Deploying Tableau on Linux

Presenters:

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Agenda

Log in to Virtual Environment

User: LabUser

Password: Pa$$w0

Check System Requirements & Updates

Supported Distributions in Tableau Server 2019.2

.rpm packages

- RHEL 7.3+
- CentOS 7.3+
- Amazon Linux 2
- Oracle Linux 7.3+

.deb packages

- Ubuntu 16.04 LTS
- Ubuntu 18.04 LTS
- Debian 9.0+

Before Starting

Define Authentication Method

- Local, AD, SAML...

Firewall

- Port requirements:

    - 80 or 443 - Gateway (SSL)
    - 8850 - Tableau Service Manager (TSM)
    - 8060 and 8061 - PostgreSQL and backup
    - 8000 to 9000 - Range of Tableau Processes
    - 27000 to 27009 - License Service

Check System

Open a terminal and type:

Check processors:

```
lscpu
```

Check memory:

```
free -h
```

Check storage:

```
df -h
```

Tableau Server Infrastructure Requirements

Proof of Concept Requirements	Minimum Production Requirements
Processor 64-bit	Processor 64-bit
4 cores / 8v-CPU (ex. AWS)	8 physical cores, 16v-CPU (ex. AWS)
16 GB system memory	32 GB system memory
15 GB minimum free disk space	50 GB minimum free disk space

Source:

https://www.tableau.com/products/techspecs

... and Updates!

Type in terminal:

```
sudo yum -y update
```

```
sudo yum upgrade
```

- Detail: in case of error (sometimes it happens)

`sudo kill -9 6867`

Installation

Commands for different Linux distribution

rpm command

- For RHEL, CentOS, Oracle or Amazon Linux

```
sudo yum install tableau-server-2019-3-0.x86_64.rpm
```

deb command

- For Ubuntu and Debian

```
sudo gdebi -n tableau-server-2019-3-0_amd64.deb
```

First commands

Execute the following commands in your VM's terminal:

```
cd Downloads

sudo yum install tableau-server{TAB Key twice to autocomplete}

cd /opt/tableau/tableau_server/packages/scripts{TAB Key twice to autocomplete}

sudo ./initialize-tsm --accepteula
```
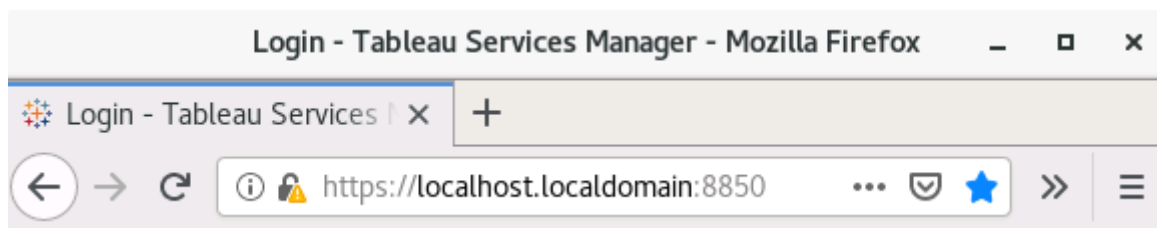
Pay attention now!

Search for this kind of message after accepting the EULA:

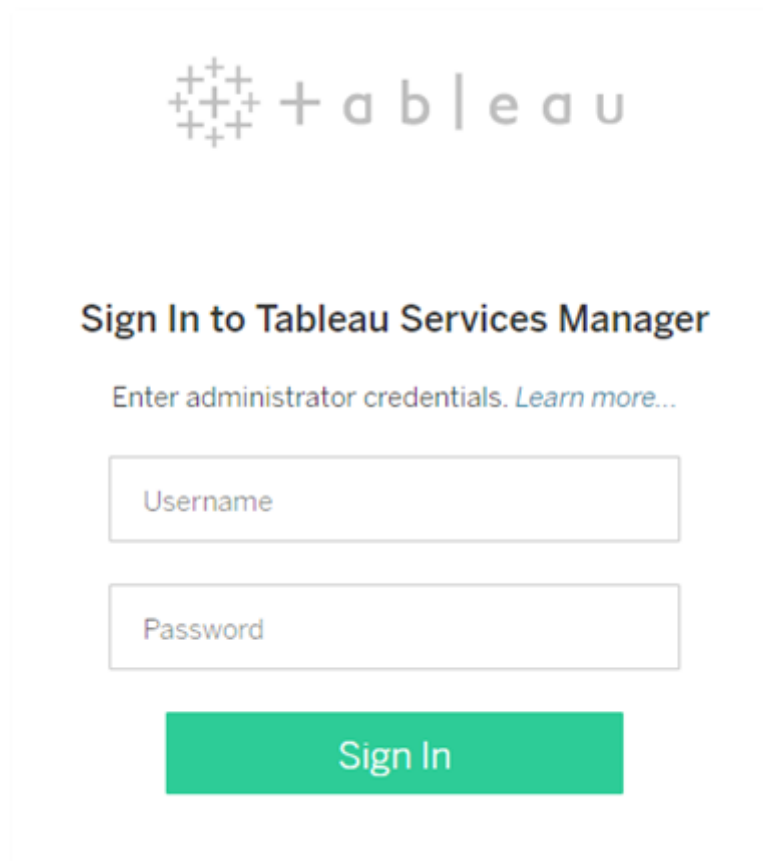> The TSM administrative web interface (and REST API) is now available at
>
> ---
>
> **https://localhost.localdomain:8850**

Go to your browser and type the URL according the message above.

Sign in user user and password.

```
LabUser

Pa$$w0
```

Important!

Log off and log on to the terminal again before you configure Tableau Server

Activate Tableau Server

Following this sequence and type these commands in your VM's terminal:

Register the License Key

```
tsm login -u LabUser -p Pa$$w0

tsm licenses activate -t
```

Activating a key (if you have it)

```
tsm licenses activate -k TSM-SUPER-KEY
```


Enter your license product key to get started with Tableau Server.

Product Key

0000-0000-0000-0000-0000

I can't find my product key.

Activate License
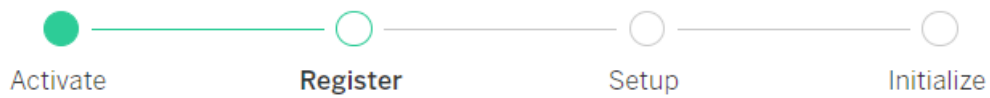
Try it free for 14 days

Start Tableau Server Trial

Register the Tableau Server

Execute this commands to register Tableau Server:

```
cd ~/Downloads/server-install-scripts

tsm register --template > registration.json

tsm register --file registration.json
```

Register with Tableau. All fields are required.

Contact Information

First Name | Last Name

Phone Number | Email

Company Information

Organization | Industry ▼

Department ▼ | Job Role ▼

Region Information

City | Postal Code

Country/Region ▼ | State/Province ▼

Register

Setup Authentication Method

We are considering authentication in local server according the file config.json

```
{
  "configEntities": {
    "identityStore": {
      "_type": "identityStoreType",
      "type": "local"
    }
  }
}
```

Type this command to import server configuration:

```
tsm settings import -f config.json
```

Apply the changes

```
tsm pending-changes apply
```


If you area installing through GUI, wait a second to finish the installation.

If you area installing through command line, go to the next step.

Initializing...

Step 8 of 30

Waiting for services to reconfigure.

```
7:01:30 AM succeeded: Updating Configuration.
7:01:30 AM succeeded: Validating that there are no pending changes.
7:01:30 AM succeeded: Generating passwords.
7:01:31 AM succeeded: Generating search server ssl certificate.
7:01:32 AM succeeded: Generating Elastic Server SSL certificate.
7:01:33 AM succeeded: Generating Key Management data.
7:01:33 AM succeeded: Promoting configuration.
```

This process could take a while to finish.
Click *Learn more* about configuring your server deployment with Tableau Services Manager. The server will be running after the initialization is complete.
You will need to create a Tableau Server Administrator account when this process finishes.

Initialize TSM

Execute the command:

```
tsm initialize
```

Initializing the server...
Job id is '1', timeout is 120 minutes.
3% - Validating that there are no pending changes.
6% - Generating passwords.
10% - Generating search server ssl certificate.
13% - Generating Elastic Server SSL certificate.
16% - Generating key store.
20% - Promoting configuration.
23% - Waiting for services to reconfigure.
26% - Generating new asset key.
30% - Saving asset key.
33% - Initializing the topology.
36% - Waiting for the maintenance app to start.
40% - Initializing the temporary database instance.
43% - Starting the temporary database instance.

46% - Creating roles and databases.
50% - Running migrations.
53% - Localizing the default projects.
56% - Stopping the temporary database instance.
60% - Making the temporary database default.
63% - Initializing the next active repository.
66% - Enabling services needed for server initialization.
70% - Connecting to the Backup/Restore service.
73% - Saving asset key metadata.
76% - Configuring search server.
80% - Connecting to the Backup/Restore service.
83% - Initializing Elastic Server.
86% - Enabling the services required for indexing.
90% - Connecting to Vizportal Maintenance.
93% - Rebuilding the search index.
96% - Finalizing the initialization.
100% - Finalizing the topology.

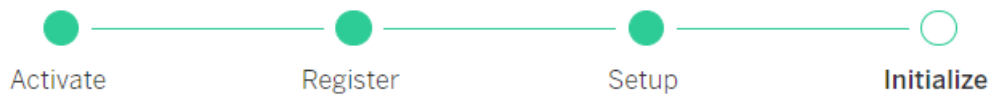Server was initialized successfully.

Start Tableau Server

```
tsm start
```

Starting service...
Job id is '2', timeout is 30 minutes.
Service was started successfully.

Create an Admin Account

Execute the command to create:

```
tabcmd initialuser --server 'localhost:80' --username 'LabUser' --password 'Pa$$w0'
```

Verify Successful Installation

Check if Tableau Server is Running

Command Line

Type:

```
tsm status
```

The answer may be:

```
[LabUser@localhost ~]$ tsm status
Status: RUNNING
```

Check if the Status: **RUNNING**

Web UI

Go to browser and type the server name and port 8850. Example:

> https://localhost.localdomain:8850/

Check STATUS menu.

tsm or tabcmd command?

tsm

TSM is used to manage and configure Tableau Server

Examples:

tsm login -s <server_name> -u <account_name>

tsm maintenance backup -f ts_backup –d

tsm configuration set -k install.component.samples -v false

More in: **https://help.tableau.com/current/server/en-us/tsm.htm**

tabcmd

To automate site administration tasks on Tableau Server site

Examples:

tabcmd delete "Sales_Workbook"

tabcmd delete "Sales_Workbook" -s http://tabserver.mycompany.com -u admin -p mypassword

tabcmd publishsamples -n "Samples" -s localhost --username "LabUser" --password "Pa$$w0"

More in: **https://help.tableau.com/current/server/en-us/tabcmd_cmd.htm**

Extras

Not Running?

Obliterate Script

Remove completely Tableau Server on Linux, and delete users and groups created by `initialize-tsm`, all related data, configuration information, and logs

Reference:

https://help.tableau.com/current/server-linux/en-us/remove_tableau.htm

Go to directory:

```
cd /opt/tableau/tableau_server/packages/scripts.<version_code>
```

Execute the command:

```
sudo ./tableau-server-obliterate -y -y -y -l
```

Setup SMTP Service

Notifications
Configure Tableau Server to send email notifications about critical events, processes and server health. Email notifications must be sent through an email (SMTP) server. *Learn more*

Email Server   Events

Configure email server
Tableau Server must connect to an email server using SMTP (Simple Mail Transfer Protocol) to send email notifications. Contact your organization's IT department to determine what SMTP information you need to configure Tableau Server to send email configurations. *Learn more about configuring SMTP for Tableau Server.*

SMTP server address	(Required) Example:smtp.example.com
Username	Optional
Password	Optional
Port Number	25 (Default)
Send all emails from	Type an email address that all emails will be sent from (example: no-reply@example.com) Required
Send server health email to	Type email addresses, separated by a comma, that will receive Tableau Server health emails. Tableau Server health emails are typically sent to server administrators or other IT admins. Required
Tableau Server URL	Choose a footer link to embed in all email alerts and subscriptions. This link is typically the sign-in page of Tableau Server. https://www.tableauserver.com

Automated Installer

How do I get it?

https://github.com/tableau/server-install-script-samples/tree/master/linux/automated-installer

Install via **yum** or **gdebi**

```
sudo ./automated-installer -s secrets -r registration.json -f config.json
--accepteula -v -k SUPER-COOL-LICENSE-KEY tableau-server-2019-2-3.x86_64.rpm
```

Local Authentication

At least one Server Administrator authenticating in server

Would you Like to Download this Content?

Go to:

•https://github.com/alicino/tsm-scripts

Tableau Official Repository

•https://github.com/tableau/server-install-script-samples