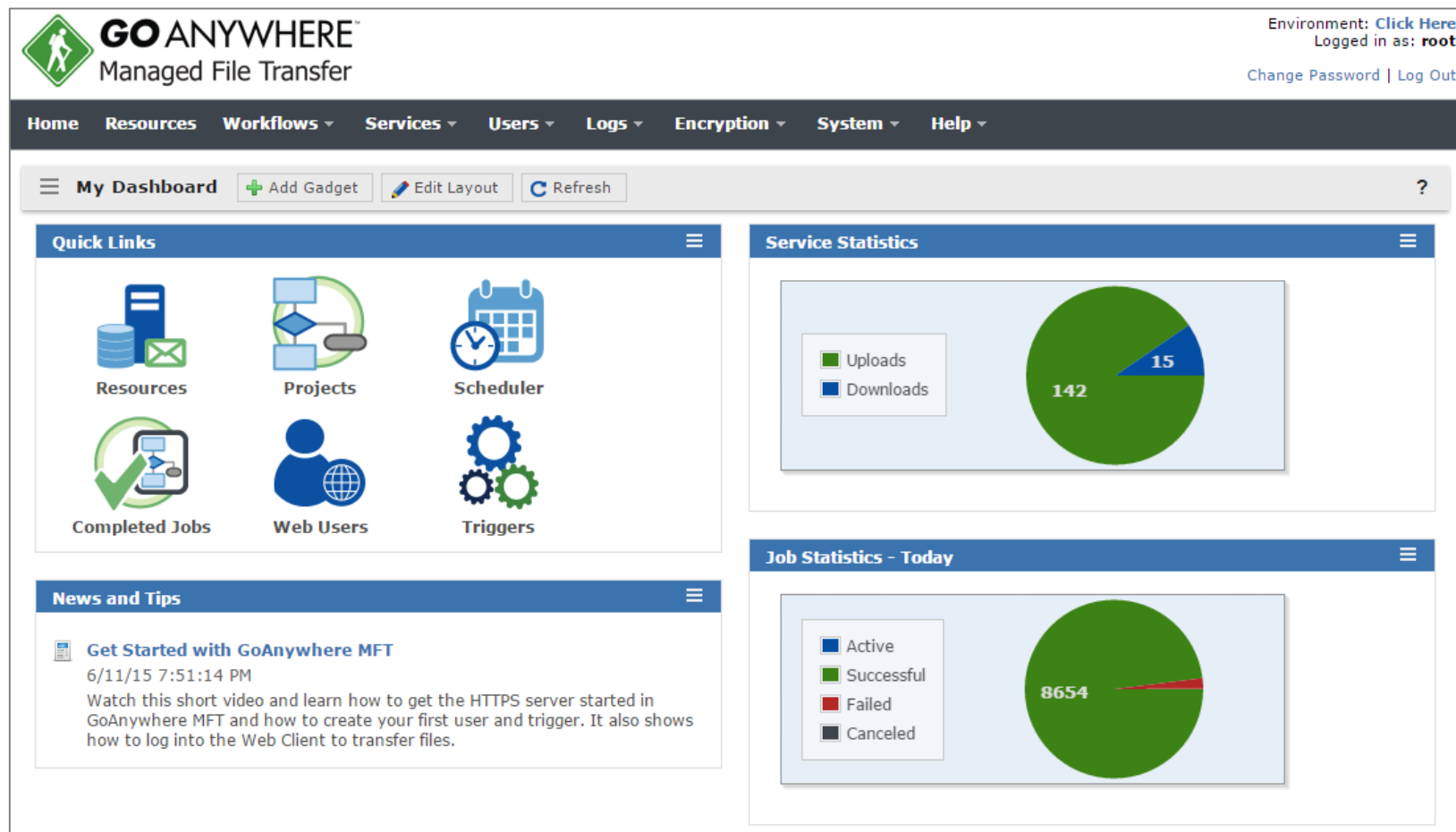
Security Features

- Helps meet compliance for PCI-DSS, HIPAA, FIPS 140-2, Sarbanes Oxley, GLBA and State Privacy Laws

- Secure Protocols
  - SFTP – FTP over SSH
  - FTPS – FTP over SSL/TLS
  - SCP – Secure Copy
  - HTTPS – HTTP over SSL
  - Open PGP / GPG
  - ZIP with password protection
  - Encrypted email (SMIME)
  - AS2

- AES encryption (key lengths of 128, 192, 256) – NIST standard

- Two-factor Authentication

- Key Management tools for Open PGP Keys, SSL X.509 certificates and SSH Keys

- Role-based Administration

- SSL protected console

RSA®

FIPS VALIDATED 140-2™

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Server Connectivity

- **File Systems**
  - Network Shares (SMB/CIFS)
  - Local File System

- **Database**
  - DB2
  - Oracle
  - Microsoft SQL Server
  - Sybase
  - MySQL
  - PostgreSQL
  - Informix

- **Enterprise Messaging (JMS)**
  - Websphere MQ
  - SonicMQ
  - ActiveMQ
  - SwiftMQ

- **FTP**
  - Standard FTP
  - SFTP (FTP over SSH)
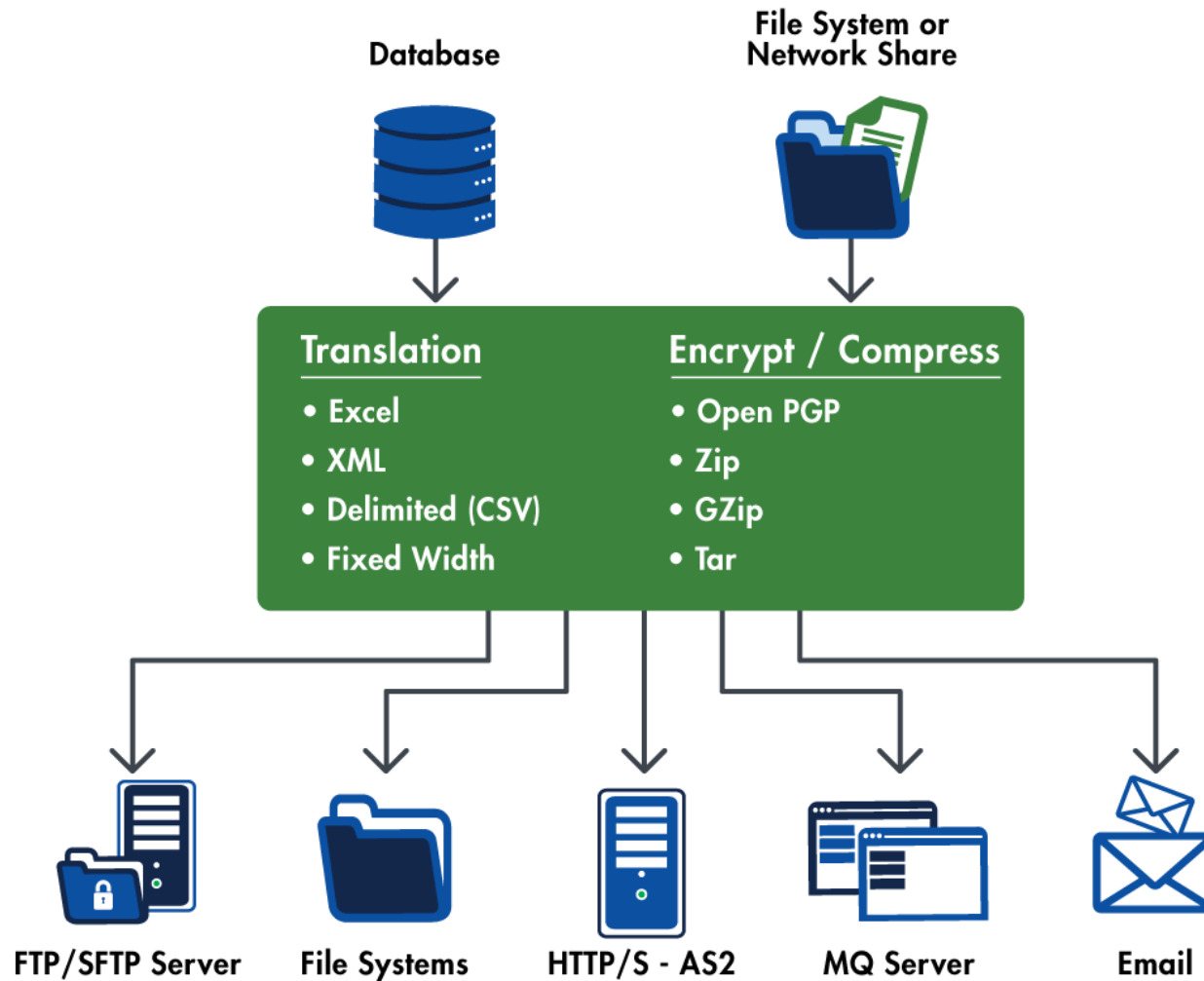 - FTPS (FTP over SSL)
  - SCP (Secure Copy)

- **Web Sites**
  - HTTP
  - HTTPS (HTTP over SSL)
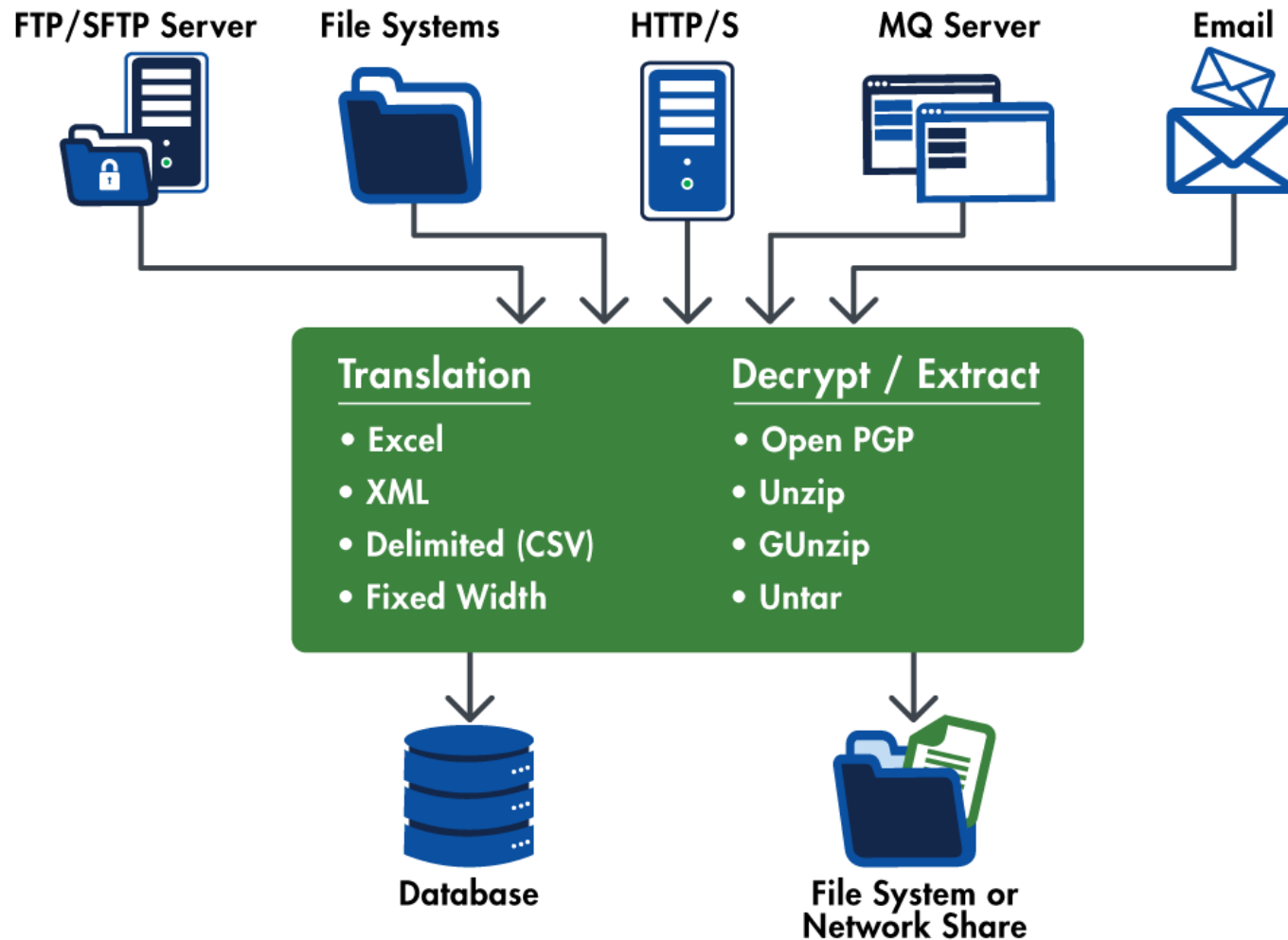 - Web Services
  - AS2

- **Email**
  - POP3
  - IMAP
  - SMTP

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Automated Workflow Examples - Outgoing

Database

File System or Network Share

Translation
- Excel
- XML
- Delimited (CSV)
- Fixed Width

Encrypt / Compress
- Open PGP
- Zip
- GZip
- Tar

FTP/SFTP Server

File Systems

HTTP/S - AS2

MQ Server

Email

Automated Workflow Examples - Incoming

FTP/SFTP Server   **File Systems**   **HTTP/S**   **MQ Server**   **Email**

Translation
- Excel
- XML
- Delimited (CSV)
- Fixed Width

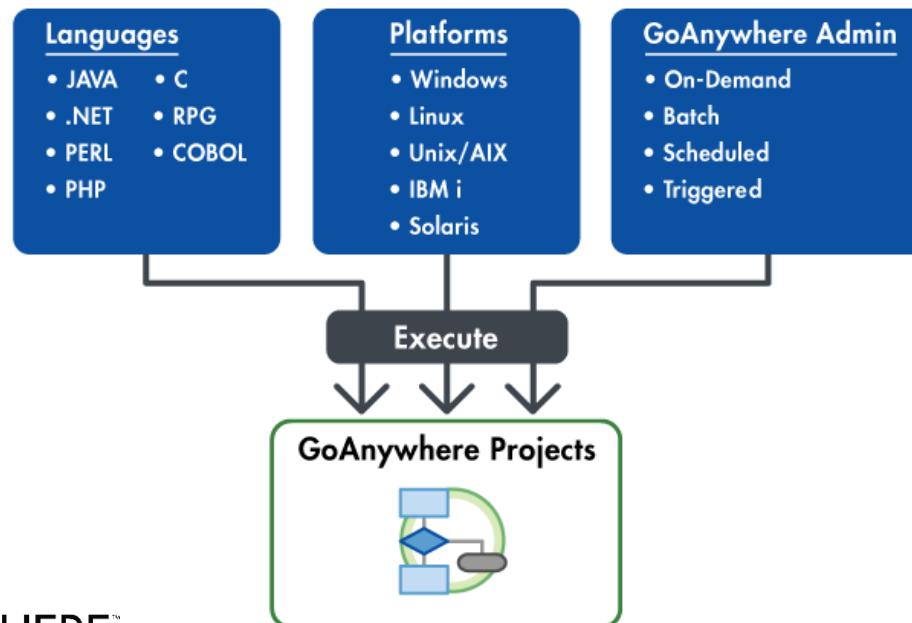## Decrypt / Extract
- Open PGP
- Unzip
- GUnzip
- Untar

Database

File System or Network Share

Executing Projects (Workflows)

- Execute immediately or in Batch

- Run from browser-based Administrator

- Run from GoAnywhere Scheduler

- Use existing Scheduler

- Execute from OS command line or from within your applications

Languages
- JAVA
- .NET
- PERL
- PHP
- C
- RPG
- COBOL

Platforms
- Windows
- Linux
- Unix/AIX
- IBM i
- Solaris

GoAnywhere Admin
- On-Demand
- Batch
- Scheduled
- Triggered

Execute

GoAnywhere Projects

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Integrated Scheduler

- **Flexible scheduling:**
  - One Time
  - Minutely
  - Hourly
  - Daily
  - Weekly
  - Monthly

- Set job priorities, job queue, etc.

- Custom holiday calendars – Skip holidays or run the business day before or after

- Auto-retry on failures

- Email notifications for success and failures

- Pass in variables to Projects

| Project | Schedule | Email Notification | Project Variables |

Current Server Time 6/12/15 4:25:21 PM
Schedule Frequency * Weekly

Schedule Options

Start Date * Jun 12, 2015
Start Time * 12:00
Run Every * 1 Weeks
Days to Run * ☐ Sun ☑ Mon ☑ Tue ☑ Wed
☑ Thu ☑ Fri ☐ Sat
End Date

Holiday Options

Holiday Calendar Holiday Calendar
Holiday Rule * Skip

Repeat Options

Frequency Never

Optionally, use your own scheduler

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Commands and APIs

- Run projects in GoAnywhere using the provided commands and APIs

- Available for Windows, Linux, IBM i (iSeries) and UNIX

- Requests sent to GoAnywhere over HTTP/S requests

- Override variables

- Run interactive or batch

- Specify Job Queue priority

- Trap for errors
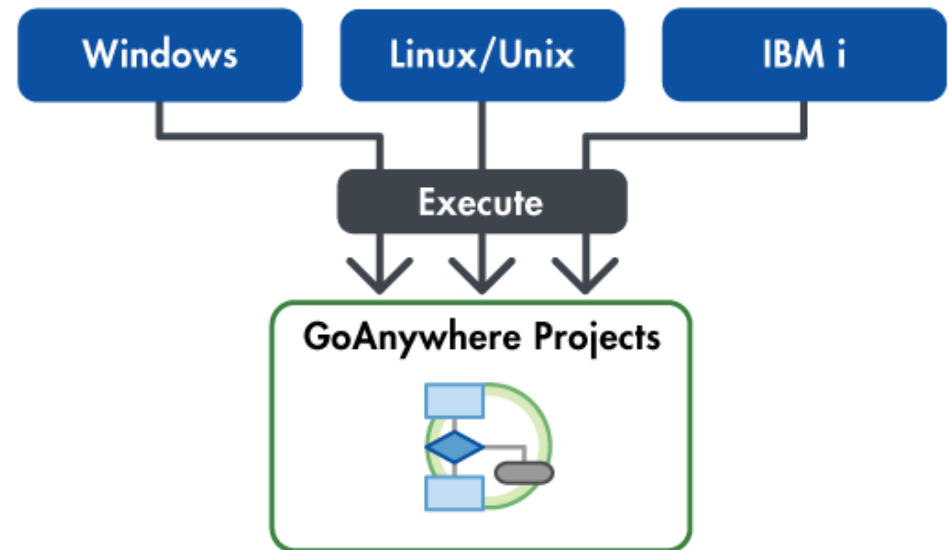
The commands and APIs are provided at no additional charge in GoAnywhere.

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Command Line Examples to Run a Project

Windows Example:

```
gacmd.exe -server http://192.168.1.20:8000/goanywhere/
          -user projectManager -password ********
          -command runProject
          -Project /Payroll/SendDirectDeposit
          -variables fileName "deposit.csv" folderPath "/inbound/deposit"
```

Linux Example:

```
sh gacmd -server http://192.168.1.20:8000/goanywhere/
          -user projectManager -password ********
          -command runProject
          -Project /Orders/SendPurchaseOrders
          -variables VendorNumber "423231" Status "Open"
```

APIs are also provided for Java and .NET

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Examples to Run a Project from CL

```
0001.00    PGM
0002.00    DCL &MESSAGE *CHAR 80
0003.00
0004.00    /* Run the Transfer */
0005.00    RUNPROJECT PROJECT('/Payroll/SendDirectDeposit') +
0006.00               USER(SFIELD) PASSWORD(******) +
0007.00               VARIABLE((StateCode NE)) PRIORITY(5)
0008.00
0009.00    /* Project failed or could not connect */
0010.00    MONMSG MSGID(GAE1002 GAE1003) EXEC(DO)
0011.00
0012.00      /* Get the error message from the program
0013.00         message queue */
0014.00      RCVMSG RMV(*NO) MSG(&MESSAGE)
0015.00
0016.00      /* Send the error to QSYSOPR   */
0017.00      SNDMSG MSG(&MESSAGE) TOMSGQ(QSYSOPR)
0018.00    ENDDO
```

- Monitor for message IDs

- Any errors are placed in Job Log

- Retrieve any errors with RCVMSG command

RPG procedures are also available to run a Project

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Reports Available

- Blacklisted IP Addresses
- Completed Jobs
- Completed Job Statistics
- Database Statistics
- Expiring Open PGP Keys
- Expiring SSL Certificates
- GoDrive Disk Usage
- Job Count Summary

- Secure Mail Activity
- Secure Mail Package Sizes
- Security Settings Audit
- Service Activity Summary
- Trigger Activity
- Web User Logins
- Web User Transfer Count Activity
- Web User Transfer Size Activity

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Report Example

Completed Job Statistics

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Generated On	6/19/15 2:21:28 PM
Date Range	6/13/15 12:00:00 AM to 6/20/15 12:00:00 AM
Grouped By	Hour
Total Jobs	1959

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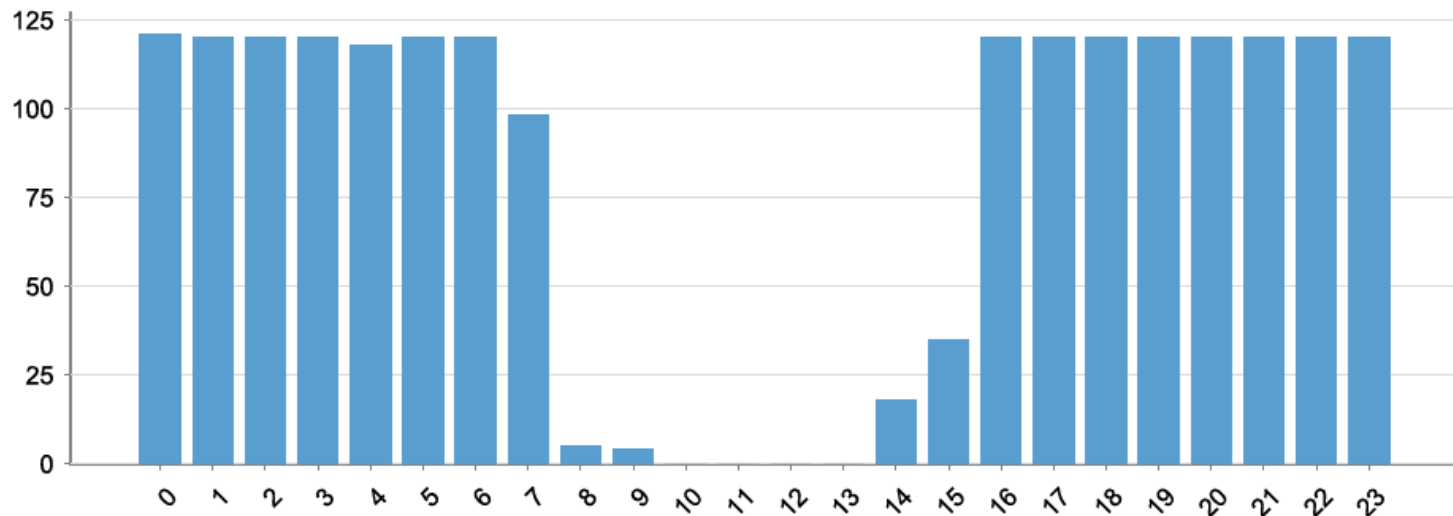
GoAnywhere.com

Security Audit Report

▪ Analyze your GoAnywhere product's security settings and determine if they comply with the Payment Card Industry Data Security Standards (PCI-DSS).

▪ For each security setting, the report will indicate if the setting meets the PCI-DSS standard using one of the following statuses:

- **Pass** - The setting meets the PCI-DSS requirement

- **Fail** - The setting <u>does not</u> meet the PCI-DSS requirement.

- **Warning** - Further research is required to ensure your system meets the specified requirement.

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Security Audit Report Example

Security Settings Audit

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Generated On	6/22/15 9:41:34 AM
Organization	Linoma Software - All
Passed	30
Warning	2
Failed	32
Fatal	1
Not Applicable	0

Security Check	Status	Recommendation	PCI DSS Section
GoAnywhere Gateway is enabled to provide a reverse proxy service for inbound connections.	Failed	Install GoAnywhere Gateway in the DMZ, which will allow ports to be closed into the private network and keep sensitive files out of the DMZ. Ensure that GoAnywhere MFT is installed in the private (internal) network.	1.2.1, 1.3.3, 1.3.7
The default Admin User 'administrator' is disabled or is not using the default password.	Failed	Disable the default 'administrator' Admin User account or change its password to a different value than the default.	2.1
The default Admin User 'root' is disabled or is not using the default password.	Failed	Disable the default 'root' Admin User account or change its password to a different value than the default.	2.1
The default SSL certificate is not used by the HTTPS admin server.	Fatal		2.1
The default SSL certificate is not used by the HTTPS/AS2 service.	Failed	The following HTTPS/AS2 service listeners are using the default certificate: 'default' Create or import your own SSL certificate into the Key Store and configure the HTTPS/AS2 service to use this certificate within the Service Manager.	2.1

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Secure Mail

- Files and messages are transferred over a secure HTTPS connection

- Your system keeps possession of the files (in encrypted form) until the recipient retrieves them (not hosted)

- No file size limits

- Recipients don't have to deal with keys or certificates (just click on the URL)

- Customizable email templates (use your own logo, color schemes, fonts)

- Licensed as an add-on module for GoAnywhere MFT

Employee → Email Notification → Recipients

GoAnywhere MFT → Download Files Securely → Recipients

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GoDrive Diagram

Remote Administration

Web Browser

- Localized Control
- PCI Level Security
- User Management
- AD & LDAP Authentication
- AES-256 Encryption
- Custom Branding
- Unlimited Scalability
- Disk Quotas

GoDrive by GO ANYWHERE™

Enterprise File Sync and Sharing (EFSS)

Alerts

Audit Logs & Reports

On-Premise Storage

Windows, Linux, Unix, AIX, IFS, Solaris, UNC...

Web Client

File Transfer and Collaboration, Versioning, Comments, Trash Bin

File Synchronization

Windows and Mac Laptops, Desktops

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- No incoming ports are opened into the private (internal) network

- No sensitive files are stored in the DMZ

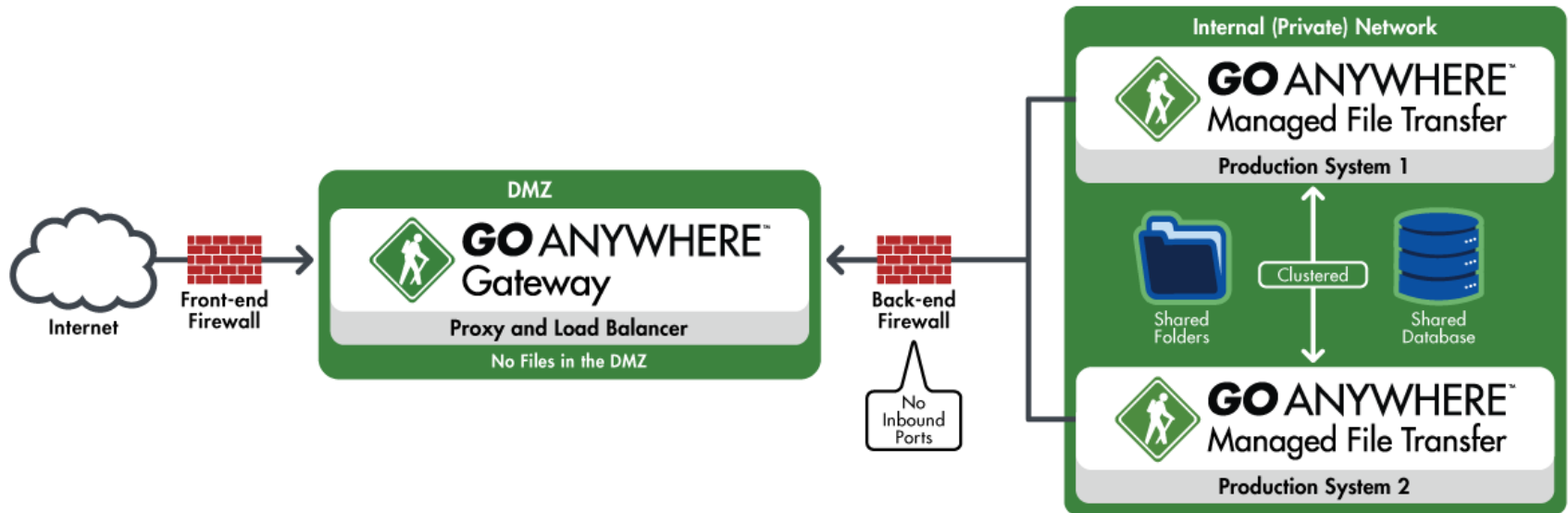- User credentials are maintained/stored in the private network
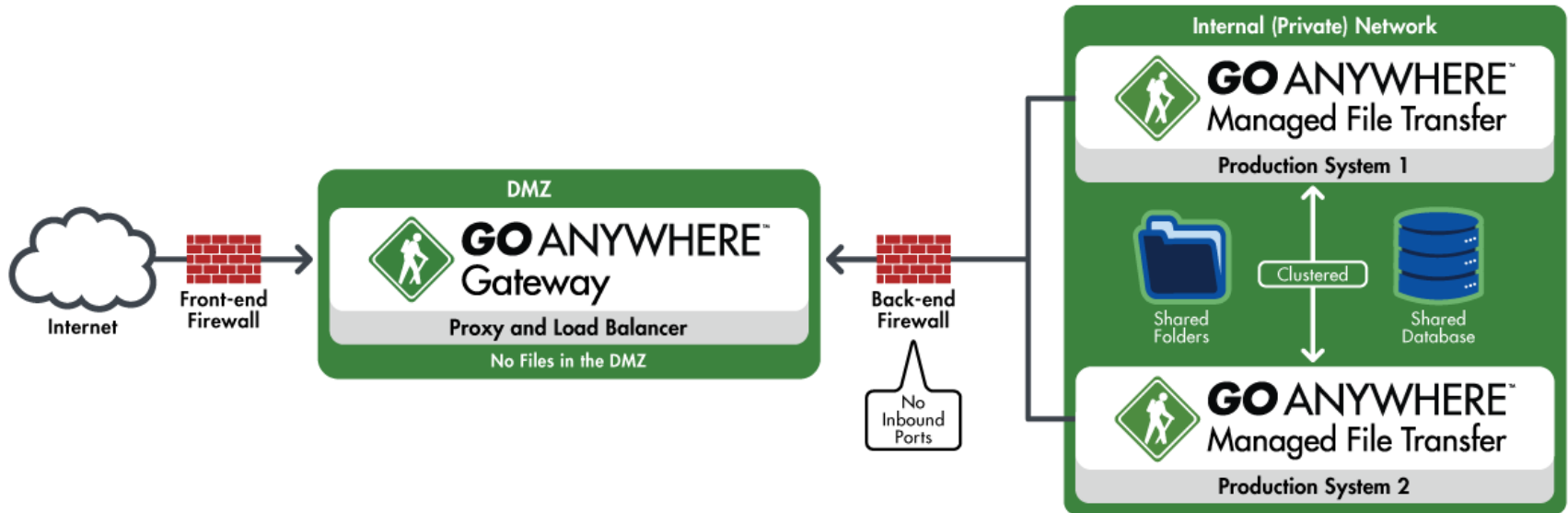
- Supports FTP/s, SFTP, SCP and HTTP/s file transfer protocols

- No special hardware components; software-only solution

- Installs to Windows, Linux, AIX, UNIX and Solaris operating systems
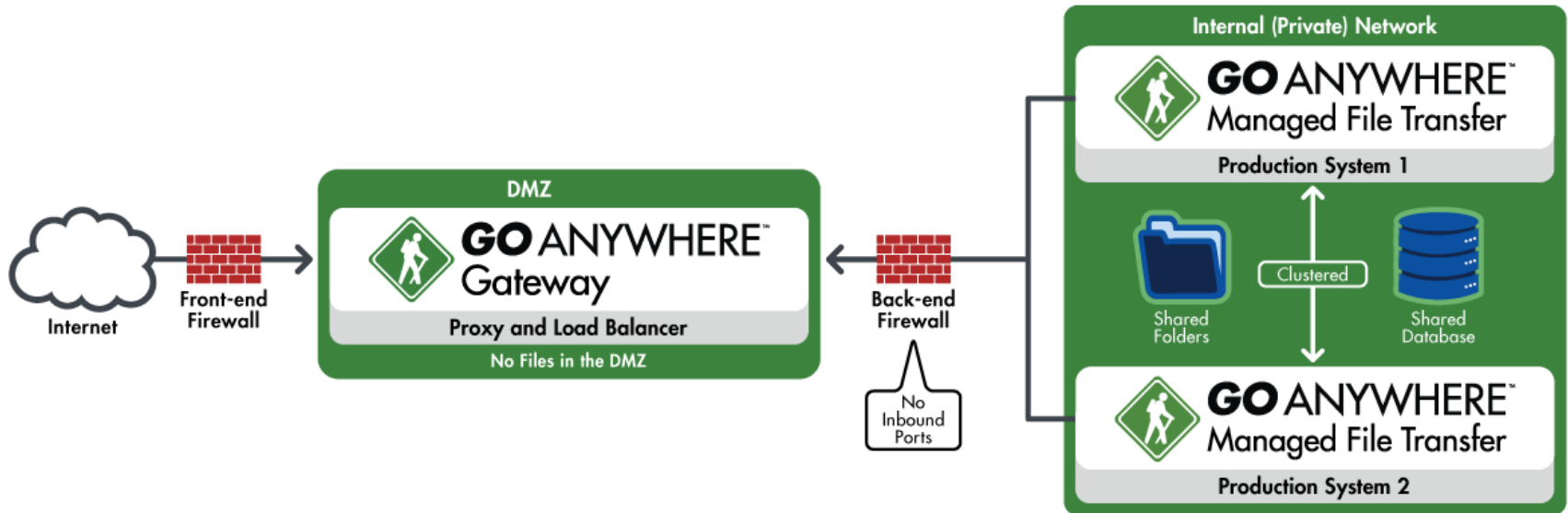
Clustering

- Two or more installations of GoAnywhere MFT can be in a cluster
- GoAnywhere Gateway can load balance inbound connections
- Project workloads are distributed "horizontally" across multiple systems
- Active-Active = Better high availability for mission critical environments
- All systems can be managed from a central interface
- No 3rd party tools or software are needed

10 Advantages of GoAnywhere MFT

- ✓ Secures transmissions using SFTP, FTPS, AS2 or HTTPS

- ✓ Encrypts files using the popular Open PGP standard

- ✓ Reads and writes XML, Excel, CSV and text documents

- ✓ Moves files between Windows servers, Linux servers and IBM Systems

- ✓ Exchanges data between databases (e.g. DB2 to SQL Server to Oracle)

- ✓ ZIPs and UNZIPs files with optional AES encryption

- ✓ Provides a web portal for your vendors/customers for ad-hoc file transfers

- ✓ Helps guarantee delivery with auto-resume and integrity checks

- ✓ Generates alerts immediately when transfers fail

- ✓ Logs all file transfer activity with centralized auditing and reporting

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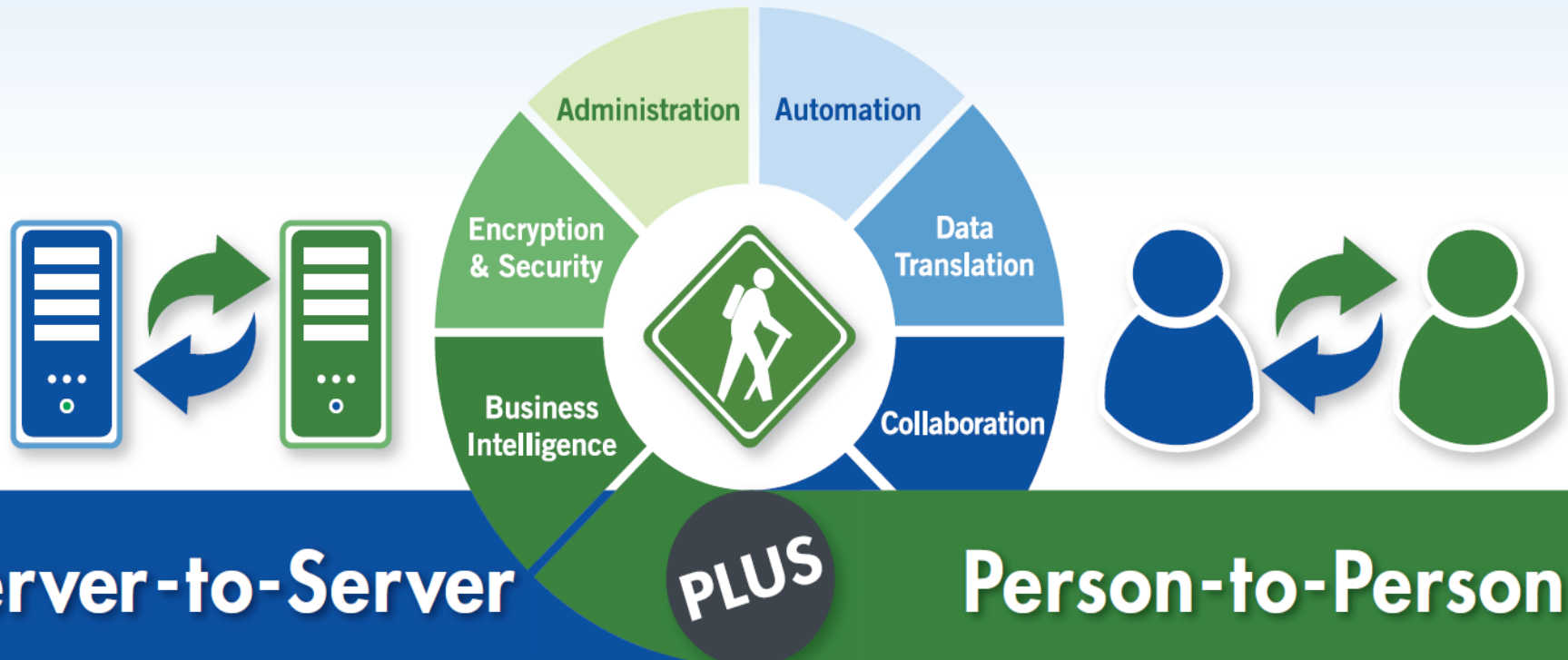
GoAnywhere Managed File Transfer

Installation Requirements

Linux (32-bit and 64-bit):

- Distributions   Red Hat, SUSE, Ubuntu, CentOS (not inclusive)
- Disk space   300 MB per product (not including user data)
- Memory   512 MB minimum per product

Windows (32-bit and 64-bit):

- Operating System   Windows 2000, 2003, 2008 R2, 2012 R2, XP, Vista, 7
- Disk space   300 MB per product (not including user data)
- Memory   512 MB minimum per product

IBM i (iSeries):

- Operating System   V5R4 or higher
- Disk space requirements   250 MB per product (not including user data)
- Memory requirements   512 MB minimum per product
- JRE   1.6 or later

UNIX / AIX / Solaris / HP-UX:

- Disk space requirements   250 MB per product (not including user data)
- Memory requirements   512 MB minimum per product
- JRE   1.6 or later

vmware® READY

Windows Server 2012 Certified

Contact Information

Web site:	www.GoAnywhere.com
E-mail:	sales@goanywhere.com
Toll-free:	1-800-949-4696
Direct:	(402) 944-4242
Fax:	(402) 944-4243
Address:	103 South 14th Street
	Ashland, NE 68003 USA

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