

# Cloud Accounting Security: A Ground Reality Comparison With Local Hosting





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# 1. Introduction | Cloud Accounting

Business accounting has taken a new shape. Now the businesses serve customers global from one or many locations. Not just products, even services are sold and delivered online. E-commerce websites are the new market. Currency conversion relates not only with the country differences only as various e-payment have stormed into the market. All these hint at the shape of modern accounting challenges.

What still remains same is the importance of accounting in a prompt and accurate arrangement. Even with the rapidly changing finance structure, flawless accounting is the only way to make well-informed decisions, improve profits and manage your cash flow.

While the developing technologies helped smaller businesses broaden the market opportunities, it also raised the accounting tasks. A computer troubled by hardware, geographic location, and networking limitations will not be able to deliver the flawless accounting for a business that is spread globally, running round the clock and has a limited budget. Meeting the modern accounting challenges require a shift to an independent, ever-available, and robust accounting platform. The most probable solution for which comes in the form of cloud accounting.

Adopting the cloud accounting system will mean your accounting application and data is hosted on the servers of the hosting service provider. It is accessible from anywhere and anywhere via any internet connected device, including - desktop, laptop, smart phone, and tablet. There is no limit to the number of users who can work together on it at the same time. As the processes take place on the third-party server, the restrictions of the user-end devices do not affect the accounting performance.

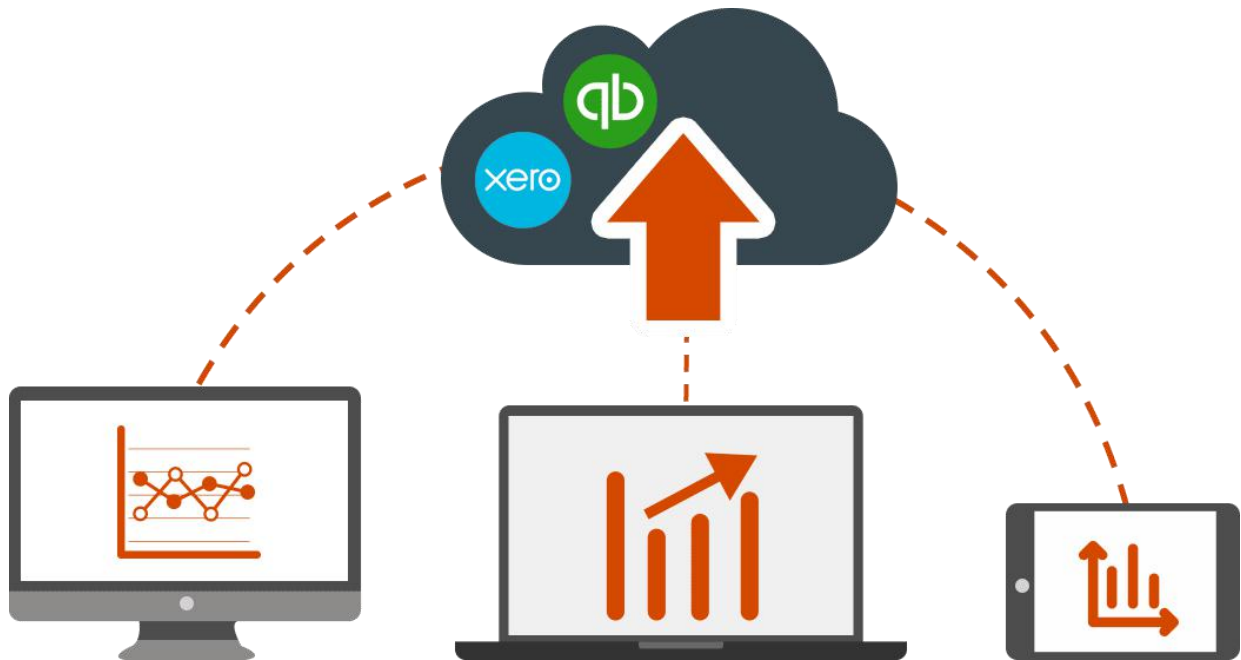
## Cloud Computing

Cloud computing is simply storing the data and running applications on a remotely located server and accessing it via any internet connected device. Internet-based email (like Gmail, Outlook, etc.) and social channels (Facebook, Twitter, etc.) are examples of the cloud-based applications. Most users do not even realize the belongingness of the applications with the cloud. Data in the form of text, images, videos, etc., remains accessible to the users from any devices. Processes like deleting, sharing publicly or privately, etc. take place on someone else's server at the command of users.

## 2. How Cloud Accounting Works

**Imagine that CPU of your workstation is placed at the distant location and it is connected to your keyboard, mouse, and other interacting services using a wireless connection.**

In cloud accounting, your application is installed on the remote server, which also hosts the data. The server can be accessed over the internet using any internet-connected device when correct login credentials are provided. So, you can use desktop, laptop or smart phone to work on the accounting applications from anywhere without installing it on the local device.





## 3. Benefits & Challenges of Cloud Accounting for Small Businesses

Cloud computing is now massive enough to influence almost all the industrial sectors that are dependent on the computer. Consider the precise case of accounting, the computer has been its central part since decades. From the days of basic spreadsheet software to dedicated accounting software, business accounting has witnessed a number of changes in the computing technology. All new technologies bring with them the shares of positives and negatives. Cloud accounting follows the similar convention. It is augmented with a number of benefits, but there are certain challenges, as well, residing with it.

### 3.1 Benefits of Adopting Cloud Accounting

#### Multiple User Collaboration

With your accounting application hosted in the cloud, all the authorized users including - your accountant, bookkeepers, co-owners, etc. can work together on the same files. It speeds up the overall operation speed without requiring to make multiple copies of the same file. Hence, it saves your accounting operations from unwanted chaos.

#### Smooth Working in Different Devices, Browsers, Mobile apps, and Screen Sizes

Recent years witnessed massive eruption in the availability of device choices and users are switching between the devices more often. Cloud applications are compatible for cross-device operations, which means the same accounting application with its existing data will be available for all devices.

#### Self-executing Data Backup

Data backup, a precautionary measure against the data loss, is arguably the most ignored practices among the computer users, usually out of laziness. Being on cloud automates the process of data backup and the data will remain protected against the possible data loss. So, in the case of any data loss because of device errors, external threat or accidental deletion, you can always recover it using the backups.

#### Frequent Software Upgrades

Cloud-based applications work independently from the local device. Because of which, software updates are deployed automatically conveniently. Such software updates enable a secure and feature-rich platform for the accounting operations to deliver improved performance.

#### Centralized Control and Governance

For well-spread or complex business accounting, the cloud turns out to be the best solution as it provides the option to monitor the activities and manage the permissions of other users from one centralized account. Other features of cloud (anytime, anywhere access, device compatibility, etc.) are, obviously, available for the admin monitoring.

#### Multi-level Data Security and Protection

Accounting on cloud means, there is no necessity of dedicated local infrastructure (real estate as well server and networking hardware). Moreover, the pricing plans of cloud hosting are comparatively much lesser than purchasing and maintaining of the same computing magnitude. Even the long term calculations indicate that opting with the cloud is more affordable than going with on-premise solutions

[1]



### **Effortless Cost Reduction**

Accounting on cloud means, there is no necessity of dedicated local infrastructure (real estate as well server and networking hardware). Moreover, the pricing plans of cloud hosting are comparatively much lesser than purchasing and maintaining of the same computing magnitude.

### **Prompt Elasticity**

Resources availed on the cloud can be scaled up and reduced within a very short time period ranging in a few minutes. Particularly in the case of accountants, who receive a sudden surge in client-base during the tax season, the elasticity with the resources plays a great support. They can opt for the greater resources during the busy season and switch to lesser solutions once the period is over.

## **3.2 Challenges with Cloud Accounting**

### **Downtime Possibilities**

The independence of the cloud services from your local infrastructure can backfire in the case when hosting service faces any disruption. Though it is among the rarest incidence, it is possible. Moreover, the user device will always require an internet connection to avail the cloud services. If the internet connection goes down, you will not be able to work for the time being.

### **Lack of Cloud Expertise**

Cloud technology lasts more than decades back. However, it is still at growing stage and the number of users is still increasing. Not all accounting professionals at your business may be fluent with the technological updates. This lack of expertise can initially offer some challenges while working on the cloud.

### **Security Vulnerabilities**

Working on cloud means accounting data is globally accessible using the correct login credentials. This prospers the chances of attackers targeting your accounting from any remote location. Since the cloud hosts data on a third-party server, the trust with data is another concern. Letting the ends loose on any security aspect can prove to a be serious harm.

### **Choosing Inefficient Resource**

Cloud computing often takes pride in being an efficient solution for computing operations but certain miscalculations can turn the things another way round. Sometimes cloud users are not able to calculate the exact resources (such as RAM, storage space, etc.) that are required and end up opting for more than required resources. Since rental for the services is paid for the chosen resources, you might end up paying more than what you should be.



## 4. Security With Cloud Accounting

The mention of security among both sections - benefits and challenges of cloud, suggests that it is something worth debating over. To understand the security of the cloud-based accounting solutions, it can be divided into three segments:

- User-end Device - using which the user accesses the applications and data
- Hosting Servers - on which the applications run and the data is stored
- Network - connection between the servers and the user-end device

Since these three segments follow completely different modus operandi, the security challenges are different too. Let's discuss the security concerns separately for these entities.

### 4.1 Security At User-end Device

**If the device is already on the network, its security aspects when working on the cloud will remain almost similar.**

Traditionally, entire digital accounting is maintained on the user's device. Hence, security responsibilities of accounting data and applications are entirely dependent on the device. Solutions like password protection are able to secure the device and its data well enough when the device is not connected to any network. When your device connects to a network, the security challenges rise prodigiously but that is manageable, with certain practices.

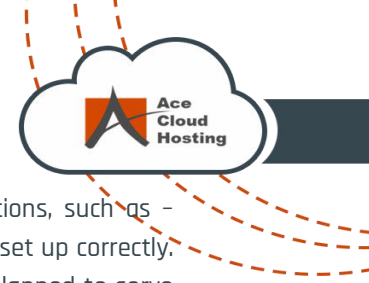
Working on the cloud means your device is accessing the data over the internet. So, the practices that are adopted to secure the device over the internet can suffice for cloud security (at the user-end device) as well.

**Follow these steps to keep your device secure while working on cloud-accounting:**

**Firewall** - Firewall acts like a filter that allows (or disallows) the access permissions to the various requests generated over the network to reach your device. Implementing a reliable firewall will mean that attacker or program is restricted from the gaining the access to the device. It identifies the threats and blocks them to allow only the safer requests to flow through.

**Complete Virus and Malware Protection** - Actions of harmful software programs that have the potential to harm the operations of the device are detected and eradicated using antivirus software. The user should ensure that the protection solution chosen is able to provide a complete protection against all varieties of malware, such as - worm, virus, spyware, etc.

**Updated Local Software** - Software require updates not only for better performance but for the security as well. As the attackers are continuously working to find ways of intruding into the user device, it is important to keep the latest technology in action to stay safe. Keeping the software settings to auto-update is usually recommended so that latest security is always available to guard the data. The practice must be followed with all software (including - Operating System, web browser, Office suite, accounting software, etc.)



**Customize the Security Settings for the Best Protection** - Simply installing the security solutions, such as - antivirus, spyware, etc. may not be able to avail a sufficient protection for your device, if it is not set up correctly. Most users install and use such applications in their default setting. Since default settings are planned to serve the general user, it may necessarily serve the specific requirements for your usage. To remain on the safer shores, you should look into the settings and customize them to best fit your needs.

## 4.2 Security at Hosting Server

Cloud is basically a CPU located remotely. So, you have your input and output devices with you but the processing device is located somewhere else. The common security challenges are noticeably similar. Common computer security practices can perform their doing. The difference, however, lies with the cloud in remote accessibility to a greater number of users.

As a hosting provider, security remains a key selling point, on which they would not like to compromise. Therefore, most of the security aspects are under complete control of hosting providers. Even with that, there are some steps that you can take to remain safe.

### **Tips to remain safe with hosting server over cloud:**

**Choose wisely between Private, Shared and Hybrid Cloud** - Depending on the number of clients that are able to access the same server, it is can be termed as Dedicated, shared, or hybrid. As their names would suggest, dedicated (or private) cloud server remains totally dedicated to one client, a shared (or public) cloud server is allocated to a number of users at once, and hybrid is an amalgamation of shared and private server.

The hybrid server can even be a union of on-premise server with a cloud server.

Each of them has its own benefits and challenges. However, when it comes to security concerns, the private server is considered the strongest at it allows the client to setup security measure to the best of their abilities along with provider's already adopted methods. The public server being shared with multiple clients may suffer most because of erroneous operations by any of the clients. The hybrid server is a mixed bag for its nature. With that said, **none of them can be generalized as a vulnerable or a resilient choice.**

The important thing is to assess the risk, tolerance, and treatment for cloud solutions, along with the abilities of the providers. According to a survey by Cloud Security Alliance, 64.9% of IT find the cloud more than on-premises solutions, which signifies that local security of most companies is below par <sup>[2]</sup>. So, going with hybrid or shared server will help if your security abilities are herculean. Else, private server should make a better choice.

**Ask for Security Methods Adopted by Provider** - The communities of the cyber lawbreakers are huge and cloud, for its herculean security measures, appear to them as an inviting challenge. Various forms of attack, such as - Denial of services, Malware-injection, Side-channel, etc. pose threats to the cloud computing and to keep the services secure, the hosting vendors must have a reliable security in action.

To start with the security solutions that are defined for end-user machines are mandatory for cloud servers as well, but there is a lot more that needs to be done for - protection and backup of data and applications - while keeping the speed and performance optimum.





## 5. Comparing Accounting Security: Cloud vs. Local Machine

To deliver reliable cloud services, hosting providers should follow these security methods:

- **Firewall** - The firewall that is controlling traffic flow on the server must be able to offer features, such as: rate-limiting, access control list, whitelisting & blacklisting options, intrusion-prevention system, blackholing, etc.
- **Hypervisor** - The Hypervisor checks the authenticity of the instance from the FAT (File Allocation Table) before scheduling the instance services to eliminate the malware attacks.
- **Random Encryption Decryption** - Encryption ensures that data is legible (fit to read) only at the user's end. Keeping the process random ensures that no predictable pattern is in effect to mitigate the chances of attack. Therefore, the authentication attacks like Man-in-the-Middle Attack and other possible like Side Channel Attack are no more a threat.
- **Salt for Hashing** - Traditional hashing follows same encryption for same password string set. Hashing is meant to serve quick verification and not secure, which makes it a potential way for attacker to seep through. Salt ensures that for every unique user, the hashing will remain unique to neutralize the common attacks like dictionary attacks, brute force attacks, lookup tables, etc.
- **Cloud Access Security Broker (CASB)** - CASB is a third-party security software for cloud services, which can be a cloud-based service or a hosted one. It maintains a control point to keep up threat protection and security.

\*For various reasons, hosting providers may not disclose the details of the security measure that they adopt.

## 5.1 Security against External Attackers

Different businesses and individuals adopt different accounting models (payment platforms, bank accounts, accounting & tax software, add-ons, etc.), which means that the security practice will vary as well. So, there is certainly no any fit-for-all solution. A specific security architecture needs to be developed and deployed to keep the business in the right shape.

### Local Machine

Once the local machine is connected to a network, its security will greatly depend on your IT expertise. Not only you have to setup security on your own, but also need to get the hardware that is compatible with the requisite security setup.

### Cloud

Cloud commands heavy advantage on its platform flexibility. So, it can accommodate any sort of accounting model for any size of business along with the security architecture. More than that your end-user device does not have issues to face with it.

## 5.2 Hardware Dependent Security

Accounting data, especially when it belongs to businesses, can never be compromised upon. There can any number of thieves attempting to steal the data from you. Apart from that, you storage device could be a factor that can take your data from you.

### Local Machine

Local hardware is vulnerable to several issues that may cause loss of data ranging from temporary and recoverable to permanent and irrecoverable. System failure, hardware damage, technological innovations, etc. can arrive without any alarm and may hamper the accounting data (and applications as well).

### Cloud

Ultimately, the cloud is also running on hardware. So, the possible flaws with the local machine exist here as well. However, the change comes with the feature of automated backup that works almost instantly. It ensures that even in the case of hardware damage, another hardware located at a different location has mirrored the information safely. The clustering technology of the cloud servers provides the connectivity to the new server without any interruption in the connection.

## 5.3 Adapting to the Changing Trends

Accounting trends do not change frequently, but that is not the case when technology is involved. Then things start to change really fast and adapting to them is not among the easier thing. Since attackers are continuously looking for the ways to find the loopholes with the existing security practices and methods, the continuous upgrade is almost a necessity.

### Local Machine

Local machine can obviously be upgraded at will, but that will require some hefty expenses. Given that hardware purchase is among the biggest expenses in the technological world, keeping with the upgrading requirements might not fit the budget of every accounting firm. The requirement of IT expertise with it adds more to hassles to it.

### Cloud

Since hosting provider bears the maintenance of hosting server user has not much to worry about with the security upgrades. The upgrades may offer interruptions with the service for certain time period. Experienced hosting providers usually perform the upgrade operations after informing the clients about possible temporary disruption or during the least usage duration or after migrating the client to the already upgraded server.<sup>[9]</sup>



## 6. Summarizing The Comparison

Accounting firms are not known for their expertise in IT security, but the immense digitization of accounting data and operations has created a demand to implement that expertise. Outsourcing the data and operations on a server that will be managed and protected by a third-party comes as an appealing option. The shift of accounting software to the cloud also pushes accounting firms and professionals to look at the cloud as the only solution that can suffice future.

A decade ago, it was tough for the common computer users, especially accountants (who don't command technical expertise) to imagine the security and accessibility of the data stored in the other half of the planet. Accessibility has improved riding on the high-speed connectivity and consistent networking solutions. The speed of connectivity can be determined by the fact that even an HD video call over cloud will not disconnect when the active server suffers any issue and a new server has to be brought into effect.

On the other hand, today security on cloud though improving for good, it still an arguable topic. Security standards over the cloud-based operation are way stronger than earlier, but the ceaseless efforts of attackers have not allowed providers to offer an unruffled protection. Yet cloud security experts are working to achieve the securest level and there are some promising solutions arriving. Relying on which Gartner predicted that by 2020 user's error will cause 95% of the security breach among the enterprises<sup>[4]</sup>. It suggests that businesses need to look for the solutions beyond local security practices, which is available in the form of Cloud Security Access Brokers (CASB) or hosting with the provider that relies on CASB. What adds more to the assurance on the cloud is that 92% businesses <sup>[5]</sup> find it a completely satisfactory. Thus, the cloud is more secure and trustable solution for your accounting needs.



## 7. Resources

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## About Author

**Nishant Kadian** is an Electronics and Communications Engineer and formally associated with Ace Cloud Hosting as a technical writer. He has a strong interest in cyber security, cloud computing, and accounting applications, such as QuickBooks. He has more than a couple of years of experience of writing in the technical industry. Smartphone, computer, and internet are his best friends and he spends most part of his awakeness with them.

## About Ace Cloud Hosting



**Ace Cloud Hosting** has been a globally trusted cloud-based hosting service provider for over 10 years. The company ranks among the most reliable providers of hosting services for accounting application such as QuickBooks.

The company has the experience to offer clients with reliable services and secure platform for hosting their applications. As an Intuit Authorized Commercial Host for QuickBooks software, Ace Cloud Hosting is the leading QuickBooks hosting provider and is changing the way businesses operate by simplifying access to data and files all over the world. Accountants and CPAs are not restricted by distance and time. The cloud service provided by Ace Cloud Hosting is adaptable and scalable according to business requirements. It provides the ability to expand their business to work with clients from further away.



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