patroni vs stolon vs repmgr

Как мы выбирали среди patroni, stolon, repmgr для нашего отказоустойчивого Постгреса

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- Краткий обзор и сравнение решений
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  - patroni

- Решение задачи в нашем случае

High Availability применительно к Postgres

- NAS/SAN
- DRBD
- Logical (trigger based old fashion, pglogical)
- WAL shipping

Постановка задачи

- Hetzner
- 3 DC (Nuremberg, Falkenstein, Helsinki)
- RTO = 10min
- RPO --> 0 =)
- Automatic db failover
- Automatic app failover
- Fencing

Amazon Aurora/RDS

- Aurora - быстро, очень быстро, очень дорого (aurora)
- Есть почти все extensions, нет pgq (pglogical since Sep 14, 2018)
- RDS - медленно (за те же деньги)
- Сложности «внешнего» бэкапа

repmgr

- 2ndQuadrant, C
- Any postgres from 9.3 -> 11
- Witness server concept
- No need for dcs
- Things to learn: 2
- No fencing
  - Workaround https://github.com/2ndQuadrant/repmgr/blob/master/doc/repmgrd-node-fencing.md
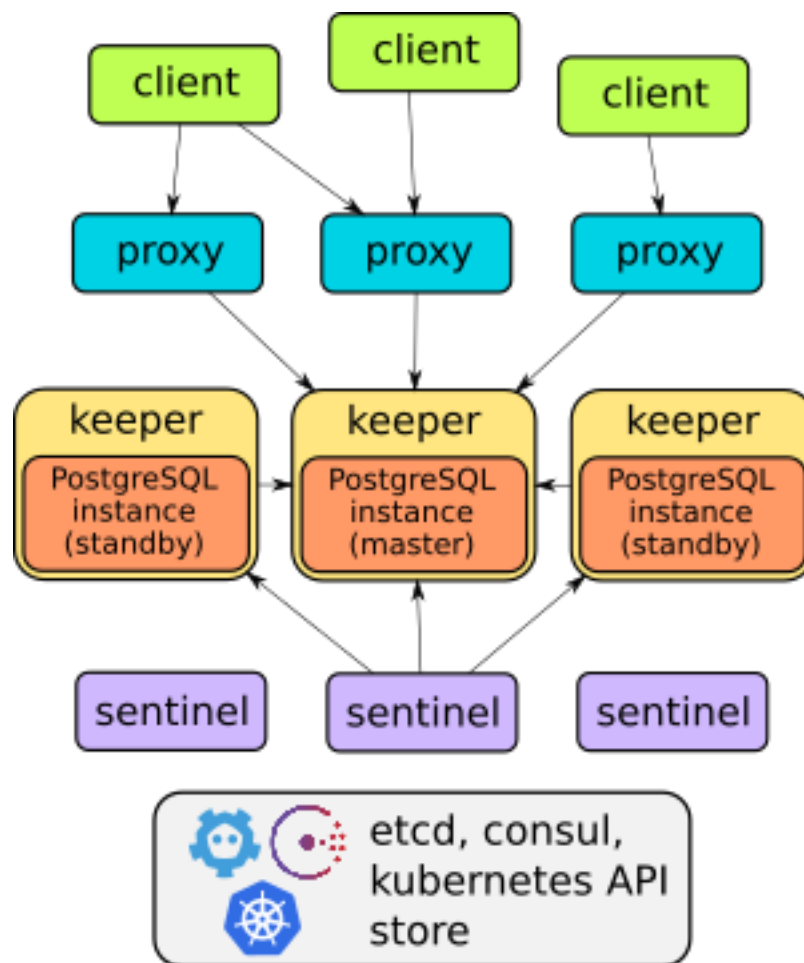
repmgr
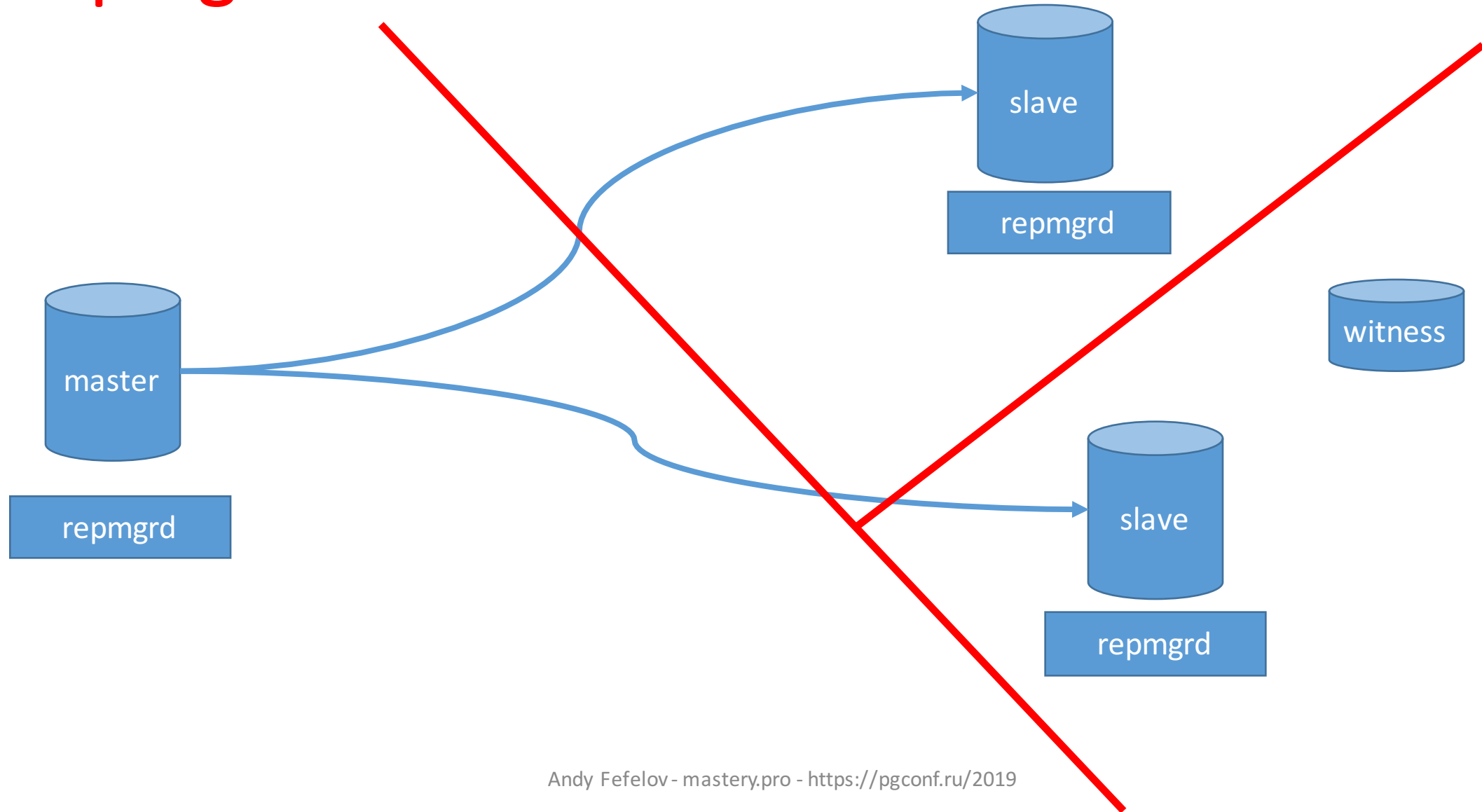
stolon

- Sorintlab, go
- Use DCS
- k8s ready
- Sync/async replication
- Custom init
- Standby cluster
- RW+RO -> master only
- One way switchover
- pg_rewind
- Things to learn: 4

stolon

patroni + consul + wal-g + s3 + docker

- Zalando, python

- Use DCS

- k8s ready

- Sync/async replication

- Custom init

- Standby cluster

- pg_rewind

- Things to learn: 2

patroni + consul + wal-g + s3 + docker

- UI
- dns
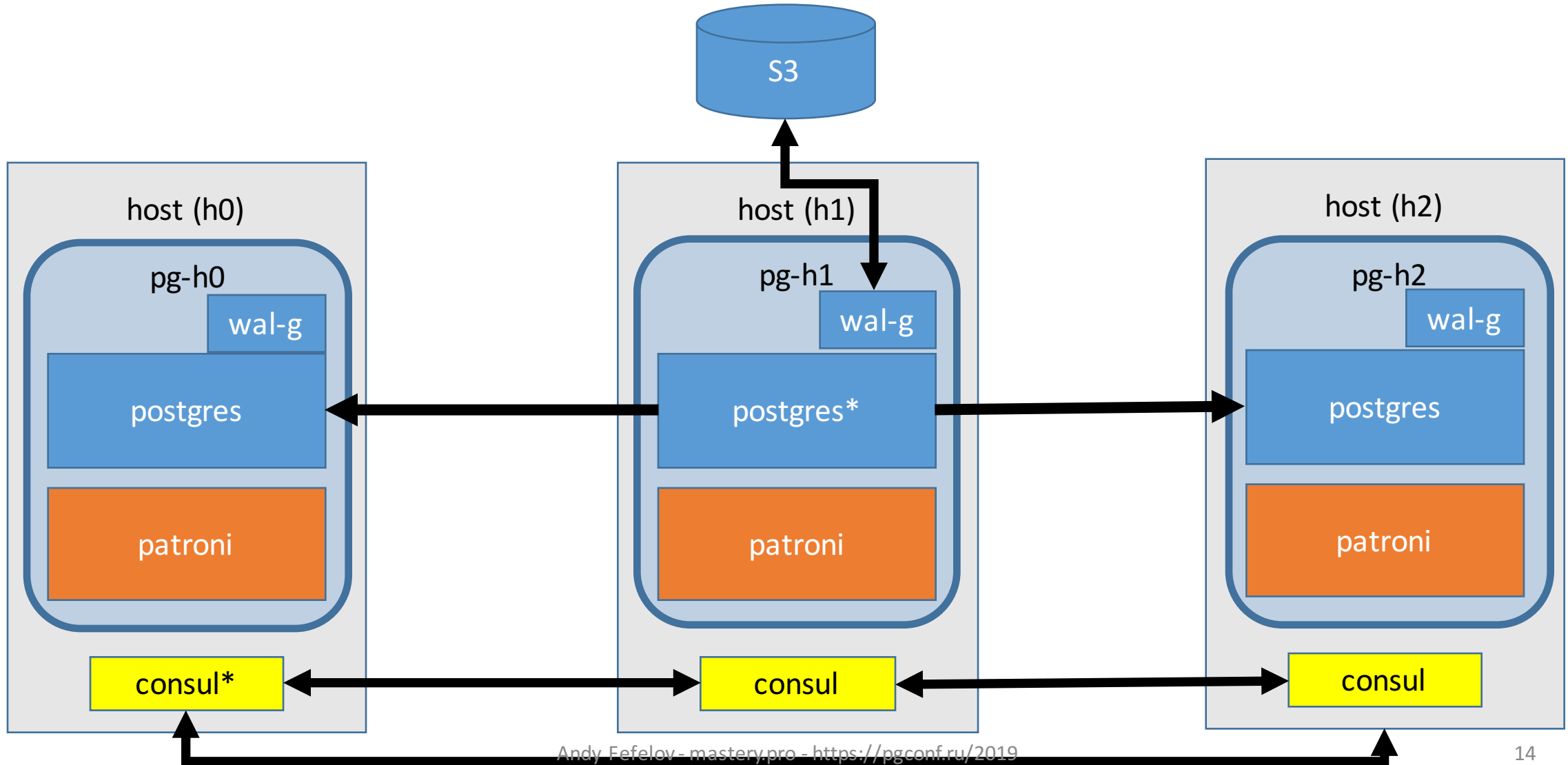- service checks
- patroni умеет анонсировать master/replica ❤❤❤❤❤❤

patroni + consul+ wal-g + s3 + docker

- fast (parallelized)
- compression
- quite simple
- production ready

patroni + consul+ wal-g + s3 + docker

- we just use them

patroni + consul+ wal-g + s3 + docker

patroni + consul+ wal-g + s3 + docker

- Pros:
  - Simple setup
  - Fast master init
  - Consistent backup from any node (thanks to REST API)
  - Failover works
  - Hooks, one love!

- Cons:
  - DNS should be tweaked
  - Slow slave init
  - Application should be ready to loose database

thanks to and links

- Александр Кукушкин (patroni)
- Андрей Бородин (wal-g)
- patroni.readthedocs.io/
- github.com/wal-g/wal-g
- github.com/afefelov/patroni-class