



# Cloud Computing for Nonprofits

## Executive Summary

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# What is Cloud Computing?

Cloud computing can be defined as the rental of someone else’s computer resources to provide services – applications, infrastructure, security, software, and storage. There are three main categories of cloud computing: infrastructure as a service (IaaS), platform as a service (PaaS), and software as a service (SaaS).

CATEGORY	INFRASTRUCTURE AS A SERVICE	PLATFORM AS A SERVICE	SOFTWARE AS A SERVICE
<b>Abbreviation</b>	IaaS	PaaS	SaaS
<b>Cloud provider responsibilities</b>	Provides the server hardware and a small amount of storage and networking software to host applications	Maintain system software, including upgrades and patches; tools to manage hardware and software	Deliver software through an internet connection; maintain system software and databases; provision user accounts and provide security
<b>Example services</b>	Amazon Web Services (AWS) Elastic Compute Service, Google Compute Engine (GCE), Apache CloudStack, OpenStack	Amazon Web Services (AWS) Elastic Beanstalk, Heroku, Microsoft Azure, Cloud Foundry	Office 365, Salesforce, Google Apps, Asana, Slack, Calendly, Hootsuite

## Positives and Negatives of Cloud Computing

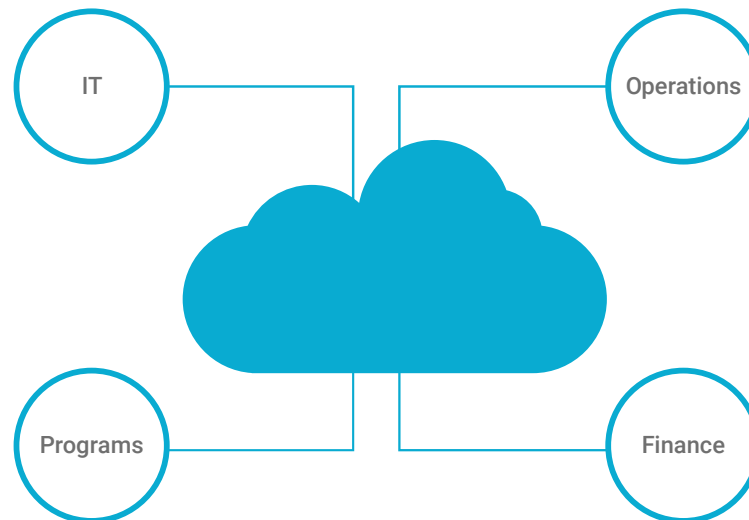
The flexibility of cloud computing makes it attractive to nonprofits. As organizations grow or their needs change, rather than continually purchasing new storage capacity to support applications, by leveraging cloud computing, nonprofits can simply request additional space based on current needs and usage. As with all technology, however, cloud computing also has its detriments. The same flexibility that makes cloud computing attractive to nonprofits also creates risk.

Advantages
<ul style="list-style-type: none"> <li>• Ease of Deployment</li> <li>• Easily scale to meet organizational demand</li> <li>• Pay only for what is needed</li> <li>• Built in software security</li> <li>• Outsource storage, maintenance, and updates</li> </ul>

Disadvantages
<ul style="list-style-type: none"> <li>• Flexible pricing may not yield anticipated cost savings</li> <li>• Questions around data sharing and security</li> <li>• Creation of “shadow IT” within an organization</li> <li>• Depends on network connectivity and bandwidth</li> </ul>

# Who Should Decide To Adopt Cloud Services?

Moving to the cloud has a range of impacts on how employees will access the software they need to do their jobs and on how the organization funds both services and use of services. Therefore, although organizations should empower a senior IT leader to assess cloud options and manage the implementation, several functions within the organization should participate in the decision-making process.



## Getting Started

As with any IT transformation project, moving to the cloud requires a significant amount of planning and consideration. Regardless of whether moving existing data and applications to the cloud or deploying new data and applications to the cloud, an organization must begin by assessing its current infrastructure and needs and selecting the cloud option(s).

### Questions to ask to assess the current state and needs

- What enterprise-wide functions are needed?
- What functions could benefit from being expanded or contracted as demand within the organization changes?
- If the organization expects to grow over the next couple of years, are there functions that will require a great deal more or less support?
- What functions are necessary, but from an IT perspective, would be more efficiently managed by a third-party, freeing up organizational IT to focus on other issues?

### **Steps to select the cloud option(s)**

- Begin the search for software based on the categories of functions needed, and then evaluate each service against their documented needs (from the assessment phase).
- Determine the organization's IT department's preferences and identify products compatible with the organization's operating environment. (e.g., if the organization already uses Google Apps, find services compatible with Google Apps and, therefore, can be quickly adopted into the environment.)
- Consider sending an IT employee to a nonprofit tech conference or group where cloud software is presented and discussed
- Select the appropriate service level for each cloud service based on the number of anticipated active users. Remember, this number can often be scaled up or down on-demand

Once an organization selects the cloud service providers, the nontrivial task of cleaning and structuring data, defining user groups and permissions, setting use policies, and deploying and testing services starts.



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