tenAsys®

INtime® Distributed RTOS
Licensing
Policies and Procedures

Table of Contents

Introduction

TenAsys licensing policy is designed to protect you and TenAsys from illegal copying of your and our intellectual property.

This document outlines the processes and policies that have been put in place to support the license protection schemes to address two environments, a development license for the development and a run-time node-lock license for production.

These policies and processes have been in place for many years and have proven to address all known situations. There are however always new situations and our goal is to ensure that our processes meet your current and on-going needs. We therefore welcome you to contact us if you are experiencing difficulties in executing the prescribed processes.

By website: www.tenasys.com Please create a support case.

By email: sales@tenasys.com
Or: license@tenasys.com
Or: support@tenasys.com

By phone:
International: +1 (503) 748-4720
USA toll free: 1 (877) 277-9189
Between the hours of 8:00 and 17:00 hours
PST/PDT - Pacific Standard/Daylight savings Time (UTC -8/-7).

Europe: +49 (89) 45 46 9 47 - 0
Between the hours of 8:00 and 17:00 hours
CET/CEST – Central European [Saving] Time (UTC +1/+2).

INtime Distributed RTOS License

The INtime Distributed RTOS license has two components. Licensing of the SDK as discussed under the heading Development Environment and licensing of deployed systems in Production Environment.

Identifying license components:

SDK license code: 5x<6 alphanumeric characters> separated by dashes
120004-9K9A70-9K9A70-EXJ05Q-EXJ05Q - Used to activate a USB Key.
SDK USB dongle key: Purple for SDK, Yellow for INtime for Windows run-time
DRTOS activation string: 4X<8 Hexadecimal digits> separated by dashes
01234567-89ABCDEF-01234567-89ABCDEF
Used to activate a node-lock license from the TenAsys license server.
DRTOS fingerprint: 84 alphanumeric characters "+" 12 alphanumeric characters
FDEyMzQ1Njc4Oj08PT1BRVRTRVVXHUZOZWEaGxwdRmxUTmV3VFtadFx8fW9fLS4vMDEyMzQ1Njc4OTo7PD0+P0BBQkNERUYA
DRTOS license response string: ~61 lines of ASCII with 76 columns.

Development Environment

USB Dongle – Single Development Platform

All Software Development Kits are supplied with a USB dongle. This USB dongle must be attached to the development platform during the installation of the SDK and while performing development work. Failing to have the USB dongle attached the platform will inhibit the operation of the SDK.

Note: This allows installation of the SDK on several platforms with the understanding that only platforms with a USB dongle are operational.

Target Platform and Development Systems.

The target platform, or system hosting the INtime Distributed RTOS application needs to be tethered (connected by an ethernet link) to a development platform that has a USB dongle, or the target platform must have its own active license. Without a tether or a local license, the target platform INtime RTOS will only run for a limited time.

Loading and activating a license on the target platform is covered in the Production Environment section.

USB Dongle – Multiple Development Platforms

By default, each SDK is locked to the particular USB dongle used to install the software.
Upon request a unified license file supporting up to seven (7) USB dongles can be provided. This allows a design center that has purchased several SDKs to use any of the USB dongle keys supplied with the SDKs to activate any of the installed SDKs in the design center.

Requests for having multiple USB dongles work on any system with an SDK installation can be made by sending an email to license@tenasys.com with the following information:

- Name of Company.
- Serial numbers of all the USB dongles.

Network License USB Dongle – Networked Platforms

A network license USB dongle is provided with the purchase of network license. The network license USB dongle needs to be on a server that is accessible by the local network hosting the SDK development platforms. The network license supports six (6) or more purchased SDKs at a time.

An active SDK checks out a token from the network license. This allows an SDK loaded on a laptop to be used on a remote site. When the remote work is completed, the license token can be checked back in to allow other SDKs on the network access to the token.

Please contact license@tenasys.com to purchase a network license.

Loss of USB Dongles

USB dongles are unique and cannot be replaced. It is therefore very important that they are secure at all times.

Production Environment

Node-lock

Action

To deploy an INtime Distributed RTOS application separate from the SDK, an INtime Distributed RTOS license must be activated on the target platform. Target platforms that are not activated will not be able to run INtime Distributed RTOS applications beyond a limited time.

Activation Process

The process of "activation" consists of capturing a "fingerprint" from the platform, sending that "fingerprint" to a license server and then loading the license string generated by the license server onto the target platform.

The activation must be performed for every target platform because the license key is unique for each individual target platform.

Run-time Licenses – Run-time & Multi-core Run-time

Run-time licenses must be purchased before they can be downloaded from the license server in the process to activate a target platform. The cost of a run-time license varies with the volume purchased per year. Multi-core run-time licenses can also be purchased to support more than two (2) instances of INtime on a single target platform. Non-multi-core licenses will only allow two (2) instances of INtime to run on a multi-core processor.
Purchase of run-time licenses can be arranged by contacting sales. See the Introduction section for phone numbers and email address.

Activation Methods

Once a license agreement and licenses have been purchased, a list of Single Use Activation Codes (SUAC) for each purchased license will be provided. SUACs are used during the activation process to:

1. Identify the kind of license that needs to be issued.
2. Record the issuance of the license against a valid account.

A list of SUACs will be provided by email or fax at the time of purchase. Appendix 1 provides step by step instructions on how to retrieve the list on-line.

Activation Methods

There are several ways to "activate" a target platform. They include:

Internet Activation

Internet activation is the default method of activation. The target platform must be connected to a network that has access to the internet and the pop-up screens provide guidance through the process.

See Appendix 1 for detailed instructions on how to perform an Internet Activation.

License portal activation

This process is for users that cannot or do not want to have the target platform connected to the internet for security or other reasons.
The process consists of capturing the "fingerprint" from the target platform and copying this "fingerprint" to a system that has access to the internet. Open the license portal at http://activate.tenasys.com/activate/activate.aspx in an internet browser. Provide the "fingerprint' to the license portal. Copy the returned license code onto the target platform.
See Appendix 2 for detailed instructions on how to perform a license portal activation.

Field Service Considerations

As mentioned earlier, every license key is unique to a particular target platform. The run-time node lock license is for a particular target system and is not transferable. Replacing a system will require the purchase of a new run-time license. Changing part of the system, such as the hard disk drive, on which INtime is activated could invalidate the license key that was generated for that target platform. A new license key for the platform might need to be generated using one of the listed methods.

Appendix 1 - Internet Activation

This method requires the target platform to be connected to a network that has internet access.

Network Firewall considerations

The license server requires the client to have access to TCP port 8888 for communication and activation.

Procedure

Activation of the target platform can be performed while the target platform is tethered or untethered. An un-activated target platform time-outs after searching for a tether but the time-out period is long enough for the activation process.

Activation of a target platform is performed with the aid of the built-in web-server on INtime Distributed RTOS. Access the web-server interface by entering the IP address from the installation configuration of the target platform or from the startup screen at boot time if the platform was set to obtain an IP address via DHCP as shown in the example screen below.

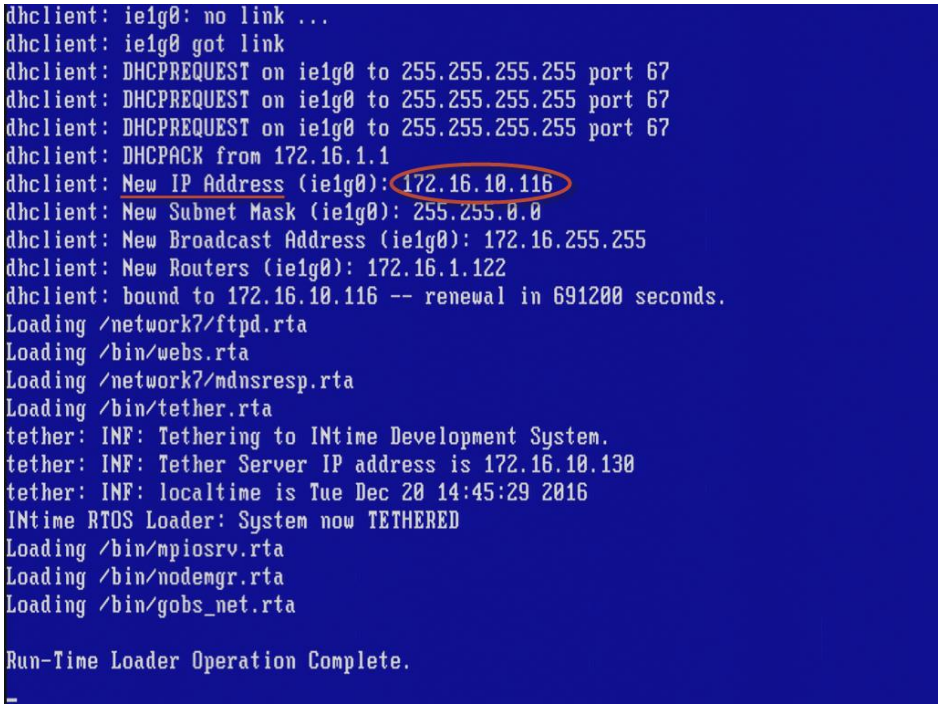

Figure 1.1 - Target platform boot up screen with the IP address listed.

The target platform was set up in DHCP mode with the network connection on network device rtl1g0.

An alternative is to use the *INtime Node Management* window on any system on the network shared with the INtime Distributed RTOS target platform. If using the *INtime Node Management* window, the IP address is displayed on the right after selecting the system on the left. Click on *Configure over network*.

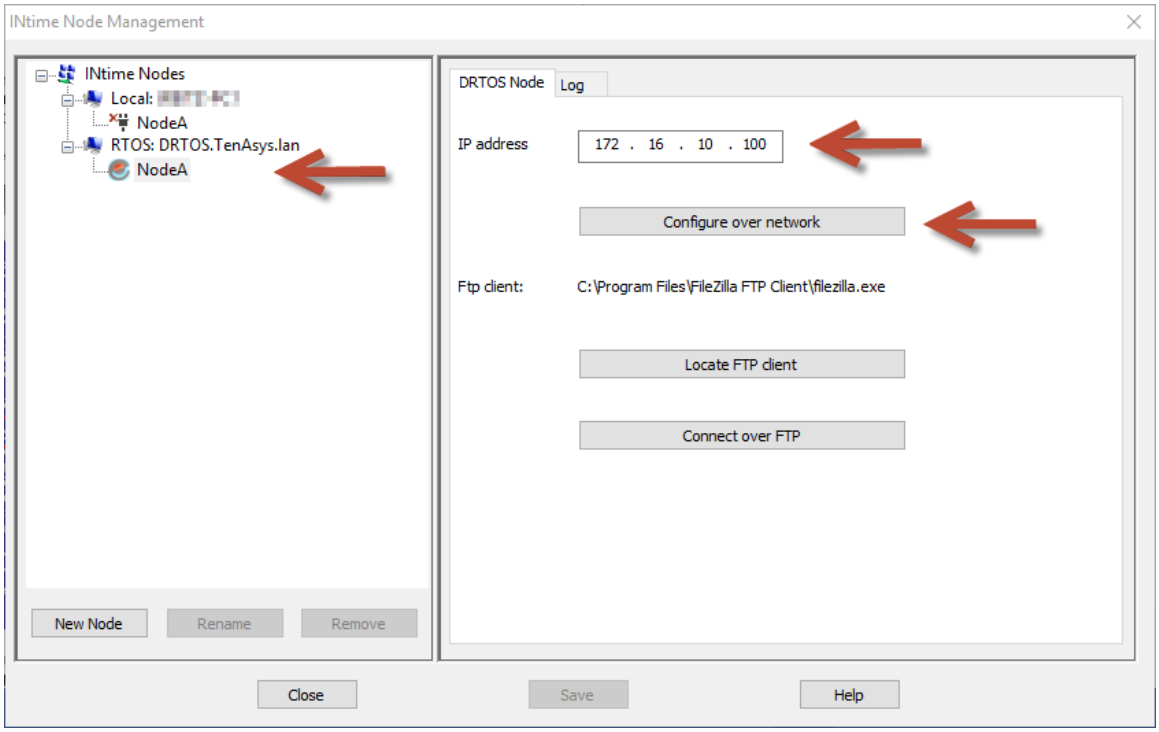

Figure 1.2 – Select the RTOS node with the INtime Node Manager.

Both methods get to the initial INtime distributed RTOS screen from the built-in web server.

Figure 1.3 – Initial screen from the RTOS web server.

Click on *INtime Configuration*.

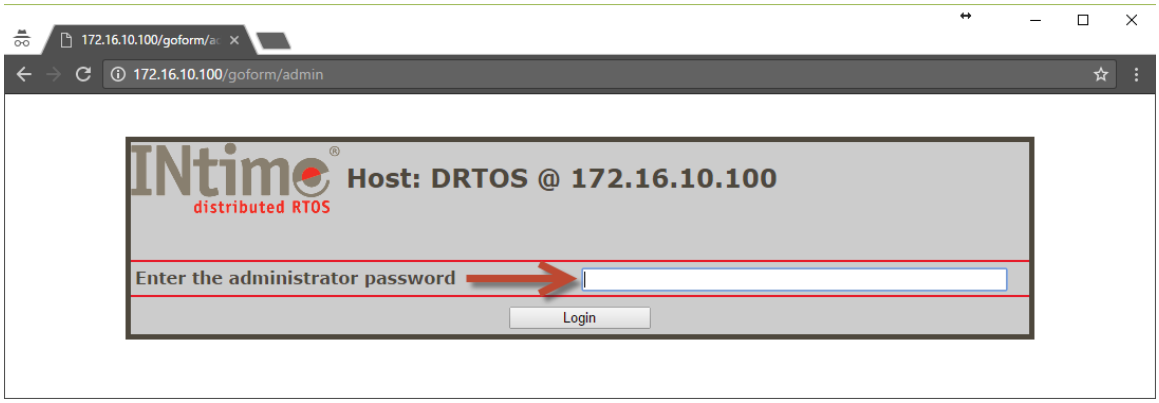

Figure 1.4 - Password screen of the target platform's built-in web-server.

Enter the target platform password set in the installation configuration process. If the password was not set, it is blank. Click on *Login*.

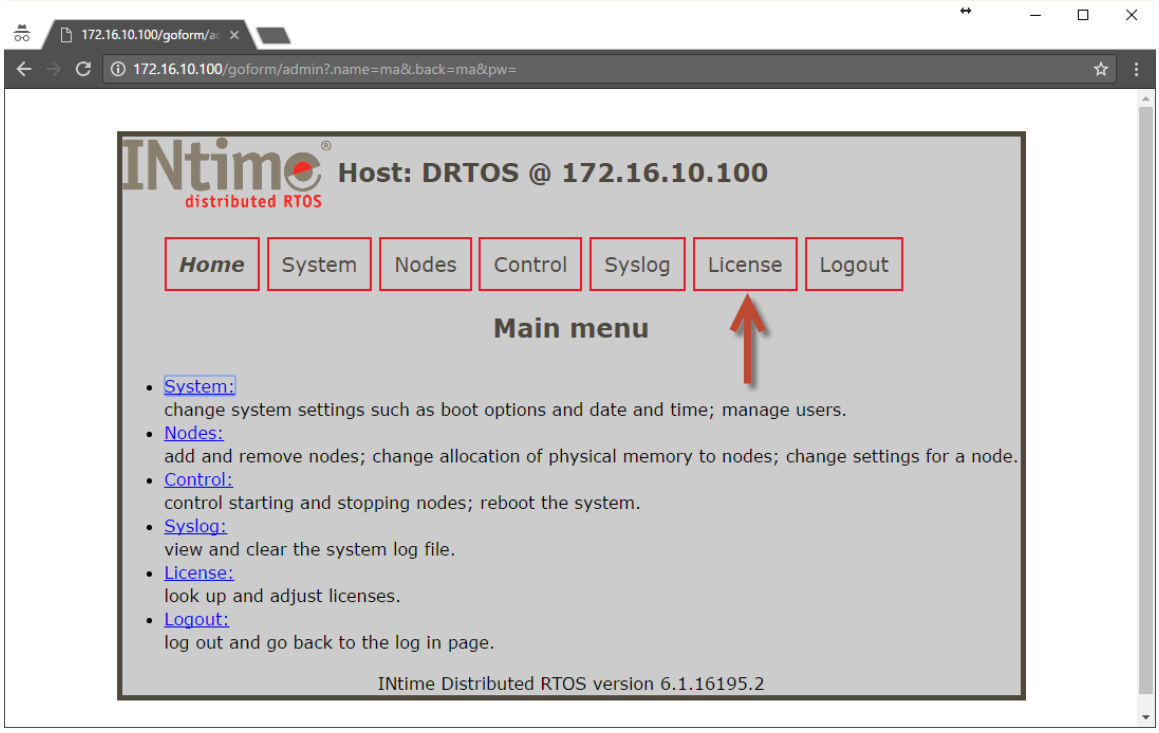

Figure 1.5 - Main screen of the target platform's built-in web-server.

Click on the License menu and a screen listing 4 methods to activate the platform appears.

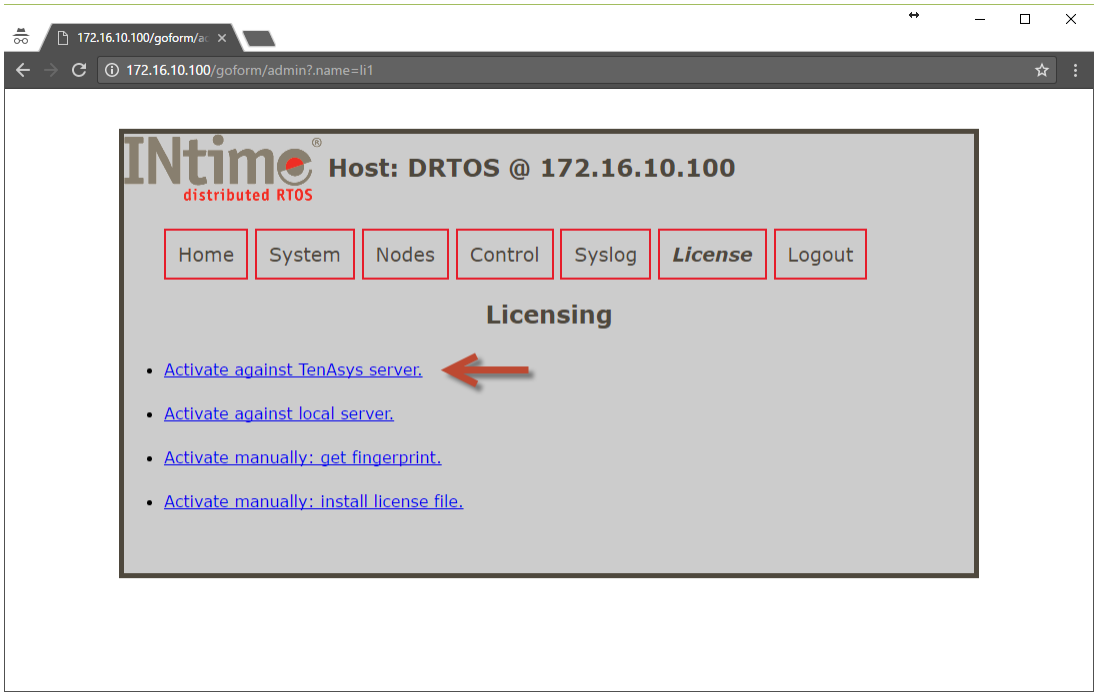

Figure 1.6 - Activation option screen and activation against TenAsys-server entry screen.

Click on *Activate against TenAsys server*.

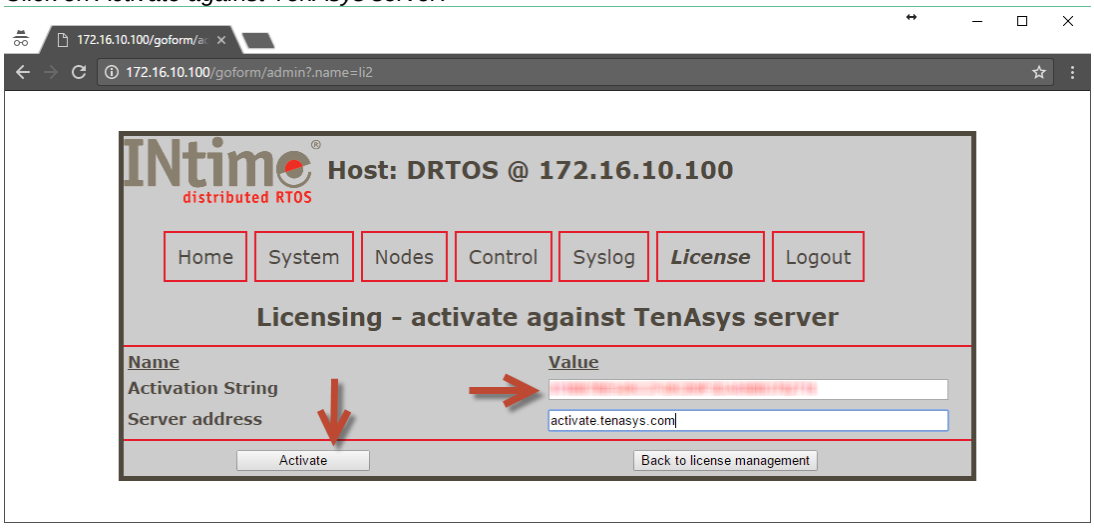

Figure 1.7 - Activation option screen and activation against TenAsys-server entry screen.

Select an "*Activation String*" from the list received after the purchase of run-time licenses. The "*Activation String*" consists of four sets of eight hexadecimal digits separated by hyphens. Enter the "*Activation String*" and click on the *Activate* button. The application will automatically take a "fingerprint" of the platform, communicate, and record the "*Activation String*" against the signature on the TenAsys license server and download a License Key to the platform from the TenAsys license server. The target platform is activated and ready to run permanently untethered.

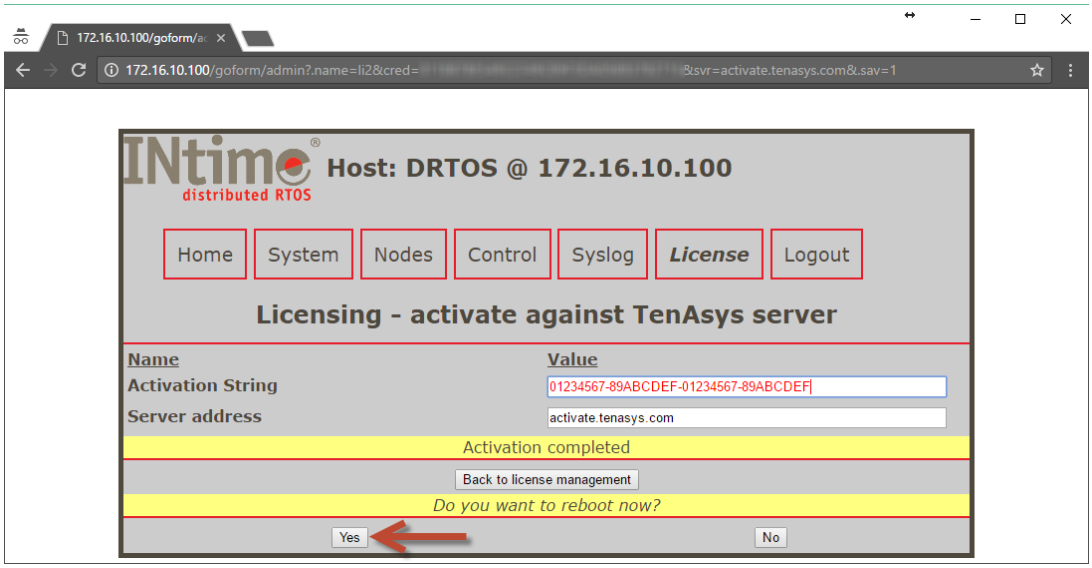

Figure 1.8 – Successful activation

Click on *Yes* to reboot the INtime Distributed RTOS system with the new license.

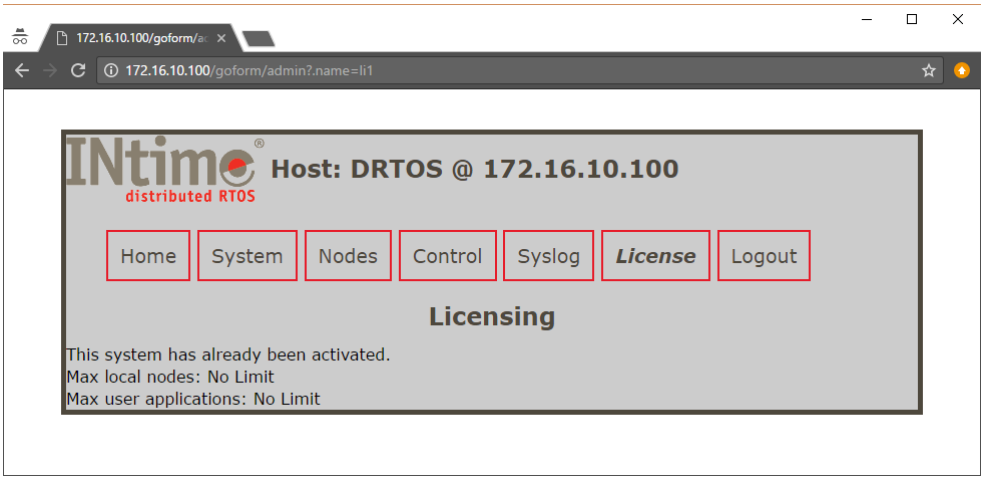

Figure 1.9 – License page after activation

If the target platform's software is re-installed from scratch, this process can be repeated. The "License code" is detected as already used and the platform's signature is checked against the signature that was sent when the platform was activated previously. If they match, then a new "License Key" will be downloaded to the platform without consuming an additional license.

Appendix 2 – License Portal Activation

License portal activation does not require the target platform to be connected to the internet. Activation comprises of several steps and may take a day or two to complete.

Procedure

Activation of the target platform can be performed while the target platform is tethered or untethered. An un-activated target platform time-outs after searching for a tether but the time-out period is long enough for the activation process.

Activation of a target platform is performed with the aid of the built-in web-server on INtime Distributed RTOS.

Access the web-server interface by entering the IP address from the installation configuration of the target platform or from the startup screen at boot time if the platform was set to obtain an IP address via DHCP as shown in the example screen below.

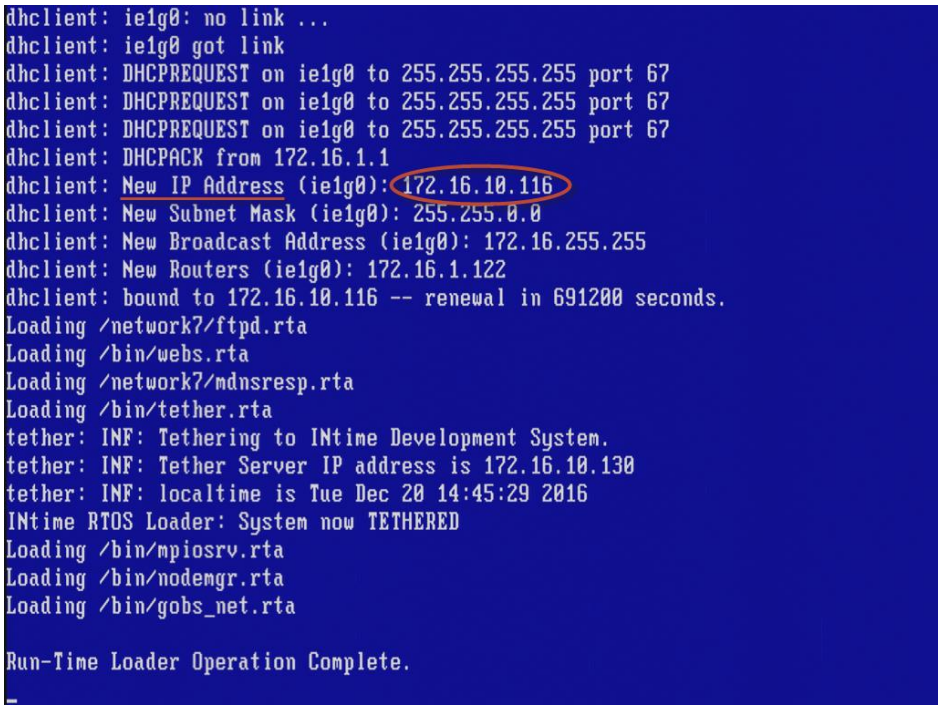

Figure 2.1 - Target platform boot up screen with the IP address listed.

The target platform was set up in DHCP mode with the network connection on network device rtl1g0.

An alternative is to use the *INtime Node Management* window on any system on the network shared with the INtime Distributed RTOS target platform. If using the *INtime Node Management* window, the IP address is displayed on the right after selecting the system on the left. Click on *Configure over network*.

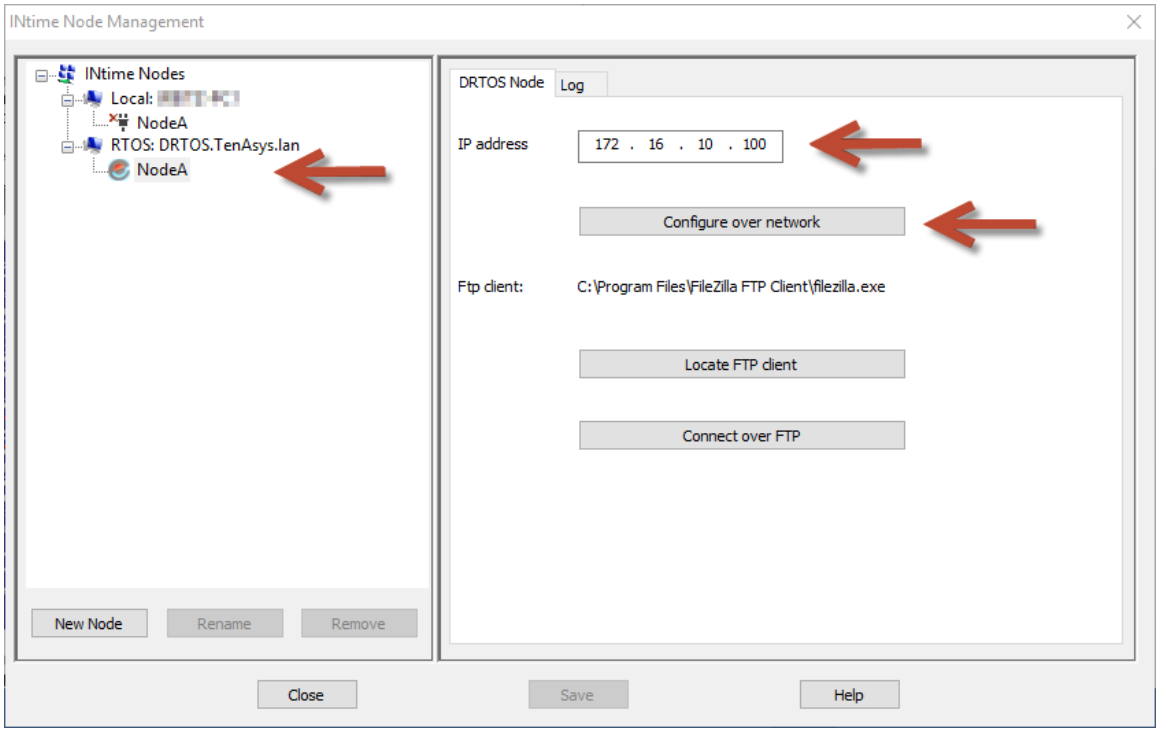

Figure 2.2 – Select the RTOS node with the INtime Node Manager.

Both methods get to the initial INtime distributed RTOS screen from the built-in web server.

Figure 2.3 – Initial screen from the RTOS web server.

Click on *INtime Configuration*.

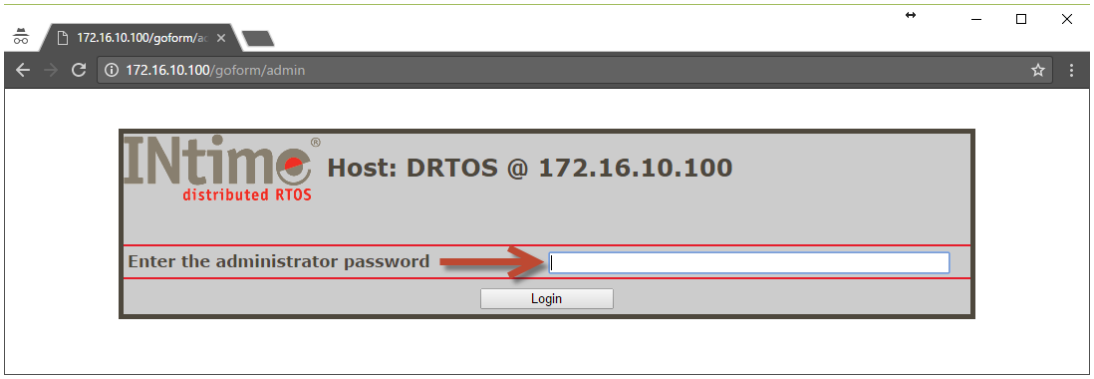

Figure 2.4 - Password screen of the target platform's built-in web-server.

Enter the target platform password set in the installation configuration process. If the password was not set, it is blank. Click on *Login*.

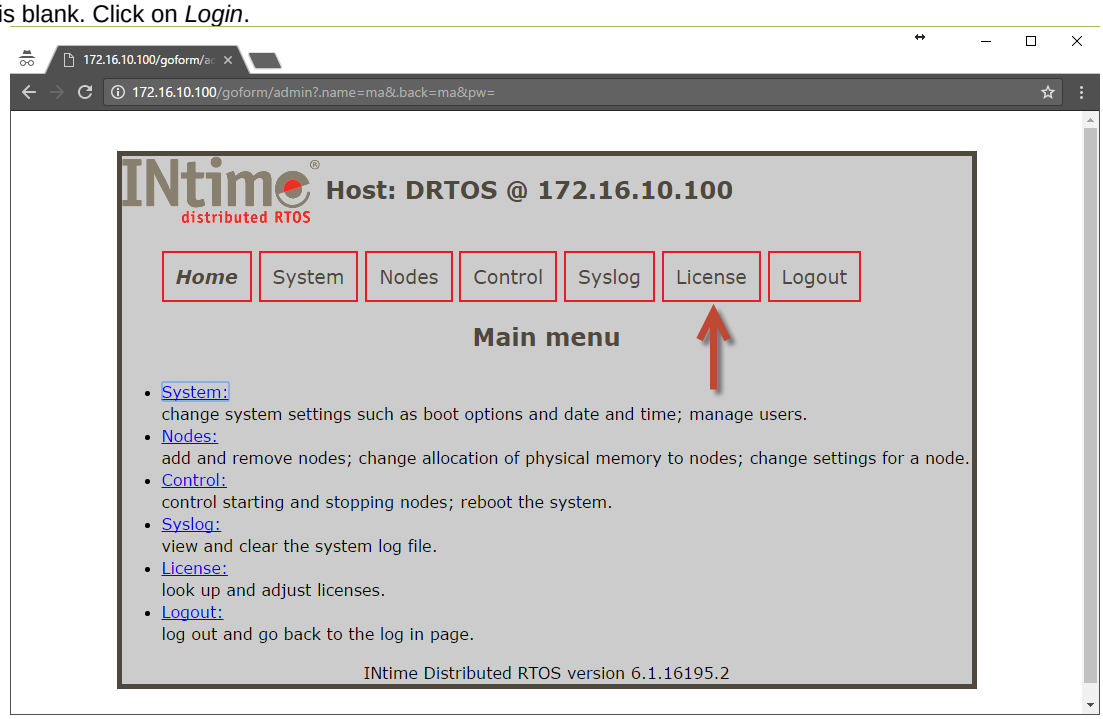

Figure 2.5 - Main screen of the target platform's built-in web-server.

Click on the *License* menu and a screen listing 4 methods to activate the platform appears. Click on *Activate manually: get fingerprint*. and a screen appears that lists the fingerprint in a blank field as shown below.

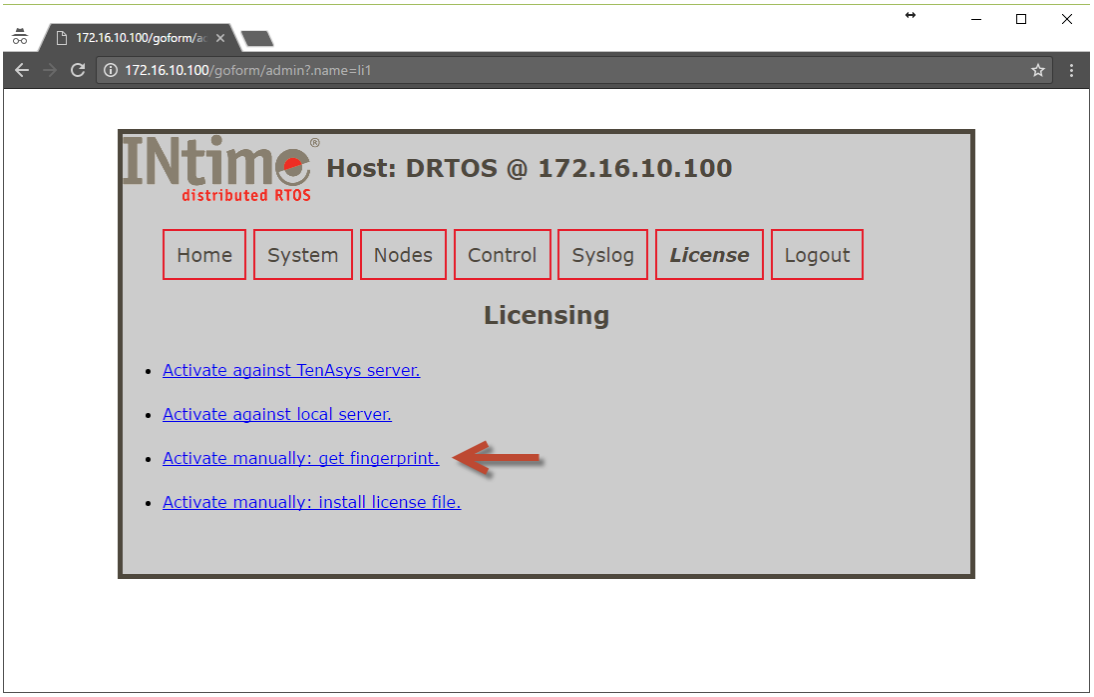

Figure 2.6 - Licensing – get fingerprint

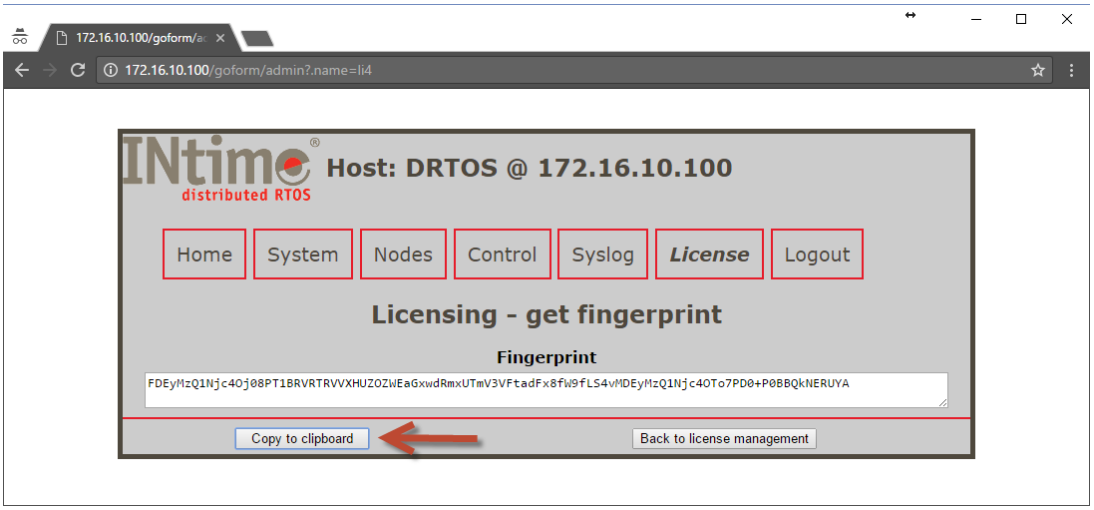

Figure 2.7 - Licensing – get fingerprint screen

Click the *Copy to clipboard* button.

Paste the content of the clipboard to a text file editor like Notepad and send it to license@tenays.com. An email response is generated within a business day (US business day) with an attached file containing the License Response String.
Load the license file on the PC that is connected to the target platform. Go the license screen and click on *Activate manually: install license file*.

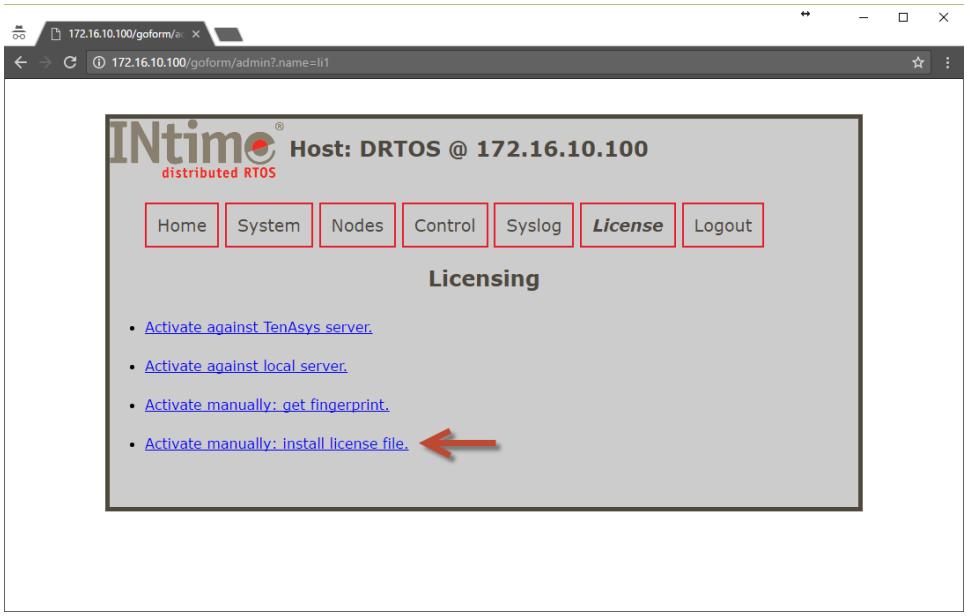

Figure 2.8 - Select install license file

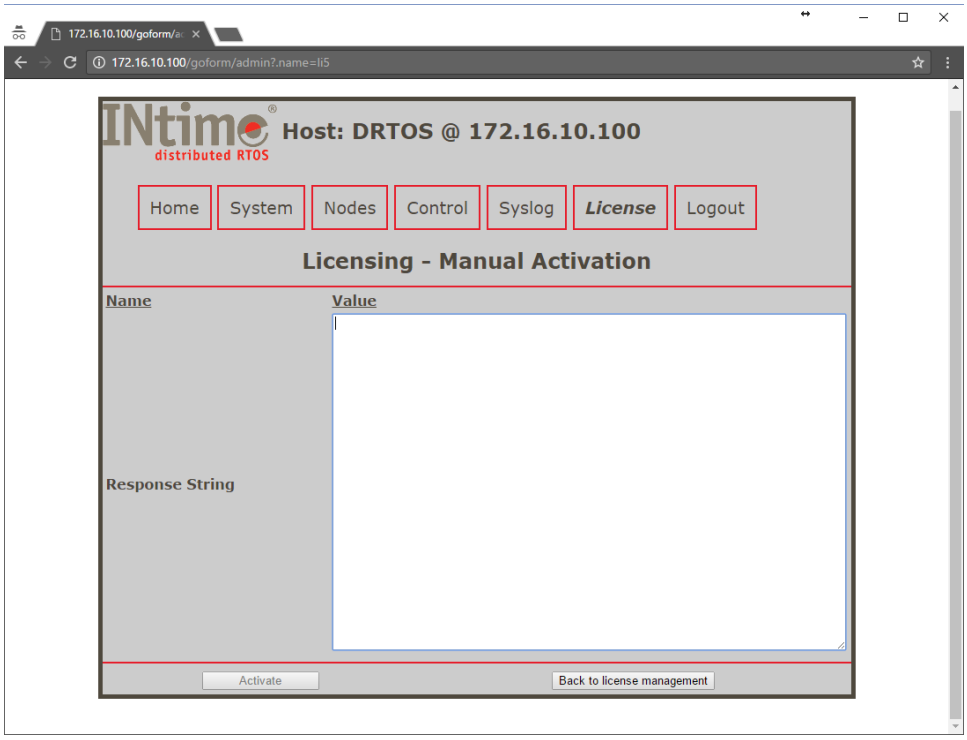

Figure 2.9 - Manual license file installation screen

Copy and paste the License Response String from the file and click on the Activate button. The target platform is activated and ready to run permanently untethered.