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REST API Guide

Informatica REST API Guide
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Preface

The *REST API User Guide* is written for developers who are responsible for designing and implementing transformations. The guide explains how to call and run Data Transformation services using the REST API. This book assumes that you have a basic knowledge of how to use Data Transformation. It also assumes that you understand JSON and API programming techniques.

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CHAPTER 1

REST API Setup and Introduction

This chapter includes the following topics:

- REST API Setup Overview, 7
- Prerequisites, 7
- Installation, 7
- Unix Installation, 8

REST API Setup Overview

REST defines a set of architectural principles by which you can design web services that transfer HTTP calls through a wide range of clients written in different languages.

An application can call the Data Transformation REST API to run a Data Transformation service.

Install the REST API on the same machine with a `ServiceDB` directory that contains the services that you want to run.

Prerequisites

Before you set up the REST API, verify that your machine has the following prerequisites:

- Informatica Data Transformation
- 64-bit Tomcat with 64-bit Java
- DTRestAPI.war file
- DTRestClient.jar file

Installation

To set up the REST API, perform the following steps.

1. Copy the file `DTRestAPI.war` to the `<tomcat_installation>\webapps` directory.

2. Add the path for the Data Transformation installation to `IFCONTENTMASTER_HOME`, `PATH`, and `CLASSPATH` in `Catalina.bat` in the `<tomcat_installation>\bin` directory.
3. Go to the `<tomcat>\bin` directory and run or start `Catalina.bat`. Type one of the following commands:
   - `catalina.bat run`
   - `catalina.bat start`
4. Copy the Data Transformation services that you want to run with a REST API call to the `ServiceDB` directory.

Unix Installation

To set up the REST AP in Unix, perform the following steps.

1. Copy the file Data Transformation license file `CDELicense.cfg` to the `<DT_installation>` directory.
2. Copy the file `DTRestAPI.war` to the `<tomcat_installation>/webapps` directory.
3. In the Data Transformation`setEnv.sh` file, define the source.
4. Edit the `Catalina.bat` file in the `<tomcat_installation>\bin` directory as follows:
   a. Set `IFCONTENTMASTER_HOME` to the path for the `<DT_installation>` directory.
   b. Prepend `PATH` with `<DT_Installation>/bin;%PATH%`.
   c. Prepend `CLASSPATH` with `<DT_Installation/api/lib/CM_JavaAPI.jar`.
5. Go to the `<tomcat>/bin` directory. In the command line run the following commands:

   ```
   goto <DT_Installation>
   run setEnv.sh
   ```

   Then type:
   - `catalina.sh run`
   - `catalina.sh start`
6. Copy the Data Transformation services that you want to run with a REST API call to the `ServiceDB` directory.

CHAPTER 2

REST API Calls

This chapter includes the following topics:

- REST API Calls Overview, 9
- API Call and Request Body Syntax, 9
- Response Body, 11
- Accessing Swagger Defintion, 12

REST API Calls Overview

An application can call the Data Transformation REST API to run a Data Transformation service. Use the REST API to do the following tasks:

- Define the service to run.
- Define the input type, such as a file or buffer.
- Define the output type, such as a file or buffer.
- Define additional input or output.
- Define service parameters.
- Run the service.

You can run a Parser, Serializer, XMap, or Mapper service with the REST API.

For the Swagger definition of the REST API, see "Accessing Swagger Defintion" on page 12.

API Call and Request Body Syntax

Use a REST API call to run a Data Transformation service.

Use the following URL for the REST API call, where <Service_Name> is the name of the Data Transformation service that the API runs:

```
http://localhost:8080/DTRestApi/informatica/dt/transform/v0.1/<Service_Name>
```

You can provide a request body in JSON to the REST API call. The following table describes the request body objects:

Object	Arguments
input	Specify a default input port for the Data Transformation service. The object has following arguments: - `type`: `FILE` or `BUFFER`. The input type determines whether the input is data or a source file path. - `value`: If the `type` is `FILE`, the value is the input file path. If the `type` is `BUFFER`, the value is a text string
output	Specify a default output port for the Data Transformation service. The object has following arguments: - `type`: `FILE` or `BUFFER`. The output type determines whether the output is provided as a buffer or saved to a target file path. - `value`: If the `type` is `FILE`, the value is the output file path. If the `type` is `BUFFER`, the value does not have to be specified and can be removed.
additionalInputs	Specify additional input ports for the Data Transformation service. A call can contain up to 15 input ports. The object has following arguments: - `name`: The name of the additional input port. - `type`: `FILE` or `BUFFER` - `value`: If the `type` is `FILE`, the value is the input file path. If the `type` is `BUFFER`, the value is a text string.
additionalOutputs	Specify additional output ports for the Data Transformation service. A call can contain up to 15 output ports. The object has following arguments: - `name`: The name of the additional output port. - `type`: `FILE` or `BUFFER` - `value`: If the `type` is `FILE`, the value is the output file path. If the `type` is `BUFFER`, the value is empty.
serviceParameters	Provides the Data Transformation service with values to apply to variables in the service parameter ports. A call can contain up to 15 service parameters. The object has following arguments: - `name`: The name of the service parameter. - `value`: The value of the service parameter.

Request Body Syntax Example

The following code contains the request body syntax:

```
{
  "input": {
    "type": "FILE",
    "value": "C:\Files\Meida\r99315.txt"
  },
  "output": {
    "type": "BUFFER",
  },
  "additionalInputs": [
    {
      "name": "SecondBill",
      "type": "FILE",
      "value": "C:\Files\Meida\r43615.txt"
    }
  ],
  "serviceParameters": [
    {
```

```
        "name": "LastPayment",
        "value": "1037"
      }
    ]
  }
```

Response Body

The REST API sends a response header and response body in JSON format with information about the success or failure of the REST API call.

The response header can contain the following information:

- server
- content-type
- content-language
- content-length
- date
- connection
- transfer-encoding
- severity
- errorCode
- description
- logFile

The response body can contain information about the output and additional output ports. If the output type was file, the response body contains a path to the output. If the output type was buffer, the response body contains the buffer contents. The response body can also contain a success or failure code and message.

Success Codes

If the REST API call was successful, the API might return the following codes in the response body:

- 200: Returns data.
- 201: Request is created successfully.
- 500: Service execution succeeded.

Error Codes

If the REST API call failed, the API might return the following codes in the response body:

- 400: Service name was not provided.
- 405: Input is not valid.

Accessing Swagger Defintion

Swagger is a standard language that defines REST APIs.

To access the Swagger definition for the REST API, use the URL `http://<DT installation local host>:8080/DTRestApi`.

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