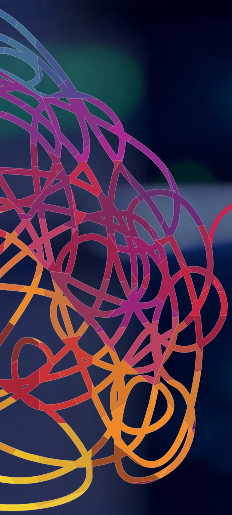


Hybrid and Multi-Cloud Computing Resource Guide



INRAM MICRO ADVANCED SOLUTIONS
IMAGINE *n*EXT.

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Hybrid and Multi-Cloud Computing

About This Guide

The Hybrid and Multi-Cloud Computing Resource Guide explains emerging cloud computing infrastructures and provides key insights into leveraging these trending technologies within the Data Center space. This guide is intended as both an educational and a sales tool for Ingram Micro associates and sales partners.

Hybrid and Multi-Cloud Computing Overview

According to Gartner®, “[cloud computing](#) is a style of computing in which scalable and elastic IT-enabled capabilities are delivered as a service using internet technologies.*” However, over the years, most cloud computing technologies have called for more comprehensive, secure solutions that can easily and seamlessly scale up or down to fit the shifting needs of an organization. As a result, two initial types of cloud deployment models emerged—public cloud and private cloud.

The [public cloud](#) deployment model is comprised of an IT infrastructure that is used by the public over the internet. A cloud service provider typically owns a public cloud, including the required hardware, software, services, and other infrastructure components, and an organization pays only for the portion of the cloud that they use to run their applications, store their data, or both. With a public cloud, the provider usually handles the server storage, maintenance, and security monitoring, which greatly reduces the overall costs and resources required by an organization.

The [private cloud](#) deployment model is an IT infrastructure that is typically owned and hosted by a single organization either onsite (i.e., on-premise cloud) or at a remote location. With a private cloud, the organization handles managing its server storage, maintenance, and security monitoring unless it employs a third party to manage its private cloud. Whether it’s financial security concerns, government compliance and regulations, or other factors, organizations that cannot or do not want to share cloud resources with other public users have found the private cloud to be an attractive alternative to the public cloud computing infrastructure.

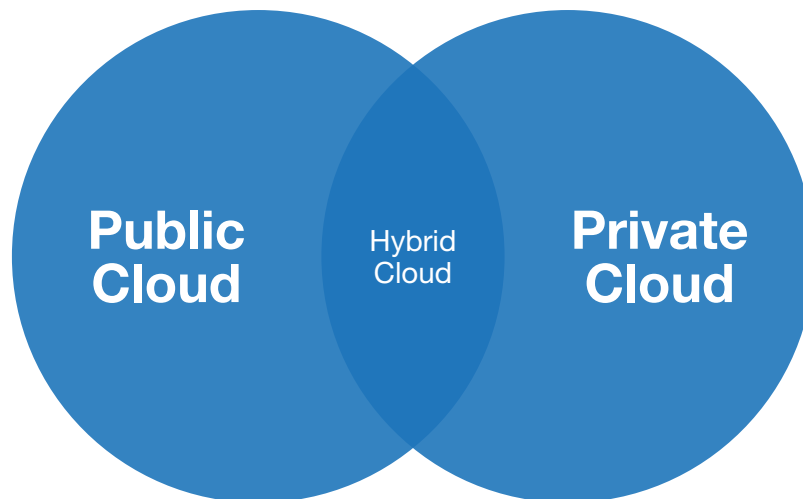
While public and private cloud deployment models are at the foundation of cloud computing, there are some newer, more flexible cloud computing technologies that have been placed at the forefront over the last several years. Hybrid Cloud and Multi-Cloud deployment models can help organizations use the right cloud technology at the right time and in the most cost-effective manner.

*Gartner® IT Glossary, “Cloud Computing,” 26 January 2023. <https://www.gartner.com/en/information-technology/glossary/cloud-computing>. GARTNER is a registered trademark and service mark of Gartner, Inc. and/or its affiliates in the U.S. and internationally and is used herein with permission. All rights reserved.

Hybrid and Multi-Cloud Computing

What is Hybrid Cloud?

A Hybrid Cloud is a cloud-model architecture that connects a mixture of public and private cloud functionality, as well as on-premises infrastructures, such as data centers and server rooms, or locally installed software, to create a uniquely blended cloud deployment solution. The Hybrid Cloud includes some orchestration, administration, and portability of workloads between multiple environments.



[Hybrid Cloud computing](#) gleans many benefits from both public cloud and private cloud environments. The public cloud offers the benefits of scalability, flexibility and cost optimization, which works in synergy with the tightly managed, secure and reliable cloud infrastructure that the private cloud provides.

Hybrid Cloud infrastructures typically require at least one private cloud and one public cloud environment*. Additionally, Hybrid Clouds may be comprised of the following elements:

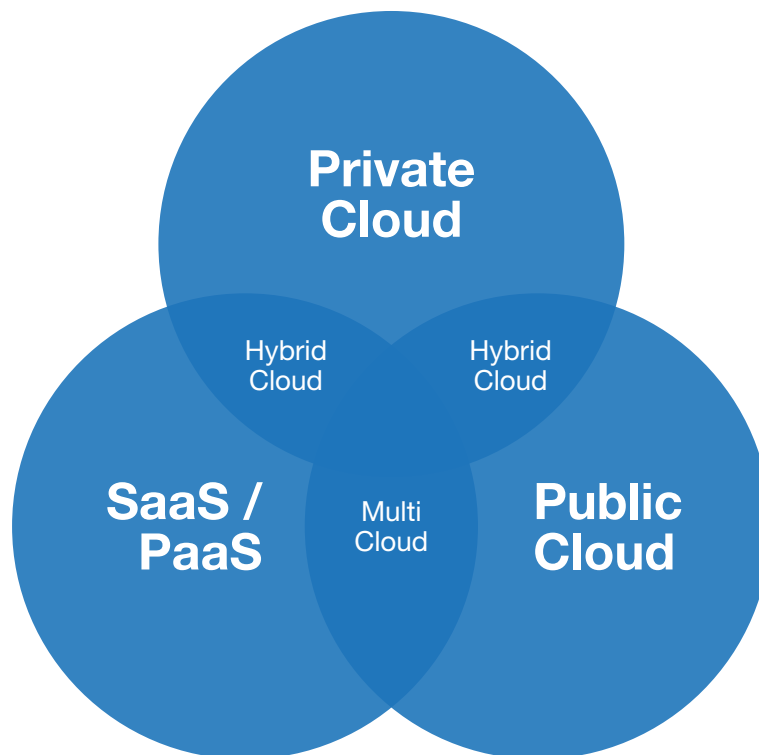
- Multiple private clouds
- Multiple public clouds
- A bare-metal or virtual environment connected to at least one or more clouds (public or private)

*Retrieved from <https://www.redhat.com/en/topics/cloud-computing/public-cloud-vs-private-cloud-and-hybrid-cloud>.

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What is Multi-Cloud?

A Multi-Cloud solution is the strategic use of multiple cloud compute, storage, and software services derived from a combination of public cloud, private cloud, and SaaS/PaaS providers to deliver the appropriate applications and services based on the time constraints, capabilities, and budget of an organization. The Multi-Cloud approach lets organizations pick the cloud deployment model that works best for their apps and use cases.



Multi-Cloud Pros and Cons

Multi-Cloud gives organizations a variety of choices when it comes to implementing and managing cloud-deployment solutions. However, it's important to be aware of the following pros and cons when utilizing a Multi-Cloud environment:

Pros

- Redundancy - Depending on how the multi-cloud strategy is utilized, clouds can provide workload resiliency. If one cloud provider is unavailable, the workload can run on a different cloud provider.
- Avoid vendor lock-in - Moving to a cloud environment normally means reliance on a single provider and potentially being locked in with them; however, using a Multi-Cloud strategy and having workloads that can be moved between cloud providers ensures that businesses can avoid being locked in to any single provider.

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- Competitive pricing – A Multi-Cloud strategy often provides more provider choices, so businesses can benefit by choosing the most appropriate provider based on their current workload and budget.

Cons

- Complexity - Managing multiple silos of resources can be challenging without the right tools and skill set, not to mention the complexity of managing multiple vendor relationships.
- Security – While Multi-Cloud allows for a broader footprint across multiple cloud providers, it also means a broader security footprint to maintain and protect. This results in an overall increase in risk and cost potential.
- Talent – Quite often, technical talent is difficult to find and recruit, particularly if a skill set is needed for a specific cloud provider. Finding resources with knowledge and skills in multiple cloud providers is even more challenging.

The Business Case for Hybrid or Multi-Cloud Solutions

Rather than making the jump to a wholly public cloud model, some businesses utilize a hybrid approach, which combines elements of both the private cloud and the public cloud. According to David Smith, a VP analyst at Gartner, “cloud computing promises that customers will benefit from several key propositions, such as shifting the responsibility and work of running hardware and software infrastructure to cloud providers, leveraging the economics of cloud elasticity, benefiting from the pace of innovation in sync with public cloud providers, and more.” (The CIO’s Guide to Distributed Cloud, 2020). Accordingly, this may explain why there has been a 15% increase in customer interest regarding Hybrid Cloud discussions with analysts over the previous three years.

While Hybrid Cloud does give customers a say in the design, ownership, and operation of some of the cloud resources while the public cloud provider handles the rest, this major benefit can also be seen as a downside. Supplying their own scalable resources (technical innovation, financial backing, operational know-how) costs time and money, which can be a financial burden depending on the customer.

Multi-Cloud strategy, however, particularly when including a Hybrid Cloud deployment model, can provide most companies with best-in-class options and the most flexibility for their workloads and desired outcomes.

Relying on a Multi-Cloud solution, CIOs can make effective decisions about workload and data such as:

- Deciding that mission-critical and highly sensitive workloads can reside on infrastructure that is one hundred percent under the control and management of a company’s data center/private cloud.
- Determining which business-critical workloads can be split between private cloud and public cloud resources while maintaining or improving availability.
- Placing datasets closer to compute resources due to data gravity or compliance.
- Deciding to migrate to best-in-class SaaS offerings and replace legacy infrastructure and applications, as well as retire technical debt.

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Identifying an Opportunity for Hybrid or Multi-Cloud Solutions

There are certain key questions to ask that can help you identify a prospective Hybrid or Multi-Cloud Opportunity. Review the following questions to ask your customer:

- Where do cloud solutions rank in order of priority for your annual initiatives?
- Where are you on your cloud journey? Have you begun testing any public cloud providers such as Azure, AWS, or GCP?
- Are you familiar with what Hybrid Cloud solutions are and the benefit they can have for your business?
- Would you be interested in hearing more about how cloud technologies can be used to add value to your organization?
- Is your current IT infrastructure/environment meeting your application scalability requirements?

Words of wisdom:

When discussing Hybrid and Multi-Cloud solutions with your customer, it's important to ensure your customer understands that the solutions deliver on the following five key principles:

1. **Simplicity:** Explain how IT operations can be simplified and that there is potential to reduce the headcount dedicated to deployment and management.
2. **Agility:** Explain how internal customers can realize greater business agility, and that IT can become more responsive to the needs of the business.
3. **Cost:** Ensure your customer understands that the Hybrid Cloud solution can reduce their direct and indirect costs in a meaningful way.
4. **Autonomy and Security:** Explain how the cloud solution supports the IT organization's management capabilities across on-premises and off-premises, securely.
5. **Efficiency:** Express the ease to purchase, deploy, and scale the cloud solution up or down.

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Building a Hybrid or Multi-Cloud Practice

1. Define your vision

“Where there is no vision, there is no hope,” – George Washington Carver

Everything begins with a clear vision you have for your business. Without a vision, you may find yourself investing time and money in new technologies and platforms that fail to meet your business requirements, or worse, your customer’s needs. First, make a clear reason for wanting to create a cloud practice and define the benefits it could provide to your business and your customers’ business requirements.

2. Build your blueprint

Identify who will lead the charge and establish a blueprint for your cloud practice. This individual or team of individuals will need to understand how each resource at your organization can and will work together to ensure the initiative is a success. Start by talking to your marketing, sales, and technical teams to understand if:

- They are currently selling cloud solutions today. If so, what type of cloud solutions are being well received by customers?
- They see an opportunity to position public or private cloud solutions to their customers.
- The best approach is to market/target an existing or new customer.
- There are Professional Service opportunities based on the existing skillset, or will training and/or partnerships be needed?
- There are existing vendor relationships your business can leverage.

3. Build your toolkit

A Hybrid or Multi-Cloud toolkit should include all the tools and technologies your customer’s employees need to get their job done. This approach often includes a multi-vendor solution.

To better assist you, our team has comprised a list of [vendors](#) that have solutions that cover one or more of the key characteristics of a Hybrid or Multi-Cloud practice. We highly encourage you to look at the vendor list, as well as research other vendors that fall under the Hybrid Cloud or Multi-Cloud categories.

4. Train your sales teams

Now that you have established your vision, blueprint, and toolkit, it is time to begin training your sales team on how to position Hybrid and Multi-Cloud solutions to their customers. It is critical to enable sales so they understand the value that Hybrid and Multi-Cloud models can bring to their customers. This way, when sales communicates with a customer, they can

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truly articulate that they have the customer's best interest in mind and are not positioning solutions that provide them little to zero value. Review the following steps to enable your sales team for success:

1. **Training** – Conduct training on all new tools and technologies to get your reps comfortable with them. Lunch and learns and group study sessions are another great way to teach reps about new sales products and techniques.
2. **Facts/Product sheets** – Provide your reps with supporting materials that they can share with customers or consume themselves.
3. **Scripts** – Less word-for-word scripts and more talking points.
4. **Sales Portals** – All sales enablement tools, resources, and training materials should be hosted in a shared place for easy sales team access.
5. **Leverage Ingram Micro** – We have both pre-sales technical and sales resources with expertise across multiple major vendor lines available to aid with your cloud opportunities. In addition, we have resources available in our state-of-the-art [Business Transformation Center](#) to showcase a comprehensive array of technology designed to expand and accelerate your go-to-market abilities.

5. Enable your technical teams

In tandem with training your sales team, it is equally critical to ensure your engineers, both pre-sales and post-sales, are aware and trained to support your Hybrid or Multi-Cloud practice. This includes having trained engineers on staff to help scope and demonstrate proof of concept (POC) on one or more cloud solutions for your customers, as well as engineers or trusted partners to help deploy the solutions. Below are some suggestions to enable your technical teams to succeed:

1. **Training/Certifications** – Conduct training/lab builds on all new tools and technologies to ensure your engineers are comfortable with their use. Virtual, instructor-led training is a great way to educate engineers and prepare them for attaining vendor certifications.

Please reach out to our Ingram Micro Training team for scheduling and pricing of virtual, instructor-led training:
dxsolutions@ingrammicro.com

2. **Vendor Enablement Training** – Depending on the vendor(s) you added to your portfolio, many vendors have free technical enablement training videos, portals, and even on-demand interactive labs.
3. **Relationships** – Leverage your vendor, distributor, and partner relationships to assist in areas where you may not have expertise. For example, Ingram Micro has a program called Ingram Micro Link, which thousands of partners use to help close the deal on opportunities beyond your engineer's technical capabilities.

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Ingram Micro Professional Services

Transitioning from a traditional, on-premises environment to a Hybrid Cloud or Multi-Cloud model is no simple task. This puts you, as a value added reseller (VAR) and/or managed service provider (MSP), in a great position to attach Professional Services to all cloud opportunities. The roadmap to transitioning to the cloud incorporates successful planning, choosing your customer's cloud provider, migrating applications and data, and validating the success of the migration.

END-TO-END
LIFECYCLE



If your team does not have the expertise to prepare and deploy a cloud migration strategy, fret not. We at Ingram Micro are here to help. We have tried-and-true Pro-Services teams who can help prepare your customer for cloud readiness, assist with migrations, and even provide services after the professional services engagement is over.

For more details on Ingram Micro's service catalog, please view the [Digital Transformation Services Catalog](#).

For pre-sales assistance, Ingram Micro has an array of resources available to assist. Both pre-sales technical and sales resources with expertise across multiple major vendor lines are available to aid with your cloud migration opportunities. In addition, we have resources available in our futuristic [Business Transformation Center](#) to showcase a comprehensive array of technology designed to expand and accelerate your go-to-market abilities

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Training

Ingram Micro offers a variety of training for Hybrid and Multi-Cloud Computing from several different vendors:

- [Ingram Micro Training – Cloud Computing](#)
- [Udemy – Cloud Training](#)
- [Plural Sight – Cloud Training](#)
- [Amazon AWS Training](#)
- [Microsoft Azure Training](#)
- [Google Cloud Training](#)
- [Oracle Cloud Training](#)
- [IBM Cloud Training](#)
- [Citrix Cloud Services Training](#)
- [Upcoming Citrix Training & Webinars](#)
- [Upcoming VMware Training & Webinars](#)
- [VMware Hands-On Labs](#)
- [CBT Nuggets – Expert IT Training](#)

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Vendors

			
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