www.pipelinepub.com
Volume 18, Issue 5

The Hyperscale Hole Left for Enterprises

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The digital infrastructure industry has seen tremendous growth, fueled even further by the many resources that helped support businesses during the COVID-19 pandemic. As the demand for cloud-based applications continues to grow, solutions for cloud computing, SaaS, ecommerce, gaming, and video services remain in high demand. As a result, hyperscale data centers are beginning to play a major role in everyday business IT operations to support the IT infrastructure of our digital world.

According to a report from Synergy Research Group, more than 100 new hyperscale data center facilities were built in 2020. The hyperscale operators Amazon, Microsoft, and Google collectively account for over half of the major data centers and continue to drive growth today.

This growth of hyperscale data centers has been a rising trend. Synergy Research also indicates that over 70 percent of hyperscale data centers are in facilities that are leased from data center operators or owned by the hyperscale operators themselves. As the data center industry lunges toward a construction pace that can keep up with the exponential growth in cloud computing, third-party providers that formally built custom data center space or hosted IT stacks for large enterprise deployments of 500 kW to 3 MW are now lured by the appeal of building or selling space to hyperscale customers. The reason is that these deployment opportunities come in multi-megawatt (MW) sizes, ranging as large as 10 to 30 MW data centers. The growth of hyperscale data centers is responsive to the demand for scalability and high-volume data computing. Certainly, it is easier to service a single massive customer than many small customers.

As data center owners and operators shift their focus toward these hyperscale customers and larger deployments, what does this mean for enterprise businesses that still require third-party data center services but don't want to be fully deployed in the cloud? And how do these businesses navigate the changing marketplace?

Optimizing enterprise operations

As large enterprises shift to cloud-based applications and hybrid IT operations, hyperscale data centers continue to increase their market share to support the growing cloud ecosystem. However, this has created a service gap in the data center landscape.

In the past, enterprise businesses managed their own on-premises data centers or outsourced to a third-party colocation provider. Businesses that required a larger data center space would select a provider to build-to-suit a custom environment. The emergence of cloud computing has transformed computing and data storage. Now businesses can leverage hyperscale assets in the cloud, built to scale quickly and capable of handling massive amounts of data. However, as enterprises shift workloads to the cloud, businesses are engaging in hybrid IT solutions that blend cloud, colocation and their own on-premise data centers to manage increased data loads, edge requirements and leverage IT applications. The industry is faced with greater complexity, adding challenges to managing on-premise environments such as shortages in skilled IT technicians, complex connectivity requirements and the operation and maintenance of the data center, ultimately distracting from a company's core competency.

As businesses search for cost-effective solutions to allow them more control over their services, the shift in the industry is showing a shrinking environment for services that cater to enterprise-sized deployments, pushing businesses to cloud solutions. While the cloud is useful, companies that rapidly expanded operations in the cloud are now seeing exorbitant usage costs and would like to bring some of the workloads back to being on-premises.

Demand for data centers and high-performance workloads

Hyperscalers like AWS, Microsoft Azure, Google Cloud, Alibaba, and IBM have built their own data centers with millions of servers worldwide that support the cloud. Because of their massive size and resources, their global network of data centers is almost exclusively tending to their

direct needs. Enterprise businesses are now left in dire need of data center providers that can provide customized solutions.

Before the hyperscale data center boom, enterprises were accustomed to a level of service that is now more challenging to find. These enterprise businesses are looking to recapture these tailored services, a challenge compounded by the cloud. While cloud services are helpful, they are costly, and lack the flexibility and agility that a data center operator can provide for these enterprises. Emerging technologies like artificial intelligence (AI) and automation will also likely increase the data usage and requirements for even enterprise-level customers, increasing their cost in ways that are difficult to predict.

The continued demand for data centers at the enterprise level is also paired with other factors, such as the location and access companies are looking for to distribute their workloads. Companies seek to expand toward the edge or incorporate colocation services to house their data centers in a controllable location. This approach will help enterprise-level businesses remain hybrid and adapt to emerging technologies.

Despite the high demand for migrating to the cloud, the private cloud and traditional data center infrastructure remain essential for enterprises. Some enterprises prefer a pricing model that helps control costs, which enterprise-level data centers typically offer. Cost-saving methods include:

- Elimination of unexpected cloud costs like egress fees and charges for unused resources and overages with a dedicated connection to cloud service providers through a data center partner.
- Leveraging data center technology to lessen the cost of energy at peak hours by peak shaving.
- Using virtualized servers to manage costs and security while benefiting from faster provisioning.

Enterprise-level data center colocation providers can offer enterprise-grade security, specific workload computing, and one-on-one management with the client, filling this growing data center industry hole.

Hyperscale or not?

While it is easy to point to the data center providers pivoting to hyperscale, it is not realistic for all data centers to support all customer types and sizes. Businesses depend on the reliability of the data center to meet the specific needs of their IT operations. Although a hyperscale data center offers an extensive portfolio of services, a colocation data center, for example, might be a better fit to match the needs of a small to midsize enterprise business.

Current enterprise-level data center providers include Databank, Equinix, QTS, and CoreSite, a list that has shrunk significantly in recent years. Today we see massive amounts of private capital and expenditures to create hyperscale facilities, far outweighing the spending on enterprise data center builds. For example, Databank just spent $700 million on hyperscale environments for large customers. Other examples of this shift include the acquisition of Dupont Fabros data

centers by Digital Realty, Cyrus One's sale of all their Houston data centers, the closure of vXchnge, and the recently announced data center being built by Compass Datacenters that will support 75 MW.

Enterprises are left battling with a double-edged sword. If they move to the cloud, not all their applications are optimally supported by the cloud, yet the inventory of local providers that meet their target needs is shifting right under their deployments as data centers are sold off or acquisitions potentially alter the customer model where their deployments reside. If they decide against that route, they can instead increase or update aging on-premise infrastructure.

What should enterprise-level customers do?

Businesses of all sizes feel the heat from the rise of hyperscale companies. The hyperscale companies are quickly outpacing enterprise data center capabilities, leaving many enterprises struggling to keep up. Businesses that cannot keep up with today's ever-changing technology are finding themselves at a disadvantage. However, surviving in this space also depends on how enterprise-level customers manage their cloud or use connected environments and colocation.

Enterprise-level data centers should be aware of the major shift in the data center landscape and strategize how to be agile and adapt to the evolving market. Focusing on how the market changes may affect their backend digital infrastructure and preparing for the digital change is crucial to hold competitive advantage in a hyperscale data center-dominant industry. Preparing for the possibility of shifts in data center operations should help prevent enterprise-level customers from being caught off-guard while helping them meet data needs.

The good news is there are still options for those enterprises that fill the hole between cloud services and data centers that cater to hyperscale companies. The market for retail-level data centers is still available with 50-100 kW. With the right provider, services are focused on just what the enterprise businesses need. This includes discounted migration services to shift their IT equipment, an expanded network ecosystem with connectivity solutions all under the same roof, cloud integration services to connect hybrid workloads, and support so customers don't have to navigate the data center ecosystem on their own. Enterprise-focused providers will lean in on setup and operations to deliver the reliable and consistent data services that enterprise businesses require in today's market.

By utilizing today's latest technologies, enterprise businesses remain competitive in an industry where scalability is increasingly important. In recent years, when the focus from data center operators has been on hyperscale, enterprise-level customers should understand that there are still data center options that are built to house their IT infrastructure and cater to their data center needs.