

Metered License Agent Installation and Setup

MLA retirement plan

The Metered License Agent is being phased out and replaced by the Data Relay Agent.

In order to reduce the number of components installed by Qube, we're in the process of folding the MLA's license collection functionality into the (new in Qube 6.10) Data Relay Agent.

This table outlines the last version of Qube that still supports the MLA. If your operating system is running a later version of Qube, please refer to the DRA Installation and Setup documentation.

| Operating System | Last Qube Version Supporting the MLA |
|------------------|--------------------------------------|
| Windows | 7.0 |
| OS X | 7.0 |
| Linux | 6.9 |

Purpose of the Metered License Agent (MLA).

The Metered License Agent (MLA) is a utility running at your facility which collects data from your supervisor and sends it to the [Metered License Server \(MLS\)](#). It may run inside your facility, on a host outside your firewall in a DMZ, or anywhere that can reach both your supervisor and the MLS on the public internet.

It samples the license usage from your supervisor once a minute and stores it locally in a batch. When it accumulates at least 15 records, it will transmit the batch of records to the MLS for storage.



The MLA should be installed on a machine that will be running 24x7.



The Metered License Agent is only supported by v3.0 and later of the Qube Installer utility.

Metered License Agent Installation Host

The MLA can be installed on any machine in your facility which:

- has the qube-core package installed
- can reach the supervisor service on the supervisor host
- can reach the public internet

The most common installation scenarios

- Install the MLA **on your supervisor**. Your supervisor must be able to access the public internet
- Install the MLA **on another machine** in your facility. A machine already running a license server is a good candidate
- Install the MLA on **a host in your firewall's DMZ**. The firewall rules can be restricted to:
 - inbound TCP port 50001 to the supervisor
 - outbound TCP port 443 on metered.pipelinefx.com

MLA login credentials

The MLA needs login credentials on the [Metered License Server \(MLS\)](#) in order to ensure that the reported data is associated with the correct Billing Account on the MLS. The username and password you created during the [PipelineFX Metered Licensing Portal Account Setup](#) step should be used.

MLA Installation Procedure

On Windows and OS X hosts, we recommend using the Qube Installer to perform the MLA installation, and provide the username and password from the MLS user account.

MLA installation from RPM on linux

Many linux machines do not have a graphics head on them, and so installation must be done using the command line and installing directly from the RPM. This will necessitate setting up the credentials file and cron job by hand.

For a list of command-line arguments to the MLA, see [Metered License Agent Advanced Usage](#).

▼ [Click here to expand the manual installation details...](#)

Install the MLA rpm

```
[root@ip-192-168-66-21 /tmp]# rpm -ivh
qube-mla-6.9-2.CENTOS_6.7.x86_64.rpm
Preparing...                          #####
[100%]
   1:qube-mla                          #####
[100%]
[root@ip-192-168-66-21 /tmp]#
```

Install the credentials into a file readable only by root

In the following example, the credentials are stored in a file name `/root/.mla_creds`. You may use any file name you wish, but this path must be matched when you setup the cron in a later step.

```
[root@ip-192-168-66-21 ~]# cat /root/.mla_creds
export PFX_MLS_USER=<your MLS user name>
export PFX_MLS_PASSWD=<your MLS password>

[root@ip-192-168-66-21 ~]# chmod 600 /root/.mla_creds
```

Test the credentials

You must source the credentials file in order to load them into the environment; the command to source will vary depending on your shell.

```
sh-4.1# . /root/.mla_creds

sh-4.1# /usr/local/pfx/qube/mla/mla --check-creds --debug
[2017-04-10 16:29:42] john.burk:axxxxxxf at
https://mls.pipelinefx.com/api/v2/login
[2017-04-10 16:29:43] Credentials test passed.  Exiting...
```

Run all the tests

This will test:

- MLA -> supervisor connectivity
- MLS login credentials
- Supervisor MAC address is registered on the Metered Portal.

```
sh-4.1# /usr/local/pfx/qube/mla/mla --check --debug
[2017-04-10 16:33:06] Testing supervisor connectivity...
[2017-04-10 16:33:06] Qube supervisor defined in qb.conf: 192.168.66.21
[2017-04-10 16:33:06] - passed
[2017-04-10 16:33:06] Testing Metered License Server login
credentials...
[2017-04-10 16:33:06] john.burk:axxxxxxf at
https://mls.pipelinefx.com/api/v2/login
[2017-04-10 16:33:07] - passed
[2017-04-10 16:33:07] Testing MAC address registration and
authorization...
[2017-04-10 16:33:07] - passed
[2017-04-10 16:33:07] All checks passed. Exiting...
```

Once all tests pass, setup the cron file to run the MLA every minute

Note that the command run includes the "source" command, with the path to the credentials file.

```
sh-4.1# ls -l /etc/cron.d/com.pipelinefx.meteredLicenseAgent.cron
-rw-r--r-- 1 root root 107 Apr 10 16:40
/etc/cron.d/com.pipelinefx.meteredLicenseAgent.cron

sh-4.1# cat /etc/cron.d/com.pipelinefx.meteredLicenseAgent.cron
MAILTO=' '
* * * * *      root    . /root/.mla_creds &&
/usr/local/pfx/qube/mla/mla --debug --records 1
```

Optionally restart the cron daemon

NOTE: the cron daemon will detect changes in **already existing** files at the top of every minute, but will only scan the /etc/cron.d directory for **NEW** files **once an hour**. For this reason, if you don't wish to wait for the top of the hour to begin testing the cron, you will need to restart the cron daemon to add the new file to cron immediately.

```
sh-4.1# /etc/init.d/crond restart
```

Check the MLA log

verify that the MLA is correctly posting records to the Metered portal

```
sh-4.1# tail /var/log/mlalog
[2017-04-10 16:41:01] Local journal not found, creating database
PFX_metered.db
[2017-04-10 16:41:01] Created database PFX_metered.db
[2017-04-10 16:41:01] License data: used:0, prepaid:64, metered:0
[2017-04-10 16:41:01] Records collected so far: 1
[2017-04-10 16:41:01] john.burk:axxxxxxf at
https://mls.pipelinefx.com/api/v2/login
[2017-04-10 16:41:02] POST'ing records to MLS at
https://mls.pipelinefx.com/api/v2/records
[2017-04-10 16:41:02] Reporting {"insert": 1, "account": "jburk
testing", "metered_key": "[metered]\nhostid =
02:EF:66:EF:90:97\nlicensee = \"jburk testing\"\nmax = 32\nexpires =
\"Apr 11, 2017 00:41:02\"\nkey = 32450283602d5539f0d5f072cef69276",
"update": 0, "authorized": true}
[2017-04-10 16:41:02] Removed all POST'ed records from table
license_data
[2017-04-10 16:41:02] "[metered]\nhostid = 02:EF:66:EF:90:97\nlicensee =
\"jburk testing\"\nmax = 32\nexpires = \"Apr 11, 2017 00:41:02\"\nkey =
32450283602d5539f0d5f072cef69276"
[2017-04-10 16:41:02] Supervisor authorized for metered licensing: true
```

Clean up once the logs show that the MLA is reporting correctly

If there are no error messages in the log file, and you see "Supervisor authorized for metered licensing: true", edit the cron and remove the --debug --records 1 arguments, so that your cron now looks like:

```
sh-4.1# cat /etc/cron.d/com.pipelinefx.meteredLicenseAgent.cron
MAILTO=' '
* * * * *      root    . /root/.mla_creds &&
/usr/local/pfx/qube/mla/mla > /dev/null 2>&1
```

Verifying the MLA Installation

After you've installed the MLA, login to the MLS at <https://metered.pipelinefx.com>, and periodically check the "Status" value in the Supervisor section.

The screenshot shows a dark-themed web interface. A tooltip titled "Metered Agent Reporting Status" is displayed over a table. The tooltip lists the following status definitions:

- Active:** within the last 15 minutes
- Warning:** longer than 15 minutes
- Critical:** longer than 4 hours
- Disabled:** longer than 8 hours, this supervisor has had **metered licensing disabled** due to the length of time from the last report
- Offline:** longer than 7 days
- Retired:** longer than 30 days
- No Records:** the metered agent has never reported any records for this supervisor

The background interface includes a table with the following columns: "MAC Address", "Status", and "Description (click to edit)". One row is visible with the MAC address "00:1E:4F:1F:57:20" and status "Active". Below the table is a button labeled "Add a new supervisor".

- a status of **No Records** indicates that the MLA has never reported data for this supervisor.
- if the status is **Active** and remains that way for at least 20 minutes, then your MLA is properly reporting license usage data back to the MLS.
- a **Warning** status indicates that the MLS has received data from your MLA, but not in the last 15 minutes.
 - This usually indicates that the initial installation of the MLA proceeded without error, but that it is not continuing to collect and report data after that time.
- if the supervisor status continues to degrade from **Warning** to **Critical** to **Disabled**, then the MLA has not reported data for at least 4 or 8 hours, respectively. In this case, you should check if the Metered License Agent is still running every minute, it's likely that the cron (linux), scheduled task (Windows), or launchd plist (OS X) doesn't have the correct credentials (user name and password).



Please note that if PipelineFX has determined that your account is not in good standing, we may **de-authorize** your metered license account.

In this case, your supervisor(s) will enter the **Disabled** state within 15 minutes. Check the **Metering Authorized** field in the Account Details section on the [MLS](#) website.

Billing Contact

Metering Authorized true

Monthly Spend limit \$1,000

Concurrent Metered limit 100

[Edit billing account details](#)

Qube Supervisors

| MAC Address | Status | Description (click to edit) |
|-------------|--------|-----------------------------|
|-------------|--------|-----------------------------|

[Add a new supervisor](#)

See Also

[Metered License Agent Advanced Usage](#)