CenturyLink

Decisions ahead: Navigating your journey to the cloud?

Table of contents

- Which cloud is right for you?
- Location
- Time to value
- Security
- Expertise
- Costs
- You've arrived: Buy or build with CenturyLink

Which cloud is right for you?

Cloud computing is at the center of your business's digital strategy. As you strive to support new business initiatives, enable innovation, accommodate growth and bolster resiliency, the cloud will become an even more vital part of your IT journey.

But what is the best path to the cloud for your business?

Public cloud services alone can't meet all of your requirements. You need an environment that is secure enough to handle your most sensitive customer data and flexible enough to support your highly customized applications—without requiring costly, time-consuming development and testing.

A hybrid cloud approach might be a better option. By bringing together public services with one or more private clouds, you can tap into powerful benefits, including improved agility, seamless scalability and reduced capital expenditures. The private cloud component of your hybrid environment will let you retain strong control of data while providing the flexibility to create a highly tailored environment.

Tapping the cloud for seasonal spikes

Does your organization experience seasonal spikes in demand for IT resources? Whether you need to ramp up for Christmas or Mother's Day, a public cloud can provide the burst capacity to accommodate short-term expansion. But if your application has been tested only on VMware, or you're handling sensitive customer information, a private cloud might be a better choice.

This next phase of your cloud journey can be an exciting one. But to maximize the benefits to your business, you'll have to navigate between a few different private cloud approaches:

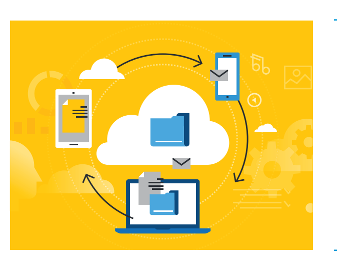
- Should you build your own private cloud, either within your own data center or in a colocation facility?
- Or should you "buy" one—opting for a managed private cloud service from a cloud service provider?

Let's look at some key decisions that can lead you to the right private cloud approach for your business.

Location

Where are you headed?

Users today demand responsive experiences. Placing cloud resources physically close to your primary data sources and your users is vital to delivering those experiences.



Location is critical

- **Global commodities platforms** place their private clouds near major trading hubs so they can gain a competitive advantage by shaving milliseconds off of transactions.
- **E-commerce businesses** deploy multiple private cloud nodes spread across the globe to provide fast inventory searches and checkouts for customers no matter where they live.

If you're integrating on-site and cloud-based applications, you can increase user satisfaction by minimizing latency. By keeping infrastructure components near each other, you also have one less thing to deal with on your cloud journey.

If you need to keep your databases in a private cloud to bolster security, help ensure regulatory compliance or adhere to licensing restrictions, placing database servers close to your application tiers minimizes potential communication issues and latency. That proximity can also greatly simplify network and security architecture.

Ask yourself a few important questions to determine the best location for your cloud:

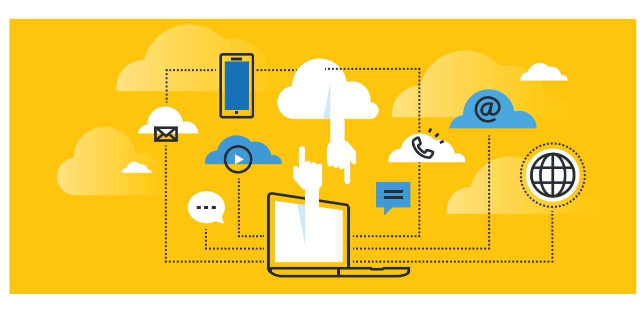
Where is your data? If your data is generated in New York, it doesn't make sense to locate a private cloud in Oregon. Reducing the distance between your data and your private cloud means lower latency and faster transactions. If your application is either sensitive to latency or requires very fast update speed because of transaction volume, minimizing the distance between your data store and your application layer can significantly improve overall response time for your users while increasing end-user satisfaction.

Where are your users? If you have users on another continent, you should have at least one of your private cloud instances there. Minimize the physical distance between your users and the applications they're accessing to improve their experience. You'll also be able to isolate failures to specific areas and avoid systemwide outages.

Are your "customers" your business's employees? If your goal is to enhance the productivity of headquarters employees, locate your private cloud within your own data center.

Are you using your cloud for disaster recovery (DR)? If so, place your DR private cloud far from your production environment. A remotely located private cloud helps you protect data and applications if your primary site is affected by a serious weather event, power outage or other interruption. Using a private cloud frees you from the geographic limitations of public clouds. You pick what works best for your business—you don't have to be constrained by public cloud locations.

Do you need to adhere to data sovereignty regulations? Some government regulations might prohibit you from transferring data beyond your state, country or region. For example, the EU Data Protection Directive restricts data movement to the European Economic Area and certain outside countries that have sufficient data protection. If you're subject to sovereignty rules, you'll need to locate your private cloud in your data center or in facilities within the specified boundaries.



Your location requirements do not necessarily determine whether you should build or buy.

- You could hire a service provider to manage a private cloud within your own data center.
- You could build a private cloud in a colocation facility.
- Or you could choose a fully managed solution located in a cloud service provider's facility.

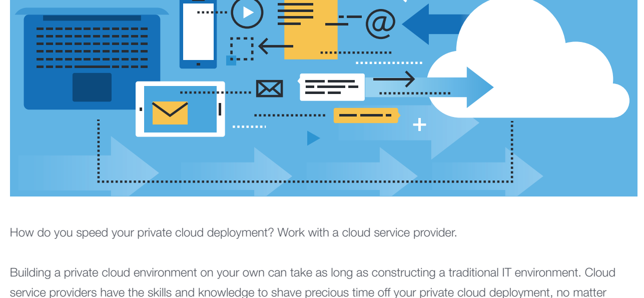
If you're considering working with a cloud service provider, find one with facilities or services where you need them. Businesses with a global reach need their private clouds close to their users and their data.

Time to value

How fast can this thing go?

Your business teams need new IT resources *now*. You can't ask them to wait months to launch a new solution, support a seasonal demand spike or accommodate an influx of data from new applications. But if you decide to build a traditional IT environment on your own, that's how long it will take to purchase, configure and deploy all of the required hardware and software components. Those setup processes often take longer than you expect as you try to simultaneously accommodate other pressing requests with an IT staff already stretched thin.

The cloud is your accelerator. The right cloud approach can help you respond to business requests fast and keep the company moving at the pace of the digital economy. You can't stay competitive doing the same thing. You need to seize new opportunities quickly, progress with your digital transformation and get innovative solutions to market before your competitors.



How do you speed your private cloud deployment? Work with a cloud service provider.

Building a private cloud environment on your own can take as long as constructing a traditional IT environment. Cloud service providers have the skills and knowledge to shave precious time off your private cloud deployment, no matter where that cloud is located. Service providers also have the expertise you need to supplement your in-house team and help you keep up with rapidly changing demands on IT. Your team can stay focused on innovation instead of spending time building servers and infrastructure.

The fastest route to a private cloud? A fully managed service. **You can have a fully managed private cloud up and running in weeks, not months.**

A fully managed private cloud can help you scale fast, too. The digital economy demands real-time scalability—you need to ramp up rapidly for short-term projects, keep revenue flowing when seasonal demand peaks and quickly test new innovative ideas. A managed private cloud lets you grow as your requirements evolve without keeping unused capacity on your books or in your data center. Service providers maintain an inventory of hardware that will allow you to expand your private cloud without the need to go through a lengthy procurement and provisioning cycle.

Security

How do you protect what's yours?

Data is the lifeblood of your business. And protecting that data is critical as you continue your cloud journey.

Choosing a private cloud instead of a public one lets you better control data and applications. You can eliminate the risk that sensitive customer data will be exposed to outside applications or companies in a multi-tenant public cloud environment.

But how can you further tighten security? Building a private cloud within your own data center is not necessarily the answer. First, cloud service providers can offer better access controls and enforce more rigorous procedures than you can within your own data center.

Find nearby facilities

Are you subject to regulations that limit data movement? Some regulations prohibit organizations from moving sensitive customer data across state lines or national borders. If those regulations apply to you, find a nearby cloud service provider or colocation facility, or set up a private cloud environment within your own data center.

Moreover, by working with a cloud service provider, you can tap into extensive security expertise. The best cloud service providers employ trusted experts with deep security knowledge and experience from hundreds or thousands of deployments. Those experts stay current with the latest patching, monitoring and threat response technologies—which you need in today's high-risk environment.

When you want to add security capabilities, or discuss new approaches to emerging threats, it's faster and more effective to access the deep pool of security resources offered by a cloud service provider than to try to accumulate that knowledge or hire experts on your own. You can use that outside expertise as you need it, without having to hire and train additional full-time employees.

Is help too far away?

Setting up a cloud too far away from your IT staff puts your data at risk. You might run a manufacturing plant in a rural area but use a data center in a metropolitan area. If something goes wrong in the data center, it could take team members several hours or a full day to reach that data center. Work with a cloud service provider that offers staff resources to diagnose and resolve problems without requiring your team to spend time and money traveling to the data center.

Expertise

Are you sure you have the resources to drive?

Deploying and operating a private cloud is resource-intensive. Does your staff have the expertise to select all of the correct components, configure and integrate those components, and conduct thorough testing? Do you have the personnel to manage the environment going forward?

Consider too whether you have resources in the right locations. Yes, you have staff at your primary data center. But what about in the other locations where you want to deploy a private cloud—for example, in the neighboring state or halfway around the world?

You'll need to address the gap between where you are today and where you want to go. Closing that gap requires supporting multiple platforms with personnel who have multiple skill sets.

Even if you have deep IT resources, building and managing a private cloud is not always the right choice. Bringing an in-house team up to speed on the latest technologies—and keeping them up to speed as technologies evolve—require a long-term commitment to training.

What will happen when your current team members move on? Finding and retaining highly in-demand cloud experts is not easy. And training a new generation of experts requires substantial investments in time and budget.

Think outside your data center. Consider working with outside experts who can help select the right components and assist with deployment. Working with outside experts—even when building your own cloud—can help accelerate time to value, reduce costs and minimize risks.

Working with outside experts can also help ensure that you have a deep bench of resources available around the clock. Do you really want to continually wake up your in-house cloud expert at 3 a.m.?

Customize without losing support

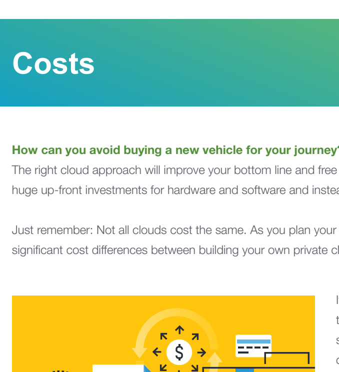
If you take a DIY approach and deviate from a cloud software vendor's approved configuration, you won't be covered by that vendor's support. By working with the right outside vendors, you can create a custom environment for your precise needs—not what the software vendor believes your needs should be. And you can still retain the vendor's certification and support.

Costs

How can you avoid buying a new vehicle for your journey?

The right cloud approach will improve your bottom line and free up cash for new projects and initiatives. You will eliminate huge up-front investments for hardware and software and instead pay on a monthly basis or according to what you use.

Just remember: Not all clouds cost the same. As you plan your private cloud budget, keep in mind that there are significant cost differences between building your own private cloud and choosing a managed private cloud service.



If you decide to build your own cloud, you'll first have to calculate the costs of acquiring new hardware and software. Add the administrative costs associated with configuring, deploying and managing that cloud. Also figure in the costs of training staff and enabling them to maintain their certifications in the future.

Selecting a managed private cloud solution through a cloud service provider enables you to eliminate most if not all of the capital costs associated with building a private cloud. In addition to shifting your spending model, you can eliminate future expenses such as the costs of training and ongoing support.

Don't forget hidden costs

The DIY approach can seem less expensive than a fully managed solution, but it will wind up costing more in the long run. Consider the full range of hidden costs, including:

- **Integration:** You'll need to integrate your database, application, monitoring and other software layers. If you're doing that integration for the first time, you'll hit roadblocks.
- **Operation:** Managing a private cloud requires your staff to deal with not only planned maintenance but also the kinds of unexpected outages that jeopardize your service-level agreements and send people scrambling to recover data.
- **Analytics:** Does your team have the time and skill set to analyze data usage and provide the reporting you need for planning? If not, you'll have to spend more time and money bringing them up to speed.
- **Security:** Even if your team has deep expertise in the latest security technologies, you'll need to continuously invest in training and certifications to ensure they can combat emerging threats.
- **Unused capacity:** When you build your own environment, you don't have the flexibility to give back resources and capacity you're not using. You lose money when your systems are not running at 100 percent.
- **Opportunity costs:** As your personnel spend time fighting fires and keeping the lights on, you'll miss opportunities to innovate.

You've arrived: Buy or build with CenturyLink

Defining your location, time-to-value and security requirements; assessing your level of in-house expertise; and calculating your budget will lead you to your private cloud decision. Whichever approach is right for you, CenturyLink can help simplify the move.

Buy: Streamline your private cloud journey with CenturyLink Dedicated Cloud Compute (DCC) Foundation.

DCC Foundation is a next-generation software-defined data center solution based on VMware Cloud Foundation. It includes software-defined networking and VMware vSAN Storage to deliver a completely integrated hyperconverged infrastructure-as-a-service (IaaS) solution. Built on industry-leading technologies, DCC Foundation offers deep flexibility to meet a wide range of private cloud requirements.

Optimize location

CenturyLink has a global data center footprint, with facilities across four continents. You have the flexibility to place your cloud close to your users to minimize latency and deliver a fast, responsive experience.

Accelerate time to value

DCC Foundation can be deployed rapidly—often in as little as four weeks. You can easily migrate and integrate your existing VMware workloads to DCC Foundation using VMware vCloud Director. It's also simple to create hybrid solutions, interconnecting DCC Foundation with your current environment as well as other cloud platforms, including public cloud platforms.

Maintain tight security

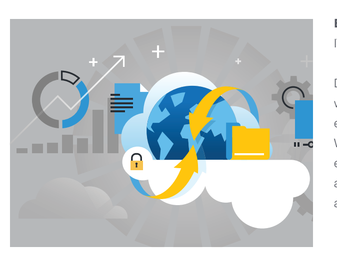
When you select DCC Foundation, you have a dedicated, discrete endpoint that provides total isolation and strong security. From tight physical security and robust access controls to integrated software-defined network capabilities, DCC Foundation helps ensure your sensitive data and applications remain secure. You also gain access to security experts who can help you address any and all emerging threats.

Draw on deep expertise

DCC Foundation gives you the flexibility to choose self-service or full-service management. With a fully managed solution, you can draw on the deep expertise of CenturyLink administrators while reserving your in-house resources for other projects.

Control costs

By choosing a managed private cloud, you can avoid the capital costs of building your own infrastructure and minimize (or eliminate) the costs of ongoing management.



Build: Implement your own private cloud with CenturyLink IT services and consulting.

Determined to build your own private cloud? Work with CenturyLink experts to design and deploy that environment so you can meet your specific requirements. With CenturyLink, you can speed time to value, help ensure tight security that maintains regulatory compliance and simplify ongoing management while keeping capital and operational costs in check.

Ready to move forward?

Get started with the next phase of your cloud journey today.

- DCC Foundation
- CenturyLink Private Cloud Computing
- Schedule a free hybrid IT consultation