On the Radar: Gemalto's Sentinel platform helps to extract the maximum value from software

Platform enables vendors and device manufacturers to monetize software licensing more effectively

Summary

Catalyst

The monetization of software is an underused opportunity for many vendors. However, fully exploiting this opportunity requires a complex mix of security infrastructure, license management, and entitlement monitoring. As more businesses become software-driven, the opportunity to monetize software increases. It spans multiple use cases: software vendors with on-premise and cloud business-to-business (B2B) applications, device manufacturers (especially of high-value devices such as advanced medical instruments), and cloud service providers. It also includes end-user companies with thousands of employees using multiple software solutions, for which the management of expensive software licenses is extremely important: license infringements occur more through oversight than through deliberate non-compliance, and where there is a high percentage of unused license entitlements, costs could be significantly reduced.

Gemalto is known for its range of security solutions around entitlement and licensing that includes IP protection, secure licensing, license lifecycle management, the delivery of customer usage insight, and customer self-service of available software. With Sentinel, Gemalto provides an integrated cloud-based monetization platform that makes its capabilities easier to adopt and manage.

Key messages

- Sentinel is a unified platform which allows any type of vendor application to use Gemalto's licensing technology, whether it is a traditional on-premise, cloud/software-as-a-service (SaaS), embedded, Internet of Things (IoT), or mobile application.
- Sentinel brings cloud licensing capabilities to traditional on-premise-oriented software vendors.
- It is highly flexible and feature-rich, and it can address almost any business model and deployment scenario including pay-per-use (PPU) licensing.
- Its large range of functionality adds to its flexibility, and Gemalto technical teams can provide support during initial integration and rollout, which is especially useful to new users of the solution.

Ovum view

By making better use of licensing and packaging, vendors can increase their revenue streams while providing greater value to their end-customers, who are able to manage the use of software more effectively. Additionally, by increasing protection from piracy, vendors can significantly reduce revenue leakage.

Many larger companies struggle to deliver product activation and license renewal on a global scale. These processes, which are often prone to error, can have a negative impact on the customer experience if they are not managed correctly. Gemalto is an expert in this field, and Ovum advises enterprises to examine its solutions before attempting home-grown alternatives. Sentinel aims to offer a comprehensive solution to the problem of providing license packaging refinements, transactional automation, and customer self-service to support license lifecycle management.

There is also a clear industrial shift from perpetual license-based pricing to recurring revenue models such as subscription and usage/PPU. Sentinel offers a simplified path to a recurring revenue model, even with a significantly entrenched legacy customer base. For example, manufacturers of high-value embedded devices are shifting from capex to opex. With the escalating costs of equipment, shorter product lifecycles, and the need for manufacturers to differentiate themselves in a commodity market and have a predictive revenue stream, this has led to an emerging PPU business model and an effective licensing technology.

Recommendations for enterprises

Why put Gemalto Sentinel on your radar?

Gemalto has a long history of providing licensing technology to the independent software vendor (ISV) market. In recent years, it has seen a marked growth in the need for software licensing in the intelligent/advanced device manufacturing market, and this is a significant part of its current business. Sentinel will provide companies in this market with the ability to enable or disable features or improve their go-to-market strategy from a business-model perspective. Gemalto's Embedded Software Monetization solution is tailored specifically to use hardware-based license enforcement techniques to protect revenues, while also enabling a wider variety of innovative business models. This will ensure that customers only pay for what they use, while equipment manufacturers are protected from the unauthorized use or distribution of their products.

For ISVs, Sentinel adds value to commercial software, and it targets any organization of significant size that has a large number of software licenses with associated entitlements to manage through their lifecycles.

Highlights

Sentinel is a software licensing solution that allows software companies and device vendors to monetize their offerings in the most optimal way. There are two primary functional areas: Sentinel Rights Management System (RMS) covers aspects of license enforcement, while Sentinel Entitlement Management System (EMS) covers all aspects of license fulfillment and delivery.

Figure 1: Gemalto's Sentinel software monetization platform
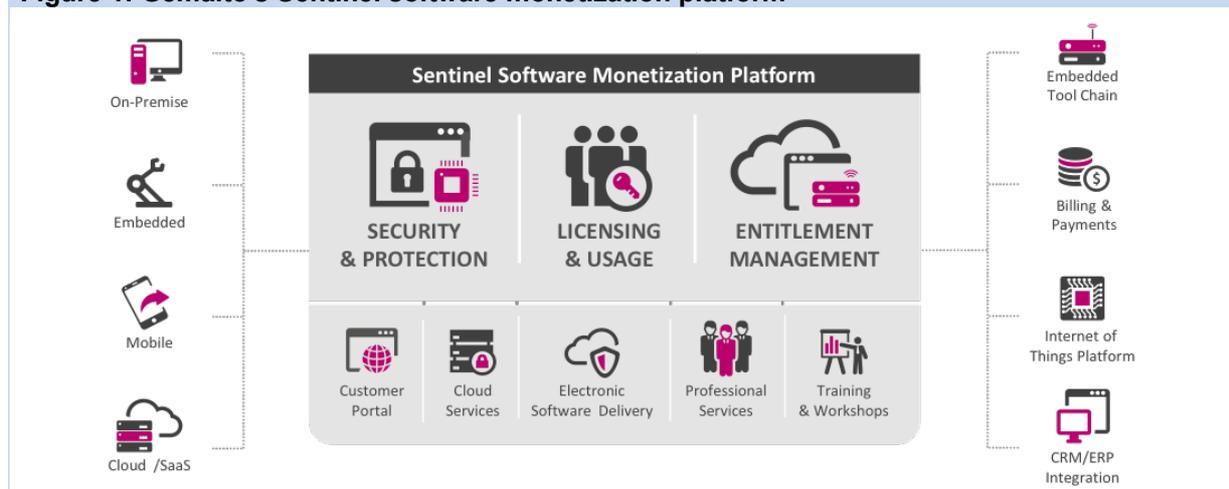
Source: Gemalto

The Sentinel software monetization platform supports enterprise software applications and intelligent hardware devices of all kinds. It communicates with customers' billing systems and back-office environments, and it is managed through customer portals. It also uses a cloud service, Sentinel Cloud Licensing (SCL), to manage any cloud-related transactions, such as usage gathering information and the dynamic control of license policies. The platform also offers various capabilities around product activation and software download management.

To accelerate adoption, Sentinel offers out-of-the-box connectors for SAP, Oracle, and Salesforce. It has an open policy toward producing additional connectors, based on market demand.

License enforcement

Sentinel RMS is primarily an SDK that is used by software developers to bind software applications to electronic licenses. Its major strength lies in what Gemalto calls "feature-based control," where the license terms determine what functionality within a piece of software can be used by a specific customer. These license terms define, for example, what features in the software are available for use, how long they can be used, and how many can use them. Additional controls defined in the licenses include how the software can be deployed: single user vs. multi-user enterprise, on-premise vs. cloud-enabled, and so on.

With feature-based control, a vendor can deploy exactly the same version of software to everyone and use licenses to determine what functionality can be accessed, therefore saving considerable cost and effort in packaging and fulfillment.

As well as providing the developers with an SDK, Sentinel RMS also includes a number of applications and services typically used by licensing end-customers, such as license managers and cloud connector services, to help facilitate the various software deployment scenarios.

Sentinel RMS also collects usage information, which it sends to the cloud for reporting purposes by Sentinel EMS, and it provides fingerprinting of the software linked to the environment to which it was licensed, to ensure copy protection.

Entitlement management

Sentinel EMS is a web-based application that covers the operational aspects of licensing. It is typically deployed within a vendor's premises, although it is increasingly being hosted as a service within a

managed cloud infrastructure. In many ways, it may be considered the customer relationship management (CRM) of licensing. It is responsible for many aspects of product and license management, such as product bundling and packaging, feature definition, and license terms. Additionally, it facilitates all fulfillment-related activities, including product activation, usage reporting, software downloads, and subscription management.

Sentinel EMS also provides self-service capabilities: end-customers and resellers can log into its web application, where they are presented with their own management portals, and they can fulfill and activate licenses themselves. Sentinel EMS is also a reporting tool, allowing users to run reports on usage, data, and the distribution of licenses.

Sentinel EMS will typically integrate with a client's back-office environment, such as their enterprise resource planning (ERP) and CRM systems, Oracle, Salesforce, or whatever system is used to run their business.

Architecture

Sentinel EMS is a JBoss-based application designed to be deployed on top of Apache Web Server. The primary means of interacting with Sentinel EMS is via a web portal, but there is also a published set of web services to allow components to interact with it programmatically.

Sentinel RMS has a developer's SDK, a principal component of which is an API library – usually referred to as the license "client." This API library contains all of the licensing functions represented by the Sentinel RMS functionality. Another principal component is the license manager, usually referred to as the license "server." This is an end-user component that manages the distribution of licenses in a multi-end-user environment such as a corporate domain. A number of additional tools and libraries help support these two principal "client" and "server" components. The Sentinel RMS components are C-based, and are ported onto many different platforms, such as Window, Linux, and UNIX.

Sentinel EMS requires knowledge of Apache Tomcat web server and Microsoft SQL or MySQL databases.

Background

Gemalto is a public company headquartered in the Netherlands, with primary operating centers in La Ciotat, France and Austin, Texas, US. The company aims to enable its clients to deliver secure and trusted digital services to billions of people worldwide. It has a turnover of €3.1bn and around 10,000 customers, and it provides security, protection, licensing, usage, and entitlement management solutions to help its customers monetize software and drive business growth.

The Gemalto Software Monetization group was acquired via Gemalto's acquisition of SafeNet in 2015, a privately held company based in the US. Founded in California in 1983 as a security solution provider, SafeNet acquired Rainbow Technologies in 2004 and established itself as the de facto provider of security technology to US Government departments such as the National Security Agency (NSA) and National Reconnaissance Office (NRO), banking systems, and enterprise customers. In 2009 **,** SafeNet acquired Aladdin Knowledge Systems, with its joint customers in enterprise security and digital rights management solutions.

Current position

Gemalto has approximately 14,000 employees operating out of 118 offices, 45 personalization and data centers, and 27 research and software development centers located in 52 countries.

Its technology partners include Aria Systems, which provides a solution to manage recurring revenue and subscription billing, and Akamai, a global leader in content delivery network (CDN) services.

Approximately 180 active customers are using one or both solution components. These include Samsung, Varian, BT, Ericsson, Onyx, HP, Philips, Airbus, Canon, Epson, Fujitsu, and Kodak.

Future developments

Below is a sample of items in Gemalto's pipeline:

- Enhance vendor operational efficiency by extending automation and streamlining operational activities throughout the entire licensing and entitlement lifecycle, from the moment an order comes in.
- Assist device vendors in their transition to becoming software and services vendors byexpanding support for new platforms and operating systems and licensing for software embedded in devices.
- Support vendors as they evolve their mindset to revolve less around the product and more around the customer by delivering tools that enhance end-customer experience and self-servicing.
- Deliver tools that support vendors in their need to analyze customer usage and purchasing habits and their use of this analysis to improve customer experience, penetrate new markets, and prevent customer attrition.
- Open new revenue streams by offering monetization solutions for APIs and data-driven business models that enable the sharing of information and data across applications.

Data sheet

Key facts

Table 1: Data sheet: Gemalto			
Product name	Sentinel EMS, Sentinel RMS, Sentinel LDK	**Product classification**	Software License Management
Version number	Sentinel EMS, current version 4.1 Sentinel RMS, current version 9.1 Sentinel LDK current version 7.6	**Release date**	August 2016, March 2017
Industries covered	Software companies across all industries, software-enabled devices across all industries	**Geographies covered**	All
Relevant company sizes	All	**Licensing options**	Subscription (average 3-year term), perpetual
URL	www.gemalto.com	**Routes to market**	90% direct sales, some channel partners in Eastern Europe and Asia-Pacific
Company headquarters	Amsterdam, Netherlands	**Number of employees**	14,000+

Source: Ovum

Appendix

On the Radar

On the Radar is a series of research notes about vendors bringing innovative ideas, products, or business models to their markets. Although On the Radar vendors may not be ready for prime time, they bear watching for their potential impact on markets and could be suitable for certain enterprise and public sector IT organizations.

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