Private Cloud vs. Data Center: Which Is Your Best Bet?

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Understanding cloud options isn't simple. While the term cloud means "moving complex computing workloads off premises," your options aren't as simple as cloud versus not-cloud. Furthermore, as Tech Target points out, a lack of standardized terminology in the cloud community makes things even more complicated. While cloud is here to stay, when it comes to picking the right kind of cloud, your options are different than they were just last year.

In this blog post, you'll learn about the complex definitions behind private clouds and data centers. Ultimately, you'll learn how to make sense of your options and the factors to consider when evaluating choices. Our goal is to help you choose the data hosting option that's right for you.

What's the Difference Between Private Clouds and Data Centers, Really?

Private clouds aren't necessarily an alternative to data centers. At a core level, they're both extensions of the same virtualization technology that separates your workload from your technology. Both options include many of the same benefits, including quick scalability, the ability to easily provision resources, and business continuity.

Ultimately, the term data center is most commonly applied to mean "public cloud" at a provider's data center, while private cloud denotes dedicated infrastructure. This dedicated infrastructure may occur on-premises or with the help of a provider who offers this option.

While there are complex factors that can inform a decision between public or private cloud, one of the most common is whether a client's business model or compliance requirements dictate dedicated infrastructure.

This is important:

The decision between public and private cloud isn't a "this or that." It's actually a decision between available options for managing your workload, which includes **on-premises, colocation, private data center arrangements, and public cloud**.

Your workload, security, compliance, and elasticity needs should dictate whether or not you require dedicated infrastructure and which setting is the best for either dedicated or non-dedicated infrastructure.

Confused? That's normal. We'll dive deeper into the differences and available options below.

Is a Data Center or Private Cloud Right for Your Workload?

Workload, along with costs and compliance, is often a driving factor in determining whether an organization opts for a private cloud or data center deployment.

Workloads that are typically thought of as a good candidate for a **data center setting** include:

- Long-term storage,
- Large-scale data storage,
- Seasonally-impacted web applications,
- Mission-critical web applications,
- Applications with uncertain demand, and
- Testing environments.

Your workload might be a better candidate for a **private cloud** if:

- Your compliance requirements dictate dedicated infrastructure,
- You have extremely high-performance needs,
- You need to maintain a homegrown or infrequently-used application, or
- Demand is predictable.

Is Private Cloud vs. Data Center Better?

The type of workload is a huge factor in determining whether or not you need dedicated infrastructure, as well as the best setting for that infrastructure. However, it's not the only factor. Consider the following:

1. On-Premises vs. Provider

Since the concept of "private cloud" can encompass on-premises deployment, a critical first step in evaluating the right fit for your business is whether an on-premises deployment or a provider is the right choice for you.

Factors that can affect on-premises versus provider selection can include:

- Staffing,
- Need for Control,
- Proximity to Providers
- Real Estate,
- Redundancy,
- Equipment, and
- Cost Investment.

For an in-depth look at this complex topic, we recommend *Data Center vs. Server Room: Which is Best for Your Business?*

2. Colocation vs. Private Cloud vs. Public Cloud

If you decide you lack the resources to create an effective private cloud environment on-premises, you should also evaluate the option of using a provider's data center for colocation.

Factors that can affect whether you should consider colocation or a provider's services are similar to on-premises versus provider, without the considerations of real estate and related costs (such as heating, cooling, and redundancy).

We covered the considerations in deciding between colocation and public or private cloud services in *Colocation vs. Cloud Services: Which is Best?*

3. Elasticity Needs

Any cloud deployment requires an in-depth understanding of workload demands. Ultimately, the right infrastructure is strong enough to handle your peak loads without wasting capital resources.

Purchasing too many dedicated resources can lead to unnecessary costs. Mapping your workload demand is the most effective way to really understand your needs, which can dictate whether dedicated equipment via private cloud is necessary or cost effective.

If you're concerned about your ability to accurately predict workload demands, that's okay. The right cloud services provider has the expertise on staff to help with these calculations.

4. Security and Compliance

If your organization isn't required by applicable regulations to invest in dedicated infrastructure, your choice between private cloud and data center should still include attention to security.

Maximizing security and compliance requirements aren't necessarily simple, either. If your organization doesn't have the ability to meet regulatory requirements on-premises or with colocation, public cloud may be safer due to knowledgeable staff and data center certifications.

Is Private Cloud or Data Center Better?

If you're thinking about your workload in terms of data center versus private cloud, you've probably figured out that the answer is "well, it depends." Data center vs. private cloud can take many forms, which include:

- On-Premises deployments,
- Hiring a colocation provider,
- Hiring a public cloud provider, or
- Hiring a private cloud provider.

The term "data center" can encompass both dedicated and non-dedicated infrastructure, while on-premises deployments are typically dedicated infrastructure. In deciding between these factors, you should consider workload needs, price points, elasticity demands, security/compliance, and other factors.

Making Sense of Cloud Options

As adoption of virtualization technologies continues to soar, the amount of options available for business data storage is increasing, too. Talking to a cloud expert can be a smart first step when determining whether you should look into a data center or private cloud and which setting is the best fit for your needs.

To receive a complimentary consultation from one of Atlantech's staff experts, please click here to start a conversation today.