

# Licensing MXL Products

## Overview

A MXL product is licensed as a time-limited subscription providing two different types of licenses.

A license embodies one or more rights to execute a MXL program. It is implemented by a license key.

A license needs to be activated. This binds the license to one or more computers, although partial and in certain circumstances complete hardware replacements are allowed. A binding is valid for a certain duration and needs to be re-activated recurrently during the subscription period, either automatically or manually.

## Subscription

The flexible subscription model works exactly to the day. A license can be extended at the end of its subscription period.

Within the subscription period updates to new releases of the licensed software are free of charge.

## License Types

Licenses are distinguished in terms of the availability of permanent Internet access:

Internet access	Online	Offline
Activation	direct	direct / indirect
Binding validity	one week	one year
Automatic re-activation	yes	no
Complete hardware replacement possible	immediately	at end of binding validity

Licenses are shared by an on-premise license server among multiple users in a network over time (floating licensing).

In order to ensure a higher availability of licenses, a failsafe cluster can be setup optionally. It consists of a set of computers, each running its own license server. One of these license servers may get unavailable without disturbing the licensed application. Utilising a greater number of license servers it is even possible to substitute one or more immediately.

## Online versus Offline licensing

A license requires recurring re-activation during the subscription period. When the binding validity expires, the license cannot be used until it is re-activated. This implicit invalidation allows license transfers by eliminating the possibility of misuse.

The (re-)activation of an online license requires direct Internet access to X-Software's license portal. The binding validity is one week, and the license is automatically re-activated.

Whereas, indirect Internet access (*sneaker net*) is sufficient for the (re-)activation of an offline license, although the procedure would be simpler with direct Internet access. The binding validity is one year, and the license must be manually (re-)activated.

# How to use

## License portal

Your purchased licenses are managed through X-Software's license portal:

[license-portal.x-software.com](https://license-portal.x-software.com)

You've received a temporary password for your first login. After logging in you see a list of your licenses. Please don't forget to change your initial password.

## MXL On-Premise Licenser

X-Software's license server, the MXL On-Premise Licenser, shares a license between the MXL applications in a network.

A MXL application connects to the MXL On-Premise Licenser, requests an execution right, and returns it upon exit. When the application is terminated ungracefully, the right will be available again within two minutes latest.

The MXL On-Premise Licenser activates the license directly with Internet access to the license portal or offline by generating a request. This request is used to activate the license from an arbitrary device with Internet access to the license portal. The resulting activation response subsequently is applied on the offline computer by the MXL On-Premise Licenser. Without direct Internet access, the activation has to be repeated manually before the binding validity expires.

## Failsafe Cluster

In order to setup a failsafe cluster, a license is bound to a list of at least three MXL On-Premise Licenses. This list of IP addresses and associated port numbers is part of the license. The license has to be activated for each MXL On-Premise Licenser and is usable as long as only one of them is down.

The total number of listed servers determines how many servers may be replaced immediately, e.g. because of a hardware failure, namely three less. After a replacement another one will be already possible at the end of the binding validity of the superseded MXL On-Premise Licenser.

## Installation

Download the MXL On-Premise Licenser package to the directory `/tmp` and execute the following commands:

```
$ cd /tmp
$ chmod +x MXL_On-Premise_Licenser-2-*.run
$ cd /opt
$ sudo /tmp/MXL_On-Premise_Licenser-2-*.run
$ rm /tmp/MXL_On-Premise_Licenser-2-*.run
```

The directory `/opt/mxl_on-premise_licenser-2/bin/` contains exactly one MXL On-Premise Licenser for each MXL product, `<PRODUCT>_on-premise_licenser`.

## Configuration

Generate a configuration for the corresponding MXL On-Premise Licenser with the desired port number:

```
sudo /opt/mxl_on-premise_licenser-2/bin/<PRODUCT>_on-premise_licenser --config
<PORT_NUMBER>
```

For a failsafe cluster of MXL On-Premise Licenses the port number must equal the corresponding port number in the license. Otherwise use an arbitrary free port, e.g. around 9000.

The configuration can be found in `/opt/mxl_on-premise_licenser-2/etc/<PRODUCT>_on-premise_licenser.yml`.

## Activation

### With direct Internet access

In order to activate a license with direct Internet access to the license portal, execute the corresponding MXL On-Premise Licenser with the license key:

```
$ sudo /opt/mxl_on-premise_licenser-2/bin/<PRODUCT>_on-premise_licenser \
--activate <LICENSE_KEY>
```

### Without direct Internet access

In order to activate a license without direct Internet access, execute the corresponding MXL On-Premise Licenser to generate an activation request:

```
$ sudo /opt/mxl_on-premise_licenser-2/bin/<PRODUCT>_on-premise_licenser \
--activation-request /tmp/activation-request.txt <LICENSE_KEY>
```

On the license portal click the appropriate license, select "Activations" and then "Offline Activation". Paste the activation request into the form and select "ACTIVATE" and then "Download Response".

Activate the license by executing the corresponding MXL On-Premise Licenser with the activation response:

```
$ sudo /opt/mxl_on-premise_licenser-2/bin/<PRODUCT>_on-premise_licenser \
--activation-response /tmp/activation-response.txt <LICENSE_KEY>
```

## Usage

Start the corresponding MXL On-Premise Licenser specifying a port number:

```
$ sudo /opt/mxl_on-premise_licenser-2/bin/<PRODUCT>_on-premise_licenser --start
```

Setup the MXL application with a MXL On-Premise Licenser:

```
$ /opt/mxl_<PRODUCT>-2/bin/mxl_<PRODUCT> --on-premise-licenser <HOST>:<PORT_NUMBER>
```

## Hardware replacement

Partial hardware changes over time are allowed, but have to be taught by repeating the activation process. This keeps the binding up to date, otherwise the license may become unusable with the next hardware change.

In case of a complete hardware replacement the license first has to be unbound (deactivated) and re-activated after its transfer to another computer. A failsafe cluster of enough MXL On-Premise Licensers allows ad-hoc replacements. Otherwise, a deactivation has to be requested from [licensing@x-software.com](mailto:licensing@x-software.com). However, this is possible only towards the end of the binding validity (one week or one year, depending on the license type, online or offline).

There is a certain trade-off between prompt and lazy re-activation of an offline license. If, on the one hand, you move the start of the binding validity forward by continuous re-activation, you correspondingly shift its end and thus the earliest possibility of a complete hardware replacement further into the future. On the other hand, if you re-activate partially changed hardware too late, you risk that the next change will count as a complete hardware replacement, which may not be possible before the end of the binding validity.