



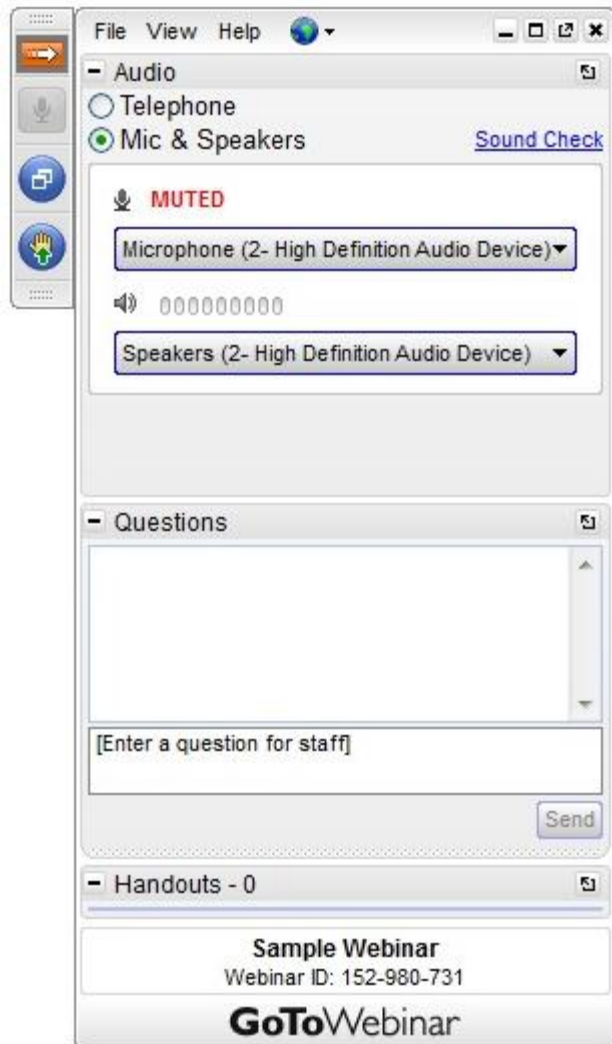
SENTURUS

EMBEDDING TABLEAU IN SALESFORCE DASHBOARDS

A How-to Primer with Demos



GoToWebinar Control Panel



Click arrow to restore full control panel



Submit questions here

Presentation Slide Deck

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COGNOS ANALYTICS NOVEMBER 2017 ENHANCEMENTS 11.0.8 Demos and Q&A with IBM Product Team	 FEATURES	→
AERO PRECISION CREATES TABLEAU VIZZES AGAINST LIVE COGNOS DATA Using the Senturus Enterprise Connector	 FEATURES	→



Today's Agenda

- Introductions
- Accessing Salesforce Data from Tableau
- Overview of Tableau Sparkler
- Demo
- Installation
- Challenges/Caveats
- Senturus Overview
- Q&A

Introducing...Today's Presenters



Michael Weinbauer
Practice Area Director /
Solutions Architect
Senturus, Inc.



Jim Frazier
VP of Client Solutions
Senturus, Inc.

Poll #1

How are you currently doing reporting in Salesforce?
(check all that apply)

- Standard reporting that comes with SFDC
- Export and analyze in BI Tool (Excel, Tableau, etc)
- Data mart containing SFDC data
- Directly Connect BI Tool to SFDC Cloud
- Other/not doing reporting/don't know

Poll #2

What are your SFDC reporting challenges? (check all that apply)

- The SFDC interface is not appealing or interactive
- Absence of trending over time
- Making it easily actionable for the sales team
- Incorporating outside reports into SFDC
- Integrating SFDC with data from other sources

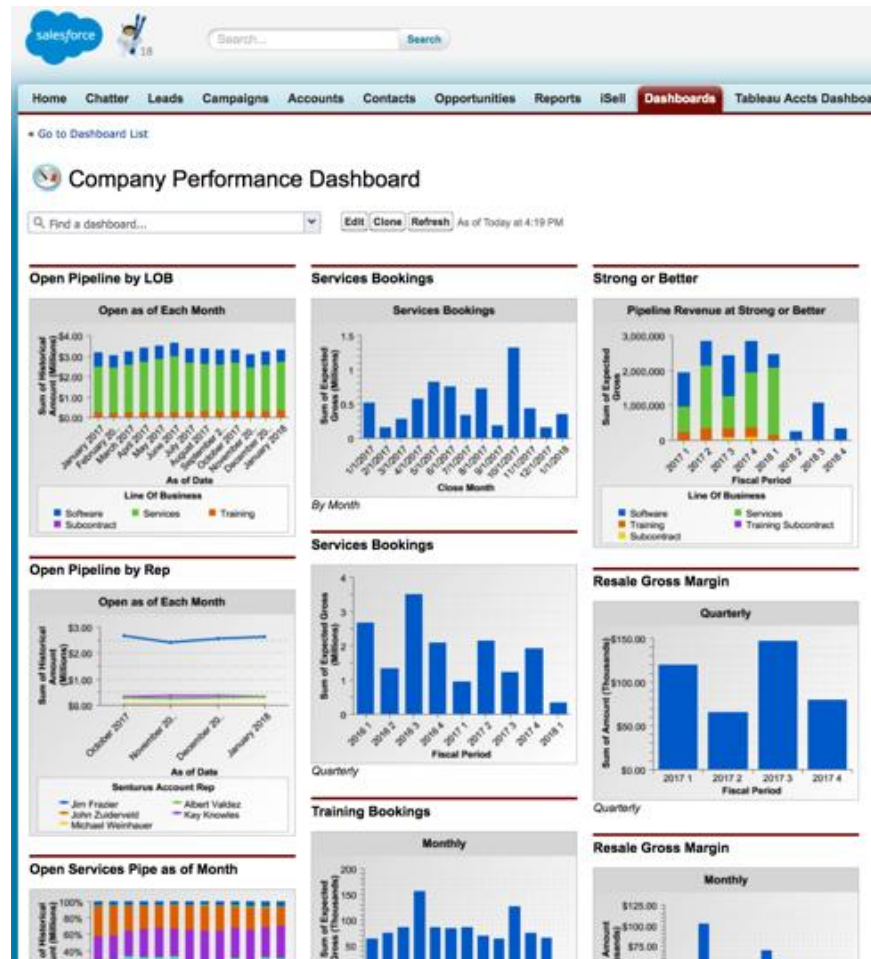


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ACCESSING SALESFORCE DATA

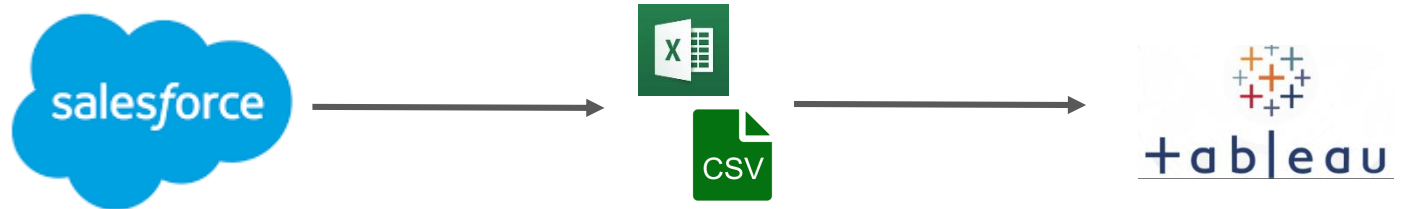
Accessing Salesforce Data

Use Salesforce integrated reporting (no Tableau)

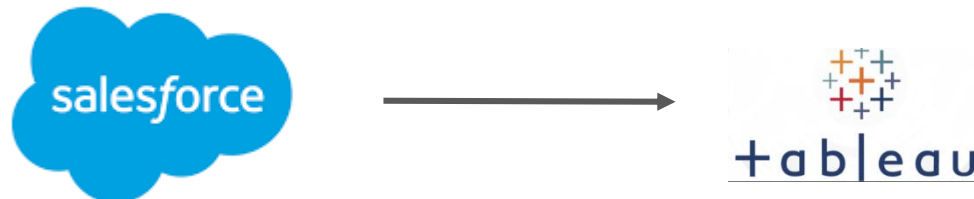


Accessing Salesforce Data from Tableau

1. Manually extract data from Salesforce into flat files, pull into Tableau



2. Utilize Tableau's direct connections to Salesforce cloud

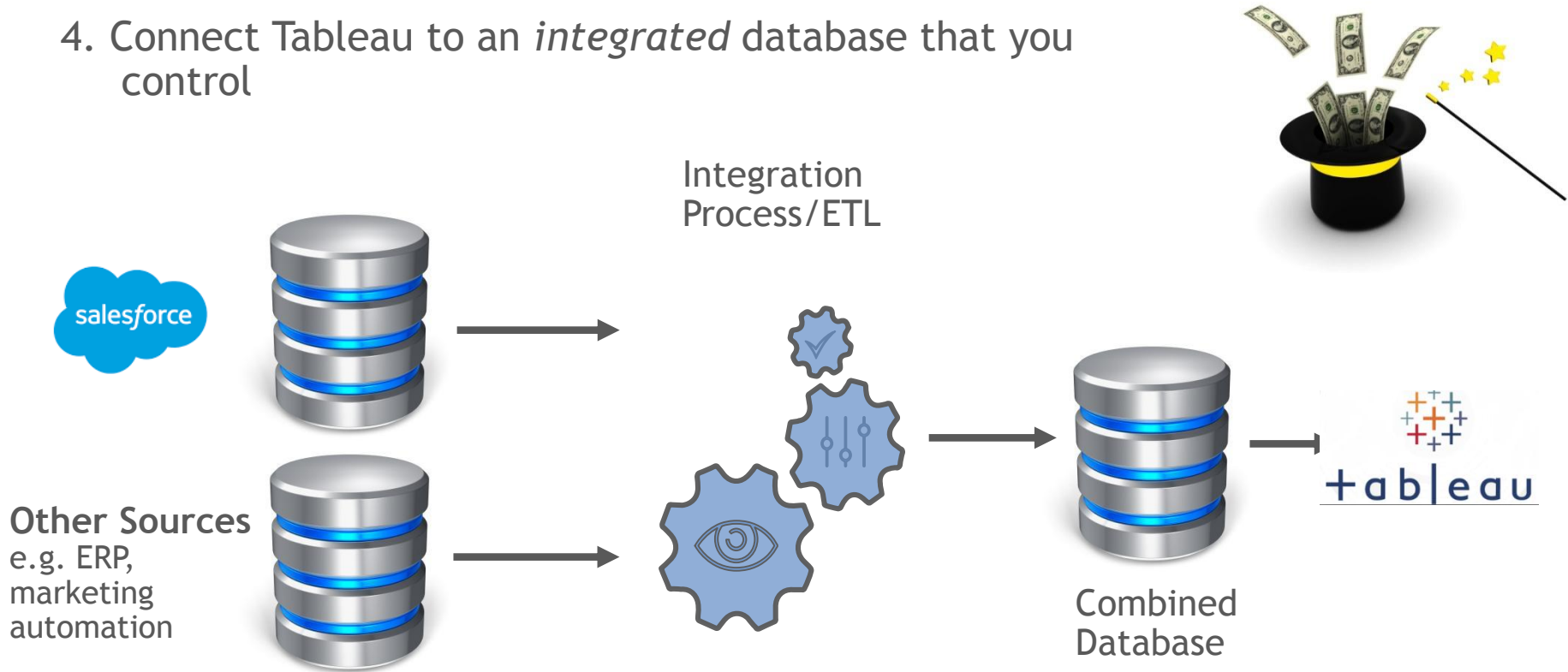


3. Connect Tableau to a replica database of Salesforce data that you control



Accessing Salesforce Data from Tableau

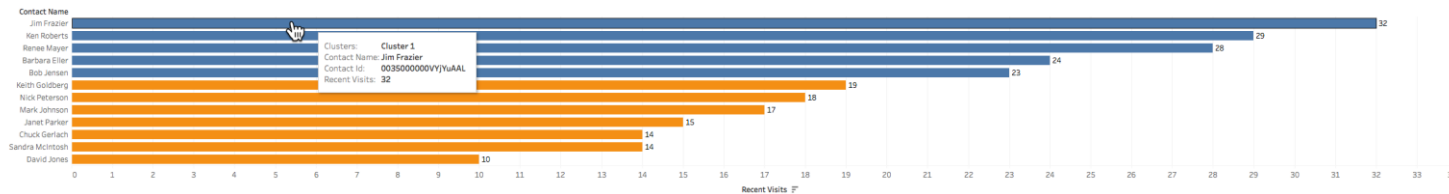
4. Connect Tableau to an *integrated* database that you control



Accessing Salesforce Data from Tableau

Drill from a Tableau dashboard directly into the relevant Salesforce screen

Recent Web Visits from People in Your Pipeline



The screenshot shows the Salesforce interface with the 'Contacts' tab selected. The contact detail for Jim Frazier is displayed, including fields for Contact Owner, Name, Account Name, and Department. The interface also shows a search bar, navigation tabs, and a list of recent items.

Navigation: Home Chatter Leads Campaigns Accounts **Contacts** Opportunities Reports iSell Dashboards

Search: Search

Create New... Shortcut

Unresolved Items

Recent Items

- Jim Frazier
- MaryKate Gozemba
- Melanie Gonzalez
- Olivia Jensen

Contact Detail

Contact Owner: Tony Morris [Change]

Name: Jim Frazier

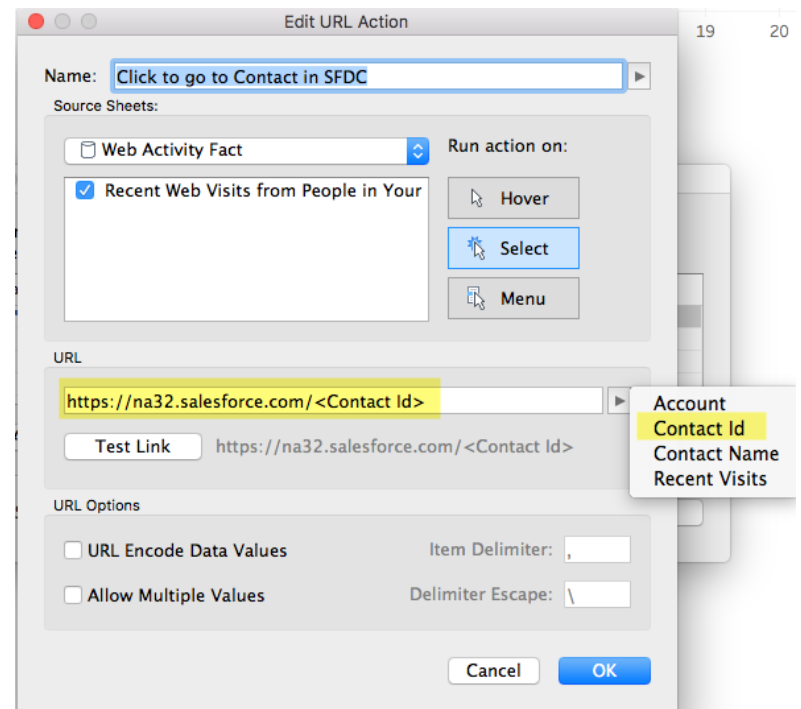
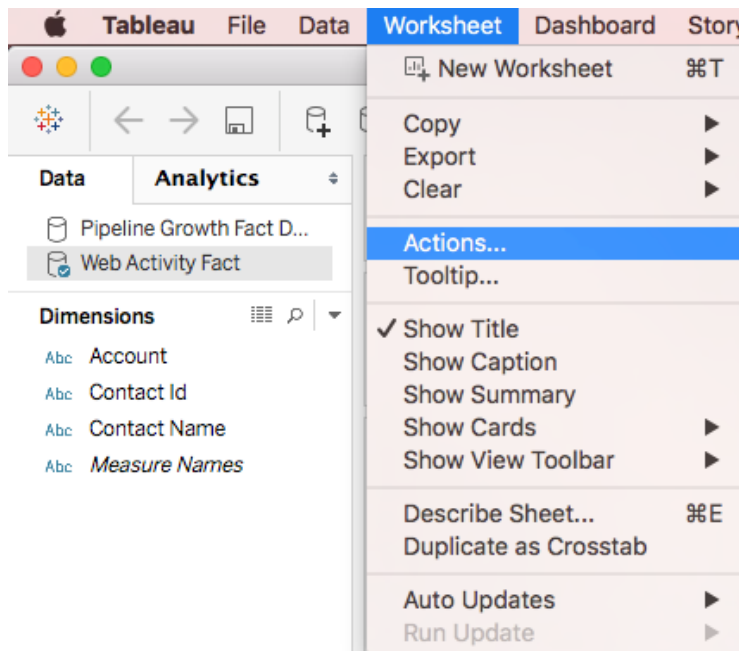
Account Name: Senturus, Inc

Department: Business Analytics



















Buttons: Edit, Delete, Clone, LinkedIn

Accessing Salesforce Data from Tableau


















Configure a Tableau URL action that combines your Salesforce domain with the relevant Salesforce record ID



Technique Capabilities Matrix

Capability	Tableau Actions	Tableau Direct to SFDC	Tableau to Local SFDC Replica Database	Tableau to Combined Database
Drill from Tableau to SFDC Screen				
Pass Context to SFDC from Tableau				
Basic Visualizations				
Blended Data				
Pipeline Growth Trend				
Components of Pipeline Growth				

Technique Capabilities Matrix

Capability	Tableau Actions	Tableau Direct to SFDC	Tableau to Local SFDC Replica Database	Tableau to Combined Database
Marketing Automation Platform-Sourced Behavior Score Growth Trend				
Marketing Automation Platform-Sourced Updates to SFDC Campaign Members				
SFDC Pipeline Analysis				
SFDC Marketing and Pipeline Activity				
Marketing Automation Platform Activity				
Combined Marketing Automation Platform & SFDC Activity				

Technique Capabilities Matrix

Capability	Tableau Actions	Tableau Direct to SFDC	Tableau to Local SFDC Replica Database	Tableau to Combined Database
Velocity Through Entire Funnel				●
Conversion Rates Through Entire Funnel				●
Marketing Effectiveness				●
Full History of all Marketing and Sales Engagements				●
Advanced Analytics				●

What If You Want Both? Enter Sparkler!

Analytics in the flow of the business process, at the point of impact!



Why Sparkler?

#1: Security

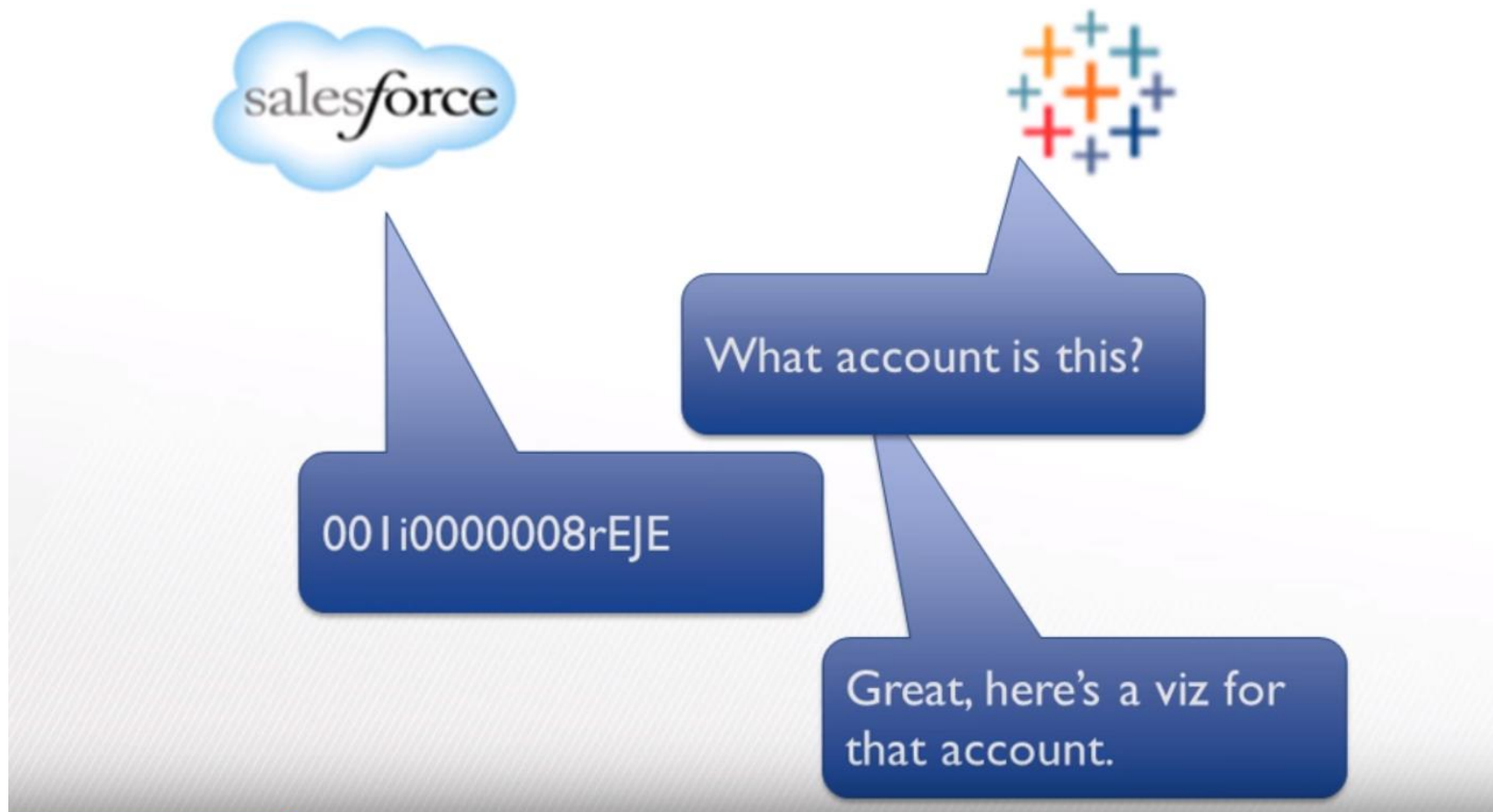


Https
Message encryption



Why Sparkler?

#2: Context without needing to leave Salesforce!



Top Level Sales View - Opportunities Dashboard

Home Accounts Leads Contacts Campaigns Opportunities iSell +

Create New...

Shortcut

Unresolved Items

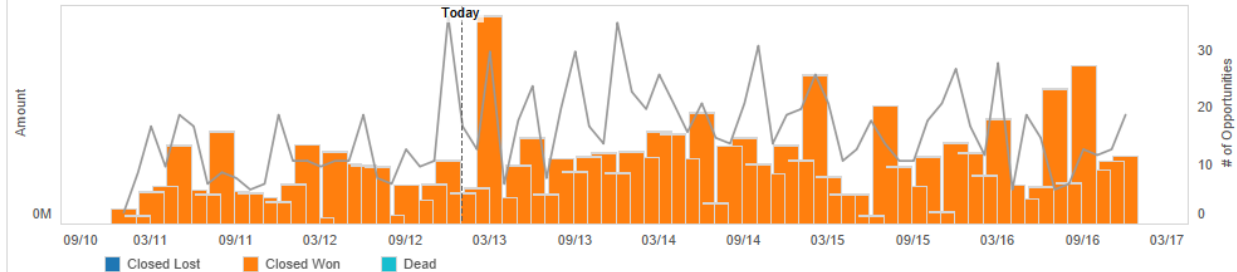
Recent Items

giuli zhang
Altorfer Inc.
CA Authoring Adv 2018-01-29-Kaiser Permanente-Jacob Malson
Jacob Malson
Kaiser Permanente - Tableau Mentoring (Serwah)
Ziegler Inc
J.A. Riggs Tractor Co.
Carolina Tractor & Equipment Co Inc
Macallister Machinery Co Inc
Wheeler Machinery Co

Recycle Bin

WARNING: The Sparkler status page is enabled. Please disable in production environments.

My Monthly Sales Trends

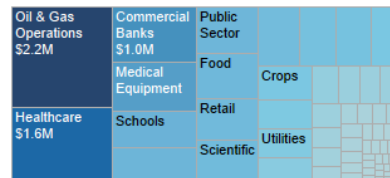


My Countries

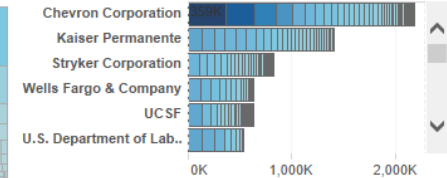


© OSM

My Industries



My Top Accounts:



Date Range
1/15/2011 12/31/2016

Closed (All)

Won (All)

Country
☒ (All)
☒ Canada

Industry (All)

Salesperson
Jim Frazier

My Account Details

Account Name	Industry	Name (Opportunities)	Stage	Amount
WL Gore & Associates I..	Miscellaneous Fabricat..	WL Gore & Associates Inc, Cognos 10..	Closed Won	3K
WebMD Health Corp.	Healthcare & Pharmace..	WebMD-Rearchitecture Project	Dead	0K
University of California -..	Education	UCOP Cognos Application Staffing R..	Closed Won	20K
Eve Mattress	Null	Eve Mattress Marketing Analytics	Dead	0K
TCI	Null	TCI Tableau and Light Staging	Closed Lost	0K
Suncast Corporation	Fabricated Plastic & Rubber	Suncast Corp - BI Enhancement Phas..	Closed Won	30K
		Suncast Corp - BI Enhancement Profit..	Closed Won	12K
		Suncast Corp - BI Optimization Asses..	Closed Won	3K
		Suncast Corp - Forecast Cube	Closed Won	14K
		Suncast Corp - TM1 assessment	Closed Won	3K
		Suncast Corp - TM1 revamp	Closed Lost	0K
Ready Pac Produce Inc	Food Processing	Ready Pac Produce- Cognos Software..	Dead	0K
Prestige Care Inc.	Healthcare Facilities	Prestige Care BI selection	Dead	0K
		Prestige Care RAAP	Dead	0K

Accounts Dashboard

[Home](#)
[Chatter](#)
[Files](#)
[Leads](#)
[Accounts Dashboard](#)
[Accounts](#)
[Opportunities](#)
[Contacts](#)
[Sales Cockpit](#)
[Reports](#)
[Dashboards](#)
[Products](#)
[Forecasts](#)

[Create New...](#)

Recent Items

- [Nulla Facilisis Suspendisse PC](#)
- [3858 Analytics Standard Turpis Egestas Aliquam Company](#)
- [3858 Analytics Standard Semper Et Lacinia Ltd](#)
- [Suspendisse Sed Dolor Company](#)
- [47650 Analytics Data Model Sed Leo Cras PC](#)
- [Risus Morbi Metus LLP](#)
- [78238 Analytics Data Model Amet Ante Associates](#)
- [Ac Turpis Egestas LLP](#)
- [Nec Diam Duis Foundation](#)

[Recycle Bin](#)

Account

Nulla Facilisis Suspendisse PC

[Customize Page](#)
[Edit Layout](#)
[Print](#)

[Hide Feed](#)

[Post](#)
[File](#)
[Link](#)
[Poll](#)

Followers

No followers.

[Show All Updates](#)

There are no updates.

[Contacts \(0\)](#)
[Open Activities \(0\)](#)
[Activity History \(0\)](#)
[Opportunities \(5+\)](#)
[Cases \(0\)](#)
[Partners \(0\)](#)
[Notes & Attachments \(0\)](#)

Account Detail

[Edit](#)
[Delete](#)
[Sharing](#)

Account Owner

[Julie Owens](#)
[Change](#)

Phone

Account Name

Nulla Facilisis Suspendisse PC

[View Hierarchy](#)

Fax

Parent Account

Website

Tableau Online - Purchase History

Total Purchase

\$1,457K

Total Opportunities

8

of Wins

6

of Losses

1

Active Opportunities

1

Customer Since

3/31/2011

Opportunities by Close Date

Hover to go to salesforce opportunity

Compare with Other Accounts

Hover to go to Salesforce account

Opportunities For This Account

Click to go to Salesforce opportunity

Status	Opportunity Name	Close Date	Stage	Amount	Quantity	Unit Price
Open	3858 Analytics Standard Turpis Egestas Aliquam Company	12/16/2013	Discover	\$800K	1,143	\$525
Closed	3858 Analytics Standard Sapien Nunc Pulvinar Incorporated	12/31/2012	Closed Won	\$73K	170	\$478
	3858 Analytics Standard Nonummy Ut Molestie LLP	8/27/2012	Closed Won	\$7K	13	\$528
	3858 Analytics Standard Ipsum Phasellus Vitae Corp.	6/21/2012	Closed Won	\$7K	15	\$492
	3858 Analytics Standard Aniwab Designs	4/8/2012	Closed Lost	\$268K	528	\$507
	3858 Analytics Standard Turpis Nulla Industries	3/22/2012	Closed Won	\$201K	491	\$466
	3858 Analytics Standard Semper Et Lacinia Ltd	7/6/2011	Closed Won	\$819K	1,710	\$532

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Opportunities Dashboard

[Home](#)
[Accounts](#)
[Leads](#)
[Contacts](#)
[Campaigns](#)
[Opportunities](#)
[iSell](#)

Create New...

Shortcut

Unresolved Items

Recent Items

Chevron SIMSmart Release 3 Jan 2013

qiuli zhang

Altorfer Inc.

CA Authoring Adv 2018-01-28-Kaiser Permanente-Jacob Malson

Jacob Malson

Kaiser Permanente - Tableau Mentoring (Sanwah)

Ziesler Inc

J.A. Riggs Tractor Co.

Carolina Tractor & Equipment Co Inc

Macallister Machinery Co Inc

Recycle Bin

Opportunity

Chevron SIMSmart Release 3 Jan 2013

Show Feed

Back to List: Visualforce Pages

Open Activities | Activity History | Notes & Attachments

Opportunity Detail

Edit

Delete

Clone

Open/Publish Project

Opportunity Owner	Jim Frazier [Change]
Senturus Account Rep	Jim Frazier
Account Name	Chevron Corporation
Opportunity Name	Chevron SIMSmart Release 3 Jan 2013
Products	Consulting Services
Vendor	Cognos
Vendor Rep	TBD
Next Step	Jim F to follow-up with Tom Roberts
Probability (%)	100%
Expected Revenue	\$358,800.00
Business Development Rep	
Prospecting Rep	
Business Development Rep Pass Date	
Prospecting Rep Pass Date	

Created By

Jim Frazier 9/5/2012 11:37 PM

Description

Sparkler Opportunities

WARNING: The Sparkler status page is enabled. Please disable in production environments.

Selected Opportunity vs. Other Opportunities

Opportunity Details

Account Name	Products	Stage	Amount
Chevron Corporation	Consulting Services	Closed Won	\$358,800.00

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DEMO

Senturus Can Help

Install Tableau Sparkler to embed
Tableau visualizations into Salesforce



- Installation of Sparkler on Tomcat application server
- Secure configuration of Sparkler (Tomcat) and Tableau Server
- Configuration of trusted tickets authentication between Tableau Server and Sparkler
- Configuration of Salesforce to use the Sparkler application, included Visualforce pages and Salesforce tabs
- Configuration of included Tableau dashboard (accounts dashboard, accounts and opportunities) for use on Tableau Server
- \$4995

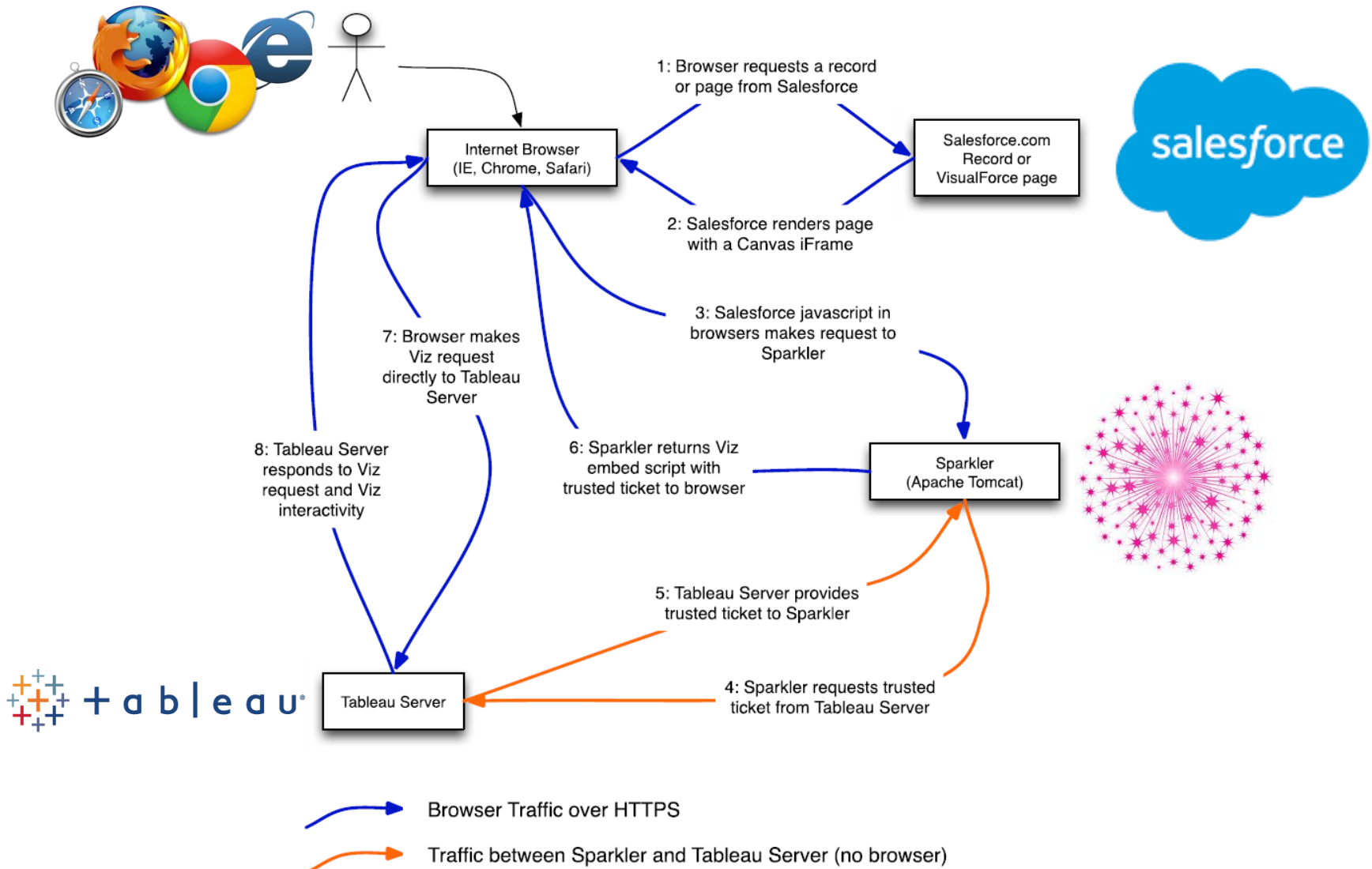
Caveat Emptor: Technical Content Ahead!



What Is Tableau Sparkler?

- Canvas is a Force.com framework for integrating 3rd party applications into the Salesforce platform
- Sparkler is a Tableau created and supported Java adapter that enables embedded dashboards via Canvas
- Free [download](#) from Tableau
 - Includes Sparkler adapter
 - Sample Tableau workbooks
 - Sample Visualforce pages
 - Instruction Manual (55 pages!)

Tableau Sparkler Architecture



Do I Need Tableau Sparkler?

- IF you use SAML authentication, AND both Tableau and SFDC use the SAME SAML authentication provider, you don't have to set up Sparkler
- In this case, just use the Visualforce pages and content; the applications will trust each other automatically



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INSTALLATION

Skills Required

- Java CLI
 - Keytool used to create self-signed SSL certificates
 - Sparkler
- Apache Tomcat install and configuration (or other web app server)
- OpenSSL
 - If creating RSA keys for Tableau
- Salesforce administration/Visualforce application configuration
- Tableau Desktop
- Tableau Server configuration and administration
- Linux

Install Components

- [Java](#)
 - Sparkler is a Java application
 - Used to create self-signed SSL certificates
- [Apache Tomcat](#)
 - Open source application server
 - You can use any application server
- [Sparkler](#)
 - Runs as a Java application within Tomcat
- [OpenSSL](#)
 - Used to create RSA keys for Tableau

Enable SSL on Tomcat

- Get/create certificate using Java keytool utility
 - Warning: do not COPY text, it will fail!
 - Critical: CN MUST MATCH fully qualified machine name
 - E.g. request URL=https://tableau.mycompany.com
 - CN=tableau.mycompany.com
- Enable SSL in configuration (conf\server.xml)
 - Uncomment SSL section, set ports, location of keystore, and keystore password

```
<Connector port="8443" protocol="org.apache.coyote.http11.Http11Protocol"
maxThreads="150" SSLEnabled="true" scheme="https" secure="true"
clientAuth="false" sslProtocol="TLS" keystoreFile="c:\Program Files\Apache Software Foundation\Tomcat 7.0\keystore" keystorePass="changeit"/>

<!-- Define an AJP 1.3 Connector on port 8009 -->
<Connector port="8009" protocol="AJP/1.3" redirectPort="8443" />
```


Tomcat Self-Signed SSL Certificate

```
Administrator: Command Prompt

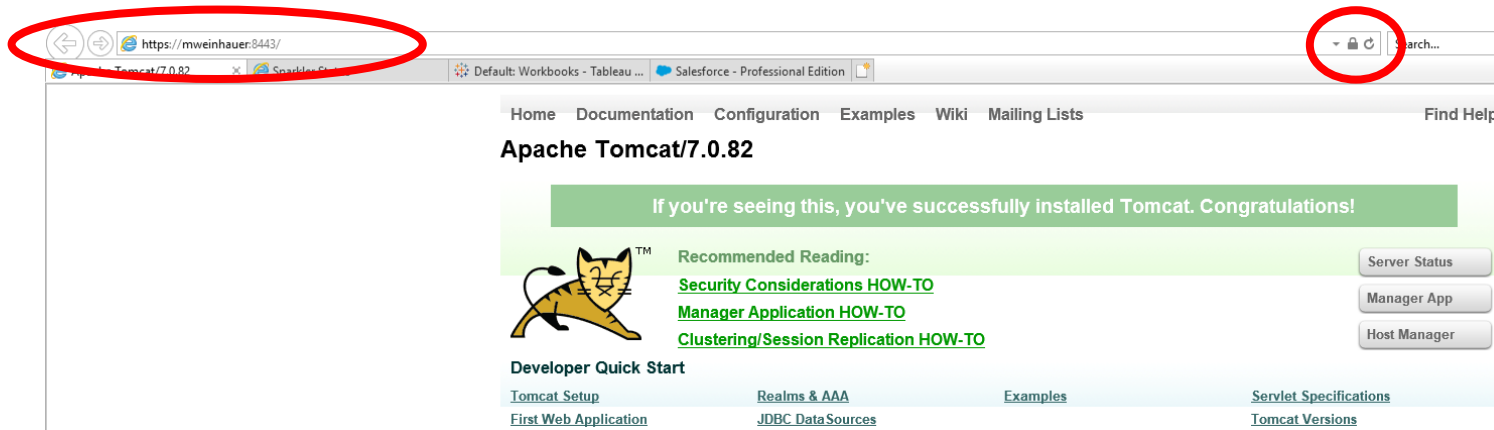
C:\Program Files\Java\jre1.8.0_151\bin>keytool.exe -genkey -alias tomcat -keyalg RSA -keystore "C:\Program Files\Apache Software Foundation\Tomcat 7.0\keystore"
Enter keystore password:
Re-enter new password:
What is your first and last name?
  [Unknown]: MWEINHAUER
What is the name of your organizational unit?
  [Unknown]: MWEINHAUER
What is the name of your organization?
  [Unknown]: MWEINHAUER
What is the name of your City or Locality?
  [Unknown]: San Mateo
What is the name of your State or Province?
  [Unknown]: CA
What is the two-letter country code for this unit?
  [Unknown]: US
Is CN=MWEINHAUER, OU=MWEINHAUER, O=MWEINHAUER, L=San Mateo, ST=CA, C=US correct?
  [no]: yes

Enter key password for <tomcat>
  (RETURN if same as keystore password):

Warning:
The JKS keystore uses a proprietary format. It is recommended to migrate to PKCS12 which is an industry standard format using "keytool -importkeystore -srckeystore C:\Program Files\Apache Software Foundation\Tomcat 7.0\keystore -destkeystore C:\Program Files\Apache Software Foundation\Tomcat 7.0\keystore -deststoretype pkcs12".

C:\Program Files\Java\jre1.8.0_151\bin>
```


Test Tomcat SSL



Enable SSL on Tableau Server

- Get/create Certificate using openSSL
 - If creating self-signed, refer to [this](#) guide
- Add certificate to Java keystore
- Install certificate
- Enable SSL in Tableau Server configuration
- Use [Configure External SSL](#) on Tableau Server help

Tableau Self-Signed SSL Certificate

```
Administrator: Command Prompt - openssl
Microsoft Windows [Version 10.0.16299.98]
(c) 2017 Microsoft Corporation. All rights reserved.

C:\WINDOWS\system32>echo %OPENSSL_CONF%
C:\Program Files\Tableau\Tableau Server\10.5\apache\conf\openssl.cnf

C:\WINDOWS\system32>openssl
OpenSSL> req -x509 -newkey rsa:4096 -keyout senturus.key -out -senturus.crt
Loading 'screen' into random state - done
Generating a 4096 bit RSA private key
.....++
.++
writing new private key to 'senturus.key'
Enter PEM pass phrase:
Verifying - Enter PEM pass phrase:
-----
You are about to be asked to enter information that will be incorporated
into your certificate request.
What you are about to enter is what is called a Distinguished Name or a DN.
There are quite a few fields but you can leave some blank
For some fields there will be a default value,
If you enter '.', the field will be left blank.
-----
Country Name (2 letter code) [AU]:US
State or Province Name (full name) [Some-State]:California
Locality Name (eg, city) []:San Mateo
Organization Name (eg, company) [Internet Widgits Pty Ltd]:MWEINHAUER
Organizational Unit Name (eg, section) []:MWEINHAUER
Common Name (e.g. server FQDN or YOUR name) []:MWEINHAUER
Email Address []:mweinbauer@senturus.com
OpenSSL>
```


Tableau Self-Signed SSL Certificate

```
Administrator: Command Prompt

C:\Program Files\Java\jre1.8.0_151\bin>keytool -import -trustcacerts -alias tableauserver -file C:\windows\system32\tableau.der -keystore "C:\Program Files\Java\jre1.8.0_151\lib\security\cacerts"
Enter keystore password:
Owner: EMAILADDRESS=mweinhauer@senturus.com, CN=MWEINHAUER, OU=MWEINHAUER, O=MWEINHAUER, L=San Mateo, ST=California, C=US
Issuer: EMAILADDRESS=mweinhauer@senturus.com, CN=MWEINHAUER, OU=MWEINHAUER, O=MWEINHAUER, L=San Mateo, ST=California, C=US
Serial number: c2f899bc1fddde1f
Valid from: Fri Dec 08 12:28:57 PST 2017 until: Sun Jan 07 12:28:57 PST 2018
Certificate fingerprints:
    MD5: CF:A7:0C:1C:1F:F8:8C:B0:A8:D8:DC:EF:0F:5D:12:29
    SHA1: 70:7F:98:8C:BA:4A:FA:D0:69:A2:A8:6D:29:DA:CC:95:39:7F:0F:F1
    SHA256: B2:B5:8D:28:78:8F:84:0C:EB:50:E6:36:C9:0E:2F:12:94:A7:95:A6:5A:94:4B:0B:51:B2:4A:37:52:E5:AC:B
F
Signature algorithm name: SHA1withRSA
Subject Public Key Algorithm: 4096-bit RSA key
Version: 3

Extensions:

#1: ObjectId: 2.5.29.35 Criticality=false
AuthorityKeyIdentifier [
KeyIdentifier [
0000: E3 59 69 86 5D 6F EF 0B 69 37 6A 7C 4E 26 5B 8A .Yi.]o..i7j.N&[.
0010: 49 B5 8F 57 I..W
]
]

#2: ObjectId: 2.5.29.19 Criticality=false
BasicConstraints:[
CA:true
PathLen:2147483647
]

#3: ObjectId: 2.5.29.14 Criticality=false
SubjectKeyIdentifier [
KeyIdentifier [
0000: E3 59 69 86 5D 6F EF 0B 69 37 6A 7C 4E 26 5B 8A .Yi.]o..i7j.N&[.
0010: 49 B5 8F 57 I..W
]
]

Trust this certificate? [no]: yes
Certificate was added to keystore

C:\Program Files\Java\jre1.8.0_151\bin>
```


Configure SSL in Tableau

Tableau Server Configuration

General Data Connections Servers SMTP Setup Alerts and Subscriptions **SSL** SAML Kerberos SAP HANA OpenID

External Webserver SSL

☒ Use SSL for server communication

SSL certificate file: C:\Program Files\Tableau\Tableau Server\SSL\senturus.crt ...

SSL certificate key file: C:\Program Files\Tableau\Tableau Server\SSL\senturus.key ...

SSL certificate key passphrase (optional):

SSL certificate chain file (optional): ...

☐ Use mutual SSL and automatic login with client certificates

SSL CA certificate file: ...

Internal Repository Database SSL

Select an SSL option for securing connections to the repository. See the Tableau Server Help for details, including information on downloading the public certificate for direct connections.

☐ Required for all connections

☐ Optional for direct user connections (required for internal component connections)

☒ Off for all connections

[Get help...](#)

OK Cancel

Configure SSL in Tableau

Must be done via TABADMIN (don't edit text file)!

“tabadmin set wgserver.trusted_hosts “MWEINHAUER, localhost””

```
1  ---
2  authentication.servicepassword: ENC (V+J3DfNkRfGkXjWoWOGebmF4vZC4EZ/2OegldHq+IdAtg2TatAUET8pCi9uEoBVoJ0zpqeoQGdXcWI83EWEgvVbMzWlLi/Sln77aPV11NUfxOTpyB2339A==)
3  authorization.servicepassword: ENC (V+J3DfNkRfGkXjWoWOGebjBR3vqXhUb2XkoqzW9kypIA2Dw9OeKzt/Bgvu5CNRNe45AmYyitzHtlihNDyHJ4NMEUHfPrAltOIkkYx6NmFubPZ6C07UxySg==)
4  clustercontroller.zookeeper.password: ENC (V+J3DfNkRfGkXjWoWOGebuCiJlkrktf9doV6781boc2SDZGMtsE/vMx/tJjYp1p1UUnwgltdF59RyifOrXGdiQZ8t9LYWiyMksi79bb9QrrTaCqr08v9LA==)
5  config.version: 17
6  crypto.configuration.active_key_id: 57e2770d-f364-45f1-a45e-35a858e19e6e
7  crypto.configuration.active_key_value: 4U7WcFNWRDK8hr4/3l2LaIFk4zLDQuH3OeAlhgW2X6EOPUKvhVFeklkHe9BYN57TUwesBq6DwxB2bRjIcJ/dFc2S3Q3fkmTyVogS18GjIA=
8  crypto.master.active_key_id: e14ed670-5356-4432-bc86-be3fdf564b68
9  filestore.zookeeper.password: ENC (V+J3DfNkRfGkXjWoWOGebhT/UteoTwQ0eVF/yNLSJE3ItDixV04Way74KiYaxE0Vh2a+3mwB+tpw9eGW14d0wrjzxul3lP0kPkdF0Svlg/LlBsmjYduShw==)
10 gateway.external_url: http://MWEINHAUER:8000
11 grpc.request.secret: ENC (V+J3DfNkRfGkXjWoWOGebsiwg0GguUDvUcVSv0EnT6MoQqMnW+5Vjfls/OdocaIjLbWMG8WFiGrymkBy9yzV01p6j38V9btrGpQkZSUGULcEUG8q06Lw==)
12 grpc.response.secret: ENC (V+J3DfNkRfGkXjWoWOGeb1Fu8++rB8Apr6NphU5gvpYXnf/rm8bqHEb5Nb8Or9Tcw+uLLd6m4fYUQMCB/cKpsfv9D9bLpCqiWcnRrdvjYU2kzk5crDGY2Q==)
13 hyper.connection.init_password: ENC (V+J3DfNkRfGkXjWoWOGebtbU4fju06yNJoXxd0zVc/D0Zrt18ar8mMohf5cdFqUYxXS2XcK/cAt6j5a7EVCg5MvMPPPrM/aCT/g7JxeFQ7TQaIuNlrBq0Tg==)
14 jdbc.password: ENC (V+J3DfNkRfGkXjWoWOGebqd4F0eyLn0J0lsoORswyxpNa28b8x+Q9cBp6PXgtkLEgrhyFWM5yLLh9HfEylU05NPCpClgV0pTpV4ogY2tdGoFDAOK8v6g==)
15 pgsql.adminpassword: ENC (V+J3DfNkRfGkXjWoWOGebtpPLAovk3+jqfhWq6szOUfnzIRvgo7rdmUhyt+FTnlpUWxWPenc+k3YrXCwP4J2bNkW/zjY4nAyK6/gV4uhE+Rs2p/c9RRPWA==)
16 pgsql.readonly_password: ENC (V+J3DfNkRfGkXjWoWOGebtw4w+NYLBX1VFkQYjBYWbbWE6M2StMjbVW12mlt8NxxXewjbtLoQsw8Nr710Hq2j9QE4oS33bdk8LTHFMnQ85ChNp/nWmdncbw==)
17 pgsql.remote_password: ENC (V+J3DfNkRfGkXjWoWOGebhrh66t3/ozl14lF52OJPDY4jgZumLAvQ9xtD5o1AyU+3VbMhGFk6OOGGcvSXaOa5xFA4rx7T+p9g6Isq4g5tzgDjSQ1J5WQ==)
18 recommendations.servicepassword: ENC (V+J3DfNkRfGkXjWoWOGebqiarIA2WJelF12NI2OixqrBK+FRVZ6bLBzIrNfU9ot+WiooE0Z6d7eR6sHjiYOnmZaQpmXR7NqHDdJdFW0Pnsu/6DbBM4PuvA==)
19 redis.password: ENC (V+J3DfNkRfGkXjWoWOGebpBpXC9rnlVxVtk+xlI4nboiiY9SoCummlpfCQzOWzGxmHJ5Da7lCwvjZFcPMLmV4/Cxn1+H0Loi2KfHx5wB/nDtOU+3waoUg==)
20 servercrashupload.scheduled_time: 01:00:00 AM Pacific Daylight Time
21 service.init.state: start
22 service.runtime.name: MWEINHAUER\Michael Weinbauer
23 ssl.cert.file: C:/Program Files/Tableau/Tableau Server/SSL/senturus.crt
24 ssl.enabled: true
25 ssl.key.file: C:/Program Files/Tableau/Tableau Server/SSL/senturus.key
26 ssl.key.passphrase: ENC (V+J3DfNkRfGkXjWoWOGeb8rHvudo46zi7UW8pbNkrJCWA3ZBRUtyjIqQb4N7LlAP10amXiyfKu8=)
27 svcmonitor.notification.smtp.canonical_url: ""
28 tabadminservice.password: ENC (V+J3DfNkRfGkXjWoWOGebhBvK5PcuK4d4NubhE6H8W9z9w1msKugGaVvVUCCIbdz657YzZsKnXz1lsmPauKZCmHQ/+CxoecCocMoTa4OA2Bule6i6PQ==)
29 telemetry.servicepassword: ENC (V+J3DfNkRfGkXjWoWOGeboegSH+6pzPR6yONiaaQQ2mXK0P7D6UvuTJgrEUJ007R3H71H2mGeVDteKEQrnn3skwqvTmdKsN53VidcCioYyrS7UcmQXfXQ==)
30 vizportal.servicepassword: ENC (V+J3DfNkRfGkXjWoWOGebkfxWW4iY9nEnZv2G0c6lBz/KX6YjowB9CTspC604RiokMgUJOUxVMrbOnyDI9on/pn2jIGtcqhqPtTV5lCf6rD74gxa+Eg==)
31 wgserver.sap_hana_sso.saml.cert.file.src: ""
32 wgserver.sap_hana_sso.saml.key.file.src: ""
33 wgserver.trusted_hosts: MWEINHAUER, localhost
34 worker0.gateway.port: 8000
35 worker0.vizqlserver.procs: 1
36
```


Test Tableau SSL

The screenshot shows a web browser window with the URL <https://mweinbauer/#/projects/1/workbooks> in the address bar. The browser tabs include 'Sparkler Status', 'Default: workbooks - Table...', and 'Salesforce - Professional Edition'. The Tableau interface features a top navigation bar with 'Content', 'Users', 'Groups', 'Schedules', 'Tasks', 'Status', and 'Settings'. Below this, the 'Default' project is displayed, which is described as 'The default project that was automatically created by Tableau.' The project summary shows 0 Projects, 6 Workbooks, 59 Views, 0 Data Sources, and 0 Details. A section titled '0 items selected' is visible. The main content area displays a grid of six items: 'Accounts_Dashboard' (57 views), 'Account_Dashboard' (32 views), 'Opportunity_Dashboard' (14 views), '10_Features_Demo_Final_MKW' (6 views), 'Tableau Public Workshop 20161212' (4 views), and 'Tableau Public 20161214' (3 views). Each item includes a thumbnail image of its content, such as bar charts, maps, and a 'Meet Tableau 10' presentation slide.

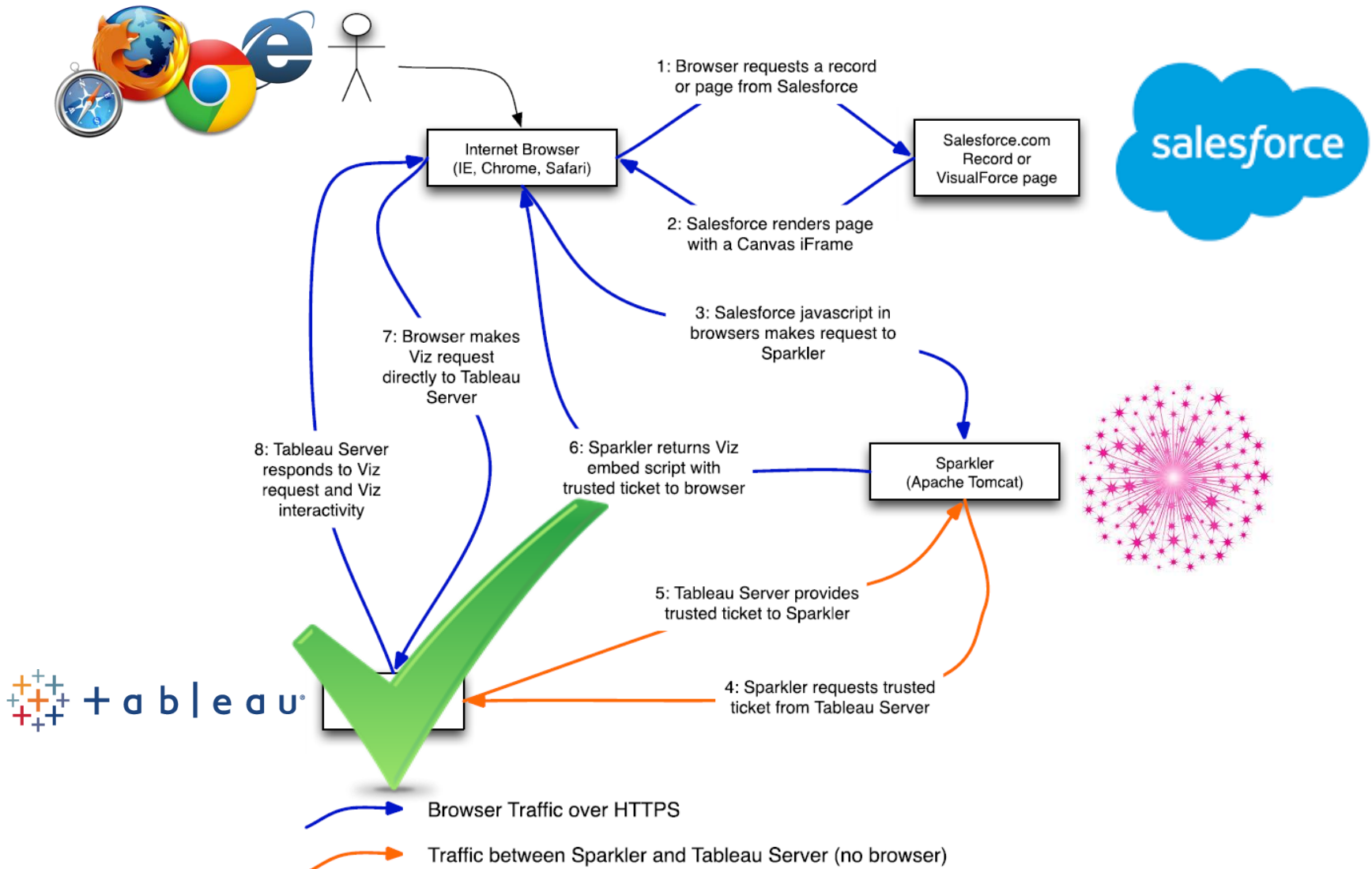
Configure Tableau Workbooks

- Included with download from Tableau
 - Accounts
 - Opportunities
 - Account Dashboard
- Fix data fields
- Other tweaks

Publish Tableau Workbooks to Server/Online

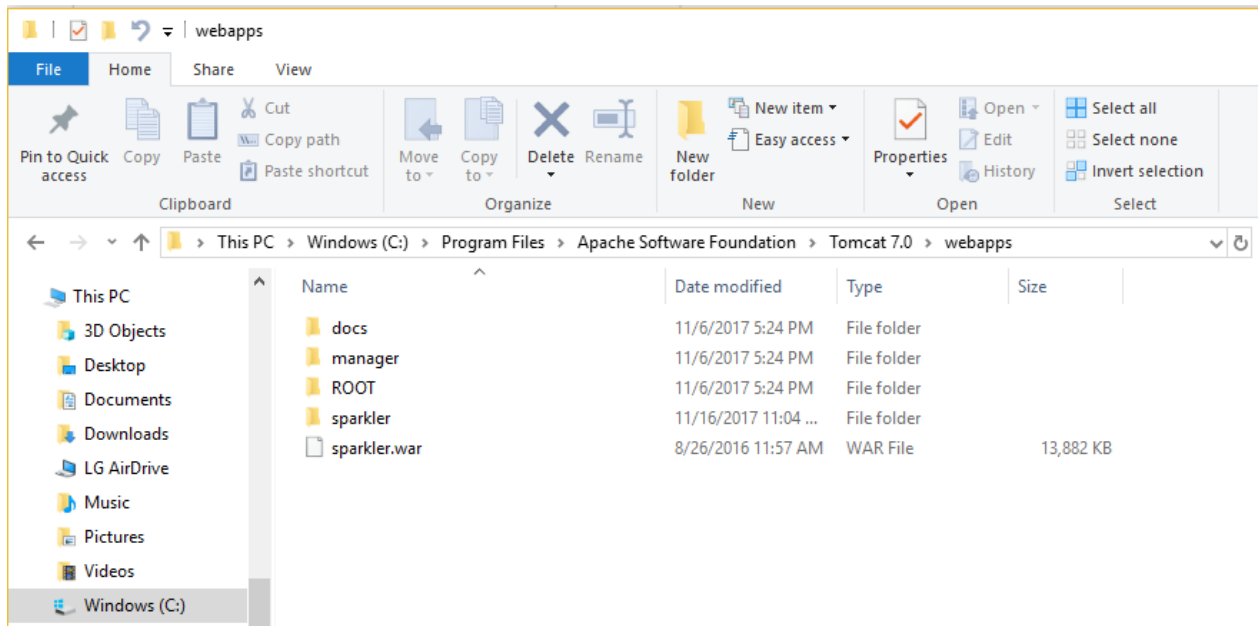
- Create extract
- Set refresh schedule

Tableau Sparkler Architecture



Deploy Sparkler on Tomcat

- Copy .war file into Tomcat webapp directory
- Tomcat will see the file and automatically deploy the application using the name of the file



Configure Sparkler (sparkler.xml)

```
4 <Context>
5 <!-- SALESFORCE.COM SETTINGS -->
6 <!-- Consumer secret set by Salesforce.com. This value will be found in the Salesforce.com admin interface. See the Sparkler documentation for further details -->
7 <Environment name="sparkler.sfdc.consumerSecret" value="6[REDACTED]" type="java.lang.String" override="false" />
8
9 <!-- List of organization-specific Salesforce.com consumer secrets. The text after "sparkler.sfdc.org." in name specifies the organization name,
10 and value is set as the consumer secret for that organization. -->
11 <!-- <Environment name="sparkler.sfdc.org.{SET ORG NAME}" value="{SET ORG CS}" type="java.lang.String" override="false" /> -->
12
13 <!-- TABLEAU SERVER TRUSTED TICKET SETTINGS -->
14 <!-- Specifies whether or not to use Trusted Tickets. If set as "true", sparkler.tableau.host must be set as well.
15 | Default: false -->
16 <Environment name="sparkler.tableau.useTrustedTickets" value="true" type="java.lang.Boolean" override="false" /> -->
17
18 <!-- Host name or IP address for Tableau Server. This should not contain "http://" or "https://". Required if Trusted Tickets are enabled. -->
19 <Environment name="sparkler.tableau.host" value="MWEINHAUER" type="java.lang.String" override="false" /> -->
20
21 <!-- Port on which Tableau Server is listening
22 | Default: 80
23 <Environment name="sparkler.tableau.port" value="443" type="java.lang.Integer" override="false" /> -->
24
25 <!-- Specifies whether or not Tableau Server is running with SSL
26 | Default: false -->
27 <Environment name="sparkler.tableau.isSecure" value="true" type="java.lang.Boolean" override="false" /> -->
28
29 <!-- Valid Tableau Server username to be used for testing the Trusted Ticket request on the Sparkler status page. -->
30 <Environment name="sparkler.tableau.test.userName" value="tmorris" type="java.lang.String" override="false" /> -->
31
32 <!-- Options to map from SF user identity to Tableau Server user name -->
33 <Environment name="sparkler.sfdc.userIdentifierField" value="email.user" type="java.lang.String" override="false" />
34
35 <!-- List of allowed email domains separated by comma. This field is required when sparkler.sfdc.userIdentifierField is set to be "email.user" -->
36 <Environment name="sparkler.sfdc.emailDomainsAllowed" value="senturus.com" type="java.lang.String" override="false" /> -->
37
38 <!-- Time skew threshold to validate the freshness of the signed user identity come from SF server.
39 | Default: 300 -->
40 <Environment name="sparkler.tableau.signedIdentitySkewSeconds" value="300" type="java.lang.Integer" override="false" />
41
```


Configure Sparkler (sparkler.xml)

- `username`: This takes the Salesforce username and maps it directly to the Tableau username. For example, if the Salesforce username is `joe@example.com`, `joe@example.com` is used as the Tableau username as well.
- `username.user`: This takes only the name but not the @ character or domain name from Salesforce username as the Tableau username. For example, the Salesforce user name `joe@example.com` becomes `joe` as the Tableau username.
- `email`: This takes Salesforce email address field for the user and maps it directly to the Tableau username. For example if `joe@example.com` is the Salesforce email name, `joe@example.com` is used as the Tableau username.
- `email.user`: This takes only the characters to the left of the @ from the Salesforce email address as the Tableau username. For example, if `joe@example.com` is the Salesforce email name, `joe` is used as the Tableau username.
- `userId`: This maps the Salesforce user ID and directly to the Tableau username. For example, if `005x0000001SyyEAAS` is the `userId`, `005x0000001SyyEAAS` is used as the Tableau username.
- `signedIdentity`: This takes the value of the `signedIdentity` setting and maps it directly to the Tableau username. You set this value if you're using custom mapping. For more information, see [Appendix J: Custom Mapping and the "signedIdentity" Parameter](#).

Configure Sparkler Adapter (sparkler.xml)

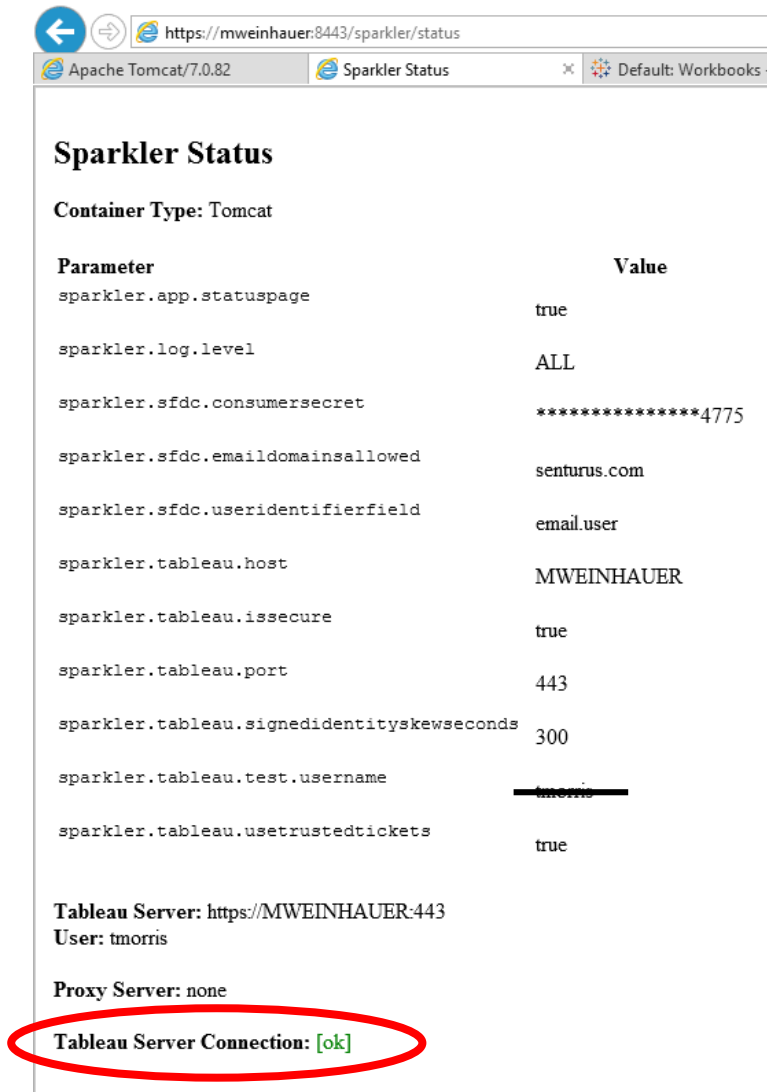
- Debug level

```
87 <!-- DEBUG SETTINGS -->
88 <!-- Sets the Sparkler log level. Possible values are: OFF, FATAL, ERROR, WARN, INFO, DEBUG, ALL
89      Default: INFO -->
90 <Environment name="sparkler.log.level" value="ALL" type="java.lang.String" override="false" />
```

- Sparkler status page

```
96 <!-- Enables the Sparkler status page at /status to assist with configuring and debugging Sparkler. If this feature
97      is enabled, a red warning message will appear on all Viz embed pages. This feature should be disabled in production
98      environments.
99      Default: false -->
100 <Environment name="sparkler.app.statusPage" value="true" type="java.lang.Boolean" override="false" />
```


Test Sparkler Adapter



Sparkler Status

Container Type: Tomcat

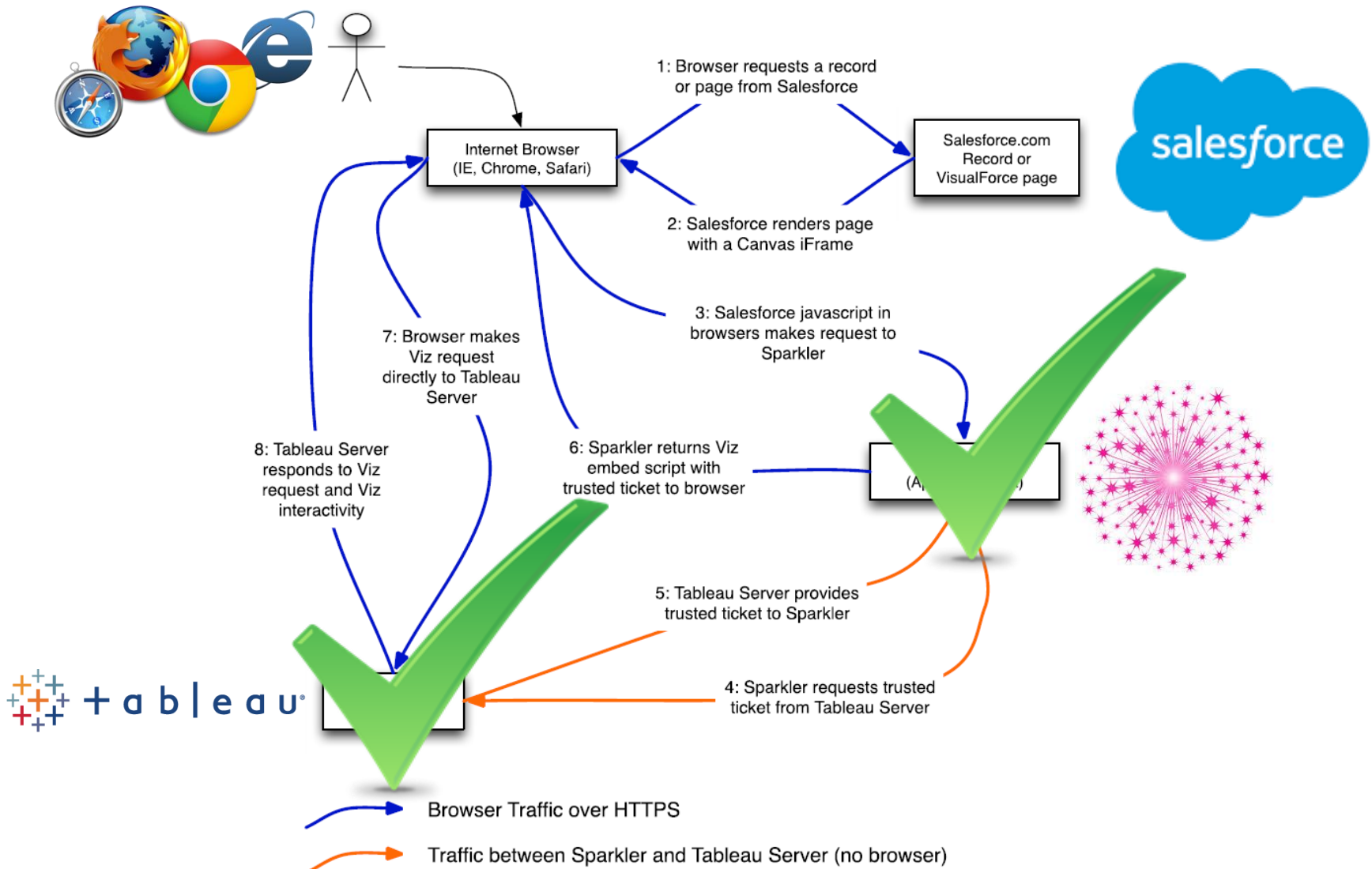
Parameter	Value
sparkler.app.statuspage	true
sparkler.log.level	ALL
sparkler.sfdc.consumersecret	*****4775
sparkler.sfdc.emaildomainsallowed	senturus.com
sparkler.sfdc.useridentifierfield	email.user
sparkler.tableau.host	MWEINHAUER
sparkler.tableau.issecure	true
sparkler.tableau.port	443
sparkler.tableau.signedidentityskewseconds	300
sparkler.tableau.test.username	tmorris
sparkler.tableau.usetrustedtickets	true

Tableau Server: https://MWEINHAUER:443
User: tmorris

Proxy Server: none

Tableau Server Connection: [ok]

Tableau Sparkler Architecture



Salesforce Configuration

- Create Visualforce connected app in Salesforce

Connected App Name

Sparkler

[Back to List: Custom Apps](#)



[Edit](#) [Delete](#) [Manage](#)

Version 1.0

API Name Sparkler

Created Date 11/16/2017 10:30 PM

By: [Tony Morris](#)

Contact Email mweinhauer@senturus.com

Contact Phone

Last Modified Date 11/17/2017 9:39 AM

By: [Tony Morris](#)

Description

Info URL

▼ API (Enable OAuth Settings)

Consumer Key 3MVG990xTyEMCQ3gPjhtJEkylTOzIZH3VOI.Dkwq3Nqewra4lxZXqBJAmswylF33Px3bn6ow33CL3vcThiN

Consumer Secret [Click to reveal](#)

Selected OAuth Scopes Access your basic information (id, profile, email, address, phone)

Callback URL <https://MWEINHAUER:8443/sparkler/keepAlive>

Enable for Device Flow ☐

Require Secret for Web Server Flow ☒

Token Valid for 0 Hour(s)

Include Custom Attributes ☐

Include Custom Permissions ☐

Enable Single Logout Single Logout disabled

▼ Custom Connected App Handler

Apex Plugin Class

Run As

▼ Canvas App Settings

Canvas App URL <https://MWEINHAUER:8443/sparkler/sfdc/canvas>

Access Method Signed Request (POST)

SAML Initiation Method None

Locations
Visualforce Page
Publisher
Chatter Feed

Options

Lifecycle Class

Salesforce Configuration

- Create Visualforce pages and/or use provided samples
- Setup > App Setup > Develop > Visualforce Pages

Visualforce Page

Page EditSave Quick Save Cancel Where is this used? Component Reference Preview

Page Information

Label

Tableau Opportunities

Name

Tableau Opportunities

Description

Tableau Opportunities (Demo)


Available for Lightning Experience, Lightning Communities, and the mobile app

☐

Require CSRF protection on GET requests

☐

Visualforce Markup**Version Settings**



```
1 <apex:page>
2   <!-- Begin Default Content REMOVE THIS -->
3   <h1>Congratulations</h1>
4   This is your new Page
5   <!-- End Default Content REMOVE THIS -->
6 </apex:page>
```


Salesforce Configuration

- Create Visualforce pages or use provided samples

```
1 <apex:page >
2 <apex:canvasApp applicationName="Sparkler"
3     height="812px"
4     width="1000px"
5     parameters="
6     {
7         'ts.name': 'Accounts_Dashboard/MyAccounts',
8         'ts.filter': 'Full Name={!$User.FirstName} {!$User.LastName}'
9     }" />
10 </apex:page>
11
12 {!$User.FirstName} {!$User.LastName}
13 <user.firstName> <user.lastName>
```

```
1 <apex:page standardController="Account">
2 <apex:canvasApp applicationName="Sparkler"
3     height="636px"
4     width="804px"
5     parameters="
6     {
7         'ts.name': 'Account_Dashboard/AcctDashboard',
8         'ts.filter': 'Account_Parameter={!Account.Id}',
9     }" />
10 </apex:page>
```


Salesforce Configuration




- Create Tab pages (Tabs contain Visualforce pages)
- Setup > App Setup > Create > Tabs > Visualforce Tabs

New Visualforce Tab

Step 1. Enter the Details

Choose the page for this new tab. Fill in other details.

Select an existing page or [create a new page now](#).

Visualforce Page	<input type="text" value="Tableau Opportunities [Tableau_Opportunities]"/>
Tab Label	<input type="text" value="Tableau Opportunities"/>
Tab Name	<input type="text" value="Tableau_Opportunities"/> 
Tab Style	 <input type="text" value="Globe"/> 

(Optional) Choose a Home Page Custom Link to show as a splash page the first time your users click on this tab.

Splash Page Custom Link


Enter a short description.

Description	<input type="text" value="Tableau Sparkler Tab (Demo)"/>
-------------	--

Salesforce Configuration


- Create page layouts embedding content
- Clone existing pages and modify
- Setup > App Setup > Customize > %PAGENAME% > Page Layouts

Create New Page Layout

 As an option, you may select an existing layout to clone. If you create a page layout without cloning, your page layout will not include the standard sections whose names are translated for your international users.

Existing Page Layout

Page Layout Name

Feed-Based Layout ☐ 

Salesforce Configuration

- Create page layouts embedding content
- Visualforce pages section - drag and drop into layout

The screenshot shows the Salesforce Page Layout Editor. The top toolbar includes buttons for Save, Quick Save, Preview As..., Cancel, Undo, Redo, and Layout Properties. On the left, a sidebar lists components: Actions, Expanded Lookups, Related Lists, Report Charts, Components, Visualforce Pages (highlighted), and Custom S-Controls. The main workspace features a 'Quick Find' search bar and a list of components to add, including Section, Blank Space, InsideView Opport..., iSell Opportunity..., Opportunity, Opportunity_Full..., Opportunity Quick..., and Tableau Opportuni... Below this, the page layout is visualized with sections: Business Development (1/17/2018), Rep Pass Date, Prospecting Rep Pass Date (1/17/2018), Services End Date (1/17/2018), Competition (Sample Competition), Project Manager (Sample Project Manager), Possible Resource (Sample Possible Resource), System Information (Created By: Sample User, Last Modified By: Sample User), Description Information (Description: Sample Description), and Sparkler Opportunities (Tableau Opportunities (Scrollbars)).

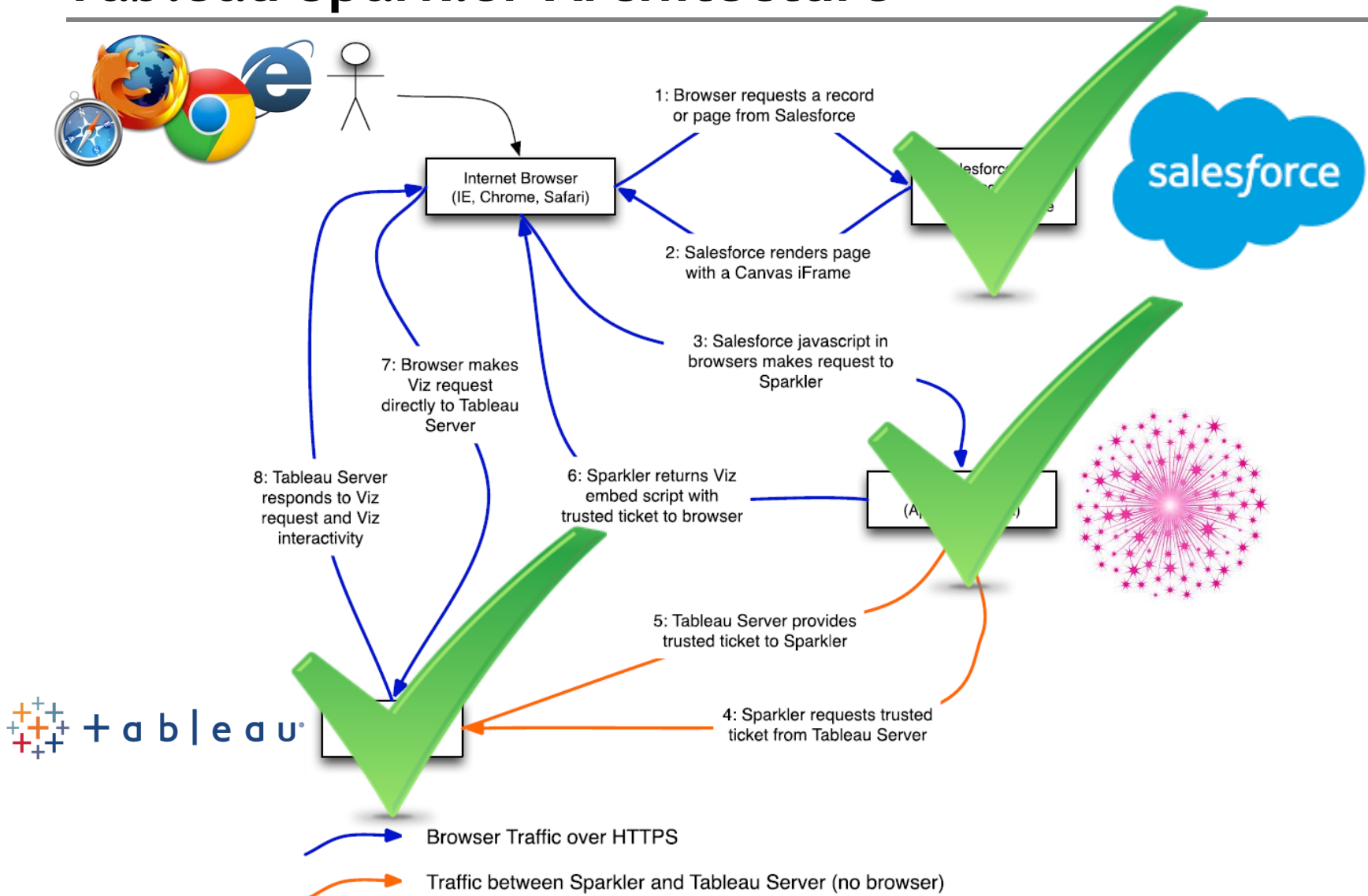
Salesforce Configuration

- Create page layouts embedding content
- Assign to role(s)

The screenshot shows the Salesforce iSell configuration interface. The top navigation bar includes links for Home, Accounts, Leads, Contacts, Campaigns, Opportunities, and iSell. The main content area is titled "Edit Page Layout Assignment Opportunity". Below the title, there is a table showing page layout assignments for different profiles. The table has two columns: "Profiles" and "Page Layout". The "Page Layout To Use:" dropdown is set to "Opportunity Layout". The table shows that the "System Administrator" profile is assigned the "Opportunity Layout".

Profiles	Page Layout
Contract Manager	Opportunity Layout
Marketing User	Opportunity Layout
Read Only	Opportunity Layout
Solution Manager	Opportunity Layout
Standard User	Opportunity Layout
System Administrator	Opportunity Layout

Tableau Sparkler Architecture



Support

- Limited to Tableau and Sparkler Adapter
 - Limited knowledge of Sparkler by support team
- Won't help with routing, network, firewalls, load balancing
- Won't help with Java, app server or browser
- Won't help with Salesforce
- Tableau Community page focused on [Sparkler](#)

Challenges/Caveats

- Clustered environments
- Auth providers - SAML/Online/Trusted Tickets
- Proxies/VPN
 - Needed for remote access to Tableau
- Mapping Tableau/SFDC users
- Certificates
 - Canvas apps must be both secure and trusted
 - Any browser warnings will result in failure to render

Challenges/Caveats

- Visualforce pages
 - Parameters
- Customizing Tableau content
 - Fields must be mapped correctly
- Linux



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SUMMARY

Key Takeaways

Summary

- There are many ways to access Salesforce data from Tableau, each with its own benefits and drawbacks.
- Tableau Sparkler enables leveraging the power of Tableau visualizations directly in Salesforce, providing analytics within the flow of the business process, at the point of impact!
- Using Tableau with a combined data source allows organization to truly unlock the power of both applications!
- Installation of Sparkler is not straightforward or easy, but the benefits are significant!





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WHO WE ARE

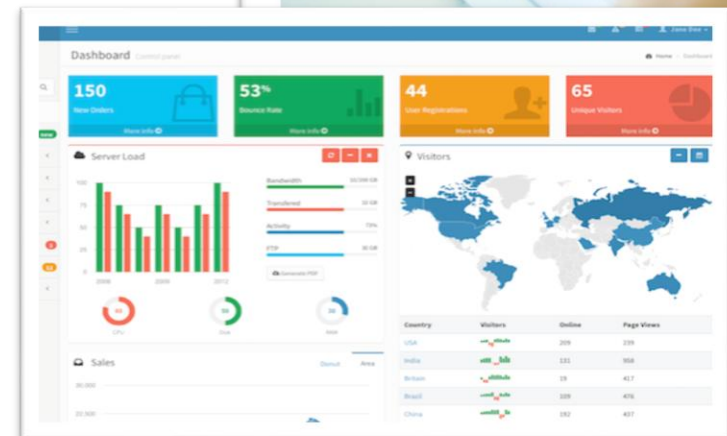
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GO-TO FEATURES MISSING IN PREVIOUS RELEASES OF V11 ARE BACK IN R7

Thursday, January 25, 2018 - 11am PT (2pm ET) - 90 minutes



ADVANCED ANALYTICS IN TABLEAU: USE THE FORCE!

BUILT-IN FUNCTIONS AND 3RD PARTY TOOLS FOR DEEPER DATA INSIGHTS

Thursday, February 08, 2018 - 11am PT (2pm ET) - 60 minutes



INSTALLING COGNOS ANALYTICS V11

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Thursday, February 15, 2018 - 11am PT (2pm ET) - 60 minutes

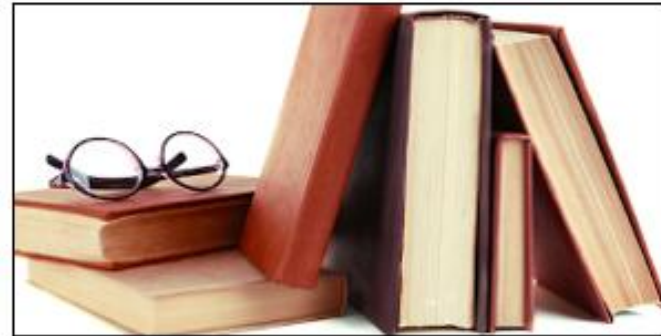
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UNLOCKING SALESFORCE AND MARKETO VALUE WITH TABLEAU Five Pragmatic, Quick-Win Techniques	 BUSINESS STRATEGY	→

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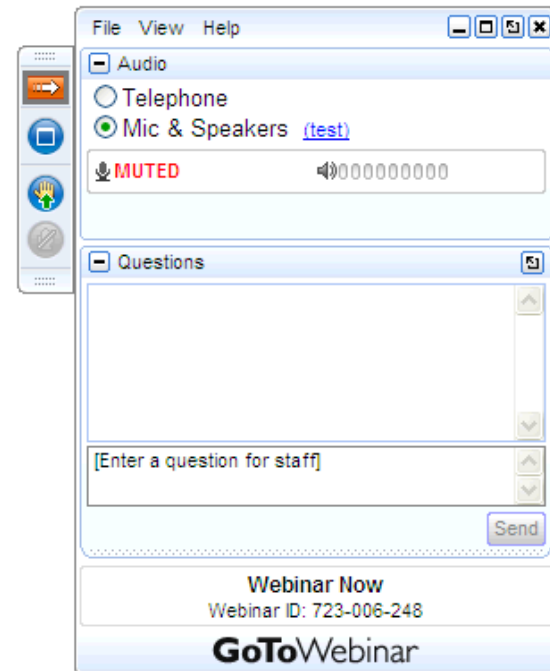
PLATFORM	VERSION	TOOL	TITLE	DATE	GO
IBM COGNOS	10.2	REPORT STUDIO	BEGINNING AND INTERMEDIATE AUTHORIZING	AUG - AUG 22 23	→

Q&A

If your question or issue is broader than what can be answered today, contact us at

info@senturus.com

and we will set up a free consultation.



Senturus Can Help

Install Tableau Sparkler to embed
Tableau visualizations into Salesforce



- Installation of Sparkler on Tomcat application server
- Secure configuration of Sparkler (Tomcat) and Tableau Server
- Configuration of trusted tickets authentication between Tableau Server and Sparkler
- Configuration of Salesforce to use the Sparkler application, included Visualforce pages and Salesforce tabs
- Configuration of included Tableau dashboard (accounts dashboard, accounts and opportunities) for use on Tableau Server
- \$4995

Thank You!

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