

# EDB's Product Roadmap

September 2022

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# Disclaimer

Statements included in this presentation, other than statements or characterizations of historical fact, are forward-looking statements. These forward-looking statements are based on our current expectations, estimates, and projections about our industry, management's beliefs, and certain assumptions made by us, all of which are subject to change. These forward-looking statements are not guarantees of future results and are subject to risks, uncertainties, and assumptions that could cause our actual results to differ materially and adversely from those expressed in any forward-looking statement.

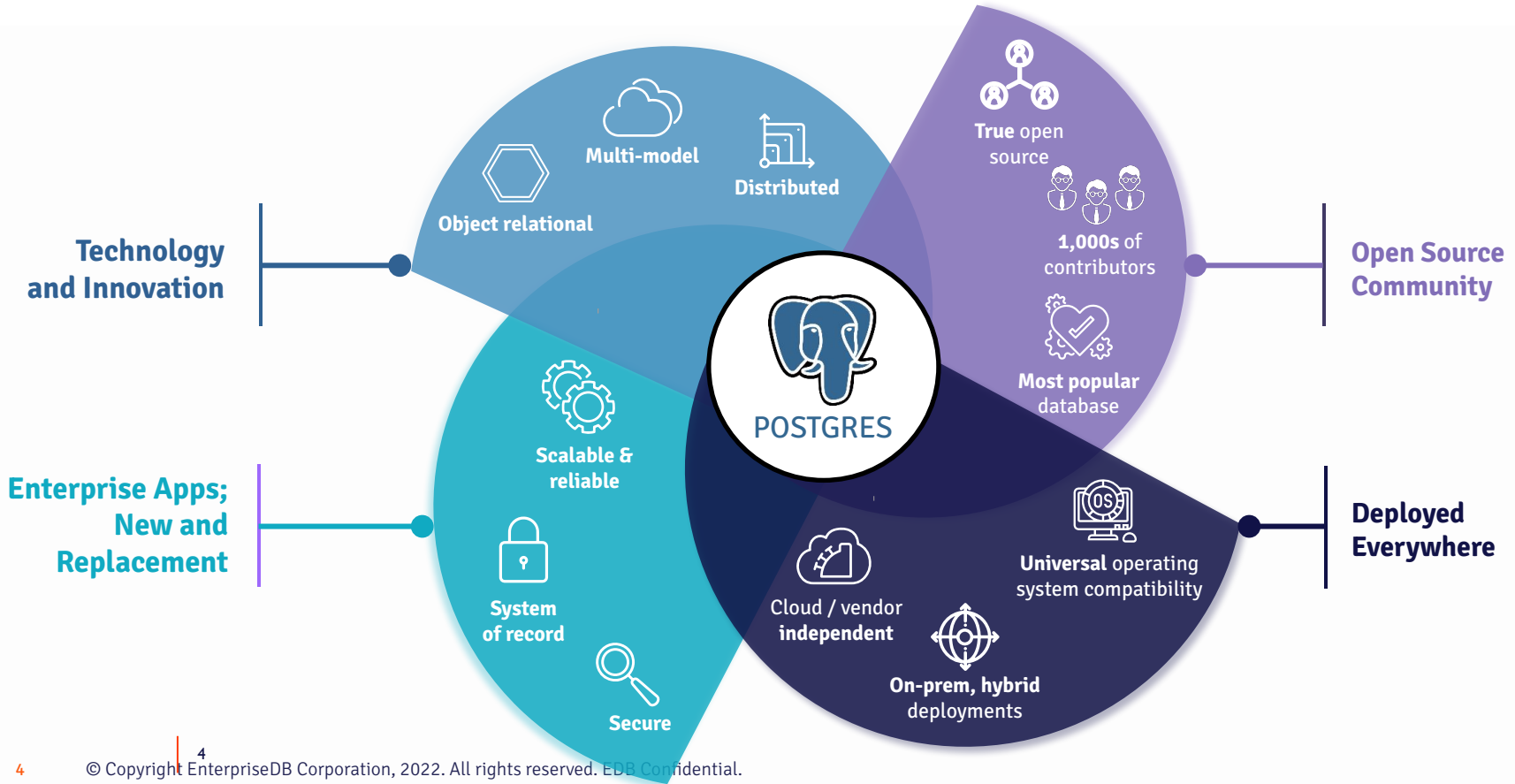
By sharing our product roadmap with you, we are not undertaking an obligation to develop the software with the features and functionality discussed herein.

The forward-looking statements in this presentation are made as of September, 2022. We undertake no obligation to revise or update publicly any forward-looking statement for any reason.



**POSTGRES IS THE MOST  
TRANSFORMATIVE OPEN SOURCE  
TECHNOLOGY SINCE LINUX**

# WHY ENTERPRISE DEVELOPERS LOVE POSTGRES



# EDB'S PRODUCT PORTFOLIO

## EDB Enterprise

Open Source + EDB Tools  
+  
Oracle Compat and Enterprise  
Features

## EDB Standard

Fully Open Source  
+  
EDB Tools

## EDB Community 360

Fully Open Source

## EDB BigAnimal

Fully Managed Postgres or  
EDB Postgres Advanced Server

## EDB Postgres Distributed

Adds Extreme High Availability  
to Standard or Enterprise

# EDB's TECHNOLOGY PORTFOLIO

## Unique Postgres Enhancements

### Database Distributions

#### Postgres

Most advanced open source operational database

#### EDB Postgres Advanced Server

PostgreSQL + Oracle compatibility + security features

### Tools

#### High Availability

99.999% availability for most demanding enterprise workloads

#### Management

Exception based database management at enterprise scale

#### Integration

Data exchange and data integration with the corporate data strategy

#### Migration

Rapid transition from legacy databases to Postgres

## Broad Platform Support

### Self-Managed

#### Virtualized

aws



vmware

#### Containerized

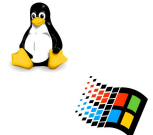
RED HAT OPENSIFT



docker



#### Bare Metal



Amazon EKS



Azure Kubernetes Service (AKS)



Google Kubernetes Engine



### Fully-Managed



Alibaba DBaaS

# EDB Roadmap News

- EDB Postgres Distributed 4.1 (formerly BDR)
- EDB BigAnimal release on AWS
- Postgres on K8s
  - Open source release of the CNP Operator
  - EDB Postgres on Kubernetes
- PostgreSQL and EDB Postgres Advanced Server 15

# EDB Postgres Distributed

(formerly known as BDR - Bidirectional Replication)



- You've chosen Postgres
- Your application needs to be always on
- Any downtime = Loss of business continuity = Revenue loss

You need:

- **A replication solution**
- **Geographically distributed** database clusters
- **Extreme high availability**
- **Optimal performance** at all times

# Enter EDB Postgres Distributed

The most advanced replication solution for Postgres



## Maintain extreme high availability

Postgres clusters deployed with EDB Postgres Distributed keep top tier enterprise applications running



## Upgrade with near zero downtime

Rolling upgrades of application and database software eliminate the largest source of downtime



## Choose the level of consistency

Robust capabilities provide flexibility to meet application data loss requirements

# New in EDB Postgres Distributed 4.1



## Reliability and Operability

Faster, fully online major version upgrades\*



## Performance and Scalability

Replication lag control with asynchronous replication\*



## High Availability and Recovery

More flexibility for durable replication with Group Commit



## User Experience

Greater control with command line interface



## User Experience

Simplified synchronous replication configuration with SQL level interface



## User Experience

Automatic management of distributed sequences



# Best fit

## Where does EDB Postgres Distributed fit in EDB's portfolio?

Requirement / Characteristic	Good fit for EDB Postgres Distributed	Fit for another EDB solution
Availability Requirements	99.99 - 99.999% Four to Five 9s	99.9 - 99.99% Three to Four 9s
Data Centers & Geographic Regions	Globally distributed	Not globally distributed
Upgrade downtime	Rolling upgrades with near-zero downtime	Appetite for maintenance windows
Application tier	"Tier 1"	"Tier 2" & "Tier 3"
Application types	Payment gateways, telecommunications call routing, global collaboration	HR, Expense Reporting, CRM



# Two primary use cases

## The most advanced replication solution for Postgres



### **1. Extreme High Availability**

Postgres clusters deployed  
with EDB Postgres Distributed  
keep top tier enterprise  
applications running



### **2. Geographically Distributed Workloads**

Global enterprise applications  
can address data sovereignty  
and stay in sync with  
EDB Postgres Distributed



# EDB Postgres Distributed Customer Success Story

## Use case

SaaS project management and collaboration company experiencing massive growth with customers spanning individuals to large enterprises supporting over 100,000 teams globally.

## The need

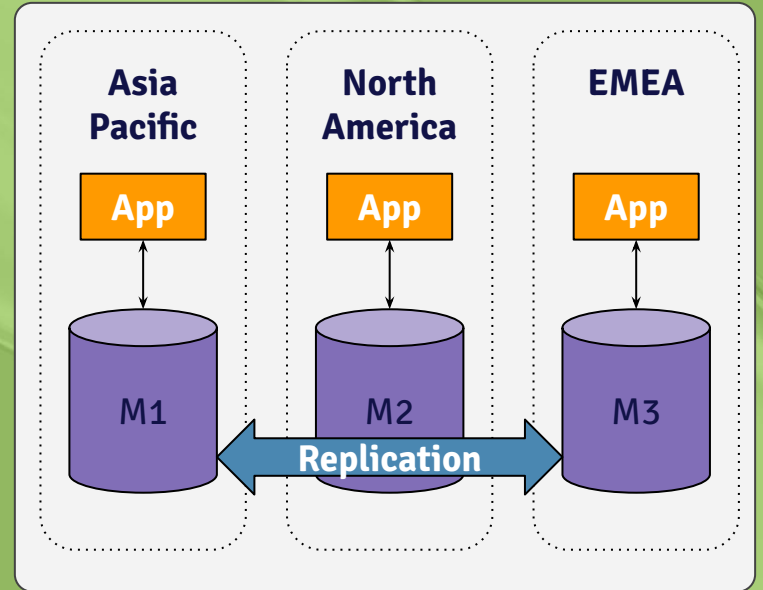
Provide consistent performance to their international customer base while scaling up their business in multiple regions.

## Why EDB Postgres Distributed

ClickUp selected EDB Postgres Distributed to address geo-distributed needs of their customer base, and later upgraded to gain improved performance, rolling upgrades, and high availability.

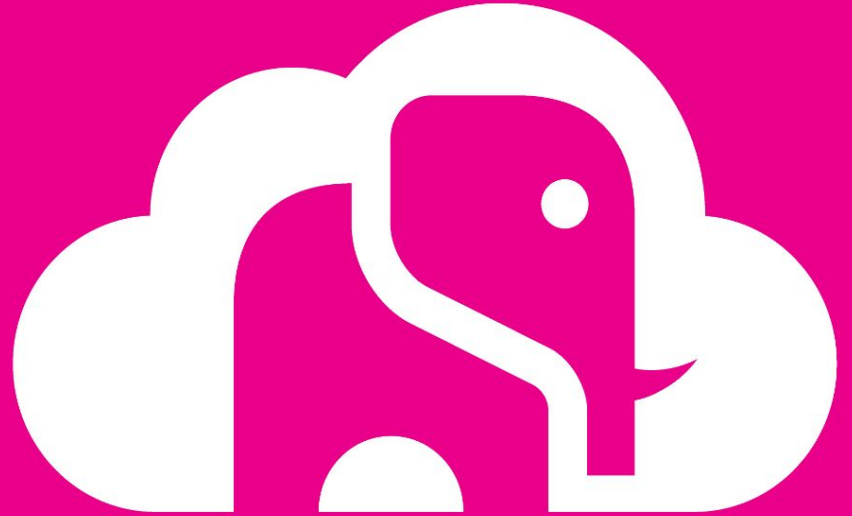
## Value

EDB Postgres Distributed has contributed to the 99.99% uptime for 12 consecutive months of ClickUp's 7 node global deployment.



# EDB BigAnimal: Unleash the power of Postgres in the cloud

Available on Azure and AWS



# Unleash the power of Postgres in the cloud

Your Postgres database is too important to leave to generalists



## Postgres Expertise

EDB's expertise goes above the infrastructure; we help steer the database roadmap and patch its bugs



## Oracle Compatibility

Leave Oracle and further your cloud journey with a fully managed Postgres service



## Extreme High Availability

High availability of your PostgreSQL clusters so you're always on, always available





# Explore fully managed PostgreSQL in the cloud with EDB BigAnimal

Log in and spin up a Postgres cluster in seconds with our self-service free trial

- Fully managed by EDB - no setup necessary
- Spin up a cluster in seconds
- 100% free - no cloud account needed
- Expert-supported by EDB's enterprise PostgreSQL team

The free trial experience includes:

- Compatibility with Oracle via PostgreSQL Advanced Server
- 14 days access to cluster creation and management
- Activity log
- Connect to your cluster and go!

The screenshot displays the EDB BigAnimal Free Trial dashboard. At the top, it says "Welcome to BIGANIMAL" and provides instructions for getting started with the free trial. Below this, there are three main sections: "Provision Quickly" (with a "Create New Cluster" button), "14 Day Trial per cluster" (with a "Get Support" button), and "Get Support" (with a "Reach out to our Sales team" button). On the right side, there is a video player titled "DEEP DIVE Demo of Oracle SQL compatibility in BigAnimal". Below the video, there are sections for "SHOW TIPS" and "NEWS AND EVENTS".

*\* This self-service free trial allows a single user to experience BigAnimal. For deeper dive evaluations against project and business requirements, please contact your sales executive.*

**BIGANIMAL**

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Signup today for 14 day self-service FREE trial!

<https://biganimal.com>

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## Q2 2022

### May

Launch on AWS

Direct purchase options from EDB

Single region continuous availability with BDR (beta launch)

Formulas for database configuration

### June

Support for Microsoft Azure ultra disks

Customizable retention periods for backups

Support for 2 node high availability clusters

**BigAnimal supported regions:**

[https://www.enterprisedb.com/docs/biganimal/latest/overview/03a\\_region\\_support/](https://www.enterprisedb.com/docs/biganimal/latest/overview/03a_region_support/)

## Q3 2022

LDAP integration for federated DB access

Enable supported EDB extensions

Regions: fine-grained BYOA infrastructure control

Reduced service level privileges

Read only connection strings

## Q4 2022 and beyond

Launch on GCP

AWS Marketplace

Multi-region continuous availability for geo-distributed workloads with BDR

PCI compliance certification

Data Migration Service

Projects: enabling isolation between workloads and teams

Integrated migration assessments

Terraform modules enabling integration into DevOps automation and pipelines

FedRAMP Preparation

# Postgres on Kubernetes:

- Cloud Native Postgres
- EDB Postgres for Kubernetes

# The CloudNativePG Project

- **CloudNativePG organization in GitHub: [github.com/cloudnative-pg](https://github.com/cloudnative-pg)**
  - CloudNativePG operator (main project):  
[github.com/cloudnative-pg/cloudnative-pg](https://github.com/cloudnative-pg/cloudnative-pg)
  - PostgreSQL operand images
  - Helm charts
- **License: Apache 2.0**
- **IP: “The CloudNativePG Contributors”**
  - We’ve applied to the CNCF Sandbox with the goal to donate the project to the CNCF
  - First PostgreSQL/Kubernetes project to attempt this



**KubeCon**

**May 2022**

# Run PostgreSQL. The Kubernetes way.

CloudNativePG is the Kubernetes operator that covers the full lifecycle of a highly available PostgreSQL database cluster with a primary/standby architecture, using native streaming replication.

[View on GitHub](#)

## Autopilot

It automates the steps that a human operator would do to deploy and to

## Data persistence

It doesn't rely on statefulsets and uses its own way to manage persistent

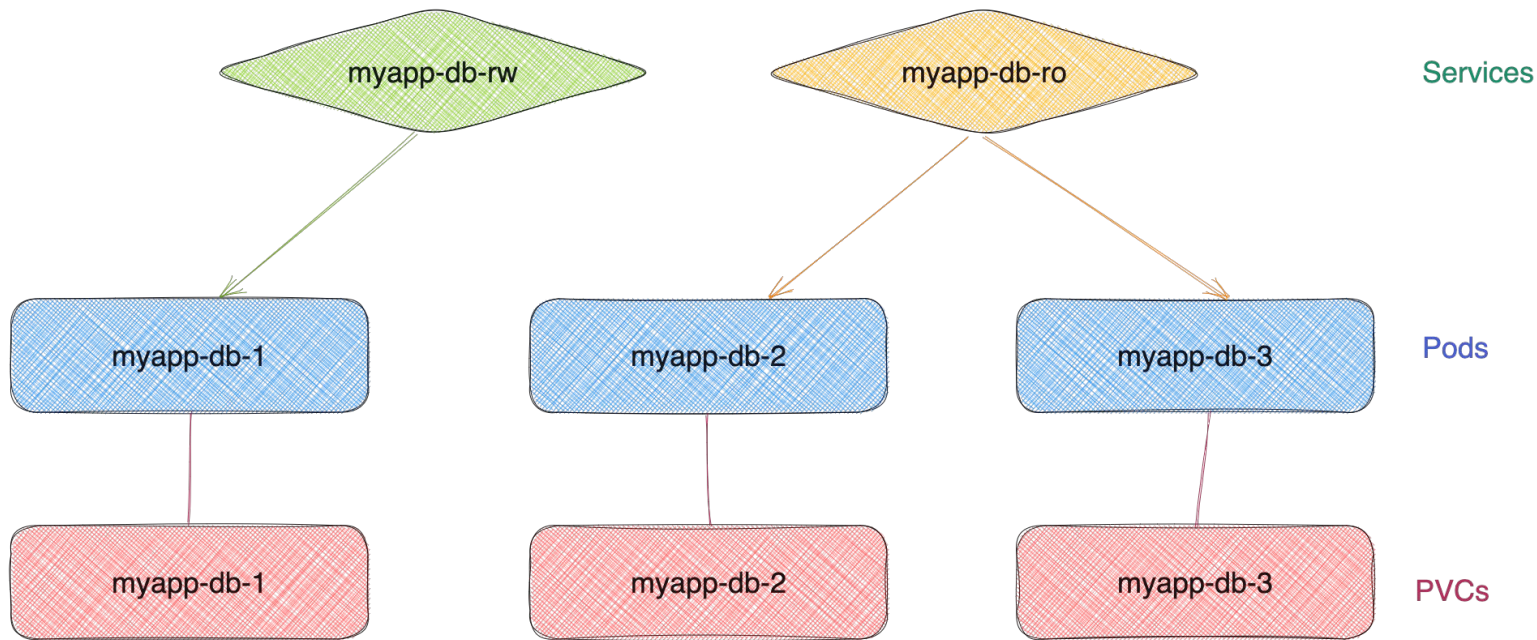
## Designed for Kubernetes

It's entirely declarative, and directly integrates with the Kubernetes API

# Example

```
apiVersion: postgresql.cnpg.io/v1
kind: Cluster
metadata:
  name: myapp-db
spec:
  instances: 3
  imageName: ghcr.io/cloudnative-pg/postgresql:14.3

  storage:
    size: 10Gi
```

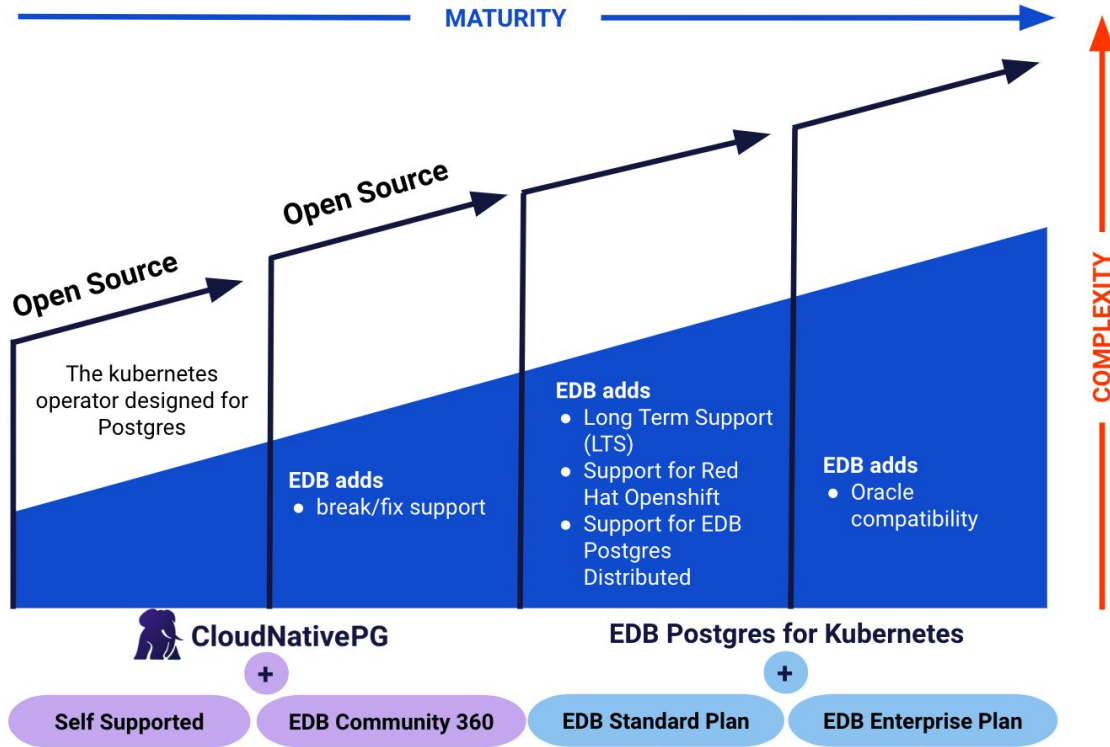


Secrets, ConfigMaps,  
PodDisruptionBudgets, Roles,  
RoleBindings, ServiceAccounts, ..



# CloudNativePG and EDB Postgres for Kubernetes

Modernize your infrastructure and power your performance with Cloud Native and EDB



LANDSCAPE OF POSTGRES FOR KUBERNETES JOURNEY







# EDB Postgres for Kubernetes

## Q2 2022

Open source release of CNPG @ Kubecon

Support for Postgres Distributed deployments in a single K8s cluster (beta)

Offline major version upgrades of Postgres via the operator

Support to scale-out disk I/O:

- Separate volumes WAL, PGDATA
- Support for tablespaces

Expand default image management for operands by supporting a default image for each Postgres major version

Support LDAP authentication (declarative)

## 2H 2022

Support for Postgres Distributed deployments across K8s clusters

Barman Operator

Support to sync LDAP users/groups with Postgres

Online major version upgrades of Postgres via the operator

Dynamic tuning of Postgres parameters

## 2023 and Beyond

Postgres Roles management - PG/EPAS

Declarative User Profile Management - EPAS

Postgres DBA health checks and remediation

Major offline upgrade with parallel data loading

Deep Insights - performance diagnostics, query performance, and audit dashboards

Option to include PgAdmin with Postgres cluster deployments

# PostgreSQL and EDB Postgres Advanced Server 15





# PostgreSQL and EDB Postgres Advanced Server 15

## Q3 2022: PostgreSQL v15 (EDB contributions)

### Logical Replication Improvements

- Column Filtering
- Row Filtering
- Restartable Transactions
- Synchronous Logical Replication Slots

### More granular permissions

- Enable non super users to do additional things (i.e. set GUCs)
- Better permission granularity on logical replication

### SQL

- MERGE

### Partitioning

- 10x performance for large partition counts with write activity
- Multi Key Partitioned tables

### Other

- Refactoring Backups to enable different targets
- Enhanced Startup messages

## Q1 2023: EDB Postgres Advanced Server v15

### Enterprise Integration

- LDAP

### Oracle Compatibility

#### Packages

- HTP, HTF, DBMS\_UTILITY (enhancements)

#### Functions

- extractvalue, rexp\_like, from:tz, to\_timestamp\_tz, to\_clob, nvl, reverse, numtodsinterval

### Security

- Transparent Data Encryption

# EDB TECHNOLOGY INVESTMENTS

