

From rebel to trend? Open source is very popular

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Open Source (OS) is big business. Originally viewed as a rebel of the IT industry, it is now being embraced not only by individual developers and small communities of programmers, but also by global corporations who have come to realize that it makes commercial sense to embrace this approach.



Open source solutions are now part of everyday life in the IT industry. (Image: Markus Winkler / <u>Pixabay</u>)

Accenture, Intel, and Microsoft are just a few of the big companies that have embraced this approach to capitalize on the proliferation of the operating system. The approach has evolved to the point where vendors are now collaborating, developing common technologies and launching or implementing related initiatives. For example, the Soda Foundation, which aims to foster an ecosystem of <u>open source</u> data management and storage software for data autonomy, counts among its members industry innovators such as Fujitsu, IBM, NTT, Scality, Seagate and Vodaphone.

We spoke to a number of industry experts and asked them: Have open source technologies paved the way for faster development of products and services? What

advice would you give to a company looking to adopt open source storage? Are cyber threats a problem for companies that rely on open source storage software?

What potential does OS hold at the individual company level?

For end users, open source can be an effective way to save money. Of course, it's easy to try out free or particularly inexpensive <u>operating system</u> software <u>outside</u> of the production environment. But when it comes to using them in real operations, things look different. Therefore, any company that wants to use open source technologies should go through a comprehensive checklist before taking the step.

"It really comes down to evaluating the potential for success of the open source platform for your business," said Andrew Moloney, SoftIron's chief marketing officer. "We see many companies adopting open source technologies and then finding that there is no 'enterprise ready' support structure to deliver what they need at the production level. In these cases they need to find support in the wild, which is what can be a real challenge. Careful review is critical to both the short-term and long-term success of an open source implementation."

OS experience: from pilot operation to real operation

This is a common belief among vendors, as operating system software is often not as sophisticated and user-friendly as commercial systems. Paul Speciale, Chief Marketing Officer at Scality, states, "We are seeing companies using open source storage software for development/testing and pilot projects. Many of these projects later decide to use commercially supported software in production, viz for a combination of reasons related to ease of use, features/capabilities, quality of support, and for customers who have chosen to use open source in production, the cost of supporting these vendors' offerings is often equivalent to that commercial license subscription costs,

However, the operating system model still has an extraordinarily strong appeal: according to VMware's The State of the Software Supply Chain: Open Source Edition 2021 survey, 95% of companies are using operating system software in production.

The question of support: it doesn't work without additional commitment

While open source provides an IT organization with advantages in terms of cost and speed, for example, it can also have disadvantages when it comes to scope and/or quality. An operating system project can be implemented quickly, but it can also fail just as quickly. Matt Starr, <u>Chief Technology Officer</u> at Spectra Logic, elaborates on this point: "Open source projects are great in a university environment that encourages innovative scientific projects. The use of open source storage solutions in large companies can However, they can lead to massive problems. For example, if the system goes down, the company's <u>CIO</u> doesn't want to hear that the solution isn't supported because it was developed 'over the weekend'."

Many companies that rely on open source software today to improve their services are unaware of this. The operating system model enables solutions to be developed more quickly, faults to be identified more quickly, and companies to tap into talent pools outside of their corporate boundaries. On the other hand, it is crucial for <u>OS</u> users that they stay informed of any issues related to the product in question as they become known, and that they are also able to take the necessary steps to remedy the minimize or eliminate the resulting effects.

Rakesh Jain, a representative of the board of directors of the Soda Foundation and IBM Research, reiterates these points: "Because open source software has no guarantee and no official support, organizations must make additional efforts to ensure that the quality meets their expectations I would recommend companies using open source storage software to actively participate in the project's community, become a member of the end-user community if the project offers one, and engage in full DevSecOps when adopting the software approach so that any issues can be identified early and resolved by the community."

At the top of the OS checklist: security

So is there a must-do that tops the planning list when considering the OS path? "Top of the list is implementing enterprise-grade data protection and strong security," said Krista Macomber, Senior Analyst at Evaluator Group.

In today's marketplace where everyone is trying to stay competitive and hold or gain market share, business agility is paramount. A company's ability to quickly adapt to changing business and customer needs can make or break the company. Open source allows companies not to waste time reinventing the wheel, but to focus on a specific aspect of the technology to be developed, building on what an exceptionally large, global pool of technical talent has already created. This leads to significantly shorter time to market.

Many vendors have tapped into the OS talent pool for this and other reasons: "SoftIron has built its business with open source at its heart from the start. Our approach allows us to achieve the best results for our customers without locking them into our solution bind," explains SoftIron's Moloney. "If we don't bind our customers to a specific provider, we are forced to do whatever is necessary to meet their needs or we risk losing them to another provider. You will see that we are continuously in invest in the communities we belong to by contributing code, participating in the ongoing maintenance of those communities, and partnering with them to solve modern challenges."

OS as the optimal path to valuable independence

For similar reasons, Speciale explains why Scality had a keen interest in open source from the start: "Since Scality was founded in 2009, we have been very involved in open communities and developments; when object storage was in its infancy, Scality was one of the first company to adopt S3 with an open source project In 2017, our dedicated engineers developed and released Zenko, an open software code base for managing data in AWS, Google Cloud and Azure, to enable binding to a Avoid cloud providers Zenko has been recognized as a SODA Foundation EcoProject and can be developed by Linux developers with support from industry standards organizations such as SODA and the Linux Foundation be used. We have also used OS technology extensively in our storage solutions; for example we use Kafka, Redis, Docker , Kubernetes, MongoDB and of course our own OS Zenko technology for multi-cloud enablement."

Hot topic: OS in the context of cybercrime

However, open source also has its weaknesses. Just like proprietary technologies, operating system solutions are also a target for cybercriminals. And as organizations devote an increasing portion of their IT budgets to security, threats are growing - and fast. According to researchers at Cybersecurity Ventures, the global cost of damage from ransomware is expected to exceed \$265 billion by 2031.

SoftIron's Moloney explains, "Reports of attacks on the software supply chain, whether open source or not, have become much more common in recent years. However, open source does offer a degree of transparency that can at least help uncover attacks , which might otherwise be obfuscated."

A 2022 survey of end users conducted by cyber protection specialist Acronis shows that 69% of companies in the EMEA region spend between 4% and 15% of their IT budget on IT security, with this budget contributing to IT security 20% of companies in South Africa and 18% in the United Arab Emirates to over 25%.

Although the operating system model introduces security risks from code vulnerabilities, Spectra Logic's Starr believes that open source solutions can have a security advantage over vendors' own solutions: "In many cases, open source is faster because of community collaboration patched against a newly discovered variant." The key is to ensure that all open source technologies in a <u>data center</u> are constantly patched to counter known issues.

"Open source storage software allows companies to meet their storage needs more cost-effectively than proprietary software," said Veniamin Simonov, Director of Product Management at NAKIVO. "However, it has a catch, and that is its global availability, which allows anyone to modify, explore and share the software, making it a key draw for cybercriminals. Operating system software code is often shared by developers around the world World updated; unfortunately, not every developer is of goodwill, and this global accessibility makes it less difficult to launch an attack. As there are no service and support packages for open source software, it can be very difficult to assess the impact of such incidents on to soften the business operations," he adds. Not only the manufacturers beat the drum for safety. Macomber from the Evaluator Group also encourages operating system users to be aware of cyber threats and to take all necessary measures to counter them: "Cyber criminals do not discriminate. In addition, open source software has some unique security vulnerabilities, that hackers will exploit, and often companies have lax practices when it comes to tracking and updating known vulnerabilities in the various operating system components they use."

Long-term planning with a focus on optimized protection

Another independent expert who strongly advises users to protect themselves from these threats is Jain from the SODA Foundation and IBM. He says: "The vulnerabilities of [open source] are public knowledge and need to be addressed with a higher priority. However, one can prepare for them by deploying the storage software in a way that protects it on several layers. For example, one should "Make sure it's not easy for attackers to get to the storage software. In simpler terms, don't expect cybersecurity problems to go away, plan ahead for how you can solve them in the short term."

When it comes to integrating operating system solutions, interoperability can be a challenge. One of the Soda Foundation's goals is to have certified vendors across standard specifications with product, conformance and certification in mind, and a conformance lab for seamless interoperability. What advantages would such a program have for providers and end users?

Scality is one of the founding members of the foundation, and Speciale, the company's CMO, shares his thoughts on the benefits of a common framework: "Standardization is a powerful tool for simplifying data management and promoting end-user data autonomy and data mobility. That's why, why Scality is one of the founding members of the SODA Foundation."

SoftIron's Moloney is a proponent of the idea of vendor certification, but also sees its limitations: "For all the benefits that open source offers, its flexibility comes at the cost of complexity. So any attempt to remove some of that complexity through testing and certification can help" to encourage broader adoption can only be good for the

community as a whole. While these types of tests and certifications can be useful in ensuring some level of compatibility among a rapidly growing number of open source projects, they are emerging In our experience, the real challenges tend to come from integrating into customer environments, which often involve integrations that go beyond the scope of either of those projects, especially for proprietary projects, which almost inevitably exist."

Spectra Logic's Starr goes one step further: "I don't think certified vendors should be considered, mainly because of the many certifications out there. Certifications like this, for example, do not allow a storage device to be connected to a secure government network These certifications are completely different - same is true for many companies."

Indeed, a standardized framework for developers to reference could further accelerate the development and adoption of operating system solutions, building on the existing pace of technology development and innovation associated with the open source model. This is arguably one of the attractions of OS, as Jain explains: "Open source technologies have had a significant impact on faster development - both in terms of open source projects and tools and with a focus on proprietary software." He adds, "That's because the processes and methodologies used in the open source world are tried and mature, and are now being used in the development of proprietary software products and services as well."

Scott Sinclair, senior analyst at ESG Global, agrees: "Open source technologies have made it easier for start-ups to enter this space, leading to more innovation."

The open source world also encourages innovation on the commercial side. "The combined efforts of the OS community are responding to the needs of this space and incrementally building a solution that supports all key features and capabilities. This process will continue until all key requirements are met," said Curtis Anderson, software architect at Panasas. "Successful open source projects enable meaningful innovation, but also disrupt existing commercial solutions if they don't address customers' needs. If this is not the case, the open source alternatives will grow much

faster and the commercial solution will be forced to change and innovate An open source project in a niche market breaks up enclaves,

"Open source technologies such as Linux, <u>Kubernetes</u> and Samba provide IT vendors with a vast intellectual property base to build on at absolutely no cost," said Aron Brand, <u>CTO</u> at CTERA. "By releasing parts of our code on open source, we were able to access a deep reservoir of technological knowledge and know-how and benefit from highly professional peer reviews and feedback. If your company has the technical readiness for open source, this can be a great be a way to leverage community knowledge and reduce your maintenance overhead," he adds.

OS as a boost for technology development?

The experts we spoke to differed on whether the OS approach has accelerated technology development and whether open source is generally good news.

Alex McDonald, data storage expert and Chair of the Storage Networking Industry Association (SNIA) EMEA, doesn't mince his words: "I like open source projects for their initial impact and vision, but they can lead to poor maintenance processes and unresponsiveness in the longer term as well as a lack of developmental direction as they mature. Faster does not automatically mean better." McDonald's comment finds further validation in the fact that once a piece of code is shared with the open source community, a developer can take it and build something new with it, which may - or may not - result in a very reliable and stable technology Not.

Moloney agrees. "It's a double-edged sword: Rapid deployment of open-source technologies on generic <u>hardware</u> without the skilful intervention of (a team of) talented engineers can lead to very mediocre results."

Starr brings up an interesting point by emphasizing that we should look at the entire process from initial development to deployment in production environments to cast our vote: "[Open source technologies] have paved the way for faster development of products and services, but you still have to test the operating system software, so development will be faster, but testing will remain the same."

Tim Klein, President and <u>CEO</u> of ATTO, has observed the evolution of the open source industry over the past forty years and believes that the impact of this approach on a solution's time to market has pros and cons: "I have mixed feelings versus open source technologies Open source can speed up some development and collaboration, but sometimes innovation is stalled because the intellectual property is too freely available, leading to really wonderful ideas being held back because of intellectual property concerns ."

That's a very valid argument: the moment an individual developer or a company that wants to capitalize on their technology brings their code to the operating system community to benefit from a much larger talent pool and faster availability, they must Have a solid business plan to monetize the product that is not compromised by making the code available to other developers. Indeed, this could slow or even halt the development of some innovative technologies, potentially to the detriment of the thousands of organizations that would benefit from them. However, many vendors have come to believe that supporting open source may make more financial sense for them than fighting it (see Microsoft).

Quo vadis? A comprehensive concept for using OS

So where to now? The benefits of the OS concept are significant, ranging from lower costs to greater flexibility and faster time to market. However, relying on the general developer community to bring the code closer to completion or even just to identify and fix problems can be a risky strategy. Vendors need to ensure they are taking all the necessary steps to bring technology to market that their customers can embrace and trust.

What about the end users? In order to take advantage of the many open source technologies available today, it would be wise to opt for solutions that are commercially supported in some form to avoid problems that directly and potentially significantly affect productivity and can ultimately affect the bottom line.