UPGRADING SOFTWARE ON A SMARTENGINE CLUSTER
(From Release 3.x to 4.x)

February 2019
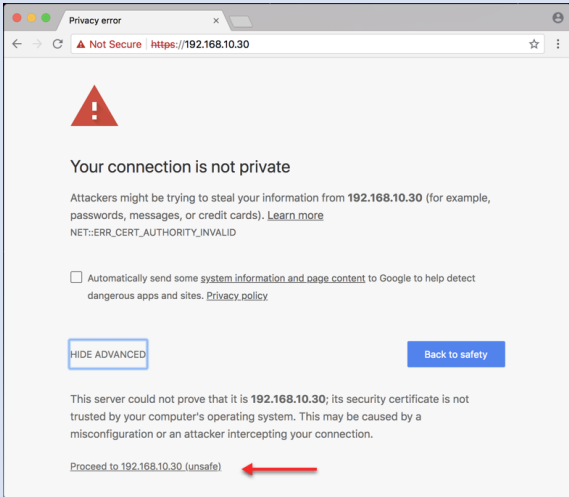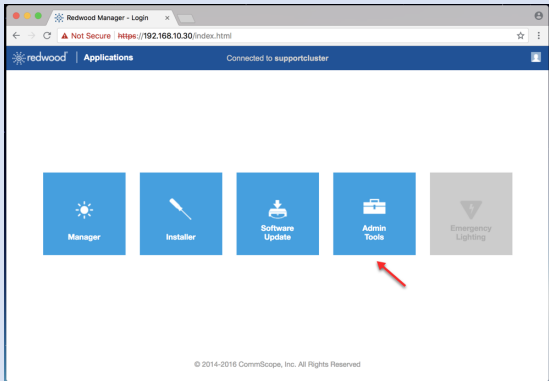
## Table of Contents

February 2019

INTRODUCTION:

The smartDirector Management software allows a user an easy way to upgrade the software version on the entire cluster with little downtime.

PRE-REQUISITES:

Prior to performing any software upgrades, it is a **best practice** (and highly recommended) to download critical pieces of information from the system/cluster. In this example, the smartDirector-led cluster is running **version 3.x** of the software. These steps will illustrate what a user should download before upgrading. We are assuming the newer **4.x software** image has already been acquired by the user from wtec.

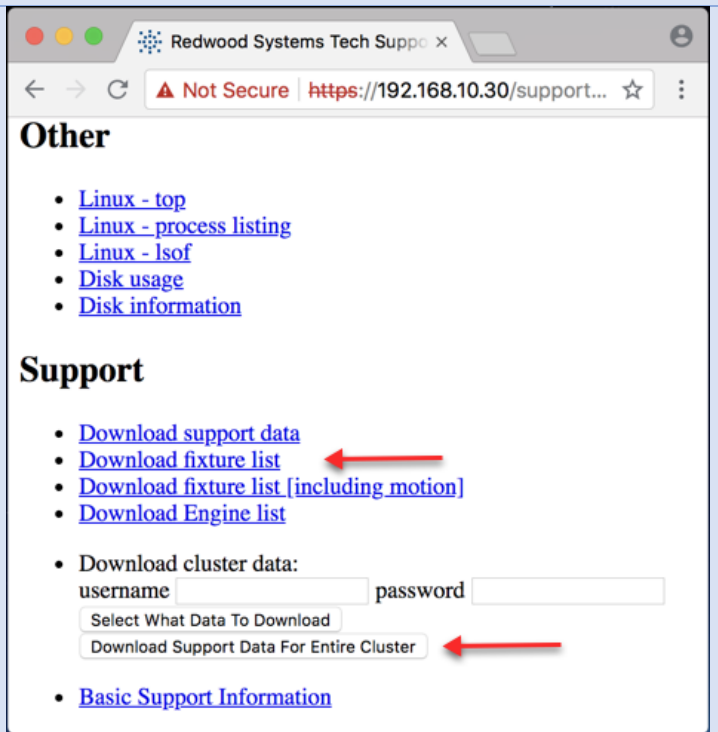| Steps to follow	This is what you will see
Step 1. Log into the smartDirector (https://<IP Address of smartDirector>) using the default **admin** account. *Note 1: This should not be an account that has admin privileges. It must be the default **admin** account.* *Note 2: If you get prompted by a certificate page, please **bypass** it by clicking on the ADVANCED link and then by clicking on proceeding to the smartDirector's login page. This is simply an indication of an unsigned certificate. The web browser used in this example is **Google Chrome**. For other web browsers you may get notified of the connection not being private (**Safari**) or secure (**Firefox**), or the site not being secure (**Internet Explorer**) etc. Simply bypass it.* After a successful login, once the main splash page appears, click on the button for **Admin Tools**. Note in this example the cluster is running **version 3.x** of the software.	

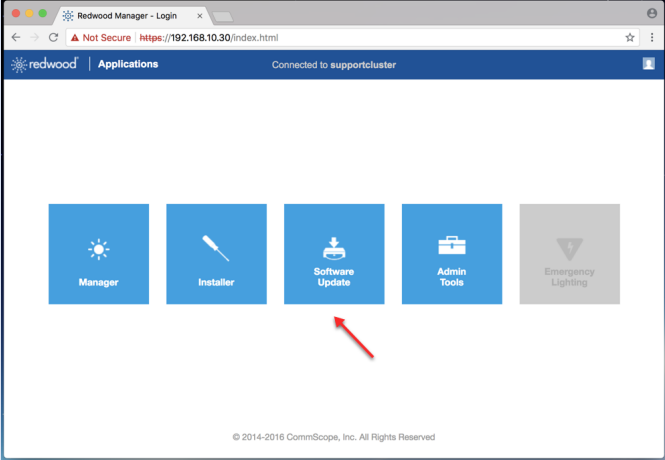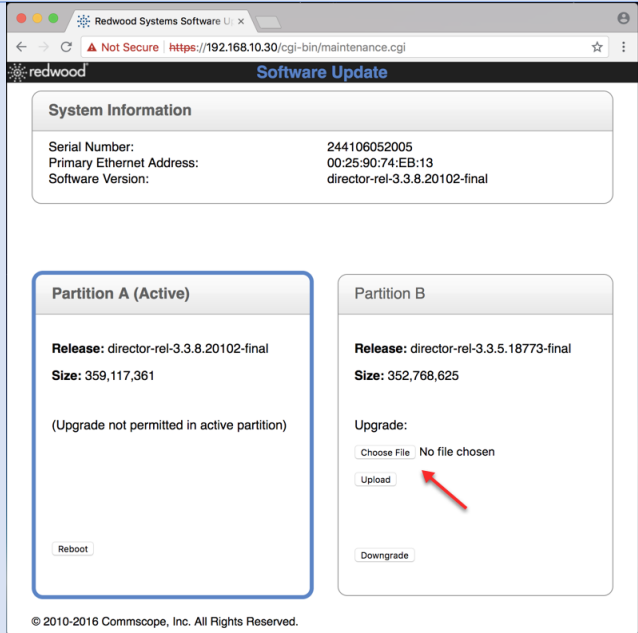| The **Tech Support Page** will appear.	**Tech Support Page** screenshot
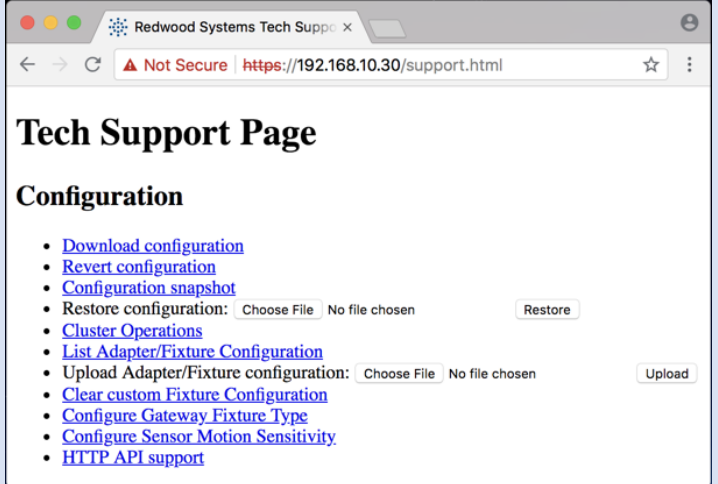
| **Step 2.** Scroll down to the last section of the page called **Support**. a) Download the **fixture** list. The downloaded file will be called fixture.csv b) Input the **admin** credentials in the fields available for Download Cluster data option and click on the button to **"Download Support Data for the Entire Cluster"**. This will take a little time to download as the smartDirector will collect all the information from every single cluster member and package it all up. The downloaded file will be named similar to **ClusterDataFor_<smartDirector name>(<smartDirector IP>)_XXXXXXXXXXXX.tgz**. It is a compressed file.	**Support** page screenshot

February 2019

UPGRADING THE SMARTDIRECTOR:

After the important pieces of information have been gathered, a user can now proceed with upgrading the smartDirector to newer 4.x release.

| Steps to follow	This is what you will see
Step 1. Log into the smartDirector (https://<IP Address of smartDirector>) using the default **admin** account. *Note: This should not be an account that has admin privileges. It must be the default **admin** account* Once the main splash page appears, click on the button for **Software Update**.	
Step 2. The **Software Update** page will appear. In this example, it shows that **Partition A** (active partition) is running software version 3.3.8. *Note: Software upload and upgrades are only allowed in inactive partitions. In this example, it is **Partition B.*** Click on Choose file and select the 4.x software image for the smartDirector that was provided to you by wtec. Next, hit the **Upload** button.	

Step 3.

A prompt will appear which will take an input from the user to proceed with the upload operation.
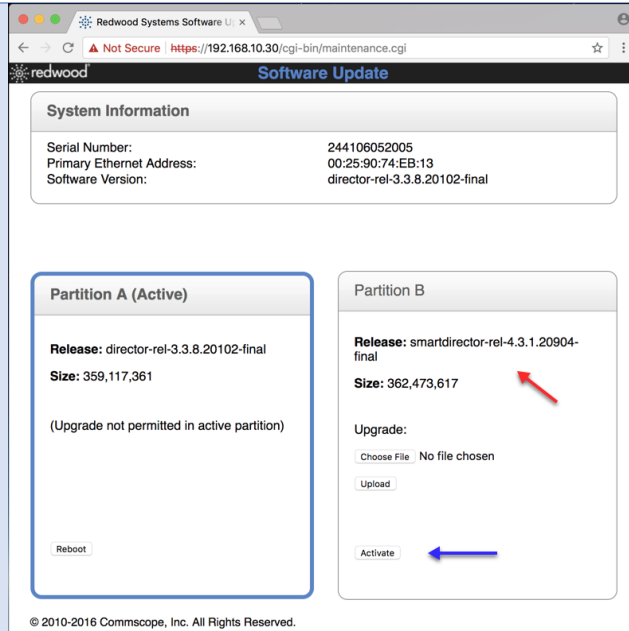
Hit the **OK** button.
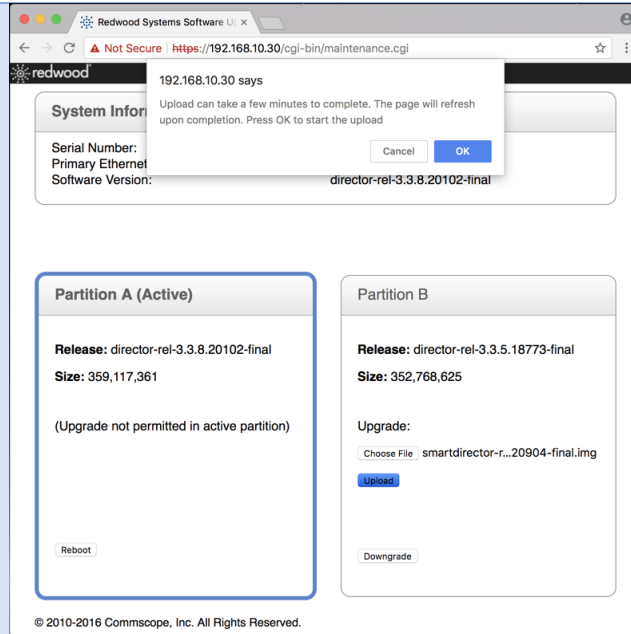
The Upload process will begin, and a progress bar will appear.
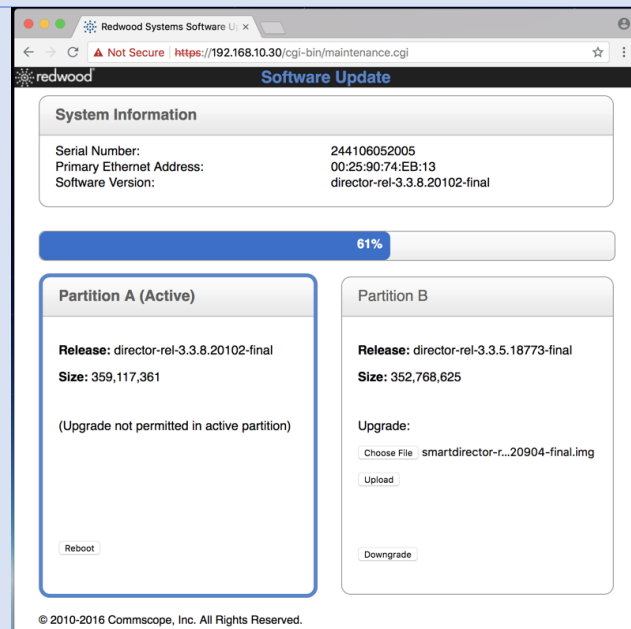
Step 4.

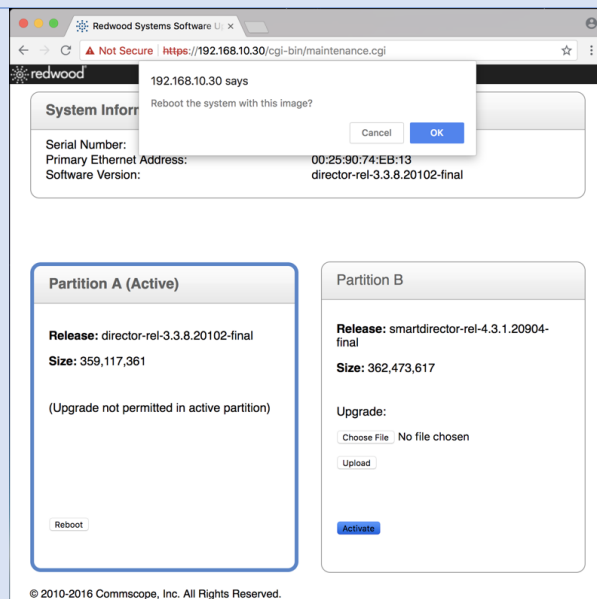Upon completion of the upload, Partition B will show the 4.x software release for the smartDirector.

Hit the **Activate** button.

Step 5.

A prompt will appear requesting acknowledgement to Reboot the system with this image.

Press **OK** to proceed.

The smartDirector will proceed with booting up with the 4.x software image. Give it a couple of minutes while the system reboots. *Note: Do not power cycle the smartDirector.* Once HTTPS access is restored again, a user can try accessing the UI @ https://<IP Address of smartDirector>. Now you will see a landing page which is different than what one would have experienced with version 3.x.

If the user hovers over the "**i**" icon on the top right corner or clicks on it, a verification of the newer software 4.x will be revealed.

==At this point the smartDirector upgrade is now complete and the user can proceed with upgrading the entire cluster with the same software release.==
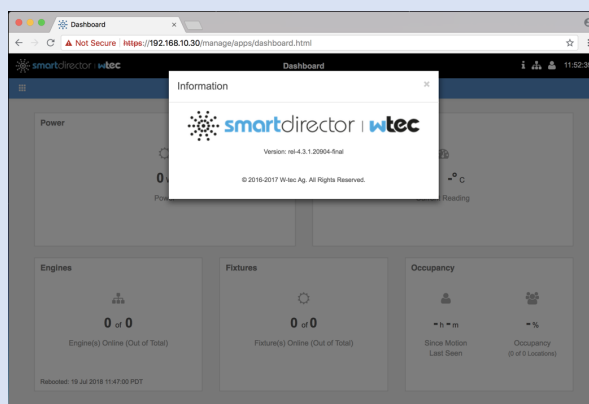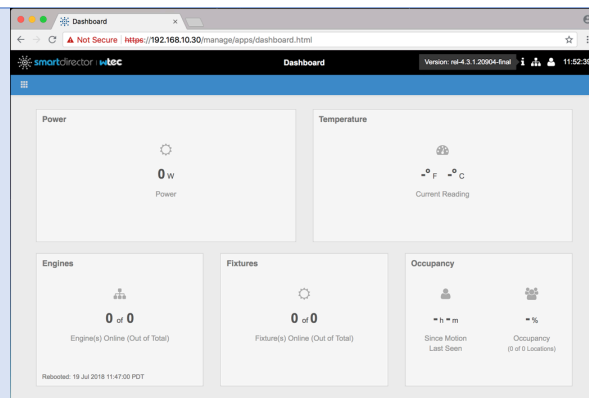
UPGRADING THE SMARTENGINES:

After the smartDirector is upgraded to the newer version, it will no longer be able to communicate with the smartEngines since there will be a mismatch of the release, however, it will be able to see all available smartEngines that are part of the cluster. By using the **Cluster Management** tool, one will be able to upgrade all the cluster members to be on the same version as the smartDirector.

Below are the steps that a user will have to take in order to upgrade the software version on the entire cluster
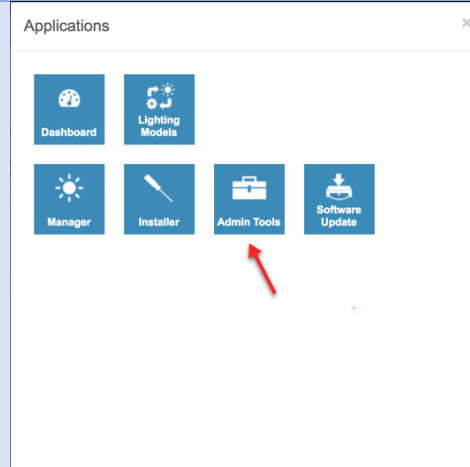
Steps to follow	This is what you will see

Step 1.

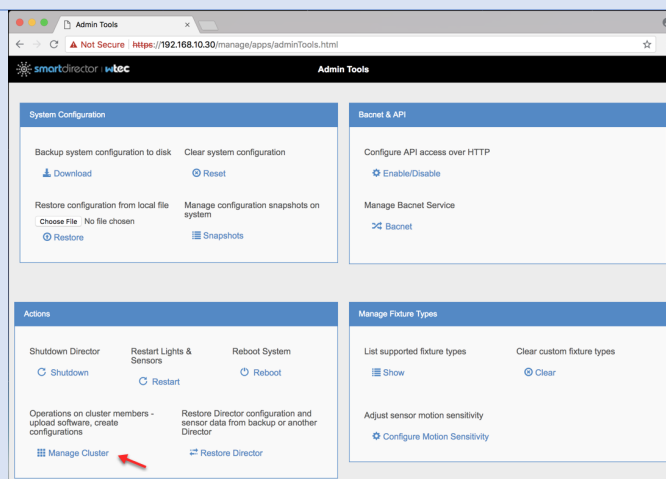Login to the smartDirector Manager using the default **admin** account.

*Note: This should not be an account that has admin privileges. It must be the default **admin** account.*

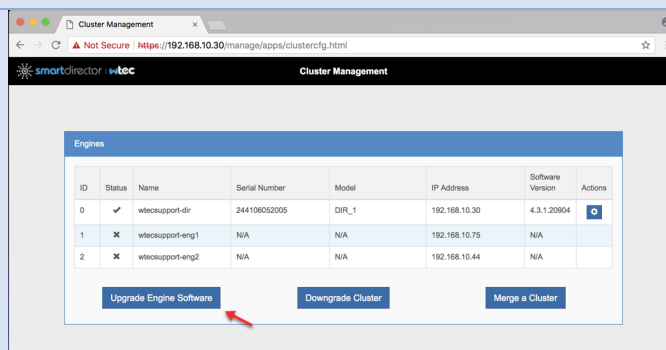- Access the **Applications** menu and click on **Admin Tools**.

Step 2.

Under the Actions section click on **Manage Cluster.**

Step 3.

This will bring up the **Cluster Management** page. Notice that you can see the Software version for the smartDirector, but it is not visible for the cluster members yet.
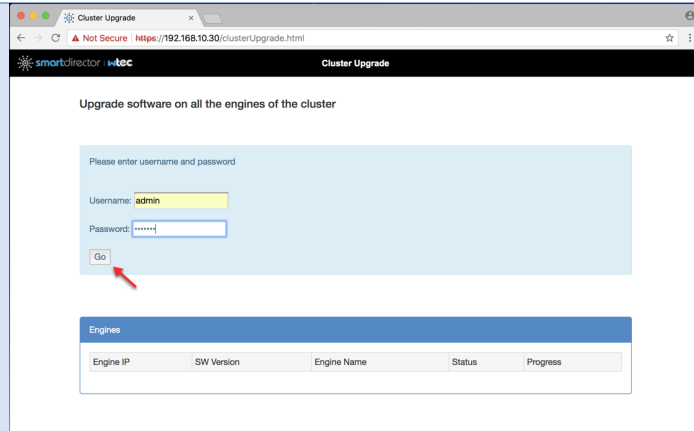
- Click on **Upgrade Engine Software** button.

Step 4.

The **Cluster Upgrade** page will appear...

- Enter the default **admin** account credentials and hit the **Go** button.

Step 5.

A list of all the smartEngines will appear with their current Status.

- Click on the **Upload** button for all the members that show a status of Upgrade required

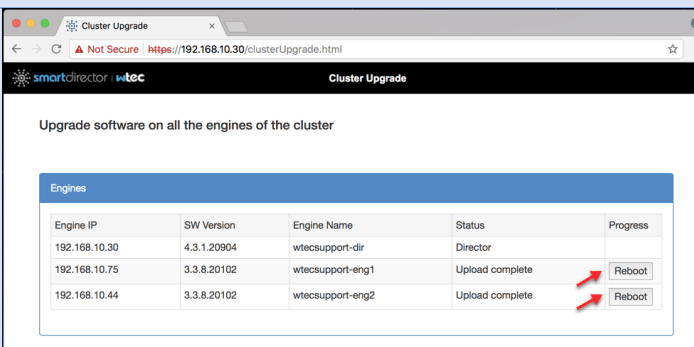The software will get uploaded to the cluster members and a progress bar will illustrate the same.

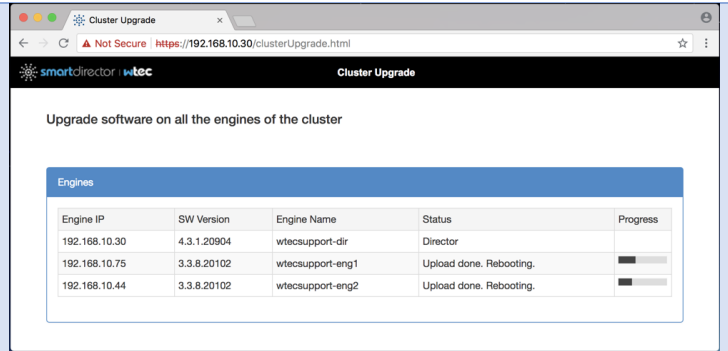Wait until you see the status as complete and the **Reboot** buttons appear.

Step 6.

You can choose to Reboot all the smartEngines at once or you can stagger the operation assuming you do not want the entire site to lose lights temporarily at the same time.

- Hit the **Reboot** button(s)

Engine IP	SW Version	Engine Name	Status	Progress
192.168.10.30	4.3.1.20904	wtecsupport-dir	Director	
192.168.10.75	3.3.8.20102	wtecsupport-eng1	Upload done. Rebooting.	
192.168.10.44	3.3.8.20102	wtecsupport-eng2	Upload done. Rebooting.	

Cluster Upgrade

Upgrade software on all the engines of the cluster

Once the smartEngines have been **rebooted** they will cluster up themselves and the status will show a successful upgrade. Notice the SW Version column having the same version as the smartDirector.
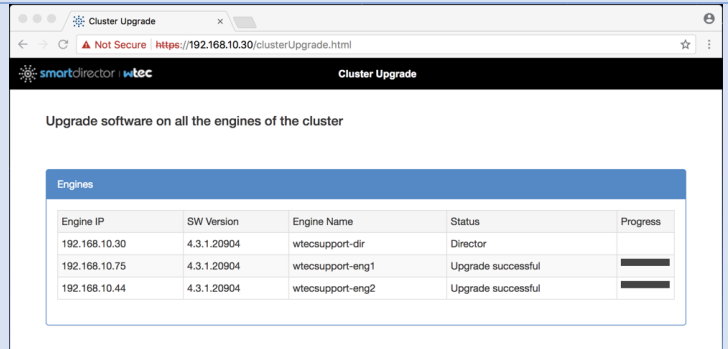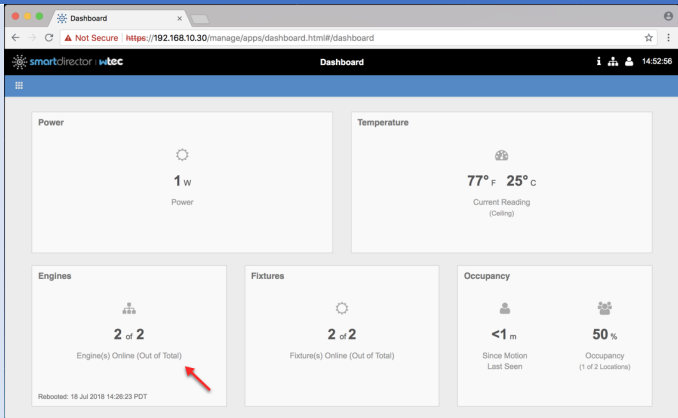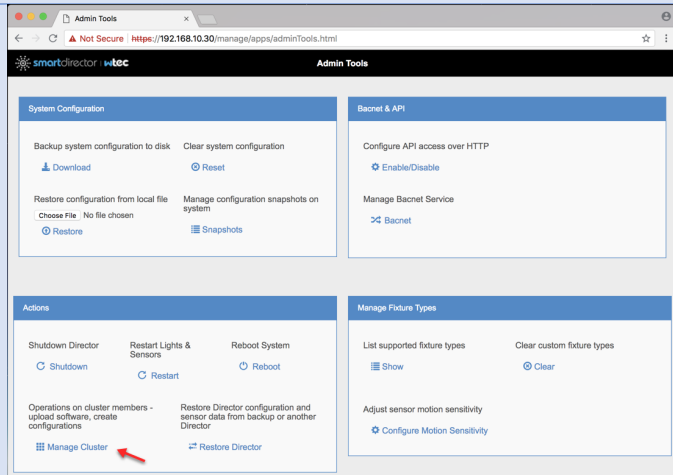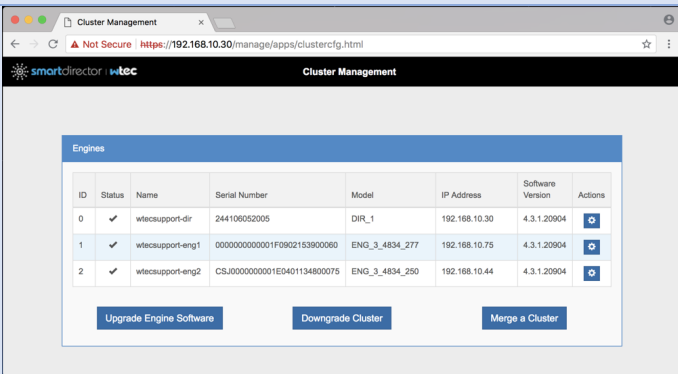
Engine IP	SW Version	Engine Name	Status	Progress
192.168.10.30	4.3.1.20904	wtecsupport-dir	Director	
192.168.10.75	4.3.1.20904	wtecsupport-eng1	Upgrade successful	
192.168.10.44	4.3.1.20904	wtecsupport-eng2	Upgrade successful	

Cluster Upgrade

Upgrade software on all the engines of the cluster

The entire cluster is now running the newer 4.x release of the software and the user can proceed with validating it accordingly.
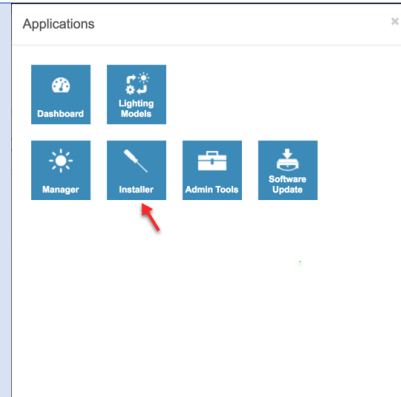
VALIDATION OF A SUCCESSFUL UPGRADE:

While the above should be sufficient to indicate a successful upgrade, there are additional steps a user should take to validate the operation.

Steps to follow	This is what you will see
Step 1. Login and access the **Dashboard**. Verify that all the engines that were online prior to the upgrade are being accounted for in the count	
Step 2. Go back to **Admin Tools** using the Applications menu, and under the Actions section click on **Manage Cluster**	
This will bring up the **Cluster Management** page. Notice that all have the same Software Version!	

Step 3.

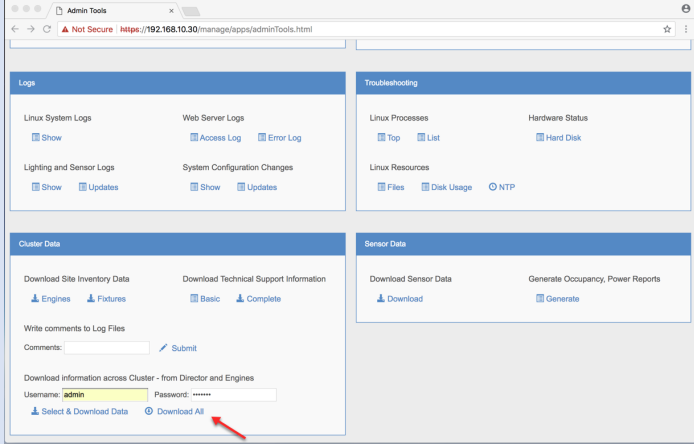Access the **Applications** menu again and click on **Installer**

The smartInstaller page will appear. Use the drop-down menu and scroll through verifying that all the engines appear as they did when the system was on version 3.3.8.
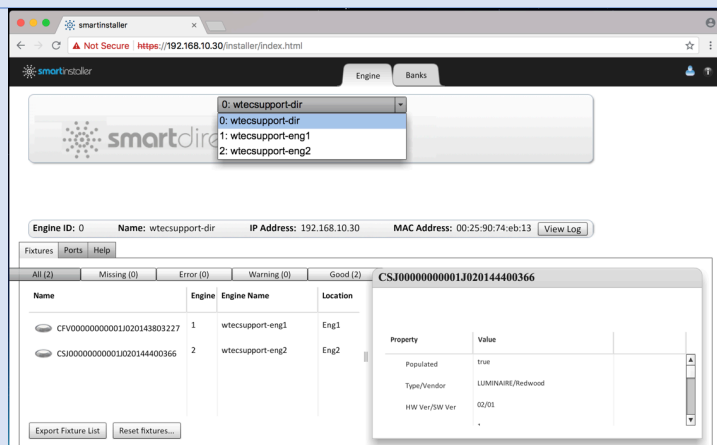
POST-UPGRADE DOWNLOAD OF INFORMATION:

It is a **best practice** (and highly recommended) that the user downloads key information from the cluster after a successful software upgrade. This information should be kept safe place in the event it is needed at a later time.

Steps to follow	This is what you will see
Click on **Admin Tools** from the Applications menu. Under the **Cluster Data** section, enter in the default **admin** account credentials and click on **Download All** button • This action will download a file called **ClusterDataFor_<smartDirector name>(<smartDirector IP>)_XXXXXXXXXXX.tgz**. It is a compressed file with key pieces of information.	
Download the **Site Inventory Data.** • The link for **Engines** will download a file called **engines.csv** • The link for **Fixtures** will download a file called **fixture.csv**	