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How to Build Business-Ready Hybrid Cloud

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In a hyper-connected world, IT departments are changing the way they operate in order to provide a more service-focused approach that better supports the business's needs. Cloud infrastructure is central to these efforts, enabling the enterprise to deploy and scale out and up applications, which adds flexibility, responsiveness, and improved delivery times across the organisation.

Meeting complex business needs requires high-performing IT infrastructure able to produce the speed and low-latency that brings results. An [IDC study](#) found that more than 70 percent of heavy cloud users are considering a hybrid cloud strategy. Yet, 42% of IT decision-makers have avoided moving to a cloud environment due to concerns around network performance. IT leaders worry about the ability of a cloud platform to provide the same level of performance for mission-critical applications as they can deliver on their own infrastructure.

A business-ready hybrid cloud solution requires highly performant network connections between multiple compute and/or storage locations. The desirable characteristics of performant network include low latency, high bandwidth, reliable performance, predictability and availability over wide geographical area. Hybrid cloud can meet these requirements, but only if the right pillars are in place.

Follow these steps to make sure your cloud environment matches the six pillars your business needs to have to gain a performance edge:

01 Find the right cloud for the right workload

Not all cloud workloads are created equal. Performance in hybrid cloud comes from allocating the right type of workloads and resources to the right type of environment, or having access to a range of pre-built applications that suit the organisation's needs. Different providers have their unique characteristics and specialisations, which should be core to your planning. The optimal solution for a particular system will vary based on the kind of workload you have, and well-architected systems use multiple solutions and enable different features to improve performance.

Identify the platform that is fit for purpose and take a long a long-term perspective when migrating to any provider.

02 Use resilient architecture to directly access cloud services

Cloud issues actually have little to do with the cloud. Hyperscale providers invest heavily in their platforms in order to ensure they offer the best service possible. Instead, the issue often lies with how you connect to the cloud. Slow, jittery performance is usually caused by a sub-standard connection. Furthermore, public Internet is susceptible to spikes in traffic, which might work against your cloud performance.

In order to be able to run demanding database applications in the cloud, you must have secure, direct connections to your cloud provider without the turbulence of public Internet. Services like Interxion Cloud Connect give you direct connectivity to major CSPs without the need for expensive bespoke network infrastructure.

03 Reduce geographical reach to cloud servers

Even the best architecture cannot overcome the laws of physics and geography. If your servers are far from cloud connection points, then latency is inevitable. Of all the factors that determine overall system performance, network latency is the factor that you usually have the least possibility to change as it will be determined by the geographical locations of the compute and storage systems within your hybrid cloud. When you add multiple users and actions in the mix, the risk of latency is heightened.

To meet response time requirements, you need to make sure your cloud servers are positioned where they can best connect to your cloud platform of choice. This is where using colocation providers to position data closer to cloud gateways and using services such as Interxion Cloud Connect to directly connect to public clouds can help solve the latency problem.

04 Scale your cloud to unexpected needs

There will be times when your business needs more from your cloud platform. These may be seasonal triggers, or else perhaps new projects have involved more people needing access to platforms. Scale, however shouldn't come at the expense of performance.

Public cloud infrastructure can scale more efficiently than in-house systems, meaning that the economics of scaling up or out applications can be very compelling for enterprises. Work with your cloud provider to make sure you have the bandwidth and redundancy options in place to meet new demands without sacrificing performance. Look for cloud providers who have the ability to cope with spikes in demand by deploying automation to autoscale your environments as required.

05 Monitor efficiency

Maintaining a high performing cloud environment requires continual monitoring so that any deviance from expected performance is highlighted, and remedial action can be taken. Monitoring can help identify problems, but a well-designed hybrid cloud infrastructure can eliminate problems before they occur. Know your performance benchmarks before migrating or deploying applications in the cloud and establish clear monitoring metrics so that action can be taken on any poorly performing components.

Monitoring can also be effective for ensuring your cloud provider meets their performance targets, as established in your SLA. Hybrid cloud traffic and load conditions are always changing, so acceptable performance today may not be acceptable tomorrow. To maintain a positive user experience and ensure providers deliver the service levels promised in the SLA, continuous and proactive performance monitoring is essential.

06 Decide which applications should run in the cloud, and which are best retained on-premise

Despite the power of public cloud to enable new business applications, enterprises making their move to the cloud do so to increase the efficiency of existing applications and workload services, such as business applications like ERP, CRM and Human Capital Management systems. While this can often be a beneficial step, moving to the cloud doesn't mean that all your applications need to run on public cloud - it may transpire that an application is best suited to dedicated resources in a colocated environment. In some instances, a company's legacy data model and architecture design might limit their abilities to fully exploit public cloud.

By decoupling secure data and operational components from non-secure components, you'll have more flexibility to migrate data to the cloud while keeping performance as a central focus. Ultimately, it's up to you to decide which data, how much data, and when your data should be on the cloud.

Planning your cloud journey? Read our Cloud Connect factsheet to understand how to optimise your cloud performance.

About Interxion

Interxion: A Digital Realty Company, is a leading provider of carrier and cloud-neutral data centre services across EMEA. With more than 700 connectivity providers in over 100 data centres across 12 European countries, Interxion provides communities of connectivity, cloud and content hubs. As part of Digital Realty, customers now have access to 44 metros across six continents.

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