

# FlexNet Three-Server Redundancy - Triad License Server

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Using the three-server redundancy capability in FlexNet Publisher, all three license servers operate to form a triad. The license servers send periodic messages to each other to make sure that at least two servers are running and communicating. A quorum is formed when at least two of the three license servers are running and communicating with each other. For more information, see the FlexNet Administration Guide on the [FlexNet license server installation and licensing](#) page.

 Teamwork Cloud and Magic Collaboration Studio do not support Triad License Server.

## Prerequisites

In order to run a license server in a Three-Server Redundancy mode (Triad License Server), you must first obtain a license key suited for it.

The license key must contain 3 SERVER lines with *hostnames* and MAC addresses defined.

## Starting on a fresh installation of *Imadmin*

1. Have the *cameo daemon* in `<Imadmin.install.dir>\licenses\cameo`
2. The first server from the license key should be started first, by importing the license key from the *Imadmin* Administration tab.
3. After the import, the cameo daemon will state that it is "Down", and the *Imadmin.log* file will be displayed. This will happen until the second server is started.

```
root.LicenseEngine started with redundant configuration -
xxxxx@xxxxxxx, xxxxx@xxxxxxx, xxxxx@xxxxxxx.
root.Quorum is starting up.
root.Quorum is waiting
```

Licenses will only be served when there are at least 2 license servers running.

## Starting on a *Imadmin* that was running a single license server

If *Imadmin* was previously started with a different, single server license, there is additional action needed. By starting a single license server, it goes into a single license server mode, and thus won't accept Three-Server redundancy (Triad) license keys.

There are two options:

- Do a clean installation of *Imadmin*.
- Reconfigure the current *Imadmin* and change the license mode.

## Clean installation

To do a clean installation of *Imadmin*, first, you need to remove the previous installation. Then you can proceed with the fresh installation (see [Starting on a fresh installation of Imadmin](#)).

## Reconfigure the current *Imadmin*

Reconfigure the current *Imadmin* and change the license mode:

Steps to change server mode:

- a. In the **Vendor Daemon Configuration** tab, Stop and Remove the existing cameo vendor daemon.
- b. In the **Server Configuration** tab, click **Stop Server** to shut down *Imadmin*. Wait for 1 minute for the server to stop.
- c. Go to the *Imadmin* installation directory (e.g. C:\Program Files\FlexNet Publisher 64-bit License Server Manager11\_17)
- d. Open the command prompt in that directory (with Administrator user rights)
- e. Type *Imadmin -import <new\_license\_file> -force -configDir <config\_dir>*



After executing the command, in the cmd line you should see:

This is an example (change the paths according to your machine):

Configured new vendor daemon, cameo.

```
lmadmin -import "C:\Program Files\FlexNet Publisher 64-bit License Server Manager11_17\licenses\cameo\triadKey.txt" -force -
```

1. Start *lmadmin* (using service). You do not need to do anything else after that. It will show Stopped until a quorum is reached (then it will start). Licenses will be served only when there are at least 2 servers running *lmadmin* (from the 3 defined).
2. The log file *lmadmin.log*, will show:

```
root.LicenseEngine started with redundant configuration -xxxxx@xxxxxxx, xxxxx@xxxxxxx, xxxxx@xxxxxxx.  
root.Quorum is starting up.  
root.Quorum is waiting.
```



- Make sure the license server is using a defined port, the same one as defined in the license file.
- Three-server redundancy configurations require all three servers to use the same platform type.