

From sprawling multinational enterprises to operators/providers, organizations across the world are facing mounting technical debt within their legacy infrastructures.

Maintaining a growing IT infrastructure (or code base) over the course of years via tactical band-aid fixes becomes exponentially harder, ultimately hitting it limit. Undocumented changes accumulate, engineer morale disintegrates and as a result productivity suffers, leaving no time to focus on valuable projects that will actually move their company forward.

In most organizations, prioritization is placed on building new features to sell. Pushing down the list is allocating precious resources towards reoptimizing existing, working application infrastructure save for easy, incremental fixes when cracks are exposed.

Sooner or later, rapidly changing business environments, customer expectations, and competitive markets push organizations to a tipping point: deal with the technical debt of their legacy infrastructure and modernize, or be left behind.

And one of the first considerations an IT team must make when taking steps toward their next digital future: infrastructure.

For a lucky few applications, modernization is a "lift and shift" to the public cloud. But for the most part, apps that can simply be "lifted and shifted" to the cloud are still the same legacy applications, just running more expensively.

Applications should first be characterized to check if they will be performant and cost-effective if run in the cloud.

Many enterprise program applications are custombuilt to address an organization's specific needs and aren't able to operate effectively in a typical public cloud environment without extensive modification.

Before application modernization begins and infrastructure migration is considered, it's important to take stock of your entire enterprise architecture.

MODERNIZATION SOUNDS TRICKY (AND IT IS)

Several factors are shaping the conversation around modernization. Every organization wants to do it, but a good portion can't seem to overcome one or more of these significant hurdles:

- 1. Skills shortages across the tech industry extend to infrastructure and hardware expertise can make it challenging to hire appropriate staff.
- 2. It can be a significant challenge to overcome knowledge deficits created by the loss of workers who created complex programs and applications one or two decades ago.
- 3. Customer expectations continually rise, far outpacing the capabilities of your legacy environment.
- 4. Migrating is tough and requires a full team of (expensive, hard-to-find) experts to evaluate the best strategies and timing for a move to a virtual environment.
- 5. Modernization is expensive; calculating ROI when there are so many unknowns is all but impossible.

"Over the past 5 years, businesses have lost an average 23% of their mainframe workforce; of those 63% of positions remain unfilled."

- Forrester

Naturally, organizations seek out standard industry solutions for migration and modernization. In fact, executives are all but demanding a shift to the public cloud. In a recent IDG survey of 550 executives, more than one-third (38%) report their IT departments are under pressure to migrate all applications and infrastructure to the cloud.

However, in previous iterations of the same survey, 56% of executives intend to stay with their on-prem systems for the foreseeable future, and at least 40% say they are too dependent on mission-critical legacy systems to migrate to the public cloud.

Some of the main factors to staying on-prem or in a private cloud can include data security implications and geo-location requirements. Other considerations include legacy applications' interoperations and entanglements with large on-prem databases, larger-than-expected cloud provider costs, and the speed at which large data sets need to be collected.

WHAT'S SO GREAT ABOUT A PRIVATE CLOUD, ANYWAY?

The advantages of a private cloud environment resemble those of a public cloud platform, but with extra control and management responsibility over the resources of the physical layer.

Private clouds offer more **control and flexibility**. They can conform to the architecture needs of unique enterprises. Private clouds support fast, near-boundless **scalability capacity**, especially when used in conjunction with bare metal resources.

Private cloud platforms are able to meet **privacy** and compliance needs better than their virtual counterparts. Often, staying compliant within specific regulatory frameworks is much easier when the physical infrastructure is private to the enterprise.

PHYSICAL INFRASTRUCTURE IS HERE TO STAY (AT LEAST FOR NOW)

Without a robust physical infrastructure plan, a move to the far off, virtual spaces of the future could be doomed from the start. A move or decision to stay in a private cloud computing environment must include a plan for how you will marry your existing infrastructure to the constantly-evolving world of virtual computing.

Most physical infrastructure, especially legacy physical infrastructure, is managed within a siloed system, where each silo sits on its own, unable to operate with any other operating system.



The result is an environment where multiple disparate systems live under the structure of a single organization.

It's hard enough to manage a siloed system from the ground. How will you translate the makeshift nature of your hardwired physical assets to a cloud environment? How will you manage labor, tooling, deployment time, daily operations, and servicing?

In the simplest terms, the biggest question is: how are you going to operationalize more effectively?

The answer lies in integration. Your private cloud and physical infrastructure systems must be able to work together so you can continue building on your organization's success.

PRIVATE CLOUD REQUIREMENTS

A functional private cloud must include a solution that focuses on several key elements:

- Performance
- Control
- Compliance
- Security
- Privacy
- And more

When you apply these elements to both the physical and virtual layers, the result is operation streamlining, better troubleshooting, and a robust system propped up by security redundancies and centralized oversight.

EVOLVING INTO PRIVATE CLOUD TECHNOLOGY

Once you've decided to take the leap, be sure to partner with a company that understands the relationship between the virtual and physical layers. Each layer is essential in its own right, and together, they can enhance nearly all your enterprise operations. Platina is a turnkey, integrated infrastructure solution that empowers organizations to build, operate and run services in cloud-native environments, whether they are public, private, or hybrid clouds.



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