

FlexLM License Server Installation Setup Configuration for Xilinx ISE Tool Suite 11

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I just struggled through setting up my licenses for ISE 11 Design Suite. After contact with my FAE and opening a Webcase I now reflect on this process as rather simple, but the lack of basic information made this process much harder for me than it should have been.

Here is my attempt at the guide I feel Xilinx should have included with the FlexLM license server download.

Note: FlexLM is needed for *floating* licenses not node-locked ones.

Other Documents:

- ISE 11 Installation Guide
 - http://www.xilinx.com/support/documentation/sw_manuals/xilinx11/irn.pdf
- The FAQ (more in depth information)
 - <http://www.xilinx.com/tools/faq.htm>

Setup Basics:

- FlexLM server runs on any machine (not necessarily a development machine)
- Xilinx License Configuration Manager (XLCM) connects to server and provides licenses to tools

Generating Licenses:

- Xilinx Product Download and Licensing Site (Entitlement Center) where you may download, install or license products: <http://www.xilinx.com/getproduct>
- Licenses must all be in one file
 - Ideally when generating the license file from the entitlement center you chose (checkbox) all of your available floating licenses and then generate a single license file for all of them at once.
 - This can be done manually by copying the data into one file and excluding additional "server" lines (server line should be identical because the licenses are locked to a single machine).
- Floating licenses must be generated for the *server* machine (OS, HostID)
 - Assuming your server is not a development machine it will not have the Xilinx tools and therefore not have XLCM
 - Instead, on a Windows machine, run CMD and run the command "ipconfig/all" which will give you your MAC address (listed here as "Physical Address") along with your IP information. Be sure you are looking at the hardware that provides your network connection; many computers have multiple network cards these days. This Physical Address should be listed under the same peripheral as the IP address of your computer. This must be done on the server to get the MAC address of the server since the license is to be locked to the server. The MAC address should be displayed as XX-XX-XX-XX-XX-XX.
 - For generating the license choose "MAC Address" as the HostID option and enter the value from the CMD window. Enter it without dashes, ie: XXXXXXXXXXXX.
- The license file gets emailed to the user, but can also be downloaded from the entitlement center once generated.

Setting Up the Server

- As implied above, the server can be run *without* having to install ISE Design Suite. This allows it to be run on virtually any machine, ideally an actual server that will be on all the time as opposed to someone's development machine.
- The server does *not* need to be "installed" in the Windows sense, the executables are merely placed where desired and run.
- From download.xilinx.com -> Login to start downloading. You will see a section in tab "1. Download Software" that states "License Server Utilities". Click on this and select the files for the appropriate OS. This will include an archive of the executables.
 - These executable are standard with FlexLM.
 - **Lmgrd.exe** - To get the server running, you should only use lmgrd.
 - **Xilinxd.exe** is the actual license daemon, and needs to be available to lmgrd to call.
 - The other tools are additional tools for advanced Flex users only.
 - **Lmutil.exe** is for debugging, Xilinx created Xilinx License Configuration Manager (on the client side) to give you a GUI that provides the functionality of this command line tool.
 - **Lmtools.exe** is currently unsupported by Xilinx and is used to run Windows Services.
 - I configured my license server to run using Lmtools.exe
 - However, I recommend the bat file because lmtools is not straight forward despite the fact that it is a GUI.
 - The server runs on startup and no CMD window opens, but when I login using remote desktop, a CMD window opens although the server is already running.
- Place the executables where desired and simply launch the server using the command line."
 - Simplest command:
 - `"lmgrd -c <LICENSE_FILE_PATH>"`
 - Supposedly using a log file suppresses the CMD window.
 - `"< Server Tool directory>\bin\nt\lmgrd -c <path_to_license>\Xilinx.lic -l <path_to_license>\log1.log"`
 - I wrote LaunchServer.bat file (this can then be added to the startup menu on a Windows server) with the command:
 - `"start C:\Xilinx\Xilinx_flexlm_v11.6\lmgrd.exe -c C:\Xilinx\Licenses\Xilinx.lic -l C:\Xilinx\Licenses\log.log"`
 - As seen above, '-c' indicates the license file path comes next; likewise '-l' indicates that the log file path comes next.
- More information on the command line:
 - <http://www.simulia.com/support/flexlm92/chap6.htm>
 - This guide seems to say that you can list multiple license files so combining may not be required. You may only run a single copy, but perhaps you can add multiple license files to be served.

Using a License from the ISE Suite using Xilinx License Configuration Manager (XLCM)

- Upon launch of an ISE tool (ISE, EDK, etc) the program will check for a valid license. If there is none it will open XLCM. XLCM can be opened from within the programs on the help menu by choosing "Manage License".
- In XLCM the example paths are simple, but not entirely clear.
 - The license server runs on a specific port (my default was 2100)
 - This is stated in the license file in the form:
 - SERVER servername XXXXXXXXXXXX port
 - The *addition* to the license paths should be:
 - Port_num@server_name;
 - ie: 2100:licsrv;
 - I added this entry to both paths listed in the manager. This may not be necessary.
- Once the server is added to the path the license window should refresh and you should see the licenses there that are served by the server. You should now be able to use them seamlessly.
- Close XLCM and the tools and re-launch the tools to see if the license is acquired.