Atoll

Wireless Network Engineering Software

License Management Guide

Version 3.4.0

AT340_LMG_E2

Forsk

Atoll 3.4.0 License Management Guide

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Introduction

This License Management Guide is aimed at administrators who need to configure fixed and floating licenses for **Atoll**.

Atoll can be used on:

- Computers with fixed license keys plugged in to USB ports on the computers themselves.
- Computers that are connected to a license server with a floating license key plugged in to a physical USB port on the server or a network-attached USB hub.

The driver for fixed license keys is installed at the same time as **Atoll** and does not require any further action. For information about installing **Atoll**, see the **Atoll** *Administrator Manual*.

The software for managing floating license keys must be installed on a server accessible to all computers on which **Atoll** runs. For more information on configuring a floating license server, see Chapter 2: Working with Floating Licenses.

In addition, an **Atoll** Security Module is available for administrating both fixed and floating licenses. For information on the Atoll Security Module utility, see Chapter 1: Atoll Security Module (Lic.exe).

About Atoll

Atoll is a multi-technology wireless network design and optimisation platform that supports wireless operators throughout the network lifecycle, from initial design to densification and optimisation. Atoll offers unique capabilities of using both predictions and live network data throughout the network planning and optimisation process.

Atoll includes integrated single RAN–multiple RAT network design capabilities for both 3GPP and 3GPP2 radio access technologies including 5G NR, LTE, NB-IoT, UMTS, GSM, and CDMA. It provides operators and vendors with a powerful framework for designing and optimising current and future integrated multi-technology networks.

Atoll supports the latest technology advances such as massive MIMO, 3D beamforming, and mmWave propagation for the design and roll-out of 5G networks.

Atoll's integration and customisation features help operators smoothly streamline planning and optimisation processes. Atoll supports a wide range of implementation scenarios, from standalone to enterprise-wide server-based configurations. Atoll has become the industry standard for radio network planning and optimisation.

If you are interested in learning more about Atoll, please contact your Forsk representative to inquire about our training solutions.

About Forsk

Forsk is an independent software company providing operators and vendors with wireless network design and optimisation products. Atoll, Forsk's flagship product, is the market-leading wireless network planning and optimisation software on the market; it allows operators to streamline planning and optimisation activities by combining predictions and live network data.

With more than 9000 active licenses installed with 500+ customers in 140 countries, Atoll has become the industry standard for wireless network design and optimisation.

Forsk distributes and supports Atoll directly from offices and technical support centres in France, USA, and China as well as through a worldwide network of distributors and partners.

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Getting Help

The online help system that is installed with Atoll is designed to give you quick access to the information you need to use the product effectively. It contains the same material as the *Atoll 3.4.0 User Manual*.

You can browse the online help from the **Contents** view, the **Index** view, or you can use the built-in **Search** feature.

You can also download manuals from the Forsk web site at:
http://www.forsk.com/support/

Printing Help Topics

You can print individual topics or chapters from the online help.

To print help topics or chapters:

1. In Atoll, click **Help > Help Topics**.
2. In the **Contents** tab, expand the table of contents.
3. Right-click the section or topic that you want to print and click **Print**. The **Print Topics** dialog box appears.
4. In the **Print Topics** dialog box, select what you want to print:
   - If you want to print a single topic, select **Print the selected topic**.
   - If you want to print an entire section, including all topics and sections in that section, select **Print the selected heading and all subtopics**.
5. Click **OK**.

About Atoll Documentation

The following PDF manuals are available to customers with a valid maintenance contract for Atoll and Atoll Microwave and can be downloaded from the Forsk web site at:
http://www.forsk.com/support/

- *Atoll User Manual*
- *Atoll Administrator Manual*
- *Atoll Licensing Guide*
- *Atoll Data Structure Reference Guide*
- *Atoll Technical Reference Guide*
- *Atoll Task Automation Guide*
- *Atoll Model Calibration Guide*

To read PDF manuals, download Adobe Reader from the Adobe web site at:
http://get.adobe.com/reader/

Hardcopy manuals are also available. For more information, contact to your Forsk representative.

Contacting Technical Support

Forsk provides global technical support for its products and services. To contact the Forsk support team, visit the My Forsk web site at:
http://www.forsk.com/support/

Alternatively, depending on your geographic location, contact one of the following support teams:

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Forsk US

For North and Central America, contact the Forsk US support team:

- Tel.: 1-888-GO-ATOLL (1-888-462-8655)
- Fax: 1-312-674-4822
- Email: support_us@forsk.com

Opening Hours: Monday to Friday 8.00 am to 8.00 pm (Eastern Standard Time)

Forsk China

For Asia (except Japan), contact the Forsk China support team:

- Tel: +86 20 8557 0016
- Fax: +86 20 8553 8285
- Email: atollsupport@forsk.com.cn

Opening Hours: Monday to Friday 9.00am to 5.30pm (GMT+08:00) Beijing, Chongqing, Hong Kong, Urumqi.

Forsk Head Office

For all other regions, contact the Forsk Head Office support team:

- Tel.: +33 562 747 225
- Fax: +33 562 747 211
- Email: support@forsk.com

Opening Hours: Monday to Friday 9.00 am to 6.00 pm (GMT +1:00)

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2 Working with Floating Licenses

Floating license keys can be used when users work with **Atoll** on a network. In a floating license environment, a license key dongle is plugged in to a single computer, the floating license server, on which the floating license management software has been installed and a floating license key plugged in. The floating license server can be one of the computers on which **Atoll** is installed.

If you are using a fixed licence, where a hardware dongle is directly connected to the computer that runs **Atoll**, you can ignore this chapter.

In this case, the licensing system is installed with the **Atoll** installer and no further action is required.

The floating license server controls the number of potential **Atoll** licenses that are used at a given time. A floating license system offers a number of tokens that are available for each **Atoll** module. The number of tokens corresponds to the maximum number of **Atoll** sessions that can run simultaneously.

For example:

- One user running several **Atoll** sessions on the same computer uses one token.
- Several users running **Atoll** on the same computer use one token per user.
- One user running **Atoll** on several computers uses one token per computer.

A token is released and made available for other users when all the **Atoll** sessions used by a user on the computer are closed.

If a computer is connected to a floating license server and also has a fixed license key plugged in, the fixed license key is accessed first.

If the fixed or the floating license key becomes unavailable, **Atoll** automatically tries to restore the connection. If the key becomes available again, **Atoll** allows users to resume their sessions. At anytime during the reconnection process, users can save their documents and close the **Atoll** session.

If the license server runs low on resources, the floating license key can become unavailable, causing a key protection error message to appear in **Atoll**.

2.1 Installing the Sentinel HASP Licensing System

Atoll uses a 3rd-party floating license management system called Gemalto Sentinel HASP. The floating license management system includes:

- **HASP floating license key:** Hardware key programmed with the numbers of tokens available for each module.
- **HASP license manager:** Interface between **Atoll** and the floating license key.
- **HASP device driver (or runtime)**: Interface between the HASP license manager and floating license key.
- **HASP monitor (optional):** Enables you to check the number of used and available tokens.
- **nhsrv.ini file:** Installed on the license server computer. Parameter file for configuring the floating license server.
- **nethasp.ini file:** Installed on the Atoll client machines to indicate which license server to connect to.

If no nhsrv.ini and nethasp.ini files are found, then default settings are applied.

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The HASP device driver, the HASP license manager, and the floating license key must be installed on the server.



A USB port must be available on the license server for plugging in the floating license key. For virtual machines and computers that do not have a physical USB port, **Atoll** licensing supports network-attached USB hubs such as Digi AnywhereUSB.

If the floating license server is protected by a firewall, port 475 must be open for the UDP protocol.

2.1.1 Installing the HASP Device Driver

The HASP device driver enables communication between the hardware HASP floating license key and the License Manager software.



Do not plug the floating license key into the server before installing the device driver. Wait for the HASP license manager setup to indicate when to plug in the key.

Ensure that no **Atoll** sessions are running when you perform this operation.

To install the HASP Device Driver:

1. Download and decompress the **Sentinel HASP/LDK - Windows GUI Run-time Installer** from the Gemalto Sentinel Customer Community web site:

   http://sentinelcustomer.gemalto.com/sentineldownloads/
2. Run the installer and follow the instructions provided by the installer.
3. Once the device driver is successfully installed, plug in the floating license key.

2.1.2 Installing the HASP License Manager

The HASP License Manager controls the allocation and retrieval of license tokens available on a floating license key.

The HASP License Manager must be installed on the license server to which the **Atoll** floating license key is connected.



After installing the HASP License Manager, the floating license key must always remain plugged into the license server.

To install the HASP License Manager:

1. Download and decompress the **HASP HL License Manager** from the Gemalto Sentinel Customer Community web site:

   http://sentinelcustomer.gemalto.com/sentineldownloads/
2. Before running the installer, right-click the **lmsetup.exe** installer and select Properties. The Properties dialog box opens.
3. In the Properties dialog box, select the Compatibility mode and set the following settings
   - Select **Run this program as an administrator**.
   - Click OK.
4. Run the **lmsetup.exe** installer and follow the instructions provided by the installer. When asked whether to run the HASP License Manager as an application or as a service, select **Service**.
5. At the end of the installation process, click **Finish** to start the HASP License Manager service.

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When running, the HASP License Manager window displays a list of supported protocols which can be modified through the **Load** and **Remove** menus. Closing this window does not stop the license manager. The icon remains available in the taskbar as long as the service is running.

To stop the HASP license manager:

1. Go to Control Panel > Administrative Tools > Services.
2. In the list of services, right-click the **HASP Loader** service, and select **Stop** from the context menu.

2.1.3 nhsrv.ini File

The nhsrv.ini file can be used to define a list of computers allowed to request tokens from the floating license server.

If used, the nhsrv.ini file must be located in a directory that is listed in the system path variable, for example: "C:\Windows".

The following is a sample nhsrv.ini file that shows how to set a list of computers allowed access to the floating license server. Complete syntax can be found on the HASP installation CD or on the Safenet website.

```
[NHS_IP]
NHS_USE_UDP      = enabled   ; enabled or disabled (default: enabled)
NHS_USE_TCP      = enabled   ; enabled or disabled (default: enabled)
NHS_IP_portnum   = 475       ; IP port number (default: 475 (IANA registered))
                             ;   CAUTION: clients must use the same port !

;NHS_IP_LIMIT = 10.24.2.18-99, 10.1.1.9/16,    10.25.0.0/24,
;               192.0.0.*, 194.0.*.*, 11.*.*.*,
;               10.24.7.8-12 /30, 10.24.2.17
; specifies the range of stations that are allowed to access the LM
; the LAST byte may be a range (e.g., 10-120)
; the 4th, the 4th and 3rd, or the 4th and 3rd and 2nd byte may be an asterisk,
;   acting as wildcard (e.g., 10.*.*.*, but NOT 10.*.20.1)
; an additional bitmask can be specified as number of one-bits (e.g., 10.0.0.0/8)
```

2.1.4 nethasp.ini File

The nethasp.ini file enables **Atoll** to locate the floating license server quickly. Without the nethasp.ini file, finding the floating license server on the network can take a long time.

The nethasp.ini file must be located in the installation directory (recommended) or a directory listed in the system path variable.

A nethasp.ini file located in the **Atoll** installation folder has priority over any nethasp.ini file located elsewhere.

Storing the nethasp.ini file in the Windows folder instead of the **Atoll** installation folder can be useful if you have more than one version of **Atoll** installed, and you wish to access the same floating license server. This avoids making a copy of the file in each **Atoll** installation folder, but might not work on the latest versions of Windows.

The following is a sample of the nethasp.ini file with the minimum required information. Complete syntax can be found on the HASP installation CD or on the Aladdin website.

```
[NH_COMMON]
NH_IPX = Disabled            ;Use the IPX protocol - Enabled or Disabled
NH_NETBIOS = Disabled        ;Use the NETBIOS protocol - Enabled or Disabled
NH_TCPIP = Enabled           ;Use the TCP/IP protocol - Enabled or Disabled
[NH_TCPIP]
NH_SERVER_ADDR = 3CT000J      ;IP address of the floating license server
NH_USE_BROADCAST = Disabled   ;Use TCP/IP broadcast - Enabled or Disabled
```

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```
;Do not remove this line
```



Remove the NH_SESSION and NH_SEND_RCV entries from the nethasp.ini file if these exist.

These fields define the timeout delays depending to the network. They can be useful in slow networks and should be set only if required.

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1 Atoll Security Module (Lic.exe)

You can use the Atoll Security Module, also known as "Lic.exe", for fixed and floating license administration tasks when using single-user and multi-user (network) licenses.



The Atoll Security Module (Lic.exe) is designed to be compatible with all current and previous versions of Atoll. Always ensure that you are using the latest version of the Atoll Security Module, regardless of the version of Atoll that you have installed.

This section covers the following topics:

- "About Atoll Licensing" on page 13
- "Installing the Atoll Security Module" on page 13
- "Using the Atoll Security Module" on page 14

1.1 About Atoll Licensing

Atoll licenses are perpetual and are automatically renewed every year by Forsk. Atoll licensing includes a perpetual license and optional maintenance services.

- A perpetual license allows you to run a specific version of **Atoll**. There is no time limit on using this version, however all licenses must be renewed every year by Forsk.
- A maintenance contract allows you to access to the Forsk helpdesk and download area, which provides product updates, documentation, and add-ins. When you purchase maintenance, Forsk reprograms your license key to allow the use of new versions.

Maintenance is automatically included during the first year following the purchase of a perpetual license. If maintenance is not purchased, the license key is reprogrammed without maintenance and you can continue to work with your current version.

The yearly expiration date for the license is referred to as the *time bomb* date. When the time bomb date expires, the license key stops working and an extension file is required.



Atoll can inform you about the approaching time bomb date 30 days in advance. This alert can be configured in the Atoll.ini file. For more information, see the *Atoll Administrator Manual*.

For more information about your license status, contact the Forsk support team at:
http://www.forsk.com/support

1.2 Installing the Atoll Security Module

You can install the Atoll Security Module with the setup program on any computer on the network.

To install the Atoll Security Module:

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1. Download and decompress the latest Atoll Security Module from the Forsk web site:

   http://downloads.forsk.com/Lic

2. Run the installer and follow the instructions provided by the installer. It is recommended to install the Atoll Security Module in a separate folder (for example: "C:\Program Files\Forsk\Atoll Security Module").
3. Once the installation is complete, click **Finish** to exit the setup.

To uninstall the Atoll Security Module, open **Uninstall a program** from the Windows Control Panel, select Atoll Security Module, and click **Uninstall**.

1.3 Using the Atoll Security Module

The Atoll Security Module enables you to view, troubleshoot, and update license keys. You must not use the license manager without full instructions and details from the Forsk support team. Modifying parameters in the license manager without proper input from Forsk can damage your fixed or floating licenses and block access of **Atoll** users to the licenses.

1.3.1 Using the Atoll Security Module Interface

To open the Atoll Security Module:

1. Open the **Atoll** installation folder and run **Lic.exe**. The Atoll Security Module opens (see Figure 1.1 on page 14).

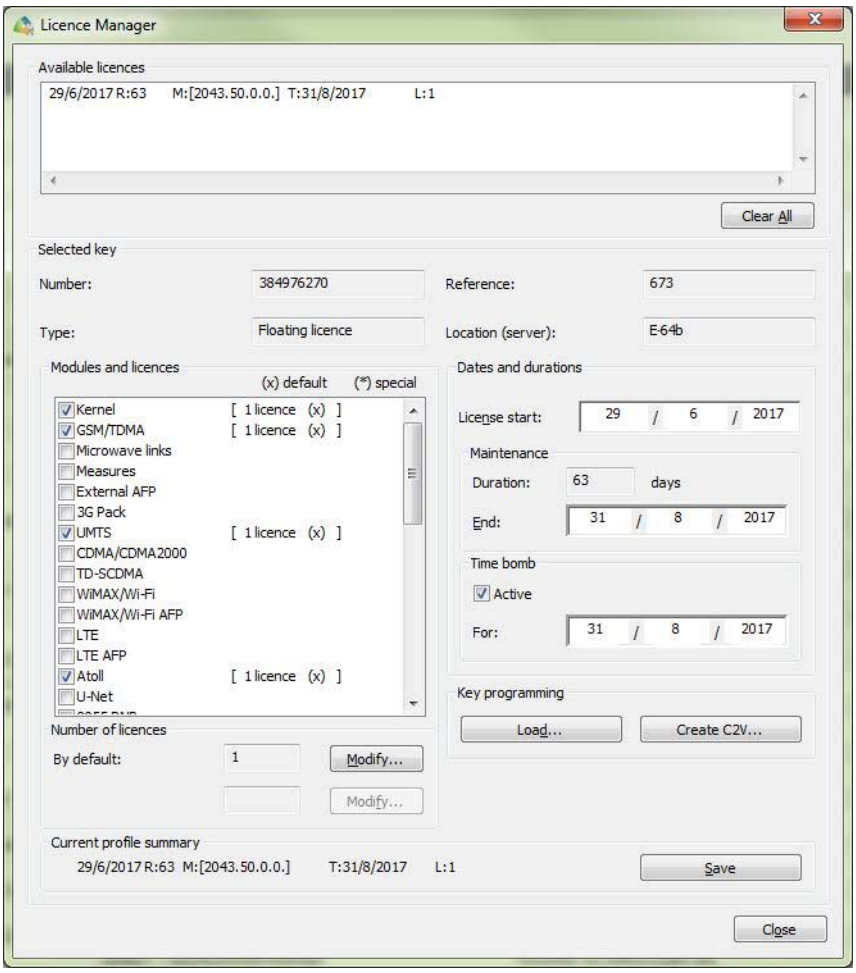


Figure 1.1: : Atoll Security Module

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2. Under **Available licenses**, select a license key in order to display the information related to it.



The **Clear all** button is reserved for Forsk use only.

Under **Selected key** the following information is available for the selected key:

- **Number:** Unique serial number given by the key provider.
- **Type:** The type of key, **Fixed license** or **Floating license**.
- **Reference:** Unique fixed or floating license key provided by Forsk. This number must be communicated to Forsk, when requested, for reprogramming the license key. This reference is also printed on the hardware dongle.
- **Location (server):** Name of the floating license management server on which the floating license dongle is connected.
- Under **Modules and licenses**, all the **Atoll** modules available on the selected key are listed along with the numbers of license tokens of each.
- Under **Number of licenses**, the **Modify** buttons are reserved for Forsk use only.
- Under **Dates and durations**, the following dates and durations are available:
  - License start date.
  - Maintenance duration and end date.
  - Time bomb date.



Do not attempt to modify the time bomb settings on the fixed license key. Contact Forsk support.

Do not change the computer's date.

- Under **Current profile summary**, all of the above information is summarised.

1.3.2 Updating License Keys

The Atoll Security Module enables administrators to update license keys by loading new key programming data from ALIC files provided by Forsk. To update a license key, you must have the ALIC file sent by Forsk.



Do not attempt to reprogram a license key without full information and support from the Forsk support team.

To update a license key:

1. Close all **Atoll** sessions.
2. Open the **Atoll** installation folder and run **Lic.exe**. The Atoll Security Module opens (see Figure 1.1 on page 14).
3. Under **Reference**, check that the key number is correct. If the proper key number is not displayed, check that the hardware dongle is properly connected to the computer.
4. Under **Key programming**, click **Load**. The **Open** dialog box appears.
5. Select the ALIC file provided by Forsk.
6. Click **Save**. The key is updated.

1.3.3 Generating a C2V File

In some cases, Forsk support teams might ask you to provide a C2V file. This file can be generated by the Atoll Security Module.

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To generate a C2V file:

1. Open the **Atoll** installation folder and run **Lic.exe**. The Atoll Security Module opens (see Figure 1.1 on page 14).
2. Under **Available licenses**, select the key to update. If the key does not appear in the available licenses list, check that the hardware dongle is properly connected to the computer.
3. Under **Key programming**, click **Create C2V**.
4. Send the generated C2V file to Forsk support.



In some cases, the **Create C2V** button can be disabled. If this occurs:

- Ensure that the Atoll Security Module is being run from the License Server (where the hardware dongle is connected).
- Ensure that the HASP Device Driver is up to date. If necessary, reinstall the latest driver as explained in "Installing the HASP Device Driver" on page 10. Ensure that no **Atoll** sessions are running when you perform this operation.

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