# Choosing Enterprise Backup Software to Protect a Mobile World

Presented By
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codefortytwo software

About Us

- Developing enterprise-level software since 2001
- Headquartered in Minneapolis - MN
- 120+ Employees worldwide*
- Serving the Fortune 1 to the Fortune 10000
- CrashPlan - Consumer
- CrashPlan PRO - SMB
- CrashPlan PROe - Enterprise
- 100 PB + 1PB/week
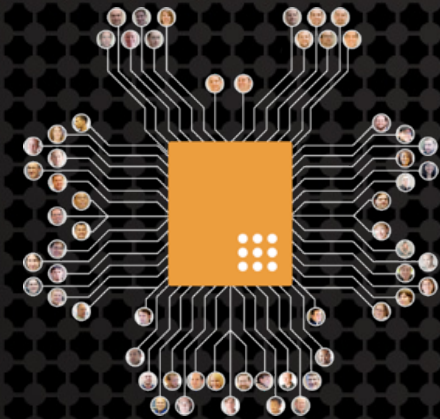
MISSION : To protect the world's data

Quick about me:

- 6 Years Apple, IS&T Desktop Engineer
  - Global NetBoot/NetInstall
  - Global Backup solutions
    - CrashPlanPROe for Apple employees
  - Collaboration and Wiki services
  - New release software certification
  - Acquisition "Mac" training
  - Keynote training
- 2 Years Code 42, Enterprise Engineer
  - Oracle, Expedia, SanDisk, Intuit, Genentech, Intel, Nike

Butterflies in the Amazon: **How I got here**

Truth about Backup: **Industry Secrets**

The industry's dirty secrets

- Backup is only useful if its in more than one location
- It's not just for failed hardware
- Backups should be treated equally as originals
- If it doesn't happen transparently and frequently, it will fail
  - (we're human after all)
- Garbage in, garbage out
- The restores are what matter

Today's Topic: ~~Server~~ **User backup**

- For servers, we really want

    - Replication

    - Resiliency

    - Scalability

- Backup for when "fit hits the shan"

    - Failure

    - Disaster

- No magic bullet

Backup Evolution: **How we got here**

- Manual copy

- Backup software (Automatic copy)

- Network

- Cloud

- Continuous backup

- Versioning

- Encryption

- Deduplication

- Self-service restore

- Multi-destination

Terminology: **What is NOT backup?**

- File servers

- Dropbox/Box/Sugarsync

- iCloud

- Network home directories

- That old HD

- RAID

- RSYNC*

- Time Machine

Theme: **Protect the edge**

- Data lives on laptops
  - 58% mission-critical corporate data - Gartner
  - Must be protected automatically and continuously
- Protect where data is created
- Always connected

Software: **Client**

Required features

- Engineered for laptops/mobile

- Continuous, Automatic protection

- Invisible performance

- "Macness"

- User-initiated restores

- Cross-platform

- Privacy

- Deployability

- Integration

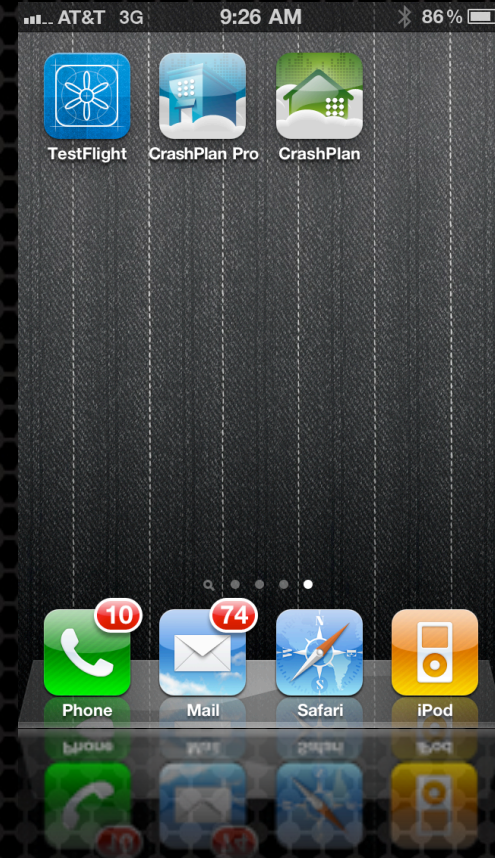# Software: **Client**

What to look for

- Throttles

- Resiliency

- Minimum interference

- Versioning

- Meta-data

- New Mac OS feature support (gatekeeper)

- Admin controls

- Automatic updates

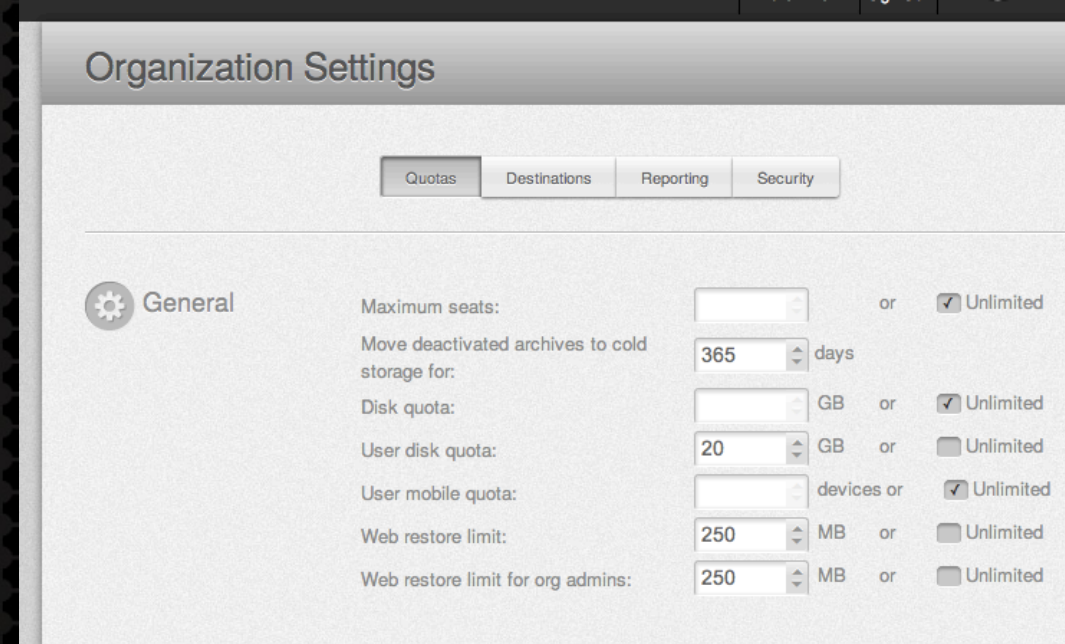# Software: **Mobile**

Why this matters

- Productivity and morale booster

- Liberate computer data onto other devices

- Ubiquity

- Simplicity

- We will eventually back up mobile devices

Software: **Mobile**

What to look for

- Central policy management

- Encrypted data/passcode

- Caution: No true mobile backup

  solution for iOS*

- Throttles

Organization Settings

| Quotas | Destinations | Reporting | Security |

⚙ General

Maximum seats:		or	✓ Unlimited
Move deactivated archives to cold storage for:	365 ↕ days		
Disk quota:		GB or	✓ Unlimited
User disk quota:	20 ↕ GB	or	☐ Unlimited
User mobile quota:		devices or	✓ Unlimited
Web restore limit:	250 ↕ MB	or	☐ Unlimited
Web restore limit for org admins:	250 ↕ MB	or	☐ Unlimited

Software: **Server**

Features

- Centralized management
- Directory services integration
- Cross-platform
- Admin restore
- Web restore
- Automatic client upgrades
- Alerting and reporting
- Tiered administration
- Flexible roles
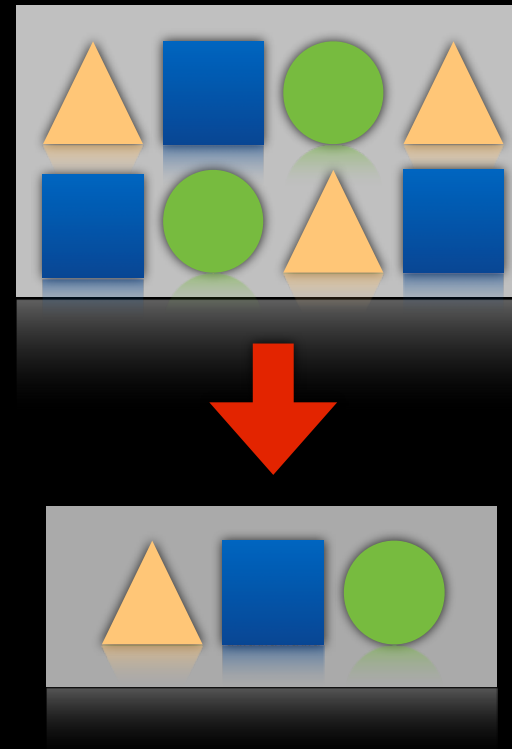- Integration

Software: **Server**

What to look for

- Gleaning

- Archive verification

- Scalability

- Flexibility

- API

- Tape is 4-letter word

Technology: **Deduplication**

- Client-side vs server-side

  - Pitfalls of "global" deduplication

- Bandwidth

- Storage

- Scalability

CRASH**PLAN**PRO*e*
Byte-level data de-duplication

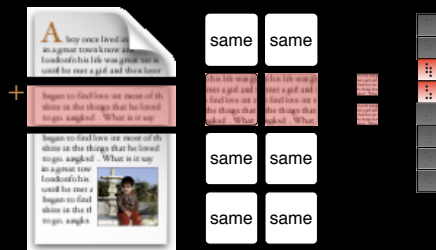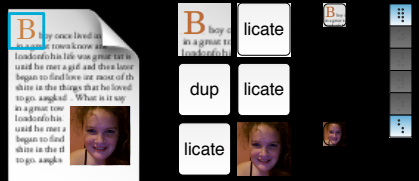Detect, Analyze, Compress & Encrypt   Transmit   Store
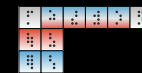
New file

File changes

Save as

Technology: **Security**

Must have #2

- Encryption

  - Data

  - Transmission

- Access controls

- Key escrow

- Admin restores

- Logging/Auditing

Decisions: **Choosing a vendor**

Be careful!

- Free*
  - "No such thing as a free lunch" - Dr. Hart
- Server backup products
  - Atempo Live Backup, CommVault Simpana, EMC Avamar, HP Data Protector, IBM Tivoli Storage Manager FastBack, Symantec Backup Exec DL, IronMountain/Autonomy/HP Connected
- From the ground-up products
  - Code 42 CrashPlan PROe, Copiun Data Manager, Datacastle RED and Druva inSync
- Cloud only products- Mozy, Carbonite, Green/Blue
- What storage services do they offer?
- Macs!
- Progress of development
- Technology

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Lions, tigers and Clouds oh my!

Where do we store our data?

Storage: **Pure Cloud**

Benefits

- Zero Infrastructure
- Instant startup
- Signup, authenticate and restore from anywhere
- Data stored offsite

Storage: **Pure Cloud**

Considerations

- Slower backup and restores
  - Not a good solution for time sensitive data*
- Limited/No LDAP integration
- Service provider has data AND encryption keys
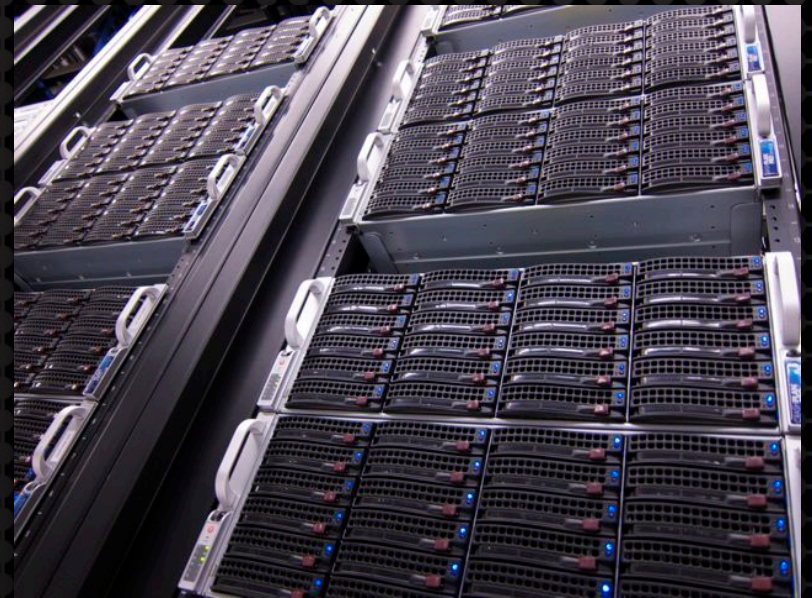
Storage: **Pure Cloud**

What to look for

- Seeding
- Disk-to-mail restore
- Certifications
- Global locations
- Safe harbor
- Bandwidth/usage caps
- Multi-tenant / Single-tenant
- Reporting

Storage: **Private Cloud**

Benefits

- Completely private

- Use your infrastructure

- Managed appliances

- Fastest possible backup and restore

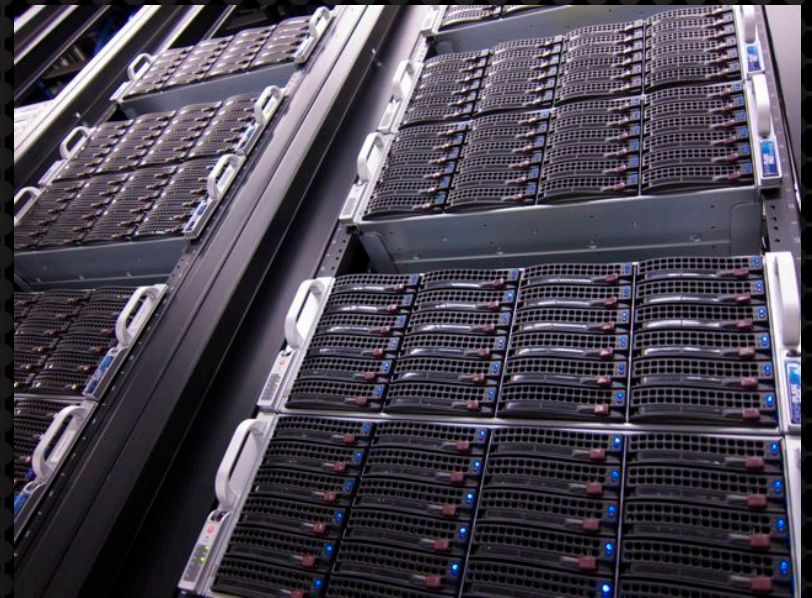- Easily exposed into DMZ for Internet backup

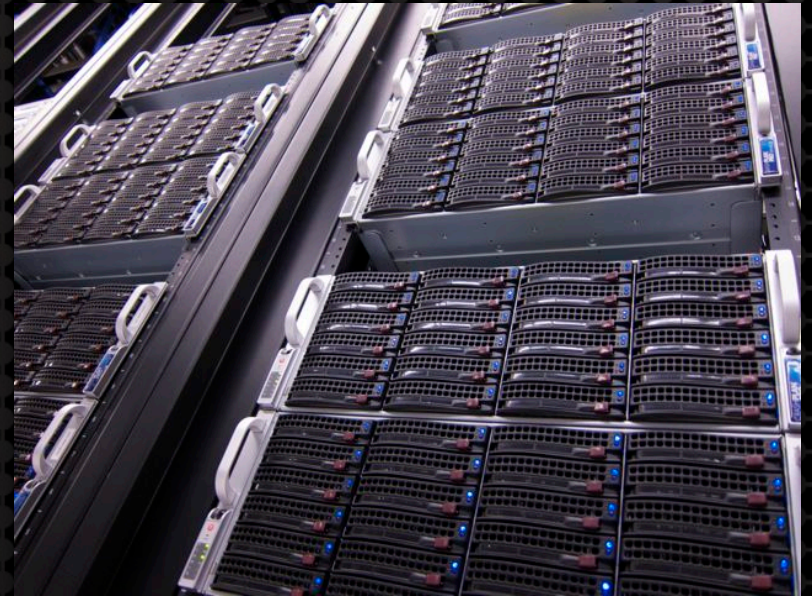# Storage: **Private Cloud**

Considerations

- Power and network

- BYOS requires care and feeding

- Complex network setup for DMZ/
  Internet backup

- Not offsite

# Storage: **Private Cloud**

What to look for

- Multiple destinations

- Managed appliances

  - Best of both worlds

- Server best practices still apply
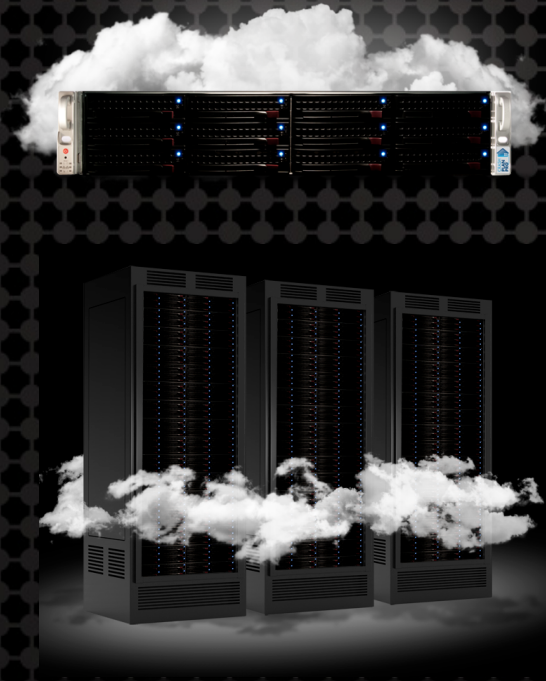
Storage: **Hybrid Cloud**

Benefits

- Policies and encryption keys stay private

- Ensure users are on corporate network before restore

- Full LDAP support-
  - Location/dept, Admin attributes, status etc

- Onsite storage for VIP users, migrations, DRN holds

- API, logging and audit options
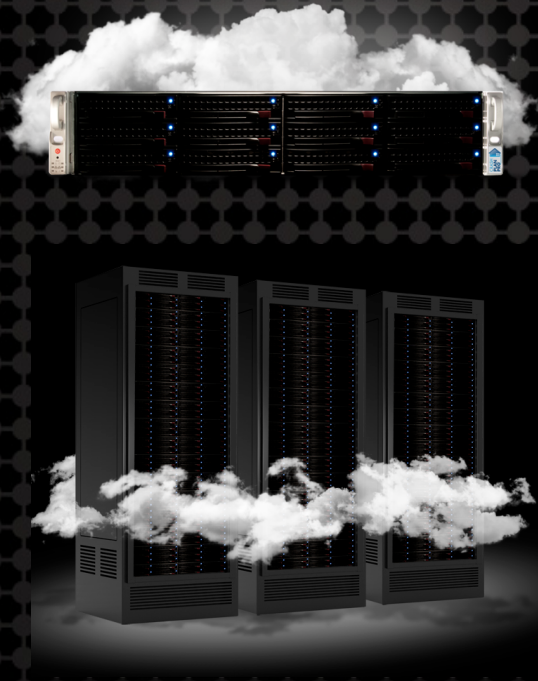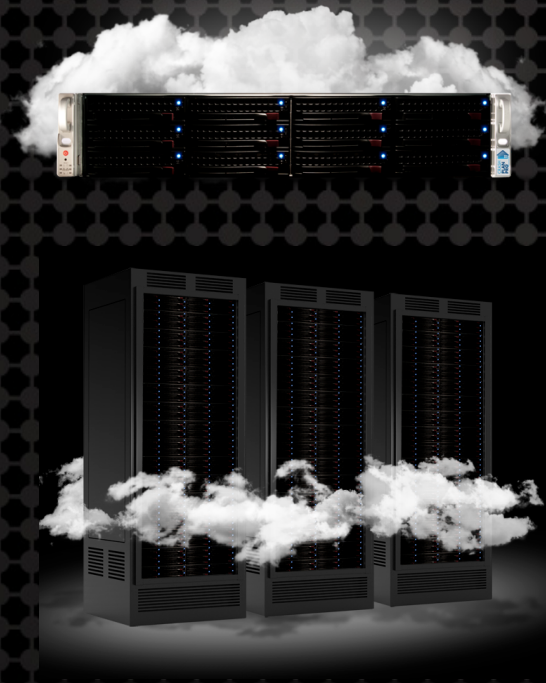
Storage: **Hybrid Cloud**

Considerations

- Additional server

- More complicated

- Authentication from anywhere requires additional network setup

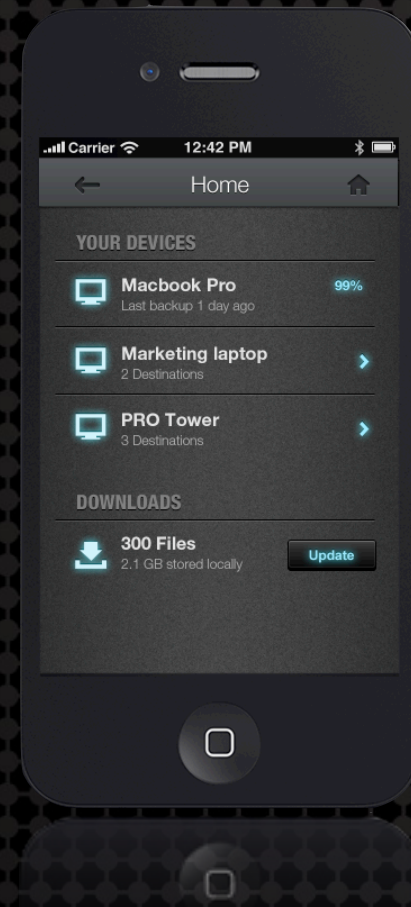# Storage: **Hybrid Cloud**

What to look for

- Managed appliances for full "cloud like" experience

- Multiple destinations

- Protect Master DB

Backup is more than an Insurance Policy

Beyond Backup: **Ubiquity**

- Easy file access from anywhere

  - Another computer

  - Web browser

  - Mobile

Beyond Backup: **Legal & Discovery**

- Instant computer snap-shot
- Unlimited versioning
  - File change history
- Archive containment

Beyond Backup: **Migrations**

- Transfer-free migration

- No additional software

- Across architecture

  - Win XP <-> Win 7

  - Win 7 -> Win 8

  - Win <-> Mac

  - Linux <->Win

- Mac deployment

  - Win -> Mac

Beyond Backup: **Lower IT headcount**

- Self-service restores meets enterprise
- Tight directory services integration
  - Auto quarantine
  - Auto geographic routing
  - Auto policy management
- Example: Code 42 is a services company
  - One stop shop
- Cloud

What's happening at Code 42

Code 42: **What's new**

- **CrashPlan PROe 3.2**
  - Realtime HTML5 management console
  - Load balancing
  - Mobile devices
  - Push restores
  - Tons of new LDAP/Security features
  - Backup sets, network blacklists, adoption, custom roles, menu bar
- **PROe 3.3**
  - Gatekeeper installers
  - Proxy support, custom web themes
  - Bug fixes
  - VMDK product
- **New clouds! Australia**

Q&A

Thank you!
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