Gabriel Soto

Gabriel Soto is the IT Director of Celebration Church which has multiple locations in the Austin metroplex and multiple location in Xai Xai Mozambique in Africa.



He specializes in live, video and graphic production workflows and leads meetings for local businesses in his local Apple store.

He also loves photography, music and competes in triathlons.

Time Machine Deep Dive, and Fitting it Into a Backup Strategy



Why should I back up?

- Versioning?
- Retention Schedule?
- Auditing?
- Analytics?

MACTECH PRO EVENTS

tmutil: the Overview

- man tmutil:
  - one of the best written man pages ever

```
TMUTIL(8)                BSD System Manager's Manual                TMUTIL(8)

NAME

     tmutil -- Time Machine utility

SYNOPSIS

     tmutil verb [options]

DESCRIPTION

     tmutil provides methods of controlling and interacting with Time Machine,
     as well as examining and manipulating Time Machine backups. Common abili-
     ties include restoring data from backups, editing exclusions, and compar-
     ing backups.

     Several, but not all, verbs require root privileges.
```

tmutil: verbs you want to know about

- setdestination
- startbackup
- restore
- destinationinfo
- compare
- inheritbackup
- associatedisk
- calculatedrift
- uniquesize
- disablelocal

Time Machine Examples

elliot — bash — 120×40

```
tmutil uniquesize "$(tmutil latestbackup)"
173.4M   /Volumes/Time Machine/Backups.backupdb/My Mac/2015-03-08-175309
```

Time Machine Examples

elliot — bash — 120×40

```
tmutil destinationinfo
> ====================================
Name          : Time Machine
Kind          : Local
Mount Point   : /Volumes/Time Machine
ID            : 0D8761C1-FE00-454E-A5AC-71D50C6E2F46
```

Time Machine Examples

elliot — bash — 120×40

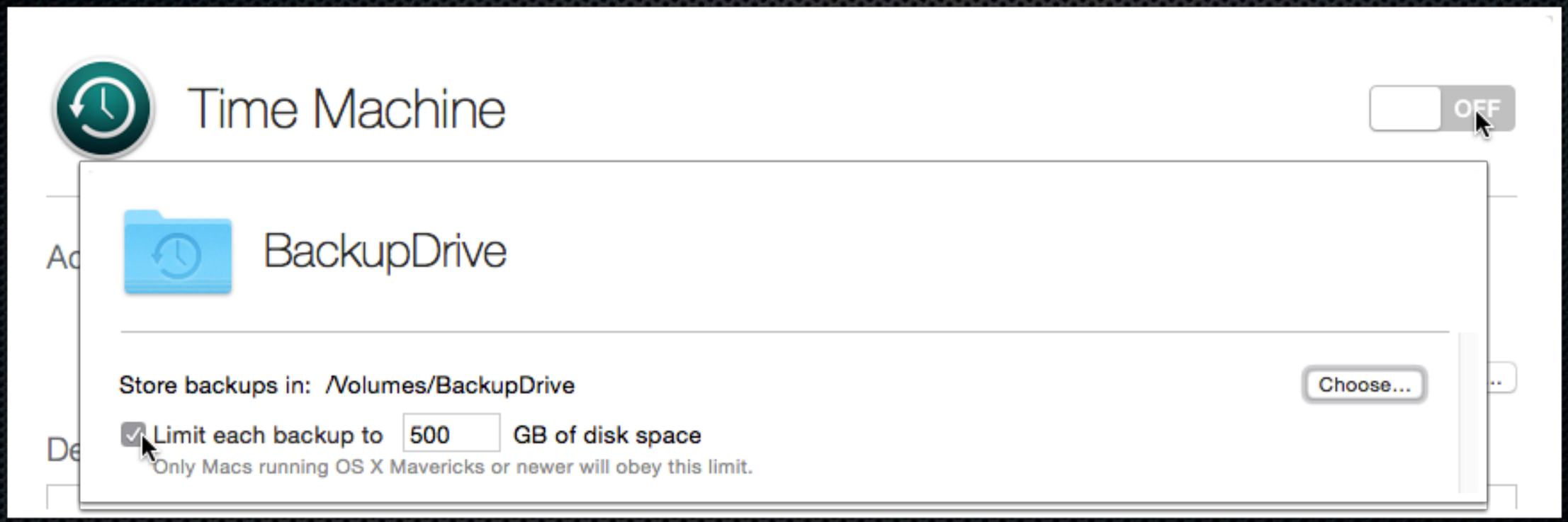
```
tmutil restore /Volumes/BackupDrive/
   Backups.backupdb/MacName/Latest/MacintoshHD/
   Users/User/Documents/Document.pdf /Volumes/
   MacintoshHD/Users/User/Desktop/
```

Using Time Machine to Backup Servers

- use tmutil disablelocal to disable processes that could cause disk thrashing if a backup drive were to become unresponsive during server operation
- Example: database files
- Restoring OS X Server from a Time machine backup. See http://support.apple.com/en-us/HT202406

OS X Server
Time Machine Service

- Enable Time Machine in just a few clicks

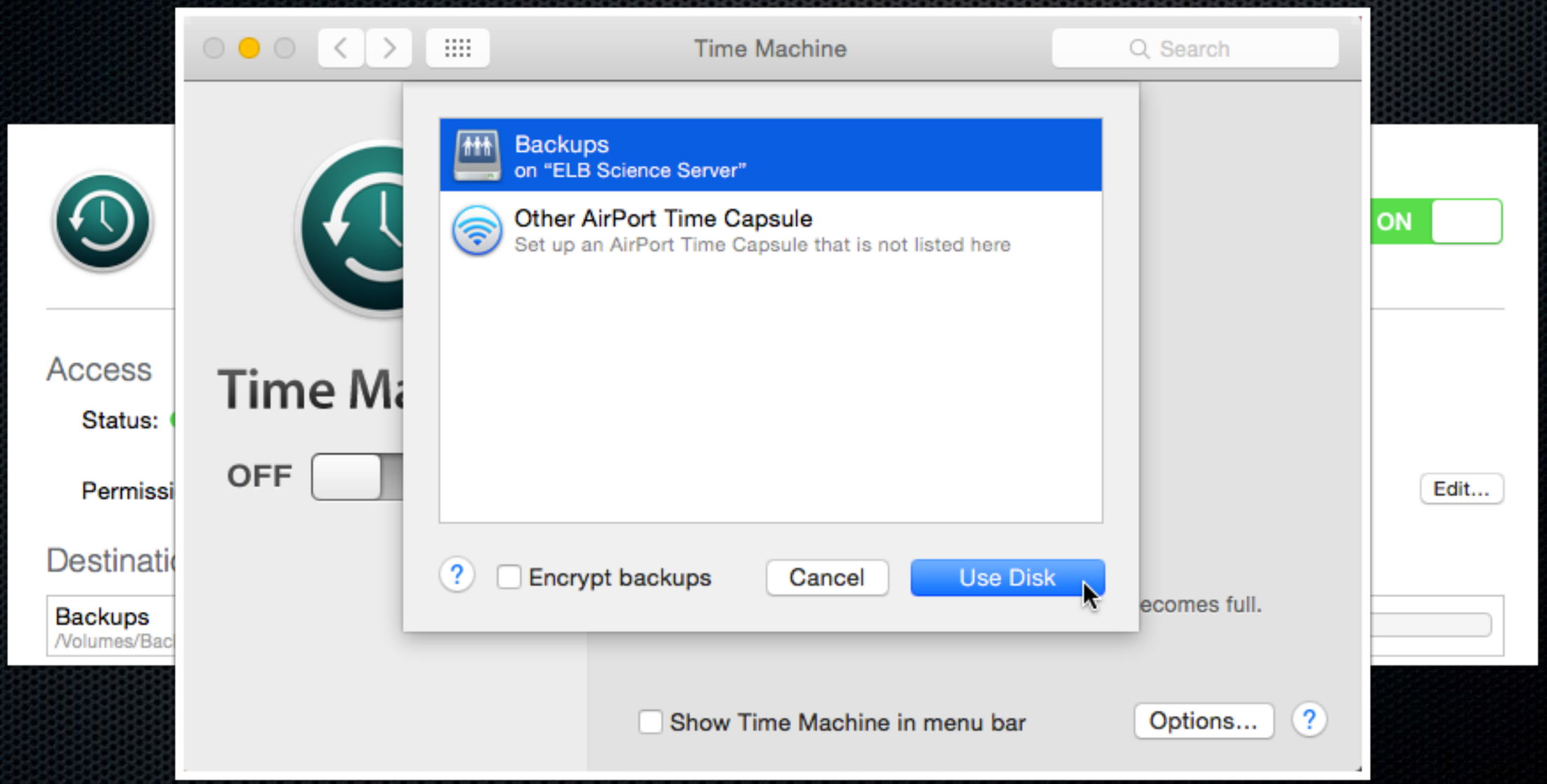


- Direct backups to different storage locations
- Set Space Restrictions (Mavericks and above only)

MACTECH PRO EVENTS

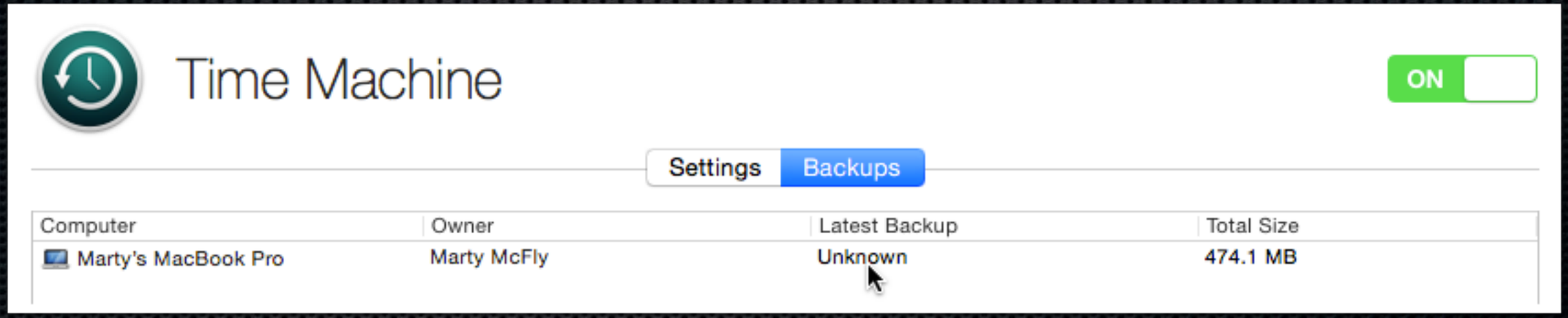
OS X Server
Time Machine Service

- Time Machine is now a destination on the network



OS X Server
Time Machine Service

- Track backups
- Push and email notification if a backup has not completed



Backup Best Practices



3-2-1: Rules for yourself

- What guidelines should a backup process follow?
  - 3-2-1: Rules for yourself.
    - 3 copies of each important file,
    - 2 different media (disk, cloud, etc..),
    - 1 copy stored in another location.

Example Configurations



MACTECH PRO EVENTS

Example Configurations



MACTECH PRO EVENTS

Example Configurations







MACTECH PRO EVENTS

Example Configurations



MACTECH PRO EVENTS

Big Data Questions

- What do you do when you have 5, 10, or 25 TB of data?
- What are real, practical ways to get this much data backed up?
- What's the expectation for restore time?
  - 15 Mbs: 1 TB = 7 days
  - 100 Mbs: 1 TB = 23 hours
- What's the best ways to have multiple copies, and off site?



Is it ok to use Time Machine as the only solution?



Is it ok to use Time Machine as the only solution?

Advantages

- Dead simple to configure
- Built-in to OS X
- Supported by Apple
- Simple restore interface
- Versioned
- Free

Limitations

- Doesn't always recover well from corruption and errors
- Central reporting is minimal, do-it-yourself
- Requires hardware (hard drive or network storage)
- No automatic offsite backup



Time Machine

Network and cloud backup from Third Parties

- Why do you use a third party?
  - Scalability
  - Reliability
  - Reporting
  - Features
- Take note of bootable restore, or not
- Cloud or local?
- What media options are offered?

Third Party Options

Advantages

- Creates bootable clones
- Minimizes downtime during recovery
- Email reporting
- Very customizable



Limitations

- Not versioned
- Difficult to configure for offsite backup
- Great for servers, not so good for backing up endpoint Macs
- Costs more than free*

*and worth it

Third Party Options

Advantages

- Scalable
- Backs up to a local server, to cloud, or both
- Deduplication and compression
- LDAP integration
- Extensive reporting
- Relatively easy to deploy to your Mac fleet



Limitations

- Great for endpoint Macs, not so good for backing up servers
- Costs more than free*

*and worth it

Other Third Party Options:

- Backblaze: Easy, inexpensive
- Acronis: Remote client speed
- Archiware for large archives
- Retrospect: Media types, legacy
- Consumer Cloud: Carbonite, Mozy
- Sync Utils: ChronoSync, Synchronize! X Plus
- Clones: dmg, SuperDuper, CopyCatX

More Resources

- Time Machine
  - Transfer Time Machine backups to a new drive [HT202380]
  - Local Snapshots [HT202301]
  - Time Machine Troubleshooting [PH18850]
  - Krypted: Yosemite Server Time Machine Service
  - Pondini.org

- TimeMachine Tools/GUIs/etc.
  - Watchman Monitoring (reporting, set trigger time and frequency)
  - Time Machine Editor (schedule editor)
  - iScheduleTimeMachine (schedule editor & toolbar replacement)
  - TimeMachineScheduler (beta for Mavericks, no updates over a year)
  - BackupLoupe

- tmutil
  - Man Page
  - Krypted: Mass Deploying Time Machine

- OS X Server Essentials 10.10 by Arek Dreyer, Ben Greisler

- BackBlaze Best Drive Survey

Questions?



Gabriel Soto
gsoto@celebrationchurchtx.com
@gssoto

MACTECH PRO EVENTS