

Business white paper

Move to the cloud



Executive summary

Cloud computing works. With the capacity to provide infrastructure and services everywhere and around the clock, the cloud has proven to be transformative to the enterprise, reshaping how businesses operate and how people live and work. The cloud is enabling CIOs to lower capital costs, invest in IT innovation for their organizations, contribute to the bottom line, and to be more responsive with services to their stakeholders.

Despite mounting evidence to testify to its value, the process of navigating the path to cloud computing remains a mystery to many who could stand to benefit greatly from its use. IT decision makers can be reticent due to concerns for data security, computing performance and availability, living up to service level agreements, undermining the investment in their existing IT infrastructure, or even uncertainty over which cloud service model—private, public, or managed—should carry the day.

HP believes the answer can be found in a hybrid delivery model with HP Converged Cloud—delivering a mixture of services from various cloud sources, as well as traditional onsite data centers. HP Converged Cloud addresses the CIO's cloud quandary—how to bridge the gap between expectations and efficacy.

84

times faster with hybrid delivery

What is hybrid delivery?

Cloud computing services have emerged in a variety of delivery models, including private clouds that are exclusive to their users; public models that allow on-demand, pay-per-use access; and managed clouds that offer a combination of private cloud control and public cloud flexibility. Consistent with each model is the impact the cloud is making on the responsibilities of IT leadership. It's no longer possible for CIOs and IT departments to focus on building and maintaining IT. The job description now includes brokering services for all end users of the enterprise's IT.

Considering these growing expectations for on-demand capacity, the rising challenges of managing big data and mobility, and the cascading costs of IT infrastructure, hybrid delivery is rapidly becoming the realistic solution for building and consuming cloud services.

That's because hybrid delivery represents the opportunity for cloud computing flexibility and customization on demand. It means aggregating sources and delivering applications and services using the best qualities of public, private, and managed clouds, as well as traditional IT. Depending on the application you're planning to develop and test, hybrid delivery offers the flexibility to turn to a private cloud for maintaining complete control and processing highly sensitive data, or to reach out to the public cloud for less sensitive workloads.

It means saving on investment in IT hardware and maintenance. Hybrid delivery balances the elasticity and efficiency that characterize the value of cloud services along with the type of control CIOs may require to keep service and compliance obligations. And hybrid delivery means you can select from different security and governance levels as you set policies for usage. It's this balance of internal and external sources that makes the hybrid model the optimal approach to delivering cloud services.

Clearly, word about the value of hybrid delivery is making its way into the marketplace. Recently, an HP sampling of IT executives found that 75% planned to pursue a hybrid delivery model, and 73% said portability of workloads between cloud models was important.

For IT organizations that have made the move to hybrid delivery, the most prominent use has been for application development and testing of applications. With the access to on-demand, elastic resources, developers have the flexibility to accelerate projects and respond quickly to business needs. HP customers such as McKesson Corp., a healthcare services specialist, have reduced provisioning of application development environments from an average of seven days to 40 minutes—84 times faster than before it embraced a hybrid model.

CloudAgile in practice

As part of HP's hybrid delivery model, we are partnering with leading cloud service providers. HP CloudAgile partners provide you a way to consume the cloud, whether it's public, managed, or privately hosted, giving you a secure, cost-effective cloud service—getting you to market faster with the flexibility and efficiency that the cloud provides. All reliably powered by HP.

Whether you want to manage your data services yourself, have them handled by your provider, or take a hybrid approach, you can by leveraging the power of an HP CloudAgile Partner. Our partners can handle the needs of businesses from small start-ups to large enterprises. With infrastructure, platform, and software as a service we provide application services, back-up and recovery, collaboration, email and DB, to name a few. We also have industry cloud solutions in areas such as government, healthcare, and retail. CloudAgile partner services are easily adaptable and ready to grow with you, scaling to meet your business needs.

And if you exceed your capacity and require a little extra muscle, you can burst from your CloudSystem into a CloudAgile partner. You benefit from:

- A choice of world-class providers
- Confidence in the scalability and reliability of your cloud services
- A consistent user experience across all delivery models

The characteristics of HP Converged Cloud

With the HP Converged Cloud portfolio, enterprises have the option of hybrid delivery in their choice of scenarios: an all-HP infrastructure featuring a rich HP-based cloud, or a heterogeneous environment in a multi-vendor cloud. In either setting, HP Converged Cloud is based on an open architecture and platform that offers the capability to build, consume, and manage IT across private, public, and managed clouds.

We believe these pillars are at the foundation of the industry's only hybrid strategy and solution portfolio that delivers choice, confidence, and consistency to customers. But why are these traits important?

Choice

- Users can select delivery models across private, public, and managed clouds, as well as traditional IT—representing a continuum of SLA choices.
- HP Converged Cloud provides an option for platforms with open, heterogeneous architecture, multiple operating systems, multiple hypervisors, multiple developer frameworks, and multi-vendor infrastructure.
- Users can choose partners to work with, including strategic alliances, value-added resellers, system integrators, and outsourcers.

Confidence

- HP Converged Cloud provides the ability to manage and secure across delivery models, as well as the scalability enterprises require to drive business forward.

Consistency

- Users can operate on common architecture across delivery models.
- HP offers workload portability across delivery models.
- HP Converged Cloud provides a single consumption experience.

Key attributes of HP Converged Cloud

There are three key attributes of the HP Converged Cloud portfolio: solutions for building and operating cloud services, cloud services that can be consumed from HP, and professional services to help you on your journey to the cloud. Let's take a closer look.

Build and operate cloud services

The flagship HP offering for building clouds is HP CloudSystem, a complete, integrated, and open solution with a single management environment for hybrid delivery. HP also provides best-in-class technology, including components from HP Converged Infrastructure portfolio, such as servers, storage, and networking. Additionally, there are automation, security, and management offerings designed for hybrid environments.

Consume cloud services

Under the HP Converged Cloud, customers seeking to consume cloud services can choose from both managed cloud and public cloud offerings, each of which includes the ability to leverage the HP CloudAgile program (see CloudAgile sidebar). The managed cloud option delivers services for mission-critical, highly secure, production workloads. Features include:

- Enterprise Cloud Services, such as managed private cloud, virtual private cloud, application and productivity services, and industry-specific solutions
- Legal and Compliance Performance Suite, with archiving and compliance, eDiscovery, Enterprise Content Management, and data protection
- Marketing Performance Suite, including web content management and optimization, Intelligent Contact Center, and Customer Interaction Analytics

Public cloud offerings apply across IaaS, PaaS, and SaaS. Public cloud features include:

- A range of services from HP Cloud Services, including compute, object storage, block storage, CDN, relational database for MySQL, and application platform as a service
- Public cloud bursting, enabling rapid management of infrastructure service delivery across multiple clouds from a single, integrated point of control

Resources, contacts, or additional links

Read more on the Fortescue Metals Group and HP CloudSystem at:

[Fortescue Metals mines for rapid growth with HP managed cloud solution](#)

The benefits of CloudSystem bursting

A fundamental objective of cloud computing is the ability to expand and shrink IT infrastructure on demand, accommodating shifting workloads with just the right amount of computing power. But managing a flexible cloud infrastructure, with the ever-present need for visibility, governance, and security, can pose a challenge for IT leaders. In a hybrid delivery setting described above, HP CloudSystem provides out-of-box cloud "bursting," which:

- Allows your organization to broker service from additional resources rapidly, across multiple clouds from a single, integrated point of control
- Provides the capacity to scale applications across clouds, such as dynamically adding web servers from a private or public cloud
- Affords the flexibility to add computing power as needed, on a pay-per-use model
- Features a common management environment for hybrid delivery, and a single user interface for bursting into a public cloud of your choice, such as HP Cloud Services, Savvis, Amazon EC2, and others
- Supports intra-company sharing of resources with CloudSystem-to-CloudSystem bursting
- Offers choices of security and governance levels, and the ability to set boundaries for data, including what type of workloads can burst from traditional IT or private clouds

Professional services

HP experts can guide both enterprises and service providers on their journey to a hybrid cloud delivery model. A portfolio of professional services includes strategy, planning, implementation, ongoing support, financial services, and education.

Learning from those who have gone before you

Australia's Fortescue Metals Group, founded in 2003, has great ambition to be a principal source of iron ore for China's colossal steel production needs. But Fortescue knew it couldn't meet its rapid growth goals without contributions from IT. Unfortunately, it faced a familiar dilemma—an IT infrastructure rendered inflexible by the fact that it was built in pieces utilizing different vendors and partners.

Setting the goal of a flexible infrastructure that could always run the latest technology, and outlining a commercial model to keep from investing in equipment it might not use, Fortescue found the answer in the HP CloudSystem. Today, Fortescue uses HP CloudSystem to operate a private infrastructure-as-a-service cloud, delivering on the essential value proposition of the cloud—massive scalability, simple management, and the capacity for rapid innovation. Since CloudSystem implementation, provisioning of new applications at Fortescue has been reduced from 16 hours to roughly 20 minutes.

Overall, HP has conducted over 1000 customer installations with HP CloudSystem in 75 countries. Over 200 HP customers are currently leveraging the managed cloud offering, and over 6000 are leveraging the HP public cloud offering. The collaborative HP CloudAgile program has enlisted more than 80 partners worldwide and more than 130 Cloud Centers of Excellence (CCOE) are now established around the world.

With a proven record based on thousands of real-world deployments, a portfolio featuring the industry's most comprehensive cloud products portfolio, and expertise in defining cloud strategy for enterprises, HP is poised to deliver the benefits of the cloud: greater speed to innovation, more agility, and lower costs.

Getting started

HP offers resources to help you step out on your cloud journey, starting with a Converged Cloud Workshop. C-level and key business and technology decision makers can work with HP to achieve business and technology alignment, develop a cloud strategy, and build a high level tactical plan for your priority projects.

If you're ready to start building a private cloud, HP CloudSystem can deliver a private cloud in short order. And if your plan is to consume external services in a pay-as-you-go approach, you have the choice of a managed cloud solution with HP Enterprise Cloud Services Virtual Private Cloud, or HP public cloud services, depending on your service, infrastructure, and service level agreements (SLAs) requirements.

For more information, contact HP at:
hp.com/cloud

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