



Balance the risks and  
rewards of the cloud.  
Here's how.



## The age of the multi-cloud is here

As more and more businesses embrace the cloud to try and take advantage of its many benefits, the more challenges they're finding along the way.

You want to use the cloud to access your systems, apps, and data wherever you are. But your legacy infrastructure, management issues, and security headaches get in the way. You might also find that you don't have the operational structure or specialised skills you need to use the cloud effectively – and securely.

Some companies assume their main need is to be cloud-ready. But this can lead them down a couple of unsuccessful paths. One is a “cloud first” path, where they believe they can just manage their cloud environment in the same way as their traditional data centres. Another is where they assume it'll be too hard to migrate their IT and data centres to the cloud, so they let their business units take a pick 'n' mix approach to cloud deployments instead. Either way, it's likely to lead to all kinds of problems.

“ 86% of CEOs recognise that they face challenges when it comes to digital IT infrastructure

The Digital Business Creating the right IT platform for digital transformation, BT, 2017

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## Mastering multi-cloud management

There's so much to think about when it comes to cloud adoption, especially when it's at scale. Just because a proof of concept works, doesn't mean it will when scaled up. It's not just about the blueprint, the technology, or the infrastructure. To really reap the rewards of agility, innovation and cost savings at scale, you need to be the maestro of multi-cloud management.

Multiple clouds might be a fact of life, but that doesn't mean you're getting the most from them. It's often difficult to do that when you're coming from a fragmented starting point, dealing with old technology, as well as deploying new "born in the cloud" applications. What you need on day one, isn't necessarily what you need next month or next year.

How do you get the choice between public, private and hybrid cloud and a flexible network? How do you get the right skills, user experience and security? And how do you get consistency across your operations, processes and people so you can scale and be compliant?





## Embrace the cloud and its benefits with confidence

### What if you could:

- have the right skills when you need them
- have the flexibility to develop the right solutions for your needs as they come along
- design, deploy, and manage all your solutions with speed
- take control of your environment and be compliant across your platforms, clouds, business units, and regions?

### If you work with us, you can.

You'll be able to focus on how ready you are from both an operational and a cultural perspective (shifts in mindset and process). You can be agile and innovate at scale while cutting costs. You'll have an intelligent approach to cloud adoption.

You'll know the apps you're running, how they talk to each other and what environments are best for each of them. You'll have people with the skills, not just across your different clouds, but across network, traditional IT and security. And you'll have the right tech and architecture, as well as be able to manage all your cloud workloads.

We'll help you make things simpler, be secure, improve consistency, and be compliant in a constantly changing environment, wherever you are in the world.

Here's how...



## Challenge one: Your technology doesn't support your move to the cloud

The internet is transforming your network from a multiprotocol label switching (MPLS) approach to a hybrid approach. You may be implementing a software-defined network in a wide area network (SD-WAN) capability and, possibly now or in the future, network functions virtualisation (NFV). And the borders between your local area network (LAN), WAN, and data centre will disappear as you adopt software-defined services across your infrastructure.

“ 89% of IT decision makers believe legacy systems to be the biggest challenge to digital transformation. ”

State of Enterprise IT 2018 – The evolution of IT,  
Vanson Bourne, 2017

A key challenge is connecting your hybrid network to your cloud services. You may have already started this process. But switching from an infrastructure that's been built to support your old apps and systems to one that supports a hybrid cloud approach is a big project. It's not just about connecting to cloud services and wider data centre services. It's about making sure you actually get the benefits of the cloud, like flexibility, agility, and cost savings.

As you start your transformation, it can be challenging to perform as well as you need to and to keep your users happy. And embracing the cloud means you'll need to revisit your security approach to make sure you don't expose your infrastructure to new security threats.

How do you get a solution that supports what you need to do today, as well as tomorrow? How do you make sure your apps perform, control your services and build an infrastructure to bring together your LAN, WAN and data centres?

Do you have the right strategy to do this?

## Solution: Connect cloud and legacy services for the best results

We can help you choose and connect a large number of cloud and hybrid environments to the rest of your organisation. You can then deliver apps and protect data across your business, no matter where they're hosted. You'll have access to the right skills and expertise to set up your multiple environments efficiently and effectively, using proven methodologies and global best practices. We'll bring your services together across your LAN, WAN and data centres. And you'll benefit from the latest infrastructure developments to help make your solution fit for the future.

### **Choose the best connectivity solutions for your business – not your provider**

Nearly every organisation can gain advantages from cloud services. But each implementation is different. We'll help you simplify your move to the cloud. We'll make it easy to connect your existing infrastructure with new cloud connections – securely and delivering the performance you need. You'll benefit from global connectivity

directly from our MPLS platform to leading third-party cloud providers and data centre services. This gives you the reliability, security, and performance you need. You'll also be backed with the skills and service support to make sure you migrate successfully. For example, we can fix problems with Equinix services in half the time of a non-managed service.

You'll also gain connectivity through our global internet capability and internet service provider (ISP) relationships that give you your choice of connectivity – from business-grade to consumer – to meet your performance needs at the right price.

### **Choose new tools that enhance your connectivity**

Cloud connectivity is only part of the story. Sometimes you need to boost that connectivity where your applications rely on performance, like Skype for Business, which needs a constant bit rate. In those situations, you need cloud-based monitoring and accelerations services, something we deliver with Riverbed and InfoVista.

We offer discovery services that are key to understanding the need for new tools like these. Our experts will help design and build your cloud infrastructure, based on what you're trying to achieve. We'll work with market-leading organisations, like CloudReach, to understand your current estate and what infrastructure you need to support that in the future in the cloud.

Your optimum design isn't necessarily going to be the same on day 30 or even day 365 as it is on day one. We'll support your solution throughout its life, not just at the start. And we'll keep supporting and auditing your service to optimise its performance.

### **Future-proof your global infrastructure**

The demands on your infrastructure are growing. As new apps and services drive the need for more bandwidth, you're also being asked to support a more agile, flexible organisation. Network technology is supporting that change.

With our bandwidth-on-demand services, you can scale up and down to meet seasonal or planned changes. Connections to cloud providers are pre-connected, so you can create new connections and extra bandwidth in a fraction of the time of a traditional circuit. We're adopting SD-WAN services especially to support branch networks that offer breakout connectivity.

You'll also be able to implement cloud instances of popular SD-WAN solutions, so you can manage your applications across the internet, between your site and the cloud.

## Challenge two: The best use of the cloud needs skills, experience and tools that are hard to find and keep

You can't successfully manage the cloud in the same way as traditional IT. If you design for peak demand, you risk creating an inefficient design and suffering from "bill shock". You might also miss out on many of the savings the cloud promises.

You may adopt multiple clouds to take advantage of either their expertise, innovation or cost advantage. The challenge is managing them consistently to grow and drive these benefits. How do you build a multi-cloud hybrid environment where you can switch between different providers based on factors like cost, performance, security and tools?

It's unlikely your environment is just cloud-based. And not all your apps will work well in the cloud. Your traditional IT approach, tools, skills and associated ITIL processes may struggle to deal with the cloud, and your cloud approach may not work with your traditional environment. So the challenges are:

- getting the right home for your applications and workloads
- and getting the right model to manage both private and public cloud environments together to achieve your goals.

Another key element of this challenge is scale. One of the most common problems we see is organisations believing they've identified the right approach. They test it with a proof of concept and everything works as expected. But once they try to scale their approach, they come up against problems. The challenge is getting the right network, security and operational processes to guarantee a good user experience.

“ The lack of standardization between cloud providers is the biggest pain point of managing a multi-cloud environment. ”

Marco Meinardi, research director at Gartner





## Solution: Monitor and control your entire estate

The needs of your business will determine your cloud migration. We'll make sure you have complete awareness of your global business infrastructure, so you can confidently combine various elements into solutions that work for your company. Features like system-wide visibility and automatic asset discovery let you find the right solutions for your different lines of business or locations – from IP address management to disaster recovery. With our support and expertise, you can easily manage your cloud solution to boost your company's agility and adaptability.

### Uncover your digital assets and their dependencies in minutes

As you roll out cloud-based solutions across your business, your multi-cloud environment becomes more and more complicated. These various private, public, and hybrid environments are usually limited in their ability to communicate with each other or with your old systems and software. We'll help you analyse your end-to-end IT infrastructure to identify, catalogue and prioritise all your digital assets and how they relate to one another. We provide insight across your apps, data and network to show you a complete view of your performance and security. You'll make better decisions by eliminating the usual difficulties associated with planning a migration.

### Make informed decisions about your migration

As your hybrid environment grows and adapts, it becomes more difficult to manage. When you work with us, you'll have a single global partner you can rely on to manage different public and private clouds across your business using a consistent set of services. You can make the most of our skills, scale, and expertise to keep control and governance over your IT services. You can also seamlessly migrate and manage workloads using our consulting services and transformation tools. By pulling together the management of your cloud platforms with infrastructure, data, and security solutions, you can cut complexity in your business and free up your people to focus on more important tasks.

### Unite your cloud, network and security into a single solution

The complexity of hybrid cloud solutions can be overwhelming. And migrating all your existing infrastructure just isn't feasible. Our collection of experts and resources will support you so you can develop a valuable business plan that aligns your organisation. Our experts are available to share lessons they've learned from managing countless cloud implementations in various operating environments around the world. You'll have access to a large pool of design, consultation and engineering resources to help plan and deliver solutions that meet your needs across network, cloud, IT and security. With the right information and expertise, you can move forward with repeatable, scalable solutions in a considered and successful way.

## Challenge three: A cloud environment needs new skills and tools for security and compliance

The cloud offers the same levels of security as a traditional solution, but only if that security is implemented using the right tools and skills. Without them, moving to the cloud opens up new vulnerabilities and threats.

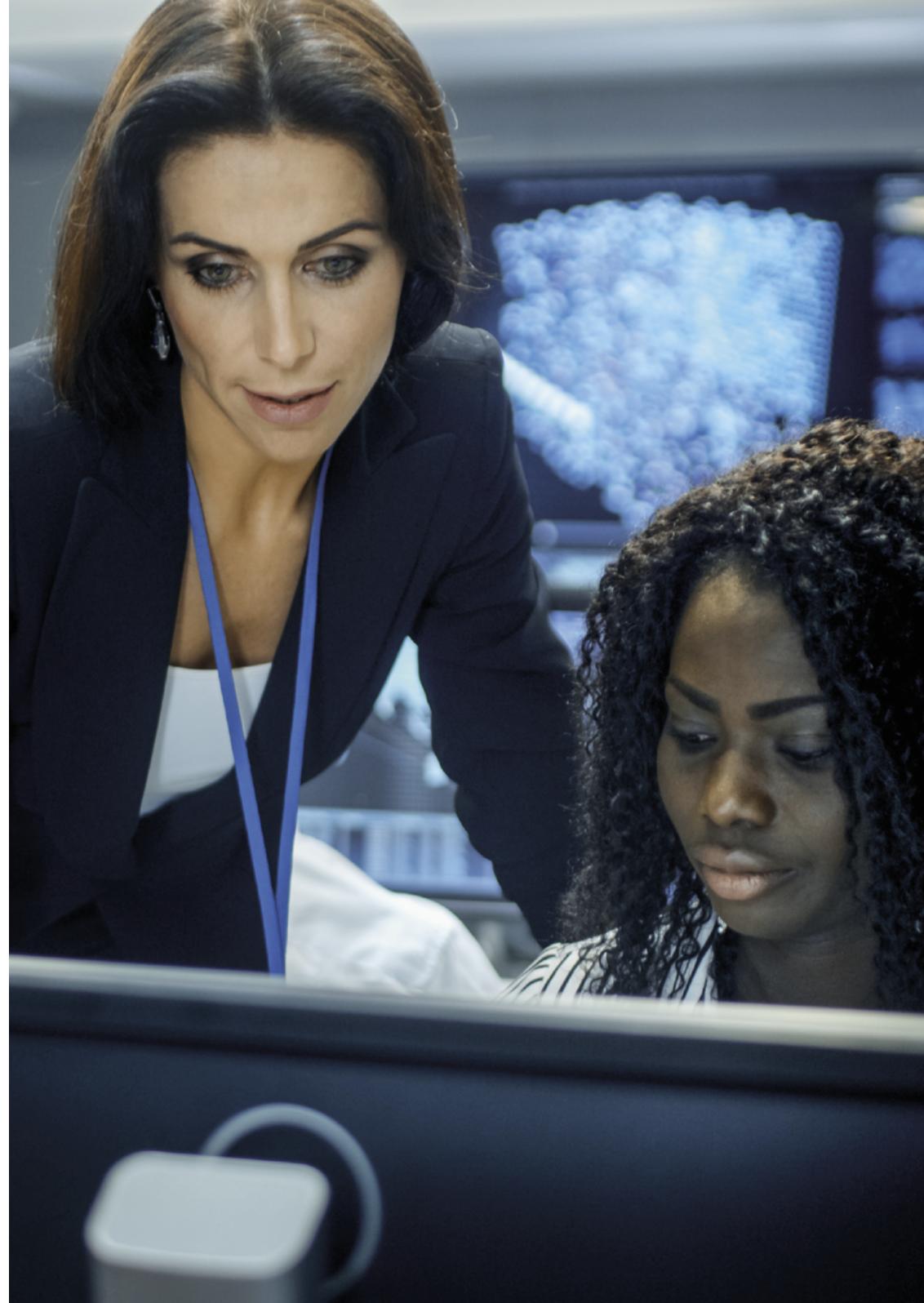
The security challenge isn't just about the cloud and your connection to it; it's about having a comprehensive approach that considers what physical security you have throughout your infrastructure, as well as what you have in the cloud. It means adding new security services, which weren't as important before, like intrusion and endpoint detection/protection services.

You must have the right security skills and understanding in place. Skills that stretch across networks and data centres; skills which are in short supply across the industry.

The cloud can offer you huge advantages in scale, speed, and flexibility. But it can also amplify mistakes and expose your business to risks related to compliance, cyber attacks and data sovereignty. If you fail to protect your entire estate – regardless of whether components are in the cloud or on-premises – you could lose customers, market position and revenue.

“ 49% of businesses are delaying cloud deployment due to a cybersecurity skills gap. ”

Building trust in a cloudy sky: the state of cloud adoption and security, Intel Security, January 2017





## Solution: Secure your business from network to cloud

You want to balance the risks and benefits of digital transformation, protecting your business against new threats. With us, you can safeguard all your digital assets with built-in security services and a broad portfolio of security expertise. You'll be able to quantify and address your digital risk to protect your data, applications and connections. You'll also protect the integrity of your data and comply with regulations, wherever you operate.

### Cut risk without impacting performance

As you move more workloads and data into the cloud, the security of your data and apps is critical. The cloud requires a fundamentally different approach to security, and you can use our experience and expertise to make sure your cloud implementations are secured at every level. You'll see across your entire cloud infrastructure in real-time. You can approach then cloud security as a strategic issue rather than a technical one, so you can take full advantage of different opportunities as they arise without opening yourself up to unnecessary risk.

### Stop threats before they impact your business

Any attack on your systems can have serious business impacts. You need to be able to spot when you're under attack and act immediately. We help you detect threats sooner and stop them faster. Our global scale and client base give you the intelligence to stop global threats. We offer you the same advanced capabilities we use to protect our own business. You'll be able to analyse suspicious behaviour and detect the latest cyber threats to your cloud-based solutions.

### Cut the risk of moving to the cloud

Cloud expertise will help you deploy your cloud strategy successfully. But experienced cloud professionals are in short supply. We offer a team of dedicated security experts who can be by your side. They understand how to prioritise and validate the threats that really matter to your business. They use a tried-and-tested "control framework" to assess any gaps and help you stay compliant. You'll be in an excellent position to prepare and improve your security strategy, putting you a step ahead of other companies making the same move to the cloud.

## Success stories

“ BT’s Cloud of Clouds is a concept that unites all the different cloud service providers. This allows us to use the best cloud provider for the best purpose at the best moment. ”



“ An additional factor is the “Cloud of Clouds”, so we expect to have savings because we’ll be moving some of the non-mission critical servers to the public cloud to re-use the operating expense that is running our technology. ”



“ Our challenge was to find a business partner that could safeguard our network in Asia and every other place we operate in around the world. BT had all the right credentials the best moment. ”



## We're helping customers around the globe with their cloud transformation challenges.

We work in more than 180 countries and provide cloud solutions to some of the world's largest companies. We have the leading cloud infrastructure coverage with our 18 cloud-enabled data centres offering more choice than any other telco provider in the world. And over the last four years, we've won 16 industry awards for our innovation in cloud services.

We're a leader in networking and cloud-enabled managed hosting. And because we're always investing in new technologies, we'll make our network even easier to connect to and services easier to access.

We want to put you in control of the cloud and turn your uncertainties into confidence, giving you the benefits no matter what your current IT looks like.

Wherever you are in your journey, we have the network, infrastructure and know-how to help you balance the risk and reward of the cloud.

To learn more, go to [bt.com/risk-reward-cloud](https://bt.com/risk-reward-cloud)

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