



**SENTURUS**

# OUR FAVORITE NEW FEATURES IN TABLEAU 2019.3

**Data and Server Management Get a Big Boost**

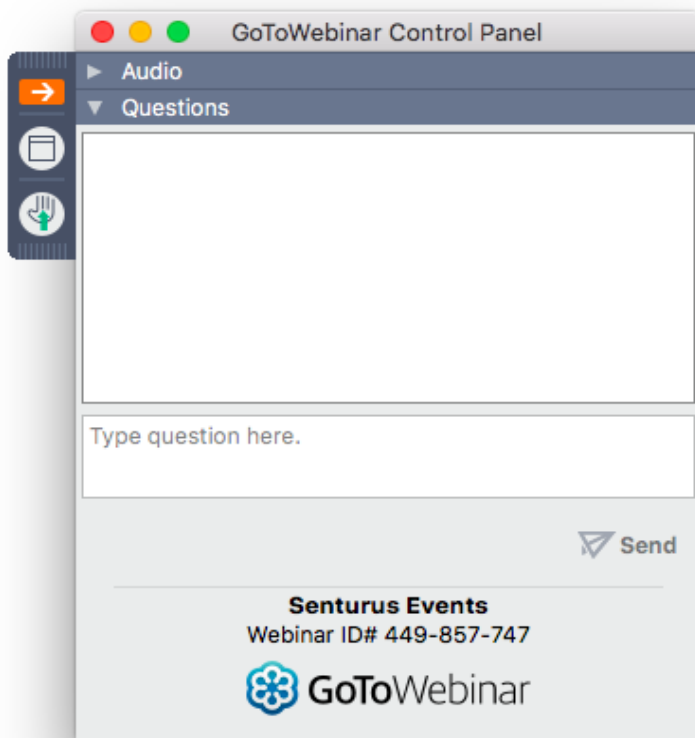


# GoToWebinar Control Panel

Click arrow to restore full control panel



Submit questions here



# Presentation Slide Deck

[www.senturus.com/resources/](http://www.senturus.com/resources/)

## RESOURCE LIBRARY

Welcome to our extensive, free library of past webinars, demos, whitepapers, presentations and helpful hints. Use the topic boxes to the right to filter through and easily locate content. We are constantly adding new materials, so please check back often to see our latest content. Enjoy!

SEARCH RESOURCES

GO

SORT BY




Popularity

Date

Title

Type



| RESOURCE TITLE  | TYPE   | GO |
|---|--|----|
| <b>SHEDDING LIGHT ON CLOUD BI OPTIONS</b><br>Amazon. IBM Cognos Cloud. Microsoft Power BI Service. Tableau Online. Azure. |  BUSINESS STRATEGY | →  |
| <b>IBM COGNOS REPORTING TOOLS: FEATURE SET COMPARISON</b><br>Visual Reference Guide                                       |  FEATURES         | →  |
| <b>A COMPARISON OF POWER BI, TABLEAU &amp; COGNOS</b><br>Differentiators Demo'd   |  FEATURES         | →  |

# Agenda

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- Introductions
- Explain Data
- Tableau Catalog
- At rest encryption
- PDF attachment subscriptions
- Tableau resource management
  - Resource monitoring
  - Deployments
  - External repository
  - Workload optimization
- 2018.4 and Beyond
- Additional resources
- Q&A

# Introducing...Today's Presenters

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**Todd Schuman**  
Practice Lead Installations,  
Upgrades and Optimization  
Senturus, Inc.



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

# Poll #1

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What Tableau Server version are you using?

- 2019.X
- 2018.2/3/4
- 2018.1
- 10.X
- 9.X

## Poll #2

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What are your biggest challenge in the Tableau environment?

- Setting up trusted authentication
- Performance issues
- Self-service security and data governance
- Installations and upgrades
- User adoption





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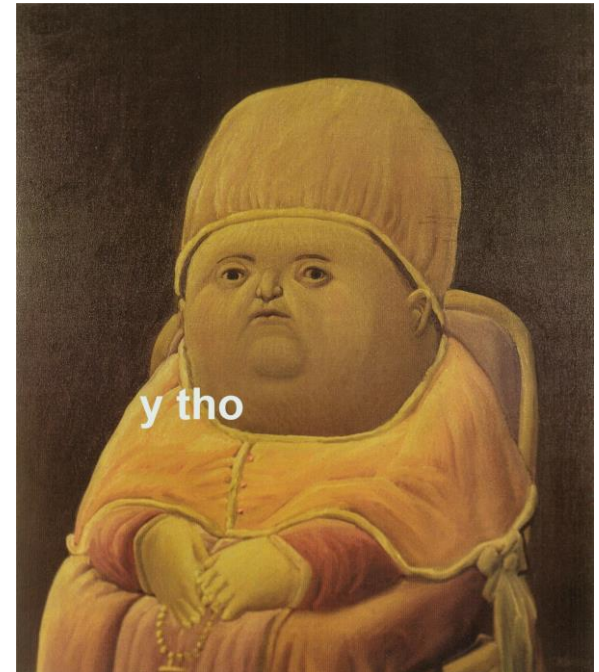
**EXPLAIN DATA**



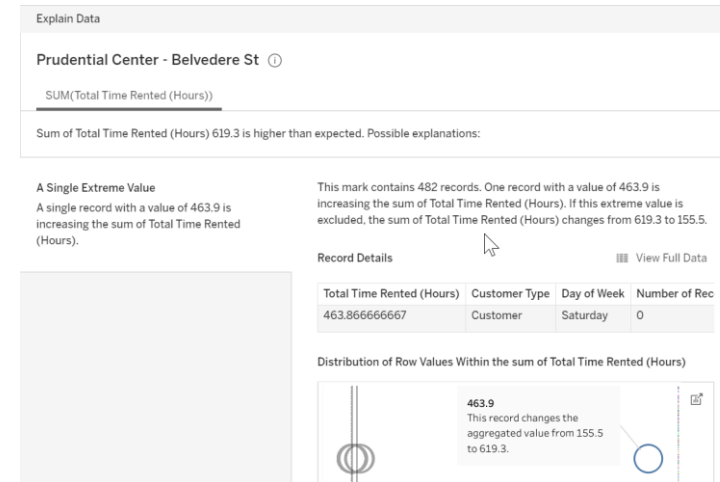
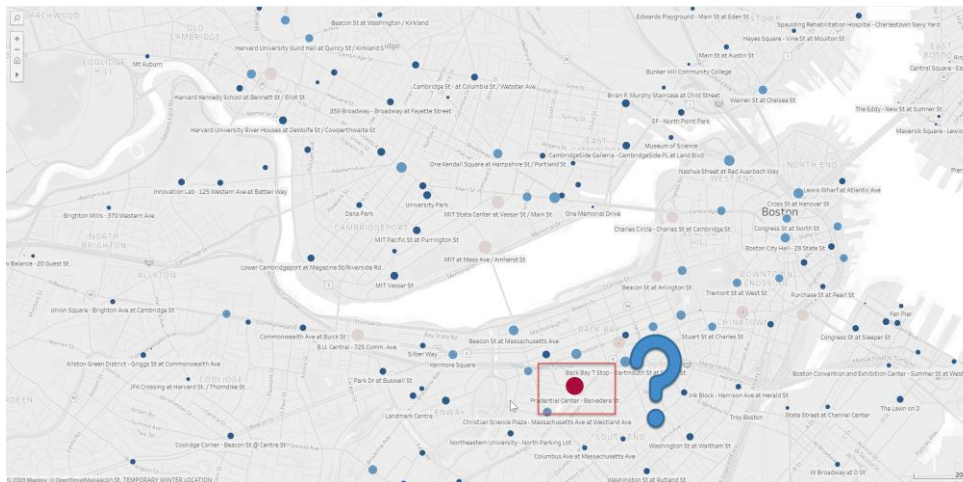
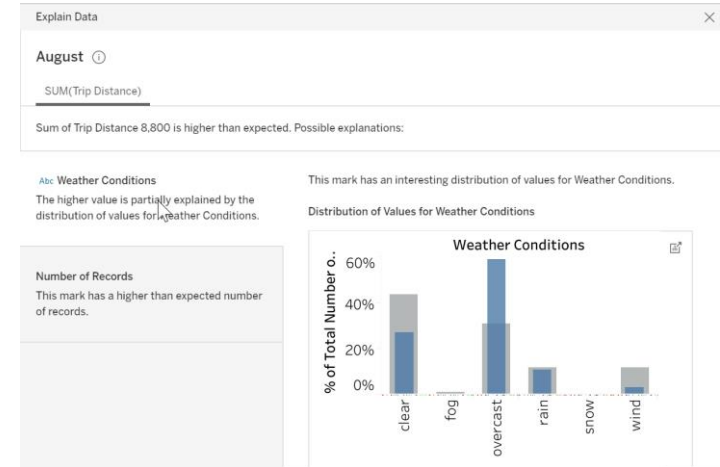
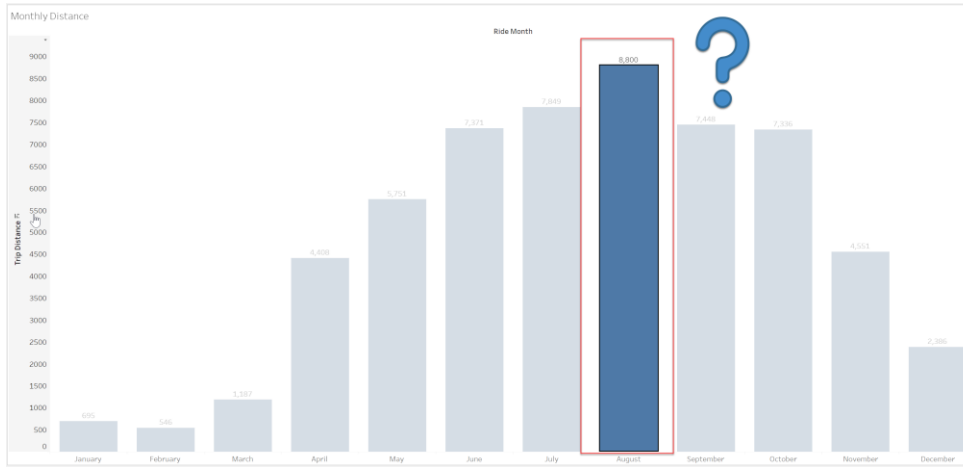
# Explain Data

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- Add additional insights into your data
- Custom created visualizations based on insights
- Dive into new viz
- Continue to dive into more insights



# Explain Data - Sample Usage





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## **TABLEAU CATALOG**

# Tableau Catalog

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- Index metadata content on your site
  - Workbooks
  - Data sources
  - Worksheets
  - Flows
- Maps metadata to databases/tables
- Enable with command line
  - “*tsm maintenance metadata-services enable*”



# Estimating the Catalog Index

```
C:\Users\senturusadmin>tsm maintenance metadata-services enable
When enabling this option, some services used by Tableau Server must be restarted. This will make some functionality on Tableau Server temporarily unavailable. Do you want to continue?
(y/n): y
Job id is '43', timeout is 10 minutes.
11% - Checking if required services to create the Metadata API Store are running.
22% - Stopping Metadata API Store related services.
33% - Enabling the maintenance app.
44% - Waiting for the maintenance app to start.
55% - Disabling database services.
66% - Waiting for database services to disable.
77% - Recreating Metadata API Store.
88% - Setting Metadata API Store related settings.
100% - Starting Metadata API Store related services.
Metadata API Store was created successfully.

C:\Users\senturusadmin>
```

- Can be time consuming to run
- Can increase threads/memory
  - Increase threads
  - Increase RAM

| Components             | Baseline values                                     |
|------------------------|---|
| Content                | 12,000 workbooks, published data sources, and flows |
| Threads                | 2   |
| JVM heap size (memory) | 64 MB (minimum) - 4 GB (maximum)                    |
| Ingestion              | ~6 hours  |

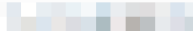

# Don't See the Catalog?

- Check your licenses
  - Data management add-on

| **Licenses** Extensions Add a Site

Creator: 9/25 Explorer: 1/0 Viewer: 0/0 Unlicensed: 0

## Product Keys

| Product Key   | Tableau Server Cores | Tableau Prep Conductor Cores | Creator | Explorer | Viewer | Guest | Valid | Server Management Add-on | Data Management Add-on | License Expires | Maintenance Expires |
|---|----------------------|------------------------------|---------|----------|--------|-------|-------|--------------------------|------------------------|-----------------|---------------------|
|  | 0                    | 0                            | 0       | 0        | 0      |       | ✓     | ✓                        | ✓                      | Feb 28, 2020    | N/A                 |
|  | 0                    | 0                            | 25      | 0        | 0      |       | ✓     |                          |                        | Feb 28, 2020    | N/A                 |

- Was it hidden/disabled?

**General** Licenses Extensions Add a Site

Revert

Save

### Tableau Prep Conductor

Users with appropriate permissions can publish, manage, and schedule flows.

☒ Allow users to publish, manage, and schedule flows

### Tableau Catalog

Turn on Catalog access for this site. This allows users with appropriate permissions to see metadata, lineage, data quality information, and more. Tableau Catalog requires the Metadata API, which is enabled server-wide using the "tsm maintenance metadata-services enable" command. Note: After enabling the Metadata API, it's always on, even if Catalog access is disabled for this site.

☒ Allow users to see metadata, lineage, and data quality information



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**AT REST ENCRYPTION**



# Lock Down Extracts

- Encrypt .hyper extracts while they are stored on Tableau Server
- Administrators can enforce encryption of all extracts on their site or allow users to specify to encrypt all

## Extract Encryption at Rest

You can specify whether extracts stored on this site are encrypted.

- ☐ Disable: Do not allow encrypted extracts on this site.
- ☒ Enable: Allow users to optionally encrypt extracts on this site.
- ☐ Enforce: All extracts published and stored on this site are encrypted.

Encryption not running.

0/10 Encrypted

10/10 Unencrypted



# Encryption Limitations

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- .tde file extracts must be upgraded to .hyper file extracts before they can be encrypted
- Temp and cache files not encrypted
- Workbooks (.twb) and data sources (.tds) are not encrypted
- Excel/JSON not encrypted unless they are converted to .hyper
- Extracts downloaded from server are decrypted

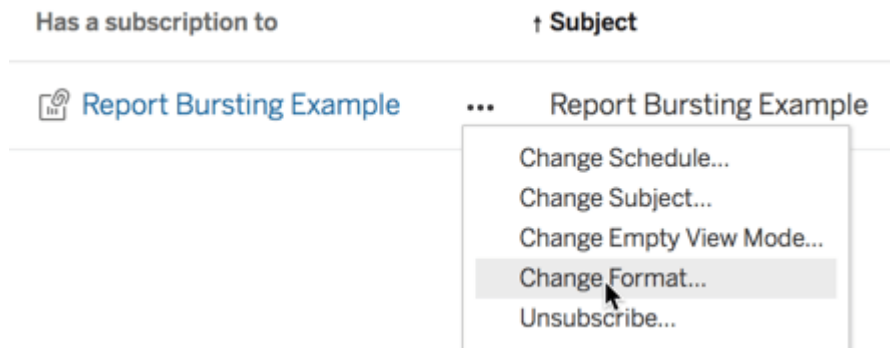


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**PDF ATTACHMENT SUBSCRIPTIONS**

# PDF Format in Subscriptions

- Select PDF as format for subscriptions
- Setup subscriptions to burst to PDF
  - Personalized report for each recipient
- Change existing format subscriptions created pre- 2019.3



The 'Subscribe' dialog box contains the following sections:

- Subscribe Users:** A text input field with the placeholder 'Type to add users or groups'.
- ☐ **Subscribe me**
- Include:** A dropdown menu currently showing 'This View'.
- ☐ **Don't send if view is empty**
- Format:** A dropdown menu currently showing 'Image and PDF'. Below it is a list of options: 'Image', 'PDF', and 'Image and PDF' (which is highlighted).
- Message (Optional):** A text input field with the placeholder 'Add a custom message'.
- Schedule:** A dropdown menu currently showing '5 days a week, at 11:00'.
- At the bottom, there is a link 'Manage Subscriptions' and two buttons: 'Cancel' and 'Subscribe'.



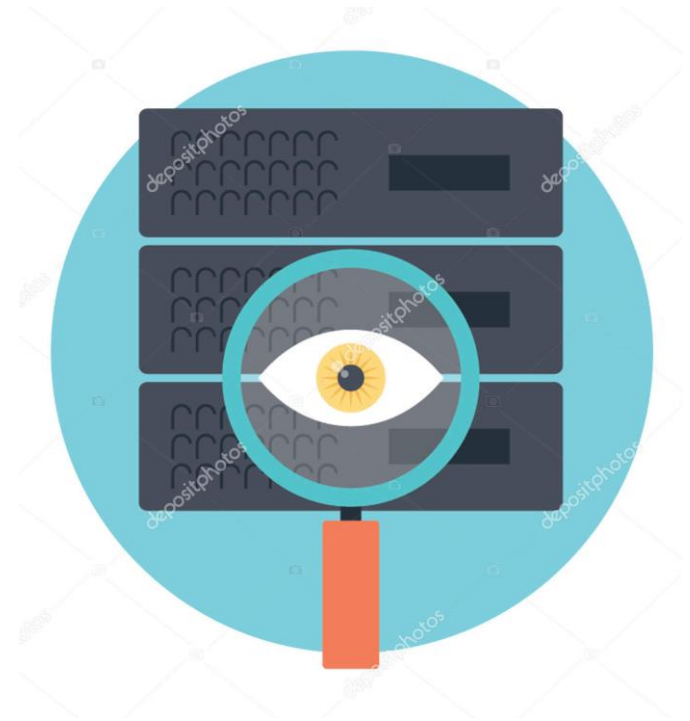
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## **TABLEAU RESOURCE MANAGEMENT**

# Resource Monitoring

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- Environment or individual server
  - Server performance monitoring
  - Tableau processes
  - Background tasks
  - Concurrent users
  - Load times
  - External data requests
- Insights
  - Slowest views
  - Longest extract refresh



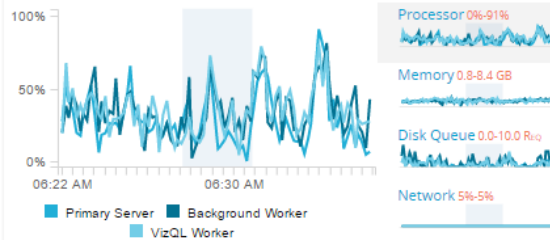
# Monitoring - Sample Charts

Requests 12

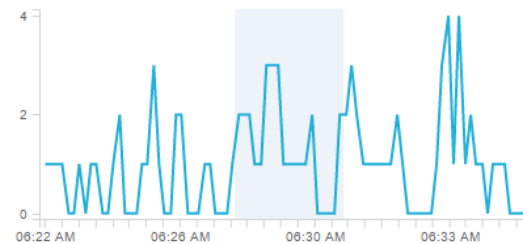
Incidents 2

Environment Activity

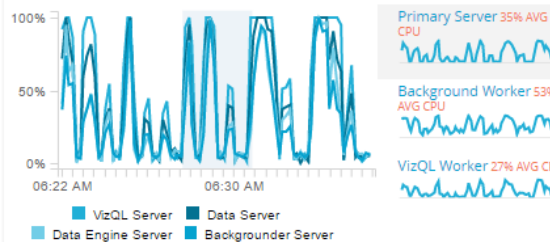
## Performance



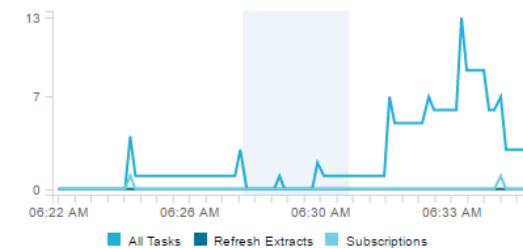
## Concurrent Users



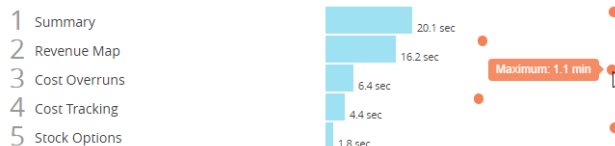
## Tableau Processes



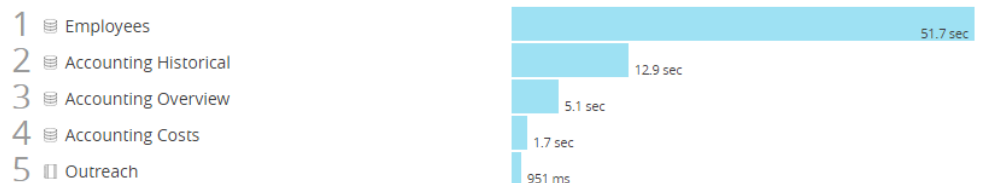
## Background Tasks



## Slowest Views



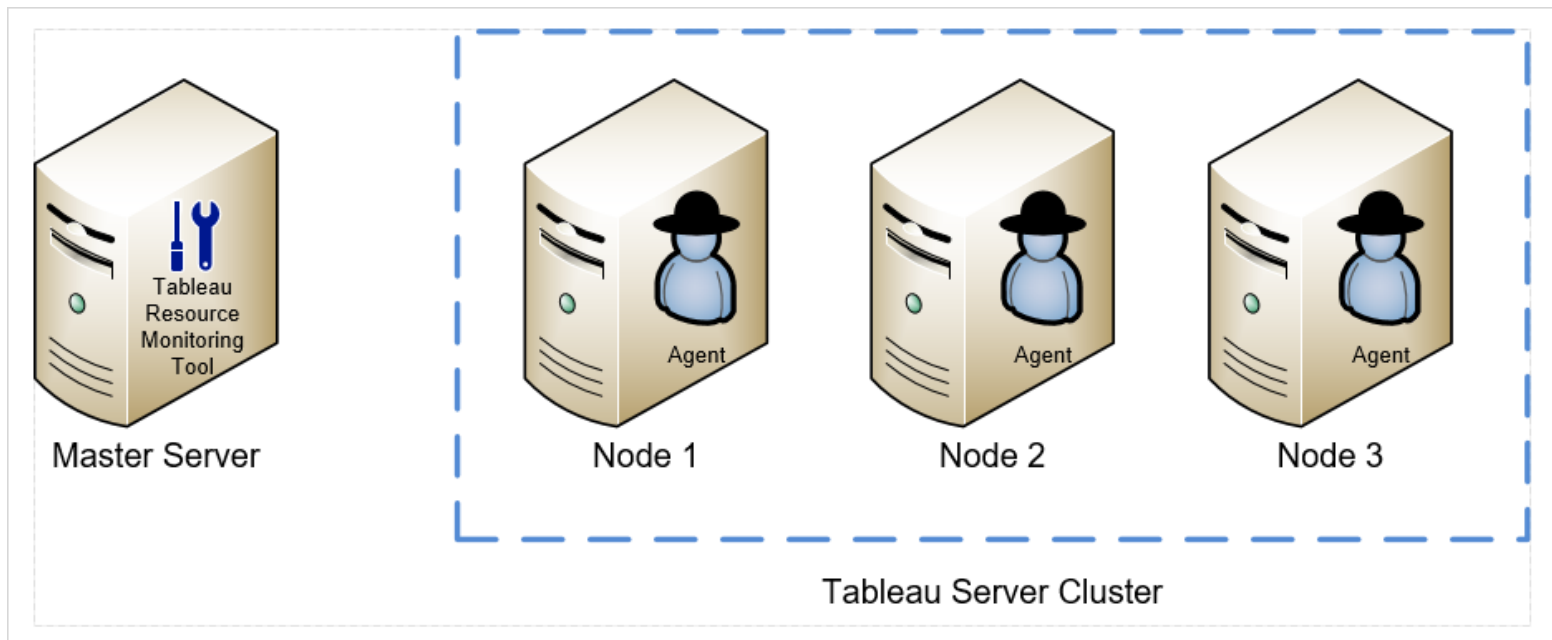
## Longest Extract Refreshes



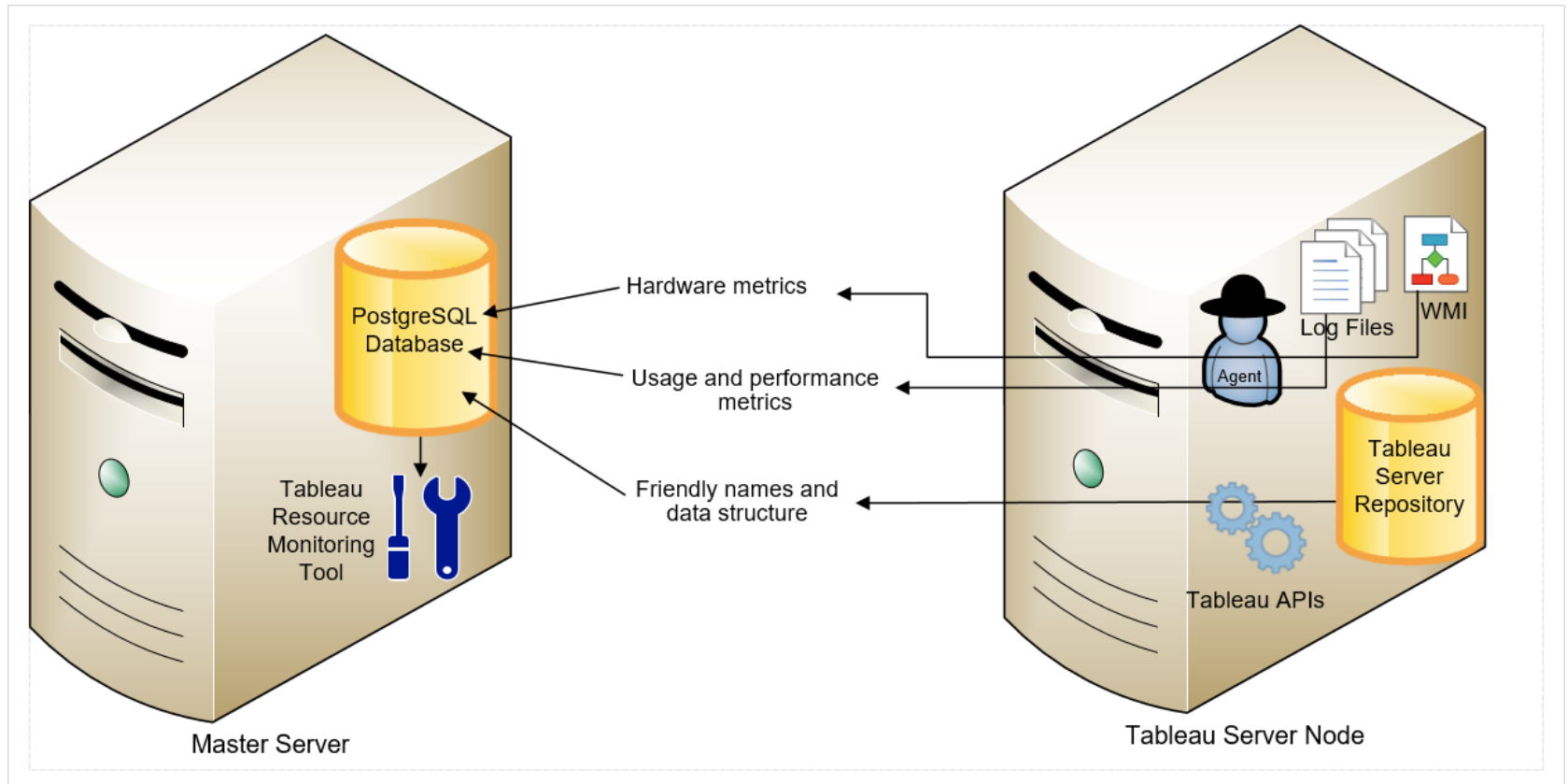


# TRM

- Master Server
- Agent



# TRM Agent to Master - Data Flow



# Installation - Multi-Step Process

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- Install prerequisites
  - RabbitMQ
  - Erlang
  - PostgreSQL database
- Install master
  - 8 physical CPU cores (16 vCPUs)
  - 32 GB RAM
  - 500 GB disk space
- Install agent
  - Each server in cluster

# TRM - Installation Tips

## Save prerequisites install account Info!!!

tmp3965.tmp - Notepad

File Edit Format View Help

!!!REVIEW THE FOLLOWING INFORMATION AND STORE IT IN A SECURE PASSWORD MANAGER IF DESIRED!!!  
!!!THIS FILE WILL BE DELETED AUTOMATICALLY WHEN CLOSED!!!

RabbitMQ Username: [REDACTED]  
RabbitMQ Password: [REDACTED]  
PostgreSQL Superuser Username: [REDACTED]  
PostgreSQL Superuser Password: [REDACTED]  
PostgreSQL Interactor Username: [REDACTED]  
PostgreSQL Interactor Password: [REDACTED]  
PostgreSQL Readonly Username: [REDACTED]  
PostgreSQL Readonly Password: [REDACTED]



# TRM - Install Master

- Setup
  - Server
  - Database
  - Message queue
- Should have values entered by default
- Will need to refer to account info in text file

Server Configuration

Server URL

Host

Internal-b6

The preferred URL for accessing the server. The server will listen to all IPs regardless of host name.

HTTP Port

80

Must specify an unused port. Port 443 will also be used for HTTPS.

Certificate Thumbprint

E8367A99568BF4C495BF4A587BEA722D8D6373C

Must match a certificate in the Windows local machine or current user certificate store. If no value is provided, a default self-signed certificate will be used.

☐ Require HTTPS?

Test Server Configuration

Database

Type

PostgreSQL

Server

localhost

Port

5555

Database

tabrmt

Username

tabrmtdb

Password

\*\*\*\*\*

Test Database Connection

Message Queue

Server

localhost

Port

5672

Virtual Host

tabrmt

Username

tabrmtmq

Password

\*\*\*\*\*

☐ Enable TLS?

Certificate Host Name

The message queue server's Canonical Name. This must match the CN on the certificate or the SSL connection will fail.

Test Message Queue Connection

Success!

Password

Password Salt

TNYYdIKRRb8=

Minimum Length

10

Minimum Numeric Characters

1

Minimum Special Characters

1

Minimum Latin Alphabet Characters

5

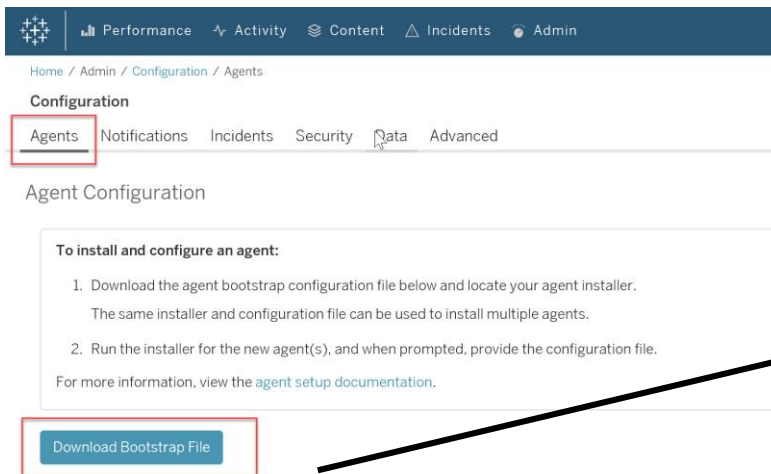
Require Upper and Lower Case Characters

☐

Save and Restart Server

# TRM - Agent Install

- Bootstrap file - download from master
- Import in all agents



The screenshot shows the Tableau Resource Monitoring (TRM) configuration interface. The top navigation bar includes links for Performance, Activity, Content, Incidents, and Admin. The breadcrumb trail indicates the path: Home / Admin / Configuration / Agents. The 'Configuration' section is active, with sub-tabs for Agents, Notifications, Incidents, Security, Data, and Advanced. The 'Agents' tab is selected, leading to the 'Agent Configuration' page. This page contains instructions on how to install and configure an agent, followed by a 'Download Bootstrap File' button, which is highlighted with a red box.

Home / Admin / Configuration / Agents

**Configuration**

Agents Notifications Incidents Security Data Advanced

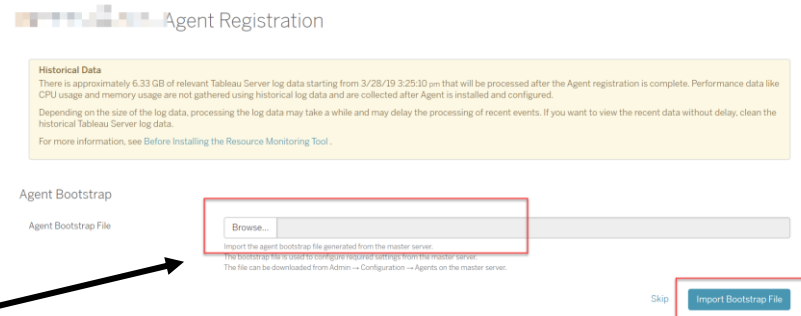
Agent Configuration

**To install and configure an agent:**

1. Download the agent bootstrap configuration file below and locate your agent installer.  
The same installer and configuration file can be used to install multiple agents.
2. Run the installer for the new agent(s), and when prompted, provide the configuration file.

For more information, view the [agent setup documentation](#).

**Download Bootstrap File**



The screenshot shows the 'Agent Registration' page. It includes a 'Historical Data' section with a warning about log data processing. Below this, the 'Agent Bootstrap' section features a file upload area with a 'Browse...' button and an 'Import Bootstrap File' button, both highlighted with red boxes. A black arrow points from the 'Download Bootstrap File' button in the previous screenshot to the 'Import Bootstrap File' button here.

Agent Registration

**Historical Data**

There is approximately 6.33 GB of relevant Tableau Server log data starting from 3/28/19 3:25:10 pm that will be processed after the Agent registration is complete. Performance data like CPU usage and memory usage are not gathered using historical log data and are collected after Agent is installed and configured.

Depending on the size of the log data, processing the log data may take a while and may delay the processing of recent events. If you want to view the recent data without delay, clean the historical Tableau Server log data.

For more information, see [Before Installing the Resource Monitoring Tool](#).

Agent Bootstrap

Agent Bootstrap File

Browse...

Import the agent bootstrap file generated from the master server.  
The bootstrap file is located on the master server.  
The file can be downloaded from Admin -> Configuration -> Agents on the master server.

Skip **Import Bootstrap File**

# Deployments - New Migration Tool

- Create a plan (reuse)
  - Source and destination server
  - Select
    - Projects
    - Workbooks
    - Data sources
  - Transformations
    - Replace table/schema names
    - Custom SQL
    - Remove extracts
  - Publish options
    - Reset selections
    - Overwrite workbooks
    - Copy schedules/permissions

The screenshot shows the 'Migration' tool interface. At the top, there's a header with a gear icon and the word 'Migration'. Below it, there are two buttons: 'Open a plan' and 'Create a plan'. The main content area is titled 'Tableau Servers' and has a sub-header 'Migrating from Source to Destination'. On the left, there's a sidebar with a tree view containing 'Planning' (with sub-items: Servers, Source Projects, Workbooks, Selection, Mapping, Transformations, Data Source Transformations, Publish Options, Published Data Sources, Selection, Mapping, Transformations, Publish Options, Scripts, Plan Options) and 'Migration' (with sub-item: Run Migration). The main area is divided into 'Source' and 'Destination' sections. Each section has a dropdown menu to 'Import from Saved Connection'. Below these are input fields for 'Server URL', 'Username', and 'Password', each with a 'Save password' checkbox. There are also 'Site:' labels and 'Sign In and Select a Site' buttons for both source and destination.

## Data Source Transformations

This screenshot shows a dropdown menu titled 'Add Transformation'. It lists several transformation options with brief descriptions: 'Replace Table/Schema Name' (Replaces all or part of a table or schema name.), 'Set Calculation Formula' (Overwrites the formula for a calculated field.), 'Set Data Source Display Name' (Change the display name on a data source), 'Set Connection Info' (Modifies connection information for matching data sources.), 'Set Custom SQL' (Modifies the custom SQL for matching data sources.), 'Remove Extract' (Removes extracts from matching data sources.), and 'Remove Extract' (Removes extracts from matching data sources.).

## Workbook Publish Options

- ☐ Reset Dashboard Selections ⓘ
- ☐ Overwrite Newer Workbooks ⓘ
- ☒ Copy Workbook Permissions ⓘ
- ☒ Copy Extract Refresh Schedules ⓘ

Add Option ▼

No additional publish options.



# Other Deployment Info

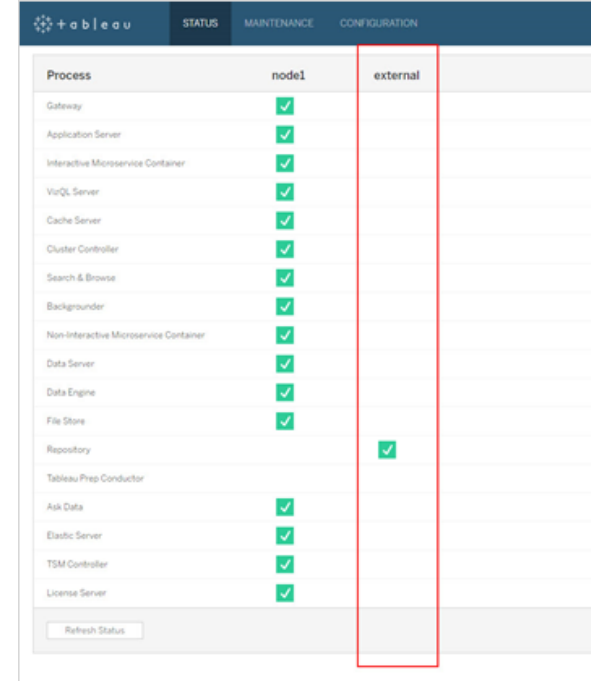
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- Limitations
  - Not able to deploy
    - Data driver alerts
    - Custom views
    - Thumbnails
- Consolidate sites
- Rollback options
- Command line options
  - [https://help.tableau.com/current/server/en-us/cmt-command\\_line.htm](https://help.tableau.com/current/server/en-us/cmt-command_line.htm)



# External Repository

- Amazon Relational Database Service (RDS)
  - Provides scalability, reliability, high availability and security built-in for PostgreSQL
  - Requirements
    - Your Tableau Server must be installed and running on Amazon Web Services (AWS)
    - Your Tableau Server must be using version 2019.3 or later
    - Your Tableau Server must have the Server management add-on keys activated
    - Familiarity with Amazon RDS setup and management
  - Migrations support
    - Local to Amazon RDS
    - Amazon RDS to local



The screenshot shows the Tableau Server Configuration page with the 'external' column highlighted by a red box. The 'Repository' row shows a green checkmark in the 'external' column, indicating that the external repository is configured. The 'Refresh Status' button is visible at the bottom left of the table.

| Process                                | node1 | external |
|--|-------|----------|
| Gateway                                | ✓     |          |
| Application Server                     | ✓     |          |
| Interactive Microservice Container     | ✓     |          |
| VirQL Server                           | ✓     |          |
| Cache Server                           | ✓     |          |
| Cluster Controller                     | ✓     |          |
| Search & Browse                        | ✓     |          |
| Backgrounder                           | ✓     |          |
| Non-Interactive Microservice Container | ✓     |          |
| Data Server                            | ✓     |          |
| Data Engine                            | ✓     |          |
| File Store                             | ✓     |          |
| Repository                             |       | ✓        |
| Tableau Prep Conductor                 |       |          |
| Ask Data                               | ✓     |          |
| Elastic Server                         | ✓     |          |
| TSM Controller                         | ✓     |          |
| License Server                         | ✓     |          |

# Workload Optimization

- Current backgrounder runs
  - Extract refreshes
  - Subscriptions
  - Flow tasks
  - ‘Run Now’ tasks
  - Tasks initiated from tabcmd
- Requires multi-node environment with more than 1 backgrounder node
- Dedicate nodes to specific tasks



# Workload Optimization Options

## Configuration Options

| Configuration                          | Jobs  |
|--|---|
| all-jobs (default)                     | All Tableau Server jobs   |
| flows                                  | Flow run jobs.  |
| no-flows                               | All jobs except flows.  |
| extract-refreshes                      | Jobs that are created for:<br><br>Incremental refreshes, full refreshes, encryption and decryption of all extracts including extracts that flow outputs create. |
| subscriptions                          | Subscription jobs   |
| extract-refreshes-and-subscriptions    | Extract-refreshes, encryption and decryption of all extracts including extracts that flow outputs generate, and subscription jobs.                              |
| no-extract-refreshes                   | All jobs except extract-refreshes, extract encryption and decryption of all extracts including extracts created from flow outputs.                              |
| no-subscriptions                       | All jobs except subscriptions.  |
| no-extract-refreshes-and-subscriptions | All jobs except extract-refreshes, encryption and decryption of all extracts including extracts created from flow outputs, and subscriptions.                   |

# 2019.4 and Beyond!

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- 2019.4
  - Enhancements to Explain Data
  - Webhooks - Automated Workflows
  - Browser Extension Creation
  - Table Improvements
- 2020
  - Write to DB from Tableau Prep
  - Tableau Prep in Browser
  - Dynamic Parameters
  - Viz Animations

# Expert Tableau Help

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- Access to an entire team of BI experts to fill in as needed
- Tableau upgrade specialists
- High level, strategic guidance to boots-on-the-ground assistance and everything in between
- Expand your in-house expertise or augment your staff

Learn more at <https://www.senturus.com/?p=6497>

Contact us at: [info@senturus.com](mailto:info@senturus.com) or 888 601 6010 ext. 87



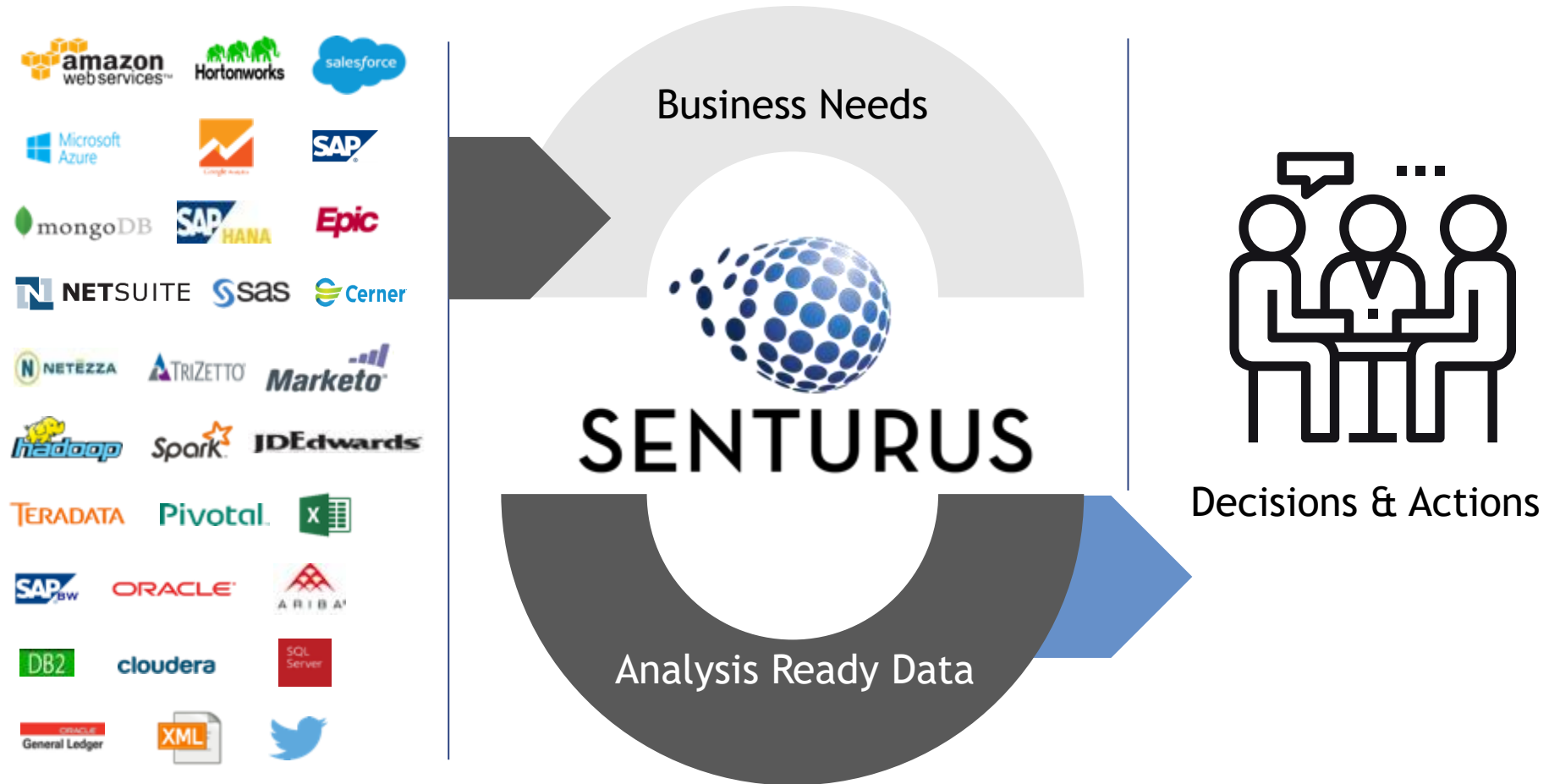
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**WHO WE ARE**

Full Spectrum of Services for BI



# Bridging the Gap between Data & Decision Making



# Full Spectrum of Services for BI

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- Dashboards, reporting and visualizations
- Data preparation and modern data warehousing
- Hybrid BI environments (migrations, security, etc.)
- BI support retainer (expertise on demand)
- Software to enable bimodal BI and platform migrations
- Training and mentoring



Power BI



# 1300+ Clients, 2500+ Projects, 19+ Years



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CALIFORNIA CHAMPAGNE



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NETGEAR<sup>®</sup>



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patagonia<sup>®</sup>



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*Family Estates*





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## **ADDITIONAL RESOURCES**

# Upcoming Events

[www.senturus.com/events](http://www.senturus.com/events)



## **POWER BI DAX KICKSTART**

OVERVIEW AND MECHANICS OF DATA ANALYSIS  
EXPRESSIONS

December 5 - 11am PT (2pm ET) - 60 minutes



## **TABLEAU DASHBOARDS: FROM DEFAULTS TO DAZZLING**

HOW TO BUILD BETTER LOOKING CHARTS WITH  
CUSTOM FORMATTING

December 12 - 11am PT (2pm ET) - 60 minutes

# Free Resources

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[www.senturus.com/senturus-resources/](http://www.senturus.com/senturus-resources/)



**UPCOMING EVENTS**



**RESOURCE LIBRARY**



**BLOG**

# Training for Tableau, Power BI and Cognos

<https://senturus.com/training/>



**CORPORATE TRAINING**



**SELF-PACED LEARNING**



**MENTORING**



**INSTRUCTOR-LED, ONLINE COURSES**



# Cyber Sale: 50% Off Instructor-Led Training

<https://senturus.com/training/course-schedule-2/>



Our biggest sale of the year!

- Dozens of instructor-led, online classes
- December 2 - Friday, December 6



# NEW Self-Paced Tableau Training

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<https://senturus.com/training/self-paced-learning>

- Starting at \$49
- Four classes:  
beginner  
intermediate  
advanced  
expert
- \$499 access to  
all four classes  
for a full year

DATA VISUALIZATION AND DASHBOARDING FUNDAMENTALS IN TABLEAU  
\$49.00 – \$99.00

TABLEAU INTERMEDIATE DATA VISUALIZATION AND DASHBOARDING  
\$99.00 – \$149.00

TABLEAU ADVANCED DATA VISUALIZATION AND DASHBOARDING  
\$199.00 – \$249.00

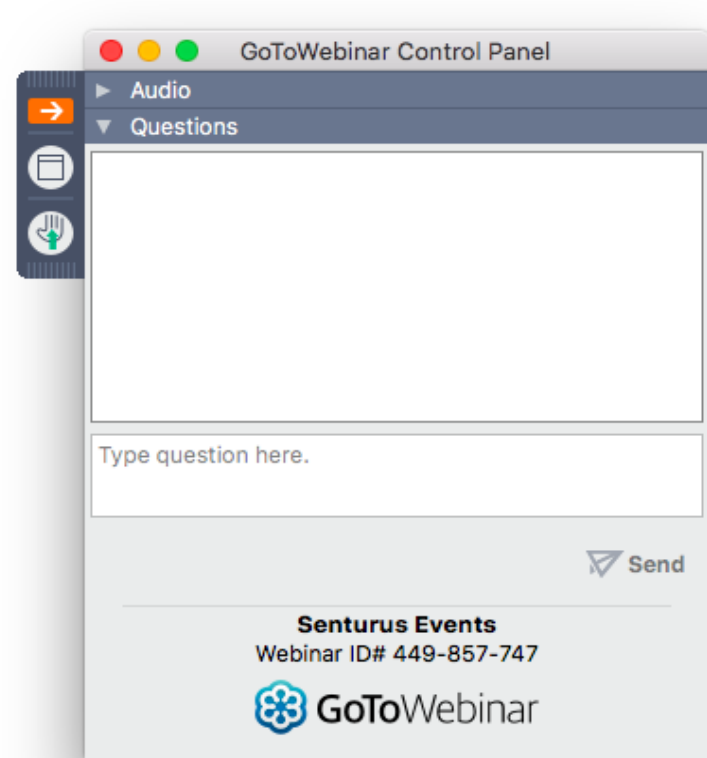
EXPERT TABLEAU DEVELOPMENT  
\$199.00 – \$249.00

# Q&A

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

[info@senturus.com](mailto:info@senturus.com)

and we will set up a free consultation.



# Thank You!

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www.senturus.com  
[info@senturus.com](mailto:info@senturus.com)  
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