



Hewlett Packard
Enterprise

HPE CNU Command Line Interface

User Guide

Abstract

This document is intended for the person who configures NIC, FCoE, iSCSI, and NPAR devices.

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Introduction

CLI overview

This document provides CLI guidelines for the CNU.

CLI commands catalog

This document also provides CLI guidelines and usage for the NIC, iSCSI, FCoE, and NPAR subcommands.

Command line syntax

CLI input is case-insensitive, except when otherwise noted. The general CLI syntax format is as follows:

```
hpcnucli <[command] | [personality]> [<managed element>] [<options>
<parameters>]
```

| Item | Description |
|-----------------|--|
| command | Operation performed |
| personality | Managed element personality for <code>-ethernet</code> , <code>-iscsi</code> , or <code>-fcoe</code> |
| managed element | Optional managed element identifier [Ethernet MAC / iSCSI MAC / FCoE Port WWN] This might be required by the personality |
| options | Commands performed on a managed element |
| parameters | Optional parameters used for managed element commands |

CLI commands

Common hpcnucli commands

The common commands for `hpcnucli` are as follows.

| Command | Description |
|------------------------------------|---|
| <code>hpcnucli -help</code> | Displays general help for the CNU CLI application and a brief synopsis of all commands |
| <code>hpcnucli -about</code> | Displays information about the product including product name, owner, and version |
| <code>hpcnucli -showadapter</code> | Displays the adapter name, port name and MAC address, or port WWN, based on iSCSI or FCoE configuration, and for all supported adapters |
| <code>hpcnucli -import</code> | Imports the XML configuration from one machine to another |

iSCSI subcommand properties

When using the `iSCSI` subcommand, it might be necessary to use login options. For login option information, see "Login options (on page 7)."

The `hpcnucli -iscsi` subcommand options are as follows.

| Command | Description |
|---|---|
| <code>hpcnucli -iscsi -getinitiator</code> | Displays the iSCSI initiator name |
| <code>hpcnucli -iscsi -setinitiator</code> | Changes the iSCSI initiator name to a specified name Examples: <code>hpcnucli -iscsi -setinitiator <initiator name> [login options]</code> and <code>hpcnucli -iscsi -setinitiator <initiator name> [-mp] [-hd] [-dd] [[-mutualCHAP] <[TargetCHAP] [TargetSecret] [InitiatorCHAP] [InitiatorSecret]>]</code> and <code>hpcnucli -iscsi -setinitiator <initiator name> [-mp] [-hd] [-dd] [[-oneWayCHAP] <[TargetCHAP] [InitiatorCHAP]>]</code> |
| <code>hpcnucli -iscsi -isns -listall</code> | Lists all iSNS servers |
| <code>hpcnucli -iscsi -isns -add</code> | Adds an iSNS server to the system based on a server IP address that is entered as an argument Example: <code>hpcnucli -iscsi -isns -add <IP address></code> |
| <code>hpcnucli -iscsi -isns -remove</code> | Removes an iSNS server to the system based on a server IP address that is entered as an argument Example: <code>hpcnucli -iscsi -isns -remove <IP address></code> |
| <code>hpcnucli -iscsi -portinfo</code> | Displays all information that is related to a specified port on the console Example: <code>hpcnucli -iscsi <MAC address> -portinfo</code> |

| Command | Description |
|--|---|
| <code>hpcnucli -iscsi -portstat</code> | Displays all port statistics for a specified port Example: <code>hpcnucli -iscsi <MAC address> -portstat</code> |
| <code>hpcnucli -iscsi -defparam</code> | Displays the default driver parameter that is related to the port on the console Example: <code>hpcnucli -iscsi <MAC address> -defparam</code> |
| <code>hpcnucli -iscsi -getbootconfig</code> | Displays the current boot configuration for the port on the console Example: <code>hpcnucli -iscsi <MAC address> -getbootconfig</code> |
| <code>hpcnucli -iscsi -setbootconfig</code> | Displays the current boot configuration for the port on the console and enables you to modify the boot configuration interactively Example: <code>hpcnucli -iscsi <MAC address> -setbootconfig</code> |
| <code>hpcnucli -iscsi -portal -listall</code> | Displays all portals that are in use Example: <code>hpcnucli -iscsi <MAC address> -portal -listall</code> |
| <code>hpcnucli -iscsi -portal -add</code> | Adds a portal to the system based on a target IP address and port number that is entered as an argument Login options are optional Example: <code>hpcnucli -iscsi <MAC address on iSCSI host port> -portal -add <portal IP of target iSCSI target portal> [port number] [login option]</code> |
| <code>hpcnucli -iscsi -portal -remove</code> | Removes a portal from the system based on a target IP address and port number that is entered as an argument The default iSCSI target portal port is 3260 Login options are optional Example: <code>hpcnucli -iscsi <MAC address on iSCSI host port> -portal -remove <portal IP of target iSCSI target portal> [port number] [login option]</code> |
| <code>hpcnucli -iscsi -target -listall</code> | Displays all currently discovered targets Example: <code>hpcnucli -iscsi <MAC address on iSCSI host port> -target -listall</code> |
| <code>hpcnucli -iscsi -target -listactive</code> | Displays all currently connected targets Example: <code>hpcnucli -iscsi <MAC address on iSCSI host port> -target -listactive</code> |
| <code>hpcnucli -iscsi -target -login</code> | Adds a target to the system based on an iSCSI target IQN, portal IP address, and port number that is entered as an argument Login options are optional Example: <code>hpcnucli -iscsi <MAC address on iSCSI host port> -target -login <iSCSI target you want to add and log into> <IP address for the iSCSI target portal> [port number for iSCSI target portal] [login option]</code> |

| Command | Description |
|---|---|
| <code>hpcnucli -iscsi -target -getinfo</code> | Retrieves information for a specified target Example: <code>hpcnucli -iscsi <MAC address on iSCSI host port> -target -getinfo <iSCSI target IQN></code> |
| <code>hpcnucli -iscsi -target -sessioninfo</code> | Retrieves information for the currently logged-in session The session ID ranges from 0 to N-1, where N is the session count The default value for the session ID is 0 Example: <code>hpcnucli -iscsi <MAC address on iSCSI host port> -target -sessioninfo <iSCSI target IQN> [session ID]</code> |
| <code>hpcnucli -iscsi -target -logout</code> | Logs-out of a defined target The default value for the session ID is 0 Example: <code>hpcnucli -iscsi <MAC address on iSCSI host port> -target -logout <iSCSI target IQN> [Session ID]</code> |
| <code>hpcnucli -iscsi -target -remove</code> | Removes a target from the system based on an iSCSI target IQN that is entered as an argument Example: <code>hpcnucli -iscsi <MAC address on iSCSI host port> -target -remove <iSCSI target IQN></code> |
| <code>hpcnucli -iscsi -target -lunlist</code> | Displays all active LUNs Example: <code>hpcnucli -iscsi <MAC address on iSCSI host port> -target -lunlist <iSCSI target IQN></code> |
| <code>hpcnucli -iscsi -ping</code> | Verifies connectivity by sending an ICMP ping request to a specified IP address Example: <code>hpcnucli -iscsi <MAC address on iSCSI host port> -ping <IP address you are sending the ping request></code> |
| <code>hpcnucli -iscsi -modifytcpip -ipv4/ipv6 -dhcp</code> | Sets an iSCSI host (either IPv4 or IPv6) as a DHCP client so that its TCP/IP settings are automatically configured by a DHCP server; the VLAN ID range is from 0 - 4094, where 0 represents VLAN disable. Example: <code>hpcnucli -iscsi <MAC address> -modifytcpip -ipv4/ipv6 -dhcp [optional VLAN ID]</code> |
| <code>hpcnucli -iscsi -modifytcpip ipv4/ipv6 -static</code> | Sets the TCP/IP settings on an iSCSI host (either IPv4 or IPv6) to be configured manually; the VLAN ID range is from 0-4094, where 0 represents VLAN disable. Example: <code>hpcnucli -iscsi <MAC address on iSCSI host port> -modifytcpip -ipv4/ipv6 -static <VLAN ID> <IP address> <subnet mask> <gateway></code> |

Login options

The `hpcnucli -iscsi` login options are as follows.

| Login option | Description |
|--------------|--|
| -mp | Multi-path, enabled by default |
| -hd | Header digest |
| -dd | Data digest |
| -option | Specified CHAP values, either mutual or one-way Possible CHAP values: <ul style="list-style-type: none"> • [-Option (-mutualCHAP -oneWayCHAP)] • [TargetCHAP] • [TargetSecret] • [InitiatorCHAP] • [InitiatorSecret] |

FCoE subcommand properties

The `hpcnucli -fcoe` subcommand options are as follows.

| Command | Description |
|---|---|
| <code>hpcnucli -fcoe -portinfo</code> | Displays all of the information related to an FCoE port that you specify Example: <code>hpcnucli -fcoe <portWWN of the FCoE adapter> -portinfo</code> |
| <code>hpcnucli -fcoe -resetstat</code> | Resets FCoE port statistic attribute values to 0 Example: <code>hpcnucli -fcoe <portWWN of the FCoE adapter> -resetstat</code> |
| <code>hpcnucli -fcoe -getdcbinfo</code> | Displays negotiated DCB information for a portWWN that you specify Example: <code>hpcnucli -fcoe <portWWN of the FCoE adapter> -getdcbinfo</code> |
| <code>hpcnucli -fcoe -getdcbconfig</code> | Displays the current DCB admin configuration for a portWWN that you specify Example: <code>hpcnucli -fcoe <portWWN of the FCoE adapter> -getdcbconfig</code> |
| <code>hpcnucli -fcoe -setdcb</code> | Modifies the DCB admin configuration interactively Example: <code>hpcnucli -fcoe <portWWN of the FCoE adapter> -setdcb</code> |
| <code>hpcnucli -fcoe -target -listactive</code> | Displays the list of all the active targets connected to a port that you specify Example: <code>hpcnucli -fcoe <portWWN of the FCoE adapter> -target -listactive</code> |
| <code>hpcnucli -fcoe -target -pbindinfo</code> | Displays the list of all persistent targets connected to a port that you specify Example: <code>hpcnucli -fcoe <portWWN of the FCoE adapter> -target -pbindinfo</code> |

| Command | Description |
|---|---|
| <code>hpcnucli -fcoe -target -getinfo</code> | Displays information for a target that you specify Example: <code>hpcnucli -fcoe <portWWN of the FCoE adapter> -target -getinfo <portWWN of the connected target></code> |
| <code>hpcnucli -fcoe -target -lunlist</code> | Displays the list of the LUNs associated with a target that you specify Example: <code>hpcnucli -fcoe <portWWN of the FCoE adapter> -target -lunlist <portWWN of the connected target></code> |
| <code>hpcnucli -fcoe -getbootconfig</code> | Displays FCoE boot configuration for a port that you specify Example: <code>hpcnucli -fcoe <portWWN of the FCoE adapter> -getbootconfig</code> |
| <code>hpcnucli -fcoe -setbootconfig</code> | Displays the current boot configuration for the port on the console and allows you to set the boot configuration interactively Example: <code>hpcnucli -fcoe <portWWN of the FCoE adapter> -setbootconfig</code> |
| <code>hpcnucli -fcoe -ping</code> | Verifies connectivity by sending a SCSI inquiry command request to a port that you specify The optional parameters are as follows: <ul style="list-style-type: none"> • <code>pcount</code> is the number of packets sent in the ping • <code>timeout</code> is the maximum time to wait for receiving a packet Example: <code>hpcnucli -fcoe <portWWN of the FCoE adapter> -ping <portWWN of the connected target> [-pcount] [-timeout]</code> |
| <code>hpcnucli -fcoe -getfip</code> | Displays FIP for a port that you specify Example: <code>hpcnucli -fcoe <portWWN of the FCoE adapter> -getfip</code> |
| <code>hpcnucli -fcoe -setfip</code> | Set the VLAN ID for the FIP of a specific port. The VLAN ID range is 0~4094, where 0 represents VLAN disable Example: <code>hpcnucli -fcoe <portWWN of the FCoE adapter> -setfip <VLAN ID></code> |
| <code>hpcnucli -fcoe -getvirtualportinfo</code> | Displays all of the information related to an FCoE Virtual Port that you specify Example: <code>hpcnucli -fcoe <portWWN of the FCoE adapter> -getvirtualportinfo</code> |
| <code>hpcnucli -fcoe -createvirtualport</code> | Creates Virtual Ports to the system based on a specific physical port, and virtual portWWNs are entered as arguments (the number of virtual ports can be up to 255) Example: <code>hpcnucli -fcoe <portWWN of the FCoE adapter> -createvirtualport <virtual portWWN 1> <virtual portWWN 2> ... <virtual portWWN 255></code> |

| Command | Description |
|--|--|
| <code>hpcnucli -fcoe -deletevirtualport</code> | Deletes Virtual Ports from the system based on a specific physical port, and virtual portWWNs are entered as arguments Example: <code>hpcnucli -fcoe <portWWN of the FCoE adapter> -deletevirtualport <virtual portWWN 1> <virtual portWWN 2> ... <virtual portWWN 255></code> |
| <code>hpcnucli -fcoe -getvirtualporttarget</code> | Displays all of the Virtual Port Target information related to an FCoE Virtual Port that you specify Example: <code>hpcnucli -fcoe <portWWN of the FCoE adapter> -getvirtualporttarget <virtual portWWN></code> |
| <code>hpcnucli -fcoe -getvirtualporttargetlun</code> | Displays all of the Virtual Port Target LUN information related to an FCoE Virtual Port that you specify Example: <code>hpcnucli -fcoe <portWWN of the FCoE adapter> -getvirtualporttargetlun <virtual portWWN></code> |

NPAR subcommand properties

The `hpcnucli -npar` subcommand options are as follows.

| Command | Description |
|----------------------------------|---|
| <code>hpcnucli -npar -get</code> | Displays NPAR information related to a specified port on the console (only in NPAR mode). If the current mode is SF, the CLI displays the message, Current mode is SF. Example: <code>hpcnucli -npar <MAC> -get</code> |
| <code>hpcnucli -npar -set</code> | Displays the current mode for the port on the console and enables interactive setting. The parameters are as follows: SF: Port flow control NPAR: Port flow control, Physical function, Bandwidth weight (0 - 100), and max bandwidth (0 - 100) Requires rebooting the system after setting Example: <code>hpcnucli -npar <MAC> -set</code> |
| <code>hpcnucli -res -get</code> | Displays the storage personality that is related to a specified port on the console (only in SF mode). If the current mode is NPAR, the CLI displays the message, This command is only effective for SF mode. Example: <code>hpcnucli -res <MAC> -get</code> (-res indicates "resource allocation") |
| <code>hpcnucli -res -set</code> | Displays storage personality for the port on the console and enables the interactive setting of the storage personality (only in SF mode). If the current mode is NPAR, the CLI displays the message, This command is only effective for SF mode. Requires rebooting the system after setting Example: <code>hpcnucli -res <MAC> -set</code> (-res indicates "resource allocation") |

NIC subcommand properties

The `hpcnucli -ethernet` subcommand options are as follows.

| Command | Description |
|---|--|
| <code>hpcnucli -ethernet -portinfo</code> | Displays all information related to a specified port on the console. Example: <code>hpcnucli -ethernet <MAC address> -portinfo</code> |
| <code>hpcnucli -ethernet -portstat</code> | Displays all port statistics for a specified port. Example: <code>hpcnucli -ethernet <MAC address> -portstat</code> |
| <code>hpcnucli -ethernet -resetstat</code> | Resets Ethernet port statistic attribute values to 0. Example: <code>hpcnucli -ethernet <MAC address> -resetstat</code> |
| <code>hpcnucli -ethernet -getadapinfo</code> | Displays all information related to an Ethernet port on the console. Example: <code>hpcnucli -ethernet <MAC> -getadapinfo</code> |
| <code>hpcnucli -ethernet -setadapinfo</code> | Displays all information related to an Ethernet port on the console and allows you to modify the settings interactively. Example: <code>hpcnucli -ethernet <MAC> -setadapinfo</code> |
| <code>hpcnucli -ethernet -modifytcpip -ipv4/ipv6 -dhcp</code> | Sets an Ethernet host (either IPv4 or IPv6) as a DHCP client so that its TCP/IP settings are automatically configured by a DHCP server; the VLAN ID range is from 0-4094, where 0 represents VLAN disable. Example: <code>hpcnucli -ethernet <MAC> -modifytcpip -ipv4/ipv6 -dhcp [optional VLAN ID]</code> |
| <code>hpcnucli -ethernet -modifytcpip -ipv4/ipv6 -static</code> | Sets the TCP/IP settings on an Ethernet host (either IPv4 or IPv6) to be configured manually; the VLAN ID range is from 0-4094, where 0 represents VLAN disable. Example: <code>hpcnucli -ethernet <MAC address> -modifytcpip -ipv4/ipv6 -static <VLAN ID> <IP address> <subnet mask> <gateway></code> |

CLI help command screenshot

The following is a screenshot of the CLI help command output.

```
C:\Program Files\HP Converged Network Utility>hpcnucli -help
Hewlett Packard Enterprise Converged Network Utility CLI(5.0.4.1)
(C) Copyright 2015 Hewlett Packard Enterprise Development LP

List of supported commands for HPCNUCLI
<..> Mandatory Arguments
[...> Optional Arguments

hpcnucli -about
hpcnucli -showadapter
hpcnucli -import
hpcnucli -iscsi -getinitiator
hpcnucli -iscsi -setinitiator <Initiator Name> [*login options]
hpcnucli -iscsi -listall
hpcnucli -iscsi -add <iSNS Server IP>
hpcnucli -iscsi -remove <iSNS Server IP>
hpcnucli -iscsi <MAC> -portinfo
hpcnucli -iscsi <MAC> -portstat
hpcnucli -iscsi <MAC> -defparam
hpcnucli -iscsi <MAC> -getbootconfig
hpcnucli -iscsi <MAC> -setbootconfig
hpcnucli -iscsi <MAC> -portal -listall
hpcnucli -iscsi <MAC> -portal -add <Portal IP> <Port Number**> [*login option]
hpcnucli -iscsi <MAC> -portal -remove <Portal IP> <Port Number**>
hpcnucli -iscsi <MAC> -target -listall
hpcnucli -iscsi <MAC> -target -listactive
hpcnucli -iscsi <MAC> -target -login <Target Name> <IP> <Port Number**> [*login option]
hpcnucli -iscsi <MAC> -target -getinfo <Target Name>
hpcnucli -iscsi <MAC> -target -sessioninfo <Target Name> <Session ID>
hpcnucli -iscsi <MAC> -target -logout <Target Name> <Session ID>
hpcnucli -iscsi <MAC> -target -remove <Target Name>
hpcnucli -iscsi <MAC> -target -lunlist <Target Name>
hpcnucli -ping <IP Address>
hpcnucli -modifytcip -dhcp [VLAN ID***]
hpcnucli -modifytcip -static <VLAN ID> <IP Address> <Subnet Mask>

<Gateway>
hpcnucli -fcoe <portWWN> -portinfo
hpcnucli -fcoe <portWWN> -portstat
hpcnucli -fcoe <portWWN> -resetstat
hpcnucli -fcoe <portWWN> -getdcbinfo
hpcnucli -fcoe <portWWN> -getdcbconfig
hpcnucli -fcoe <portWWN> -setdcb
hpcnucli -fcoe <portWWN> -target -listactive
hpcnucli -fcoe <portWWN> -target -pbindinfo
hpcnucli -fcoe <portWWN> -target -getinfo <Target Name>
hpcnucli -fcoe <portWWN> -target -lunlist <Target Name>
hpcnucli -fcoe <portWWN> -target -getbootconfig
hpcnucli -fcoe <portWWN> -target -setbootconfig
hpcnucli -fcoe <portWWN> -target -ping <Target Name>
hpcnucli -fcoe <portWWN> -target -ping <Target Name> -pcount <Count>
hpcnucli -fcoe <portWWN> -target -ping <Target Name> -timeout <time in secs>

hpcnucli -npar <MAC> -get
hpcnucli -npar <MAC> -set
hpcnucli -res <MAC> -get
hpcnucli -res <MAC> -set
hpcnucli -ethernet <MAC> -portinfo
hpcnucli -ethernet <MAC> -portstat
hpcnucli -ethernet <MAC> -resetstat
hpcnucli -ethernet <MAC> -getadapinfo
hpcnucli -ethernet <MAC> -setadapinfo
hpcnucli -ethernet <MAC> -gettcip
hpcnucli -ethernet <MAC> -modifytcip -ipv4 -dhcp [VLAN ID***]
hpcnucli -ethernet <MAC> -modifytcip -ipv6 -dhcp [VLAN ID***]
hpcnucli -ethernet <MAC> -modifytcip -ipv4 -static <VLAN ID> <IP Address> <Subnet Mask>
hpcnucli -ethernet <MAC> -modifytcip -ipv6 -static <VLAN ID> <IP Address> <Prefix Length> [Gateway]

* <-mp> <-hd> <-dd> <-Option (-mutualCHAP | -oneWayCHAP)> <TargetCHAP> <Target Secret> <InitiatorCHAP> <InitiatorSecret>
*** Default Port Number : 3260
*** Default VLAN ID : 1
```

CNU system log location

The CNU system log is stored in the following directory:

```
$installdir$\hpcnu.log
```

Support and other resources

Accessing Hewlett Packard Enterprise Support

- For live assistance, go to the Contact Hewlett Packard Enterprise Worldwide website (<http://www.hpe.com/assistance>).
- To access documentation and support services, go to the Hewlett Packard Enterprise Support Center website (<http://www.hpe.com/support/hpesc>).

Information to collect

- Technical support registration number (if applicable)
- Product name, model or version, and serial number
- Operating system name and version
- Firmware version
- Error messages
- Product-specific reports and logs
- Add-on products or components
- Third-party products or components

Accessing updates

- Some software products provide a mechanism for accessing software updates through the product interface. Review your product documentation to identify the recommended software update method.
- To download product updates, go to either of the following:
 - Hewlett Packard Enterprise Support Center **Get connected with updates** page (<http://www.hpe.com/support/e-updates>)
 - Software Depot website (<http://www.hpe.com/support/softwaredepot>)
- To view and update your entitlements, and to link your contracts, Care Packs, and warranties with your profile, go to the Hewlett Packard Enterprise Support Center **More Information on Access to Support Materials** page (<http://www.hpe.com/support/AccessToSupportMaterials>).



IMPORTANT: Access to some updates might require product entitlement when accessed through the Hewlett Packard Enterprise Support Center. You must have an HP Passport set up with relevant entitlements.

Websites

- Hewlett Packard Enterprise Information Library (<http://www.hpe.com/info/enterprise/docs>)
- Hewlett Packard Enterprise Support Center (<http://www.hpe.com/support/hpesc>)
- Contact Hewlett Packard Enterprise Worldwide (<http://www.hpe.com/assistance>)

- Subscription Service/Support Alerts (<http://www.hpe.com/support/e-updates>)
- Software Depot (<http://www.hpe.com/support/softwaredepot>)
- Customer Self Repair (<http://www.hpe.com/support/selfrepair>)
- Insight Remote Support (<http://www.hpe.com/info/insightremotesupport/docs>)
- Serviceguard Solutions for HP-UX (<http://www.hpe.com/info/hpux-serviceguard-docs>)
- Single Point of Connectivity Knowledge (SPOCK) Storage compatibility matrix (<http://www.hpe.com/storage/spock>)
- Storage white papers and analyst reports (<http://www.hpe.com/storage/whitepapers>)

Remote support

Remote support is available with supported devices as part of your warranty, Care Pack Service, or contractual support agreement. It provides intelligent event diagnosis, and automatic, secure submission of hardware event notifications to Hewlett Packard Enterprise, which will initiate a fast and accurate resolution based on your product's service level. Hewlett Packard Enterprise strongly recommends that you register your device for remote support.

For more information and device support details, go to the Insight Remote Support website (<http://www.hpe.com/info/insightremotesupport/docs>).

Acronyms and abbreviations

CHAP

Challenge Handshake Authentication Protocol

CNU

Converged Network Utility

DHCP

Dynamic Host Configuration Protocol

FCoE

Fibre Channel over Ethernet

ICMP

Internet Control Message Protocol

IQN

iSCSI qualified name

iSCSI

Internet Small Computer System Interface

iSNS

Internet Storage Name Service

LUN

logical unit number

MAC

Media Access Control

NPAR

NIC partitioning

SF

single function

VLAN

virtual local-area network

WWN

World Wide Name

Documentation feedback

Hewlett Packard Enterprise is committed to providing documentation that meets your needs. To help us improve the documentation, send any errors, suggestions, or comments to Documentation Feedback (<mailto:docsfeedback@hpe.com>). When submitting your feedback, include the document title, part number, edition, and publication date located on the front cover of the document. For online help content, include the product name, product version, help edition, and publication date located on the legal notices page.