

Making the Move to **Hybrid IT**



The Benefits, the Challenges and Solutions for IT Leaders




Hewlett Packard
Enterprise

Platinum
Partner

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Think about what you did at work today.

If you're like many IT leaders, you opened your email to an urgent message from your marketing director saying there's a new app that will help promote sales of your company's latest product or service line; it's cloud-based and they needed it yesterday.

After that, you found an email from the VP of sales about a new Salesforce integration that is overdue. She's asking, "What is IT doing to get it implemented so the company's reps can get the information they need to close deals?"

Finally, there's an urgent communiqué from your IT manager saying how she's pored over the research and there's no way you can move your policy administration software to the cloud without breaking it. Forever.

Somewhere down the hall you think you just heard your star programmer's head explode.



Cloud, cloud, cloud

When you look at your calendar, browse your favorite tech news sites or leaf through your interoffice mail, one topic keeps coming up: the benefits of cloud services. Dropbox, Salesforce, Workday and more reside in the cloud, but at your organization, you've relied on homegrown applications. If you move everything to the cloud, what kind of risk will you incur? What (or who) will you lose, and how painful will the move be?

A carefully planned and executed hybrid IT strategy ensures that you'll get the most from your cloud and on-premises solutions. Without a cloud strategy in place, you've likely become overwhelmed to the point of inactivity. Fear of losing ground to the competition, pressure to keep costs down and a genuine lack of knowledge about the best path forward could keep you in limbo forever.

Now, a new buzzword—hybrid IT—has entered the scene. Beyond a basic understanding of hybrid IT as a blend of cloud-based and on-premises IT services, you might be wondering whether it could help you succeed—or cause you to fail.

This e-book breaks down the hybrid IT buzzword by explaining the following:

- Hybrid IT as a concept
- Why companies are turning to hybrid IT
- The challenges and complexities hybrid IT can introduce
- How to identify the best use of cloud and traditional services to advance your specific digital business strategy

It also discusses some of the critical tools that accompany a move to hybrid IT and how Sirius' comprehensive array of assessments and technical expertise can help you identify the most profitable path forward for your company.



A carefully planned and executed hybrid IT strategy ensures that you'll get the most from your cloud and on-premises solutions. Without a cloud strategy in place, you'll likely become overwhelmed to the point of inactivity.



Although marketing messages and digital ads might lead you to believe otherwise, not everything in the business world is carried out in the cloud today. Financial transactions, booking flights and even traffic lights all are run by traditional computing that most likely involves a mainframe. The cost and risk of moving homegrown applications to the cloud has many businesses keeping them at home. However, some applications, such as Microsoft Office 365, are ideal candidates for the cloud.

The reality that some applications and services can move to the cloud while others shouldn't creates a natural need for a hybrid IT environment that many, if not most, businesses are employing. From midsize insurance companies to healthcare systems, the companies operating hybrid IT environments span every size and every industry.



One size does not fit all

Do any of these realities resonate with you?

- **“Large capital outlays and long procurement cycles no longer fit my business model.”**
- **“Some data and workloads need to stay on-premises and under my control, but others could move to the public cloud.”**
- **“I need to be ready for growth and unpredictable surges in demand.”**

If so, take comfort in the fact that you are not alone; these are the most common reasons that IT leaders choose to implement hybrid IT environments.

At its most basic level, hybrid IT combines cloud-based and on-premises IT services into one environment. Applications that must reside close to users or that require intensive data usage are better run locally. However, e-commerce storefronts or collaboration tools for employees working from different locations are best managed in the cloud.

When a hybrid IT environment is created carefully and appropriately, it empowers data centers to run workloads in the location (cloud or on-site) that makes the most sense for that organization's operations.



Five things to avoid for successful hybrid IT implementation

Whether you're currently running a hybrid environment or building your next-generation data center, hybrid IT likely will play a significant role in the architecture. Trying to transform your company's infrastructure without a solid strategy and the right technical expertise not only can disrupt your business, but it also can lead to an unmanageable and risky mix of workload-specific hardware platforms and shadow IT that could tie your organization in knots. Here are five things the experts at Sirius recommend avoiding as you prepare for hybrid IT:

1. **Inflexible infrastructures that hold back deployment**
2. **Complexity that undermines control over IT**
3. **Traditional IT operations that impede application development**
4. **Legacy infrastructure that increases business risks**
5. **IT procurement and provisioning processes that increase costs**

>> Read more and get our hybrid IT checklist.



Benefits of operating a hybrid IT environment

IDG found that the No. 1 priority of IT directors and tech leaders is to accelerate speed to deployment. Not only is it their top objective, but nearly 40 percent of IT leaders said it's also the one most likely to be funded.¹

Let's look at the most significant benefits driving organizations to transform their data centers into hybrid IT environments.

1. Speed to deployment

Every IT director has sat in a meeting where the only question that mattered was, "How fast can you get it up and running?" Speed to deployment is the top reason organizations choose to run certain applications in the cloud versus on-premises.

Typically, it's not a lack of desire or effort that keeps IT teams from meeting business leaders' implementation demands. In a traditional environment, the IT team is limited by configuration periods, build times, shipping, testing and application rollout, each of which often takes weeks to complete. They generally are not able to move as fast as they would like unless they have excess capacity that they're not using, which is another problem in its own right.

Yet, properly designed hybrid IT environments reduce the time to deployment by enabling IT teams to choose the applications they want and need to put in the cloud. In addition, companies that embrace either hyperconverged or composable infrastructure are able to support a wide range of workloads from an integrated solution stack.

¹ *Navigating IT Transformation: Tales from the Front Lines*. HPE and IDG.
www.hpe.com/us/en/resources/integrated-systems/navigating-transformation-tales.html

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- **Hyperconverged infrastructure** is a step toward a hybrid cloud solution that combines storage and compute resources for greater flexibility.
 - **Composable infrastructure** is a single platform and operational model capable of supporting all workloads and delivering improved deployment speed. Frost & Sullivan describes the benefits of composable infrastructure in the following way:

“A composable infrastructure enables you to manage your infrastructure resources (physical, virtual, general-purpose, application-optimized, on-premises and cloud) to deliver a better mix of performance, security, scalability and cost for your workloads. It’s as if a child’s set of Lego™ bricks came with the ability to replicate blocks as needed and programmed instructions to configure those blocks into a ninja temple today and a working race car tomorrow.”²

A composable infrastructure is so flexible that, like Legos™, it can be assembled and reassembled to meet the changing needs of specific applications. In essence, it enables IT teams to provision on-premises resources as if they were in the public cloud. It’s so powerful that you can program an entire infrastructure with a single line of code through a unified application program interface (API).

² How the Right Infrastructure Can Prepare Your Data Center for Business Disruptors. Frost & Sullivan, 2015.

2. Flexibility

In addition to reducing deployment times, properly designed hybrid IT environments let IT teams match workloads with the infrastructure solution that makes the most financial sense for each application. They can enjoy security and speed, along with the ability to scale up or down according to changing needs for capacity. From the start, a hybrid IT environment delivers greater flexibility than what cloud or on-premises environments could achieve on their own.

QUICK

In a hybrid IT environment, quick application development becomes possible, and scaling up capacity for an event that lasts only a short duration becomes not only doable, but also affordable.

CAPACITY

As an IT leader, you know all too well that the capacity you need and the capacity you have are never perfectly aligned. Too little capacity threatens your ability to capitalize on new business opportunities, while too much ties up your capital in less useful assets.

FLEXIBLE

A flexible capacity hybrid IT solution, however, allows you to easily scale your capacity up or down without outlaying capital or enduring a lengthy procurement process.

Spotlight on Retail

Retail businesses are certainly accustomed to seasonal spikes in traffic and application usage. According to a report from HPE³, retailers with a hybrid IT environment can:

- Create a single technical platform for all store locations with ease of management and consistent, predictable performance
- Use a single set of data, on-premises or in the cloud
- Save time and money with remote IT management
- Deliver a better in-store shopping experience

When a smart hybrid IT solution is in place, new approaches to engaging with customers become possible, not only for retailers, but for all businesses—and with not only their customers but also their employees.

3 Hybrid IT: The gateway to a new, personalized shopping experience. Hewlett Packard Enterprise Development LP. 2017. More at <https://h20195.www2.hpe.com/v2/getpdf.aspx/a00016507enw.pdf>.

3. Control

Would the ability to slowly migrate to a cloud environment make you feel more comfortable about integrating it into your business operations?

We bet it would.

A hybrid IT environment gives IT leaders complete control over what applications move to the cloud and the pace at which they move there. Hybrid IT is a game changer, but as many IT leaders have discovered, it's not an all-or-nothing, roll-the-dice-and-hope-for-the-best kind of game.

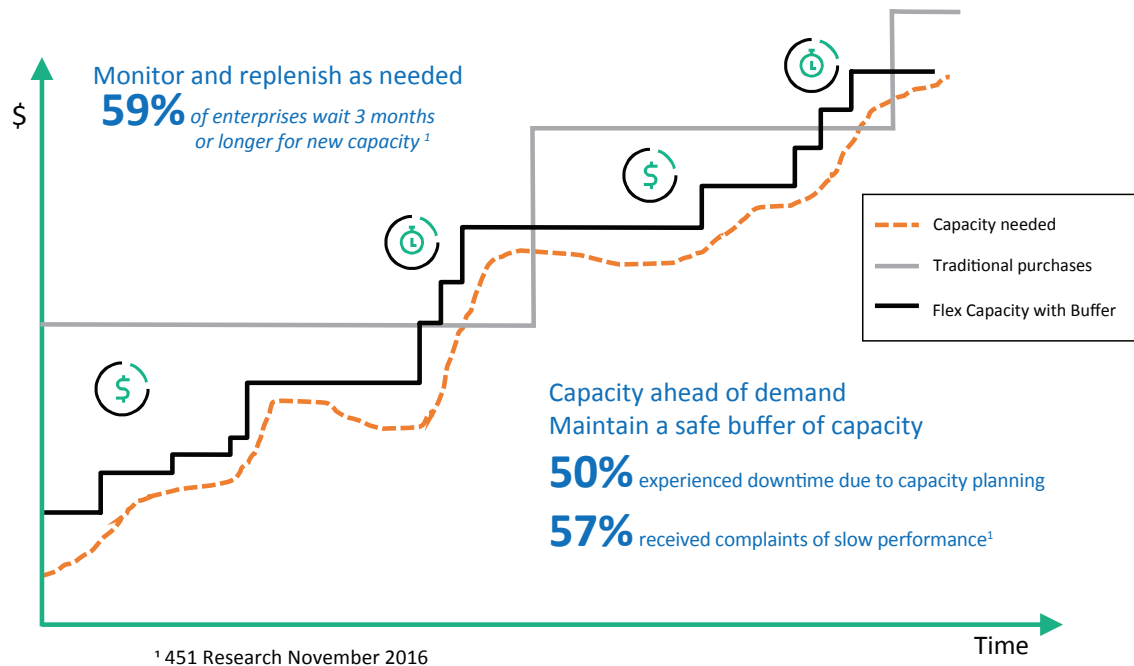
If you need more bandwidth for your operations or you're looking at the cloud as a disaster recovery solution, hybrid IT gives you the control to meet those needs in a much more cost-effective way than with an expensive co-location situation where you pay by the watt for rack space, power and equipment. Instead, you can put just the 5 percent of the critical systems you would need to access in an emergency into the cloud and pay to keep those safe, secure and accessible at a moment's notice.

Properly designed hybrid IT environments reduce the time to deployment by enabling IT teams to choose the applications they want and need to put in the cloud.



A flexible capacity model gives you control over your data center's capacity and what you pay for it, ensuring that you always have what you need and that you pay only for what you actually use.

How consumption benefits IT Procurement



With this kind of transparent pay-per-use model, you gain not only insight into your actual usage, but also control over how much you spend, which makes infrastructure planning more manageable.

Unfortunately, everything doesn't always go smoothly, even with the best IT solutions in place. Moving to a hybrid IT environment is not without potential pitfalls.

Hybrid IT undoubtedly delivers benefits. But, because many companies must continue to maintain legacy or traditional systems, a hybrid environment can introduce new complexities that, when unplanned for, could threaten the payoff from the benefits the company is pursuing in the first place.

The following list identifies common challenges a hybrid IT environment might introduce:

- **Operational friction.** Without a cloud strategy in place, it's easy for applications and their accompanying business units to become siloed in multiple clouds, which then become cumbersome and potentially costly to manage.
- **Application integration issues.** Integrating popular applications or services such as Salesforce into hybrid IT environments requires IT teams to customize and bridge both traditional and cloud systems management to address business requirements, maintain service availability and comply with regulations—all of which becomes exponentially more difficult because systems are less standardized in a hybrid IT environment.
- **Greater pressure to keep costs down.** Again, without a proper strategy in place, management complexity can actually increase in the wake of a move to a hybrid IT environment. Cost often accompanies management complexity, so IT directors experience increased pressure to keep costs down. Ultimately, this kind of environment can lead to cutting corners, which could increase a company's risk and end up costing more in the long run.

- **Speed differential between cloud and traditional IT systems.** This new reality, which is introduced in a hybrid IT environment, can delay the delivery of digital business services. IT teams must learn how to reduce technical complexities and simplify fulfillment processes between services and platforms, or they risk losing the speed, agility and cost benefits that initially motivated them to implement cloud solutions.
- **Keeping data secure in the cloud.** Some organizations are less comfortable than others with putting personally identifiable information (PII) in the cloud. Highly publicized breaches put pressure on organizations to make sure the data they've put in the cloud is secure. Without a cloud strategy, businesses could find themselves—and their customers—exposed to greater risk.

Many IT directors may feel comfortable securing applications and data on-premises but don't feel the same confidence with applications in the cloud. Conducting a security assessment and incorporating the results into your cloud strategy can allay fears and provide confidence that data you have stored in the cloud is safe and secure.

- **Lack of cost controls and analysis.** While optimized pay-per-use models exist, not every business knows about them or keeps a close eye on cloud expenditures. One business put itself 100 percent in the cloud and, because of the ever-increasing cost, couldn't get out or right-size to a hybrid environment quickly enough. Sadly, that business had to shut its doors and declare bankruptcy, all because of spiraling cloud costs.

The true challenge facing any IT leader considering a move to a hybrid IT environment is to identify the best use of cloud and traditional services based on their particular digital business strategy.

Sirius helps companies meet that challenge head-on with predictive assessments, cloud strategies and consultation services that make the transition to a hybrid IT environment smooth and successful.



The true challenge facing any IT leader considering a move to a hybrid IT environment is to identify the best use of cloud and traditional services based on their particular digital business strategy.

If the cloud is keeping you up at night, you're not alone.

Many IT leaders feel that pressure, and they have found a way to relieve it: by employing a trusted partner, like Sirius, for consultative services, predictive assessments and expertly engineered cloud strategies.



Assessments give the insight you need

Armed with the right information, you can make your hybrid IT transition successful from the start.

A cloud assessment helps you answer questions like the following with confidence:

- What can I move to the cloud?
- What can't I move to the cloud?
- What data regulations do I need to follow?

Finding the answers can be time-consuming and overwhelming. A cloud assessment helps you make logical decisions about what applications and services to move to the cloud. It also gives you a strategy for making necessary upgrades, reassignment and retraining of employees, and identifying the resources you'll need in the new hybrid IT model, ensuring that your hybrid IT implementation rolls out seamlessly.

A cloud assessment helps you make decisions about what applications and services to move to the cloud and gives you a strategy, so your hybrid IT implementation is seamless.





The Sirius advantage

Sirius has the ability to recreate your exact environment, so we can test and find the precise solutions that will deliver the results you expect.

In addition to our cloud assessment, our cost analysis assessments deliver invaluable insight through the following:

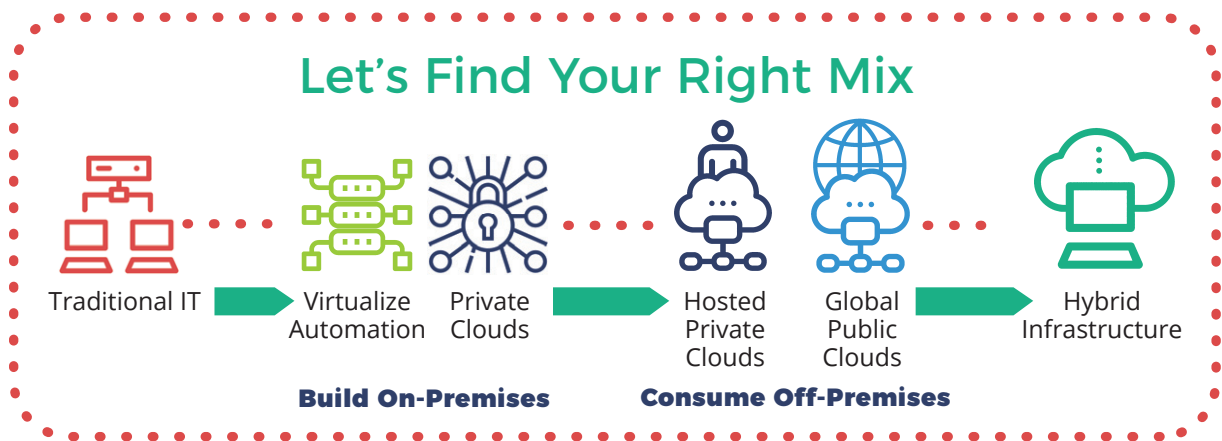
- **Health checks on your current environment**
- **Application evaluations to determine which ones make the most sense to migrate to the cloud**
- **Calculations of how much a hybrid IT implementation will cost you, and how much it will save you once implemented**
- **Analysis of your cloud spend to determine whether you're overpaying and to ensure that you get the most value out of your IT investment**

With Amazon-certified team members, Sirius can perform Amazon Web Services (AWS) well-architected reviews, a skill that few technology partners offer. This gives us even more ability to predict how a hybrid IT environment will affect your organization before you make the decision, ensuring that you don't encounter any nasty surprises.

Sirius predictive assessments of an on-premises versus cloud environment enable us to implement a solution virtually and to quickly determine the right mix of solutions for you. If you need to build a business case for incorporating hybrid IT into your data center, we can run assessments and analyses to accurately determine the cost, value and return on investment (ROI) you can expect.

Ultimately, Sirius assessments help you find the most profitable path forward depending on your needs, your wants and the absolute best practices the industry has to offer.

Solutions for transitioning to a hybrid IT environment abound. The key to ensuring success is to first run thorough assessments on your cloud and operating environment, and then choose the right solutions based on the outcomes of those assessments. Hewlett Packard Enterprise and Sirius call this combination of solutions “the right mix.”



As an HPE Platinum Partner, Sirius is committed to helping IT teams select the right mix of hybrid IT solutions that will deliver the performance, capacity, flexibility, bandwidth, storage, security and cost controls their organizations need to advance their digital business objectives.

HPE GreenLake

As we mentioned earlier, the strength of a composable infrastructure is its ability to deliver software-enabled automation that allows you to manage your entire infrastructure as code. HPE GreenLake offers industry-leading composable infrastructure solutions.

Simplified hybrid cloud management provides a unified view of all your public and private clouds in one place. HPE GreenLake Hybrid Cloud makes it easy to move to an on-demand IT setup by combining the simplicity, agility and economics of public cloud with the security and performance benefits of on-premises IT architecture.

HPE GreenLake Flex Capacity offers a pay-per-use model that gives you the capacity you need, with a buffer of additional capacity to use when you need it. With HPE GreenLake, you have room to grow your environment yet pay only for your actual metered use. Technology transitions can be built in, and infrastructure and services are billed monthly, so you can align the costs to business use.

With HPE GreenLake, Sirius can help you determine your own right mix of hybrid IT and workload placement with an approach to IT consumption and scalability that helps you better control your destiny in the digital economy.

Consider the benefits of a composable infrastructure that we previously discussed:

- **Improved time to market by maintaining a safe buffer of capacity, ready for use when you need it**
- **The ability to keep capacity ahead of demand with regular monitoring**
- **The ability to pay only for the capacity you use, not the capacity deployed, with payments based on actual metered usage**
- **Reduced IT risk**

An HPE GreenLake solution can include HPE servers, storage, networking, software, converged systems, and even non-HPE equipment and certain Microsoft Azure services.

If you need to align IT cost with revenue, HPE GreenLake is worth further exploration.



HPE Synergy

HPE Synergy is a next-generation blade environment⁵ that allows you to configure and change your IT environment via a single line of code. Instead of sitting in front of a GUI, you can work more efficiently through automation layers and other software.

For example, you can build X servers for Y application during the day, and at night you can put those same servers to rest and rebuild them as Z application in the evening. This capability delivers a higher use of resources at half the cost.

Together, HPE Synergy and a composable infrastructure form the foundation of a hybrid IT environment. As the world's first platform built specifically for composable infrastructure⁶, HPE Synergy is designed to bridge traditional and new IT, providing the agility, speed and near-continuous delivery needed for today's applications.

The following are some of the benefits:

- **Cloud-like speed within a secure data center**
- **Single-platform infrastructure for two IT environments**
- **Accelerated innovation through software-defined infrastructure**

In today's economy, competitive advantage is often driven by breakthrough ideas, but winners are determined by how fast they act on those ideas. A composable infrastructure and HPE Synergy can help your company gain a leg up on your competition by getting your ideas to market faster.

⁵ More information on HPE Synergy is available at: <https://www.hpe.com/us/en/integrated-systems/synergy.html>

⁶ "The Top Ten Reasons to Move to Composable Infrastructure." Hewlett Packard Enterprise Development LP. 4AA6-4783ENW, May 2016, Rev.1.



HPE OneSphere

HPE OneSphere⁷ is an as-a-service hybrid cloud management solution with seamless deployment, cost analytics and a unique developer experience. This multi-cloud management platform simplifies how IT teams manage multi-cloud environments and on-premises infrastructure. A unified view enables you to compose hybrid clouds that can support both traditional and cloud-native applications.

HPE OneSphere brings all your public and private clouds together and lets you operate them as if they were one while providing access to everyone on your team, from any location. That kind of convenience lets IT teams focus more of their time on applications and less on operations. HPE OneSphere offers many benefits:

- **Cross-cloud resource pool and utilization reporting**
- **Visibility into on-premises and public cloud usage costs**
- **Consumption model based on one-, three- and five-year subscription options**
- **Reduced operational cost with a Software-as-a-Service (SaaS)-based control plane**
- **Self-service infrastructure and on-demand provisioning**
- **Less active hands-on operation of hardware, firmware and VMware® ESXi™ life cycle management**
- **Project-based resource access and management**

With HPE OneSphere, you can create project workspaces for developers and teams, so you can build and deploy applications faster. You can engage in hybrid builds of applications on open APIs that literally build your environment as code.

The Sirius Advantage

Sirius can help you determine which legacy hardware might need to be replaced to unlock all the benefits not only of a OneSphere solution, but also of the transition to a hybrid IT environment.

⁷ "Multi-cloud management redefined: HPE OneSphere." Hewlett Packard Enterprise Development LP. A00036490ENW, November 2017. Learn more at: [HPE.com/onesphere](https://www.hpe.com/onesphere).



Spotlight on education

An increasing number of school systems are moving to mixed cloud and on-premises infrastructure to deliver to their staff and students the learning benefits of advanced technology resources without causing their IT teams to burn out.⁸

The cloud allows schools to expand their capabilities in the following ways:

- **Run current apps on affordable computers and devices**
- **Share data more easily**
- **Quickly deploy new educational applications**
- **Retire legacy systems**
- **Install new applications rapidly**

At the same time, on-premises infrastructure provides schools with security and control over data and latency-sensitive information, such as student, district and reporting data.

Schools are learning that a hybrid IT environment is the best option for providing the speed to deployment, bandwidth, simplicity, scalability, cost control, safety and security they need in order to give their students the best possible education. Some of the tools that schools are using to transition to hybrid IT environments include the following HPE solutions:

- **HPE Just Right IT**—Schools with limited resources, staff and budget are seeing success with HPE ProLiant servers and Sirius cloud assessments to find the perfect solutions, feature-rich products and services for their system. For example, for schools with fewer than 300 active users, the HPE ProLiant Easy Connect EC200a Managed Hybrid Server comes preconfigured with unique cloud-management software that automates disaster recovery, backup and restore with Microsoft Azure.

⁸ The information in this Spotlight on Education section is taken from "Hybrid IT: Driving higher scores and lower costs for schools" by Hewlett Packard Enterprise and Intel. 2017 Hewlett Packard Enterprise Development LP. a00016505eew, July 2017



- **HPE OneView Management**—Larger schools with sprawling campuses are using this comprehensive management platform to provide single-console access to health, inventory and configuration monitoring, eliminating the need for an administrator to run from one building to another to install system updates, change configurations or manage the IT environment. They're finding that the HPE SimpliVity platform and HPE MSA Storage are meeting their needs for storage with flash enablement, multidimensional scaling, unified file and block data services, and subscription-based pricing.

Schools with large student bodies or multiple sites are discovering that the HPE Easy Connect ProLiant ML110 Managed Hybrid Server has the increased storage and memory capacity they need to handle up to 500 students concurrently. Teachers appreciate the single sign-on and access capability that makes mobile or offsite teaching more convenient from a technology perspective.

Schools with even larger or more complex needs are finding similar benefits and capabilities in the HPE SimpliVity 380 virtualized systems.

Software-defined solutions and hybrid IT tools let you:

- **Harness powerful software to quickly deploy IT resources for any workload**
- **Accelerate application development and deployment**
- **Reduce costs**
- **Streamline IT operations by deploying and controlling data center infrastructure as code**





The bottom line

The goal of hybrid IT is to combine the right mix of traditional IT, private cloud and public cloud architecture to achieve optimal workload placement, but progress toward that goal is often fraught with operational challenges that threaten the very benefits a hybrid environment is designed to provide.

With the proper solution in place for your particular situation, it is possible to overcome obstacles so you can improve productivity and reduce costs for your organization.

Sirius offers with technical expertise and comprehensive assessments to help you find the best solution for what you need, what you want and what you should do.

Don't get lost in the cloud. Let Sirius help you find the best path forward with strategies and solutions that will help you make a successful transition to a hybrid IT environment.

About Sirius and Hewlett Packard Enterprise

Sirius has achieved HPE's highest partner level, Platinum Converged Infrastructure Specialist, and offers a variety of consulting and integration services to help you establish and execute a hybrid IT strategy that fits your business.

In 2016, Sirius became an HPE Cloud Builder partner, delivering a complete portfolio of cloud products. When it comes to traditional and next-generation environments, HPE offers broad and deep solutions across hardware, software and services that accelerate business outcomes. With more than 200 HPE sales and technical certifications, Sirius has dedicated teams of solution architects and IT consultants who are ready to help make your IT more efficient, productive and secure.

