



Improve Your Software Supply Chain With Next-Generation Asset Management

MARKET TRENDS REPORT



Introduction

The federal government spends billions of dollars annually on software that supports mission-critical activities, such as public health, social services and cybersecurity capabilities.

But despite the increasing amounts of money agencies spend in this area, the current methods used to buy, track and maintain software purchases lack transparency. Those methods leave agencies exposed to security risks and either overspend or large, unplanned vendor audit penalties.

At the root of the problem is inadequate software supply chain management, which is the active management of data through the seven stages of the software life cycle, from the initial contract negotiation through to end of life.

The lack of strong software supply chain management stems from an often antagonistic relationship between federal agencies and their software vendors.

There are two factors at play worth noting. First, agencies are challenged to keep pace with ever-changing licensing models of how they can procure software. At the same time, suppliers are constantly releasing new products, each with varying end-of-life dates and security implications that agencies must consider. However, agencies are dependent on software suppliers to provide them with this critical information.

To address these issues, agencies and their software vendors must build a relationship rooted in trust and transparency — one that enables both sides to clearly understand what software is being purchased, how it's being used and how to make both of those processes more efficient.

To explore the current challenges around software supply chain management in the federal government, GovLoop partnered with Flexera, which specializes in software license optimization solutions, to produce this report. In it, we highlight three of the top software supply chain management issues that agencies face today, best practices for addressing them as well as a government success story that agencies can consider as a model.

BY THE NUMBERS

\$6 BILLION+

is what federal agencies spent on software purchases through more than 42,000 separate transactions.

Source: General Services Administration, 2016

756

software projects were reported by the government's 24 largest agencies (also known as CFO Act Agencies) in the Federal Information Technology Acquisition Reform (FITARA) Act Scorecards released May 2018.

Source: House Committee on Oversight and Government Reform

135

recommendations were made by the Government Accountability Office in May 2014 to help agencies better manage software licenses. As of May 2018, 78 of the recommendations remained open.

Source: GAO

~30%

of what many organizations spend on software can be cut by implementing software license optimization best practices.

Source: Gartner

// **The Making Electronic Government Accountable by Yielding Tangible Efficiencies Act of 2016, or the 'MEGABYTE Act'** further enhances CIOs' management of software licenses by requiring agency CIOs to establish an agency software licensing policy and a comprehensive software license inventory to track and maintain licenses, among other requirements."

Source: GAO

THE CHALLENGE

Improving Transparency in the Software Supply Chain

One of the biggest barriers to improved software supply chain management is the fact that government and its software vendors aren't using the same terminology and baseline data to clearly communicate what software is being purchased and how it's being used.

"This lack of information sharing often creates an adversarial relationship, which erodes trust and leads to increased costs for both parties," said Walker White, Senior Vice President for Products at Flexera.

When the buyer-supplier relationship is not rooted in trust and built on shared data, agencies end up overbuying or underbuying software. For vendors, issues can arise with lost revenue because they're overservicing clients.

"For an agency to operate effectively, they don't want to be in a firefighting mode," White said. "If we can enable and promote trust and transparency between buyers and suppliers, such that they talk about their technology assets with a shared language, then we will effectively allow both sides to reach their respective business goals with much more efficiency and at a much lower cost."

There are a few other significant challenges agencies face when it comes to software supply chain management, including:

- Understanding what they need in terms of software and number of licenses
- Knowing what they already have in their software inventory
- Ensuring that the software they're using is secure

Let's explore each of these challenges a little further. In order for agencies to understand what is needed from a software perspective, they must be able to identify their mission requirements, understand what they need to achieve specific business outcomes and know what technologies can help to meet those needs. Executing on these tasks are easier said than done and can pose great challenges for large agencies with varying responsibilities and mission requirements.

"Gartner data shows at least 30 percent of all software spend is wasted," White said. The reasons? Organizations don't have an

accurate assessment of what is needed, or the software they purchased was never used.

In some cases, agencies have the necessary software capabilities at their disposal through existing contracts and agreements. However, they don't know what's already in use across the enterprise. Then there's the issue of cybersecurity vulnerabilities, which can only be identified through accurate asset data coming from the software supply chain.

THE SOLUTION

Agencies need a comprehensive software asset management solution that enables them to gain visibility and control of IT assets; reduce ongoing software costs; and maintain continuous license compliance.

The solution agencies adopt should enable asset discovery. Discovery helps agencies to understand what software licenses they are currently using, how many and where they are being used — if at all.

"Most agencies have plenty of tools, and frankly multiple tools deployed onto individual systems," White said. But the raw data generated by those tools does not provide a comprehensive software inventory.

A software asset management solution should also normalize agencies' raw data to ensure that a common language is used for every piece of software and hardware in the enterprise. When a common language is in place, agencies can better understand their buying habits and make the necessary adjustments to meet their current and future needs.

Organizations that are most successful at improving software supply chain management are those that leverage a software asset management solution to normalize their data and then use that data for analytical purposes to answer questions about their software usage and costs. Ultimately, these practices lead to increased standardization, improved cybersecurity and better compliance.

In the next section, we will highlight several best practices that will help to improve software supply chain management at your agency.

BEST PRACTICES

Improving Software Supply Chain Management



1. Discover what's in your environment

In the fast-paced world of software supply chain management, getting to the point where your agency understands what software was purchased and how it's being used can seem like a daunting task. But it isn't impossible. With the right tools and processes, you can move from a reactive state to a proactive one where you are routinely updating your inventory. In the discovery phase, agencies can deploy automated sensors and tools to detect what software is being used across the environment.



2. Normalize raw data from the discovery phase

In general, the discovery tools that most agencies use don't give them a functional inventory of all their software purchases. The raw data that these tools generate isn't suitable for operational use quite yet. "You've got to take the raw data from the myriad of tools and systems and processes that are out there gathering data and get it into a consumable form," White said. "A consumable form is one that is legible and usable by agency personnel and other tools that rely on that data to drive decision-making."



3. Rationalize the data

Once agencies understand what they have in terms of software and licenses and have that information in a legible and consumable format, rationalization is the next step. This process gives agencies a deeper level of insight into their software inventory, including how many different and potentially redundant versions of licenses they have and what applications exist that serve a similar need. This is a key part in the journey to better software supply chain management because there are enormous costs associated with duplicative and outdated capabilities across the agency.



4. Partner with industry in a transparent way

When it comes to improving the way government buys, manages and tracks its software purchases, a strong partnership between agencies and suppliers is key. Agencies should be well-informed about what they are buying and overall what their inventory includes and excludes. But that's not always the case. Agencies and their suppliers should have discussions, at least annually, about software usage and whether the agencies' needs are being met under the existing licensing agreement. When government and industry have a shared understanding of the current software environment, they can work together to address gaps and plan for future needs.



Case Study

Managing the software inventory of federal agencies is no easy task, especially when it involves navigating the complexities of an intelligence agency's software supply chain.

For one particular intelligence community agency, there was initial data showing that it had a large shortfall of necessary software licenses — around 2,000 licenses short of what had been purchased. These details came to light during an annual true-up process, which ensures an agency is receiving and using the products it paid for.

“We were brought in to take a look at what was going on, and we focused on the problems they had on the inventory side, in terms of mapping virtual machines to the corresponding physical hosts,” said Peter Jeanmougin, Software Supply Chain Solution Architect at InSequence, a Flexera partner.

One of the challenges this agency faced was that its service providers were very distributed, and some were no longer providing inventory feeds, Jeanmougin said. Working with InSequence, the agency learned it actually had enough licenses and was able to discontinue a number of Windows licenses it did not need.

“To address these issues, we developed a process we call a gap analysis,” said Andy Filla, Technical Director and Software Supply Chain Architect at InSequence. The Continuous Inventory Gap Analysis, which is powered by the Flexera tool suite, involves pulling data from the agency's various tools and running that data through a series of steps to understand where the holes are in the inventory, Filla said. It's an iterative process.

For this intelligence agency, InSequence leveraged the Flexera Software License Optimization tool suite. This allowed InSequence to collect inventory from over 70 separate inventory sources, providing a singular normalized view of the hardware, virtual hardware and software being managed. Collecting and normalizing the inventory allowed InSequence to see there was data missing from the total inventory picture, namely the relationship between the physical hardware and the virtual machines executing the software that was managed.

“We were able to reduce the data center server licenses consumption from 2,837 down to 972,” Jeanmougin said. The agency was also able to reduce the Windows standard license consumption from 862 down to 135.

HOW FLEXERA HELPS

Flexera enables federal agencies to gain visibility and control of their IT assets, which in turn reduces ongoing software costs and enables them to maintain continuous license compliance. These capabilities are delivered as a comprehensive suite of enterprise software asset management and license compliance solutions — all of which are aimed at improving supply chain management throughout the software lifecycle.

Flexera's solutions support a realistic implementation of software supply chain best practices that improve cybersecurity, reduce costs and give agencies greater visibility of their software inventory. For example, using Flexera agencies can normalize, clean and aggregate data from multiple discovery tools.

With Flexera, agencies also have access to the world's largest and most comprehensive repository of enterprise software and hardware. This repository provides increased transparency, accurate product information and real-time market intelligence for agency IT assets.

Learn more here: www.flexera.com

Conclusion

Software applications no longer just help agencies achieve their mission; in many cases, these applications run the mission. Yet most agencies lack a strategic solution to improve how their software supply chain is managed.

While many agencies have mastered negotiating discounts on software purchases, they are unable to ensure continuous software license optimization and compliance and track overall software spending.

Addressing these issues requires a multi-pronged approach that starts with discovering what software the agency already has. From there, that data must be presented in a format that is useful and able to drive decision-making.

As agencies mature their processes for buying, tracking and managing software, they will experience greater efficiencies, lower costs and improved cybersecurity.

FLEXERA™

ABOUT FLEXERA

Flexera is reimagining the way software is bought, sold, managed and secured. We make the business of buying and selling software more transparent, secure and effective.

Learn more at www.flexera.com



ABOUT GOVLOOP

GovLoop's mission is to "connect government to improve government." We aim to inspire public-sector professionals by serving as the knowledge network for government. GovLoop connects more than 270,000 members, fostering cross-government collaboration, solving common problems and advancing government careers. GovLoop is headquartered in Washington, D.C., with a team of dedicated professionals who share a commitment to connect and improve government.

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