

OSD4SF: The Open Source Dashboard for Salesforce

Version 1.0.3

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We provide this Open Source Dashboard for Salesforce (“**OSD4SF**” or “**OSD** for **SF**”) in the hope that it will be useful, but without any warranty; without even the implied warranty of MERCHANTABILITY or FITNESS FOR A PARTICULAR PURPOSE.

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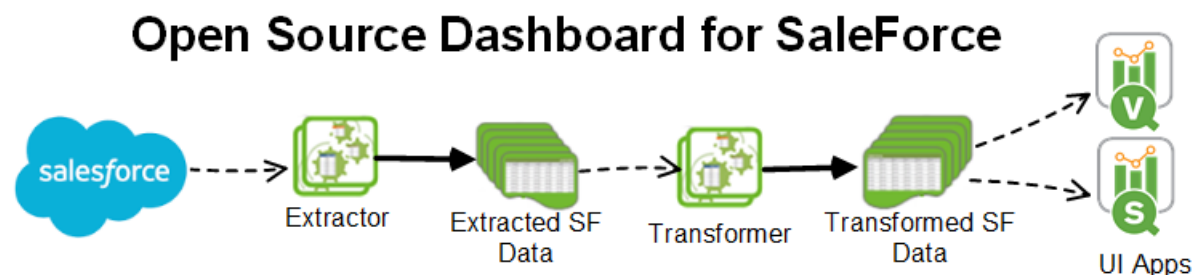
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Introduction

Salesforce, also known as SFDC, is a hosted (software as a service or SAAS) customer relationship management (CRM) package. Many QlikView and Qlik Sense customers build dashboards sourced from Salesforce data to support their business goal of Performance Management of Sales, Marketing and the Customer Success Organization (CSO).

Since default Salesforce objects (tables and fields) are the same across all Salesforce implementations, a single common set of Qlik assets can be used by all Qlik customers, for both QlikView and Qlik Sense, to source data from Salesforce for Sales, Marketing and Customer Success Organization dashboards.

As such, we have created and posted a common set of Qlik assets as an open source project on Qlik Branch and GitHub for free use by Qlik customers. The resulting Open Source Dashboard for Salesforce (“**OSD4SF**” or “**OSD** for **SF**”) is not a demo, template or accelerator. Rather, this **OSD4SF** is a **ready-to-deploy** Salesforce dashboard, including ETL and UI components, implemented as a set of QVFs for Qlik Sense and a set of QVWs for QlikView.



Benefits of the Open Source Dashboard for Salesforce

1. **Pre-built Solution at no additional cost** (above the required Salesforce & Qlik licenses or subscriptions):

The **OSD4SF**, as posted for free download on Qlik Branch and GitHub, provides a **ready-to-deploy** Qlik dashboard for Salesforce.

- a. To deploy the dashboard, the customer simply needs to:
 - i. Configure the Salesforce connector and folder connections in their favorite BI product.
 - ii. Reload the QVF or QVW chain in sequence:
 1. Extractor
 2. Transformer
 3. UI App
 - The customer does **not** need to do *any* scripting or UI work, or hire a consultancy, to quickly deploy a functional SF dashboard that covers the primary default [Sales Tables](#) and [Support Objects](#), as well as the optional [Financial Force PSA](#) (Professional Services Automation) module.
2. **Product Flexibility:** The **OSD** ETL components and front-end UI apps run within the top 4 BI products: QlikView Desktop, Qlik Sense Desktop, QlikView Server and Qlik Sense Enterprise.
 3. **Compatibility:** The OSD works without modification with all Salesforce implementations. Additionally, the **OSD** is based on built-in Qlik functionality; extensions are *not* required to run the **OSD**.
 4. **Custom Data Support:** Additional Salesforce data, including custom tables and fields, may be freely added to the **OSD**.
 - a. The posted **OSD** includes examples for custom tables and fields that are part of the FinancialForce PSA Module.
 - b. Support for additional optional modules (such as CPQ) may be freely implemented for specific projects and then optionally contributed to the GitHub repository for global community benefit.
 5. **Open Source:** Customers and prospects are welcome enhance the **OSD** freely for their requirements.

Current Limitations and Future Plans

This, **version 1.0.1**, is the very 1st public release of the **OSD4SF**. As such, the OSD does not have every “[bell and whistle](#)” that could possibly be added to a Qlik dashboard.

Going forward we will be enhancing the **OSD** to include more capabilities and features; we also welcome additional contributions and enhancements from the broader community of Qlik employees, customers and partners. In the meantime, even in this v1 release, the **OSD** is a functional and **ready-to-deploy** Qlik dashboard that enables Qlik customers to more quickly achieve their Salesforce analysis goals.

Future enhancement plans include performance optimizations, additional sheets, and a greater number and wider variety of master items & visualizations.

Instructions for the Open Source Dashboard for Salesforce

ZIP File Download and Unblock Instructions (for Both Qlik Sense and QlikView)

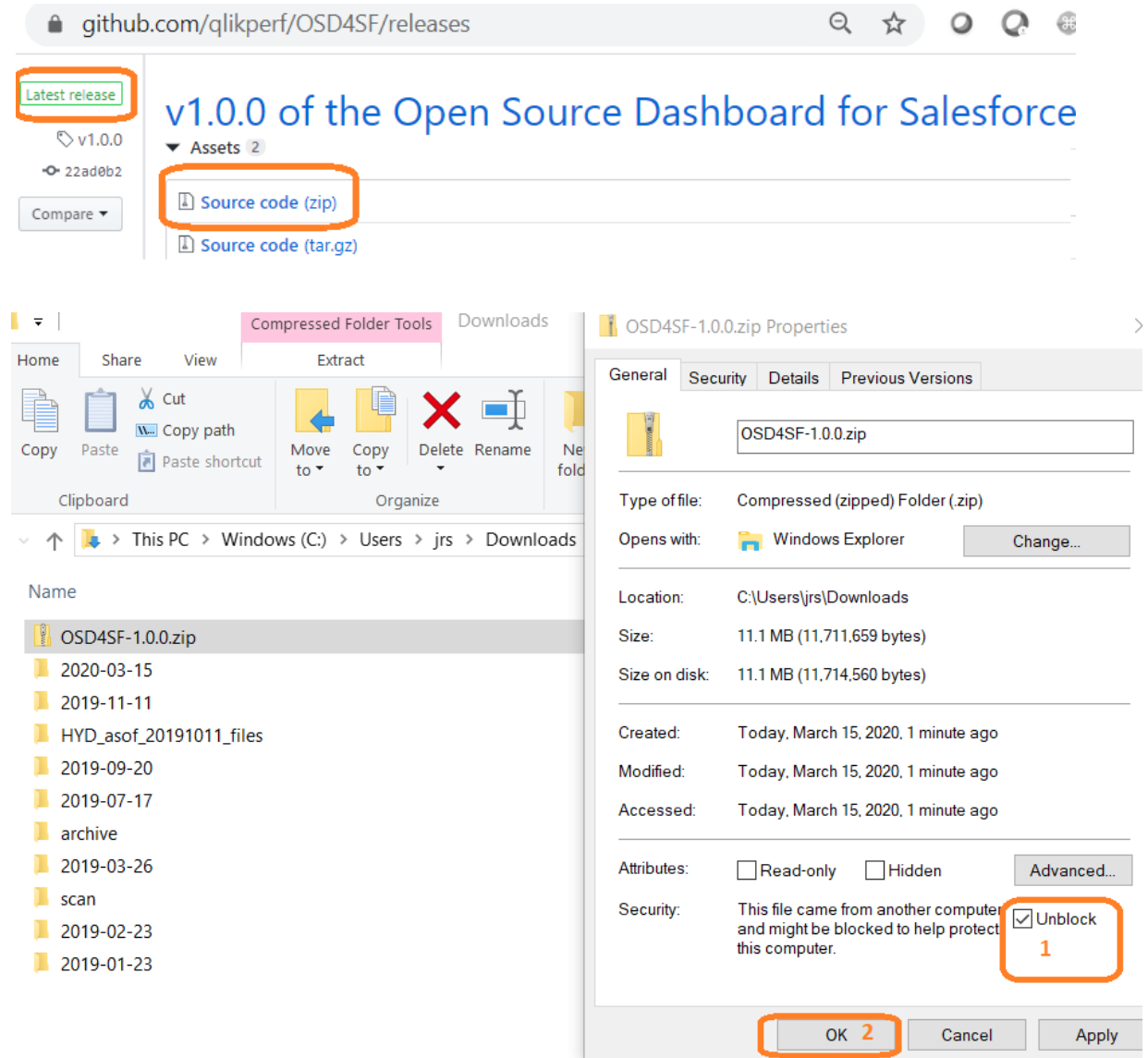
Download the **Source code (zip)** file for the latest OSD for SF release from <https://github.com/qlikperf/OSD4SF/releases>.

As of the time of this writing, the **latest release** posted for download was **v1.0.0** as shown in the screen shot below. Future releases will have higher version numbers; please download the release with the highest version number at the time when you download.

After you download the file, please check **Unblock** in the ZIP file properties and then click **OK**.

Note that the screenshot at right shows a ZIP file named **OSD4SF-1.0.0.zip**. **1.0.0** is the current release number as of this writing; if you have downloaded a newer release, your **OSD4SF ZIP** file will have a higher release number.

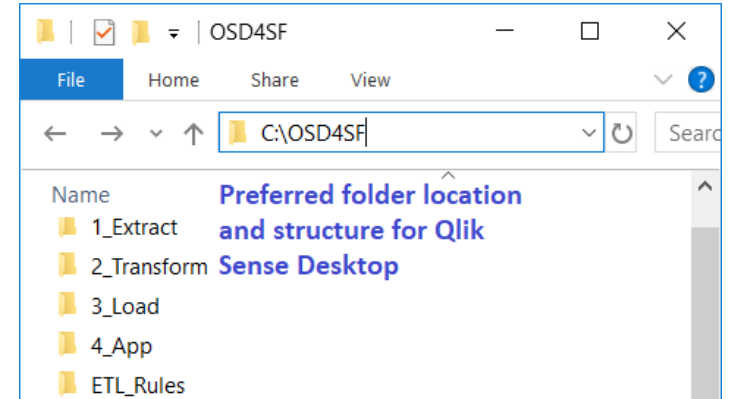
The remainder of this document simply refers to the downloaded file as “the **OSD4SF ZIP** file”.



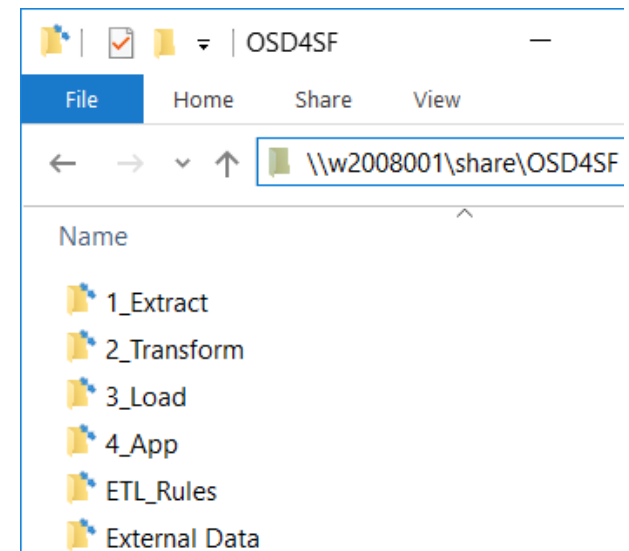
ZIP File Extraction Instructions (Both Qlik Sense and QlikView)

For **Qlik Sense Desktop** users, we recommend extracting the contents of the **OSD4SF ZIP** file to the path of **C:\OSD4SF**, since this will allow use of pre-built folder data connections within the provided sample QVFs.

Any alternate folder location may be used; however, an alternate location will require modification of the pre-built folder data connections to point to the alternate location.



2. For **QlikView Server** and **Qlik Sense Enterprise**, we recommend extracting the contents of the **OSD4SF ZIP** file to a sub-folder of a network share to which your development team has read and write access. The screen shot at right shows an example, a `\\w2008001\share` with a `OSD4SF` sub-folder contained within.
3. For **QlikView Desktop**, the **OSD4SF ZIP** file may be extracted to any desired local folder or network share.



For the rest of this document, `~\` refers to the local folder or network path containing the top-level **OSD4SF** folder. For example:

1. in the context of the screen shot at upper right, `~\` refers to **C:**
2. in the context of the screen shot at lower right, `~\` refers to **\\w200801\share**.

ETL Execution Instructions (QlikView)

1. In the QlikView script editor, create a **CUSTOM CONNECT** string for Salesforce as per the instructions at [this documentation link](#). You will need to specify
 - a. Salesforce User name
 - b. Salesforce Password
 - c. Salesforce Security token (provided by email from Salesforce)
 - d. Bulk API

After you click “Test Connection” and then “OK”, a CUSTOM CONNECT string will be added to your QlikView script.

2. Next, open the following file and paste in your CUSTOM CONNECT string:
 - a. `~\OSD4SF\Include\Connections\Salesforce_View.txt`
 - b. Note this `txt` file already contains a commented sample CUSTOM CONNECT string in which **XUserId** and **XPassword** are “REDACTED”.
3. Reload each of the following the following QVWs in sequence, either with QlikView Desktop or via QlikView Publisher tasks:
 - a. `~\OSD4SF\1_Extract\Sales Extract.qvw`
 - b. `~\OSD4SF\2_Transform\Sales Transform.qvw`
 - c. `~\OSD4SF\4_App\Sales Dashboard.qvw`¹

Salesforce Connection

Account properties

User name: @.com

Password:

Security token:

URL (optional):

Interface type

☒ Bulk API
Use to increase processing speed when reading over a million records. This mode does not support relationship queries.

☐ SOAP API Query
Required when selecting data with relationship queries.

Options

☐ Convert SQL dates

☐ Boolean as strings

☐ Convert UTC to local time

☐ PK Chunking

Number of threads: 2

Proxy

Proxy host:

Test Connection OK

¹ The fact that step c references a folder pre-fixed with the number 4, rather than the number 3, is intentional. For more information on this numbering, please see the `Readme.txt` in `~\OSD4SF\4_Load`.

ETL Execution Instructions (Qlik Sense)

Below, you only need to complete Step 1 OR Step 2, depending on your Qlik Sense product:

1. For **Qlik Sense Desktop**, copy each of the 3 QVFs to your Qlik Sense Apps folder. The default location of this folder is `C:\Users\<user id>\Documents\Qlik\Sense\Apps`. The 3 ETL QVFs to copy are:

- a. `~\OSD4SF\1_Extract\Salesforce Extract.qvf`
- b. `~\OSD4SF\2_Transform\Salesforce Transform.qvf`
- c. `~\OSD4SF\4_App\Salesforce Dashboard.qvf2`

You may perform these 3 copy operations manually, or to automate the 3 options with one easy step, you may double-click `~\Copy QVFs to Default QS Desktop Folder.bat`

2. For **QlikSense Enterprise**, use the QMC to import each of the following 3 QVFs:

- a. `~\OSD4SF\1_Extract\Salesforce Extract.qvf`
- b. `~\OSD4SF\2_Transform\Salesforce Transform.qvf`
- c. `~\OSD4SF\4_App\Salesforce Dashboard.qvf3`

3. Next, create the folder data connections⁴. If you are using **Qlik Sense Enterprise**, you will need to create the connections in the **Data Load Editor**. Qlik Sense Enterprise users should also use the **QMC** to strip out the (`<directory>_<userid>`) postfix from each connection name⁵. Connections should be defined as follows:

- a. **Admin:** folder connection pointing to `~\OSD4SF\TSEEQ\Source Documents\Admin`.
- b. **Sales:** folder connection pointing to `~\OSD4SF\TSEEQ\Source Documents\TSEEQ Sales Sample`.
- c. **Common:** folder connection pointing to `~\OSD4SF\TSEEQ\Source Documents\Common`.

The next page describes how to create the **SalesforceBulkAPI** connection.

² The fact that step c references a folder pre-fixed with the number 4, rather than the number 3, is intentional. For more information on this numbering, please see the *Readme.txt* in `~\OSD4SF\4_Load`.

³ Please see footnote 2, immediately above.

⁴ **Qlik Sense Desktop** users should be able to use the pre-built connections in each QVF, unless a folder other than `C:\OSD3SF` is being used.

⁵ If the connection names cannot be edited due to QMC access restrictions, each of the ETL QVFs provides the option to use post-fixed connection names; please see the **01-Main** script tab within each QVF for more information.

4. For the *Salesforce Extract* QVF only, in the Qlik Sense data load editor, create a new connection for Salesforce as per the instructions at [this documentation link](#). You will need to specify:

- Salesforce User name
- Salesforce Password
- Salesforce Security token (provided by email from Salesforce)
- Bulk API
- Connection name of **SalesforceBulkAPI**

4. Open the **Data Load Editor** and press **load data**, for each of the following apps in sequence:

- Salesforce Extract*
- Salesforce Transform*
- Salesforce Dashboard*

Create new connection (Salesforce)

Account properties

User name
[redacted]@[redacted].com

Password
[redacted]

Security token
[redacted]

URL (optional)
[redacted]

Interface type

☒ Bulk API
☐ SOAP API Query

Options

☐ Convert SQL dates
☐ Boolean as strings

Name
SalesforceBulkAPI

Test Connection Cancel Create

Enabling ETL for the Optional Financial Force PSA (Professional Services Automation) module

Some Salesforce implementations include the optional [Financial Force PSA](#) (Professional Services Automation) module for management and monitoring of consulting projects. The **OSD4SF** includes ETL and measures for the Extract, Transform and analysis of Financial Force data. Since not every Salesforce implementation includes Financial Forces, these rules and measures are turned off by default.

If you would like to enable the Financial Force ETL and measures within the **OSD4SF**, please change the **ENABLED** parameter from **N** to **Y** for the Financial Forces rules and measures in each of the following locations:

File	Sheet within File
1. ~\OSD4SF\ETL_Rules\SalesforceExtractRules.xls	TABLES
2. ~\OSD4SF\ETL_Rules\SalesforceTransformRules.xls	TABLES
3. ~\OSD4SF\ETL_Rules\SalesforceTransformRules.xls	TABLES
4. ~\OSD4SF\Variables\Salesforce Dashboard Chart Measures.xlsx	Sheet1

Here is how the rules appear in the 1st file (*SalesforceExtractRules*) from the table above; changing the **N** values to **Y** will enable the Financial Force functionality of the **OSD4SF** for the EXTRACT step of the ETL flow:

	Comment	Target	Source	ENABLED
1				
6	Built-in Sales Object	OpportunityLineItemExtract	OpportunityLineItem	Y
7	Built-in Sales Object	Product2Extract	Product2	Y
8	Built-in Sales Object	PricebookEntryExtract	PricebookEntry	Y
	Built-in Support Object	CaseExtract	Case	Y
9				
10	Requires the optional FinancialForce PSA Module	TimeCardExtract	pse__Timecard__c	N
11	Requires the optional FinancialForce PSA Module	ProjectExtract	pse__Proj__c	N
12	Requires the optional FinancialForce PSA Module	RegionExtract	pse__Region__c	N
13	Requires the optional FinancialForce PSA Module	AssignmentExtract	pse__Assignment__c	N

Enabling the Financial Force functionality in files 2-4 from the table above may be done in a similar manner.

Technical Notes

The **OSD4SF** is powered by **TSEEQ** (pronounced “seek”), The Structured ETL Engine for Qlik.

For more information on **TSEEQ**, please see the documentation PDF, located at [this GitHub link](#) as well as within the ~\OSD4SF\TSEEQ sub-folder of the **OSD4SF** installation.

TSEEQ (Structured ETL Engine for Qlik) 3-stage

