Being Your Own IT Department: Moving Day

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Deer Run Associates

Question 1: Why Move?

- Most of my work is either
  - "Get on airplane" type work
  - Work that's done in my home office

- The SF Bay Area is:
  - Expensive
  - A traffic nightmare
  - Too full of computer geeks?

Question 2: Why Eugene?

It met our criteria:
- College/university town smaller than 500K
- Good arts scene
- Liberal politics
- Support for natural/organic lifestyle
- Moderate climate
- Within 2 hours of a major airport
- Reasonably priced broadband Internet
- Professional baseball team

IT Issues for the Move

- Deciding on Internet services solution

- Arrange move to eliminate (or at least minimize) outages for external services

- Arranging telephony for new home

- Physically moving 15+ computers, two printers, four monitors, and misc supplies

Internet Service in Eugene

- South Eugene is too far from C.O. for anything other than IDSL (128K, boo!)

- Didn't want to pay for T-1 level service

- That leaves Comcast:
  - Single, dynamic IP address
  - No servers!
  - Asymmetric bandwidth allocation tuned for "normal" browsing behavior

There'll Have to be Changes...

- **Pre-move: SDSL with 30 IP addresses–**
  - Ran all servers (DNS, Web, SMTP) at home
  - Used SSH access to home network to read email when traveling

- **Post-move:**
  - Guess I'm going to need to find a co-lo
  - Still would like to read email on my home network (behind my own firewalls)

… And More Changes

- On my old home network, physical size wasn't really an issue

- Just used old cast-off PCs as firewalls, web servers, etc.

- For co-lo application, wanted a 1U server to save money

- Actually ended up buying a new machine for this (eBay had no bargains)

Some Words About Co-Los

- What good is a local co-lo if I'm not allowed access to my machine?

- Decent hosting facilities don't want customers who only want 1U...

- ...but they can recommend companies who re-sell rack space in their facility!

The Email Conundrum

- Don't really want "client" email access (IMAP, etc.) on hosted server

- But how to forward email to my home network when external IP is dynamic?

- DDNS might be an option, but I'm worried about failover time

- Also, don't want to be running a "server" that Comcast might get upset over

The Email Solution

- In `/etc/inittab` on my <u>internal</u> host:

  ```
  smtp:3:respawn:/usr/bin/ssh -nNTx -i /.ssh/id_dsa
     -l root -R 25:deer:25 -L 25:bullwinkle:25
     bullwinkle >/dev/null 2>&1
  ```

- Now "localhost:25" on each host talks to the SMTP server on the other host
- Now add a little Sendmail hackery… (Hint: see `MAIL_HUB` and `SMART_HOST`)
- "`respawn`" option should ensure connection gets restarted as needed

Plotting the Move

1. Purchase and install system for co-lo
2. Put machine in co-lo
3. Set up new Web, DNS, SMTP servers
4. Change where DNS records point
5. Update InterNIC
6. Backup all critical data (to CD-ROM)
7. Shut down SF network, load into truck

The Physical Move

- Decided I didn't trust the moving company with my computers– just the dead UPSes!

- Ended up loading all computer gear into a rental truck w/ items for our temp dwelling

- My wife thought I was crazy for keeping all those old shipping boxes– not anymore!

Unexpected Problems

- Getting really sick just when I needed to be in Eugene installing my server

- Demonstrating my "professionalism" by pulling the wrong cable in the co-lo

- Electrical load limits in our temporary apartment (damn blow-dryers!)

- Auto-negotiation problems between OpenBSD and my cheap cable modem

Three Phone Lines –
How Hard Could it Be?

- Our new house is in an area with underground service

- All houses are wired for two lines

- We need three lines (home/work/fax)

- Three lines means boring new pairs to our house– this means permits and delays

- Still not sure when our phones will work

In Hindsight…

- Having primary server in co-lo is great:
  - Simplified transition and allowed zero downtime during move procedure
  - Don't worry about losing service at home
  - Don't have to share home bandwidth with external services

- Should've gotten started on procuring phone service much sooner