

Network licenses installation manual

TopSolid 2022

(Sentinel RMS License Manager 9.6, Sentinel Protection Installer 7.6.9)

- **"Sentinel RMS License Manager version 9.6 supported platforms:**
 - 32 bit: Windows 7 / 8.1 / 10 v1903 / Server 2008.
 - 64 bit: Windows 7 / 8.1 / 10 v1903 / Server 2008 / Server 2008 R2 / Server 2012 / Server 2012 R2 / Server 2016 / Server 2019.
- **Migrating from Sentinel License Manager 7.2 to RMS 9.6: Licenses files used with 7.2** license manager can be reused by the license manager 9.6. Previous TopSolid versions (TopSolid from 6.6 to 6.22) are compatible with license manager 9.6. Thus, it is recommended to remove any license manager 7.2 installations and replace them by an 9.6 installation and transfer previous license files to this server. This new server will be able to provide licenses to TopSolid 6.6, 6.7, 6.8, 6.9, 6.10, 6.11, 6.12, 6.13, 6.14, 6.15, 6.16, 6.17, 6.18, 6.19, 6.20, 6.21, 6.22 and 6.23 client installations.

1. Introduction

This manual describes how to install network licenses for TopSolid 2022.

You will see how to configure the license server and the client machines. For a configuration with several license servers, just repeat the steps described in chapter 3.

For more information about "Sentinel RMS License Manager 9.6" refer on TopSolid DVD to: "`\Redist\Sentinel RMS License Manager\Help\default.htm`" file.

2. Requirements

- A local network with a TCP/IP or IPX protocol, this is the only protocols supported for network licenses.
- You need administrator privileges to install, configure and manage network licenses.
- Have a fixed IP address on the machine where will be installed the Sentinel RMS License Manager.

3. License server machine installation

A. During the TopSolid installation, choose "Client + Server" then "Server Machine" options.

To check if the license server installation is correct: search in "Configuration pane/Add Delete programs", for "Sentinel RMS License Manager" and "Sentinel Protection Installer".

"Sentinel RMS License Manager" is the license manager. "Sentinel Protection Installer" is the driver for communicating with the dongle. The dongle allows identifying your server machine. Only license codes generated with your dongle identification number can be added to the license manager.

If the installation isn't complete:

- On TopSolid DVD, run "`\Redist\Sentinel RMS License Manager\Setup.exe`" to install the license server.
- Run "`\Redist\Sentinel Protection Installer\Sentinel Protection Installer 7.6.9.exe`" to install the sentinel driver.
- Restart computer.

Remarks:

- Check that each client computer is connected with the license server on the local network.
- On the license server, "lservnt.exe" process manages continuously the available licenses and the client requests.
- "lservnt.exe" can be started and stopped with the command lines: "lservnt.exe -X start" et "lservnt.exe -X stop" (in C:\Program Files\Common files\SafeNet Sentinel\Sentinel RMS License Manager\WinNT).

To check that installation is complete you can search for "lservnt.exe" process in the "Windows Task Manager".

B. Install the Sentinel dongle (Identifying key). Switch off the server computer before plugging in the key. This key is specific to a licenses server and is different of a traditional key. In the Sentinel LM directory run "wechoid.exe", check that the line "Computer ID" is active.

If not, the key is not properly installed or the key is broken. You can check if the Sentinel driver is properly installed: search in "C:\Windows\System32\drivers" the driver "Sentinel.sys" exists.

4. Client machine installation

During the TopSolid installation, choose "Client + Server" then "Client Machine" options.

A. Shortcut solution: During setup a shortcut TopSolid V6.23 has been created on the desktop with the following argument "-fTOPSOLID/Module/6.23". Replace « Module » with a license module number existing on the license server. You can specify several modules using the following syntax: "top623.exe -fTOPSOLID/200/6.23 -fTOPSOLID/2/6.23 etc..."

Code file solution: Remove « -fTOPSOLID/Module/6.23 » argument. Declare the license modules in the "top.cod" file located in the configuration folder of TopSolid (TOPCONFIG folder, you can check it using the menu entry « Help » -> « Configuration »). Enter one line for each module using the syntax "TOPSOLID/Module/6.23".

Centralized code file solution: You can declare the license modules in the "top.cod" file located in the group folder (TOPGROUP folder declared for all the client machines, you can check it using the menu entry « Help » -> « Configuration »). Then you can specify for each module which computer will be able to use it using the following syntax:

PC1: TOPSOLID/Module/6.23

PC2: TOPSOLID/Module/6.23

PC3: TOPSOLID/Module/6.23

etc.

PC1, PC2, PC3 are the computer names on the local network. This solution allows the license administrator to manage the license modules for each client machines.

B. Open the system file "hosts", this file is located in "\Windows\system32\drivers\etc". This file must contain the declaration of the server machine name (refer to the explanations in the hosts file to add the server machine name).

C. Define the environment variable:

- If there is only **one license server**:
Define the environment variable LSFORCEHOST

set LSFORCEHOST=<name_of_license_server_machine>
in "Configuration pane/System/advanced->environment variable" panel.

You can use the LSFORCEHOST environment variable to force the application to look for only one license server computer (saving of time during research of the server). If the license server listed in the variable cannot be found, the application stops searching and returns an error.

Sample: To configure TopSolid to send license requests to a server on the same subnetwork called ACCT_SERVER:

LSFORCEHOST=ACCT_SERVER

- If there are **several licenses manager on the network**:
Define the environment variable LSHOST
set LSHOST=<name_of_license_server_machine1>~<name_of_license_server_machine2>
in "Configuration pane/System/advanced->environment variable" panel.

The LSHOST environment variable is used on a computer that is running a protected application. It tells the application one or more license server computers to search for.
If this variable is not set then the application will perform a broadcast for any license server that can authorize the application to run. When the variable is set, the application will traverse the list of license servers beginning at the first license server in the list and moving down the list. If none of the specified license servers is found, the application will broadcast to the network, looking for any license servers. Separate license server host names with a ":" symbol.

5. License codes installation on the server

On the **license server** machine:

A license file (normally with a ".lic" extension) has been delivered to you.

In the Sentinel LM directory run **WlmAdmin** utility (directory on DVD: Redist\Sentinel RMS License Manager\Tools), right click on license server then "Add Feature", "From a File", "To Server and its File".

6. Installation checking

- On the license server machine: run "WlmAdmin.exe". Search the license server in the subnet tree. Check the licenses are declared.
- On the client machine: run TopSolid.
- If TopSolid runs in demo mode, you can copy "Isapiw32.dll" and "WlmAdmin.exe" in a temporary directory on the client machine. Then run "WlmAdmin.exe" and check if the license server is visible.
- If some problems remain, see Chapter 8 for common problems resolution.
- If the client and server machines are located on different subnets in the local network, refer to Chapter 9.

7. Administration tools

Here are several utilities to manage network licenses. For more information about their behavior see Sentinel Administrator Guide (cf. chapter 1).

WlmAdmin Display the license servers, the licenses and the licenses states.

wechoid	Display the Sentinel identification numbers of the computer. See "Computer ID" to check dongle.
Isdecode	Check that each license code has a server locking code identical to the dongle code.

8. Common problems resolution

A. Server checking

- Check TCP/IP (ping, route print).
- Check if the Sentinel LM process is running (lservnt.exe).
- Check that the machine names don't contain underscores "_" or dashes "-", it isn't supported.
- **wechoid** tool returns the key code (warning this code is different than the key Serial Number).
Check the key code is not zero.
If the code is null, install the sentinel driver.
Check the serial port configuration, it must be bidirectional.
If the code is still zero, the key might be broken.
- With **WlmAdmin**, check that the required license code is declared.
- Use **Isdecode** to check that each protection code has a "server lock code" identical to the dongle "lock code" and that it matches the "Sentinel Computer ID". If not, code has been wrongly generated.

B. Client checking

- Check that the client machine sees the server with **WlmAdmin**.
- Define the variable **LSFORCEHOST** or **LSHOST** to indicate the name of the license server.
- Check if the command line of the TopSolid shortcut is correct, it must contain: '-fTOPSOLID/N°Module/6.23'. The module number must match an available module number on the license server.
- When TopSolid terminates abnormally, it tries to release the license codes owned by the application. But if it fails, the license server will keep these licenses for 5 minutes. You can see with WlmAdmin if the requested licenses are newly available.

9. Different subnets or internet access

If the client and server machines are located on different subnets or if you want to access the server machine via internet:

- The router must open the 5093 port (it's a reserved port for Sentinel LM). Take care the firewall doesn't close accesses to this port.
- On the client machine set the LSPORT environment variable: set LSPORT=5093
- On the server machine set the LSERVOPTS environment variable: set LSERVOPTS=-port 5093 (LSERVOPTS supports several options including "-port" option)
- On the client machine set LSFORCEHOST to the name or IP address of the server machine.

10. License server on virtual machine

It is possible to install **Sentinel RMS License Manager** on virtual servers.

Depending on the virtualization technology the USB connectivity can be supported or not:

- Virtual Box, VMWare Workstation => USB supported
- Hyper-V, Citrix, VMWare ESX => USB not supported

This generates an issue because **Sentinel RMS License Manager** need to access an USB dongle to protect their license(s).

Protecting a license with the Network ID (MAC address) is not secure on a virtual server; Indeed, the administrator can easily set any desired MAC address. Therefore, this is not suitable to replace a Dongle ID by a Network ID, just because the USB key can't be accessed.

Solution:

When it comes to protect a License Server, an USB hub must be used. This allows the customer to access the USB dongle anywhere on the local network. Two solutions are recommended by TOPSOLID:

- AnywhereUSB (www.digi.com)
- DongleServers (<http://www.dongle-server.com/>)