

Navigating Disruption:

Architecting Your Sovereign Data Estate for Resiliency



9th June 2026

POLL:

How would you describe your organisation's current approach to data sovereignty?

- We have a clear strategy in place
- We're working on it but it's not fully defined yet
- It's on our radar but we haven't started
- We're not sure where to begin



We are the leading Data and AI Platform
on Postgres





EDB

Postgres® for the AI Generation

MISSION

Enable enterprises to reduce their reliance on costly proprietary solutions and slash their database spend

VISION

Enable builders, data champions, and business leaders to realize and operationalize the near-infinite potential of Postgres and AI

1500+ Enterprises and Growing

EDB deeply understands Enterprise Postgres needs.

79 Countries around the World

Global footprint and employee base.

Over 20 Years of Driving Postgres

Long-term customers and deep Postgres capabilities.



Postgres - the top choice for developers

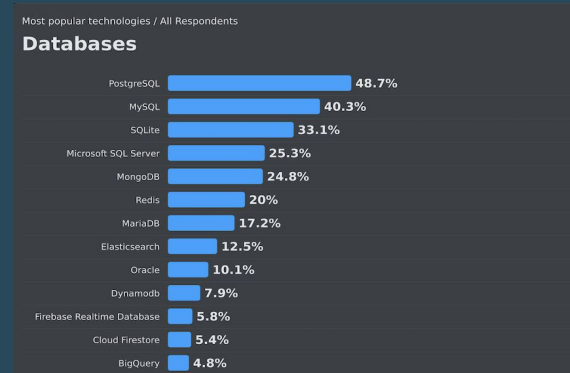
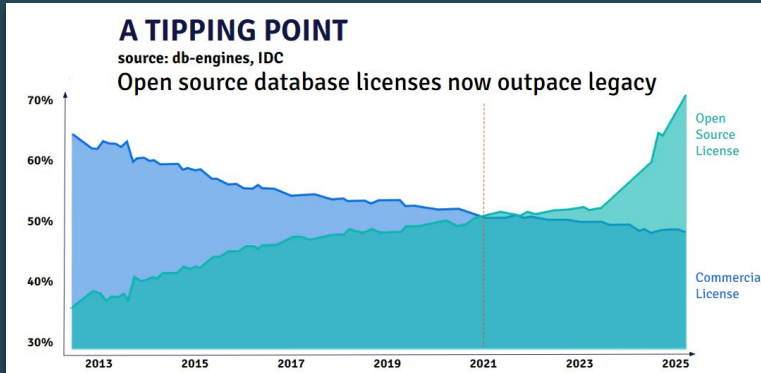
The **rise of Open Source** software is well documented

Many articles on global adoption across industries [CNBC](#), [Forbes](#), [Techcrunch](#), [TechNewsWorld](#)

#1
LARGEST
DEVELOPER
COMMUNITY

#1
FASTEST
GROWING
DBMS

#1
MOST USED,
LOVED,
WANTED BY
DEVELOPERS



Source: Stack Overflow, 2024 Developer Survey




1,600+ Leading Enterprises With Complex, Compliant, And Scaling Data Needs Trust EDB




Resiliency – The Risk Landscape Has Changed

CLOUD & DATA CENTER CHAOS





- **DIRECT PHYSICAL** on cloud facilities
- **REPEATED DISRUPTIONS, POWER FAILURES**, regional outages
- **MIGRATION OF CRITICAL DATA** to global regions advised

REGIONAL CLOUD AVAILABILITY




CONNECTIVITY & SUBSEA CABLES



- **STRAIT OF HORMUZ & RED SEA** under extreme duress
- **CABLE REPAIRS BLOCKED**, high logistics difficulty
- **SIGNIFICANT LATENCY SPIKES**, global data rerouting


CYBER ESCALATION



- **INCREASED USE OF WIPER MALWARE**, destructive attacks
- **TARGETED SECTORS:** Banking, Airports, Healthcare, Gov.
- **RETALIATION**

"STRYKER" (breached)

SUPPLY CHAIN & ECONOMICS



- **CONSUMPTION** of advanced chips
- **SEMICONDUCTOR SHORTAGES** risk state interventions
- **VOLATILE ENERGY COSTS** increase datacenter/fab overhead
- **IT SPENDING FOR INNOVATION** Shifted to **RESILIENCY**



The Disruption is Real – and Accelerating

CLOUD INFRASTRUCTURE FAILURES

- Hyperscaler outages in Middle East regions left critical services dark for hours
- ME regions operate with fewer availability zones than US/EU – single points of failure remain
- Regional conflicts caused public cloud infrastructure disruption
- Recovery windows measured in hours and days – not the minutes enterprises require

US CLOUD ACT – THE HIDDEN RISK

- US law mandates US-headquartered cloud providers hand over your data on demand
- Applies regardless of where data is physically stored – UAE, KSA, or any location
- AWS, Microsoft Azure, Google Cloud, Oracle Cloud – all subject to this legislation
- Your sovereign data centre may still have a foreign hand reaching into it

REGULATORY COMPLIANCE PRESSURE

- UAE PDPL, Saudi PDPL, NCA frameworks demand strict data residency controls
- Central bank and financial sector mandates require sovereign infrastructure proof
- Sector regulators can impose fines and operational restrictions for non-compliance
- Cloud-native architectures increasingly unable to satisfy localisation requirements



The US CLOUD Act: The Invisible Hand on Your Data

Clarifying Lawful Overseas Use of Data Act, 2018 – Why your ME data centre doesn't fully protect you

What the US CLOUD Act Says

US government can compel

Any US-headquartered cloud provider – AWS, Azure, Google, Oracle – must produce customer data within 7 days of a lawful request.

Location does not matter

Data stored in UAE, Saudi Arabia, Qatar, or any other jurisdiction is fully accessible under this law. Physical borders offer no legal protection.

No customer notification required

Providers may be legally prohibited from informing you that your data has been accessed or handed over.

Applies to ALL data types

Business records, communications, databases, analytics, backups – no exceptions for corporate or government data.

Which Cloud Providers Are Affected



Amazon Web Services (AWS)

US-HQ · ME-South (Bahrain), UAE



Microsoft Azure

US-HQ · UAE North, UAE Central



Google Cloud Platform

US-HQ · ME-West1



Oracle Cloud (OCI)

US-HQ · UAE, Saudi Arabia



Alibaba Cloud

China-HQ · CLOUD Act does not apply



G42 Cloud / STC Cloud

ME-domiciled · Not subject to CLOUD Act



The Stakes Are Not Hypothetical

\$5,600

per minute

Avg. enterprise downtime cost
(Gartner, Andrew Lerner)

2+

predicted in 2026

Major multiday cloud outages
forecast for 2026 alone
(Forrester, 2025)

5M

AED · Max Fine

UAE PDPL penalty ceiling
(Cabinet Decision No. 111/2023)

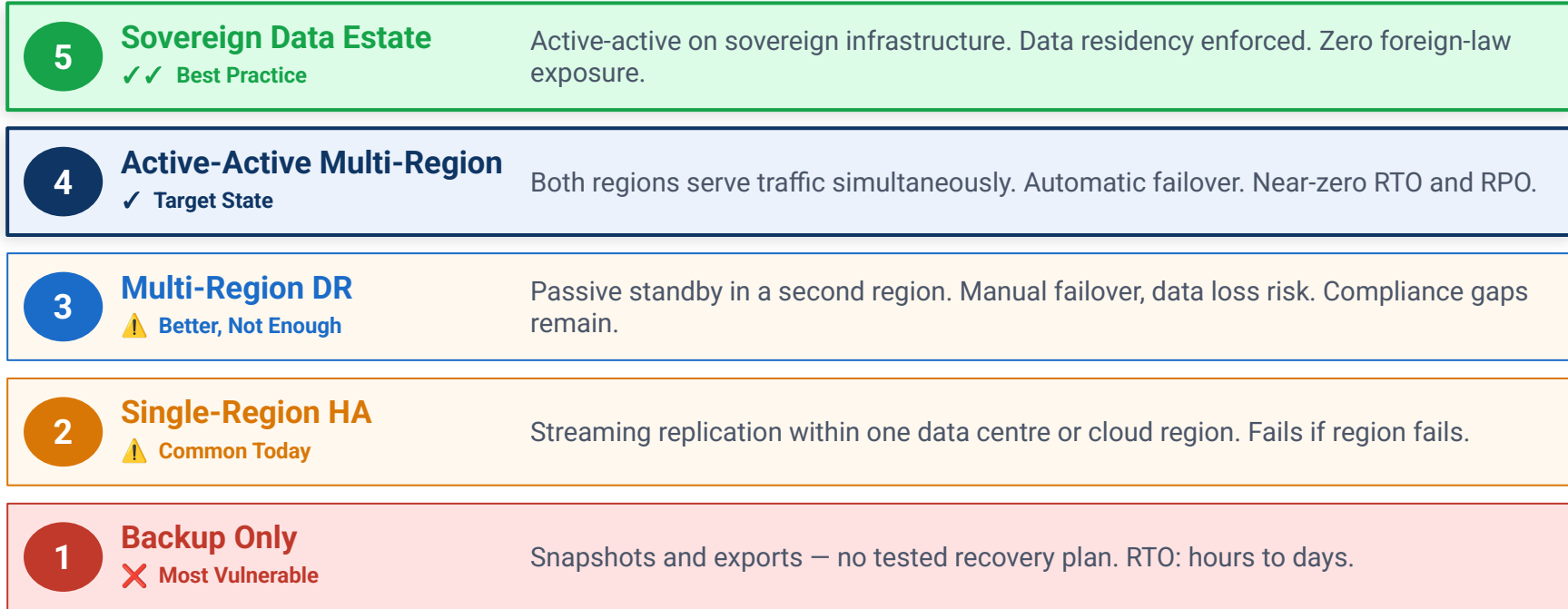
- Every hour of unplanned downtime can erase days of revenue
- Regulatory non-compliance compounds the financial impact
- Reputational damage in the ME market can be permanent
- Board-level accountability is now the norm, not the exception



From Backup to Sovereignty: Where Are You Today?

Most organisations are two or three levels below where they need to be

Maturity



What 'Sovereignty-Aware' Actually Means

Three non-negotiable pillars for your data estate in 2026



Data Residency

Your data. Your jurisdiction.

Data never leaves your sovereign boundary – physically or legally

Customer-held encryption keys (TDE with external KMS)

No foreign-law exposure – infrastructure domiciled and governed locally

Full audit trail: who accessed what, when, from where

EDB PG – TDE + EDB Hybrid Manager on sovereign infrastructure



Operational Independence

Always on – regardless of what goes down.

Active-active multi-region: both sites serve live traffic simultaneously

Automatic failover in seconds – not minutes or hours

No dependency on a single cloud vendor, hyperscaler, or foreign platform

Self-managed or managed on infrastructure you own and control

EDB Postgres Distributed (PGD) – Active-Active, sub-second failover



Geopolitical Resilience

Built for the world as it is – not as it was.

Architecture that survives sanctions, cable cuts, and border closures

US CLOUD Act immune: not subject to foreign government data demands

Meets UAE PDPL, Saudi PDPL, NCA and sector-specific mandates

Analytics and BI on data that never touches a foreign cloud

Full EDB stack: PG + PGD + Hybrid Manager + WarehousePG + Barman



EDB: The Open Sovereign Data Platform

Built on PostgreSQL — the world's most advanced open-source database — without vendor lock-in or foreign-law exposure



EDB Postgres

Enterprise PostgreSQL with Transparent Data Encryption (AES-256), enhanced security, long-term support, and EDB enterprise backing.



EDB Postgres Distributed (PGD)

Multi-region active-active replication. Both sites serve live traffic. Sub-second failover. Zero single point of failure. The backbone of your sovereign estate.



EDB Hybrid Manager

Unified control plane across on-prem, private cloud, and public cloud. Provision, monitor, and manage your entire data estate from one interface.



EDB WarehousePG

MPP analytics platform — advanced SQL analytics at scale, running entirely within your sovereign boundary. No data egress to foreign clouds.



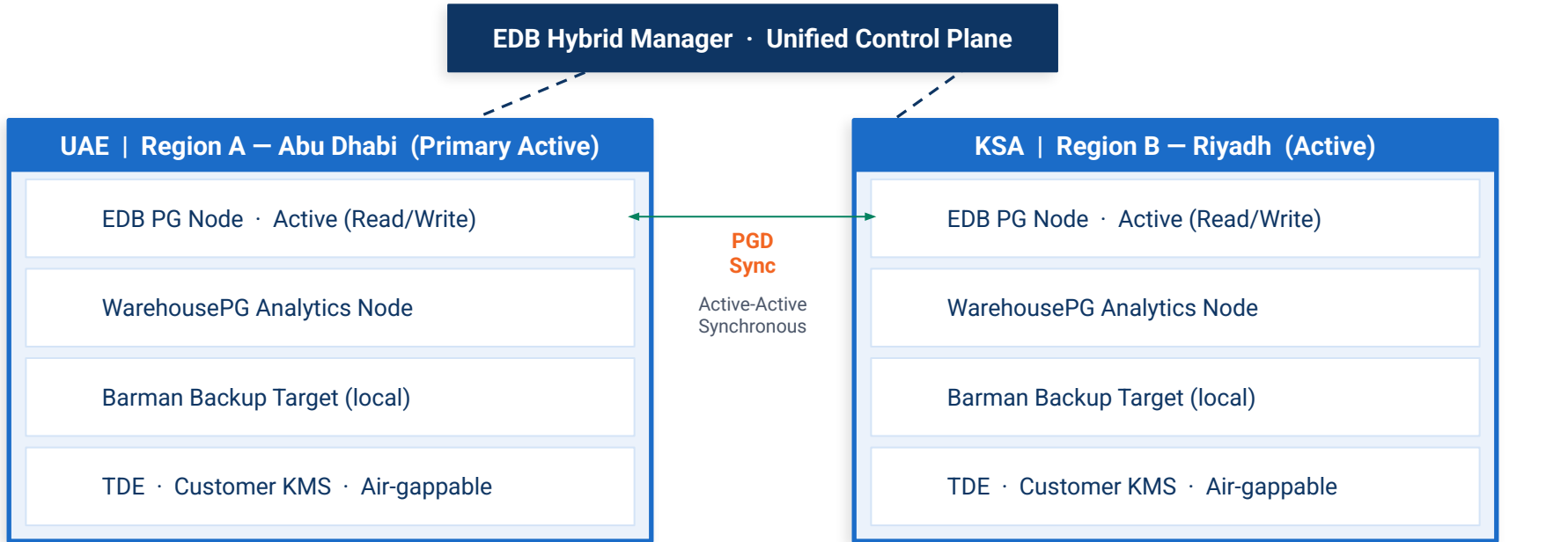
Barman — Backup & Recovery

Sovereign backup orchestration: PITR, WAL streaming, incremental backup. Runs in your estate — no cloud storage dependency.



Reference Architecture: Sovereign Data Estate

Active-active multi-region – always on, always compliant, always yours



✓ No CLOUD Act exposure

✓ Data never leaves your border

✓ Regulatory audit-ready

✓ Zero-dependency on hyperscalers

The Regulatory Imperative – Your Obligations in 2026

UAE Federal PDPL (Decree 45/2021) + CBUAE	KSA Saudi PDPL + NCA + SDAIA Framework	GCC QFCRA + Broader GCC Frameworks
Personal data must be processed and stored within UAE borders	PDPL: Personal data must remain in KSA except by regulatory approval	Qatar Financial Centre Regulatory Authority data protection rules
Central Bank cloud regulations mandate data residency for financial data	National Cybersecurity Authority (NCA) mandates for critical sectors	GCC cross-border data transfer restrictions across all member states
TDRA oversees cloud governance for critical infrastructure sectors	SAMA regulations for banking sector: cloud data classification	Bahrain PDPL, Kuwait data protection regulations in active enforcement
Penalties up to AED 5 million per violation	Essential Cybersecurity Controls require data localisation proof	Trend: all GCC regulators moving toward stricter localisation mandates



EDB vs. Cloud-Native Databases

Concern	Cloud-Native (AWS RDS, Azure SQL, GCP Cloud SQL)	EDB Sovereign Stack
Data Sovereignty	✗ Subject to US CLOUD Act – data accessible to US government on demand	✓ Full sovereignty – customer-controlled keys, no foreign-law exposure
Multi-Region HA	✗ Active-passive typically; active-active at prohibitive cost	✓ Active-active by default with EDB PGD
Outage Exposure	✗ Entire estate dependent on single vendor SLA	✓ Multi-vendor, multi-infrastructure – true independence
Regulatory Compliance	✗ Requires workarounds; rarely satisfies strict localisation mandates	✓ Designed to meet UAE PDPL, Saudi PDPL, NCA frameworks natively
Vendor Lock-in	✗ Proprietary APIs, formats, tooling – painful to migrate	✓ Open-source PostgreSQL foundation – portable, standard SQL
Analytics at Scale	✗ Data must be exported to cloud data warehouse – egress costs + CLOUD Act exposure	✓ EDB WarehousePG runs in-estate – zero egress, zero foreign exposure
Total Cost	✗ Egress fees, multi-region surcharges, proprietary license costs escalate at scale	✓ Predictable, subscription-based – runs on commodity or sovereign cloud



Your Path Forward – A Practical 90-Day Roadmap

Three phases to move from vulnerability to sovereignty

1 Assess & Expose (Days 1–30)	2 Architect & Prove (Days 31–60)	3 Deploy & Operate (Days 61–90)
Map your current data estate: where is each database, who controls it?	Design your target sovereign architecture with EDB solution architects	Migrate priority workloads to EDB sovereign estate with near zero-downtime cutover
Identify CLOUD Act exposure: which systems run on US-HQ cloud providers?	Deploy a proof-of-concept: EDB PGD active-active across two sovereign sites	Activate EDB Hybrid Manager for unified operational control
Benchmark current RTO/RPO against your regulatory obligations	Test: simulate a full regional failure – measure actual RTO in your environment	Integrate EDB WarehousePG for analytics – eliminate cloud data warehouse egress
Run an EDB Sovereignty Assessment: free workshop with EDB architects	Validate against UAE/KSA regulatory requirements – produce compliance evidence	Establish ongoing EDB enterprise support with regional SLA commitment
Deliverable: Sovereignty Risk Report + Gap Analysis	Deliverable: Validated Architecture Blueprint + Regulator Evidence Pack	Deliverable: Sovereign Data Estate in Production + Runbook



Why EDB – Five Reasons That Matter to Your Board

01



Proven at Scale Globally

EDB powers critical infrastructure for governments, banks, and enterprises in 70+ countries. Our technology has been battle-tested in environments where failure is not an option.

02



Built for Sovereign Deployment

Designed from the ground up to run on-premises, in private data centres, or sovereign clouds. No phone-home, no foreign dependency, no CLOUD Act exposure – by architecture.

03



Active-Active and Active-Passive

EDB Postgres Distributed (PGD) is the only enterprise PostgreSQL platform with true active-active multi-region. Your second site serves traffic – it's not just waiting to fail over.

04



Regulatory Compliance by Design

Our architecture meets UAE PDPL, Saudi PDPL, NCA, SAMA, CBUAE and GCC frameworks natively. We produce evidence packs for regulators – not workarounds or exceptions.

05



Enterprise Support with ME Presence

Dedicated EDB enterprise support with regional coverage in the Middle East. Guaranteed SLAs, local architects, and a partner ecosystem with in-country expertise.



The Question Is No Longer Whether to Act.
It's Whether You Act Before or After the Next Incident.



Request a Sovereignty Assessment

Free 2-hour workshop with EDB architects — map your exposure, define your target state



See PGD Active-Active Live

30-minute technical demonstration: simulate a regional failure and watch zero-downtime recovery



See WarehousePG Live

60-minute technical demonstration: run in-database analytics with full sovereignty within your environment

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"Your data. Your jurisdiction. Your rules."



POLL:

Are you interested in the any of the below services?

- Personalised Sovereignty Assessment
- 30-minute Technical Demo of PGD Active-Active Live
- 60-minute Technical Demo of WarehousePG Live



Thank you



IT Infrastructure Has Already Been Hit

Verified incidents from the 2026 Iran War · Sources: AWS Health Dashboard, Cloudflare Radar, Data Centre Dynamics, InfoQ

1 Mar 2026



AWS UAE — Direct Drone Strike (First Ever on a Hyperscaler)

mec1-az2 & mec1-az3 simultaneously hit. Fire, structural damage, flood suppression.

109+ services down. Emirates NBD, ADCB, Careem, Hubpay, Alaan
Source: InfoQ · DCD · Bleeping Computer · Fortune Online.

1 Mar – 1 Apr



AWS Bahrain (ME-SOUTH-1) — Hit Three Times

Struck March 1, March 23, April 1 — three separate events, extended outages each time.

AWS advisory: migrate workloads to US, EU, or Asia-Pacific.
Source: Al Jazeera 24 Mar · Cloudflare Q1 2026 · DCD

28 Feb – 26 May



Iran Internet — 88-Day Blackout (Longest in History)

All 3 major ISPs (MCCI, MTN Irancell, TIC) dropped to <1% traffic. Starlink jammed.

Cost: \$35–80M/day. Partial restore May 26 — Chinese shutdown
Source: Cloudflare Radar · NetBlocks · Al Jazeera · TechTimes hardware remains in place.

20 Apr 2026



IRGC: AWS, Azure, GCP Formally Declared Military Targets

IRGC-affiliated channels formally designated hyperscaler data centres in the Gulf

as legitimate targets, citing dual-use military and AI logistics functions.
Source: Tom's Hardware · CNBC 6 Mar

9 May 2026



Submarine Cables Threatened — Both Chokepoints Simultaneously

Iran threatened to impose fees on cables through Hormuz. 17 Red Sea cables +

Hormuz cables at risk. Alcatel issued force majeure — no repair ships
Source: The Register · Time · Business Today · Stimson Center can safely access.

88

days offline — Iran

Longest national internet shutdown ever recorded

109+

AWS services disrupted

Single strike on UAE region
March 1, 2026

The Multi-AZ Model Failed

Drones hit mec1-az2 and mec1-az3 simultaneously. Multi-AZ is designed for natural disasters — not coordinated kinetic strikes.

True resilience requires multi-REGION on sovereign, geographically separated infrastructure.

EDB Postgres Distributed — Built to Survive Anything

Active-Active multi-region architecture — the cornerstone of a sovereign, always-on data estate

~0s

RTO

Recovery Time Objective
Active-active: no failover needed

~0s

RPO

Recovery Point Objective
Synchronous commit mode

5+

Regions

Simultaneously active
Any infrastructure

99.999%

Uptime

Five nines availability
Geodistributed by design

How PGD Works

Always-On Architecture

Multiple nodes in multiple regions simultaneously write and serve reads. No passive standby waiting to be promoted.

Raft Consensus Engine

Distributed consensus ensures every node agrees on committed transactions. No split-brain, no data divergence.

Selective Sync Replication

Choose synchronous or asynchronous replication per table or workload — optimise for latency or safety.

Conflict Resolution

Built-in conflict detection and resolution for concurrent writes — tunable policies for your business rules.

Why It Matters for Sovereignty



Survive a full regional cloud outage without manual intervention



Operate on G42 Cloud, STC Cloud, on-prem hardware — any sovereign infrastructure



Regulators see a genuine multi-region, locally-domiciled architecture



Analytics and OLTP on the same distributed, sovereign data fabric

Control Your Entire Estate — and Analyse Without Borders

EDB Hybrid Manager and WarehousePG: management and analytics on your terms



EDB Hybrid Manager

Unified control plane across every environment — on-prem data centre, private cloud, or sovereign cloud — from a single interface.

Deploy Anywhere

Provision and manage clusters on bare metal, VMware, OpenShift, or sovereign cloud (G42, STC, Aramco Cloud)

Unified Observability

Single-pane health, performance, and capacity view across all environments and regions

Lifecycle Management

Automated minor updates, certificate rotation, backup scheduling — no manual toil

Cloud Act Firewall

Infrastructure never needs to 'phone home' to a US-HQ cloud. Fully air-gappable.



WarehousePG — Sovereign Analytics

Advanced MPP analytics platform — run enterprise-scale analytics on your data, inside your sovereign boundary.

No Data Egress

Analytics on your sovereign estate — data never leaves for a foreign cloud data warehouse. Zero CLOUD Act exposure.

Massively Parallel Processing

Distribute query execution across nodes for petabyte-scale analytics — traditional data warehouse speed, open architecture.

PostgreSQL Compatible

Standard SQL — no proprietary query language. Your existing BI tools (Power BI, Tableau, Looker) connect natively.

Hybrid OLTP + Analytics

Combine transactional data from EDB PGD with analytical workloads — one estate, no data movement.