

PathWave Manufacturing Analytics License Management

Viewing and adding licenses with the license manager

Introduction

The PathWave Manufacturing Analytics software uses licensing to control various aspects of the software. There is a built-in license manager that uses license files that it reads to enable certain features. These license files control access to the user interface features, as well as the number of connected equipment that you can activate. To add and remove licenses requires you to know how to work with the license manager as well as the PathWave Manufacturing Analytics (PMA) software.

License Redemption

You can redeem a license using an entitlement certificate provided to you when you purchase the PMA software product. An email with the license file will arrive as part of the redemption process, you will need this license file in order to add new licenses to the software. The redemption process happens through the Keysight Software Manager website and is not described within this document, 1` refer to <https://ksm.software.keysight.com>

You need to provide a 'Host ID' in order to redeem a license. Log into the license manager and use one of the 'Ethernet Address' values found on the 'System Information' page as the 'Host ID'. Since you can redeem many licenses always use the same 'Host ID' for all them, as this will make it easier for you to trace them in the future.

New Server Installations

The first time that you install the PMA software the license manager may not be running. This means that you may not be able to do any license management. If you can access the license manager using the steps for 'Accessing the License Manager' then it is already running.

If the license manager is not running, you will need to edit the `/etc/rc.local` file and find the command used to start it.

1. First check that the license manager is not running by checking the output of the command on the command line on the master 1 node: `ps -ef | grep lmadmin`
2. If you do not find a path ending in `/lmadmin/lmadmin` then the license manager will not be running. If you do find it then the license manager is running.
3. On the master 1 node edit the `/etc/rc.local` file with the command: `vi /etc/rc.local`
4. Find the line that runs the `lmadmin` and copy the entire line.
5. Quit Vim and return to the command line: `<ESC key> :q! <Enter key>`
6. Enter the entire command to startup the license manager and press the Enter key to start it.
7. Follow the steps for 'Accessing the License Manager'.
8. Follow the steps for 'Adding and Activating a License'.

Accessing the License Manager

The license manager is located on the PMA cluster's master 1 node at <http://master1ip:8090/> website. The `master1ip` in the website address is the cluster's private side network IP address for the master 1 node set in the `conf/cluster.properties` file.

Logging into the License Manager

To access the license manager website on the PMA cluster and login, use the following steps:

1. Visit the license manager website at <http://master1ip:8090/>
2. To access the administration page of the license manager, click Administration on the top-right of the webpage.
3. Login using the default login username "admin" and password "get.lost" (all without quotes). Click 'Submit' and you will jump to the 'System Information' page.
4. The 'System Information' page will display a summary of the system information available which includes items such as the 'Ethernet Address' (the 'Host ID') for the server, the port, and the version of the license manager.

Viewing the Available Licenses

There are 2 ways to view the available licenses on the PMA server. The first method is through the license manager website, and the second method is through the PMA website.

To view licenses using the license manager website, follow these steps:

1. Visit the license manager website at <http://master1ip:8090/>
2. The default page shows the 'Dashboard' (highlighted on the top-right of the webpage).
3. Click on the 'Concurrent' license icon. The page shows the current list of valid licenses available along with their expiration dates.

To view licenses using the PMA website, follow these steps:

1. After logging into the PMA website, click on the top-right gear icon to show a menu and then click on 'Admin'. This will take you to the 'PathWave Administration' webpage.
2. Along the top menu there is a 'Licensing' option, click it to display the 'Seat Licenses' page. The page shows the current list of valid licenses available along with their expiration dates.

Adding and Activating a License

After receiving the license file from KSM you will need to add it to the license manager.

1. Follow the steps to log into the license manager.
2. Click on the 'Vendor Daemon Configuration' tab on the left side.
3. Click on the 'Import License' button to jump to the 'Import License File' page. You can then upload a license file from your local machine.
4. Click on the 'Browse...' button and select the license file, which must have '.lic' extension, and then click Open to return back to the 'Import License File' page.
5. Click on the 'Import License' button. Only check the box to overwrite the file if you are updating a previously uploaded license file with new content. You will jump to the 'Import Information' page and should have success messages for the license upload.
6. Click OK to go back to the 'Vendor Daemon Configuration' page.
7. Click on the agileesofd vendor daemon in the list.
8. In the 'General Configuration' section you will need to make some edits to the 'License File or Directory' because the newly added license will appear in the list and it is better to keep the paths pared down to a single directory. Remove all lines except the 'licenses/agileesofd' directory from the 'License File or Directory' box.
9. Click Save at the bottom of the page.
10. If the 'Vendor Daemon' stops click the 'Start' button and then click the 'agileesofd' daemon in the list.
11. Click the 'Reread License Files button'. The display will show whether the license file import is successful.

Summary

This has been a review of some of the basic license manager functions. You can login, view, and add a license that controls the PathWave Manufacturing Analytics software. You can startup a stopped license manager or license daemon.

Appendix A: FAQ

Where is the PMA UI license viewer?

From the PMA UI visit the licenses page by clicking on the top-right gear icon and then Admin and then the Licensing tab.

Where is the PMA license service?

The license service name is FlexNet Publisher®. It is a server back-end daemon service. To reach it you require access to server back-end which may not be on the same network as the PMA UI. The service can be found at <http://master1ip:8090/> The master1ip in the website address is the cluster's private side network IP address for the master 1 node set in the conf/cluster.properties file.

Where is FlexNet Publisher UI location?

Visit the <http://master1ip:8090/> (master1ip is the cluster side Linux server IP) to access the FlexNet Publisher® license manager UI. Log into the Administration page, default login is "admin" and password is "get.lost" (without the quotes).

Why are the menu items on the left side of the UI disabled?

Go to the license manager UI. It is a requirement, for PMA currently, that PA101CPA, PA102FMA, PA104EEA are present for all UI menus to be enabled. In future versions this requirement will change.

Why can I not activate new equipment or previously disabled equipment?

Go to the license manager UI. For PMA the PA120TSA feature license is necessary for activating an equipment ID in the UI. If the number of active equipment exceeds the total available count, the new equipment or previously disabled equipment cannot be enabled.

Why does the license manager UI not show any available licenses?

Go to the license manager UI. If the UI is empty, all the licenses may have expired.

Why does the license manager UI not show any available licenses?

If the PMA license manager UI shows no licenses available (blank list) then there may be no available or active licenses. Visit the FlexNet Publisher® license manager UI, you should be on the Dashboard page, click on Concurrent, if there are no licenses listed proceed with further troubleshooting.

Why does the FlexNet Publisher agileesof daemon not start?

Click on Vendor Daemon Configuration. Check the Vendor Daemon agileesofd status and if it is down then usually there are no active licenses available.

Why does the FlexNet Publisher agileesof daemon not start?

Click the agileesofd Vendor Daemon. Scroll down to the Vendor Daemon Log and click on the header, then click on "View file externally". A new window will pop up with the log details displayed. Scroll to the bottom of the list and check for errors. For example, if all licenses have expired there will be a message "No features to serve, exiting". Update the license file or folder with valid licenses and start the daemon again to check if it is successful.

Why does the FlexNet Publisher agileesof daemon not start?

Upon clicking "Start" for the agileesofd vendor daemon there is a message displayed at the top of the page "Unable to start vendor: agileesofd." There is likely no license files available in the default install folder

/home/kimatic/agileesofd.clean/x64_Isb/lmadmin/licenses/agileesofd or the name(s) of the license file(s) is/are not the same as ones that the daemon is set to read. Check the name(s) of the license file(s) or folder that it is reading under the "General Configuration", "License File or Directory". If it is a folder or file name make sure that they are correct and match the install directory location, the default folder is "licenses/agileesofd".

How do I find the Host ID to use for a license?

From the FlexNet Publisher UI click on Administration and login, then click on the System Information item in the left menu. There will be a list of ethernet addresses, make sure to use one of the active Ethernet cards used by the cluster, since you do not want the information to change frequently nor disappear. Alternatively, if there are license files already on the server then edit one of them to view the Host ID near the start of any license line, "SERVER this_host <HOST_ID> ...".

Is it better to use a file name for the license list or a folder?

It is easier to use just a folder containing all the licenses. In this case the daemon can pick up all the files in the folder at once. Note that the reading in of the files in a folder happens automatically if the file extension is ".lic". If you set a list of files then update them in the FlexNet Publisher, "Vendor Daemon Configuration", agileesofd daemon, "General Configuration", "License File or Directory". You can do a combination of folders and files.

When reading a folder of licenses how do I know which license files the FlexNet Publisher® has used?

Check the Vendor Daemon Log and click "View file externally" to have a window pop up with the log details. Scroll to the end and check for a line stipulating the names of the files read in from the folder. For example, License file(s) used:

```
licenses/agileesofd/d0946657b97f_1092090.lic  
licenses/agileesofd/d0946657b97f_5762627.lic
```

Where is FlexNet Publisher Help location?

If the PMA license manager UI shows no licenses available (blank list) then there may be no available or active licenses. Visit the <http://master1ip:8090/> (master1ip is the cluster side Linux server IP) FlexNet Publisher license manager UI, you should be on the Dashboard page, click on Concurrent, if there are no licenses listed proceed with further troubleshooting.

How do I stop the vendor daemon in the FlexNet Publisher®?

The user that starts the service does not usually have access to stop the vendor daemon, so to stop it the whole service needs to stop. SSH to the server, search for the lmadmin process and terminate it. Check if it is running using "sudo ps -ef | grep lmadmin" and get the PID which is in column 2, usually under user kimatic. Kill the process with "kill -9 PID" where PID is the number that you got from the previous command.

Where do I get a new license for the server?

Follow the instructions on the certificate to use the Keysight Software Manager to add a certificate and redeem the licenses from it.

How do I install a license on the server?

Copy the entire contents of license file received to either the end of an existing license file on the server or to a new file on the server. Make sure to use the license folder that the FlexNet Publisher® is scanning. In the case of a list of license files in the FlexNet Publisher®, you will need to use one of those files, if it's a folder then just add a new file to the folder. Now re-read the license files for the vendor daemon to update the list available on the dashboard. Note that the PMA license viewer will not reflect the changes until the backend services also go through a restart.

Why, after installing new licenses, do the PMA menu items remain disabled or why can I not activate new/disable equipment?

The current 2.3 and lower versions of the PMA software require that 2 services go through a restart in order to refresh the active licenses in the PMA UI. Note that there is downtime for the UI, but it does not affect the rest of the back-end services while the restart is happening. Go to the PMA install folder, default is /opt/kimatic/ and change to the tomcat-angular-vis folder, run the ./teardown.sh and wait for a minute. Change to the ../tomcat-spring-das folder, run the ./teardown.sh and wait for a minute, and then run the ./create.sh. Change back to the ../tomcat-angular-vis folder and run the ./create.sh and wait for a minute, then check the PMA UI has refreshed and activated disabled menu items as well as reflecting the new list of licenses.

How do I find the FlexNet Publisher® install location?

To find the location of the FlexNet Publisher® go to the command line of the master1 server, edit the /etc/rc.local file, and find the line which runs the lmadm. For example:
/home/kimatic/agileesofd.clean/x64_lsb/lmadm/

How do I find the folder location to place the license files for the FlexNet Publisher?

From the FlexNet Publisher web UI, go to the Administration page and login. Click on the Vendor Daemon Configuration in the left menu, then agileesofd daemon. Under General Configuration the "License File or Directory" will usually contain the relative path that the license files are located at, "licenses/agileesofd" for example. If the absolute path is set then use it, for example "/opt/kimatic/licenses". For the relative path, follow the steps to get the lmadm installation folder from the /etc/rc.local file, from the command remove the last lmadm (the executable name). The complete path is a combination of the installation folder for the lmadm and the license file relative path in the FlexNet Publisher configuration, the full path is usually "/home/kimatic/agileesofd.clean/x64_lsb/lmadm/licenses/agileesofd".

How do I terminate the FlexNet Publisher?

SSH to the server, search for the lmadm process and terminate it. Check if it is running using "sudo ps -ef | grep lmadm" and get the PID which is in column 2, usually under user kimatic. Kill the process with "kill -9 PID" where PID is the number that you got from the previous command.

How do I start the FlexNet Publisher?

On the backend master1 server edit the /etc/rc.local file "sudo vi /etc/rc.local" and find the line which runs the lmadm, copy the entire line, quit vi ":q!". Paste the command on the command line and press enter to run it.

How do I check the expiration date of the licenses that are on the server?

From the PMA UI visit the licenses page by clicking on the top-right gear icon and then Admin and then the Licensing tab. Refer to the Expiration Date column for the date of expiry for each line item.

What does the number of seats mean in the license viewer?

From the PMA UI visit the licenses page by clicking on the top-right gear icon and then Admin and then the Licensing tab. Refer to the Seats column for the number of available licenses (number in use/available) for each line item. The seats will be the quantity of available licenses for that feature.

What does the server mean in the license viewer?

From the PMA UI visit the licenses page by clicking on the top-right gear icon, then Admin, and then the Licensing tab. Refer to the Server column, in each line item, for the server address that is serving the license.

What does the feature mean in the license viewer?

From the PMA UI visit the licenses page by clicking on the top-right gear icon and then Admin and then the Licensing tab. Refer to the Feature column for the available feature for each line item. The feature will either enable a menu item in the PMA UI or allow you to activate a new/disabled equipment ID. The feature is the feature or function that will be enabled by the license.

Learn more at: www.keysight.com

For more information on Keysight Technologies' products, applications or services, please contact your local Keysight office. The complete list is available at: www.keysight.com/find/contactus

