

Hybrid IT: the whats, whys, hows and more

Staying safe in a shifting, dangerous threat landscape



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FLEXENTIAL

Introduction

“Hybrid” has swiftly become another buzzword that seems to pop up everywhere when it comes to business IT infrastructure. What does it really mean, and is it something your business really needs?

Hybrid or managed services are considerably advantageous for businesses who want to explore integrating cloud solutions, but also keep on-premise systems in place. Let’s face it — most businesses need to keep an on-premise solution in place due to legacy restraints, security or storage latency. Think of hybrid as having your cake and eating it too in the world of IT.

A hybrid IT infrastructure is often thought of as a strategy that works well primarily for large enterprises, but it can also be ideal for small to mid-sized businesses, too. Here’s what you’ll need to know to assess whether hybrid IT is a viable option for your business:

- **What is hybrid IT?**
- **Why is hybrid IT necessary?**
- **How can you use hybrid IT to meet business needs?**
- **Where to start — the three-year IT plan.**
- **Who’s using hybrid IT?**

Mastering hybrid IT

The what

In simple terms, hybrid IT is the use of both on-premise and external IT resources.



Data Center/Colocation



Private Cloud

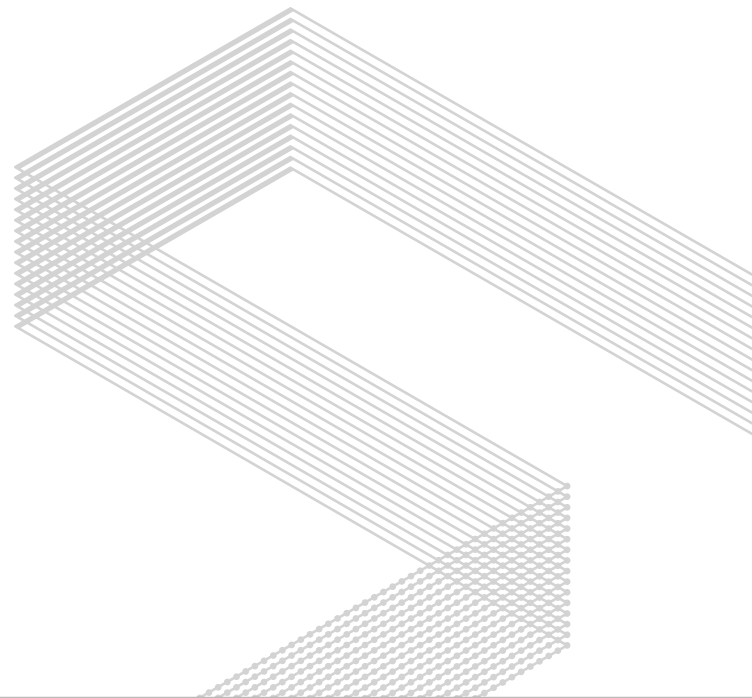


Public Cloud

It’s an approach to IT that your business may already take advantage of without realizing it. Essentially, hybrid IT is the concept of taking any type of physical asset that you use (at your data center or on-premise at your office) while simultaneously consuming cloud resources out in the community (software as a service, or virtualization in the cloud) — it’s a combination of any of these sets of services.

The concept of hybrid IT really revolves around, “How does our business combine multiple clouds?” Many companies may already have a capital investment inside of a cloud infrastructure that they’re running in a data center, but want to start taking advantage the cloud.

So, how do you execute both IT initiatives with connectivity from an office, or within a data center that can provide access to a private cloud or public cloud? It’s important to delineate what makes sense to keep in a hybrid cloud environment versus public. For instance, an IO-intensive database may make sense to live on private dedicated hardware, but front-end servers that can be scaled out horizontally will run better inside the cloud, given the capacity to burst up in certain seasons of the year. In retail, for instance, the busiest time of year is October through December; all retail companies use a considerable amount of resources during that time frame, so being able to scale up and down as business demands compute resources is key.



The why

There are a number of viable reasons to consider a hybrid approach to IT, ranging from testing and development to managing the challenge of IT investments.

Scenario 1: test and development

- Capital outlay
- Continuing outlay of human capital

Testing and development are almost always a solid use case for a hybrid IT strategy. They require a large investment of time made into building out the infrastructure to ensure that the application is in a solid state for deployment. As a developer, fighting for additional dev resources is a common scenario — you might want five servers to work with rather than three, while your quality assurance department wants to spin up multiple instances of the application within different environments.

Scenario 2: capacity planning vs. consumption-based

Buy what you THINK you need, versus paying for what you may not need.

Anytime your IT team is going through a budgeting cycle, you have to ask yourself, “What am I actually investing in a system?” Historically, if your business wanted to put a new account system online, for example, the first question asked would be, “What are the minimum requirements for that specific piece of hardware?” The server would be purchased, racked and stacked, and more server than was actually required was probably paid for because you’re obligated to predict what the environment will look like in three to five years — businesses operating within tighter margins may even try to maintain a hardware lifecycle of seven years.

There is no real way to plan for your future IT needs; purchases are primarily made based on guesswork. However, in using the cloud, the approach is shifted to a consumption-based model, and there’s no need to think ahead more than six months to a year. This allows your IT practice to pay for what is needed.

Scenario 3: Security and other operational requirements

- PCI-DSS
- HIPAA
- Other industry or government compliance requirements

PCI-DSS, HIPAA and a variety of different regulatory bodies can significantly influence an organization’s comfort level with putting data into a cloud environment.

For example, consider a hospital that does not want their electronic health record system in the public cloud; they may prefer to run this system on their own dedicated hardware, but there may be ancillary applications that make sense in a shared environment (although some people worry about increased potential for a security breach). There are many reputable cloud providers who are very conscientious about security, meeting compliance and auditability.

Hybrid IT gives an organization such as a hospital the opportunity to keep some data on internal hardware and less sensitive data in the cloud, with connectivity between the two and integrated layers of security.



Scenario 4: legacy applications

There are some legacy applications that businesses simply can't afford to get rid of. However, there are many varying ancillary applications for reporting, business intelligence or accounting that can be easily moved to a virtual environment.

A legacy application that was written in the COBOL computing programming language, running on a P-Series, for instance, might bar your IT team from the luxury of being able to virtualize it. Finding a data center with cloud connectivity at local LAN speeds is a viable solution. Installing a rack with legacy hardware and running the legacy application will enable cross-connection to the cloud at LAN speed so you can still take advantage of the cloud, but the environment as a whole is hybrid since a legacy application needs to run on a specific hardware stack.

Mainframes are another example; it simply makes sense to have a mainframe for your core business application, but businesses can preserve the ability to use a virtualization and cloud environment for all other IT functions.

Scenario 5: hardware and IT asset investments

An almost daily conversation among IT decision makers revolves around hardware and IT asset investments. Not many IT organizations want to make large capital investments in hardware and commit to a three- to five-year lifecycle. Having an operational expense that enables the ability to consume using a needs-based model is far more reasonable from a financial perspective.

Notwithstanding, there are still finite scenarios that precipitate the need for specific hardware or figuring out a way to gradually transition to an operational cost.

Hybrid IT provides a pathway to the cloud. There is a certain amount of hesitation toward the cloud, typically because of security concerns or general skepticism over not having direct control over data. Hybrid IT gives organizations who are hesitant the ability to move core infrastructure into a data center and slowly migrate applications to the cloud to find out what it's like — as a result, it's easier to start making reliable judgments about whether a given application makes sense to move to the cloud or remain on physical hardware.

Plus, if a particular project doesn't go successfully, it's simple to move an environment back to physical hardware. Hybrid IT offers the flexibility of moving an environment around as it suits business needs.



The three-year IT strategy

The how

Successfully operationalizing a hybrid IT strategy requires evaluating a few key considerations:

- Determining business driver
- Education and consultation
- Assessment and design
- Deployment and migration
- Monitoring and tuning
- Continual service improvement

Where to start

Begin with a three-year plan. What's your three-year strategy? In considering moving into a hybrid cloud model, it's critical to work with a service provider to define reasonable short-term goals and long-term goals for the business environment. Building out a roadmap will make the plan clear, which is essential given the pace of change in technology.

What your plan should consist of

- High-level vision of what the IT department will look like at the end of three years
- Tactical goals to achieve within the next year
- Initiatives to undertake in year two
- Prognosticating goals for year three
- Graphical roadmap
- Ongoing research and development ideas

An example scenario

Consider a new project that would require additional compute resources; an upgraded accounting system, for instance. A good starting place is deciding whether buying new servers or adding additional hardware into the virtual environment, using a private cloud, or moving to the cloud is the preferred route.

If a three-year strategy is in place, deciding how to execute a new project becomes much easier, especially when types of applications, which are viable in the cloud, are defined. When faced with the decision of buying new servers or moving to the cloud, ensure that you test your options and decisions against your three-year plan and delineate that your decision makes sense for your hybrid requirements.



Who uses hybrid IT? Real-world use cases

At Flexential, our hybrid experts have had the opportunity to successfully help many customers with migrating into a hybrid cloud model. Typically, we suggest choosing application groups with a migration path of one group per month (depending on size and complexity). Since migrating an environment requires resources, making sure it's tested properly and getting all stakeholders engaged is key prior to going live.

There are a lot of variables to think about when executing any type of migration into the cloud, and having an experienced partner to help guide you down the path will be a helpful benefit.

The PGA of America is an example of an organization that Flexential has worked with to help develop their hybrid IT strategy:

PGA

Challenge(s): The PGA of America became a Flexential customer in 2008 when they were preparing for the Ryder Cup Championship. The championship was being hosted in Louisville, KY that year, and PGA had the need to host a specific ticketing application.

In 2012, PGA made their scoring application and data feed public, but experienced a scalability problem in responding to the demand for new resources.

Solution: Rather than making a large capital investment into the infrastructure, PGA moved the ticketing application into a cloud platform for the event.

In response to their scoring application, PGA decided to move the application to the cloud while keeping some of the infrastructure that was feeding the back-end data on physical hybrid gear.

Conclusion

Integrating hybrid IT may seem like a complex endeavor, but with proper planning, it is a seamless process that will improve IT operations, and you don't have to go it alone.

Start small. In a perfect world, instantaneously moving everything to the cloud sounds great, but taking a more gradual approach and categorizing application groups will support a stress-free transition. Test the waters and see how it works.

Remember to build a migration and test plan, which should encompass a lot more people than solely the IT folks. Ideally, involve all application owners and end users to make sure that everyone is happy with the migration.

Finally, create your three-year strategic IT plan. And most importantly, thoroughly interview your potential cloud providers — they're not all equal.

Frankly, hybrid IT is not just about one cloud provider. There's nothing wrong with taking the time to decide what's best for your IT organization and being selective about where to keep your different cloud environments to support a holistic, secure solution.

Flexential helps organizations optimize IT transformation while simultaneously balancing cost, scalability, compliance and security. With a focus on building trusted relationships, providing valuable support and delivering tailored solutions and reliable performance, Flexential delivers colocation, connectivity, cloud, managed solutions and professional services to 4,200 customers across the U.S. and Canada.

