Managing Licenses from the Command Line

This section describes methods for managing licenses through the use of the command line and solution-specific .bat files. The license manager invoked from the command line is also known as the *floating license manager*.

• Running the License Manager from the Command Line describes how to start the License Manager from the command line in all other OPNET solutions

Note—Use the command line method only if you do not have a License Manager GUI installed in your environment that can access the license server that you want to manage. See License Manager Graphical User Interface.

Running the License Manager from the Command Line

This section describes how to run the floating license manager from the command line in AppInternals Xpert or OPNET analysis software. The arguments described in Table 3-8 can be included in the command line when starting the floating license manager.

Table 3-8   Floating License Manager Arguments

Argument	Description
-console	Starts the floating license manager console in which you can enter licensing commands. This argument is unnecessary if you are using the "op_license_util_console" command to start the license manager.
-license_server <license_server_name>	Identifies the license server you want to manager. This argument is optional if you are logged onto the license server you want to manage.
-license_port <port_identifier>	Identifies the license server port on which the process is running. This argument is optional if your license server is running on port_a (default).

Use the following procedure to start License Manager from the command line.

Procedure 3-31   Running the License Manager from the Command Line (Windows)

1 Click on Start > Programs >. Locate your OPNET analysis software program group, and choose OPNET Console 17.0.

Alternatively, you may open a Windows command prompt and navigate to the bin sub-directory in the release directory for your application (for example, C:\Program Files\OPNET\Modeler\16.0.A\sys\pc_intel_win32\bin).

2 In the console window, type `op_license_util` or
`op_license_util_console`. Either command will start the floating license
manager.

Note—Refer to Table 3-8 for optional arguments you can use in this step.

➥ The floating license manager starts.

End of Procedure 3-31

For UNIX systems, use one of the following commands to invoke the floating
license manager, based on your operating system.

Note—On Linux and Solaris, you must run the license manager from the root
account.

• **Linux:**
  `<installdir>/opnet_license_server/<version>/sys/pc_inte`
  `l_linux/bin/op_license_util_console`

• **Solaris:**
  `<installdir>/opnet/<version>/sys/sun_sparc_solaris/bin/`
  `op_license_util_console`

Available Commands for Command Line License Management

Table 3-9   Available Floating License Manager Commands

Command	Description
Basic Commands	
add_permits	Adds one or more licenses. See also Add License from License Manager GUI for the equivalent GUI command.
ch_exp	Changes the expiration date of a license. See Change License Expiration (button) for the equivalent GUI command.
ch_mtn	Changes the expiration date of the maintenance agreement for a license. See Change Maintenance Expiration (button) for the equivalent GUI command.
clear_fl_db	Removes all licenses from the license file, if none are currently loaned. See Clear License File (button) for the equivalent GUI command.
create_fl_db	Creates a new license. See also Add License from License Manager GUI for the equivalent GUI command.
delete_permits	Deregisters one or more licenses. See Deregistering a License from the Command Line for the equivalent GUI command.

Table 3-9   Available Floating License Manager Commands (Continued)

Command	Description
permit_info	Displays information about licenses (permits) in the license file.
quit or exit	Quits the License Manager.
revoke_permit	Revokes a license from an application. See License Server Operations (Buttons) for the equivalent GUI command.
sup_info	Lets you search the network and display the status of any License Server.
update_fls_date	Updates the floating license system date. See Updating the System Date on a License Server from the Command Line for the equivalent GUI command.
validate_fl_db	Validates the license file. See Validate License File (Button) for the equivalent GUI command.
Statistic Commands	
fldb_stats	Displays detailed license file statistics. See License File Usage Reports for more information.
license_stats	Displays detailed license usage statistics. See License File Usage Reports for more information.
reset_stats	Resets license usage statistics. See License Server Reporting for more information.
stats_info	Displays summary usage statistics. See Obtaining License Server Statistics for more information.
Loanable Licenses Commands	
ch_loan	Changes the authorized loan duration of a license. See Change Authorized Loan Duration (button).
check_pool	Checks the definition of one or all pools of loanable licenses.
loan_extend	Extends the duration of a loan. See Extend On-Loan License (button).
loan_info	Displays information about loaned license.

—

Table 3-9   Available Floating License Manager Commands (Continued)

Command	Description
loan_properties	Displays the properties of loaned license. See Change Loan Properties (button).
loan_request	Requests a license from another License Server. See Borrow Selected License (button).
loan_return	Returns a loaned license. See Return On-Loan License (button).
loan_providers	Searches the network for available License Servers and loanable licenses.

Starting the Application and License Manager in Manage License Mode from the Command Line

Use the following procedure to start the License Manager GUI from the Windows command line in manage licenses mode.

Procedure 3-32   Starting the License Manager GUI from the Command Line in Manage Licenses Mode

1 Open a command window.

2 Launch the program (for example, modeler) with the manage_licenses argument:

```
<program> -manage_licenses
```

➥ The License Manager opens in one window. The application opens in another window but has limited functions.

End of Procedure 3-32

Exiting the Floating License Manager from the Command Line

To exit the Floating License Manager at the command line, type exit at the `manager>` prompt.

Starting a License Server from the Command Line

There are several ways to start `op_license_server`, the process that is commonly referred to as the License Server; however it is typically started by the host operating system during system startup. Methods for starting the process manually are described in this section.

Note—See also Stopping the License Server from the Command Line for methods of stopping the license server.

When you invoke a licensed application (such as OPNET analysis software), the application sends a request for a license to `op_license_server`. This license server examines the license file and, if a license is free, sends a reply granting the licensed application permission to run. If all licenses are in use, `op_license_server` sends a reply denying permission and the application notifies you.

The procedures contained in this section describe how to start a license server from the command line. Regardless of the method you use, you should note these considerations:

• The License Server process (`op_license_server`) must have read/write permissions on the license file to work correctly.

• If you installed OPNET analysis software in standalone licensing mode, it will obtain licenses on its own. There is no need to start the license server in this case.

Note—Standalone licensing is not a typical use case and is not available for AppInternals Xpert.

Starting the License Server from Windows (Alternate Methods)

There are two alternate ways to start the license server on Windows:

• Manually, as described in Procedure 3-33

• Automatically, as described in Procedure 3-34

The following procedure applies to all products.

Procedure 3-33   Starting the License Server on Windows (Manually)

1 Start the Services application (in the Administrative Tools section of the Windows Control Panel).

   Note—Your path to the Services application depends on your version of the Windows operating system. Please consult your Microsoft manual for assistance.

2 Locate OPNET License Server in the scrolling list of available services. If the Status column entry for this service does not read "Started", select it and click the Start button.

3 The Startup column entry should read "Automatic", which indicates that `op_license_server` will be started automatically whenever Windows is restarted. If this is not the case, change the Startup Type property to "Automatic".

End of Procedure 3-33

If you want the License Server to start automatically whenever the computer is rebooted, use the following procedure.

Procedure 3-34 Starting the License Server on Windows (Automatically)

1 Install or reinstall the application.

2 Select "Floating: Serve licenses from this computer" as your licensing scheme.

3 Complete the installation.

End of Procedure 3-34

Starting the License Server on Linux (Alternate Methods)

There are two alternate ways to start the license server on Linux:

• Manually, from the command line

• Automatically, using auto-boot commands typically located in the `/etc/rc` file

---

Procedure 3-35 Starting the License Server on Linux (Manually)

1 Log into the host computer where `op_license_server` is running.

2 Navigate to the binary directory (`<bindir>`) for your OPNET analysis software release and architecture.

3 Type the following command.

```
./op_license_server -license_port <port>
```

Note—If you do not know which port is available for `op_license_server`, enter "port_a". If that port is unavailable, an error message will tell you which ports are available and you can re-enter the command with the correct port.

End of Procedure 3-35

The following procedure applies to OPNET analysis software only. Do not use this procedure for AppInternals Xpert.

Procedure 3-36   Starting the License Server on Linux (Automatically)

Note—Root permissions are usually required for this procedure.

1   Create the following file: `/etc/rc3.d/S999_opnet_lic_server`.

2   Insert the following auto-boot commands into the file you created:

```
# OPNET License Server
echo 'starting OPNET License Server...'
<bindir>/op_license_server -license_port <port>
```

3   (Linux only) Copy the same script to /etc/rc5.d using the following command:

```
cp /etc/rc3.d/S999_opnet_lic_server /etc/rc5.d
```

End of Procedure 3-36

Stopping the License Server from the Command Line

The preferred method is to use the License Manager GUI to stop a license server, as described in Stopping the License Server, however you can stop a license server from the command line using the procedures in this section.

WARNING—Do not stop the License Server while any licensed application is running, unless you will bring the license server back up within 15 minutes. For best system behavior, ask users to stop using the software or revoke all in-use licenses with the License Manager before stopping the License Server.

Stopping the License Server from Windows

You can stop the OPNET License Manager service, as shown in Procedure 3-37.

Procedure 3-37   Stopping the License Server on Windows (Manually)

1   Start the Services application (in the Administrative Tools section of the Windows Control Panel).

Note—Your path to the Services application depends on your version of the Windows operating system. Please consult your Microsoft manual for assistance.

2   Locate OPNET License Server in the scrolling list of available services. If the Status column entry for this service reads "Started", select it and click the Stop button.

End of Procedure 3-37

The following procedure should be used only when other methods fail to stop the license server and only for license servers that are *not* serving licenses to AppInternals Xpert or VNE Server. For cases in which you cannot stop a license server that is serving licenses to those products, please contact OPNET Technical Support for assistance.

WARNING—Do not use Procedure 3-38 on AppInternals Xpert

Procedure 3-38   Stopping the License Server on Windows—Alternate Method

1   Invoke the License Manager program from the command line in the stop server mode:

```
op_license_util -license_server_kill -license_server <server> \
        -license_port <port>
```

For information about `op_license_util`, see the *Program Descriptions* chapter of your product documentation.

End of Procedure 3-38

Stopping the License Server on Linux

The following procedure describes an alternate way to stop the license server on Linux. The preferred method to use is described in Stopping the License Server.

WARNING—Do not use Procedure 3-39 on AppInternals Xpert.

Procedure 3-39   Stopping the License Server on Linux (Alternate Method)

   Warning—Use this procedure only when other methods do not work.

1   Determine the process id (pid) of `op_license_server` by logging into the process' host and using the `ps` command.

2   Execute the `kill` command from the command line:

```
kill <pid>
```

End of Procedure 3-39

—

Updating the System Date on a License Server from the Command Line

You may need to update the system date on a license server because the server's date is wrong. This can occur even if the computer running the license server is correct.

Note—Resetting the date requires that you contact technical support via the Internet, e-mail, or phone/fax.

Procedure 3-40   Updating the System Date on a License Server

1 Start the floating license manager, using the appropriate method for your application.

   • Use Procedure 3-31 for OPNET analysis software or AppInternals Xpert.

2 Enter the command `update_fls_date`, and press Enter.

3 Provide OPNET Technical Support with the Transaction Code displayed on the screen via the licensing registration webpage, email, phone, or fax. (Contact information is displayed on the screen in the floating license manager.)

4 Enter the approval code provided by OPNET Technical Support, and press Enter.

5 Provide the confirmation code to OPNET Technical Support, and press Enter.

   ➥ Your system date update is successful. If any part of the process fails, OPNET Technical Support will assist you.

6 Exit the floating license manager by typing `exit` and pressing Enter.

End of Procedure 3-40

Add Licenses

This section discusses the ways to add licenses to a license server. For any of these procedures, note the following:

• The OPNET License Server service must be running on the computer to which you want to add the license

• You must also have permission to add licenses to the license server in question (see Restricting License Server Administration)

Note—The procedure in this section requires you to communicate with OPNET Technical Support.

Add Licenses from the Command Line

This section describes how to add licenses when using the floating license manager. Use the following procedure to add licenses.

Procedure 3-41   Add Licenses Using the Command Line

   1 Open the floating license manager from the command line:

   • For OPNET analysis software or AppInternals Xpert use Procedure 3-31

   2 At the manager> prompt, enter **add_permits** and press Enter. See the following example:

```
manager> add_permits

Please provide the transaction code to OPNET via the web:

        http://www.opnet.com/services/licenses_register.html

If you are unable to perform license registration over the web,

contact OPNET via:

        Phone: +1 (240) 497-1200

        Email: support@opnet.com

Transaction code> DFEB.072B.FF29.41C0.45EE.A9DF.035A.A033.94D4

After sending the transaction code to Technical Support, please

do not exit the current session of op_license_util before

receiving the approval code from Technical Support.

Enter approval code.

Approval code>
```

3 In your web browser, go to:
http://www.opnet.com/services/license_registration.html

4 Log in with your OPNET Username and Password when the following dialog box appears. Click OK.
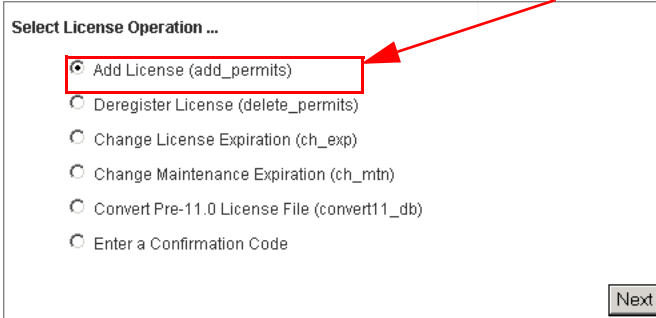
Figure 3-37   Login to OPNET Support Center

5 Click on "Perform license operations."

6 Select "Add License (add_permits)," and click on the Next button.

Figure 3-38   Add License—Browser Method

7 Enter the Transaction Code (from step 2) and the hostname of your license server. Make sure there are no extra spaces before or after the code or hostname. Click Next .

Figure 3-39   Enter Transaction Code/Hostname

8 When the "Select Starting License" page appears, select the lowest license ID that you want to add to your computer. If you want to add only one license, select that license.

9 When the "Select Ending License" page appears, select the highest license ID that you want to add to your computer. If you want to add only one license, select that license. The confirmation page appears.

10 When the "License Registration Confirmation" page appears, check that the information is correct, then click on the Get Approval Code button.

➥ The Approval Code appears.

11 Enter the Approval Code where prompted in the floating license manager and press Enter.

12 To confirm that the server added the license, use the license manager **permit_info** command to display the license you just added.

13 Type exit to leave the floating license manager, and close your browser.

End of Procedure 3-41

Manage Licenses from the Command Line

Once you have added your licenses to the license server, there are certain operations you may need to perform at a later time. For example

• Deregistering a License from the Command Line

• Clearing a License File from the Command Line

• Change Maintenance Expiration from Command Line

• Changing the Expiration Date for a License

Deregistering a License from the Command Line

Typically, you will deregister licenses if the computer is about to be reformatted or decommissioned, or if you want to move the license to another license file.

This section describes how to deregister licenses when using the command line (floating license manager). Use Procedure 3-42 to deregister one or more licenses.

Procedure 3-42   Deregister Licenses from the Command Line

1 Open the floating license manager from the command line:

• For OPNET analysis software or AppInternals Xpert use Procedure 3-31.

2 At the manager> prompt, enter `delete_permits` and press Enter. See the following example:

```
manager> delete_permits

Please provide the transaction code to OPNET via the web:

        http://www.opnet.com/services/licenses_register.html

If you are unable to perform license registration over the web,

contact OPNET via:

        Phone: +1 (240) 497-1200

        Email: support@opnet.com

Transaction code> DFEB.072B.FF29.41C0.45EE.A9DF.035A.A033.94D4

After sending the transaction code to Technical Support, please

do not exit the current session of op_license_util before

receiving the approval code from Technical Support.

Enter approval code.

Approval code>
```
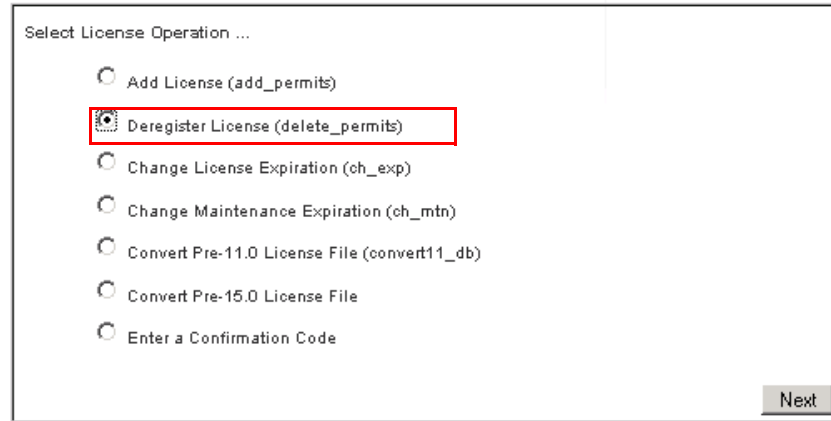
3 In your web browser, go to:
http://www.opnet.com/services/license_registration.html

4 Log in with your OPNET Username and Password when the following dialog box appears. Click OK.

Figure 3-40   Login to OPNET Support Center

5 Click on "Perform license operations."

6 Select "Deregister License (delete_permits)," and click Next.

Figure 3-41 Deregister License—Browser Method

7 Enter the Transaction Code (from step 2) and the hostname of your license server. Make sure there are no extra spaces before or after the code or hostname. Click Next.

Figure 3-42 Enter Transaction Code/Hostname

8 When the "Select Starting License" page appears, select the lowest license ID that you want to add to your computer. If you want to add only one license, select that license.

9 When the "Select Ending License" page appears, select the highest license ID that you want to add to your computer. If you want to add only one license, select that license. The confirmation page appears.

10 When the "License Registration Confirmation" page appears, check that the information is correct, then click on the Get Approval Code button.

➥ The Approval Code appears.

11 Enter the Approval Code where prompted in the floating license manager and press Enter.

12 To confirm that the server deregistered the license, use the license manager permit_info command to display the license you have available.

13 Type exit to leave the floating license manager, and close your browser.

End of Procedure 3-42

Deregistering versus Clearing a License File Should you use "Deregister License" or "Clear License File"? These two options sound very similar but each performs the same operation on a different scale.

- Option 1—Deregister all licenses

    If you want to deregister all of your licenses in a single operation, use Clear License File (see Clearing a License File from the Command Line). This deregisters all licenses in the license file at once, regardless of their contract number range.

- Option 2—Deregister one or more selected licenses

    If you want to deregister a selected license use the Deregister License operation described in this section, and enter the license(s) to remove from your license file.

Clearing a License File from the Command Line

This operation deregisters *all* licenses from the license file in a single operation. You should *always* contact OPNET Technical Support by e-mail, phone, or fax before performing this operation.

In the command line floating license manager, use the **clear_fl_db** to clear a license file.

Change Maintenance Expiration from Command Line

This section describes how to change the maintenance expiration date for licenses when using the command line (floating license manager).

Procedure 3-43 Change Licensing Maintenance Expiration Using the Command Line

1 Open the floating license manager from the command line:

- For AppInternals Xpert use Procedure 3-31

2 At the manager> prompt, enter ch_mtn and press Enter. See the following example:

```
manager> ch_mtn

Please provide the transaction code to OPNET via the web:

        http://www.opnet.com/services/licenses_register.html

If you are unable to perform license registration over the web,

contact OPNET via:

        Phone: +1 (240) 497-1200

        Email: support@opnet.com
```

```
Transaction code> DFEB.072B.FF29.41C0.45EE.A9DF.035A.A033.94D4

After sending the transaction code to Technical Support, please

do not exit the current session of op_license_util before

receiving the approval code from Technical Support.

Enter approval code.

Approval code>
```
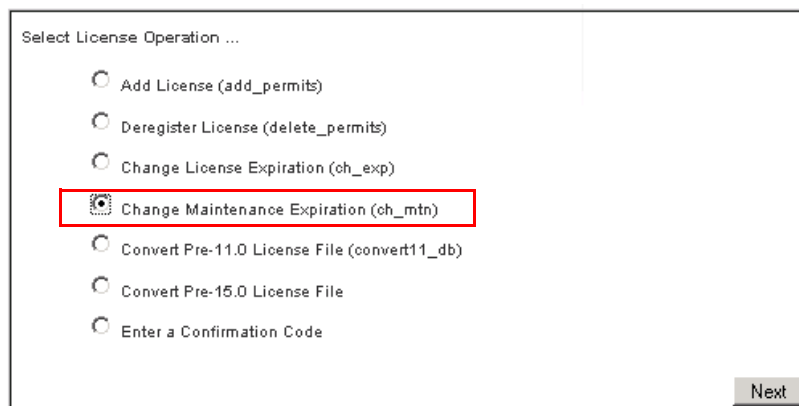
3 In your web browser, go to:
http://www.opnet.com/services/license_registration.html

4 Log in with your OPNET Username and Password when the following dialog box appears. Click OK.

Figure 3-43   Login to OPNET Support Center

5 Click on "Perform license operations."

6 Select "Update Maintenance Expiration (ch_mtn)," and click Next.

Figure 3-44   Change Maintenance Expiration—Browser Method

7 Enter the Transaction Code (from step 2) and the hostname of your license server. Make sure there are no extra spaces before or after the code or hostname. Click Next.

8 When the "Select Starting License" page appears, select the lowest license ID that you want to update. If you want to update only one license, select that license.

9 When the "Select Ending License" page appears, select the highest license ID that you want to update. If you want to update only one license, select that license.

➡ The confirmation page appears.

10 When the "License Registration Confirmation" page appears, check that the information is correct, then click on the Get Approval Code button.

➡ The Approval Code appears.

11 Enter the Approval Code where prompted in the floating license manager and press Enter.

12 Type `exit` to leave the floating license manager, and close your browser.

End of Procedure 3-43

Changing the Expiration Date for a License

This section describes how to change the expiration date for licenses when using the command line (floating license manager).

Procedure 3-44   Change License Expiration Using the Command Line

1 Open the floating license manager from the command line:

• For AppInternals Xpert use Procedure 3-31

2 At the manager> prompt, enter `ch_exp` and press Enter. See the following example:

```
manager> ch_exp

Please provide the transaction code to OPNET via the web:

        http://www.opnet.com/services/licenses_register.html

If you are unable to perform license registration over the web,

contact OPNET via:

        Phone: +1 (240) 497-1200

        Email: support@opnet.com

Transaction code> DFEB.072B.FF29.41C0.45EE.A9DF.035A.A033.94D4

After sending the transaction code to Technical Support, please
```

```
do not exit the current session of op_license_util before

receiving the approval code from Technical Support.

Enter approval code.

Approval code>
```
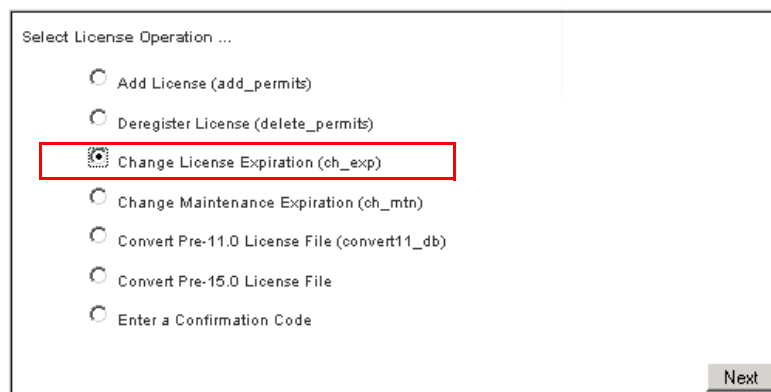
3 In your web browser, go to:
http://www.opnet.com/services/license_registration.html

4 Log in with your OPNET Username and Password when the following dialog box appears. Click OK.

Figure 3-45   Login to OPNET Support Center

5 Click on "Perform license operations."

6 Select "Change License Expiration (ch_exp)," and click Next.

Figure 3-46   Change License Expiration—Browser Method

7 Enter the Transaction Code (from step 2) and the hostname of your license server. Make sure there are no extra spaces before or after the code or hostname. Click Next.

8 When the "Select Starting License" page appears, select the lowest license ID for which you want to change the expiration date. If you want to update only one license, select that license.

9 When the "Select Ending License" page appears, select the highest license ID for which you want to change the expiration date. If you want to update only one license, select that license.

➥ The confirmation page appears.

10 When the "License Registration Confirmation" page appears, check that the information is correct, then click on the Get Approval Code button.

➥ The Approval Code appears.

11 Enter the Approval Code where prompted in the floating license manager and press Enter.

12 Type `exit` to leave the floating license manager, and close your browser.

End of Procedure 3-44

op_license_util Command Line Utility

This section covers the `op_license_util` command line utility for licensing as well as the command line options available. Use this section as a reference for `op_license_util`, which can be helpful for troubleshooting or for applications other than OPNET analysis software. It is recommended that whenever possible, however, you use the License Manager GUI (see License Manager Graphical User Interface).

`op_license_util` supports the following single-operation modes. These are specified by invoking `op_license_util` with the corresponding commands, as listed below.

- Check the status of a server's ports (`-port_check`)

- (OPNET analysis software only) Kill a license server (`-license_server_kill`)

license_server_kill

WARNING—Do not use this command for AppInternals Xpert.

Specifies that the license server process be stopped. This operation sends a message to the license server, causing it to log its status just before exiting. This operation prevents `op_license_util` from presenting an interactive user interface. Only a user account that has write permissions on the license file can perform this operation. The values of the preferences `-license_server` and `license_port` are used to determine the location of the license server process. If these attributes are not set, the license file is checked for the location of the license server.

Note—Once you exit the license server with this command, the license server process can only be started at the license server machine by restarting the license server service from Control Panel services.

portchk

Specifies that the status of the three UDP/IP ports potentially used by the licensing system be checked for availability on the local host computer. A list of the three ports and their statuses is printed on the standard output device.

This operation prevents `op_license_util` from presenting an interactive user interface.

session_id

Specifies that the opnet session ID be printed to the standard output device. The session ID is a time-varying value that provides installation reference information to OPNET Technical Support.

—

Example Usage for op_license_util

```
% op_license_util -port_check

The status of the ports on "titan"
usable for the license server:

    port_a: unavailable
    port_b: available
    port_c: available

% op_license_util -license_server_kill TRUE -license_server unreliable -license_port
port_b

%
```