



TIBCO Foresight® REST API

Installation

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Introduction

TIBCO Foresight® REST API is a web application designed to expose the TIBCO Foresight® Instream® and TIBCO Foresight® Translator REST APIs, which can be used by applications that require the EDI/Flat File validation and/or EDI/Flat File/XML translation.

Installation Requirements

This section describes the supported platforms and disk space, system memory, and software requirements for Foresight® REST API.

Disk Space Requirements

The minimum disk space requirement is 20 GB.

System Memory Requirements

The minimum system memory requirement is 4 GB.

Supported Platforms

The supported platforms are as follows:

- RHEL 8.x
- RockyLinux 8.x

Software Requirements

Before you install and deploy Foresight REST API, ensure that you have the following software installed and deployed:

Table 1 Software Requirements

Software	Description
Foresight® Instream Standard or Healthcare Edition	If your Foresight REST API installation is to perform Instream operations, you must install Foresight Instream Standard or Healthcare Edition.
Foresight® Translator	If your Foresight REST API installation is to perform Translation operations, you must install Foresight Translator.

Software	Description
Docker	<p>You must install Docker for building the docker images.</p> <p>Docker provides a way to run applications securely in an isolated container, packaged with all its dependencies and libraries. Your application can run in any environment because all the dependencies are already present in the image of the application.</p>

Installation Modes and Procedures

You can run Foresight REST API either in Console mode or in Silent mode. Each mode is supported on all the platforms. Ensure that your system meets all the requirements described in the [Installation Requirements](#).

Installation Mode	Description	Reference
Console	In console mode, you can run the installer on a command line. This is useful if your machine does not have a GUI environment.	Installing in Console Mode
Silent	In silent mode, the installer installs the product without prompting you for the information.	Installing in Silent Mode

Installing in Console Mode

In console mode, you can run the installer on a command line. This is useful if your machine does not have a GUI environment.

Docker Files for TIBCO Foresight REST API

Foresight REST API provides configuration files for installing Foresight REST API inside the docker containers.

Foresight REST API also provides a docker file, which is a script consisting of various commands to automatically perform actions on a base image.

TIBCO Foresight REST API Docker Files

Foresight REST API provides the following configuration files and scripts for installation in Console mode:

File	Description
configuration.properties	Contains the properties to be set before building Foresight REST API docker images.
build-fsrest-engine.sh	Creates the Foresight Instream/Foresight Translator engine used by the Foresight REST API image.
build-images.sh	Creates the Foresight REST API docker images and pushes the images to the docker repository.

Building TIBCO Foresight REST API Engine for Docker

This step builds the Foresight Instream/Foresight Translator engine that the Foresight REST API Docker image uses. Building the Foresight REST API engine requires that the customer's licensed versions of Foresight Instream (Standard or Healthcare) and/or Foresight Translator be installed on the machine where the Foresight REST API Docker image is to be built.

The Foresight REST API engine must be built (or rebuilt) when:

- Foresight REST API is first installed on a machine.
- An update or hotfix to Foresight Instream and/or Foresight Translator is released and installed on the machine where the Foresight REST API Docker image is being built.
- For healthcare customers, whenever an update to the code tables or guidelines is released and installed on the machine where the Foresight REST API Docker image is being built.

Perform the following steps to build the Foresight REST API Engine:

Procedure

1. Download the `TIB_fsrest_1.2.0.tar.gz` file from the [TIBCO eDelivery](#) site, and extract the file contents to a folder.

To download the installation package, you require a username and password. In case you do not have it, contact TIBCO Technical Support.

2. For new Foresight REST API installations, or if the Foresight Instream and/or Foresight Translator installations have been removed, first install Foresight Instream (either Standard or Healthcare version) and/or Foresight Translator on the machine where the Foresight REST API docker image is to be built.

Update Foresight Instream and/ or Foresight Translator with any updates or hotfixes, or for healthcare customers, apply any code table or guideline updates.

3. Navigate to the `<folder>/fsrest-1.2.0/images/scripts` folder.

i Note: You need to input the host mount path, then the content under `images/services/fsrest/misc/FSRestDirs` gets copied to the mount path before the Foresight REST API image is running, if there is no mount path, then you can input `n` or `N`. The following is the text displayed while installation:

Do you want to mount the FSREST resource directory outside of the container? Please input the path or (n)o.

4. Run the following command:

```
./build-fsrest-engine.sh
```

5. Follow the prompts, entering the locations where Foresight Instream and Foresight Translator are installed. If one of these packages was not installed on the system, enter 'none' for its location.

On entry of the Foresight Instream/Foresight Translator locations, the script displays a screen to approve the engine build:

```
** Specify the Instream and Translator installations to use in
FSRest Engine

    Enter path of Instream installation to use or 'none':
/home/username/FSRest/TIBCO/Instream920/instream/9.2
    Use Instream installation in
'/home/username/FSRest/TIBCO/Instream920/instream/9.2' (y/n)? y

    Enter path of Translator installation to use or 'none':
/home/username/FSRest/TIBCO/Translator4.1/translator/4.1
    Use Translator installation in
'/home/username/FSRest/TIBCO/Translator4.1/translator/4.1' (y/n)? y

** Confirming components to be used to build FSRest
Instream/Translator Engine:
    Instream source directory   =
'/home/username/FSRest/TIBCO/Instream920/instream/9.2' (Healthcare
Version)
    Translator source directory =
'/home/username/FSRest/TIBCO/Translator4.1/translator/4.1'

    Proceed to build FSRest engine (y/n/q)?
```

Building TIBCO Foresight REST API Docker Images

Perform the following steps to build Foresight REST API components docker images:

Procedure

1. If you have not already done so, download the `TIB_fs-restapi_1.2.0.tar.gz` file from the [TIBCO eDelivery](#) site, and extract the file contents to a folder.
To download the installation package, you require a username and password. In case you do not have a username, contact TIBCO Technical Support.
2. Build the Foresight REST API Foresight Instream/Foresight Translator Engine as described in the previous section.
3. Navigate to `<folder>/fsrest-1.2.0/images/config` folder.
4. Open the `configuration.properties` file and configure the following properties:

Configuration Properties

Property	Description
<code>docker_repository=<docker_registry_ip>: <docker_registry_port></code>	<p>Required.</p> <p><code><docker_registry_ip></code> is the IP address of the machine in which you want to push the docker images.</p> <p><code><docker_registry_port></code> is the optional port number of the Docker repository at the IP address <code>speciDockern <docker_registry_ip></code>.</p> <div>Note: If this parameter is not needed, remove the preceding colon (:).</div>
<code>docker_username=</code>	<p>Optional.</p> <p>Specify the username of the Docker login.</p>

5. Save and close the `configuration.properties` file.
6. Navigate to `<folder>/fsrest-1.2.0/images/scripts` folder.

7. Run the following command:

```
./build-images.sh
```

If you are running the script for the first time, the following message is displayed:

```
You must accept the License agreement before proceeding. Press
ENTER key to read the License. Press q to finish reading.
```

8. Press the **Enter** key to read the license agreement. Press **q** to finish the reading.
9. Enter 'y' to accept the license agreement.
10. You are now prompted to confirm the Foresight REST API engine component paths. Foresight REST API Docker image is built with the following Foresight Validation/Translation engine:

```
FSRest Engine Build                               Mon Dec 11 05:49:17 EST
2023

=====
====
Instream component:
'/home/tibco/FSRest/TIBCO/Instream920/instream/9.2' (Healthcare
Version)
Translator component:
'/home/tibco/FSRest/TIBCO/Translator4.1/translator/4.1'
Created by user:      tibco pts/1      2023-12-11 01:18
(xx.xx.xxx.175)

Proceed with this Engine? (y/n)
```

Check the details. Enter 'y', if you want to proceed with this engine and 'n' if you do not want to proceed with this engine.

11. After confirming the engine paths, you are prompted to clean up the path `images/services/fsrest/misc/FSRestDirs/guidelines/` where the user might have uploaded customized guidelines and map files; and copy the guidelines and maps from the Foresight REST API engine.

```
Do you want to clean up the from guidelines under the FSRest
```

```
image's guidelines resource directory? Please answer (y)es or (n)o.  
Do you want to copy the guidelines from FSRest Engine? Please  
answer (y)es or (n)o.  
Do you want to clean up the map files under the FSRest image's maps  
resource directory? Please answer (y)es or (n)o.  
Do you want to copy the map files from FSRest Engine? Please answer  
(y)es or (n)o.
```

12. After clean-up and copying the guidelines, you are prompted to enable SSL.

By enabling SSL, the user can call Foresight REST API through HTTPS to encrypt communication so that attackers cannot steal data.

```
Do you want to enable ssl? Please answer (y)es or (n)o.
```

If you enter (n)o, you are directly prompted to the next step. However, if you enter (y)es, you are prompted to enter the following details related to the SSL, before you move to the next step.

Properties	Description
keystoreFile	This is the path where the certificate is stored in your local machine. < Path to the file > / <keystore-filename>
keystoreType	Keystore type PKSCS12 or JKS
keystorePass	Keystore password

i Note: If you enable SSL, Foresight REST API runs on HTTPS with port 8443. While running the docker image, ensure that you map port 8443 instead of 8080.

i Note: This release of Foresight REST API only supports server-side SSL authentication.

13. After enableSSL confirmation, you are prompted to configure the API key

Do you want to secure with API key? Please answer (y)es or (n)o

If you enter (n)o, you are directly prompted to the next step. However, if you enter (y)es, you are prompted to enter the following details related to the key, before you move to the next step.

i Note: An API key security is a code used to authenticate an application.

Property	Description
jdbc.platform	MYSQL or Oracle If you are using an Oracle database, add its connector lib path to the database.driver.path
jdbc.driver	Database driver URL
jdbc.url	Database connection URL
jdbc.username	Database username
jdbc.password	Database password
jdbc.databasesname	Database name for MYSQL or Oracle database
APIKeyExpireTime	Expire time (in seconds) for API key

14. After the configuration of the API key, you are prompted to configure a mount path.

Do you want to mount the FSREST resource directory outside of the

```
container? Please input the path or (n)o.
```

You need to input the host mount path, then the content under `images/services/fsrest/misc/FSRestDirs` gets copied to the mount path before the FSREST image is running, if there is no mount path, then you can input `n` or `N`.

15. In the next step, you are prompted to enter the docker password for the details entered in the `configuration.properties` file. Enter the password.

i Note: This step is optional and the prompt comes only when you have provided the `docker_repository`.

```
#####
#####
Login to xx.xx.x.xxx:5000

#####
#####

Password:
```

16. Once you log in, you are prompted to push the Docker images to the Docker repository.

```
Login Succeeded
Do you want to push the TIBCO Foresight REST API docker image to
<machine-id>:5000?
If not, the TIBCO Foresight REST API docker image will still be
built at 'local'.
(y/n)
```

Enter 'y' or 'n' as per the following requirements:

- If you enter 'y', the Foresight REST API docker image is built and pushed to the Docker repository.
- If you enter 'n', the Foresight REST API docker image is built locally.

Installing in Silent Mode

In silent mode, the installer installs the product without prompting you for information.

TIBCO Foresight REST API Docker Files

Foresight REST API provides the following docker configuration files and scripts, for installation in Silent Mode:

File	Description
configuration.properties	Contains the docker properties to be set before building Foresight REST API docker images.
build-fsrest-image-silent.properties	Contains all other properties to be set before building Foresight REST API docker images.
build-fsrest-image-silent.sh	Creates the Foresight REST API docker images and pushes the images to the docker repository.

Building TIBCO Foresight REST API Docker Images

Procedure

1. Navigate to <folder>/fsrest-1.2.0/images/config folder.
2. Open the configuration.properties file and configure the following properties:

Configuration Properties

Property	Description
docker_repository=<docker_registry_ip>: <docker_registry_port>	<p>Required.</p> <p><docker_registry_ip> is the IP address of the machine in which you want to push the docker images.</p> <p><docker_registry_port> is the optional port number of the Docker repository at the IP address specified in <docker_registry_ip>.</p> <p>Note: If this parameter is not needed, remove the preceding colon (:)</p>
docker_username=	<p>Optional.</p> <p>Specify the username of the Docker login.</p>

3. Save and close the configuration.properties file.
4. Navigate to <folder>/fsrest-1.2.0/images/scripts folder.
5. Open the build-fsrest-image-silent.properties file and edit the properties as follows:

Properties	Parameters
Do you accept the license?	<p>Y/y = Accept license</p> <p>N/n = Do not accept license</p> <p>Enter Y/y or N/n.</p>
instreamPath	<p>Enter the file path where Foresight Instream is installed.</p> <p>For example: </instream path/instream version></p> <p>If Foresight Instream is not installed, specify the path as 'none'.</p>

Properties	Parameters
translatorPath	<p>Enter the file path where Foresight Translator is installed.</p> <p>For example: <code></translator path/translator version></code></p> <p>If Foresight Translator is not installed, specify the path as 'none'.</p>
dockerInstallDir	<p>Enter the directory path where the Foresight REST API engine resides in the docker image. This entry must match the entry in the Dockerfile where the Foresight REST API is added.</p> <p>For example:</p> <pre>ADD ./engine/FSRest_ITEngine.tar.gz /usr/share/tomcat/tibco/instream/fseng</pre> <p>dockerInstallDir for the above path is <code>/usr/share/tomcat/tibco/instream/fseng</code></p>
cleanGuidelines	<p>Y/y or N/n</p> <p>Enter Y/y if you want to clean the guidelines in the Foresight REST API image's guideline resource directory.</p> <p>Enter N/n if you do not want to clean the guidelines in the Foresight REST API image's guideline resource directory.</p>
copyGuidelines	<p>Specify if the guideline files from Foresight Instream and/or Foresight Translator are to be copied to the Foresight REST API image.</p> <div> <p>Note: A guideline file is a file with the extension <code>.std</code>, <code>.sef</code>, or <code>.xsd</code> found in the Foresight Instream and/or Foresight Translator installation's database directory.</p> </div> <p>Valid parameters:</p> <p>N = Do not copy any guideline files from the Foresight</p>

Properties	Parameters
	<p>Instream or Foresight Translator installations to the Foresight REST API image.</p> <p>I = Copy guideline files from the Foresight Instream installation.</p> <p>T = Copy guideline files from the Foresight Translator installation.</p> <p>IT = Copy guideline files from both installations, first Foresight Instream and then Foresight Translator. Any guideline file in both installations have the file from Foresight Translator overwriting the one from Foresight Instream.</p> <p>TI = Copy guideline files from both installations, first Foresight Translator and then Foresight Instream. Any guideline files in both installations have the file from Foresight Instream overwriting the one from Foresight Translator.</p> <p>For example:</p> <pre>copyGuidelines = TI</pre>
cleanMaps	<p>Y/y or N/n</p> <p>Enter Y/y if you want to clean the map files in the Foresight REST API image's map resource directory.</p> <p>Enter Y/y if you do not want to clean the map files in the Foresight REST API image's map resource directory.</p>
copyMaps	<p>Y/y or N/n</p> <p>Enter Y/y if you want to copy the map files from the Foresight REST API engine.</p> <p>Enter N/n if you do not want to copy the map files from the Foresight REST API engine.</p>

Properties	Parameters						
enableSSL	<p>Y/y or N/n</p> <p>Enter Y/y if you want to enable SSL. Enter the given properties related to the SSL:</p> <hr/> <table> <tr> <td>keystoreFile</td><td> <p>This is the path where the certificate is stored in your local machine.</p> <p>< Path to the file > / <keystore-filename></p> </td></tr> <tr> <td>keystoreType</td><td> <p>Keystore type</p> <p>PKSCS12 or JKS</p> </td></tr> <tr> <td>keystorePass</td><td>Keystore password</td></tr> </table> <hr/> <p>Note: If you enable SSL, Foresight REST API runs on https with port 8443. While running the docker image, ensure that you map port 8443 instead of 8080.</p> <p>Enter N/n if you do not want to enable SSL.</p> <p>Note: This release of Foresight REST API only supports server-side SSL authentication.</p>	keystoreFile	<p>This is the path where the certificate is stored in your local machine.</p> <p>< Path to the file > / <keystore-filename></p>	keystoreType	<p>Keystore type</p> <p>PKSCS12 or JKS</p>	keystorePass	Keystore password
keystoreFile	<p>This is the path where the certificate is stored in your local machine.</p> <p>< Path to the file > / <keystore-filename></p>						
keystoreType	<p>Keystore type</p> <p>PKSCS12 or JKS</p>						
keystorePass	Keystore password						
dockerPush	<p>Y/y or N/n</p> <p>Enter Y/y if you want to push the Docker image to the Docker repository.</p> <p>Enter N/n if you do not want to push the Docker image to the Docker repository.</p>						
removeOldDockerImage	Y/y or N/n						

Properties	Parameters														
	<p>Enter Y/y if you want the system to look for and remove an existing Docker image.</p> <p>Enter N/n you do not want the system to look for and remove an existing Docker image.</p>														
secureWithAPIKey	<p>Enter Y/y if you want to enable API Key Security. Enter the given properties related to the key:</p> <table> <tr> <td>jdbc.platform</td><td> MYSQL or Oracle If you are using an Oracle database, add its connector lib path to the database.driver.path </td></tr> <tr> <td>jdbc.driver</td><td>Database driver URL</td></tr> <tr> <td>jdbc.url</td><td>Database connection URL</td></tr> <tr> <td>jdbc.username</td><td>Database username</td></tr> <tr> <td>jdbc.password</td><td>Database password</td></tr> <tr> <td>jdbc.databasesname</td><td>Database name for MYSQL database</td></tr> <tr> <td>APIKeyExpireTime</td><td>Expire time (in seconds) for API key</td></tr> </table> <p>Enter N/n if you do not want to enable API Key Security.</p> <p>For more information, see the <i>TIBCO Foresight® REST API User Guide</i>.</p>	jdbc.platform	MYSQL or Oracle If you are using an Oracle database, add its connector lib path to the database.driver.path	jdbc.driver	Database driver URL	jdbc.url	Database connection URL	jdbc.username	Database username	jdbc.password	Database password	jdbc.databasesname	Database name for MYSQL database	APIKeyExpireTime	Expire time (in seconds) for API key
jdbc.platform	MYSQL or Oracle If you are using an Oracle database, add its connector lib path to the database.driver.path														
jdbc.driver	Database driver URL														
jdbc.url	Database connection URL														
jdbc.username	Database username														
jdbc.password	Database password														
jdbc.databasesname	Database name for MYSQL database														
APIKeyExpireTime	Expire time (in seconds) for API key														
mountDir	Input the path or N/n														

Properties	Parameters
	<p>You need to input the host mount path, then the content under <code>images/services/fsrest/misc/FSRestDirs</code> gets copied to the mount path before the FSREST image is running, if there is no mount path, then you can input <code>n</code> or <code>N</code>.</p> <p>The following is the example:</p> <pre># Specify the mount directory of FSREST root folder. # When mount directory is n or N, no mount folder will be set. # mountDir=/fsmount # mountDir=n</pre>

- Run the following command:

```
./build-fsrest-image-silent.sh
```

- Now you are prompted to enter the Docker password. Enter the password.



Note: This step is optional and the prompt comes only when you have provided the `docker_repository`.

```
#####
#####
Login to xx.xx.x.xxx:5000

#####
#####

Password:
```

- Once you enter the password, you receive a message Login Succeeded. On successful installation, you receive this message:

TIBCO Foresight REST API engine and docker image build is completed.

Running TIBCO Foresight REST API

After building the docker image, you can run the Foresight REST API image using the 'docker run' command.

For Example:

When SSL is not enabled:

```
docker run -p 8080:8080 -d <IMAGE ID>
```

When SSL is enabled:

```
docker run -p 8443:8443 -d <IMAGE ID>
```

You can customize the docker run command as per your requirement.

Uninstalling TIBCO Foresight REST API

Perform the following steps to uninstall Foresight REST API.

Procedure

1. Stop Foresight REST API Docker image.
2. Remove Foresight REST API Docker image.

TIBCO Documentation and Support Services

For information about this product, you can read the documentation, contact Support, and join TIBCO Community.

How to Access TIBCO Documentation

Documentation for TIBCO products is available on the [Product Documentation website](#), mainly in HTML and PDF formats.

The [Product Documentation website](#) is updated frequently and is more current than any other documentation included with the product.

Product-Specific Documentation

The documentation for this product is available on the [TIBCO Foresight® REST API Product Documentation](#) page.

How to Contact Support for TIBCO Products

You can contact the Support team in the following ways:

- To access the Support Knowledge Base and getting personalized content about products you are interested in, visit our [product Support website](#).
- To create a Support case, you must have a valid maintenance or support contract with a Cloud Software Group entity. You also need a username and password to log in to the [product Support website](#). If you do not have a username, you can request one by clicking **Register** on the website.

How to Join TIBCO Community

TIBCO Community is the official channel for TIBCO customers, partners, and employee subject matter experts to share and access their collective experience. TIBCO Community offers access to Q&A forums, product wikis, and best practices. It also offers access to extensions, adapters, solution accelerators, and tools that extend and enable customers to gain full value from TIBCO products. In addition, users can submit and vote on feature

requests from within the [TIBCO Ideas Portal](#). For a free registration, go to [TIBCO Community](#).

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