

# The Teaching Database service (and alpine)

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Research & Teaching Unit

# Teaching database server

An elephant is standing in shallow water, facing left. The water is dark and rippled. The elephant's trunk is partially submerged. The background shows more water and some distant land.

- PostgreSQL server for Informatics teaching courses
- Provides databases to
  - students for teaching courses
  - some research purposes
    - usually by request
  - some operational services
    - usually by default

# postgres.inf, June 2006

- Creaking
  - PostgreSQL 7.4
  - DICE Redhat 9
  - bantam, a desktop, on a chair\*
  - cut off from its own services
  - filling up...
- Painful to administer

# pgteach requirements

- Server & service refresh
  - Split service into teaching & research
  - make use of the latest software
  - rescue from existing hardware
- Account management system
  - tied to DICE accounts
  - simple user administration
  - user self-service
- Preserve existing use

# installing pgteach.inf

- Dell PE850 in Forrest Hill
  - my first challenge!
- FC5 + PostgreSQL 8.1
  - required for Kerberos support
  - no lcfg-postgres component
  - no secure apache support (then)
- FC3 + Apache 1.3
  - required for x509 web service

# pgteach.inf, May 2007

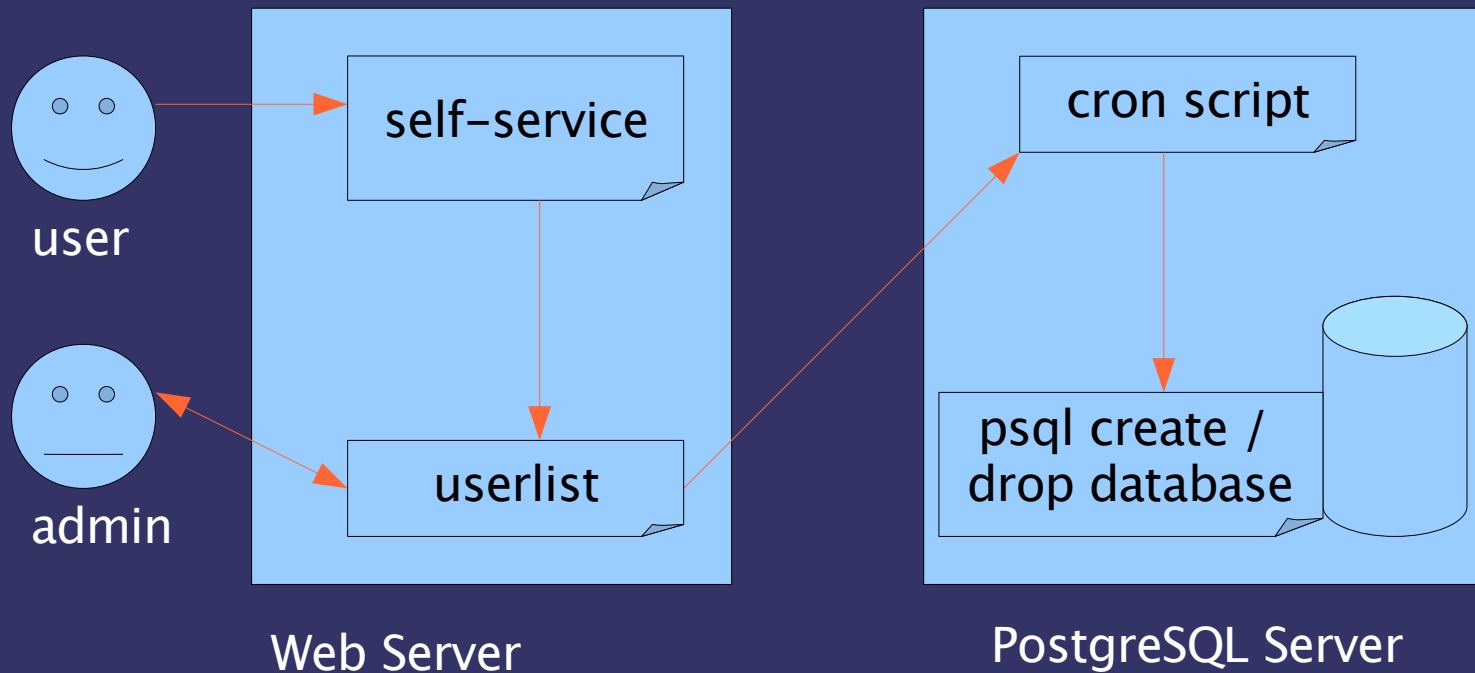
- PostgreSQL 8.1
  - better (working) Kerberos authentication
  - better TCP/IP connectivity
  - SSL support
  - UTF-8 by default
  - does the vacuuming for you...

# pgteach.inf, May 2007

- User Management service
  - web interface using kx509
  - user self-registration, access by role
  - sysman may adjust user and role lists
  - completely independent of database server
- PostgreSQL 'createuserdb' script
  - run as cron job
  - psql accounts automatically synced with list
  - relies only on a plain-text list

# pgteach.inf, May 2007

- User-management script + server system
  - As of Jan 07, `biscuit` provides both services





# pgteach.inf, next steps

- Database
  - non-interactive access
  - pg\_hba limitations
    - (partially solved in 8.2 with GRANT CONNECT)
- Account Management
  - security?
  - the 'old account' question
  - integration

# pgteach.inf, next steps

- lcfg-postgresql-2.0
  - new schema
  - supports postgres-8.x on FC6
  - backup functionality
  - administrative features
- the future
  - account disposal
  - `puffin` ('pgresearch.inf')
  - more integrated account management?

~ interval ~

# Alpine

- UW official replacement for Pine
  - First semi-public release Nov 2006
  - Alternatively\* Licensed Program for Internet News and Email
- Enthusiastically maintained on DICE...
  - Available on most desktops: `$ alpine`
  - Current version 0.99, regular patches
  - 1.0 due for release *October 2006*

# why \*pine?

- simple, consistent, powerful interface
- beginner friendly
- customisable
- cross-platform, remote .rc system
- likes standards
- all the advantages of a console app
- “cancel canceled!”

```
ALPINE 0.99 MESSAGE INDEX [H] <Shared: S> COs,2002 Msg 4,648 of 4,733 NEW +
N 11/12/02 [cos] DICE CO restructuring (2K)
N 11/12/02 [cos] new empty home dirs (2K)
N 11/12/02 > [cos] FH (and JCMB) mirror backups (2K)
N 11/12/02 [cos] restores progress (3K)
N 11/12/02 [cos] lost gloves and hat (2K)
N 11/12/02 [cos] BP NFS server (rhymer) rebooted (3K)
N 12/12/02 [cos] hat and gloves found (2K)
N 12/12/02 - [cos] Up to date LCFG documentation (2K)
N 12/12/02 - I-Re: [cos] Up to date LCFG documentat (2K)
N 12/12/02 - I-Re: [cos] Up to date LCFG document (2K)
N 12/12/02 I-Re: [cos] Up to date LCFG docume (3K)
N 12/12/02 [cos] christmas mail backups (2K)
N 12/12/02 [cos] LCFG Documentation errors (2K)
N 12/12/02 [cos] scanner needs home (2K)
N 12/12/02 - [cos] Tower (3K)
N 16/12/02 I-[cos] Re: Tower (3K)
N 12/12/02 > [cos] Re: [inf,ed,ac,uk #1237] Tempora (5K)
N 12/12/02 > [cos] server space at the Tower (2K)
N 12/12/02 [cos] [syssies] CERT Advisory CA-2002- (10K)
? Help < FldrList P PrevMsg - PrevPage D Delete R Reply
0 OTHER CMDS > [ViewMsg] N NextMsg Spc NextPage U Undelete F Forward
```

# how to improve on perfection?

- Alpine adds
  - trademark-free distribution
  - Unicode support
  - standardised GNU build procedure
  - .rc compatibility with pine
  - IPv6 support (so I'm told)
  - a few new bugs
  - eye-candy

# alpine

- some more features...
  - address tab-completion
  - improved HTML support
  - adaptive message scoring
  - 256-colour xterm support
  - unread message counts
  - keychain support in Windows & OS X
  - handfults of new configuration variables...

# thanks

- thanks; questions?
  - free alpine support on request!

- Links

- <http://www.washington.edu/alpine/>
- <http://www.postgresql.org/>
- <http://www.flickr.com/>