

# Production grade Postgres with Docker

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Tue 23 Jan 2024 - Docker Athens - [@pariskasid](#) + [@akalipetis](#)

**RDS is Highly Available!**

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...if you set up multi AZ  
on your own

# Aurora scales!

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...if you utilise read / write  
endpoints

**Aurora is serverless!**

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...if you pay a fortune for  
predictable workloads

# Production grade Postgres

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with LOGIC



# Agenda

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# Agenda

- Requirements
- Set up
- Maintenance
- Demo

# Requirements

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# Requirements

- Easy to deploy
- Scalable
- High available
- Disaster safety

# Easy to deploy

- Single action deployment
- Readable configuration (100 LOCs)

# Scalable

- Automated connection pooling
- Scale horizontally without clients noticing

# Highly available

- Users should barely notice if the primary server goes down
- Users should never notice if reader servers goes down

# Disaster safety

- Backup data on remote storage regularly
- Minimal commands to restore to point in time



# Set up

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# Set up

- Infrastructure
- Software

# Infrastructure

- At least two host machines
- Private networking

# Software

- Linux (Ubuntu 22.04)
- Docker Engine (25.0.0)
- Docker Swarm
- Postgres 16
- Pgpool-II (4.3)

# Topology

- Postgres primary on host 1
- Postgres secondary on host 2
- At least one Pgpool-II instance running anywhere inside the cluster

# Maintenance

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# Maintenance

- No single point of failure
- Monitoring
- Upgrades (see you next year!)

**Demo time!**



[github.com/withlogicco/postgres](https://github.com/withlogicco/postgres)

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# Need help with DevOps?

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<https://withlogic.co/docker> - [hey@withlogic.co](mailto:hey@withlogic.co)