

# Five Best Practices for Streamlining Electronic Licensing Operations



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## Executive Summary

The last five years have witnessed a dramatic adoption of electronic licensing among software publishers. Publishers claim that this is one of the easiest ways to accelerate a product's revenue growth. Electronic licensing enables software publishers to flexibly price and package their applications in any way that their customers want to buy their products. At the same time, electronic licensing prevents revenue loss from unauthorized software use. Electronic licensing is becoming a standard part of most software applications, not unlike software installers.

While the benefits of electronic licensing are overwhelmingly positive, publishers transitioning to electronic licensing are often caught off-guard by the morass of manual processes they end up using to manage their licensing operations. Inefficient, time-consuming manual processes have a negative impact on costs as well as customer satisfaction. A not-so-obvious reality of electronic licensing is that once licenses are issued by a publisher, they take on a life of their own. Therefore, it is critical for publishers to proactively define operational processes for electronic licensing and streamline them up front.

This paper begins by outlining the business processes that make up the license lifecycle, which helps us identify potential operational blindspots publishers must take care to avoid. Next we introduce the five best practices for streamlining the license lifecycle, which Flexera Software developed after working with hundreds of publishers to implement effective electronic licensing. Based on that experience, we provide a framework for the "build vs buy" decision for an operational application that automates the licensing lifecycle. The paper concludes with a brief description of how Nokia successfully anticipated and addressed operational issues prior to launching electronic licensing in their products.

## Introduction

Software publishers who implement electronic licensing to price, package and protect their products still face the challenge of how to create seamless licensing processes—for themselves, their channel partners and their customers.

Most publishers already have some combination of ERP and CRM systems handling processes related to quotes, orders, contracts, customer data and customer support.

However, license and entitlement management processes are different for publishers using electronic licensing, and are not typically handled well by today's ERP/CRM applications, leaving publishers to build homegrown applications as a consequence.

More often than not, publishers underestimate the time and cost required to create efficient and end-user-friendly processes for managing licenses and entitlements using their own internal resources. The following scenario occurs all too often when publishers begin transitioning to electronic licensing using homegrown approaches:

*A software publisher launched a new product with electronic licensing. The product consisted of 6 components (a design time tool, a run time server component, and 4 applications) that were turned "on" or "off" based on the license. A major customer, ABC Company, purchased the product with all 6 components, along with Gold level support. The customer was instructed to install 6 license files, one for each component. When the customer installed the product along with the license files, they found that only 5 of 6 components were activated. When ABC Company emailed tech support, they received a second license file that activated the missing component as well as one of the others. In addition to being totally different from each other, the initial and corrected license files also indicated different support levels, though the customer knew that they had ordered Gold level support. Nine months later, when ABC Company contacted the publisher to upgrade their software, they received license*

files that authorized only 5 users—despite the fact they had originally purchased licenses for 20 users. ABC Company also discovered that they were once again missing one component key altogether.

ABC Company used the publisher's product in a mission-critical internal project with tight schedules. Given the recurring nightmares with license files, and their impact on internal schedules, ABC Company decided not to bother upgrading at all in the future!

Unfortunately, scenarios like this are common in the software industry and have significant negative impact on profitability and customer satisfaction. Consider these facts:

- Publishers lose 5-10% of their gross profits because they are unable to flexibly price and package their software due to operational issues.<sup>1</sup>
- Publishers spend on average between 1-2%<sup>2</sup> of their gross revenues just on generating and fulfilling licenses from customer orders.
- Publishers spend approximately \$36<sup>3</sup> per support call related to licensing issues— most of these calls are avoidable. Supporting customers who are not entitled to receive support is another unnecessary and avoidable expense.
- Many publishers lose upgrade and renewal revenues because they are not able to track their installed base usage at the granular level of product version<sup>4</sup>.
- Publishers spend on average between 0.1 – 0.3% of gross revenues adapting a homegrown application to support licensing and packaging changes.<sup>5</sup>

These costs can easily add up to hundreds of thousands of dollars a year for a reasonably sized publisher. This paper demonstrates that using a best of breed application to automate license management processes helps publishers maximize profits by:

- Maximizing revenues through flexibly pricing and packaging software.
- Minimizing license generation and fulfillment costs
- Reducing customer support calls pertaining to licensing and non-entitled users.
- Maximizing renewal and upgrade revenues by tracking customer purchases.
- Minimizing IT costs for developing and maintaining a homegrown operational application.

## A Day in the Life of a License

While concepts such as “Product Lifecycle” and “Customer Lifecycle” are well understood by publishers, surprisingly few publishers transitioning to electronic licensing realize that licenses have a life of their own. A first step to streamlining electronic licensing operations is to recognize this lifecycle. So what are we talking about?

Based on our experience helping publishers implement electronic licensing over the past two decades, we have identified seven processes that make up the license lifecycle (refer to the glossary at the end of this document for an explanation of terms), as shown in Figure 1:

1. Create new product or package.
2. Entitle customers to the product (and maintenance or support that goes with it) based on their orders in an ERP or CRM application.<sup>6</sup>
3. Deliver and install product.
4. Activate license (may be demo/evaluation or production licenses).
5. Manage license and entitlement changes (e.g. Return/Rehost licenses; transfer/merge/split entitlements).
6. Update maintenance-paying customers.
7. Upsell or renew licenses.

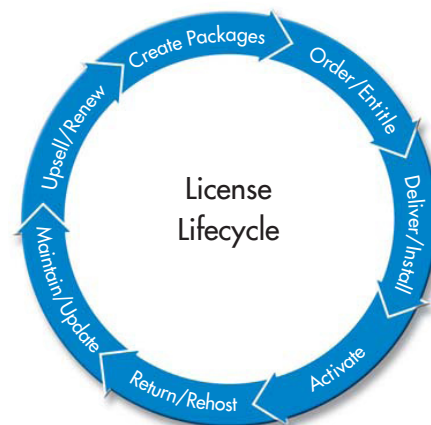


Figure 1: License Cycle

Publishers and high-tech device manufacturers, to an even greater degree,<sup>7</sup> selling through channel partners have the same lifecycle processes as above, except that they have to deal with an additional layer of complexity introduced by the presence of an intermediary who may create orders and licenses as well. In many cases, companies are supporting a model where the end-user remains anonymous, i.e., the customer is owned by the channel partner. In other cases, publishers want to know more about end-users and register them prior to activating licenses, even if they order through the channel.

1. Source: McKinsey and Company, October 2003

2. Source: Flexera Software estimates based on customer surveys. Higher end of these figures typically apply to small publishers using manual processes to generate electronic licenses.

3. Source: “Technical Support Cost Ratios,” Softletter, The Association of Support Professionals, 2000. These figures are based on average support call costs for software publishers. There is no evidence to suggest that licensing related support calls cost more or less than the average support call.

4. On a related note, enterprise customers are demanding better approaches to ensure that they are able to be in compliance with their publisher agreements— tracking the installed base is a necessary first step to provide the required capability.

5. Source: Flexera Software estimate based on customer surveys.

6. Note that for a demo or evaluation license, no orders are typically required, though a customer entitlement still needs to be created.

7. We have found that high-tech device manufacturers (such as Nokia, Cisco) face these issues more often than software producers because of their more widespread use of channels

Mapping out the license lifecycle is the first step towards automating licensing operations—the key to higher customer satisfaction and lower operational costs.

### The Zen of Streamlined Electronic Licensing Operations

What does it take to implement efficient operational processes for the license lifecycle outlined above? We have identified five best practices based on Flexera Software's experience with publishers (see Figure 2):



**1. Ensure change-readiness.** Publishers embarking on electronic licensing must assume changes are inevitable, and in many cases, should expect them on a continuous basis. An IDC survey revealed that:

- 60% of software vendors make licensing changes every year, and
- 33% of software vendors that made licensing changes in a previous year, plan on making changes in the following year.<sup>8</sup>

Most software publishers and high-tech device manufacturers have to deal with the inevitability of mergers or acquisitions. When these happen, an often overlooked but critically important change is the impact to the licensing back office. Frequently new license key generators or new licensing technologies must now be integrated into the existing back office, which may not be able to handle this. As a result, large vendors over time can end up with several homegrown and third party license key generators which drive up operational costs and result in a poor customer experience.

On an ongoing basis, changing business and licensing models often result in modifications to licensing processes and end-user-facing interfaces. For example, a publisher that is introducing node-locked licensing for the first time would need to capture parameters of their end-user's machines prior to generating a license, while in their prior license models, such information may not have been required. Publishers are, therefore, better served by operational applications that anticipate such changes and can handle them cost-effectively. Put simply, publisher's operational applications should be "change-ready".



**2. Avoid manual handoffs.** For most publishers an electronic license requires information from orders, such as the product or SKU number.

Manual handoffs between a publisher's order management system (i.e. their ERP/CRM application) and the licensing operations application should be eliminated. Publishers must recognize that electronic licensing impacts several operational areas, including sales operations, order entry/fulfillment operations, customer support and IT. A solution that automates any part of the license lifecycle process will touch those areas as well.



**3. Enable self-service.** Activating a license, providing temporary licenses on an emergency basis (e.g. when an end-user's machine becomes unusable) or moving licenses from one machine to another (i.e. a re-host) are all examples of license lifecycle processes that can be manual and costly tasks for a publisher. Several nuances of these business processes may also occur based on the licensing model such as partial fulfillments, partial returns and partial rehosts (see glossary for a description). Publishers that allow their end-users and channel partners to self-serve license lifecycle processes minimize operational costs, support calls and associated costs. Given that over 50% of large and medium-sized companies manage over 40 software contracts<sup>9</sup>, self-service also enables enterprises to mitigate some of this "complexity crisis" by helping them track what they bought and stay in compliance.



**4. Make licensing invisible.** End-users should not have to know about electronic licenses at all—all they care about is how to order, install and use the publisher's product/manufacturer's device, and get upgrades when they choose to do so. Publishers and high-tech device manufacturers should create an end-user experience that enables "hands free" activation requiring minimal user input. For example, when users install Adobe's line of products, the only input required is the serial number on the CD (or a serial number they receive via email). The software is "turned on" without users being aware that they just received a software license from Adobe.



**5. Track license and entitlement histories.** As licenses get generated, publishers can accumulate a wealth of information about what customers actually installed at a more granular level than an ERP or CRM application allows—and more specifically, answer questions such as:

- What products and versions does Customer ABC have?
- On an average, how long do customers wait before they activate our products?
- Which customers have Product A, version 5.6?
- Which platforms have our customers purchased?
- What entitlements does Company ABC have?
  - a. How many licenses have they purchased versus what they have already installed?
  - b. Which products have they purchased that are still current on support and maintenance?
- What activations has Company ABC received in the last 12 months?
- What license and entitlement changes has Company ABC done in the last 12 months (e.g., what is their list of license returns)?

8. "Future of Software Licensing Study", IDC, 2004

9. "Future of Software Licensing Study", IDC, 2004

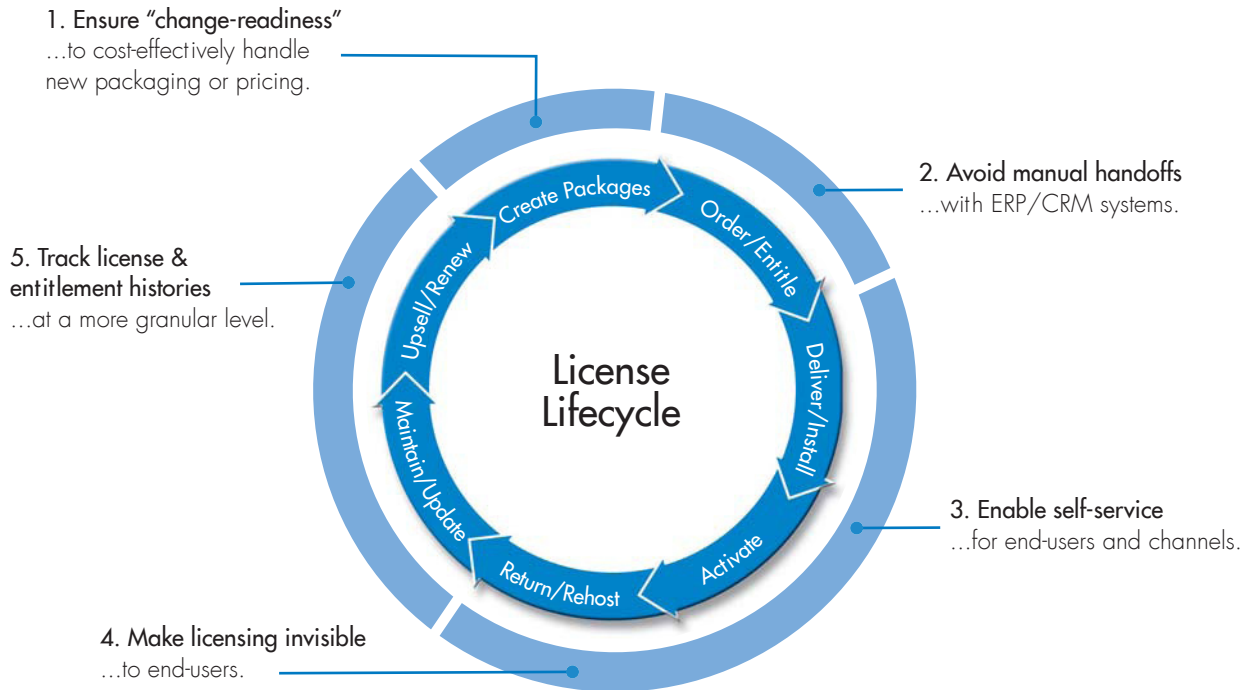


Figure 2: Five Best Practices

This information is a goldmine for publishers—as they plan upgrades and renewals, they can maximize those revenues. They can also avoid support calls and costs for customers that did not pay to get support (i.e. “unentitled” customers). Customers benefit too, by knowing what they have installed and staying in compliance with their contracts with publishers.

### To Build or Buy...That is the Question

The five best practices for operational excellence apply whether publishers or high-tech device manufacturers build their own operational application or buy one off-the-shelf. So which is better: building or buying an application for licensing processes?

Needless to say, software publishers and high-tech device manufacturers are experts in software development. (As a result, many might suspect that building an application in-house to support electronic licensing operations will be easy.) However, the actual experience of publishers building homegrown applications for managing the license lifecycle indicates that there are several pitfalls they have encountered. These pitfalls frequently result from:

- **Underestimating changes to business and licensing models.** Every time a publisher goes through a merger or an acquisition, or wants to change their licensing, they need to overhaul their operational systems. Ideally, you would want that flexibility built in to gain potential new revenues from flexibly pricing and packaging your software. As the IDC survey cited earlier points out, license and business model changes are constant in the software industry—as more publishers are finding out, these changes can be very costly to operationalize.

- “The more we build out our homegrown app, the more it is costing us to maintain it as changes happen... changes to license models, upgrades to our ERP, changes to end-user-facing interfaces we have 2 FTE (full time equivalents) focused on maintaining our in-house system...”

—Office equipment manufacturer with \$200M in gross revenues

- **“Bad data, bad key”** resulting from the poor integration of the operational application with order management systems. This often causes manual processes and error-prone licenses, as the following anecdote highlights:

- “Order entry person takes an order printout from SAP, looks up a paper license configuration document to find list of features for product and then enters feature list and machine serial number into the “License Editor” (homegrown application) to generate licenses...customers go through the entire installation process assuming the keys they received are correct. As they use the product, they find they are missing features or components they paid for because their licenses are incorrect...”

—Large Medical Equipment Manufacturer

- **Poor understanding of the license lifecycle.** Once a license is generated, it takes on a life of its own. The lifecycle includes activities such as replacing lost licenses, processing license returns or rehosts, merging or splitting of entitlements and facilitating upgrades and renewals. Most homegrown solutions fail to anticipate and manage these types of changes that typify licenses and entitlements. Consider the examples below from large software

producers that have built and maintained their own operational applications:

- "Customer license files are very large and continue to grow. We regenerate the entire license file each time a customer install-base record is touched or changed in any way (i.e., new purchase, maintenance renewal, rehost, upsell or update). Customers have no way to easily identify exactly what changed or what is the difference between the "before" and "after" license file. We have no easy way to assist the customer here."

—Large publisher of Electronic Design Automation software

- **Poorly designed customer experience.** Most publishers would not be in business if their products were as poorly designed as their customer-facing licensing processes. Often, publishers make customers go through multiple installations and keys with unintuitive user inputs such as HOSTIDs. Such problems are exacerbated for publishers that integrate products from other publishers in an OEM relationship or acquired as part of a merger.

- "I struggle with four component keys with different expiration dates located in four different places. Whenever I launch the product, a portion of the product may not work because of an expired license...It is a real pain." —Customer of a leading enterprise software publisher

- "30% of customer support calls pertain to lost keys or customers that cannot find their machine's HOSTID"  
—Large server high-tech device manufacturer

- **Inability to identify upsell and renewal opportunities.** Because publishers cannot track installed base license and entitlement histories, they lack the ability to proactively identify upsell and renewal opportunities. As it relates to support entitlements, poor tracking causes some customers to be denied support they are entitled to, while other users may get support without paying for it.

- "By scanning the spreadsheets I use, I could catch a few customers here and there who are not current on maintenance...But with 10-20% of 50,000 customers being "problem" customers, we require several thousand manual checks"  
—Inside Sales Manager of an enterprise

Pitfall: Homegrown Approach	Best Practice: 3rd Party Application	Operational Cost/ Revenue Impact	Empirical Cost/Benefit Data <sup>10</sup> (where available)	
			Homegrown Approach	3rd Party Application
Underestimated license & business model changes	Ensure "change ready" applications	Lost revenue due to inability to operationalize licensing and packaging changes	5–10% of gross profits lost	Maximize revenues with flexible pricing and packaging
		IT costs to maintain operational application	0.1–0.3% of gross revenues	IT costs can be reduced by more than 50% compared to homegrown.
"Bad data, bad key"	Avoid manual handoffs between orders, entitlements and licenses	License generation & fulfillment costs	1%–2% of gross revenues	Can be reduced to zero depending on level of self-service and ERP/CRM integration
Poor understanding of license Lifecycle	Ensure self-service for all license lifecycle processes	Support costs for license & entitlement changes	\$36/support call. Some estimates claim over 30% of support calls pertain to changes such as lost keys, rehosts, splits/merges etc.	Can be reduced significantly via end user self service and "hands free" activation
Poorly designed customer experience	Make licensing invisible to end-users			
Inability to identify upsell and renewal opportunities	Track license & entitlement history	Upsell & renewal revenues	Revenues lost because of poor tracking of installed base	Proactive renewals and upgrades would likely increase renewal & upgrade revenues by 5–10%
		Support cost avoidance for unentitled users	Example in year 1, customer bought 3 products, dropped support on 1 product in year 2. If that product gets 3 support calls/year, each costing \$500, then the publisher incurs \$1500 in extra costs.	Can be reduced significantly by tracking of the installed base at the level of products and their versions.

Table 1: Summary comparison of homegrown vs. best of breed third party application

10. Source: Flexera Software estimates based on customer surveys: McKinsey & Co. SoftLetter.

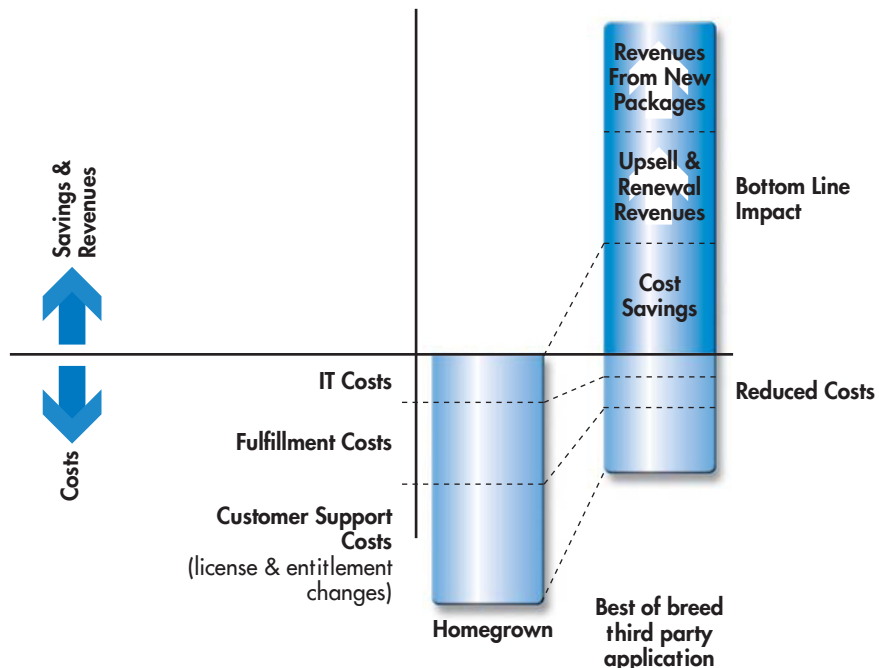


Figure 3: Summary of cost savings and revenue increases from a best-of-breed license and entitlement management application

### Streamlining Electronic Licensing Operations at Nokia: A Case Study

Nokia Business Systems is a division of Nokia that focuses on Internet infrastructure solutions. The division’s products were the first to use electronic licensing in Nokia history. Because the division sells primarily through its channel partners, it was critical to account for channel processes as part of streamlining licensing operations.

Nokia has automated key license lifecycle processes using Flexera Software®’s FlexNet™ Operations:

- End-user entitlements are created automatically from their orders in the SAP system
- Channel partners and end-users can self-serve evaluation and production licenses from the Nokia portal. They can also manage license changes—upgrades, downgrades, transfers and version updates from the Web.
- Customer installed base records in Nokia’s Vantive CRM application are updated with their licensing histories to enable tracking of upgrade and renewal opportunities

Summarizing Nokia’s transition to electronic licensing, Chandra Shekar, Director- Business Systems for Nokia, says, “Thanks to the FlexNet platform, we’ve been able to create and enforce a license model that closely matches how customers perceive the value of our products. Back office systems and processes are also integrated into the licensing lifecycle, enabling seamless, self-service-based licensing operations.” Such “seamless, self-service-based licensing operations” allows Nokia to minimize operational costs while ensuring customer satisfaction.

- “Customers admit that there is no way that they can be 100% compliant. Vendors estimate non-compliance at 20%. This amounts to a \$40B problem.”—IDC

Because of these pitfalls, in-house applications raise operational costs and often fail to track upsells and renewals, resulting in lost revenues, as summarized in Table 1 and Figure 3.

Beyond these cost and revenue impacts, some other considerations when deciding whether to build or buy an operational application include:

- Does maintaining your own solution detract from your core product development objectives?
- What are the risks of not completing an in-house solution on time? What is the effect on product ship dates, customer satisfaction, IT budgets and—ultimately—overall profitability?
- Is the system able to provide business owners with all the data they need to make better business decisions?

In addition to the financial benefits, buying a proven license and entitlement management solution from a trusted third party that incorporates the five best practices for streamlining operations is the “safe” choice for publishers.

### Conclusion

To minimize the operational costs of electronic licensing, publishers and device manufacturers must create seamless operational processes for license and entitlement management. They can best achieve this by selecting an application from a trusted vendor that adheres to the five best practices for streamlining electronic licensing operations.

### For more information

FlexNet Operations, part of the FlexNet Suite, is a key component of Flexera Software's Entitlement & Compliance Management Solution, enabling software producers and high-tech device manufacturers to increase revenues, reduce support costs, and simplify customer relationships.

FlexNet Operations provides a single entitlement tracking system that enables producers to quickly create versatile product configurations, allows management of multiple licensing technologies, provides a unified customer experience, and facilitates prompt revenue recognition.

## Appendix

### Glossary of Terms

Term	Definition
Entitlement	What the customer bought. Can be of three types: Product, Maintenance (right to updates of software such as patches, updates under maintenance), Support (right to call tech support) Entitlements specify the product, the quantity and duration plus related entitlements (e.g. product includes maintenance). Example, an entitlement might be for 10 copies of Product A, lasting for 1 year.
Fulfillment	Represents what the customer installed or redeemed against an entitlement.
Activation	Synonymous with fulfillment.
HOSTID	A unique identifier for an end-user's machine- can be one or a combination of IP address, MAC address, Disk Serial Number and so on.
License	A license file enforced by the application.
Rehost	The process of moving a fulfillment (partially or fully) from one machine to another. A rehost does not change the quantity of unredeemed entitlements. A repair is a full re-host.
Renewal	Resets the date on an expiring entitlement.
Return	The process of banking a fulfillment (partially or fully) with the publisher, resulting in an increase in the unredeemed entitlements. Similar in spirit to a product return allowed by a retail store.
SKU	Stock Keeping Unit. A number that uniquely identifies an orderable product in an ERP system.
Update	A free upgrade from Product A to Product B assuming the customer is current on maintenance.
Upsell	A paid upgrade from Product A to Product B.
Entitlement Transfers/ Splits/Merges	Entitlement Transfers: Customer ABC bought 10 licenses for Product A, which is since used by Department 1 of ABC. Customer ABC wants to transfer the licenses to Department 2 because Department 1 no longer needs them, which is the process of transferring the entitlement from Department 1 to 2. Entitlement Splits: Channel partner EFG bought 100 licenses to Product A. They wish to sell 45 licenses to Company 1, 20 licenses to Company 2 and 35 licenses to Company 3. They would have to split their original entitlement to accomplish this. Entitlement Merges: Customer ABC bought 10 licenses for Product A. Customer XYZ bought 15 licenses to Product A. Customer ABC merges with Customer XYZ. Customer XYZ would like to consolidate their 25 entitlements to A under its own name, representing a merge of entitlements.
Partial Fulfillments	If an end customer buys 10 licenses from a publisher, partial fulfillment allows the end-user to fulfill these licenses in batches, up to the total number of licenses purchased. In addition to fulfilling individual licenses from the same order, vendors can allow partial license durations to be obtained from a single license. This feature allows an end user to check out a license for several days on one computer while other licenses are concurrently fulfilled on other computers. In effect, it enables a very secure form of license borrowing.
Partial Returns and Rehosts	These are situations where an end-user wants to move, for example, 10 out of 100 licenses from one machine to another (partial rehost) or return 15 of 40 licenses for a credit from publisher for other products (partial returns).

### About Flexera Software

Flexera Software provides solutions that power the business of software for multiple customer segments, including high-tech device manufacturers and software producers, engineers and developers, helping them uncover revenue opportunities, streamline their infrastructure and reduce costs. Flexera

Software's proven solutions have been simplifying the business relationship between software producers and high-tech device manufacturers and their enterprise and government customers for more than 20 years, enabling Flexera Software to maximize the value of the software the world develops and uses. For more information, please go to: [www.flexerasoftware.com](http://www.flexerasoftware.com).



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