Documentation

IBM Workload Scheduler integration with Tableau

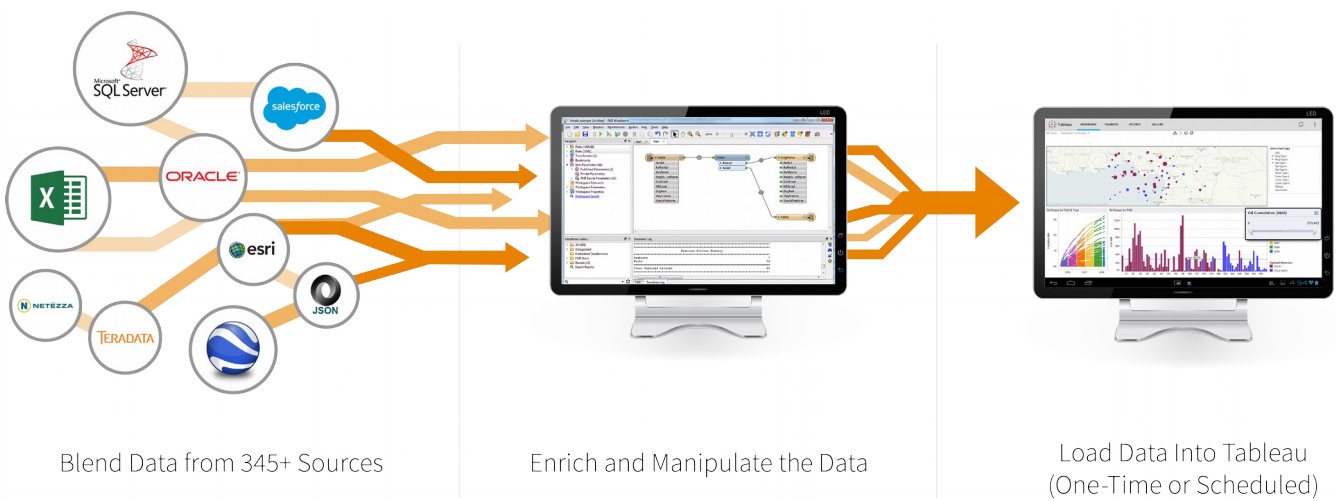| Written by : **Miguel Sanders** Uniforce	Date : **March 25 2017**

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CHANGE HISTORY

Version	Date of change	Change detail
1.0	March 25 2017	Initial version by M. Sanders
1.1	July 11 2017	Added support for Tableau Server 10.3 and Tableau Online

1. INTRODUCTION

Tableau made its mark on the world of Business Intelligence by being one of the first companies to give business users the ability to perform fairly complex data visualization in a very intuitive, drag and drop manner. Tableau integrates with the most common data sources and offers out of the box integration with a variety of big data platforms, including Hadoop.

By leveraging the integration with IBM Workload Scheduler, you will be able to visualize the refreshed data in Tableau Server or Tableau Online very quickly.

Blend Data from 345+ Sources   Enrich and Manipulate the Data   Load Data Into Tableau
(One-Time or Scheduled)

2. INSTALLING AND CONFIGURING THE PLUG-IN FOR TABLEAU

The following prerequisites must be met in order to use the IBM Workload Scheduler plug-in for Tableau.

- IBM Workload Scheduler 9.1 or later

- IBM Dynamic Workload Console 9.1 or later

- Tableau 10.1 or later

To install and configure the IBM Workload Scheduler plug-in for Tableau, perform the following steps:

- Copy *com.ibm.scheduling.agent.tableau_<version>.jar* to the *<TWA_HOME>/TWS/applicationJobPlugIn* folder on either the Master Domain Manager or a Dynamic Domain Manager

- Copy *com.ibm.scheduling.agent.tableau _<version>.jar* to the *<TWA_HOME>/TWS/JavaExt/eclipse/plugins* folder on the Dynamic Agent that will run the Tableau jobs

- Modify *config.ini* located in *<TWA_HOME>/TWS/JavaExt/eclipse/configuration* on the Dynamic Agent that will run the Tableau jobs. At the end of the line that starts with "osgi.bundles=", add the following: *",com.ibm.scheduling.agent.tableau@4:start"*

- Restart the WebSphere Application Server of either the Master Domain Manager or the Dynamic Domain Manager.

- Restart the Dynamic Agent

- Restart the Dynamic Workload Console

3. DEFINING A TABLEAU JOB

From the Dynamic Workload Console, you can define a Tableau job as follows:

- In the Dynamic Workload Console navigation tree, expand *Administration* and select *Manage Workload Definitions*.

- Specify the name of the engine. Subsequently, the Workload Designer is displayed.

- In the Working List panel, select *New -> Job Definition -> Business Analytics -> Tableau*.

- On the *Tableau* panel, fill in the job details

    - **Hostname** : Hostname of the Tableau Server or Tableau Online.

    - **Username** : The username to log on to Tableau Server or Tableau Online.

    - **Password** : The password of the user that will log on to Tableau Server or Tableau Online.

        To validate the connection, click *Test Connection*.

    - **Workbook or Data Source** : The name of the workbook or data source that you want to refresh.

    - **Incremental** : By default, extracts are doing a full refresh. Select "Incremental" to run an incremental refresh.

    - **Project** : The name of the project.

    - **Polling Period** : The monitoring frequency determines how often the job is monitored. The default value is 10 seconds..

    - **Timeout** : The monitoring time determines for how long the job is monitored. If the job hasn't finished by the end of the timeout interval, the job is marked as ABEND. The default value is 7200 seconds.

TABLEAU (9.4.0.00) - DELTA#P_TABLEAU_DEMO

Select an Action ▼

General	Affinity	Recovery Options	Tableau	Versions

Connection Details

* Hostname   https://dub01.online.tableau.com

* Username   miguel.sanders@uniforce.be

* Password   ••••••••••••••••••••••   •••

Test Connection

Refresh Extracts

○ Workbook

☐ Incremental

◉ Data source   Clients

* Project   IWS

* Polling period 10

* Timeout   7200

Alternatively, the *composer* command line can be used to define the job. Example:

```
DELTA#P_TABLEAU_DEMO

TASK

<?xml version="1.0" encoding="UTF-8"?>

<jsdl:jobDefinition xmlns:jsdl="http://www.ibm.com/xmlns/prod/scheduling/1.0/jsdl"
xmlns:jsdltableau="http://www.ibm.com/xmlns/prod/scheduling/1.0/jsdltableau" name="TABLEAU">

  <jsdl:application name="tableau">

    <jsdltableau:tableau>

      <jsdltableau:TableauParameters>

        <jsdltableau:TableauParms>

          <jsdltableau:connectionDetails>

            <jsdltableau:server>https://dub01.online.tableau.com</jsdltableau:server>

            <jsdltableau:username>miguel.sanders@uniforce.be</jsdltableau:username>

            <jsdltableau:password>{aes}74Pg+hGHtZh4UgwmQmNsZC=</jsdltableau:password>

          </jsdltableau:connectionDetails>

          <jsdltableau:refreshExtracts>

            <jsdltableau:workbookOrDatasource>

              <jsdltableau:datasourceButton>

                <jsdltableau:datasource>Clients</jsdltableau:datasource>

              </jsdltableau:datasourceButton>

            </jsdltableau:workbookOrDatasource>

            <jsdltableau:project>IWS</jsdltableau:project>

            <jsdltableau:pollingPeriod>10</jsdltableau:pollingPeriod>

            <jsdltableau:pollingTimeout>7200</jsdltableau:pollingTimeout>

          </jsdltableau:refreshExtracts>

         </jsdltableau:TableauParms>

       </jsdltableau:TableauParameters>

     </jsdltableau:tableau>

  </jsdl:application>

</jsdl:jobDefinition>

RECOVERY STOP
```

4. MONITORING A TABLEAU JOB

Like regular jobs, you can monitor Tableau jobs by using either the Dynamic Workload Console or the *conman* command line.

Plan Name: Current Plan

@#@.P_TABLEAU_DEMO

Job Log...	Dependencies...	Release Dependencies	Rerun...	What-if	Job Stream View	More Actions ⌄	◇ ⌄

Status	^ Internal Status	^ Job	^ Job Type	^ Workstation (Job)	^ Job Stream	^ Workstation (Job Stream)
☐ ✅ Successful	SUCC	P_TABLEAU_DEMO	Tableau	DELTA	JOBS	DELTA

```
= Job Number: 307272995
= Fri 07/14/2017 13:46:10 CEST
================================================================
Finished refresh of extracts (new extract id:{E830ADDA-6B22-47E7-8940-6A84416C3620}) for Data Source 'Clients'


================================================================
= Exit Status        : 0
= Elapsed Time (hh:mm:ss) : 00:00:23
= Fri 07/14/2017 13:46:33 CEST
================================================================
```