



Nuvoovis
Software Licensing Overview

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Introduction

This document gives an overview of Software Licensing & Copy Protection, and how Nuvovis goes about providing its Software Licensing service to Independent Software Vendors (ISVs).

Not all software can run in the cloud as a service like Salesforce, where you can simply monitor usage and bill customers for the services that they use. Software vendors also need to provide applications for customers to install and use on their own hardware or on cloud hardware under their control. So for server or desktop software we still need some sort of software copy protection or software licensing.

Software licensing is used by software vendors to control how many copies (and possibly what features) of an application are used by their customers. With no protection at all a software vendor's customers could not only run as many copies of an application as they like but also share it with others who haven't paid for the software. Typically software vendors charge for the number of users or machines that can use the software so the vendor needs to limit their customers' use of the software in some way. This software use limitation is controlled using Software Licensing.

To implement Software Licensing ISVs could develop their own custom license checking software and provide an internet facing service to allow users to activate their licenses over the internet. The licensing software could be a simple local machine lock or more sophisticated features may be needed such as “floating licenses” that can be shared by users on multiple machines. The internet facing service needs to be able to meet peak demand, be secure & kept up to date with software updates, have its logs monitored, be highly responsive and resilient to local failures or even disaster striking a data centre. The Nuvovis software and service relieve ISVs from all of these concerns.

License Check

Nuvovis provides a cloud service and a small library (DLL on Windows) called via an API to ensure that a software application is run with the settings prescribed by the software vendor, and is run only in the environment for which the license was originally activated. A software license contains the following:

- Licensee's name.
- Information about the software to be licensed.
- Expiry date.
- Execution environment locks (optional).
- Live License flag.

The information about the software includes the name of the application and any separately chargeable features within the application. The expiry date can be used to time limit the license's validity or the license can optionally be marked as perpetual. The environment locks are used to limit the use of the licensed software to a particular environment e.g. a particular server machine or the license can be allowed to move. Live Licenses have their settings refreshed from the cloud and can “float” from one machine or user to another.

Nuvovis API

To enforce the license a software vendor's application calls the Nuvovis API to activate the license on their client's machine and read the license settings to check that the application has a valid license. The Nuvovis library and licensing is designed to simplify the integration task for developers and minimise the impact on the licensed application and its operating environment. The library comes with worked examples for C++, .NET C#, Java, Python and Delphi. The remote license activation services are provided by Nuvovis using Google AppEngine ensuring optimal reliability and speed as Google will provide the service close to the end user's internet location. The API provides functions to do the following:

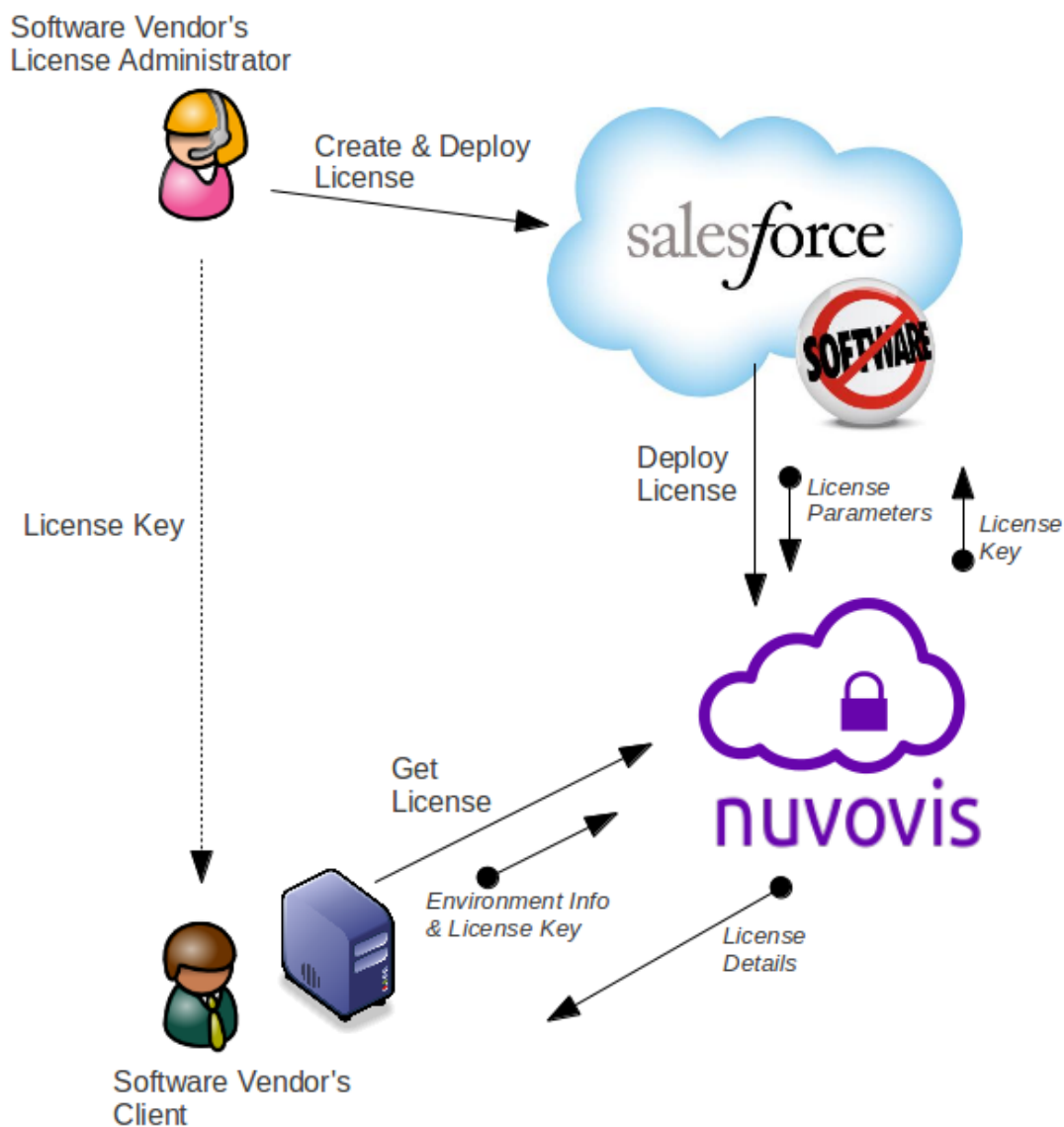
- Activate or refresh a license.
- Check the existing license is valid.
- Read the license settings.
- De-activate (release) a live license.

For more details see the API Reference here:

<https://www.nuvovis.com/doxygen/index.html>

License Activation

So how is a license locked to its execution environment and what is license activation?



The software licensing process starts with the creation of a license either using the Salesforce hosted Nuvovis App or using the Nuvovis Portal running in Google AppEngine. The software vendor's License Administrator creates a new license for a customer specifying the parameters:

- Application Name.
- Application Settings.
- Expiry Date.
- Which Environment Locks to apply.
- Live License Flag.

The License Administrator has full control (using easy to use wizards) over what is locked in the client's execution environment. This allows the software vendor to enable execution in any environment e.g. in virtual machines which need to move around physical hardware.

When the License Administrator saves the license the license parameters are sent to the Nuvovis service and Nuvovis responds with a license key. This key (a random sequence of letters and numbers) is then sent to the customer, typically using email.

With the license key and the application to be licensed the client is ready to activate the license. The application sends the environment information and the license key to the Nuvovis service and receives the license settings. If the settings are valid the application can now execute in the client's execution environment.

For more details about license creation see the Nuvovis User Guide.