



Microsoft® Software Licensing and Protection (SLP) Services

Getting Started User Guide



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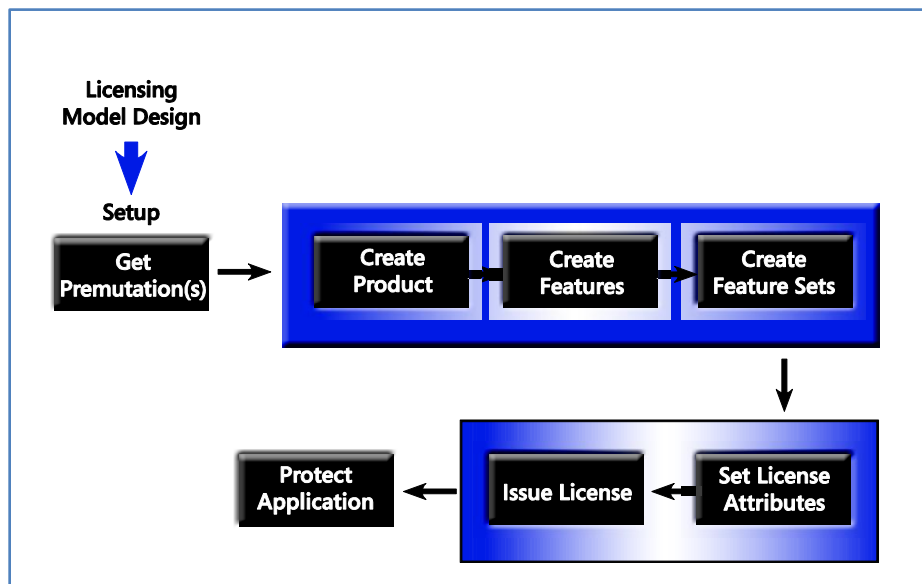
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Overview: Licensing and Protecting your .NET Assembly

Congratulations on purchasing Microsoft® Software and Licensing Protection Services. This service enables you to help protect your .NET applications, making reverse-engineering to access the source code difficult.

The following block diagram illustrates the workflow for licensing and protecting your software application.



SKU Definition and License Issues

The first step is to develop a licensing model for your product. This may include defining various tiers of services. For example, you may offer *basic* service for the lowest price and functionality, and *advanced* service for customers paying a higher amount. For a different product, you may want unlimited customers who could use your product for a limited duration, after which the product is no longer available unless they purchase a commercial license. Once your licensing model is designed and ready, you are ready to use the SLP Online Service.

Using your login credentials you log on the SLP Online Service and setup your account. Next, based on your intended licensing model, you create the required number of private permutations.

The next functional block describes creating a SKU definition. This task is performed on the SLP Online Service. It is composed of three distinct operations:

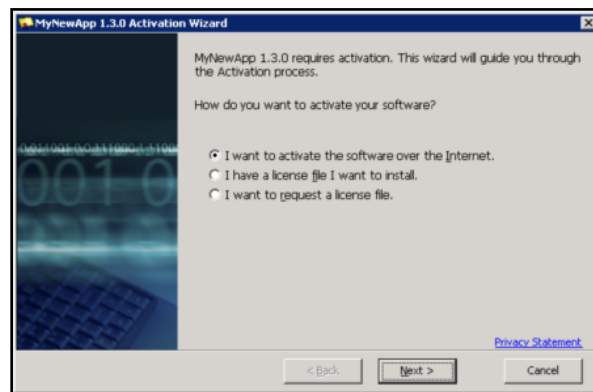
- a) Creating a product

- b) Creating features
- c) Creating a feature set associated with the features

Once you have created a SKU definition, you can associate the features with a license you may issue for that product. Features have attributes such as *Total Usage Limit* and *Expiration Days*. Similarly, it is possible to select the license attributes that apply to the entire application. The attributes that apply to the entire application may be set independent of the attributes for the features associated with the license. Once the license attributes are set, you can issue the product license(s). An activation key is created for each issued license. When a license is issued as part of an operation of this functional block, it is not yet created. A template of the actual license is created along with an activation key. The actual license gets created by the SLP Online Service when the application user initiates activation using this key. The detailed operations for *Setup*, *SKU Definition*, and *License Issue* (refer to diagram above) are covered in the document *SLP Online Service User Guide*.

The last functional block refers to the operation of applying protection on the assembly through the Code Protector, using the features associated with the license. The Code Protector application typically resides on a developer build machine. When the Code Protector application starts, it downloads all product-related information (entered as part of the *SKU Definition* functional block operations) from the SLP Online Service Server. At any time, you can synchronize Code Protector with the SLP Online Service so that it fetches and displays the most recent product information. The *Code Protector User Guide* describes these operations.

As a vendor for protected or protected and licensed assemblies, you need to distribute the activation key(s) to your end-users. In order for end-users to run the protected methods of an assembly, they need to activate the protected application. When the end-user runs the protected assembly for the first time, he/she will be presented with a UI prompting them to enter the activation key.



The user enters the activation key and a request is then sent to the SLP activation service where the activation key is examined. If the key is found to be valid, a license is created and returned. The license is stored on the end-user license store; which could be a computer, a website, or any other supported license store. The protected application can now be run in accordance to the terms of the license.

As part of your account package, you should have received:

- a) A Product key (or keys, depending on the terms of your account).
- b) A link to SLP Online Service. You will log on to SLP Online Service to complete account information and order private permutations.
- c) A link to download the Code Protector application.

NOTE: If your account is a SLP Online Service account, you will manage your products and licenses from Microsoft SLP Online Service portal.

Licensing Models

As described earlier, before you use the SLP Online Service and/or Code Protector, you need to develop a licensing and/or protection model based on your product commercialization strategy. Some of typical licensing scenarios are listed below.

- a. **Trial/Evaluation** license
 - Trial (Unmanaged) – Activate “once use” features for a limited time. Feature should not launch after first use.
 - Trial (managed) – No initial activation required. The license is time limited, and at end of trial period, the user is prompted for activating the license.
- b. **Perpetual** license - Activate license once on launch and run forever on that machine.
- c. **Subscription** license - Activate, and at end of subscription period accept automatic renewal.
- d. **Feature-based** license – Launch application, and use the feature that requires activation. After activation, feature is fully usable.
- e. **Usage-limited application** license – Launch application N times, where N is a limit. On N+1 launch, application informs user that license is unavailable, and quits.

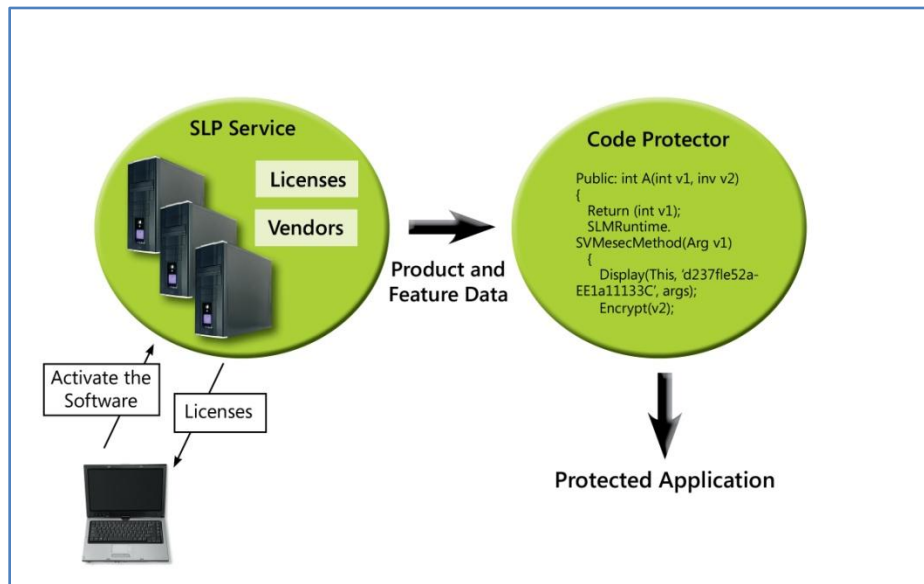
The *SLP Online Service User Guide* describes how to issue licenses based on these scenarios.

License Management

As described earlier, you can manage your product licenses using SLP Online Service. The SLP Online Service is hosted by Microsoft. Microsoft has made a significant investment in providing the

infrastructure needed to ensure that licenses can be reliably managed and administered. Most importantly, the Microsoft-hosted SLP Online Service provides a robust activation platform that ensures end-users can activate their licenses when they present a legitimate activation key to the service.

There is another platform that provides the license management functionality – the SLP Server. Managing licenses using the SLP Server is essentially quite similar to how licenses are created and issued on SLP Online Service. The difference lies in that permutations have to be manually installed on the SLP Server.



Hosting the SLP Server may require a significant investment in terms of infrastructure and operational expenses. This is especially true if your business requires uptimes that approach 99.999%. If you are opting to use the SLP Server, refer to the *SLP Server Installation User Guide* and *SLP Online Service User Guide* documents to install the SLP Server application and issue licenses for your products. If you are using Microsoft-hosted SLP Online Service, the *SLP Online Service User Guide* document explains the license management functions and tasks relevant to your product.

Accompanying Documentation

Depending upon your product marketing strategy, you may fall into one of the following categories:

- Customer with a licensed and protected product (.NET assembly)
- Customer with a protected product

Additionally, if you are intending to license your product, you may either be using the Microsoft-hosted SLP Online Service or the SLP Server product hosted by someone other than Microsoft.

You will need the following accompanying documents to achieve the tasks described in section [Overview: Licensing and Protecting Your .NET Assembly](#).

- *SLP Online Service User Guide* (if you are licensing your product using either Microsoft-hosted SLP Online Service, or the SLP Server)
- *Code Protector Installation Guide* and *Code Protector User Guide* (if you are protecting your product)
- *SLP Server Installation Guide* (if you are licensing your product, and not using the SLP Online Service)
- SLP Runtime API documentation (.CHM file)
- SLP Server API documentation (.CHM file)

These documents can be accessed from the following locations.

- Code Protector Installation Guide – Online (<http://go.microsoft.com/fwlink/?LinkId=98422>)
- Code Protector User Guide – Code Protector Installation Package
- SLP Runtime API documentation – Code Protector Installation Package
- SLP Server Installation Guide – Online (<http://go.microsoft.com/fwlink/?LinkId=98422>)
- SLP Online Service (and SLP Server) User Guide – SLP Server Installation Package
- SLP Server API documentation – Code Protector Installation Package

Glossary

A

Activation (1)	Process of acquiring license entitlements by providing proof of purchase.
Activation (2)	A method of delivering Runtime License to end user machine. Activation involves sending the activation key together with binding parameters to SLP Server, verification of the provided activation key, generation of Runtime License according to the binding parameters, and installation of the license on the end user machine.
Activation Key License Key	A string that uniquely identifies a License.

B

Backend Server	Logic and data layers of SLP Server. Contains the License Issue System.
Binding (1)	Associating a given set of entitlements with a specific, unique entity. Typically entitlements are bound to machines, but they could be bound to other hardware, a user, or other entity that can be accessed from the client system.
Binding (2)	Connecting a Runtime License to specific instance of License Store. For example: binding Runtime License to specific machine.

C

CID	Confirmation ID, encoded package of entitlement information sent from Activation server to end-user. Used only in phone activation.
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Code Protector GUI	Code Protector that runs as Windows form application.
Code Protector CMD	Code Protector that runs in command line.
Code Protection	A transformation applied to software code to make unauthorized modification and reverse engineering more complex.
ComputerID	An algorithm that creates a unique identification of the machine according to various hardware and software parameters.
Customer (Vendor's customer)	A person or organization that a License can be issued for.
Customer Portal	Web portal used by Users to monitor their license usage.

D

Developer	A software developer that performs integration of Vendor's software and SLP Services.
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E

End User	A person that uses software protected by SLP.
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F

Feature (1)	The smallest definable unit of capability. In an image processing application, one feature may be "sharpen" another might be "adjust brightness" and a third might be "remove red-eye."
Feature (2)	A logical group of product functionality.
Feature Sets (1)	A collection of one or more features. Feature Sets pre-populate feature lists during the license creation activity. Features can be added or removed from the feature lists

	associated with licenses at the time of license issuance.
Feature Set (2)	A group of product Features associated with a License.
Frontend Server	Presentation layer components of SLP Server. Contains Vendor Portal, Customer Portal and Partner portal.

G

Generic Permutation	A permutation provided to customers for trial purposes.
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I

IID	Installation ID, proof of purchase, binding and vendor information submitted to the Activation server as a request for entitlements. Used only in phone activation.
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L

License (1)	Defines the terms of use for a given Feature/Feature Set/Product combination. Licenses can be limited by usage or time and can be bound to unique entities.
License (2)	Software license information on SLP Server can be identified by License Key. Licenses may be based on: the number of machines on which the licensed program can run; the number of users permitted to use the program; an application enabled to run on only one machine; an application enabled to run on different computers as long as its copies are not running simultaneously; an application enabled to run simultaneously on a specific number of copies.
License Administrator	An application that can be redistributed with licensed Vendor application. It enables managing (install/uninstall) licenses on the end user machine, and configuring Network License Server connection.

License Issue System	Web Services related to License Management.
License Issuing	A process of creating a new license.
License Reissuing	A process of updating an existing license with new set of restrictions and terms, or replacing the license with a new one.
License Request	Information collected from end user machine that enable generation of a Runtime License. It contains description of license stores that are available on the machine, and can optionally contain usage counters status information.
License Store	A device that can store Runtime License information, and allow binding of Runtime Licenses. Examples: Machine, USB flash dongle...
Limitations	A set of restriction that vendor can apply for a specific license. For example: number of concurrent usage limit, expiration period...
Load Balancer	A device that distributes processing and communications activity evenly across a computer network so that no single device is overwhelmed.

M

Manual Activation	An activation process where the data exchange is done manually, for example, using e-mail.
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N

Network License	Managed by Network License Server. This license is not installed on the client machine locally, but can be accessed by client machine from the server on demand.
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O

Obfuscation	A process of changing meaningful symbolic information into meaningless information, making human reverse engineering complicated.
Online Activation	An activation process where the data exchange is done using direct Internet connection.

P

Partner	System integrator or distributor that resells an ISV's software.
Partner Portal	Web portal used by Partners to issue and reissue licenses.
Permutation (1)	A unique instance of a Secure Virtual Machine.
Permutation (2)	A custom vendor-specific version of Secure Virtual Machine.
Permutation Generator	A web service that generates permutation packages containing Permutation and Vendor information.
Permutation Package	A file that contains Permutation and Vendor information. It enables a vendor to issue licenses and apply code protection to software.
Portals	Any web portal that is a part of SLP System. Examples: Vendor Portal; Customer Portal...
Private Permutation	A permutation generated specifically for a vendor.
Product	A collection of one or more feature sets. The product is the entity that relates features to licenses via feature sets. Using the example above you could have a product for each feature or combine all three into a product "enhance image".

R

Resident License	A license that can be delivered with the product for evaluation or other purposes.
Runtime License	A tamper proof representation of a License that can be used by SLP Runtime for software license terms enforcement.

S

SLP Code protector	An application that allows seamless integration with licensing. It applies transformation on .NET code for anti -tampering protection. Code protector application has two parts: Code Protector GUI and Code Protector CMD .
SLP Enterprise Server	SLP server installed by a vendor.
SLP Hosted Server	SLP server hosted on a server farm.
SLP Master	An administrative account that allows adding a new vendor, deleting a vendor and perform other admin level actions.
SLP Online Service	Software Licensing and Protection hosted subscription. Classified as Starter, Basic, and Standard.
SLP Runtime	Set of components that are distributed with an application protected by SLP. The components contain client-side License Management and Code Protection functionality.
SLP Server	The server which provides license issue and management services. It provides a direct interface to client machines through web services. Classified as Standard and Enterprise.
SLP Services	Software Licensing and Protection Services.
SLP Suite	Represents the Server and Service (includes Front-end and Back-end components).

SLP System	All software components used in the implementation of SLP Services.
SVM	Secure Virtual Machine. Secure Virtual Machine. Represents the virtual machine which executes protected assemblies, performing decryption and decoding when required.

T

Template License	A license that can be used to issue other licenses. The derived licenses will have the same definitions as the template license, but a different license key.
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V

Vendor	A software vendor that uses SLP Services for software licensing or protection.
Vendor Portal (1)	Web portal used by Marketing/Sales/Dev/Support to configure and issue licenses.
Vendor Portal (2)	A portal that allows vendors to manage product definitions and licenses.
License Management Suite	