

# On-Premises or On-Cloud? How to Make the Choice



## Introduction

It was once a tech buzzword, but cloud computing has become a mature best practice for companies of all sizes and industries. Even if you don't know it, it's highly likely that part or all of your business has already moved into the cloud.

Case in point: A whopping [96 percent of organizations](#) now report that they use cloud computing in some form or fashion.

Despite this lofty statistic, many companies are also choosing to maintain some or all of their technology on-premises. So what exactly is the difference between on-premises and on-cloud? How can you make the choice for yourself? We'll discuss the answers in this article.

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## Achieve Cloud Elasticity with Iron

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## What Is On-Premise Computing?

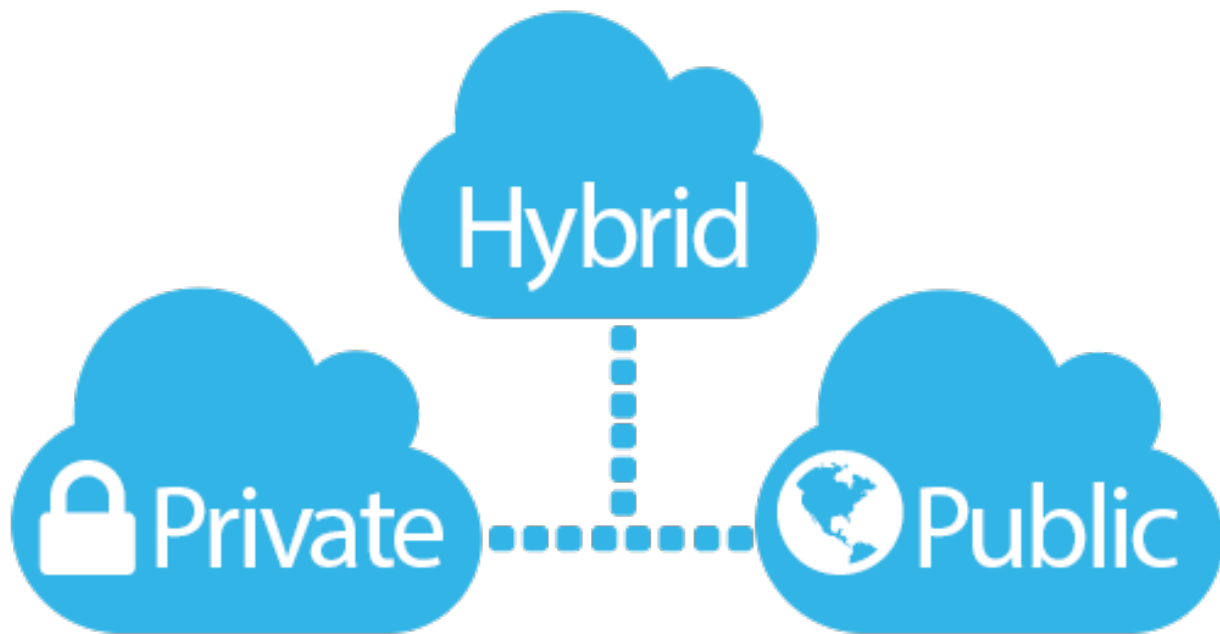
[On-premise computing](#) (also known as "on-premises") is the traditional (and, until recently, the dominant) model of enterprise IT.

In the on-premises model, organizations buy their own hardware and software, and then run applications and services on their own IT infrastructure. On-premises applications are sometimes called "shrinkwrap." This refers to the plastic film used to package commercial off-the-shelf software.

The term "on-premises" implies that the technology is physically located on the organization's own property. This could be in the building itself or at a nearby facility. This grants the organization full control over the technology's management, monitoring, configuration, and security.

Companies that use the on-premises model usually need to purchase their own software licenses and handle their own tech support. For these reasons, on-premise computing is well-suited for larger enterprises. They are more likely to have sizable IT budgets and skilled IT employees.

# What Is Cloud Computing?



[Cloud computing](#) is an enterprise IT model in which hardware and/or software are hosted remotely, rather than on company premises.

There are two main types of cloud computing: public cloud and private cloud.

- In a public cloud, a third party is responsible for providing your business cloud services, software, and storage via the internet. Your data is hosted within the cloud provider's remote data center, separate from the data of other customers.
- In a private cloud, your business owns or maintains its own cloud infrastructure. The cloud is provisioned for the use of a specific organization. Like the public cloud, software, storage, and services are provided remotely via the internet.

In addition to the public-private division, there are three different types of cloud computing that you should know about: IaaS, PaaS, and SaaS.

- IaaS (infrastructure as a service): This is the most bare-bones cloud computing offering. Users rent IT infrastructures such as virtual machines (VMs), servers, networks, and storage and access them via the internet. However, they are responsible for managing all other aspects of the system: runtime, middleware, operating systems, applications, and data.
- PaaS (platform as a service): PaaS includes all the services provided by IaaS, as well as the runtime, middleware, and operating system. Users are only responsible for managing the applications and data.
- SaaS (software as a service): SaaS is an all-in-one offering that includes everything from the VMs and servers to the applications running atop them and the data that they use. A few examples of SaaS products are Dropbox, Google Apps, Microsoft Office 365, and Adobe Creative Cloud.

## On-Premise vs. On-Cloud: The Pros and Cons

Rather than jumping on the cloud bandwagon, it's important to perform a sober evaluation of the pros and cons of both on-premise and on-cloud for your own business needs. Now that we've defined both on-premise computing and cloud computing, let's discuss which one is more convenient in terms of four considerations: cost, scalability, security, and backups.

### Cost Model

In terms of cost, the cloud vs. on-premises comparison boils down to two different pricing models: capital expenses and operating expenses.

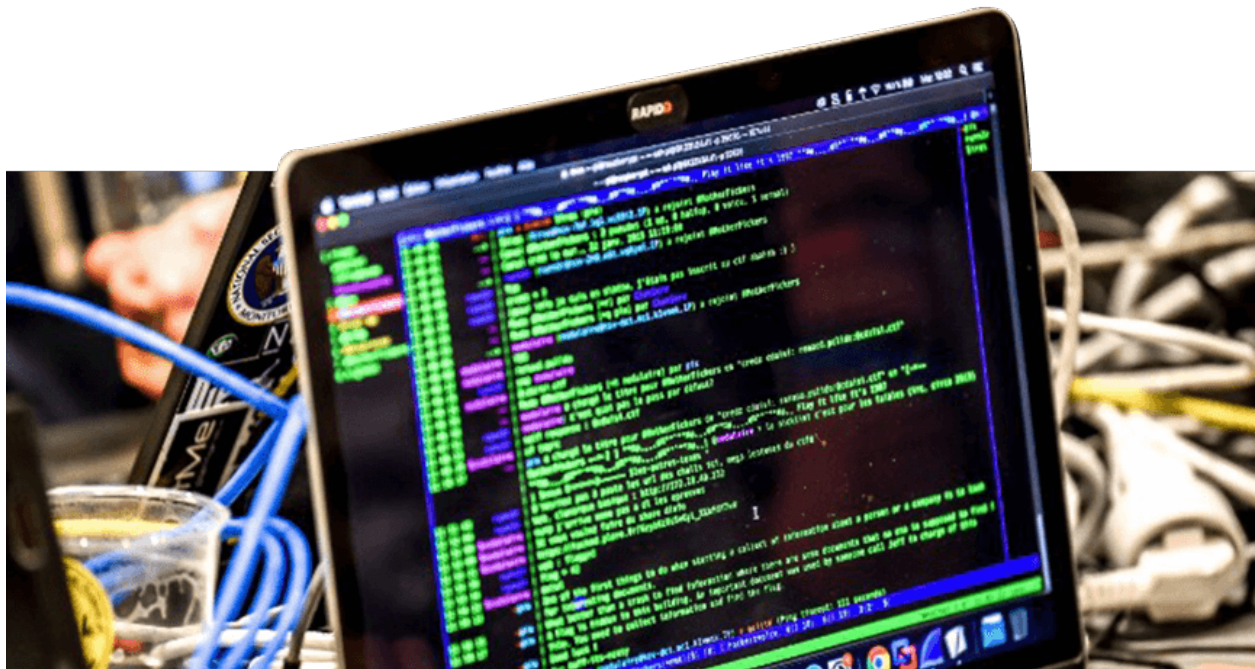
With on-premise computing, businesses need to make a large capital investment upfront when buying hardware and software. They're also responsible for any support and maintenance costs incurred during a product's lifetime.

Cloud computing, meanwhile, is usually an operating expense. Businesses pay a monthly or annual subscription fee in order to have continued access to the cloud. Upgrades, support, and maintenance are the vendor's responsibility and usually baked into the costs of the subscription.

Some companies find that the subscription model of cloud computing is more convenient for their purposes. Subscribing to a new service for a few months can be more cost-efficient for businesses that are looking to experiment, and for smaller businesses that don't have large amounts of capital available. For example, [Xplenty](#) is a cloud-based ETL (extract, transform, load) tool that offers code-free transformations. The cost of paying for Xplenty's platform monthly is less expensive than paying a data

engineer to handle the process. However, research by firms such as Gartner has shown that both cost models are equivalent over the long term.

## Scalability



Scalability refers to a system's capacity to easily handle increases in load. For example, a website that usually sees very little traffic could suddenly have thousands or millions of visitors if it starts to receive attention on social media.

Cloud computing is able to rapidly scale storage and services up and down during peaks and lulls of inactivity. This is tremendously helpful for companies that see frequent changes in demand, such as a greeting card e-commerce website that does most of its business during a few holidays.

When compared with the cloud, on-premise computing is fairly brittle and difficult to scale. Businesses that operate on-premises may need to buy powerful hardware that goes unused for much of the time, wasting time and resources.

## Iron.io Serverless Tools

Speak to us to learn how IronWorker and IronMQ are essential products for your application to become cloud elastic.

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### IronMQ v3 On Premise

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IronMQ is a full featured high-performance messaging solution. Previously, we offered IronMQ in two hosting configurations (multi-tenant or dedicated). Our new on-premise product is the first to allow you to run our software in your own dedicated cloud.

### Overview

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IronMQ On Premise features a new, robust distributed database to power queues and queue metadata. This new foundation ensures that the product will run as well on your infrastructure as it does on ours.

- **High performance** - we run the same software in our hosted environments supporting many queues at high throughputs
- **High availability** - we host this software in multiple clouds and have remained available through outages
- **Scalable** - IronMQ scales horizontally, and every node is homogeneous. Simply add more nodes to the system to scale up the number of queues.
- **Redundant** - message data and queue metadata are replicated to multiple nodes, and the database can do snapshot backups..
- **Simple to configure** - our [installation](#) takes a few minutes, and we also offer a quick setup process using [Terraform](#).

### Getting Started

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We provide IronMQ on premise in [Docker](#) containers. This means that almost any cloud (or even bare metal server) that runs Docker can run IronMQ.

Please [read our system requirements](#) to ensure that IronMQ will run efficiently on your infrastructure.

Once you're done, you're ready to [install IronMQ On Premise](#)

(If you've already installed IronMQ On Premise, please see our [management guide](#))

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# Cloud Agnostic Architecture Strategies



The landscape of business IT and computing has altered dramatically [over the last few years](#). At least 91% of organizations have adopted the public cloud for a multitude of tasks. *Public Cloud* refers to cloud computing services such as storage, software, and virtual machines provided by third parties over the internet. Some of the biggest public cloud providers are Amazon Web Services, Microsoft Azure, and Google Cloud Platform. Today, more and more companies are moving towards a *cloud agnostic* strategy. So, what does this mean, and how can your own business become cloud agnostic?

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## Cloud Agnostic: Definition and Examples

One of the greatest benefits of cloud computing is its flexibility. If you're running out of storage, your public cloud solution can automatically scale it up for you. This allows your operations to continue seamlessly.

Being cloud agnostic takes this idea of the flexible cloud one step further. Effective organizations are those capable of easily running their workloads and applications within any public cloud. They may also use a variety of cloud services.

This doesn't mean that a company is completely indifferent as to which cloud provider it uses for each workload. Any organization will have established preferences for their cloud setup. This is often based on factors such as price, region, and the offerings from each provider.

Being cloud agnostic means that you're capable of switching tracks to a different public cloud provider should the need arise, with minimal disruption to your business.

## Why Be Cloud Agnostic?



It's hardly surprising that more companies are looking to be cloud agnostic. Around [93 percent of enterprises](#) now run a multi-cloud strategy, involving utilizing two or more public cloud solutions. This allows businesses to take advantage of the differences in features or prices between providers.

Another reason that companies want to embrace this strategy is to avoid [vendor lock-in](#). Cloud computing has revolutionized the ways that companies do business. It does so by giving them access to more products and services without having to support and maintain their own hardware and infrastructure. However, this increased reliance on cloud computing also comes with the risk of dependency.

While it might seem impossible for an Amazon or Google to go out of business, remembering companies like AOL show that it's not completely unrealistic for a vendor

to cut services. By making your company more flexible and adaptable, being cloud agnostic inoculates against the risk of vendor lock-in.

## **Iron.io is Cloud Agnostic**

Speak to us to learn how easy it is to setup up IronWorker and IronMQ in any language.