

# V9.1.1

## SCRIPTING AGENT

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Installation and configuration support is provided under warranty for 45 days from initial purchase, as well as under annual maintenance agreements. Email and phone support is available from 9 a.m. ET to 5 p.m. ET weekdays. If you require assistance, contact Coviant Software support as follows:

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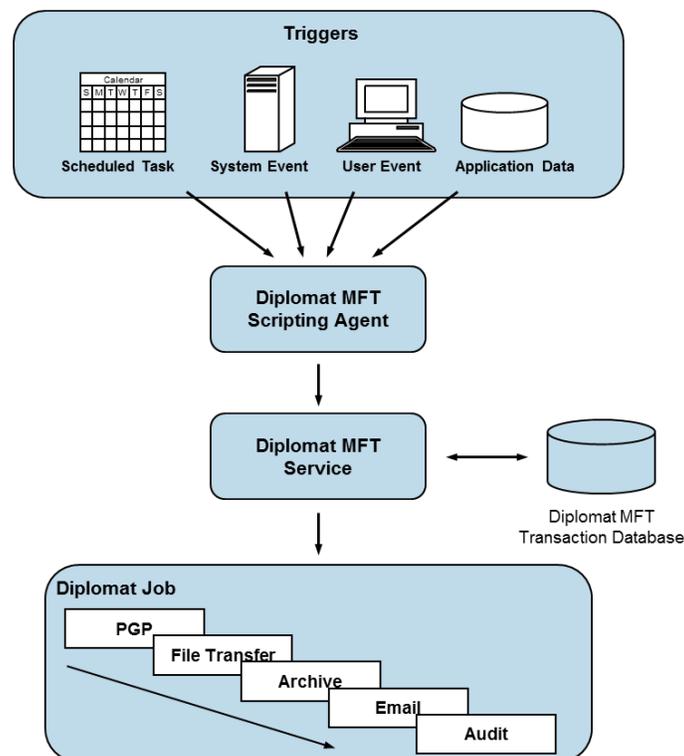
# 1 Overview

Using Diplomat MFT Scripting Agent, you can trigger Diplomat MFT file transfer jobs using any third-party scheduler, batch file, or other application. It is a Command Line Interface (CLI) for executing Diplomat MFT jobs, generating a list of Partner information, and performing OpenPGP encryption, decryption, signing, and verifying files. Jobs can be invoked instead of, or in addition to, the built-in Diplomat MFT scheduler options.

For example, you might want to create and send payroll files to your bank or other payroll company. You might set up a job stream that starts with a time and attendance application to calculate the number of hours worked by each employee and then kicks off a payroll application to generate payroll data. With Diplomat MFT Scripting Agent, you can add another step to the job stream to encrypt the payroll file and transfer it to your bank or payroll company for processing. Or you can use the OpenPGP capabilities from the command line to replace expensive OpenPGP utilities, or free utilities that lack vendor support.

## 1.1 Using Diplomat MFT Scripting Agent

Diplomat MFT Scripting Agent works by sending a request to the Diplomat MFT Service to immediately execute a specific transaction that is defined on the Diplomat MFT server. Many system/user events, scheduled tasks, or specific application events can be set to trigger a job to run that executes a script containing a Diplomat MFT Scripting Agent command, based on your business needs.



### How Diplomat Works with External Requests

Diplomat MFT Scripting Agent can only execute transactions that you have already set up on the Diplomat MFT server. When configuring a transaction to be executed via the Scripting Agent, you must also enable the “Allow Diplomat MFT Scripting Agent requests” in the *Job Execution* panel on the transaction. Optionally, you can also

protect the execution of that transaction by specifying a password in Diplomat MFT which must be provided by the Scripting Agent when initiating the execution.

**NOTE:** If you do not select *Allow Diplomat MFT Scripting Agent requests* on the *Job Execution* panel on the transaction, the Diplomat MFT Service ignores requests from Diplomat MFT Scripting Agent to run the transaction.

**NOTE:** Diplomat MFT Scripting Agent is ONLY supported with a Diplomat MFT **Enterprise Edition** license.

## 1.2 Configuration

Diplomat Managed File Transfer is a Java-based, client-server application that runs on Windows or UNIX systems.

- **Diplomat Web Administration Client**  
Admin user website that enables the creation and modification of transaction, key, and partner information. It captures all transaction information and administrative settings in the Diplomat MFT transaction database for use by the Diplomat MFT Service.
- **Diplomat MFT Service**  
Runtime engine that executes transactions stored in the Diplomat MFT transaction database via commands to FTP servers, mail servers, and other systems. It creates a log file with system messages, an audit database, and archive copies of transaction files, if desired.  
  
On Windows systems, Diplomat MFT Server is set up as a Windows service, called *Diplomat MFT 64*. On Linux systems, the Diplomat MFT server is set up as a service, called *diplomatServer*.
- **Diplomat MFT Scripting Agent**  
Command Line Interface (CLI) Java application that enables execution of Diplomat MFT file transfer jobs directly at a command prompt or via scripts. The Diplomat MFT Scripting Agent jar files must reside in a location accessible to the batch file, 3<sup>rd</sup> party application, or Enterprise Scheduler that invokes it.

If you choose to run the Diplomat MFT Scripting Agent on a system that does not have the Diplomat MFT Server Service installed, you must run the Diplomat MFT installer and choose the “Scripting Agent” option to deploy the necessary file(s) to the target system. Instructions for installing Diplomat MFT Scripting Agent on Linux or other UNIX systems are provided in Section 2.2 of this document.

## 2 Installation

Diplomat MFT Scripting Agent runs independently of the Diplomat MFT Service. Diplomat MFT Scripting Agent can be installed on any system that can run Java.

For simplicity, many users choose to install the Diplomat MFT Scripting Agent on the same system as the Diplomat MFT Service and then execute it remotely at run time. When the scripting agent is executed remotely, mapped drives or complete pathnames must be used when initiating a file transfer job request and permissions may be needed to access the scripting agent files on the remote system.

**NOTE:** Diplomat MFT Scripting Agent is only supported as a feature of Diplomat MFT Enterprise Edition.

### 2.1 Windows Installation

Diplomat MFT Scripting Agent is installed with the Windows installation module.

In addition to performing an initial installation, you can:

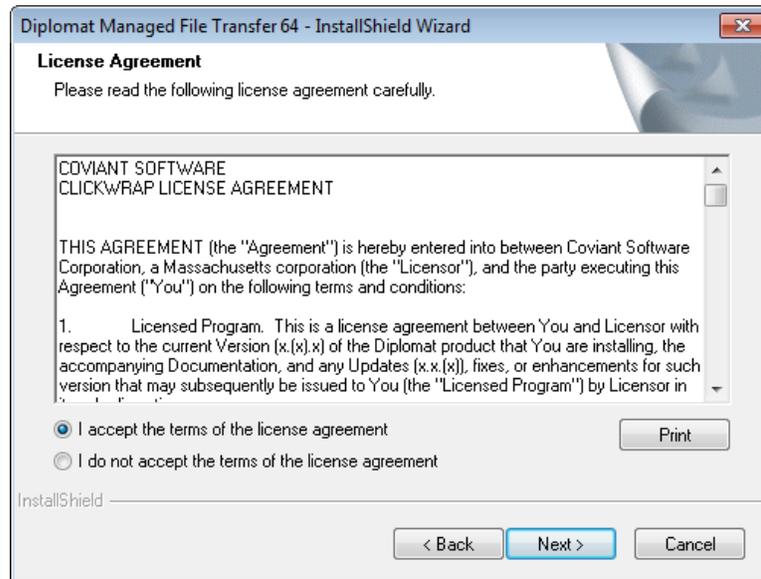
- |               |  |
|---------------|--|
| <b>Modify</b> | <ul style="list-style-type: none"><li>▪ Add Diplomat MFT Scripting Agent to an existing installation</li><li>▪ Uninstall only Diplomat MFT Scripting Agent</li></ul> |
| <b>Repair</b> | <ul style="list-style-type: none"><li>▪ Update to a new version of Diplomat MFT Scripting Agent</li></ul>  |
| <b>Remove</b> | <ul style="list-style-type: none"><li>▪ Uninstall all Diplomat MFT components</li></ul>  |

#### 2.1.1 Install Diplomat MFT Scripting Agent

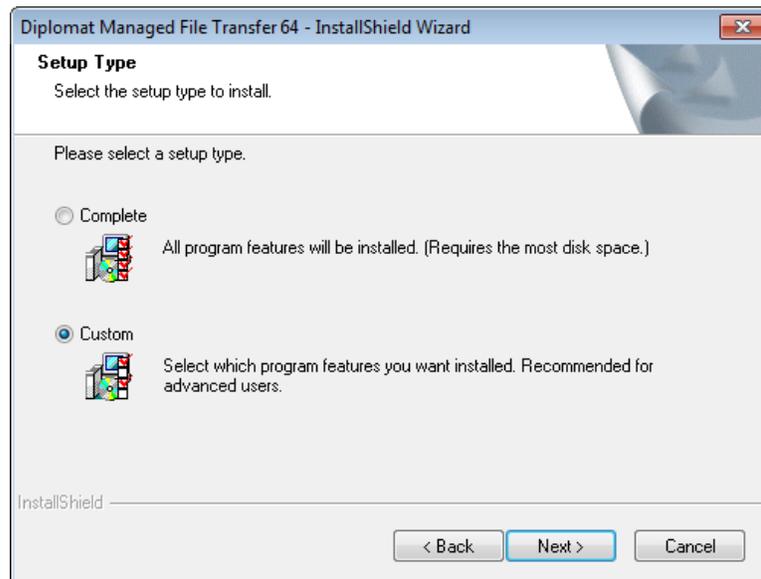
These Diplomat MFT Scripting Agent installation instructions are valid only for installations on a separate system from the Diplomat MFT Service. If you have already installed the Diplomat MFT Service and want to add the Diplomat MFT Scripting Agent to the same system, see the section entitled *Add Diplomat MFT Scripting Agent*.

1. Log on the system where the Diplomat MFT Scripting Agent is being installed.
2. Go to [www.coviantsoftware.com](http://www.coviantsoftware.com) and log on using the username and password supplied by Coviant Software support. Navigate to <http://www.coviantsoftware.com/support-portal.php>. Download the DiplomatSetup file for the correct edition of Diplomat Managed File Transfer.
3. Double-click on the file name to start the installation. You can change an installation setting by selecting **Back** until you reach the previous window where the change is needed. Otherwise, select **Next** to continue to the next step. You can select **Cancel** at any time to stop the installation.

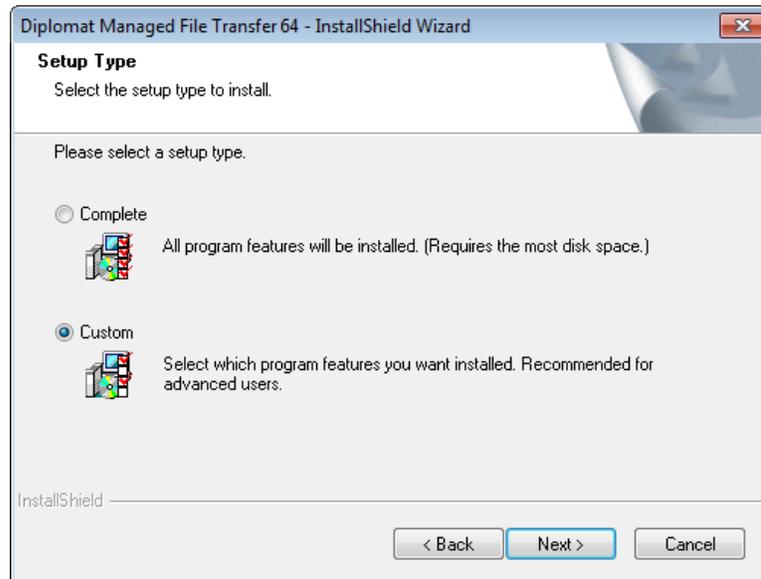
4. Scroll through the license agreement and review the terms and conditions. If you agree with the terms, select "I accept the terms of the license agreement" to continue. You may also print a copy of the license agreement for your records using the **Print** button.



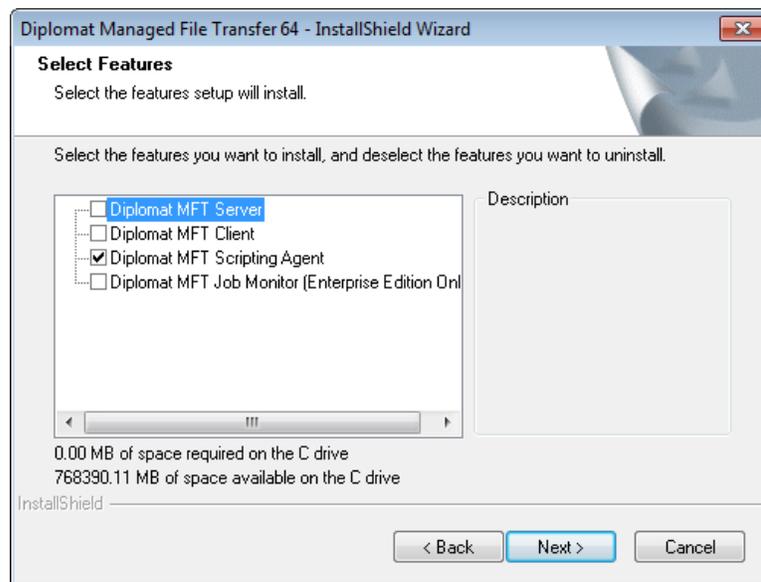
5. Select **Custom**.



6. Select **Next** to accept the default location (C:\Program Files\Coviant Software\Diplomat-j) or **Browse** to identify a new destination directory. Diplomat MFT Scripting Agent files will be installed in the sub-directory \scriptingAgent of the destination directory.



7. To install **ONLY Diplomat MFT Scripting Agent**, check Diplomat MFT Scripting Agent and uncheck Diplomat Server and Diplomat Client.



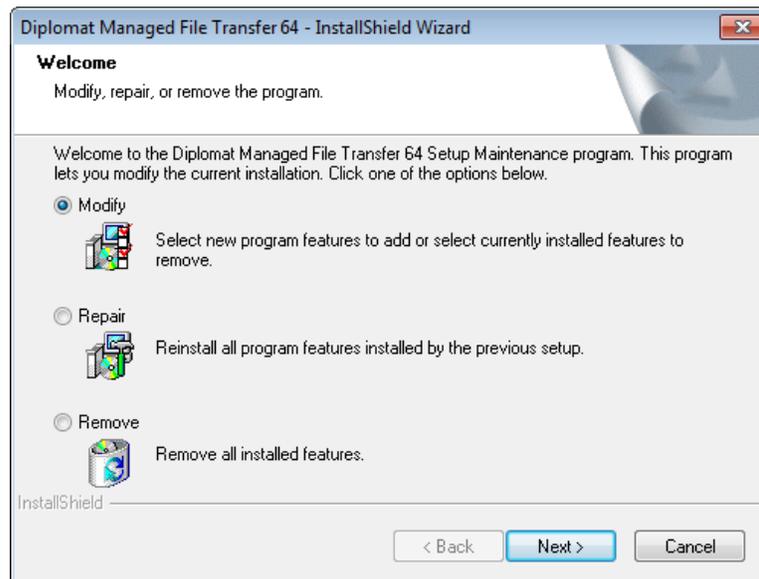
8. Select **Install** on the next screen to start the installation.
9. If firewall software is running on the Diplomat MFT Scripting Agent system. It may have to be configured to allow the Diplomat MFT Scripting Agent program to have access to the Internet. The process name that Diplomat MFT Scripting Agent uses to access the internet is **java.exe**. The java.exe file is located in the ...\Diplomat-j\jre\jre\bin or your corresponding install directory.

10. A new directory structure is created during the installation of the Diplomat MFT Scripting Agent. If you selected the default installation location, this directory structure is located under C:\Program Files\Coviant Software\Diplomat-j. Changes to any of these files can affect the performance of Diplomat MFT Scripting Agent. **We strongly recommend that you set privileges on these directories to limit access** to only necessary applications, such as backup.

### 2.1.2 Add Diplomat MFT Scripting Agent

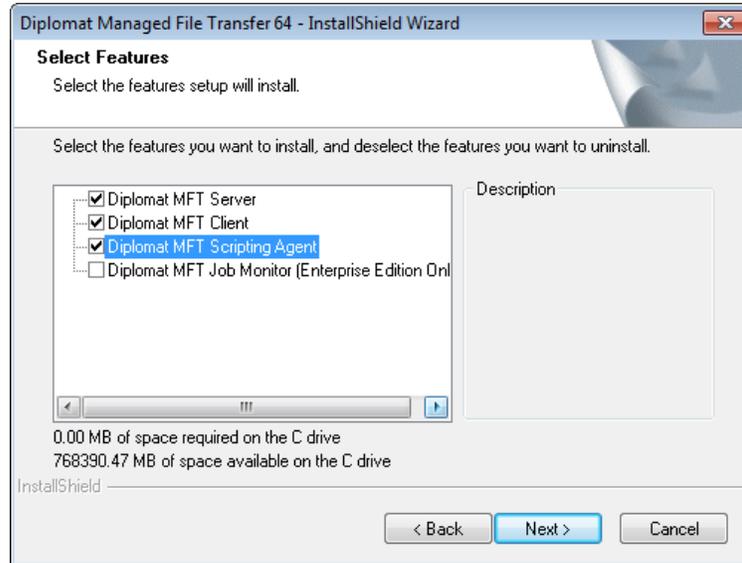
Use the following instructions **only** if you are adding the Diplomat MFT Scripting Agent to a system on which the Diplomat Server has been installed.

1. Log on the system where the Diplomat MFT Scripting Agent is being installed.
2. Go to [www.coviantsoftware.com](http://www.coviantsoftware.com) and log on using the username and password supplied from Coviant Software support. Navigate to <http://www.coviantsoftware.com/support-portal.php>. Download and unzip the DiplomatSetup file for the correct edition of Diplomat Managed File Transfer.
3. Double-click on the file name to start the installation. You can change an installation setting by selecting **Back** until you reach the previous window where the change is needed. Otherwise, select **Next** to continue to the next step. You can select **Cancel** at any time to stop the installation.
4. Select **Modify**.

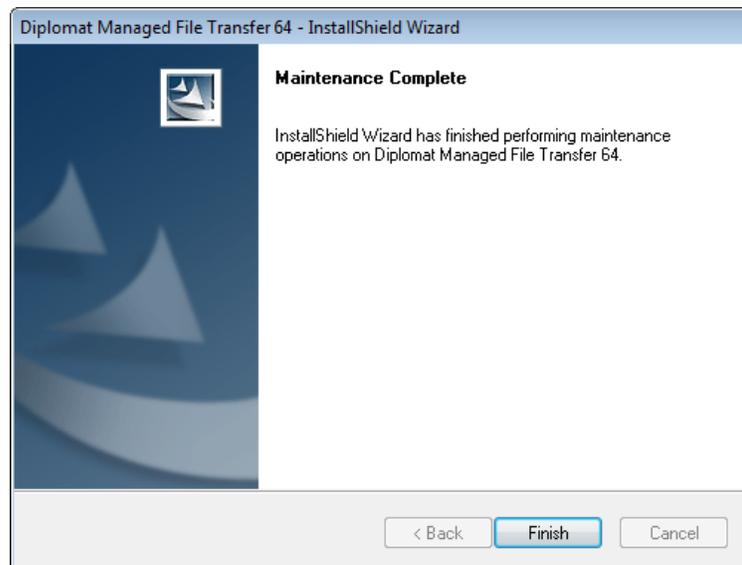


- When **ADDING** the Diplomat MFT Scripting Agent, check Diplomat MFT Scripting Agent **AND** any components already installed. Diplomat MFT Scripting Agent will be installed in the directory in which the Diplomat Client or Server were installed. The default directory is C:\Program Files\Coviant Software\Diplomat-j.

**WARNING: DO NOT** leave components that are already installed unchecked. If you do, the unchecked components will be uninstalled.



- The final screen indicates that you have successfully completed the component install.



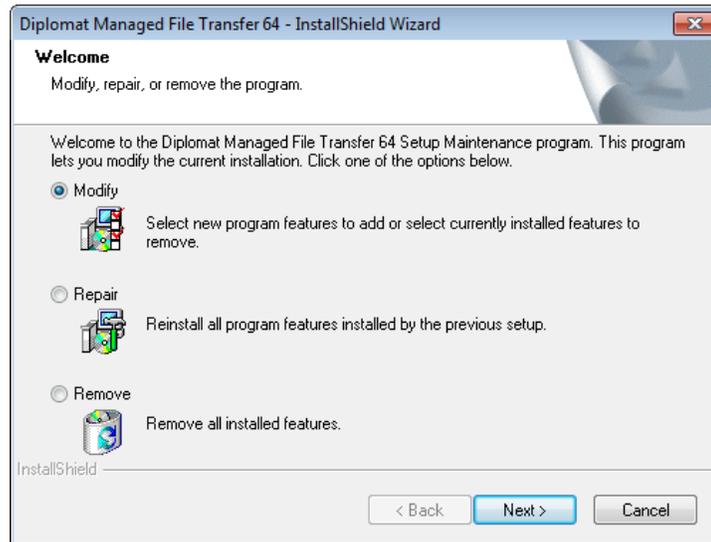
- If firewall software is running on the Diplomat MFT Scripting Agent system. It may have to be configured to allow the Diplomat MFT Scripting Agent program to have access to the Internet. The process name that the Diplomat MFT Scripting Agent uses to access the internet is **java.exe**. The java.exe file is located in the ...\Diplomat-j\jre\jre\bin or your corresponding install directory.
- A new directory structure is created during the installation of the Diplomat MFT Scripting Agent. If you selected the default installation location, this directory structure is located under C:\Program Files\Coviant Software\Diplomat-j. Changes to any of these files can affect the performance of Diplomat MFT Scripting

Agent. **We strongly recommend that you set privileges on these directories to limit access** to only necessary applications, such as backup.

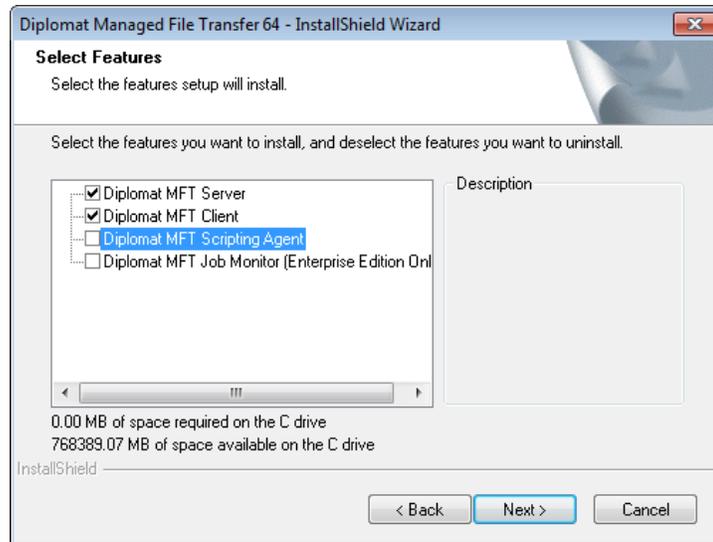
### 2.1.3 Uninstall Diplomat MFT Scripting Agent

Use the following instructions if you are uninstalling **ONLY** the Diplomat MFT Scripting Agent from a system on which the Diplomat Server is already installed.

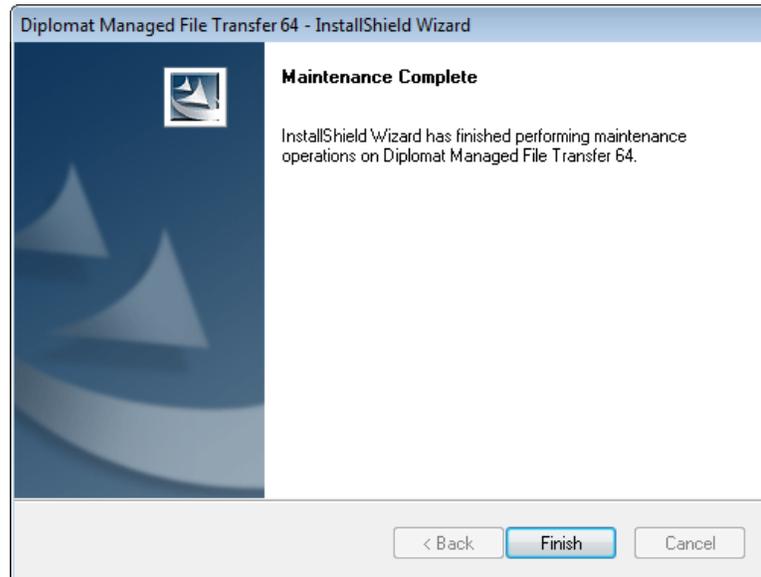
1. Log on the system from which the Diplomat MFT Scripting Agent is to be uninstalled.
2. Go to [www.coviantsoftware.com](http://www.coviantsoftware.com) and log on using the username and password supplied from Coviant Software support. Navigate to <http://www.coviantsoftware.com/support-portal.php>. Download and unzip the DiplomatSetup file for the correct edition of Diplomat Managed File Transfer.
3. Double-click on the file name to start the installation. You can change an installation setting by selecting **Back** until you reach the previous window where the change is needed. Otherwise, select **Next** to continue to the next step. You can select **Cancel** at any time to stop the installation.
4. Select **Modify**.



5. To **UNINSTALL** Diplomat MFT Scripting Agent, check **ONLY** the components you plan to keep. **ALL unchecked components will be uninstalled.**



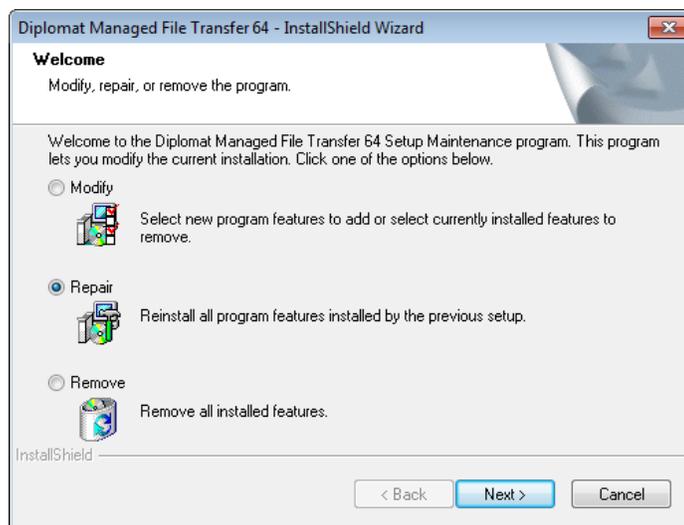
6. The final screen indicates that you have successfully completed the component uninstall.



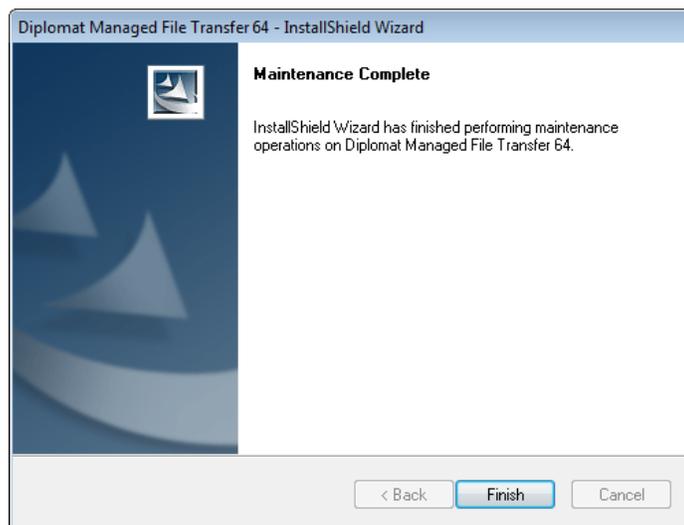
### 2.1.4 Diplomat MFT Scripting Agent Version Update

1. Log on the system on which the Diplomat MFT Scripting Agent and other components will be updated.
2. Go to [www.coviantsoftware.com](http://www.coviantsoftware.com) and log on using the username and password supplied from Coviant Software support. Navigate to <http://www.coviantsoftware.com/support-portal.php>. Download and unzip the DiplomatSetup file for the correct edition of Diplomat Managed File Transfer.
3. Double-click on the file name to start the update. You can change an update setting by selecting **Back** until you reach the previous window where the change is needed. Otherwise, select **Next** to continue to the next step. You can select **Cancel** at any time to stop the update.
4. On the Welcome screen, select **Repair** to install the current version of Diplomat.

**NOTE:** Repair updates all Diplomat components.



5. The final screen indicates that you have successfully completed the update.

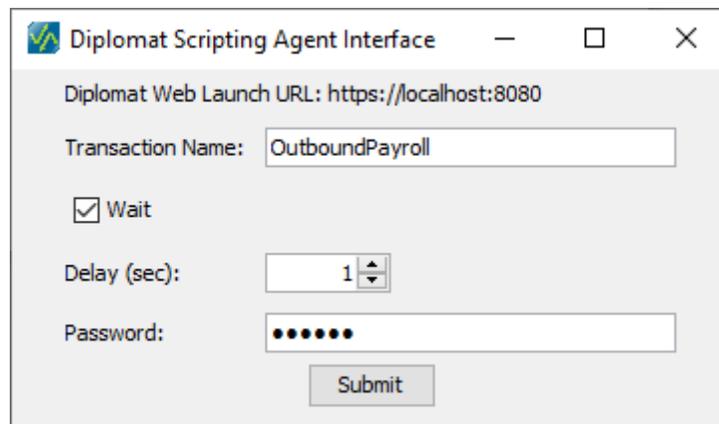


### 2.1.5 Trusted SSL Certificate

The Scripting Agent will verify the SSL certificate of the Diplomat MFT server to which it is connecting (unless you pass the “-noss!” flag). Verification is based upon the certificates listed as trusted in the “diplomat.keystore” file found in the Scripting Agent folder (the path where the JAR file is located). In order to trust the Diplomat MFT server to which you are connecting, be sure that you have the same “diplomat.keystore” in the Scripting Agent folder as the one that exists on the Diplomat MFT server, located in the default installation path “C:\Program Files\Coviant Software\Diplomat-j\TomcatWebserver\conf”.

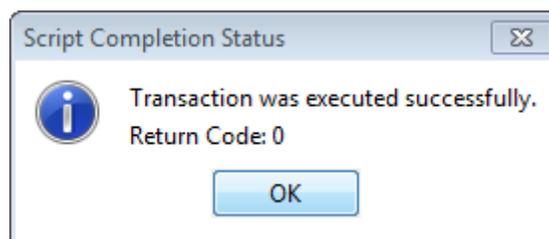
## 3 Desktop Application

Diplomat MFT Scripting Agent GUI enables the user to run pre-configured Diplomat MFT transactions from their Windows systems without needing to run command line batch files. Simply install the Scripting Agent onto the target Windows machine, and double-click on the “diplomatScriptingAgent.jar” file to launch (or run “java -jar diplomat.scripting.ScriptingGUIClient”).



The Diplomat MFT Scripting Agent Interface allows the user to enter arguments for the secure file transfer job to be run on the Diplomat MFT Service to which it connects. The Transaction Name identifies the transaction to run. The Wait checkbox is used to determine whether to wait for the results of the Diplomat MFT job. The *Delay* argument determines how long the process waits to start the Diplomat MFT job after it is submitted. The *Password* is used to authenticate that the user has the right to run the job. Refer to the next section for more information on each of these arguments. These values are saved between launches to a file “%TEMP%\scriptingagent.properties” (where %TEMP% is the value of the Environment Variable named “TEMP”). If you wish to pre-populate these values on a Windows machine, run the Application on a machine, populate the correct values, and execute the job. At that point, the “scriptingagent.properties” file will be saved in “%TEMP%”, and you can copy this to the target Windows machines to pre-populate the values at launch time..

**NOTE:** Arguments other than Transaction Name, Wait, Delay and Password are not supported by the Diplomat Scripting Agent Interface using Diplomat Desktop Application.



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When the Diplomat MFT job is complete, a script completion status dialog is displayed. It shows the results of the Diplomat MFT Job, including the return code. More information on return codes is provided in a following section.

## 4 Command Line Format

Diplomat Scripting Agent command line operates in three basic modes:

- Execute a transaction on the Diplomat MFT Server
- Generate a folder listing for the given partner, and save it to a text file
- Execute PGP operations on the specified file using the PGP keys defined in Diplomat MFT

### 4.1 Executing a Diplomat MFT Transaction

The following command line statement executes a Diplomat MFT file transfer job for the specified transaction:

```
<javapathname>java -cp <jarpathname>diplomatScriptingAgent.jar
diplomat.scripting.ScriptingClient "Transaction Name" [-server
"serverName1[:port1], serverName2[:port2], ..., serverName10[:port10]"] [-noSSL] [[-
nowait] | [-wait secs]] [-delay XX] [-password XXXXX] [-vars "variable_name=value,
variable_name=value, ..."]
```

**NOTE:** <javapathname> is always required and must be the complete pathname to the directory containing the Java Runtime Environment (JRE) installed for use with the Diplomat MFT Scripting Agent.

**NOTE:** <jarpathname> is required if a scripting agent command or a script containing a command is executed from a directory other than the directory containing the scripting agent jar files and must be set to the complete pathname to the directory containing the scripting agent jar files.

The arguments are explained below with optional arguments enclosed in brackets:

#### Transaction Name

Transaction Name is found on the Transaction Identification panel of the transaction window of the desired transaction. ***Transaction Name is case sensitive.***

**NOTE:** Transaction Name must always be the first argument in the command line statement.

**NOTE:** If Transaction Name contains blanks or special characters, it must be enclosed in double quotes.



The image shows a screenshot of a software interface titled "Transaction Identification". It contains two input fields. The first field is labeled "Transaction Name:" and contains the text "BT Outbound B12". The second field is labeled "Description:" and is currently empty.

**[-server "serverName1[:port1], serverName2[:port2], ..., serverName10[:port10]"]**

If the command line statement is executed on the system where the Diplomat MFT Service is running, the -server parameter is not required and the default value is 'localhost:8080'. If the Diplomat MFT Service is running on a different system or is using a port other than 8080, the -server parameter must be specified with at least one server name and port number listed. ServerName is the network IP address or domain name of the system where the Diplomat MFT Service is running.

Up to 10 servers may be specified. If `serverName1` is not available, then the Diplomat MFT Scripting Agent attempts to schedule the job on `serverName2` and so on through `serverName10`. If no servers are available, the job fails.

**NOTE:** If `serverName` contains blanks or special characters, it must be enclosed in double quotes.

**NOTE:** If multiple server names are specified, the list of server names must be separated by commas and enclosed in double quotes.

**NOTE:** By default, Diplomat MFT uses port 8080 for secure connections and 8443 for non-secure connections. If a non-secure port is used, the `-noSSL` parameter must also be specified.

#### **[-noSSL]**

If the `-noSSL` parameter is specified, the Diplomat MFT Scripting Agent attempts to connect to the Diplomat MFT Service using a non-secure HTTP connection. If the `-noSSL` parameter is not specified, the Diplomat MFT Scripting Agent attempts to connect to the Diplomat MFT Service using a secure HTTP connection over SSL. The default setting is to use a secure connection.

#### **[[--nowait] | [--wait XX]]**

A `--nowait` or `--wait` parameter can be specified, but is not required.

If the `-nowait` parameter is specified, the Diplomat MFT Scripting Agent schedules a Diplomat MFT file transfer job but does not wait for the job to finish execution. If the return code = 0, then the request was successfully received by the Diplomat MFT Service (i.e., the job is scheduled successfully by the Diplomat MFT Service).

If `--wait XX` is specified, the Diplomat MFT Scripting Agent waits for the job to finish execution and checks for job status every XX seconds. A return code = 0 indicates the Diplomat MFT file transfer job executed successfully.

**NOTE:** If neither `--nowait` nor `--wait` are specified, the default is to wait for the job to execute with a status interval of 10 seconds.

#### **[-delay XX]**

If the `-delay` parameter is specified, the Diplomat MFT Scripting Agent schedules a Diplomat MFT file transfer job to execute XX minutes after the command line statement is executed. If the `-delay` parameter is not specified, the Diplomat MFT Scripting Agent attempts to schedule a Diplomat MFT file transfer job for immediate execution.

**NOTE:** Unless `-nowait` is specified, any script containing a command line statement with `-delay XX` specified waits the delay period and run the Diplomat MFT file transfer job before returning to the script.

#### **[-password XXXXX]**

If a `-password` parameter is specified, the Diplomat MFT Service validates the password supplied against the password stored in the transaction. If no password is stored in the transaction, then the `-password` parameter is not required. If a `-password` parameter is specified and no password is stored in the Diplomat MFT transaction, then the password parameter is ignored and no error is generated.

**NOTE:** If a password contains blanks or special characters, it must be enclosed in double quotes.

#### **[-vars "variable\_name=value, variable\_name=value, ..."]**

If a `--vars` parameter is specified in a *Source* or *Destination File(s)* field, the Diplomat job replaces the "`<%variable_name%>`" string in the source or destination file name with the specified value.

Variables can be used in both the sub-directory and filename portion of the *Source* or *Destination File(s)* fields. If any variables specified in a *Source* or *Destination File(s)* field are not defined in a Scripting Agent command, the Diplomat job fails with a return code of '5'.

## 4.2 Generate a Folder Listing for a given partner

The following command line statement generates a folder listing for a given Partner defined on the Diplomat MFT server:

```
<javapathname>java -cp <jarpathname>diplomatScriptingAgent.jar
diplomat.scripting.ScriptingClient -partner "Partner Name" -file <filepath> [-server
"serverName1[:port1], serverName2[:port2], ..., serverName10[:port10]"] [-noSSL]
```

The command line parameters for “-server” and “-noSSL” are the same as the previous section.

### Partner Name

Partner Name is the name of the partner defined in Diplomat MFT. **Partner Name is case sensitive.**

### -file <filepath>

This specifies the **file path** on the Diplomat MFT Server to which it will write the directory contents of the partner. The path must be accessible to the Diplomat MFT Service.

## 4.3 Perform PGP Operations On A File

The Scripting Agent can be used to direct Diplomat MFT to perform PGP operations on a local accessible to the Diplomat MFT Service. The PGP keys used in these operations must be present in the Diplomat MFT configuration. These operations can only be performed by the Scripting Agent on the same machine as the Diplomat MFT Service is running.

Using the Scripting Agent in this manner bypasses the typical structure of Diplomat’s operations. This means that no Transaction is being executed and therefore no integration for auditing, email notifications, Job Monitor, and so on. The details of the request execution and its results will be written to Diplomat’s primary log, indicating the operation and the file(s) involved. Additionally, it may be desirable to redirect console output to a file when invoked through an automated approach such as a batch file or script or from another application.

### 4.3.1 Encryption and Signing

When invoking Diplomat to encrypt a file, by default a new file will be created in the same location as the source, with a .pgp extension added to the original file name, encrypted in binary format with the contents compressed. The original file will be left in place for you to do with as desired for your overall process design. If a file of the same name as the output file already exists in the output location, it will be overwritten. You may optionally also sign the file, add additional encryption keys, and/or specify an alternate output file path.

#### Command Line:

```
<javapathname>java -cp <jarpathname>diplomatScriptingAgent.jar
diplomat.scripting.ScriptingClient -encrypt <filepath> -key <Key ID> [-aeks <comma
separated key ids>] [-sign <keyid>] [-armor] [-out <filepath>] [-noSSL]
```

### <filepath>

This is the full path to the file to be encrypted, and must be accessible by the Diplomat MFT Service

**-key <key>**

Specify the OpenPGP Public Key (or KeyPair) to be used for PGP encryption. The key to be used may be specified as the Diplomat MFT name for the key as it appears in the key ring, the “user id” value contained in the key, or the hex Key ID.

**-aeks <key (or comma separated multiple keys)>**

Optionally, include one or more additional OpenPGP encryption keys to be used when encrypting the file. This can be useful for providing a single encrypted file to multiple partners, adding your own key to an encrypted file so that you can recover the contents at a future date, and other potential uses. The key to be used may be specified as the Diplomat MFT name for the key as it appears in the key ring, the “user id” value contained in the key, or the hex Key ID. If multiple keys are to be specified, ensure the list is encapsulated in quotes and that each key is separated from the next by a comma, with no spaces between the keys. See the example below for reference.

**-sign <key>**

Specify the PGP KeyPair to be used to sign the encrypted file. The key to be used may be specified as the Diplomat MFT name for the key as it appears in the key ring, the “user id” value contained in the key, or the hex Key ID.

**-out <filepath>**

This is the full path to the encrypted file to be generated, and must be accessible by the Diplomat MFT Service. If not specified, the resulting encrypted (and signed) file will be placed in the same folder as the source file, with either “.asc” (for ASCII armored output) or “.pgp” (for binary output) appended to the file name.

**-armor**

If this flag is present, the encrypted output file will be ASCII armored. When absent, the encrypted output file will default to binary.

**[-noSSL]**

Specify this flag to cause the Diplomat MFT scripting agent to connect to Diplomat MFT using plain text HTTP, rather than HTTPS. Useful when testing on a server that you haven’t configured the “diplomat.keystore” yet.

**EXAMPLE**

```
java -cp diplomatScriptingAgent.jar diplomat.scripting.ScriptingClient -encrypt
E:\Data\EncryptMe\PositivePay.csv -key "dtssupport2@wellsfargo.com" -aeks
"example@coviantsoftware.com,alternate@coviantsoftware.com" -sign
"example@coviantsoftware.com" -out "E:\Data\Encrypted\Wells
Fargo\PositivePay\PositivePay.csv.pgp"
```

### 4.3.2 Decryption and Verification

When invoking Diplomat to decrypt a file, by default a new file will be created in the same location as the source, with the extension removed from the original file name. The original file will be left in place for you to do with as desired for your overall process design. If a file of the same name as the output file already exists in the output location, it will be overwritten. You may optionally also verify a signature on the file and/or specify an alternate output file path.

**Command Line:**

```
<javapathname>java -cp <jarpathname>diplomatScriptingAgent.jar
diplomat.scripting.ScriptingClient -decrypt <filepath> -key <Key ID> [-verify
<keyid>] [-out <filepath>] [-noSSL]
```

**<filepath>**

This is the full path to the file to be encrypted, and must be accessible by the Diplomat MFT Service

**-key <key>**

Specify the Open PGP Key Pair to be used for decryption. The key to be used may be specified as the Diplomat MFT name for the key as it appears in the key ring, the “user id” value contained in the key, or the hex Key ID.

**-verify <key>**

Specify the PGP Public Key to be used to verify the signature on the PGP encrypted file. The key to be used may be specified as the Diplomat MFT name for the key as it appears in the key ring, the “user id” value contained in the key, or the hex Key ID.

**-out <filepath>**

This is the full path to the decrypted file to be generated, and must be accessible by the Diplomat MFT Service. If not specified, the resulting encrypted (and signed) file will be placed in the same folder as the source file, with the final extension removed.

**[-noSSL]**

Specify this flag to cause the Diplomat MFT scripting agent to connect to Diplomat MFT using plain text HTTP, rather than HTTPS. Useful when testing on a server that you haven’t configured the “diplomat.keystore” yet.

**EXAMPLE**

```
java -cp diplomatScriptingAgent.jar diplomat.scripting.ScriptingClient -decrypt  
"E:\Data\Encrypted\Wells Fargo\PositivePay\PositivePay.csv.pgp" -key  
"example@coviantsoftware.com" -verify "dtssupport2@wellsfargo.com" -out  
E:\Data\Decrypted\PositivePay.csv"
```

## 5 Return Codes

The Diplomat MFT Scripting Agent provides the following return codes for diagnosing the success or failure of a job request. In a batch file, these return codes are captured as “ERRORLEVEL”. For other programming languages, these would be the process exit codes.

Return Code	Explanation
0	Default indicates that the specified Diplomat MFT file transfer job executed successfully. If <code>-nowait</code> specified, indicates that the request to schedule the specified Diplomat MFT file transfer job was successful.
1	Invalid arguments or error parsing arguments.
2	Error attempting to schedule job. Possible errors include: <ul style="list-style-type: none"> <li>▪ Invalid server IP address</li> <li>▪ IP address not found</li> <li>▪ Diplomat MFT Service not running</li> <li>▪ Transaction Name not found</li> <li>▪ Transaction not set to allow Diplomat MFT Scripting Agent</li> </ul>
3	Preview license. Job did not execute.
4	Job executed, but specified file(s) not found AND transaction NOT set to <i>Fail if File Not Found</i> .
5	Job executed, but completed with a status of “Failure”.
6	Transaction was found, but has been suspended by the Diplomat MFT Client. <b>NOTE:</b> This error code can only occur when running Diplomat MFT Enterprise Edition.
7	Password required by transaction, but valid password not found.
8	Job executed, but completed with a status of “Warning”.
9	Error performing specified PGP operation

Status of jobs initiated by the Diplomat MFT Scripting Agent is entered into the Diplomat MFT log file every 60 seconds. Return codes are entered into the log, when available.

## 6 Job Set-up

Follow these steps set up a script to execute a Diplomat MFT job using the Diplomat MFT Scripting Agent:

### 1. Install Diplomat MFT Service and Diplomat MFT Client.

The Diplomat MFT Service must be installed and the Diplomat MFT Service must be running to execute transactions. The Diplomat MFT Client must be installed to set up a Diplomat MFT transaction for execution via the Diplomat MFT Scripting Agent.

## 2. Create transaction using Diplomat MFT Client

Once the Diplomat MFT Service is running, open the Diplomat MFT Client. Create an inbound or outbound transaction with the desired characteristics. *Check Allow Diplomat MFT Scripting Agent requests on the Job Execution panel on the transaction screen.*

If you want to ONLY allow Diplomat MFT Scripting Agent requests, then set *Run Jobs Using* in the Job Execution panel to <NONE>. NOTE that you can specify a scheduler for the job as well; the Scripting Agent request will still work to trigger the job on demand.

If you want to validate the scripting agent request at run time, enter a password, as well. **NOTE:** If you enter a password in the transaction and no password is provided at run time, the file transfer job fails.

## 3. Set up script containing Diplomat MFT Scripting Agent command.

Sample files are provided in the Diplomat MFT installation to assist you in creating your own scripts to execute a Diplomat MFT Scripting Agent command. These scripts execute the Diplomat MFT Scripting Agent command documented in Section 3 above and include a `DIPLOMAT_HOME` parameter to set the pathname to the scripting agent jar files.

Two Windows batch files, `sampleDiplomatScriptingAgent.bat` and `sampleRunScriptingAgent.bat`, are included. The `sampleDiplomatScriptingAgent.bat` file is a sample script used when setting up a file to be executed from another Windows batch file. The `sampleRunScriptingAgent.bat` file is a sample script used when setting up a file to be executed from a process (e.g., from the pre- or post-command of a Diplomat MFT transaction). The `sampleDiplomatScriptingAgent.sh` file is a sample script for Linux systems.

**NOTE:** The batch files are only intended as examples. You must change the name of the file before you use it. If you do not change the filename, it will be overwritten the next time you update Diplomat MFT and any changes you have made will be lost.

**NOTE:** If the Diplomat MFT Scripting Agent jars and the JRE are not installed in the default directories on the local system, you must set the `DIPLOMAT_HOME` parameter to the complete pathname.

**NOTE:** Do not use `sampleDiplomatScriptingAgent.bat` as a template to create a batch file to be executed as a pre- or post-command in Diplomat MFT Enterprise Edition as it always generate a return code of '0'. These scripts are located in `C:\Program Files\Coviant Software\Diplomat-j\scriptingAgent` for Windows systems, `/opt/coviant/diplomat-j/scriptingAgent` for Linux installations, or the corresponding directory for your installation.

Here are a few examples using the script:

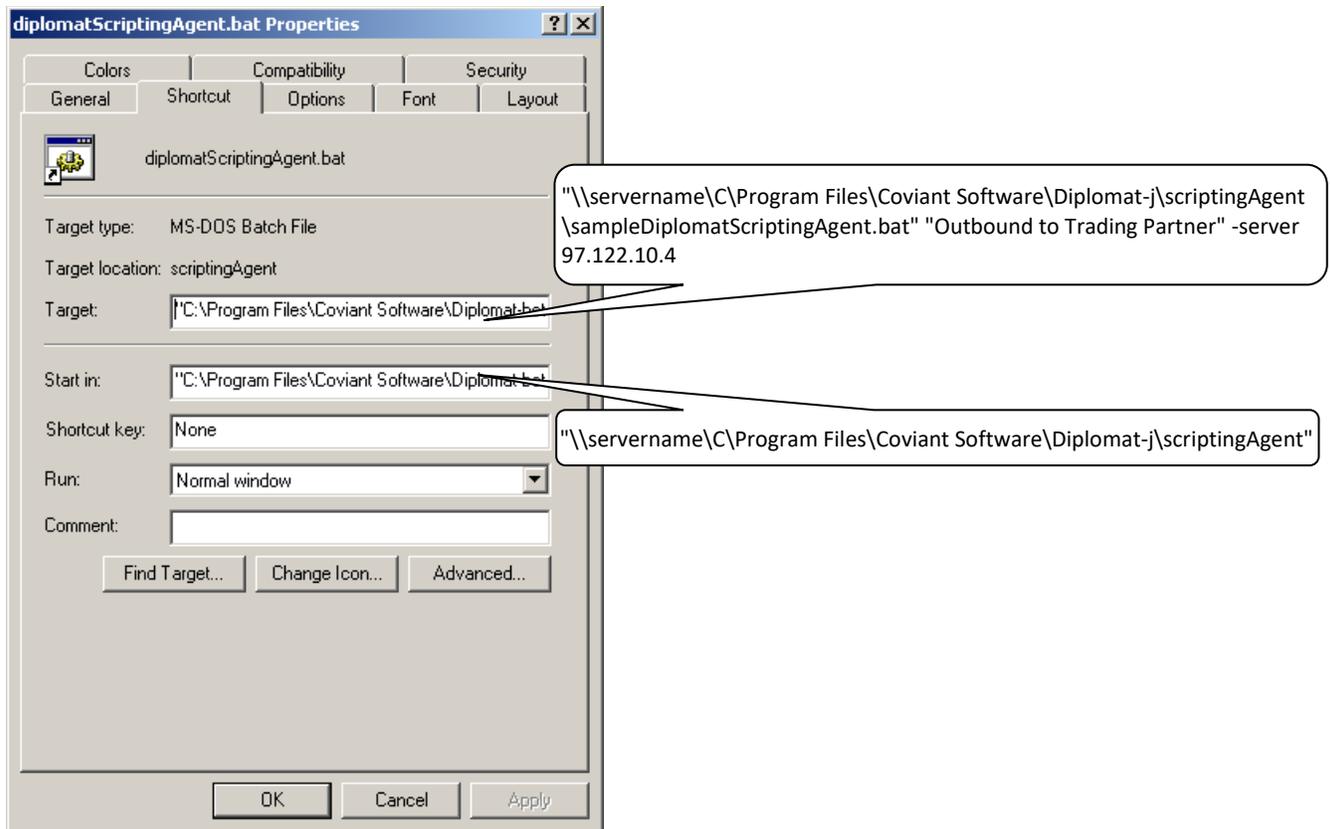
Command	Action
sampleDiplomatScriptingAgent "Transaction Name"	Runs transaction on localhost; Returns 0 if Diplomat MFT file transfer job executed successfully.
sampleDiplomatScriptingAgent "Transaction Name" -nowait	Run transaction on localhost; Returns 0 if request to schedule Diplomat MFT file transfer job successful.
sampleDiplomatScriptingAgent "Transaction Name" -server ServerName	Run transaction on host <i>ServerName</i> ; Returns 0 if Diplomat MFT file transfer job executed successfully.

**4. Schedule execution of script or set up an icon for manual execution.**

The script can be executed directly at the command line, by a 3<sup>rd</sup> party scheduler, or by another 3<sup>rd</sup> party application.

You can also set up a desktop icon that can be used to initiate requests to execute a Diplomat MFT file transfer job using the Diplomat MFT Scripting Agent. The Target field in the icon would either:

- Point to a directory with an executable file containing the appropriate Diplomat MFT Scripting Agent command with the appropriate parameters for the specific file transfer job.
- Contain a Diplomat MFT Scripting Agent command with the appropriate parameters for the specific file transfer job.



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**NOTE:** If the batch file or scripting agent jars being executed are not located on the same system as the desktop icon, a complete pathname needs to be entered as part of the “Target” and “Start in” fields shown above. Always use the [-password xxxx] parameter in the scripting agent command for user authentication in this configuration.

**NOTE:** No user identity information is captured in the log or audit trail at run-time if the scripting agent jars are not initiated from a Windows system. Also, configurations that use UNC pathnames rather than mapped drives to identify the location of batch files, jars, or other files may not capture authentication information in the log or audit trail.

## 7 Appendix A: Configuration Requirements

Your environment may include not only the computer systems to run Diplomat, but other systems that provide functionality that co-exists with or is used by Diplomat, such as ftp servers, mail servers, paging servers, and OpenPGP software for key import/export. Specific software versions tested for Diplomat Managed File Transfer are shown below.

Supported Software	
Diplomat MFT Service	Windows 10 and 11 (64-bit) Windows Server 2016, 2019, and 2022 (64-bit) Linux/Unix systems running Java Runtime Environment (JRE) 1.8 (64-bit)
Diplomat MFT Scripting Agent	Windows 10 and 11 (64-bit) Windows Server 2016, 2019, and 2022 (64-bit) Linux/Unix systems running Java Runtime Environment (JRE) 1.8 (64-bit)

The hardware configurations shown are based on approximately 50 simultaneous file transfer jobs with associated keys and partners. Your production environment may require less or more memory/disk space depending on the numbers of transactions, keys, and partners you use.

Minimum Hardware Configurations		
Diplomat MFT Service	Memory	1 GB
	Disk Space	250 MB
Diplomat MFT Scripting Agent	Memory Usage	512 MB
	Disk Space	160 MB

## 8 Appendix B: Glossary

**Additional Archive Directory** – Directory on the network where backup files for a specific file transfer job are written.

**Additional Encryption Key (AEK)** – Public key used when the user wants to encrypt files to more than one key.

**Active Window** – Right-hand side of the main screen for Diplomat MFT Client that displays the active key, partner, or transaction that is being viewed or edited. Some data is displayed in panels that can be maximized for editing and then minimized to save screen space.

**Allow Diplomat MFT Scripting Agent or API**– Allows an external process to initiate execution of an existing Diplomat MFT transaction.

**Business Users** – Persons responsible for specific file transfers with trading partners or internal groups.

**Debug** – A setting that when activated inserts system messages into an email notification message. It is used primarily to troubleshoot problems in jobs.

**Destination Directory** – The directory on an FTP server or local system where a transaction file is to be written.

**Diplomat MFT Administrator** – Person administering the Diplomat MFT Service and Diplomat MFT Configuration Database.

**Diplomat MFT Audit Database** – Database containing detailed records of every job executed and user activity. The audit database is a set of XML files where each job has a single file or a SQL database with three tables to capture Job, File, and User Activity and three tables in which to archive Job, File, and User Activity records.

**Diplomat MFT Client** – Desktop application that enables creation and modification of key, partner, transaction information, and configuration settings, as well as license management, report generation, and job scheduling.

**Diplomat MFT REST API** – HTTP/S API that enables development or extension of third-party applications to run file transfer jobs and obtain job status from the Diplomat MFT Service.

**Diplomat MFT Scripting Agent** – Java application that submits for execution a specified transaction that has been created and saved in a Diplomat MFT transaction database that may require an optional password.

**Diplomat MFT Service** – Run-time engine that executes transactions stored in the Diplomat MFT transaction database and interfaces with FTP servers, mail servers, and other systems, as needed. The Diplomat MFT Service is implemented as a Windows service. After installation, the Windows operating system starts the Diplomat MFT Service, which then runs in the background creating jobs for each transaction. Plus, it creates a log file with system messages, an audit database, and archives transaction files, if desired.

**Diplomat MFT Service Login** – Windows login identity for the Diplomat MFT Service on the Diplomat MFT site. Defaults to Local System.

**Diplomat MFT Transaction Database** – Contains all data needed to create and schedule jobs, including keys, partner profiles, transaction, and configuration data. The transaction database is comprised of a SQL database.

**Diplomat MFT Users** – Persons setting up new keys, partners, and transactions that are allowed to automatically login to the Diplomat MFT Client, but do not have access to certain administrative functions.

**Firewall** – A software program that protects computers on a network from unauthorized Internet access.

**FTP Server** – A software program that allows the receipt and pick-up of files, which typically resides outside a corporate firewall.

**Inbound Transaction** – The process of receiving a file from another organization with optional decryption and verification.

**IP Address** – The numerical identification of a computer connected to a network. The IP Address appears with periods separating groups of numbers. (i.e. 192.168.0.1).

**Job** – A job is a particular execution of a transaction. For example, if a transaction is scheduled to run once a day, a new job is created and executed once a day.

**Job Monitor** – A feature of Diplomat MFT that allows the real-time monitoring of job scheduling and execution.

**License File** – Diplomat MFT uses a license file named *diplomat.lic* to determine the number of keys you can have in your Diplomat MFT database and the expiration date of your license.

**Log File** – File containing chronological system messages generated as a result of Diplomat MFT operation.

**Mail Server** – A computer that acts as temporary recipient and storage for email messages sent to an individual.

**Main Screen** – Contains top menu bar, left-hand navigation tree, and active window for Diplomat MFT Client.

**Menu Bar** – Bar at the top of the main screen for Diplomat MFT Client that allows access to a variety of functions via sub-menus and pop-up dialog boxes.

**Menu Item** – Selection on the top menu bar of Diplomat MFT Client. When a menu item is selected either a sub-menu or a pop-up dialog box is displayed.

**Navigation Tree** – Left-hand side of the main screen for Diplomat MFT Client that displays folders, sub-folders, and objects with status indicators in a tree format for easy navigation

**OpenPGP** – Open PGP is one type of public key encryption technology. It is based on an asymmetric scheme that uses a pair of keys: a *public key*, which encrypts data, and a corresponding *private*, or *secret key* for decryption. The OpenPGP protocol, created by the Internet Engineering Task Force (IETF), defines standard formats for encrypted messages, signatures, private keys, and certificates for exchanging public keys.

**OpenPGP Command Line Tool** – OpenPGP products with a command line interface, such as PGP Command Line Server and McAfee e-Business Server.

**Open PGP Key Pair** – OpenPGP keys are always created as key pairs with a public key and a private key. The owner of a key pair keeps their key pair and gives their trading partner their public key.

**OpenPGP Public Key** – The OpenPGP key that is made available to an organization's trading partners to be used to encrypt data that is sent from the trading partner to the organization.

**Outbound Transaction** – The process of moving a file from within an organization to a receiving organization with optional encryption and signing of the file.

**Paging Application** – Software that converts email or files to a radio signal that is received by beepers.

**Panel** – Section of active window, usually surrounded by a blue border. Some larger panels can be maximized for editing and then minimized to save screen space.

**Partner Profile** – A set of information defining default parameters to be used when setting up a transaction with the trading partner.

**Passphrase** – Used by OpenPGP algorithms to encrypt your private key.

**PGP** – An acronym for Pretty Good Privacy, an encryption application developed by Phil Zimmerman that utilizes asymmetrical or public/key pairs to encrypt and decrypt files. Trademarked by PGP Corporation.

**Pop-up Dialog Box** – Window used to collect data for features accessed from the top menu bar in the Diplomat MFT Client.

**Primary Archive Directory** – Directory on the network where backup copies of files from all jobs are written.

**Public Partners** – Trading partners that provide you only their public keys for encryption and verification.

**Signature Key**– The OpenPGP key used to sign a file on encryption and authenticate/verify it on decryption.

**Source Directory** – The directory on an FTP server or local system where a transaction file is to be picked up.

**SQL Audit Database** – Contains two tables to capture Job and File records for each transaction and two tables in which to archive Job and File records, if desired.

**Status Indicator** – Colored icons that indicate scheduling status of transactions and suspend status of keys, partners, and transaction folders.

**Trusted Partners** – Trading partners that are considered part of your organization and can use key pairs for decryption or signing.

**User Activity** – Any action taken when using the Diplomat MFT client, such as when a user creates, updates, or deletes records in the Diplomat MFT transaction database and associated configuration files.