

LICENSE4J LICENSE MANAGER USER GUIDE

VERSION 4.0



LICENSE4J
www.license4j.com

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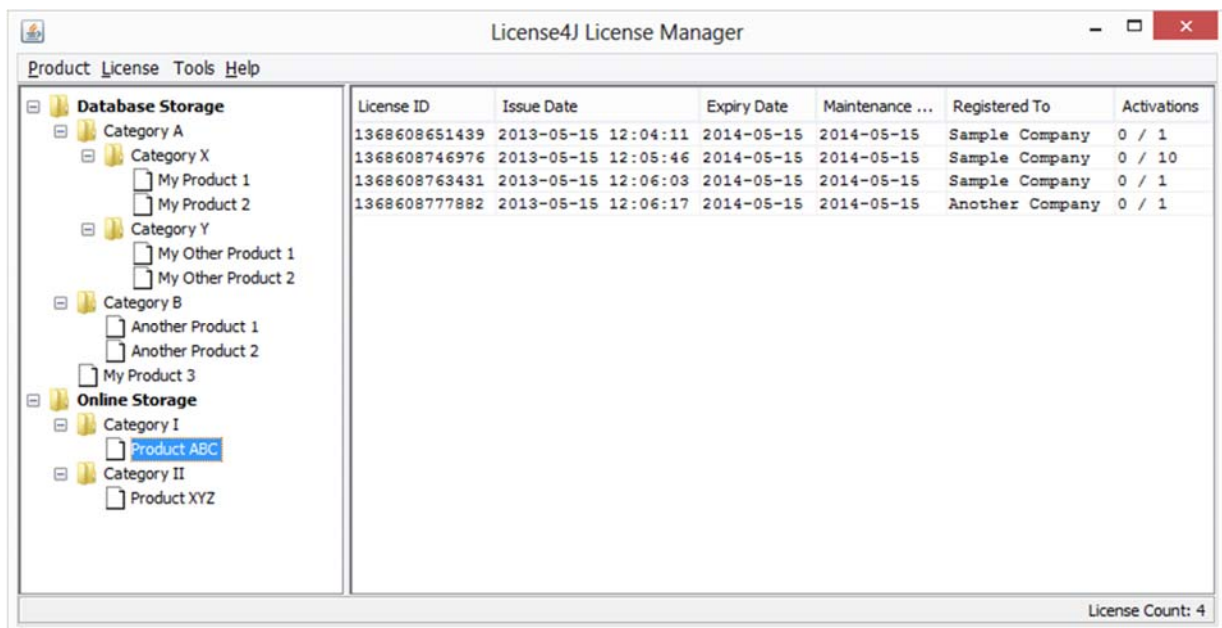
Getting Started

License4J License Manager supports generation of license text, license key, and floating license text. Online.License4J system is an online storage for products and licenses, and also supports license auto generation through http post requests and online license activation from runtime library.

License4J runtime library includes necessary methods to validate and activate a license. It is a free library and is distributed within any software product for license validation.

Download packages on www.license4j.com/download/ includes License Manager Setup file, Floating License Server Setup file, Library jar files, examples, and documentation.

License Manager GUI is an easy to use software to manage products and licenses. Main GUI window includes a left tree panel for navigation on products and categories and the table on the right displays licenses for the selected product.



License text or keys generated with License4J version 3 is NOT compatible with version 4.

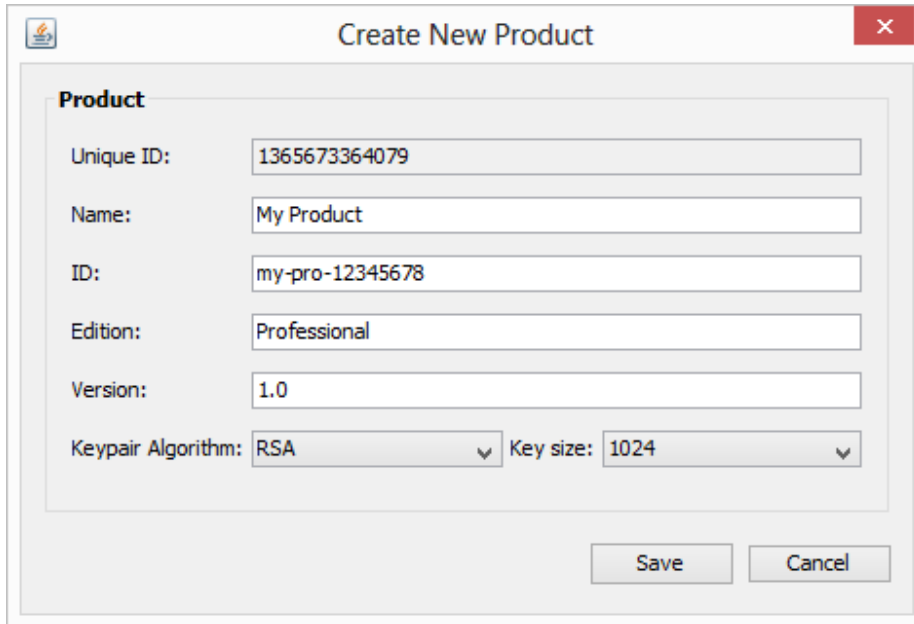
Managing Products

License Manager allows definition of products to categorize and manage generated licenses. Public and private key pair is generated when product is created, and it cannot be changed later.

Create Product

Create New Product menu item brings a window as below for creation of a new product in license manager. Unique ID is for license manager database usage and generated automatically. ID field is required field because it will be used in license validation, product cannot be created without an ID.

Available key pair algorithms are RSA and DSA with 1024 and 2048 bit key size. For generation of license keys EC algorithm is used and it is the only available choice.



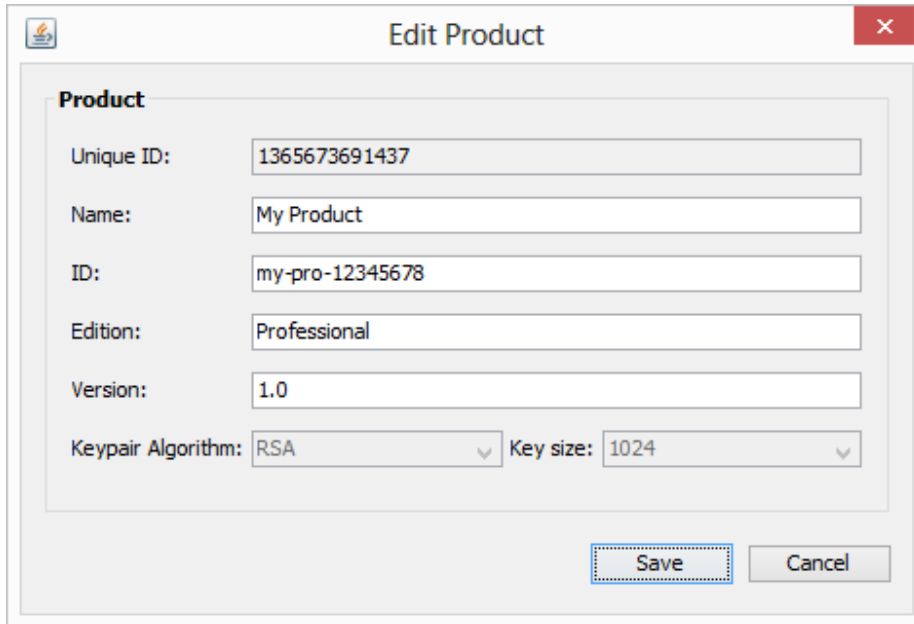
The image shows a 'Create New Product' dialog box. It has a title bar with a close button (X) in the top right corner. The dialog contains a section titled 'Product' with several input fields: 'Unique ID' (1365673364079), 'Name' (My Product), 'ID' (my-pro-12345678), 'Edition' (Professional), and 'Version' (1.0). Below these is a 'Keypair Algorithm' dropdown menu set to 'RSA' and a 'Key size' dropdown menu set to '1024'. At the bottom right are 'Save' and 'Cancel' buttons.

Product	
Unique ID:	1365673364079
Name:	My Product
ID:	my-pro-12345678
Edition:	Professional
Version:	1.0
Keypair Algorithm:	RSA
Key size:	1024

Save Cancel

Edit Product

Product information can be changed with *Edit* menu item. Key pair settings cannot be changed because generated licenses for this product becomes invalid if it changes. If ID is changed all generated licenses before will fail in license validation since license validation checks for product id given in validate method of runtime library.

A screenshot of the 'Edit Product' dialog box. The dialog has a title bar with a close button (X) in the top right corner. Inside, there is a section titled 'Product' containing several input fields: 'Unique ID' with the value '1365673691437', 'Name' with 'My Product', 'ID' with 'my-pro-12345678', 'Edition' with 'Professional', and 'Version' with '1.0'. Below these is a 'Keypair Algorithm' dropdown menu set to 'RSA' and a 'Key size' dropdown menu set to '1024'. At the bottom right of the dialog are two buttons: 'Save' and 'Cancel'.

Product	
Unique ID:	1365673691437
Name:	My Product
ID:	my-pro-12345678
Edition:	Professional
Version:	1.0
Keypair Algorithm:	RSA
Key size:	1024

Save Cancel

Refresh, Delete Product

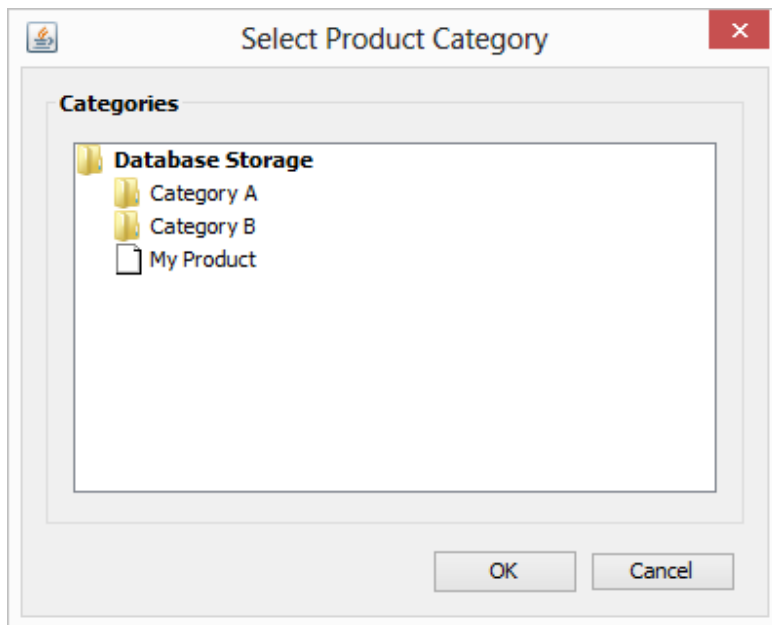
If a remote database or Online.License4J is used as the storage and there are other users connecting to the same database, *Refresh* menu item can be used to see changed licenses on database. It refreshes product information and licenses.

Products can be deleted with *Delete* menu item; deleting a product will also delete all licenses for that product.

Change Product Category

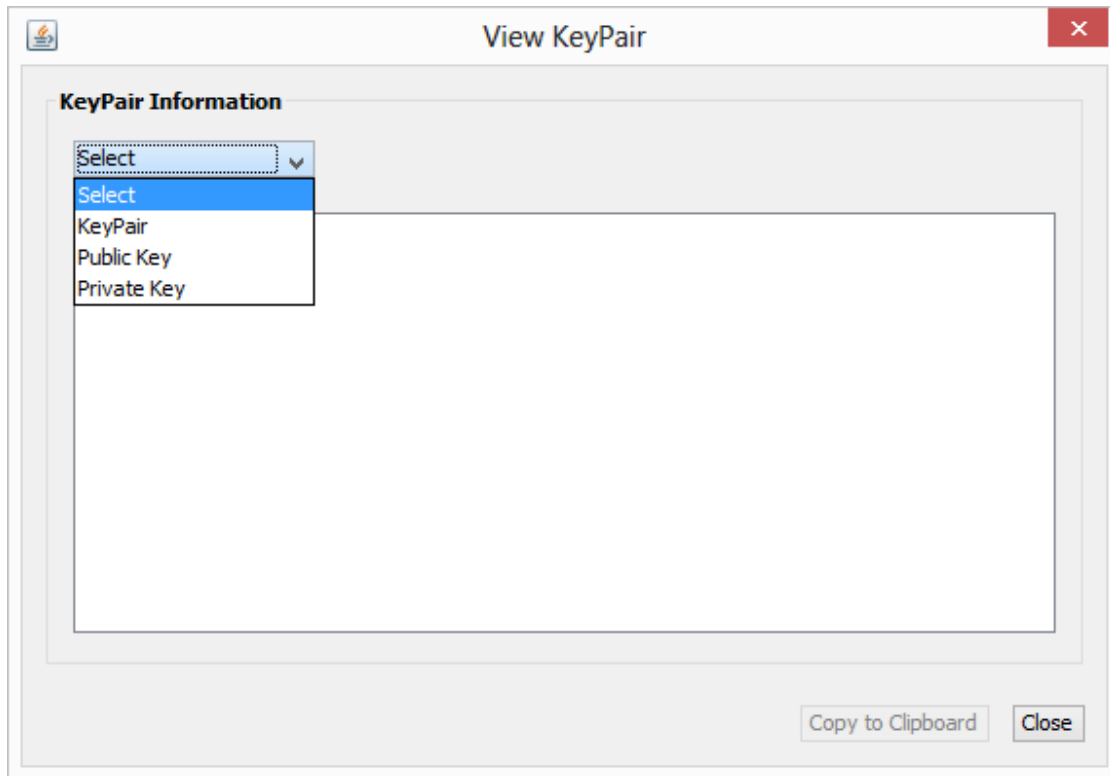
Products can be categorized with creating categories. Unlimited number of categories and subcategories can be created. It is possible to change a product category with *Change Product Category* menu item.

Following window displayed with a list of products and categories, product will be moved to selected category.



View Key Pair

Key pair, public and private key is displayed with *View KeyPair* menu item. Public key is used in license validation. Key pair and private key is displayed for informational purposes; they are not used in any part of license validation, but they are used in license generation methods.

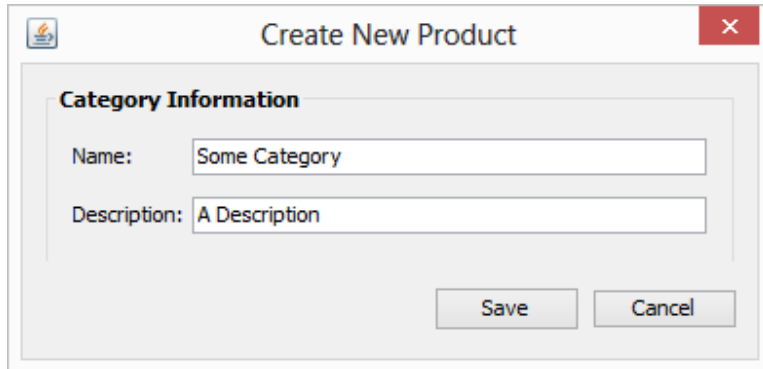


Managing Categories

Categories is a way for grouping products on the left tree in license manager. They are just like standard folders.

Create, Edit Categories

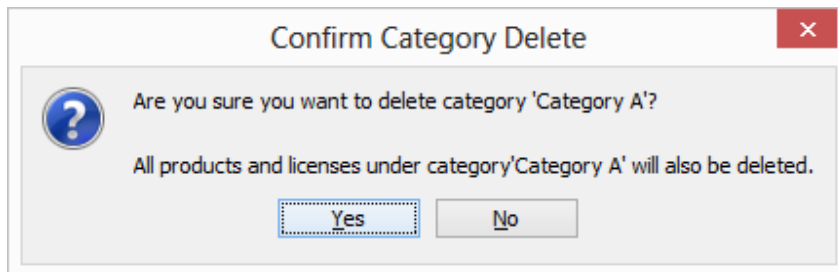
Category name is a required field. Unlimited number of categories and subcategories can be created.

A screenshot of a 'Create New Product' dialog box. It has a title bar with a small icon on the left and a red close button on the right. The main area is titled 'Category Information' and contains two text input fields: 'Name:' with the value 'Some Category' and 'Description:' with the value 'A Description'. At the bottom right, there are two buttons: 'Save' and 'Cancel'.

Refresh, Delete Categories

When a category is refreshed, subcategories, products and licenses for that products are all refreshed from database.

If a category is deleted, all subcategories, products and licenses also deleted recursively.

A screenshot of a 'Confirm Category Delete' dialog box. It has a title bar with a red close button on the right. The main area contains a question mark icon on the left. The text reads: 'Are you sure you want to delete category 'Category A'? All products and licenses under category 'Category A' will also be deleted.' At the bottom, there are two buttons: 'Yes' and 'No'.

Managing Licenses

Licenses are generated for products in license manager, so a product must be selected on left tree to enable license menu items.

Four types of license are supported;

1. License Text

License text normally used as a license file, it is an encrypted text of defined properties. The first line includes product name and a unique license id for information.

Sample license text:

```
# My Product License (id: 1365675659120)
25f2ca4d8070e4a7baef4b7dd5549ba520dbb305d222dd9c18cbee490709
4cef78e28fade0e235f6011182c6764a1d5344b0605a2fd2b7769f47fb75
b7badc745e56870b04b1e658ddbb6661fa53e3f53ae515af5335d724db28
cfe13f9225a4a9f893fd0493b683c7b0df9b5b547ae0364fa82059dda7af
6ef448efa121974bf1b8eb26beb795a2b77339236a9360ccb350afef372e
afaa2dc1cc60e998284f41b2cebac295d840c3fcd1a6d0a0a698027cb91c
27248d477bcb9929878bd66c040216c1a2c12a79af3fc47eabddd279da33
ca9c58421d6de12608ef47ed5aa1af304998fc9211823b69e83d991c0d2d
5a804b5d39a2aeec8046e72c2cd93ca8fa01e643bf6ea32753d24e67d38e
60af3bd6842092fddfffd2c32383d6ed499d0aaed60c0dde2d28afb22e85
23c8296f850dad464fa40c4bc3ba3a80b57c8177f87b4c1ddd90c4f9f39e
1ec5914e68feefd5c376bceae7c98fb68d6f0f646c04d2cb12b77948b1f7
b52cdb1954eefc9ca3fb43a1f61dd4068ec426fa4bfe570cc1306f42ca4b
3174a60d1a568275c5a9f30891cadde7d968
```

2. Floating License Text

Floating licenses can only be installed on License4J Floating License Server and clients borrow licenses from license server. It is same as license text with additional floating license features defined internally.

3. Basic License Key

Basic license key is generated with a reversible algorithm and a hidden keyword. It is not cryptographically secure.

Sample basic license key:

AQDS6-UAYJU-66FXV-W9WVL-U6A4P

4. Cryptographically Secure License Key

This is a secure license key generated with EC algorithm. Since an encryption algorithm is used, it is a longer key. It is also used as an activation code on Online.License4J.

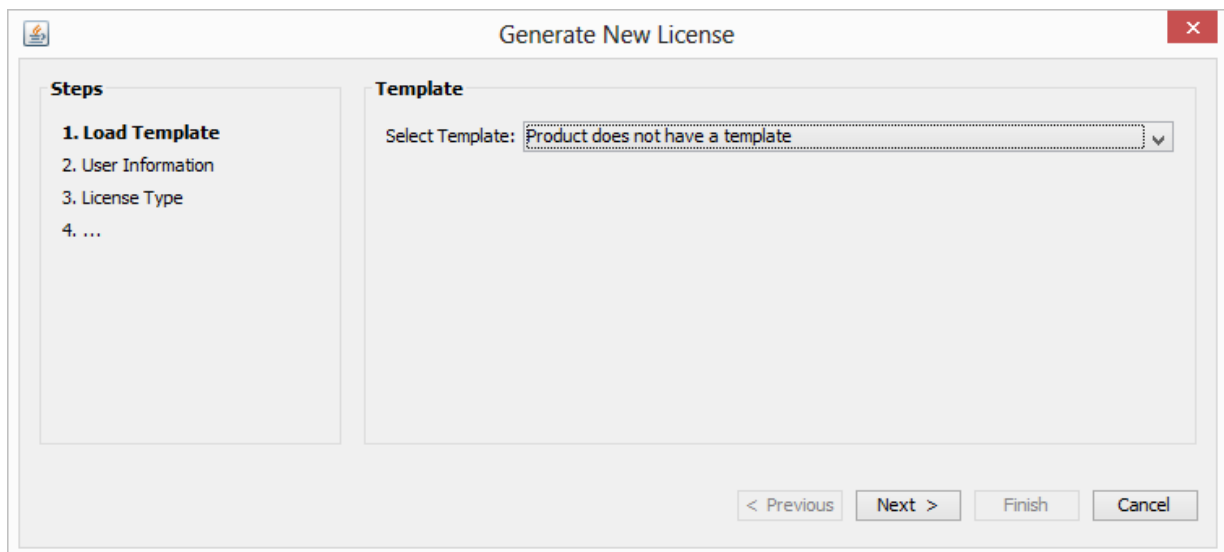
Sample cryptographically secure License Key:

2UTQF-DSFT5-G9UWC-DM23D-36FA2-KJQ4A-A9FES-6C9EN-2LYLV-WD3AR-HMHSY

Generate New License

A wizard is used for license generation, each step of the wizard defines various features of a license.

The first step is for template loading, if there is no templates defined for the product, it displays a message.



The second step includes user information. User information like name, company, e-mail is defined.

The screenshot shows the 'Generate New License' wizard window. The title bar says 'Generate New License'. On the left, a 'Steps' panel lists: 1. Load Template, 2. **User Information**, 3. License Type, 4. ... The main area is titled 'User Information' and contains several text input fields arranged in two columns: Full Name, Register To, Company, E-Mail, Street, Telephone, City, Fax, Zip Code, and Country. At the bottom right, there are four buttons: '< Previous', 'Next >', 'Finish', and 'Cancel'. The 'Next >' button is highlighted with a blue dashed border.

License type selection is on the third step. After selecting a license type, wizard steps changes according to selected license type.

The screenshot shows the 'Generate New License' wizard window at Step 3. The 'Steps' panel on the left now lists: 1. Load Template, 2. User Information, 3. **License Type**, 4. ... The main area is titled 'License Information' and contains three radio button options: License File, Floating License File, and License Key. Under the 'License Key' option, there are two sub-options: Basic Key and Cryptographically Secure Key. At the bottom right, the same four buttons are present: '< Previous', 'Next >', 'Finish', and 'Cancel'. The 'Next >' button is highlighted with a blue dashed border.

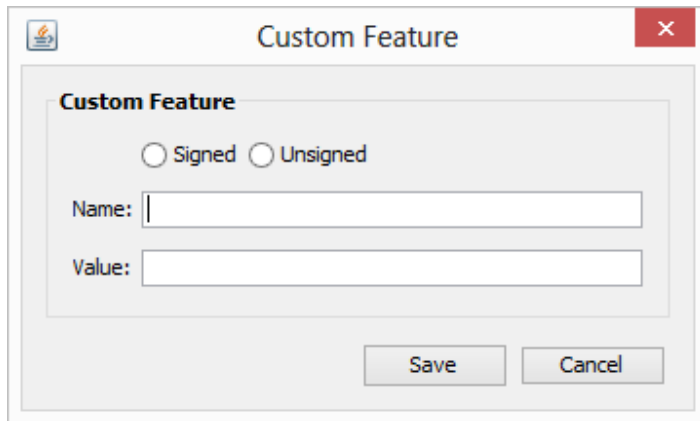
When license file is selected on the third step, following fourth step displayed for defining license file features.

The screenshot shows the 'Generate New License' dialog box with the 'License File Features' step selected. The 'Steps' list on the left includes: 1. Load Template, 2. User Information, 3. License Type, 4. License File Features (highlighted), 5. Custom Features, 6. Date and Time Check, and 7. Finish Information. The 'License File Features' section contains the following fields: 'License Quantity' (set to 1, range 1 - 99999), 'Valid Product Edition' (empty), 'Valid Product Version' (empty), 'License Validity Period' (set to 0, range 1 - 99999 days), 'Maintenance Period' (set to 0, range 1 - 99999 days), and 'Hardware ID' (empty). At the bottom, there are buttons for '< Previous', 'Next >' (highlighted), 'Finish', and 'Cancel'.

The next step of license file generation is to define some custom signed/unsigned features if required.

The screenshot shows the 'Generate New License' dialog box with the 'Custom Features' step selected. The 'Steps' list on the left includes: 1. Load Template, 2. User Information, 3. License Type, 4. License File Features, 5. Custom Features (highlighted), 6. Date and Time Check, and 7. Finish Information. The 'Custom Features' section contains a large empty text area for defining custom features. To the right of the text area are three buttons: 'Add', 'Remove', and 'Edit'. At the bottom, there are buttons for '< Previous', 'Next >' (highlighted), 'Finish', and 'Cancel'.

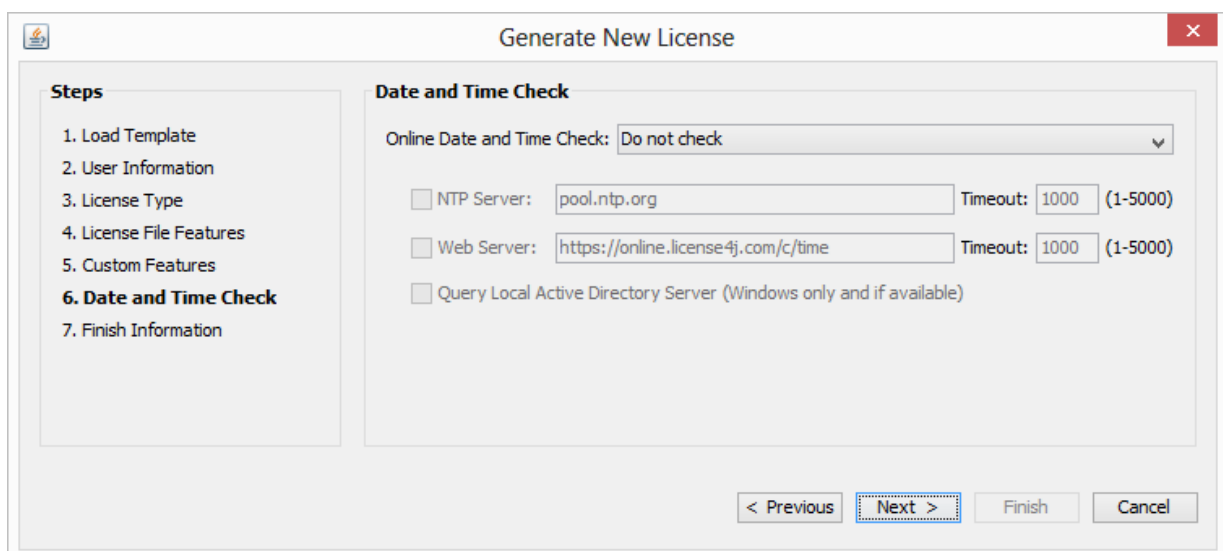
Use the buttons on right to add, remove or edit a custom feature. Following is a screenshot of add custom feature window.



A dialog box titled "Custom Feature" with a close button (X) in the top right corner. Inside the dialog, there is a section titled "Custom Feature" containing two radio buttons: "Signed" and "Unsigned". Below these are two text input fields labeled "Name:" and "Value:". At the bottom of the dialog are two buttons: "Save" and "Cancel".

In the next step online date/time check settings defined. If it is selected to run on each run, defined NTP server, web server, and if applicable active directory server is queried in order to get the time, so date/time changing on customers' computer can be detected. If an online date/time source is queried and the difference is more than 24 hours with customers' local computer time, license validation status is set as *INCORRECT_SYSTEM_TIME*.

Web server link must return a single line of time since epoch like 1365676045742.



A dialog box titled "Generate New License" with a close button (X) in the top right corner. The dialog is divided into two main sections. On the left, a "Steps" list shows the following steps: 1. Load Template, 2. User Information, 3. License Type, 4. License File Features, 5. Custom Features, 6. Date and Time Check (which is currently selected and highlighted), and 7. Finish Information. On the right, the "Date and Time Check" section contains a dropdown menu for "Online Date and Time Check:" set to "Do not check". Below this are three checkboxes with associated text and timeout settings: "NTP Server:" with the value "pool.ntp.org" and a "Timeout:" of "1000 (1-5000)"; "Web Server:" with the value "https://online.license4j.com/c/time" and a "Timeout:" of "1000 (1-5000)"; and "Query Local Active Directory Server (Windows only and if available)". At the bottom of the dialog are four buttons: "< Previous", "Next >" (which is highlighted with a dashed border), "Finish", and "Cancel".

And the last step for license file generation displays defined features for the license, after clicking on finish button license is generated.

The screenshot shows a window titled "Generate New License" with a close button (X) in the top right corner. On the left, a "Steps" sidebar lists seven steps: 1. Load Template, 2. User Information, 3. License Type, 4. License File Features, 5. Custom Features, 6. Date and Time Check, and 7. Finish Information (which is currently selected and bolded). The main area is titled "Finish Information" and contains a table labeled "License Information".

License Information	
ID	1365677146953
License Type	License File
Quantity	1
Valid Product Edition	Professional
Valid Product Version	1.0
License Validity Period	0

At the bottom right of the window are four buttons: "< Previous", "Next >", "Finish", and "Cancel" (which is highlighted with a dashed border).

If Floating License is selected on the third step, one additional step is added to wizard and as seen on screenshot below floating license features are defined. Floating license check performed in defined license check period times in minutes. Floating license server check performed if defined in related field. The last allow multiple instances feature defines whether it will be allowed a user to run multiple copies of software on the same host computer. This feature can be used to prevent customers using a single product license on a remote computer by running many copies with same user id.

The screenshot shows the 'Generate New License' wizard at Step 5, 'Floating License Features'. The 'Steps' list on the left includes: 1. Load Template, 2. User Information, 3. License Type, 4. License File Features, 5. Floating License Features (highlighted), 6. Custom Features, 7. Date and Time Check, and 8. Finish Information. The main area contains two input fields: 'License Check Period' set to 0 minutes (0 - 1140) and 'License Server Connection Check Period' set to 0 minutes (0 - 1140). There is an unchecked checkbox for 'Allow Multiple Instances for Same User on Same Host'. At the bottom, there are buttons for '< Previous', 'Next >' (highlighted), 'Finish', and 'Cancel'.

If basic license key is selected on the third step, wizard steps changes as in the following screenshot. Only license key features can be defined. Internal hidden string is used in basic license key generation, if it is not defined unique product id is used, so it must be used in license validation method. Customer full name and company name can be used in license validation if related checkbox items are selected.

The screenshot shows the 'Generate New License' wizard at Step 4, 'License Key Features'. The 'Steps' list on the left includes: 1. Load Template, 2. User Information, 3. License Type, 4. License Key Features (highlighted), and 5. Finish Information. The main area contains three input fields: 'License Quantity' set to 1 (with a range of 1 - 99999), 'Hardware ID' (empty), and 'Internal Hidden String' (empty). There are two unchecked checkboxes: 'Use Customer Name in Validation' and 'Use Company Name in Validation'. At the bottom, there are buttons for '< Previous', 'Next >', 'Finish', and 'Cancel'.

There is no difference in wizard steps if cryptographically secure license key is selected in third step. The only difference is that internal hidden string is not required in license key generation since a cryptographic algorithm is used.

If License Manager is connected to Online.License4J one extra activation step is displayed as below.

The screenshot shows the 'Generate New License' dialog box, specifically the '5. Activation Information' step. On the left, a 'Steps' list shows the progression from '1. Load Template' to '8. Finish Information', with '5. Activation Information' highlighted. The main area is titled 'Activation' and contains the following options:

- ☐ **Activation Required**
- Activation Period: 0 (dropdown)
- Allowed Activation Count: 1 (text input) (1-999999)
- Activation Return: Select (dropdown)
- Hardware ID Selection: ☐ Check All ☐ Check Any
 - ☐ 1 - Hostname ☐ 3 - System Disk Volume UUID
 - ☐ 2 - Ethernet Address ☐ 4 - HDD Serial Number

At the bottom right, there are four buttons: '< Previous', 'Next >', 'Finish', and 'Cancel'.

If license will require activation, it can be defined in this step. As in the screenshot, allowed activation count may be defined different from license quantity thus customer buys one license but it may activate license on his/her two computers like work and home if allowed.

Activation period starts from license generation date, NOT license installation date on customers' computers, because license installation date can easily be changed.

Activation return types are activation code and license text. If license text is selected and license type on the third step is selected as a license key one additional license file features step is added and features which will be added to

activated license can be defined. Activation code return type generates a cryptographically secure license key to be used as activation code.

Activated license is locked to customers' computer with a hardware id. Hardware IDs can be combined with AND and OR combination. It can be defined to lock license to a computer by using its hostname, Ethernet mac address, disk volume serial number (uuid) and disk manufacturer's serial number. Check All checkbox combines selected hardware id types with AND, Check Any checkbox combines selected hardware id types with OR.

View License

Generated license features are displayed with *View* menu item. On the bottom, license string which will be sent to customers will also be displayed.

License Information	
ID	1365677146953
License Type	License File
Quantity	1
Valid Product Edition	Professional
Valid Product Version	1.0
License Validity Period	0
Maintenance Period	365
Locked Hardware ID:	null

User Information	
Full Name	Example Customer Name
Registered To	Example Company
e-mail Address	email@domain.com

Close

Clone License

Cloning license is available through *Clone* menu item. The generate license wizard comes with all features defined as in the source license. They can be used as is, or can be changed. A new license with a different license ID will be generated, and the generated license string will be different.

Delete License

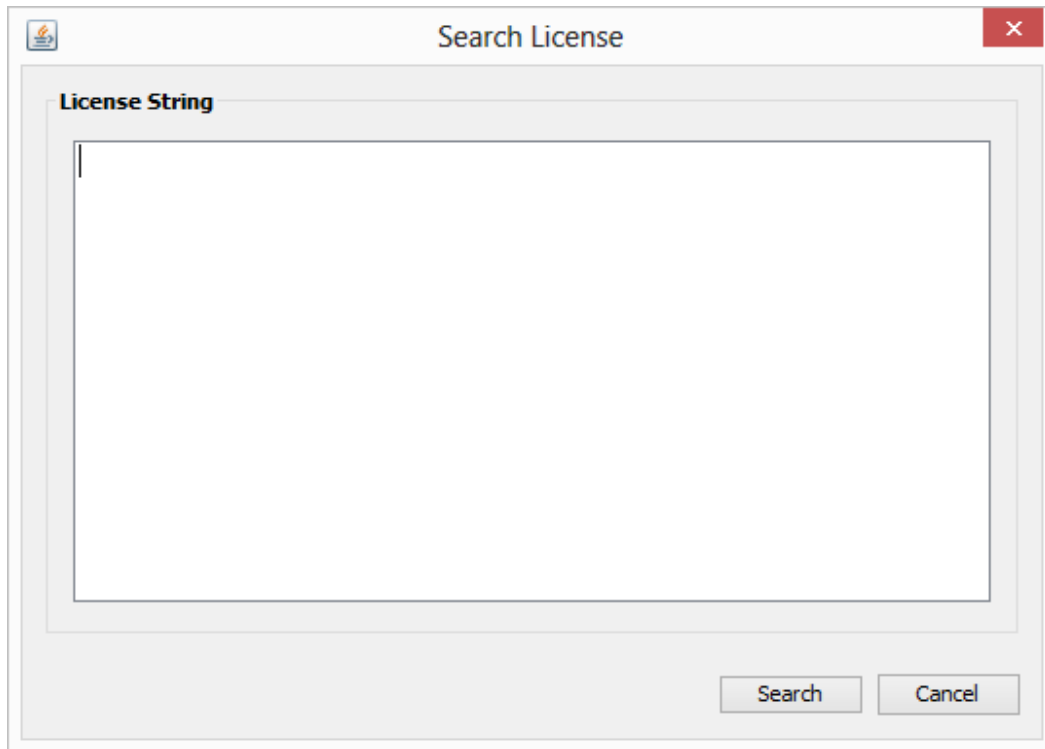
Licenses can be deleted with delete menu item. If deleted license has activations, all activations are also deleted.

Export License

Licenses selected on the license manager are exported to text files with *Export* menu item.

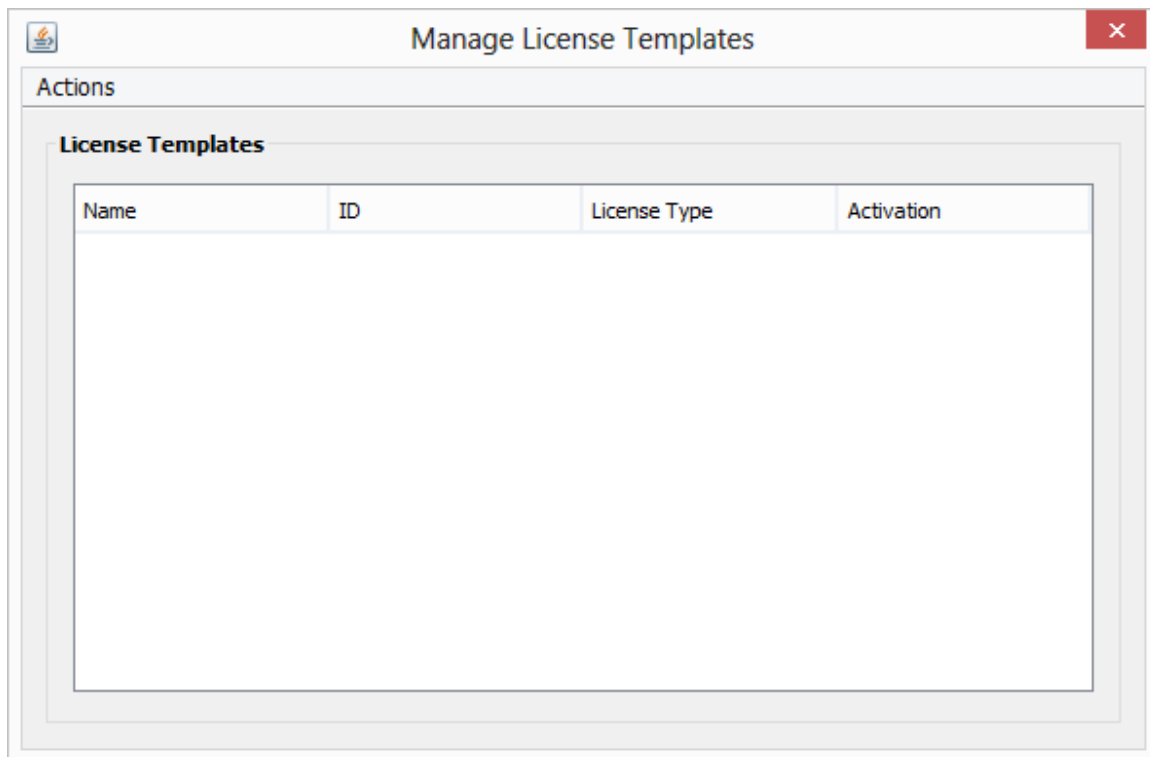
Search License

A License key or text can be searched with *Search* menu item in License menu. Single license key or any license text is searched for selected product and if found license view window displays the found license information. It also searches for activation code and activated license, if given license key is an activation code or given license text is a license activation it displays activation view window.



Manage License Templates

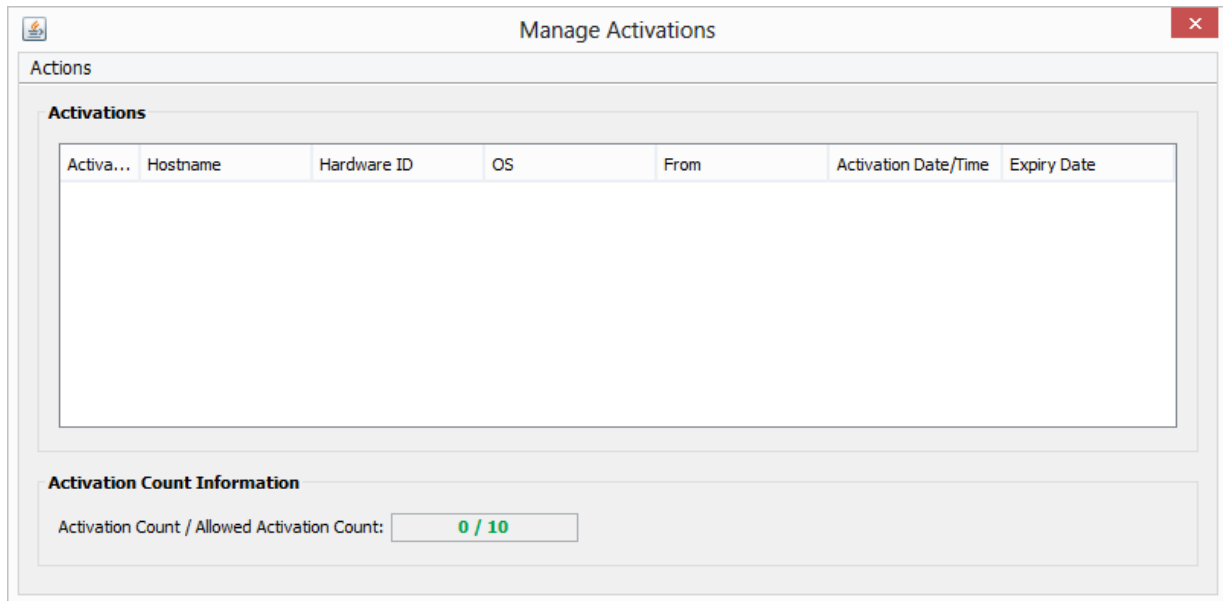
Any number of license templates can be defined for each product. All license templates are displayed on template management window. Create, edit, delete, view actions are available under *Actions* menu. License template creation is done with the same wizard as license generation.



Manage Activations

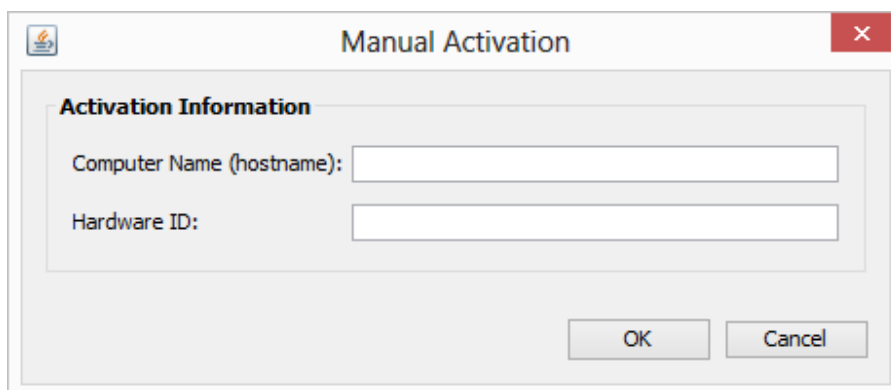
License activation is a feature of Online.License4J system, so License Manager must be connected to Online.License4J server and activations must be enabled for the generated license.

When activation management window opened, all activations for the license is displayed.



On the bottom, activation count and allowed activation count is displayed. Allowed activation count can be modified with *Modify Maximum Allowed Activation Count* menu item in *Actions* menu.

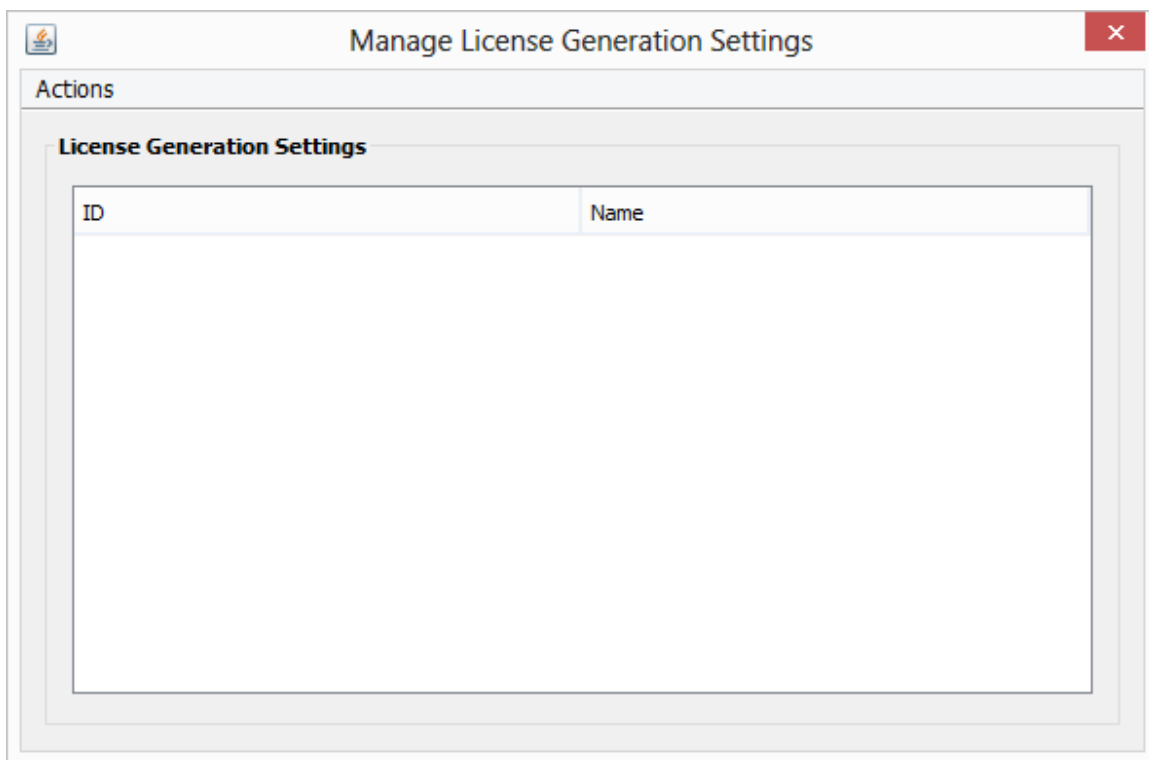
Manual activation is performed with *Add Manual Activation* menu item, as on the following screenshot hostname (for informational only, not used in activation creation), and hardware id should be defined. After adding activation, it can be exported to a file to send to customer.



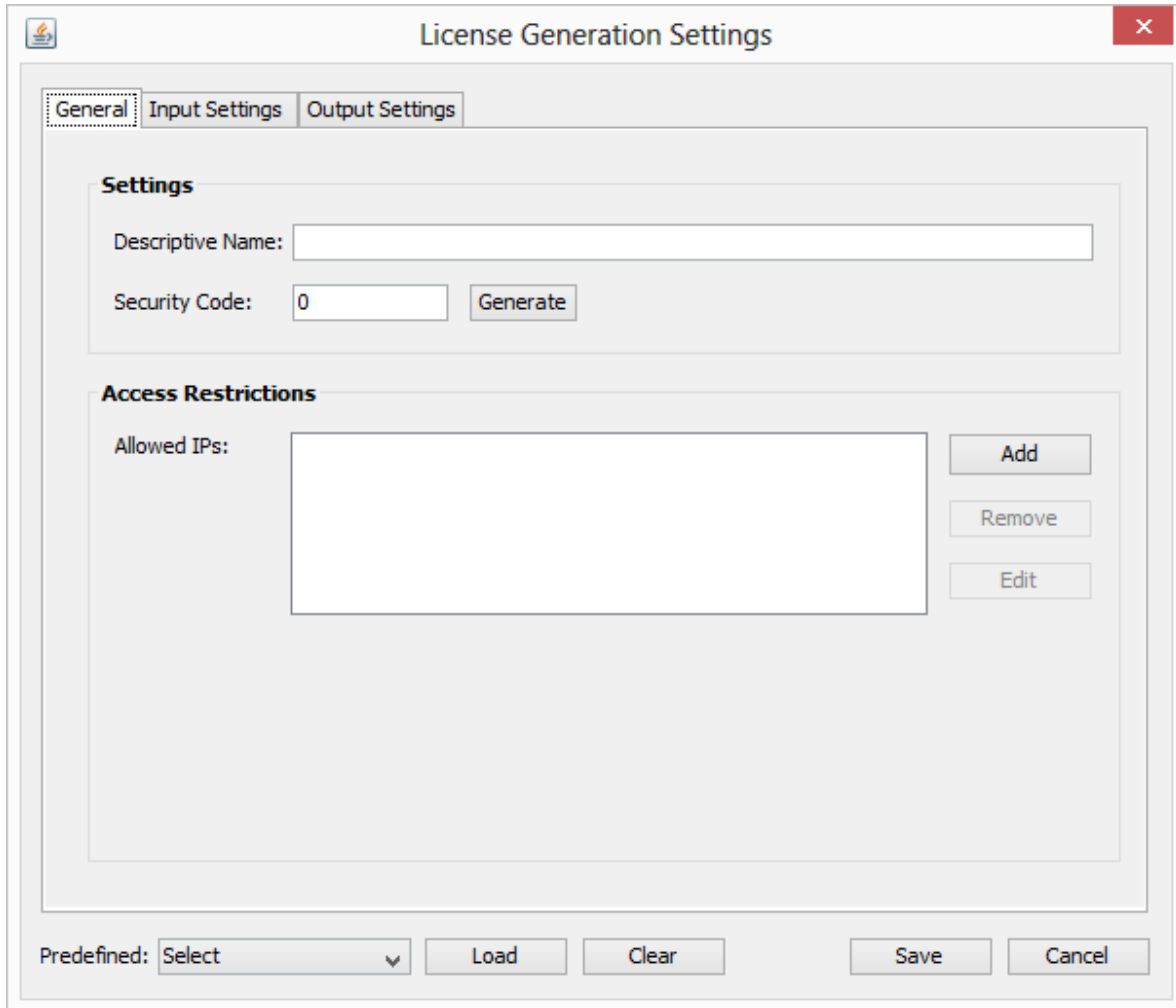
Automatic License Generation Settings

Automatic license generation is a feature of Online.License4J system, the related menu item is only enabled if connected to Online.License4J, and product is created online.

Management window is similar to license template management window. Any number of different auto license generation settings can be defined.



With *Create* menu item, following window displayed.



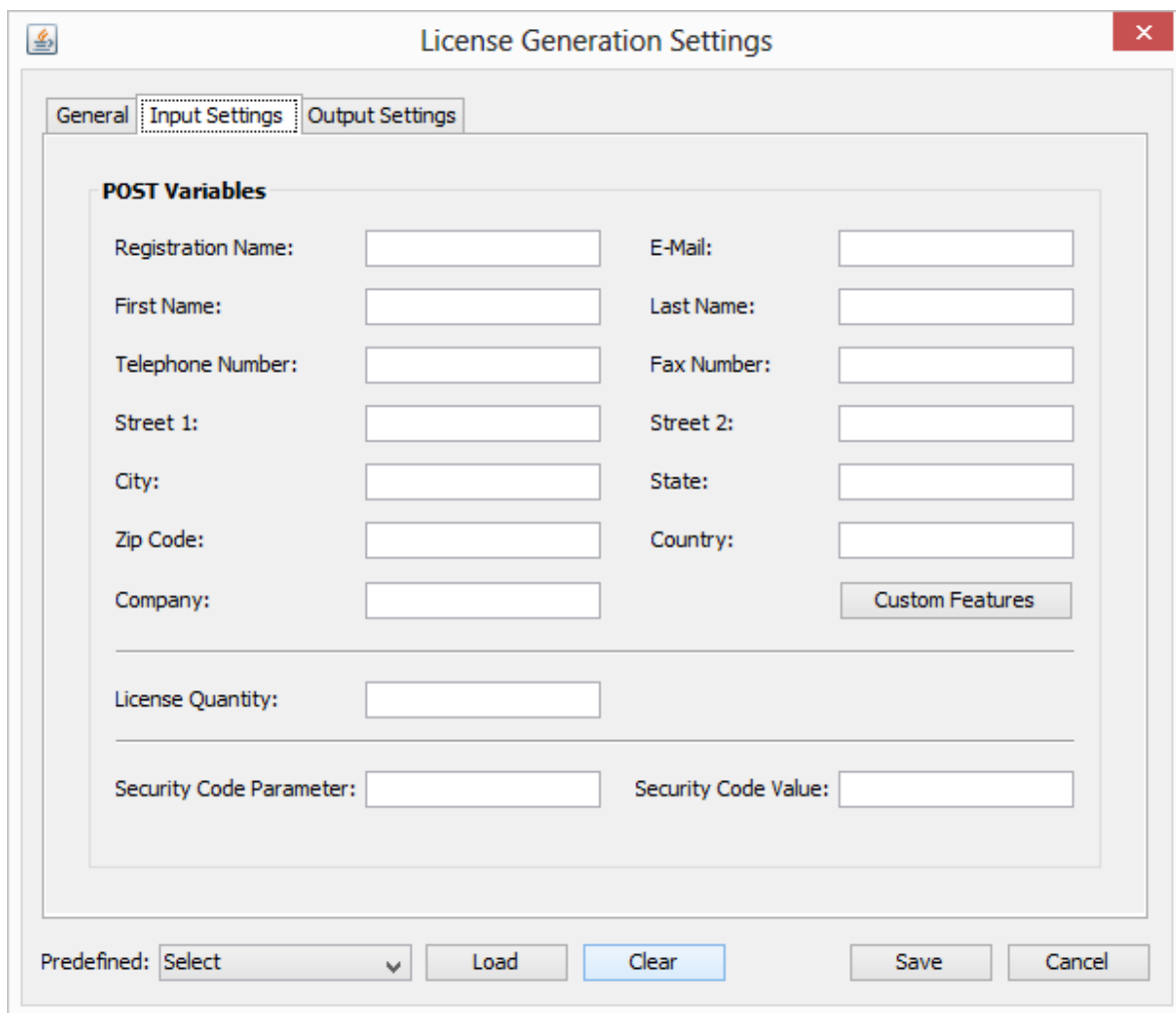
The image shows a Windows-style dialog box titled "License Generation Settings". It has a standard icon in the top-left corner and a close button (X) in the top-right corner. The dialog contains three tabs: "General", "Input Settings", and "Output Settings". The "General" tab is currently selected. Inside the "General" tab, there are two main sections. The first section, titled "Settings", contains a "Descriptive Name:" label followed by a text input field, and a "Security Code:" label followed by a text input field containing the value "0" and a "Generate" button. The second section, titled "Access Restrictions", contains an "Allowed IPs:" label followed by a large empty text area. To the right of this text area are three buttons: "Add", "Remove", and "Edit". At the bottom of the dialog, there is a "Predefined:" label followed by a dropdown menu showing "Select", and three buttons: "Load", "Clear", "Save", and "Cancel".

Window includes three tabs for general, input and output settings. Also there are some predefined settings which can be loaded on the bottom of window.

Since auto license generation will be performed by accepting HTTP POST requests, allowed server IPs can be defined on the first screen. Security code is for license generation URL and check on each license generation request.

On the input settings tab, POST variable names which any payment processors or remote server is posting are defined. Custom features can also be defined, so it is possible to send many features to use in license generation.

Security code parameter and Security code value is used for some payment processors for extra security, not all payment processors support it. If a custom license generation request sent, it can be also used for security.

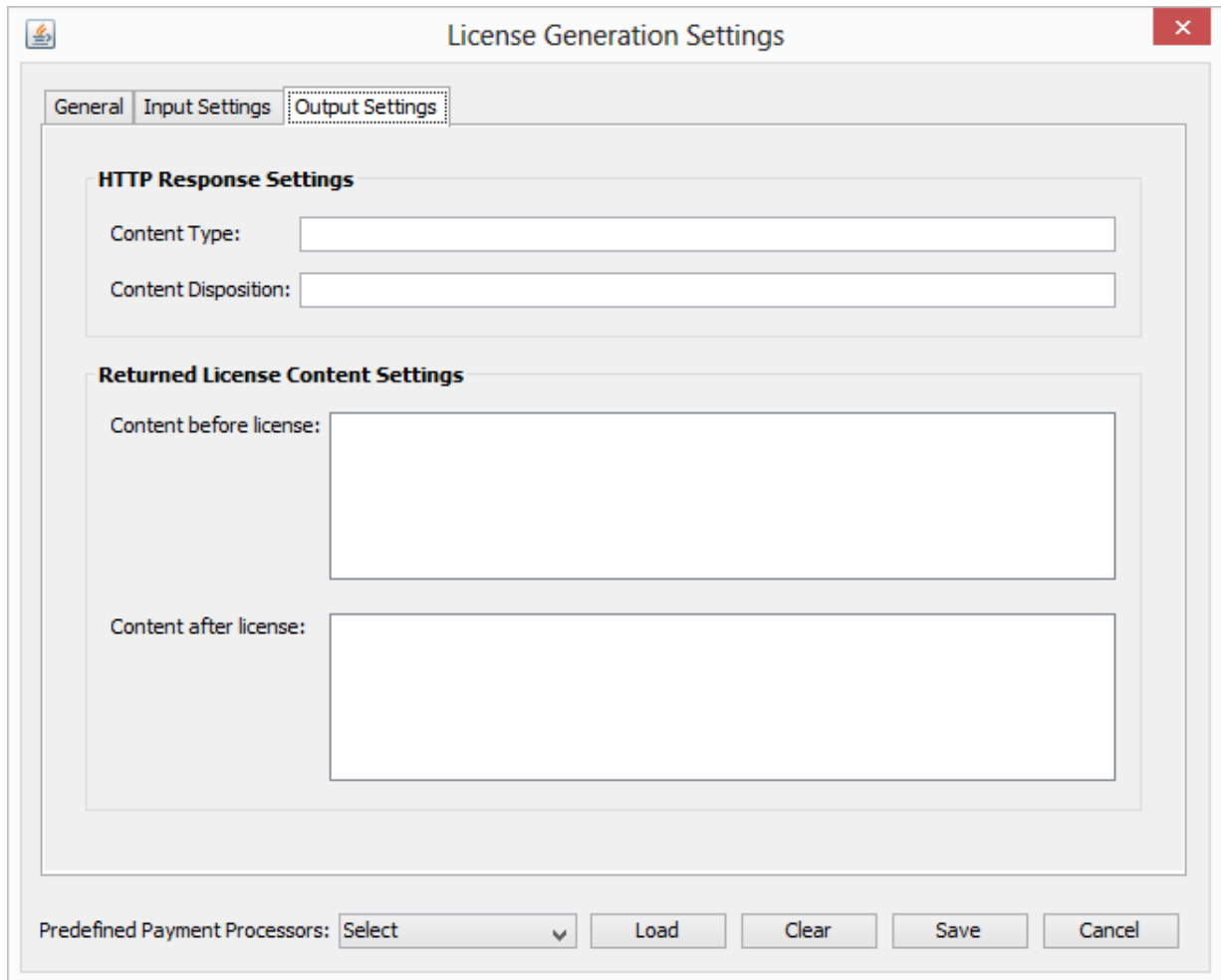


The image shows a 'License Generation Settings' dialog box with three tabs: 'General', 'Input Settings', and 'Output Settings'. The 'Input Settings' tab is active. It contains a section titled 'POST Variables' with the following fields:

Field	Field
Registration Name:	E-Mail:
First Name:	Last Name:
Telephone Number:	Fax Number:
Street 1:	Street 2:
City:	State:
Zip Code:	Country:
Company:	Custom Features

Below the 'POST Variables' section, there is a 'License Quantity' field and a 'Security Code Parameter' field next to a 'Security Code Value' field. At the bottom of the dialog, there is a 'Predefined' dropdown menu set to 'Select', and buttons for 'Load', 'Clear', 'Save', and 'Cancel'.

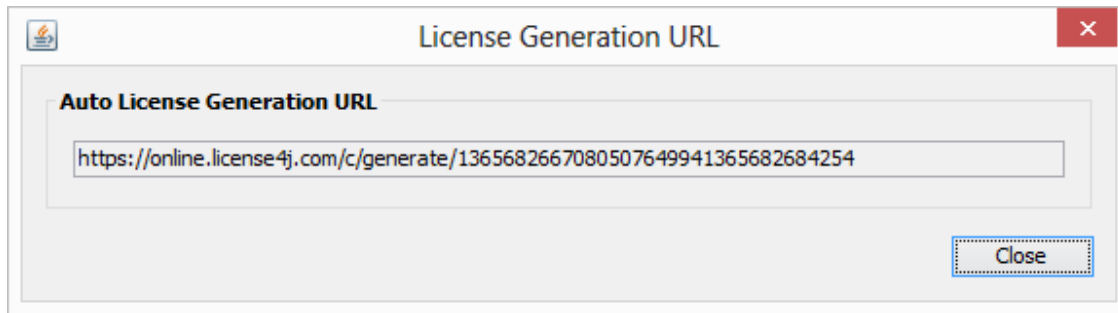
On the output settings tab, HTTP response type, disposition content before and after license string can be defined to support any payment processor, or any custom license generation requests.



The image shows a 'License Generation Settings' dialog box with three tabs: 'General', 'Input Settings', and 'Output Settings'. The 'Output Settings' tab is selected. It contains two sections: 'HTTP Response Settings' and 'Returned License Content Settings'. The 'HTTP Response Settings' section has two text input fields: 'Content Type:' and 'Content Disposition:'. The 'Returned License Content Settings' section has two large text input fields: 'Content before license:' and 'Content after license:'. At the bottom of the dialog, there is a 'Predefined Payment Processors:' label followed by a dropdown menu with 'Select' and a downward arrow, and four buttons: 'Load', 'Clear', 'Save', and 'Cancel'.

Display License Generation URL

License generation URL is only displayed with the selection of license template, a sample URL follows.



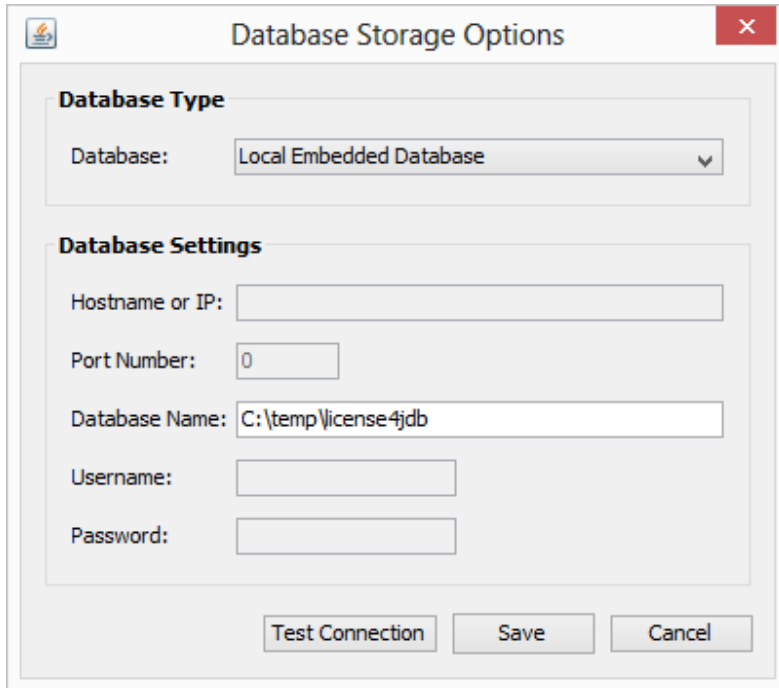
This URL is used to post license generation request with data in post variables. HTTP or HTTPS can be used, HTTPS may be unsupported or slow in some cases.

Tools and Options

With *tools* menu, storage options and online connection options are managed.

Database Storage Options

License Manager can use local embedded Java database, MySQL, PostgreSQL, and MS SQL Server for data storage. By default local embedded Java database is used.



The screenshot shows a Windows-style dialog box titled "Database Storage Options". It has a standard icon in the top-left corner and a close button (X) in the top-right corner. The dialog is divided into two main sections: "Database Type" and "Database Settings".

Database Type

Database: Local Embedded Database (selected from a dropdown menu)

Database Settings

Hostname or IP: (empty text box)

Port Number: 0 (text box)

Database Name: C:\temp\license4jdb (text box)

Username: (empty text box)

Password: (empty text box)

At the bottom of the dialog, there are three buttons: "Test Connection", "Save", and "Cancel".

Online.License4J Settings

Online.License4J login and logout is controlled with *Work Online* and *Work Offline* menu items.

Online Storage Connection Options

Online.License4J connection options can be changed on with *Online Storage Connection Options* menu item.

Online Storage Options

Host and Authentication

Host: ☐ Use SSL

Username:

Password:

☒ Connect on startup

Connection via Proxy

☐ Use proxy server for connection

Host: Port:

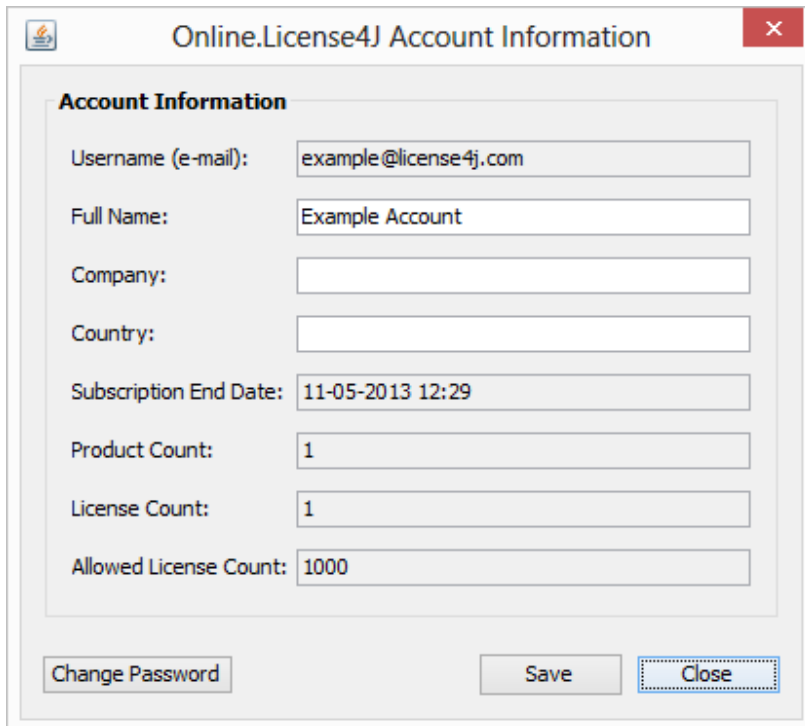
☐ Proxy authentication required

Username:

Password:

Account Information

Account information window displays information about current connected account, and password can be changed by clicking on Change Password button.



Online.License4J Account Information

Account Information

Username (e-mail): example@license4j.com

Full Name: Example Account

Company:

Country:

Subscription End Date: 11-05-2013 12:29

Product Count: 1

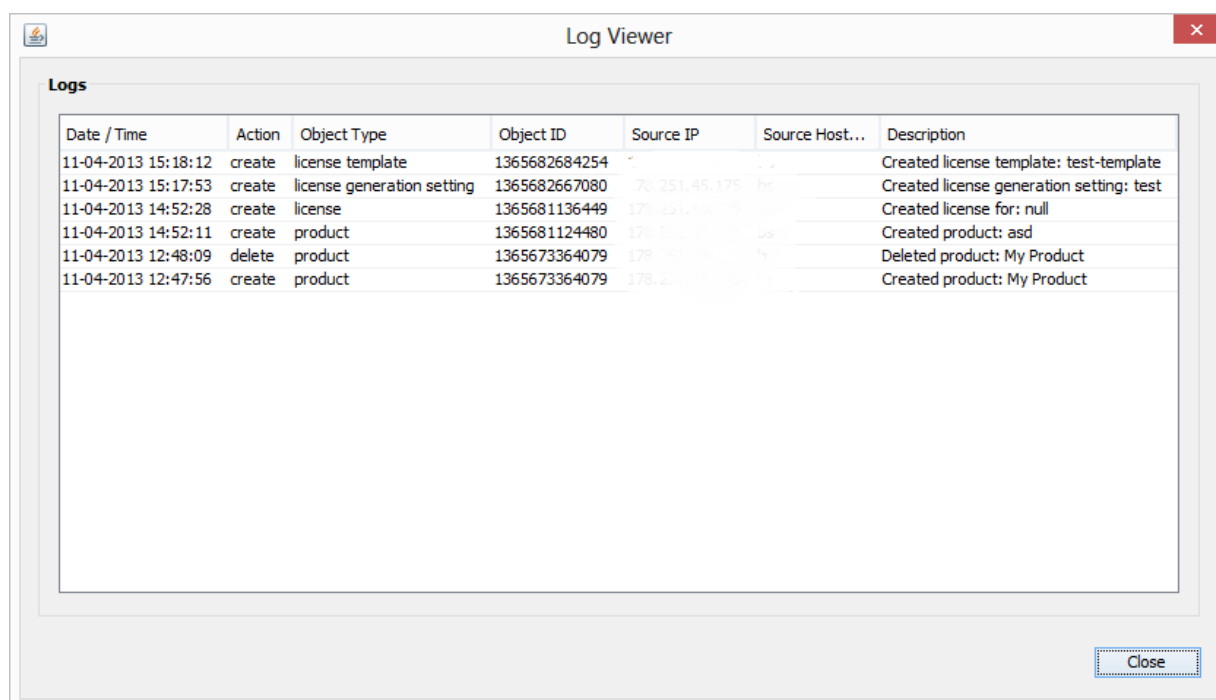
License Count: 1

Allowed License Count: 1000

Change Password Save Close

Log Viewer

Log viewer is available only when connected to Online.License4J, and it displays create, edit, and delete actions performed by current connected user.



Hardware ID Use

License Manager Version 4.0 supports hardware id generation from hostname, Ethernet mac address, disk volume serial number and disk manufacturer serial number. Any of all of them can be used in hardware validation.

License Manager Package comes with a Hardware ID Viewer application to display all hardware IDs. You can distribute it standalone or bundled in your product free of charge to anyone.

While generating license, a single or combination of hardware IDs can be defined. AND (&&) and OR (||) combinations available. For example, to check for both hostname and disk volume serial number hardware IDs the combination should be defined as

17c9df801-238a-3e28-8ae2-675fd3166a1a&&32c43ad26-36ca-356c-8a7f-fa3118fb6e0e

both of hardware IDs should pass the check for hardware ID validation success. OR (||) combination checks succeed if any of the hardware ID validates.

License4J Runtime Library Integration

License4J runtime library file name is *License4J-Library-Runtime.jar* and it is included in distribution. Library should be included in product for license validation.

Basic and Cryptographically Secure License Key Validation

Basic license key validation method:

```
LicenseValidator.validate(  
    licenseString,  
    publicKey,  
    internalString,  
    nameforValidation,  
    companyforValidation,  
    hardwareidValidation);
```

License string is the license key like JZENR-R6TNH-EMAXC-QYS3F-J63UL. Public key is your product's public key, it can be viewed on license manager gui. Internal string is defined during license key generation, if not specified it is set as product's unique id by default only for basic license key. Name for validation and company for validation are the customer name and company name, which are defined during license generation, but they should be included in key validation only if specified during license generation.

As all validation methods, it returns a License object. License object has ValidationStatus enumeration, which has following.

LICENSE_VALID

LICENSE_INVALID

LICENSE_EXPIRED

LICENSE_MAINTENANCE_EXPIRED

MISMATCH_PRODUCT_ID

MISMATCH_PRODUCT_EDITION

MISMATCH_PRODUCT_VERSION

MISMATCH_HARDWARE_ID

FLOATING_LICENSE_SERVER_NOT_AVAILABLE

FLOATING_LICENSE_NOT_FOUND

FLOATING_LICENSE_NOT_AVAILABLE_ALL_IN_USE

INCORRECT_SYSTEM_TIME

For a basic license key some of them are not applicable. By using `getValidationStatus()` method of License object, you can get the validation result of license. `LICENSE_VALID`, `LICENSE_INVALID`, `MISMATCH_HARDWARE_ID`, `INCORRECT_SYSTEM_TIME` results can be obtained. A sample switch statement may be used as below.

```
switch (license.getValidationStatus()) {  
    case LICENSE_VALID:  
        // TODO  
  
        break;  
  
    case LICENSE_INVALID:  
        // TODO  
  
        break;  
  
    case MISMATCH_HARDWARE_ID:  
        // TODO
```

```
        break;

        case INCORRECT_SYSTEM_TIME:

            // TODO

            break;
    }
}
```

License Text Validation

License text validation method:

```
LicenseValidator.validate(
    licenseString,
    publickey,
    productID,
    productEdition,
    currentProductVersion,
    currentDate,
    currentProductReleaseData);
```

Same License object returns after validation like in license key validation, and it has ValidationStatus enumeration with validation results.

License Activation

If validated license requires activation, (this is check with license.isActivationRequired method) it can be activated with LicenseValidator.autoActivate(license) method. The method returns a License object. License object has ActivationStatus enumeration with following results.

ACTIVATION_COMPLETED

ACTIVATION_REQUIRED

ACTIVATION_NOT_REQUIRED

ACTIVATION_SERVER_CONNECTION_ERROR

LICENSE_NOT_FOUND_ON_ACTIVATION_SERVER

ALREADY_ACTIVATED_ON_ANOTHER_COMPUTER

MULTIPLE_ACTIVATION_LIMIT_REACHED

Activation result is obtained with `getActivationStatus()` method. Simple switch statement to check for activation status follows.

```
switch (license.getActivationStatus()) {  
    case ACTIVATION_COMPLETED:  
        // TODO  
        break;  
    case ACTIVATION_SERVER_CONNECTION_ERROR:  
        // TODO  
        break;  
        case MISMATCH_HARDWARE_ID:  
            // TODO  
            break;  
    case ALREADY_ACTIVATED_ON_ANOTHER_COMPUTER:  
        // TODO  
        break;  
    case MULTIPLE_ACTIVATION_LIMIT_REACHED:  
        // TODO  
        break;
```

```
}
```

License4J Development Library Integration

Required methods are available in License4J development library to generate licenses programmatically. The process starts with generating your keypair, then LicenseText or LicenseKey objects are initialized, features set and license string is generated. Sample code are given below. JavaDoc documentation is provided within License4J download package.

Generate KeyPair:

```
LicenseKeyPair keypair = LicenseManager.createKeyPair(  
    "key pair descriptive name",  
    "some description",  
    LicenseKeyPair.KEYPAIR_ALGORITHM_RSA,  
    LicenseKeyPair.SIGNATURE_ALGORITHM_SHA512withRSA,  
    LicenseKeyPair.KEYSIZE_1024);
```

Key pair and signature algorithms are defined as static variables in LicenseKeyPair.

Create LicenseText or LicenseKey object and set required features:

```
LicenseText licenseText = new LicenseText();  
licenseText.setUserFullName("some user");  
licenseText.setUserEMail("email@domain.com");
```

Generate License:

```
String licenseString = LicenseManager.generateLicenseText(keypair, licenseText);
```

After this three step, you will have a license string, copy it in a file and send to your customer. License4J package also includes a small utility for reading and writing to text files, you can write your license string to a file as below.

```
FileUtils.writeFile("c:\\license.txt", licenseString);
```

License4J Development library requires a license. To install and activate the license you have to use `com.license4j.License4JLicense` class in command line.

To install 30 days valid trial license and activate use the command below.

```
java -classpath LICENSE4J-Development-Librar.jar com.license4j.License4JLicense getTrialLicense
```

This command connects to Online.License4J and activates trial license for running computer, and it returns license key and activated license text. After getting your license text you have to set Java system variables which development library checks for. The license key below is the trial license.

```
System.setProperty("license4j.license.key", "<license key> ");
```

```
System.setProperty("license4j.license.text", <license text obtained with getActivationResult  
or getTrialLicense>
```

These properties should be set before generating license string. Finally, a complete running example is given below.

```
System.setProperty("license4j.license.key", "<license key>");
```

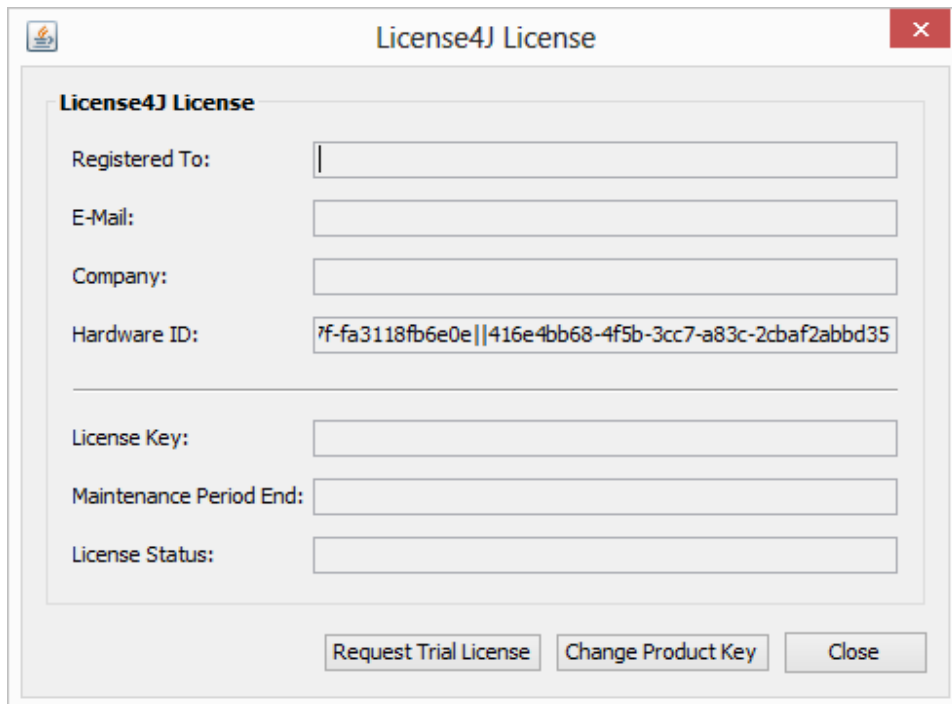
```
System.setProperty("license4j.license.text", <license text>
```

```
LicenseKeyPair keypair = LicenseManager.createKeyPair(  
    "key pair descriptive name",  
    "some description",  
    LicenseKeyPair.KEYPAIR_ALGORITHM_RSA,
```

```
LicenseText licenseText = new LicenseText();  
  
licenseText.setUserFullName("some user");  
  
licenseText.setUserEMail("email@domain.com");  
  
String licenseString = LicenseManager.generateLicenseText(keypair, licenseText);  
  
FileUtils.writeFile("c:\\license.txt", licenseString);
```

License4J License Manager License

When License Manager first run licensing window appears as below.

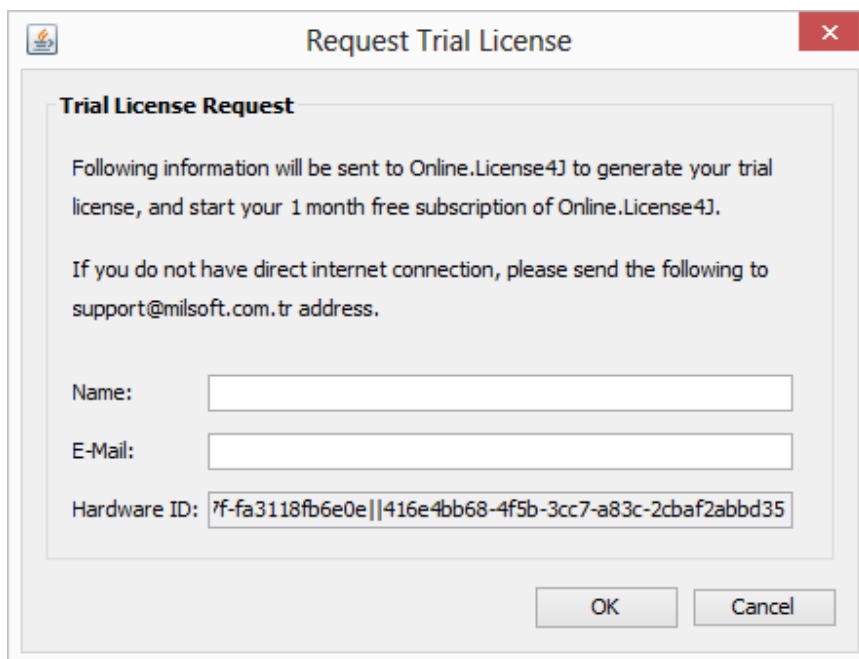


The screenshot shows a Java Swing window titled "License4J License". The window contains a panel with the same title. Inside the panel, there are seven labeled text input fields arranged vertically: "Registered To:", "E-Mail:", "Company:", "Hardware ID:" (pre-filled with "7f-fa3118fb6e0e||416e4bb68-4f5b-3cc7-a83c-2cbaf2abbd35"), "License Key:", "Maintenance Period End:", and "License Status:". At the bottom of the panel, there are three buttons: "Request Trial License", "Change Product Key", and "Close".

If you want to use trial period for testing, click on Request Trial License button to get your trial license and Online.License4J account online. If you do not have internet connection contact us.

Trial period has some restrictions. License keys are created for name "License4J Trial" and it must be used in license key validation method. License text will have 10 days validity period.

Trial request window asks for name and e-mail address for Online.License4J account creation, your e-mail will be used as username. Trial license will be activated with your hardware id.



The image shows a Windows-style dialog box titled "Request Trial License". It contains a section titled "Trial License Request" with the following text: "Following information will be sent to Online.License4J to generate your trial license, and start your 1 month free subscription of Online.License4J. If you do not have direct internet connection, please send the following to support@milsoft.com.tr address." Below this text are three input fields: "Name:" (empty), "E-Mail:" (empty), and "Hardware ID:" (containing the text "7f-fa3118fb6e0e||416e4bb68-4f5b-3cc7-a83c-2cbaf2abbd35"). At the bottom right are "OK" and "Cancel" buttons.

Request Trial License

Trial License Request

Following information will be sent to Online.License4J to generate your trial license, and start your 1 month free subscription of Online.License4J.

If you do not have direct internet connection, please send the following to support@milsoft.com.tr address.

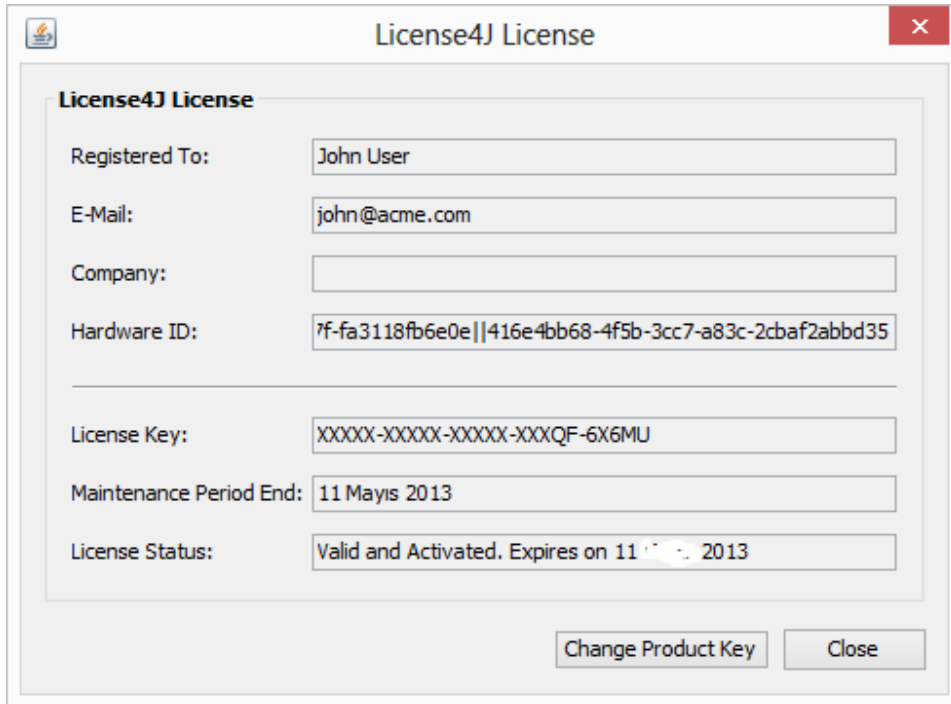
Name:

E-Mail:

Hardware ID:

OK Cancel

After trial license is activated, licensing window will display license details.

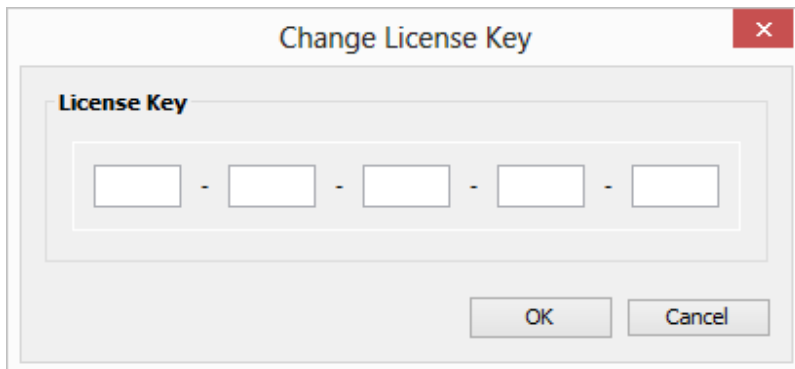


The 'License4J License' dialog box displays the following information:

Registered To:	John User
E-Mail:	john@acme.com
Company:	
Hardware ID:	7f-fa3118fb6e0e 416e4bb68-4f5b-3cc7-a83c-2cbaf2abbd35
License Key:	XXXXX-XXXXX-XXXXX-XXXQF-6X6MU
Maintenance Period End:	11 Mayis 2013
License Status:	Valid and Activated. Expires on 11 May 2013

Buttons at the bottom: Change Product Key, Close

When you purchase License4J License Manager, you will have a license key sent by payment processor. Click on Change Product Key button to enter your license key.



The 'Change License Key' dialog box contains a 'License Key' section with a text input field divided into five segments by hyphens: [] - [] - [] - [] - [].

Buttons at the bottom: OK, Cancel

After license key validation you have to activate your copy of License Manager within 30 days.

End of document.