Is Consumption-based IT the Answer for your Business?

Learn how emerging hardware-as-a-service offerings solve many of today's biggest IT challenges.

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Introduction

Utility-like infrastructure pricing started with the mainframe systems of the 1960s. Analysts IDG remarked it was nothing new back in 2003.[1] These days the majority of IT infrastructure is powered by the latest Intel® Xeon® Scalable Processor family, such as those from Lenovo which are consistently rated #1 for customer satisfaction[2] and reliability.[3] However, present-day infrastructure challenges are leading vendors to offer compelling new flavours of utility-like IT and they are gaining traction with businesses. The key difference with new "pay as you go" (PAYG) offerings, compared to traditional leasing and financial instruments, is that you do not pay a flat rate for each month you keep the hardware. Instead, costs depend on your monthly infrastructure consumption (or usage). That's why PAYG is also known as "consumption-based infrastructure".

PAYG has a lot in common with "as-a-service" public cloud offerings such as SaaS (software-as-a-service) and IaaS (infrastructure-as-a-service). Both can enable you to turn IT capex into opex. Both can enable you to reduce your data centre footprint and IT management burden. However, public cloud isn't suitable for every kind of workload, or every kind of organisation. For critical workloads and sensitive data, many prefer the security and reliability of dedicated, on-premises solutions. Additionally, cloud solutions often fail to meet requirements around application latency, complexity, and data sovereignty.[4] Only on-premises IT provides the control and performance needed there.

Yet acquiring dedicated, on-premises infrastructure has traditionally meant making a long-term investment in one ecosystem, with high up-front costs. These costs are prohibitive for many organisations. It is also difficult to adopt new innovations mid-way through the hardware lifecycle, to meet changing needs. It is no wonder "traditional datacenters are struggling to keep up with the demands of the business."[4]

While modern IT infrastructure is highly scalable, when you buy it you can only scale upwards. Over-provisioning is therefore difficult to avoid. In a world of flexible, low-risk SaaS and IaaS offerings, traditional hardware acquisition models are therefore starting to feel outdated. HaaS (hardware-as-a-service), as pay-as-you-go IT is also known, could be the modern evolution you are waiting for.

At the same time as businesses work to reduce their data centre footprint, the need for servers is growing quickly. Worldwide server revenues increased by 38% year-over-year in the third quarter of 2018, due to the "requirements from resource intensive next-generation applications."[5] Organisations need a way to keep up with changing requirements that does not over-stretch financial resources. The new answer for a lot of businesses is pay-as-you-go IT. Gartner predicts that by 2020, enterprises "will spend 5% of their on-premises infrastructure budgets for consumption-based offerings, from virtually zero today."[6] A year ago, McKinsey named it as the number one trend redefining IT infrastructure, "because buyers increasingly prefer consumption-based pricing models."[7] Generally, "as-a-service" models will eclipse traditional procurement by 2020 according to IDC.[8]

So while "customer adoption remains relatively nascent"[9] today, we appear to be at the beginning of a new trend in IT. You can use it to gain competitive advantage if you need to increase business agility and financial elasticity, find a more flexible way to run workloads on-premises, or reduce management burden and investment risk – but only if you choose wisely from a diverse range of offerings out there. Read on for answers to common questions that can help you decide whether pay-as-you-go IT is right for your business.

What is pay-as-you-go IT?

"An opex pricing model for an on-premises data center system, paid on a periodic basis based on measured resource usage, with bidirectional resource scaling."[6]

The above is how Gartner defines pay-as-you-go IT, also known as consumption-based infrastructure or ITaaS (IT-as-a-service).

With PAYG you lease your infrastructure, which makes IT an operational expenditure rather than a capital one. However, you pay periodically not for the hardware itself but based on how much you use it. True PAYG solutions also provide the flexibility to scale to meet bigger and smaller needs.

→ Pay-as-you-go is a new IT acquisition model that can improve IT economics, business agility, data security and management simplicity, as well as reducing IT investment risk.

Is pay-as-you-go IT the best way to turn capex into opex?

Pay-as-you-go IT is a simple way to turn capex into opex, but not all deals are equal.

Buying IT infrastructure ties up capital in hardware that depreciates. It is an investment that "never reaches its full potential", because "in virtually every datacenter, server hardware sits woefully underutilised by around 30%."[10]

Hardware vendors help businesses spread the cost by offering complex financial services, which make buying IT more like an operating expense. This helps businesses free up capital to fund business growth or other initiatives. However, these financial services involve a complex bundling of various costs for hardware, software and services over multi-year periods.

PAYG IT turns infrastructure into a real operating expense, because you only pay for what you use. You do not pay up-front or monthly for hardware, management or support services. This improves economic elasticity without all the financial gymnastics.

However, Gartner warns that "many of the current consumption-based programs are not truly based on consumption or flexible in their usage."[6] Because PAYG is a newly-emerging market, offerings are diverse and you should look closely for hidden costs before committing.

→ Examine PAYG offerings carefully to make sure they deliver the simplicity and economic advantages they promise.

How is pay-as-you-go IT billed? Will it save you money?

True pay-as-you-go IT solutions are based on usage, but some have additional costs.

With true pay-as-you-go IT, monthly bills are based on how much you used the hardware that month. But the way usage is metered, and what your solution includes, varies from vendor to vendor. Cost savings will therefore depend on which PAYG offering you choose.

In the case of Lenovo TruScale, the amount you pay each month is based on the amount of electricity the hardware draws – and there is no minimum usage requirement to inflate your bills. TruScale solutions also include professional services to deploy, manage, maintain and support your infrastructure at no additional cost. Other services differ: HPE GreenLake, for example, has a minimum usage requirement and is metered based on software usage rather than power.

→ Consider hidden costs such as service charges and minimum usage requirements when calculating the total cost of PAYG solutions.

Which organisations will benefit most from the flexibility of pay-as-you-go IT?

Growing organisations that need freedom to scale and upgrade on-premises infrastructure will gain most from pay-as-you-go IT.

Digital technologies have become the foundation of business competitiveness. Infrastructure cycles have shortened as a result. Growing businesses need to refresh, modernise and scale infrastructure with agility, but capital is not limitless. True pay-as-you-go IT enables you to deploy modern on-premises infrastructure and scale it up or down at will, with almost no up-front costs. This could enable you to greenlight IT projects previously stalled by budget constraints.[10] With Lenovo TruScale, you can also upgrade hardware mid-contract.

When you are deploying long-term, stable infrastructure running predictable workloads, PAYG IT may perform more like a traditional lease. As with any lease, cost comparisons with hardware purchases worsen over time. Total cost of ownership over 5 years, for example, could be greater than for infrastructure purchased with traditional finance. However, when calculating total cost of ownership you should factor in any savings achieved through inclusive services such as deployment and remote management.

→ Pay-as-you-go IT may deliver most value when you need infrastructure flexibility, but can also be an efficient way to acquire stable infrastructure.

Is pay-as-you-go IT more secure than public cloud?

Gain the utility pricing of public cloud and the security of on-premises IT.

Public cloud offers many of the same advantages as pay-as-you-go IT: utility pricing, plus flexibility to scale up and down or adopt new technologies. However, public cloud must trust third-parties to store, process and transmit your data. For sensitive workloads, this raises security concerns. For every kind of workload, there are further issues around application latency, regulatory compliance and data sovereignty. Pay-as-you-go solves these issues by providing modern on-premises infrastructure with the benefits of public cloud.

Public cloud has its own advantages, such as not requiring physical space to house servers. Fortunately, you don't need to choose one or the other but can mix and match as needed.

→ Use consumption-based infrastructure alongside cloud services for workloads that need to be kept on-premises.

Does pay-as-you-go IT simplify infrastructure management?

Free the IT department from the costly, reactive cycle of dealing with hardware and firmware issues.

"The more infrastructure that gets racked, the bigger the headache in managing hardware and firmware," notes Moor Insights in its assessment of the challenges addressed by consumption-based infrastructure. "We are at the point where IT spends most of its day reacting, instead of proactively addressing the needs of the business."[10]

Pay-as-you-go IT solutions address this issue by including professional services as well as hardware. With Lenovo TruScale, you don't need to spend time or resources on deployment, management or maintenance. This frees the IT department to focus on high-value projects. However, not all pay-as-you-go offerings are real end-to-end solutions, and you should assess packaged services carefully.

→ Choose the solution that adds value by reducing management cost and burden.

How does pay-as-you-go IT reduce infrastructure investment risk?

With pay-as-you-go you can assess infrastructure without making a long-term commitment or large capital investment.

The risk of traditional infrastructure acquisition is that it will not meet changing business needs throughout the hardware lifecycle, or that it will simply fail to deliver the required value now or in the future. These risks apply even where financial instruments make paying for IT purchases more like opex than capex.

True pay-as-you-go offerings reduce risk by providing flexibility to refresh and bidirectionally scale infrastructure much more often. Organisations do not own the hardware, which can be seen as a drawback. However, they have freedom to “trial” a solution and change it, or re-size it, if necessary.

Whichever way businesses acquire IT, it is always essential to reduce risk by selecting a vendor with a strong track record in hardware performance, reliability and customer satisfaction.

→ Manage risk by removing the need for long-term infrastructure commitments and continually optimising infrastructure to fit changing needs.

What is Lenovo TruScale?

Launched in February 2019, Lenovo TruScale is a pay-as-you-go IT programme designed for businesses of all sizes. It differs from competing services in several key areas:

- Customers are not limited to low-end hardware but can choose from the entire portfolio of Lenovo ThinkSystem and ThinkAgile systems. This industry leading portfolio, powered by the latest Intel® Xeon® Scalable Processor family, delivers outstanding performance

- Usage costs are based on how much electricity the hardware draws; a “relatively accurate way to measure usage without compromising infrastructure security” according to TBR[9]

- Lenovo handles deployment and provides 24x7 remote monitoring and management

- Customers can add incremental capacity and upgrade hardware during their contract term to meet changing business needs

Analysts have noted the flexibility of the service compared to alternatives, which makes it suitable for businesses of all sizes. “Any IT organisation [can] deploy TruScale for any workload and use case, with no ‘minimum consumption’ requirement and no lease. You truly only pay for what you use.”[10]

IT modernisation with Lenovo is a low-risk path generally, based on the company’s consistent leadership in x86 server reliability[3] and x86 server customer satisfaction.[2] TruScale offers even greater certainty that servers and storage will solve customers’ challenges now and in the future.

Modernising IT with Lenovo

Lenovo solutions are different from the competition because they are built on true partnership and driven by customer challenges – not conventional thinking. When choosing TruScale or any other Lenovo solution, businesses choose:

- A hardware portfolio that holds 121 world record benchmarks
- The broadest portfolio of award-winning professional IT services
- The ability to run any workloads and applications they choose, thanks to Lenovo's open approach to software and OEM partnerships
- Industry-leading, integrated solutions developed in partnership with leaders like SAP and Microsoft
- The #1 vendor for x86 server reliability and customer satisfaction
- Support from over 10,000 global Lenovo specialists
- The leading vendor on the TOP500 Supercomputer list

Conclusion

Today's competitive businesses want the flexibility to scale and innovate rapidly, to reduce the burden of data centre ownership and management, and to avoid tying up capital in risky and depreciating hardware investments. Consumption-based infrastructure has the potential to meet these needs, by increasing business agility and economic elasticity, simplifying management, reducing risk and addressing security issues that make public cloud unsuitable for sensitive workloads and data.

The consumption-based infrastructure market is evolving and with the launch of Lenovo TruScale, the first programme to offer the flexibility and simplicity businesses need has arrived.

For more information, please click here to speak to Lenovo.

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