WHY ARE DBAS SO GRUMPY ALL THE TIME?

NORDIC PGDAY
2018-03-12

Lætitia AVROT
Loxodata
WHO

Lætitia Avrot

- PostgreSQL consultant and teacher
- DBA PostgreSQL for more than 10 years (and also Oracle and SQL Server)
- @l_avrot
Company built on 3 essential pillars

- PostgreSQL
- DevOps
- Cloud
Why are DBAs so grumpy all the time?

- Messing up from the beginning
- Worst developer's practices
- Ops can mess up too!
THE DESIGN
Remove potential interferences

- Don't tell people about your project
- Don't tell "ops" about your project
- Keep your DBA busy (with production)
The more complex, the more fun!

- Replication (multimaster, synchronous, logical...)
- Authentication (AD, LDAP)
- External data sources (Datalinks, FDW, ETL...)
Complexity by example

- A simple website
- Shows the company canteen menu each day
Complexity by example

- Adding external authentication
- Adding synchronous replication
- Adding "0 administration architecture"
- Adding Backup and Monitoring tools
Complexity by example

- Adding Elastic search for full text search
- Adding data from old application
- Adding logical replication for BI App
Cost reduction

- Mutualization
- 50+ instances running on the same server
- One database per instance
Docker is the new black

- Does everything!
- Composing? What for?
- Backing up? What for?
"Bad" docker by example

- 2 dockers on same VM
- 1 PostgreSQL instance per container
- With streaming replication: call it high availability!
APPLICATION DEVELOPMENT
ORMs

- Let your ORM choose which model you need
- Activate indexing
Model

- 1st Normal Form
- Drop constraints, your app can handle it!
- Don't normalize: call it denormalization!
Be trendy: try schemaless!

- Easier, faster, lighter!
- Mongo can do it!
- Store a lot: call it Big Data!
- You can fake a model too: Entity, Attribute, Value
Time series

- Store current and archive data on same table
- No partitioning, of course!
- No purge ever : you need all your data!
Joins

- Grab list of ids from first table
- Loop on it and query on the second table
- If it's slow, blame the database!
Transactions, commits, locks and so on

- Open transactions and leave it open
- Ask for explicit commit and never commit
- Postgres can't manage correct locks: use explicit locks!
Backups

- Don't need (replication, disk mirroring, VM snapshots)
- Only logical
- Home made!
- No testing required
Monitoring

- Graphs are for weaklings!
- Provide graphs without unit or legend
- Take one measure per day, it's quite enough!
"Cleaning" $PGDATA

- pg_xlog/pg_wal
- pg_clog
- use pg_resetwal
RDBMS are magic!

- No DBA needed
- Nothing to understand: it's just magic!
- No maintenance needed!
Autovacuum

- Setting it off
- `autovacuum_*_scale_factor=0`
- `autovacuum_*_threshold=100000`
Hide behind ITIL!

- Strip the DBA off any permission
- One change per month, no more
- 6-months validation process for a minor update
CONCLUSION

KEEP CALM AND LISTEN TO THE CONCLUSION
If you're a DBA...

- Improve your communication
- Smile
- Appease others
If you're not a DBA...

- Improve your communication
- Smile
- Don't let fear take control of you!
All we need is love!

- Sysadmin appreciation day: last friday of July
- Day of the Programmer: 256th day of the year
- DBA appreciation day: first friday of July
Questions?

Thanks to Paul S Randall for the inspiration

Thanks to Freepik and Pixabay for illustrations and photos
Don't forget to leave feedback

https://2018.nordicpgday.org/feedback