

Open Source & the Cloud

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The open source Cloud is creating ripples with increased adoption and better efficiency. Pupun Dutta evaluates the prospects of this technology

Though, people constantly differ in their opinion about the viability of open source software, if we take the examples of Amazon or Facebook, you can't argue against its ability to run the biggest sites. About 80% of the leading public Clouds run on Linux. Given the on-demand scalability, multi-tenancy and high density computing; open-source is more appealing than any other available platform.

Despite these benefits, many CIOs continue to be apprehensive about the adoption of open source for various reasons.

The rationale for the open source Cloud

"Open source promotes free redistribution and access to the end products' design and implementation. This has been the primary reason for its prominence. Also, one can see a wide range of application developers who leverage open source software to create programs to suit their requirements in large IT companies. This not only helps in cost reduction but also promotes openness," said Sitaram Venkat, Director Enterprise Solutions Business, Dell India.

According to Venkat, one of the communities that took cognizance of open-source software has been that of research institutes that have been employing these tools for over a decade now.

"In India, besides the prevalence and existence of open source, the technology is powered by players like Red Hat etc. who have facilitated the transition to open source platforms for companies making it easier and cost-effective for them. Moreover, virtualization providers too started supporting their hypervisor technology on open-source platforms and that gave a fillip to this movement," Venkat explained.

Moreover, these solutions have proved popular with BPO outfits. Nilesh Goradia, Manager Systems Engineering - India Subcontinent, Citrix Systems, said, "BPOs in India use open source software and virtualization in a big way and also for hosting Cloud platforms."



"Building a Cloud on an open source platform gives you the flexibility of not being constrained like you would be with a proprietary OS. Since, the Cloud is just a delivery platform, it is only wise to choose open source as the medium given the benefits of scalability and flexibility," said Narayana Menon K, Lead Marketing and Strategy India and South Asia, The Attachmate Group.

Presently, a lot of outsourcing software development projects are being executed in India based on the open source stack known as LAMP (Linux, Apache, MySQL and PHP). Interestingly, given the demand for these skills, a lot of training institutes offer courses around open source software. It is estimated that India has the largest number of Red Hat Certified Engineers (Linux)—around 20,000 of them.

Some options that are available for open source Cloud software include OpenStack, Cloud Foundry, OpenNebula, Red Hat OpenShift, Xen Cloud Platform Project (XCP) etc.

Support costs

Experts concur that although the cost of acquisition may be null, there are support costs to be considered when it comes to using open source software.

"If the procurement manager has to compare the cost of acquiring the software in the purchase-stage, then open source software may appear to be a zero cost option compared to commercial counterparts. At the same time, if we see this in totality, open source software does not come at zero cost. The reason is that, although these software stacks help save a chunk on initial software licensing fees and annual charges; administration and support costs continue to exist. So it is better termed as a low cost option that corresponds to lower TCO," said Jitendra Patil, Senior Expert - Cloud Computing, Persistent Systems Limited.



"Zero cost is the scenario where you can simply download the software and use it. Some groups on the Internet offer free software and support forums and request you to contribute zero to any value (by choice) to fund the associated support cost. Still, to say that open source software is a free solution to all of your computing needs, would be wrong," explained Anuj Mediratta, Founder and Director Technology, Ace Data Devices Pvt. Ltd.

Open-source vs. proprietary

While discussions and debates go on about the various advantages of proprietary platforms over open-source or vice versa, open source based Clouds are a hit with public Cloud providers.

"In a public Cloud, the cost of virtual machines per hour is about 10 cents whereas the equivalent in enterprise IT is about a dollar or almost ten times more. The server to administration ratio is 300:1, whereas in enterprise IT, the same is 20:1. Also, while public Clouds utilize 75% of resources, enterprise IT uses just 20% of the same. This explains why it is more economical to adopt open source based platforms rather than proprietary ones," said Andy Karandikar, Head Pre-Sales and Solutions Architect, Red Hat India.

"You can avoid getting locked in with a single vendor and own an infrastructure in which there is sufficient flexibility with regards to physical infrastructure as well as the software," he added.

Drivers & benefits

While cost is the most obvious advantage of open source software, especially in the context of virtualization and the Cloud, the other advantages include proven platforms, massive scalability and the ability to co-exist with other proprietary virtualization and Cloud technologies.

"Another major benefit of having an open source Cloud is not getting locked in the vendor's strategies. Since, Cloud and virtualization are not just any other technology but a paradigm shift in how IT services are delivered and consumed, it is important to make the right choices. Given this and also coupled with the fact that organizations are going to make significant investments, they should choose not to get locked into a specific vendor. This is where open source software scores significantly over other options," said Sunil Sarat P, AVP and Head - Innovation, Microland.

Other advantages include control over software, greater security as companies can define their own rules and not be swayed by the companies offering security solutions; better quality and support given the numerous communities and forums that offer support and develop new software constantly.

Challenges

Despite improved efficiency and technological advances, CIOs continue to be apprehensive about open-source software. Some of the reasons for such apprehension are: the availability of service and support, legal issues etc.

"Besides, the usual challenges, the maturity of these products often comes into question. Another thing is the total cost of ownership wherein, though the software is available for free, the ongoing maintenance and support costs are high. Moreover, the non-standard environment increases costs and time to resolve issues as they arise," explained Sridharan Mani, CEO and Director, American Megatrends India.



It is also believed that the user friendliness of proprietary software is better as compared to open source software.

"Adopters of open source also face the challenge of getting skilled professionals who can offer the needed support," said Venkat of Dell.

Moving on

With open source deployment businesses are able to get up and running faster given the ease of downloading and deploying and using numerous solutions for free.

Though proprietary projects will continue to have their share of the market, they will continue to be under severe pressure due to the impact, penetration and innovation of open source platforms.

The good news is that every layer of the entire Cloud architecture is being well innovated and made available through open source projects now. So organizations that are tracking these developments and making talent investments in these would be far ahead in reaping benefits.

As always, the future belongs to those who take on new bets, try to look for newer ways to do things, and be more open and collaborative. And this holds true in the technology space and open source adoption as well.