

NETool® 10.7.0 Release Notes

Contents

International Trade Compliance.....2

Definitions..... 2

Introduction.....4

Changes..... 4

System Requirements12

NETool® Installation14

NETool® Complete Installation Instructions.....15

License Set-Up.....17

Hardware-locked License (Single User License) Setup 17

Server-based Network License Setup (Multi-User license)..... 18

Support20

Contacting Support 20

International Trade Compliance

This application is manufactured or designed using U.S. origin technology and is therefore subject to the export control laws of the United States. Any use or further disposition of such items is subject to U.S. law. Exports from the United States and any re-export thereafter may require a formal export license authorization from the government. If there are doubts about the requirements of the applicable law, it is recommended that the buyer obtain qualified legal advice. These items cannot be used in the design, production, use, or storage of chemical, biological, or nuclear weapons, or missiles of any kind.

The ECCN's provided in Release Notes represent Landmark Graphics' opinion of the correct classification for the product today (based on the original software and/or original hardware). Classifications are subject to change. If you have any questions or need assistance please contact us at FHOUEXP@halliburton.com

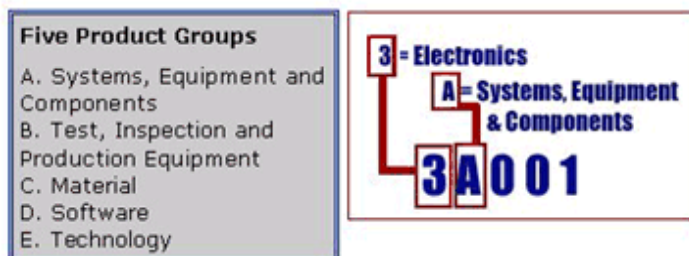
Under the U.S. Export Administration Regulations (EAR), the U.S. Government assigns your organization or client, as exporter/importer of record, responsibility for determining the correct authorization for the item at the time of export/import. Restrictions may apply to shipments based on the products, the customer, or the country of destination, and an export license may be required by the Department of Commerce prior to shipment. The U.S. Bureau of Industry and Security provides a website to assist you with determining the need for a license and with information regarding where to obtain help.

The URL is: <http://www.bis.doc.gov>

Definitions

CCATS (Commodity Classification Automated Tracking System) - the tracking number assigned by the U.S. Bureau of Industry and Security (BIS) to products formally reviewed and classified by the government. The CCATS provides information concerning export/re-export authorizations, available exceptions, and conditions.

ECCN (Export Control Classification Number) -The ECCN is an alpha-numeric code, e.g., 3A001, that describes a particular item or type of item, and shows the controls placed on that item. The CCL (Commerce Control List) is divided into ten broad categories, and each category is further subdivided into five product groups. The CCL is available on the [EAR Website](#).



The ECCN Number, License Type, and the CCATS Numbers for this product are included in the table below. Also included is the date the table was last updated.

Product/Component/R5000	ECCN Number	License	CCATS Number	Last Date Updated
NETool™	5D992	TSU	G074087	3/16/2012

Introduction

NETool® helps well planning and completion design, as well as troubleshoots production problems and aids in taking appropriate corrective actions. The graphical user interface facilitates interactive well placement and easy selection of completion components, the effects of well position, length, and completion configuration on production and injection performance are easily modeled.

NETool® replaces conventional nodal analysis software with the ability to model complex well hydraulics from sandface to the wellhead by combining reservoir deliverability with completion and vertical flow.

Changes

The following changes were implemented in NETool® version 10.7.0 compared to 10.6.1:

New features added:

- Added CO₂ injector well type for CCS that uses EOS.
- Added C# scripting option for ESP.

Improvements and bugfixes:

- Added tornado plot and flow direction for ESP
- Added an input for effective screen area for velocity calculation.
- Improvement to licensing – license is checked periodically instead of runtime.
- Model calibration table now uses real time instead of labels.
- Added a warning for RCP Valve coefficients being zero.
- Added capture and report exceptions in DLL API
- Added friction factor scaling in Segment settings / Advanced.
- Changed “Completion Summary” table in the results to be expressed as joints.
- Improved convergence for Steam Injectors.
- Numerous bug fixes related to convergence and “Wrong number of Equations” in PLT matching.

Additional comments:

- Landmark LAM version 5000.0.7.0 or later is required to use NETool with a local or remote server license. NETool is not compatible with LAM versions prior to version 5000.0.7.0.

The following changes were implemented in NETool® version 10.6.1 compared to 10.6.0:

Important: Version 10.6.1 uses a new version of license daemon which requires a new license code. Please contact [Landmark support](#) to receive an updated license code.

New features added:

- Full thermal modeling with enthalpy balance.
- C# scripting for custom completion equipment.
- Steam.
- Calculation of heat transfer coefficients from completion dimensions.
- Completely new, well documented API for Netool DLL.
- Template support in Segment Settings for copying parts of the well between models.
- EDM coupling on the cloud.

Improvements and bugfixes:

- PLT matching and copying results back has been improved
- Multiple convergence improvements
- Added mass rates to the input and output.
- Fracture and radial transient models have been temporarily disabled.

The following changes were implemented in NETool® version 10.6.0 compared to 5000.0.5.0:

Starting this release the numbering system has been changed from 5000.x.x.x to 10.x.x

New features added:

- Pressure sensors can now be added on both sides of electric submersible pumps (ESPs), inflow control valves (ICVs), and anywhere in the tubing. They can be used to auto-calibrate well model with real-time data.
- A transient radial inflow model has been added. The model dynamically simulates inflow in the near-wellbore region.
- The well model may now split into two sections: upper and lower. User can now design lower completion and then with one click enable/disable modeling to the surface.
- Added a heat transfer model to calculate conduction between flowing fluids and between a flowing fluid and the formation. Wellbore temperatures are calculated based on amount of heat transferred.

- Added a downhole separator that can remove fluid phases from the produced fluid.
- Added a pump selection tool to assist with ESP selection.

Improvements:

- Improvements have been made to the hydraulic fracture model.
- Lift gas can be injected through a valve. Valve characteristics and upstream pressure are specified and lift gas injection rate is calculated.

Bugs fixed:

- Java and COM API interfaces return results for multilateral simulation.

The following changes were implemented in NETool® version 5000.0.5.0 compared to 5000.0.4.5:

New features added:

- Added compositional PVT support: The Generate Black Oil PVT feature reads a compositional PVT model defined in Eclipse 300 .INIT file and converts to an extended black oil PVT table.
- Added Pressure Sensors to ICV and ESP locations as time-dependent tables. These sensors can be used for calibrating well model by modifying reservoir pressure upstream.
- ICV opening can now be specified as a time-dependent table.

Improvements:

- Added an option to calibrate reservoir pressure instead of permeability in Well Target, Model Calibration and PLT Matching.
- Added ~170 pumps to ESP database
- Refactored Custom ESP input: Now instead of polynomial coefficients it takes tables.
- Improved fracture modeling algorithm.
- Added a button to quickly switch between main and results windows.
- 24 bugs fixed.

The following changes were implemented in NETool® version 5000.0.4.5 compared to 5000.0.4.4:

New features added:

- Added Model Calibration window for matching a model to well tests consisting of oil, gas, water rates and pressure. (Netool calculates resulting reservoir permeability and flowing fractions).

- Three production rates and pressure can simultaneously be used as well targets in “Match all constraints” mode.

Improvements:

- UI simplified: “Global Settings” and “Fluid Properties” are now tabs instead of pop-up menus.
- Improved annular flow regime in LMK1 flow correlation.
- Added Search to the list of recently opened models.
- Autosave added.
- Removed “Compatibility with pre 5000.0.3.0” mode from PI models as obsolete.
- PI Calibration is now a part of Model Calibration dialogue.
- Fractures and non-producing segments are made clearer on completion schematics.
- Changed far reservoir boundary condition for fracture model to better match long term production.

11 Bugfixes. Among them:

- Several bugs in Eclipse coupling and well model export.
- Infinite pressure drop produced by Herschel-Bulkley model under some conditions.
- NETool crash if no reservoirs present in database.
- Fracture warning messages are made clearer.
- Multiple UI bugs.

The following changes were implemented in NETool® version 5000.0.4.4 compared to 5000.0.4.3:

New features added:

- “Check for update” added in Help menu. This functionality informs user if a newer Netool version is available for download.

Improvements:

- Improved Herschel-Bulkley model for flow in the annulus.
- Full integration with EDM common data model.
- Reworked results output mechanism to handle large .ntlplot files.
- Added Automation OLE interface to netool.dll
- Improved Eclipse coupling
- Liquid loading implemented for all correlations.
- In preparation for the UI improvement switched to tree view in Global Settings and Fluid Properties.

Bugs fixed:

- Fixed sometimes incorrect branch numbering for ML well export into Eclipse reservoir simulator.
- Results viewer:
 - Renaming of the top node not working.
 - Compare button not working when loading .ntlplot file
 - Density plot being empty.

The following changes were implemented in NETool® version 5000.0.4.3 compared to 5000.0.4.2:

New features added:

- Dual well constraints in “Time schedule” with 2 modes:
 - Match both
 - Match the strictest.
- Ability to import, read and write from/to EDM (requires running EDM update script).
- Calculation of liquid loading through Turner velocity.
- List of recently added models in File->Open dialogue.

Improvements:

- Models for HAL AICD 1A.1 and 4B.1 added.
- RCP valve model modified to have zero flow from tubing to annulus.
- Eclipse™ coupling made more stable, supports grids with LGR.
- Fracture model:
 - Automated fracture spacing calculation based on actual distance between initiation points (controlled by checkbox in Global settings->Advanced)
 - Improved speed and convergence.
 - Reservoir model speed/tolerance ratio can be controlled by slider in Global settings->Advanced
- D-factor is reported in Stock Tank units now.
- Reported PI now is calculated as an angle of IPR curve and includes completions.
- Dramatically improved convergence when modeling to the wellhead.
- C# bindings to netool.dll were added.
- Added Herschel-Bulkley pressure drop model for flow in annulus.

Bugs fixed:

- Incorrect grid crossings when non-unity mapaxes, directional survey and “fit to gridblocks” are used.

- UI text becoming blue when ESP is used.
- Copy-paste error due to incorrect handling of units.
- Incorrect behavior when lateral is injecting in producer mode.

The following changes were implemented in NETool® version 5000.0.4.2 compared to 5000.0.4.1.1:

New features added (both are in public test mode):

- Time-dependent hydraulic fracture productivity model.
- Dynamic coupling to Eclipse™ reservoir simulator.

Improvements:

- Added Gas Lift modeling.
- Updated Halliburton Equiflow™ AICD Range 2 and 3 to better match multiphase flow tests.
- Upgraded Quiklook reservoir simulator coupling for v 4.6.251.991 or later.
- Added ability to specify well target vs. time.
- Completion export to reservoir simulators now supports multi-laterals and LGR
- Numerous improvements and fixes in completion export to Eclipse™ and Nexus™.
- Added ability to add/delete rows in “segment settings”.
- Well segments in UI can be color-labeled.
- Added Herschel-Bulkley pressure drop model.
- Added C-factor calculation for gravel pack completions

The following changes were implemented in NETool® version 5000.0.4.1.1 compared to 5000.0.4.1:

Fixed:

- Completion design export to Eclipse creating too many nodes.
- Bug in licensing not allowing calling Netool from Excel.
- PVT calculator not always working
- Ntlgrid export with 1 timestep not working in 32-bit version
- Inability to assign PI zones for some type of wells.
- Simulation dates from Nexus VDB were sometimes offset by 2 months.

The following changes were implemented in NETool® version 5000.0.4.1 compared to 5000.0.4.0:**Improvements:**

- PLT matching has been automated (Global Settings->PLT)
- Netool can be run and passed values from Excel. (/DevKit/examples/Excel)
- “LMK-1” Multiphase flow correlation: slug regime improved.
- Nexus and Eclipse completion export: models generated have much less nodes.
- Reservoir grid handling: accuracy and speed have been improved.
- Results viewer memory handling: Netool won’t run out of memory on large number of simulations opened in the Results Viewer.
- Added hydrostatic correction from block center for pressure coming from gridblocks.
- Numerical discretization of the well is now aligned with gridblocks

Fixed:

- Multi-thread error when opening a large model.
- B&O and Joshi PI models were used only in “Compatibility with pre 5000...” mode.
- Combo spinner control behavior with Landmark Look & Feel themes
- Enabled plots compare for IPR runs
- Missing data in LAS files causes usability problem
- Multiple other bugs.

The following changes were implemented in NETool® version 5000.0.4.0 compared to 5000.0.3.1:**New features added:**

- Export of the completion model into reservoir simulator keywords. Supported simulators are Eclipse™ and Nexus™.
- Import of Nexus™ reservoir models in VDB format.
- LMK-1 pressure drop model for multiphase flow in pipe.

Improvements:

- Netool grid format (.ntlgrid) has been reworked. Now Netool imports multiple restart time steps which can be scrolled through with well model opened.

Fixes:

- Laterals didn’t compare in the results viewer when “compare plots” feature used.

- Switched to XYZ import from Petrel™ deviation files.
- Fixed short term injectors always using manual saturation values.

Compatibility with Earlier Versions

All files created with NETool® earlier versions can be opened in NETool® 10.7.0.

The opposite — opening files created with NETool® 10.7.0 with earlier versions of NETool® — generally does not work.

NETool® 10.7.0 and previous versions install in different folders, and can be run independently of each other. However different versions share the files database, please understand the files compatibility if using both versions in parallel.

Version 10.6.1 uses a new version of license daemon which requires a new license code. Please contact [Landmark support](#) to receive an updated license code. If both old and new license codes are valid – 10.6.1 and older versions can work in parallel.

System Requirements

Hardware

Minimum system requirements:

- 500 Mb HDD space
- 4 Gb RAM
- 1 GHz CPU clock

Recommended:

- 2 Gb HDD space
- 8 Gb RAM
- 3.0 GHz CPU clock

Operating Systems

- 64 bit Windows® 10
- Linux (RHEL/CentOS 7 or higher, Fedora 19 or higher or a compatible distribution) — 64 bit.

NETool® installation package contains both 32 and 64 bit Windows versions. Only 64-bit version is supported officially therefore we do not recommend installing the product on a 32-bit OS.

Third Party Prerequisites

- PDF viewer, for example Adobe Acrobat Reader

Third Party Applications

Halliburton uses various third-party applications in the development of its software.

Halliburton acknowledges that certain third party code has been bundled with, or embedded in, its software. The licensors of this third party code, and the terms and conditions of their respective licenses, may be found at the following location:

NETool_Install_Folder/doc/Third_Party_Licenses_and Attributions.pdf

NETool® Installation

This section provides instructions on installing the NETool® application.

Installation Instructions

NETool is available for download from the Landmark Software Manager (LSM) at <http://esd.halliburton.com/>. Downloads from LSM are restricted to individuals who are authorized to receive the software. Not all users can download from this area. Additional information about the LSM is available at <http://css.lgc.com/InfoCenter/index?page=LSMinfo>

It is recommended that personnel from the IT department perform the installation of NETool® software and license key. The process requires administrator rights for the computer.

1. Receive download access credentials from Landmark.
2. Download **NETool®** installation package from <http://esd.halliburton.com>

Under Microsoft Windows the installation package file name is **NETool_10.7.0_setup.zip**.

3. Install NETool® by extracting and running **NETool_10.7.0_setup.msi**.

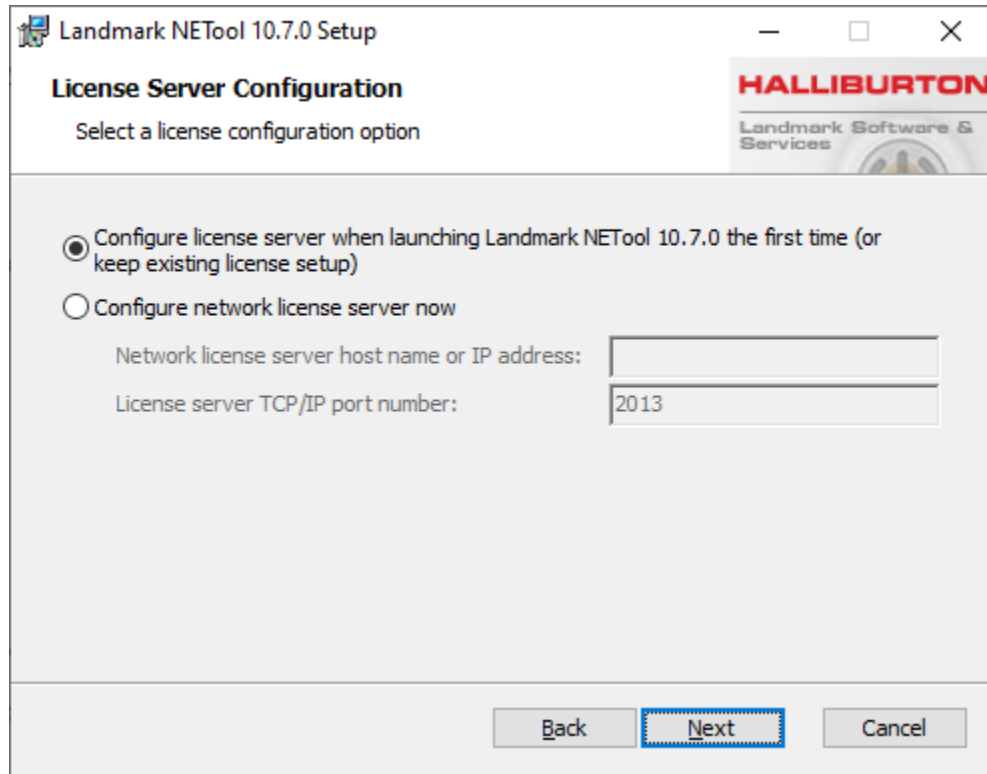
By default, NETool® will be installed into the catalog **C:\Program Files (x86)\Landmark\NETool-10.7.0** on the local drive. It is possible to assign another installation destination during the install process.

The installation program will install a private copy of Oracle Java 15 Runtime Environment into **NETool_Install_Folder\jre**. NETool® requires Java 15 or higher to run..

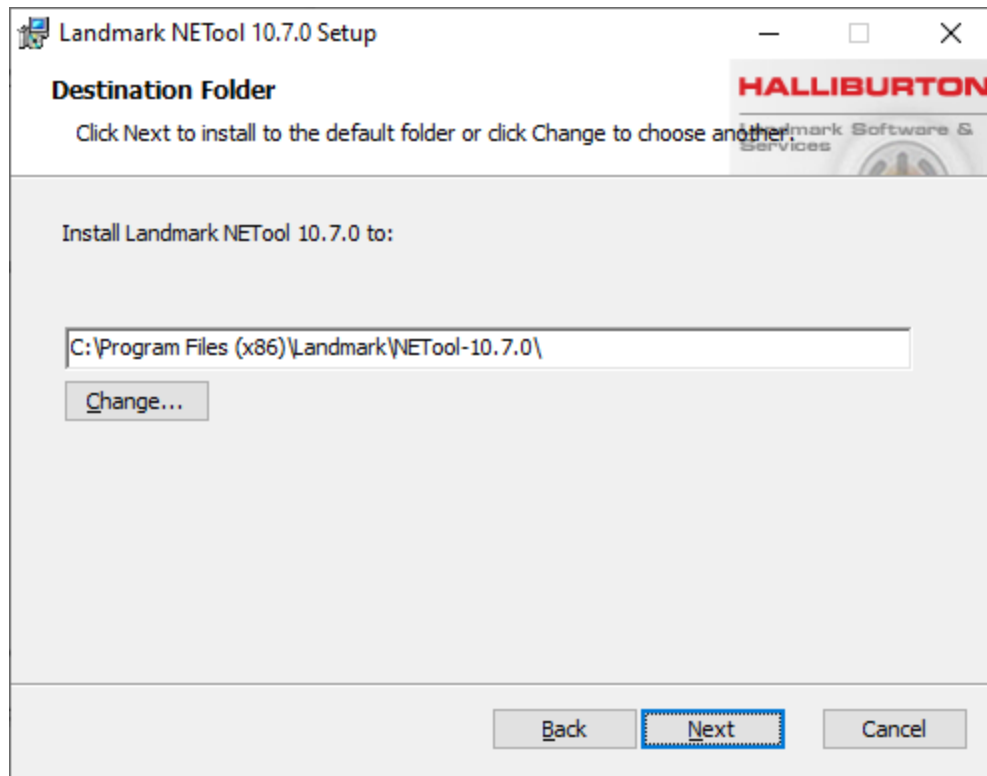
4. After successful installation NETool® can be started from the Start menu:
Start→Programs→Landmark→NETool 10.7.0→NETool Well Simulator.

NETool® Complete Installation Instructions

1. Unzip and launch installation executable **NETool_10.7.0_setup.msi** and click **Next**.
2. Unless the name of the license server is known chose the first option. Netool will ask for license at start.



3. Select an installation folder and click **Next**.
(the default installation catalog is **C:\Program Files (x86)\Landmark\NETool-10.7.0**).



4. Chose Installation set. The first option installs additional shortcut that allows to run Netool in a simplified mode. That mode is useful for beginners and training classes as has all advanced features hidden.

Setup will also install Netool Software Development Kit designed for coupling third-party software like reservoir simulators.

5. InstallShield installs NETool® files.
6. Click **Finish**. The installation is complete.

Launch NETool

Launch NETool® with **Start→Programs→NETool 10.7.0**.

License Set-Up

Hardware-locked License (Single User License) Setup

1. Receive download access credentials from Landmark.
2. Download NETool® installation package using from <http://esd.halliburton.com>.
3. Install NETool®.
4. Run NETool®. The following window will appear. (It can be opened later by selecting **Help→Configure License**).

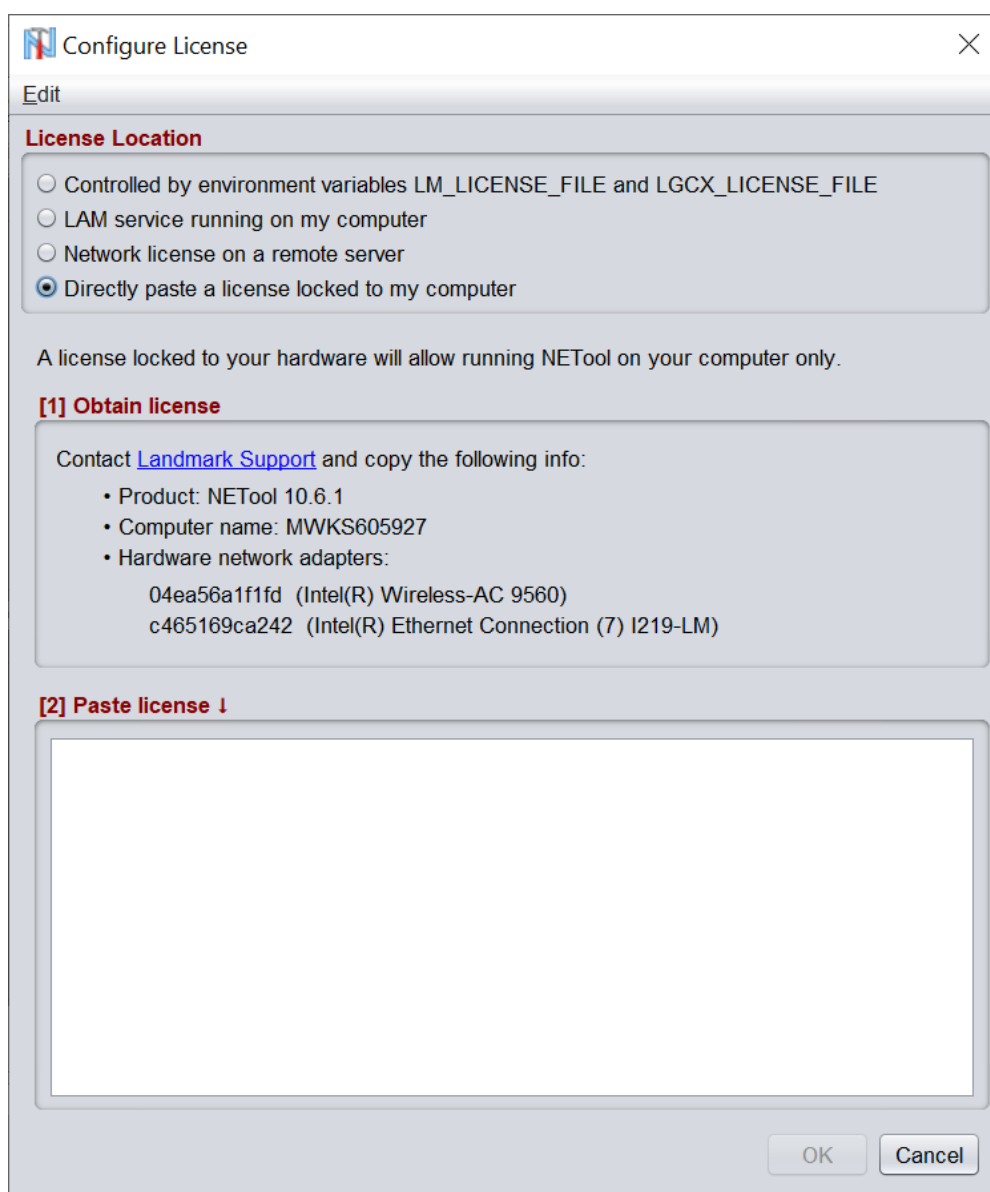


Figure 11. Configure License Window

5. Make sure **Directly paste a license locked to my computer** is selected.
6. Email **Product, Computer Name** and **FLEXlm Host ID** (Hardware Network Adapters) to Landmark.
7. Receive license code from Landmark.
8. Paste the text of the license obtained from Landmark into the white text area, and click **OK**.

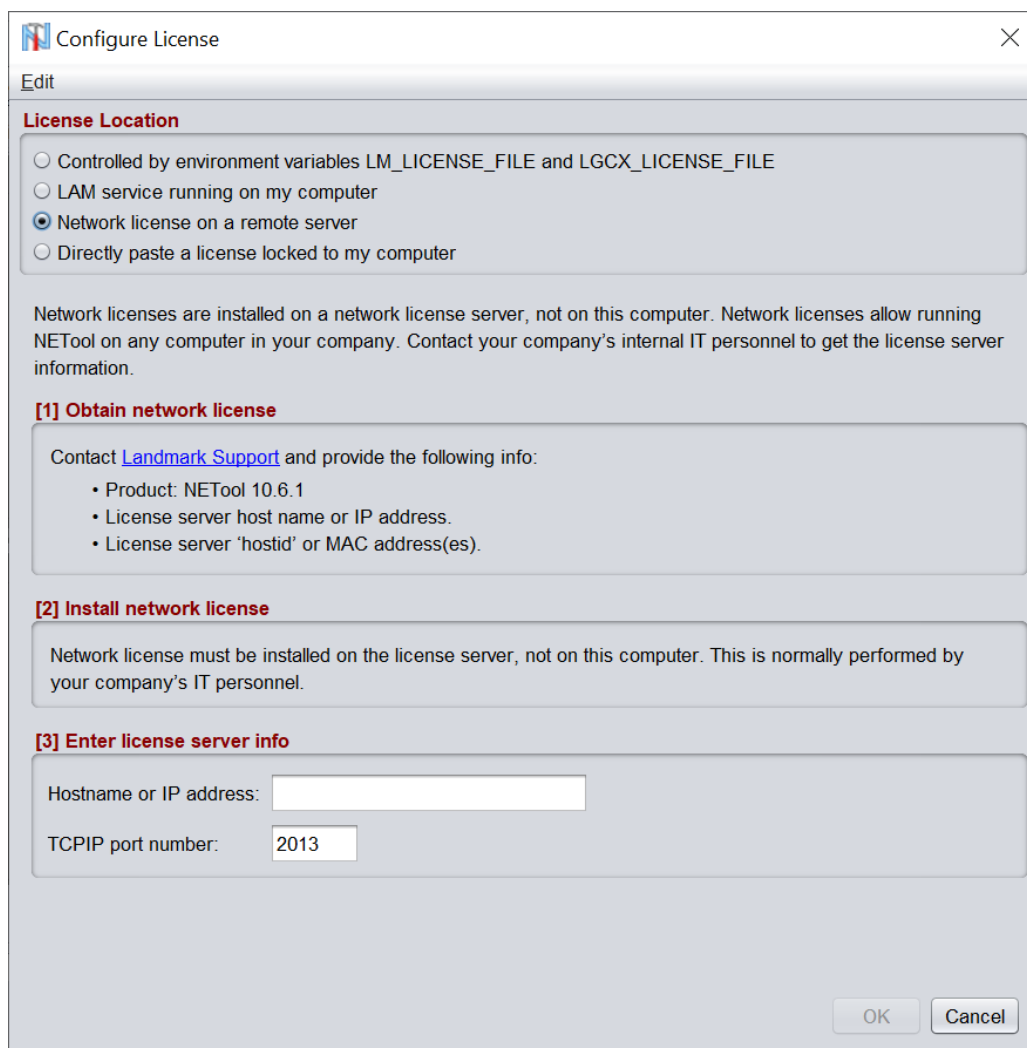
If a license file for other Landmark products exists on the computer it is convenient to use it instead of individual Netool license. In this case select **Licensing controlled by the LM_LICENSE_FILE environment variable**.

Server-based Network License Setup (Multi-User license).

1. Decide on an appropriate server for installation of FLEXlm™ license control.
The license control server needs to be either Windows or Linux, and must be accessible for NETool® clients at all times.
2. Email information about the FLEXlm™ license control server to Landmark:
 - a. server name
 - b. server IP address
 - c. MAC address of the server
3. Receive FLEXlm™ license file from Landmark.
4. Receive download access credentials from Landmark.
5. Download LAM from <http://esd.halliburton.com> (located in the Tools folder).
LAM is a FLEXlm™ license server package configured to use with Landmark software. LAM version 5000.0.7.0 or later is required. NETool is not compatible with LAM versions prior to version 5000.0.7.0.
6. Install LAM on the server machine.
7. Install license file on the server machine.
8. If needed configure firewalls to accept communication through fixed ports such that your NETool® installations can access the FLEXlm™ license server.
9. Download NETool® installation package from <http://esd.halliburton.com>.
10. Distribute NETool™ installation package to end users.

Setup for Each NETool® User

1. Install NETool®.
2. Configure NETool® to access the FLEXlm™ server:
3. Run NETool®. The following window will appear when you first run NETool® (it can be opened later by selecting **Help→Configure License**).



The image shows a 'Configure License' dialog box with a title bar containing a small icon and the text 'Configure License' and a close button. Below the title bar is an 'Edit' button. The main content area is divided into sections. The first section, 'License Location', contains four radio buttons: 'Controlled by environment variables LM_LICENSE_FILE and LGCX_LICENSE_FILE', 'LAM service running on my computer', 'Network license on a remote server' (which is selected), and 'Directly paste a license locked to my computer'. Below this is a paragraph explaining that network licenses are installed on a network license server, not on this computer, and that network licenses allow running NETool on any computer in the company. The next section, '[1] Obtain network license', contains a paragraph asking the user to contact Landmark Support and provide the following information: Product: NETool 10.6.1, License server host name or IP address, and License server 'hostid' or MAC address(es). The following section, '[2] Install network license', contains a paragraph stating that the network license must be installed on the license server, not on this computer, and that this is normally performed by the company's IT personnel. The final section, '[3] Enter license server info', contains two input fields: 'Hostname or IP address:' and 'TCP/IP port number:'. The 'TCP/IP port number' field has the value '2013' entered. At the bottom right of the dialog are 'OK' and 'Cancel' buttons.

Configure License

Edit

License Location

☐ Controlled by environment variables LM_LICENSE_FILE and LGCX_LICENSE_FILE

☐ LAM service running on my computer

☒ Network license on a remote server

☐ Directly paste a license locked to my computer

Network licenses are installed on a network license server, not on this computer. Network licenses allow running NETool on any computer in your company. Contact your company's internal IT personnel to get the license server information.

[1] Obtain network license

Contact [Landmark Support](#) and provide the following info:

- Product: NETool 10.6.1
- License server host name or IP address.
- License server 'hostid' or MAC address(es).

[2] Install network license

Network license must be installed on the license server, not on this computer. This is normally performed by your company's IT personnel.

[3] Enter license server info

Hostname or IP address:

TCP/IP port number:

OK Cancel

4. Choose **Network License on a remote server**.
5. Enter the FLEXlm™ license server hostname or IP address into the upper input box.
Enter TCP/IP port number LAM server is configured for.

Download, Installation and Configuration of both FLEXlm™ and NETool® is the responsibility of the client (assisted by guidance from Landmark customer support if necessary).

Support

Contacting Support

Landmark operates Technical Assistance Centers (TACs) in Australia, the United Kingdom, and the United States. Additional support is also provided through local support offices around the world. Local support office information is listed below. If problems cannot be resolved at the district level, our escalation team is called to resolve your incidents quickly.

Support information is always available on the Landmark Graphics Support internet page located at <https://www.landmark.solutions/support>

Table 1. Technical Assistance Centers

Technical Assistance Centers	
North America 7:30 am - 5:30 pm Central Standard Time Monday - Friday, excluding holidays	713-839-2200 (Houston, TX, USA) Toll Free 1-877-435-7542 (1-877-HELP-LGC) Fax: 713-839-2168 (Houston, TX) Fax: 907-275-2655 (Anchorage, AK) Fax: 303-796-0807 (Denver, CO) Fax: 403-262-1929 (Calgary, Canada) Email: support@lgc.com
	1-713-839-3405 (Houston, TX, USA) Fax: 713-839-3646 Email: soporte@lgc.com
	Toll Free from: Argentina: 0800-800-5263 Brazil: 0800-891-0837 Chile: 800-201-898 Colombia: 01800-915-4743 Mexico: 001-888-438-1296 Peru: 0800-51634 Trinidad: 1-888-438-1296 Venezuela: 0-800-526-3627
	Toll Free from local area: Ecuador (Quito) (02)226-1908
Latin America (Spanish, Portuguese, English) 7:00 am - 5:00 pm Central Standard Time Local normal business hours	44-1372-868686 (Leatherhead, UK) Fax: 44-1372-868601 (Leatherhead, UK) Fax: 44-1224-723260 (Aberdeen, UK) Email: eame_helpdesk@lgc.com support@lgc.com
Europe, Africa, Middle East 9:00 am - 5:30 pm Local Time Monday - Friday, excluding holidays	

61-8-9481-4488 (Perth, Australia)**Toll-free 1-800-448-488**

Fax: 61-8-9481-1580

Email:

apsupport@lgc.com**Asia, Pacific**

8:00 am - 5:00 pm Local Time

Monday-Friday, excluding holidays

Toll-Free from:

China: 10-800-6100-253

Indonesia: 001-803-61284

Japan: 00531-61-0021

Malaysia 1800-803-687

New Zealand 0800-400-555

South Korea 00308-61-0046

Taiwan 0080-161-1350

Toll Free from local area:

Vietnam: 84-8-9101901

India: 91-11-622-1885 (c/o Samit Enterprises)

District Support Offices**Algeria (Algiers)**

8:30 am - 4:30 pm Local Time

Saturday - Wednesday excluding holidays

213 2137 7239Email: support@lgc.com**Angola (Luanda)**

8:00 am - 5:00 pm Local Time

Monday - Friday, excluding holidays

244 222 695200

(ask for Landmark Technical Support)

Email: support@lgc.com**Argentina (Buenos Aires)**

9:00 am - 6:00 pm

Local time

54-11-4312-8411**Toll Free 0800-800-5263**

Fax: 54-11-4311-9566

Email: soporte@lgc.com**Australia (Perth)**

8:00 am - 5:00 pm Local Time

Monday - Friday, excluding holidays

61-8-9481-4488**Toll Free 1800-448-488**

Fax: 61-8-9481-1580

Email: apsupport@lgc.com**Brazil (Rio de Janeiro)**

8:00 am - 5:30 pm

Local Time

55-21-3974-4000 or**Toll Free 0800-891-0837**

Fax: 55-21-3974-4002

Email: soporte@lgc.com**Brunei (Bandar Seri Bagawan)**

8:30 am - 5:30 pm Local Time

Monday - Friday, excluding holidays

67-3-233-5319Email: apsupport@lgc.com**Canada (Calgary)**

7:30 am - 5:30 pm Central Standard Time

Monday-Friday, excluding holidays

Toll Free 1-877-435-7542**(1-877-HELP-LGC)**

Fax: 403-262-1929 (Calgary, Canada)

Fax: 713-830-2168 (Houston, TX)

Email: support@lgc.com

Chile

Local normal business hours

Toll Free 800-201-898

Fax: 1-713-839-3646

Email: soporte@lgc.com**Colombia (Bogota)**

8:00 am - 5:00 pm

Local Time

57-1-326-4000**57-1-326-6710****Toll Free 01800-915-4743**

Fax: 57-1-326-6717

Email: soporte@lgc.com**Ecuador (Quito)**

8:00 am - 5:00 pm

Local Time

59-32-226-1844**Toll Free from Quito (02)226-1908**

Fax: 59-32-226-2590

Email: soporte@lgc.com**Egypt (Cairo)**

8:00 am - 4:00 pm Local Time

Saturday - Wednesday, excluding holidays

20-2-759-1717

(ask for Landmark Technical Support)

Email: support@lgc.com**India (New Delhi)**

9:00 am - 5:30 pm Local Time

Local Business Days, excluding holidays

91-11-622-1885

(c/o Samit Enterprises)

Fax: 91-11-647-9246

Email: apsupport@lgc.com**Indonesia (Jakarta)**

7:30 am - 4:30 pm Local Time

Monday - Friday, excluding holidays

62-21-3003-9039 or**Toll Free 001-803-61284**

Fax: 62-21-3003-9088

Email: apsupport@lgc.com**Japan**

8:00 am - 5:00 pm Local Time

Monday - Friday, excluding holidays

Toll Free 00531-61-0021Email: apsupport@lgc.com**Malaysia (Kuala Lumpur)**

8:30 am - 5:30 pm Local Time

Monday - Friday, excluding holidays

603-2164-1121 or**Toll Free 1-800-803-687**

Fax: 603-2164-1135

Email: apsupport@lgc.com**Mexico (Reynosa)**

8:00 am - 6:00 pm

Local Time

52-555-208-3533**52-555-208-3868****Toll Free 001-888-438-1296**

Local Office Fax: 52-555-514-7646

Email: soporte@lgc.com**New Zealand (New Plymouth)**

8:00 am - 5:00 pm Local Time

Monday - Friday, excluding holidays

61-6-755-2318**Toll Free 0800-400-555**

Fax: 64-6-755-2407

Email: apsupport@lgc.com**Nigeria (Lagos)**

8:00 am - 5:00 pm Local Time

234-1-461-0780

(ask for Landmark Technical Support)

Monday - Friday, excluding holidays

Fax: 234-1-262-0769
Email: support@lgc.com

People's Republic of China (Beijing)

9:00 am - 5:30 pm Local Time
Monday - Friday, excluding holidays

86-10-8486-4501
Toll Free 10-800-6100-253 or
10-800-810-0209
Fax: 86-10-8486-4819
Email bisupport@lgc.com
or apsupport@lgc.com

Peru (Lima)

Local normal business hours

Toll Free 0800-51634
Fax: 001-713-839-9646
Email: soporte@lgc.com

Russia (Moscow)

7:00 am - 5:00 pm Local Time
Local Business Days, excluding holidays

7-495-960-2926
7-495-960-2927
(ask for Landmark Technical Support)
Fax: 7-095-755-8301
Email: support@lgc.com

South Korea

8:00 am - 5:00 pm Local Time
Monday - Friday, excluding holidays

Toll Free 00308-61-0046
Email: apsupport@lgc.com

Taiwan

8:30 am - 5:30 pm Local Time
Monday-Friday, excluding holidays

Toll Free 00801-61-1350
Email: apsupport@lgc.com

Trinidad & Tobago (TAO TAC, Houston, TX)

7:00 am - 5:00 pm Central Standard Time
(Houston, TX)
Local normal business hours

Toll Free: 1-888-438-1296
Fax: 1-713-839-3646
Email: soporte@lgc.com

United Arab Emirates (Dubai)

7:00 am - 5:00 pm Local Time
Local Business Days, excluding holidays

971-4-3036446
(ask for Landmark Technical Support)
Fax: +971-4-3315837
Email:
gulf_support@lgc.com
support@lgc.com

United Kingdom

8:00 am - 5:30 pm Local Time
Monday - Friday, excluding holidays

44-1372-868686 (Leatherhead)
Fax: 44-1372-868601 (Leatherhead)
Fax 44-1224-723260 (Aberdeen)
Email: support@lgc.com

United States (Anchorage)

7:30 am - 5:30 pm Central Standard Time
Monday - Friday, excluding holidays

Toll Free 1-877-435-7542
(1-877-HELP-LGC)
Fax: 907-275-2655
Email: support@lgc.com

United States (Denver)

7:30 am - 5:30 pm Central Standard Time
Monday - Friday, excluding holidays

Toll Free 1-877-435-7542
(1-877-HELP-LGC)
Fax: 303-796-0807
Email: support@lgc.com

United States (Houston)

7:30 am - 5:30 pm Central Standard Time
Monday - Friday, excluding holidays

713-839-2200
Toll Free 1-877-435-7542
(1-877-HELP-LGC)
Fax: 713-839-2168

Venezuela (Caracas)

8:00 am - 5:00 pm

Local Time

Email: support@lgc.com

58-212-953-0774

Toll Free 0-800-526-3627

Fax: 58-212-952-3845

Email: soporte@lgc.com

Vietnam (Ho Chi Minh City)

8:00 am - 5:00 pm Local Time

Monday - Friday, excluding holidays

84-8-910-1901

Fax: 84-8-910-1902

Email: apsupport@lgc.com