



KubeCon



CloudNativeCon

Europe 2026

#KubeCon #CloudNativeCon

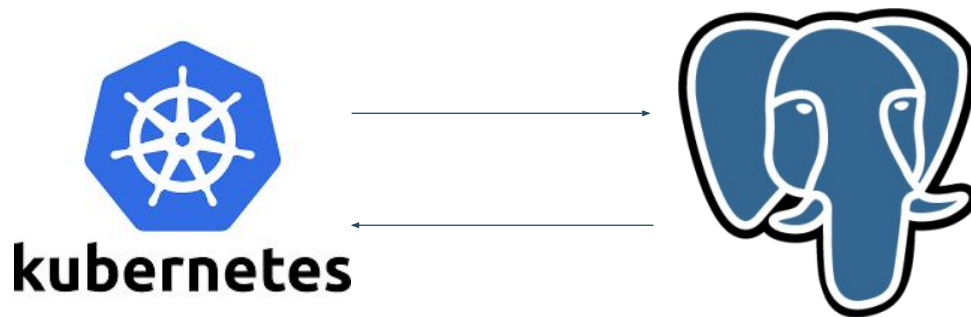
Five minutes by the CloudNativePG river

Gabriele Quaresima,
Staff Software Engineer at EDB, CloudNativePG Contributor

Project Lightning Talk - 23 March 2026



- **Yes, you can run Data on Kubernetes!****



* Skipping the question, as this is a lightning talk and I need to be fast

** Especially PostgreSQL, with CloudNativePG!

What is CloudNativePG?

- An open-source operator designed to manage **PostgreSQL** workloads on any supported **Kubernetes** cluster
- A **CNCF Sandbox Project**, applied for **Incubation**
- An active **community** of people
- The umbrella of several repositories you can **contribute** to

In a Nutshell



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It defines a new K8s resource called **Cluster**, representing a PostgreSQL cluster made up of a single primary and an optional numbers of replicas

```
apiVersion: postgresql.cnpg.io/v1
kind: Cluster
metadata:
  name: kubecon-eu
spec:
  instances: 3

  storage:
    size: 1Gi
```

Suggested Architecture

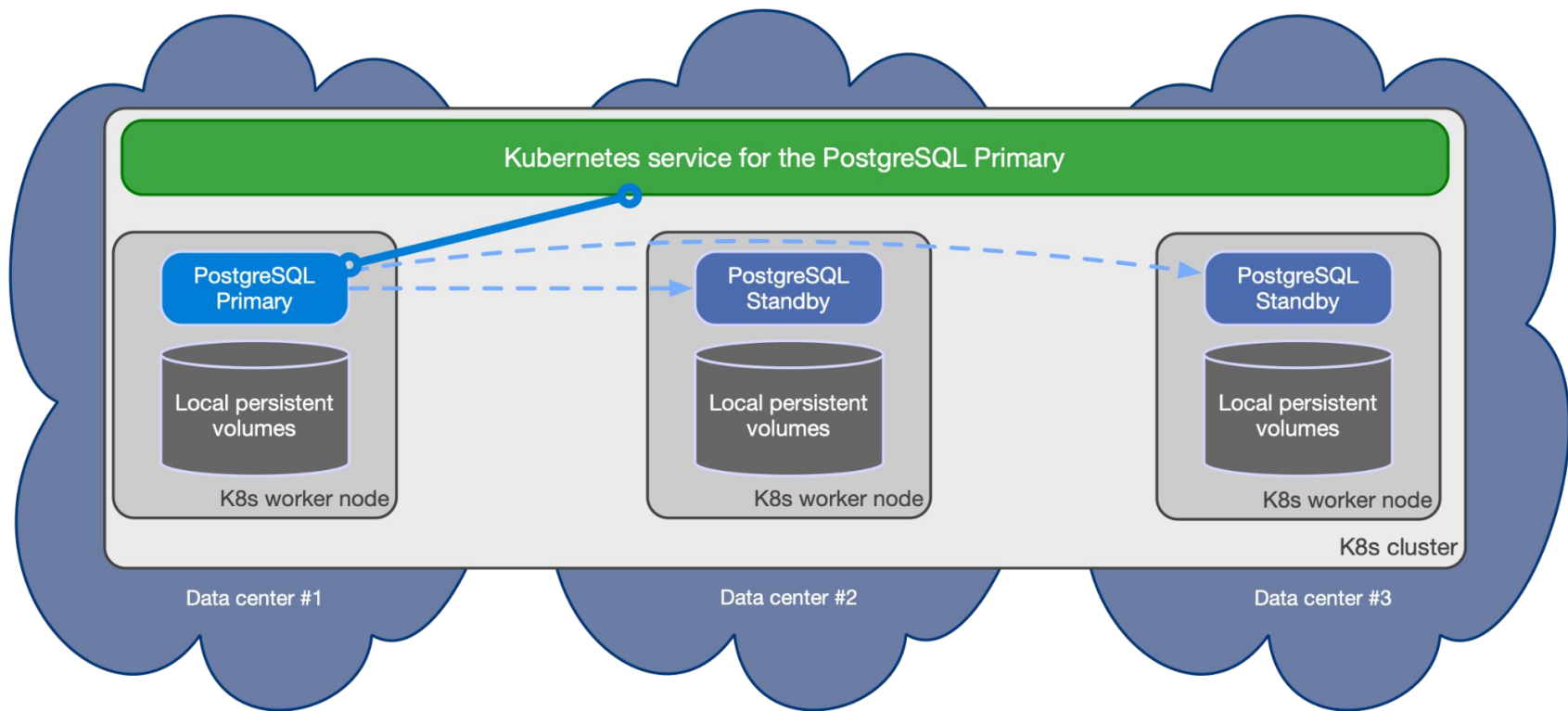


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Main Features

- Direct integration with K8s API Server for self healing
 - High Availability capability
 - Scale up/down capabilities
 - Definition of an arbitrary number of instances and services
 - Replica cluster enabling PostgreSQL distributed topologies
- Planned switchover
 - Declarative management of PostgreSQL configuration
 - Backup and recovery via VolumeSnapshot and object stores
 - kubectl plugin for cluster management
 - Cluster hibernation / fencing

Most Recent Features



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- Declarative databases and logical replication
 - CNPG-I: define your own plugin!
 - Major PostgreSQL upgrade support
- Declarative Foreign Data Management (via Database CRD)
 - Quorum Based Failover
 - Declarative loading of PG extensions via OCI containers

Join the community



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Website: <https://cloudnative-pg.io/>

CloudNativePG is on **LinkedIn**, **Mastodon**, **Bluesky** and on

- **CNCF** <https://cncf.io/sandbox-projects/>,
- **Slack** <https://cloud-native.slack.com/archives/C08MAUJ7NPM>
- **GitHub (Contributing guide)**

<https://github.com/cloudnative-pg/cloudnative-pg/blob/main/CONTRIBUTING.md>

Thanks!



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<https://cloudnative-pg.io>

Meet the **CloudNativePG** team

Kiosk Shift: *Wednesday 25 at 10:00 - 13:30*

Kiosk number: P-3A

Location: Halls 1-5 | Project Pavillion

Monday 23rd March from 16:30 to 16:55

Gabriele Bartolini and Floor Dress:

“Beyond the DBaaS trap: Achieving Data Sovereignty with Kubernetes and CloudNativePG”

Wednesday 25th March from 16:10 to 16:35

Laurent Parodi and Gabriele Bartolini:

“From VMs to Kubernetes in a large global bank: a DBA’s journey”



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