

Corporate Datacenter Trends

The Search for Capacity: Enterprise Facilities Expect Increased Use of Cloud and Colo

About This Report: A May survey of 1,240 members of the 451 Global Digital Infrastructure Alliance looked at key enterprise datacenter trends – including overall spending on datacenter facilities, current capacity utilization and what organizations plan to do as they run out.

Datacenter Facilities Spending – Next 90 Days: One in four respondents (25%) say their organization’s datacenter facility spending will increase over the next 90 days. While this is down slightly from last quarter’s survey, it’s better than it was in summer 2014.

Datacenter Utilization: Are we at a Tipping Point? The average datacenter is utilized at 63% capacity from a square-footage perspective, and at 56% from a power perspective. However, the average organization waits until it is at 75% power or space utilization before looking for more capacity.

Solutions to the Capacity Issue: When asked what they will do if they run out of datacenter capacity, three-in-five (62%) respondents say they will *Consolidate their IT Infrastructure to Accommodate Power and/or Space Availability*. Another 41% say they will *Utilize Off-Premises Cloud Service Providers*.

Cloud and Colocation Trends: On average, enterprises that own datacenters still deploy 8% of their total applications in the cloud and 11% at a colocation. Going forward, these same respondents expect significant growth in their use of third-party providers – with 21% of their applications deployed at a cloud service provider and 15% at a colocation provider within the next three years.

Datacenter Facilities Spending – Next 90 Days

One in four respondents (25%) say their organization’s datacenter facility spending will increase over the next 90 days (8% *Significant Increase*; 17% *Slight*). While this is down slightly from last quarter’s survey, it’s better than it was in summer 2014.

*How would you characterize your organization’s **datacenter facility** spending plans over the next 90 days compared with the previous 90 days? Please include spending on the building or “shell,” power, and cooling equipment, but do not include colocation expenses.*

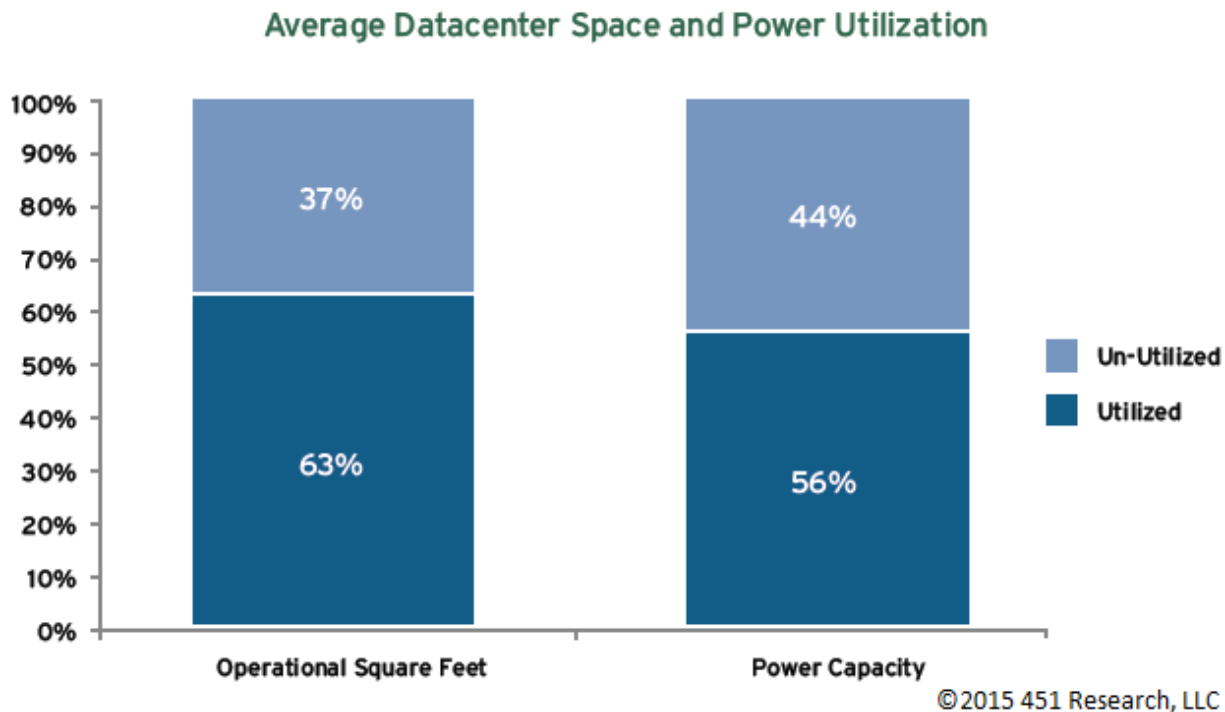
	Previous Survey (Jul '14)	Previous Survey (Oct '14)	Previous Survey (Feb '15)	Current Survey (May '15)
Significant Increase Over Next 90 Days	7%	7%	10%	8%
Slight Increase Over Next 90 Days	15%	20%	19%	17%
About the Same	68%	61%	60%	63%
Slight Decrease Over Next 90 Days	8%	9%	8%	11%
Significant Decrease Over Next 90 Days	2%	3%	3%	2%

Only 13% say their facilities' spending will decrease (2% *Significant Decrease*; 11% *Slight*), although that's up two percentage points since February.

Companies in the Information Services industry are most likely to be increasing spending, along with healthcare and finance.

Datacenter Utilization: Are we at a Tipping Point?

Current Datacenter Utilization Levels: The average datacenter is utilized at 63% capacity from a square-footage perspective, and 56% from a power perspective. Healthcare organizations have the highest utilization, followed by finance and information companies.



We asked enterprise datacenter owners at what point would they go looking for more capacity. We found that the average organization would wait until it was at about 75% power or space utilization before looking for more.

In short, the average datacenter operator has an additional 12% of unused floor capacity and 19% of unused power capacity before hitting the 75% tipping point.

In terms of increasing internal capacity, consolidation of IT equipment is thought to be an important component of datacenter floor-space utilization. But how does it rank among datacenter operators in terms of actions taken when running out of capacity?

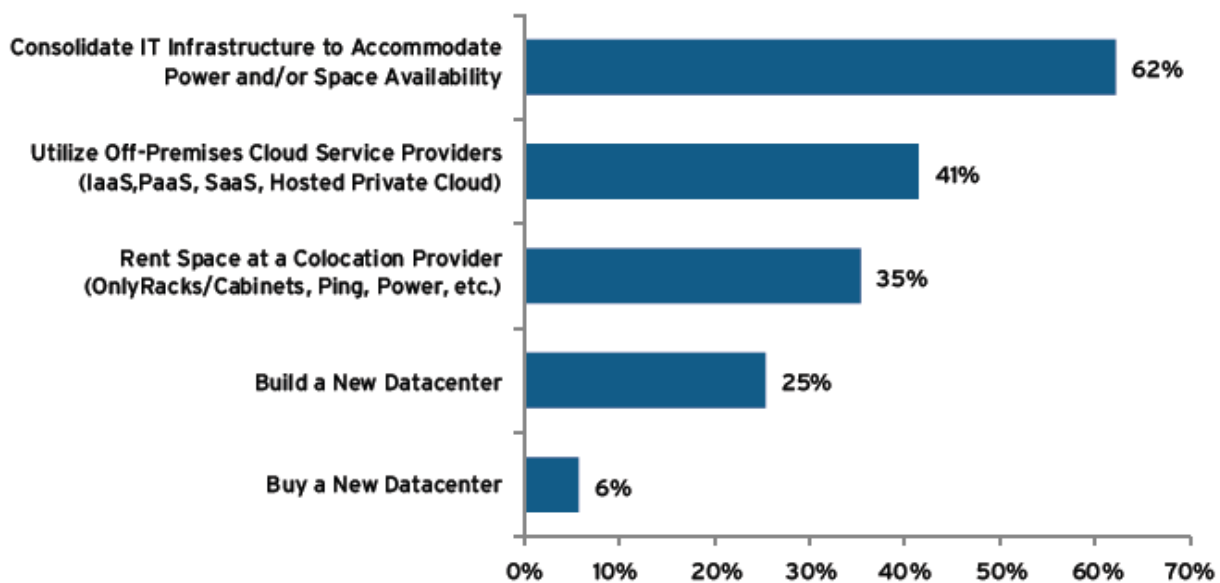
Solutions to the Capacity Issue

When organizations do run out of datacenter capacity, they have several options, such as consolidating or reducing IT asset utilization, building new datacenters, renting datacenter space from colocation providers, or moving to the cloud.

Taking a closer look at capacity issues, we asked respondents, “*What will your organization most likely do if you run out of floor space or power capacity at your datacenters?*” Here’s what we found:

- Most organizations (62%) continue to say they will *Consolidate their IT Infrastructure to Accommodate Power and/or Space Availability*.
- 41% say they will *Utilize Off-Premises Cloud Service Providers such as IaaS, PaaS, SaaS or Hosted Private Cloud*.
- 35% will *Rent Space at a Colocation Provider*.
- And 31% will build or buy a new datacenter (25% build; 6% buy).

Course of Action in the Event of Lack of Capacity



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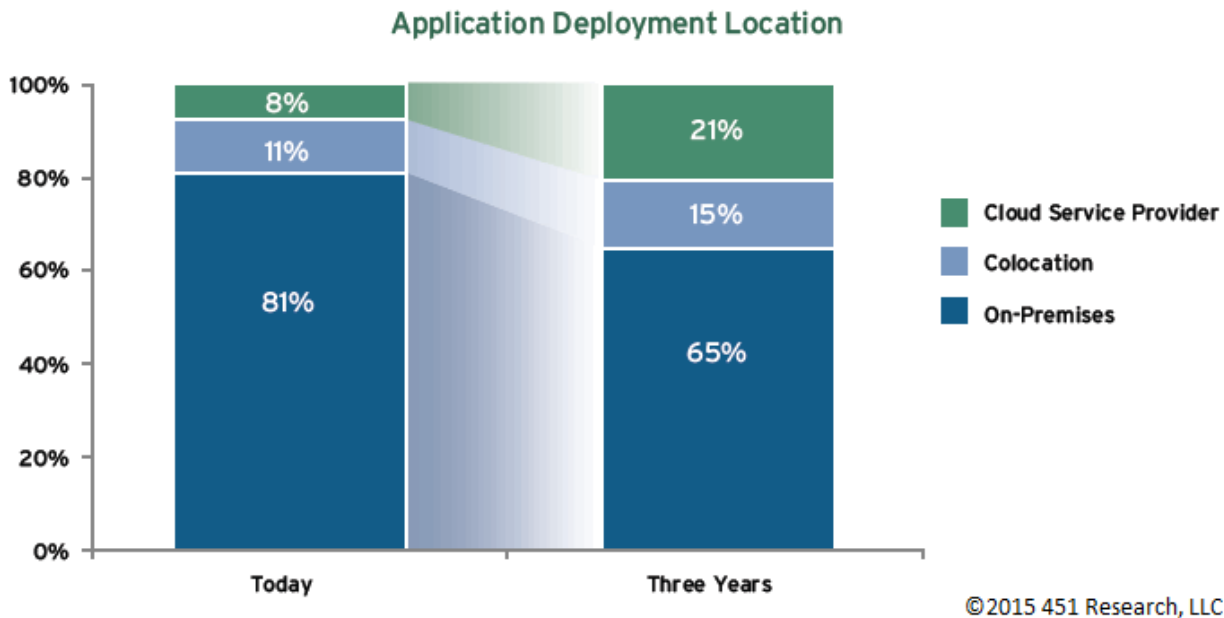
Interestingly, nearly two-thirds (63%) of those that cite *Consolidation of IT Infrastructure* also say they would *Utilize Off-Premises Cloud Resources* as a way to grow capacity. “The data shows a strong desire to maintain and optimize existing infrastructure while using the cloud where appropriate,” says 451 Research analyst Dan Harrington.

“For those organizations unable to squeeze more efficiency out of their IT equipment, and for whom the sheer growth in business demand for IT is too much, large percentages are looking at colocation or cloud providers to accommodate that demand.”

Cloud and Colocation Trends

While most enterprises with datacenters deploy the vast majority of their applications at their own IT sites, many of them also use colocation and cloud services for at least some of their applications. On average, enterprises with their own datacenters still deploy 8% of their total applications in the cloud and 11% at a colocation.

Going forward, these same respondents expect an increase in their use of third-party providers – with 21% of their applications deployed at a cloud service provider and 15% at a colocation provider within the next three years. “These findings point to significant growth in the use of third-party providers,” says Harrington.



Workload Deployments. Performance- and data-sensitive workloads (such as analytics or databases) are most likely to be deployed at company-owned datacenters or IT sites. Similarly, unified communications and virtual desktop workloads (which are latency-sensitive and security-focused) are also likely to remain at company-owned datacenters or IT sites.

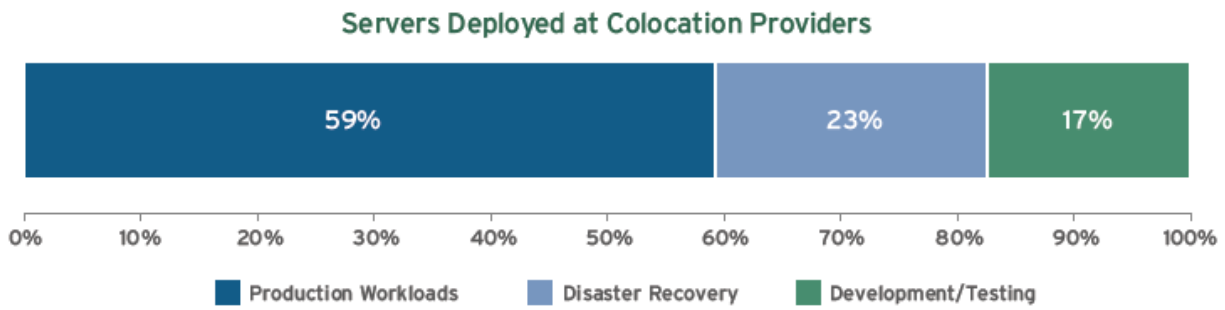
The exception is email – the only application deployed less than 50% of the time at company-owned datacenters. We found email to be most commonly deployed at SaaS providers, reflecting the popularity of offerings like Microsoft Office 365 and Google Docs.

A Closer Look at Colocation Usage

On average, enterprises with their own datacenters still use two different colocation providers and an average of three different colo facilities.

One common misconception is that colocation datacenters are only used for disaster recovery or test-and-development environments. But according to our respondents, a majority of their applications running at colo environments are for production workloads (59%), followed by disaster recovery (23%) and development/testing (17%).

What percentage of physical servers deployed across your colocation providers are for the following?

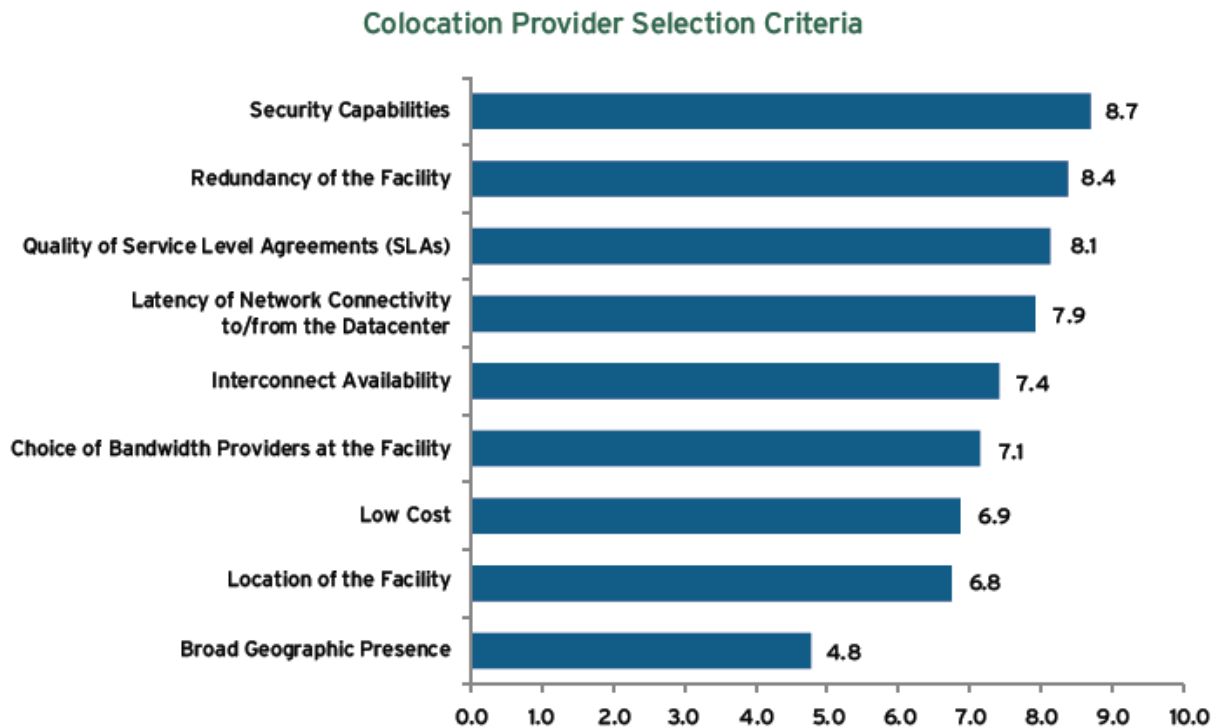


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Selecting a Colocation Provider

When selecting a colocation provider, respondents report that their most important criteria is security (8.7 on a 10-point scale), followed by redundancy of the facility (8.4) and quality of the service-level agreement with their provider (8.1).

Please rate how important the following criteria are for choosing a colocation provider, with 0 being 'Not at all Important' and 10 being 'Extremely Important.'



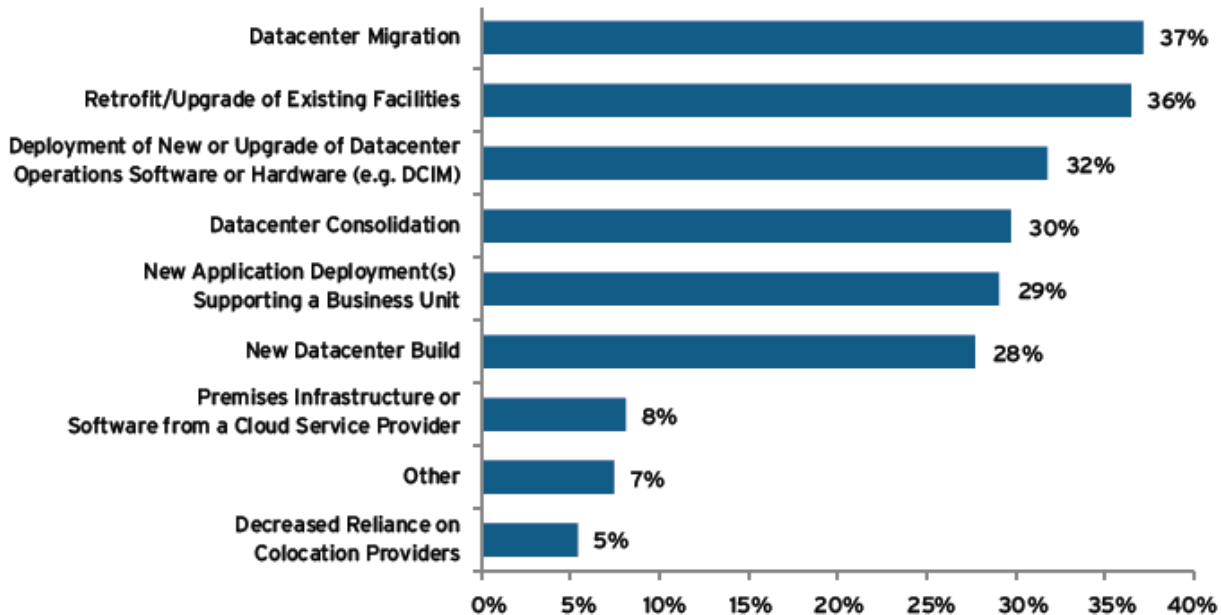
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Not surprisingly, security is top of mind in almost every industry, followed by the reliability of the facility in ensuring that businesses remain uninterrupted. With so much of IT operations tied to revenue streams, businesses can ill afford any prolonged outages.

A Look at IT Project Spending: Next 90 Days

When we look at the IT projects driving datacenter facility spending over the next 90 days, we find datacenter migrations (37%) and retrofits of existing facilities (36%) to be the two biggest areas of investment.

Top IT Projects Driving Facilities Investment



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