Hero + Hero = Superhero?

Who we are

The Company

> Founded in 2010

> More than 100 specialists

> Specialized in the Middleware Infrastructure

> > The invisible part of IT

> Customers in Switzerland and all over Europe

Our Offer

> Consulting

> Service Level Agreements (SLA)

> Trainings

> License Management

About me

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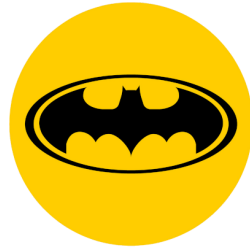
✉ julia.gugel[at]dbi-services.com
🐦 @gugeljuli
in Julia Gugel

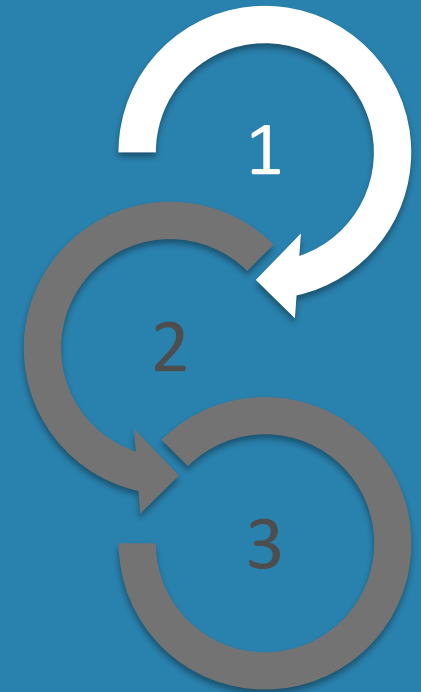# Agenda

1. Heroes

2. How to create a superhero

3. Conclusion

Heroes

> pgBackRest
> Patroni

Heroes
pgBackRest

OpenSource backup tool
> Full, incremental, differential backups

> Using parallel jobs, if configured

> PITR

> Backup can be stored in the Cloud (AWS S3, Azure…..)

> Centralized backup repository

> Patroni Nodes can be restored from backup

> Uses stanza

> > configuration for a PostgreSQL database cluster

> > defines location, how it will be backed up, archiving options

Heroes
Patroni
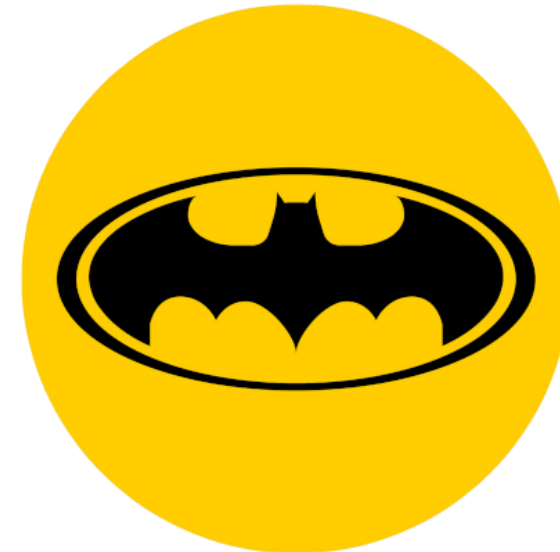
Zalando's Python-based PostgreSQL controller

Template to create high-availability solutions

Dynamical reconfiguration of all cluster members at once

Components

> One writable node (primary/leader)

> Multiple read-only replicas (secondary)

Supports manual switchovers and automatic failovers
Needs a distributed key value store

> Etcd, consul, zookeeper….

Heroes
Patroni

We will use etcd in this example
> Store data across distributed systems
> Stores information about the cluster status, available nodes and resources
> Needs an uneven number of members
> Leader is elected by the other members

What is it used for in combination with Patroni?
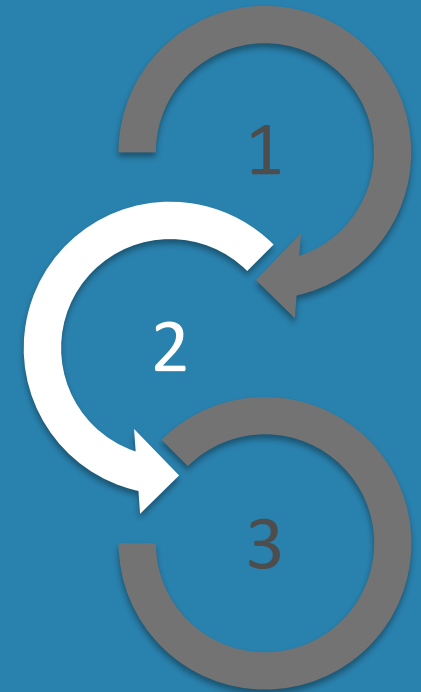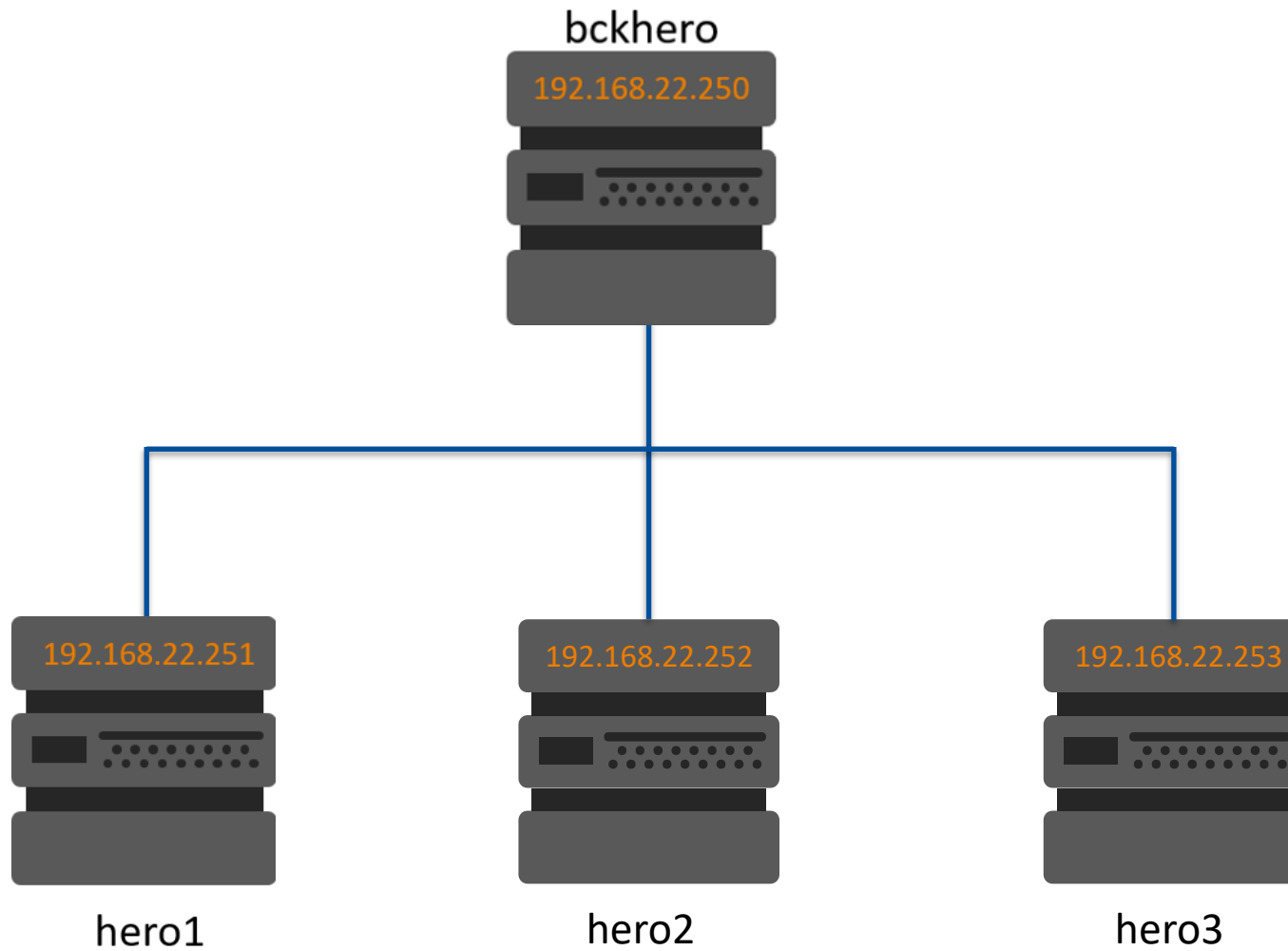> Postgres nodes make use of etcd to keep the Postgres cluster up and
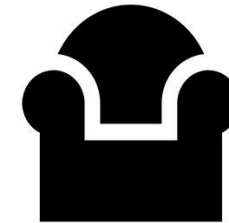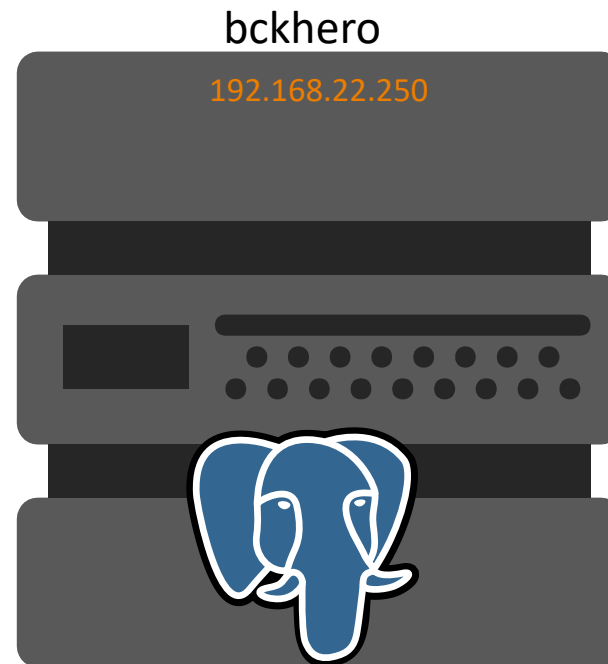 running

How to create a superhero

1

2

3

How to create a superhero

How to create a superhero

bckhero
192.168.22.250
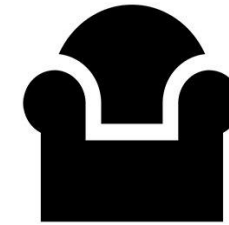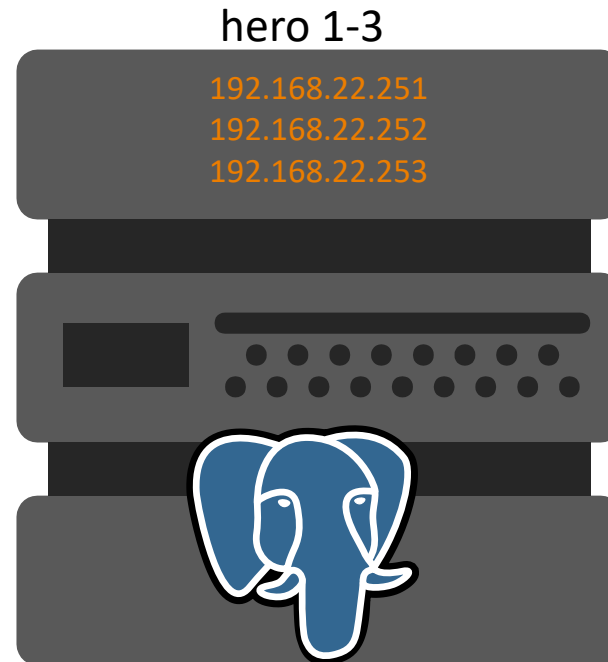
> Prerequisites installed
> pgBackRest source downloaded
> ssh-keys exchanged
> dbi dmk installed

How to create a superhero
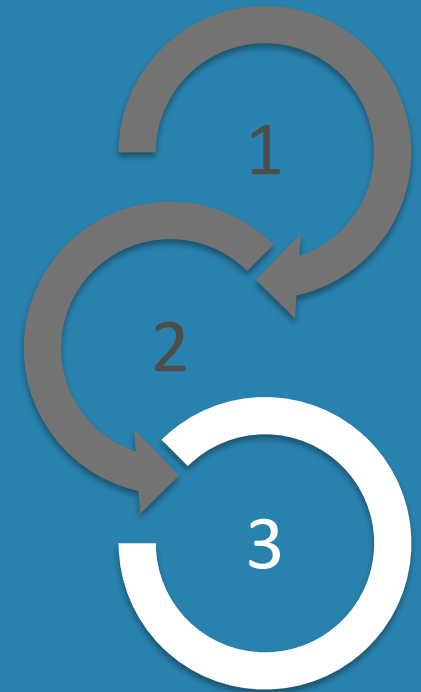
hero 1-3

192.168.22.251
192.168.22.252
192.168.22.253

> Prerequisites installed
> Etcd source downloaded
> pgBackRest source downloaded
> ssh-keys exchanged
> dbi dmk installed

Conclusion

> Is this really a superhero?

1

2

3

Conclusion
Is this really a superhero?

Installation

> It's possible to install everything from packages

> Installing from source gives the biggest flexibility

Documentation

> Read it! And if you don't find your solution, community is really helpful

Configuration

> Error messages are not always self-explaining

```
ERROR: Error creating replica using method pgbackrest: pgbackrest --
stanza=hero2hero restore exited with code=31
```

Conclusion
Is this really a superhero?

Easy to rebuild a missing node either from
> pgBackRest backup or
> Basebackup taken from another node

Easy to rebuild the full cluster from pgBackRest backup

Keep some things in mind before you start
> Decision where to put your backups is important
>> Reachable from all Patroni nodes
> Decide from which node you want to take the backup
>> Standby / Primary
>> with a repo-host this is easy

Conclusion
Is this really a superhero?

Together we are strong

Patroni

Community

pgBackRest

Conclusion
Is this really a superhero?

QUESTIONS?

Please do ask

GETTING
GREAT
PEOPLE
TOGETHER