THALES

Cloud Licensing
With Sentinel LDK
Securely access software from anywhere, anytime.

Cloud Licensing with Sentinel LDK

Cloud licensing with Sentinel LDK is a solution for software licensing which leverages user identities to enable a user centric approach to licensing.

Leveraging Sentinel cloud licenses (Sentinel CL), software vendors are able to deploy a cloud based licensing service which enables a highly convenient experience for end customers whilst offering a secure solution for virtual, containerized and cloud environments, as well a physical machines.

Cloud licensing versus traditional licensing

Traditional software license enforcement is based around the concept of machine-based authorization. Access to a license is dependent on a specific device and if that device is missing or incorrect, access to the license is denied. Typically, this is controlled in one of two ways – either via a hardware key or via a software license with fingerprinting.

With hardware key licensing, the protected software is bound to a physical hardware key – usually a USB dongle – which is validated each time the software is run. If the hardware key is missing, or is the incorrect key for the application, the application will not be authorized. With software licensing, the license is installed onto the local hard disk as an encrypted file, which is bound to the local device's hardware signature or fingerprint. If the fingerprint does not match what has been defined in the license, then the application will again not be authorized. Both of these cases of hardware and software based licensing are known as **local licensing**.

An extended concept for software licensing is known as **network licensing**. Here a licensing service, known as a license manager (LM) is installed within a local network environment such as a corporate site, and the protected applications communicate over the network with the LM network to gain authorization. Network licensing also enables concurrency, where only a specified number of protected applications or client can obtain a license simultaneously.

Local licensing

- Licenses are deployed on the same machine that is running the licensed software
- Licenses are bound to the fingerprint of the local machine

Network Licensing

- Licenses are deployed on a license manager on the end users local area network
- Network users connect to the license manager to obtain a license
- Users can detach a license from the license manager if they also want to use it offline

Cloud Licensing

- Deployed in a public or private cloud
- Users connect to the cloud license manager via the Internet or a private connection
- User can detach a license from the cloud for offline use
- License control is bound to the user instead of the machine

With **cloud licensing**, the software licenses are installed on a cloud license manager (cloud LM) which is deployed into a public or private cloud environment which user's access in real time. The cloud LM can be used in online mode in a very similar manner to a conventional LM, or a license can be detached from the cloud and used locally in an offline scenario. When used in online mode, the authorization to the license is user based as opposed to machine based. When detached offline, a local license is created which is bound to a more conventional fingerprint. If the local fingerprint is more volatile and often changes (such as with a virtual environment) then the license can be reauthorized by connecting back to the cloud LM. The vendor can also control the policy over how long a local detached license can be used for before the application is forced to connect back to the LM and obtain a refreshed state.

Advantages and benefits

- Existing LDK customers can use cloud licensing with their exisitng LDK API implementation.
- By deploying a cloud license manager (cloud LM), vendors can enable and disable access to features in real-time with high levels of security.
- The cloud LM can also be deployed into the private cloud environment of an end customer site, ideal for where more stringent network compliance requirements exist.
- End customers have the freedom to access the software from any machine since they authorized by their user ID instead of their device fingerprint.
- Supports a wide variety of operating systems, including Android, Linux on ARM, and Apple M1.
- Developers can centrally manage users and licenses through the cloud LM, and have a complete view of licensing activities at a glance.
- The cloud LM collects usage data which developers can use to make better business and development optimization decisions.
- Software licensing is not disrupted or misused by activities such as operating system reinstallation, hardware replacement, cloud migration, virtual machine migration, container restarts, etc.
- Wide range of supported application deployment scenarios - offline and online, public and private cloud.
- Improved security with online scenarios from real-time license verification.

Customer stories

" I require the convenience of accessing the licensed software from my company PC, my home PC, and my iPad."

" How can the software licensing policy and related data be easily restored after a computer failure, hardware replacement or system reinstallation?"

" As a developer, I need a flexible way to manage trial licenses and get better insights into trial activity."

" My end customers often object to the overhead of having to manage and maintain their own license manager."

" For my corporate end users, IT teams need to be able to easily assign and manage Software licenses for their users."

" I want users to simply log in and use the software without worrying about license activation."

Cloud licensing workflow
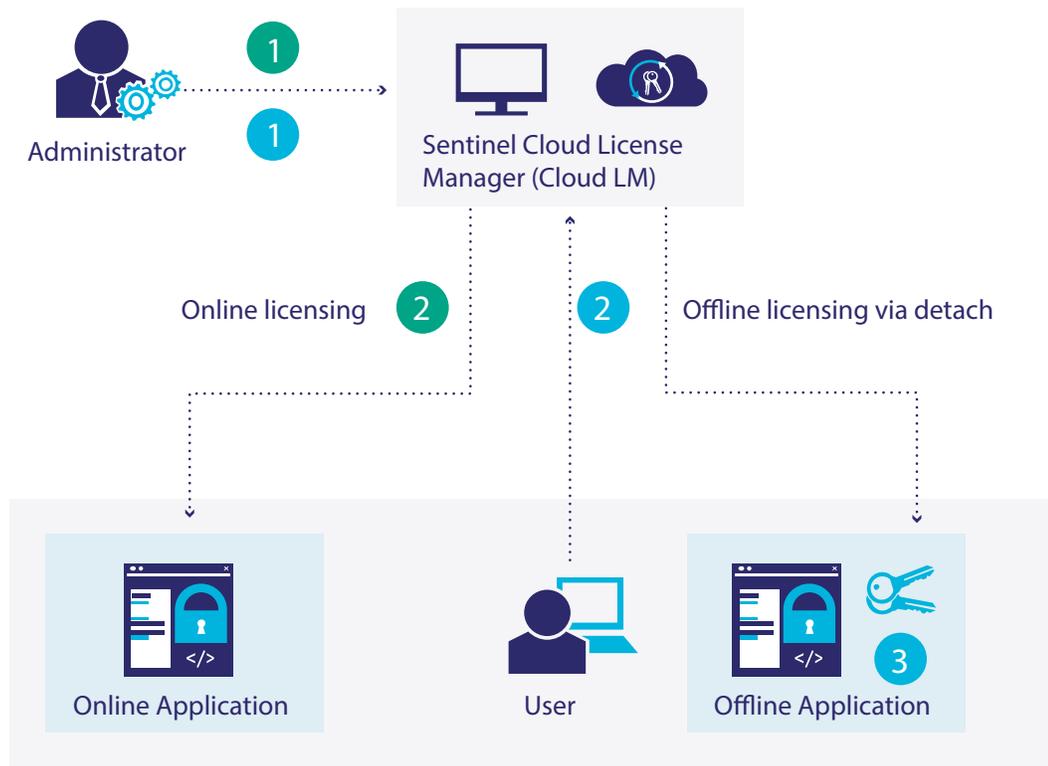
Operating modes

Online mode:

1. The administrator installs the license on the cloud LM and configures the user ID.

2. End user client connects to the cloud LM and their user ID is used to authorize the application

Offline mode:

1. The administrator installs the license on the cloud LM and configures the user ID.

2. When the end user has connectivity, the license is detached and downloaded from the cloud LM to the local machine has a network connection.

3. Once offline, the end user accesses the license locally.

Mixed mode:

The end user downloads the license for offline use, and then a predefined interval (e.g. every 2 hours) determines when the end users machine must connect back to the cloud LM and update the license before it expires.

Cloud licensing deployment modes
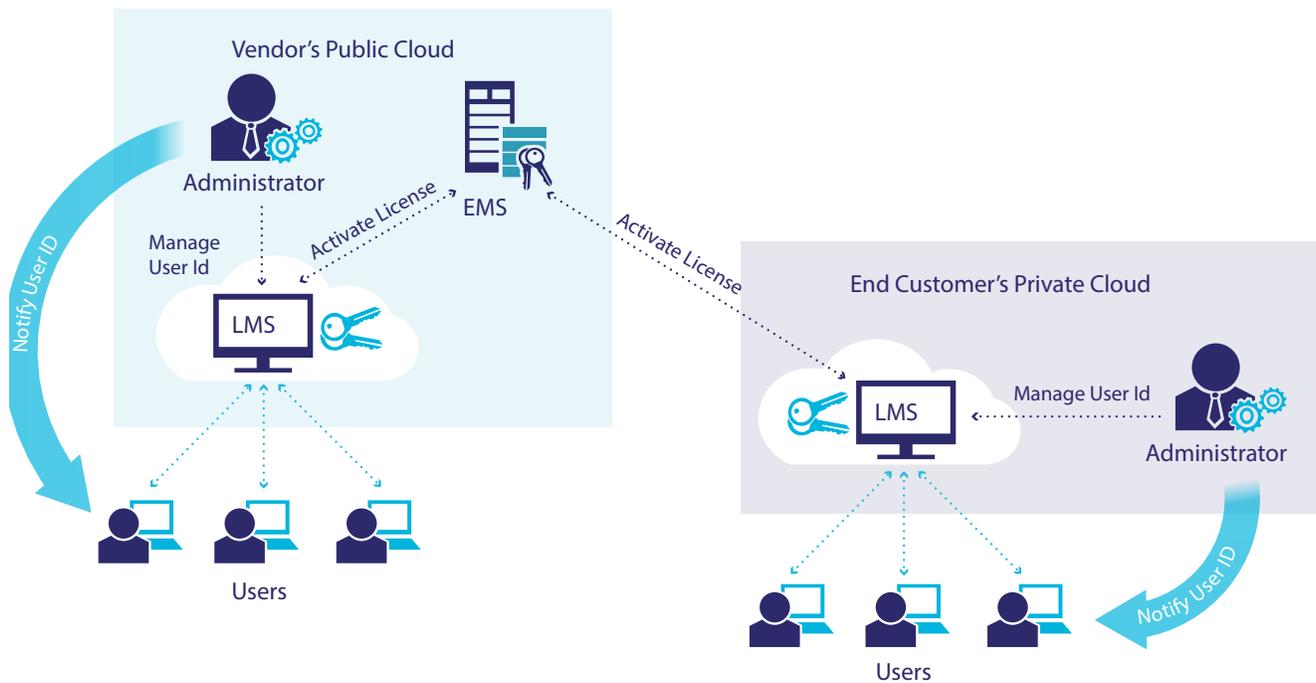
Supported operating systems and platforms

Cloud License Manager

- Windows
- Linux Intel x86_64
- Linux ARM 32 and ARM 64
- MAC

Client

- Windows
- Linux Intel x86_64
- Linux ARM 32 and ARM 64
- MAC
- Android

Programming language support is consistent with all Sentinel LDK licensing.

Contact us

For office locations and contact information, please visit
cpl.thalesgroup.com/software-monetization/contact-us

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