Asterisk, GIS and NAS

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asterisk gis mapping nas openfiler openlayers openstreetmap voip sip

Happy new year everyone! 2010 is going to be a huge year for the Jackson clan, Joanne and I are expecting a new arrival any day now, and we will both be turning the big 30!

Anyways this is a technical post, so I thought I might blog about three cool technologies that I was playing around with during the Christmas period.

The first is trixbox, a standalone distribution of the asterisk open source telephony software, it's a complete linux distribution (based on centos 5.4) all of the zaptel drivers come bundled (allowing us to use our existing digium isdn card right out of the box).

I was really impressed, in four days I managed to migrate our entire PBX. Unlike our previous system, everything is configured via the web interface (no more manually hacking around with extensions.conf).

This includes sip extensions, music on hold, digital receptionist, call queues, call transfer, call parking etc. Well worth checking out if you are considering a voip rollout.

http://www.trixbox.com http://www.asterisk.org

Lately I've been doing a bit of work with gis - essentially writing spatial reports for use by our business development consultants. I'm currently using an extension to postgresql called postgis to store spatial data against our customer records.

This data is derived using http://nominatim.openstreetmap.org and other open sources (including freely available postcode/suburb to lat long data).

Postgis allows you to write spatial queries ie give me all customers within 20km of this point matching some specific search criteria, and it's very fast to do so.

I'm currently producing reports using the georss markup and overlaying these results onto openlayers (with openstreetmap). Yahoo! Maps also supports georss but it needs to be served off a public facing website (which is not ideal).

Both google maps and Microsoft bing maps charge money for commercial use of their mapping services - unfortunately our budget did not stretch far enough to use these Apis.

The yahoo! community guidelines are much more friendly regarding commercial use of their mapping api (allowing 5000 transactions per day from behind your firewall). Last month yahoo! also released Australian street map tiles (which is sweet).

http://www.postgis.org http://www.openstreetmap.org http://www.openlayers.org

Lastly I had a play around with freenas - a cut down version of freebsd that you can use to build a cheap nas. It's cool because you can run it off a USB key, it supports raid 5, allows you to run all of the popular file sharing protocols, has good event notification and is free.

I built one using four old 500gb IDE hard drives (raid 5) running a upnp server that my ps3 can access my digital media off. Dead simple to set up, comes recommended.

http://www.freenas.org