

Best Practices for What Files Do I Put Where?

How to navigate the many options for digital storage



Table of Contents:

Introduction	3
A Brief History of Document Storage	4
Types of Data Storage	5
With More Storage Comes More Questions	6
Protecting Your Business	8
With Great Power Comes Great Responsibility	9
OneDrive for Business	10
SharePoint	12
StorSimple	14
File Management Guide	15
Summary	18

Introduction

Saving digital files used to be so easy — just hit “Control-S”, and “Bam!” — your spreadsheet was saved. If you wanted to take the file with you, you burned it onto a CD, and you were off.

But the modern world of mobile computing has made preserving digital files more complicated. The sheer number and variety of devices that contain your digital content make it challenging to share and access your content, not to mention keep it secure.

Companies and their employees create, store and use digital content on countless devices that can share files either wirelessly, or via removable storage media, so passing files and photos between devices has become incredibly easy. On a personal level, the biggest issue this has created is trying to figure out where that cute picture of your dog is, but at a business level, the decisions on how and where to access, store, backup and protect all that data have never been more complex.

A Brief History of Document Storage

There has been more digital storage created in the last 5 years than in the whole lifetime of the human race! Today, 1 Terabyte (TB) of storage is the norm. Let's just put that in perspective. When IBM came out with the first PC in 1982, it came with a hard disk drive that had the capacity of 5 megabytes (1 megabyte = 1,024,000 bytes). Files were saved to the network or NDrive on file servers that were on premise. You backed up to tapes or disks.

If you wanted to take any data with you, you may remember toting a 3.5-inch floppy to and from work or school which held a whopping 1.44 MB of data. Through the years we saw computer storage options evolve from CDs (700 MB) to Zip and Jaz Drives (up to 2GB) to those convenient USB Flash Drives (64 GB). Oh how far we've come.

While cloud storage has technically been around since the 60's, its popularity only started in 2006 as services like Amazon Web Services(AWS) and DropBox became more widely used. Now the choices are endless: Google Drive, iCloud, Carbonite, SugarSync and OneDrive to name a few.

Types of Data Storage

Digital File Storage has become a hot topic as well as a headache and concern for network administrators, Chief Security Officers, CTOs and pretty much everyone in business today because we are creating so much “content” as well as sharing it with so many people and platforms.

If we were having this conversation 20 years ago, the type of content we would be primarily describing would fall into the category of **structured storage** which contains databases in rows and columns. Think names, account numbers, phone numbers, etc. Today, there is another type of data called **unstructured storage** which includes word documents, powerpoint presentations, photos, pictures, video and audio files.

Another way to define unstructured data is any data that is not in a database. Unstructured data makes up 82% of content created by business users today and this number continues to grow.* (source:)

More Digital Storage Options Means More Questions

There are so many ways to digitally store data today. More and more storage has moved to the cloud yet there is still data you may want on premise. Most users have multiple devices they use and store data on as well. While digital storage options is not an issue, knowing “what to put where?” is the question of the day, or more like hour.

#WhatToPutWhere

Consider this. If you're using Office 365, which approximately 1 in 4 businesses are as of June 2014, each of your users get 1 TB of space in the cloud for OneDrive for Business (sometimes referred to as OneDrivePro).

Let's say you have 1000 employees. That means every employee gets 1 TB which means you now have 1 PB (Petabyte) of storage that you no longer have to purchase. What do you do? Shouldn't you figure out how to leverage that? We think so.

More Digital Storage Options Means More Questions

This has caused a lot of questions about “what to put where” which is why we wanted to write this white paper. Our customers started asking us more and more questions about this topic. Questions like:

- “How do we handle all our data?”
- “What do we keep on our own servers versus in the cloud?”
- “What documents should I put on a local file server, vs OneDrive for Business, vs SharePoint, vs StorSimple?”
- “What do I use if I want to share and collaborate with others?”
- “With all these options, how do I keep track of what I have where?”
- “Is my data secure? How do I back it all up?”

These are big questions. We’ve put together guidelines for you to figure out **#WhatToPutWhere**.

Protecting Your Business

Your data is the lifeblood of your business and it's never been more vulnerable. You've got employees sending out emails with file attachments from all kind of devices, as well as storing valuable data on tablets and smart phones that can easily be lost or stolen. Not to mention what happens if you have a disgruntled employee who actually wants to do harm to your organization. This storage conversation is an important one, but it's vital to ensure that no matter how you plan to store and backup your documents, you think about how you are going to protect your business and valuable assets. There are 3 key areas you need to consider:

1. DLP - Data Loss Prevention
2. Rights Management
3. Multi-factor Authentication

If you don't seriously factor these technologies into your data storage plan, you are putting your business at high risk. To learn more about protecting your business, check out this article: [Proven Advice from a CEO: 3 Steps to Protect your Business](#)

With Great Power Comes Great Responsibility

As we mentioned earlier, Office 365 business customers get 1 TB of OneDrive for Business storage per user as part of their Office 365 subscription which started to roll out in July 2014. Office 365 for business is truly an amazing offering. It's never been easier to manage, share and protect your corporate data. It's a powerful application that offers many choices and the need to make decisions about what data to put where. As a Microsoft Partner, we've migrated thousands of customers to Office 365. While our customers at Champion Solutions Group are excited about the convenience of having their data in the cloud, they are also concerned about what data to put where. Our customers frequently ask us "Now that I am on Office 365, what data should I put in OneDrive for Business versus StorSimple versus SharePoint?"

We've put together these guidelines so you can figure out what to put where. These will be useful when developing digital storage policies for user files or groups of files.

Feel free to jump to the end and look at the graphic we created (Figure 1) to give you a visual way to view these guidelines. However, much discussion is required to help fill in all the gaps that a checklist cannot possibly fill. Please read on.



OneDrive for Business stores and organizes your work documents.

As an integral part of Office 365 or SharePoint Server 2013, OneDrive for Business lets you work within the context of your organization, with features such as direct access to your organization's address book. NOTE: OneDrive for Business is different from OneDrive, which is intended for personal storage separate from your workplace. OneDrive for Business is also different from your team site, which is intended for storing team or project-related documents.

Can OneDrive for Business be used to share files with users?

Yes, it certainly can. However, that's not its primary use. OneDrive for Business can be used when an individual wants to share files, possibly of their own creation, with a small number of other users. When file sharing is more complex or involves many users, one of the other solutions is preferred. However if you often need to share files with a small number of users, files that you have been working on and creating yourself and normally would keep on your personal storage, OneDrive for Business is an excellent place to store your files and share them with other users.

Save documents to OneDrive for Business when:

- **You don't plan to share them.** Documents you place in OneDrive for Business are private by default, unless you place them in the Shared with Everyone folder. This makes OneDrive for Business your best option for draft documents or personal documents that no one else needs to see.
- **You plan to share them, but they have a limited scope or lifecycle.** You may sometimes work on documents that aren't related to an ongoing project, which are important mostly to you, but that you still want to share. For example, perhaps you're writing an article to appear in a blog, and you'd like to ask selected colleagues to review and edit it before you post it. In this case, you expect people to use the document once and then be done with it. People don't need any additional context information, or need to know where in particular you're keeping the document. All they need is a link to the document and editing permission.
- **You can't identify an existing team site where your document belongs, and you don't think the purpose of the document warrants creating a new one.**



The primary value of OneDrive for Business is storing files you want to share with yourself. That's correct, files you want to share with yourself! Today most users have at least two devices, often three or more. One of the great advantages of OneDrive is that it allows you to move from device to device and have access to all of your files all the time. This is extremely useful. What's more, OneDrive for Business provides access to your files securely from any device anywhere simply by logging on to Office 365. This means no matter where you are, if you have access to the Internet, you have access to all your files. Office 365 includes the web-based versions of your favorite productivity applications and Microsoft Office which allows you to edit, update, create, or share, these documents as you travel, with or without your device.

Is OneDrive for Business effective as a backup solution?

Yes and no. Yes, in that OneDrive for Business does make a copy of all of your files from your device(s) and duplicates them in the cloud; and can therefore protect those files in the event that the device is lost or otherwise compromised. However, a true backup also protects us from ourselves. That is to say that if the user accidentally deletes files or edits them, or otherwise modifies them unintentionally, a backup solution allows us to restore those files whereas OneDrive for Business does not. Therefore, OneDrive for Business does not protect us from ourselves as a true backup solution would.

Does OneDrive for Business make a good alternative for a user's home directory?

Again, yes and no. Yes, it does if the users laptop (or other device) is backed up by some other means. But as mentioned before, since OneDrive for Business does not protect you from yourself and unintentional deletes or edits, or other types of unintentional file modifications or corruption, it may not be suitable as a home directory replacement unless a comprehensive and reliable device backup system is in place that will protect the data in these cases. Remember, most data loss is due to user error.



Connect with employees across the enterprise - use SharePoint to engage with people, share ideas and reinvent the way you work together. SharePoint is designed to store files and documents when collaboration, version control, and potentially publishing those documents to the web is important.

Is SharePoint good for workflow?

SharePoint provides a strong platform for implementing workflow within your organization, and workflow allows your end-users to check documents in and out and complete their portion of the document and essentially “pass the baton” to the next user such that they can make their contributions to the document. Workflow, combined with the audit trail and full-text search, and versioning, make SharePoint an extremely powerful tool for sharing and developing documents.

Can I use SharePoint as a replacement for my file server?

SharePoint is not appropriate for storing large numbers of files so we don't recommend you use it as a replacement for your file server. However, if you need to share files that require various levels of collaboration; if you need to retain all versions of files; if you need to maintain an audit trail for all edits of files and if you need to include a long text description with each of the files that can be searched via full text search, SharePoint is most certainly the right data storage solution for these files.

What's the difference between OneDrive for Business and SharePoint Online?

OneDrive for Business IS SharePoint Online; essentially they are only different because of the user experience, layout of the site, and initial permissions layout. They are the same product with the exception that OneDrive for Business is geared towards individual storage, and security is by default trimmed for personal access only. OneDrive for Business is hosted inside SharePoint Online, and is thus governed by the rules of SharePoint Online - this applies for the feature set and the limitations.

SharePoint Online and OneDrive for Business have almost the same capabilities and features depending on which subscription plan you are looking at.

The following examples are Library Settings, and only need the library to be customized and have these options adjusted:

- Check-in/Check-out
- Versioning
- Publishing/Content Approval
- Share with myself
- Granular SharePoint permission controls available
 - ✓ Share files, folders, libraries, sites with other company users
 - ✓ Share files, folders, libraries, sites with external users
- Full search capabilities (as long as using a compatible file type)

SharePoint Online storage is controlled by the Office 365 tenant and the respective site used for storage, and by that nature is expected to be comprised of company business related documentation for that corresponding site.

Main Things SharePoint does that OneDrive for Business Does not:

- **Dashboards:** Employees sign in on branded company pages that can feature news, announcements, notices — pretty much whatever you want everyone in the company to see.
- **Sites:** After signing in to the main company dashboard, employees navigate to their department's site, or even their own site, where they find all the documents they need to work on, along with things like reminders and notifications of coworkers' availabilities.
- **Workflows:** These are automated actions that you can set up that get triggered whenever someone uploads or edits a document. A common example of a workflow is one that automatically sends an email notification to people in other departments if a document or series of edits needs some kind of administrative approval.
- **Lists:** These are similar to spreadsheets, and they're used to provide information in areas where they can be accessed by different types of users. A common example is a list of employees with their roles and contact information.
- **Calendars:** These can be used to schedule meetings, set up notifications and reminders, and help workers keep track of each other's availability.

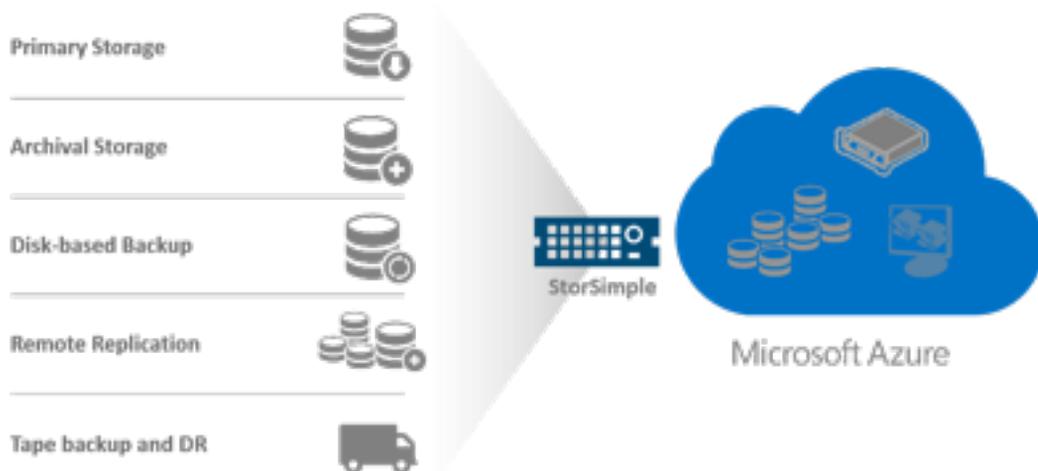


Last but certainly not least is StorSimple. Microsoft's StorSimple provides a high-performance gateway to the endless storage capacity within the Azure cloud. With its high-performance hybrid storage (flash storage combined with tried and true rotating media) and near-line storage in the cloud, all from one integrated device, it certainly simplifies hierarchical storage.

StorSimple provides a great mass storage device for large quantities of unstructured data, making it an excellent back end for corporate file servers. And, with StorSimple you get integrated storage data protection, offsite replication and a foundation for disaster recovery all in one, high-performance, package.

StorSimple is the preferred data storage solution for storing mass quantities of unstructured data and implementing hierarchical storage rules to that data such that frequently used and accessed data is stored in the very fast, flash storage, and the seldom accessed data is stored only in the cloud, with the remainder stored on the devices rotating media SAS drives.

StorSimple provides scalable, durable cloud storage, backup, and recovery solutions for any data, big and small. It works with the infrastructure you already have to cost-effectively enhance your business continuity strategy as well as provide storage required by your cloud applications including unstructured text or binary data such as video, audio and images.



File Management Guide: What to Put Where

File Management Guide Legend	
Primary	✓✓
Alternative	✓
Not Recommended	✗

	OneDrive	SharePoint	StorSimple	Notes
Share with myself on any of my devices	✓	✗	✗	
Share specific file/folders with individuals outside my organization	✓	✓	✗	OneDrive for temporary/adhoc; SharePoint for ongoing.
Requires Versioning	✓	✓✓	✗	SharePoint for version control and collaboration across versions, OneDrive preserves versions.
Access my personal files from shared computers and devices	✓	✗	✗	
Email large files	✓	✗	✗	
Files normally stored on my internal storage	✓	✗	✗	
Personal files that need to be protected (duplicated) offsite	✓	✗	✗	

File Management Guide: What to Put Where

 Champion	OneDrive	SharePoint	StorSimple	Notes
Documents that require workflow	✓	✓✓	✗	OneDrive facilitates limited collaboration and workflow, with SharePoint providing for more customization in terms of function as well as look and feel.
Documents that are developed collaboratively	✓	✓✓	✗	SharePoint provides for a more user-friendly UI.
Documents accessed by many with varying access (security) levels	✓	✓✓	✗	SharePoint provides for enterprise wide management of access.
Documents requiring governance/audit trail for compliance	✗	✓	✗	
Requires Checkin/Checkout	✗	✓	✗	
Need extended/full text search	✓	✓✓	✗	SharePoint provides for custom, detailed descriptions that are full-text searchable.
Shared through a web interface/application	✓	✓	✗	OneDrive is preferred for Adhoc sharing.
Need extended, searchable descriptions/catalogs	✓	✓✓	✗	SharePoint provides for custom, detailed descriptions that are full-text searchable.
Need to be directly associated with an SQL database	✗	✓	✗	Files can be associated with SQL database data when stored in SharePoint.

File Management Guide: What to Put Where

 Champion	OneDrive	SharePoint	StorSimple	Notes
Manage access through Active Directory	✓	✓	✓	Full integration with AD across all modes of storage.
Mass amount of unstructured, business critical data	X	X	✓	
Data that needs to be shared enterprise wide, or in major subsets thereof	X	✓	✓	SharePoint provides means for a more user friendly UI, if desired.
Unstructured corporate data that is shared with many but seldom accessed	X	✓	✓	StoreSimple will store infrequently accessed data in Azure, saving primary storage.
Unstructured corporate data that is shared with many and frequently accessed	X	✓	✓	SharePoint provides means for a more user friendly UI, if desired.
Unstructured corporate data that is shared with many and frequently modified	X	✓	✓	SharePoint provides means for a more user friendly UI, if desired.
Management of data/files is provided by corporate IT (not individuals)	X	✓	✓✓	StorSimple preferred for corporate file shares.
Data requires integral encrypted, offsite backup	X	X	✓	
Mission critical data that needs to be a part of corporate disaster recovery plan.	X	X	✓	

Get to Work!

What to Put Where Summary

As we mentioned, digital file storage is a hot topic and concern for network administrators, Chief Security Officers and CTOs because we are creating so much “content” as well as sharing it with so many people amongst multiple platforms.

The conversation and questions around **What to Put Where** is an ongoing one that we at Champion Solutions Group are constantly thinking about so as to provide our customers and community with useful guidelines. This white paper is the start of that conversation and one that we will continually add to and evolve.

Many of our customers use Office 365 which offers advantages such as substantial productivity increases and a huge potential of savings in deployment and maintenance costs. Microsoft Office 365 gives organizations access to solutions that leading companies in the world are using at a fraction of cost. But as we’ve discussed, the functional overlap between SharePoint, OneDrive for Business and StorSimple have led everyone to one big question: “What do I put where?”

Get to Work!

What to Put Where Summary

At Champion Solutions Group, we specialize in simplifying and enhancing your IT experience. We've been delivering technology services and solutions for over 3 decades and have helped thousands of our customers reduce costs, increase productivity, and mitigate risks.

As one of Microsoft's most progressive cloud partners, we consistently create and provide useful and timely tools, tips, services and software, which extend the functionality of Microsoft Online.

Let's keep the conversation going using #WhatToPutWhere and share your feedback and additional questions on [Twitter](#), [Facebook](#) and [LinkedIn](#). We're waiting to hear from you!