Dragonframe License Manager User Guide
Version 3.0

The Dragonframe License Manager (DFLM) provides floating license management for Dragonframe 3.0 and above.

You must contact support (support@dragonframe.com) to request a *license manager customer ID* if you want to use the license manager.

How it works:
• It is an application that runs as a Windows service or macOS launch daemon.
• You run DFLM on a central server.
• You install your Dragonframe licenses into DFLM.
• You configure end-user machines with Dragonframe to obtain their licenses from DFLM.
• DFLM tracks the number of licenses that are checked out.

Network requirements:
• The DFLM server must be accessible from the end-user machines in order for them to check out licenses.
• Port 5075 is used for communication between the end-user machines and DFLM. This port must be available across your network.
• Port 5076 is used to access the web-based management interface of DFLM.
• Both of the ports can be changed.

System Requirements

macOS 10.14+ or Windows 10+ (64-bit only)
Available ports 5075 (for end-user checkouts) and 5076 (for local DFLM interface).

Installing the License Manager - macOS

Setting Host IP
Normally the License Manager is able to detect the local IP address of the host machine properly. However, you may need to set this via a system setting. This is the IP address that other machines on your network will use to reach the host.

To set the host IP address, set the environment variable **DFLM_IP**.

Setting Custom Ports
By default, DFLM uses ports 5075 and 5076. If you need to change these ports, it is easiest to do this before you install the software.

Note: The custom TCP port must be set before you register your server, because it gets included in the activation code for the client machines.

To use custom ports, set the environment variables:
• DFLM_TCP_PORT (for end-user license checkout)
• DFLM_HTTP_PORT (for local web-based management interface)

You can set these in variables directly in the startup script:
`/Library/Dragonframe License Manager/dflm.sh`

Configuring Network Proxy
The license manager needs to contact our Dragonframe server at "www.dragonframe.com" for initial registration, and for adding licenses, and occasionally for validating licenses. If your network has an HTTP proxy, you can configure that through environment variables:

• DFLM_PROXY_HOST - the hostname of the proxy server (required)
• DFLM_PROXY_PORT - the port of the proxy server (required)
• DFLM_PROXY_USER - the username if authentication is needed (optional)
• DFLM_PROXY_PASS - the password if authentication is needed (optional)

You can set these in variables directly in the startup script:
`/Library/Dragonframe License Manager/dflm.sh`

Installing the Software
Download the installation package from our server at:
https://www.dragonframe.com/downloads/

Look for the **License Manager** section and find the macOS installer.

What this installs:
• A launch daemon at /Library/LaunchDaemons/com.dzed.dflm.launch.plist
• Application files at /Library/Dragonframe License Manager

The license manager will start automatically. See "Configuring the License Manager" for next steps.

Stopping/Starting the License Manager
If you change your ports, you will need to unload and reload the launch agent.
```
ituser$ sudo launchctl unload /Library/LaunchDaemons/com.dzed.dflm.launch.plist
ituser$ sudo launchctl load /Library/LaunchDaemons/com.dzed.dflm.launch.plist
```

Installing the License Manager - Windows

Setting Custom Ports
By default, DFLM uses ports 5075 and 5076. If you need to change these ports, it is easiest to do this before you install the software.

Note: The custom TCP port must be set before you register your server, because it gets included in the activation code for the client machines.

To use custom ports, set the environment variables:
• DFLM_TCP_PORT (for end-user license checkout)
• DFLM_HTTP_PORT (for local web-based management interface)

Configuring Network Proxy
The license manager needs to contact our Dragonframe server at "www.dragonframe.com" for initial registration, and for adding licenses. If your network has an HTTP proxy, you can configure that through environment variables:

• DFLM_PROXY_HOST - the hostname of the proxy server (required)
• DFLM_PROXY_PORT - the port of the proxy server (required)
• DFLM_PROXY_USER - the username if authentication is needed (optional)
• DFLM_PROXY_PASS - the password if authentication is needed (optional)

Installing the Software
Download the installation package from our server at:
https://www.dragonframe.com/downloads/

Look for the **License Manager** section and find the Windows installer.

What this installs:
• Application files at [ProgramFiles]/DZED/Dragonframe License Manager
• A service named "DFLM" (with long name "Dragonframe License Manager")

The license manager will start automatically. See "Configuring the License Manager" for next steps.

Stopping/Starting the License Manager
If you change your ports, you will need to stop and start your service
```
C:\> net stop DFLM
C:\> net start DFLM
```

Configuring the License Manager

You access the license manager interface through a web-browser.
Open a browser on the DFLM machine and go to:
http://localhost:5076

Register your License Manager
The first step is to register your license manager with our server.
You must contact support (support@dragonframe.com) to request a license manager customer ID if you haven't already.
The admin interface will ask you for this ID.
It will also ask for a server IP. This must be the local public IP address that the end-user machines will use to talk with the DFLM.
If you have problems registering, contact us at support@dragonframe.com

Registering your Dragonframe Licenses
Once your license manager is registered, you will want to add Dragonframe licenses to your DFLM, so that it can manage them for your end-users.
Enter a license in the "Add License" field, and press the "Add" button.

Making the Admin Interface Available to Other Machines
By default, the admin interface is only accessible via "localhost".
If you want it to be available from other machines, put their IP addresses into the "Access List" field, separated by commas. Press the "Set Access" button.

Securing the License Manager with a Password
By default, the admin interface does not require a password.
You can add a password to the license manager configuration file.

For macOS, the configuration file is:
`/Library/Dragonframe License Manager/config/dflm.properties`

For Windows, the configuration file is:
`%ALLUSERSPROFILE%/DZED/DragonframeLicenseManager/config/dflm.properties`

To add a password:
1. Stop the license manager.
2. Open dflm.properties in a text editor and add a line like this:
   `pw=[SHA-256 of password]`
3. Optionally adjust the authentication period (30 minutes) with a line like this:
   `sessionMinutes=60`
4. Save dflm.properties.
5. Start the license manager.

On macOS you can generate the SHA-256 via the command line:
`echo -n "password" | shasum -a 256`

Configuring End-User Machines

Now that your license manager is running and has a license to serve, you will want to configure your end-user machines to use it.

There are two ways to do this:
- Activate the software through the program's interface.
- Copy the floating license properties file directly to the end-user machine.

Activating the Software through the Program's Interface

Install the software on an end-user machine, run it, and choose "Floating License Manager" as the license type. You must provide the IP address of the DFLM machine.

Dragonframe will attempt to connect to the DFLM and obtain the floating license key.

Copy the Floating License to the End-User Machine

When you register DFLM it creates end-user license files that instructs the end-user machine to contact your DFLM to obtain a floating license. You can copy these files to client machines and they will be automatically configured to use the license manager.

For macOS, the files are:
```
/Library/Dragonframe License Manager/config/
      com.dzed.Dragonframe-License.properties  // for Dragonframe 3
      com.dzed.Dragonframe4-License.properties // for Dragonframe 4
      com.dzed.Dragonframe5-License.properties // for Dragonframe 5 or newer
```

For Windows, the files are:
```
%ALLUSERSPROFILE%/DZED/DragonframeLicenseManager/config/
      com.dzed.Dragonframe-License.properties  // for Dragonframe 3
      com.dzed.Dragonframe4-License.properties // for Dragonframe 4
      com.dzed.Dragonframe5-License.properties // for Dragonframe 5 or newer
```

Add Contact Information

Before you copy them to each end-user machine, you may want to add local contact information. This is information that will show in the Dragonframe interface if the user has trouble obtaining a license. It could be the IT department email or phone number, for example.

To add contact information, open the license properties file (listed above), and add a line like this:
```
license.contact=it@school.edu, 888-555-1212x123
```

For each end-user machine, copy the properties file(s) to:

For macOS: `/Library/Preferences/`

For Windows: `%ALLUSERSPROFILE%\DZED\Dragonframe\`

The Audit Log

DFLM creates a running audit log of all checkouts and checkins.
You may want to review this information from time to time.

Audit log location for macOS:
`/Library/Dragonframe License Manager/log/audit-X.log`

Audit log location for Windows:
`%ALLUSERSPROFILE%/DZED/DragonframeLicenseManager/log/audit-X.log`

Format

The audit log is a TAB-delimited file with four fields per line:
- "IN" or "OUT" - noting that a license is checked in (not used) or out (in use)
- "DF3" - the product name (short for "Dragonframe 3")
- HOST - the host name of the machine that obtained the license
- IP - the IP address of the machine that obtained the license