

TIME MACHINE

the easy way to back up your computer 👍

Good Morning (Evening)! This presentation will discuss Time Machine — the easy way to back up your computer!



WHY BACK UP???

'cause you KNOW you should...

So, you know you should back up but why? Most folks have many precious files on their computers. You might have those wonderful photos of your kids and grandkids. How would you feel if you lost them all, never to be seen again? What if you run a small business and your internal hard drive failed on your Mac? Would you be stuck without being able to replicate important business files? All of these and many more are reasons why you **MUST** have a back up strategy.

Before we start, I will have a copy of this Keynote presentation, along with all my presenter notes up on the website, so you won't need to take any notes as I talk today/tonight.

What do I need?

- Software?
- Hardware?
- Time?
- Reminders & Persistence?

So, I've convinced you that you need to back up. Now, what is it that you will need? Will you need additional software? Will you need additional hardware? How much of your time will be involved? And who's going to continually remind you to perform your back up?

What Software do I Need?

- Mac OS X Leopard (10.5), or above (the Time Machine software comes with the operating system)



Let's look at what software you'll need. If you have a computer running Mac OS Leopard (which was 10.5) or any other operating system beyond Leopard, you already have the Time Machine software that comes with your operating system. No other software is needed!

What do I need?

- Hardware

Next you'll be wondering if you need additional hardware.

What Hardware do I Need?

- My Macintosh Computer
- An External Hard Drive



And what hardware might that be? Obviously, you'll need your Macintosh computer. Then, you'll need to invest in an external hard drive.

External Hard Drive

- How big should the hard drive be?
- What type of hard drive do you need (USB, Firewire, Thunderbolt)?
- How should the hard drive be formatted?
- What brand hard drive should you buy?
- Where should you buy it from?



Let's talk a bit about the external hard drive decisions. First, how big should the hard drive be? Time Machine needs 2 to 4 times as much space as the data it's backing up. So, if your hard drive has 300 GB of data on it, (show them how to tell), you'll need an external drive that is around 1 TB. If in doubt, get a bigger one than you think you need now. If you get a really large external hard drive, you can always partition it and use only one partition for Time Machine.

Next, do you need a USB, Firewire or Thunderbolt drive? Speed and cost are the main issues here. The cheapest is to go with the USB type; make sure it's USB 3.0 to be compatible with current and future computers. The newest type is Thunderbolt, which is really, really fast but really, really expensive.

Don't worry about how the hard drive is formatted. We'll take care of that in our set up. SMUG — make sure MacOS Extended (Journaled) is selected under the format section and then erase disk.

Typical brands that work well with Macintosh computers are LaCie, Seagate, Western Digital, G-Drive, Apple Time Capsule. Depending on whom you speak to, you'll get different recommendations. All drives fail eventually!

Where should you buy your drive from? Buy it from a reputable store (physical or online) — the one where you get the best deal. Shop around; you're sure

Hardware & Software in hand, now what?

- First, consider if you want to partition the external hard drive.
Reasons why:
 1. you want to backup more than 1 computer on the drive
 2. you want to use part of the external drive for another purpose
 3. you want to have more than one backup of a single computer on the external drive

Now that you have the correct operating system with the software, Time Machine, and you have an appropriate external hard drive, what now? First, you need to consider if you want to partition the external hard drive. What would be several reasons why you'd want to do that?

How to Partition External Hard Drive

Demo

So, now you're probably wanting to know how to go about partitioning an external hard drive — right?

For SMUG members, I won't have time to do the Demo showing you how to go about this so if you want to see the demo, you can attend the MIAMUG meeting this coming Saturday.

I'm going to show you exactly how to do that and from within the same application, I will also show you how to properly format the external drive even if you don't want to partition it. We're going to do all of this by using the handy Disk Utility application that is on everyone's computer.

Demo!

Once it's partitioned, what's next?

This is **REALLY, REALLY** hard...

1. plug the external drive into the computer
2. when asked if you want to use this external drive as your Time Machine drive, answer "yes"!!!



3. Time Machine will automatically take care of everything else...

Once your external hard drive is partitioned or formatted properly, you'll need to know how to begin your backup process. This is really, really hard, so concentrate...

What are the time factors?

- the backup will take a long time initially
 - and “yes” you can use your computer while the backup is being done
- it will take a much shorter time subsequently
- subsequent backups will be made every hour when the computer is not sleeping

The first backup is a complete backup of every single file on your computer and will take awhile, depending on the used size of your hard drive and the speed of your computer processor.

And “yes”, you can continue to use your computer while the backup is being done.

The next backup (an incremental one) will only backup any files that have changed since the last backup. So, it will take only a fraction of the time.

From here on out, Time Machine will make another backup every hour when the computer is not sleeping.

Advantages to an Incremental Backup

1. you can go back in time (hence the name, Time Machine) and recover earlier versions of documents, photos, emails, etc.
2. things that have been deleted are recoverable
3. you can do a complete restore, if necessary

Unlike applications that only backup the entire drive and then replace that backup with an entire current backup, Time Machine does an incremental backup. The advantages to this type of backup are:

How to Monitor Time Machine

- The Time Machine menu in the menu bar shows you what's happening...



Idle



**Backup
in progress**

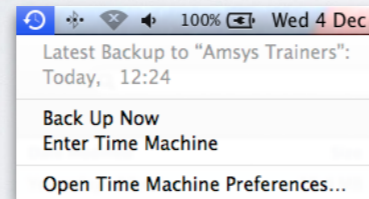


**Cannot
Backup!**

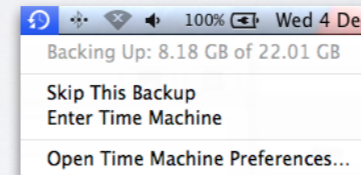
The Time Machine menu in the menu bar (at the top of your computer) lets you know when a backup is happening in the background. So, this is the icon when Time Machine is idle. This is the icon when a backup is in progress (note that the icon is rotating in versions prior to Mavericks). And if you see this icon, it means something is wrong and the backup failed.

How to Monitor Time Machine

- If you click on the Time Machine menu in the menu bar, you can check the status of backups



Idle

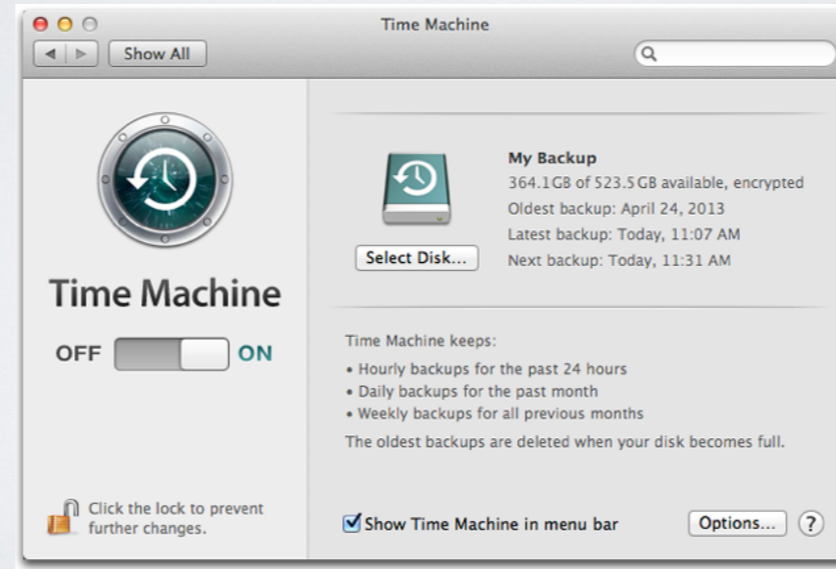


**Backup
in progress**

If you click on the Time Machine menu in the menu bar, you can check the status of backups. So, this is the idle state and you can see when the last backup occurred. In this next instance, the backup is taking place and tells you how much is being backed up. In both of these menu items, you can enter Time Machine for a restore or open the Time Machine Preferences.

Time Machine Preferences

- You can set many other options by accessing the Time Machine Preferences



Time Machine Preferences allow you to set many other options.

1. You can select another external disk for using Time Machine.
2. You can turn Time Machine on and off.
3. You can click on the Options button, which lets you exclude items from the backup.

Restore

- Types of restore
 1. Complete Restore
 2. Partial Restore



Now that you've set up Time Machine, how do you go about restoring data? This is a step that most people have never looked into and have never taken the opportunity to learn about. It is essential that everyone know how to go about this.

There are 2 types of restore. Complete restore means that you completely replace the entire operating system, plus all the applications and all your computer files in such a case when your internal hard drive has developed problems and is not working properly or has completely died.

A partial restore is called for when you've accidentally deleted an individual file or files that you want to replace.

When bad things happen, the cardinal rule is... Don't Panic!

Complete Restore

- Steps to take...
 1. Start up your Mac from your Recovery HD (install disc on Snow Leopard or earlier) or by holding down the command+R keys when starting up and choose “restore from a Time Machine backup”.
 2. Select “Restore From Time Machine Backup”

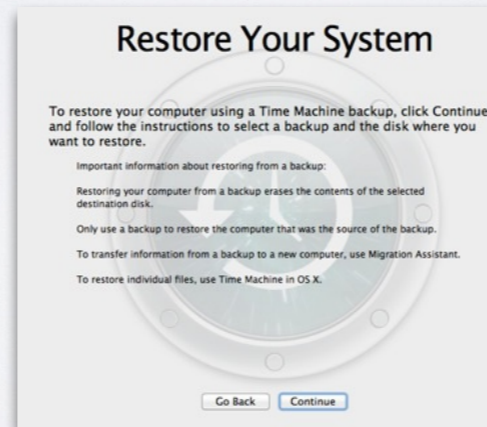


Here are the steps you'll want to take for a complete restore...

1. If you have Snow Leopard or earlier, you'll need to start up your Mac using the install disc that came with your computer, holding down the "C" key to force the startup from the CD/DVD. Once you're booted from the CD/DVD, choose Utilities > Restore System From Backup and follow the onscreen instructions.
2. If you're on a system later than Snow Leopard, make sure your external hard drive is plugged into the computer and hold down the command+R keys at startup and choose "restore from a Time Machine backup.

Complete Restore

- The next steps to take are...
 3. Select the backup you want to restore, and where you want to put it.
 4. Wait while your Mac does all the work (copying all your stuff).
 5. Start up normally and you're back in business!



Then find the Time Machine backup on the external drive and select the date and time of the backup you want to restore, and then follow the onscreen instructions.

Note that after you restore your system from a Time Machine backup, Time Machine may perform a full backup at the next scheduled backup time. This is normal. Time Machine will resume incremental backups after the full backup is completed.

Partial Restore

- If you only want to restore a single or multiple files
 - I. Use the Time Machine interface from the computer...

Demo

Let's talk about a Partial Restore now.`

If you only want to restore a single or multiple files, you'd use the Time Machine interface from the computer.

A partial restore is MUCH easier and much more fun to perform. This is probably something you'd be more likely to do and something that a lot of folks forget is possible.

Now, let's do a demonstration to show you how it's done.