

Using Waypoint Software on Virtual Computers

This document is intended to explain the differences in licensing when using Waypoint software on a virtual computer, and to provide suggestions on how to handle those differences.

Waypoint software supports single instance use on virtual machines. This means when using Waypoint software on a virtualized computer only a single user may use the software at any time. The exception is the Waypoint SDK, which supports multiple instances/users.

Licensing for Waypoint software works differently on a virtualized computer. The information used to uniquely identify a virtualized computer is different than the information used to uniquely identify a physical computer. Additional items termed **VMID** and **VM Generation ID** are used to determine the identity of a virtualized computer¹. These items are not available when using a physical computer.

If either the **VMID** or **VM Generation ID** change, the computer identity will change with respect to how Waypoint licensing sees it. This can lead to issues returning the license from the virtualized computer.

Usually the **VMID** will not change unless the virtual machine is cloned.

The **VM Generation ID** will change after the following actions are taken on a virtual machine (i.e. unsafe licensing actions):

- The virtual machine starts executing a snapshot
- The virtual machine is recovered from a backup
- The virtual machine is failed over in a disaster recovery environment
- The virtual machine is imported, copied, or cloned

The **VM Generation ID** will *not* change after the following actions are taken on a virtual machine (i.e. safe licensing actions):

- The virtual machine is paused or resumed
- The virtual machine reboots
- The virtual machine host reboots
- The virtual machine is live migrated
- The virtual machine is failed over in a clustered environment

¹ A computer's "identity" as seen by Waypoint is an obfuscated hex string generated by the licensing API. There is no actual identifying information present, such as IP address. While this hex string is unique to each computer, it cannot be used to reveal any user data.

In order to successfully return a license, the license server requires the return request to come from the same computer the activation request came from. If the identity of a virtual machine changes between license activation and return (i.e. VMID or VM Generation ID change) it is likely that the license cannot be returned and is therefore locked to the virtual machine.

The suggested method of handling a Waypoint license on a virtual machine is to activate the license when you need it and return the license when you are done. This avoids the potential for the computer identity to change while a license is active.

If the license is locked and cannot be returned due to a difference in the computer identity, a license replacement request must be done. Contact support@novatel.com for further information.