

# Determining which HostID to use

*The information on this page refers to LM-X v4.9 and newer, which added HostIDs for Google Compute Engine and Azure. If you are using an older version of LM-X, refer to [documentation for earlier versions](#).*

The following table lists all HostID types that are supported by LM-X License Manager and indicates the level of security and flexibility of each type to help you decide which HostID type(s) work best for your needs. We recommend using a HostID that the end user will not change often during the valid period of the license.

**Note:** The values you enter as HostID(s) are case-insensitive (for example, "User" and "USER" are interpreted as the same entries).

HostID Type	Security	Flexibility	Notes
Hostname	Low	High	Easy to move.
Username	Low	High	Easy to move.
IP address	Low	High	Easy to move. This HostID is a good choice if the IP address is static and available.
Windows product ID	Low	High	Easy to move.
Harddisk	High	Low	Difficult to move. For optimal security, locking to the BIOS and/or Harddisk HostID is more resistant to abuse; however, these HostIDs can be acquired only on Windows platforms.
BIOS	High	Low	Difficult to move. For optimal security, locking to the BIOS and/or Harddisk HostID is more resistant to abuse; however, these HostIDs can be acquired only on Windows platforms.
Long (Unix-specific locking)	High	Low	Difficult to move. <b>Note:</b> Mac OS X machines which have undergone extensive hardware modifications, for example had their internal hardware components replaced, may irreversibly lose their serial number (Long HostID). This can cause LM-X to fail to check out the license. Therefore, users without a well-defined serial number or those users who lost their serial number are recommended to choose a HostID type other than Long HostID for their licensing purposes.
Ethernet card (MAC address of the Ethernet card)	Medium	Low	Difficult to move; however, it is possible to change the MAC address, which somewhat compromises security.  Generally a good choice for locking either a node-locked license or a floating license, because almost all machines have an Ethernet card, and information about the Ethernet HostID is available on all platforms.
Hasp HL dongle	High	High	Dongles have superior security and flexibility; however, because the dongle is a physical device, it has the risk of being lost or broken.
Custom	High	High	Lets you develop your own algorithm to lock the application to custom hardware.
AWS Instance ID	High	High	May be somewhat time-consuming when collected in environments other than AWS; therefore, this HostID should be disabled if not being used by the client.
Google Compute Engine (GCE)	High	High	May be somewhat time-consuming when collected in environments other than GCE; therefore, this HostID should be disabled if not being used by the client.
Azure	High	High	May be somewhat time-consuming when collected in environments other than Azure; therefore, this HostID should be disabled if not being used by the client.

**Note:** For the highest level of security, we recommend that you use as many HostID types as possible. We also recommend using [HostID matching](#) to define custom configuration settings more accurately.