

CAPITA

IT Enterprise Services

Hybrid cloud

Choosing the right cloud mix for your enterprise



89%

of respondents who signified that deploying some sort of private cloud and hybrid infrastructure is a key priority for them in 2015^[1]

Optimise your cloud investments with innovative hybrid cloud solutions.

Cloud, and all its forms, has developed significantly over recent years. The emergence of hybrid cloud infrastructure models allow enterprises to reap the benefits of public cloud while keeping control of valuable and sensitive data in private cloud data centres.

Maximise the potential of cloud for your business by exploring the nuances of three types of cloud infrastructure.

Hybrid cloud provides an optimised combination of public and private infrastructure which is tailored to fit the needs of each organisation.

The first wave of cloud technology drove a fundamental change in the provision of IT infrastructure services. The second 'hybrid wave' is now well underway, characterised by the increasing adoption of both hosted private cloud, such as Capita Private Cloud, and its hybrid cloud counterparts.

According to Gartner (February 2015) hosted private cloud growth is expected to outpace its on-premise counterpart over the next 2-3 years.

45%

According to TBR, the managed private cloud market is expected to grow 45% in 2015. ^[2]

2015

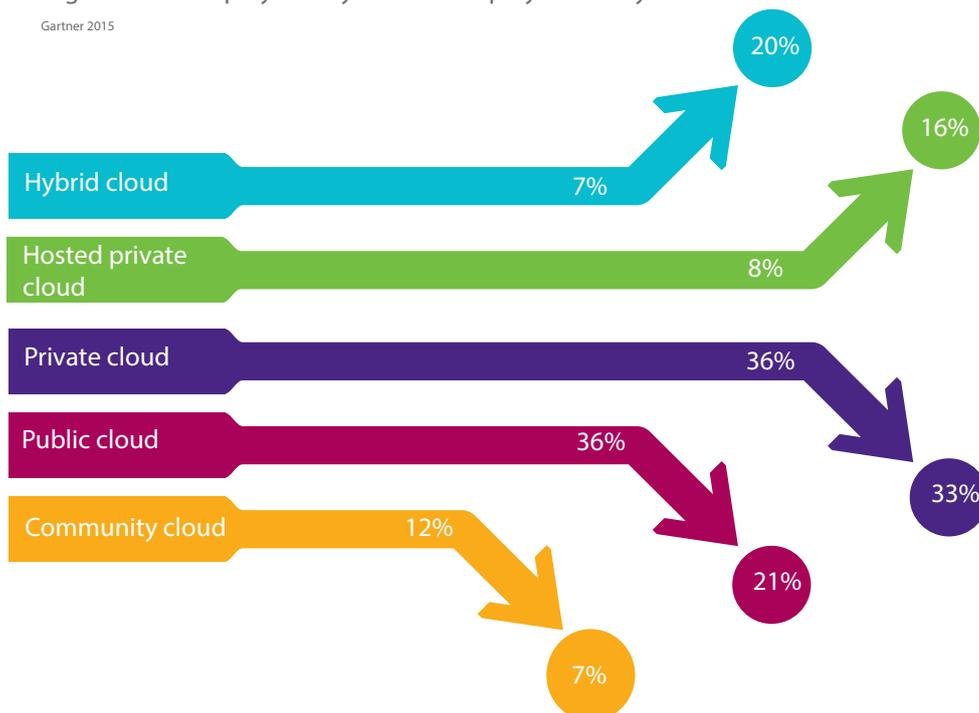
TBR predicts that private cloud will lead adoption and spending growth in 2015. ^[2]

+20%

TBR also predicts private cloud revenue growth of more than 20% year-to-year in 2015. ^[2]

When considering your organisation's use of cloud services, which is the **primary** cloud model your organisation employs today and will employ in three years?

Gartner 2015



One cloud does not fit all - 3 cloud models and their characteristics

Public cloud infrastructure

- **Competitive** - commodity infrastructure at a competitive price.
- **Convenience** - leading public cloud infrastructure providers, such as Microsoft Azure and Amazon Elastic Compute Cloud (EC2), typically offer convenience -in general they are straightforward to setup, use and access.
- **Scalable-pay-per-use model** - public clouds typically operate on a pay-as-you-go model, so you only need to pay for what you use — but costs will typically increase when larger workloads are migrated to the cloud.
- **Flexible** - public clouds allow you to easily add or reduce capacity and typically provide simple connection and access from any internet-connected device.
- **One size fits all** - public cloud services are traditionally built to common specifications and seek to deliver a more universal experience. This provides useful and popular access to cloud computing but can be limited in its ability to mix different levels of service and security.
- **Less assurance on data sovereignty** - in Europe in particular data sovereignty (where your data is stored and who may have access to it) comes into play. Many public cloud providers reserve the right to move data around from one region to another without notifying the user. This may cause issues, legal and otherwise, for organisations with strict (and often regulatory enforced) data security policies.

82% of enterprises have a multi-cloud strategy (up 9% since 2014) ^[3]

10% use a single public cloud ^[3]

5% use a single private cloud ^[3]

Of the multi-cloud strategies

14% of enterprises use multiple private clouds ^[3]

13% use multiple public clouds ^[3]

55% use hybrid clouds ^[3]

The key question is not *should I continue to invest in developing my in-house IT capabilities (private cloud) or should I move to public cloud services?*

It should be *how do I weave internal and external, cloud and non-cloud, services together to deliver the right business outcome and user experience?* Ovum

Private cloud infrastructure

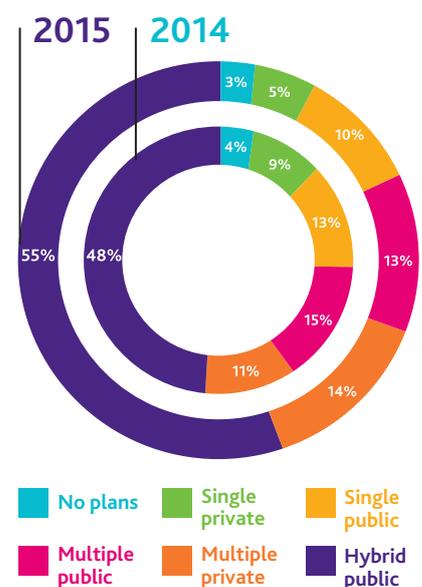
Private cloud infrastructure brings with it many of the public cloud benefits of agility, scalability and convenience mentioned above. In addition it also brings some unique characteristics of its own:

- **Data sovereignty** - if you're concerned about knowing **exactly** where your data is stored and having complete control over it, and who ultimately has access to it, private cloud provides a higher degree of security and peace of mind. This is critical to UK public sector, financial services and other highly regulated organisations.
 - **Managed services** - the first wave of private cloud adoption focused largely on organisations investing in their own on-premise private cloud facilities. In contrast, hosted private clouds, such as Capita Private Cloud, are operated by large scale service providers. These typically offer additional managed services, third-party expertise for maintenance and security provision over and above
- public cloud alternatives, such as service monitoring, OS management, intrusion detection and prevention, anti-virus and patching.
- **Customise your cloud** - hosted private cloud allows you to customise storage and networking components to a greater extent so that the cloud is a perfect fit for your organisation and its application needs.
 - **Governance** - private cloud is commonly the most suitable option if you require strong regulatory governance, handle sensitive data or if you are concerned over your own intellectual property being hosted on the public cloud.
 - **Greater control and reliability** - private cloud infrastructure services are maintained onsite, or in a privately hosted environment such as a data centre. Provider-managed private clouds, such as Capita Private Cloud, remove the burden of managing the physical infrastructure while providing you with the utmost control over data access — IT can know where information is deployed

and can maintain governance on the boundaries that surround your data. Additionally, hosted private clouds allow for strong service level agreements, which can drive increased reliability.

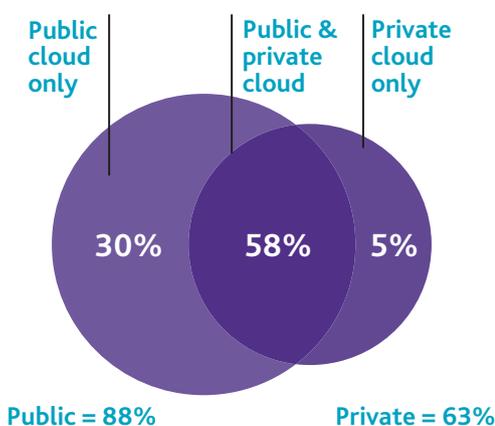
- **It's all about your data** - the choice between public and private cloud often comes down to data and data sovereignty. While IT directors and CIOs assess the relative strengths of each type of cloud platform, decisions often land in favour of private cloud when data sensitivity, access and sovereignty is an issue. This is where private cloud services win.
- **Requires IT expertise** - If you don't have the infrastructure or skills to completely build out and manage a custom private cloud on your own premises a hosted private cloud, such as Capita Private Cloud, is often the most effective option.

Enterprise multicloud strategy, 2014 compared with 2015



Source: State of the cloud. Right Scale 2015

Public and private cloud usage



Source: State of the cloud. RightScale 2015

Hybrid cloud infrastructure – towards the best of both worlds?

- **Best fit approach** - hybrid cloud infrastructure allows for a “best fit” approach, enabling you to pick and choose various elements from either the public cloud or private cloud — or a combination of the two — that make the most sense for your organisation. For example, you could host an eCommerce website — complete with customer details and credit card information — on a private cloud, but you could also host your non-sensitive material (such as marketing videos, etc.) on the public cloud. In times of austerity with rising need for agility in business, having this ability to play to the strengths of both forms of cloud services, enables you to optimise your spend and choice of supplier to create a ‘tailored’ cloud environment.
- **Private + public does not = hybrid** - simply having both cloud infrastructures in place does not give you a true hybrid cloud. In fact, you could end up having the benefits of neither, but the challenges of both. When moving secure data to the public cloud it’s easy to go against data protection laws and the migration of apps between public and private cloud environments can lead to unexpected costs. Having a true hybrid cloud means controlling your workloads, storage and network infrastructure to limit risk, as well as increase productivity and utility in a defined fashion. Hybrid environments can manage both complex and straightforward workloads. This then allows your staff to focus on business-centric bespoke applications and tasks within the organisation.

- **Flexible and scalable** - as its name suggests, hybrid cloud takes elements of both private and public cloud infrastructure to give enterprises the ability to mix and match for the ideal balance of cost and security.
- **Cost effective** - you can take advantage of the agility and convenience of public cloud computing, while enjoying the security, tailored services and performance of private cloud infrastructure, playing to the strengths of each model.
- **Security** - by its very nature hybrid cloud allows you to design a ‘best-fit’ security model to your data, keeping mission critical and sensitive data in a fully controlled and sovereign environment.
- **Becoming the norm** - more and more enterprises are adopting this type of model. Ultimately, hybrid cloud looks to be a promising candidate for the future default model of IT services provision.

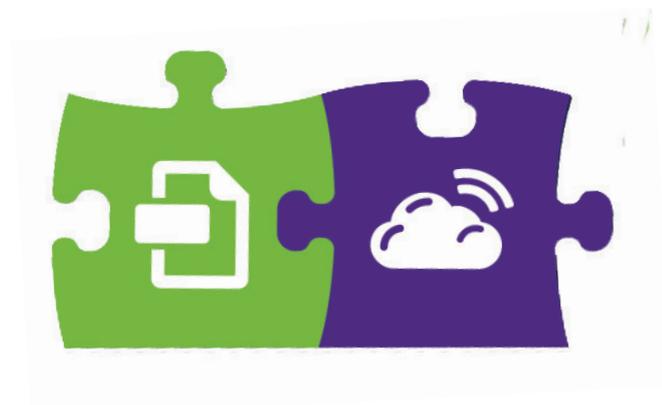
Hybrid cloud advancing to cloud brokerage

Traditional on-premise IT deployments exposed numerous challenges for the enterprise such as lack of integration, managing multiple supply contracts and SLAs. To a large extent these challenges have carried over into the cloud era - in fact some have even been magnified by the plethora of services in the market.

Shadow IT presents one particular challenge, with employees choosing to bring their own cloud services to the enterprise with little or no real governance. Then there is the question of which cloud services to choose, and the complex integration of solutions deployed across multiple clouds.

Enter cloud brokerage models - providing expert Service Integration and Management (SIAM) in the context of today’s hybrid cloud IT landscape.

What if you had one trusted partner that could bring all of your cloud computing solutions and services together across Infrastructure, Platforms and Software-as-a-Service? A service which removes complexity and optimises your hybrid IT environment. That’s Capita’s vision. By leveraging our extensive experience working across both cloud and traditional IT we are uniquely placed to help you exploit the opportunities and avoid the pitfalls.



Deciding on the right fit

While there isn't a specific industry or workload that universally makes sense for each type of cloud, there are certain considerations you should take into account when deciding upon the right fit.

If you have highly sensitive data that needs to be protected hybrid cloud computing may be a sensible choice.

For example, do you manage sensitive customer information or need to adhere to specific data protection regulations? In certain cases it will make sense to use the public cloud for storage of non-mission-critical data, while keeping the most important applications and information running on private cloud infrastructure. You may wish to connect your private cloud to multiple clouds, each of which offer specific benefits, such as processing power, physical location or media streaming capability.

In summary hybrid cloud works best for:

- Organisations that would like the security and sovereignty of private cloud for some of their data sets
- Enterprises that can split their data into sensitive and non-sensitive components
- Workloads with API compatibility and solid network connectivity

Due to the size and complexity of enterprise IT infrastructure it is rarely possible to "switch off" services and place them in the cloud. This is where hybrid cloud comes into play, removing the risk associated with changes to business applications and services while innovating with technology.

For many, hybrid cloud can provide an optimal balance between convenience, data sovereignty and security. For those that have already made the move to an outsourced IT model they will be familiar and comfortable with relinquishing control of their IT environment. Because of this they are more likely to be ready to take the next step in the cloud journey. As a result we are witnessing a rise in the adoption of hybrid cloud services as the most strategic option for infrastructure delivery.



Considering hybrid cloud infrastructure?

The key to deploying a successful hybrid cloud model is to fully understand which datasets and applications will best be suited to each cloud environment.

So, it's best to work with trusted experts to ensure that you can capitalise on the best platform for your business needs in a fully integrated manner. Capita have a range of expert services to help you define the most appropriate model, and a plan to migrate your services towards it.

Perhaps you are held back by complex IT infrastructure interdependencies, as well as an incomplete inventory of your IT assets and their relationships to business

applications. With just a spreadsheet and no disciplined methodology, it can be nearly impossible to accurately assess application suitability and its placement in the correct cloud architecture.

Hybrid cloud readiness – the first step towards optimising your cloud deployment can be a hybrid cloud readiness assessment. We can provide you with a comprehensive view of your application portfolio and determine whether you should migrate, consolidate, modernise, or retire applications.



Key questions to ask

Top apps

What are our top applications and use-cases for hybrid cloud in the next 2 to 3 years?

Compliance

What are our relevant security, data sovereignty and industry-specific regulatory compliance constraints and principles?

SLAs

What is our required service level and support needs for these applications?

Cloud choice

Which public clouds do we want to leverage?

Management

How will we manage the hybrid environment?

Integration

How will this integrate with our existing operations?

Skills

What skill sets will we require to deploy, maintain and operate our hybrid cloud environment?

Why Capita IT Enterprise Services?

Our cloud portfolio is ideally suited to meeting today's business challenges - data security, on demand capacity and familiar tools.

What makes us different?

- **Utility pricing:** we offer flexible and scalable utility pricing models across all of our cloud services.
- **Best of breed:** we leverage vast experience and strong relationships with leading cloud vendors including Microsoft, Cisco, EMC and VMware to ensure your solution delivers value, enterprise class resilience, security and competitive advantage.
- **UK data sovereignty and security:** managed in our highly secure, UK data centres, we deliver the best of cloud and guaranteed data sovereignty – vital for government and tightly regulated organisations.
- **Physical & cyber security:** are you under protecting or over protecting your data? Our experts, including CLAS consultants, can advise on how best to protect and manage your data.
- **Beyond infrastructure:** we offer a full range of cloud-based enterprise desktop, productivity, collaboration and communication tools to modernise your business.
- **Data lifecycle management:** we don't just provide technology, our data experts can help you optimise your full data lifecycle, driving down storage costs.
- **Experience and expertise:** Capita has over 20 years of proven expertise in managing and protecting highly secure, mission critical data and applications. Our technical teams are fully accredited and experienced in working in highly regulated environments. We can provide solutions to meet the requirements of data security standards and classifications including PSN, PCI-DSS, OFFICIAL and OFFICIAL SENSITIVE.

Ready for the next move?

If you want to know more about how a hybrid cloud solution can benefit your organisation why not ask us for a 'hybrid cloud readiness assessment' or for one of our free workshops?

Contact us at ITES@Capita.co.uk

References:

- [1] Navisite survey
- [2] TBR 2015 Cloud Predictions
- [3] Rightscale.com



At Capita IT Enterprise Services we...

Listen
Create
Deliver



Listen carefully to what you need, finding out where we can add value and how we can drive down cost.

Create a solution that innovates around your problems and meets your objectives.

Deliver transformational IT, on-time, on-budget and to the highest standards.

Want to learn more? Contact us at ites@capita.co.uk or visit www.capita-ites.co.uk