

# GoAnywhere MFT Install Guide

Version 6.8.6



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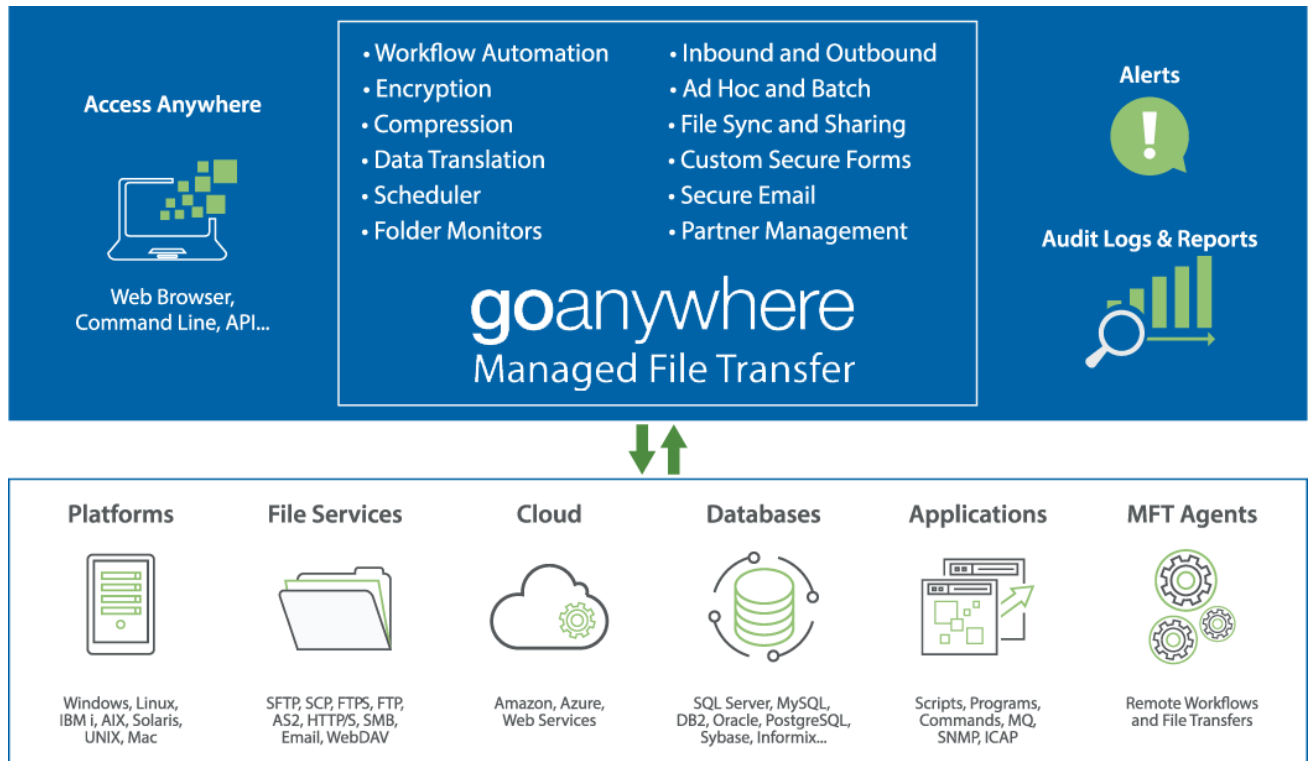
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# Introduction

GoAnywhere MFT is a Managed File Transfer solution which provides centralized control and auditing of file transfers and workflows for the enterprise. With its comprehensive features and intuitive interface, GoAnywhere MFT will reduce operational costs, improve the quality of data transmissions and meet stringent compliance requirements.

*Please note that GoAnywhere MFT will be referred to as simply “GoAnywhere” throughout this guide.*



## GoAnywhere General Features

- Runs on most platforms including Windows, Linux, VMware, Docker, UNIX, IBM i, Solaris and Mac OS.
- Includes a browser-based administrator interface with a customizable dashboard, advanced graphical components and drag-n-drop support.
- Supports popular file transfer protocols including SFTP, SCP, FTP/s, HTTP/s, AS2, Web Services, SMTP, POP3 and IMAP.
- Provides client components for connecting to internal and external systems for sending and retrieving files.
- Provides server components to allow systems and users to connect to GoAnywhere for uploading and downloading files.
- Protects files “at rest” and “in-motion” with FIPS 140-2 validated AES256 encryption.
- Logs all file transfer activity in a central database with an optional SYSLOG feed.

- Produces a wide variety of management and analytical reports.
- Provides Domain support to segment GoAnywhere into logical security zones.
- Allows clustering for high availability (active-active) and load balancing.
- Controls user access with role-based permissions and extensive security controls.
- Includes key management tools for Open PGP Keys, SSH Keys and SSL Certificates.
- Works with the optional *GoAnywhere Gateway* to keep files out of the DMZ and close inbound ports into the internal (private) network.

GoAnywhere can be used for a variety of file transfer needs including workflow automation, ad-hoc file transfers and document collaboration. It can simplify system-to-system, user-to-system and user-to-user file transfers.

### **Workflow Automation**

- Provides a graphical interface for creating multi-step workflows; no scripting or programming required.
- Includes an integrated scheduler for running workflows and file transfers at future dates/times.
- Triggers workflows based on events, such as an upload/download event or the presence of a new file in a folder.
- Provides APIs and commands for running workflows from customer applications and 3rd party schedulers.
- Encrypts, signs, verifies and decrypts files using the Open PGP encryption standard.
- Accesses files and directories on network shares with support for UNC, NFS, SMB and CIFS.
- Connects to popular database servers including DB2, SQL Server, Oracle, Informix, MySQL/MariaDB, and PostgreSQL.
- Translates data to/from Excel, XML, Delimited text and Fixed Width file formats.
- Calls customer programs and scripts as part of an overall workflow.
- Connects to enterprise messaging systems including Websphere MQ, SonicMQ, ActiveMQ and SwiftMQ
- Compresses and extracts files using ZIP, GZIP and TAR standards.
- Supports large files with auto-resume and integrity checks to help guarantee delivery.
- Allows workflow jobs to be prioritized and segmented with job queues and run priorities.
- Sends email alerts and text messages for failed and completed transfers.

### **Ad-Hoc File Transfers and Collaboration**

- Provides an HTTPS web-client for browser-based file transfers.
- Allows access to authorized network folders through the browser.
- Includes the GoDrive file system for collaboration, sharing and synchronizing documents across devices.
- Provides delivery of sensitive messages and documents through email notifications with secure HTTPS links.

- Integrates with Active Directory (AD), LDAP, IBM i, RADIUS, and SAML for user authentication
- Allows self-registration of users with administrator approval.

# Administration

Authorized users can utilize GoAnywhere's browser-based Administrator to perform configuration and monitoring within the product.

The screenshot displays the GoAnywhere MFT Administrator web interface. The top navigation bar includes the GoAnywhere logo, a system name dropdown set to 'Default', and a user profile icon. A left-hand sidebar lists navigation categories: Home, Resources, Workflows, Services, Users, Reporting, Encryption, System, and Help. The main content area is titled 'My Dashboard' and includes buttons for 'Add Gadget', 'Edit Layout', and 'Refresh'. It is divided into several sections:

- Quick Start:** A 'Welcome to GoAnywhere MFT' message with links to a 'Quick Start' video and help documentation.
- Documentation, Training, and Support:** Links to the 'User Guide', 'Online Help Center', and 'Support Forum'.
- Quick Links:** A grid of icons for 'Resources', 'Projects', 'Scheduler', 'Triggers', 'Admin Users', 'Web Users', 'Audit Logs', and 'Reports'.
- News and Tips:** A list of recent updates, including 'Secure Forms and New Project Automation Features Added in GoAnywhere MFT 5.3' and 'File Acceleration, Security Domains and Five new protocols added in GoAnywhere MFT 5.2'.
- Service Status:** A table showing the status of various services.

Service	Status	Active Sessions
HTTPS/AS2	Started	1
FTP	Started	0
FTPS	Started	0
SFTP	Started	0
GoFast	Stopped	0

A 'More Details' link is available at the bottom right of the Service Status table.

# Pre-Installation Notes

## Port Number Usage

Listed below are the default port numbers that will be used for GoAnywhere modules. These port numbers can be overridden during the installation or at any time after the installation. You may need to adjust your firewall settings or other access control software to allow connections on these ports.

Port Number	Description
8000	Administrator functions over HTTP
8001	Administrator functions over HTTPS
8005	Shutdown port for GoAnywhere
8006	Clustering communications channel (if enabled)
8009	Agent service
8010	Command communications channel for GoFast (if enabled)
443	HTTPS/AS2 service for trading partners
21	FTP service for trading partners
990	FTPS service for trading partners
22	SFTP service for trading partners

## Browser Compatibility

The GoAnywhere Administrator and Web Client interface's require modern internet browsers that support HTML 5. Popular browsers are supported including Internet Explorer\*, Edge, Chrome, Firefox and Safari. Please note that some HTML 5 advanced features, such as drag and drop, will not work in older versions of browsers.

\*GoAnywhere MFT supports Microsoft Internet Explorer 9, 10, and 11.

# Installing GoAnywhere in a Virtual Environment


GoAnywhere MFT can be installed in most virtual environments, including VMware, Microsoft Azure, Amazon EC2, Docker, and more. When installing in a virtual environment, the MAC address on the server where GoAnywhere is installed must be static. Your GoAnywhere MFT license will become invalid if the MAC addresses changes, and a new license must be issued by contacting HelpSystems Sales.

# Installation – Windows

GoAnywhere can be installed onto a Windows server for enterprise usage. GoAnywhere can also be installed onto Windows desktops or laptops, which is useful for individual development and testing purposes. Both 32-bit and 64-bit versions of Windows are supported.

A Windows installation wizard is provided for GoAnywhere which installs the product files into the directory of your choice. GoAnywhere will be implemented as a Windows Service which will automatically start (by default) when Windows starts.

## Requirements

Operating Systems supported	Windows Server 2012®	
	Windows Server 2012 R2®	
	Windows Server 2016®	
	Windows Server 2019®	
	Windows 8®	
	Windows 10®	
Disk space	375 MB for product (does not include user data)	
Memory	1024 MB minimum	

## Installing GoAnywhere on Windows

Perform the following steps to install the GoAnywhere product onto a Windows machine.

1. Login to the target Windows system as an administrator.
2. Download the GoAnywhere installer .EXE file from the GoAnywhere Customer Portal at [my.goanywhere.com](http://my.goanywhere.com).

**NOTE:**

If you have a 64-bit operating system, make sure to download the 64-bit version.

3. Execute the downloaded .EXE file and follow the prompts on the screens.
4. If you did not choose to start the GoAnywhere application server within the installer, then you can manually start this server by following these instructions:
  - a. Go to **Control Panel > Administrative tools > Services**.
  - b. In the Services window, right-click on GoAnywhere and select **Start**.
  - c. Within seconds after starting GoAnywhere, its status should be updated to “Started”. If not, please contact HelpSystems technical support.
5. The installation and startup of GoAnywhere is complete. Now you should proceed to the [Initial Configuration](#) instructions.

**NOTE:**

GoAnywhere is configured in Windows as an automatic startup Service. This means that the GoAnywhere will automatically start whenever Windows starts.

## Silent Install – Windows

The installation of GoAnywhere can be automated by using a silent install option. Silent install uses the Windows command line to execute the installation.

To perform a silent install of an GoAnywhere on Windows:

1. Log in to the target Windows system as an administrator.
2. Open the command prompt and use the cd command to navigate to the directory containing the GoAnywhere installer.
3. Execute the GoAnywhere installer file using the following command:

```
[installer file name].exe -q
```

Parameters that begin with -V must be specified as a key=value pair. Separate each -V parameter with a space.

**EXAMPLE:**

```
[installer file name].exe -q -Vgoanywhere.adminPort=8005 -Vgoanywhere.httpsPort=8443
```


For parameters for silent install on Windows, see the [Parameters](#) table.

# Installation – Linux

GoAnywhere can be installed onto a Linux server for enterprise usage. GoAnywhere can also be installed onto Linux desktops or laptops, which is useful for individual development and testing purposes. Both 32-bit and 64-bit versions of Linux are supported.

A graphical installation wizard is provided for GoAnywhere which installs the product files into the directory of your choice.

## Requirements

Disk space	375 MB for product (does not include user data)	
Memory	1024 MB minimum	

## Linux Installation Considerations

GoAnywhere MFT is a powerful automation tool that is capable of executing native Linux commands and programs, as well as file actions such as read, write, and delete. It is recommended to designate a non-root user on the system that will be used to install and run the GoAnywhere application. This user will be the owner of all files created during installation as well as files written to the file system during use.

During installation, you will be prompted to specify the ports required (FTP, SFTP, HTTPS, etc) by GoAnywhere. Although Linux requires root level access to bind to privileged ports (1-1024), it is recommended to configure GoAnywhere to bind to non-standard ports so that root level access is not required to install and run GoAnywhere.

GoAnywhere Gateway is a reverse proxy that can be used in front of GoAnywhere MFT that allows binding to privileged ports without allowing root access to the file system. If GoAnywhere Gateway is not used, GoAnywhere MFT may need to be installed and running as root to use standard FTP, FTPS, SFTP and HTTP/S ports.

## Installing GoAnywhere on Linux

Perform the following steps to install the GoAnywhere onto a Linux system.

1. Create or designate a non-root user on the system that will be used to install and run the GoAnywhere application. This user will be the owner of all files created during installation as well as files written to the file system during use.
2. Login to the target Linux system as the user designated in step 1.
3. Download the GoAnywhere Linux installer file from the URL provided by HelpSystems.
4. If needed, set the Executable bit on the file (e.g. **chmod 755 ga5\_x\_x\_linux.sh**).

5. If you have a graphical desktop for Linux, execute the downloaded installer file and follow the prompts on the screens. Otherwise, execute the downloaded installer file with a `-c` option (e.g. `installer_filename.sh -c`) and follow the prompts.
6. Start GoAnywhere by following these instructions:
  - a. Open a Terminal window.
  - b. Change the working directory to the directory where GoAnywhere was installed (for example, `cd /usr/local/HelpSystems/GoAnywhere`)
  - c. Start GoAnywhere by executing the following shell script:  
`./goanywhere.sh start`
7. The installation and startup of GoAnywhere is complete. Now you should proceed to the [Initial Configuration](#) instructions.

**NOTE:**

You can setup GoAnywhere so it starts automatically when the Linux system is booted. Please refer to your operating system manual for more details on setting up auto-start services. You can execute `goanywhere.sh` from your startup scripts.

## Silent Install – Linux

The GoAnywhere installation can be automated by using a silent install option.

To perform a silent install of GoAnywhere on Linux:

1. Copy the GoAnywhere Linux installer file to the Linux server.
2. Execute the downloaded installer file using the following command:

```
[installer_filename].sh -q
```

Parameters that begin with `-V` must be specified as a key=value pair. Separate each `-V` parameter with a space.

**EXAMPLE:**

```
[installer file name].sh -q -Vgoanywhere.adminPort=8005 -Vgoanywhere.httpsPort=8443
```

For parameters for silent install on Linux, see the [Parameters](#) table.

## Installation - Linux RPM

Perform the following steps to install the GoAnywhere RPM onto a Linux system.

1. Create or designate a user with root or sudo privileges on the system that will be used to install and run the GoAnywhere application. This user will be the owner of all files created during installation as well as files written to the file system during use.
2. Login to the target Linux system as the user designated in step 1.

3. Download the GoAnywhere Linux RPM installer file from the URL provided by HelpSystems.
4. Execute the downloaded installer file by running **sudo yum install <rpm\_file>** and follow the prompts.
5. Start GoAnywhere by following these instructions:
  - a. Open a Terminal window.
  - b. Start GoAnywhere by executing the following shell script:  
**sudo service goanywhere-mft start**
6. The installation and startup of GoAnywhere is complete. Now you should proceed to the [Initial Configuration](#) instructions.

**NOTE:**

You can setup GoAnywhere so it starts automatically when the Linux system is booted by running **sudo service goanywhere-mft enable**. Please refer to your operating system manual for more details on setting up auto-start services.

# Installation – UNIX

GoAnywhere can be installed onto a server for enterprise usage. This page includes installation instructions for AIX, HP-UX, Solaris or non x86-based Linux systems (UNIX).

An installation wizard is provided for GoAnywhere which installs the product files into the directory of your choice.

## Requirements

Disk space	250 MB for product (does not include user data)
Memory	1024 MB minimum
JRE (Java Runtime Environment)	<p>The following JREs can be used:</p> <ul style="list-style-type: none"><li>• Oracle Java SE 8</li><li>• Azul Zulu Java SE 8</li><li>• IBM Java SE 8</li></ul>

## Installing GoAnywhere

Perform the following steps to install GoAnywhere onto a UNIX server.

1. Create or designate a non-root user on the system that will be used to install and run the GoAnywhere application. This user will be the owner of all files created during installation as well as files written to the file system during use.
2. Login to the server as the user designated in step 1.
3. Download the GoAnywhere UNIX installer file from the GoAnywhere Customer Portal at [my.goanywhere.com](http://my.goanywhere.com).
4. Open a Terminal window.
5. Change the directory to where the installer file was downloaded (e.g. `cd /root/Desktop`).
6. If needed, set the Executable bit on the file (e.g. `chmod 755 ga5_x_x_unix.sh`).
7. Run the installer (e.g. `./goanywhere5_x_x_unix.sh`).
8. The installer will attempt to find a compatible JRE (Java Runtime Environment) for the installation process. Follow the steps below if the installer cannot find a compatible JRE:
  - a. Define an environment variable named **INSTALL4J\_JAVA\_HOME** to point to the home directory of the JRE (e.g. `export INSTALL4J_JAVA_HOME=/usr/lib/jvm/java-1.8.0-sun/jre`).
  - b. Clear the Installer cache by removing the file named **.install4j** from your home directory

(e.g. `rm /root/.install4j`).

- c. Run the installer again (e.g. `./goanywhere5_x_x_unix.sh`).
9. Follow the on-screen instructions to complete the installation.
10. JCE policy files must be copied to the JRE's (Java Runtime Environment) security folder in order to support encryption functions in GoAnywhere:

For IBM platforms (e.g. AIX), copy the JCE policy files of **US\_export\_policy.jar** and **local\_policy.jar** from the **jce\_policy\_files/ibm** folder (located under the GoAnywhere installation folder) to the **jre/lib/security** folder (located under the JRE's installation directory).

For all other platforms (e.g. Solaris), copy the JCE policy files of **US\_export\_policy.jar** and **local\_policy.jar** from the **jce\_policy\_files/sun** folder (located under the GoAnywhere installation folder) to the **jre/lib/security** folder (located under the JRE's installation directory).

11. Start the GoAnywhere by following these instructions:
  - a. Open a Terminal window.
  - b. Change the working directory to the directory where GoAnywhere is installed. (eg, `cd /usr/local/HelpSystems/GoAnywhere`)
  - c. Start the GoAnywhere by executing the following shell script:  
`./goanywhere.sh start`.
  - d. If you receive an error indicating that no JRE could be found, set an environment variable named **JAVA\_HOME** to point to the JRE's home directory (e.g. `export JAVA_HOME=/usr/lib/jvm/java-1.8.0-sun/jre`) and try starting GoAnywhere again.
12. The installation and startup of GoAnywhere is complete. Now you should proceed to the [Initial Configuration](#) instructions.

**NOTE:**

You can setup GoAnywhere so it starts automatically when the system is booted. Please refer to your operating system manual for more details on setting up auto-start services. You can execute **goanywhere.sh** from your startup scripts.

## Silent Install – UNIX

The installation of GoAnywhere can be automated by using a silent install option.

To perform a silent install of GoAnywhere on AIX, HP-US, Solaris or non x86-based Linux systems (UNIX):

1. Copy the GoAnywhere UNIX installer file to the UNIX server.
2. Execute the downloaded installer file using the following command:

```
[installer_filename].sh -q
```

Parameters that begin with -V must be specified as a key=value pair. Separate each -V parameter with a space.

**EXAMPLE:**

```
[installer file name].sh -q -Vgoanywhere.adminPort=8005 -Vgoanywhere.httpsPort=8443
```

For parameters for silent install on UNIX, see the [Parameters](#) table.

# Silent Install Parameters

The following table contains the required and optional parameters for a silent install on Windows, Linux, and AIX, HP-UX, Solaris or non x86-based Linux systems (UNIX):

Parameter Name	Description	Required?
-q	Displays no user interface.	Yes
-dir	The directory path where GoAnywhere will be installed.	No
-Vgoanywhere.serviceDisplayName	The display name of the GoAnywhere service.  <b>NOTE:</b> This parameter is used only for silent install on Windows.	No
-Vgoanywhere.serviceName	The name of the GoAnywhere service (this is typically the same as the serviceDisplayName).  <b>NOTE:</b> This parameter is used only for silent install on Windows.	No
-Vgoanywhere.adminPort	Administrator port for functions over HTTP.	No
-Vgoanywhere.secureAdminPort	Administrator port for functions over HTTPS.	No
-Vgoanywhere.shutdownPort	Shutdown port for GoAnywhere	No
-Vgoanywhere.agentsPort	Agent service port.	No
-Vgoanywhere.gofastPort	Command communications port for GoFast.	No
-Vgoanywhere.ftpPort	FTP service port.	No
-Vgoanywhere.ftpsPort	FTPS service port.	No
-Vgoanywhere.httpsPort	HTTPS/AS2 service port.	No

Parameter Name	Description	Required?
-Vgoanywhere.pesitPort	PeSIT service port.	No
-Vgoanywhere.sftpPort	SFTP service port.	No
-Vgoanywhere.startServiceOption	Determines whether the GoAnywhere Service will be started as soon as installation is complete. Valid values are 0 (yes) and 1 (no).	No

# Installation – IBM i (iSeries)

GoAnywhere can be installed on IBM i systems which meet the following requirements.

## Requirements

<b>Operating System</b>	IBM i V7R1 or higher
<b>Disk Space</b>	275 MB for product (does not include user data)
<b>Memory</b>	1024 MB minimum

### Required licensed programs

The following IBM i licensed programs are prerequisites to the installation of GoAnywhere, which are dependent on IBM i release and your choice of supported Java version.

IBM i Release	Licensed Program	Product Option	Description
<b>V7R1</b>	5761JV1 (Only one option is required)	16	Java SE 8 32 bit
		17	Java SE 8 64 bit
	5770SS1	30	QShell
	5770SS1	33	Portable App Solutions
<b>V7R2, V7R3, V7R4</b>	5770JV1 (Only one option is required)	16	Java SE 8 32 bit
		17	Java SE 8 64 bit
	5770SS1	30	QShell
	5770SS1	33	Portable App Solutions Environment

To check if the licensed programs (listed above) are installed on your IBM i, execute the command **GO LICPGM** and select option 10 to display the installed licensed programs. Press F11 twice from that screen to display the **Product Options**.

If these licensed programs are not loaded on your IBM i, they may be available on the IBM software CDs that came with your IBM i. Otherwise, you will have to request those licensed programs from IBM, which are normally provided at no charge.

## Required PTFs

The following IBM i Program Temporary Fixes (PTFs) and Group PTFs are prerequisites to installing GoAnywhere.

V7R1	Group PTF	Java group build 8.0.6.25
V7R2	Group PTF	Java group build 8.0.6.25
V7R3	Group PTF	Java group build 8.0.6.25
V7R4	Group PTF	Java group build 8.0.6.25

Use the command **DSPPTF** to verify that the required individual PTFs are applied. Use the command

**WRKPTFGRP** to verify that the required group PTFs are applied.

## IBM i components installed

The following components will be installed onto the IBM i by the GoAnywhere installation process:

- A IBM i library will be created, which will contain the GoAnywhere commands and program objects. The default library name is **GOANYWHERE**, which can be changed during installation.
- An IFS folder will be created, which will contain the GoAnywhere software components. The default IFS folder name is **/helpsystems/goanywhere**, which can be changed during installation.
- The policy files named **US\_export\_policy.jar** and **local\_policy.jar** will be installed into the security directory of the Java Development Kit (JDK). These policy files are used to support encryption functions in GoAnywhere. The directory is:  
**QOpenSys/QIBM/ProdData/JavaVM/jdk80/32bit/jre/lib/security**

# Installing GoAnywhere on IBM i

Perform the following steps to install the GoAnywhere product onto the IBM i.

1. Sign on to the IBM i with the **QSECOFR** user profile OR with a profile which has \*ALLOBJ authority.
2. Create a temporary Save file on your IBM i by executing the following IBM i command:  
**CRTSAVF FILE(QGPL/GOANYWHERE)**
3. The GoAnywhere software needs to be uploaded to your IBM i using FTP. Before proceeding, ensure the FTP server is running on the IBM i. To start the native FTP server on the IBM i, you can issue the IBM i command of  
**STRTCPSVR SERVER(\*FTP).**

4. Download the GoAnywhere installer (for IBM i) from the Customer Portal at [my.goanywhere.com](http://my.goanywhere.com).
5. Extract the files from the installer ZIP file into a new temporary folder on your workstation. One of the extracted files will be named **GOANYWHERE.SAVF**.
6. FTP the extracted **GOANYWHERE.SAVF** file from your PC to the Save file on the IBM i (that was created in step 2). Listed below are instructions for a Windows user:
  - a. Open a DOS window.
  - b. Enter the DOS command **FTP <hostname>**, where **<hostname>** is the host name or IP address of your IBM i.
  - c. Login with your IBM i user id and password, then enter the following highlighted FTP commands:

ftp> <b>BINARY</b>	Switches the FTP session to binary mode
ftp> <b>LCD \&lt;tempdir&gt;</b>	The <tempdir> is the PC directory containing the file named GOANYWHERE.SAVF
ftp> <b>CD qgpl</b>	Changes the remote directory to the QGPL library
ftp> <b>PUT goanywhere.savf goanywhere</b>	Sends the PC file GOANYWHERE.SAVF to the IBM i Save file named GOANYWHERE
ftp> <b>QUIT</b>	Ends your FTP session

7. Restore the installation objects into QTEMP by executing the following IBM i command:  
**RSTOBJ OBJ(\*ALL) SAVLIB(QTEMP) DEV(\*SAVF) SAVF(QGPL/GOANYWHERE)**
8. Delete the temporary Save file by executing the following IBM i command (optional):  
**DLTF FILE(QGPL/GOANYWHERE)**
9. If QTEMP library is not in your library list, then add it by executing the following IBM i command:  
**ADDLIBLE LIB(QTEMP) POSITION(\*FIRST)**
10. Prompt (F4) the command **QTEMP/INSTALLGA** for installing GoAnywhere. The following

screen appears.

```

                                Install GoAnywhere (INSTALLGA)

Type choices, press Enter.

Install library . . . . . GOANYWHERE      Name
Install IFS directory . . . . . '/helpsystems/goanywhere'

Install policy files . . . . . *YES          *YES, *NO
Administration port . . . . . 8000          1-65534
Secure administration port . . . 8001        1-65534
HTTPS service port . . . . . 443           1-65534
FTP service port . . . . . 21              1-65534
FTPS service port . . . . . 990            1-65534
SFTP service port . . . . . 22             1-65534
GoFast service port . . . . . 8010         1-65534
Shutdown port . . . . . 8005              1-65534

```

#### Parameter descriptions:

Field name	Description
Install library	The library to contain the GoAnywhere product objects. The specified library name must not already exist.
Install IFS directory	The directory to contain the GoAnywhere product files. The specified directory name must not already exist.
Install policy files	Indicate if policy files should be installed into the security directory of the Java Development Kit (JDK). These files are used to support the encryption processes in GoAnywhere. It is strongly recommended to use the default setting of 'YES'.
Administration port	The port number that the GoAnywhere Administrator runs under (using HTTP). Default is 8000. *
Secure administration port	The port number that the GoAnywhere Administrator runs under (using HTTPS). Default is 8001. *
HTTPS service port	The port number to run the HTTPS/AS2 service under (for trading partner file transfers). Default is 443. *
FTP service port	The port number to run the FTP service under (for trading partner file transfers). Default is 21. *
FTPS service port	The port number to run the FTPS service under (for trading partner file transfers). Default is 990. *

Field name	Description
SFTP service port	The port number to run the SFTP service under (for trading partner file transfers). Default is 22. *
GoFast service port	The port number to run the GoFast service under (for accelerated trading partner file transfers). Default is 8010.*
Shutdown port	The port number which the GoAnywhere will listen to for shutdown requests. Default is 8005. *

\* To check if the port number is already in use, run the IBM i command of **NETSTAT** and select option 3. Then press F14 to see the numeric port numbers.

11. After reviewing and/or modifying the parameters on the **INSTALLGA** command, press enter to start the installation process.
12. Prompt (F4) the command **GOANYWHERE/STRGA** for starting the GoAnywhere subsystem. The following screen will be displayed.

```

                                Start GoAnywhere (STRGA)

Type choices, press Enter.

Server user profile . . . . . *CURRENT      Name, *CURRENT

```

For the **Server User Profile** parameter, keep the default of \*CURRENT if you want to run the GoAnywhere application under your user profile. Otherwise, specify a different user profile to run the GoAnywhere application server under.

**NOTE:**

The user profile specified on the **STRGA** command must be enabled on the IBM i. This profile must have \*USE authority to the **STRSBS** command and \*RWX authority to the IFS folders where GoAnywhere is installed.

For security purposes, you may want to create a new user profile and consistently use that profile on the **STRGA** command. Then you would only have to grant authority for the GoAnywhere installation IFS folders to that user profile. There are certain user profiles that you cannot use to start the GoAnywhere subsystem. These are: 'QSECOFR', 'QSPL', 'QDOC', 'QDBSHR', 'QRJE', 'QSYS', 'QLPAUTO', 'QLPINSTALL', 'QTSTRQS' or 'QDFTOWN'

13. Press enter on the **STRGA** command to start the GoAnywhere subsystem.
14. Execute the **WRKACTJOB** (Work with Active Jobs) command to confirm that the GoAnywhere subsystem is running. You should find a subsystem which has the same name as the library name that was specified on the **INSTALLGA** command in step 10 (named GOANYHWERE by default). This subsystem should contain two jobs, one is for the GoAnywhere application, and the other is for the JVM.

15. The installation and startup of GoAnywhere is complete. Now you should proceed to the [Initial Configuration](#) instructions.

**NOTE:**

The GoAnywhere can automatically start when the System i is powered up (IPL). To perform this automatic startup, place the **STRGA** command in the System i startup CL program (after the start of TCPIP).

**CL example:**

```
0001.00  QSYS/STRTCP          /* Start TCP */
0002.00  DLYJOB DLY(120)      /* Wait for TCP to fully start */
0003.00  GOANYWHERE/STRGA     /* Start GoAnywhere server */
```

# Installation – Mac OS X

GoAnywhere can be installed onto Apple's Mac OS X desktops, laptops, or servers.

A Mac OS X installation wizard is provided for GoAnywhere which installs the product files into the directory of your choice.

## Requirements

Operating Systems supported	Mac OS X
Disk space	250 MB for product (does not include user data)
Memory	1024 MB minimum

## Installing GoAnywhere on Mac OS X

Perform the following steps to install the GoAnywhere product onto an Apple machine.

1. Login to the target Mac OS X system as an administrator.
2. Download the GoAnywhere installer .DMG file from the GoAnywhere Customer Portal at [my.goanywhere.com](http://my.goanywhere.com).
3. Open the downloaded .DMG file, double click the GoAnywhere Installer, and follow the prompts on the screen.
4. Start GoAnywhere by following these instructions:
  - a. Open a Terminal window.
  - b. Change the working directory to the directory where GoAnywhere was installed. (for example, `cd /Applications/HelpSystems/GoAnywhere`)
  - c. Start GoAnywhere by executing the following shell script:  
`./goanywhere.sh start`
5. The installation and startup of GoAnywhere is complete. Now you should proceed to the [Initial Configuration](#) instructions.

**NOTE:**

You can setup GoAnywhere so it starts automatically when the Mac OS X system is booted. Please refer to your operating system manual for more details on setting up auto-start services. You can execute **goanywhere.sh** from your startup scripts.

# Installation – Docker

GoAnywhere can be installed using Docker containers. The GoAnywhere Docker image provided by HelpSystems is based on CentOS Linux and uses the built in Azul Zulu Java SE 8 Java Runtime Environment (JRE). The image is installed in the `/opt/HelpSystems/GoAnywhere` directory and runs as a non-root user (GAMFT instead of ROOT). GoAnywhere installations must be [licensed](#) after they are started.

## Requirements

<b>Disk space</b>	250 MB for product (does not include user data)
<b>Memory</b>	1024 MB minimum
<b>Docker</b>	<ul style="list-style-type: none"> <li>• <b>Docker</b> version 18.09.1 or higher</li> <li>• <b>Docker Compose</b> version 1.23.2 or higher (optional)</li> </ul> <div> <p><b>NOTE:</b></p> <p>Docker Compose is included by default with Docker Desktop for Windows. It is a separate install for Mac and Linux.</p> </div>

## Port Numbers

Each GoAnywhere Docker image is configured to use the [default](#) ports, with the exception of the HTTPS/AS2 (8443), FTP (8021), FTPS (8990), and SFTP (8022) Services. When creating a new container, you must use the `--publish (-p)` attribute to map the default ports in the container to ports that the host will use to send communication to GoAnywhere. An install example below includes example port mappings.

For passive FTP, passive FTPS, and GoFast services, the GoAnywhere Docker image has 200 ports set up for each service by default. If you need additional ports, or need to modify the default ports on the Docker host, you will need to modify the corresponding service settings and modify your docker-compose or docker run command to match.

When running GoAnywhere MFT in a cluster, the ports used must be unique and must match the ports used in the service set up. For non-default ports, you will need to modify the service settings to match your docker-compose or docker run command.

## Volumes

Volumes are the preferred mechanism for persisting data that is generated by and used by Docker containers. For GoAnywhere MFT, you will need to create a volume for the following directories:

- [install\_dir]/config
- [install\_dir]/tomcatlogsdir
- [install\_dir]/ghttpsrootcustomdir
- [install\_dir]/userdata

Creating these volumes will ensure that your configuration and userdata persist through upgrades. For more information on volumes, see the Docker documentation at: <https://docs.docker.com/storage/volumes/>.

## Install GoAnywhere Using Docker

Perform the following steps to download and run GoAnywhere from the official Docker file hosted on Docker Hub.

1. Ensure Docker is running.
2. Open a terminal window.
3. Download the GoAnywhere Docker image from Docker Hub using the following command:  
**docker pull helpsystems/goanywhere-mft**
4. You can verify the image has been downloaded correctly by using the following command:  
**docker images**
5. Run the image in an container using the following command:  
**docker run -d -p *outside\_port:inside\_port* *image\_name:tag\_version***

### EXAMPLE:

The following command starts GoAnywhere MFT in a container and maps all the default GoAnywhere ports to port numbers that will be used by the host.

```
docker run --detach \
--publish 9000:8000 --publish 9001:8001 --publish 9005:8005 \
--publish 9006:8006 --publish 9009:8009 --publish 9010:8010 \
--publish 9443:8443 --publish 9021:8021 --publish 9022:8022 \
--publish 32001-32300:32001-32300 \
--volume userdata:/opt/HelpSystems/GoAnywhere/userdata/ \
--volume configdir:/etc/HelpSystems/GoAnywhere/config/ \
--volume tomcatlogsdir:/opt/HelpSystems/GoAnywhere/tomcat/logs/ \
--volume ghttpsrootcustomdir:/opt/HelpSystems/GoAnywhere/ghttpsroot/custom/ \
helpsystems/goanywhere-mft:latest
```

6. Verify the Docker container is running using the following command:  
**docker ps -a**
7. Once the Docker container is running, you can access the administrator by opening a browser window on your host and connecting to **localhost:port** where *port* number is the mapped port number used in step 5. For example, the admin port 8000 was mapped to port 9000. To access the administrator, you would use localhost:9000.

# Install GoAnywhere Using Docker Compose

Compose is a tool used for defining and running multi-container Docker applications, such as a GoAnywhere MFT cluster. When using Compose, a YAML file is required to define your application's services. A single command will create and start all the services in your configuration. You can learn more about compose from <https://docs.docker.com/compose/overview>. A basic compose file consists of a service, followed by service parameters.

## Example Compose YAML File

```
version: '3'
services:
  mft:
    image: helpsystems/goanywhere-mft:latest
    container_name: goanywhere-mft
    restart: unless-stopped
    ports:
      # Standard ports used by GoAnywhere MFT
      - "9000-9001:8000-8001"
      - "9005-9006:8005-8006"
      - "9009-9010:8009-8010"
      - "9443:8443"
      - "9021:8021"
      - "9990:8990"
      - "9022:8022"
      - "9330:6330"
      # Port range used for GoFast transfers, must match range
      # set in service configuration to work properly.
      - "32001-32100:32001-32100"
      # Port range used for passive FTP transfers, must match range
      # set in service configuration to work properly.
      - "32101-32200:32101-32200"
      # Port range used for passive FTPS transfers, must match range
      # set in service configuration to work properly.
      - "32201-32300:32201-32300"
    volumes:
      - userdata:/opt/HelpSystems/GoAnywhere/userdata/
      - configdir:/etc/HelpSystems/GoAnywhere/config/
      - tomcatlogsdir:/opt/HelpSystems/GoAnywhere/tomcat/logs/
      - ghttpsrootcustomdir:/opt/HelpSystems/GoAnywhere/
        ghttpsroot/custom/
volumes:
  configdir:
  userdata:
```

```
tomcatlogsdir:  
ghttpsrootcustomdir:
```

HelpSystems provides two sample `docker.compose.yml` files that you can modify. The first sample file contains a single GoAnywhere instance definition. The second example contains the necessary components to run GoAnywhere in a Cluster, such as three GoAnywhere instance definitions, a MySQL database that each instance will use as a back end database, and a shared volume. You can download each compose file here:

- **Single Instance:** <https://my.goanywhere.com/public/goanywhere/mft/docker/single/docker-compose.yml>
- **Multi Instance:** <https://my.goanywhere.com/public/goanywhere/mft/docker/multi/docker-compose.yml>

To use a Compose file:

1. Ensure Docker and Docker Compose are running.
2. Download an example `docker-compose.yml` file from a link above.
3. Open a terminal window.
4. From the terminal window, change to the directory that contains the `docker-compose.yml` file.
5. Download the GoAnywhere Docker image and all other services by using the following command:  
**docker-compose pull**
6. Start all the services (in the background) by using the following command:  
**docker-compose up -d**
7. Verify the status of all services by using the following command:  
**docker-compose ps**
8. Optionally, you can shut down all the services in your Compose file by using the following command:  
**docker-compose down**

If the multi-instance Compose file was used, Compose will have downloaded any necessary images (such as `mysql`), created containers, mapped volumes, and started GoAnywhere MFT. You will then use the Cluster documentation to verify and complete your clustered Docker installation.

**TIP:**

The GoAnywhere Docker Image does not contain a text editor. You will need to install your preferred software to modify system configuration files.

# Starting and Stopping GoAnywhere

## Windows instructions

To start GoAnywhere:

1. Go to the Windows machine and log in with an administrator account.
2. Go to **Control Panel > Administrative tools > Services**.
3. In the **Services** window, right-click on GoAnywhere and select **Start**. Within seconds after starting GoAnywhere, its status should be updated to "Running".

To stop GoAnywhere:

1. Go to the Windows machine and log in with an administrator account.
2. Go to **Control Panel > Administrative tools > Services**.
3. In the **Services** window, right-click on the GoAnywhere and select **Stop**.

## Linux and UNIX instructions

To start GoAnywhere:

1. Open a Terminal window.
2. Change the working directory to the directory where GoAnywhere is installed (for example, `cd /usr/local/HelpSystems/GoAnywhere`).
3. Start the GoAnywhere by executing the following shell script:  
`./goanywhere.sh start`

To stop GoAnywhere:

1. Open a Terminal window.
2. Change the working directory to the directory where GoAnywhere is installed (for example, `cd /usr/local/HelpSystems/GoAnywhere`).
3. Stop the GoAnywhere by executing the following shell script:  
`./goanywhere.sh stop`

## IBM i (iSeries) instructions

Start the GoAnywhere by executing the IBM i command of **STRGA**.

Stop the GoAnywhere by executing the IBM i command of **ENDGA**.

The **STRGA** and **ENDGA** commands are located in the GoAnywhere installation library, which is named GOANYWHERE by default.

## Mac OS X instructions

To start GoAnywhere:

1. Open a Terminal window.
2. Change the working directory to the directory where GoAnywhere is installed (for example, **cd /Applications/HelpSystems/GoAnywhere**)
3. Start the GoAnywhere by executing the following shell script:  
**./goanywhere.sh start**

To stop GoAnywhere:

1. Open a Terminal window.
2. Change the working directory to the directory where GoAnywhere is installed (for example, **cd /Applications/HelpSystems/GoAnywhere**)
3. Stop the GoAnywhere by executing the following shell script:  
**./goanywhere.sh stop**

## Docker Instructions

To start a Docker container:

1. Ensure Docker is running.
2. Determine the container name or ID.  
**docker ps -a**
3. Start the container.  
**docker start *container name or ID***

To stop a Docker container:

1. Determine the container name or ID.  
**docker ps -a**
2. Stop the container.  
**docker stop *container name or ID***

# Initial Configuration

Follow the instructions below to access the software, request a license key, create an administrator account.

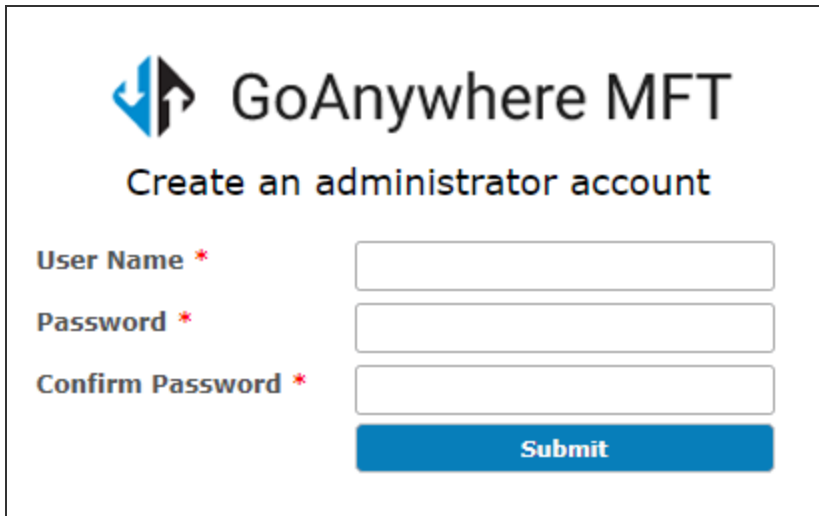
1. To access the GoAnywhere Administrator using a secure HTTPS connection, open your browser and type the URL of **https://[hostname]:[portnumber]** where **[hostname]** is the host name or IP address of GoAnywhere and **[portnumber]** is the port number of the GoAnywhere Administrator. The default HTTPS port for the Administrator is 8001.

**Example:** **https://myserver:8001**

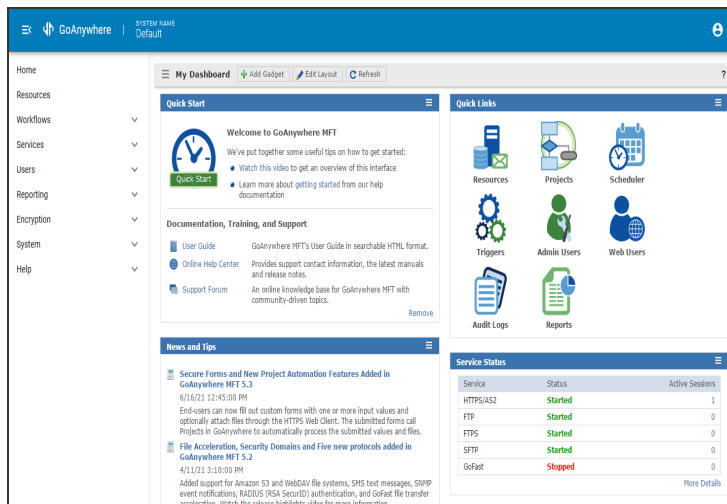
Otherwise, to access the GoAnywhere Administrator over an HTTP connection, open your browser and type the URL of **http://[hostname]:[portnumber]**. The default HTTP port for the Administrator is 8000.

**Example:** **http://myserver:8000**

2. The License Server page appears. Click the **Get License** button and follow the on screen prompts to license the server.
3. Once the server is licensed, You are prompted to create an administrator account for GoAnywhere. This account is assigned all administrator roles with access rights to the entire GoAnywhere application. After this account is created, other Admin User accounts can be created from the **Users > Admin Users** page.

A screenshot of a web form titled "GoAnywhere MFT" with the subtitle "Create an administrator account". The form contains three input fields: "User Name \*", "Password \*", and "Confirm Password \*". Each field has a red asterisk indicating it is required. Below the input fields is a blue "Submit" button. The GoAnywhere logo, consisting of a blue square with a white stylized 'G' and 'A', is positioned to the left of the title.

4. Specify a User Name and Password and click **Submit**.
5. The GoAnywhere Administrator dashboard is displayed.



- Every page in the GoAnywhere Administrator contains a [?](#) link to help documentation. Click the link to launch the help, and then navigate to the **Getting Started > GoAnywhere Feature Tour** topic to learn how to use GoAnywhere's features.

# Customizing Installation Settings

## Changing the Location of Configuration Files

By default, GoAnywhere config files are located in the `[install_dir]/config` folder.

On install of GoAnywhere, you have an option to specify a custom location for GoAnywhere config files. If a custom location is specified, the path will be written to `system.properties` and the config files will be moved to the user defined directory.

If you want to change the location of the GoAnywhere config files after installing or upgrading GoAnywhere, you will need to add the new path to the `system.properties` file and manually move the config files to the user defined directory.

To create a user defined directory and to manually move the GoAnywhere config files, complete the following steps:

1. Change the directory in the `system.properties` file. For example:

`com.linoma.config.directory=C:\\ProgramData\\HelpSystems\\GoAnywhere\\`

**NOTE:**

All backslash ('\\') characters need to be escaped in a given file path with an additional backslash as noted in the example above.

2. Create a new folder in the user defined directory named 'config'.
3. Move the following GoAnywhere config files from the install directory into the user defined config folder:
  - agent.xml
  - cluster.xml
  - database.xml
  - ftp.xml
  - ftps.xml
  - gateway.xml
  - gofast.xml
  - https.xml
  - sftp.xml

- security.xml
  - log4j2.xml
4. After moving the GoAnywhere config files to the user defined directory, create a 'tomcat' folder in the user defined directory and create a 'conf' subfolder.
  5. Locate the server.xml file in the [install\_dir]\tomcat\conf folder and move it to the user defined conf subfolder.
  6. Restart GoAnywhere for the changes to take effect.

**NOTE:**

On Linux systems, you will need to modify directory permissions before installation for non-root users if they choose a restricted directory (/etc., /var/lib) for their config files. The user who has permissions to access the directory needs to be the user that installs and runs GoAnywhere MFT.


## Changing GoAnywhere Port Numbers

By default, GoAnywhere administrator will utilize port numbers 8000, 8001 and 8005 on your system for the following functions:

- 8000 is the default HTTP port which users can connect (from their browsers) for performing administration in GoAnywhere.
- 8001 serves the same function as port 8000, but uses a HTTPS (SSL-protected) connection.
- 8005 is the default port for requesting a shutdown of GoAnywhere from a remote system.

You can change these port numbers within the GoAnywhere browser-based administrator interface, or by using the **CFGGA** command for IBM i or by making direct changes to a GoAnywhere configuration file.

### Changing ports using the browser interface

1. Open a browser window and log into the GoAnywhere Administrator.
2. From the main menu bar, select the **System > Admin Server**.
3. Select the  **edit** icon next to the Administrator.
4. Select a **Listener** node in the tree.
5. Specify the new port number and click on the **Save** button.
6. The GoAnywhere server must be restarted for the changes to take effect.

### Changing ports using the CFGGA command on IBM i

1. Log in to the IBM i using a terminal session.
2. End the GoAnywhere subsystem by running the **ENDGA** command.
3. Run the **CFGGA** command.
4. Under the **Port Information** section, edit the port numbers as needed by choosing option 2.

5. You may also want to change the URL under the **Run Project Defaults** section to match the port number to the new **Server Port**.
6. Save the settings and restart GoAnywhere by running the **STRGA** command.

### Changing ports by manually editing the configuration file

1. Stop the GoAnywhere server (if it is running).
2. Edit the configuration file `[Install_Dir]/tomcat/conf/server.xml`, where `[Install_Dir]` is the installation directory of GoAnywhere.
3. Change the port number for the HTTP or HTTPS connectors. Example:  
`<Connector port="8000" />`
4. Change the port number for the shutdown listener. Example:  
`<Server port="8005" shutdown="SHUTDOWN">`
5. Save the configuration file.
6. Start the GoAnywhere server.

## Memory Allocation

GoAnywhere runs in a JVM (Java Virtual Machine) instance, which is allocated 1024 MB of memory by default when the product is installed. This memory is utilized for all features in GoAnywhere including administration functions and file transfer activity.

Typically 1024 MB of memory is sufficient for most installations, though 2048 is ideal. If you anticipate high loads (e.g. several thousand file transfers per day), then it is recommended to allocate more memory for the GoAnywhere JVM. Depending on your operating system, follow the instructions below to change this memory allocation.

### For Windows:

1. Navigate to the directory of `[Install_Dir]/tomcat/bin`, where `[Install_Dir]` is the installation directory for GoAnywhere.
2. Find the file named `[Service_Name]w.exe`, in which `[Service_Name]` is the name of the windows service specified during installation. GoAnywherew.exe is the default name. Right click on the file and choose to **Run as administrator**.

#### NOTE:

This is a service properties program that provides additional information in regards to the JVM being started by the service.

3. Click on the Java tab and edit the Maximum memory pool setting. Specify 2048 for 2GB of memory, 3072 for 3GB of memory, 4096 for 4GB of memory, etc...
4. Click on the **Apply** button to save the memory settings.
5. To restart GoAnywhere for the changes to take effect, click on the **General tab** and choose to **Stop** and then **Start** the service.

**For Linux, IBM i, Unix, Solaris and Mac OS X:**

1. Navigate to the directory of [Install\_Dir]/tomcat/bin, where [Install\_Dir] is the installation directory for GoAnywhere.
2. Edit the file named **start\_tomcat.sh**.
3. Modify the following line in the file:

```
JAVA_OPTS='-Xmx1024m -XX:MaxPermSize=256m -Djava.awt.headless=true'
```

4. The setting -Xmx1024m is the max memory setting, which is set to 1024 MB by default. Change this setting to Xmx2048m for 2GB of memory, -Xmx3072 for 3GB of memory, Xmx4096 for 4GB of memory, etc...  
Do not change the MaxPermSize value. For example:

```
JAVA_OPTS='-Xmx2048m -XX:MaxPermSize=256m -Djava.awt.headless=true'
```

5. Save the file.
6. Restart GoAnywhere for the change to take effect.

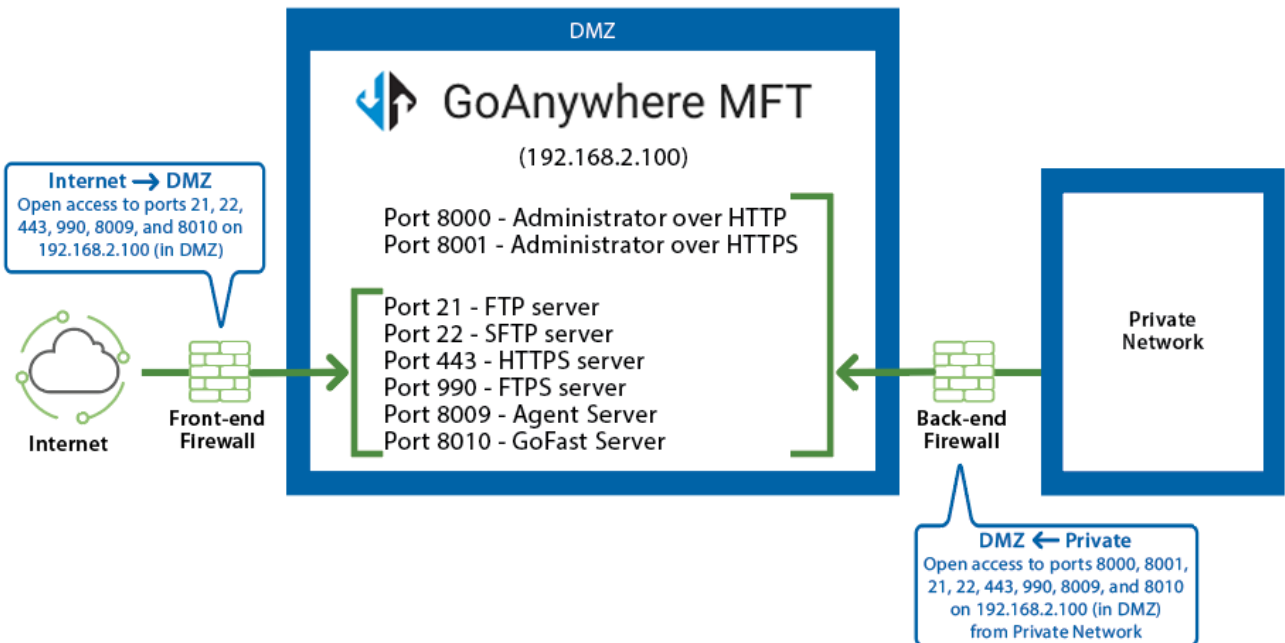
## Firewall Recommendations

If you want to make GoAnywhere available to external clients over the internet, it is important that you only open certain port numbers to the machine in which GoAnywhere is installed. This can be controlled through your firewall settings. The firewall settings will depend on whether if the GoAnywhere software is installed in your DMZ (Demilitarized Zone) or the Private (internal) network, and whether if it is used in conjunction with HelpSystems *GoAnywhere Gateway* product.

The following diagrams show the firewall settings to use if the default port numbers were used during the installation of GoAnywhere.

### Installation in the DMZ

This diagram illustrates GoAnywhere as installed in the DMZ.



Please note that the IP addresses shown are for demonstration purposes only.

#### Firewall configuration:

In order to administer GoAnywhere from any workstations in the private network, ports 8000 and 8001 will need to be opened (through the back-end firewall) from the private network to GoAnywhere in the DMZ.

If external trading partners need access to the file transfer protocols (e.g. SFTP, FTP, HTTPS, AS2, FTPS, GoFast) in GoAnywhere, those port numbers (e.g. 21, 22, 443, 990, 8009, 8010) need to be opened through the front-end firewall to GoAnywhere in the DMZ. Additionally, if employees (on the private network) need to access those file transfer protocols in GoAnywhere, the port numbers will need to be opened through the back-end firewall from the private network to GoAnywhere in the DMZ.

If trigger events in GoAnywhere need to call Remote Projects, then ports 8000 and 8001 need to be opened (through the back-end firewall) from GoAnywhere to another GoAnywhere server in the private network.

## Changing the Java Virtual Machine (JRE)

GoAnywhere MFT runs on Java 8. GoAnywhere is bundled with Azul Zulu 8 for Windows and Linux, but also supports OpenJDK versions of Java provided by Oracle and IBM i. Depending on the operating system, GoAnywhere may use the JRE that is bundled with the application or it may use an existing JRE which is already installed. Follow the steps below to change the JRE that GoAnywhere will use.

## Determine Java (JRE) version and Location

1. From the menu bar, point to **Help**, then click **About**.
2. In the About window, click the **System Info** tab.
3. On the System Info tab, verify the Java Version and the Java Home values.
  - If the Java Home is configured to [INSTALL\_DIR]/jre or [INSTALL\_DIR]/jre8, you are using the **embedded JRE**. Use the Upgrade instructions below to upgrade your embedded JRE.
  - If the Java Home is configured to any other directory, you are using an **external JRE**.

## Cleaning Up Existing Embedded JRE Folders

Even if GoAnywhere MFT is using an external JRE, it is possible that an embedded JRE still exists within the application. HelpSystems recommends that you remove the [INSTALL\_DIR]/jre folder, or rename the [INSTALL\_DIR]/jre to something like [INSTALL\_DIR]/jre.old.

# Using an External JRE

To use an external JRE, ensure the unlimited strength JCE policy files are installed and the Java execution environment is correct. Later versions of Java 8 include these files by default. Installing these files is only required if GoAnywhere MFT fails to start with an error indicating that the policy files are not installed. Use the following procedures if you are instructed to install the JCE policy files:

## JCE Policy Files

Before GoAnywhere can be started using the new JRE, it requires installation of the unlimited strength JCE policy files. To use the unlimited strength policy files, copy the **US\_export\_policy.jar** file and the **local\_policy.jar** file from the **jce\_policy\_files/oracle/1\_8** folder (located in the GoAnywhere installation folder) to the **jre/lib/security** folder (located in the JRE's installation directory).

For IBM platforms (e.g. AIX), copy the JCE policy files of **US\_export\_policy.jar** and **local\_policy.jar** from the **jce\_policy\_files/ibm** folder (located under the GoAnywhere installation folder) to the **jre/lib/security** folder (located under the JRE's installation directory).

## Changing JAVA\_HOME For Linux

The JAVA\_HOME environment variable needs to be set to the appropriate location for Java 8. To set the Java version used to run GoAnywhere on Linux, run the following command before executing the GoAnywhere upgrade script.

```
export JAVA_HOME='/path/to/jre'
```

'/path/to/jre' is the absolute path to the JRE, for example: '/usr/lib/jvm/jdk8/jre'

## Changing JAVA\_Home For Windows

The JAVA\_HOME environment variable needs to be set to the appropriate location for Java 8. To set the Java version used to run GoAnywhere on Windows, run the following command before executing the GoAnywhere upgrade script.

1. Open the **Control Panel** and navigate to **System And Security > System**.
2. Click the **Advanced system settings** link.
3. On the **Advanced** tab, select Environment Variables, and then edit JAVA\_HOME to point to where the JDK software is located, for example, C:\Program Files\Java\jdk1.8.0.

## IBM i Java Requirements

### Required PTFs

The following Group PTFs are prerequisites to run GoAnywhere 6.0.0 on Java 8. Use the command WRKPTFGRP to verify that the required group PTFs are applied.

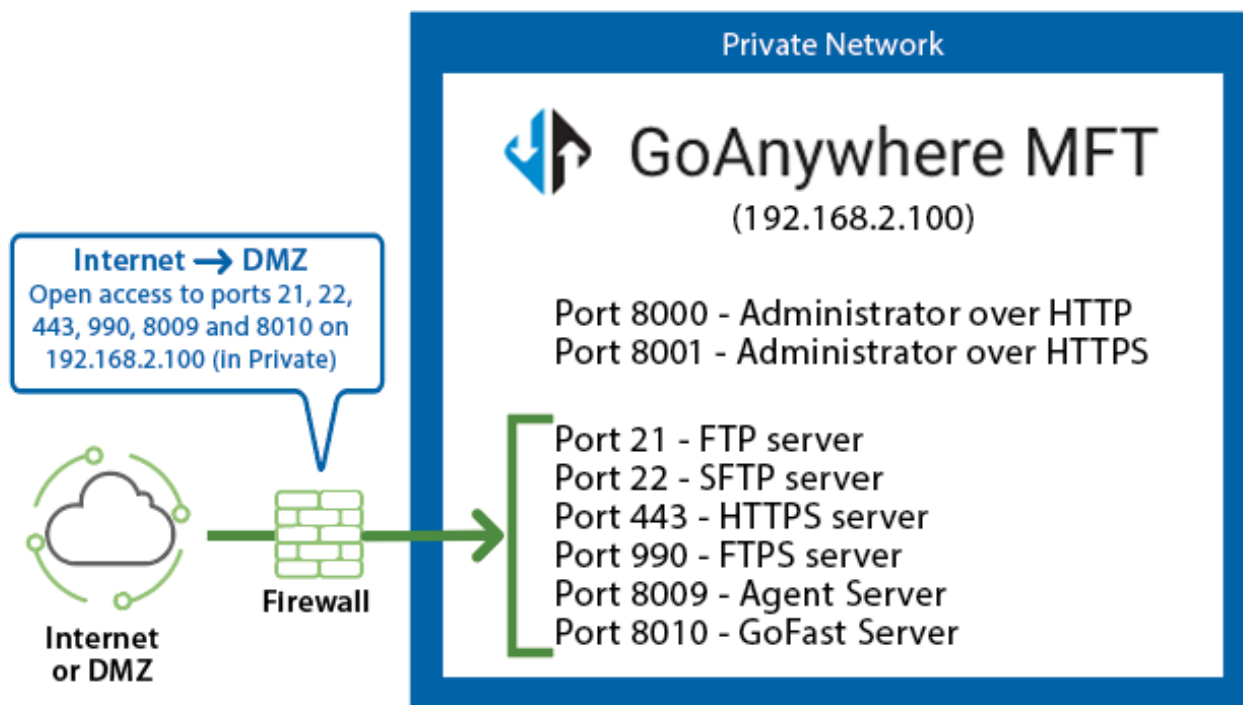
IBM i Release	Licensed Program	Product Option	Description
V7R1	5761JV1 (Only one option is required)	16	Java SE 8 32 bit
		17	Java SE 8 64 bit
	5770SS1	30	QShell
	5770SS1	33	Portable App Solutions
V7R2, V7R3, V7R4	5770JV1 (Only one option is required)	16	Java SE 8 32 bit
		17	Java SE 8 64 bit
	5770SS1	30	QShell
	5770SS1	33	Portable App Solutions Environment

## Changing Java Home

1. Stop the GoAnywhere MFT subsystem by executing the IBM i command of ENDGA. The ENDGA command is located in the installation library, which is named GOANYWHERE by default. Wait until the GoAnywhere MFT subsystem is completely shutdown before proceeding.
2. Run GOANYWHERE/CFGGA and select option 2 on Java Home and Java Version.
3. Change the Java Home value from /QOpenSys/QIBM/ProdData/JavaVM/jdk70/32bit to /QOpenSys/QIBM/ProdData/JavaVM/jdk80/32bit and then press ENTER to save.
4. Change the Java Version value from 1.7 to 1.8 and then press ENTER to save.
5. Run GOANYWHERE/CPYPOLICY to copy the JCE unlimited strength policy files into the JVM used by GoAnywhere.
6. Start the GoAnywhere MFT subsystem by executing the IBM i command of STRGA. The STRGA command is located in the installation library, which is named GOANYWHERE by default.
7. Navigate to the **Help > About** page and verify Java has been has changed to your selected version.

# Installation in the Private Network

This diagram illustrates GoAnywhere as installed in the Private network.



**NOTE:**

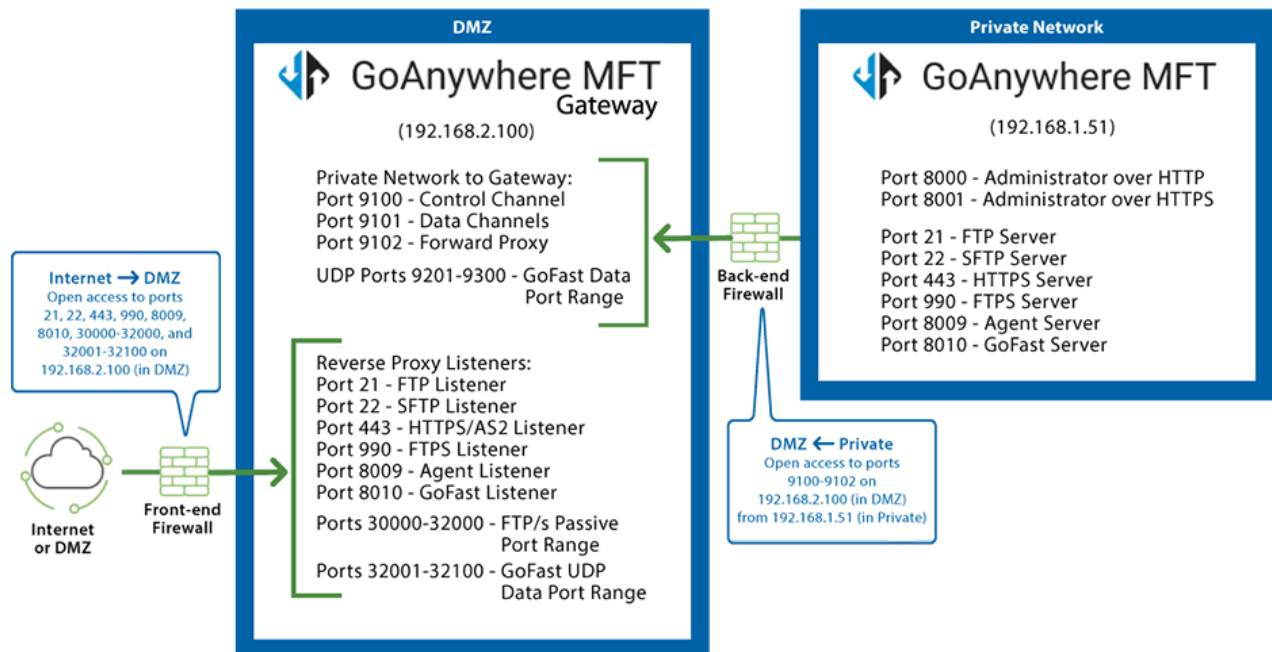
The IP addresses shown are for demonstration purposes only.

**Firewall configuration:**

If external trading partners need access to the file transfer protocols (e.g. SFTP, FTP, HTTPS, AS2, FTPS, GoFast) in GoAnywhere, those port numbers (e.g. 21, 22, 443, 990, 8009, 8010) need to be opened through the firewall to GoAnywhere in the private network.

## Installation with GoAnywhere Gateway

This diagram illustrates GoAnywhere as installed in the Private network, in conjunction with *GoAnywhere Gateway* (a separate licensed product from HelpSystems) in the DMZ. This configuration allows your organization to keep sensitive files, credentials and logs in the Private network. This configuration also does not require any incoming ports opened into the Private network, which provides a high level of security.

**NOTE:**

The IP addresses shown are for demonstration purposes only.

**Firewall configuration:**

In order to establish control and data channels from GoAnywhere to *GoAnywhere Gateway*, ports 9100 and 9101 will need to be opened (through the back-end firewall) from the Private Network to *GoAnywhere Gateway* in the DMZ. Port 9102 will also need to be opened from the Private Network to *GoAnywhere Gateway* for Forward Proxy services.

The port numbers (e.g. 21, 22, 443, 990, 8010 and 30000-32100) for the desired file transfer protocols (e.g. FTP, SFTP, HTTPS, FTPS, AS2, GoFast) need to be opened through the front-end firewall to *GoAnywhere Gateway* in the DMZ.

More information about *GoAnywhere Gateway* can be found at [www.GoAnywhere.com](http://www.GoAnywhere.com).

## Database Overview

By default, GoAnywhere stores its configuration settings and application data in an embedded Derby database. This database includes almost everything GoAnywhere needs to operate, including user-defined settings, user account information, permissions, server configuration information and more. The database also stores the audit log entries for Project Workflows and each of the file transfer protocols.

### Operational Considerations

The embedded Derby database is ideal for trial purposes and standalone instances such as sandbox or development environments. Customers who use the embedded Derby database on production systems should be aware of the following limitations:

- The embedded Derby database does not support GoAnywhere clustering, and as such, the database is only ideal for small operations where high availability is not needed.
- GoAnywhere is unavailable during backups and database tuning of the embedded database, which halts all file transfer and workflow tasks. Externalizing the database is the preferred method if 24/7 availability is required.
- The embedded Derby database is not accessible to 3rd party database reporting and monitoring tools.

**TIP:**

HelpSystems highly recommends customers externalize the GoAnywhere database. Complete database instructions can be found in the *GoAnywhere MFT User Guide* in the **System > Database Configuration** section.

## Clustering Overview

Clustering allows two or more GoAnywhere installations (systems) to work together to provide file transfer services for the enterprise. This provides greater scalability by allowing workloads to be distributed horizontally across multiple GoAnywhere systems.

If one GoAnywhere 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 system fails, the remaining systems in the cluster will automatically continue to service the trading partners.

To learn more about clustering in GoAnywhere, see the *GoAnywhere MFT User Guide* and navigate to **System > Clustering**.

# GoAnywhere IBM i Commands

For IBM i installations, GoAnywhere includes IBM i commands for performing various functions in the product. These commands can be entered on the IBM i command line, placed in CL programs and used in job schedulers on the IBM i.

The IBM i commands can be found in the installation library, which is GOANYWHERE by default. Listed below is an alphabetical listing of the commands:

Command	Command Description	Comments
CFGGA	Configure GoAnywhere	Allows users (with *SECADM authority) to change certain properties in the GoAnywhere installation, such as the default user, password and URL to use for the RUNPROJECT command.
CPYPROJECT	Copy (promote) Project	Copies a Project definition from one installation of GoAnywhere to another installation of GoAnywhere.
CPYRES	Copy (promote) Resource	Copies a Resource definition from one installation of <i>GoAnywhere</i> to another installation of GoAnywhere.
CRTCMDPRJ	Create Command Projects	Creates the supporting Projects that are used for the SFTPGET, SFTPPUT, PGPENCRYPT, PGPDECRYPT, ZIP, UNZIP and SNDEMLMSG commands. This command should only need to be run once.
DSPPRDINF	Product information	Displays the current version number of GoAnywhere, the port numbers used and the IBM i serial number and processor group.
ENDGA	End GoAnywhere Server	Ends the GoAnywhere application server
IMPPROJECT	Import Project	Imports a Project definition XML into GoAnywhere
PGPDECRYPT	Decrypt file with OpenPGP	Provides both decryption and signature verification.

Command	Command Description	Comments
PGPENCRIPT	Encrypt file with OpenPGP	Provides both encryption and signing of files.
RUNPROJECT	Run Project	Runs a GoAnywhere Project
SFTPGET	Get file over SFTP	Retrieves one or more files over a SFTP connection
SFTPPUT	Put file over SFTP	Sends one or more files over a SFTP connection
SNDEMLMSG	Send Email Message	Sends a message to one or more email addresses. Includes support for file attachments
STRGA	Start GoAnywhere Server	Starts the GoAnywhere application server
UPGRADEGA	Upgrade GoAnywhere	Upgrades the GoAnywhere software
UNZIP	UnCompress file with ZIP	Unzips files that were compressed with ZIP standard
ZIP	Compress file with ZIP	Provides compression and password protection

## SFTP, OpenPGP, ZIP and Email Command Shortcuts

Native commands are provided for IBM i customers that allow quick access to popular functions in GoAnywhere. This includes commands to get and put files through SFTP, encrypt and decrypt files with OpenPGP, ZIP and UNZIP files, as well as send Emails. These commands can be entered on the IBM i command line, placed in CL programs and used in job schedulers on the IBM i.

These native commands can be found in the GoAnywheremenu of GAMENU4 (accessible by running the command of **GO GOANYWHERE/GAMENU**). Each command can be prompted and has on-line help text that is available through the F1 function key.

**NOTE:**

Before the SFTP, OpenPGP, ZIP and Email native commands can be utilized, their underlying Projects (to process these commands) must be first created in GoAnywhere. To perform this initial Project creation, select option 1 from GAMENU4 (which will execute the command **CRTCMDPRJ**). The Projects will be created in the GoAnywhere folder of **\CommandLineProjects**.

# Upgrading GoAnywhere

New versions of GoAnywhere can be downloaded from the GoAnywhere Customer Portal at [my.goanywhere.com](https://my.goanywhere.com). A *GoAnywhere MFT Upgrade Guide* is released for each new software version, and contains detailed upgrade considerations and instructions. The upgrade guide is also available on the GoAnywhere Customer Portal.

## Configuring HTTP Proxy

If your organization uses a Proxy Server, then you need to configure those proxy settings in GoAnywhere before you can retrieve web updates:

1. From the main menu, select **System** and then **Global Preferences**.
2. Click the HTTP Proxy tab near the right end of the tab set.
3. Specify the type of proxy to use. DIRECT, HTTP, or SOCKS. DIRECT represents a direct connection, or the absence of a proxy. HTTP represents proxy for high-level protocols such as HTTP or FTP. SOCK represents a SOCKS (V4 or V5) proxy.
4. Specify the host name of the proxy server.
5. Specify the port number used by the proxy server.
6. Specify the username to use in order to connect to the proxy server. This is only necessary if the proxy server requires authentication.
7. Specify the password to use in order to connect to the proxy server. This is only necessary if the proxy server requires authentication.
8. Click the **Save** button.

## Upgrade Process

Upgrading GoAnywhere requires that you first download the updates from the portal at [my.goanywhere.com](https://my.goanywhere.com). Then you will need to stop its corresponding service/subsystem, apply the updates, and then restart GoAnywhere.

You can check for software updates by following the instructions below:

1. Login to GoAnywhere browser-based Administrator.
2. From the main menu, select **Help** and then choose the **Check for Updates** option.
3. If updates are found, the page will display the new version number, the release notes, and brief instructions on how to download and install the new version. Detailed upgrade instructions for the new version can be found in the *GoAnywhere MFT Upgrade Guide*.

# Uninstalling GoAnywhere

This section describes how to uninstall GoAnywhere. Prior to removing GoAnywhere from your system, you must deactivate the license through the GoAnywhere administrator. The license can then be used for another system. Navigate to **Help > License**, and then click the **Deactivate** button. Follow the prompts to remove the license from the server. Once the license is deactivated, you will no longer be able to access or use the system.

**WARNING:**

All GoAnywhere configurations, resources and project definitions will be deleted during the uninstall process.

## Windows uninstall instructions

To uninstall the GoAnywhere product from Windows:

1. End the GoAnywhere service on the Windows system.
2. Browse to the installation directory of GoAnywhere. The default install directory is **C:\Program Files\HelpSystems\GoAnywhere**.
3. Run the file named **uninstall.exe** to uninstall the product.

## Linux and UNIX uninstall instructions

To uninstall the GoAnywhere product from Linux:

1. Verify that no jobs are currently running in the GoAnywhere Administrator.
2. Change the working directory to the directory where GoAnywhere was installed (for example, **cd /usr/local/HelpSystems/GoAnywhere**).
3. Stop the GoAnywhere by executing the following shell script:  
**./goanywhere.sh stop**
4. Uninstall the GoAnywhere product by executing the following shell script:  
**./uninstall.sh**

## Linux RPM uninstall instructions

To uninstall the GoAnywhere product from Linux RPM:

1. Verify that no jobs are currently running in the GoAnywhere Administrator.
2. Stop the GoAnywhere by executing the following shell script:  
**sudo service goanywhere-mft stop**
3. Uninstall the GoAnywhere product by executing the following shell script:  
**sudo yum remove <mft\_package>**

4. To remove GoAnywhere and all unneeded dependencies, execute the following shell script:  
**sudo yum autoremove <mft\_package>**

## IBM i uninstall instructions

To uninstall the GoAnywhere product from the IBM i:

1. End the GoAnywhere service.  
**GOANYWHERE/ENDGA**
2. Verify that there are no locks on the GoAnywhere library. Default library name is GOANYWHERE.  
**WRKOBJLCK OBJ(GOANYWHERE) OBJTYPE(\*LIB)**
3. Delete the GoAnywhere library. Default library name is GOANYWHERE.  
**DLTLIB LIB(GOANYWHERE)**
4. Delete the GoAnywhere folder from the IFS. The default main folder name is /helpsystems/goanywhere.  
**RMVLNK OBJLNK('/helpsystems/goanywhere/\*.\*')**  
**RMVDIR DIR('/helpsystems/goanywhere')**

## Mac OS X uninstall instructions

To uninstall the GoAnywhere product from Mac OSX:

1. Verify that no jobs are currently running in the GoAnywhere Administrator.
2. Log in to the Mac OS X system as an administrator and open a Terminal window.
3. Change the working directory to the directory where GoAnywhere was installed (for example, **cd /Applications/HelpSystems/GoAnywhere**).
4. Stop the GoAnywhere by executing the following shell script:  
**./goanywhere.sh stop**
5. Uninstall the GoAnywhere product by double clicking the GoAnywhere Uninstaller found in the /Applications/HelpSystems/GoAnywhere directory and follow the prompts on the screen.

## Docker uninstall instructions

To delete a container and image from Docker:

1. Verify that no jobs are currently running in the GoAnywhere Administrator.
2. Determine the name or ID of the container you want to delete using the following command:  
**docker ps -a**
3. Stop the container from running using the following command:  
**docker stop *container name or id***

4. Delete the container by running the following command:  
**`docker rm container name or id`**
5. Delete the GoAnywhere image from Docker using the following command:  
**`docker rmi image name`**