

# Leica Geosystems

Product TruView Global AWS Deployment

Date 06 August 2015

Instructions below provide important information about the deploying TruView Global to Amazon Web Services.

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### 1. Introduction

These steps need to be carefully followed to deploy TruView Global (TVG) to Amazon Web Service. It assumes you have some knowledge in IT.

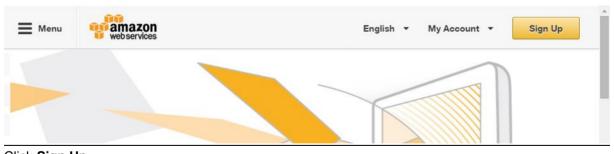
This document describes in a step-by-step method, how you can utilized a pre-configured installation of TruView Global and "clone" that installation to your account. It assumes you are setting up new "Virtual Computers" in a fresh manner, starting from scratch. If you already have a virtual computer(s) setup on AWS you may also be able to use these instructions.

We have created an AMI (Amazon Machine Image) that you can use as a preconfigured setup. The instructions we provide will walk you through the following steps.

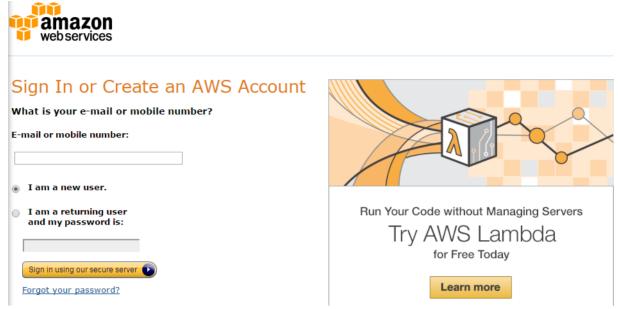
- 1. Creating a new Amazon account
- 2. Configure a virtual computer
  - a. We have provided specific choices of the size, and type of CPU, Memory, etc. that is sufficient for using TruView Global in nearly every case. If you have extreme needs, you can easily scale up this deployment if the need should arise in the future.
- 3. Once you have a computer configured, you will copy/clone the AMI we have preconfigured that has a working copy of TruView Global ready to go.
- 4. You'll need to also configure another virtual computer to run the CLM license server
  - a. This second computer is a minimal resource computer and just runs a small licenses server (CLM) to allow the TruView Global software to be licensed.
  - b. You will install the CLM license server software on that computer
- 5. Once you have these two computers properly configured your final step will be to install the license EID provided as part of your purchase transaction and you will be up and running.

## 2. Creating an Amazon Web Service Account

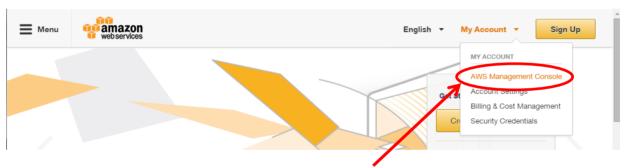
Go to - http://aws.amazon.com/



Click Sign Up

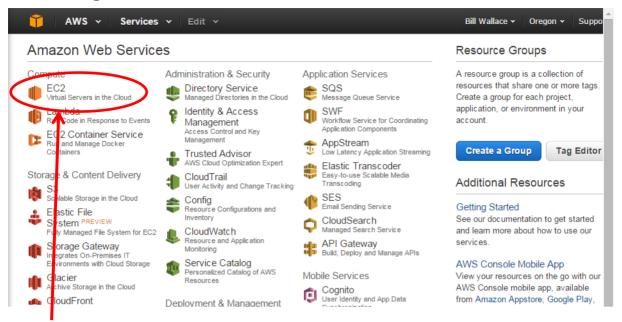


You will be prompted to enter an email address, and check "I am a new user" if you do not have an AWS account set up. Follow the prompts to enter in the information needed.

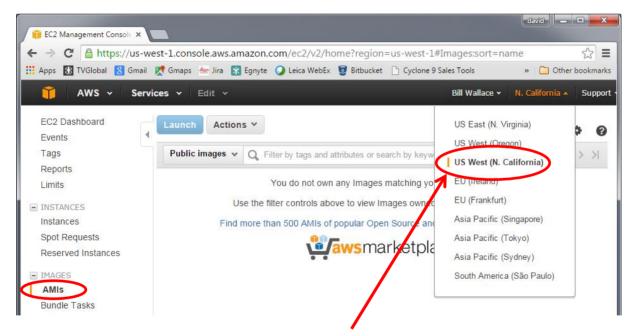


Once you have created an account, go to **My Account > AWS Management Console.** Enter your Username / Password, and sign in.

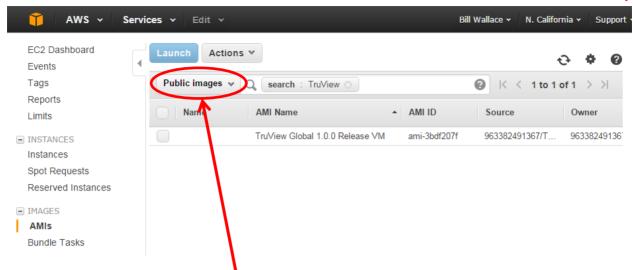
## 3. Creating a TruView Global Cloud Machine on AWS



#### Click EC2

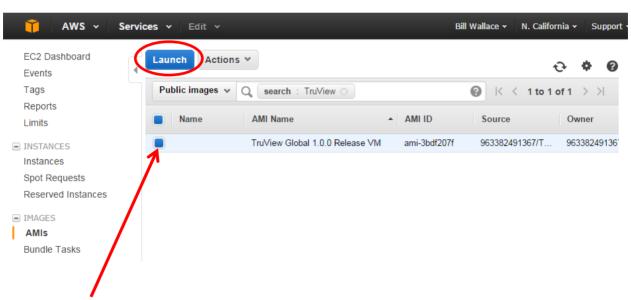


Click AMIs and change your region to look in US West (N.California)



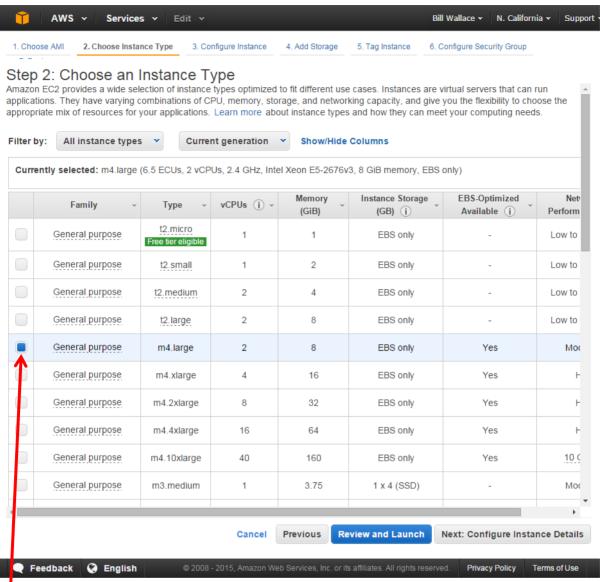
Make sure you are searching in Public images.

Perform a search for "TruView" and you will see an AMI Name of TruView Global 1.0.0 Release VM



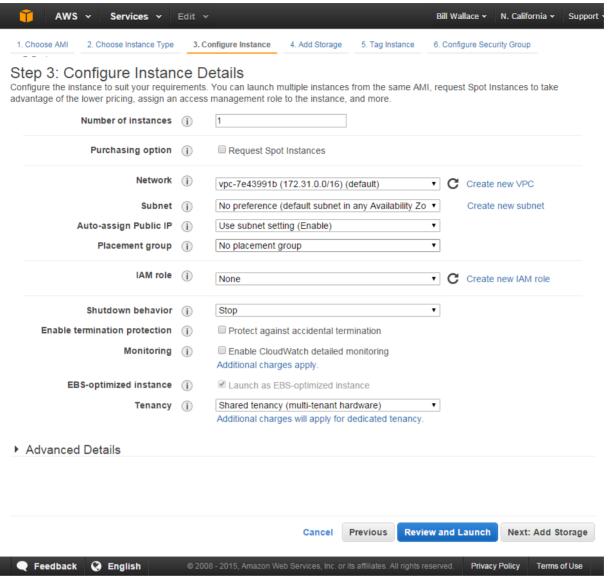
Select TruView Global 1.0.0 Release VM Click Launch





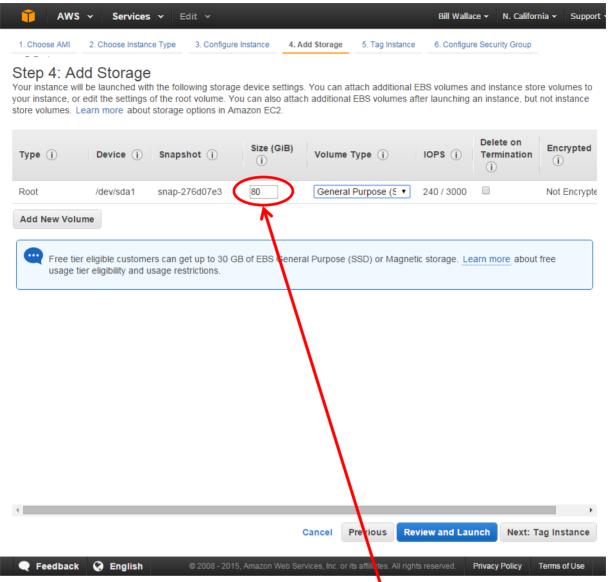
Select General purpose - m.4.large Click Next: Configure Instance Detail



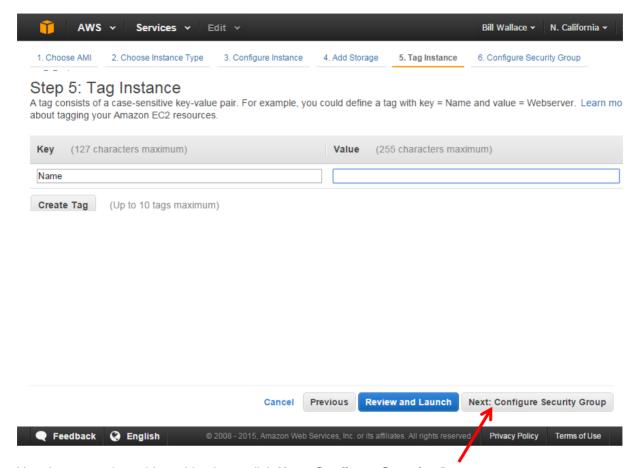


You can use all default setting here, click Next: Add Storage

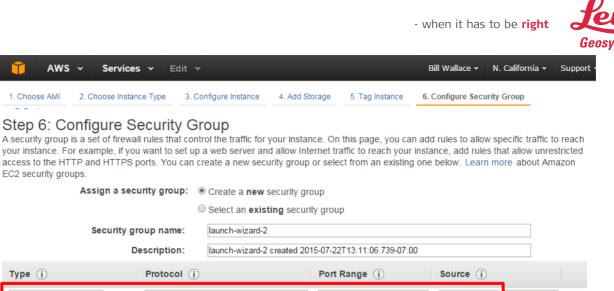


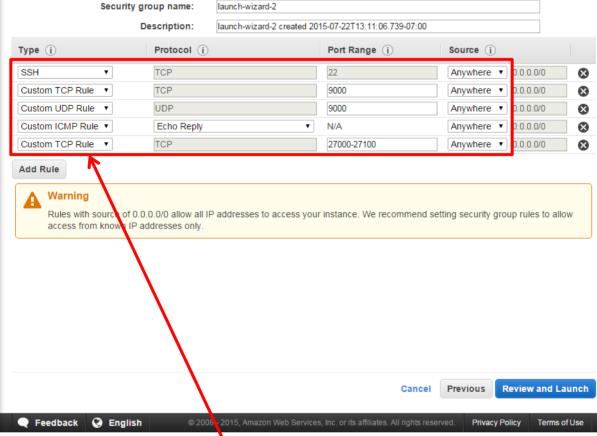


TruView Global has a minimum storage size of 80GB. Set the storage size to a **minimum of 80GB** Click **Next: Tag Instance** 



You do not need to add anything here, click Next: Configure Security Group





4 Add Storage

Select an existing security group

5. Tag Instance

Add 4 new rules and be sure you have all the rules above. Type, Protocol, Port Range, and Source **MUST** match above Rules.

After you have all the Rules created, click Review and Launch

AWS ~

EC2 security groups

Services v

2 Choose Instance Type

Step 6: Configure Security Group

Edit v

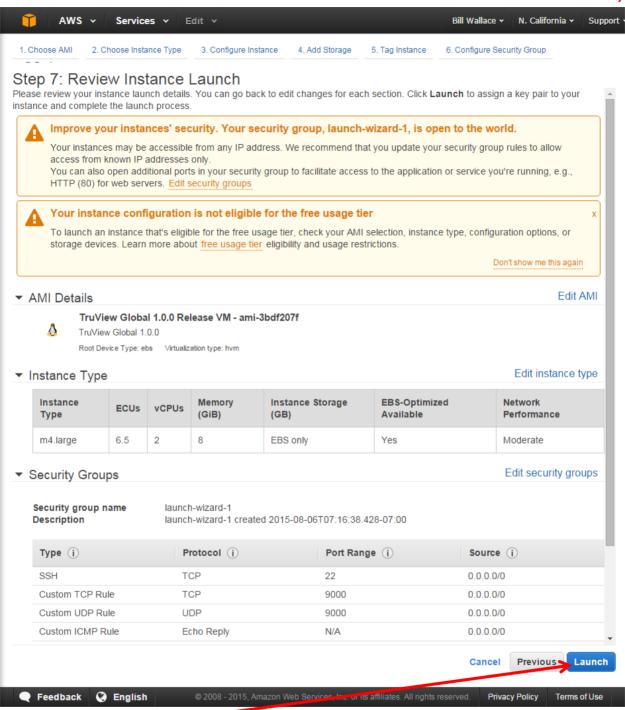
Assign a security group: 

Oreate a new security group

NOTE: If you have CLM already running on a server machine in your office, you can open the appropriate ports (27000 – 27010) to allow TVG to connect to it. This is a more cost effective way, due to the fact that you will only be running one machine opposed to two on AWS.

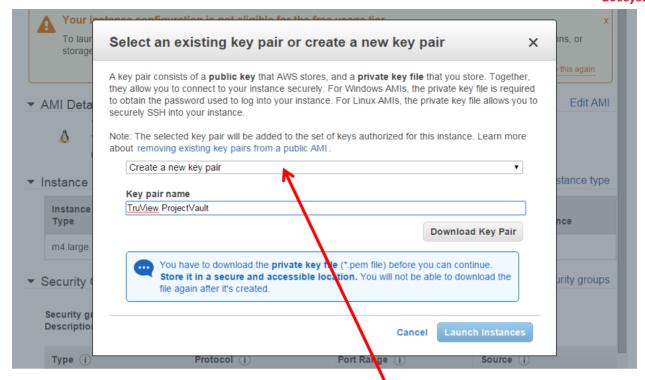
If you do plan to run CLM from a server machine in your office Edit: Custom TCP Rule above to Port Range: 27000-27010, Source: Anywhere

In addition to the all the rules above, Add: Custom UDP Rule – Port Range: 27000-27010, Source: Anywhere



Click Launch





You will be prompted to select an existing key pair. Choose **Create a new key Pair Enter Key pair name**, such as TruView ProjectVault **Download Key Pair** 

Then you will be able to Launch Instance





#### Launch Status



The following instance launches have been initiated: i-ae521465 View launch log

# Get notified of estimated charges

Create billing alerts to get an email notification when estimated charges on your AWS bill exceed an amount you define (for example, if you exceed the free usage tier).

#### How to connect to your instances

Your instances are launching, and it may take a few minutes until they are in the **running** state, when they will be ready for you to use. Usage hours on your new instances will start immediately and continue to accrue until you stop or terminate your instances.

Click **View Instances** to monitor your instances' status. Once your instances are in the **running** state, you can **connect** to them from the Instances screen. Find out how to connect to your instances.

#### ▼ Here are some helpful resources to get you started

- How to connect to your Linux instance
- · Amazon EC2: User Guide
- · Learn about AWS Free Usage Tier
- · Amazon EC2: Discussion Forum

While your instances are launching you can also

Create status check alarms to be notified when these instances fail status checks. (Additional charges may apply)

Create and attach additional EBS volumes (Additional charges may apply)

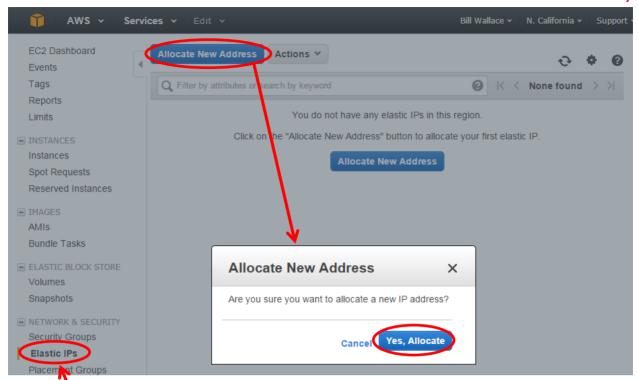
Manage security groups

Feedback

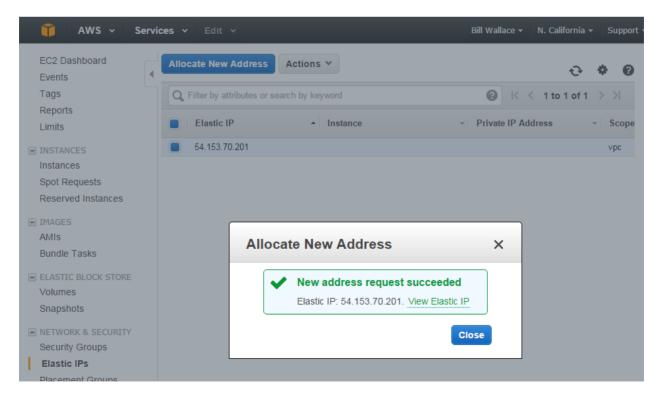


You will now see Launch Status Click View Instance

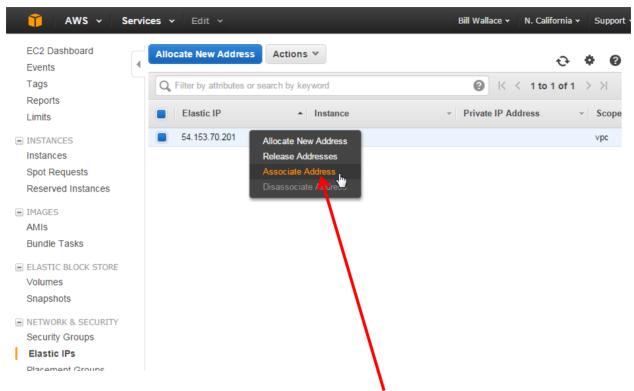
English



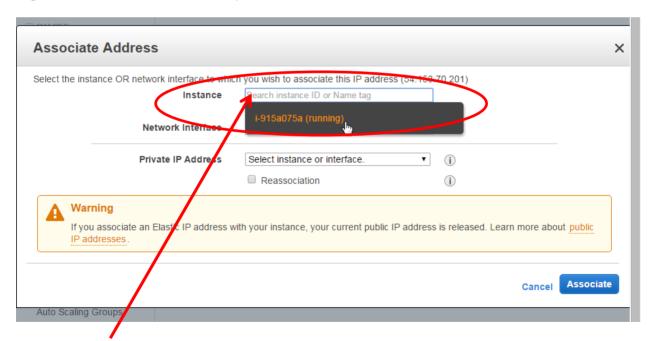
Go to Elastic IPs
Click Allocate New Address
Click Yes, Allocate in the dialog



New Address will be allocated, click Close



Right Click on the Address that was just created, and click Associate Address

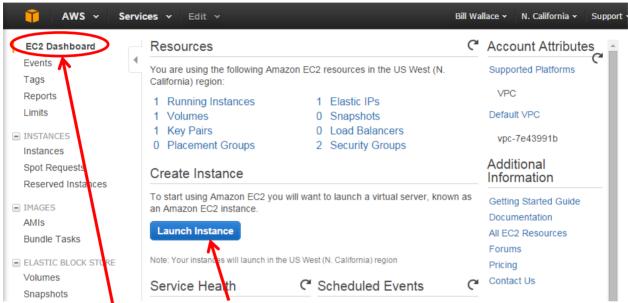


Click in the **Instance** box, and you should see the one instance, or VM that was just created. Select that Instance/VM and click **Associate**Your TruView Global ProjectVault is now running.

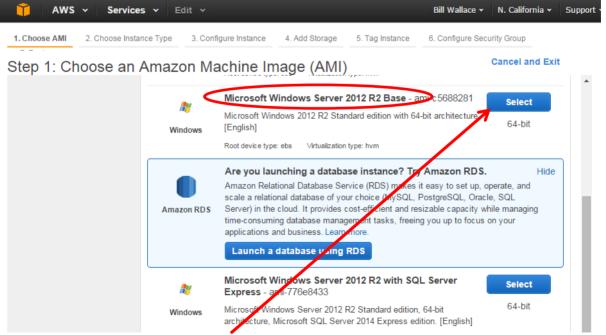
## 4. Creating a CLM Cloud Machine on AWS

CLM license manager requires a Windows machine to license TruView Global. This next section creates a Windows server on AWS, giving the ability to activate your TVG EIDs, and connect to the TVG ProjectVault.

**NOTE:** If you have CLM already running on a server machine in your office, you can open the appropriate ports (27000 – 27010) to allow TVG to connect to it. This is a more cost effective way, due to the fact that you will only be running one machine opposed to two on AWS and you can SKIP steps 4 & 5.

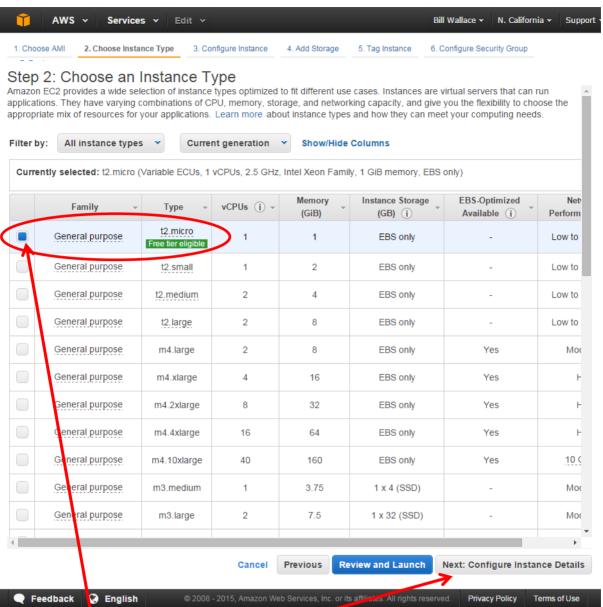


Go to EC2 Dashboard and Click Launch Instance



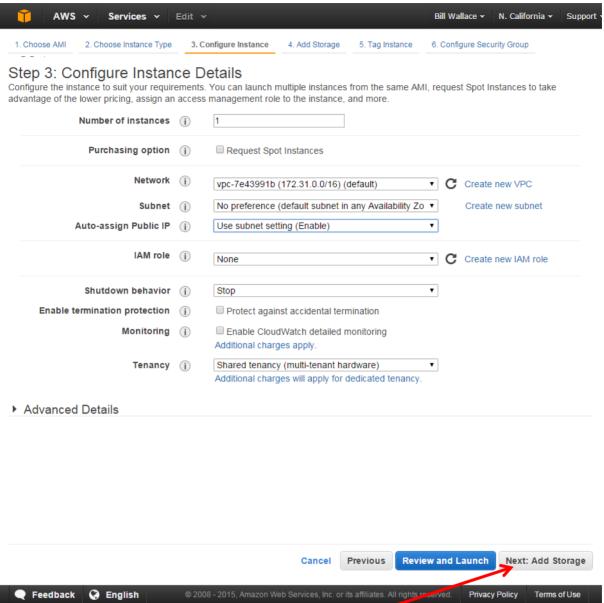
Select Microsoft Windows Server 2012 R2 Base





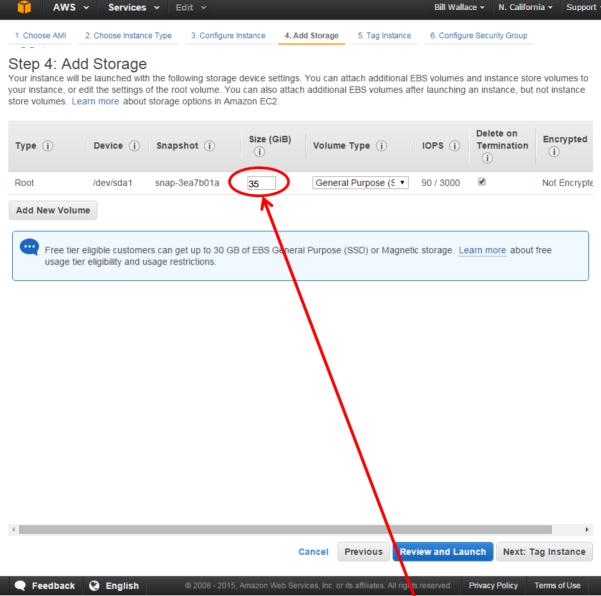
Select General purpose t2 micro
Click Next: Configure Instance Details





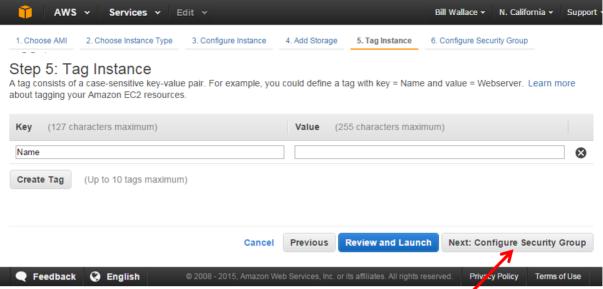
You can use all **default** setting here, click **Next: Add Storage** 



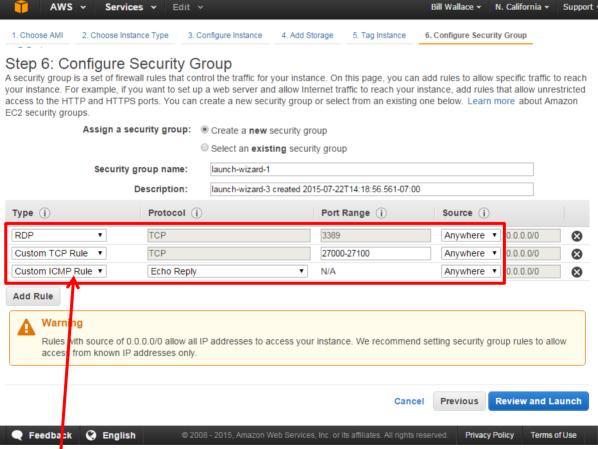


CLM doesn't require a large amount of storage. Set the storage size to **35GB** Click **Next: Tag Instance** 



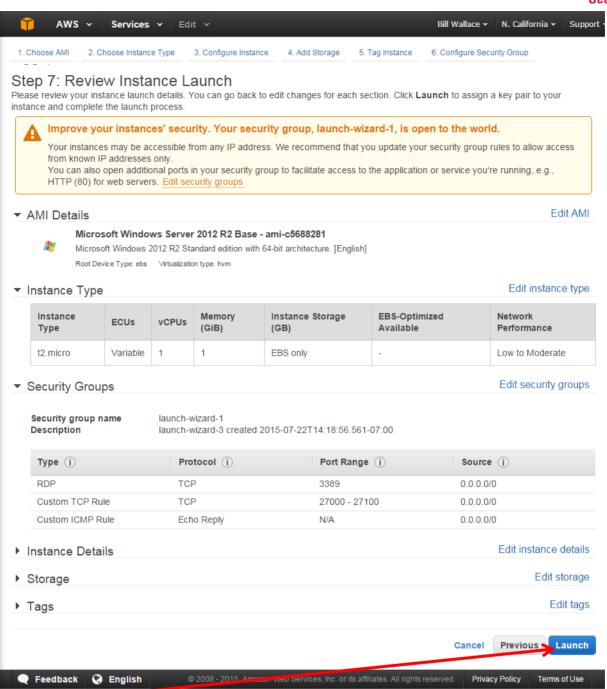


You do not need to configure anything here, click Next: Configure Security Group

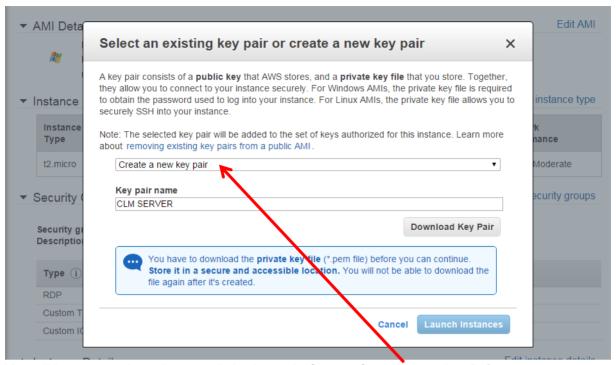


**Add Rules** and be sure you have all the Rules above. Type, Protocol, Port Range, and Source **MUST** match above Rules.

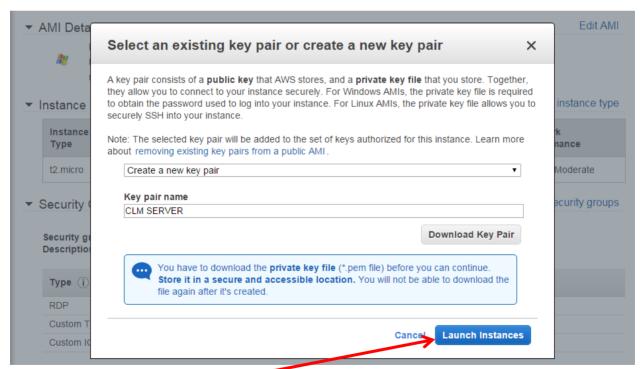
After you have all the Rules created, click Review and Launch



Click Launch



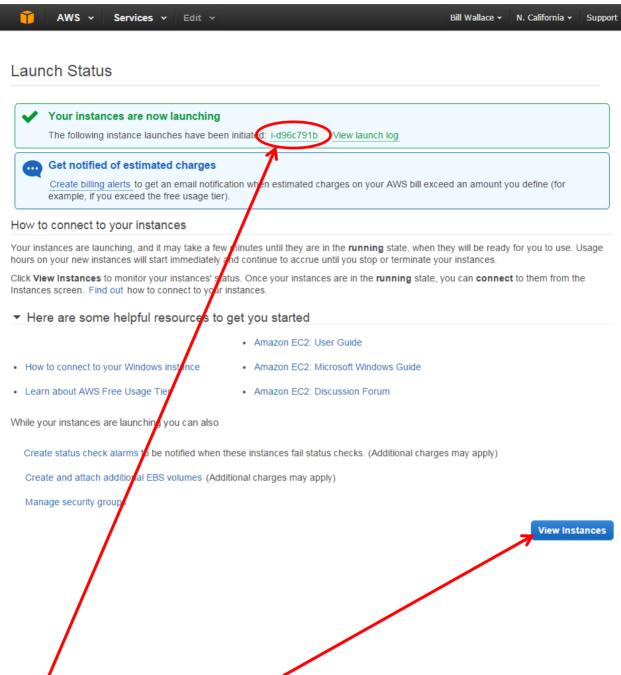
You will be prompted to select an existing key pair. Choose **Create a new key Pair Enter Key pair name**, such as CLM SERVER
Click **Download Key Pair** 



Now you will be able to Launch Instances

Privacy Policy

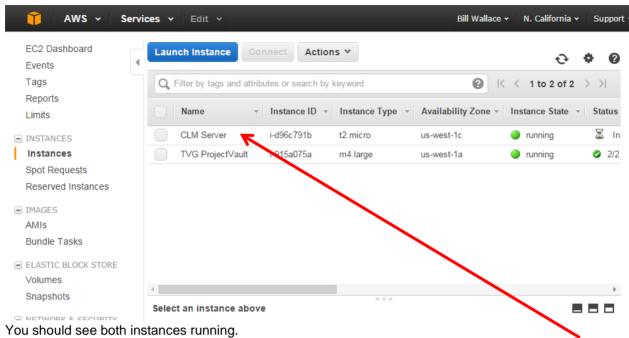




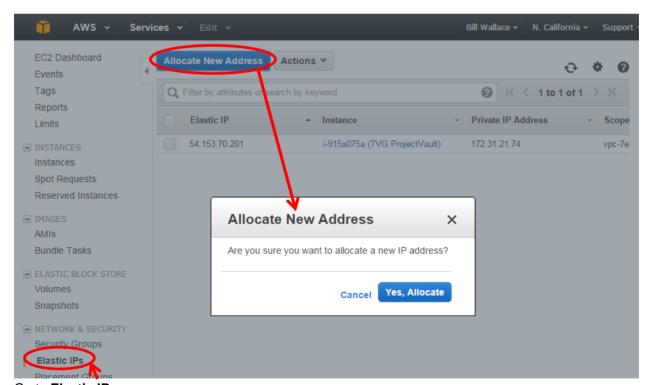
Take note of the Instance name Click View Instance

🗨 Feedback 😯 English

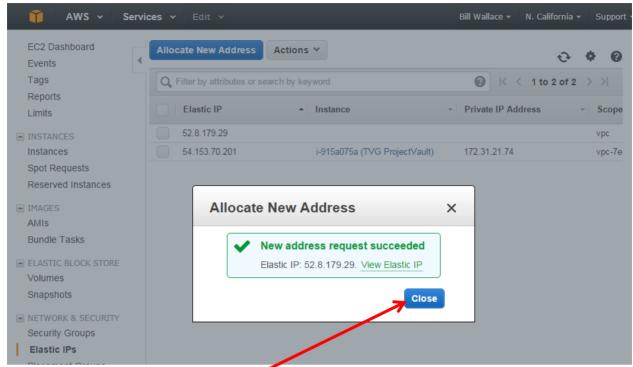
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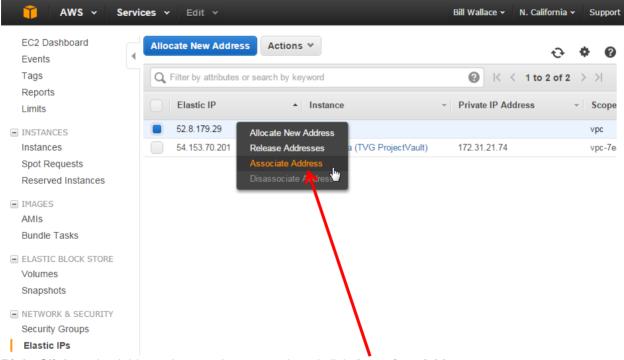
**Name each instance** for ease of use, cross reference the name that was just noted. That will be CLM Server, and the other (m4.large) will be TVG ProjectVault.



Go to Elastic IPs Click Allocate New Address Click Yes, Allocate in the dialog

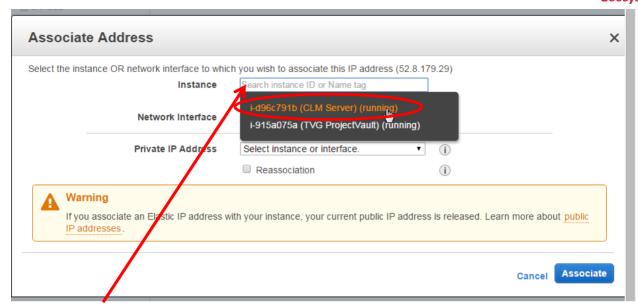


New Address will be allocated, click Close

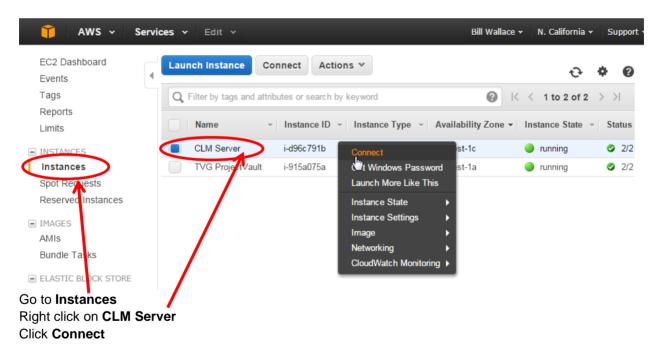


Right Click on the Address that was just created, and click Associate Address

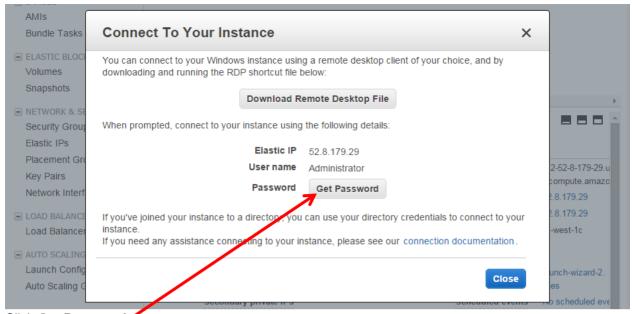




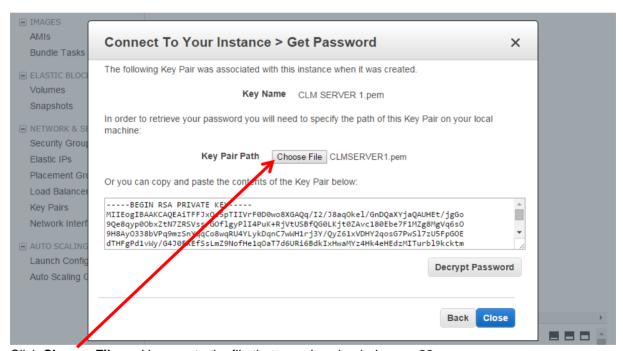
Click in the **Instance** box, and you should see two instances, or VMs running Be sure to select the CLM instances that was just created, or CLM Server Select that Instance/VM and click **Associate** 







Click Get Password



Click **Choose File** and browse to the file that was downloaded on pg 22 Click **Decrypt Password** 





Take note of **IP**, **User Name**, **and Password** that was just created Click **Close** 

## 5. Licensing CLM Server



On your local PC, start Remote Desktop Connection Enter your **IP\Administrator** 

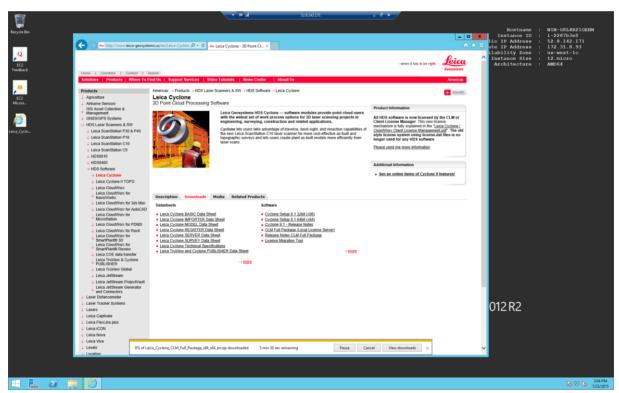


Click Use another account Enter IP\Administrator Enter Password





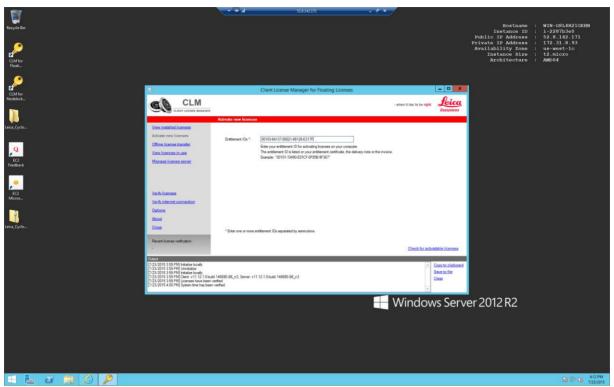
Click Yes



You will now be connected to your CLM machine on AWS

Go to **Cyclone Downloads** - <a href="http://www.leica-geosystems.us/en/Leica-Cyclone\_6515.htm">http://www.leica-geosystems.us/en/Leica-Cyclone\_6515.htm</a>
Download and Install **CLM Full Package** 

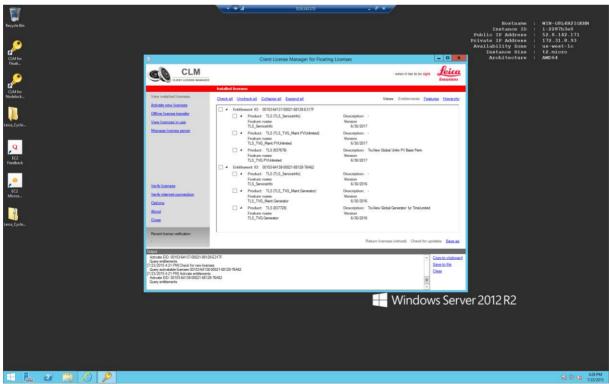




Open **CLM for Floating Licenses** 

Click Activate new Licenses

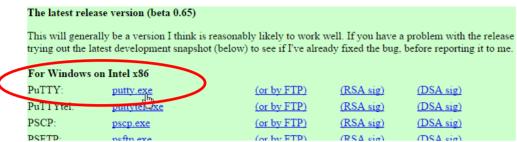
**Enter TruView Global ProjectVault and Generator EIDs** 



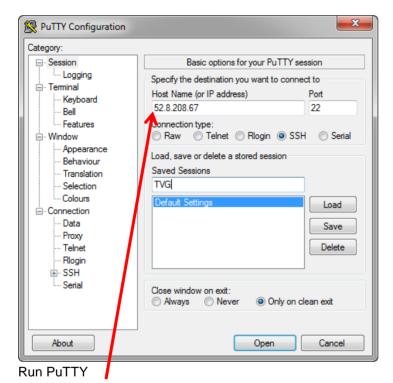
CLM Machine and Licenses are now configured.

## 6. Configure TVG Server to CLM Server

Before continuing, please check that valid TruView Global EIDs have been activated on your Leica CLM License Server system from section 4 above. Contact Leica support to obtain TruView Global EIDs if you haven't received them.



Download PuTTY, which is an interface to connect to TruView Global's Linux box. The exe can be found on the following page: http://www.chiark.greenend.org.uk/~sgtatham/putty/download.html

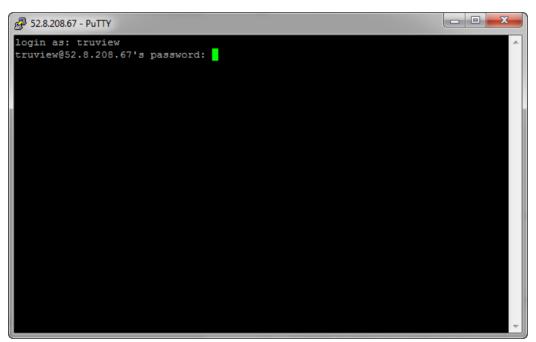


**Enter the IP Address** of TruView Global from AWS. You can Name and Save the Session so you will not have to remember the IP address.





Click Yes

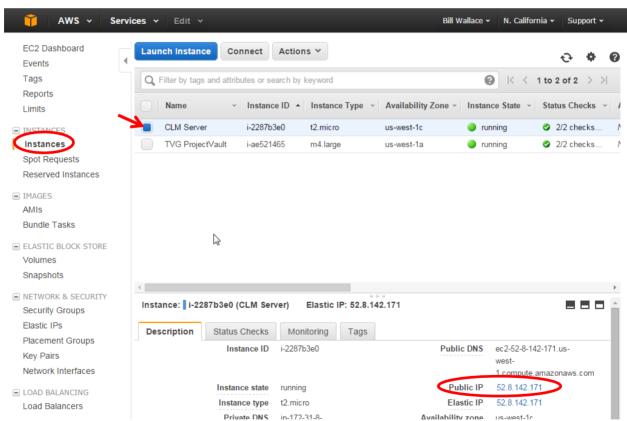


Enter the login: **truview**Enter password: **labolg01** 



```
_ 0 X
ruview@truviewglobal: ~
login as: truview
truview@52.8.208.67's password:
Welcome to Ubuntu 14.04.2 LTS (GNU/Linux 3.16.0-30-generic x86 64)
 * Documentation: https://help.ubuntu.com/
 System information as of Wed Aug 5 10:54:13 PDT 2015
 System load: 0.0
                                                       127
                                  Processes:
 Usage of /: 7.8% of 76.38GB
                                  Users logged in:
                                  IP address for eth0: 172.31.21.42
 Memory usage: 5%
 Swap usage:
 Graph this data and manage this system at:
   https://landscape.canonical.com/
120 packages can be updated.
64 updates are security updates.
Last login: Wed Aug 5 10:50:42 2015 from 216.85.0.50
truview@truviewglobal:~$ ./setlicense server.sh
-bash: ./setlicense_server.sh: No such file or directory
truview@truviewglobal:~$ ./set_license_server.sh
```

Type ./set\_license\_server.sh and hit enter



You can obtain your CLM Server IP by going to your AWS Instances

Click CLM Server

Take Note of your Public IP



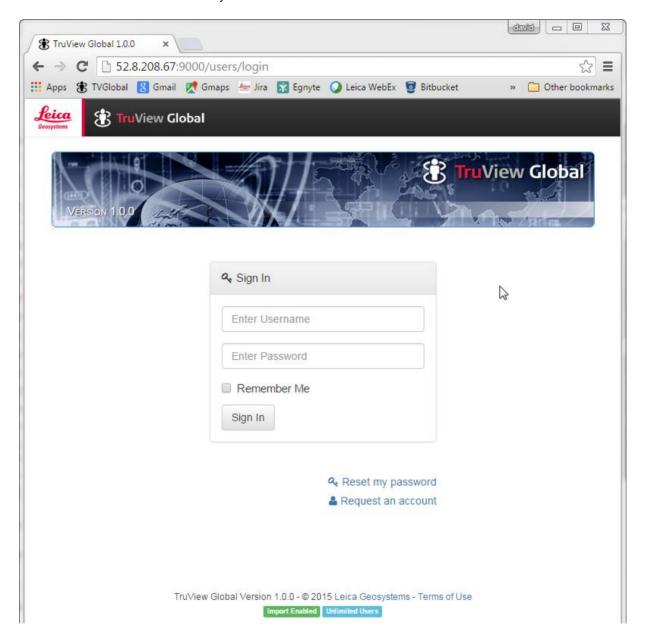
```
truview@truviewglobal: ~
  Documentation: https://help.ubuntu.com/
  System information as of Wed Aug 5 10:54:13 PDT 2015
  System load: 0.0
                                 Processes:
                                                      127
  Usage of /: 7.8% of 76.38GB Users logged in:
 Memory usage: 5%
                                IP address for eth0: 172.31.21.42
  Swap usage: 0%
  Graph this data and manage this system at:
   https://landscape.canonical.com/
120 packages can be updated.
64 updates are security updates.
Last login: Wed Aug 5 10:50:42 2015 from 216.85.0.50
truview@truviewglobal:~$ ./setlicense_server.sh
-bash: ./setlicense_server.sh: No such file or directory
truview@truviewglobal:~$ ./set license server.sh
Set License Server for TruView Global
Copyright (C) 2015 Leica Geosystems
Enter your license server's hostname or IP address: 52.8.142.171
```

You will be prompted to enter the license server's **hostname** or **IP Address**. TruView Global will restart. Note that it may take up to two minutes for license checking to complete. In this example above, the CLM license machine IP is 52.8.142.171.

Note: If you are using a CLM server in your office you will need to open port 27000-27010 on the CLM server in your office and then get the pubic IP address for that computer. Once you have the pubic IP Address enter it in Putty as shown in the image above and continue with installation.

# 7. Logging In To TruView Global

Open a web-browser and your Public IP, including :9000. In the example below, the site is 52.8.208.67:9000 Username and Password is initially: admin



## 8. TruView Global ProjectVault Operations

#### 8.1 Check IP

Once you login to the TruView Global VM you can also check the IP address of your machine using the ifconfig command.

In this example below, the address is 192.168.37.128. The actual IP address of your TruView Global VM will be different and it will depend on your local network configuration.

```
Getting the IP address using ifconfig

truview@truviewglobal:~$ ifconfig eth0| grep 'inet addr:'

inet addr:192.168.37.128 Bcast:192.168.37.255 Mask:255.255.255.0
```

## 8.2 Setup VM Network Configuration (optional)

All TruView Global VMs are setup with bridged networking. Your local network configuration may require you to change the VM network configuration to fit your requirements.

We recommend you consult your VM platform documentation before making changes to the TruView Global VM network setup:

- VMware Workstation Configuring Network Connections
- Configuring Virtual Networking for Microsoft Hyper-V
- VirtualBox Virtual Networking

### 8.3 Logout

To log off the VM, type 'logout'. The login prompt will be displayed.

#### 8.4 Power off VM

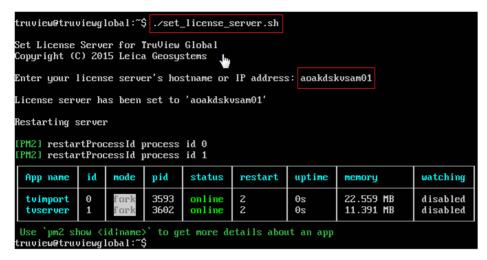
Note: make sure there is no running job in the import queue before shutting down the VM.

If you have to turn off the host computer running TruView Global VM for maintenance, you must first power off the TruView Global VM. First logon to the VM and then execute the command 'sudo shutdown - P 0'. You will be prompted to enter the password of the TruView user. Once the VM is powered off, you can then safely shut down the host computer.

### 8.5 Setup License Server

Before continuing, please check that valid TruView Global EIDs have been activated on your Leica CLM License Server system. Contact Leica support to obtain TruView Global EIDs if you haven't received them.





The TruView Global server needs a valid license to begin accepting connections. To configure the license server for TruView Global, login to the server and issue the command './set\_license\_server.sh'. You will be prompted to enter the license server hostname. You can enter either the hostname or its IP address. TruView Global will restart. Note that it may take up to two minutes for license checking to complete. In this example below, the license hostname is 'aoakdskvsam01'.

Alternatively, you can change the license server hostname by editing the file ~/truview/tvserver/tvg.json in a text editor. The license server hostname is specified in the 'lmserver' field.

## 8.6 Change Passwords

The first thing to do once the VM is up and running is to change the passwords for the Linux's truview account and the TruView Global administrator user.

#### 8.6.1 Change Password on Linux

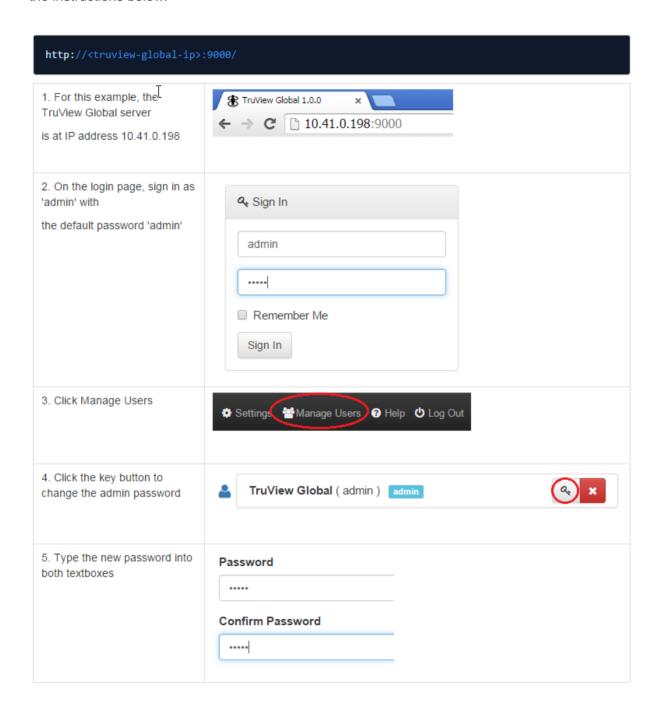
After you login as 'truview' with the default password 'labola01, execute 'passwd'. You will be prompted to enter the current password and the new password as shown below.

```
Change Ubuntu truview password

truview@truviewglobal:~$ passwd
Changing password for truview.
(current) UNIX password:
Enter new UNIX password:
Retype new UNIX_password:
passwd: password updated successfully
```

## 8.6.2 Change TruView Global Administrator Password

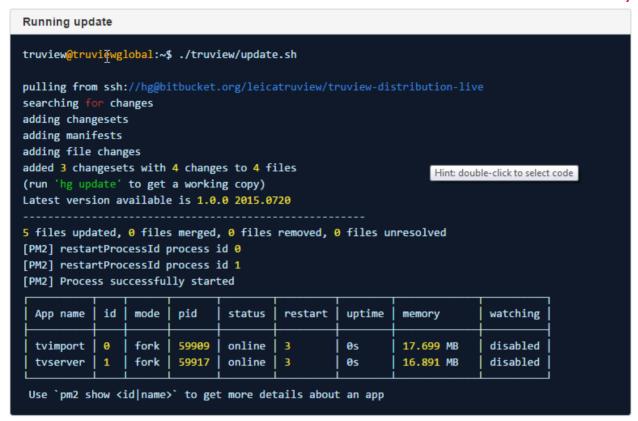
You can change TruView Global Administrator password by opening your TruView Global URL in a browser. Simply point your browser to the IP address of TruView Global VM on port 9000 and follow the instructions below.



## 8.7 Updating TruView Global

Leica Geosystems periodically releases minor updates for TruView Global. To get these updates, login to the VM and run the command './truview/update.sh' as shown in the example below. TruView Global will automatically restart after the update is installed. Note that the startup may take up to two minutes because of license checking.





## 8.8 Enable Remote Access to Leica Geosystems Support

In the unlikely event TruView Global server error is encountered and our support team couldn't resolve the issue by phone, we may ask that you allow remote access to your TruView Global server for further troubleshooting. To enable remote access for Leica support personnel, execute './enable\_remote\_access.sh' after you login. Then, type 'Yes'.

```
truview@truviewglobal:~$ ./enable_remote_access.sh

This operation will enable Leica Support to access this system. You can always disable it later.

Do you want to proceed? Type Yes to enable access: Yes

Remote access enabled.

Hint: double-click to select code
```

Note that in order for our support to login to your TruView Global server, the server must have a public IP address that is reachable from the internet.

#### 8.9 Disable Remote Access

To disable remote access, type the command './disable remote access.sh' at the command line.

```
truview@truviewglobal:~$ ./disable_remote_access.sh
Remote access disabled.
```

## 8.10 Changing TruView Global Landing Page

The default homepage is the LogIn page. If you have the PV Unlimited license, you can change the default homepage to the Welcome page where thumbnails of TruView projects are visible.command

line. To change the default homepage, open ~/truview/tvserver/tvg.json in a text editor. Change the value from "/users/login" to "/welcome". Save the file and restart TruView Global using "pm2 restart all".

```
json.tvg

{
    "lmserver": "@license_server",
    "home": "/welcome"
}
Hint: double-company

Hint:
```