

Gridgen License Management

A frequent source of questions for our users is Gridgen's license management, particularly issues related to license files and license servers. This issue of the Pointer will focus on additional useful information regarding these topics that is not found in our standard Gridgen installation or license management documentation. However, those documents should be sufficient to cover most typical installations and can be found on our web site at www.pointwise.com/library. Note that there is also extensive information about FLEXlm at the Macrovision Support web site, including their "End Users Guide" (www.macrovision.com/pdfs/flexlm_licensing_end_user_guide.pdf).

The Gridgen License and Server

First we will look at a typical license file and provide a description of its contents. Here is the body of a typical license file:

```
SERVER hostname 0007e9b7c2f4
VENDOR gridgend
USE_SERVER
FEATURE gridgen gridgend 15.0 31-dec-2005 2 \
user_info=CustID=pwi SIGN=BDA526D25BF2
#NOTE: You can edit the hostname on the server line (1st arg).
# Most other changes will invalidate this license.
# Your Customer ID is pwi.
# Please include it in all correspondence with Pointwise.
```

Let's look at the file line by line:

```
SERVER hostname 0007e9b7c2f4
```

The first line is the "SERVER" line with that term as the first word. That word is followed by the hostname of your server. When we generate your license, we will specify the hostname being used in the "SERVER" line. However, the hostname entry can be edited by you should your server's hostname be changed for any reason.

The last entry on the "SERVER" line is the host ID of your server. This ID usually is the Ethernet or MAC address of your server. When requesting a Gridgen license, use either LMTOOLS (Windows) or the LICENSE_CONTROL.SH script (UNIX/Linux/Mac) to obtain the correct ID. This host ID string cannot be edited. It is the primary item on which the license is keyed. Because of this, it is important to note that changing your Ethernet adapter will invalidate your license. An optional port number may be added to the end of the "SERVER" line for use by the FLEXlm standard

"lmgrd" daemon. This port number is generally automatically assigned by lmgrd from a default range.

```
VENDOR gridgend
```

The second line of the license file is the "VENDOR" line. This line informs the lmgrd daemon of the name of the vendor specific daemon, in Gridgen's case "gridgend." The lmgrd daemon will launch gridgend automatically. This line is necessary in the license file with these first two terms. Additionally, the line can be edited to add a specific port number at the end for use by the gridgend daemon. Otherwise, this line should not be changed.

```
USE_SERVER
```

The third line contains only the term "USE_SERVER" which takes no arguments and essentially transfers process checkout validation to the vendor daemon, gridgend.

```
FEATURE gridgen gridgend 15.0 31-dec-2005 2 \
user_info=CustID=pwi SIGN=BDA526D25BF2
```

The "FEATURE" line provides the essentials of what is available for you to checkout, what version may be used, the expiration date, and how many total processes can be used. This line should not be edited. The backslash (\) in the line indicates a continuation of that line. Also included in Gridgen license files, is the "user_info" attribute that Pointwise uses to include your specific customer ID. The "SIGN" field contains the unique signature authenticating each "FEATURE" line.

```
#NOTE: You can edit the hostname on the server line (1st arg).
# Most other changes will invalidate this license.
# Your Customer ID is pwi.
# Please include it in all correspondence with Pointwise.
```

At the bottom of the license are comment lines that are optional and can be removed. These discuss editing the file and also provide your customer ID again. There are other variations you may see in your license file depending on options requested or features licensed:

```
SERVER hostname1 10gfa059 27009
SERVER hostname2 10e85de3 27009
SERVER hostname3 10e853f3 27009
VENDOR gridgend
USE_SERVER
FEATURE gridgen gridgend 15.0 28-feb-2008 1 \
user_info=CustID=pwi SIGN=053C2216A456
FEATURE gridgen-catiaV5 gridgend 15.0 04-sep-2006 1 \
user_info=CADserver=hostname1:1542 SIGN=4E9B4AD0311E
```

This license provides three-server redundancy to avoid loss of productivity due to a failed server. It also provides an additional "FEATURE" line for access to one of our add-on Native CAD Reader (NCR) products. That line contains additional "user_info" for the NCR server name and port number.

When installing your Gridgen license file, please do so by using our recommended location, the "licenses/" directory created under your installation folder, and our recommended name, gridgen_flexlm.lic. Doing so makes troubleshooting any issues much easier. The Gridgen support personnel will be able to locate your files for you more easily.

Also, when starting your Gridgen server, please specify a log file as outlined in the installation instructions. This file contains vital information about your server when errors do occur. The log file should be named similarly to the license file, gridgen_flexlm.log, and specified in the same "licenses/" directory.

NCR License Files and Server

If your company has licensed one or more of our optional Native CAD Readers (NCR), you will also receive an NCR license file in addition to your primary Gridgen license file. These files cannot be edited, so examining the components of the file is not very useful. However, the header of the file does contain a trailing portion of the server's MAC address as shown here:

```
# TTF License file
# Bundle TTFFoundations Version 6 for POINTWISE
# On  MAC ADDRESS : 0784ECA6 - 31 AUG 2007 (1 Access(es))
```

This may be useful in verifying the accuracy of the file versus your server's actual NCR host ID. As stated earlier for the Gridgen license file, when requesting an NCR license file, you should use the tools provided by Pointwise to obtain your NCR host ID. These are the NCR Tools utility (Windows) or the LICENSE_CONTROL.SH script (UNIX/Linux/Mac).

Keep in mind on some platforms the NCR host ID is completely different from the Gridgen FLEXlm host ID. Therefore, when requesting an NCR license it is prudent to send both ID's as reported by the respective utilities.

When starting the NCR license server on a Windows system, you will be prompted for your username and password. It is important to use the username and password associated with your Windows platform instead of those used for your local area network.

Diagnostics and Errors

The most common error seen when Gridgen cannot be started is simply that the FLEXlm server software either has not been started, or the server is down due to a system reboot. It is easy to check the server status on all platforms using either LMTOOLS or the LICENSE_CONTROL.SH script. In fact, it is a good idea to do this immediately following a server start to verify proper start-up. In all cases, the status results should appear similar to this:

```
License server status: 27000@MyServerName
      License file(s) on hostname: C:\Program
Files\Pointwise\GridgenV15\licenses\gridgen_flexlm.lic:

      hostname: license server UP (MASTER) v9.2

Vendor daemon status (on hostname):

      gridgend: UP v9.2
```

This listing shows both the lmgrd daemon ("MASTER") and the gridgend daemon are running. Therefore, barring some communication problem, Gridgen should be able to check out a license and start up properly.

Communication problems generally result from ports being blocked for use by the respective daemons. Ports are typically blocked by firewall software, either on the client system, the server system, both systems, or somewhere between the two for remote servers. When ports are blocked, you will generally see an error message including the text:

```
Winsock: Operation would block
```

In this case, you should determine where the firewall software is located, verify the firewall is blocking the ports Gridgen needs, and then open the required ports. These ports can be found in the FLEXlm log file, gridgen_flexlm.log, mentioned earlier. An error of this form can also be generated if the hostname in the license file does not match the server system's true hostname or if multiple host IDs exist for your server. In these cases, you will need to work with your Gridgen support engineer to ensure that the correct hostname and host ID are being used in your license file.

This edition of the Pointer should give you a better understanding of the license files and servers associated with Gridgen. We hope this will help you diagnose any future issues more quickly.

Happy Gridding!